Microbac

Laboratory Report Number: L12010576 *(Revised)*

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

This report was certified on February 21 2012

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L12010576
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 #
0016587	H	1.0		1002241143010004575000874824307429

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

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Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL18-0112-1	L12010576-01	01/20/2012 10:30	01/21/2012 16:26
T40-0112-1	L12010576-02	01/20/2012 12:10	01/21/2012 16:26
MPL17-0112-1	L12010576-03	01/20/2012 13:45	01/21/2012 16:26

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/26/2012 10:21
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/26/2012 17:59
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	P2.012612.175948
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Tin, Total	7440-31-5		U	0.500	0.250

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:00
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	P2.012512.140024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	5.74		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	1.98		1.00	0.500
Sodium, Total	7440-23-5	19.5		0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:34
Collect Date:	01/20/2012 10:30	**Dilution:**	10	**File ID:**	P2.012512.143454
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	34.1		2.00	1.00

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL18-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:05
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EL.012812.220550
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	0.00189		0.00100	0.000500
Barium, Total	7440-39-3	0.135		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00382		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1	0.00104		0.00100	0.000500
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00163		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL18-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:54
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	HY.012612.085447
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.

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL18-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:08
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	I20131121808.10
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	13.1		0.200	0.100

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.282		0.200	0.100
Sulfate	14808-79-8	34.3		1.00	0.500

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL18-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	OS12012413032101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.94		0.000	0.000

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		103		20.0	10.0

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		103		20.0	10.0

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

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

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201271150-07
Sample Tag:	CN-A	**Units:**	mg/L		

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

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201241510-10
Sample Tag:	WD	**Units:**	mg/L		

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

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201241530-08
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL18-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	32.1201271120-03
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		318		1.00	0.500

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:00
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120127002.020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.230		0.100	0.0500

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC12012514291401
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.64		0.0500	0.0250

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201220940-05
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 #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EN.1201251610-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		208		20.0	10.0

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL18-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:18
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	TC01252012.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.534	J	1.00	0.500

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

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EN.1201261453-04
Sample Tag:		**Units:**	mg/L		

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

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	T40-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:07
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	P2.012512.140718
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	7.38		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	3.57		1.00	0.500

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Sodium, Total	7440-23-5	20.4		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	T40-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:41
Collect Date:	01/20/2012 12:10	**Dilution:**	10	**File ID:**	P2.012512.144142
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	46.3		2.00	1.00

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	T40-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:13
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EL.012812.221337
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	0.00252		0.00100	0.000500
Barium, Total	7440-39-3	0.133		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00615		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
Nickel, Total	7440-02-0	0.00596		0.00400	0.00200
Selenium, Total	7782-49-2	0.00253		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	T40-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:56
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	HY.012612.085630
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.

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	T40-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:27
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	I20131121827.11
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.159	J	0.200	0.100
Sulfate	14808-79-8	32.6		1.00	0.500

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

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	T40-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	02/01/2012 08:24
Collect Date:	01/20/2012 12:10	**Dilution:**	2	**File ID:**	I20201120824.31
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	27.6		0.400	0.200

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	T40-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	OS12012413032601
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.15		0.000	0.000

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		125		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

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

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

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		125		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201241510-11
Sample Tag:	WD	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201241530-09
Sample Tag:		**Units:**	mg/L		

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

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201271150-08
Sample Tag:	CN-A	**Units:**	mg/L		

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

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	T40-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	32.1201271120-04
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		402		1.00	0.500

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:00
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120127002.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.173		0.100	0.0500

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 12:10	**Dilution:**	4	**File ID:**	SC12012514292201
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.30		0.200	0.100

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201220940-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.0948		0.0500	0.0250

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	T40-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EN.1201251610-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		302		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	T40-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:30
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	TC01252012.058
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.601	J	1.00	0.500

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	T40-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EN.1201261453-05
Sample Tag:		**Units:**	mg/L		

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

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:14
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	P2.012512.141414
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	7.76		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.18		1.00	0.500
Sodium, Total	7440-23-5	25.7		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:48
Collect Date:	01/20/2012 13:45	**Dilution:**	10	**File ID:**	P2.012512.144832
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	49.9		2.00	1.00

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL17-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:21
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EL.012812.222124
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	0.00177		0.00100	0.000500
Barium, Total	7440-39-3	0.0746		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00185	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
Nickel, Total	7440-02-0	0.00353	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00454		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:58
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	HY.012612.085825
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 #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0112-1	**Prep Method:**	300.0	**Prep Date:**	02/17/2012 08:22
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	02/10/2012 10:32
Workgroup #:	WG389994	**Analyst:**	JBK	**Run Date:**	02/17/2012 09:32
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	I10217120932.07
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.245		0.200	0.100

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL17-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:45
Collect Date:	01/20/2012 13:45	**Dilution:**	4	**File ID:**	I20131121845.12
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	43.8		0.800	0.400
Sulfate	14808-79-8	52.0		4.00	2.00

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	OS12012413033101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.67		0.000	0.000

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		87.1		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		87.1		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:50
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201241530-10
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0549		0.0100	0.00500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201241510-12
Sample Tag:	WD	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.00605	J	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201271150-09
Sample Tag:	CN-A	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0496		0.0100	0.00500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL17-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	32.1201271120-05
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		458		1.00	0.500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:02
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120127002.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.148		0.100	0.0500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 13:45	**Dilution:**	4	**File ID:**	SC12012514293101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.36		0.200	0.100

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201220940-07
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.

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EN.1201251610-16
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		324		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:41
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	TC01252012.059
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.582	J	1.00	0.500

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

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EN.1201261453-06
Sample Tag:		**Units:**	mg/L		

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

Certificate of Analysis

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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: L12010576
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG387825 - Tin was not added to the initial post digestion spike analyzed on 25-JAN-2012 at 16:04; therefore, client sample 01 was reanalyzed with a post digestion spike and serial dilution for tin on a later calibration.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG387825 - Client samples 01, 02 and 03 required dilution analyses in order to obtain results for calcium within the linear range.

Narrative ID: 41337
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/26/2012 10:21
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/26/2012 17:59
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	P2.012612.175948
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Tin, Total	7440-31-5		U	0.500	0.250

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 #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:00
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	P2.012512.140024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	5.74		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	1.98		1.00	0.500
Sodium, Total	7440-23-5	19.5		0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:34
Collect Date:	01/20/2012 10:30	**Dilution:**	10	**File ID:**	P2.012512.143454
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	34.1		2.00	1.00

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	T40-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:07
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	P2.012512.140718
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	7.38		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	3.57		1.00	0.500
Sodium, Total	7440-23-5	20.4		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	T40-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:41
Collect Date:	01/20/2012 12:10	**Dilution:**	10	**File ID:**	P2.012512.144142
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	46.3		2.00	1.00

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:14
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	P2.012512.141414
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	7.76		0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.18		1.00	0.500
Sodium, Total	7440-23-5	25.7		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0112-1	**Prep Method:**	3005A	**Prep Date:**	01/24/2012 07:42
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	01/25/2012 10:14
Workgroup #:	WG387825	**Analyst:**	KHR	**Run Date:**	01/25/2012 14:48
Collect Date:	01/20/2012 13:45	**Dilution:**	10	**File ID:**	P2.012512.144832
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	49.9		2.00	1.00

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

Certificate of Analysis

2.1.1.2 QC Summary Data

Example 6010 Calculations
Perkin Elmer Optima 4300 DV

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

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

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

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

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

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

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

4.0 Adjusting the concentration to dry weight:

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

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

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG387753
Analyst: REK
Spike Analyst: REK
Method: 3005A
Run Date: 01/24/2012 07:42
Hotblock Start Temp: 94.9 @ 06:55
Hotblock End Temp: 95.1 @ 10:55

SOP: ME401 Revison 14
Spike Solution: STD49450
Spike Witness: VC
HNO3 Lot #: COA15827
HCL Lot #: COA15847
Digestion Tubes Lot #: COA15882

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG387753-02	BLANK	1	50 mL	50 mL		
2	WG387753-03	LCS	1	50 mL	50 mL	5 mL	
3	L12010576-01	SAMP	1	50 mL	50 mL		02/03/12
4	L12010576-02	SAMP	1	50 mL	50 mL		02/03/12
5	WG387753-01	REF	1	50 mL	50 mL		
6	L12010576-03	SAMP	1	50 mL	50 mL		02/03/12
7	L12010590-01	SAMP	1	50 mL	50 mL		02/03/12
8	L12010590-02	SAMP	1	50 mL	50 mL		02/03/12
9	L12010590-03	SAMP	1	50 mL	50 mL		02/03/12
10	L12010590-04	SAMP	1	50 mL	50 mL		02/03/12
11	L12010590-05	SAMP	1	50 mL	50 mL		02/03/12
12	L12010590-06	SAMP	1	50 mL	50 mL		02/03/12
13	L12010590-07	SAMP	1	50 mL	50 mL		02/03/12
14	L12010590-08	SAMP	1	50 mL	50 mL		02/03/12
15	L12010590-09	SAMP	1	50 mL	50 mL		02/03/12
16	L12010590-10	SAMP	1	50 mL	50 mL		02/03/12
17	L12010590-11	SAMP	1	50 mL	50 mL		02/03/12
18	L12010590-12	SAMP	1	50 mL	50 mL		02/03/12
19	L12010590-13	SAMP	1	50 mL	50 mL		02/03/12
20	L12010590-14	SAMP	1	50 mL	50 mL		02/03/12
21	L12010590-15	SAMP	1	50 mL	50 mL		02/03/12
22	L12010590-16	SAMP	1	50 mL	50 mL		02/03/12
23	WG387753-04	MS	1	50 mL	50 mL	5 mL	
24	WG387753-05	MSD	1	50 mL	50 mL	5 mL	

Analyst: [signature]

Reviewer: [signature]

HB_DIG - Modified 09/30/2009
PDF ID: 2287792
Report generated: 01/24/2012 11:07

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012512HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40410

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV:

Workgroups: 387803, 387825, 387811, 387712

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.012512.094723	WG387964-01	Calibration Point		1		01/25/12 09:47
2	P2.012512.095414	WG387964-02	Calibration Point		1		01/25/12 09:54
3	P2.012512.100103	WG387964-03	Calibration Point		1		01/25/12 10:01
4	P2.012512.100752	WG387964-04	Calibration Point		1		01/25/12 10:07
5	P2.012512.101446	WG387964-05	Calibration Point		1		01/25/12 10:14
6	P2.012512.102143	WG387964-06	Initial Calibration Verification		1		01/25/12 10:21
7	P2.012512.102835	WG387964-07	Initial Calib Blank		1		01/25/12 10:28
8	P2.012512.103524	WG387964-08	Interference Check		1		01/25/12 10:35
9	P2.012512.104117	WG387964-09	Interference Check		1		01/25/12 10:41
10	P2.012512.104710	WG387964-10	CCV		1		01/25/12 10:47
11	P2.012512.105406	WG387964-11	CCB		1		01/25/12 10:54
12	P2.012512.110413	WG387803-02	Serial Dilution	5/50	1	L12010487-01	01/25/12 11:04
13	P2.012512.111102	WG387781-03	Laboratory Control S	5/50	1		01/25/12 11:11
14	P2.012512.111755	WG387781-01	Reference Sample		1	L12010514-02	01/25/12 11:17
15	P2.012512.112448	WG387781-04	Matrix Spike	5/50	1	L12010514-02	01/25/12 11:24
16	P2.012512.113142	WG387781-05	Matrix Spike Duplica	5/50	1	L12010514-02	01/25/12 11:31
17	P2.012512.113836	L12010487-01	BRR SALTCAKE	5/50	200		01/25/12 11:38
18	P2.012512.114528	WG387803-01	Post Digestion Spike		200	L12010487-01	01/25/12 11:45
19	P2.012512.115223	WG387803-02	Serial Dilution		1000	L12010487-01	01/25/12 11:52
20	P2.012512.115916	WG387964-12	CCV		1		01/25/12 11:59
21	P2.012512.120612	WG387964-13	CCB		1		01/25/12 12:06
22	P2.012512.121300	L12010487-02	BRR BAGHOUSE \#2		200		01/25/12 12:13
23	P2.012512.121952	L12010487-03	BRR \#1 CYCLONE		200		01/25/12 12:19
24	P2.012512.122640	L12010489-01	BRRBH\#3	5/50	200		01/25/12 12:26
25	P2.012512.123328	L12010583-01	13837-SSP0156	5/50	1		01/25/12 12:33
26	P2.012512.124020	WG387803-03	Post Digestion Spike		1	L12010583-01	01/25/12 12:40
27	P2.012512.124714	WG387803-04	Serial Dilution		5	L12010583-01	01/25/12 12:47
28	P2.012512.125406	WG387964-14	CCV		1		01/25/12 12:54
29	P2.012512.130102	WG387964-15	CCB		1		01/25/12 13:01
30	P2.012512.130449	L12010487-02	BRR BAGHOUSE \#2	5/50	100		01/25/12 13:04
31	P2.012512.131138	L12010487-03	BRR \#1 CYCLONE	5/50	100		01/25/12 13:11
32	P2.012512.131828	WG387964-16	CCV		1		01/25/12 13:18
33	P2.012512.132524	WG387964-17	CCB		1		01/25/12 13:25
34	P2.012512.134640	WG387753-02	Method/Prep Blank	50/50	1		01/25/12 13:46

Page: 1 Approved: January 26, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012512HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40410

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV:

Workgroups: 387803, 387825, 387811, 387712

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	P2.012512.135330	WG387753-03	Laboratory Control S	50/50	1		01/25/12 13:53
36	P2.012512.140024	L12010576-01	MPL18-0112-1	50/50	1		01/25/12 14:00
37	P2.012512.140718	L12010576-02	T40-0112-1	50/50	1		01/25/12 14:07
38	P2.012512.141414	WG387753-01	Reference Sample		1	L12010576-03	01/25/12 14:14
39	P2.012512.142109	WG387753-04	Matrix Spike	50/50	1	L12010576-03	01/25/12 14:21
40	P2.012512.142801	WG387753-05	Matrix Spike Duplica	50/50	1	L12010576-03	01/25/12 14:28
41	P2.012512.143454	L12010576-01	MPL18-0112-1	50/50	10		01/25/12 14:34
42	P2.012512.144142	L12010576-02	T40-0112-1	50/50	10		01/25/12 14:41
43	P2.012512.144832	WG387753-01	Reference Sample		10	L12010576-03	01/25/12 14:48
44	P2.012512.145521	WG387964-18	CCV		1		01/25/12 14:55
45	P2.012512.150217	WG387964-19	CCB		1		01/25/12 15:02
46	P2.012512.150905	WG387753-04	Matrix Spike	50/50	10	L12010576-03	01/25/12 15:09
47	P2.012512.151555	WG387753-05	Matrix Spike Duplica	50/50	10	L12010576-03	01/25/12 15:15
48	P2.012512.152245	L12010590-01	11615-W0001	50/50	1		01/25/12 15:22
49	P2.012512.152935	L12010590-02	11624-W0001	50/50	1		01/25/12 15:29
50	P2.012512.153625	L12010590-03	11624-W0002	50/50	1		01/25/12 15:36
51	P2.012512.154419	L12010590-04	12290-W0001	50/50	1		01/25/12 15:44
52	P2.012512.155110	L12010590-05	12290-W0002	50/50	1		01/25/12 15:51
53	P2.012512.155803	L12010590-06	12290-W0003	50/50	1		01/25/12 15:58
54	P2.012512.160452	WG387825-01	Post Digestion Spike		1	L12010590-01	01/25/12 16:04
55	P2.012512.161144	WG387825-02	Serial Dilution		5	L12010590-01	01/25/12 16:11
56	P2.012512.161833	WG387964-20	CCV		1		01/25/12 16:18
57	P2.012512.162529	WG387964-21	CCB		1		01/25/12 16:25
58	P2.012512.163217	L12010590-07	12292-W0001	50/50	1		01/25/12 16:32
59	P2.012512.163907	L12010590-08	12292-W0002	50/50	1		01/25/12 16:39
60	P2.012512.164556	L12010590-09	14500-W0001	50/50	1		01/25/12 16:45
61	P2.012512.165245	L12010590-10	14500-W0002	50/50	1		01/25/12 16:52
62	P2.012512.165935	L12010590-11	14500-W0003	50/50	1		01/25/12 16:59
63	P2.012512.170625	L12010590-12	16113-W0001	50/50	1		01/25/12 17:06
64	P2.012512.171315	L12010590-13	16113-W0002	50/50	1		01/25/12 17:13
65	P2.012512.172009	L12010590-14	75509-W0001	50/50	1		01/25/12 17:20
66	P2.012512.172701	L12010590-15	75509-W0002	50/50	1		01/25/12 17:27
67	P2.012512.173352	L12010590-16	75511-W0001	50/50	1		01/25/12 17:33
68	P2.012512.174041	WG387964-22	CCV		1		01/25/12 17:40

Page: 2 Approved: January 26, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012512HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40410

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV:

Workgroups: 387803, 387825, 387811, 387712

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	P2.012512.174737	WG387964-23	CCB		1		01/25/12 17:47
70	P2.012512.175425	WG387751-02	Reference Sample		100	L12010604-01	01/25/12 17:54
71	P2.012512.180115	WG387751-07	Matrix Spike	50/50	100	L12010604-01	01/25/12 18:01
72	P2.012512.180804	WG387751-08	Matrix Spike Duplica	50/50	100	L12010604-01	01/25/12 18:08
73	P2.012512.181453	L12010518-04	LTL-G-MWL2A-DIS	50/50	100		01/25/12 18:14
74	P2.012512.182142	L12010518-06	LTL-G-MWL7-DIS	50/50	100		01/25/12 18:21
75	P2.012512.182832	L12010518-10	LTL-G-MWL9-DIS	50/50	100		01/25/12 18:28
76	P2.012512.183521	WG387712-03	Post Digestion Spike		100	L12010518-10	01/25/12 18:35
77	P2.012512.184214	WG387712-04	Serial Dilution		500	L12010518-10	01/25/12 18:42
78	P2.012512.184904	WG387964-24	CCV		1		01/25/12 18:49
79	P2.012512.185600	WG387964-25	CCB		1		01/25/12 18:56
80	P2.012512.190248	L12010519-02	LTL-G-MWL6-DIS	50/50	100		01/25/12 19:02
81	P2.012512.191008	L12010519-04	LTL-G-MWL13A-DIS		100	WG387646-01	01/25/12 19:10
82	P2.012512.191658	WG387646-05	Matrix Spike	50/50	100	L12010519-04	01/25/12 19:16
83	P2.012512.192350	WG387646-06	Matrix Spike Duplica	50/50	100	L12010519-04	01/25/12 19:23
84	P2.012512.193041	WG387964-26	CCV		1		01/25/12 19:30
85	P2.012512.193737	WG387964-27	CCB		1		01/25/12 19:37

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012612H2R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40421

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV: STD49420

Workgroups: 387681, 388048, 387825, 387712, 387811

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.012612.095408	WG388068-01	Calibration Point		1		01/26/12 09:54
2	P2.012612.100058	WG388068-02	Calibration Point		1		01/26/12 10:00
3	P2.012612.100748	WG388068-03	Calibration Point		1		01/26/12 10:07
4	P2.012612.101437	WG388068-04	Calibration Point		1		01/26/12 10:14
5	P2.012612.102131	WG388068-05	Calibration Point		1		01/26/12 10:21
6	P2.012612.102828	WG388068-06	Initial Calibration Verification		1		01/26/12 10:28
7	P2.012612.103520	WG388068-07	Initial Calib Blank		1		01/26/12 10:35
8	P2.012612.104209	WG388068-08	Low Level Initial Calibration V		1		01/26/12 10:42
9	P2.012612.104859	WG388068-09	Low Level Initial Calibration V		1		01/26/12 10:48
10	P2.012612.105548	WG388068-10	Interference Check		1		01/26/12 10:55
11	P2.012612.110141	WG388068-11	Interference Check		1		01/26/12 11:01
12	P2.012612.110734	WG388068-12	CCV		1		01/26/12 11:07
13	P2.012612.111430	WG388068-13	CCB		1		01/26/12 11:14
14	P2.012612.112118	WG387653-02	Method/Prep Blank	50/50	1		01/26/12 11:21
15	P2.012612.113059	WG387653-02	Method/Prep Blank		1		01/26/12 11:30
16	P2.012612.113749	WG387653-03	Laboratory Control S	50/50	1		01/26/12 11:37
17	P2.012612.114329	WG387653-01	Reference Sample		1	L12010539-06	01/26/12 11:43
18	P2.012612.115024	WG387653-04	Matrix Spike	50/50	1	L12010539-06	01/26/12 11:50
19	P2.012612.115720	WG387653-05	Matrix Spike Duplica	50/50	1	L12010539-06	01/26/12 11:57
20	P2.012612.120416	L12010539-02	DUP-01-120119	50/50	1		01/26/12 12:04
21	P2.012612.121113	L12010539-03	ST006CP1660112	50/50	1		01/26/12 12:11
22	P2.012612.121809	L12010539-04	ST008CP2300112	50/50	1		01/26/12 12:18
23	P2.012612.122500	WG387681-01	Post Digestion Spike		1	L12010539-04	01/26/12 12:25
24	P2.012612.123152	WG388068-14	CCV		1		01/26/12 12:31
25	P2.012612.123848	WG388068-15	CCB		1		01/26/12 12:38
26	P2.012612.124536	WG387681-02	Serial Dilution		5	L12010539-04	01/26/12 12:45
27	P2.012612.125225	L12010539-05	SS040CP2800112	50/50	1		01/26/12 12:52
28	P2.012612.125919	WG388068-16	CCV		1		01/26/12 12:59
29	P2.012612.130615	WG388068-17	CCB		1		01/26/12 13:06
30	P2.012612.131303	WG388068-18	Low Level Continuing Calibra		1		01/26/12 13:13
31	P2.012612.131953	WG388068-19	Low Level Continuing Calibra		1		01/26/12 13:19
32	P2.012612.132643	L12010551-01	70130-W0001	50/50	1		01/26/12 13:26
33	P2.012612.133333	L12010551-03	70141-W0001	50/50	1		01/26/12 13:33
34	P2.012612.134023	L12010551-04	70143-W0001	50/50	1		01/26/12 13:40

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Maren Berry

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Instrument Run Log

Instrument: PE-ICP2 Dataset: 012612H2R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40421

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV: STD49420

Workgroups: 387681, 388048, 387825, 387712, 387811

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	P2.012612.134742	L12010551-05	70147-W0001	50/50	1		01/26/12 13:47
36	P2.012612.135432	L12010551-06	70264-W0001	50/50	1		01/26/12 13:54
37	P2.012612.140124	WG388068-20	CCV		1		01/26/12 14:01
38	P2.012612.140820	WG388068-21	CCB		1		01/26/12 14:08
39	P2.012612.141508	L12010536-01	MPL06-0112-1	50/50	1		01/26/12 14:15
40	P2.012612.142204	L12010536-02	MPL07-0112-1	50/50	1		01/26/12 14:22
41	P2.012612.142856	L12010536-03	MPL07-0112-2	50/50	1		01/26/12 14:28
42	P2.012612.143550	L12010536-01	MPL06-0112-1	50/50	10		01/26/12 14:35
43	P2.012612.144238	L12010536-02	MPL07-0112-1	50/50	10		01/26/12 14:42
44	P2.012612.144928	L12010536-03	MPL07-0112-2	50/50	10		01/26/12 14:49
45	P2.012612.145617	WG388068-22	CCV		1		01/26/12 14:56
46	P2.012612.150313	WG388068-23	CCB		1		01/26/12 15:03
47	P2.012612.150814	L12010008-01	IDL1-ICP-PE2		1		01/26/12 15:08
48	P2.012612.151504	L12010008-02	IDL2-ICP-PE2		1		01/26/12 15:15
49	P2.012612.152154	L12010008-03	IDL3-ICP-PE2		1		01/26/12 15:21
50	P2.012612.152844	L12010008-04	IDL4-ICP-PE2		1		01/26/12 15:28
51	P2.012612.153534	L12010008-05	IDL5-ICP-PE2		1		01/26/12 15:35
52	P2.012612.154225	L12010008-06	IDL6-ICP-PE2		1		01/26/12 15:42
53	P2.012612.154917	L12010008-07	IDL7-ICP-PE2		1		01/26/12 15:49
54	P2.012612.155608	IDL	IDL		1		01/26/12 15:56
55	P2.012612.160257	IDL	IDL		1		01/26/12 16:02
56	P2.012612.160945	IDL	IDL		1		01/26/12 16:09
57	P2.012612.161634	WG388068-24	CCV		1		01/26/12 16:16
58	P2.012612.162330	WG388068-25	CCB		1		01/26/12 16:23
59	P2.012612.163018	WG387972-02	Method/Prep Blank	50/50	1		01/26/12 16:30
60	P2.012612.163708	WG387972-03	Laboratory Control S	50/50	1		01/26/12 16:37
61	P2.012612.164401	L12010657-06	006	50/50	1		01/26/12 16:44
62	P2.012612.165054	L12010659-01	001	50/50	1		01/26/12 16:50
63	P2.012612.165748	L12010663-01	004	50/50	1		01/26/12 16:57
64	P2.012612.170442	L12010675-01	OUTFALL 002/COMP	50/50	1		01/26/12 17:04
65	P2.012612.171136	WG388048-01	Post Digestion Spike		1	L12010675-01	01/26/12 17:11
66	P2.012612.171832	WG388048-02	Serial Dilution		5	L12010675-01	01/26/12 17:18
67	P2.012612.172523	WG388068-26	CCV		1		01/26/12 17:25
68	P2.012612.173218	WG388068-27	CCB		1		01/26/12 17:32

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Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012612H2R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40421

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV: STD49420

Workgroups: 387681, 388048, 387825, 387712, 387811

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	P2.012612.173906	WG387972-01	Reference Sample		1	L12010676-04	01/26/12 17:39
70	P2.012612.174602	WG387972-04	Duplicate	50/50	1	L12010676-04	01/26/12 17:46
71	P2.012612.175255	WG387972-05	Matrix Spike	50/50	1	L12010676-04	01/26/12 17:52
72	P2.012612.175948	L12010576-01	MPL18-0112-1	50/50	1		01/26/12 17:59
73	P2.012612.180641	WG387825-03	Post Digestion Spike		1	L12010576-01	01/26/12 18:06
74	P2.012612.181334	L12010519-06	LTL-G-MWL14A-DIS	50/50	100		01/26/12 18:13
75	P2.012612.182023	L12010604-01	DRL-Z-LM1		20	WG387751-02	01/26/12 18:20
76	P2.012612.182716	L12010604-04	DRL-Z-LM1-MS	50/50	20	WG387751-07	01/26/12 18:27
77	P2.012612.183409	L12010604-05	DRL-Z-LM1-MSD	50/50	20	WG387751-08	01/26/12 18:34
78	P2.012612.184102	WG388068-28	CCV		1		01/26/12 18:41
79	P2.012612.184758	WG388068-29	CCB		1		01/26/12 18:47
80	P2.012612.185446	WG387991-02	Method/Prep Blank		1		01/26/12 18:54
81	P2.012612.190136	WG387991-03	Laboratory Control S		1		01/26/12 19:01
82	P2.012612.190829	WG387991-01	Reference Sample		1	L12010653-01	01/26/12 19:08
83	P2.012612.191522	WG387991-04	Matrix Spike		1	L12010653-01	01/26/12 19:15
84	P2.012612.192216	WG387991-05	Matrix Spike Duplica		1	L12010653-01	01/26/12 19:22
85	P2.012612.192910	WG388024-01	Post Digestion Spike		1	L12010653-01	01/26/12 19:29
86	P2.012612.193604	WG388024-02	Serial Dilution		5	L12010653-01	01/26/12 19:36
87	P2.012612.194258	WG387944-01	Fluid Blank		1		01/26/12 19:42
88	P2.012612.194953	WG388068-30	CCV		1		01/26/12 19:49
89	P2.012612.195649	WG388068-31	CCB		1		01/26/12 19:56
90	P2.012612.200337	WG387850-02	Method/Prep Blank		1		01/26/12 20:03
91	P2.012612.201029	WG387850-03	Laboratory Control S		1		01/26/12 20:10
92	P2.012612.201722	L12010514-01	SAND PAD		1		01/26/12 20:17
93	P2.012612.202412	L12010558-01	12385-W0004		1		01/26/12 20:24
94	P2.012612.203102	L12010558-02	9134-W0001		1		01/26/12 20:31
95	P2.012612.203752	L12010558-03	9136-W0001		1		01/26/12 20:37
96	P2.012612.204442	L12010558-04	9160-W0001		1		01/26/12 20:44
97	P2.012612.205132	L12010558-05	9162-W0001		1		01/26/12 20:51
98	P2.012612.205823	WG387954-01	Post Digestion Spike		1	L12010558-05	01/26/12 20:58
99	P2.012612.210517	WG387954-02	Serial Dilution		5	L12010558-05	01/26/12 21:05
100	P2.012612.211207	WG388068-32	CCV		1		01/26/12 21:12
101	P2.012612.211903	WG388068-33	CCB		1		01/26/12 21:19
102	P2.012612.212551	L12010558-06	9284-W0001		1		01/26/12 21:25

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Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 012612H2R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 11
Maintenance Log ID: 40421

Calibration Std: STD49553 ICV Std: STD49610 Post Spike: STD48461
ICSA: STD49326 ICSAB: STD49327 Int. Std: STD49611
CCV: STD49613 LLCCV: STD49420

Workgroups: 387681, 388048, 387825, 387712, 387811

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	P2.012612.213242	L12010558-07	9284-W0002		1		01/26/12 21:32
104	P2.012612.213934	WG387850-01	Reference Sample		1	L12010613-01	01/26/12 21:39
105	P2.012612.214629	WG387850-04	Matrix Spike		1	L12010613-01	01/26/12 21:46
106	P2.012612.215323	WG387850-05	Matrix Spike Duplica		1	L12010613-01	01/26/12 21:53
107	P2.012612.220017	WG387850-01	Reference Sample		10	L12010613-01	01/26/12 22:00
108	P2.012612.220707	WG387850-04	Matrix Spike		10	L12010613-01	01/26/12 22:07
109	P2.012612.221357	WG387850-05	Matrix Spike Duplica		10	L12010613-01	01/26/12 22:13
110	P2.012612.222047	WG388068-34	CCV		1		01/26/12 22:20
111	P2.012612.222743	WG388068-35	CCB		1		01/26/12 22:27
112	P2.012612.223431	L12010616-01	LH18/24-SP650-6586-GRAB		1		01/26/12 22:34
113	P2.012612.224126	L12010616-02	LH18/24-SP650-6586-COMP		1		01/26/12 22:41
114	P2.012612.224821	WG387719-01	Fluid Blank		1		01/26/12 22:48
115	P2.012612.225511	WG388068-36	CCV		1		01/26/12 22:55
116	P2.012612.230207	WG388068-37	CCB		1		01/26/12 23:02

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15			Accidentally reanalyzed PBS.	

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Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: KHR
Analyst: NA
Method: 6010
Instrument: PE-ICP2
Curve Workgroup: 387964
Runlog ID: 44824
Analytical Workgroups: 387803, 387825, 387811, 387712

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	
Level 4	583, 576, 590
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:
26-JAN-2012

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 13:15:53

Microbac Laboratories Inc.

Data Checklist

Date: 26-JAN-2012
Analyst: KHR
Analyst: NA
Method: 6010
Instrument: PE-ICP2
Curve Workgroup: 388068
Runlog ID: 44843
Analytical Workgroups: 387681, 388048, 387825, 387712, 387811

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	539
Level 4	536, 551, 576
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
27-JAN-2012
Kym H. Rhoden

Secondary Reviewer:
27-JAN-2012
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 16:10:39

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B AAB#: WG387825

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12					01/24/12	3.9	180		01/26/12	6.3	180	
MPL18-0112-1	01	01/20/12					01/24/12	3.9	180		01/25/12	5.1	180	
MPL18-0112-1	01	01/20/12					01/24/12	3.9	180		01/25/12	5.2	180	
T40-0112-1	02	01/20/12					01/24/12	3.8	180		01/25/12	5.1	180	
T40-0112-1	02	01/20/12					01/24/12	3.8	180		01/25/12	5.1	180	
MPL17-0112-1	03	01/20/12					01/24/12	3.7	180		01/25/12	5	180	
MPL17-0112-1	03	01/20/12					01/24/12	3.7	180		01/25/12	5	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2289884
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: P2.012512.134640
Prep Date: 01/24/12 07:42
Analyzed Date: 01/25/12 13:46
Analyst: KHR

Work Group: WG387825
Blank Sample ID: WG387753-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG387753-03	P2.012512.135330	01/25/12 13:53	01
MPL18-0112-1	L12010576-01	P2.012512.140024	01/25/12 14:00	01
T40-0112-1	L12010576-02	P2.012512.140718	01/25/12 14:07	01
MPL17-0112-1	L12010576-03	P2.012512.141414	01/25/12 14:14	01
MPL18-0112-1	L12010576-01	P2.012512.143454	01/25/12 14:34	DL01
T40-0112-1	L12010576-02	P2.012512.144142	01/25/12 14:41	DL01
MPL17-0112-1	L12010576-03	P2.012512.144832	01/25/12 14:48	DL01
MPL18-0112-1	L12010576-01	P2.012612.175948	01/26/12 17:59	02

Report Name: BLANK_SUMMARY
PDF File ID: 2289885
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/24/12 07:42 Sample ID: WG387753-02
Instrument ID: PE-ICP2 Run Date: 01/25/12 13:46 Prep Method: 3005A
File ID: P2.012512.134640 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG387825 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-25-JAN-12

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

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

Report Name: BLANK
PDF ID: 2289886
26-JAN-2012 08:34

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/25/2012 Sample ID: WG387753-03
Instrument ID: PE-ICP2 Run Time: 13:53 Prep Method: 3005A
File ID: P2.012512.135330 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG387825 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49450 Cal ID: PE-ICP-25-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Total	0.0250	0.0245	98.1	80 - 120	
Calcium, Total	5.00	4.71	94.2	80 - 120	
Magnesium, Total	5.00	4.98	99.6	80 - 120	
Manganese, Total	0.250	0.246	98.4	80 - 120	
Potassium, Total	25.0	24.6	98.6	80 - 120	
Sodium, Total	25.0	25.5	102	80 - 120	
Tin, Total	0.500	0.533	107	80 - 120	
Vanadium, Total	0.500	0.486	97.2	80 - 120	
Zinc, Total	0.500	0.503	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2289887
Report generated: 01/26/2012 08:34

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

Loginnum: L12010576 Cal ID: PE-ICP2- Worknum: WG387825
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG387753-01 File ID: P2.012512.141414 Dil: 1 Matrix: WATER
Sample ID: WG387753-04 MS File ID: P2.012512.142109 Dil: 1 Units: mg/L
Sample ID: WG387753-05 MSD File ID: P2.012512.142801 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Total	ND	0.0250	0.0236	94.5	0.0250	0.0237	94.7	0.143	80 - 120	20	
Magnesium, Total	7.76	5.00	12.9	103	5.00	12.7	98.4	1.69	80 - 120	20	
Manganese, Total	ND	0.250	0.245	97.9	0.250	0.242	96.7	1.25	80 - 120	20	
Potassium, Total	2.18	25.0	27.6	102	25.0	27.1	99.8	1.72	80 - 120	20	
Sodium, Total	25.7	25.0	54.0	113	25.0	51.8	104	4.24	80 - 120	20	
Tin, Total	ND	0.500	0.520	104	0.500	0.535	107	2.96	80 - 120	20	
Vanadium, Total	ND	0.500	0.495	98.9	0.500	0.486	97.3	1.68	80 - 120	20	
Zinc, Total	ND	0.500	0.501	100	0.500	0.494	98.7	1.47	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2289888
Report generated 01/26/2012 08:34

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

Loginnum: L12010576 Cal ID: PE-ICP2 - Worknum: WG387825
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG387753-01 File ID: P2.012512.144832 Dil: 10 Matrix: WATER
Sample ID: WG387753-04 MS File ID: P2.012512.150905 Dil: 10 Units: mg/L
Sample ID: WG387753-05 MSD File ID: P2.012512.151555 Dil: 10

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Calcium, Total	49.9	5.00	54.2	85.3	5.00	56.3	126	3.71	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2289888
Report generated 01/26/2012 08:34

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12010576 **Worknum:** WG387825
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG387825-02 **File ID:** P2.012512.161144 **Dil:** 5 **Units:** mg/L
Sample: L12010590-01 **File ID:** P2.012512.152245 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Beryllium	ND	U	ND	U		
Calcium	0.382	X	ND	U		
Magnesium	ND	U	ND	U		
Manganese	ND	U	ND	U		
Potassium	ND	U	ND	U		
Sodium	ND	U	ND	U		
Tin	ND	U	ND	U		
Vanadium	ND	U	ND	U		
Zinc	ND	U	ND	U		

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

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2289882
01/26/2012 08:33

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12010576 **Worknum:** WG387825
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG387825-01 **File ID:** P2.012512.160452 **Dil:** 1 **Units:** mg/L
Sample ID: L12010590-01 **File ID:** P2.012512.152245 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0244		0	U	.025	97.5	75 - 125	
CALCIUM	5.11		0.382		5	95.4	75 - 125	
MAGNESIUM	5.08		0	U	5	101.5	75 - 125	
MANGANESE	0.254		0	U	.25	101.8	75 - 125	
POTASSIUM	25.6		0	U	25	102.4	75 - 125	
SODIUM	26.6		0	U	25	106.2	75 - 125	
TIN	-0.00828	U	0	U	.5	-01.7	75 - 125	N
VANADIUM	0.499		0	U	.5	99.7	75 - 125	
ZINC	0.527		0	U	.5	105.4	75 - 125	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2289883
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12010576 **Worknum:** WG387825
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG387825-03 **File ID:** P2.012612.180641 **Dil:** 1 **Units:** mg/L
Sample ID: L12010576-01 **File ID:** P2.012612.175948 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0240		0	U	.025	95.9	75 - 125	
CALCIUM	38.1		36.2		5	111.4	75 - 125	
MAGNESIUM	9.91		5.65		5	96.5	75 - 125	
MANGANESE	0.258		0	U	.25	103.1	75 - 125	
POTASSIUM	28.5		2.06		25	106.4	75 - 125	
SODIUM	43.3		19.8		25	102.1	75 - 125	
TIN	0.565		0	U	.5	112.9	75 - 125	
VANADIUM	0.518		0.0100		.5	101.8	75 - 125	
ZINC	0.524		0.0117	F	.5	102.7	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: 2289883
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	L12010576	Workgroup (AAB#):	WG387825
Analytical Method:	6010B	Instrument ID:	PE-ICP2
ICAL Worknum:	WG387964	Initial Calibration Date:	25-JAN-2012 10:14

	WG387964-01		WG387964-02		WG387964-03		WG387964-04		WG387964-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-573	.0005	177	.001	346	.05	15800	.1	31200	.999975	
CALCIUM	0	-5.72	NA	NA	.2	14.1	10	686	20	1380	.999999	
MAGNESIUM	0	4.45	.1	27.7	.2	58.1	10	2850	20	5810	.999956	
MANGANESE	0	338	.005	1330	.01	2690	.5	136000	1	260000	.999755	
POTASSIUM	0	-9.51	.5	768	1	1690	50	77700	100	153000	1	
SODIUM	0	969	.5	4640	1	9590	50	448000	100	902000	1	
TIN	0	12.9	.01	25.1	.02	55.0	1	2740	1	5320	.999881	
VANADIUM	0	4780	.01	785	.02	1730	1	89300	2	174000	.999936	
ZINC	0	5.96	.01	144	.02	288	1	14500	2	28200	.999888	

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: 2289891
Report generated: 27-JAN-2012 10:21

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	L12010576	Workgroup (AAB#):	WG387825
Analytical Method:	6010B	Instrument ID:	PE-ICP2
ICAL Worknum:	WG388068	Initial Calibration Date:	26-JAN-2012 10:21

	WG388068-01		WG388068-02		WG388068-03		WG388068-04		WG388068-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-527	.0005	150	.001	306	.05	14900	.1	30000	.999998	
CALCIUM	0	-10.2	NA	NA	.2	17.6	10	662	20	1340	.999958	
MAGNESIUM	0	7.23	.1	25.5	.2	54.2	10	2800	20	5690	.999973	
MANGANESE	0	202	.005	1300	.01	2560	.5	127000	1	248000	.999915	
POTASSIUM	0	31.6	.5	734	1	1600	50	78800	100	159000	1	
SODIUM	0	620	.5	5070	1	10300	50	449000	100	885000	1	
TIN	0	11.5	.01	27.0	.02	50.5	1	2540	1	5070	.999999	
VANADIUM	0	4690	.01	799	.02	1710	1	83600	2	166000	.999997	
ZINC	0	3.95	.01	135	.02	270	1	13300	2	26700	1	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2289891
Report generated: 27-JAN-2012 10:21

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-07
Instrument ID: PE-ICP2
Run Time: 10:28
Method: 6010B
File ID: P2.012512.102835
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP2 - 25-JAN-12
Matrix: WATER

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

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

ICB - Modified 07/14/2009
PDF File ID: 2289893
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12010576
Instrument ID: PE-ICP2
File ID: P2.012612.103520
Workgroup (AAB#): WG387825
Matrix: WATER

Run Date: 01/26/2012
Run Time: 10:35
Analyst: KHR
Cal ID: PE-ICP2 - 26-JAN-12

Sample ID: WG388068-07
Method: 6010B
Units: mg/L

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

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

ICB - Modified 07/14/2009
PDF File ID: 2289893
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-11
Instrument ID: PE-ICP2
Run Time: 10:54
Method: 6010B
File ID: P2.012512.105406
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-17
Instrument ID: PE-ICP2
Run Time: 13:25
Method: 6010B
File ID: P2.012512.132524
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-19
Instrument ID: PE-ICP2
Run Time: 15:02
Method: 6010B
File ID: P2.012512.150217
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-21
Instrument ID: PE-ICP2
Run Time: 16:25
Method: 6010B
File ID: P2.012512.162529
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388068-13
Instrument ID: PE-ICP2
Run Time: 11:14
Method: 6010B
File ID: P2.012612.111430
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 26-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388068-27
Instrument ID: PE-ICP2
Run Time: 17:32
Method: 6010B
File ID: P2.012612.173218
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 26-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2289896
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Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388068-29
Instrument ID: PE-ICP2
Run Time: 18:47
Method: 6010B
File ID: P2.012612.184758
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 26-JAN-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
Manganese	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

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

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Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12010576 Run Date: 01/25/2012 Sample ID: WG387964-06
Instrument ID: PE-ICP2 Run Time: 10:21 Method: 6010B
File ID: P2.012512.102143 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG387825 Cal ID: PE-ICP - 25-JAN-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0489	97.8	90 - 110	
Calcium		10	9.57	95.7	90 - 110	
Magnesium		10	9.76	97.6	90 - 110	
Manganese		.5	0.499	99.7	90 - 110	
Potassium		50	49.1	98.3	90 - 110	
Sodium		50	50.1	100	90 - 110	
Tin		1	1.01	101	90 - 110	
Vanadium		1	0.956	95.6	90 - 110	
Zinc		1	0.985	98.5	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2289892
Report generated 01/27/2012 10:21

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12010576 Run Date: 01/26/2012 Sample ID: WG388068-06
Instrument ID: PE-ICP2 Run Time: 10:28 Method: 6010B
File ID: P2.012612.102828 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG387825 Cal ID: PE-ICP - 26-JAN-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0498	99.6	90 - 110	
Calcium		10	10.0	100	90 - 110	
Magnesium		10	10.0	100	90 - 110	
Manganese		.5	0.518	104	90 - 110	
Potassium		50	50.5	101	90 - 110	
Sodium		50	49.5	99.1	90 - 110	
Tin		1	1.05	105	90 - 110	
Vanadium		1	0.998	99.8	90 - 110	
Zinc		1	1.01	101	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2289892
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-10
Instrument ID: PE-ICP2
Run Time: 10:47
Method: 6010B
File ID: P2.012512.104710
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0521	mg/L	104	90 - 110		
Calcium		10.0	9.86	mg/L	98.6	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Manganese		0.500	0.522	mg/L	104	90 - 110		
Potassium		50.0	49.7	mg/L	99.4	90 - 110		
Sodium		50.0	49.8	mg/L	99.7	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.02	mg/L	102	90 - 110		
Zinc		1.00	1.03	mg/L	103	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-16
Instrument ID: PE-ICP2
Run Time: 13:18
Method: 6010B
File ID: P2.012512.131828
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0511	mg/L	102	90 - 110		
Calcium		10.0	9.79	mg/L	97.9	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Manganese		0.500	0.515	mg/L	103	90 - 110		
Potassium		50.0	50.4	mg/L	101	90 - 110		
Sodium		50.0	51.0	mg/L	102	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.02	mg/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: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-18
Instrument ID: PE-ICP2
Run Time: 14:55
Method: 6010B
File ID: P2.012512.145521
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0497	mg/L	99.4	90 - 110		
Calcium		10.0	9.76	mg/L	97.6	90 - 110		
Magnesium		10.0	9.77	mg/L	97.7	90 - 110		
Manganese		0.500	0.510	mg/L	102	90 - 110		
Potassium		50.0	51.3	mg/L	103	90 - 110		
Sodium		50.0	51.3	mg/L	103	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	0.999	mg/L	99.9	90 - 110		
Zinc		1.00	1.02	mg/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: L12010576
Run Date: 01/25/2012
Sample ID: WG387964-20
Instrument ID: PE-ICP2
Run Time: 16:18
Method: 6010B
File ID: P2.012512.161833
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 25-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0486	mg/L	97.1	90 - 110		
Calcium		10.0	9.90	mg/L	99.0	90 - 110		
Magnesium		10.0	9.96	mg/L	99.6	90 - 110		
Manganese		0.500	0.500	mg/L	100	90 - 110		
Potassium		50.0	51.9	mg/L	104	90 - 110		
Sodium		50.0	51.4	mg/L	103	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	0.984	mg/L	98.4	90 - 110		
Zinc		1.00	0.996	mg/L	99.6	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388068-12
Instrument ID: PE-ICP2
Run Time: 11:07
Method: 6010B
File ID: P2.012612.110734
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0508	mg/L	102	90 - 110		
Calcium		10.0	9.83	mg/L	98.3	90 - 110		
Magnesium		10.0	9.93	mg/L	99.3	90 - 110		
Manganese		0.500	0.515	mg/L	103	90 - 110		
Potassium		50.0	50.6	mg/L	101	90 - 110		
Sodium		50.0	49.7	mg/L	99.5	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	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576 Run Date: 01/26/2012 Sample ID: WG388068-26
Instrument ID: PE-ICP2 Run Time: 17:25 Method: 6010B
File ID: P2.012612.172523 Analyst: KHR QC Key: DOD4
Workgroup (AAB#): WG387825 Cal ID: PE-ICP - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0492	mg/L	98.4	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	9.82	mg/L	98.2	90 - 110		
Manganese		0.500	0.517	mg/L	103	90 - 110		
Potassium		50.0	53.5	mg/L	107	90 - 110		
Sodium		50.0	53.0	mg/L	106	90 - 110		
Tin		1.00	1.05	mg/L	105	90 - 110		
Vanadium		1.00	1.02	mg/L	102	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: L12010576
Run Date: 01/26/2012
Sample ID: WG388068-28
Instrument ID: PE-ICP2
Run Time: 18:41
Method: 6010B
File ID: P2.012612.184102
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG387825
Cal ID: PE-ICP - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0482	mg/L	96.4	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	10.0	mg/L	100	90 - 110		
Manganese		0.500	0.517	mg/L	103	90 - 110		
Potassium		50.0	54.5	mg/L	109	90 - 110		
Sodium		50.0	52.5	mg/L	105	90 - 110		
Tin		1.00	1.05	mg/L	105	90 - 110		
Vanadium		1.00	1.03	mg/L	103	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12010576
Instrument ID: PE-ICP2
Sol. A : WG387964-08 **File ID:** P2.012512.103524
Sol. AB : WG387964-09 **File ID:** P2.012512.104117

Workgroup (AAB#): WG387825
Method: 6010B
Units: mg/L
Matrix: Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	-0.000600	NS	0.250	0.257	103	
Calcium	250	251	100	250	257	103	
Magnesium	250	251	100	250	241	96.4	
Manganese	NS	-0.00122	NS	0.250	0.248	99.2	
Potassium	NS	-0.0314	NS	5.00	4.98	99.6	
Sodium	NS	-0.00701	NS	5.00	5.09	102	
Tin	NS	-0.0250	NS	NS	-0.0249	NS	
Vanadium	NS	-0.00105	NS	0.250	0.250	100	
Zinc	NS	-0.00377	NS	0.500	0.477	95.4	

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.
INTERFERENCE CHECK SAMPLES

Login number: L12010576
Instrument ID: PE-ICP2
Sol. A : WG388068-10 **File ID:** P2.012612.105548
Sol. AB : WG388068-11 **File ID:** P2.012612.110141

Workgroup (AAB#): WG387825
Method: 6010B
Units: mg/L
Matrix: Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.000530	NS	0.250	0.255	102	
Calcium	250	255	102	250	261	104	
Magnesium	250	238	95.2	250	240	96.0	
Manganese	NS	0.000110	NS	0.250	0.253	101	
Potassium	NS	-0.0666	NS	5.00	5.10	102	
Sodium	NS	-0.0537	NS	5.00	4.91	98.2	
Tin	NS	-0.0242	NS	NS	-0.0236	NS	
Vanadium	NS	0.00183	NS	0.250	0.256	102	
Zinc	NS	-0.000300	NS	0.500	0.478	95.6	

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

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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **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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Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	0	6.33
ARSENIC	188.98	0	0.0200	0	0	-6.59
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	-0.0733
BORON	249.68	0	0	24.1	5.90	1.50
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	300	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	-0.244
COPPER	327.39	0	0	0	0.380	-0.0400
IRON	239.56	0	0	0	1.91	0
LEAD	220.35	0	-0.0480	0	0.116	-0.0700
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	-1.04	0	-0.755	-0.0418	-0.110
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	-0.566	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.300	0	-1.52	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0.400	0	3.48	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	-0.0100	0	0	0.297
VANADIUM	290.88	0	0	0	0	0
ZINC	206.20	0	0	0	0	-3.64

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2289890
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	396.15	0	0.0192	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	-0.00250	0	0	0
BARIUM	233.53	0	-0.0187	0	0	0
BERYLLIUM	234.86	0	0.210	0	0	0
BORON	249.68	0	-4.66	0	0	0
CADMIUM	228.80	0	-0.00420	0	0	0
CALCIUM	227.55	-2.00	100	0	0	0.104
CHROMIUM	267.72	0	0.0391	0	0	0
COBALT	228.62	0	0.0262	0	0	0
COPPER	327.39	0	-0.0688	0	0.154	0
IRON	239.56	0	0	0	0	0.0276
LEAD	220.35	0.740	0.0440	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.540	0	0	0
MANGANESE	257.61	-0.0457	-0.0580	-0.0181	-0.794	0.0147
MOLYBDENUM	202.03	0	-0.0494	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.465	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0.0717	0.0240	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0.120	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.134	0	0	0
ZINC	206.20	-0.200	0.0198	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2289890
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

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

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2289890
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **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: 2289890
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12010576 **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: 2289890
Report generated: 01/27/2012 10:21

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12010576 **Date:** 01/03/2012
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	72.0
Selenium	10.00	45.0
Silicon	10.00	36.0
Silver	10.00	4.5
Sodium	10.00	180.0
Strontium	10.00	4.5
Thallium	10.00	45.0
Tin	10.00	45.0
Titanium	10.00	27.0
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: 2289889
Report generated: 01/27/2012 10:21

2.1.1.3 Raw Data

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

Results Data Set (original): 012512H
Results Library (original): C:\pe\peicp2\Results\Results.mdb
Results Data Set (reprocessed): 012512HR
Results Library (reprocessed): C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 1**
Sample ID: S0 **Date Collected: 1/25/2012 9:47:23 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:20 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S0

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3499937.2	57878.11	1.65%		
YRADIAL	261342.4	2607.49	1.00%		
Ga 417.206	692552.5	10812.74	1.56%		
GaRADIAL	39946.9	649.06	1.62%		
Ag 328.068†	-875.0	78.09	8.92%	[0.00]	mg/L
Al 396.153†	-64.6	5.95	9.21%	[0.00]	mg/L
As 188.979†	-0.8	2.40	307.69%	[0.00]	mg/L
Ba 233.527†	14.6	3.12	21.31%	[0.00]	mg/L
Be 234.861†	-573.5	16.39	2.86%	[0.00]	mg/L
B 249.677†	240.2	7.69	3.20%	[0.00]	mg/L
Ca 227.546†	-5.7	3.45	60.29%	[0.00]	mg/L
Cd 228.802†	23.9	1.99	8.31%	[0.00]	mg/L
Co 228.616†	-15.1	2.12	14.07%	[0.00]	mg/L
Cr 267.716†	106.0	12.76	12.03%	[0.00]	mg/L
Cu 327.393†	-1261.8	85.33	6.76%	[0.00]	mg/L
Fe 239.562†	2.2	0.76	34.82%	[0.00]	mg/L
Mg 279.077†	4.5	3.23	72.51%	[0.00]	mg/L
Mn 257.610†	338.0	6.99	2.07%	[0.00]	mg/L
Mo 202.031†	-19.7	0.95	4.83%	[0.00]	mg/L
Ni 231.604†	12.8	3.13	24.46%	[0.00]	mg/L
Pb 220.353†	20.8	1.98	9.52%	[0.00]	mg/L
Sb 206.836†	15.6	5.21	33.39%	[0.00]	mg/L
Se 196.026†	7.1	4.63	65.39%	[0.00]	mg/L
Si 251.611†	341.4	6.41	1.88%	[0.00]	mg/L
Sn 189.927†	12.9	3.11	24.20%	[0.00]	mg/L
Ti 334.940†	413.1	26.62	6.44%	[0.00]	mg/L
Tl 190.801†	-22.8	3.18	13.95%	[0.00]	mg/L
V 290.880†	4777.1	97.84	2.05%	[0.00]	mg/L
Zn 206.200†	6.0	2.61	43.85%	[0.00]	mg/L
K 766.490†	-9.5	15.04	158.18%	[0.00]	mg/L
Na 589.592†	968.8	177.62	18.33%	[0.00]	mg/L
Sr 407.771†	-485.9	21.89	4.50%	[0.00]	mg/L
Li 670.784†	-188.3	52.20	27.72%	[0.00]	mg/L

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S1 **Date Collected: 1/25/2012 9:54:14 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:21 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S1

Analyte	Back Pressure	Flow

Approved: January 26, 2012

All	145.0 kPa	0.50 L/min

Mean Data: S1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	3532844.1	38821.19	1.10%		
YRADIAL	263527.2	2871.10	1.09%		
Ga 417.206	702069.7	10832.59	1.54%		
GaRADIAL	40115.3	55.03	0.14%		
Ag 328.068†	639.5	72.49	11.34%	[0.0040]	mg/L
Al 396.153†	299.6	0.77	0.26%	[0.10]	mg/L
Ba 233.527†	311.2	1.74	0.56%	[0.010]	mg/L
Be 234.861†	177.0	13.96	7.89%	[0.0005]	mg/L
Cd 228.802†	5.7	4.66	81.69%	[0.00050]	mg/L
Co 228.616†	17.0	0.88	5.15%	[0.0020]	mg/L
Cr 267.716†	333.5	1.17	0.35%	[0.0050]	mg/L
Cu 327.393†	496.9	88.85	17.88%	[0.0050]	mg/L
Fe 239.562†	3.0	0.47	15.86%	[0.040]	mg/L
Mg 279.077†	27.7	2.44	8.80%	[0.10]	mg/L
Mn 257.610†	1332.5	6.20	0.46%	[0.0050]	mg/L
Mo 202.031†	68.2	4.57	6.70%	[0.010]	mg/L
Ni 231.604†	90.7	3.26	3.59%	[0.0050]	mg/L
Pb 220.353†	15.2	6.98	45.95%	[0.0050]	mg/L
Sb 206.836†	8.8	3.25	37.00%	[0.012]	mg/L
Si 251.611†	990.4	34.00	3.43%	[0.050]	mg/L
Sn 189.927†	25.1	0.55	2.18%	[0.010]	mg/L
Ti 334.940†	4676.9	165.84	3.55%	[0.010]	mg/L
V 290.880†	785.0	63.47	8.09%	[0.010]	mg/L
Zn 206.200†	143.6	1.76	1.23%	[0.010]	mg/L
K 766.490†	767.8	36.79	4.79%	[0.50]	mg/L
Na 589.592†	4641.7	217.88	4.69%	[0.50]	mg/L
Sr 407.771†	10780.0	113.50	1.05%	[0.010]	mg/L
Li 670.784†	584.2	36.27	6.21%	[0.010]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S2 **Date Collected: 1/25/2012 10:01:03 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:22 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S2

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: S2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	3505679.5	72070.76	2.06%		
YRADIAL	270133.8	2450.21	0.91%		
Ga 417.206	700492.6	15036.82	2.15%		
GaRADIAL	40872.0	548.51	1.34%		
Ag 328.068†	1126.3	98.21	8.72%	[0.0080]	mg/L
Al 396.153†	619.2	62.37	10.07%	[0.20]	mg/L
As 188.979†	6.5	2.87	43.93%	[0.0080]	mg/L
Ba 233.527†	644.4	8.22	1.28%	[0.020]	mg/L
Be 234.861†	345.7	17.58	5.08%	[0.0010]	mg/L
B 249.677†	297.0	19.86	6.69%	[0.010]	mg/L
Ca 227.546†	14.1	0.47	3.31%	[0.20]	mg/L
Cd 228.802†	11.4	2.17	19.12%	[0.0010]	mg/L
Co 228.616†	34.7	3.08	8.87%	[0.0040]	mg/L
Cr 267.716†	686.8	12.18	1.77%	[0.010]	mg/L
Cu 327.393†	1017.1	67.14	6.60%	[0.010]	mg/L
Fe 239.562†	6.9	0.32	4.64%	[0.080]	mg/L
Mg 279.077†	58.1	0.95	1.64%	[0.20]	mg/L
Mn 257.610†	2689.7	72.83	2.71%	[0.010]	mg/L
Mo 202.031†	146.5	4.80	3.28%	[0.020]	mg/L
Ni 231.604†	187.6	7.95	4.24%	[0.010]	mg/L

Approved: January 26, 2012

Pb 220.353†	31.8	2.01	6.30%	[0.010]	mg/L
Sb 206.836†	20.2	0.56	2.78%	[0.024]	mg/L
Se 196.026†	9.2	2.11	22.95%	[0.0080]	mg/L
Si 251.611†	1980.5	46.03	2.32%	[0.10]	mg/L
Sn 189.927†	55.0	0.37	0.67%	[0.020]	mg/L
Ti 334.940†	9802.6	142.99	1.46%	[0.020]	mg/L
Tl 190.801†	9.1	2.17	23.94%	[0.010]	mg/L
V 290.880†	1726.4	34.93	2.02%	[0.020]	mg/L
Zn 206.200†	288.0	5.53	1.92%	[0.020]	mg/L
K 766.490†	1693.9	24.01	1.42%	[1.00]	mg/L
Na 589.592†	9591.6	281.04	2.93%	[1.00]	mg/L
Sr 407.771†	22330.6	427.91	1.92%	[0.020]	mg/L
Li 670.784†	1225.6	37.70	3.08%	[0.020]	mg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S3 **Date Collected: 1/25/2012 10:07:52 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:24 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S3

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: S3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3376208.7	14075.70	0.42%		
YRADIAL	269795.4	2122.29	0.79%		
Ga 417.206	727273.2	2085.31	0.29%		
GaRADIAL	41375.8	1235.39	2.99%		
Ag 328.068†	51032.5	544.21	1.07%	[0.40]	mg/L
Al 396.153†	29234.6	114.37	0.39%	[10.00]	mg/L
As 188.979†	222.2	1.72	0.77%	[0.40]	mg/L
Ba 233.527†	32245.4	545.00	1.69%	[1.00]	mg/L
Be 234.861†	15846.8	149.88	0.95%	[0.05]	mg/L
B 249.677†	14603.4	270.68	1.85%	[0.50]	mg/L
Ca 227.546†	686.5	4.75	0.69%	[10.00]	mg/L
Cd 228.802†	566.5	4.95	0.87%	[0.05]	mg/L
Co 228.616†	2107.3	13.12	0.62%	[0.20]	mg/L
Cr 267.716†	32745.7	334.50	1.02%	[0.50]	mg/L
Cu 327.393†	49970.2	625.49	1.25%	[0.50]	mg/L
Fe 239.562†	383.4	6.27	1.64%	[4.00]	mg/L
Mg 279.077†	2847.2	36.37	1.28%	[10.00]	mg/L
Mn 257.610†	135854.2	1398.68	1.03%	[0.50]	mg/L
Mo 202.031†	7445.1	77.93	1.05%	[1.00]	mg/L
Ni 231.604†	9037.5	120.42	1.33%	[0.50]	mg/L
Pb 220.353†	1505.7	7.05	0.47%	[0.50]	mg/L
Sb 206.836†	1025.3	5.86	0.57%	[1.20]	mg/L
Se 196.026†	260.0	3.85	1.48%	[0.40]	mg/L
Si 251.611†	94448.8	1273.20	1.35%	[5.00]	mg/L
Sn 189.927†	2742.8	16.49	0.60%	[1.00]	mg/L
Ti 334.940†	491194.2	1077.36	0.22%	[1.00]	mg/L
Tl 190.801†	451.8	9.58	2.12%	[0.50]	mg/L
V 290.880†	89255.3	976.12	1.09%	[1.00]	mg/L
Zn 206.200†	14524.1	116.60	0.80%	[1.00]	mg/L
K 766.490†	77675.8	193.61	0.25%	[50.00]	mg/L
Na 589.592†	448058.9	14641.05	3.27%	[50.00]	mg/L
Sr 407.771†	1077007.3	12521.56	1.16%	[1.00]	mg/L
Li 670.784†	58985.2	314.34	0.53%	[1.00]	mg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S4 **Date Collected: 1/25/2012 10:14:46 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:25 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 26, 2012

Nebulizer Parameters: S4

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: S4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3364736.3	32924.60	0.98%		
YRADIAL	258196.6	11543.01	4.47%		
Ga 417.206	721131.2	9199.03	1.28%		
GaRADIAL	40307.6	2054.93	5.10%		
Ag 328.068†	101704.6	1413.44	1.39%	[0.80]	mg/L
Al 396.153†	57765.1	563.75	0.98%	[20.00]	mg/L
As 188.979†	438.0	2.74	0.62%	[0.80]	mg/L
Ba 233.527†	62866.6	257.94	0.41%	[2.00]	mg/L
Be 234.861†	31226.3	305.27	0.98%	[0.10]	mg/L
B 249.677†	29208.6	367.81	1.26%	[1.00]	mg/L
Ca 227.546†	1376.9	17.12	1.24%	[20.00]	mg/L
Cd 228.802†	1121.5	12.24	1.09%	[0.10]	mg/L
Co 228.616†	4099.4	31.82	0.78%	[0.40]	mg/L
Cr 267.716†	63992.4	618.00	0.97%	[1.00]	mg/L
Cu 327.393†	99127.3	1338.92	1.35%	[1.00]	mg/L
Fe 239.562†	767.9	36.58	4.76%	[8.00]	mg/L
Mg 279.077†	5806.4	236.60	4.07%	[20.00]	mg/L
Mn 257.610†	259792.8	551.43	0.21%	[1.00]	mg/L
Mo 202.031†	14503.6	134.47	0.93%	[2.00]	mg/L
Ni 231.604†	17478.0	265.76	1.52%	[1.00]	mg/L
Pb 220.353†	2915.4	24.24	0.83%	[1.00]	mg/L
Sb 206.836†	2020.6	23.89	1.18%	[2.40]	mg/L
Se 196.026†	515.4	8.07	1.57%	[0.80]	mg/L
Si 251.611†	183900.4	1208.76	0.66%	[10.00]	mg/L
Sn 189.927†	5316.6	44.93	0.85%	[2.00]	mg/L
Ti 334.940†	973634.1	2277.65	0.23%	[2.00]	mg/L
Tl 190.801†	870.3	5.72	0.66%	[1.00]	mg/L
V 290.880†	174493.4	403.58	0.23%	[2.00]	mg/L
Zn 206.200†	28176.9	254.82	0.90%	[2.00]	mg/L
K 766.490†	153413.2	1238.73	0.81%	[100.00]	mg/L
Na 589.592†	901628.6	34622.00	3.84%	[100.00]	mg/L
Sr 407.771†	2181066.5	108686.65	4.98%	[2.00]	mg/L
Li 670.784†	115200.6	429.36	0.37%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin, Calc Int	97.7	127100	0.00000	0.999998	
Al 396.153	4	Lin, Calc Int	60.2	2892	0.00000	0.999983	
As 188.979	3	Wt. Lin	2.2	547.4	0.00000	0.999988	
Ba 233.527	4	Lin, Calc Int	105.1	31530	0.00000	0.999922	
Be 234.861	4	Lin, Calc Int	46.1	312600	0.00000	0.999975	
B 249.677	3	Lin, Calc Int	2.1	29210	0.00000	1.000000	
Ca 227.546	3	Lin, Calc Int	-0.2	68.82	0.00000	0.999999	
Cd 228.802	4	Lin, Calc Int	0.8	11230	0.00000	0.999988	
Co 228.616	4	Lin, Calc Int	4.1	10290	0.00000	0.999901	
Cr 267.716	4	Lin, Calc Int	112.2	64160	0.00000	0.999937	
Cu 327.393	4	Lin, Calc Int	59.1	99220	0.00000	0.999992	
Fe 239.562	4	Lin, Calc Int	-0.6	96.04	0.00000	0.999999	
Mg 279.077	4	Lin, Calc Int	-7.4	289.6	0.00000	0.999956	
Mn 257.610	4	Lin, Calc Int	781.2	261200	0.00000	0.999755	
Mo 202.031	4	Lin, Calc Int	23.2	7276	0.00000	0.999916	
Ni 231.604	4	Lin, Calc Int	42.2	17550	0.00000	0.999865	
Pb 220.353	4	Lin, Calc Int	7.0	2926	0.00000	0.999875	
Sb 206.836	4	Lin, Calc Int	1.5	843.7	0.00000	0.999973	
Se 196.026	3	Wt. Lin	4.1	639.5	0.00000	1.000000	
Si 251.611	4	Lin, Calc Int	377.6	18440	0.00000	0.999915	
Sn 189.927	4	Lin, Calc Int	10.6	2669	0.00000	0.999881	
Ti 334.940	4	Lin, Calc Int	505.8	487400	0.00000	0.999990	
Tl 190.801	3	Lin, Calc Int	3.2	873.1	0.00000	0.999807	
V 290.880	4	Lin, Calc Int	216.9	87520	0.00000	0.999936	

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Zn 206.200	4	Lin, Calc Int	57.1	14140	0.00000	0.999888
K 766.490	4	Non Lin, Calc Int	34.1	1572	-0.38196	1.000000
Na 589.592	4	Non Lin, Calc Int	291.5	8898	1.15422	1.000000
Sr 407.771	4	Lin, Calc Int	-1561.6	1089000	0.00000	0.999981
Li 670.784	4	Lin, Calc Int	198.0	57760	0.00000	0.999933

Sequence No.: 6 **Autosampler Location: 11**
Sample ID: ICV 2nd Vendor **Date Collected: 1/25/2012 10:21:43 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:26 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	146.0 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	3500012.2				41169.90	1.18%
YRADIAL	270894.4				2187.69	0.81%
Ga 417.206	746566.1				7150.53	0.96%
GaRADIAL	41021.7				158.55	0.39%
Ag 328.068†	48741.8	0.384 mg/L	0.0068	0.384 mg/L	0.0068	1.76%
QC value within limits for Ag 328.068 Recovery = 95.97%						
Al 396.153†	28951.0	9.98 mg/L	0.008	9.98 mg/L	0.008	0.08%
QC value within limits for Al 396.153 Recovery = 99.78%						
As 188.979†	216.3	0.387 mg/L	0.0082	0.387 mg/L	0.0082	2.12%
QC value within limits for As 188.979 Recovery = 96.80%						
Ba 233.527†	31040.9	0.984 mg/L	0.0151	0.984 mg/L	0.0151	1.53%
QC value within limits for Ba 233.527 Recovery = 98.37%						
Be 234.861†	15108.3	0.0489 mg/L	0.00115	0.0489 mg/L	0.00115	2.34%
QC value within limits for Be 234.861 Recovery = 97.81%						
B 249.677†	14135.5	0.490 mg/L	0.0079	0.490 mg/L	0.0079	1.62%
QC value within limits for B 249.677 Recovery = 98.03%						
Ca 227.546†	663.2	9.57 mg/L	0.138	9.57 mg/L	0.138	1.44%
QC value within limits for Ca 227.546 Recovery = 95.70%						
Cd 228.802†	542.9	0.0492 mg/L	0.00095	0.0492 mg/L	0.00095	1.93%
QC value within limits for Cd 228.802 Recovery = 98.32%						
Co 228.616†	2014.5	0.193 mg/L	0.0025	0.193 mg/L	0.0025	1.31%
QC value within limits for Co 228.616 Recovery = 96.43%						
Cr 267.716†	31295.8	0.486 mg/L	0.0100	0.486 mg/L	0.0100	2.05%
QC value within limits for Cr 267.716 Recovery = 97.26%						
Cu 327.393†	48583.8	0.491 mg/L	0.0083	0.491 mg/L	0.0083	1.70%
QC value within limits for Cu 327.393 Recovery = 98.14%						
Fe 239.562†	377.8	3.94 mg/L	0.052	3.94 mg/L	0.052	1.32%
QC value within limits for Fe 239.562 Recovery = 98.46%						
Mg 279.077†	2818.8	9.76 mg/L	0.040	9.76 mg/L	0.040	0.41%
QC value within limits for Mg 279.077 Recovery = 97.60%						
Mn 257.610†	130059.9	0.499 mg/L	0.0094	0.499 mg/L	0.0094	1.88%
QC value within limits for Mn 257.610 Recovery = 99.73%						
Mo 202.031†	6931.4	0.950 mg/L	0.0157	0.950 mg/L	0.0157	1.66%
QC value less than the lower limit for Mo 202.031 Recovery = 94.99%						
Ni 231.604†	8652.8	0.491 mg/L	0.0080	0.491 mg/L	0.0080	1.62%
QC value within limits for Ni 231.604 Recovery = 98.12%						
Pb 220.353†	1438.4	0.494 mg/L	0.0071	0.494 mg/L	0.0071	1.43%
QC value within limits for Pb 220.353 Recovery = 98.86%						
Sb 206.836†	1009.1	1.20 mg/L	0.010	1.20 mg/L	0.010	0.84%
QC value within limits for Sb 206.836 Recovery = 99.91%						
Se 196.026†	259.2	0.403 mg/L	0.0123	0.403 mg/L	0.0123	3.04%
QC value within limits for Se 196.026 Recovery = 100.77%						
Si 251.611†	90599.4	4.88 mg/L	0.091	4.88 mg/L	0.091	1.87%
QC value within limits for Si 251.611 Recovery = 97.55%						
Sn 189.927†	2703.0	1.01 mg/L	0.018	1.01 mg/L	0.018	1.75%
QC value within limits for Sn 189.927 Recovery = 100.89%						
Ti 334.940†	481124.9	0.986 mg/L	0.0012	0.986 mg/L	0.0012	0.12%
QC value within limits for Ti 334.940 Recovery = 98.61%						
Tl 190.801†	437.0	0.505 mg/L	0.0112	0.505 mg/L	0.0112	2.21%

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   QC value within limits for Tl 190.801  Recovery = 101.02%
V 290.880†            83914.9       0.956 mg/L        0.0177       0.956 mg/L        0.0177   1.85%
   QC value within limits for V 290.880  Recovery = 95.62%
Zn 206.200†           13959.2       0.985 mg/L        0.0205       0.985 mg/L        0.0205   2.08%
   QC value within limits for Zn 206.200  Recovery = 98.53%
K 766.490†            76439.9        49.1 mg/L          0.18        49.1 mg/L          0.18   0.36%
   QC value within limits for K 766.490  Recovery = 98.29%
Na 589.592†          448982.9        50.1 mg/L          1.29        50.1 mg/L          1.29   2.57%
   QC value within limits for Na 589.592  Recovery = 100.20%
Sr 407.771†         1060000.4       0.974 mg/L        0.0138       0.974 mg/L        0.0138   1.42%
   QC value within limits for Sr 407.771  Recovery = 97.41%
Li 670.784†           58305.4        1.01 mg/L         0.008        1.01 mg/L         0.008   0.79%
   QC value within limits for Li 670.784  Recovery = 100.61%
QC Failed.  Continue with analysis.

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Sequence No.: 7                                    Autosampler Location: 1
Sample ID: ICB                                     Date Collected: 1/25/2012 10:28:35 AM
Analyst:                                           Data Type: Reprocessed on 1/25/2012 11:03:28 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                      146.0 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            3517672.8                                                   61103.04   1.74%
YRADIAL               262589.5                                                    3173.33   1.21%
Ga 417.206            691648.4                                                    6856.52   0.99%
GaRADIAL               40179.8                                                    1164.81   2.90%
Ag 328.068†              -67.4    -0.00131 mg/L      0.001028    -0.00131 mg/L      0.001028  78.73%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               43.2    -0.00585 mg/L      0.021715    -0.00585 mg/L      0.021715 371.30%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                2.0    -0.00033 mg/L      0.007612    -0.00033 mg/L      0.007612 >999.9%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -5.0    -0.00350 mg/L      0.000126    -0.00350 mg/L      0.000126   3.60%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               27.7    -0.00007 mg/L      0.000069    -0.00007 mg/L      0.000069 104.47%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                91.7     0.00312 mg/L      0.000844     0.00312 mg/L      0.000844  27.03%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                1.9      0.0288 mg/L       0.09116      0.0288 mg/L       0.09116 316.66%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -3.4    -0.00037 mg/L      0.000181    -0.00037 mg/L      0.000181  48.45%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -4.7    -0.00086 mg/L      0.000360    -0.00086 mg/L      0.000360  41.98%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1    -0.00173 mg/L      0.000109    -0.00173 mg/L      0.000109   6.27%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -96.6    -0.00157 mg/L      0.000736    -0.00157 mg/L      0.000736  46.82%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                0.2     0.00784 mg/L      0.013501     0.00784 mg/L      0.013501 172.23%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                0.2      0.0263 mg/L       0.00651      0.0263 mg/L       0.00651  24.71%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              -31.2    -0.00311 mg/L      0.000030    -0.00311 mg/L      0.000030   0.95%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -2.7    -0.00356 mg/L      0.000571    -0.00356 mg/L      0.000571  16.03%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                3.1    -0.00223 mg/L      0.000363    -0.00223 mg/L      0.000363  16.25%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                4.6    -0.00083 mg/L      0.001248    -0.00083 mg/L      0.001248 150.23%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                0.1    -0.00168 mg/L      0.002285    -0.00168 mg/L      0.002285 135.70%
   QC value within limits for Sb 206.836  Recovery = Not calculated
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Se 196.026†	1.2	-0.00442	mg/L	0.005138	-0.00442	mg/L	0.005138	116.15%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	9.0	-0.0199	mg/L	0.00045	-0.0199	mg/L	0.00045	2.24%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	5.0	-0.00212	mg/L	0.000665	-0.00212	mg/L	0.000665	31.41%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-120.0	-0.00128	mg/L	0.000051	-0.00128	mg/L	0.000051	3.94%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	3.3	0.00010	mg/L	0.002654	0.00010	mg/L	0.002654	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	-124.6	-0.00390	mg/L	0.001783	-0.00390	mg/L	0.001783	45.74%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	1.0	-0.00397	mg/L	0.000072	-0.00397	mg/L	0.000072	1.80%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	87.7	0.0341	mg/L	0.02841	0.0341	mg/L	0.02841	83.27%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	42.8	-0.0279	mg/L	0.00887	-0.0279	mg/L	0.00887	31.73%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	-56.7	0.00138	mg/L	0.000062	0.00138	mg/L	0.000062	4.47%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	94.5	-0.00179	mg/L	0.001293	-0.00179	mg/L	0.001293	72.16%
QC value within limits for Li 670.784 Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 8 **Autosampler Location: 12**
Sample ID: ICSA **Date Collected: 1/25/2012 10:35:24 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:29 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	145.0 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	3275139.5						40060.43	1.22%
YRADIAL	258119.3						5419.03	2.10%
Ga 417.206	715371.6						8191.27	1.15%
GaRADIAL	40681.4						1282.97	3.15%
Ag 328.068†	419.7	-0.00105	mg/L	0.001126	-0.00105	mg/L	0.001126	106.83%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	703678.1	243	mg/L	4.2	243	mg/L	4.2	1.74%
QC value within limits for Al 396.153 Recovery = 97.33%								
As 188.979†	20.9	-0.00009	mg/L	0.010753	-0.00009	mg/L	0.010753	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	79.3	-0.00447	mg/L	0.000112	-0.00447	mg/L	0.000112	2.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	6066.4	-0.00060	mg/L	0.000325	-0.00060	mg/L	0.000325	54.52%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	-6262.3	-0.0314	mg/L	0.01186	-0.0314	mg/L	0.01186	37.72%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	17980.8	251	mg/L	8.4	251	mg/L	8.4	3.33%
QC value within limits for Ca 227.546 Recovery = 100.57%								
Cd 228.802†	-5.3	-0.00023	mg/L	0.000188	-0.00023	mg/L	0.000188	80.74%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	5.8	-0.00239	mg/L	0.000552	-0.00239	mg/L	0.000552	23.12%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	331.8	0.00021	mg/L	0.000244	0.00021	mg/L	0.000244	118.81%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-658.3	-0.00050	mg/L	0.001349	-0.00050	mg/L	0.001349	271.53%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	9389.1	97.8	mg/L	1.25	97.8	mg/L	1.25	1.28%
QC value within limits for Fe 239.562 Recovery = 97.76%								
Mg 279.077†	72627.1	251	mg/L	3.3	251	mg/L	3.3	1.31%
QC value within limits for Mg 279.077 Recovery = 100.29%								
Mn 257.610†	-62.9	-0.00122	mg/L	0.000151	-0.00122	mg/L	0.000151	12.41%

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   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -10.1     0.00025 mg/L      0.000524     0.00025 mg/L      0.000524 210.18%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -43.0    -0.00494 mg/L      0.000278    -0.00494 mg/L      0.000278   5.64%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -59.7     0.00001 mg/L      0.004247     0.00001 mg/L      0.004247 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               18.5      0.0202 mg/L       0.00392      0.0202 mg/L       0.00392  19.43%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -65.4    -0.00001 mg/L      0.010364    -0.00001 mg/L      0.010364 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              374.8    -0.00009 mg/L      0.001381    -0.00009 mg/L      0.001381 >999.9%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -56.0     -0.0250 mg/L       0.00473     -0.0250 mg/L       0.00473  18.95%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -1454.2    -0.00141 mg/L      0.000036    -0.00141 mg/L      0.000036   2.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              113.1      0.0213 mg/L       0.01223      0.0213 mg/L       0.01223  57.49%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†             -1071.6    -0.00105 mg/L      0.003012    -0.00105 mg/L      0.003012 287.69%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               31.0    -0.00377 mg/L      0.000679    -0.00377 mg/L      0.000679  18.02%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -15.2     -0.0314 mg/L       0.01572     -0.0314 mg/L       0.01572  50.09%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              229.1    -0.00701 mg/L      0.010494    -0.00701 mg/L      0.010494 149.69%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            30042.0     0.00674 mg/L      0.000258     0.00674 mg/L      0.000258   3.83%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              220.9     0.00040 mg/L      0.001695     0.00040 mg/L      0.001695 428.33%
   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: 1/25/2012 10:41:17 AM
Analyst:                                             Data Type: Reprocessed on 1/25/2012 11:03:30 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                   Initial Sample Vol:
Dilution:                                            Sample Prep Vol:

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Nebulizer Parameters: ICSAB
Analyte                 Back Pressure    Flow
All                    146.0 kPa        0.50 L/min

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Mean Data: ICSAB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            3237792.9                                                    48886.55   1.51%
YRADIAL               259518.4                                                     1583.92   0.61%
Ga 417.206            703794.4                                                    14855.76   2.11%
GaRADIAL               39301.8                                                      196.74   0.50%
Ag 328.068†            65240.7       0.510 mg/L        0.0165       0.510 mg/L        0.0165   3.23%
   QC value within limits for Ag 328.068  Recovery = 101.91%
Al 396.153†           737668.4         255 mg/L           0.7         255 mg/L           0.7   0.26%
   QC value within limits for Al 396.153  Recovery = 102.03%
As 188.979†              148.9       0.234 mg/L        0.0059       0.234 mg/L        0.0059   2.53%
   QC value within limits for As 188.979  Recovery = 93.48%
Ba 233.527†             7794.7       0.241 mg/L        0.0060       0.241 mg/L        0.0060   2.48%
   QC value within limits for Ba 233.527  Recovery = 96.37%
Be 234.861†            86447.6       0.257 mg/L        0.0059       0.257 mg/L        0.0059   2.31%
   QC value within limits for Be 234.861  Recovery = 102.94%
B 249.677†             -6439.7     -0.0816 mg/L       0.01766     -0.0816 mg/L       0.01766  21.63%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†            18327.5         257 mg/L          12.1         257 mg/L          12.1   4.72%
   QC value within limits for Ca 227.546  Recovery = 102.88%
Cd 228.802†             5177.5       0.462 mg/L        0.0101       0.462 mg/L        0.0101   2.18%
   QC value within limits for Cd 228.802  Recovery = 92.39%
Co 228.616†             2408.9       0.231 mg/L        0.0042       0.231 mg/L        0.0042   1.81%
   QC value within limits for Co 228.616  Recovery = 92.43%
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Cr 267.716†	16152.7	0.247 mg/L	0.0091	0.247 mg/L	0.0091	3.70%
QC value within limits for Cr 267.716 Recovery = 98.82%						
Cu 327.393†	23892.3	0.247 mg/L	0.0080	0.247 mg/L	0.0080	3.26%
QC value within limits for Cu 327.393 Recovery = 98.63%						
Fe 239.562†	9016.4	93.9 mg/L	0.85	93.9 mg/L	0.85	0.91%
QC value within limits for Fe 239.562 Recovery = 93.88%						
Mg 279.077†	69948.3	241 mg/L	1.5	241 mg/L	1.5	0.61%
QC value within limits for Mg 279.077 Recovery = 96.59%						
Mn 257.610†	64848.0	0.248 mg/L	0.0083	0.248 mg/L	0.0083	3.35%
QC value within limits for Mn 257.610 Recovery = 99.32%						
Mo 202.031†	-15.6	-0.00063 mg/L	0.000525	-0.00063 mg/L	0.000525	84.01%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	8277.7	0.469 mg/L	0.0071	0.469 mg/L	0.0071	1.52%
QC value within limits for Ni 231.604 Recovery = 93.83%						
Pb 220.353†	1385.6	0.495 mg/L	0.0063	0.495 mg/L	0.0063	1.28%
QC value within limits for Pb 220.353 Recovery = 98.95%						
Sb 206.836†	441.4	0.520 mg/L	0.0125	0.520 mg/L	0.0125	2.40%
QC value within limits for Sb 206.836 Recovery = 104.01%						
Se 196.026†	89.3	0.241 mg/L	0.0033	0.241 mg/L	0.0033	1.37%
QC value within limits for Se 196.026 Recovery = 96.45%						
Si 251.611†	164.1	-0.0115 mg/L	0.00089	-0.0115 mg/L	0.00089	7.73%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-55.8	-0.0249 mg/L	0.00316	-0.0249 mg/L	0.00316	12.70%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-1436.5	-0.00140 mg/L	0.000170	-0.00140 mg/L	0.000170	12.21%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	531.0	0.498 mg/L	0.0144	0.498 mg/L	0.0144	2.88%
QC value within limits for Tl 190.801 Recovery = 99.57%						
V 290.880†	20922.3	0.250 mg/L	0.0116	0.250 mg/L	0.0116	4.63%
QC value within limits for V 290.880 Recovery = 99.89%						
Zn 206.200†	6806.0	0.477 mg/L	0.0084	0.477 mg/L	0.0084	1.76%
QC value within limits for Zn 206.200 Recovery = 95.34%						
K 766.490†	7866.4	4.98 mg/L	0.028	4.98 mg/L	0.028	0.57%
QC value within limits for K 766.490 Recovery = 99.67%						
Na 589.592†	45600.7	5.09 mg/L	0.010	5.09 mg/L	0.010	0.19%
QC value within limits for Na 589.592 Recovery = 101.78%						
Sr 407.771†	29010.7	0.00667 mg/L	0.000241	0.00667 mg/L	0.000241	3.60%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	188.6	-0.00016 mg/L	0.001583	-0.00016 mg/L	0.001583	971.74%
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: 1/25/2012 10:47:10 AM**
Analyst: **Data Type: Reprocessed on 1/25/2012 11:03:31 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	146.0 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	3412128.9						65672.28	1.92%
YRADIAL	262685.0						3242.83	1.23%
Ga 417.206	732289.8						15009.69	2.05%
GaRADIAL	40983.1						311.71	0.76%
Ag 328.068†	51381.0	0.405	mg/L	0.0080	0.405	mg/L	0.0080	1.98%
QC value within limits for Ag 328.068 Recovery = 101.18%								
Al 396.153†	29014.3	10.00	mg/L	0.045	10.00	mg/L	0.045	0.45%
QC value within limits for Al 396.153 Recovery = 99.99%								
As 188.979†	221.2	0.396	mg/L	0.0150	0.396	mg/L	0.0150	3.78%
QC value within limits for As 188.979 Recovery = 98.96%								
Ba 233.527†	32491.9	1.03	mg/L	0.014	1.03	mg/L	0.014	1.36%
QC value within limits for Ba 233.527 Recovery = 102.99%								
Be 234.861†	16082.9	0.0521	mg/L	0.00086	0.0521	mg/L	0.00086	1.65%

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   QC value within limits for Be 234.861  Recovery = 104.25%
B 249.677†            14791.1       0.513 mg/L        0.0099       0.513 mg/L        0.0099   1.93%
   QC value within limits for B 249.677  Recovery = 102.61%
Ca 227.546†              682.8        9.86 mg/L         0.207        9.86 mg/L         0.207   2.10%
   QC value within limits for Ca 227.546  Recovery = 98.63%
Cd 228.802†              563.6      0.0510 mg/L       0.00077      0.0510 mg/L       0.00077   1.51%
   QC value within limits for Cd 228.802  Recovery = 102.04%
Co 228.616†             2076.2       0.199 mg/L        0.0035       0.199 mg/L        0.0035   1.74%
   QC value within limits for Co 228.616  Recovery = 99.42%
Cr 267.716†            33004.0       0.513 mg/L        0.0083       0.513 mg/L        0.0083   1.62%
   QC value within limits for Cr 267.716  Recovery = 102.59%
Cu 327.393†            50045.6       0.506 mg/L        0.0112       0.506 mg/L        0.0112   2.21%
   QC value within limits for Cu 327.393  Recovery = 101.10%
Fe 239.562†              386.6        4.03 mg/L         0.098        4.03 mg/L         0.098   2.43%
   QC value within limits for Fe 239.562  Recovery = 100.75%
Mg 279.077†             2904.9        10.1 mg/L          0.15        10.1 mg/L          0.15   1.50%
   QC value within limits for Mg 279.077  Recovery = 100.58%
Mn 257.610†           136203.1       0.522 mg/L        0.0096       0.522 mg/L        0.0096   1.83%
   QC value within limits for Mn 257.610  Recovery = 104.45%
Mo 202.031†             7487.5        1.03 mg/L         0.024        1.03 mg/L         0.024   2.36%
   QC value within limits for Mo 202.031  Recovery = 102.64%
Ni 231.604†             9076.9       0.515 mg/L        0.0095       0.515 mg/L        0.0095   1.85%
   QC value within limits for Ni 231.604  Recovery = 102.95%
Pb 220.353†             1477.2       0.508 mg/L        0.0093       0.508 mg/L        0.0093   1.84%
   QC value within limits for Pb 220.353  Recovery = 101.59%
Sb 206.836†             1022.5        1.22 mg/L         0.024        1.22 mg/L         0.024   1.99%
   QC value within limits for Sb 206.836  Recovery = 101.26%
Se 196.026†              261.3       0.406 mg/L        0.0094       0.406 mg/L        0.0094   2.30%
   QC value within limits for Se 196.026  Recovery = 101.62%
Si 251.611†            95365.0        5.13 mg/L         0.117        5.13 mg/L         0.117   2.28%
   QC value within limits for Si 251.611  Recovery = 102.69%
Sn 189.927†             2709.1        1.01 mg/L         0.020        1.01 mg/L         0.020   1.96%
   QC value within limits for Sn 189.927  Recovery = 101.11%
Ti 334.940†           487113.1       0.998 mg/L        0.0023       0.998 mg/L        0.0023   0.23%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†              447.2       0.517 mg/L        0.0105       0.517 mg/L        0.0105   2.04%
   QC value within limits for Tl 190.801  Recovery = 103.38%
V 290.880†             89568.8        1.02 mg/L         0.018        1.02 mg/L         0.018   1.81%
   QC value within limits for V 290.880  Recovery = 102.08%
Zn 206.200†            14550.8        1.03 mg/L         0.018        1.03 mg/L         0.018   1.78%
   QC value within limits for Zn 206.200  Recovery = 102.73%
K 766.490†             77296.3        49.7 mg/L          0.15        49.7 mg/L          0.15   0.30%
   QC value within limits for K 766.490  Recovery = 99.40%
Na 589.592†           446545.4        49.8 mg/L          1.47        49.8 mg/L          1.47   2.94%
   QC value within limits for Na 589.592  Recovery = 99.66%
Sr 407.771†          1073394.0       0.986 mg/L        0.0127       0.986 mg/L        0.0127   1.29%
   QC value within limits for Sr 407.771  Recovery = 98.64%
Li 670.784†            58903.3        1.02 mg/L         0.011        1.02 mg/L         0.011   1.06%
   QC value within limits for Li 670.784  Recovery = 101.64%
All analyte(s) passed QC.

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Sequence No.: 11                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 1/25/2012 10:54:06 AM
Analyst:                                          Data Type: Reprocessed on 1/25/2012 11:03:32 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     146.0 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            3462238.1                                                     29684.56   0.86%
YRADIAL               268124.1                                                      4726.50   1.76%
Ga 417.206            686051.7                                                     11994.96   1.75%
GaRADIAL               40970.7                                                       675.51   1.65%
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Approved: January 26, 2012

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Ag 328.068†            -141.5    -0.00188 mg/L      0.001031    -0.00188 mg/L      0.001031  54.70%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              41.0    -0.00657 mg/L      0.013738    -0.00657 mg/L      0.013738 208.94%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               1.8    -0.00068 mg/L      0.001195    -0.00068 mg/L      0.001195 176.04%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -0.9    -0.00337 mg/L      0.000087    -0.00337 mg/L      0.000087   2.60%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              22.6    -0.00008 mg/L      0.000034    -0.00008 mg/L      0.000034  40.64%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               71.6     0.00246 mg/L      0.000263     0.00246 mg/L      0.000263  10.71%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               2.6      0.0376 mg/L       0.00199      0.0376 mg/L       0.00199   5.28%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -2.5    -0.00030 mg/L      0.000261    -0.00030 mg/L      0.000261  88.57%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -6.7    -0.00105 mg/L      0.000162    -0.00105 mg/L      0.000162  15.41%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              21.4    -0.00142 mg/L      0.000047    -0.00142 mg/L      0.000047   3.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -108.2    -0.00168 mg/L      0.000772    -0.00168 mg/L      0.000772  45.81%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               0.7      0.0134 mg/L       0.02144      0.0134 mg/L       0.02144 160.34%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               1.5      0.0305 mg/L       0.00683      0.0305 mg/L       0.00683  22.35%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              -8.2    -0.00303 mg/L      0.000018    -0.00303 mg/L      0.000018   0.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -4.2    -0.00377 mg/L      0.000219    -0.00377 mg/L      0.000219   5.81%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               5.8    -0.00207 mg/L      0.000059    -0.00207 mg/L      0.000059   2.85%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               1.0    -0.00206 mg/L      0.001255    -0.00206 mg/L      0.001255  60.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -0.5    -0.00239 mg/L      0.004737    -0.00239 mg/L      0.004737 197.97%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.6    -0.00730 mg/L      0.003085    -0.00730 mg/L      0.003085  42.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               9.1     -0.0199 mg/L       0.00062     -0.0199 mg/L       0.00062   3.12%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.8    -0.00257 mg/L      0.001294    -0.00257 mg/L      0.001294  50.32%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -53.6    -0.00115 mg/L      0.000225    -0.00115 mg/L      0.000225  19.62%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               0.6    -0.00295 mg/L      0.006339    -0.00295 mg/L      0.006339 215.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               82.4    -0.00153 mg/L      0.001266    -0.00153 mg/L      0.001266  82.58%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               3.2    -0.00382 mg/L      0.000174    -0.00382 mg/L      0.000174   4.55%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               64.6      0.0194 mg/L       0.02150      0.0194 mg/L       0.02150 110.59%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -110.2     -0.0451 mg/L       0.00722     -0.0451 mg/L       0.00722  15.98%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -30.0     0.00140 mg/L      0.000055     0.00140 mg/L      0.000055   3.94%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             -11.9    -0.00364 mg/L      0.000499    -0.00364 mg/L      0.000499  13.74%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
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Approved: January 26, 2012

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Analysis Begun

Start Time: 1/25/2012 11:04:11 AM **Plasma On Time: 1/25/2012 7:37:34 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\WEDNESDAY1.sif
Batch ID:
Results Data Set: 012512HR
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 14**
Sample ID: PBW X5 WG387803-02 **Date Collected: 1/25/2012 11:04:13 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW X5 WG387803-02

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: PBW X5 WG387803-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3472471.1						29689.80	0.86%
YRADIAL	266275.9						4388.34	1.65%
Ga 417.206	673271.7						7773.77	1.15%
GaRADIAL	41494.5						731.36	1.76%
Ag 328.068†	-54.1	-0.00120	mg/L	0.000281	-0.00120	mg/L	0.000281	23.45%
Al 396.153†	22.5	-0.0130	mg/L	0.01453	-0.0130	mg/L	0.01453	111.86%
As 188.979†	1.4	-0.00132	mg/L	0.000314	-0.00132	mg/L	0.000314	23.78%
Ba 233.527†	1.4	-0.00330	mg/L	0.000096	-0.00330	mg/L	0.000096	2.90%
Be 234.861†	-72.0	-0.00039	mg/L	0.000025	-0.00039	mg/L	0.000025	6.55%
B 249.677†	56.3	0.00190	mg/L	0.000144	0.00190	mg/L	0.000144	7.61%
Ca 227.546†	1.2	0.0180	mg/L	0.07427	0.0180	mg/L	0.07427	412.27%
Cd 228.802†	2.3	0.00013	mg/L	0.000303	0.00013	mg/L	0.000303	236.54%
Co 228.616†	-10.3	-0.00140	mg/L	0.000016	-0.00140	mg/L	0.000016	1.17%
Cr 267.716†	-40.2	-0.00238	mg/L	0.000035	-0.00238	mg/L	0.000035	1.49%
Cu 327.393†	187.8	0.00130	mg/L	0.000961	0.00130	mg/L	0.000961	74.15%
Fe 239.562†	-0.0	0.00565	mg/L	0.001684	0.00565	mg/L	0.001684	29.81%
Mg 279.077†	0.1	0.0260	mg/L	0.00139	0.0260	mg/L	0.00139	5.35%
Mn 257.610†	-123.3	-0.00347	mg/L	0.000031	-0.00347	mg/L	0.000031	0.89%
Mo 202.031†	-8.9	-0.00441	mg/L	0.000951	-0.00441	mg/L	0.000951	21.58%
Ni 231.604†	3.2	-0.00222	mg/L	0.000238	-0.00222	mg/L	0.000238	10.70%
Pb 220.353†	-1.3	-0.00285	mg/L	0.002059	-0.00285	mg/L	0.002059	72.33%
Sb 206.836†	0.1	-0.00167	mg/L	0.001134	-0.00167	mg/L	0.001134	68.07%
Se 196.026†	1.9	-0.00335	mg/L	0.007450	-0.00335	mg/L	0.007450	222.37%
Si 251.611†	33.0	-0.0186	mg/L	0.00039	-0.0186	mg/L	0.00039	2.12%
Sn 189.927†	-0.2	-0.00405	mg/L	0.000376	-0.00405	mg/L	0.000376	9.30%
Ti 334.940†	9.6	-0.00102	mg/L	0.000062	-0.00102	mg/L	0.000062	6.05%
Tl 190.801†	-3.0	-0.00715	mg/L	0.001818	-0.00715	mg/L	0.001818	25.42%
V 290.880†	-69.9	-0.00327	mg/L	0.001242	-0.00327	mg/L	0.001242	37.94%
Zn 206.200†	22.5	-0.00245	mg/L	0.000139	-0.00245	mg/L	0.000139	5.67%
K 766.490†	3.3	-0.0196	mg/L	0.01294	-0.0196	mg/L	0.01294	65.86%
Na 589.592†	439.2	0.0166	mg/L	0.01390	0.0166	mg/L	0.01390	83.74%
Sr 407.771†	441.5	0.00184	mg/L	0.000044	0.00184	mg/L	0.000044	2.40%
Li 670.784†	-103.5	-0.00522	mg/L	0.000782	-0.00522	mg/L	0.000782	14.98%

==========

Sequence No.: 2 **Autosampler Location: 15**
Sample ID: LCSW X5 WG387781-03 **Date Collected: 1/25/2012 11:11:02 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW X5 WG387781-03

Approved: January 26, 2012

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: LCSW X5 WG387781-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3510849.6						59902.47	1.71%
YRADIAL	267631.2						5949.22	2.22%
Ga 417.206	727894.9						15335.77	2.11%
GaRADIAL	41013.7						201.98	0.49%
Ag 328.068†	24693.0	0.194	mg/L	0.0042	0.194	mg/L	0.0042	2.16%
Al 396.153†	14310.9	4.92	mg/L	0.132	4.92	mg/L	0.132	2.67%
As 188.979†	105.0	0.186	mg/L	0.0008	0.186	mg/L	0.0008	0.41%
Ba 233.527†	15499.2	0.490	mg/L	0.0119	0.490	mg/L	0.0119	2.43%
Be 234.861†	7295.3	0.0236	mg/L	0.00050	0.0236	mg/L	0.00050	2.10%
B 249.677†	27471.8	0.944	mg/L	0.0205	0.944	mg/L	0.0205	2.17%
Ca 227.546†	328.3	4.74	mg/L	0.075	4.74	mg/L	0.075	1.58%
Cd 228.802†	269.1	0.0243	mg/L	0.00045	0.0243	mg/L	0.00045	1.84%
Co 228.616†	997.0	0.0952	mg/L	0.00152	0.0952	mg/L	0.00152	1.60%
Cr 267.716†	15686.7	0.243	mg/L	0.0044	0.243	mg/L	0.0044	1.80%
Cu 327.393†	24449.5	0.247	mg/L	0.0045	0.247	mg/L	0.0045	1.82%
Fe 239.562†	188.7	1.97	mg/L	0.044	1.97	mg/L	0.044	2.25%
Mg 279.077†	1427.2	4.95	mg/L	0.139	4.95	mg/L	0.139	2.81%
Mn 257.610†	63805.3	0.243	mg/L	0.0041	0.243	mg/L	0.0041	1.67%
Mo 202.031†	3589.2	0.490	mg/L	0.0097	0.490	mg/L	0.0097	1.97%
Ni 231.604†	4303.5	0.243	mg/L	0.0023	0.243	mg/L	0.0023	0.95%
Pb 220.353†	708.6	0.242	mg/L	0.0046	0.242	mg/L	0.0046	1.88%
Sb 206.836†	491.7	0.583	mg/L	0.0093	0.583	mg/L	0.0093	1.59%
Se 196.026†	120.3	0.184	mg/L	0.0003	0.184	mg/L	0.0003	0.17%
Si 251.611†	46482.9	2.49	mg/L	0.049	2.49	mg/L	0.049	1.95%
Sn 189.927†	-1.5	-0.00455	mg/L	0.001280	-0.00455	mg/L	0.001280	28.16%
Ti 334.940†	239482.3	0.490	mg/L	0.0007	0.490	mg/L	0.0007	0.13%
Tl 190.801†	208.7	0.240	mg/L	0.0029	0.240	mg/L	0.0029	1.19%
V 290.880†	42436.4	0.482	mg/L	0.0087	0.482	mg/L	0.0087	1.81%
Zn 206.200†	6774.8	0.476	mg/L	0.0085	0.476	mg/L	0.0085	1.78%
K 766.490†	38060.9	24.3	mg/L	0.06	24.3	mg/L	0.06	0.23%
Na 589.592†	228841.3	25.6	mg/L	0.37	25.6	mg/L	0.37	1.45%
Sr 407.771†	529357.6	0.487	mg/L	0.0055	0.487	mg/L	0.0055	1.14%
Li 670.784†	29513.4	0.508	mg/L	0.0129	0.508	mg/L	0.0129	2.53%

Sequence No.: 3
Sample ID: L1201051402 WG387781-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 1/25/2012 11:17:55 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201051402 WG387781-01

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201051402 WG387781-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3364500.9						43018.03	1.28%
YRADIAL	266798.8						3547.13	1.33%
Ga 417.206	719111.1						13345.66	1.86%
GaRADIAL	40658.3						556.57	1.37%
Ag 328.068†	-175.5	-0.00215	mg/L	0.000664	-0.00215	mg/L	0.000664	30.84%
Al 396.153†	97.2	0.0129	mg/L	0.02956	0.0129	mg/L	0.02956	229.70%
As 188.979†	1.9	-0.00047	mg/L	0.003726	-0.00047	mg/L	0.003726	788.77%
Ba 233.527†	3122.5	0.0957	mg/L	0.00066	0.0957	mg/L	0.00066	0.69%
Be 234.861†	-14.2	-0.00022	mg/L	0.000029	-0.00022	mg/L	0.000029	13.03%
B 249.677†	3332.3	0.114	mg/L	0.0029	0.114	mg/L	0.0029	2.55%
Ca 227.546†	66.9	0.964	mg/L	0.0777	0.964	mg/L	0.0777	8.06%
Cd 228.802†	1.9	0.00010	mg/L	0.000162	0.00010	mg/L	0.000162	165.86%
Co 228.616†	-8.6	-0.00127	mg/L	0.000260	-0.00127	mg/L	0.000260	20.48%
Cr 267.716†	31.3	-0.00126	mg/L	0.000083	-0.00126	mg/L	0.000083	6.59%
Cu 327.393†	230.0	0.00174	mg/L	0.000880	0.00174	mg/L	0.000880	50.68%

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Fe 239.562†	9.2	0.101	mg/L	0.0112	0.101	mg/L	0.0112	11.06%
Mg 279.077†	63.5	0.245	mg/L	0.0052	0.245	mg/L	0.0052	2.14%
Mn 257.610†	2065.8	0.00635	mg/L	0.000091	0.00635	mg/L	0.000091	1.44%
Mo 202.031†	-9.8	-0.00452	mg/L	0.000339	-0.00452	mg/L	0.000339	7.49%
Ni 231.604†	28.3	-0.00079	mg/L	0.000488	-0.00079	mg/L	0.000488	61.94%
Pb 220.353†	7.9	0.00031	mg/L	0.001142	0.00031	mg/L	0.001142	368.08%
Sb 206.836†	0.6	-0.00111	mg/L	0.002736	-0.00111	mg/L	0.002736	247.62%
Se 196.026†	2.3	-0.00244	mg/L	0.002783	-0.00244	mg/L	0.002783	113.97%
Si 251.611†	2599.1	0.121	mg/L	0.0088	0.121	mg/L	0.0088	7.30%
Sn 189.927†	3.2	-0.00278	mg/L	0.000427	-0.00278	mg/L	0.000427	15.40%
Ti 334.940†	598.9	0.00020	mg/L	0.000129	0.00020	mg/L	0.000129	64.11%
Tl 190.801†	-4.5	-0.00914	mg/L	0.006218	-0.00914	mg/L	0.006218	68.00%
V 290.880†	353.8	0.00158	mg/L	0.001582	0.00158	mg/L	0.001582	100.37%
Zn 206.200†	1040.8	0.0696	mg/L	0.00099	0.0696	mg/L	0.00099	1.43%
K 766.490†	4230.3	2.52	mg/L	0.056	2.52	mg/L	0.056	2.21%
Na 589.592†	1337752.8	147	mg/L	2.1	147	mg/L	2.1	1.41%
Sr 407.771†	2821.7	0.00400	mg/L	0.000058	0.00400	mg/L	0.000058	1.45%
Li 670.784†	47.1	-0.00261	mg/L	0.000806	-0.00261	mg/L	0.000806	30.85%

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Sequence No.: 4 **Autosampler Location: 17**
Sample ID: L1201051402S WG387781-04 **Date Collected: 1/25/2012 11:24:48 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051402S WG387781-04

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201051402S WG387781-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3378510.4						73147.91	2.17%
YRADIAL	264955.8						2243.25	0.85%
Ga 417.206	719195.4						7686.64	1.07%
GaRADIAL	40335.7						1177.93	2.92%
Ag 328.068†	24971.8	0.196	mg/L	0.0011	0.196	mg/L	0.0011	0.55%
Al 396.153†	14821.1	5.10	mg/L	0.015	5.10	mg/L	0.015	0.30%
As 188.979†	103.7	0.183	mg/L	0.0052	0.183	mg/L	0.0052	2.83%
Ba 233.527†	19131.4	0.605	mg/L	0.0145	0.605	mg/L	0.0145	2.41%
Be 234.861†	7489.8	0.0242	mg/L	0.00005	0.0242	mg/L	0.00005	0.22%
B 249.677†	31535.6	1.08	mg/L	0.007	1.08	mg/L	0.007	0.62%
Ca 227.546†	400.5	5.78	mg/L	0.163	5.78	mg/L	0.163	2.81%
Cd 228.802†	272.0	0.0246	mg/L	0.00054	0.0246	mg/L	0.00054	2.19%
Co 228.616†	1004.3	0.0959	mg/L	0.00275	0.0959	mg/L	0.00275	2.87%
Cr 267.716†	16241.5	0.252	mg/L	0.0054	0.252	mg/L	0.0054	2.13%
Cu 327.393†	25434.1	0.257	mg/L	0.0013	0.257	mg/L	0.0013	0.51%
Fe 239.562†	199.7	2.08	mg/L	0.037	2.08	mg/L	0.037	1.79%
Mg 279.077†	1472.5	5.11	mg/L	0.064	5.11	mg/L	0.064	1.25%
Mn 257.610†	68312.0	0.262	mg/L	0.0046	0.262	mg/L	0.0046	1.77%
Mo 202.031†	3700.9	0.506	mg/L	0.0108	0.506	mg/L	0.0108	2.13%
Ni 231.604†	4405.2	0.249	mg/L	0.0044	0.249	mg/L	0.0044	1.78%
Pb 220.353†	717.2	0.245	mg/L	0.0062	0.245	mg/L	0.0062	2.51%
Sb 206.836†	487.6	0.579	mg/L	0.0086	0.579	mg/L	0.0086	1.48%
Se 196.026†	124.2	0.190	mg/L	0.0022	0.190	mg/L	0.0022	1.16%
Si 251.611†	51577.9	2.77	mg/L	0.029	2.77	mg/L	0.029	1.05%
Sn 189.927†	-5.3	-0.00596	mg/L	0.001404	-0.00596	mg/L	0.001404	23.56%
Ti 334.940†	241686.5	0.495	mg/L	0.0031	0.495	mg/L	0.0031	0.63%
Tl 190.801†	207.8	0.238	mg/L	0.0036	0.238	mg/L	0.0036	1.52%
V 290.880†	44366.0	0.504	mg/L	0.0111	0.504	mg/L	0.0111	2.21%
Zn 206.200†	8161.4	0.574	mg/L	0.0137	0.574	mg/L	0.0137	2.39%
K 766.490†	42419.8	27.0	mg/L	0.08	27.0	mg/L	0.08	0.30%
Na 589.592†	1576070.4	173	mg/L	2.3	173	mg/L	2.3	1.30%
Sr 407.771†	535021.7	0.492	mg/L	0.0075	0.492	mg/L	0.0075	1.52%
Li 670.784†	29356.5	0.505	mg/L	0.0029	0.505	mg/L	0.0029	0.58%

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Sequence No.: 5 **Autosampler Location: 18**
Sample ID: L1201051402SD WG387781-05 **Date Collected: 1/25/2012 11:31:42 AM**

Approved: January 26, 2012

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

Nebulizer Parameters: L1201051402SD WG387781-05

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201051402SD WG387781-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3412859.9						27180.77	0.80%
YRADIAL	265461.9						11255.42	4.24%
Ga 417.206	720133.0						7543.88	1.05%
GaRADIAL	39937.6						1561.73	3.91%
Ag 328.068†	24313.3	0.191	mg/L	0.0036	0.191	mg/L	0.0036	1.90%
Al 396.153†	14841.1	5.10	mg/L	0.031	5.10	mg/L	0.031	0.60%
As 188.979†	106.9	0.189	mg/L	0.0050	0.189	mg/L	0.0050	2.62%
Ba 233.527†	18423.9	0.582	mg/L	0.0128	0.582	mg/L	0.0128	2.21%
Be 234.861†	7344.0	0.0237	mg/L	0.00056	0.0237	mg/L	0.00056	2.39%
B 249.677†	30718.0	1.06	mg/L	0.025	1.06	mg/L	0.025	2.34%
Ca 227.546†	401.5	5.77	mg/L	0.050	5.77	mg/L	0.050	0.87%
Cd 228.802†	267.4	0.0242	mg/L	0.00023	0.0242	mg/L	0.00023	0.94%
Co 228.616†	986.9	0.0942	mg/L	0.00035	0.0942	mg/L	0.00035	0.37%
Cr 267.716†	15605.1	0.242	mg/L	0.0044	0.242	mg/L	0.0044	1.83%
Cu 327.393†	24817.2	0.250	mg/L	0.0047	0.250	mg/L	0.0047	1.86%
Fe 239.562†	217.9	2.27	mg/L	0.129	2.27	mg/L	0.129	5.68%
Mg 279.077†	1468.1	5.10	mg/L	0.244	5.10	mg/L	0.244	4.80%
Mn 257.610†	66586.1	0.255	mg/L	0.0044	0.255	mg/L	0.0044	1.74%
Mo 202.031†	3527.1	0.482	mg/L	0.0088	0.482	mg/L	0.0088	1.83%
Ni 231.604†	4250.0	0.240	mg/L	0.0029	0.240	mg/L	0.0029	1.22%
Pb 220.353†	706.8	0.242	mg/L	0.0015	0.242	mg/L	0.0015	0.61%
Sb 206.836†	482.2	0.572	mg/L	0.0048	0.572	mg/L	0.0048	0.84%
Se 196.026†	122.4	0.188	mg/L	0.0099	0.188	mg/L	0.0099	5.27%
Si 251.611†	48687.3	2.61	mg/L	0.072	2.61	mg/L	0.072	2.75%
Sn 189.927†	-4.1	-0.00554	mg/L	0.002178	-0.00554	mg/L	0.002178	39.34%
Ti 334.940†	237452.1	0.486	mg/L	0.0014	0.486	mg/L	0.0014	0.28%
Tl 190.801†	202.1	0.231	mg/L	0.0031	0.231	mg/L	0.0031	1.33%
V 290.880†	42555.5	0.484	mg/L	0.0102	0.484	mg/L	0.0102	2.11%
Zn 206.200†	7934.2	0.558	mg/L	0.0133	0.558	mg/L	0.0133	2.38%
K 766.490†	41963.9	26.7	mg/L	0.30	26.7	mg/L	0.30	1.13%
Na 589.592†	1575557.0	173	mg/L	4.9	173	mg/L	4.9	2.82%
Sr 407.771†	529151.1	0.487	mg/L	0.0067	0.487	mg/L	0.0067	1.37%
Li 670.784†	29030.0	0.499	mg/L	0.0031	0.499	mg/L	0.0031	0.63%

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Sequence No.: 6 **Autosampler Location: 19**
Sample ID: L1201048701 0.005 **Date Collected: 1/25/2012 11:38:36 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201048701 0.005

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201048701 0.005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3543230.8						63327.40	1.79%
YRADIAL	269217.6						5022.26	1.87%
Ga 417.206	732113.7						18776.66	2.56%
GaRADIAL	42425.2						1249.76	2.95%
Ag 328.068†	-109.2	-0.00163	mg/L	0.000773	-0.00163	mg/L	0.000773	47.31%
Al 396.153†	195.7	0.0469	mg/L	0.00748	0.0469	mg/L	0.00748	15.93%
As 188.979†	2.9	0.00131	mg/L	0.004257	0.00131	mg/L	0.004257	325.04%
Ba 233.527†	54.9	-0.00160	mg/L	0.000269	-0.00160	mg/L	0.000269	16.81%
Be 234.861†	92.4	0.00014	mg/L	0.000067	0.00014	mg/L	0.000067	47.37%

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B 249.677†	137.6	0.00463	mg/L	0.000808	0.00463	mg/L	0.000808	17.45%
Ca 227.546†	5.6	0.0829	mg/L	0.05133	0.0829	mg/L	0.05133	61.90%
Cd 228.802†	-6.0	-0.00060	mg/L	0.000229	-0.00060	mg/L	0.000229	38.05%
Co 228.616†	-7.7	-0.00115	mg/L	0.000198	-0.00115	mg/L	0.000198	17.23%
Cr 267.716†	-49.0	-0.00251	mg/L	0.000210	-0.00251	mg/L	0.000210	8.33%
Cu 327.393†	77.8	0.00019	mg/L	0.000752	0.00019	mg/L	0.000752	398.71%
Fe 239.562†	-0.1	0.00536	mg/L	0.006467	0.00536	mg/L	0.006467	120.59%
Mg 279.077†	6.8	0.0490	mg/L	0.01403	0.0490	mg/L	0.01403	28.66%
Mn 257.610†	718.0	-0.00018	mg/L	0.000087	-0.00018	mg/L	0.000087	47.60%
Mo 202.031†	-5.6	-0.00396	mg/L	0.000344	-0.00396	mg/L	0.000344	8.70%
Ni 231.604†	5.1	-0.00212	mg/L	0.000092	-0.00212	mg/L	0.000092	4.37%
Pb 220.353†	6.6	-0.00014	mg/L	0.001360	-0.00014	mg/L	0.001360	975.67%
Sb 206.836†	-1.1	-0.00311	mg/L	0.000880	-0.00311	mg/L	0.000880	28.32%
Se 196.026†	-2.5	-0.0103	mg/L	0.00571	-0.0103	mg/L	0.00571	55.68%
Si 251.611†	62.2	-0.0170	mg/L	0.00352	-0.0170	mg/L	0.00352	20.63%
Sn 189.927†	1.8	-0.00332	mg/L	0.001561	-0.00332	mg/L	0.001561	46.97%
Ti 334.940†	-167.9	-0.00138	mg/L	0.000138	-0.00138	mg/L	0.000138	10.03%
Tl 190.801†	0.7	-0.00288	mg/L	0.003232	-0.00288	mg/L	0.003232	112.12%
V 290.880†	-21.5	-0.00272	mg/L	0.001438	-0.00272	mg/L	0.001438	52.88%
Zn 206.200†	93.9	0.00260	mg/L	0.000205	0.00260	mg/L	0.000205	7.91%
K 766.490†	3095.0	1.94	mg/L	0.026	1.94	mg/L	0.026	1.33%
Na 589.592†	28607.7	3.18	mg/L	0.057	3.18	mg/L	0.057	1.78%
Sr 407.771†	462.9	0.00186	mg/L	0.000048	0.00186	mg/L	0.000048	2.60%
Li 670.784†	-50.5	-0.00430	mg/L	0.001508	-0.00430	mg/L	0.001508	35.05%

Sequence No.: 7
Sample ID: L1201048701PS WG387803-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 1/25/2012 11:45:28 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201048701PS WG387803-01

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201048701PS WG387803-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3467703.3						49950.46	1.44%
YRADIAL	265072.3						5662.23	2.14%
Ga 417.206	748654.2						14351.79	1.92%
GaRADIAL	41090.5						104.48	0.25%
Ag 328.068†	25104.6	0.197	mg/L	0.0037	0.197	mg/L	0.0037	1.88%
Al 396.153†	14568.3	5.01	mg/L	0.212	5.01	mg/L	0.212	4.24%
As 188.979†	110.3	0.196	mg/L	0.0019	0.196	mg/L	0.0019	0.99%
Ba 233.527†	15987.1	0.505	mg/L	0.0030	0.505	mg/L	0.0030	0.59%
Be 234.861†	7875.3	0.0254	mg/L	0.00035	0.0254	mg/L	0.00035	1.38%
B 249.677†	28960.0	0.995	mg/L	0.0137	0.995	mg/L	0.0137	1.38%
Ca 227.546†	338.9	4.90	mg/L	0.121	4.90	mg/L	0.121	2.47%
Cd 228.802†	274.4	0.0248	mg/L	0.00069	0.0248	mg/L	0.00069	2.76%
Co 228.616†	1037.7	0.0992	mg/L	0.00174	0.0992	mg/L	0.00174	1.76%
Cr 267.716†	16012.6	0.248	mg/L	0.0031	0.248	mg/L	0.0031	1.26%
Cu 327.393†	23858.4	0.241	mg/L	0.0053	0.241	mg/L	0.0053	2.19%
Fe 239.562†	190.8	1.99	mg/L	0.017	1.99	mg/L	0.017	0.85%
Mg 279.077†	1473.9	5.12	mg/L	0.120	5.12	mg/L	0.120	2.35%
Mn 257.610†	66115.5	0.252	mg/L	0.0032	0.252	mg/L	0.0032	1.28%
Mo 202.031†	3585.8	0.490	mg/L	0.0069	0.490	mg/L	0.0069	1.41%
Ni 231.604†	4479.5	0.253	mg/L	0.0054	0.253	mg/L	0.0054	2.13%
Pb 220.353†	751.6	0.257	mg/L	0.0037	0.257	mg/L	0.0037	1.43%
Sb 206.836†	503.5	0.597	mg/L	0.0144	0.597	mg/L	0.0144	2.41%
Se 196.026†	133.4	0.204	mg/L	0.0055	0.204	mg/L	0.0055	2.71%
Si 251.611†	47187.2	2.53	mg/L	0.039	2.53	mg/L	0.039	1.52%
Sn 189.927†	-4.1	-0.00551	mg/L	0.000368	-0.00551	mg/L	0.000368	6.68%
Ti 334.940†	240361.7	0.492	mg/L	0.0005	0.492	mg/L	0.0005	0.09%
Tl 190.801†	231.6	0.266	mg/L	0.0061	0.266	mg/L	0.0061	2.30%
V 290.880†	43223.7	0.491	mg/L	0.0068	0.491	mg/L	0.0068	1.38%
Zn 206.200†	7604.9	0.535	mg/L	0.0068	0.535	mg/L	0.0068	1.27%
K 766.490†	41735.2	26.7	mg/L	0.11	26.7	mg/L	0.11	0.43%
Na 589.592†	257560.4	28.8	mg/L	0.28	28.8	mg/L	0.28	0.97%

Approved: January 26, 2012

Sr 407.771†	537526.2	0.495 mg/L	0.0057	0.495 mg/L	0.0057	1.14%
Li 670.784†	29586.1	0.509 mg/L	0.0186	0.509 mg/L	0.0186	3.65%

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Sequence No.: 8 **Autosampler Location: 21**
Sample ID: L1201048701DL WG387803-02 **Date Collected: 1/25/2012 11:52:23 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201048701DL WG387803-02

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201048701DL WG387803-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3632560.0						29494.23	0.81%
YRADIAL	277094.1						4518.27	1.63%
Ga 417.206	744323.4						11395.50	1.53%
GaRADIAL	43541.4						134.51	0.31%
Ag 328.068†	-151.0	-0.00196	mg/L	0.000568	-0.00196	mg/L	0.000568	28.95%
Al 396.153†	37.3	-0.00785	mg/L	0.002371	-0.00785	mg/L	0.002371	30.20%
As 188.979†	1.1	-0.00198	mg/L	0.002152	-0.00198	mg/L	0.002152	108.42%
Ba 233.527†	7.5	-0.00311	mg/L	0.000242	-0.00311	mg/L	0.000242	7.81%
Be 234.861†	109.9	0.00020	mg/L	0.000024	0.00020	mg/L	0.000024	12.03%
B 249.677†	111.2	0.00379	mg/L	0.000545	0.00379	mg/L	0.000545	14.40%
Ca 227.546†	0.7	0.0104	mg/L	0.12116	0.0104	mg/L	0.12116	>999.9%
Cd 228.802†	-4.7	-0.00049	mg/L	0.000091	-0.00049	mg/L	0.000091	18.61%
Co 228.616†	-6.4	-0.00102	mg/L	0.000420	-0.00102	mg/L	0.000420	41.26%
Cr 267.716†	-59.1	-0.00267	mg/L	0.000026	-0.00267	mg/L	0.000026	0.98%
Cu 327.393†	-134.7	-0.00195	mg/L	0.000458	-0.00195	mg/L	0.000458	23.43%
Fe 239.562†	-0.0	0.00595	mg/L	0.031783	0.00595	mg/L	0.031783	533.90%
Mg 279.077†	4.3	0.0402	mg/L	0.00904	0.0402	mg/L	0.00904	22.47%
Mn 257.610†	58.7	-0.00276	mg/L	0.000016	-0.00276	mg/L	0.000016	0.57%
Mo 202.031†	-5.5	-0.00394	mg/L	0.000364	-0.00394	mg/L	0.000364	9.23%
Ni 231.604†	-0.6	-0.00244	mg/L	0.000544	-0.00244	mg/L	0.000544	22.29%
Pb 220.353†	1.0	-0.00207	mg/L	0.001001	-0.00207	mg/L	0.001001	48.40%
Sb 206.836†	0.2	-0.00149	mg/L	0.002599	-0.00149	mg/L	0.002599	174.42%
Se 196.026†	-0.0	-0.00642	mg/L	0.003759	-0.00642	mg/L	0.003759	58.56%
Si 251.611†	-50.2	-0.0231	mg/L	0.00044	-0.0231	mg/L	0.00044	1.89%
Sn 189.927†	-0.7	-0.00426	mg/L	0.001358	-0.00426	mg/L	0.001358	31.85%
Ti 334.940†	-154.8	-0.00135	mg/L	0.000071	-0.00135	mg/L	0.000071	5.23%
Tl 190.801†	3.5	0.00028	mg/L	0.000360	0.00028	mg/L	0.000360	126.50%
V 290.880†	-49.8	-0.00304	mg/L	0.000675	-0.00304	mg/L	0.000675	22.19%
Zn 206.200†	33.1	-0.00170	mg/L	0.000243	-0.00170	mg/L	0.000243	14.26%
K 766.490†	679.0	0.410	mg/L	0.0047	0.410	mg/L	0.0047	1.14%
Na 589.592†	6083.0	0.651	mg/L	0.0318	0.651	mg/L	0.0318	4.89%
Sr 407.771†	30.9	0.00146	mg/L	0.000007	0.00146	mg/L	0.000007	0.45%
Li 670.784†	16.3	-0.00315	mg/L	0.001246	-0.00315	mg/L	0.001246	39.59%

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Sequence No.: 9 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 11:59:16 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	146.0 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	3444994.9						29156.26	0.85%
YRADIAL	269645.1						5692.57	2.11%
Ga 417.206	738026.3						5941.12	0.81%

Approved: January 26, 2012

GaRADIAL	41303.5				206.27	0.50%
Ag 328.068†	48976.2	0.386 mg/L	0.0043	0.386 mg/L	0.0043	1.12%
QC value within limits for Ag 328.068 Recovery = 96.43%						
Al 396.153†	28650.8	9.87 mg/L	0.026	9.87 mg/L	0.026	0.26%
QC value within limits for Al 396.153 Recovery = 98.74%						
As 188.979†	213.7	0.382 mg/L	0.0071	0.382 mg/L	0.0071	1.86%
QC value within limits for As 188.979 Recovery = 95.56%						
Ba 233.527†	31329.1	0.993 mg/L	0.0028	0.993 mg/L	0.0028	0.28%
QC value within limits for Ba 233.527 Recovery = 99.28%						
Be 234.861†	15193.2	0.0492 mg/L	0.00042	0.0492 mg/L	0.00042	0.86%
QC value within limits for Be 234.861 Recovery = 98.48%						
B 249.677†	14020.7	0.486 mg/L	0.0037	0.486 mg/L	0.0037	0.75%
QC value within limits for B 249.677 Recovery = 97.20%						
Ca 227.546†	670.5	9.68 mg/L	0.065	9.68 mg/L	0.065	0.67%
QC value within limits for Ca 227.546 Recovery = 96.84%						
Cd 228.802†	538.3	0.0487 mg/L	0.00060	0.0487 mg/L	0.00060	1.23%
QC value within limits for Cd 228.802 Recovery = 97.47%						
Co 228.616†	2025.9	0.194 mg/L	0.0018	0.194 mg/L	0.0018	0.91%
QC value within limits for Co 228.616 Recovery = 96.98%						
Cr 267.716†	31548.6	0.490 mg/L	0.0044	0.490 mg/L	0.0044	0.89%
QC value within limits for Cr 267.716 Recovery = 98.05%						
Cu 327.393†	47380.1	0.479 mg/L	0.0063	0.479 mg/L	0.0063	1.31%
QC value within limits for Cu 327.393 Recovery = 95.72%						
Fe 239.562†	370.2	3.86 mg/L	0.052	3.86 mg/L	0.052	1.35%
QC value within limits for Fe 239.562 Recovery = 96.49%						
Mg 279.077†	2782.4	9.63 mg/L	0.233	9.63 mg/L	0.233	2.42%
QC value within limits for Mg 279.077 Recovery = 96.34%						
Mn 257.610†	129732.3	0.497 mg/L	0.0044	0.497 mg/L	0.0044	0.88%
QC value within limits for Mn 257.610 Recovery = 99.48%						
Mo 202.031†	7150.5	0.980 mg/L	0.0085	0.980 mg/L	0.0085	0.87%
QC value within limits for Mo 202.031 Recovery = 98.00%						
Ni 231.604†	8664.5	0.491 mg/L	0.0013	0.491 mg/L	0.0013	0.26%
QC value within limits for Ni 231.604 Recovery = 98.25%						
Pb 220.353†	1445.0	0.497 mg/L	0.0070	0.497 mg/L	0.0070	1.41%
QC value within limits for Pb 220.353 Recovery = 99.35%						
Sb 206.836†	989.3	1.18 mg/L	0.009	1.18 mg/L	0.009	0.76%
QC value within limits for Sb 206.836 Recovery = 97.96%						
Se 196.026†	256.2	0.399 mg/L	0.0035	0.399 mg/L	0.0035	0.88%
QC value within limits for Se 196.026 Recovery = 99.63%						
Si 251.611†	90486.8	4.87 mg/L	0.048	4.87 mg/L	0.048	0.98%
QC value within limits for Si 251.611 Recovery = 97.42%						
Sn 189.927†	2640.7	0.986 mg/L	0.0088	0.986 mg/L	0.0088	0.90%
QC value within limits for Sn 189.927 Recovery = 98.55%						
Ti 334.940†	484938.5	0.994 mg/L	0.0026	0.994 mg/L	0.0026	0.27%
QC value within limits for Ti 334.940 Recovery = 99.39%						
Tl 190.801†	434.2	0.502 mg/L	0.0100	0.502 mg/L	0.0100	1.99%
QC value within limits for Tl 190.801 Recovery = 100.38%						
V 290.880†	85216.3	0.971 mg/L	0.0068	0.971 mg/L	0.0068	0.70%
QC value within limits for V 290.880 Recovery = 97.11%						
Zn 206.200†	13965.4	0.986 mg/L	0.0061	0.986 mg/L	0.0061	0.62%
QC value within limits for Zn 206.200 Recovery = 98.58%						
K 766.490†	76716.6	49.3 mg/L	0.19	49.3 mg/L	0.19	0.38%
QC value within limits for K 766.490 Recovery = 98.65%						
Na 589.592†	447433.5	49.9 mg/L	0.58	49.9 mg/L	0.58	1.16%
QC value within limits for Na 589.592 Recovery = 99.86%						
Sr 407.771†	1065251.5	0.979 mg/L	0.0139	0.979 mg/L	0.0139	1.42%
QC value within limits for Sr 407.771 Recovery = 97.89%						
Li 670.784†	58266.4	1.01 mg/L	0.005	1.01 mg/L	0.005	0.52%
QC value within limits for Li 670.784 Recovery = 100.54%						

All analyte(s) passed QC.

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Sequence No.: 10 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/25/2012 12:06:12 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	**Back Pressure**	**Flow**
All	146.0 kPa	0.50 L/min

Approved: January 26, 2012

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3461148.0						52648.74	1.52%
YRADIAL	264751.5						2834.39	1.07%
Ga 417.206	685030.8						18450.85	2.69%
GaRADIAL	40573.1						328.61	0.81%
Ag 328.068†	-136.7	-0.00185	mg/L	0.000121	-0.00185	mg/L	0.000121	6.54%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	18.1	-0.0145	mg/L	0.00658	-0.0145	mg/L	0.00658	45.35%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	2.6	0.00082	mg/L	0.000816	0.00082	mg/L	0.000816	100.00%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-2.0	-0.00340	mg/L	0.000239	-0.00340	mg/L	0.000239	7.02%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	32.1	-0.00005	mg/L	0.000085	-0.00005	mg/L	0.000085	157.43%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	114.6	0.00394	mg/L	0.000613	0.00394	mg/L	0.000613	15.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-0.8	-0.0107	mg/L	0.01694	-0.0107	mg/L	0.01694	157.92%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-3.7	-0.00040	mg/L	0.000034	-0.00040	mg/L	0.000034	8.52%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-9.9	-0.00136	mg/L	0.000473	-0.00136	mg/L	0.000473	34.86%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	29.5	-0.00129	mg/L	0.000104	-0.00129	mg/L	0.000104	8.06%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-85.8	-0.00146	mg/L	0.000469	-0.00146	mg/L	0.000469	32.14%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	0.7	0.0129	mg/L	0.00722	0.0129	mg/L	0.00722	56.01%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	1.2	0.0296	mg/L	0.00628	0.0296	mg/L	0.00628	21.19%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	151.4	-0.00241	mg/L	0.000036	-0.00241	mg/L	0.000036	1.50%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-6.4	-0.00406	mg/L	0.000352	-0.00406	mg/L	0.000352	8.68%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	11.9	-0.00172	mg/L	0.000115	-0.00172	mg/L	0.000115	6.64%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	5.8	-0.00042	mg/L	0.000340	-0.00042	mg/L	0.000340	80.12%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.7	-0.00096	mg/L	0.001760	-0.00096	mg/L	0.001760	182.59%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-2.8	-0.0107	mg/L	0.00767	-0.0107	mg/L	0.00767	71.82%
QC value less than the lower limit for Se 196.026 Recovery = Not calculated								
Si 251.611†	-0.9	-0.0205	mg/L	0.00097	-0.0205	mg/L	0.00097	4.74%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	4.4	-0.00232	mg/L	0.001647	-0.00232	mg/L	0.001647	70.99%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-66.7	-0.00117	mg/L	0.000161	-0.00117	mg/L	0.000161	13.74%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-1.5	-0.00539	mg/L	0.003035	-0.00539	mg/L	0.003035	56.28%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	44.3	-0.00197	mg/L	0.001679	-0.00197	mg/L	0.001679	85.27%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-0.2	-0.00406	mg/L	0.000149	-0.00406	mg/L	0.000149	3.68%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	39.0	0.00312	mg/L	0.042256	0.00312	mg/L	0.042256	>999.9%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	321.3	0.00335	mg/L	0.021659	0.00335	mg/L	0.021659	646.59%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	25.3	0.00145	mg/L	0.000075	0.00145	mg/L	0.000075	5.13%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	44.4	-0.00266	mg/L	0.000730	-0.00266	mg/L	0.000730	27.46%
QC value within limits for Li 670.784 Recovery = Not calculated								

QC Failed. Continue with analysis.

Sequence No.: 11 **Autosampler Location: 22**
Sample ID: L1201048702 0.005 **Date Collected: 1/25/2012 12:13:00 PM**

Approved: January 26, 2012

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

Nebulizer Parameters: L1201048702 0.005

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201048702 0.005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3510521.8						83960.76	2.39%
YRADIAL	268248.4						8343.10	3.11%
Ga 417.206	717573.8						21295.43	2.97%
GaRADIAL	42120.1						314.20	0.75%
Ag 328.068†	-172.2	-0.00213	mg/L	0.000383	-0.00213	mg/L	0.000383	18.03%
Al 396.153†	155.9	0.0331	mg/L	0.01282	0.0331	mg/L	0.01282	38.67%
As 188.979†	2.3	0.00024	mg/L	0.001722	0.00024	mg/L	0.001722	722.69%
Ba 233.527†	45.7	-0.00189	mg/L	0.000074	-0.00189	mg/L	0.000074	3.92%
Be 234.861†	87.0	0.00013	mg/L	0.000018	0.00013	mg/L	0.000018	14.68%
B 249.677†	-0.2	-0.00013	mg/L	0.000191	-0.00013	mg/L	0.000191	142.51%
Ca 227.546†	65.0	0.946	mg/L	0.0669	0.946	mg/L	0.0669	7.07%
Cd 228.802†	-5.5	-0.00056	mg/L	0.000141	-0.00056	mg/L	0.000141	24.99%
Co 228.616†	-7.3	-0.00110	mg/L	0.000469	-0.00110	mg/L	0.000469	42.51%
Cr 267.716†	-55.2	-0.00261	mg/L	0.000144	-0.00261	mg/L	0.000144	5.50%
Cu 327.393†	-198.9	-0.00260	mg/L	0.000140	-0.00260	mg/L	0.000140	5.38%
Fe 239.562†	-1.3	-0.00731	mg/L	0.006970	-0.00731	mg/L	0.006970	95.29%
Mg 279.077†	0.7	0.0279	mg/L	0.00601	0.0279	mg/L	0.00601	21.53%
Mn 257.610†	-92.7	-0.00333	mg/L	0.000038	-0.00333	mg/L	0.000038	1.14%
Mo 202.031†	-6.6	-0.00410	mg/L	0.000539	-0.00410	mg/L	0.000539	13.13%
Ni 231.604†	-1.2	-0.00247	mg/L	0.000152	-0.00247	mg/L	0.000152	6.16%
Pb 220.353†	2.2	-0.00160	mg/L	0.002814	-0.00160	mg/L	0.002814	175.79%
Sb 206.836†	-1.1	-0.00311	mg/L	0.002448	-0.00311	mg/L	0.002448	78.67%
Se 196.026†	-2.4	-0.00989	mg/L	0.003003	-0.00989	mg/L	0.003003	30.37%
Si 251.611†	-37.8	-0.0225	mg/L	0.00168	-0.0225	mg/L	0.00168	7.49%
Sn 189.927†	-0.9	-0.00433	mg/L	0.000802	-0.00433	mg/L	0.000802	18.50%
Ti 334.940†	-191.9	-0.00142	mg/L	0.000052	-0.00142	mg/L	0.000052	3.68%
Tl 190.801†	0.4	-0.00364	mg/L	0.001721	-0.00364	mg/L	0.001721	47.33%
V 290.880†	78.4	-0.00158	mg/L	0.003127	-0.00158	mg/L	0.003127	198.22%
Zn 206.200†	21.7	-0.00251	mg/L	0.000212	-0.00251	mg/L	0.000212	8.45%
K 766.490†	896.4	0.547	mg/L	0.0092	0.547	mg/L	0.0092	1.68%
Na 589.592†	10574.7	1.16	mg/L	0.021	1.16	mg/L	0.021	1.81%
Sr 407.771†	3494.1	0.00465	mg/L	0.000027	0.00465	mg/L	0.000027	0.59%
Li 670.784†	2.0	-0.00339	mg/L	0.001450	-0.00339	mg/L	0.001450	42.73%

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Sequence No.: 12 **Autosampler Location: 23**
Sample ID: L1201048703 0.005 **Date Collected: 1/25/2012 12:19:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201048703 0.005

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201048703 0.005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3524058.4						13799.70	0.39%
YRADIAL	267232.4						2245.99	0.84%
Ga 417.206	720894.8						4332.15	0.60%
GaRADIAL	41830.7						607.88	1.45%
Ag 328.068†	-115.4	-0.00168	mg/L	0.000250	-0.00168	mg/L	0.000250	14.85%
Al 396.153†	8.0	-0.0180	mg/L	0.01706	-0.0180	mg/L	0.01706	94.70%
As 188.979†	2.3	0.00026	mg/L	0.002771	0.00026	mg/L	0.002771	>999.9%
Ba 233.527†	29.6	-0.00240	mg/L	0.000059	-0.00240	mg/L	0.000059	2.47%
Be 234.861†	85.1	0.00012	mg/L	0.000048	0.00012	mg/L	0.000048	40.61%

Approved: January 26, 2012

B 249.677†	2.7	0.00006	mg/L	0.000390	0.00006	mg/L	0.000390	617.06%
Ca 227.546†	57.4	0.835	mg/L	0.0526	0.835	mg/L	0.0526	6.30%
Cd 228.802†	-3.8	-0.00041	mg/L	0.000094	-0.00041	mg/L	0.000094	23.03%
Co 228.616†	-7.0	-0.00108	mg/L	0.000322	-0.00108	mg/L	0.000322	29.79%
Cr 267.716†	-55.1	-0.00261	mg/L	0.000049	-0.00261	mg/L	0.000049	1.88%
Cu 327.393†	-219.6	-0.00281	mg/L	0.000380	-0.00281	mg/L	0.000380	13.53%
Fe 239.562†	-0.4	0.00194	mg/L	0.003169	0.00194	mg/L	0.003169	163.21%
Mg 279.077†	-0.4	0.0242	mg/L	0.00673	0.0242	mg/L	0.00673	27.76%
Mn 257.610†	-112.8	-0.00340	mg/L	0.000052	-0.00340	mg/L	0.000052	1.53%
Mo 202.031†	-3.4	-0.00365	mg/L	0.000177	-0.00365	mg/L	0.000177	4.83%
Ni 231.604†	4.0	-0.00218	mg/L	0.000310	-0.00218	mg/L	0.000310	14.23%
Pb 220.353†	-3.3	-0.00349	mg/L	0.001811	-0.00349	mg/L	0.001811	51.88%
Sb 206.836†	-0.7	-0.00253	mg/L	0.000834	-0.00253	mg/L	0.000834	33.01%
Se 196.026†	-1.7	-0.00883	mg/L	0.006973	-0.00883	mg/L	0.006973	78.99%
Si 251.611†	-22.4	-0.0216	mg/L	0.00111	-0.0216	mg/L	0.00111	5.14%
Sn 189.927†	1.1	-0.00356	mg/L	0.000153	-0.00356	mg/L	0.000153	4.30%
Ti 334.940†	-173.3	-0.00138	mg/L	0.000137	-0.00138	mg/L	0.000137	9.89%
Tl 190.801†	1.4	-0.00237	mg/L	0.002871	-0.00237	mg/L	0.002871	121.00%
V 290.880†	-70.1	-0.00328	mg/L	0.000978	-0.00328	mg/L	0.000978	29.84%
Zn 206.200†	28.7	-0.00201	mg/L	0.000252	-0.00201	mg/L	0.000252	12.51%
K 766.490†	1253.6	0.775	mg/L	0.0659	0.775	mg/L	0.0659	8.50%
Na 589.592†	8781.0	0.954	mg/L	0.0236	0.954	mg/L	0.0236	2.48%
Sr 407.771†	3523.0	0.00467	mg/L	0.000059	0.00467	mg/L	0.000059	1.27%
Li 670.784†	-61.3	-0.00449	mg/L	0.001029	-0.00449	mg/L	0.001029	22.92%

Sequence No.: 13
Sample ID: L1201048901 0.005
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 24
Date Collected: 1/25/2012 12:26:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201048901 0.005

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201048901 0.005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3454863.2						44073.79	1.28%
YRADIAL	267552.7						2115.49	0.79%
Ga 417.206	709038.1						4459.70	0.63%
GaRADIAL	41919.7						834.64	1.99%
Ag 328.068†	-116.3	-0.00168	mg/L	0.000634	-0.00168	mg/L	0.000634	37.60%
Al 396.153†	979.5	0.318	mg/L	0.0044	0.318	mg/L	0.0044	1.39%
As 188.979†	1.5	-0.00127	mg/L	0.004391	-0.00127	mg/L	0.004391	345.40%
Ba 233.527†	23.3	-0.00260	mg/L	0.000035	-0.00260	mg/L	0.000035	1.33%
Be 234.861†	83.7	0.00011	mg/L	0.000030	0.00011	mg/L	0.000030	26.01%
B 249.677†	15.0	0.00006	mg/L	0.000367	0.00006	mg/L	0.000367	653.90%
Ca 227.546†	46.7	0.680	mg/L	0.0560	0.680	mg/L	0.0560	8.23%
Cd 228.802†	9.0	0.00073	mg/L	0.000346	0.00073	mg/L	0.000346	47.76%
Co 228.616†	-8.3	-0.00121	mg/L	0.000311	-0.00121	mg/L	0.000311	25.78%
Cr 267.716†	-38.3	-0.00234	mg/L	0.000066	-0.00234	mg/L	0.000066	2.80%
Cu 327.393†	824.7	0.00772	mg/L	0.000277	0.00772	mg/L	0.000277	3.58%
Fe 239.562†	-0.8	-0.00282	mg/L	0.006862	-0.00282	mg/L	0.006862	243.36%
Mg 279.077†	30.8	0.132	mg/L	0.0152	0.132	mg/L	0.0152	11.54%
Mn 257.610†	1308.7	0.00205	mg/L	0.000085	0.00205	mg/L	0.000085	4.13%
Mo 202.031†	-6.6	-0.00410	mg/L	0.000196	-0.00410	mg/L	0.000196	4.79%
Ni 231.604†	5.7	-0.00208	mg/L	0.000107	-0.00208	mg/L	0.000107	5.15%
Pb 220.353†	8.2	0.00043	mg/L	0.002054	0.00043	mg/L	0.002054	477.57%
Sb 206.836†	-1.3	-0.00333	mg/L	0.001858	-0.00333	mg/L	0.001858	55.79%
Se 196.026†	-4.5	-0.0132	mg/L	0.00222	-0.0132	mg/L	0.00222	16.87%
Si 251.611†	405.6	0.00158	mg/L	0.001193	0.00158	mg/L	0.001193	75.56%
Sn 189.927†	-0.6	-0.00423	mg/L	0.000605	-0.00423	mg/L	0.000605	14.31%
Ti 334.940†	-84.5	-0.00120	mg/L	0.000098	-0.00120	mg/L	0.000098	8.16%
Tl 190.801†	0.5	-0.00336	mg/L	0.003169	-0.00336	mg/L	0.003169	94.45%
V 290.880†	224.4	0.00010	mg/L	0.001195	0.00010	mg/L	0.001195	>999.9%
Zn 206.200†	1246.5	0.0841	mg/L	0.00100	0.0841	mg/L	0.00100	1.19%
K 766.490†	1936.0	1.21	mg/L	0.014	1.21	mg/L	0.014	1.13%
Na 589.592†	10997.1	1.20	mg/L	0.030	1.20	mg/L	0.030	2.46%

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Sr 407.771†	1371.6	0.00269 mg/L	0.000038	0.00269 mg/L	0.000038	1.39%
Li 670.784†	25.0	-0.00300 mg/L	0.000793	-0.00300 mg/L	0.000793	26.46%

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Sequence No.: 14 **Autosampler Location: 25**
Sample ID: L1201058301 **Date Collected: 1/25/2012 12:33:28 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201058301

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201058301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3354066.3						25745.43	0.77%
YRADIAL	262678.7						2133.49	0.81%
Ga 417.206	715532.4						5549.68	0.78%
GaRADIAL	40277.2						378.99	0.94%
Ag 328.068†	-32.7	-0.00117	mg/L	0.000106	-0.00117	mg/L	0.000106	9.09%
Al 396.153†	10952.5	3.77	mg/L	0.024	3.77	mg/L	0.024	0.65%
As 188.979†	13.0	0.0179	mg/L	0.00464	0.0179	mg/L	0.00464	25.95%
Ba 233.527†	3367.1	0.103	mg/L	0.0015	0.103	mg/L	0.0015	1.41%
Be 234.861†	230.9	-0.00006	mg/L	0.000033	-0.00006	mg/L	0.000033	57.89%
B 249.677†	1460.3	0.0607	mg/L	0.00014	0.0607	mg/L	0.00014	0.23%
Ca 227.546†	5017.1	72.6	mg/L	0.15	72.6	mg/L	0.15	0.20%
Cd 228.802†	9.2	0.00080	mg/L	0.000051	0.00080	mg/L	0.000051	6.39%
Co 228.616†	-6.3	-0.00114	mg/L	0.000265	-0.00114	mg/L	0.000265	23.20%
Cr 267.716†	258.6	0.00213	mg/L	0.000212	0.00213	mg/L	0.000212	9.95%
Cu 327.393†	1802.9	0.0178	mg/L	0.00036	0.0178	mg/L	0.00036	2.01%
Fe 239.562†	308.5	3.22	mg/L	0.009	3.22	mg/L	0.009	0.28%
Mg 279.077†	472.6	1.66	mg/L	0.018	1.66	mg/L	0.018	1.09%
Mn 257.610†	27415.6	0.104	mg/L	0.0031	0.104	mg/L	0.0031	2.98%
Mo 202.031†	-16.2	-0.00524	mg/L	0.000530	-0.00524	mg/L	0.000530	10.13%
Ni 231.604†	48.6	0.00032	mg/L	0.000070	0.00032	mg/L	0.000070	22.03%
Pb 220.353†	9.7	0.00445	mg/L	0.000611	0.00445	mg/L	0.000611	13.74%
Sb 206.836†	11.7	0.0121	mg/L	0.00296	0.0121	mg/L	0.00296	24.47%
Se 196.026†	-15.7	-0.00780	mg/L	0.010526	-0.00780	mg/L	0.010526	134.91%
Si 251.611†	9783.2	0.510	mg/L	0.0081	0.510	mg/L	0.0081	1.59%
Sn 189.927†	-0.6	-0.00419	mg/L	0.001448	-0.00419	mg/L	0.001448	34.56%
Ti 334.940†	3478.3	0.00683	mg/L	0.000392	0.00683	mg/L	0.000392	5.75%
Tl 190.801†	68.8	0.0462	mg/L	0.00424	0.0462	mg/L	0.00424	9.17%
V 290.880†	532.4	0.00349	mg/L	0.002495	0.00349	mg/L	0.002495	71.49%
Zn 206.200†	1562.2	0.106	mg/L	0.0019	0.106	mg/L	0.0019	1.75%
K 766.490†	2359.2	1.34	mg/L	0.060	1.34	mg/L	0.060	4.45%
Na 589.592†	1284804.9	142	mg/L	4.8	142	mg/L	4.8	3.39%
Sr 407.771†	110993.4	0.103	mg/L	0.0015	0.103	mg/L	0.0015	1.49%
Li 670.784†	329.6	0.00228	mg/L	0.001407	0.00228	mg/L	0.001407	61.79%

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Sequence No.: 15 **Autosampler Location: 26**
Sample ID: L1201058301PS WG387803-03 **Date Collected: 1/25/2012 12:40:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201058301PS WG387803-03

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201058301PS WG387803-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3349209.4						24424.91	0.73%
YRADIAL	266573.4						1776.07	0.67%
Ga 417.206	715654.9						6475.62	0.90%

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GaRADIAL	40647.6					1041.21	2.56%
Ag 328.068†	25034.0	0.197	mg/L	0.0020	0.197 mg/L	0.0020	1.01%
Al 396.153†	24369.4	8.40	mg/L	0.051	8.40 mg/L	0.051	0.61%
As 188.979†	121.5	0.214	mg/L	0.0073	0.214 mg/L	0.0073	3.41%
Ba 233.527†	18761.1	0.593	mg/L	0.0150	0.593 mg/L	0.0150	2.53%
Be 234.861†	7858.5	0.0248	mg/L	0.00039	0.0248 mg/L	0.00039	1.59%
B 249.677†	29719.2	1.03	mg/L	0.022	1.03 mg/L	0.022	2.17%
Ca 227.546†	4881.1	70.6	mg/L	0.55	70.6 mg/L	0.55	0.78%
Cd 228.802†	276.3	0.0250	mg/L	0.00022	0.0250 mg/L	0.00022	0.86%
Co 228.616†	1010.9	0.0965	mg/L	0.00019	0.0965 mg/L	0.00019	0.20%
Cr 267.716†	16437.8	0.254	mg/L	0.0055	0.254 mg/L	0.0055	2.16%
Cu 327.393†	26530.5	0.268	mg/L	0.0049	0.268 mg/L	0.0049	1.84%
Fe 239.562†	459.1	4.79	mg/L	0.031	4.79 mg/L	0.031	0.65%
Mg 279.077†	1828.9	6.34	mg/L	0.082	6.34 mg/L	0.082	1.29%
Mn 257.610†	90180.6	0.346	mg/L	0.0075	0.346 mg/L	0.0075	2.18%
Mo 202.031†	3743.1	0.512	mg/L	0.0010	0.512 mg/L	0.0010	0.20%
Ni 231.604†	4429.5	0.250	mg/L	0.0012	0.250 mg/L	0.0012	0.47%
Pb 220.353†	716.9	0.249	mg/L	0.0009	0.249 mg/L	0.0009	0.37%
Sb 206.836†	509.9	0.605	mg/L	0.0024	0.605 mg/L	0.0024	0.40%
Se 196.026†	111.9	0.192	mg/L	0.0038	0.192 mg/L	0.0038	1.96%
Si 251.611†	56636.4	3.04	mg/L	0.044	3.04 mg/L	0.044	1.45%
Sn 189.927†	-1.6	-0.00458	mg/L	0.000901	-0.00458 mg/L	0.000901	19.70%
Ti 334.940†	245063.5	0.502	mg/L	0.0009	0.502 mg/L	0.0009	0.17%
Tl 190.801†	264.4	0.277	mg/L	0.0046	0.277 mg/L	0.0046	1.65%
V 290.880†	45041.8	0.512	mg/L	0.0114	0.512 mg/L	0.0114	2.22%
Zn 206.200†	8435.5	0.594	mg/L	0.0113	0.594 mg/L	0.0113	1.90%
K 766.490†	40608.9	25.8	mg/L	0.10	25.8 mg/L	0.10	0.39%
Na 589.592†	1372546.5	151	mg/L	0.7	151 mg/L	0.7	0.47%
Sr 407.771†	632525.2	0.581	mg/L	0.0102	0.581 mg/L	0.0102	1.76%
Li 670.784†	29584.2	0.509	mg/L	0.0042	0.509 mg/L	0.0042	0.82%

Sequence No.: 16 **Autosampler Location: 27**
Sample ID: L1201058301DL WG387803-04 **Date Collected: 1/25/2012 12:47:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201058301DL WG387803-04

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201058301DL WG387803-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3377809.5						71869.95	2.13%
YRADIAL	263202.6						1183.17	0.45%
Ga 417.206	708764.1						13325.86	1.88%
GaRADIAL	40469.4						859.43	2.12%
Ag 328.068†	-133.4	-0.00185	mg/L	0.000493	-0.00185	mg/L	0.000493	26.65%
Al 396.153†	2095.2	0.704	mg/L	0.0133	0.704	mg/L	0.0133	1.88%
As 188.979†	4.7	0.00430	mg/L	0.001563	0.00430	mg/L	0.001563	36.36%
Ba 233.527†	684.8	0.0184	mg/L	0.00072	0.0184	mg/L	0.00072	3.91%
Be 234.861†	38.4	-0.00016	mg/L	0.000207	-0.00016	mg/L	0.000207	127.22%
B 249.677†	502.3	0.0194	mg/L	0.00040	0.0194	mg/L	0.00040	2.08%
Ca 227.546†	1003.2	14.5	mg/L	0.27	14.5	mg/L	0.27	1.87%
Cd 228.802†	-0.1	-0.00007	mg/L	0.000238	-0.00007	mg/L	0.000238	349.01%
Co 228.616†	-9.8	-0.00138	mg/L	0.000163	-0.00138	mg/L	0.000163	11.84%
Cr 267.716†	65.6	-0.00076	mg/L	0.000080	-0.00076	mg/L	0.000080	10.55%
Cu 327.393†	306.7	0.00255	mg/L	0.000441	0.00255	mg/L	0.000441	17.30%
Fe 239.562†	63.3	0.665	mg/L	0.0048	0.665	mg/L	0.0048	0.72%
Mg 279.077†	94.8	0.353	mg/L	0.0089	0.353	mg/L	0.0089	2.53%
Mn 257.610†	5655.6	0.0190	mg/L	0.00080	0.0190	mg/L	0.00080	4.20%
Mo 202.031†	-5.3	-0.00388	mg/L	0.000712	-0.00388	mg/L	0.000712	18.33%
Ni 231.604†	13.0	-0.00168	mg/L	0.000365	-0.00168	mg/L	0.000365	21.72%
Pb 220.353†	6.7	0.00060	mg/L	0.001123	0.00060	mg/L	0.001123	187.58%
Sb 206.836†	5.1	0.00427	mg/L	0.003179	0.00427	mg/L	0.003179	74.47%
Se 196.026†	-9.2	-0.0161	mg/L	0.00294	-0.0161	mg/L	0.00294	18.30%
Si 251.611†	2005.0	0.0883	mg/L	0.00489	0.0883	mg/L	0.00489	5.54%
Sn 189.927†	-0.1	-0.00403	mg/L	0.001703	-0.00403	mg/L	0.001703	42.23%

Approved: January 26, 2012

Ti 334.940†	549.2	0.00024 mg/L	0.000197	0.00024 mg/L	0.000197	83.55%
Tl 190.801†	22.4	0.0162 mg/L	0.00133	0.0162 mg/L	0.00133	8.22%
V 290.880†	210.4	-0.00010 mg/L	0.001925	-0.00010 mg/L	0.001925	>999.9%
Zn 206.200†	348.3	0.0206 mg/L	0.00029	0.0206 mg/L	0.00029	1.39%
K 766.490†	536.6	0.290 mg/L	0.0316	0.290 mg/L	0.0316	10.88%
Na 589.592†	261463.7	29.2 mg/L	0.45	29.2 mg/L	0.45	1.53%
Sr 407.771†	21447.5	0.0210 mg/L	0.00038	0.0210 mg/L	0.00038	1.79%
Li 670.784†	160.8	-0.00064 mg/L	0.000202	-0.00064 mg/L	0.000202	31.36%

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Sequence No.: 17 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 12:54:06 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3416196.6						20357.42	0.60%
YRADIAL	264757.5						3543.67	1.34%
Ga 417.206	732142.3						6570.30	0.90%
GaRADIAL	41010.7						787.68	1.92%
Ag 328.068†	50840.5	0.400	mg/L	0.0064	0.400	mg/L	0.0064	1.60%
QC value within limits for Ag 328.068 Recovery = 100.11%								
Al 396.153†	29747.0	10.3	mg/L	0.01	10.3	mg/L	0.01	0.13%
QC value within limits for Al 396.153 Recovery = 102.52%								
As 188.979†	221.4	0.396	mg/L	0.0089	0.396	mg/L	0.0089	2.23%
QC value within limits for As 188.979 Recovery = 99.06%								
Ba 233.527†	32366.6	1.03	mg/L	0.007	1.03	mg/L	0.007	0.67%
QC value within limits for Ba 233.527 Recovery = 102.59%								
Be 234.861†	15802.4	0.0512	mg/L	0.00078	0.0512	mg/L	0.00078	1.53%
QC value within limits for Be 234.861 Recovery = 102.41%								
B 249.677†	14722.3	0.511	mg/L	0.0074	0.511	mg/L	0.0074	1.46%
QC value within limits for B 249.677 Recovery = 102.11%								
Ca 227.546†	687.6	9.93	mg/L	0.121	9.93	mg/L	0.121	1.21%
QC value within limits for Ca 227.546 Recovery = 99.28%								
Cd 228.802†	559.0	0.0506	mg/L	0.00078	0.0506	mg/L	0.00078	1.55%
QC value within limits for Cd 228.802 Recovery = 101.22%								
Co 228.616†	2098.4	0.201	mg/L	0.0007	0.201	mg/L	0.0007	0.36%
QC value within limits for Co 228.616 Recovery = 100.47%								
Cr 267.716†	32746.2	0.509	mg/L	0.0023	0.509	mg/L	0.0023	0.45%
QC value within limits for Cr 267.716 Recovery = 101.78%								
Cu 327.393†	49600.8	0.501	mg/L	0.0086	0.501	mg/L	0.0086	1.71%
QC value within limits for Cu 327.393 Recovery = 100.21%								
Fe 239.562†	390.4	4.07	mg/L	0.025	4.07	mg/L	0.025	0.61%
QC value within limits for Fe 239.562 Recovery = 101.73%								
Mg 279.077†	2918.2	10.1	mg/L	0.18	10.1	mg/L	0.18	1.83%
QC value within limits for Mg 279.077 Recovery = 101.03%								
Mn 257.610†	135358.4	0.519	mg/L	0.0033	0.519	mg/L	0.0033	0.63%
QC value within limits for Mn 257.610 Recovery = 103.82%								
Mo 202.031†	7412.5	1.02	mg/L	0.003	1.02	mg/L	0.003	0.34%
QC value within limits for Mo 202.031 Recovery = 101.61%								
Ni 231.604†	9056.3	0.514	mg/L	0.0013	0.514	mg/L	0.0013	0.25%
QC value within limits for Ni 231.604 Recovery = 102.72%								
Pb 220.353†	1490.4	0.512	mg/L	0.0056	0.512	mg/L	0.0056	1.09%
QC value within limits for Pb 220.353 Recovery = 102.49%								
Sb 206.836†	1023.8	1.22	mg/L	0.009	1.22	mg/L	0.009	0.70%
QC value within limits for Sb 206.836 Recovery = 101.39%								
Se 196.026†	266.8	0.415	mg/L	0.0016	0.415	mg/L	0.0016	0.38%
QC value within limits for Se 196.026 Recovery = 103.80%								
Si 251.611†	94221.4	5.07	mg/L	0.078	5.07	mg/L	0.078	1.53%
QC value within limits for Si 251.611 Recovery = 101.45%								
Sn 189.927†	2729.6	1.02	mg/L	0.006	1.02	mg/L	0.006	0.56%
QC value within limits for Sn 189.927 Recovery = 101.88%								
Ti 334.940†	497793.2	1.02	mg/L	0.003	1.02	mg/L	0.003	0.26%

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```
   QC value within limits for Ti 334.940  Recovery = 102.03%
Tl 190.801†              450.3       0.521 mg/L        0.0039       0.521 mg/L        0.0039   0.74%
   QC value within limits for Tl 190.801  Recovery = 104.12%
V 290.880†             88953.6        1.01 mg/L         0.006        1.01 mg/L         0.006   0.57%
   QC value within limits for V 290.880  Recovery = 101.38%
Zn 206.200†            14456.2        1.02 mg/L         0.003        1.02 mg/L         0.003   0.32%
   QC value within limits for Zn 206.200  Recovery = 102.06%
K 766.490†             79058.5        50.8 mg/L          0.13        50.8 mg/L          0.13   0.25%
   QC value within limits for K 766.490  Recovery = 101.70%
Na 589.592†           455185.3        50.8 mg/L          0.36        50.8 mg/L          0.36   0.71%
   QC value within limits for Na 589.592  Recovery = 101.58%
Sr 407.771†          1101324.8        1.01 mg/L         0.014        1.01 mg/L         0.014   1.39%
   QC value within limits for Sr 407.771  Recovery = 101.20%
Li 670.784†            60344.1        1.04 mg/L         0.012        1.04 mg/L         0.012   1.15%
   QC value within limits for Li 670.784  Recovery = 104.14%
All analyte(s) passed QC.

==========================================================================================================
Sequence No.: 18                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/25/2012 1:01:02 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

----------------------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     146.0 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            3445655.4                                                    13237.05   0.38%
YRADIAL               261351.7                                                     8995.59   3.44%
Ga 417.206            685949.8                                                     7307.39   1.07%
GaRADIAL               40030.3                                                     1954.85   4.88%
Ag 328.068†             -148.5    -0.00194 mg/L      0.000972    -0.00194 mg/L      0.000972  50.08%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               57.7    -0.00079 mg/L      0.012329    -0.00079 mg/L      0.012329 >999.9%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                0.3    -0.00347 mg/L      0.002717    -0.00347 mg/L      0.002717  78.37%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -4.7    -0.00349 mg/L      0.000062    -0.00349 mg/L      0.000062   1.77%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               34.2    -0.00005 mg/L      0.000102    -0.00005 mg/L      0.000102 223.86%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               108.7     0.00367 mg/L      0.000393     0.00367 mg/L      0.000393  10.71%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -0.4    -0.00353 mg/L      0.137603    -0.00353 mg/L      0.137603 >999.9%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -1.4    -0.00020 mg/L      0.000282    -0.00020 mg/L      0.000282 138.43%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -9.1    -0.00128 mg/L      0.000170    -0.00128 mg/L      0.000170  13.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               21.0    -0.00142 mg/L      0.000068    -0.00142 mg/L      0.000068   4.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -187.8    -0.00249 mg/L      0.000586    -0.00249 mg/L      0.000586  23.55%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.3     0.00332 mg/L      0.014721     0.00332 mg/L      0.014721 443.45%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                3.5      0.0375 mg/L       0.01026      0.0375 mg/L       0.01026  27.39%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              133.6    -0.00248 mg/L      0.000034    -0.00248 mg/L      0.000034   1.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -6.8    -0.00412 mg/L      0.000459    -0.00412 mg/L      0.000459  11.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               15.6    -0.00152 mg/L      0.000205    -0.00152 mg/L      0.000205  13.52%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                1.2    -0.00200 mg/L      0.001415    -0.00200 mg/L      0.001415  70.79%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                0.4    -0.00128 mg/L      0.000309    -0.00128 mg/L      0.000309  24.11%
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   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.3    -0.00681 mg/L      0.008125    -0.00681 mg/L      0.008125 119.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              23.0     -0.0192 mg/L       0.00132     -0.0192 mg/L       0.00132   6.88%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               0.4    -0.00385 mg/L      0.000798    -0.00385 mg/L      0.000798  20.72%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -95.7    -0.00123 mg/L      0.000184    -0.00123 mg/L      0.000184  14.89%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -2.0    -0.00594 mg/L      0.005710    -0.00594 mg/L      0.005710  96.08%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               -8.7    -0.00257 mg/L      0.000893    -0.00257 mg/L      0.000893  34.72%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               1.5    -0.00393 mg/L      0.000161    -0.00393 mg/L      0.000161   4.10%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               20.5    -0.00867 mg/L      0.032891    -0.00867 mg/L      0.032891 379.25%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             250.6    -0.00460 mg/L      0.019658    -0.00460 mg/L      0.019658 427.56%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              64.0     0.00149 mg/L      0.000033     0.00149 mg/L      0.000033   2.20%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              64.5    -0.00231 mg/L      0.000602    -0.00231 mg/L      0.000602  26.01%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
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Approved: January 26, 2012

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Analysis Begun

Start Time: 1/25/2012 1:04:47 PM **Plasma On Time: 1/25/2012 7:37:34 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\WEDNESDAY1.sif
Batch ID:
Results Data Set: 012512HR
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 28**
Sample ID: L1201048702 0.01 **Date Collected: 1/25/2012 1:04:49 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201048702 0.01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201048702 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3549599.4						48131.58	1.36%
YRADIAL	267879.1						6575.43	2.45%
Ga 417.206	729695.5						8156.96	1.12%
GaRADIAL	42525.5						1322.97	3.11%
Ag 328.068†	-140.3	-0.00188	mg/L	0.000210	-0.00188	mg/L	0.000210	11.20%
Al 396.153†	240.6	0.0624	mg/L	0.02096	0.0624	mg/L	0.02096	33.57%
As 188.979†	2.2	0.00001	mg/L	0.003691	0.00001	mg/L	0.003691	>999.9%
Ba 233.527†	102.5	-0.00009	mg/L	0.000215	-0.00009	mg/L	0.000215	243.49%
Be 234.861†	99.8	0.00016	mg/L	0.000063	0.00016	mg/L	0.000063	39.28%
B 249.677†	-4.4	-0.00018	mg/L	0.000318	-0.00018	mg/L	0.000318	174.58%
Ca 227.546†	134.2	1.95	mg/L	0.109	1.95	mg/L	0.109	5.61%
Cd 228.802†	-4.4	-0.00046	mg/L	0.000198	-0.00046	mg/L	0.000198	43.02%
Co 228.616†	-9.1	-0.00129	mg/L	0.000307	-0.00129	mg/L	0.000307	23.84%
Cr 267.716†	-55.0	-0.00261	mg/L	0.000141	-0.00261	mg/L	0.000141	5.41%
Cu 327.393†	-148.8	-0.00209	mg/L	0.000637	-0.00209	mg/L	0.000637	30.43%
Fe 239.562†	1.4	0.0207	mg/L	0.00451	0.0207	mg/L	0.00451	21.84%
Mg 279.077†	1.3	0.0301	mg/L	0.00378	0.0301	mg/L	0.00378	12.56%
Mn 257.610†	13.8	-0.00290	mg/L	0.000027	-0.00290	mg/L	0.000027	0.95%
Mo 202.031†	-3.2	-0.00362	mg/L	0.000068	-0.00362	mg/L	0.000068	1.88%
Ni 231.604†	2.6	-0.00226	mg/L	0.000264	-0.00226	mg/L	0.000264	11.71%
Pb 220.353†	2.1	-0.00158	mg/L	0.000480	-0.00158	mg/L	0.000480	30.31%
Sb 206.836†	-1.0	-0.00292	mg/L	0.003530	-0.00292	mg/L	0.003530	121.01%
Se 196.026†	0.5	-0.00505	mg/L	0.005319	-0.00505	mg/L	0.005319	105.43%
Si 251.611†	-0.6	-0.0205	mg/L	0.00295	-0.0205	mg/L	0.00295	14.40%
Sn 189.927†	-2.5	-0.00491	mg/L	0.000129	-0.00491	mg/L	0.000129	2.63%
Ti 334.940†	-68.9	-0.00116	mg/L	0.000088	-0.00116	mg/L	0.000088	7.63%
Tl 190.801†	4.7	0.00096	mg/L	0.001797	0.00096	mg/L	0.001797	187.33%
V 290.880†	98.7	-0.00135	mg/L	0.000885	-0.00135	mg/L	0.000885	65.66%
Zn 206.200†	27.8	-0.00208	mg/L	0.000210	-0.00208	mg/L	0.000210	10.08%
K 766.490†	1797.8	1.12	mg/L	0.055	1.12	mg/L	0.055	4.94%
Na 589.592†	20120.8	2.23	mg/L	0.051	2.23	mg/L	0.051	2.27%
Sr 407.771†	6825.5	0.00770	mg/L	0.000091	0.00770	mg/L	0.000091	1.18%
Li 670.784†	20.1	-0.00308	mg/L	0.001466	-0.00308	mg/L	0.001466	47.60%

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Sequence No.: 2 **Autosampler Location: 29**
Sample ID: L1201048703 0.01 **Date Collected: 1/25/2012 1:11:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201048703 0.01

Approved: January 26, 2012

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201048703 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3500366.7						14162.53	0.40%
YRADIAL	271314.9						7429.87	2.74%
Ga 417.206	715951.5						10455.76	1.46%
GaRADIAL	42418.6						1062.45	2.50%
Ag 328.068†	-36.8	-0.00106	mg/L	0.000216	-0.00106	mg/L	0.000216	20.36%
Al 396.153†	24.4	-0.0123	mg/L	0.01125	-0.0123	mg/L	0.01125	91.17%
As 188.979†	1.9	-0.00043	mg/L	0.002790	-0.00043	mg/L	0.002790	648.06%
Ba 233.527†	63.2	-0.00133	mg/L	0.000053	-0.00133	mg/L	0.000053	3.98%
Be 234.861†	76.7	0.00009	mg/L	0.000018	0.00009	mg/L	0.000018	19.57%
B 249.677†	32.1	0.00104	mg/L	0.000527	0.00104	mg/L	0.000527	50.51%
Ca 227.546†	114.3	1.66	mg/L	0.138	1.66	mg/L	0.138	8.30%
Cd 228.802†	-5.4	-0.00055	mg/L	0.000089	-0.00055	mg/L	0.000089	16.03%
Co 228.616†	-7.6	-0.00113	mg/L	0.000170	-0.00113	mg/L	0.000170	15.00%
Cr 267.716†	-47.8	-0.00249	mg/L	0.000176	-0.00249	mg/L	0.000176	7.05%
Cu 327.393†	-53.9	-0.00114	mg/L	0.000535	-0.00114	mg/L	0.000535	46.97%
Fe 239.562†	-0.9	-0.00330	mg/L	0.020353	-0.00330	mg/L	0.020353	616.98%
Mg 279.077†	-3.9	0.0121	mg/L	0.01198	0.0121	mg/L	0.01198	98.91%
Mn 257.610†	-132.5	-0.00345	mg/L	0.000023	-0.00345	mg/L	0.000023	0.67%
Mo 202.031†	-3.6	-0.00368	mg/L	0.000437	-0.00368	mg/L	0.000437	11.87%
Ni 231.604†	-2.3	-0.00254	mg/L	0.000326	-0.00254	mg/L	0.000326	12.84%
Pb 220.353†	5.9	-0.00033	mg/L	0.000565	-0.00033	mg/L	0.000565	171.60%
Sb 206.836†	-1.2	-0.00323	mg/L	0.003121	-0.00323	mg/L	0.003121	96.74%
Se 196.026†	-4.7	-0.0132	mg/L	0.00614	-0.0132	mg/L	0.00614	46.52%
Si 251.611†	-7.9	-0.0208	mg/L	0.00139	-0.0208	mg/L	0.00139	6.65%
Sn 189.927†	-2.9	-0.00505	mg/L	0.000798	-0.00505	mg/L	0.000798	15.80%
Ti 334.940†	-108.0	-0.00124	mg/L	0.000131	-0.00124	mg/L	0.000131	10.57%
Tl 190.801†	5.6	0.00210	mg/L	0.001506	0.00210	mg/L	0.001506	71.79%
V 290.880†	71.5	-0.00166	mg/L	0.001530	-0.00166	mg/L	0.001530	92.32%
Zn 206.200†	18.8	-0.00271	mg/L	0.000155	-0.00271	mg/L	0.000155	5.73%
K 766.490†	2680.5	1.68	mg/L	0.076	1.68	mg/L	0.076	4.54%
Na 589.592†	18321.3	2.03	mg/L	0.019	2.03	mg/L	0.019	0.95%
Sr 407.771†	7395.3	0.00823	mg/L	0.000046	0.00823	mg/L	0.000046	0.56%
Li 670.784†	-13.6	-0.00366	mg/L	0.001541	-0.00366	mg/L	0.001541	42.04%

Sequence No.: 3 — **Autosampler Location: 6**
Sample ID: CCV — **Date Collected: 1/25/2012 1:18:28 PM**
Analyst: — **Data Type: Original**
Initial Sample Wt: — **Initial Sample Vol:**
Dilution: — **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	146.0 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	3413758.0						23109.59	0.68%
YRADIAL	262295.0						2947.47	1.12%
Ga 417.206	731604.1						3936.10	0.54%
GaRADIAL	40753.1						929.59	2.28%
Ag 328.068†	50732.2	0.400	mg/L	0.0032	0.400	mg/L	0.0032	0.79%
QC value within limits for Ag 328.068 Recovery = 99.90%								
Al 396.153†	29371.8	10.1	mg/L	0.03	10.1	mg/L	0.03	0.27%
QC value within limits for Al 396.153 Recovery = 101.23%								
As 188.979†	218.3	0.391	mg/L	0.0017	0.391	mg/L	0.0017	0.44%
QC value within limits for As 188.979 Recovery = 97.65%								
Ba 233.527†	32370.2	1.03	mg/L	0.010	1.03	mg/L	0.010	0.98%
QC value within limits for Ba 233.527 Recovery = 102.60%								
Be 234.861†	15780.1	0.0511	mg/L	0.00058	0.0511	mg/L	0.00058	1.13%
QC value within limits for Be 234.861 Recovery = 102.25%								
B 249.677†	14612.3	0.507	mg/L	0.0049	0.507	mg/L	0.0049	0.96%

Approved: January 26, 2012

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   QC value within limits for B 249.677  Recovery = 101.36%
Ca 227.546†              678.6        9.79 mg/L         0.072        9.79 mg/L         0.072   0.73%
   QC value within limits for Ca 227.546  Recovery = 97.95%
Cd 228.802†              557.1      0.0504 mg/L       0.00016      0.0504 mg/L       0.00016   0.32%
   QC value within limits for Cd 228.802  Recovery = 100.86%
Co 228.616†             2076.3       0.199 mg/L        0.0012       0.199 mg/L        0.0012   0.60%
   QC value within limits for Co 228.616  Recovery = 99.40%
Cr 267.716†            32525.3       0.505 mg/L        0.0049       0.505 mg/L        0.0049   0.97%
   QC value within limits for Cr 267.716  Recovery = 101.10%
Cu 327.393†            49292.4       0.498 mg/L        0.0032       0.498 mg/L        0.0032   0.64%
   QC value within limits for Cu 327.393  Recovery = 99.58%
Fe 239.562†              387.6        4.04 mg/L         0.041        4.04 mg/L         0.041   1.03%
   QC value within limits for Fe 239.562  Recovery = 101.01%
Mg 279.077†             2909.3        10.1 mg/L          0.10        10.1 mg/L          0.10   1.02%
   QC value within limits for Mg 279.077  Recovery = 100.73%
Mn 257.610†           134406.4       0.515 mg/L        0.0038       0.515 mg/L        0.0038   0.75%
   QC value within limits for Mn 257.610  Recovery = 103.08%
Mo 202.031†             7357.1        1.01 mg/L         0.010        1.01 mg/L         0.010   1.01%
   QC value within limits for Mo 202.031  Recovery = 100.84%
Ni 231.604†             8941.1       0.507 mg/L        0.0071       0.507 mg/L        0.0071   1.41%
   QC value within limits for Ni 231.604  Recovery = 101.41%
Pb 220.353†             1475.0       0.507 mg/L        0.0036       0.507 mg/L        0.0036   0.71%
   QC value within limits for Pb 220.353  Recovery = 101.42%
Sb 206.836†             1014.5        1.21 mg/L         0.012        1.21 mg/L         0.012   0.96%
   QC value within limits for Sb 206.836  Recovery = 100.47%
Se 196.026†              265.4       0.413 mg/L        0.0104       0.413 mg/L        0.0104   2.52%
   QC value within limits for Se 196.026  Recovery = 103.22%
Si 251.611†            93802.8        5.05 mg/L         0.035        5.05 mg/L         0.035   0.68%
   QC value within limits for Si 251.611  Recovery = 101.00%
Sn 189.927†             2703.2        1.01 mg/L         0.009        1.01 mg/L         0.009   0.94%
   QC value within limits for Sn 189.927  Recovery = 100.89%
Ti 334.940†           493451.4        1.01 mg/L         0.001        1.01 mg/L         0.001   0.12%
   QC value within limits for Ti 334.940  Recovery = 101.14%
Tl 190.801†              441.2       0.510 mg/L        0.0031       0.510 mg/L        0.0031   0.61%
   QC value within limits for Tl 190.801  Recovery = 102.03%
V 290.880†             88513.2        1.01 mg/L         0.009        1.01 mg/L         0.009   0.90%
   QC value within limits for V 290.880  Recovery = 100.87%
Zn 206.200†            14429.2        1.02 mg/L         0.009        1.02 mg/L         0.009   0.90%
   QC value within limits for Zn 206.200  Recovery = 101.86%
K 766.490†             78423.9        50.4 mg/L          0.21        50.4 mg/L          0.21   0.42%
   QC value within limits for K 766.490  Recovery = 100.87%
Na 589.592†           456998.5        51.0 mg/L          1.71        51.0 mg/L          1.71   3.36%
   QC value within limits for Na 589.592  Recovery = 101.98%
Sr 407.771†          1093324.6        1.00 mg/L         0.020        1.00 mg/L         0.020   2.02%
   QC value within limits for Sr 407.771  Recovery = 100.47%
Li 670.784†            59363.9        1.02 mg/L         0.009        1.02 mg/L         0.009   0.84%
   QC value within limits for Li 670.784  Recovery = 102.44%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 4                                    Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 1/25/2012 1:25:24 PM
Analyst:                                           Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     146.0 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            3456752.7                                                    14112.92   0.41%
YRADIAL               265965.2                                                     4273.24   1.61%
Ga 417.206            684031.4                                                     7147.71   1.04%
GaRADIAL               40769.4                                                      824.19   2.02%
Ag 328.068†             -165.3    -0.00207 mg/L      0.000353    -0.00207 mg/L    0.000353  17.05%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               28.6     -0.0109 mg/L       0.01095     -0.0109 mg/L     0.01095 100.50%
```

Approved: January 26, 2012

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   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                1.4    -0.00130 mg/L      0.001209    -0.00130 mg/L      0.001209  92.80%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -2.4    -0.00342 mg/L      0.000065    -0.00342 mg/L      0.000065   1.91%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               46.0    -0.00001 mg/L      0.000046    -0.00001 mg/L      0.000046 488.53%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                91.9     0.00317 mg/L      0.000319     0.00317 mg/L      0.000319  10.05%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -1.4     -0.0196 mg/L       0.04472     -0.0196 mg/L       0.04472 228.19%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -2.3    -0.00028 mg/L      0.000211    -0.00028 mg/L      0.000211  75.97%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -12.3    -0.00159 mg/L      0.000293    -0.00159 mg/L      0.000293  18.40%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               23.4    -0.00138 mg/L      0.000031    -0.00138 mg/L      0.000031   2.24%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -197.0    -0.00258 mg/L      0.001308    -0.00258 mg/L      0.001308  50.70%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                1.0      0.0164 mg/L       0.03417      0.0164 mg/L       0.03417 207.72%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                2.9      0.0355 mg/L       0.02036      0.0355 mg/L       0.02036  57.29%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              127.8    -0.00251 mg/L      0.000010    -0.00251 mg/L      0.000010   0.38%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -3.3    -0.00363 mg/L      0.000240    -0.00363 mg/L      0.000240   6.59%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               10.5    -0.00181 mg/L      0.000730    -0.00181 mg/L      0.000730  40.41%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                7.4     0.00013 mg/L      0.002465     0.00013 mg/L      0.002465 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -0.8    -0.00275 mg/L      0.001909    -0.00275 mg/L      0.001909  69.32%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                1.1    -0.00461 mg/L      0.009170    -0.00461 mg/L      0.009170 199.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -15.5     -0.0213 mg/L       0.00070     -0.0213 mg/L       0.00070   3.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.6    -0.00265 mg/L      0.000650    -0.00265 mg/L      0.000650  24.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -111.3    -0.00127 mg/L      0.000023    -0.00127 mg/L      0.000023   1.78%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -2.5    -0.00654 mg/L      0.001519    -0.00654 mg/L      0.001519  23.23%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†                88.2    -0.00147 mg/L      0.000226    -0.00147 mg/L      0.000226  15.44%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                2.5    -0.00387 mg/L      0.000109    -0.00387 mg/L      0.000109   2.82%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                63.9      0.0190 mg/L       0.01057      0.0190 mg/L       0.01057  55.65%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†               29.0     -0.0295 mg/L       0.01529     -0.0295 mg/L       0.01529  51.82%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              110.4     0.00153 mg/L      0.000033     0.00153 mg/L      0.000033   2.17%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               20.5    -0.00307 mg/L      0.003008    -0.00307 mg/L      0.003008  97.88%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
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Approved: January 26, 2012

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Analysis Begun

Start Time: 1/25/2012 1:46:38 PM **Plasma On Time: 1/25/2012 7:37:34 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\WEDNESDAY1.sif
Batch ID:
Results Data Set: 012512HR
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 30**
Sample ID: PBW AC WG387753-02 **Date Collected: 1/25/2012 1:46:40 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW AC WG387753-02

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: PBW AC WG387753-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3521806.0						36479.44	1.04%
YRADIAL	268813.7						4711.69	1.75%
Ga 417.206	718046.1						10180.98	1.42%
GaRADIAL	41761.7						145.93	0.35%
Ag 328.068†	-125.3	-0.00176	mg/L	0.000461	-0.00176	mg/L	0.000461	26.20%
Al 396.153†	-12.2	-0.0250	mg/L	0.00243	-0.0250	mg/L	0.00243	9.72%
As 188.979†	1.8	-0.00069	mg/L	0.003342	-0.00069	mg/L	0.003342	483.37%
Ba 233.527†	-3.4	-0.00345	mg/L	0.000084	-0.00345	mg/L	0.000084	2.45%
Be 234.861†	61.8	0.00004	mg/L	0.000027	0.00004	mg/L	0.000027	62.84%
B 249.677†	-17.5	-0.00061	mg/L	0.000073	-0.00061	mg/L	0.000073	11.85%
Ca 227.546†	-1.8	-0.0244	mg/L	0.03263	-0.0244	mg/L	0.03263	133.63%
Cd 228.802†	-5.7	-0.00058	mg/L	0.000080	-0.00058	mg/L	0.000080	13.79%
Co 228.616†	-12.6	-0.00162	mg/L	0.000156	-0.00162	mg/L	0.000156	9.64%
Cr 267.716†	10.1	-0.00159	mg/L	0.000091	-0.00159	mg/L	0.000091	5.71%
Cu 327.393†	-99.4	-0.00160	mg/L	0.000433	-0.00160	mg/L	0.000433	27.12%
Fe 239.562†	-0.4	0.00218	mg/L	0.003642	0.00218	mg/L	0.003642	167.12%
Mg 279.077†	1.0	0.0288	mg/L	0.00907	0.0288	mg/L	0.00907	31.46%
Mn 257.610†	-47.3	-0.00318	mg/L	0.000033	-0.00318	mg/L	0.000033	1.02%
Mo 202.031†	-5.0	-0.00387	mg/L	0.001039	-0.00387	mg/L	0.001039	26.83%
Ni 231.604†	9.5	-0.00186	mg/L	0.000509	-0.00186	mg/L	0.000509	27.38%
Pb 220.353†	4.7	-0.00081	mg/L	0.001498	-0.00081	mg/L	0.001498	184.39%
Sb 206.836†	-1.3	-0.00334	mg/L	0.000851	-0.00334	mg/L	0.000851	25.50%
Se 196.026†	-0.9	-0.00773	mg/L	0.004940	-0.00773	mg/L	0.004940	63.92%
Si 251.611†	43.0	-0.0181	mg/L	0.00013	-0.0181	mg/L	0.00013	0.71%
Sn 189.927†	2.4	-0.00309	mg/L	0.001066	-0.00309	mg/L	0.001066	34.44%
Ti 334.940†	-40.5	-0.00112	mg/L	0.000009	-0.00112	mg/L	0.000009	0.78%
Tl 190.801†	-2.2	-0.00616	mg/L	0.001898	-0.00616	mg/L	0.001898	30.83%
V 290.880†	26.5	-0.00217	mg/L	0.001711	-0.00217	mg/L	0.001711	78.79%
Zn 206.200†	22.2	-0.00247	mg/L	0.000106	-0.00247	mg/L	0.000106	4.30%
K 766.490†	-58.6	-0.0589	mg/L	0.00913	-0.0589	mg/L	0.00913	15.51%
Na 589.592†	-346.8	-0.0717	mg/L	0.02080	-0.0717	mg/L	0.02080	28.99%
Sr 407.771†	-67.0	0.00137	mg/L	0.000067	0.00137	mg/L	0.000067	4.85%
Li 670.784†	-40.2	-0.00413	mg/L	0.001021	-0.00413	mg/L	0.001021	24.74%

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Sequence No.: 2 **Autosampler Location: 31**
Sample ID: LCSW AC WG387753-03 **Date Collected: 1/25/2012 1:53:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW AC WG387753-03

Approved: January 26, 2012

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: LCSW AC WG387753-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3442603.7						56601.85	1.64%
YRADIAL	264382.5						4896.84	1.85%
Ga 417.206	749238.3						13193.35	1.76%
GaRADIAL	40905.0						183.60	0.45%
Ag 328.068†	24219.3	0.190	mg/L	0.0053	0.190	mg/L	0.0053	2.80%
Al 396.153†	14689.3	5.05	mg/L	0.077	5.05	mg/L	0.077	1.53%
As 188.979†	109.4	0.194	mg/L	0.0059	0.194	mg/L	0.0059	3.03%
Ba 233.527†	15802.6	0.499	mg/L	0.0118	0.499	mg/L	0.0118	2.36%
Be 234.861†	7591.8	0.0245	mg/L	0.00071	0.0245	mg/L	0.00071	2.88%
B 249.677†	28333.7	0.973	mg/L	0.0240	0.973	mg/L	0.0240	2.46%
Ca 227.546†	325.9	4.71	mg/L	0.181	4.71	mg/L	0.181	3.85%
Cd 228.802†	262.8	0.0238	mg/L	0.00076	0.0238	mg/L	0.00076	3.20%
Co 228.616†	1022.0	0.0977	mg/L	0.00189	0.0977	mg/L	0.00189	1.93%
Cr 267.716†	15902.5	0.246	mg/L	0.0061	0.246	mg/L	0.0061	2.47%
Cu 327.393†	23433.1	0.236	mg/L	0.0061	0.236	mg/L	0.0061	2.60%
Fe 239.562†	187.0	1.95	mg/L	0.046	1.95	mg/L	0.046	2.34%
Mg 279.077†	1434.9	4.98	mg/L	0.064	4.98	mg/L	0.064	1.28%
Mn 257.610†	64536.0	0.246	mg/L	0.0064	0.246	mg/L	0.0064	2.59%
Mo 202.031†	3556.6	0.486	mg/L	0.0080	0.486	mg/L	0.0080	1.65%
Ni 231.604†	4458.2	0.252	mg/L	0.0063	0.252	mg/L	0.0063	2.49%
Pb 220.353†	730.5	0.250	mg/L	0.0045	0.250	mg/L	0.0045	1.81%
Sb 206.836†	485.1	0.576	mg/L	0.0148	0.576	mg/L	0.0148	2.57%
Se 196.026†	126.0	0.193	mg/L	0.0060	0.193	mg/L	0.0060	3.11%
Si 251.611†	46361.6	2.49	mg/L	0.067	2.49	mg/L	0.067	2.70%
Sn 189.927†	1433.9	0.533	mg/L	0.0100	0.533	mg/L	0.0100	1.88%
Ti 334.940†	237883.2	0.487	mg/L	0.0021	0.487	mg/L	0.0021	0.44%
Tl 190.801†	222.2	0.255	mg/L	0.0052	0.255	mg/L	0.0052	2.05%
V 290.880†	42752.4	0.486	mg/L	0.0144	0.486	mg/L	0.0144	2.95%
Zn 206.200†	7159.7	0.503	mg/L	0.0108	0.503	mg/L	0.0108	2.15%
K 766.490†	38586.6	24.6	mg/L	0.04	24.6	mg/L	0.04	0.14%
Na 589.592†	228254.5	25.5	mg/L	0.25	25.5	mg/L	0.25	0.98%
Sr 407.771†	531343.1	0.489	mg/L	0.0056	0.489	mg/L	0.0056	1.15%
Li 670.784†	30679.6	0.528	mg/L	0.0077	0.528	mg/L	0.0077	1.46%

Sequence No.: 3
Sample ID: L1201057601
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 32
Date Collected: 1/25/2012 2:00:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201057601

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3460444.7						30168.14	0.87%
YRADIAL	267871.8						3736.62	1.39%
Ga 417.206	766942.7						12679.06	1.65%
GaRADIAL	42305.6						653.16	1.54%
Ag 328.068†	-85.3	-0.00150	mg/L	0.000362	-0.00150	mg/L	0.000362	24.12%
Al 396.153†	96.7	0.0126	mg/L	0.01312	0.0126	mg/L	0.01312	103.88%
As 188.979†	9.2	0.0122	mg/L	0.00124	0.0122	mg/L	0.00124	10.13%
Ba 233.527†	4375.4	0.135	mg/L	0.0021	0.135	mg/L	0.0021	1.58%
Be 234.861†	120.3	0.00021	mg/L	0.000018	0.00021	mg/L	0.000018	8.60%
B 249.677†	1000.5	0.0347	mg/L	0.00120	0.0347	mg/L	0.00120	3.45%
Ca 227.546†	2446.0	35.5	mg/L	0.52	35.5	mg/L	0.52	1.45%
Cd 228.802†	-7.8	-0.00074	mg/L	0.000393	-0.00074	mg/L	0.000393	53.30%
Co 228.616†	-11.3	-0.00155	mg/L	0.000048	-0.00155	mg/L	0.000048	3.09%
Cr 267.716†	337.4	0.00351	mg/L	0.000252	0.00351	mg/L	0.000252	7.19%
Cu 327.393†	-207.1	-0.00267	mg/L	0.000662	-0.00267	mg/L	0.000662	24.82%

Approved: January 26, 2012

Fe 239.562†	10.4	0.114	mg/L	0.0144	0.114	mg/L	0.0144	12.71%
Mg 279.077†	1654.2	5.74	mg/L	0.082	5.74	mg/L	0.082	1.42%
Mn 257.610†	1548.4	0.00332	mg/L	0.000043	0.00332	mg/L	0.000043	1.29%
Mo 202.031†	22.4	-0.00011	mg/L	0.000496	-0.00011	mg/L	0.000496	466.89%
Ni 231.604†	22.9	-0.00113	mg/L	0.000135	-0.00113	mg/L	0.000135	11.95%
Pb 220.353†	-3.0	-0.00173	mg/L	0.000893	-0.00173	mg/L	0.000893	51.68%
Sb 206.836†	6.6	0.00608	mg/L	0.002658	0.00608	mg/L	0.002658	43.71%
Se 196.026†	-10.0	-0.0112	mg/L	0.00476	-0.0112	mg/L	0.00476	42.32%
Si 251.611†	311314.3	16.9	mg/L	0.12	16.9	mg/L	0.12	0.72%
Sn 189.927†	-2.5	-0.00491	mg/L	0.001293	-0.00491	mg/L	0.001293	26.34%
Ti 334.940†	660.9	0.00067	mg/L	0.000159	0.00067	mg/L	0.000159	23.65%
Tl 190.801†	44.4	0.0330	mg/L	0.00305	0.0330	mg/L	0.00305	9.25%
V 290.880†	550.4	0.00428	mg/L	0.001574	0.00428	mg/L	0.001574	36.75%
Zn 206.200†	154.6	0.00691	mg/L	0.000098	0.00691	mg/L	0.000098	1.42%
K 766.490†	3177.7	1.98	mg/L	0.042	1.98	mg/L	0.042	2.11%
Na 589.592†	174327.8	19.5	mg/L	0.26	19.5	mg/L	0.26	1.31%
Sr 407.771†	346584.3	0.320	mg/L	0.0044	0.320	mg/L	0.0044	1.37%
Li 670.784†	800.1	0.0104	mg/L	0.00078	0.0104	mg/L	0.00078	7.51%

Sequence No.: 4 **Autosampler Location: 33**
Sample ID: L1201057602 **Date Collected: 1/25/2012 2:07:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057602

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057602

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3423520.5						27919.47	0.82%
YRADIAL	269999.2						4973.51	1.84%
Ga 417.206	759783.9						6009.00	0.79%
GaRADIAL	42205.4						1259.56	2.98%
Ag 328.068†	-66.2	-0.00136	mg/L	0.000695	-0.00136	mg/L	0.000695	51.02%
Al 396.153†	37.1	-0.00798	mg/L	0.010487	-0.00798	mg/L	0.010487	131.38%
As 188.979†	11.1	0.0154	mg/L	0.00822	0.0154	mg/L	0.00822	53.37%
Ba 233.527†	4387.3	0.136	mg/L	0.0012	0.136	mg/L	0.0012	0.88%
Be 234.861†	127.3	0.00024	mg/L	0.000017	0.00024	mg/L	0.000017	7.20%
B 249.677†	799.8	0.0278	mg/L	0.00009	0.0278	mg/L	0.00009	0.33%
Ca 227.546†	3178.2	46.2	mg/L	0.59	46.2	mg/L	0.59	1.27%
Cd 228.802†	-6.5	-0.00062	mg/L	0.000058	-0.00062	mg/L	0.000058	9.42%
Co 228.616†	-10.0	-0.00141	mg/L	0.000399	-0.00141	mg/L	0.000399	28.22%
Cr 267.716†	463.0	0.00547	mg/L	0.000073	0.00547	mg/L	0.000073	1.33%
Cu 327.393†	-229.8	-0.00290	mg/L	0.000937	-0.00290	mg/L	0.000937	32.30%
Fe 239.562†	8.4	0.0932	mg/L	0.01237	0.0932	mg/L	0.01237	13.28%
Mg 279.077†	2128.9	7.38	mg/L	0.154	7.38	mg/L	0.154	2.09%
Mn 257.610†	1119.4	0.00173	mg/L	0.000059	0.00173	mg/L	0.000059	3.44%
Mo 202.031†	16.5	-0.00091	mg/L	0.000384	-0.00091	mg/L	0.000384	41.96%
Ni 231.604†	107.0	0.00366	mg/L	0.000262	0.00366	mg/L	0.000262	7.15%
Pb 220.353†	2.5	0.00068	mg/L	0.001341	0.00068	mg/L	0.001341	196.42%
Sb 206.836†	9.2	0.00917	mg/L	0.001513	0.00917	mg/L	0.001513	16.49%
Se 196.026†	-15.9	-0.0174	mg/L	0.00572	-0.0174	mg/L	0.00572	32.88%
Si 251.611†	480232.4	26.0	mg/L	0.10	26.0	mg/L	0.10	0.37%
Sn 189.927†	-3.1	-0.00513	mg/L	0.001677	-0.00513	mg/L	0.001677	32.68%
Ti 334.940†	201.0	-0.00017	mg/L	0.000055	-0.00017	mg/L	0.000055	33.04%
Tl 190.801†	49.7	0.0348	mg/L	0.00833	0.0348	mg/L	0.00833	23.91%
V 290.880†	535.7	0.00425	mg/L	0.001082	0.00425	mg/L	0.001082	25.44%
Zn 206.200†	164.7	0.00764	mg/L	0.000218	0.00764	mg/L	0.000218	2.85%
K 766.490†	5671.7	3.57	mg/L	0.055	3.57	mg/L	0.055	1.53%
Na 589.592†	182107.1	20.4	mg/L	0.36	20.4	mg/L	0.36	1.76%
Sr 407.771†	404260.6	0.373	mg/L	0.0052	0.373	mg/L	0.0052	1.39%
Li 670.784†	921.9	0.0125	mg/L	0.00088	0.0125	mg/L	0.00088	7.06%

Sequence No.: 5 **Autosampler Location: 34**
Sample ID: L1201057603 WG387753-01 **Date Collected: 1/25/2012 2:14:14 PM**

Approved: January 26, 2012

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

Nebulizer Parameters: L1201057603 WG387753-01

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057603 WG387753-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3486689.1						26837.16	0.77%
YRADIAL	270598.4						540.26	0.20%
Ga 417.206	778131.9						10387.86	1.33%
GaRADIAL	42654.7						763.52	1.79%
Ag 328.068†	-2.6	-0.00086	mg/L	0.000541	-0.00086	mg/L	0.000541	62.73%
Al 396.153†	-44.8	-0.0363	mg/L	0.01267	-0.0363	mg/L	0.01267	34.91%
As 188.979†	11.1	0.0154	mg/L	0.00322	0.0154	mg/L	0.00322	20.95%
Ba 233.527†	2294.9	0.0694	mg/L	0.00043	0.0694	mg/L	0.00043	0.62%
Be 234.861†	130.0	0.00025	mg/L	0.000012	0.00025	mg/L	0.000012	4.65%
B 249.677†	575.5	0.0200	mg/L	0.00051	0.0200	mg/L	0.00051	2.57%
Ca 227.546†	3354.4	48.7	mg/L	0.81	48.7	mg/L	0.81	1.66%
Cd 228.802†	-5.3	-0.00051	mg/L	0.000341	-0.00051	mg/L	0.000341	67.04%
Co 228.616†	-13.2	-0.00171	mg/L	0.000140	-0.00171	mg/L	0.000140	8.18%
Cr 267.716†	160.2	0.00075	mg/L	0.000062	0.00075	mg/L	0.000062	8.29%
Cu 327.393†	-201.6	-0.00262	mg/L	0.000790	-0.00262	mg/L	0.000790	30.20%
Fe 239.562†	6.4	0.0722	mg/L	0.03227	0.0722	mg/L	0.03227	44.69%
Mg 279.077†	2241.5	7.76	mg/L	0.022	7.76	mg/L	0.022	0.28%
Mn 257.610†	126.1	-0.00208	mg/L	0.000008	-0.00208	mg/L	0.000008	0.41%
Mo 202.031†	5.1	-0.00248	mg/L	0.000488	-0.00248	mg/L	0.000488	19.68%
Ni 231.604†	60.9	0.00103	mg/L	0.000080	0.00103	mg/L	0.000080	7.83%
Pb 220.353†	-7.1	-0.00249	mg/L	0.000979	-0.00249	mg/L	0.000979	39.33%
Sb 206.836†	6.0	0.00539	mg/L	0.001668	0.00539	mg/L	0.001668	30.94%
Se 196.026†	-13.8	-0.0132	mg/L	0.01212	-0.0132	mg/L	0.01212	91.57%
Si 251.611†	366110.4	19.8	mg/L	0.28	19.8	mg/L	0.28	1.41%
Sn 189.927†	2.3	-0.00312	mg/L	0.002078	-0.00312	mg/L	0.002078	66.56%
Ti 334.940†	22.0	-0.00051	mg/L	0.000054	-0.00051	mg/L	0.000054	10.70%
Tl 190.801†	56.3	0.0413	mg/L	0.00447	0.0413	mg/L	0.00447	10.82%
V 290.880†	351.4	0.00219	mg/L	0.001741	0.00219	mg/L	0.001741	79.63%
Zn 206.200†	173.3	0.00823	mg/L	0.000457	0.00823	mg/L	0.000457	5.56%
K 766.490†	3506.4	2.18	mg/L	0.037	2.18	mg/L	0.037	1.68%
Na 589.592†	229806.6	25.7	mg/L	0.11	25.7	mg/L	0.11	0.44%
Sr 407.771†	397775.0	0.367	mg/L	0.0036	0.367	mg/L	0.0036	0.98%
Li 670.784†	725.5	0.00913	mg/L	0.000417	0.00913	mg/L	0.000417	4.57%

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Sequence No.: 6 **Autosampler Location: 35**
Sample ID: L1201057603S WG387753-04 **Date Collected: 1/25/2012 2:21:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057603S WG387753-04

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057603S WG387753-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3384653.1						27707.31	0.82%
YRADIAL	266891.5						4819.70	1.81%
Ga 417.206	764280.6						8600.12	1.13%
GaRADIAL	40983.4						830.95	2.03%
Ag 328.068†	23569.7	0.185	mg/L	0.0029	0.185	mg/L	0.0029	1.54%
Al 396.153†	14566.3	5.01	mg/L	0.026	5.01	mg/L	0.026	0.53%
As 188.979†	116.1	0.205	mg/L	0.0042	0.205	mg/L	0.0042	2.06%
Ba 233.527†	18128.9	0.573	mg/L	0.0052	0.573	mg/L	0.0052	0.91%
Be 234.861†	7313.5	0.0236	mg/L	0.00048	0.0236	mg/L	0.00048	2.02%

Approved: January 26, 2012

B 249.677†	29078.5	0.999	mg/L	0.0216	0.999	mg/L	0.0216	2.16%
Ca 227.546†	3799.0	55.2	mg/L	0.35	55.2	mg/L	0.35	0.64%
Cd 228.802†	250.7	0.0227	mg/L	0.00011	0.0227	mg/L	0.00011	0.46%
Co 228.616†	991.3	0.0946	mg/L	0.00042	0.0946	mg/L	0.00042	0.45%
Cr 267.716†	15967.2	0.247	mg/L	0.0020	0.247	mg/L	0.0020	0.83%
Cu 327.393†	22526.7	0.227	mg/L	0.0044	0.227	mg/L	0.0044	1.94%
Fe 239.562†	195.6	2.04	mg/L	0.055	2.04	mg/L	0.055	2.68%
Mg 279.077†	3729.6	12.9	mg/L	0.28	12.9	mg/L	0.28	2.17%
Mn 257.610†	64092.4	0.245	mg/L	0.0018	0.245	mg/L	0.0018	0.72%
Mo 202.031†	3676.6	0.502	mg/L	0.0013	0.502	mg/L	0.0013	0.26%
Ni 231.604†	4375.7	0.247	mg/L	0.0009	0.247	mg/L	0.0009	0.37%
Pb 220.353†	714.0	0.247	mg/L	0.0004	0.247	mg/L	0.0004	0.17%
Sb 206.836†	488.4	0.580	mg/L	0.0019	0.580	mg/L	0.0019	0.33%
Se 196.026†	112.3	0.186	mg/L	0.0101	0.186	mg/L	0.0101	5.42%
Si 251.611†	420518.2	22.8	mg/L	0.13	22.8	mg/L	0.13	0.58%
Sn 189.927†	1397.2	0.520	mg/L	0.0036	0.520	mg/L	0.0036	0.69%
Ti 334.940†	244571.1	0.501	mg/L	0.0014	0.501	mg/L	0.0014	0.29%
Tl 190.801†	273.1	0.293	mg/L	0.0029	0.293	mg/L	0.0029	1.00%
V 290.880†	43451.0	0.495	mg/L	0.0048	0.495	mg/L	0.0048	0.96%
Zn 206.200†	7126.4	0.501	mg/L	0.0040	0.501	mg/L	0.0040	0.80%
K 766.490†	43235.5	27.6	mg/L	0.22	27.6	mg/L	0.22	0.80%
Na 589.592†	484180.7	54.0	mg/L	1.53	54.0	mg/L	1.53	2.83%
Sr 407.771†	958696.6	0.881	mg/L	0.0097	0.881	mg/L	0.0097	1.10%
Li 670.784†	31268.5	0.538	mg/L	0.0029	0.538	mg/L	0.0029	0.53%

Sequence No.: 7
Sample ID: L1201057603SD WG387753-05
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 36
Date Collected: 1/25/2012 2:28:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201057603SD WG387753-05

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057603SD WG387753-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3473271.9						82212.68	2.37%
YRADIAL	269437.1						2621.51	0.97%
Ga 417.206	780563.4						27374.61	3.51%
GaRADIAL	42380.6						435.41	1.03%
Ag 328.068†	23416.0	0.184	mg/L	0.0023	0.184	mg/L	0.0023	1.23%
Al 396.153†	14207.8	4.89	mg/L	0.032	4.89	mg/L	0.032	0.65%
As 188.979†	111.3	0.196	mg/L	0.0140	0.196	mg/L	0.0140	7.14%
Ba 233.527†	17968.9	0.568	mg/L	0.0067	0.568	mg/L	0.0067	1.17%
Be 234.861†	7328.0	0.0237	mg/L	0.00014	0.0237	mg/L	0.00014	0.61%
B 249.677†	28977.4	0.996	mg/L	0.0094	0.996	mg/L	0.0094	0.94%
Ca 227.546†	3772.1	54.8	mg/L	1.95	54.8	mg/L	1.95	3.56%
Cd 228.802†	243.8	0.0221	mg/L	0.00080	0.0221	mg/L	0.00080	3.62%
Co 228.616†	966.2	0.0922	mg/L	0.00241	0.0922	mg/L	0.00241	2.61%
Cr 267.716†	15639.3	0.242	mg/L	0.0022	0.242	mg/L	0.0022	0.93%
Cu 327.393†	22280.6	0.225	mg/L	0.0027	0.225	mg/L	0.0027	1.19%
Fe 239.562†	192.3	2.01	mg/L	0.014	2.01	mg/L	0.014	0.67%
Mg 279.077†	3666.9	12.7	mg/L	0.06	12.7	mg/L	0.06	0.49%
Mn 257.610†	63309.3	0.242	mg/L	0.0012	0.242	mg/L	0.0012	0.52%
Mo 202.031†	3585.1	0.490	mg/L	0.0115	0.490	mg/L	0.0115	2.35%
Ni 231.604†	4256.7	0.240	mg/L	0.0057	0.240	mg/L	0.0057	2.38%
Pb 220.353†	698.3	0.241	mg/L	0.0039	0.241	mg/L	0.0039	1.63%
Sb 206.836†	476.6	0.566	mg/L	0.0228	0.566	mg/L	0.0228	4.03%
Se 196.026†	110.0	0.183	mg/L	0.0048	0.183	mg/L	0.0048	2.63%
Si 251.611†	417897.7	22.6	mg/L	0.32	22.6	mg/L	0.32	1.41%
Sn 189.927†	1438.8	0.535	mg/L	0.0114	0.535	mg/L	0.0114	2.14%
Ti 334.940†	239543.1	0.491	mg/L	0.0020	0.491	mg/L	0.0020	0.41%
Tl 190.801†	261.9	0.280	mg/L	0.0001	0.280	mg/L	0.0001	0.04%
V 290.880†	42732.4	0.486	mg/L	0.0036	0.486	mg/L	0.0036	0.75%
Zn 206.200†	7023.1	0.494	mg/L	0.0040	0.494	mg/L	0.0040	0.82%
K 766.490†	42502.8	27.1	mg/L	0.18	27.1	mg/L	0.18	0.65%
Na 589.592†	463969.1	51.8	mg/L	1.18	51.8	mg/L	1.18	2.29%

Approved: January 26, 2012

Sr 407.771†	942094.0	0.866 mg/L	0.0111	0.866 mg/L	0.0111	1.29%
Li 670.784†	30587.9	0.526 mg/L	0.0034	0.526 mg/L	0.0034	0.64%

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Sequence No.: 8 **Autosampler Location: 37**
Sample ID: L1201057601 0.1 **Date Collected: 1/25/2012 2:34:54 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057601 0.1

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057601 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3510307.6						59540.31	1.70%
YRADIAL	268373.0						2642.34	0.98%
Ga 417.206	735253.2						13318.73	1.81%
GaRADIAL	42776.8						506.89	1.18%
Ag 328.068†	-210.3	-0.00243	mg/L	0.000717	-0.00243	mg/L	0.000717	29.51%
Al 396.153†	48.4	-0.00402	mg/L	0.011774	-0.00402	mg/L	0.011774	292.96%
As 188.979†	2.6	0.00066	mg/L	0.002163	0.00066	mg/L	0.002163	327.97%
Ba 233.527†	425.2	0.0101	mg/L	0.00018	0.0101	mg/L	0.00018	1.73%
Be 234.861†	127.9	0.00025	mg/L	0.000028	0.00025	mg/L	0.000028	11.19%
B 249.677†	187.9	0.00643	mg/L	0.000324	0.00643	mg/L	0.000324	5.04%
Ca 227.546†	234.8	3.41	mg/L	0.051	3.41	mg/L	0.051	1.50%
Cd 228.802†	-5.6	-0.00056	mg/L	0.000088	-0.00056	mg/L	0.000088	15.65%
Co 228.616†	-7.8	-0.00116	mg/L	0.000288	-0.00116	mg/L	0.000288	24.84%
Cr 267.716†	-6.2	-0.00185	mg/L	0.000208	-0.00185	mg/L	0.000208	11.30%
Cu 327.393†	-238.0	-0.00299	mg/L	0.000169	-0.00299	mg/L	0.000169	5.66%
Fe 239.562†	0.5	0.0110	mg/L	0.01078	0.0110	mg/L	0.01078	98.25%
Mg 279.077†	169.7	0.611	mg/L	0.0143	0.611	mg/L	0.0143	2.34%
Mn 257.610†	61.1	-0.00272	mg/L	0.000061	-0.00272	mg/L	0.000061	2.24%
Mo 202.031†	-5.8	-0.00399	mg/L	0.000512	-0.00399	mg/L	0.000512	12.83%
Ni 231.604†	2.9	-0.00224	mg/L	0.000527	-0.00224	mg/L	0.000527	23.47%
Pb 220.353†	8.3	0.00060	mg/L	0.000296	0.00060	mg/L	0.000296	49.57%
Sb 206.836†	0.6	-0.00105	mg/L	0.001375	-0.00105	mg/L	0.001375	131.52%
Se 196.026†	-5.3	-0.0136	mg/L	0.01018	-0.0136	mg/L	0.01018	74.67%
Si 251.611†	32435.9	1.74	mg/L	0.016	1.74	mg/L	0.016	0.90%
Sn 189.927†	0.2	-0.00391	mg/L	0.000851	-0.00391	mg/L	0.000851	21.79%
Ti 334.940†	-122.7	-0.00125	mg/L	0.000109	-0.00125	mg/L	0.000109	8.72%
Tl 190.801†	5.0	0.00074	mg/L	0.005842	0.00074	mg/L	0.005842	785.88%
V 290.880†	154.1	-0.00067	mg/L	0.000998	-0.00067	mg/L	0.000998	150.06%
Zn 206.200†	29.7	-0.00194	mg/L	0.000209	-0.00194	mg/L	0.000209	10.74%
K 766.490†	254.9	0.138	mg/L	0.0414	0.138	mg/L	0.0414	29.88%
Na 589.592†	18025.0	1.99	mg/L	0.049	1.99	mg/L	0.049	2.43%
Sr 407.771†	36100.0	0.0346	mg/L	0.00103	0.0346	mg/L	0.00103	2.98%
Li 670.784†	91.1	-0.00185	mg/L	0.000317	-0.00185	mg/L	0.000317	17.11%

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Sequence No.: 9 **Autosampler Location: 38**
Sample ID: L1201057602 0.1 **Date Collected: 1/25/2012 2:41:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057602 0.1

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201057602 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3539805.9						55455.92	1.57%
YRADIAL	268566.8						8868.30	3.30%
Ga 417.206	747468.2						11948.88	1.60%

Approved: January 26, 2012

Kim H. Rhoden

GaRADIAL	42732.2					1508.27	3.53%
Ag 328.068†	-216.0	-0.00248	mg/L	0.000526	-0.00248 mg/L	0.000526	21.20%
Al 396.153†	45.7	-0.00497	mg/L	0.013447	-0.00497 mg/L	0.013447	270.34%
As 188.979†	2.5	0.00052	mg/L	0.006603	0.00052 mg/L	0.006603	>999.9%
Ba 233.527†	415.7	0.00985	mg/L	0.000193	0.00985 mg/L	0.000193	1.96%
Be 234.861†	136.4	0.00028	mg/L	0.000049	0.00028 mg/L	0.000049	17.29%
B 249.677†	66.6	0.00224	mg/L	0.000289	0.00224 mg/L	0.000289	12.92%
Ca 227.546†	318.6	4.63	mg/L	0.047	4.63 mg/L	0.047	1.02%
Cd 228.802†	-6.0	-0.00060	mg/L	0.000137	-0.00060 mg/L	0.000137	22.76%
Co 228.616†	-11.8	-0.00155	mg/L	0.000208	-0.00155 mg/L	0.000208	13.46%
Cr 267.716†	3.6	-0.00169	mg/L	0.000173	-0.00169 mg/L	0.000173	10.19%
Cu 327.393†	-288.8	-0.00351	mg/L	0.000455	-0.00351 mg/L	0.000455	12.98%
Fe 239.562†	-0.4	0.00169	mg/L	0.010586	0.00169 mg/L	0.010586	627.01%
Mg 279.077†	224.3	0.800	mg/L	0.0281	0.800 mg/L	0.0281	3.51%
Mn 257.610†	-13.9	-0.00301	mg/L	0.000018	-0.00301 mg/L	0.000018	0.60%
Mo 202.031†	-5.6	-0.00396	mg/L	0.000387	-0.00396 mg/L	0.000387	9.77%
Ni 231.604†	16.2	-0.00149	mg/L	0.000351	-0.00149 mg/L	0.000351	23.53%
Pb 220.353†	2.4	-0.00137	mg/L	0.000962	-0.00137 mg/L	0.000962	70.11%
Sb 206.836†	-0.1	-0.00185	mg/L	0.002783	-0.00185 mg/L	0.002783	150.59%
Se 196.026†	-5.4	-0.0134	mg/L	0.00896	-0.0134 mg/L	0.00896	66.81%
Si 251.611†	49924.9	2.69	mg/L	0.076	2.69 mg/L	0.076	2.82%
Sn 189.927†	-2.3	-0.00484	mg/L	0.001156	-0.00484 mg/L	0.001156	23.86%
Ti 334.940†	-100.6	-0.00120	mg/L	0.000085	-0.00120 mg/L	0.000085	7.07%
Tl 190.801†	9.2	0.00501	mg/L	0.004495	0.00501 mg/L	0.004495	89.67%
V 290.880†	51.1	-0.00183	mg/L	0.000937	-0.00183 mg/L	0.000937	51.33%
Zn 206.200†	31.7	-0.00180	mg/L	0.000152	-0.00180 mg/L	0.000152	8.46%
K 766.490†	546.5	0.324	mg/L	0.0367	0.324 mg/L	0.0367	11.34%
Na 589.592†	18763.5	2.08	mg/L	0.014	2.08 mg/L	0.014	0.68%
Sr 407.771†	42489.3	0.0405	mg/L	0.00081	0.0405 mg/L	0.00081	2.00%
Li 670.784†	98.9	-0.00172	mg/L	0.000206	-0.00172 mg/L	0.000206	12.03%

Sequence No.: 10 **Autosampler Location: 39**
Sample ID: L1201057603 WG387753-01 **Date Collected: 1/25/2012 2:48:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057603 WG387753-01

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057603 WG387753-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3509242.7						26859.41	0.77%
YRADIAL	268521.3						7210.70	2.69%
Ga 417.206	741381.2						3250.12	0.44%
GaRADIAL	42736.0						1362.29	3.19%
Ag 328.068†	-222.4	-0.00253	mg/L	0.000609	-0.00253	mg/L	0.000609	24.09%
Al 396.153†	26.1	-0.0117	mg/L	0.01782	-0.0117	mg/L	0.01782	151.91%
As 188.979†	0.9	-0.00241	mg/L	0.004547	-0.00241	mg/L	0.004547	188.62%
Ba 233.527†	227.0	0.00386	mg/L	0.000165	0.00386	mg/L	0.000165	4.27%
Be 234.861†	136.6	0.00028	mg/L	0.000046	0.00028	mg/L	0.000046	16.02%
B 249.677†	26.8	0.00085	mg/L	0.000105	0.00085	mg/L	0.000105	12.26%
Ca 227.546†	343.5	4.99	mg/L	0.089	4.99	mg/L	0.089	1.79%
Cd 228.802†	-7.8	-0.00077	mg/L	0.000122	-0.00077	mg/L	0.000122	15.85%
Co 228.616†	-12.4	-0.00161	mg/L	0.000719	-0.00161	mg/L	0.000719	44.78%
Cr 267.716†	-28.0	-0.00218	mg/L	0.000162	-0.00218	mg/L	0.000162	7.43%
Cu 327.393†	-216.6	-0.00278	mg/L	0.000202	-0.00278	mg/L	0.000202	7.26%
Fe 239.562†	-1.2	-0.00676	mg/L	0.002977	-0.00676	mg/L	0.002977	44.03%
Mg 279.077†	237.6	0.846	mg/L	0.0105	0.846	mg/L	0.0105	1.24%
Mn 257.610†	-113.6	-0.00339	mg/L	0.000018	-0.00339	mg/L	0.000018	0.54%
Mo 202.031†	-4.5	-0.00381	mg/L	0.000446	-0.00381	mg/L	0.000446	11.73%
Ni 231.604†	12.0	-0.00173	mg/L	0.000376	-0.00173	mg/L	0.000376	21.74%
Pb 220.353†	9.2	0.00099	mg/L	0.002918	0.00099	mg/L	0.002918	295.65%
Sb 206.836†	-0.5	-0.00233	mg/L	0.001077	-0.00233	mg/L	0.001077	46.28%
Se 196.026†	-2.8	-0.00918	mg/L	0.002566	-0.00918	mg/L	0.002566	27.95%
Si 251.611†	39336.9	2.11	mg/L	0.010	2.11	mg/L	0.010	0.48%
Sn 189.927†	-3.4	-0.00525	mg/L	0.000978	-0.00525	mg/L	0.000978	18.64%

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Ti 334.940†	-151.7	-0.00130 mg/L	0.000138	-0.00130 mg/L	0.000138	10.65%
Tl 190.801†	11.1	0.00700 mg/L	0.004655	0.00700 mg/L	0.004655	66.53%
V 290.880†	73.5	-0.00156 mg/L	0.000844	-0.00156 mg/L	0.000844	53.95%
Zn 206.200†	49.0	-0.00058 mg/L	0.000395	-0.00058 mg/L	0.000395	68.33%
K 766.490†	309.7	0.173 mg/L	0.0296	0.173 mg/L	0.0296	17.13%
Na 589.592†	23254.2	2.58 mg/L	0.018	2.58 mg/L	0.018	0.69%
Sr 407.771†	40533.6	0.0387 mg/L	0.00030	0.0387 mg/L	0.00030	0.76%
Li 670.784†	48.7	-0.00259 mg/L	0.002014	-0.00259 mg/L	0.002014	77.89%

Sequence No.: 11 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 2:55:21 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	144.0 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	3426022.1						29646.91	0.87%
YRADIAL	264148.1						2821.09	1.07%
Ga 417.206	741165.0						17539.83	2.37%
GaRADIAL	40697.1						1155.17	2.84%
Ag 328.068†	49610.7	0.391	mg/L	0.0091	0.391	mg/L	0.0091	2.32%
QC value within limits for Ag 328.068 Recovery = 97.69%								
Al 396.153†	29048.3	10.0	mg/L	0.02	10.0	mg/L	0.02	0.19%
QC value within limits for Al 396.153 Recovery = 100.11%								
As 188.979†	218.5	0.391	mg/L	0.0104	0.391	mg/L	0.0104	2.65%
QC value within limits for As 188.979 Recovery = 97.77%								
Ba 233.527†	32761.7	1.04	mg/L	0.007	1.04	mg/L	0.007	0.70%
QC value within limits for Ba 233.527 Recovery = 103.84%								
Be 234.861†	15323.0	0.0497	mg/L	0.00118	0.0497	mg/L	0.00118	2.37%
QC value within limits for Be 234.861 Recovery = 99.37%								
B 249.677†	14380.0	0.498	mg/L	0.0109	0.498	mg/L	0.0109	2.18%
QC value within limits for B 249.677 Recovery = 99.67%								
Ca 227.546†	674.8	9.76	mg/L	0.233	9.76	mg/L	0.233	2.39%
QC value within limits for Ca 227.546 Recovery = 97.55%								
Cd 228.802†	541.0	0.0490	mg/L	0.00099	0.0490	mg/L	0.00099	2.01%
QC value within limits for Cd 228.802 Recovery = 97.99%								
Co 228.616†	2066.0	0.198	mg/L	0.0020	0.198	mg/L	0.0020	1.01%
QC value within limits for Co 228.616 Recovery = 98.91%								
Cr 267.716†	32289.9	0.502	mg/L	0.0053	0.502	mg/L	0.0053	1.05%
QC value within limits for Cr 267.716 Recovery = 100.36%								
Cu 327.393†	47997.5	0.485	mg/L	0.0132	0.485	mg/L	0.0132	2.72%
QC value within limits for Cu 327.393 Recovery = 96.97%								
Fe 239.562†	373.6	3.89	mg/L	0.056	3.89	mg/L	0.056	1.44%
QC value within limits for Fe 239.562 Recovery = 97.36%								
Mg 279.077†	2822.3	9.77	mg/L	0.106	9.77	mg/L	0.106	1.08%
QC value within limits for Mg 279.077 Recovery = 97.72%								
Mn 257.610†	132909.2	0.510	mg/L	0.0055	0.510	mg/L	0.0055	1.08%
QC value within limits for Mn 257.610 Recovery = 101.94%								
Mo 202.031†	7314.8	1.00	mg/L	0.007	1.00	mg/L	0.007	0.70%
QC value within limits for Mo 202.031 Recovery = 100.26%								
Ni 231.604†	8943.3	0.507	mg/L	0.0058	0.507	mg/L	0.0058	1.14%
QC value within limits for Ni 231.604 Recovery = 101.43%								
Pb 220.353†	1470.0	0.505	mg/L	0.0038	0.505	mg/L	0.0038	0.75%
QC value within limits for Pb 220.353 Recovery = 101.08%								
Sb 206.836†	1000.7	1.19	mg/L	0.032	1.19	mg/L	0.032	2.68%
QC value within limits for Sb 206.836 Recovery = 99.10%								
Se 196.026†	260.0	0.404	mg/L	0.0095	0.404	mg/L	0.0095	2.36%
QC value within limits for Se 196.026 Recovery = 101.09%								
Si 251.611†	92691.6	4.99	mg/L	0.125	4.99	mg/L	0.125	2.51%
QC value within limits for Si 251.611 Recovery = 99.80%								
Sn 189.927†	2713.8	1.01	mg/L	0.006	1.01	mg/L	0.006	0.63%
QC value within limits for Sn 189.927 Recovery = 101.29%								
Ti 334.940†	489599.0	1.00	mg/L	0.008	1.00	mg/L	0.008	0.80%

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   QC value within limits for Ti 334.940  Recovery = 100.35%
Tl 190.801†              440.2       0.509 mg/L        0.0053       0.509 mg/L        0.0053   1.04%
   QC value within limits for Tl 190.801  Recovery = 101.79%
V 290.880†             87628.4       0.999 mg/L        0.0115       0.999 mg/L        0.0115   1.16%
   QC value within limits for V 290.880  Recovery = 99.86%
Zn 206.200†            14396.3        1.02 mg/L         0.007        1.02 mg/L         0.007   0.65%
   QC value within limits for Zn 206.200  Recovery = 101.63%
K 766.490†             79732.9        51.3 mg/L          0.28        51.3 mg/L          0.28   0.55%
   QC value within limits for K 766.490  Recovery = 102.58%
Na 589.592†           459739.4        51.3 mg/L          2.25        51.3 mg/L          2.25   4.39%
   QC value within limits for Na 589.592  Recovery = 102.59%
Sr 407.771†          1084054.8       0.996 mg/L        0.0117       0.996 mg/L        0.0117   1.18%
   QC value within limits for Sr 407.771  Recovery = 99.62%
Li 670.784†            60403.4        1.04 mg/L         0.006        1.04 mg/L         0.006   0.54%
   QC value within limits for Li 670.784  Recovery = 104.24%
All analyte(s) passed QC.

==========================================================================================================
Sequence No.: 12                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/25/2012 3:02:17 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

----------------------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                      145.0 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            3465054.0                                                     20624.36   0.60%
YRADIAL               262883.3                                                      4031.04   1.53%
Ga 417.206            692209.0                                                      2521.90   0.36%
GaRADIAL               40711.3                                                      1015.94   2.50%
Ag 328.068†             -373.3    -0.00371 mg/L      0.000382    -0.00371 mg/L      0.000382  10.31%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†                5.4     -0.0189 mg/L       0.00878     -0.0189 mg/L       0.00878  46.52%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -0.9    -0.00560 mg/L      0.002193    -0.00560 mg/L      0.002193  39.12%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -11.4    -0.00370 mg/L      0.000101    -0.00370 mg/L      0.000101   2.74%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               88.1     0.00013 mg/L      0.000047     0.00013 mg/L      0.000047  37.37%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                46.7     0.00158 mg/L      0.000588     0.00158 mg/L      0.000588  37.23%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -1.8     -0.0244 mg/L       0.09177     -0.0244 mg/L       0.09177 376.78%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -5.2    -0.00055 mg/L      0.000191    -0.00055 mg/L      0.000191  34.86%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†              -10.0    -0.00137 mg/L      0.000445    -0.00137 mg/L      0.000445  32.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               34.8    -0.00121 mg/L      0.000229    -0.00121 mg/L      0.000229  19.01%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -297.8    -0.00360 mg/L      0.000804    -0.00360 mg/L      0.000804  22.36%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.2     0.00344 mg/L      0.019642     0.00344 mg/L      0.019642 571.56%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                2.4      0.0337 mg/L       0.01815      0.0337 mg/L       0.01815  53.93%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               14.2    -0.00294 mg/L      0.000023    -0.00294 mg/L      0.000023   0.78%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -10.1    -0.00457 mg/L      0.000289    -0.00457 mg/L      0.000289   6.32%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               16.5    -0.00146 mg/L      0.000089    -0.00146 mg/L      0.000089   6.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                7.8     0.00025 mg/L      0.002670     0.00025 mg/L      0.002670 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -0.2    -0.00203 mg/L      0.001385    -0.00203 mg/L      0.001385  68.37%
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QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† -1.2 -0.00831 mg/L 0.006176 -0.00831 mg/L 0.006176 74.27%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† -24.7 -0.0217 mg/L 0.00070 -0.0217 mg/L 0.00070 3.21%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 1.0 -0.00359 mg/L 0.000746 -0.00359 mg/L 0.000746 20.75%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† -115.5 -0.00127 mg/L 0.000101 -0.00127 mg/L 0.000101 7.89%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -2.4 -0.00640 mg/L 0.006017 -0.00640 mg/L 0.006017 94.06%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 141.0 -0.00086 mg/L 0.001363 -0.00086 mg/L 0.001363 158.38%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† -0.0 -0.00404 mg/L 0.000482 -0.00404 mg/L 0.000482 11.93%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 12.0 -0.0140 mg/L 0.06151 -0.0140 mg/L 0.06151 439.77%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† -259.1 -0.0619 mg/L 0.01182 -0.0619 mg/L 0.01182 19.10%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† -103.6 0.00134 mg/L 0.000026 0.00134 mg/L 0.000026 1.93%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 0.8 -0.00341 mg/L 0.001665 -0.00341 mg/L 0.001665 48.75%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

==========

Sequence No.: 13 **Autosampler Location: 40**
Sample ID: L1201057603S WG387753-04 **Date Collected: 1/25/2012 3:09:05 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057603S WG387753-04

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201057603S WG387753-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3491501.7						22266.15	0.64%
YRADIAL	266967.9						2178.40	0.82%
Ga 417.206	739178.8						9994.83	1.35%
GaRADIAL	42520.0						480.72	1.13%
Ag 328.068†	2278.9	0.0172	mg/L	0.00030	0.0172	mg/L	0.00030	1.75%
Al 396.153†	1513.9	0.502	mg/L	0.0289	0.502	mg/L	0.0289	5.75%
As 188.979†	13.5	0.0205	mg/L	0.00316	0.0205	mg/L	0.00316	15.44%
Ba 233.527†	1798.5	0.0538	mg/L	0.00005	0.0538	mg/L	0.00005	0.10%
Be 234.861†	906.7	0.00278	mg/L	0.000044	0.00278	mg/L	0.000044	1.57%
B 249.677†	2910.8	0.0999	mg/L	0.00296	0.0999	mg/L	0.00296	2.96%
Ca 227.546†	373.1	5.42	mg/L	0.085	5.42	mg/L	0.085	1.56%
Cd 228.802†	18.1	0.00159	mg/L	0.000166	0.00159	mg/L	0.000166	10.42%
Co 228.616†	88.3	0.00806	mg/L	0.000183	0.00806	mg/L	0.000183	2.28%
Cr 267.716†	1542.7	0.0223	mg/L	0.00090	0.0223	mg/L	0.00090	4.05%
Cu 327.393†	2000.7	0.0196	mg/L	0.00120	0.0196	mg/L	0.00120	6.11%
Fe 239.562†	18.6	0.200	mg/L	0.0147	0.200	mg/L	0.0147	7.37%
Mg 279.077†	381.7	1.34	mg/L	0.017	1.34	mg/L	0.017	1.29%
Mn 257.610†	6189.6	0.0209	mg/L	0.00046	0.0209	mg/L	0.00046	2.21%
Mo 202.031†	339.4	0.0435	mg/L	0.00098	0.0435	mg/L	0.00098	2.26%
Ni 231.604†	447.2	0.0231	mg/L	0.00003	0.0231	mg/L	0.00003	0.14%
Pb 220.353†	79.9	0.0254	mg/L	0.00145	0.0254	mg/L	0.00145	5.71%
Sb 206.836†	50.0	0.0577	mg/L	0.00362	0.0577	mg/L	0.00362	6.27%
Se 196.026†	11.8	0.0138	mg/L	0.00325	0.0138	mg/L	0.00325	23.49%
Si 251.611†	43660.0	2.35	mg/L	0.045	2.35	mg/L	0.045	1.92%
Sn 189.927†	135.3	0.0467	mg/L	0.00087	0.0467	mg/L	0.00087	1.85%
Ti 334.940†	22883.0	0.0460	mg/L	0.00112	0.0460	mg/L	0.00112	2.43%
Tl 190.801†	28.7	0.0276	mg/L	0.00388	0.0276	mg/L	0.00388	14.08%
V 290.880†	4287.1	0.0466	mg/L	0.00299	0.0466	mg/L	0.00299	6.41%
Zn 206.200†	755.3	0.0495	mg/L	0.00021	0.0495	mg/L	0.00021	0.42%
K 766.490†	4305.4	2.71	mg/L	0.111	2.71	mg/L	0.111	4.09%
Na 589.592†	47669.8	5.32	mg/L	0.151	5.32	mg/L	0.151	2.84%

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Sr 407.771†	97044.6	0.0905 mg/L	0.00214	0.0905 mg/L	0.00214	2.36%
Li 670.784†	3125.9	0.0507 mg/L	0.00174	0.0507 mg/L	0.00174	3.43%

Sequence No.: 14 **Autosampler Location: 41**
Sample ID: L1201057603SD WG387753-05 **Date Collected: 1/25/2012 3:15:55 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057603SD WG387753-05

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201057603SD WG387753-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3491201.1						63612.84	1.82%
YRADIAL	268014.9						4976.80	1.86%
Ga 417.206	741325.6						17169.21	2.32%
GaRADIAL	42521.5						648.49	1.53%
Ag 328.068†	2179.3	0.0164	mg/L	0.00072	0.0164	mg/L	0.00072	4.39%
Al 396.153†	1466.0	0.486	mg/L	0.0083	0.486	mg/L	0.0083	1.71%
As 188.979†	13.1	0.0197	mg/L	0.00522	0.0197	mg/L	0.00522	26.42%
Ba 233.527†	1877.6	0.0563	mg/L	0.00127	0.0563	mg/L	0.00127	2.26%
Be 234.861†	928.0	0.00285	mg/L	0.000029	0.00285	mg/L	0.000029	1.01%
B 249.677†	3017.7	0.104	mg/L	0.0011	0.104	mg/L	0.0011	1.06%
Ca 227.546†	387.2	5.63	mg/L	0.189	5.63	mg/L	0.189	3.36%
Cd 228.802†	20.5	0.00180	mg/L	0.000267	0.00180	mg/L	0.000267	14.83%
Co 228.616†	92.1	0.00842	mg/L	0.000438	0.00842	mg/L	0.000438	5.20%
Cr 267.716†	1576.3	0.0228	mg/L	0.00060	0.0228	mg/L	0.00060	2.61%
Cu 327.393†	2120.1	0.0209	mg/L	0.00075	0.0209	mg/L	0.00075	3.62%
Fe 239.562†	18.2	0.196	mg/L	0.0149	0.196	mg/L	0.0149	7.62%
Mg 279.077†	383.9	1.35	mg/L	0.030	1.35	mg/L	0.030	2.20%
Mn 257.610†	6502.0	0.0221	mg/L	0.00053	0.0221	mg/L	0.00053	2.37%
Mo 202.031†	355.0	0.0456	mg/L	0.00099	0.0456	mg/L	0.00099	2.17%
Ni 231.604†	453.4	0.0234	mg/L	0.00070	0.0234	mg/L	0.00070	2.99%
Pb 220.353†	78.8	0.0250	mg/L	0.00170	0.0250	mg/L	0.00170	6.81%
Sb 206.836†	52.7	0.0610	mg/L	0.00294	0.0610	mg/L	0.00294	4.82%
Se 196.026†	9.6	0.0104	mg/L	0.00133	0.0104	mg/L	0.00133	12.82%
Si 251.611†	45414.9	2.44	mg/L	0.031	2.44	mg/L	0.031	1.28%
Sn 189.927†	148.3	0.0516	mg/L	0.00168	0.0516	mg/L	0.00168	3.25%
Ti 334.940†	23773.0	0.0478	mg/L	0.00034	0.0478	mg/L	0.00034	0.71%
Tl 190.801†	32.2	0.0315	mg/L	0.00268	0.0315	mg/L	0.00268	8.49%
V 290.880†	4401.2	0.0479	mg/L	0.00072	0.0479	mg/L	0.00072	1.51%
Zn 206.200†	789.9	0.0519	mg/L	0.00140	0.0519	mg/L	0.00140	2.70%
K 766.490†	4215.2	2.66	mg/L	0.036	2.66	mg/L	0.036	1.34%
Na 589.592†	46775.1	5.22	mg/L	0.067	5.22	mg/L	0.067	1.29%
Sr 407.771†	94833.8	0.0885	mg/L	0.00095	0.0885	mg/L	0.00095	1.07%
Li 670.784†	3046.3	0.0493	mg/L	0.00052	0.0493	mg/L	0.00052	1.05%

Sequence No.: 15 **Autosampler Location: 42**
Sample ID: L1201059001 **Date Collected: 1/25/2012 3:22:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059001

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059001

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3475111.0						52585.15	1.51%
YRADIAL	268815.4						9425.16	3.51%
Ga 417.206	715160.1						11856.79	1.66%

Approved: January 26, 2012

GaRADIAL	41776.5					804.91	1.93%
Ag 328.068†	-332.5	-0.00339	mg/L	0.000506	-0.00339 mg/L	0.000506	14.92%
Al 396.153†	135.7	0.0262	mg/L	0.00124	0.0262 mg/L	0.00124	4.73%
As 188.979†	-0.3	-0.00451	mg/L	0.002570	-0.00451 mg/L	0.002570	56.97%
Ba 233.527†	58.2	-0.00150	mg/L	0.000094	-0.00150 mg/L	0.000094	6.28%
Be 234.861†	113.2	0.00020	mg/L	0.000014	0.00020 mg/L	0.000014	7.08%
B 249.677†	7.2	0.00037	mg/L	0.000432	0.00037 mg/L	0.000432	115.73%
Ca 227.546†	26.4	0.382	mg/L	0.0736	0.382 mg/L	0.0736	19.25%
Cd 228.802†	-6.5	-0.00066	mg/L	0.000039	-0.00066 mg/L	0.000039	5.88%
Co 228.616†	-16.1	-0.00197	mg/L	0.000144	-0.00197 mg/L	0.000144	7.34%
Cr 267.716†	157.5	0.00070	mg/L	0.000189	0.00070 mg/L	0.000189	26.93%
Cu 327.393†	992.2	0.00941	mg/L	0.000957	0.00941 mg/L	0.000957	10.17%
Fe 239.562†	3.8	0.0453	mg/L	0.00760	0.0453 mg/L	0.00760	16.78%
Mg 279.077†	21.6	0.100	mg/L	0.0051	0.100 mg/L	0.0051	5.14%
Mn 257.610†	408.3	-0.00143	mg/L	0.000088	-0.00143 mg/L	0.000088	6.13%
Mo 202.031†	-6.8	-0.00412	mg/L	0.000680	-0.00412 mg/L	0.000680	16.50%
Ni 231.604†	29.6	-0.00072	mg/L	0.000185	-0.00072 mg/L	0.000185	25.77%
Pb 220.353†	8.0	0.00032	mg/L	0.001115	0.00032 mg/L	0.001115	343.75%
Sb 206.836†	-1.0	-0.00291	mg/L	0.001166	-0.00291 mg/L	0.001166	40.03%
Se 196.026†	-1.9	-0.00922	mg/L	0.003033	-0.00922 mg/L	0.003033	32.89%
Si 251.611†	2280.5	0.103	mg/L	0.0067	0.103 mg/L	0.0067	6.51%
Sn 189.927†	-2.7	-0.00498	mg/L	0.001019	-0.00498 mg/L	0.001019	20.45%
Ti 334.940†	175.9	-0.00067	mg/L	0.000237	-0.00067 mg/L	0.000237	35.15%
Tl 190.801†	1.5	-0.00206	mg/L	0.002250	-0.00206 mg/L	0.002250	109.22%
V 290.880†	34.1	-0.00208	mg/L	0.001640	-0.00208 mg/L	0.001640	78.82%
Zn 206.200†	98.2	0.00292	mg/L	0.000362	0.00292 mg/L	0.000362	12.41%
K 766.490†	156.0	0.0774	mg/L	0.04042	0.0774 mg/L	0.04042	52.22%
Na 589.592†	1328.8	0.117	mg/L	0.0106	0.117 mg/L	0.0106	9.08%
Sr 407.771†	645.0	0.00202	mg/L	0.000045	0.00202 mg/L	0.000045	2.22%
Li 670.784†	-27.8	-0.00391	mg/L	0.000780	-0.00391 mg/L	0.000780	19.94%

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Sequence No.: 16 **Autosampler Location: 43**
Sample ID: L1201059002 **Date Collected: 1/25/2012 3:29:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059002

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3465631.6						93803.27	2.71%
YRADIAL	270778.3						3274.26	1.21%
Ga 417.206	716775.8						25653.88	3.58%
GaRADIAL	42069.8						1151.13	2.74%
Ag 328.068†	-400.3	-0.00392	mg/L	0.000568	-0.00392	mg/L	0.000568	14.50%
Al 396.153†	47.8	-0.00423	mg/L	0.005624	-0.00423	mg/L	0.005624	133.04%
As 188.979†	-0.0	-0.00400	mg/L	0.002703	-0.00400	mg/L	0.002703	67.57%
Ba 233.527†	45.5	-0.00189	mg/L	0.000052	-0.00189	mg/L	0.000052	2.73%
Be 234.861†	115.4	0.00021	mg/L	0.000061	0.00021	mg/L	0.000061	29.01%
B 249.677†	-2.8	-0.00004	mg/L	0.000523	-0.00004	mg/L	0.000523	>999.9%
Ca 227.546†	13.5	0.196	mg/L	0.0742	0.196	mg/L	0.0742	37.97%
Cd 228.802†	-6.0	-0.00062	mg/L	0.000167	-0.00062	mg/L	0.000167	27.19%
Co 228.616†	-12.6	-0.00162	mg/L	0.000440	-0.00162	mg/L	0.000440	27.14%
Cr 267.716†	81.8	-0.00047	mg/L	0.000164	-0.00047	mg/L	0.000164	34.58%
Cu 327.393†	603.7	0.00549	mg/L	0.000718	0.00549	mg/L	0.000718	13.08%
Fe 239.562†	1.7	0.0235	mg/L	0.02229	0.0235	mg/L	0.02229	94.70%
Mg 279.077†	16.2	0.0814	mg/L	0.00181	0.0814	mg/L	0.00181	2.22%
Mn 257.610†	229.2	-0.00211	mg/L	0.000056	-0.00211	mg/L	0.000056	2.66%
Mo 202.031†	-11.3	-0.00474	mg/L	0.000419	-0.00474	mg/L	0.000419	8.84%
Ni 231.604†	21.4	-0.00118	mg/L	0.000469	-0.00118	mg/L	0.000469	39.79%
Pb 220.353†	12.1	0.00172	mg/L	0.002099	0.00172	mg/L	0.002099	122.14%
Sb 206.836†	0.6	-0.00110	mg/L	0.004491	-0.00110	mg/L	0.004491	408.31%
Se 196.026†	-1.1	-0.00799	mg/L	0.007571	-0.00799	mg/L	0.007571	94.73%
Si 251.611†	1638.6	0.0684	mg/L	0.00273	0.0684	mg/L	0.00273	3.99%
Sn 189.927†	-1.4	-0.00451	mg/L	0.001429	-0.00451	mg/L	0.001429	31.70%

Approved: January 26, 2012

Ti 334.940†	-20.0	-0.00108	mg/L	0.000109	-0.00108	mg/L	0.000109	10.10%
Tl 190.801†	-4.5	-0.00884	mg/L	0.001181	-0.00884	mg/L	0.001181	13.35%
V 290.880†	251.7	0.00041	mg/L	0.000717	0.00041	mg/L	0.000717	176.48%
Zn 206.200†	113.0	0.00396	mg/L	0.000135	0.00396	mg/L	0.000135	3.41%
K 766.490†	324.3	0.184	mg/L	0.0201	0.184	mg/L	0.0201	10.93%
Na 589.592†	5937.3	0.634	mg/L	0.0055	0.634	mg/L	0.0055	0.87%
Sr 407.771†	494.8	0.00188	mg/L	0.000055	0.00188	mg/L	0.000055	2.93%
Li 670.784†	-7.8	-0.00356	mg/L	0.000570	-0.00356	mg/L	0.000570	15.99%

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Sequence No.: 17 **Autosampler Location: 44**
Sample ID: L1201059003 **Date Collected: 1/25/2012 3:36:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059003

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201059003

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3446756.5						12566.69	0.36%
YRADIAL	271281.2						6386.30	2.35%
Ga 417.206	714592.4						6089.65	0.85%
GaRADIAL	42107.6						722.88	1.72%
Ag 328.068†	-404.9	-0.00396	mg/L	0.000961	-0.00396	mg/L	0.000961	24.28%
Al 396.153†	192.2	0.0457	mg/L	0.00889	0.0457	mg/L	0.00889	19.45%
As 188.979†	0.0	-0.00385	mg/L	0.004772	-0.00385	mg/L	0.004772	123.91%
Ba 233.527†	51.9	-0.00169	mg/L	0.000230	-0.00169	mg/L	0.000230	13.63%
Be 234.861†	117.8	0.00022	mg/L	0.000057	0.00022	mg/L	0.000057	26.32%
B 249.677†	-12.0	-0.00035	mg/L	0.000222	-0.00035	mg/L	0.000222	63.80%
Ca 227.546†	25.4	0.368	mg/L	0.0613	0.368	mg/L	0.0613	16.64%
Cd 228.802†	-4.7	-0.00050	mg/L	0.000121	-0.00050	mg/L	0.000121	24.09%
Co 228.616†	-14.2	-0.00178	mg/L	0.000252	-0.00178	mg/L	0.000252	14.14%
Cr 267.716†	157.1	0.00070	mg/L	0.000060	0.00070	mg/L	0.000060	8.56%
Cu 327.393†	1486.7	0.0144	mg/L	0.00059	0.0144	mg/L	0.00059	4.08%
Fe 239.562†	3.0	0.0372	mg/L	0.00944	0.0372	mg/L	0.00944	25.41%
Mg 279.077†	21.2	0.0988	mg/L	0.01194	0.0988	mg/L	0.01194	12.09%
Mn 257.610†	609.2	-0.00066	mg/L	0.000027	-0.00066	mg/L	0.000027	4.06%
Mo 202.031†	-8.9	-0.00441	mg/L	0.000786	-0.00441	mg/L	0.000786	17.81%
Ni 231.604†	30.6	-0.00066	mg/L	0.000114	-0.00066	mg/L	0.000114	17.24%
Pb 220.353†	11.6	0.00157	mg/L	0.001905	0.00157	mg/L	0.001905	121.00%
Sb 206.836†	1.1	-0.00052	mg/L	0.003123	-0.00052	mg/L	0.003123	596.30%
Se 196.026†	-0.0	-0.00630	mg/L	0.003228	-0.00630	mg/L	0.003228	51.23%
Si 251.611†	2870.9	0.135	mg/L	0.0013	0.135	mg/L	0.0013	0.98%
Sn 189.927†	-1.5	-0.00454	mg/L	0.000426	-0.00454	mg/L	0.000426	9.39%
Ti 334.940†	388.1	-0.00024	mg/L	0.000150	-0.00024	mg/L	0.000150	62.89%
Tl 190.801†	-0.7	-0.00458	mg/L	0.001903	-0.00458	mg/L	0.001903	41.53%
V 290.880†	233.1	0.00019	mg/L	0.001440	0.00019	mg/L	0.001440	740.97%
Zn 206.200†	112.4	0.00392	mg/L	0.000258	0.00392	mg/L	0.000258	6.60%
K 766.490†	188.5	0.0979	mg/L	0.04025	0.0979	mg/L	0.04025	41.10%
Na 589.592†	2631.7	0.263	mg/L	0.0050	0.263	mg/L	0.0050	1.88%
Sr 407.771†	478.2	0.00186	mg/L	0.000052	0.00186	mg/L	0.000052	2.79%
Li 670.784†	-51.8	-0.00433	mg/L	0.000909	-0.00433	mg/L	0.000909	21.02%

User canceled analysis.

Approved: January 26, 2012

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Analysis Begun

Start Time: 1/25/2012 3:44:17 PM **Plasma On Time: 1/25/2012 7:37:34 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\WEDNESDAY1.sif
Batch ID:
Results Data Set: 012512HR
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 45**
Sample ID: L1201059004 **Date Collected: 1/25/2012 3:44:19 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059004

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059004

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3534653.1						40129.20	1.14%
YRADIAL	271408.3						4115.14	1.52%
Ga 417.206	724985.4						9748.48	1.34%
GaRADIAL	42248.6						1193.42	2.82%
Ag 328.068†	-350.1	-0.00353	mg/L	0.000943	-0.00353	mg/L	0.000943	26.69%
Al 396.153†	440.6	0.132	mg/L	0.0118	0.132	mg/L	0.0118	8.96%
As 188.979†	0.9	-0.00233	mg/L	0.004387	-0.00233	mg/L	0.004387	188.59%
Ba 233.527†	68.3	-0.00117	mg/L	0.000081	-0.00117	mg/L	0.000081	6.92%
Be 234.861†	132.7	0.00024	mg/L	0.000045	0.00024	mg/L	0.000045	18.37%
B 249.677†	165.7	0.00609	mg/L	0.000146	0.00609	mg/L	0.000146	2.40%
Ca 227.546†	39.5	0.564	mg/L	0.0099	0.564	mg/L	0.0099	1.75%
Cd 228.802†	-5.7	-0.00059	mg/L	0.000161	-0.00059	mg/L	0.000161	27.52%
Co 228.616†	-11.3	-0.00150	mg/L	0.000196	-0.00150	mg/L	0.000196	13.02%
Cr 267.716†	183.2	0.00110	mg/L	0.000037	0.00110	mg/L	0.000037	3.35%
Cu 327.393†	1327.6	0.0128	mg/L	0.00096	0.0128	mg/L	0.00096	7.47%
Fe 239.562†	12.3	0.134	mg/L	0.0108	0.134	mg/L	0.0108	8.11%
Mg 279.077†	30.3	0.130	mg/L	0.0128	0.130	mg/L	0.0128	9.84%
Mn 257.610†	2172.1	0.00533	mg/L	0.000123	0.00533	mg/L	0.000123	2.30%
Mo 202.031†	-12.5	-0.00490	mg/L	0.000291	-0.00490	mg/L	0.000291	5.95%
Ni 231.604†	31.5	-0.00061	mg/L	0.000190	-0.00061	mg/L	0.000190	31.25%
Pb 220.353†	15.0	0.00273	mg/L	0.000884	0.00273	mg/L	0.000884	32.45%
Sb 206.836†	2.1	0.00068	mg/L	0.001923	0.00068	mg/L	0.001923	280.78%
Se 196.026†	-0.6	-0.00714	mg/L	0.002551	-0.00714	mg/L	0.002551	35.73%
Si 251.611†	6176.5	0.314	mg/L	0.0042	0.314	mg/L	0.0042	1.33%
Sn 189.927†	-1.3	-0.00449	mg/L	0.001922	-0.00449	mg/L	0.001922	42.81%
Ti 334.940†	982.2	0.00098	mg/L	0.000171	0.00098	mg/L	0.000171	17.42%
Tl 190.801†	0.5	-0.00329	mg/L	0.000661	-0.00329	mg/L	0.000661	20.07%
V 290.880†	145.3	-0.00081	mg/L	0.000135	-0.00081	mg/L	0.000135	16.63%
Zn 206.200†	122.7	0.00465	mg/L	0.000279	0.00465	mg/L	0.000279	6.00%
K 766.490†	137.9	0.0656	mg/L	0.02722	0.0656	mg/L	0.02722	41.52%
Na 589.592†	4674.1	0.493	mg/L	0.0138	0.493	mg/L	0.0138	2.80%
Sr 407.771†	842.7	0.00218	mg/L	0.000040	0.00218	mg/L	0.000040	1.85%
Li 670.784†	17.0	-0.00314	mg/L	0.000509	-0.00314	mg/L	0.000509	16.24%

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Sequence No.: 2 **Autosampler Location: 46**
Sample ID: L1201059005 **Date Collected: 1/25/2012 3:51:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059005

Approved: January 26, 2012

Kim H. Rhoden

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201059005

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3524536.6						73900.98	2.10%
YRADIAL	270913.2						7534.86	2.78%
Ga 417.206	726721.2						15187.85	2.09%
GaRADIAL	42065.3						789.22	1.88%
Ag 328.068†	-444.2	-0.00427	mg/L	0.000593	-0.00427	mg/L	0.000593	13.88%
Al 396.153†	531.7	0.163	mg/L	0.0097	0.163	mg/L	0.0097	5.95%
As 188.979†	2.5	0.00057	mg/L	0.001178	0.00057	mg/L	0.001178	206.80%
Ba 233.527†	145.9	0.00128	mg/L	0.000105	0.00128	mg/L	0.000105	8.17%
Be 234.861†	139.8	0.00027	mg/L	0.000039	0.00027	mg/L	0.000039	14.54%
B 249.677†	171.8	0.00631	mg/L	0.000401	0.00631	mg/L	0.000401	6.36%
Ca 227.546†	77.1	1.11	mg/L	0.045	1.11	mg/L	0.045	4.04%
Cd 228.802†	-8.8	-0.00085	mg/L	0.000317	-0.00085	mg/L	0.000317	37.12%
Co 228.616†	-14.0	-0.00177	mg/L	0.000163	-0.00177	mg/L	0.000163	9.25%
Cr 267.716†	100.1	-0.00020	mg/L	0.000145	-0.00020	mg/L	0.000145	73.87%
Cu 327.393†	1877.8	0.0183	mg/L	0.00093	0.0183	mg/L	0.00093	5.07%
Fe 239.562†	13.0	0.141	mg/L	0.0233	0.141	mg/L	0.0233	16.46%
Mg 279.077†	32.4	0.137	mg/L	0.0088	0.137	mg/L	0.0088	6.39%
Mn 257.610†	2305.3	0.00585	mg/L	0.000396	0.00585	mg/L	0.000396	6.77%
Mo 202.031†	-9.6	-0.00449	mg/L	0.000220	-0.00449	mg/L	0.000220	4.90%
Ni 231.604†	29.7	-0.00071	mg/L	0.000232	-0.00071	mg/L	0.000232	32.79%
Pb 220.353†	13.6	0.00227	mg/L	0.000801	0.00227	mg/L	0.000801	35.34%
Sb 206.836†	2.9	0.00167	mg/L	0.004254	0.00167	mg/L	0.004254	254.64%
Se 196.026†	-2.0	-0.00914	mg/L	0.006883	-0.00914	mg/L	0.006883	75.32%
Si 251.611†	7664.2	0.395	mg/L	0.0129	0.395	mg/L	0.0129	3.27%
Sn 189.927†	-1.3	-0.00447	mg/L	0.000870	-0.00447	mg/L	0.000870	19.48%
Ti 334.940†	1547.1	0.00215	mg/L	0.000168	0.00215	mg/L	0.000168	7.82%
Tl 190.801†	-2.7	-0.00717	mg/L	0.002645	-0.00717	mg/L	0.002645	36.91%
V 290.880†	113.0	-0.00118	mg/L	0.001688	-0.00118	mg/L	0.001688	142.47%
Zn 206.200†	155.7	0.00698	mg/L	0.000218	0.00698	mg/L	0.000218	3.13%
K 766.490†	353.1	0.202	mg/L	0.0425	0.202	mg/L	0.0425	20.99%
Na 589.592†	6288.0	0.674	mg/L	0.0093	0.674	mg/L	0.0093	1.39%
Sr 407.771†	1191.6	0.00250	mg/L	0.000019	0.00250	mg/L	0.000019	0.77%
Li 670.784†	-45.6	-0.00422	mg/L	0.001008	-0.00422	mg/L	0.001008	23.89%

Sequence No.: 3
Sample ID: L1201059006
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 1/25/2012 3:58:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201059006

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059006

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3494669.4						23111.70	0.66%
YRADIAL	263768.2						2828.31	1.07%
Ga 417.206	717839.2						5203.42	0.72%
GaRADIAL	41231.1						1096.11	2.66%
Ag 328.068†	-406.9	-0.00398	mg/L	0.001083	-0.00398	mg/L	0.001083	27.24%
Al 396.153†	261.4	0.0697	mg/L	0.01405	0.0697	mg/L	0.01405	20.18%
As 188.979†	1.5	-0.00124	mg/L	0.002244	-0.00124	mg/L	0.002244	180.38%
Ba 233.527†	52.2	-0.00169	mg/L	0.000083	-0.00169	mg/L	0.000083	4.94%
Be 234.861†	120.3	0.00022	mg/L	0.000013	0.00022	mg/L	0.000013	5.76%
B 249.677†	-21.7	-0.00063	mg/L	0.000240	-0.00063	mg/L	0.000240	37.96%
Ca 227.546†	14.2	0.203	mg/L	0.0336	0.203	mg/L	0.0336	16.60%
Cd 228.802†	-5.4	-0.00055	mg/L	0.000237	-0.00055	mg/L	0.000237	42.79%
Co 228.616†	-10.7	-0.00145	mg/L	0.000517	-0.00145	mg/L	0.000517	35.78%
Cr 267.716†	62.4	-0.00078	mg/L	0.000232	-0.00078	mg/L	0.000232	29.79%
Cu 327.393†	1306.6	0.0126	mg/L	0.00061	0.0126	mg/L	0.00061	4.87%

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Fe 239.562†	4.5	0.0525 mg/L	0.01058	0.0525 mg/L	0.01058	20.15%
Mg 279.077†	25.1	0.112 mg/L	0.0068	0.112 mg/L	0.0068	6.08%
Mn 257.610†	1220.0	0.00168 mg/L	0.000070	0.00168 mg/L	0.000070	4.16%
Mo 202.031†	-11.4	-0.00475 mg/L	0.000627	-0.00475 mg/L	0.000627	13.21%
Ni 231.604†	13.5	-0.00164 mg/L	0.000225	-0.00164 mg/L	0.000225	13.76%
Pb 220.353†	13.2	0.00212 mg/L	0.001687	0.00212 mg/L	0.001687	79.75%
Sb 206.836†	1.1	-0.00041 mg/L	0.001007	-0.00041 mg/L	0.001007	247.62%
Se 196.026†	-3.4	-0.0116 mg/L	0.00435	-0.0116 mg/L	0.00435	37.45%
Si 251.611†	3766.4	0.184 mg/L	0.0048	0.184 mg/L	0.0048	2.59%
Sn 189.927†	-4.5	-0.00566 mg/L	0.000298	-0.00566 mg/L	0.000298	5.26%
Ti 334.940†	880.9	0.00077 mg/L	0.000220	0.00077 mg/L	0.000220	28.47%
Tl 190.801†	0.5	-0.00317 mg/L	0.002888	-0.00317 mg/L	0.002888	91.04%
V 290.880†	32.3	-0.00210 mg/L	0.001442	-0.00210 mg/L	0.001442	68.63%
Zn 206.200†	86.7	0.00209 mg/L	0.000137	0.00209 mg/L	0.000137	6.54%
K 766.490†	263.7	0.146 mg/L	0.0384	0.146 mg/L	0.0384	26.35%
Na 589.592†	2373.9	0.234 mg/L	0.0119	0.234 mg/L	0.0119	5.09%
Sr 407.771†	528.2	0.00191 mg/L	0.000077	0.00191 mg/L	0.000077	4.02%
Li 670.784†	41.0	-0.00272 mg/L	0.001874	-0.00272 mg/L	0.001874	68.93%

Sequence No.: 4 **Autosampler Location: 48**
Sample ID: L1201059006PS WG387825-01 **Date Collected: 1/25/2012 4:04:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059006PS WG387825-01

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059006PS WG387825-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3423588.7						39323.51	1.15%
YRADIAL	266755.6						5539.33	2.08%
Ga 417.206	745618.4						8122.05	1.09%
GaRADIAL	41381.5						1054.86	2.55%
Ag 328.068†	24507.9	0.193	mg/L	0.0032	0.193	mg/L	0.0032	1.64%
Al 396.153†	14861.8	5.11	mg/L	0.128	5.11	mg/L	0.128	2.50%
As 188.979†	107.1	0.190	mg/L	0.0043	0.190	mg/L	0.0043	2.29%
Ba 233.527†	16502.3	0.521	mg/L	0.0092	0.521	mg/L	0.0092	1.77%
Be 234.861†	7542.4	0.0244	mg/L	0.00011	0.0244	mg/L	0.00011	0.47%
B 249.677†	29129.1	1.00	mg/L	0.021	1.00	mg/L	0.021	2.05%
Ca 227.546†	354.0	5.11	mg/L	0.151	5.11	mg/L	0.151	2.95%
Cd 228.802†	262.1	0.0237	mg/L	0.00034	0.0237	mg/L	0.00034	1.42%
Co 228.616†	1043.2	0.0997	mg/L	0.00183	0.0997	mg/L	0.00183	1.83%
Cr 267.716†	16250.7	0.252	mg/L	0.0036	0.252	mg/L	0.0036	1.42%
Cu 327.393†	25039.9	0.253	mg/L	0.0039	0.253	mg/L	0.0039	1.54%
Fe 239.562†	194.9	2.03	mg/L	0.059	2.03	mg/L	0.059	2.88%
Mg 279.077†	1462.6	5.08	mg/L	0.121	5.08	mg/L	0.121	2.37%
Mn 257.610†	66722.9	0.254	mg/L	0.0038	0.254	mg/L	0.0038	1.49%
Mo 202.031†	3631.6	0.496	mg/L	0.0134	0.496	mg/L	0.0134	2.70%
Ni 231.604†	4516.7	0.255	mg/L	0.0046	0.255	mg/L	0.0046	1.82%
Pb 220.353†	754.8	0.258	mg/L	0.0045	0.258	mg/L	0.0045	1.73%
Sb 206.836†	494.9	0.587	mg/L	0.0074	0.587	mg/L	0.0074	1.26%
Se 196.026†	131.7	0.202	mg/L	0.0045	0.202	mg/L	0.0045	2.23%
Si 251.611†	50806.4	2.73	mg/L	0.049	2.73	mg/L	0.049	1.81%
Sn 189.927†	-11.4	-0.00828	mg/L	0.000493	-0.00828	mg/L	0.000493	5.96%
Ti 334.940†	243537.0	0.499	mg/L	0.0013	0.499	mg/L	0.0013	0.26%
Tl 190.801†	225.6	0.259	mg/L	0.0079	0.259	mg/L	0.0079	3.04%
V 290.880†	43851.0	0.499	mg/L	0.0103	0.499	mg/L	0.0103	2.06%
Zn 206.200†	7490.6	0.527	mg/L	0.0060	0.527	mg/L	0.0060	1.13%
K 766.490†	40070.2	25.6	mg/L	0.16	25.6	mg/L	0.16	0.63%
Na 589.592†	237352.2	26.6	mg/L	0.46	26.6	mg/L	0.46	1.75%
Sr 407.771†	540219.1	0.497	mg/L	0.0074	0.497	mg/L	0.0074	1.50%
Li 670.784†	31197.8	0.537	mg/L	0.0100	0.537	mg/L	0.0100	1.87%

Sequence No.: 5 **Autosampler Location: 49**
Sample ID: L1201059006DL WG387825-02 **Date Collected: 1/25/2012 4:11:44 PM**

Approved: January 26, 2012

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

Nebulizer Parameters: L1201059006DL WG387825-02

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059006DL WG387825-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3418890.6						18608.08	0.54%
YRADIAL	265792.7						3892.98	1.46%
Ga 417.206	690510.8						5466.04	0.79%
GaRADIAL	41073.9						1039.26	2.53%
Ag 328.068†	-470.7	-0.00447	mg/L	0.000624	-0.00447	mg/L	0.000624	13.94%
Al 396.153†	51.7	-0.00287	mg/L	0.005774	-0.00287	mg/L	0.005774	201.00%
As 188.979†	2.4	0.00041	mg/L	0.002132	0.00041	mg/L	0.002132	515.39%
Ba 233.527†	-0.1	-0.00334	mg/L	0.000093	-0.00334	mg/L	0.000093	2.78%
Be 234.861†	107.7	0.00019	mg/L	0.000031	0.00019	mg/L	0.000031	16.30%
B 249.677†	101.0	0.00343	mg/L	0.000558	0.00343	mg/L	0.000558	16.27%
Ca 227.546†	-2.8	-0.0392	mg/L	0.04367	-0.0392	mg/L	0.04367	111.30%
Cd 228.802†	-7.3	-0.00072	mg/L	0.000269	-0.00072	mg/L	0.000269	37.14%
Co 228.616†	-14.9	-0.00184	mg/L	0.000316	-0.00184	mg/L	0.000316	17.15%
Cr 267.716†	35.8	-0.00119	mg/L	0.000194	-0.00119	mg/L	0.000194	16.31%
Cu 327.393†	8.5	-0.00051	mg/L	0.001102	-0.00051	mg/L	0.001102	216.76%
Fe 239.562†	-0.1	0.00501	mg/L	0.009763	0.00501	mg/L	0.009763	194.82%
Mg 279.077†	7.5	0.0512	mg/L	0.00052	0.0512	mg/L	0.00052	1.01%
Mn 257.610†	185.1	-0.00229	mg/L	0.000034	-0.00229	mg/L	0.000034	1.48%
Mo 202.031†	-11.3	-0.00474	mg/L	0.000408	-0.00474	mg/L	0.000408	8.59%
Ni 231.604†	15.2	-0.00154	mg/L	0.000231	-0.00154	mg/L	0.000231	15.01%
Pb 220.353†	6.2	-0.00030	mg/L	0.001439	-0.00030	mg/L	0.001439	485.19%
Sb 206.836†	0.2	-0.00155	mg/L	0.000659	-0.00155	mg/L	0.000659	42.64%
Se 196.026†	-1.0	-0.00789	mg/L	0.003472	-0.00789	mg/L	0.003472	44.00%
Si 251.611†	778.5	0.0218	mg/L	0.00065	0.0218	mg/L	0.00065	2.99%
Sn 189.927†	-4.7	-0.00573	mg/L	0.000741	-0.00573	mg/L	0.000741	12.93%
Ti 334.940†	31.6	-0.00097	mg/L	0.000037	-0.00097	mg/L	0.000037	3.79%
Tl 190.801†	-4.6	-0.00893	mg/L	0.005097	-0.00893	mg/L	0.005097	57.05%
V 290.880†	184.6	-0.00036	mg/L	0.001112	-0.00036	mg/L	0.001112	307.18%
Zn 206.200†	41.7	-0.00109	mg/L	0.000167	-0.00109	mg/L	0.000167	15.32%
K 766.490†	46.2	0.00771	mg/L	0.004545	0.00771	mg/L	0.004545	58.95%
Na 589.592†	129.7	-0.0182	mg/L	0.01326	-0.0182	mg/L	0.01326	72.96%
Sr 407.771†	13.3	0.00145	mg/L	0.000070	0.00145	mg/L	0.000070	4.86%
Li 670.784†	26.1	-0.00298	mg/L	0.000942	-0.00298	mg/L	0.000942	31.65%

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Sequence No.: 6 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 4:18:33 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	145.0 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	3406560.9						41067.43	1.21%
YRADIAL	259515.9						2488.73	0.96%
Ga 417.206	742316.1						12726.40	1.71%
GaRADIAL	40235.8						339.97	0.84%
Ag 328.068†	48555.8	0.382	mg/L	0.0130	0.382	mg/L	0.0130	3.39%
QC value within limits for Ag 328.068 Recovery = 95.61%								
Al 396.153†	29117.9	10.0	mg/L	0.01	10.0	mg/L	0.01	0.12%
QC value within limits for Al 396.153 Recovery = 100.35%								
As 188.979†	215.9	0.386	mg/L	0.0061	0.386	mg/L	0.0061	1.57%

Approved: January 26, 2012

QC value within limits for As 188.979 Recovery = 96.56%

Ba 233.527†	32199.4	1.02 mg/L	0.028	1.02 mg/L	0.028	2.72%
QC value within limits for Ba 233.527 Recovery = 102.05%						
Be 234.861†	14978.8	0.0486 mg/L	0.00195	0.0486 mg/L	0.00195	4.01%
QC value within limits for Be 234.861 Recovery = 97.11%						
B 249.677†	14016.3	0.486 mg/L	0.0176	0.486 mg/L	0.0176	3.62%
QC value within limits for B 249.677 Recovery = 97.23%						
Ca 227.546†	685.3	9.90 mg/L	0.171	9.90 mg/L	0.171	1.73%
QC value within limits for Ca 227.546 Recovery = 98.96%						
Cd 228.802†	533.3	0.0483 mg/L	0.00103	0.0483 mg/L	0.00103	2.13%
QC value within limits for Cd 228.802 Recovery = 96.60%						
Co 228.616†	2059.8	0.197 mg/L	0.0021	0.197 mg/L	0.0021	1.08%
QC value within limits for Co 228.616 Recovery = 98.61%						
Cr 267.716†	31765.0	0.494 mg/L	0.0153	0.494 mg/L	0.0153	3.11%
QC value within limits for Cr 267.716 Recovery = 98.72%						
Cu 327.393†	47035.3	0.475 mg/L	0.0171	0.475 mg/L	0.0171	3.61%
QC value within limits for Cu 327.393 Recovery = 95.03%						
Fe 239.562†	379.3	3.95 mg/L	0.062	3.95 mg/L	0.062	1.58%
QC value within limits for Fe 239.562 Recovery = 98.85%						
Mg 279.077†	2878.1	9.96 mg/L	0.112	9.96 mg/L	0.112	1.13%
QC value within limits for Mg 279.077 Recovery = 99.65%						
Mn 257.610†	130419.2	0.500 mg/L	0.0166	0.500 mg/L	0.0166	3.33%
QC value within limits for Mn 257.610 Recovery = 100.03%						
Mo 202.031†	7235.7	0.992 mg/L	0.0295	0.992 mg/L	0.0295	2.98%
QC value within limits for Mo 202.031 Recovery = 99.17%						
Ni 231.604†	8817.4	0.500 mg/L	0.0135	0.500 mg/L	0.0135	2.69%
QC value within limits for Ni 231.604 Recovery = 100.00%						
Pb 220.353†	1462.0	0.503 mg/L	0.0073	0.503 mg/L	0.0073	1.45%
QC value within limits for Pb 220.353 Recovery = 100.52%						
Sb 206.836†	994.1	1.18 mg/L	0.024	1.18 mg/L	0.024	2.04%
QC value within limits for Sb 206.836 Recovery = 98.44%						
Se 196.026†	257.1	0.400 mg/L	0.0071	0.400 mg/L	0.0071	1.77%
QC value within limits for Se 196.026 Recovery = 99.99%						
Si 251.611†	90337.1	4.86 mg/L	0.175	4.86 mg/L	0.175	3.59%
QC value within limits for Si 251.611 Recovery = 97.25%						
Sn 189.927†	2710.7	1.01 mg/L	0.012	1.01 mg/L	0.012	1.15%
QC value within limits for Sn 189.927 Recovery = 101.17%						
Ti 334.940†	492183.4	1.01 mg/L	0.003	1.01 mg/L	0.003	0.33%
QC value within limits for Ti 334.940 Recovery = 100.88%						
Tl 190.801†	440.6	0.509 mg/L	0.0066	0.509 mg/L	0.0066	1.30%
QC value within limits for Tl 190.801 Recovery = 101.87%						
V 290.880†	86373.2	0.984 mg/L	0.0307	0.984 mg/L	0.0307	3.12%
QC value within limits for V 290.880 Recovery = 98.43%						
Zn 206.200†	14111.2	0.996 mg/L	0.0346	0.996 mg/L	0.0346	3.48%
QC value within limits for Zn 206.200 Recovery = 99.61%						
K 766.490†	80637.7	51.9 mg/L	0.39	51.9 mg/L	0.39	0.74%
QC value within limits for K 766.490 Recovery = 103.76%						
Na 589.592†	460908.1	51.4 mg/L	0.84	51.4 mg/L	0.84	1.63%
QC value within limits for Na 589.592 Recovery = 102.85%						
Sr 407.771†	1091420.3	1.00 mg/L	0.013	1.00 mg/L	0.013	1.25%
QC value within limits for Sr 407.771 Recovery = 100.30%						
Li 670.784†	61261.0	1.06 mg/L	0.014	1.06 mg/L	0.014	1.29%
QC value within limits for Li 670.784 Recovery = 105.72%						

All analyte(s) passed QC.

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Sequence No.: 7 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/25/2012 4:25:29 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	146.0 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	3520960.6						34764.29	0.99%

Approved: January 26, 2012

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YRADIAL              268936.5                                                    3380.03   1.26%
Ga 417.206           712250.2                                                   11525.37   1.62%
GaRADIAL              41410.2                                                     398.41   0.96%
Ag 328.068†             -539.5    -0.00502 mg/L      0.000431    -0.00502 mg/L      0.000431   8.60%
   QC value less than the lower limit for Ag 328.068  Recovery = Not calculated
Al 396.153†               -8.0     -0.0235 mg/L       0.00828     -0.0235 mg/L       0.00828  35.22%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                2.4     0.00040 mg/L      0.000759     0.00040 mg/L      0.000759 189.54%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -9.7    -0.00365 mg/L      0.000174    -0.00365 mg/L      0.000174   4.76%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              126.4     0.00025 mg/L      0.000048     0.00025 mg/L      0.000048  19.11%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                34.6     0.00115 mg/L      0.000307     0.00115 mg/L      0.000307  26.77%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -4.2     -0.0590 mg/L       0.03406     -0.0590 mg/L       0.03406  57.71%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -5.9    -0.00059 mg/L      0.000051    -0.00059 mg/L      0.000051   8.66%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†              -15.9    -0.00194 mg/L      0.000286    -0.00194 mg/L      0.000286  14.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               35.9    -0.00119 mg/L      0.000068    -0.00119 mg/L      0.000068   5.69%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -338.3    -0.00401 mg/L      0.001051    -0.00401 mg/L      0.001051  26.25%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.8    -0.00216 mg/L      0.009009    -0.00216 mg/L      0.009009 416.58%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               -1.8      0.0192 mg/L       0.01011      0.0192 mg/L       0.01011  52.60%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              -30.2    -0.00311 mg/L      0.000014    -0.00311 mg/L      0.000014   0.46%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -9.8    -0.00453 mg/L      0.000185    -0.00453 mg/L      0.000185   4.09%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               15.7    -0.00151 mg/L      0.000178    -0.00151 mg/L      0.000178  11.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               11.9     0.00166 mg/L      0.000974     0.00166 mg/L      0.000974  58.68%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                3.2     0.00206 mg/L      0.001920     0.00206 mg/L      0.001920  93.17%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.5    -0.00875 mg/L      0.005174    -0.00875 mg/L      0.005174  59.14%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -45.8     -0.0229 mg/L       0.00041     -0.0229 mg/L       0.00041   1.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -1.0    -0.00434 mg/L      0.000775    -0.00434 mg/L      0.000775  17.84%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              -142.3    -0.00133 mg/L      0.000180    -0.00133 mg/L      0.000180  13.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -3.8    -0.00801 mg/L      0.003131    -0.00801 mg/L      0.003131  39.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               118.1    -0.00112 mg/L      0.002023    -0.00112 mg/L      0.002023 179.90%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                1.2    -0.00395 mg/L      0.000081    -0.00395 mg/L      0.000081   2.04%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -58.1     -0.0586 mg/L       0.05448     -0.0586 mg/L       0.05448  92.98%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -393.5     -0.0770 mg/L       0.01742     -0.0770 mg/L       0.01742  22.63%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -100.2     0.00134 mg/L      0.000016     0.00134 mg/L      0.000016   1.18%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               16.0    -0.00315 mg/L      0.001446    -0.00315 mg/L      0.001446  45.87%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 8                                    Autosampler Location: 50
Sample ID: L1201059007                             Date Collected: 1/25/2012 4:32:17 PM
Analyst: KHR                                       Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

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Nebulizer Parameters: L1201059007
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Approved: January 26, 2012

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059007

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3502175.0						28899.78	0.83%
YRADIAL	267692.9						11782.19	4.40%
Ga 417.206	724925.9						11962.63	1.65%
GaRADIAL	41827.3						2077.47	4.97%
Ag 328.068†	-443.2	-0.00426	mg/L	0.000433	-0.00426	mg/L	0.000433	10.17%
Al 396.153†	175.5	0.0399	mg/L	0.01634	0.0399	mg/L	0.01634	40.92%
As 188.979†	-0.2	-0.00437	mg/L	0.002742	-0.00437	mg/L	0.002742	62.74%
Ba 233.527†	48.6	-0.00180	mg/L	0.000119	-0.00180	mg/L	0.000119	6.60%
Be 234.861†	139.0	0.00028	mg/L	0.000047	0.00028	mg/L	0.000047	16.98%
B 249.677†	194.8	0.00691	mg/L	0.000468	0.00691	mg/L	0.000468	6.77%
Ca 227.546†	26.3	0.377	mg/L	0.0715	0.377	mg/L	0.0715	18.96%
Cd 228.802†	-7.4	-0.00074	mg/L	0.000105	-0.00074	mg/L	0.000105	14.33%
Co 228.616†	-13.5	-0.00171	mg/L	0.000335	-0.00171	mg/L	0.000335	19.57%
Cr 267.716†	105.2	-0.00011	mg/L	0.000076	-0.00011	mg/L	0.000076	67.44%
Cu 327.393†	2062.9	0.0202	mg/L	0.00031	0.0202	mg/L	0.00031	1.52%
Fe 239.562†	6.3	0.0715	mg/L	0.01021	0.0715	mg/L	0.01021	14.29%
Mg 279.077†	22.7	0.104	mg/L	0.0122	0.104	mg/L	0.0122	11.77%
Mn 257.610†	1156.9	0.00145	mg/L	0.000064	0.00145	mg/L	0.000064	4.46%
Mo 202.031†	-9.1	-0.00443	mg/L	0.000442	-0.00443	mg/L	0.000442	9.97%
Ni 231.604†	23.2	-0.00108	mg/L	0.000096	-0.00108	mg/L	0.000096	8.88%
Pb 220.353†	8.4	0.00047	mg/L	0.001018	0.00047	mg/L	0.001018	217.27%
Sb 206.836†	1.1	-0.00049	mg/L	0.003664	-0.00049	mg/L	0.003664	750.70%
Se 196.026†	-2.2	-0.00975	mg/L	0.004650	-0.00975	mg/L	0.004650	47.70%
Si 251.611†	4083.6	0.201	mg/L	0.0018	0.201	mg/L	0.0018	0.90%
Sn 189.927†	0.6	-0.00375	mg/L	0.002214	-0.00375	mg/L	0.002214	59.02%
Ti 334.940†	467.7	-0.00007	mg/L	0.000015	-0.00007	mg/L	0.000015	20.31%
Tl 190.801†	-5.5	-0.0101	mg/L	0.00296	-0.0101	mg/L	0.00296	29.39%
V 290.880†	157.5	-0.00067	mg/L	0.001924	-0.00067	mg/L	0.001924	286.40%
Zn 206.200†	132.9	0.00537	mg/L	0.000906	0.00537	mg/L	0.000906	16.88%
K 766.490†	221.7	0.119	mg/L	0.0132	0.119	mg/L	0.0132	11.15%
Na 589.592†	6690.1	0.719	mg/L	0.0017	0.719	mg/L	0.0017	0.23%
Sr 407.771†	749.5	0.00211	mg/L	0.000038	0.00211	mg/L	0.000038	1.80%
Li 670.784†	-28.6	-0.00392	mg/L	0.001667	-0.00392	mg/L	0.001667	42.47%

Sequence No.: 9
Sample ID: L1201059008
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 51
Date Collected: 1/25/2012 4:39:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201059008

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059008

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3499560.5						31717.05	0.91%
YRADIAL	275254.6						5447.17	1.98%
Ga 417.206	724000.5						1320.27	0.18%
GaRADIAL	42879.8						1263.94	2.95%
Ag 328.068†	-454.8	-0.00435	mg/L	0.000982	-0.00435	mg/L	0.000982	22.57%
Al 396.153†	41.2	-0.00650	mg/L	0.007691	-0.00650	mg/L	0.007691	118.27%
As 188.979†	-1.4	-0.00641	mg/L	0.004480	-0.00641	mg/L	0.004480	69.92%
Ba 233.527†	16.9	-0.00280	mg/L	0.000071	-0.00280	mg/L	0.000071	2.54%
Be 234.861†	123.0	0.00024	mg/L	0.000041	0.00024	mg/L	0.000041	17.41%
B 249.677†	-27.9	-0.00099	mg/L	0.000213	-0.00099	mg/L	0.000213	21.54%
Ca 227.546†	1.2	0.0200	mg/L	0.05479	0.0200	mg/L	0.05479	274.29%
Cd 228.802†	-8.5	-0.00084	mg/L	0.000123	-0.00084	mg/L	0.000123	14.64%
Co 228.616†	-14.5	-0.00181	mg/L	0.000248	-0.00181	mg/L	0.000248	13.73%
Cr 267.716†	88.0	-0.00038	mg/L	0.000039	-0.00038	mg/L	0.000039	10.25%
Cu 327.393†	-268.1	-0.00330	mg/L	0.001399	-0.00330	mg/L	0.001399	42.42%

Approved: January 26, 2012

Fe 239.562†	-0.3	0.00258	mg/L	0.009320	0.00258	mg/L	0.009320	361.06%
Mg 279.077†	8.5	0.0547	mg/L	0.00202	0.0547	mg/L	0.00202	3.70%
Mn 257.610†	108.9	-0.00258	mg/L	0.000024	-0.00258	mg/L	0.000024	0.92%
Mo 202.031†	-13.6	-0.00505	mg/L	0.000120	-0.00505	mg/L	0.000120	2.37%
Ni 231.604†	18.4	-0.00136	mg/L	0.000227	-0.00136	mg/L	0.000227	16.72%
Pb 220.353†	8.8	0.00059	mg/L	0.001911	0.00059	mg/L	0.001911	326.41%
Sb 206.836†	0.1	-0.00168	mg/L	0.000900	-0.00168	mg/L	0.000900	53.71%
Se 196.026†	0.5	-0.00565	mg/L	0.002287	-0.00565	mg/L	0.002287	40.50%
Si 251.611†	1126.7	0.0407	mg/L	0.00029	0.0407	mg/L	0.00029	0.71%
Sn 189.927†	-4.3	-0.00559	mg/L	0.000723	-0.00559	mg/L	0.000723	12.94%
Ti 334.940†	-202.5	-0.00145	mg/L	0.000181	-0.00145	mg/L	0.000181	12.43%
Tl 190.801†	-3.1	-0.00719	mg/L	0.004133	-0.00719	mg/L	0.004133	57.52%
V 290.880†	76.1	-0.00160	mg/L	0.001913	-0.00160	mg/L	0.001913	119.58%
Zn 206.200†	50.2	-0.00049	mg/L	0.000229	-0.00049	mg/L	0.000229	46.84%
K 766.490†	-90.7	-0.0795	mg/L	0.02683	-0.0795	mg/L	0.02683	33.76%
Na 589.592†	1030.1	0.0830	mg/L	0.01319	0.0830	mg/L	0.01319	15.89%
Sr 407.771†	157.8	0.00158	mg/L	0.000032	0.00158	mg/L	0.000032	2.02%
Li 670.784†	-27.2	-0.00390	mg/L	0.000476	-0.00390	mg/L	0.000476	12.21%

Sequence No.: 10 **Autosampler Location: 52**
Sample ID: L1201059009 **Date Collected: 1/25/2012 4:45:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059009

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059009

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3444644.6						62971.35	1.83%
YRADIAL	273337.0						6553.10	2.40%
Ga 417.206	714011.8						19097.88	2.67%
GaRADIAL	42688.2						1413.06	3.31%
Ag 328.068†	-524.2	-0.00489	mg/L	0.000338	-0.00489	mg/L	0.000338	6.90%
Al 396.153†	242.5	0.0631	mg/L	0.01841	0.0631	mg/L	0.01841	29.18%
As 188.979†	1.8	-0.00061	mg/L	0.003123	-0.00061	mg/L	0.003123	515.55%
Ba 233.527†	90.5	-0.00047	mg/L	0.000105	-0.00047	mg/L	0.000105	22.55%
Be 234.861†	131.3	0.00026	mg/L	0.000032	0.00026	mg/L	0.000032	12.64%
B 249.677†	-9.2	-0.00024	mg/L	0.000197	-0.00024	mg/L	0.000197	80.97%
Ca 227.546†	14.5	0.209	mg/L	0.0394	0.209	mg/L	0.0394	18.87%
Cd 228.802†	-5.0	-0.00052	mg/L	0.000136	-0.00052	mg/L	0.000136	26.43%
Co 228.616†	-8.0	-0.00118	mg/L	0.000353	-0.00118	mg/L	0.000353	29.98%
Cr 267.716†	46.9	-0.00102	mg/L	0.000136	-0.00102	mg/L	0.000136	13.36%
Cu 327.393†	229.4	0.00172	mg/L	0.000307	0.00172	mg/L	0.000307	17.80%
Fe 239.562†	3.6	0.0436	mg/L	0.01681	0.0436	mg/L	0.01681	38.54%
Mg 279.077†	21.5	0.0998	mg/L	0.01398	0.0998	mg/L	0.01398	14.01%
Mn 257.610†	599.3	-0.00070	mg/L	0.000073	-0.00070	mg/L	0.000073	10.48%
Mo 202.031†	-10.5	-0.00463	mg/L	0.000462	-0.00463	mg/L	0.000462	9.99%
Ni 231.604†	24.3	-0.00102	mg/L	0.000175	-0.00102	mg/L	0.000175	17.17%
Pb 220.353†	9.9	0.00097	mg/L	0.000773	0.00097	mg/L	0.000773	79.80%
Sb 206.836†	1.0	-0.00055	mg/L	0.001166	-0.00055	mg/L	0.001166	212.74%
Se 196.026†	-1.1	-0.00802	mg/L	0.005663	-0.00802	mg/L	0.005663	70.59%
Si 251.611†	3374.0	0.163	mg/L	0.0061	0.163	mg/L	0.0061	3.73%
Sn 189.927†	-4.0	-0.00549	mg/L	0.000593	-0.00549	mg/L	0.000593	10.79%
Ti 334.940†	513.0	0.00002	mg/L	0.000388	0.00002	mg/L	0.000388	>999.9%
Tl 190.801†	-2.3	-0.00636	mg/L	0.001524	-0.00636	mg/L	0.001524	23.97%
V 290.880†	279.0	0.00072	mg/L	0.001694	0.00072	mg/L	0.001694	235.95%
Zn 206.200†	77.9	0.00147	mg/L	0.000205	0.00147	mg/L	0.000205	13.97%
K 766.490†	74.2	0.0254	mg/L	0.03271	0.0254	mg/L	0.03271	128.90%
Na 589.592†	1627.5	0.150	mg/L	0.0098	0.150	mg/L	0.0098	6.52%
Sr 407.771†	470.1	0.00186	mg/L	0.000028	0.00186	mg/L	0.000028	1.50%
Li 670.784†	38.5	-0.00276	mg/L	0.002205	-0.00276	mg/L	0.002205	79.84%

Sequence No.: 11 **Autosampler Location: 53**
Sample ID: L1201059010 **Date Collected: 1/25/2012 4:52:45 PM**

Approved: January 26, 2012

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

Nebulizer Parameters: L1201059010

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059010

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3563569.1						70111.14	1.97%
YRADIAL	269055.5						1213.74	0.45%
Ga 417.206	732568.6						11562.95	1.58%
GaRADIAL	41933.1						572.04	1.36%
Ag 328.068†	-462.8	-0.00442	mg/L	0.000448	-0.00442	mg/L	0.000448	10.15%
Al 396.153†	195.6	0.0469	mg/L	0.00422	0.0469	mg/L	0.00422	9.01%
As 188.979†	1.8	-0.00065	mg/L	0.008502	-0.00065	mg/L	0.008502	>999.9%
Ba 233.527†	47.2	-0.00185	mg/L	0.000028	-0.00185	mg/L	0.000028	1.54%
Be 234.861†	130.3	0.00025	mg/L	0.000081	0.00025	mg/L	0.000081	32.98%
B 249.677†	-26.8	-0.00067	mg/L	0.000260	-0.00067	mg/L	0.000260	38.62%
Ca 227.546†	11.2	0.158	mg/L	0.0245	0.158	mg/L	0.0245	15.55%
Cd 228.802†	-6.8	-0.00068	mg/L	0.000195	-0.00068	mg/L	0.000195	28.63%
Co 228.616†	-15.0	-0.00186	mg/L	0.000551	-0.00186	mg/L	0.000551	29.70%
Cr 267.716†	187.0	0.00116	mg/L	0.000151	0.00116	mg/L	0.000151	12.99%
Cu 327.393†	920.9	0.00869	mg/L	0.000421	0.00869	mg/L	0.000421	4.84%
Fe 239.562†	6.7	0.0754	mg/L	0.01650	0.0754	mg/L	0.01650	21.89%
Mg 279.077†	18.6	0.0896	mg/L	0.00419	0.0896	mg/L	0.00419	4.68%
Mn 257.610†	352.2	-0.00164	mg/L	0.000031	-0.00164	mg/L	0.000031	1.88%
Mo 202.031†	-11.9	-0.00481	mg/L	0.000180	-0.00481	mg/L	0.000180	3.74%
Ni 231.604†	29.2	-0.00074	mg/L	0.000182	-0.00074	mg/L	0.000182	24.63%
Pb 220.353†	18.5	0.00390	mg/L	0.001067	0.00390	mg/L	0.001067	27.38%
Sb 206.836†	-1.2	-0.00319	mg/L	0.002267	-0.00319	mg/L	0.002267	71.07%
Se 196.026†	0.4	-0.00574	mg/L	0.008367	-0.00574	mg/L	0.008367	145.66%
Si 251.611†	2949.2	0.139	mg/L	0.0044	0.139	mg/L	0.0044	3.12%
Sn 189.927†	-1.6	-0.00458	mg/L	0.001028	-0.00458	mg/L	0.001028	22.46%
Ti 334.940†	330.6	-0.00036	mg/L	0.000143	-0.00036	mg/L	0.000143	39.86%
Tl 190.801†	-1.1	-0.00496	mg/L	0.002201	-0.00496	mg/L	0.002201	44.33%
V 290.880†	65.1	-0.00173	mg/L	0.001363	-0.00173	mg/L	0.001363	78.79%
Zn 206.200†	98.0	0.00290	mg/L	0.000158	0.00290	mg/L	0.000158	5.44%
K 766.490†	138.1	0.0659	mg/L	0.03016	0.0659	mg/L	0.03016	45.80%
Na 589.592†	2962.3	0.300	mg/L	0.0025	0.300	mg/L	0.0025	0.84%
Sr 407.771†	474.8	0.00185	mg/L	0.000078	0.00185	mg/L	0.000078	4.20%
Li 670.784†	38.7	-0.00276	mg/L	0.002396	-0.00276	mg/L	0.002396	86.84%

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Sequence No.: 12 **Autosampler Location: 54**
Sample ID: L1201059011 **Date Collected: 1/25/2012 4:59:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059011

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059011

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3447188.6						55801.55	1.62%
YRADIAL	268722.9						3695.17	1.38%
Ga 417.206	705057.8						13950.88	1.98%
GaRADIAL	41880.0						228.07	0.54%
Ag 328.068†	-440.4	-0.00423	mg/L	0.000066	-0.00423	mg/L	0.000066	1.57%
Al 396.153†	56.1	-0.00134	mg/L	0.005006	-0.00134	mg/L	0.005006	374.39%
As 188.979†	0.6	-0.00287	mg/L	0.000721	-0.00287	mg/L	0.000721	25.11%
Ba 233.527†	30.2	-0.00238	mg/L	0.000124	-0.00238	mg/L	0.000124	5.22%
Be 234.861†	108.3	0.00019	mg/L	0.000066	0.00019	mg/L	0.000066	34.65%

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B 249.677†	-18.2	-0.00064	mg/L	0.000227	-0.00064	mg/L	0.000227	35.18%
Ca 227.546†	7.7	0.113	mg/L	0.0206	0.113	mg/L	0.0206	18.24%
Cd 228.802†	-5.8	-0.00059	mg/L	0.000249	-0.00059	mg/L	0.000249	41.92%
Co 228.616†	-12.7	-0.00164	mg/L	0.000272	-0.00164	mg/L	0.000272	16.64%
Cr 267.716†	44.0	-0.00106	mg/L	0.000098	-0.00106	mg/L	0.000098	9.21%
Cu 327.393†	769.8	0.00716	mg/L	0.000339	0.00716	mg/L	0.000339	4.73%
Fe 239.562†	0.1	0.00729	mg/L	0.001509	0.00729	mg/L	0.001509	20.69%
Mg 279.077†	19.6	0.0930	mg/L	0.00569	0.0930	mg/L	0.00569	6.11%
Mn 257.610†	66.3	-0.00274	mg/L	0.000062	-0.00274	mg/L	0.000062	2.27%
Mo 202.031†	-15.5	-0.00531	mg/L	0.000855	-0.00531	mg/L	0.000855	16.08%
Ni 231.604†	17.6	-0.00140	mg/L	0.000088	-0.00140	mg/L	0.000088	6.31%
Pb 220.353†	7.7	0.00021	mg/L	0.001194	0.00021	mg/L	0.001194	558.58%
Sb 206.836†	0.6	-0.00110	mg/L	0.002440	-0.00110	mg/L	0.002440	222.39%
Se 196.026†	0.7	-0.00521	mg/L	0.000943	-0.00521	mg/L	0.000943	18.10%
Si 251.611†	1531.6	0.0626	mg/L	0.00691	0.0626	mg/L	0.00691	11.04%
Sn 189.927†	-3.1	-0.00516	mg/L	0.000560	-0.00516	mg/L	0.000560	10.85%
Ti 334.940†	-66.9	-0.00117	mg/L	0.000105	-0.00117	mg/L	0.000105	8.95%
Tl 190.801†	-4.5	-0.00890	mg/L	0.006341	-0.00890	mg/L	0.006341	71.24%
V 290.880†	227.4	0.00013	mg/L	0.001053	0.00013	mg/L	0.001053	806.84%
Zn 206.200†	82.1	0.00177	mg/L	0.000158	0.00177	mg/L	0.000158	8.97%
K 766.490†	71.2	0.0234	mg/L	0.02007	0.0234	mg/L	0.02007	85.92%
Na 589.592†	2605.7	0.260	mg/L	0.0101	0.260	mg/L	0.0101	3.90%
Sr 407.771†	526.9	0.00192	mg/L	0.000046	0.00192	mg/L	0.000046	2.41%
Li 670.784†	-46.9	-0.00424	mg/L	0.001255	-0.00424	mg/L	0.001255	29.58%

Sequence No.: 13
Sample ID: L1201059012
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 55
Date Collected: 1/25/2012 5:06:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201059012

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059012

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3485877.2						64349.46	1.85%
YRADIAL	268068.9						1950.03	0.73%
Ga 417.206	732714.6						13667.42	1.87%
GaRADIAL	42202.8						1010.39	2.39%
Ag 328.068†	-435.9	-0.00424	mg/L	0.001085	-0.00424	mg/L	0.001085	25.58%
Al 396.153†	6232.3	2.13	mg/L	0.035	2.13	mg/L	0.035	1.63%
As 188.979†	0.9	-0.00250	mg/L	0.002312	-0.00250	mg/L	0.002312	92.54%
Ba 233.527†	489.3	0.0121	mg/L	0.00031	0.0121	mg/L	0.00031	2.59%
Be 234.861†	200.5	0.00026	mg/L	0.000130	0.00026	mg/L	0.000130	50.60%
B 249.677†	-80.2	0.00016	mg/L	0.000212	0.00016	mg/L	0.000212	134.95%
Ca 227.546†	101.5	1.36	mg/L	0.044	1.36	mg/L	0.044	3.24%
Cd 228.802†	-6.6	-0.00066	mg/L	0.000066	-0.00066	mg/L	0.000066	10.03%
Co 228.616†	-10.7	-0.00153	mg/L	0.000595	-0.00153	mg/L	0.000595	38.89%
Cr 267.716†	128.8	0.00021	mg/L	0.000125	0.00021	mg/L	0.000125	59.85%
Cu 327.393†	1442.5	0.0141	mg/L	0.00077	0.0141	mg/L	0.00077	5.45%
Fe 239.562†	109.7	1.15	mg/L	0.030	1.15	mg/L	0.030	2.58%
Mg 279.077†	118.2	0.433	mg/L	0.0084	0.433	mg/L	0.0084	1.93%
Mn 257.610†	7542.7	0.0260	mg/L	0.00085	0.0260	mg/L	0.00085	3.27%
Mo 202.031†	-11.5	-0.00470	mg/L	0.000853	-0.00470	mg/L	0.000853	18.14%
Ni 231.604†	27.6	-0.00083	mg/L	0.000294	-0.00083	mg/L	0.000294	35.46%
Pb 220.353†	9.6	0.00099	mg/L	0.001952	0.00099	mg/L	0.001952	196.87%
Sb 206.836†	2.3	0.00097	mg/L	0.002014	0.00097	mg/L	0.002014	207.08%
Se 196.026†	-2.1	-0.00887	mg/L	0.004928	-0.00887	mg/L	0.004928	55.56%
Si 251.611†	79836.5	4.31	mg/L	0.124	4.31	mg/L	0.124	2.87%
Sn 189.927†	-3.2	-0.00519	mg/L	0.000492	-0.00519	mg/L	0.000492	9.49%
Ti 334.940†	12943.8	0.0255	mg/L	0.00035	0.0255	mg/L	0.00035	1.36%
Tl 190.801†	0.0	-0.00384	mg/L	0.001852	-0.00384	mg/L	0.001852	48.19%
V 290.880†	345.5	0.00142	mg/L	0.002106	0.00142	mg/L	0.002106	148.44%
Zn 206.200†	193.9	0.00966	mg/L	0.000636	0.00966	mg/L	0.000636	6.58%
K 766.490†	1205.8	0.745	mg/L	0.0105	0.745	mg/L	0.0105	1.40%
Na 589.592†	2065.0	0.199	mg/L	0.0093	0.199	mg/L	0.0093	4.64%

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Sr 407.771†	3398.1	0.00429 mg/L	0.000085	0.00429 mg/L	0.000085	1.97%
Li 670.784†	74.1	-0.00215 mg/L	0.001239	-0.00215 mg/L	0.001239	57.76%

Sequence No.: 14 **Autosampler Location: 56**
Sample ID: L1201059013 **Date Collected: 1/25/2012 5:13:15 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059013

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059013

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3587880.5						33737.72	0.94%
YRADIAL	269452.6						425.12	0.16%
Ga 417.206	741886.9						9815.88	1.32%
GaRADIAL	42111.3						624.39	1.48%
Ag 328.068†	-413.6	-0.00408	mg/L	0.000323	-0.00408	mg/L	0.000323	7.90%
Al 396.153†	2635.1	0.890	mg/L	0.0098	0.890	mg/L	0.0098	1.10%
As 188.979†	2.0	-0.00036	mg/L	0.004117	-0.00036	mg/L	0.004117	>999.9%
Ba 233.527†	208.4	0.00322	mg/L	0.000192	0.00322	mg/L	0.000192	5.97%
Be 234.861†	213.7	0.00024	mg/L	0.000069	0.00024	mg/L	0.000069	28.71%
B 249.677†	-133.0	0.00116	mg/L	0.000300	0.00116	mg/L	0.000300	25.90%
Ca 227.546†	34.4	0.357	mg/L	0.0296	0.357	mg/L	0.0296	8.29%
Cd 228.802†	-1.4	-0.00019	mg/L	0.000384	-0.00019	mg/L	0.000384	200.78%
Co 228.616†	-9.5	-0.00139	mg/L	0.000258	-0.00139	mg/L	0.000258	18.51%
Cr 267.716†	699.8	0.00910	mg/L	0.000047	0.00910	mg/L	0.000047	0.52%
Cu 327.393†	1662.4	0.0163	mg/L	0.00098	0.0163	mg/L	0.00098	6.01%
Fe 239.562†	139.3	1.46	mg/L	0.031	1.46	mg/L	0.031	2.16%
Mg 279.077†	56.8	0.221	mg/L	0.0087	0.221	mg/L	0.0087	3.95%
Mn 257.610†	5479.8	0.0181	mg/L	0.00038	0.0181	mg/L	0.00038	2.10%
Mo 202.031†	0.6	-0.00303	mg/L	0.000446	-0.00303	mg/L	0.000446	14.73%
Ni 231.604†	41.4	-0.00004	mg/L	0.000272	-0.00004	mg/L	0.000272	606.31%
Pb 220.353†	10.1	0.00103	mg/L	0.000533	0.00103	mg/L	0.000533	51.74%
Sb 206.836†	0.3	-0.00145	mg/L	0.002078	-0.00145	mg/L	0.002078	143.74%
Se 196.026†	-1.8	-0.00839	mg/L	0.004845	-0.00839	mg/L	0.004845	57.76%
Si 251.611†	35034.6	1.88	mg/L	0.029	1.88	mg/L	0.029	1.55%
Sn 189.927†	-2.1	-0.00477	mg/L	0.000694	-0.00477	mg/L	0.000694	14.55%
Ti 334.940†	7038.7	0.0134	mg/L	0.00022	0.0134	mg/L	0.00022	1.61%
Tl 190.801†	0.1	-0.00350	mg/L	0.003988	-0.00350	mg/L	0.003988	113.83%
V 290.880†	133.3	-0.00105	mg/L	0.001071	-0.00105	mg/L	0.001071	102.16%
Zn 206.200†	166.6	0.00776	mg/L	0.000251	0.00776	mg/L	0.000251	3.24%
K 766.490†	547.7	0.327	mg/L	0.0369	0.327	mg/L	0.0369	11.31%
Na 589.592†	1640.0	0.152	mg/L	0.0090	0.152	mg/L	0.0090	5.93%
Sr 407.771†	1661.9	0.00263	mg/L	0.000048	0.00263	mg/L	0.000048	1.84%
Li 670.784†	14.2	-0.00318	mg/L	0.002042	-0.00318	mg/L	0.002042	64.14%

Sequence No.: 15 **Autosampler Location: 57**
Sample ID: L1201059014 **Date Collected: 1/25/2012 5:20:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059014

Analyte	Back Pressure	Flow
All	144.0 kPa	0.50 L/min

Mean Data: L1201059014

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3481073.3						98705.26	2.84%
YRADIAL	268906.2						5757.25	2.14%
Ga 417.206	712529.8						23742.50	3.33%

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GaRADIAL	41999.5					1368.43	3.26%
Ag 328.068†	-361.3	-0.00362	mg/L	0.000286	-0.00362 mg/L	0.000286	7.91%
Al 396.153†	182.1	0.0422	mg/L	0.00439	0.0422 mg/L	0.00439	10.40%
As 188.979†	1.6	-0.00107	mg/L	0.001746	-0.00107 mg/L	0.001746	162.52%
Ba 233.527†	125.0	0.00063	mg/L	0.000214	0.00063 mg/L	0.000214	34.17%
Be 234.861†	116.9	0.00021	mg/L	0.000087	0.00021 mg/L	0.000087	41.47%
B 249.677†	-20.7	-0.00058	mg/L	0.000611	-0.00058 mg/L	0.000611	105.45%
Ca 227.546†	15.8	0.227	mg/L	0.0517	0.227 mg/L	0.0517	22.72%
Cd 228.802†	-5.0	-0.00052	mg/L	0.000141	-0.00052 mg/L	0.000141	27.06%
Co 228.616†	-10.8	-0.00145	mg/L	0.000412	-0.00145 mg/L	0.000412	28.50%
Cr 267.716†	97.0	-0.00024	mg/L	0.000002	-0.00024 mg/L	0.000002	0.98%
Cu 327.393†	3120.6	0.0309	mg/L	0.00105	0.0309 mg/L	0.00105	3.41%
Fe 239.562†	4.3	0.0506	mg/L	0.01407	0.0506 mg/L	0.01407	27.80%
Mg 279.077†	23.8	0.108	mg/L	0.0093	0.108 mg/L	0.0093	8.60%
Mn 257.610†	889.1	0.00042	mg/L	0.000104	0.00042 mg/L	0.000104	24.74%
Mo 202.031†	-7.3	-0.00419	mg/L	0.000340	-0.00419 mg/L	0.000340	8.12%
Ni 231.604†	27.1	-0.00086	mg/L	0.000079	-0.00086 mg/L	0.000079	9.23%
Pb 220.353†	16.6	0.00324	mg/L	0.001021	0.00324 mg/L	0.001021	31.54%
Sb 206.836†	-0.1	-0.00188	mg/L	0.001741	-0.00188 mg/L	0.001741	92.66%
Se 196.026†	1.6	-0.00383	mg/L	0.008562	-0.00383 mg/L	0.008562	223.65%
Si 251.611†	2723.9	0.127	mg/L	0.0031	0.127 mg/L	0.0031	2.47%
Sn 189.927†	-1.6	-0.00459	mg/L	0.000728	-0.00459 mg/L	0.000728	15.86%
Ti 334.940†	353.1	-0.00031	mg/L	0.000024	-0.00031 mg/L	0.000024	7.68%
Tl 190.801†	-2.6	-0.00675	mg/L	0.001860	-0.00675 mg/L	0.001860	27.55%
V 290.880†	129.1	-0.00100	mg/L	0.000834	-0.00100 mg/L	0.000834	83.78%
Zn 206.200†	157.6	0.00711	mg/L	0.000336	0.00711 mg/L	0.000336	4.72%
K 766.490†	324.0	0.184	mg/L	0.0235	0.184 mg/L	0.0235	12.79%
Na 589.592†	4733.3	0.499	mg/L	0.0126	0.499 mg/L	0.0126	2.52%
Sr 407.771†	592.4	0.00197	mg/L	0.000040	0.00197 mg/L	0.000040	2.02%
Li 670.784†	-11.2	-0.00362	mg/L	0.000771	-0.00362 mg/L	0.000771	21.28%

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Sequence No.: 16 **Autosampler Location: 58**
Sample ID: L1201059015 **Date Collected: 1/25/2012 5:27:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059015

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059015

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3494985.7						26803.87	0.77%
YRADIAL	275274.1						5199.05	1.89%
Ga 417.206	718423.4						4803.98	0.67%
GaRADIAL	42913.4						1138.94	2.65%
Ag 328.068†	-459.8	-0.00439	mg/L	0.000500	-0.00439	mg/L	0.000500	11.39%
Al 396.153†	142.1	0.0284	mg/L	0.01985	0.0284	mg/L	0.01985	69.95%
As 188.979†	0.6	-0.00276	mg/L	0.004478	-0.00276	mg/L	0.004478	162.12%
Ba 233.527†	75.8	-0.00094	mg/L	0.000206	-0.00094	mg/L	0.000206	21.98%
Be 234.861†	112.4	0.00020	mg/L	0.000050	0.00020	mg/L	0.000050	24.99%
B 249.677†	-21.3	-0.00068	mg/L	0.000525	-0.00068	mg/L	0.000525	77.07%
Ca 227.546†	10.6	0.154	mg/L	0.0751	0.154	mg/L	0.0751	48.80%
Cd 228.802†	-5.3	-0.00055	mg/L	0.000243	-0.00055	mg/L	0.000243	44.06%
Co 228.616†	-12.3	-0.00160	mg/L	0.000026	-0.00160	mg/L	0.000026	1.63%
Cr 267.716†	59.4	-0.00082	mg/L	0.000142	-0.00082	mg/L	0.000142	17.19%
Cu 327.393†	458.9	0.00403	mg/L	0.001257	0.00403	mg/L	0.001257	31.18%
Fe 239.562†	2.2	0.0289	mg/L	0.02547	0.0289	mg/L	0.02547	87.99%
Mg 279.077†	18.2	0.0885	mg/L	0.00230	0.0885	mg/L	0.00230	2.60%
Mn 257.610†	205.3	-0.00221	mg/L	0.000022	-0.00221	mg/L	0.000022	1.00%
Mo 202.031†	-9.5	-0.00449	mg/L	0.000068	-0.00449	mg/L	0.000068	1.51%
Ni 231.604†	18.3	-0.00136	mg/L	0.000457	-0.00136	mg/L	0.000457	33.69%
Pb 220.353†	12.8	0.00196	mg/L	0.001846	0.00196	mg/L	0.001846	94.13%
Sb 206.836†	1.1	-0.00047	mg/L	0.000626	-0.00047	mg/L	0.000626	132.03%
Se 196.026†	-2.0	-0.00938	mg/L	0.003076	-0.00938	mg/L	0.003076	32.80%
Si 251.611†	1786.7	0.0765	mg/L	0.00300	0.0765	mg/L	0.00300	3.93%
Sn 189.927†	-1.8	-0.00464	mg/L	0.000676	-0.00464	mg/L	0.000676	14.56%

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Ti 334.940†	84.9	-0.00086	mg/L	0.000155	-0.00086	mg/L	0.000155	17.96%
Tl 190.801†	-3.8	-0.00811	mg/L	0.003966	-0.00811	mg/L	0.003966	48.90%
V 290.880†	110.2	-0.00121	mg/L	0.002100	-0.00121	mg/L	0.002100	173.49%
Zn 206.200†	104.5	0.00335	mg/L	0.000353	0.00335	mg/L	0.000353	10.54%
K 766.490†	18.5	-0.0101	mg/L	0.01917	-0.0101	mg/L	0.01917	190.78%
Na 589.592†	1171.6	0.0989	mg/L	0.01067	0.0989	mg/L	0.01067	10.79%
Sr 407.771†	587.2	0.00197	mg/L	0.000062	0.00197	mg/L	0.000062	3.17%
Li 670.784†	-36.4	-0.00406	mg/L	0.001260	-0.00406	mg/L	0.001260	31.04%

Sequence No.: 17 **Autosampler Location: 59**
Sample ID: L1201059016 **Date Collected: 1/25/2012 5:33:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201059016

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201059016

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3495771.4						31157.14	0.89%
YRADIAL	268659.1						5935.72	2.21%
Ga 417.206	723056.1						11100.95	1.54%
GaRADIAL	41920.0						594.55	1.42%
Ag 328.068†	-415.3	-0.00404	mg/L	0.000653	-0.00404	mg/L	0.000653	16.14%
Al 396.153†	140.6	0.0279	mg/L	0.00444	0.0279	mg/L	0.00444	15.94%
As 188.979†	2.5	0.00071	mg/L	0.007171	0.00071	mg/L	0.007171	>999.9%
Ba 233.527†	82.6	-0.00072	mg/L	0.000109	-0.00072	mg/L	0.000109	15.20%
Be 234.861†	130.6	0.00025	mg/L	0.000047	0.00025	mg/L	0.000047	18.87%
B 249.677†	151.6	0.00547	mg/L	0.000331	0.00547	mg/L	0.000331	6.05%
Ca 227.546†	13.9	0.196	mg/L	0.0585	0.196	mg/L	0.0585	29.78%
Cd 228.802†	-6.9	-0.00069	mg/L	0.000317	-0.00069	mg/L	0.000317	46.20%
Co 228.616†	-10.0	-0.00137	mg/L	0.000129	-0.00137	mg/L	0.000129	9.37%
Cr 267.716†	88.3	-0.00038	mg/L	0.000043	-0.00038	mg/L	0.000043	11.31%
Cu 327.393†	1314.6	0.0127	mg/L	0.00040	0.0127	mg/L	0.00040	3.16%
Fe 239.562†	7.1	0.0797	mg/L	0.01949	0.0797	mg/L	0.01949	24.46%
Mg 279.077†	19.8	0.0938	mg/L	0.00635	0.0938	mg/L	0.00635	6.77%
Mn 257.610†	840.6	0.00024	mg/L	0.000059	0.00024	mg/L	0.000059	24.63%
Mo 202.031†	-9.4	-0.00447	mg/L	0.000924	-0.00447	mg/L	0.000924	20.67%
Ni 231.604†	21.3	-0.00119	mg/L	0.000388	-0.00119	mg/L	0.000388	32.68%
Pb 220.353†	14.4	0.00251	mg/L	0.002569	0.00251	mg/L	0.002569	102.52%
Sb 206.836†	1.4	-0.00006	mg/L	0.001507	-0.00006	mg/L	0.001507	>999.9%
Se 196.026†	0.7	-0.00513	mg/L	0.003101	-0.00513	mg/L	0.003101	60.49%
Si 251.611†	2649.0	0.123	mg/L	0.0044	0.123	mg/L	0.0044	3.54%
Sn 189.927†	-4.6	-0.00572	mg/L	0.001631	-0.00572	mg/L	0.001631	28.52%
Ti 334.940†	135.6	-0.00076	mg/L	0.000112	-0.00076	mg/L	0.000112	14.84%
Tl 190.801†	-5.1	-0.00956	mg/L	0.005909	-0.00956	mg/L	0.005909	61.83%
V 290.880†	114.1	-0.00117	mg/L	0.001788	-0.00117	mg/L	0.001788	152.67%
Zn 206.200†	158.0	0.00714	mg/L	0.000494	0.00714	mg/L	0.000494	6.92%
K 766.490†	220.5	0.118	mg/L	0.0197	0.118	mg/L	0.0197	16.73%
Na 589.592†	6600.5	0.709	mg/L	0.0171	0.709	mg/L	0.0171	2.41%
Sr 407.771†	474.0	0.00185	mg/L	0.000019	0.00185	mg/L	0.000019	1.05%
Li 670.784†	108.2	-0.00156	mg/L	0.002956	-0.00156	mg/L	0.002956	190.06%

Sequence No.: 18 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 5:40:41 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Approved: January 26, 2012

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3401461.3						11802.91	0.35%
YRADIAL	262024.5						2875.09	1.10%
Ga 417.206	742261.9						7215.63	0.97%
GaRADIAL	40663.1						1083.83	2.67%
Ag 328.068†	48475.1	0.382	mg/L	0.0066	0.382	mg/L	0.0066	1.73%
QC value within limits for Ag 328.068 Recovery = 95.45%								
Al 396.153†	29075.0	10.0	mg/L	0.03	10.0	mg/L	0.03	0.27%
QC value within limits for Al 396.153 Recovery = 100.20%								
As 188.979†	215.5	0.386	mg/L	0.0035	0.386	mg/L	0.0035	0.90%
QC value within limits for As 188.979 Recovery = 96.39%								
Ba 233.527†	32319.3	1.02	mg/L	0.009	1.02	mg/L	0.009	0.84%
QC value within limits for Ba 233.527 Recovery = 102.43%								
Be 234.861†	14885.6	0.0483	mg/L	0.00075	0.0483	mg/L	0.00075	1.55%
QC value within limits for Be 234.861 Recovery = 96.50%								
B 249.677†	14004.2	0.486	mg/L	0.0073	0.486	mg/L	0.0073	1.50%
QC value within limits for B 249.677 Recovery = 97.15%								
Ca 227.546†	685.4	9.90	mg/L	0.024	9.90	mg/L	0.024	0.25%
QC value within limits for Ca 227.546 Recovery = 98.95%								
Cd 228.802†	534.1	0.0484	mg/L	0.00065	0.0484	mg/L	0.00065	1.34%
QC value within limits for Cd 228.802 Recovery = 96.74%								
Co 228.616†	2080.8	0.199	mg/L	0.0005	0.199	mg/L	0.0005	0.26%
QC value within limits for Co 228.616 Recovery = 99.63%								
Cr 267.716†	31863.2	0.495	mg/L	0.0060	0.495	mg/L	0.0060	1.21%
QC value within limits for Cr 267.716 Recovery = 99.03%								
Cu 327.393†	46847.9	0.473	mg/L	0.0082	0.473	mg/L	0.0082	1.72%
QC value within limits for Cu 327.393 Recovery = 94.65%								
Fe 239.562†	380.2	3.96	mg/L	0.064	3.96	mg/L	0.064	1.62%
QC value within limits for Fe 239.562 Recovery = 99.09%								
Mg 279.077†	2879.4	9.97	mg/L	0.175	9.97	mg/L	0.175	1.75%
QC value within limits for Mg 279.077 Recovery = 99.70%								
Mn 257.610†	130268.7	0.500	mg/L	0.0057	0.500	mg/L	0.0057	1.14%
QC value within limits for Mn 257.610 Recovery = 99.92%								
Mo 202.031†	7231.0	0.991	mg/L	0.0135	0.991	mg/L	0.0135	1.37%
QC value within limits for Mo 202.031 Recovery = 99.11%								
Ni 231.604†	8809.5	0.500	mg/L	0.0054	0.500	mg/L	0.0054	1.07%
QC value within limits for Ni 231.604 Recovery = 99.91%								
Pb 220.353†	1482.1	0.509	mg/L	0.0014	0.509	mg/L	0.0014	0.27%
QC value within limits for Pb 220.353 Recovery = 101.90%								
Sb 206.836†	996.7	1.18	mg/L	0.012	1.18	mg/L	0.012	1.02%
QC value within limits for Sb 206.836 Recovery = 98.70%								
Se 196.026†	256.7	0.399	mg/L	0.0080	0.399	mg/L	0.0080	2.01%
QC value within limits for Se 196.026 Recovery = 99.85%								
Si 251.611†	90407.9	4.87	mg/L	0.084	4.87	mg/L	0.084	1.72%
QC value within limits for Si 251.611 Recovery = 97.33%								
Sn 189.927†	2732.6	1.02	mg/L	0.002	1.02	mg/L	0.002	0.16%
QC value within limits for Sn 189.927 Recovery = 101.99%								
Ti 334.940†	493187.7	1.01	mg/L	0.002	1.01	mg/L	0.002	0.23%
QC value within limits for Ti 334.940 Recovery = 101.08%								
Tl 190.801†	443.0	0.512	mg/L	0.0053	0.512	mg/L	0.0053	1.03%
QC value within limits for Tl 190.801 Recovery = 102.42%								
V 290.880†	86333.3	0.984	mg/L	0.0109	0.984	mg/L	0.0109	1.11%
QC value within limits for V 290.880 Recovery = 98.38%								
Zn 206.200†	14174.3	1.00	mg/L	0.014	1.00	mg/L	0.014	1.38%
QC value within limits for Zn 206.200 Recovery = 100.06%								
K 766.490†	79838.7	51.4	mg/L	0.27	51.4	mg/L	0.27	0.52%
QC value within limits for K 766.490 Recovery = 102.72%								
Na 589.592†	459269.3	51.2	mg/L	1.57	51.2	mg/L	1.57	3.07%
QC value within limits for Na 589.592 Recovery = 102.48%								
Sr 407.771†	1088203.3	1.00	mg/L	0.011	1.00	mg/L	0.011	1.07%
QC value within limits for Sr 407.771 Recovery = 100.00%								
Li 670.784†	60673.4	1.05	mg/L	0.007	1.05	mg/L	0.007	0.67%
QC value within limits for Li 670.784 Recovery = 104.71%								

All analyte(s) passed QC.

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Sequence No.: 19 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/25/2012 5:47:37 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: January 26, 2012

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	145.0 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	3503600.8						100679.70	2.87%
YRADIAL	267575.4						3524.99	1.32%
Ga 417.206	697832.2						22253.90	3.19%
GaRADIAL	41265.1						1090.44	2.64%
Ag 328.068†	-401.3	-0.00393	mg/L	0.000748	-0.00393	mg/L	0.000748	19.03%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	66.7	0.00231	mg/L	0.016283	0.00231	mg/L	0.016283	704.00%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.5	-0.00116	mg/L	0.008478	-0.00116	mg/L	0.008478	727.82%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-10.9	-0.00368	mg/L	0.000087	-0.00368	mg/L	0.000087	2.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	90.9	0.00014	mg/L	0.000038	0.00014	mg/L	0.000038	27.66%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	14.5	0.00044	mg/L	0.000484	0.00044	mg/L	0.000484	110.95%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-6.7	-0.0955	mg/L	0.04545	-0.0955	mg/L	0.04545	47.60%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-5.7	-0.00058	mg/L	0.000099	-0.00058	mg/L	0.000099	17.02%
QC value less than the lower limit for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-16.6	-0.00201	mg/L	0.000167	-0.00201	mg/L	0.000167	8.33%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	34.5	-0.00121	mg/L	0.000085	-0.00121	mg/L	0.000085	7.05%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-321.2	-0.00383	mg/L	0.001198	-0.00383	mg/L	0.001198	31.26%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	-0.7	-0.00133	mg/L	0.007219	-0.00133	mg/L	0.007219	540.79%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	-1.0	0.0222	mg/L	0.00948	0.0222	mg/L	0.00948	42.76%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	-43.6	-0.00316	mg/L	0.000028	-0.00316	mg/L	0.000028	0.89%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-8.0	-0.00429	mg/L	0.000764	-0.00429	mg/L	0.000764	17.81%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	14.8	-0.00156	mg/L	0.000049	-0.00156	mg/L	0.000049	3.15%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.5	0.00014	mg/L	0.001331	0.00014	mg/L	0.001331	954.22%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.3	-0.00145	mg/L	0.002967	-0.00145	mg/L	0.002967	204.25%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.2	-0.00605	mg/L	0.005697	-0.00605	mg/L	0.005697	94.12%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-41.9	-0.0227	mg/L	0.00073	-0.0227	mg/L	0.00073	3.22%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	0.6	-0.00378	mg/L	0.000666	-0.00378	mg/L	0.000666	17.63%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-65.1	-0.00117	mg/L	0.000046	-0.00117	mg/L	0.000046	3.93%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-5.7	-0.0102	mg/L	0.00388	-0.0102	mg/L	0.00388	38.05%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	76.8	-0.00160	mg/L	0.002482	-0.00160	mg/L	0.002482	155.50%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-0.1	-0.00405	mg/L	0.000110	-0.00405	mg/L	0.000110	2.73%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-21.1	-0.0350	mg/L	0.04484	-0.0350	mg/L	0.04484	127.97%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	-190.9	-0.0542	mg/L	0.03951	-0.0542	mg/L	0.03951	72.88%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	-95.5	0.00135	mg/L	0.000053	0.00135	mg/L	0.000053	3.91%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	-3.6	-0.00349	mg/L	0.001611	-0.00349	mg/L	0.001611	46.14%

Approved: January 26, 2012

QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

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Sequence No.: 20 **Autosampler Location: 71**
Sample ID: L1201060401 WG387751-02 **Date Collected: 1/25/2012 5:54:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060401 WG387751-02

Analyte	Back Pressure	Flow
All	144.0 kPa	0.50 L/min

Mean Data: L1201060401 WG387751-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3422554.6						34390.87	1.00%
YRADIAL	259940.6						5271.44	2.03%
Ga 417.206	707857.0						11495.25	1.62%
GaRADIAL	41032.0						654.75	1.60%
Ag 328.068†	-327.5	-0.00337	mg/L	0.000732	-0.00337	mg/L	0.000732	21.70%
Al 396.153†	-22.0	-0.0284	mg/L	0.01965	-0.0284	mg/L	0.01965	69.28%
As 188.979†	3.8	0.00288	mg/L	0.006156	0.00288	mg/L	0.006156	213.50%
Ba 233.527†	113.1	0.00023	mg/L	0.000114	0.00023	mg/L	0.000114	48.99%
Be 234.861†	135.3	0.00019	mg/L	0.000089	0.00019	mg/L	0.000089	47.15%
B 249.677†	5702.4	0.197	mg/L	0.0074	0.197	mg/L	0.0074	3.77%
Ca 227.546†	146.8	2.09	mg/L	0.141	2.09	mg/L	0.141	6.74%
Cd 228.802†	-7.3	-0.00071	mg/L	0.000071	-0.00071	mg/L	0.000071	10.05%
Co 228.616†	-11.0	-0.00147	mg/L	0.000413	-0.00147	mg/L	0.000413	28.04%
Cr 267.716†	-38.5	-0.00238	mg/L	0.000071	-0.00238	mg/L	0.000071	3.01%
Cu 327.393†	-258.5	-0.00317	mg/L	0.000970	-0.00317	mg/L	0.000970	30.60%
Fe 239.562†	43.1	0.455	mg/L	0.0196	0.455	mg/L	0.0196	4.30%
Mg 279.077†	307.3	1.09	mg/L	0.036	1.09	mg/L	0.036	3.32%
Mn 257.610†	6446.1	0.0218	mg/L	0.00105	0.0218	mg/L	0.00105	4.80%
Mo 202.031†	-10.6	-0.00462	mg/L	0.000334	-0.00462	mg/L	0.000334	7.23%
Ni 231.604†	3.0	-0.00224	mg/L	0.000219	-0.00224	mg/L	0.000219	9.78%
Pb 220.353†	3.7	-0.00107	mg/L	0.001131	-0.00107	mg/L	0.001131	106.02%
Sb 206.836†	0.9	-0.00070	mg/L	0.002393	-0.00070	mg/L	0.002393	341.71%
Se 196.026†	-2.8	-0.00991	mg/L	0.004928	-0.00991	mg/L	0.004928	49.74%
Si 251.611†	2908.5	0.137	mg/L	0.0078	0.137	mg/L	0.0078	5.65%
Sn 189.927†	0.7	-0.00371	mg/L	0.001432	-0.00371	mg/L	0.001432	38.61%
Ti 334.940†	-226.7	-0.00148	mg/L	0.000196	-0.00148	mg/L	0.000196	13.21%
Tl 190.801†	4.6	0.00080	mg/L	0.004971	0.00080	mg/L	0.004971	617.80%
V 290.880†	164.2	-0.00054	mg/L	0.001887	-0.00054	mg/L	0.001887	347.60%
Zn 206.200†	55.6	-0.00012	mg/L	0.000236	-0.00012	mg/L	0.000236	197.26%
K 766.490†	871.8	0.530	mg/L	0.0131	0.530	mg/L	0.0131	2.48%
Na 589.592†	23831.6	2.64	mg/L	0.038	2.64	mg/L	0.038	1.43%
Sr 407.771†	42321.9	0.0402	mg/L	0.00058	0.0402	mg/L	0.00058	1.44%
Li 670.784†	880.8	0.0118	mg/L	0.00031	0.0118	mg/L	0.00031	2.63%

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Sequence No.: 21 **Autosampler Location: 72**
Sample ID: L1201060404S WG387751-07 **Date Collected: 1/25/2012 6:01:15 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060404S WG387751-07

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201060404S WG387751-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3522367.0						50463.37	1.43%
YRADIAL	264703.6						3220.26	1.22%
Ga 417.206	733305.4						11296.89	1.54%

Approved: January 26, 2012

GaRADIAL	41861.7					260.52	0.62%
Ag 328.068†	-40.8	-0.00112	mg/L	0.000351	-0.00112 mg/L	0.000351	31.39%
Al 396.153†	249.2	0.0654	mg/L	0.01130	0.0654 mg/L	0.01130	17.30%
As 188.979†	1.5	-0.00132	mg/L	0.003640	-0.00132 mg/L	0.003640	275.26%
Ba 233.527†	268.1	0.00516	mg/L	0.000400	0.00516 mg/L	0.000400	7.76%
Be 234.861†	228.1	0.00049	mg/L	0.000074	0.00049 mg/L	0.000074	15.01%
B 249.677†	5896.6	0.204	mg/L	0.0108	0.204 mg/L	0.0108	5.32%
Ca 227.546†	164.3	2.34	mg/L	0.112	2.34 mg/L	0.112	4.77%
Cd 228.802†	-5.0	-0.00052	mg/L	0.000157	-0.00052 mg/L	0.000157	30.42%
Co 228.616†	-0.9	-0.00051	mg/L	0.000266	-0.00051 mg/L	0.000266	52.46%
Cr 267.716†	135.2	0.00033	mg/L	0.000163	0.00033 mg/L	0.000163	49.55%
Cu 327.393†	-50.5	-0.00107	mg/L	0.000937	-0.00107 mg/L	0.000937	87.57%
Fe 239.562†	44.2	0.466	mg/L	0.0135	0.466 mg/L	0.0135	2.89%
Mg 279.077†	340.1	1.20	mg/L	0.011	1.20 mg/L	0.011	0.95%
Mn 257.610†	8087.9	0.0281	mg/L	0.00243	0.0281 mg/L	0.00243	8.66%
Mo 202.031†	23.4	0.00006	mg/L	0.000529	0.00006 mg/L	0.000529	865.97%
Ni 231.604†	53.0	0.00061	mg/L	0.000163	0.00061 mg/L	0.000163	26.59%
Pb 220.353†	17.0	0.00353	mg/L	0.000995	0.00353 mg/L	0.000995	28.20%
Sb 206.836†	3.3	0.00216	mg/L	0.002107	0.00216 mg/L	0.002107	97.72%
Se 196.026†	1.9	-0.00248	mg/L	0.007531	-0.00248 mg/L	0.007531	303.08%
Si 251.611†	3343.3	0.161	mg/L	0.0104	0.161 mg/L	0.0104	6.50%
Sn 189.927†	-4.1	-0.00552	mg/L	0.000611	-0.00552 mg/L	0.000611	11.08%
Ti 334.940†	2147.6	0.00339	mg/L	0.000502	0.00339 mg/L	0.000502	14.81%
Tl 190.801†	2.6	-0.00152	mg/L	0.003613	-0.00152 mg/L	0.003613	237.62%
V 290.880†	412.4	0.00230	mg/L	0.002040	0.00230 mg/L	0.002040	88.73%
Zn 206.200†	98.0	0.00289	mg/L	0.000226	0.00289 mg/L	0.000226	7.83%
K 766.490†	1437.2	0.890	mg/L	0.0443	0.890 mg/L	0.0443	4.98%
Na 589.592†	27366.4	3.04	mg/L	0.029	3.04 mg/L	0.029	0.96%
Sr 407.771†	54672.8	0.0515	mg/L	0.00051	0.0515 mg/L	0.00051	1.00%
Li 670.784†	1219.9	0.0177	mg/L	0.00110	0.0177 mg/L	0.00110	6.19%

Sequence No.: 22 **Autosampler Location: 73**
Sample ID: L1201060405SD WG387751-08 **Date Collected: 1/25/2012 6:08:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060405SD WG387751-08

Analyte	Back Pressure	Flow
All	144.0 kPa	0.50 L/min

Mean Data: L1201060405SD WG387751-08

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3404469.3						21987.19	0.65%
YRADIAL	261991.2						6841.33	2.61%
Ga 417.206	703676.1						4812.14	0.68%
GaRADIAL	41455.6						1507.88	3.64%
Ag 328.068†	-177.0	-0.00218	mg/L	0.000421	-0.00218	mg/L	0.000421	19.29%
Al 396.153†	199.0	0.0480	mg/L	0.03465	0.0480	mg/L	0.03465	72.19%
As 188.979†	4.9	0.00490	mg/L	0.005016	0.00490	mg/L	0.005016	102.45%
Ba 233.527†	271.4	0.00527	mg/L	0.000137	0.00527	mg/L	0.000137	2.60%
Be 234.861†	236.3	0.00052	mg/L	0.000182	0.00052	mg/L	0.000182	34.83%
B 249.677†	6130.2	0.212	mg/L	0.0076	0.212	mg/L	0.0076	3.57%
Ca 227.546†	166.5	2.38	mg/L	0.097	2.38	mg/L	0.097	4.08%
Cd 228.802†	-5.5	-0.00055	mg/L	0.000107	-0.00055	mg/L	0.000107	19.64%
Co 228.616†	2.7	-0.00016	mg/L	0.000155	-0.00016	mg/L	0.000155	96.92%
Cr 267.716†	141.3	0.00043	mg/L	0.000293	0.00043	mg/L	0.000293	68.97%
Cu 327.393†	-54.2	-0.00111	mg/L	0.000150	-0.00111	mg/L	0.000150	13.61%
Fe 239.562†	42.0	0.444	mg/L	0.0334	0.444	mg/L	0.0334	7.53%
Mg 279.077†	307.7	1.09	mg/L	0.028	1.09	mg/L	0.028	2.61%
Mn 257.610†	8154.1	0.0283	mg/L	0.00097	0.0283	mg/L	0.00097	3.41%
Mo 202.031†	23.3	0.00004	mg/L	0.000738	0.00004	mg/L	0.000738	>999.9%
Ni 231.604†	43.3	0.00006	mg/L	0.000341	0.00006	mg/L	0.000341	574.36%
Pb 220.353†	13.5	0.00231	mg/L	0.000729	0.00231	mg/L	0.000729	31.54%
Sb 206.836†	8.0	0.00777	mg/L	0.001194	0.00777	mg/L	0.001194	15.36%
Se 196.026†	-1.5	-0.00779	mg/L	0.000829	-0.00779	mg/L	0.000829	10.65%
Si 251.611†	3513.3	0.170	mg/L	0.0066	0.170	mg/L	0.0066	3.91%
Sn 189.927†	-6.3	-0.00636	mg/L	0.000359	-0.00636	mg/L	0.000359	5.64%

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Ti 334.940†	2222.3	0.00355 mg/L	0.000170	0.00355 mg/L	0.000170	4.80%
Tl 190.801†	6.7	0.00315 mg/L	0.003209	0.00315 mg/L	0.003209	101.92%
V 290.880†	596.1	0.00439 mg/L	0.002022	0.00439 mg/L	0.002022	46.06%
Zn 206.200†	103.6	0.00329 mg/L	0.000522	0.00329 mg/L	0.000522	15.89%
K 766.490†	1283.6	0.792 mg/L	0.0452	0.792 mg/L	0.0452	5.71%
Na 589.592†	25130.9	2.79 mg/L	0.023	2.79 mg/L	0.023	0.83%
Sr 407.771†	49940.7	0.0472 mg/L	0.00048	0.0472 mg/L	0.00048	1.02%
Li 670.784†	1091.9	0.0155 mg/L	0.00050	0.0155 mg/L	0.00050	3.20%

Sequence No.: 23 **Autosampler Location: 74**
Sample ID: L1201051804 0.01 **Date Collected: 1/25/2012 6:14:53 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051804 0.01

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051804 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3468174.4						75938.29	2.19%
YRADIAL	265615.8						5883.01	2.21%
Ga 417.206	723332.8						15557.08	2.15%
GaRADIAL	42115.4						1511.83	3.59%
Ag 328.068†	-318.3	-0.00327	mg/L	0.000776	-0.00327	mg/L	0.000776	23.69%
Al 396.153†	22.7	-0.0129	mg/L	0.01313	-0.0129	mg/L	0.01313	101.80%
As 188.979†	2.6	0.00084	mg/L	0.006158	0.00084	mg/L	0.006158	736.24%
Ba 233.527†	28.2	-0.00244	mg/L	0.000092	-0.00244	mg/L	0.000092	3.78%
Be 234.861†	135.6	0.00028	mg/L	0.000029	0.00028	mg/L	0.000029	10.20%
B 249.677†	43.9	0.00146	mg/L	0.000086	0.00146	mg/L	0.000086	5.90%
Ca 227.546†	-2.4	-0.0332	mg/L	0.05149	-0.0332	mg/L	0.05149	155.05%
Cd 228.802†	-6.6	-0.00066	mg/L	0.000056	-0.00066	mg/L	0.000056	8.44%
Co 228.616†	-15.2	-0.00187	mg/L	0.000164	-0.00187	mg/L	0.000164	8.79%
Cr 267.716†	-42.5	-0.00241	mg/L	0.000141	-0.00241	mg/L	0.000141	5.83%
Cu 327.393†	-325.5	-0.00388	mg/L	0.000800	-0.00388	mg/L	0.000800	20.63%
Fe 239.562†	-0.7	-0.00086	mg/L	0.013583	-0.00086	mg/L	0.013583	>999.9%
Mg 279.077†	6.1	0.0466	mg/L	0.00640	0.0466	mg/L	0.00640	13.72%
Mn 257.610†	-132.0	-0.00345	mg/L	0.000022	-0.00345	mg/L	0.000022	0.64%
Mo 202.031†	-7.7	-0.00424	mg/L	0.000860	-0.00424	mg/L	0.000860	20.27%
Ni 231.604†	7.1	-0.00200	mg/L	0.000100	-0.00200	mg/L	0.000100	5.01%
Pb 220.353†	3.6	-0.00117	mg/L	0.000479	-0.00117	mg/L	0.000479	40.88%
Sb 206.836†	-2.2	-0.00434	mg/L	0.003350	-0.00434	mg/L	0.003350	77.12%
Se 196.026†	-1.5	-0.00874	mg/L	0.002547	-0.00874	mg/L	0.002547	29.15%
Si 251.611†	538.4	0.00878	mg/L	0.000468	0.00878	mg/L	0.000468	5.33%
Sn 189.927†	-2.0	-0.00472	mg/L	0.000858	-0.00472	mg/L	0.000858	18.17%
Ti 334.940†	-214.6	-0.00148	mg/L	0.000175	-0.00148	mg/L	0.000175	11.84%
Tl 190.801†	-0.3	-0.00404	mg/L	0.001060	-0.00404	mg/L	0.001060	26.23%
V 290.880†	153.2	-0.00072	mg/L	0.002168	-0.00072	mg/L	0.002168	300.25%
Zn 206.200†	14.9	-0.00299	mg/L	0.000248	-0.00299	mg/L	0.000248	8.30%
K 766.490†	26.3	-0.0100	mg/L	0.01065	-0.0100	mg/L	0.01065	106.21%
Na 589.592†	45318.9	5.06	mg/L	0.095	5.06	mg/L	0.095	1.88%
Sr 407.771†	2429.2	0.00367	mg/L	0.000039	0.00367	mg/L	0.000039	1.08%
Li 670.784†	3.5	-0.00337	mg/L	0.000653	-0.00337	mg/L	0.000653	19.39%

Sequence No.: 24 **Autosampler Location: 75**
Sample ID: L1201051806 0.01 **Date Collected: 1/25/2012 6:21:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051806 0.01

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Approved: January 26, 2012

Mean Data: L1201051806 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3416206.5						40421.90	1.18%
YRADIAL	264301.9						2388.07	0.90%
Ga 417.206	703631.1						9579.78	1.36%
GaRADIAL	42033.1						621.59	1.48%
Ag 328.068†	-347.2	-0.00350	mg/L	0.000239	-0.00350	mg/L	0.000239	6.83%
Al 396.153†	56.6	-0.00119	mg/L	0.012760	-0.00119	mg/L	0.012760	>999.9%
As 188.979†	3.6	0.00270	mg/L	0.001590	0.00270	mg/L	0.001590	58.93%
Ba 233.527†	-0.0	-0.00334	mg/L	0.000054	-0.00334	mg/L	0.000054	1.62%
Be 234.861†	115.4	0.00022	mg/L	0.000048	0.00022	mg/L	0.000048	22.28%
B 249.677†	-36.5	-0.00134	mg/L	0.000306	-0.00134	mg/L	0.000306	22.86%
Ca 227.546†	28.2	0.412	mg/L	0.0404	0.412	mg/L	0.0404	9.81%
Cd 228.802†	-7.7	-0.00075	mg/L	0.000157	-0.00075	mg/L	0.000157	20.85%
Co 228.616†	-11.1	-0.00148	mg/L	0.000053	-0.00148	mg/L	0.000053	3.62%
Cr 267.716†	-39.0	-0.00236	mg/L	0.000005	-0.00236	mg/L	0.000005	0.22%
Cu 327.393†	-347.4	-0.00410	mg/L	0.000599	-0.00410	mg/L	0.000599	14.63%
Fe 239.562†	-1.4	-0.00826	mg/L	0.005464	-0.00826	mg/L	0.005464	66.13%
Mg 279.077†	96.2	0.358	mg/L	0.0084	0.358	mg/L	0.0084	2.33%
Mn 257.610†	-153.4	-0.00357	mg/L	0.000021	-0.00357	mg/L	0.000021	0.60%
Mo 202.031†	-9.2	-0.00445	mg/L	0.000585	-0.00445	mg/L	0.000585	13.14%
Ni 231.604†	10.0	-0.00184	mg/L	0.000303	-0.00184	mg/L	0.000303	16.50%
Pb 220.353†	10.9	0.00132	mg/L	0.000471	0.00132	mg/L	0.000471	35.58%
Sb 206.836†	-1.3	-0.00324	mg/L	0.000969	-0.00324	mg/L	0.000969	29.87%
Se 196.026†	-1.6	-0.00883	mg/L	0.001240	-0.00883	mg/L	0.001240	14.03%
Si 251.611†	593.4	0.0118	mg/L	0.00239	0.0118	mg/L	0.00239	20.36%
Sn 189.927†	-1.3	-0.00448	mg/L	0.000559	-0.00448	mg/L	0.000559	12.47%
Ti 334.940†	-255.0	-0.00156	mg/L	0.000110	-0.00156	mg/L	0.000110	7.05%
Tl 190.801†	1.6	-0.00202	mg/L	0.002013	-0.00202	mg/L	0.002013	99.42%
V 290.880†	149.2	-0.00074	mg/L	0.001392	-0.00074	mg/L	0.001392	188.08%
Zn 206.200†	11.7	-0.00322	mg/L	0.000090	-0.00322	mg/L	0.000090	2.81%
K 766.490†	-17.0	-0.0346	mg/L	0.02581	-0.0346	mg/L	0.02581	74.62%
Na 589.592†	18868.9	2.09	mg/L	0.046	2.09	mg/L	0.046	2.19%
Sr 407.771†	9163.0	0.00985	mg/L	0.000136	0.00985	mg/L	0.000136	1.38%
Li 670.784†	-42.1	-0.00416	mg/L	0.001832	-0.00416	mg/L	0.001832	44.05%

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Sequence No.: 25 **Autosampler Location: 76**
Sample ID: L1201051810 0.01 **Date Collected: 1/25/2012 6:28:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051810 0.01

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051810 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3487881.8						5161.82	0.15%
YRADIAL	269032.1						2615.00	0.97%
Ga 417.206	739310.7						7340.92	0.99%
GaRADIAL	42372.0						243.52	0.57%
Ag 328.068†	-272.9	-0.00292	mg/L	0.000378	-0.00292	mg/L	0.000378	12.93%
Al 396.153†	9.9	-0.0173	mg/L	0.01419	-0.0173	mg/L	0.01419	81.90%
As 188.979†	1.7	-0.00093	mg/L	0.001685	-0.00093	mg/L	0.001685	181.56%
Ba 233.527†	310.5	0.00651	mg/L	0.000115	0.00651	mg/L	0.000115	1.76%
Be 234.861†	139.2	0.00029	mg/L	0.000053	0.00029	mg/L	0.000053	18.23%
B 249.677†	-2.5	-0.00019	mg/L	0.000222	-0.00019	mg/L	0.000222	116.73%
Ca 227.546†	22.1	0.324	mg/L	0.0406	0.324	mg/L	0.0406	12.54%
Cd 228.802†	-6.2	-0.00063	mg/L	0.000110	-0.00063	mg/L	0.000110	17.56%
Co 228.616†	-9.3	-0.00131	mg/L	0.000256	-0.00131	mg/L	0.000256	19.62%
Cr 267.716†	-43.8	-0.00243	mg/L	0.000155	-0.00243	mg/L	0.000155	6.38%
Cu 327.393†	-268.8	-0.00330	mg/L	0.000977	-0.00330	mg/L	0.000977	29.56%
Fe 239.562†	-2.0	-0.0151	mg/L	0.00605	-0.0151	mg/L	0.00605	40.20%
Mg 279.077†	38.1	0.157	mg/L	0.0123	0.157	mg/L	0.0123	7.85%
Mn 257.610†	-166.1	-0.00343	mg/L	0.000003	-0.00343	mg/L	0.000003	0.08%
Mo 202.031†	-9.4	-0.00448	mg/L	0.000395	-0.00448	mg/L	0.000395	8.81%

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Ni 231.604†	3.0	-0.00223	mg/L	0.000533	-0.00223	mg/L	0.000533	23.89%
Pb 220.353†	5.2	-0.00061	mg/L	0.000162	-0.00061	mg/L	0.000162	26.71%
Sb 206.836†	0.2	-0.00153	mg/L	0.001902	-0.00153	mg/L	0.001902	124.17%
Se 196.026†	-6.1	-0.0159	mg/L	0.00687	-0.0159	mg/L	0.00687	43.29%
Si 251.611†	413.0	0.00198	mg/L	0.000629	0.00198	mg/L	0.000629	31.75%
Sn 189.927†	-1.0	-0.00437	mg/L	0.001164	-0.00437	mg/L	0.001164	26.65%
Ti 334.940†	-192.6	-0.00143	mg/L	0.000202	-0.00143	mg/L	0.000202	14.16%
Tl 190.801†	-1.9	-0.00598	mg/L	0.000977	-0.00598	mg/L	0.000977	16.34%
V 290.880†	134.6	-0.00092	mg/L	0.001172	-0.00092	mg/L	0.001172	126.90%
Zn 206.200†	16.4	-0.00288	mg/L	0.000384	-0.00288	mg/L	0.000384	13.32%
K 766.490†	47.9	-0.0105	mg/L	0.04741	-0.0105	mg/L	0.04741	452.19%
Na 589.592†	172246.0	19.3	mg/L	0.30	19.3	mg/L	0.30	1.53%
Sr 407.771†	36165.3	0.0347	mg/L	0.00032	0.0347	mg/L	0.00032	0.92%
Li 670.784†	26.9	-0.00296	mg/L	0.000568	-0.00296	mg/L	0.000568	19.16%

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Sequence No.: 26 **Autosampler Location: 77**
Sample ID: L1201051810PS WG387712-03 **Date Collected: 1/25/2012 6:35:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051810PS WG387712-03

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051810PS WG387712-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3423852.3						85861.58	2.51%
YRADIAL	262463.1						4166.57	1.59%
Ga 417.206	743475.6						24018.73	3.23%
GaRADIAL	40666.3						713.78	1.76%
Ag 328.068†	24806.3	0.195	mg/L	0.0102	0.195	mg/L	0.0102	5.25%
Al 396.153†	14579.6	5.01	mg/L	0.027	5.01	mg/L	0.027	0.53%
As 188.979†	112.0	0.199	mg/L	0.0039	0.199	mg/L	0.0039	1.97%
Ba 233.527†	16540.7	0.523	mg/L	0.0231	0.523	mg/L	0.0231	4.42%
Be 234.861†	7800.9	0.0252	mg/L	0.00152	0.0252	mg/L	0.00152	6.03%
B 249.677†	29265.7	1.01	mg/L	0.054	1.01	mg/L	0.054	5.37%
Ca 227.546†	367.1	5.31	mg/L	0.163	5.31	mg/L	0.163	3.08%
Cd 228.802†	269.7	0.0244	mg/L	0.00105	0.0244	mg/L	0.00105	4.30%
Co 228.616†	1041.3	0.0995	mg/L	0.00221	0.0995	mg/L	0.00221	2.22%
Cr 267.716†	16100.7	0.249	mg/L	0.0122	0.249	mg/L	0.0122	4.89%
Cu 327.393†	23447.6	0.237	mg/L	0.0129	0.237	mg/L	0.0129	5.46%
Fe 239.562†	190.6	1.99	mg/L	0.019	1.99	mg/L	0.019	0.96%
Mg 279.077†	1506.7	5.23	mg/L	0.068	5.23	mg/L	0.068	1.30%
Mn 257.610†	65034.3	0.248	mg/L	0.0120	0.248	mg/L	0.0120	4.85%
Mo 202.031†	3641.2	0.497	mg/L	0.0210	0.497	mg/L	0.0210	4.23%
Ni 231.604†	4515.9	0.255	mg/L	0.0100	0.255	mg/L	0.0100	3.94%
Pb 220.353†	753.2	0.258	mg/L	0.0061	0.258	mg/L	0.0061	2.39%
Sb 206.836†	503.0	0.597	mg/L	0.0214	0.597	mg/L	0.0214	3.59%
Se 196.026†	138.4	0.212	mg/L	0.0055	0.212	mg/L	0.0055	2.60%
Si 251.611†	47701.6	2.56	mg/L	0.138	2.56	mg/L	0.138	5.40%
Sn 189.927†	-6.5	-0.00642	mg/L	0.000906	-0.00642	mg/L	0.000906	14.12%
Ti 334.940†	243875.1	0.499	mg/L	0.0052	0.499	mg/L	0.0052	1.05%
Tl 190.801†	227.5	0.261	mg/L	0.0057	0.261	mg/L	0.0057	2.18%
V 290.880†	43505.2	0.495	mg/L	0.0263	0.495	mg/L	0.0263	5.32%
Zn 206.200†	7583.4	0.533	mg/L	0.0270	0.533	mg/L	0.0270	5.05%
K 766.490†	39708.5	25.3	mg/L	0.05	25.3	mg/L	0.05	0.20%
Na 589.592†	407111.8	45.5	mg/L	0.45	45.5	mg/L	0.45	0.98%
Sr 407.771†	576934.2	0.531	mg/L	0.0067	0.531	mg/L	0.0067	1.26%
Li 670.784†	30487.0	0.524	mg/L	0.0036	0.524	mg/L	0.0036	0.68%

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Sequence No.: 27 **Autosampler Location: 78**
Sample ID: L1201051810DL WG387712-04 **Date Collected: 1/25/2012 6:42:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 26, 2012

Nebulizer Parameters: L1201051810DL WG387712-04

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051810DL WG387712-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3470927.6						19114.01	0.55%
YRADIAL	260299.3						5354.89	2.06%
Ga 417.206	718090.8						3020.51	0.42%
GaRADIAL	41362.0						1302.85	3.15%
Ag 328.068†	-392.4	-0.00386	mg/L	0.000604	-0.00386	mg/L	0.000604	15.65%
Al 396.153†	53.2	-0.00235	mg/L	0.023474	-0.00235	mg/L	0.023474	>999.9%
As 188.979†	2.8	0.00120	mg/L	0.002353	0.00120	mg/L	0.002353	195.63%
Ba 233.527†	53.1	-0.00165	mg/L	0.000202	-0.00165	mg/L	0.000202	12.21%
Be 234.861†	131.2	0.00026	mg/L	0.000053	0.00026	mg/L	0.000053	20.15%
B 249.677†	73.0	0.00244	mg/L	0.000556	0.00244	mg/L	0.000556	22.78%
Ca 227.546†	3.2	0.0483	mg/L	0.04737	0.0483	mg/L	0.04737	98.15%
Cd 228.802†	-6.7	-0.00067	mg/L	0.000070	-0.00067	mg/L	0.000070	10.53%
Co 228.616†	-9.0	-0.00127	mg/L	0.000257	-0.00127	mg/L	0.000257	20.19%
Cr 267.716†	-39.4	-0.00236	mg/L	0.000252	-0.00236	mg/L	0.000252	10.69%
Cu 327.393†	-299.6	-0.00362	mg/L	0.000949	-0.00362	mg/L	0.000949	26.26%
Fe 239.562†	-0.8	-0.00202	mg/L	0.008348	-0.00202	mg/L	0.008348	413.98%
Mg 279.077†	9.1	0.0571	mg/L	0.00594	0.0571	mg/L	0.00594	10.41%
Mn 257.610†	-158.7	-0.00356	mg/L	0.000006	-0.00356	mg/L	0.000006	0.17%
Mo 202.031†	-11.1	-0.00471	mg/L	0.000413	-0.00471	mg/L	0.000413	8.76%
Ni 231.604†	4.2	-0.00216	mg/L	0.000168	-0.00216	mg/L	0.000168	7.74%
Pb 220.353†	9.5	0.00085	mg/L	0.001794	0.00085	mg/L	0.001794	211.27%
Sb 206.836†	-1.2	-0.00323	mg/L	0.002343	-0.00323	mg/L	0.002343	72.44%
Se 196.026†	-3.0	-0.0111	mg/L	0.00544	-0.0111	mg/L	0.00544	49.00%
Si 251.611†	9.8	-0.0199	mg/L	0.00030	-0.0199	mg/L	0.00030	1.51%
Sn 189.927†	-5.5	-0.00606	mg/L	0.001415	-0.00606	mg/L	0.001415	23.37%
Ti 334.940†	-176.5	-0.00140	mg/L	0.000074	-0.00140	mg/L	0.000074	5.26%
Tl 190.801†	1.0	-0.00256	mg/L	0.003332	-0.00256	mg/L	0.003332	130.06%
V 290.880†	79.5	-0.00156	mg/L	0.001085	-0.00156	mg/L	0.001085	69.42%
Zn 206.200†	14.4	-0.00302	mg/L	0.000028	-0.00302	mg/L	0.000028	0.92%
K 766.490†	15.8	-0.0155	mg/L	0.05112	-0.0155	mg/L	0.05112	329.10%
Na 589.592†	35180.5	3.92	mg/L	0.078	3.92	mg/L	0.078	1.99%
Sr 407.771†	7305.2	0.00814	mg/L	0.000108	0.00814	mg/L	0.000108	1.33%
Li 670.784†	-25.3	-0.00387	mg/L	0.001752	-0.00387	mg/L	0.001752	45.31%

Sequence No.: 28 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/25/2012 6:49:04 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	145.0 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	3471453.3						50451.15	1.45%
YRADIAL	263513.9						1908.71	0.72%
Ga 417.206	745997.8						13565.31	1.82%
GaRADIAL	40553.9						1057.46	2.61%
Ag 328.068†	48844.8	0.385	mg/L	0.0164	0.385	mg/L	0.0164	4.26%
QC value within limits for Ag 328.068 Recovery = 96.18%								
Al 396.153†	28327.6	9.76	mg/L	0.014	9.76	mg/L	0.014	0.14%
QC value within limits for Al 396.153 Recovery = 97.62%								
As 188.979†	214.8	0.384	mg/L	0.0035	0.384	mg/L	0.0035	0.91%
QC value within limits for As 188.979 Recovery = 96.06%								
Ba 233.527†	32219.4	1.02	mg/L	0.039	1.02	mg/L	0.039	3.82%
QC value within limits for Ba 233.527 Recovery = 102.11%								
Be 234.861†	15191.8	0.0492	mg/L	0.00207	0.0492	mg/L	0.00207	4.20%

Approved: January 26, 2012

QC value within limits for Be 234.861 Recovery = 98.49%

B 249.677†	14228.5	0.494 mg/L	0.0215	0.494 mg/L	0.0215	4.37%

QC value within limits for B 249.677 Recovery = 98.71%

Ca 227.546†	671.4	9.70 mg/L	0.221	9.70 mg/L	0.221	2.28%

QC value within limits for Ca 227.546 Recovery = 96.99%

Cd 228.802†	532.4	0.0482 mg/L	0.00107	0.0482 mg/L	0.00107	2.21%

QC value within limits for Cd 228.802 Recovery = 96.42%

Co 228.616†	2032.9	0.195 mg/L	0.0028	0.195 mg/L	0.0028	1.41%

QC value within limits for Co 228.616 Recovery = 97.33%

Cr 267.716†	31817.1	0.494 mg/L	0.0191	0.494 mg/L	0.0191	3.86%

QC value within limits for Cr 267.716 Recovery = 98.89%

Cu 327.393†	47102.4	0.476 mg/L	0.0216	0.476 mg/L	0.0216	4.54%

QC value within limits for Cu 327.393 Recovery = 95.16%

Fe 239.562†	375.6	3.92 mg/L	0.045	3.92 mg/L	0.045	1.15%

QC value within limits for Fe 239.562 Recovery = 97.88%

Mg 279.077†	2848.5	9.86 mg/L	0.014	9.86 mg/L	0.014	0.14%

QC value within limits for Mg 279.077 Recovery = 98.63%

Mn 257.610†	130618.3	0.501 mg/L	0.0198	0.501 mg/L	0.0198	3.95%

QC value within limits for Mn 257.610 Recovery = 100.17%

Mo 202.031†	7242.1	0.993 mg/L	0.0383	0.993 mg/L	0.0383	3.86%

QC value within limits for Mo 202.031 Recovery = 99.26%

Ni 231.604†	8828.4	0.501 mg/L	0.0222	0.501 mg/L	0.0222	4.43%

QC value within limits for Ni 231.604 Recovery = 100.12%

Pb 220.353†	1445.4	0.497 mg/L	0.0086	0.497 mg/L	0.0086	1.73%

QC value within limits for Pb 220.353 Recovery = 99.39%

Sb 206.836†	986.7	1.17 mg/L	0.023	1.17 mg/L	0.023	1.93%

QC value within limits for Sb 206.836 Recovery = 97.71%

Se 196.026†	257.0	0.400 mg/L	0.0172	0.400 mg/L	0.0172	4.31%

QC value within limits for Se 196.026 Recovery = 99.94%

Si 251.611†	91609.7	4.93 mg/L	0.232	4.93 mg/L	0.232	4.71%

QC value within limits for Si 251.611 Recovery = 98.63%

Sn 189.927†	2669.7	0.996 mg/L	0.0117	0.996 mg/L	0.0117	1.17%

QC value within limits for Sn 189.927 Recovery = 99.64%

Ti 334.940†	481027.8	0.986 mg/L	0.0019	0.986 mg/L	0.0019	0.19%

QC value within limits for Ti 334.940 Recovery = 98.59%

Tl 190.801†	431.3	0.499 mg/L	0.0043	0.499 mg/L	0.0043	0.85%

QC value within limits for Tl 190.801 Recovery = 99.71%

V 290.880†	86331.9	0.984 mg/L	0.0386	0.984 mg/L	0.0386	3.92%

QC value within limits for V 290.880 Recovery = 98.38%

Zn 206.200†	14278.0	1.01 mg/L	0.039	1.01 mg/L	0.039	3.84%

QC value within limits for Zn 206.200 Recovery = 100.79%

K 766.490†	77415.2	49.8 mg/L	0.33	49.8 mg/L	0.33	0.67%

QC value within limits for K 766.490 Recovery = 99.56%

Na 589.592†	448836.5	50.1 mg/L	0.56	50.1 mg/L	0.56	1.12%

QC value within limits for Na 589.592 Recovery = 100.17%

Sr 407.771†	1059998.8	0.974 mg/L	0.0104	0.974 mg/L	0.0104	1.07%

QC value within limits for Sr 407.771 Recovery = 97.41%

Li 670.784†	58387.4	1.01 mg/L	0.006	1.01 mg/L	0.006	0.57%

QC value within limits for Li 670.784 Recovery = 100.75%

All analyte(s) passed QC.

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Sequence No.: 29 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/25/2012 6:56:00 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	145.0 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	3456691.0						35204.86	1.02%
YRADIAL	259368.5						6681.11	2.58%
Ga 417.206	692702.5						12484.38	1.80%
GaRADIAL	40185.9						1508.27	3.75%
Ag 328.068†	-407.6	-0.00398	mg/L	0.000337	-0.00398	mg/L	0.000337	8.46%

Approved: January 26, 2012

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   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              77.4     0.00601 mg/L      0.013497     0.00601 mg/L      0.013497 224.75%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -1.8    -0.00718 mg/L      0.004887    -0.00718 mg/L      0.004887  68.03%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†             -16.3    -0.00386 mg/L      0.000091    -0.00386 mg/L      0.000091   2.37%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†             110.0     0.00020 mg/L      0.000079     0.00020 mg/L      0.000079  39.97%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               44.0     0.00143 mg/L      0.000697     0.00143 mg/L      0.000697  48.67%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -6.3     -0.0890 mg/L       0.07752     -0.0890 mg/L       0.07752  87.09%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -5.2    -0.00055 mg/L      0.000105    -0.00055 mg/L      0.000105  18.96%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†             -18.4    -0.00218 mg/L      0.000417    -0.00218 mg/L      0.000417  19.13%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              30.7    -0.00127 mg/L      0.000130    -0.00127 mg/L      0.000130  10.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -301.5    -0.00364 mg/L      0.000626    -0.00364 mg/L      0.000626  17.22%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              -0.9    -0.00296 mg/L      0.014789    -0.00296 mg/L      0.014789 499.76%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               1.6      0.0309 mg/L       0.00588      0.0309 mg/L       0.00588  19.03%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             -43.1    -0.00317 mg/L      0.000031    -0.00317 mg/L      0.000031   0.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -11.2    -0.00473 mg/L      0.000250    -0.00473 mg/L      0.000250   5.28%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              11.6    -0.00174 mg/L      0.000209    -0.00174 mg/L      0.000209  12.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               5.9    -0.00041 mg/L      0.001835    -0.00041 mg/L      0.001835 450.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               0.9    -0.00066 mg/L      0.001895    -0.00066 mg/L      0.001895 287.58%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.8    -0.00924 mg/L      0.003662    -0.00924 mg/L      0.003662  39.63%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -62.4     -0.0238 mg/L       0.00012     -0.0238 mg/L       0.00012   0.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.5    -0.00417 mg/L      0.001098    -0.00417 mg/L      0.001098  26.36%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -217.1    -0.00148 mg/L      0.000113    -0.00148 mg/L      0.000113   7.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -3.0    -0.00711 mg/L      0.004373    -0.00711 mg/L      0.004373  61.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -43.7    -0.00297 mg/L      0.000868    -0.00297 mg/L      0.000868  29.21%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -5.5    -0.00443 mg/L      0.000189    -0.00443 mg/L      0.000189   4.26%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -67.5     -0.0646 mg/L       0.02049     -0.0646 mg/L       0.02049  31.73%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -546.3     -0.0942 mg/L       0.00771     -0.0942 mg/L       0.00771   8.19%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -76.3     0.00136 mg/L      0.000037     0.00136 mg/L      0.000037   2.70%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              14.6    -0.00318 mg/L      0.001479    -0.00318 mg/L      0.001479  46.56%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.

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Sequence No.: 30                                    Autosampler Location: 79
Sample ID: L1201051902 0.01                         Date Collected: 1/25/2012 7:02:48 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1201051902 0.01
Analyte                  Back Pressure    Flow
All                    145.0 kPa         0.50 L/min

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Approved: January 26, 2012

Mean Data: L1201051902 0.01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3522387.5						69020.54	1.96%
YRADIAL	274396.1						2178.97	0.79%
Ga 417.206	746970.3						26633.51	3.57%
GaRADIAL	43571.6						375.77	0.86%
Ag 328.068†	-344.4	-0.00348	mg/L	0.000618	-0.00348	mg/L	0.000618	17.75%
Al 396.153†	39.3	-0.00715	mg/L	0.009615	-0.00715	mg/L	0.009615	134.51%
As 188.979†	3.4	0.00235	mg/L	0.003755	0.00235	mg/L	0.003755	159.81%
Ba 233.527†	165.9	0.00192	mg/L	0.000194	0.00192	mg/L	0.000194	10.12%
Be 234.861†	159.8	0.00036	mg/L	0.000081	0.00036	mg/L	0.000081	22.71%
B 249.677†	0.4	-0.00003	mg/L	0.000280	-0.00003	mg/L	0.000280	>999.9%
Ca 227.546†	9.1	0.134	mg/L	0.0512	0.134	mg/L	0.0512	38.23%
Cd 228.802†	-8.5	-0.00083	mg/L	0.000269	-0.00083	mg/L	0.000269	32.60%
Co 228.616†	-10.3	-0.00140	mg/L	0.000356	-0.00140	mg/L	0.000356	25.45%
Cr 267.716†	-42.2	-0.00241	mg/L	0.000122	-0.00241	mg/L	0.000122	5.09%
Cu 327.393†	-275.9	-0.00338	mg/L	0.000856	-0.00338	mg/L	0.000856	25.36%
Fe 239.562†	-0.6	0.00006	mg/L	0.014884	0.00006	mg/L	0.014884	>999.9%
Mg 279.077†	16.2	0.0813	mg/L	0.00309	0.0813	mg/L	0.00309	3.80%
Mn 257.610†	-136.5	-0.00340	mg/L	0.000032	-0.00340	mg/L	0.000032	0.95%
Mo 202.031†	-11.1	-0.00472	mg/L	0.000279	-0.00472	mg/L	0.000279	5.92%
Ni 231.604†	8.5	-0.00192	mg/L	0.000234	-0.00192	mg/L	0.000234	12.19%
Pb 220.353†	7.2	0.00004	mg/L	0.001972	0.00004	mg/L	0.001972	>999.9%
Sb 206.836†	1.3	-0.00025	mg/L	0.000449	-0.00025	mg/L	0.000449	179.48%
Se 196.026†	-2.2	-0.00977	mg/L	0.003222	-0.00977	mg/L	0.003222	32.96%
Si 251.611†	290.3	-0.00467	mg/L	0.001963	-0.00467	mg/L	0.001963	42.06%
Sn 189.927†	-3.8	-0.00542	mg/L	0.000905	-0.00542	mg/L	0.000905	16.71%
Ti 334.940†	-205.0	-0.00146	mg/L	0.000271	-0.00146	mg/L	0.000271	18.58%
Tl 190.801†	0.4	-0.00331	mg/L	0.004283	-0.00331	mg/L	0.004283	129.33%
V 290.880†	82.3	-0.00153	mg/L	0.001293	-0.00153	mg/L	0.001293	84.55%
Zn 206.200†	22.2	-0.00248	mg/L	0.000168	-0.00248	mg/L	0.000168	6.78%
K 766.490†	22.7	-0.0190	mg/L	0.02948	-0.0190	mg/L	0.02948	154.87%
Na 589.592†	105145.3	11.8	mg/L	0.20	11.8	mg/L	0.20	1.74%
Sr 407.771†	15778.5	0.0159	mg/L	0.00010	0.0159	mg/L	0.00010	0.65%
Li 670.784†	-70.0	-0.00464	mg/L	0.001218	-0.00464	mg/L	0.001218	26.25%

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Sequence No.: 31 **Autosampler Location: 80**
Sample ID: L1201051904 WG387646-01 **Date Collected: 1/25/2012 7:10:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051904 WG387646-01

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051904 WG387646-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3489490.4						24187.79	0.69%
YRADIAL	268627.8						4402.53	1.64%
Ga 417.206	736005.2						4993.41	0.68%
GaRADIAL	42614.1						129.30	0.30%
Ag 328.068†	-373.7	-0.00371	mg/L	0.000589	-0.00371	mg/L	0.000589	15.87%
Al 396.153†	39.4	-0.00712	mg/L	0.017346	-0.00712	mg/L	0.017346	243.45%
As 188.979†	0.7	-0.00261	mg/L	0.002069	-0.00261	mg/L	0.002069	79.32%
Ba 233.527†	96.2	-0.00029	mg/L	0.000112	-0.00029	mg/L	0.000112	39.12%
Be 234.861†	156.0	0.00035	mg/L	0.000036	0.00035	mg/L	0.000036	10.37%
B 249.677†	2.5	0.00002	mg/L	0.000183	0.00002	mg/L	0.000183	947.69%
Ca 227.546†	3.2	0.0495	mg/L	0.01775	0.0495	mg/L	0.01775	35.89%
Cd 228.802†	-7.3	-0.00072	mg/L	0.000068	-0.00072	mg/L	0.000068	9.47%
Co 228.616†	-13.2	-0.00168	mg/L	0.000689	-0.00168	mg/L	0.000689	40.99%
Cr 267.716†	-37.2	-0.00233	mg/L	0.000123	-0.00233	mg/L	0.000123	5.28%
Cu 327.393†	-338.2	-0.00401	mg/L	0.001555	-0.00401	mg/L	0.001555	38.82%
Fe 239.562†	-1.1	-0.00553	mg/L	0.024792	-0.00553	mg/L	0.024792	447.98%
Mg 279.077†	8.4	0.0545	mg/L	0.00202	0.0545	mg/L	0.00202	3.70%
Mn 257.610†	-107.9	-0.00332	mg/L	0.000011	-0.00332	mg/L	0.000011	0.34%
Mo 202.031†	-5.6	-0.00396	mg/L	0.000658	-0.00396	mg/L	0.000658	16.63%

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Ni 231.604†	10.0	-0.00183	mg/L	0.000158	-0.00183	mg/L	0.000158	8.63%
Pb 220.353†	11.1	0.00140	mg/L	0.001707	0.00140	mg/L	0.001707	122.31%
Sb 206.836†	-0.4	-0.00221	mg/L	0.000688	-0.00221	mg/L	0.000688	31.08%
Se 196.026†	-0.9	-0.00779	mg/L	0.003845	-0.00779	mg/L	0.003845	49.39%
Si 251.611†	459.8	0.00451	mg/L	0.000431	0.00451	mg/L	0.000431	9.55%
Sn 189.927†	-3.4	-0.00526	mg/L	0.001727	-0.00526	mg/L	0.001727	32.84%
Ti 334.940†	-221.1	-0.00149	mg/L	0.000129	-0.00149	mg/L	0.000129	8.63%
Tl 190.801†	-0.5	-0.00422	mg/L	0.002164	-0.00422	mg/L	0.002164	51.30%
V 290.880†	110.4	-0.00121	mg/L	0.002047	-0.00121	mg/L	0.002047	169.33%
Zn 206.200†	23.6	-0.00237	mg/L	0.000028	-0.00237	mg/L	0.000028	1.18%
K 766.490†	9.9	-0.0245	mg/L	0.00109	-0.0245	mg/L	0.00109	4.45%
Na 589.592†	81359.5	9.10	mg/L	0.148	9.10	mg/L	0.148	1.63%
Sr 407.771†	7881.8	0.00867	mg/L	0.000064	0.00867	mg/L	0.000064	0.74%
Li 670.784†	-18.7	-0.00375	mg/L	0.001170	-0.00375	mg/L	0.001170	31.17%

==========

Sequence No.: 32 **Autosampler Location: 81**
Sample ID: L1201051904S WG387646-05 **Date Collected: 1/25/2012 7:16:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051904S WG387646-05

Analyte	Back Pressure	Flow
All	145.0 kPa	0.50 L/min

Mean Data: L1201051904S WG387646-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3527734.4						41717.99	1.18%
YRADIAL	260581.8						2280.53	0.88%
Ga 417.206	744910.7						12764.31	1.71%
GaRADIAL	41264.3						686.80	1.66%
Ag 328.068†	-56.4	-0.00121	mg/L	0.000250	-0.00121	mg/L	0.000250	20.66%
Al 396.153†	161.9	0.0351	mg/L	0.03209	0.0351	mg/L	0.03209	91.30%
As 188.979†	3.3	0.00209	mg/L	0.003639	0.00209	mg/L	0.003639	174.24%
Ba 233.527†	262.2	0.00499	mg/L	0.000133	0.00499	mg/L	0.000133	2.66%
Be 234.861†	223.9	0.00057	mg/L	0.000063	0.00057	mg/L	0.000063	11.20%
B 249.677†	304.0	0.0104	mg/L	0.00028	0.0104	mg/L	0.00028	2.69%
Ca 227.546†	7.9	0.117	mg/L	0.0237	0.117	mg/L	0.0237	20.25%
Cd 228.802†	-4.9	-0.00051	mg/L	0.000185	-0.00051	mg/L	0.000185	36.45%
Co 228.616†	-2.6	-0.00067	mg/L	0.000219	-0.00067	mg/L	0.000219	32.89%
Cr 267.716†	133.0	0.00032	mg/L	0.000128	0.00032	mg/L	0.000128	39.50%
Cu 327.393†	-74.4	-0.00134	mg/L	0.000951	-0.00134	mg/L	0.000951	71.11%
Fe 239.562†	1.1	0.0169	mg/L	0.00603	0.0169	mg/L	0.00603	35.69%
Mg 279.077†	23.7	0.107	mg/L	0.0021	0.107	mg/L	0.0021	1.96%
Mn 257.610†	531.9	-0.00085	mg/L	0.000035	-0.00085	mg/L	0.000035	4.14%
Mo 202.031†	29.5	0.00087	mg/L	0.000359	0.00087	mg/L	0.000359	41.03%
Ni 231.604†	51.6	0.00054	mg/L	0.000327	0.00054	mg/L	0.000327	60.85%
Pb 220.353†	10.3	0.00115	mg/L	0.002186	0.00115	mg/L	0.002186	189.96%
Sb 206.836†	4.0	0.00296	mg/L	0.001775	0.00296	mg/L	0.001775	59.95%
Se 196.026†	-0.4	-0.00690	mg/L	0.007260	-0.00690	mg/L	0.007260	105.20%
Si 251.611†	964.4	0.0318	mg/L	0.00183	0.0318	mg/L	0.00183	5.77%
Sn 189.927†	9.1	-0.00059	mg/L	0.000900	-0.00059	mg/L	0.000900	153.43%
Ti 334.940†	2129.1	0.00333	mg/L	0.000166	0.00333	mg/L	0.000166	4.98%
Tl 190.801†	-1.6	-0.00546	mg/L	0.004042	-0.00546	mg/L	0.004042	73.95%
V 290.880†	506.3	0.00331	mg/L	0.000463	0.00331	mg/L	0.000463	13.96%
Zn 206.200†	93.3	0.00257	mg/L	0.000080	0.00257	mg/L	0.000080	3.10%
K 766.490†	343.2	0.187	mg/L	0.0321	0.187	mg/L	0.0321	17.14%
Na 589.592†	83691.3	9.36	mg/L	0.137	9.36	mg/L	0.137	1.47%
Sr 407.771†	13232.8	0.0136	mg/L	0.00018	0.0136	mg/L	0.00018	1.29%
Li 670.784†	342.6	0.00250	mg/L	0.001108	0.00250	mg/L	0.001108	44.26%

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Sequence No.: 33 **Autosampler Location: 82**
Sample ID: L1201051904SD WG387646-06 **Date Collected: 1/25/2012 7:23:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 26, 2012

Nebulizer Parameters: L1201051904SD WG387646-06

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201051904SD WG387646-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3559389.6						64881.77	1.82%
YRADIAL	268727.0						4373.86	1.63%
Ga 417.206	748778.8						16989.98	2.27%
GaRADIAL	42557.1						1373.56	3.23%
Ag 328.068†	-119.7	-0.00171	mg/L	0.000642	-0.00171	mg/L	0.000642	37.54%
Al 396.153†	155.9	0.0331	mg/L	0.00996	0.0331	mg/L	0.00996	30.11%
As 188.979†	4.3	0.00390	mg/L	0.004572	0.00390	mg/L	0.004572	117.23%
Ba 233.527†	257.9	0.00485	mg/L	0.000027	0.00485	mg/L	0.000027	0.55%
Be 234.861†	228.7	0.00058	mg/L	0.000084	0.00058	mg/L	0.000084	14.38%
B 249.677†	290.6	0.00991	mg/L	0.000500	0.00991	mg/L	0.000500	5.05%
Ca 227.546†	6.5	0.0966	mg/L	0.01525	0.0966	mg/L	0.01525	15.79%
Cd 228.802†	-4.9	-0.00050	mg/L	0.000206	-0.00050	mg/L	0.000206	41.38%
Co 228.616†	-0.4	-0.00044	mg/L	0.000605	-0.00044	mg/L	0.000605	136.24%
Cr 267.716†	134.2	0.00034	mg/L	0.000180	0.00034	mg/L	0.000180	52.44%
Cu 327.393†	-57.9	-0.00117	mg/L	0.000309	-0.00117	mg/L	0.000309	26.36%
Fe 239.562†	0.5	0.0115	mg/L	0.00922	0.0115	mg/L	0.00922	80.29%
Mg 279.077†	21.9	0.101	mg/L	0.0072	0.101	mg/L	0.0072	7.09%
Mn 257.610†	512.5	-0.00093	mg/L	0.000075	-0.00093	mg/L	0.000075	8.08%
Mo 202.031†	28.5	0.00074	mg/L	0.000310	0.00074	mg/L	0.000310	42.09%
Ni 231.604†	46.6	0.00025	mg/L	0.000224	0.00025	mg/L	0.000224	89.17%
Pb 220.353†	14.0	0.00240	mg/L	0.001131	0.00240	mg/L	0.001131	47.07%
Sb 206.836†	3.3	0.00220	mg/L	0.001263	0.00220	mg/L	0.001263	57.34%
Se 196.026†	-1.6	-0.00877	mg/L	0.002338	-0.00877	mg/L	0.002338	26.67%
Si 251.611†	955.1	0.0313	mg/L	0.00193	0.0313	mg/L	0.00193	6.18%
Sn 189.927†	7.8	-0.00105	mg/L	0.000392	-0.00105	mg/L	0.000392	37.41%
Ti 334.940†	2089.4	0.00325	mg/L	0.000299	0.00325	mg/L	0.000299	9.19%
Tl 190.801†	-1.8	-0.00574	mg/L	0.004783	-0.00574	mg/L	0.004783	83.33%
V 290.880†	447.7	0.00264	mg/L	0.001284	0.00264	mg/L	0.001284	48.60%
Zn 206.200†	82.5	0.00180	mg/L	0.000190	0.00180	mg/L	0.000190	10.54%
K 766.490†	396.4	0.221	mg/L	0.0446	0.221	mg/L	0.0446	20.17%
Na 589.592†	81983.3	9.17	mg/L	0.072	9.17	mg/L	0.072	0.78%
Sr 407.771†	13119.8	0.0135	mg/L	0.00014	0.0135	mg/L	0.00014	1.01%
Li 670.784†	339.6	0.00245	mg/L	0.000841	0.00245	mg/L	0.000841	34.29%

Sequence No.: 34
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/25/2012 7:30:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	145.0 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	3413605.3						86976.72	2.55%
YRADIAL	265209.4						3758.61	1.42%
Ga 417.206	736530.1						22452.37	3.05%
GaRADIAL	40244.6						809.25	2.01%
Ag 328.068†	49311.0	0.388	mg/L	0.0085	0.388	mg/L	0.0085	2.19%
QC value within limits for Ag 328.068 Recovery = 97.10%								
Al 396.153†	28724.9	9.90	mg/L	0.049	9.90	mg/L	0.049	0.49%
QC value within limits for Al 396.153 Recovery = 98.99%								
As 188.979†	218.6	0.391	mg/L	0.0100	0.391	mg/L	0.0100	2.56%
QC value within limits for As 188.979 Recovery = 97.80%								
Ba 233.527†	32441.8	1.03	mg/L	0.012	1.03	mg/L	0.012	1.16%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 234.861†	15251.6	0.0495	mg/L	0.00089	0.0495	mg/L	0.00089	1.79%

Approved: January 26, 2012

QC value within limits for Be 234.861 Recovery = 98.91%

B 249.677†	14245.9	0.494 mg/L	0.0079	0.494 mg/L	0.0079	1.59%

QC value within limits for B 249.677 Recovery = 98.70%

Ca 227.546†	674.1	9.75 mg/L	0.266	9.75 mg/L	0.266	2.73%

QC value within limits for Ca 227.546 Recovery = 97.50%

Cd 228.802†	539.4	0.0489 mg/L	0.00132	0.0489 mg/L	0.00132	2.69%

QC value within limits for Cd 228.802 Recovery = 97.70%

Co 228.616†	2058.8	0.197 mg/L	0.0042	0.197 mg/L	0.0042	2.15%

QC value within limits for Co 228.616 Recovery = 98.57%

Cr 267.716†	32042.4	0.498 mg/L	0.0077	0.498 mg/L	0.0077	1.54%

QC value within limits for Cr 267.716 Recovery = 99.59%

Cu 327.393†	47657.4	0.481 mg/L	0.0109	0.481 mg/L	0.0109	2.27%

QC value within limits for Cu 327.393 Recovery = 96.28%

Fe 239.562†	366.4	3.82 mg/L	0.074	3.82 mg/L	0.074	1.93%

QC value within limits for Fe 239.562 Recovery = 95.50%

Mg 279.077†	2784.4	9.64 mg/L	0.116	9.64 mg/L	0.116	1.21%

QC value within limits for Mg 279.077 Recovery = 96.41%

Mn 257.610†	131522.7	0.504 mg/L	0.0075	0.504 mg/L	0.0075	1.49%

QC value within limits for Mn 257.610 Recovery = 100.87%

Mo 202.031†	7247.5	0.993 mg/L	0.0129	0.993 mg/L	0.0129	1.30%

QC value within limits for Mo 202.031 Recovery = 99.34%

Ni 231.604†	8897.6	0.505 mg/L	0.0064	0.505 mg/L	0.0064	1.27%

QC value within limits for Ni 231.604 Recovery = 100.91%

Pb 220.353†	1466.1	0.504 mg/L	0.0103	0.504 mg/L	0.0103	2.05%

QC value within limits for Pb 220.353 Recovery = 100.80%

Sb 206.836†	996.1	1.18 mg/L	0.033	1.18 mg/L	0.033	2.76%

QC value within limits for Sb 206.836 Recovery = 98.64%

Se 196.026†	255.7	0.398 mg/L	0.0107	0.398 mg/L	0.0107	2.68%

QC value within limits for Se 196.026 Recovery = 99.43%

Si 251.611†	91704.0	4.94 mg/L	0.089	4.94 mg/L	0.089	1.80%

QC value within limits for Si 251.611 Recovery = 98.73%

Sn 189.927†	2696.2	1.01 mg/L	0.020	1.01 mg/L	0.020	2.00%

QC value within limits for Sn 189.927 Recovery = 100.63%

Ti 334.940†	487738.9	1.000 mg/L	0.0025	1.000 mg/L	0.0025	0.25%

QC value within limits for Ti 334.940 Recovery = 99.96%

Tl 190.801†	437.3	0.506 mg/L	0.0072	0.506 mg/L	0.0072	1.43%

QC value within limits for Tl 190.801 Recovery = 101.11%

V 290.880†	86972.9	0.991 mg/L	0.0162	0.991 mg/L	0.0162	1.64%

QC value within limits for V 290.880 Recovery = 99.11%

Zn 206.200†	14210.6	1.00 mg/L	0.015	1.00 mg/L	0.015	1.46%

QC value within limits for Zn 206.200 Recovery = 100.31%

K 766.490†	78717.1	50.6 mg/L	0.19	50.6 mg/L	0.19	0.38%

QC value within limits for K 766.490 Recovery = 101.25%

Na 589.592†	464416.8	51.8 mg/L	1.99	51.8 mg/L	1.99	3.84%

QC value within limits for Na 589.592 Recovery = 103.63%

Sr 407.771†	1076470.4	0.989 mg/L	0.0153	0.989 mg/L	0.0153	1.54%

QC value within limits for Sr 407.771 Recovery = 98.93%

Li 670.784†	59570.1	1.03 mg/L	0.004	1.03 mg/L	0.004	0.40%

QC value within limits for Li 670.784 Recovery = 102.80%

All analyte(s) passed QC.

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Sequence No.: 35 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/25/2012 7:37:37 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	145.0 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	3558066.5						7723.91	0.22%
YRADIAL	270513.0						8035.77	2.97%
Ga 417.206	704732.8						6327.91	0.90%
GaRADIAL	41622.5						1203.41	2.89%
Ag 328.068†	-390.5	-0.00385	mg/L	0.000674	-0.00385	mg/L	0.000674	17.54%

Approved: January 26, 2012

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   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              62.7     0.00093 mg/L      0.023919     0.00093 mg/L      0.023919 >999.9%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               3.6     0.00257 mg/L      0.001032     0.00257 mg/L      0.001032  40.12%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -3.2    -0.00344 mg/L      0.000336    -0.00344 mg/L      0.000336   9.77%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              94.6     0.00015 mg/L      0.000067     0.00015 mg/L      0.000067  44.73%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               21.6     0.00065 mg/L      0.000641     0.00065 mg/L      0.000641  99.42%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -2.8     -0.0383 mg/L       0.07827     -0.0383 mg/L       0.07827 204.49%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -4.9    -0.00050 mg/L      0.000188    -0.00050 mg/L      0.000188  37.34%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†             -10.9    -0.00146 mg/L      0.000201    -0.00146 mg/L      0.000201  13.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              22.4    -0.00140 mg/L      0.000163    -0.00140 mg/L      0.000163  11.62%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -310.7    -0.00373 mg/L      0.000758    -0.00373 mg/L      0.000758  20.32%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              -1.3    -0.00764 mg/L      0.021773    -0.00764 mg/L      0.021773 285.08%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               0.3      0.0266 mg/L       0.00793      0.0266 mg/L       0.00793  29.77%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             -52.4    -0.00320 mg/L      0.000046    -0.00320 mg/L      0.000046   1.43%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -8.4    -0.00435 mg/L      0.000103    -0.00435 mg/L      0.000103   2.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               7.4    -0.00198 mg/L      0.000387    -0.00198 mg/L      0.000387  19.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              11.6     0.00154 mg/L      0.001069     0.00154 mg/L      0.001069  69.56%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               0.3    -0.00140 mg/L      0.003851    -0.00140 mg/L      0.003851 275.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.0    -0.00641 mg/L      0.005611    -0.00641 mg/L      0.005611  87.48%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             141.4     -0.0127 mg/L       0.01784     -0.0127 mg/L       0.01784 140.03%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               2.0    -0.00323 mg/L      0.000971    -0.00323 mg/L      0.000971  30.05%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -84.8    -0.00121 mg/L      0.000046    -0.00121 mg/L      0.000046   3.79%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.6    -0.00547 mg/L      0.002672    -0.00547 mg/L      0.002672  48.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -56.5    -0.00312 mg/L      0.000606    -0.00312 mg/L      0.000606  19.43%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               0.5    -0.00401 mg/L      0.000152    -0.00401 mg/L      0.000152   3.79%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                7.4     -0.0169 mg/L       0.02942     -0.0169 mg/L       0.02942 174.10%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -429.6     -0.0810 mg/L       0.02090     -0.0810 mg/L       0.02090  25.79%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -34.0     0.00140 mg/L      0.000081     0.00140 mg/L      0.000081   5.80%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             114.8    -0.00144 mg/L      0.001027    -0.00144 mg/L      0.001027  71.24%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.
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Approved: January 26, 2012

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

Results Data Set (original): 012612H2
Results Library (original): C:\pe\peicp2\Results\Results.mdb
Results Data Set (reprocessed): 012612H2R
Results Library (reprocessed): C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 1**
Sample ID: S0 **Date Collected: 1/26/2012 9:54:08 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:43 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S0

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3548822.2	13590.97	0.38%		
YRADIAL	273913.8	9996.55	3.65%		
Ga 417.206	730708.8	3610.12	0.49%		
GaRADIAL	42766.4	1838.86	4.30%		
Ag 328.068†	-895.9	66.34	7.41%	[0.00]	mg/L
Al 396.153†	-29.5	11.17	37.93%	[0.00]	mg/L
As 188.979†	-1.7	1.99	118.57%	[0.00]	mg/L
Ba 233.527†	11.8	4.80	40.61%	[0.00]	mg/L
Be 234.861†	-527.0	7.40	1.40%	[0.00]	mg/L
B 249.677†	208.9	7.38	3.53%	[0.00]	mg/L
Ca 227.546†	-10.2	1.18	11.51%	[0.00]	mg/L
Cd 228.802†	20.4	0.93	4.57%	[0.00]	mg/L
Co 228.616†	-23.8	0.68	2.87%	[0.00]	mg/L
Cr 267.716†	105.2	7.48	7.11%	[0.00]	mg/L
Cu 327.393†	-1340.0	51.70	3.86%	[0.00]	mg/L
Fe 239.562†	1.3	1.48	115.40%	[0.00]	mg/L
Mg 279.077†	7.2	3.80	52.51%	[0.00]	mg/L
Mn 257.610†	202.0	2.09	1.04%	[0.00]	mg/L
Mo 202.031†	-21.1	4.03	19.08%	[0.00]	mg/L
Ni 231.604†	17.7	3.37	19.03%	[0.00]	mg/L
Pb 220.353†	17.7	1.33	7.53%	[0.00]	mg/L
Sb 206.836†	13.2	2.16	16.29%	[0.00]	mg/L
Se 196.026†	2.2	1.17	53.25%	[0.00]	mg/L
Si 251.611†	303.9	6.99	2.30%	[0.00]	mg/L
Sn 189.927†	11.5	0.76	6.57%	[0.00]	mg/L
Ti 334.940†	357.4	187.86	52.56%	[0.00]	mg/L
Tl 190.801†	-22.8	4.32	18.89%	[0.00]	mg/L
V 290.880†	4688.4	117.06	2.50%	[0.00]	mg/L
Zn 206.200†	3.9	3.20	81.09%	[0.00]	mg/L
K 766.490†	31.6	33.89	107.26%	[0.00]	mg/L
Na 589.592†	620.4	56.22	9.06%	[0.00]	mg/L
Sr 407.771†	-570.6	66.44	11.64%	[0.00]	mg/L
Li 670.784†	-195.0	160.62	82.37%	[0.00]	mg/L

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S1 **Date Collected: 1/26/2012 10:00:58 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:45 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S1

Analyte	Back Pressure	Flow

Approved: January 27, 2012

All 148.0 kPa 0.50 L/min

Mean Data: S1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	3566473.3	33225.36	0.93%		
YRADIAL	276443.2	5478.00	1.98%		
Ga 417.206	725957.6	8764.91	1.21%		
GaRADIAL	43118.1	1393.47	3.23%		
Ag 328.068†	393.5	32.41	8.24%	[0.0040]	mg/L
Al 396.153†	306.4	51.19	16.71%	[0.10]	mg/L
Ba 233.527†	298.8	7.46	2.50%	[0.010]	mg/L
Be 234.861†	149.8	11.42	7.62%	[0.0005]	mg/L
Cd 228.802†	6.4	0.77	11.96%	[0.00050]	mg/L
Co 228.616†	20.6	1.01	4.91%	[0.0020]	mg/L
Cr 267.716†	317.7	7.00	2.20%	[0.0050]	mg/L
Cu 327.393†	478.3	45.61	9.54%	[0.0050]	mg/L
Fe 239.562†	3.8	0.12	3.12%	[0.040]	mg/L
Mg 279.077†	25.5	2.27	8.90%	[0.10]	mg/L
Mn 257.610†	1304.1	24.62	1.89%	[0.0050]	mg/L
Mo 202.031†	66.6	3.30	4.95%	[0.010]	mg/L
Ni 231.604†	81.6	6.19	7.58%	[0.0050]	mg/L
Pb 220.353†	17.4	1.60	9.14%	[0.0050]	mg/L
Sb 206.836†	10.6	2.56	24.16%	[0.012]	mg/L
Si 251.611†	983.3	26.70	2.72%	[0.050]	mg/L
Sn 189.927†	27.0	4.00	14.80%	[0.010]	mg/L
Ti 334.940†	4665.1	183.61	3.94%	[0.010]	mg/L
V 290.880†	799.4	103.23	12.91%	[0.010]	mg/L
Zn 206.200†	134.7	3.45	2.57%	[0.010]	mg/L
K 766.490†	733.6	19.23	2.62%	[0.50]	mg/L
Na 589.592†	5070.8	380.34	7.50%	[0.50]	mg/L
Sr 407.771†	10989.7	151.03	1.37%	[0.010]	mg/L
Li 670.784†	602.0	49.94	8.30%	[0.010]	mg/L

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Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S2 **Date Collected: 1/26/2012 10:07:48 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:46 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S2

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: S2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	3545482.2	12162.98	0.34%		
YRADIAL	272487.4	3807.57	1.40%		
Ga 417.206	735271.0	4759.52	0.65%		
GaRADIAL	42438.0	1036.51	2.44%		
Ag 328.068†	1029.5	129.24	12.55%	[0.0080]	mg/L
Al 396.153†	639.7	87.28	13.64%	[0.20]	mg/L
As 188.979†	7.3	4.27	58.46%	[0.0080]	mg/L
Ba 233.527†	611.3	5.30	0.87%	[0.020]	mg/L
Be 234.861†	306.4	10.61	3.46%	[0.0010]	mg/L
B 249.677†	285.2	12.17	4.27%	[0.010]	mg/L
Ca 227.546†	17.6	8.06	45.72%	[0.20]	mg/L
Cd 228.802†	14.3	1.05	7.35%	[0.0010]	mg/L
Co 228.616†	43.5	2.62	6.02%	[0.0040]	mg/L
Cr 267.716†	652.1	4.07	0.62%	[0.010]	mg/L
Cu 327.393†	922.9	78.95	8.55%	[0.010]	mg/L
Fe 239.562†	8.4	2.50	29.82%	[0.080]	mg/L
Mg 279.077†	54.2	4.07	7.52%	[0.20]	mg/L
Mn 257.610†	2561.0	32.27	1.26%	[0.010]	mg/L
Mo 202.031†	137.3	3.93	2.86%	[0.020]	mg/L
Ni 231.604†	173.7	2.20	1.27%	[0.010]	mg/L

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Pb 220.353†	31.6	3.58	11.33%	[0.010]	mg/L
Sb 206.836†	21.4	1.57	7.33%	[0.024]	mg/L
Se 196.026†	9.1	7.39	80.89%	[0.0080]	mg/L
Si 251.611†	1932.0	100.83	5.22%	[0.10]	mg/L
Sn 189.927†	50.5	0.38	0.74%	[0.020]	mg/L
Ti 334.940†	9432.9	137.86	1.46%	[0.020]	mg/L
Tl 190.801†	8.9	4.38	49.41%	[0.010]	mg/L
V 290.880†	1709.9	61.24	3.58%	[0.020]	mg/L
Zn 206.200†	269.8	0.29	0.11%	[0.020]	mg/L
K 766.490†	1596.1	39.63	2.48%	[1.00]	mg/L
Na 589.592†	10263.3	168.24	1.64%	[1.00]	mg/L
Sr 407.771†	22534.2	163.08	0.72%	[0.020]	mg/L
Li 670.784†	1306.4	56.23	4.30%	[0.020]	mg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S3 **Date Collected: 1/26/2012 10:14:37 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:47 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S3

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: S3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3515849.2	92027.87	2.62%		
YRADIAL	269546.4	4124.39	1.53%		
Ga 417.206	778311.1	20489.33	2.63%		
GaRADIAL	43109.9	522.14	1.21%		
Ag 328.068†	48719.8	825.39	1.69%	[0.40]	mg/L
Al 396.153†	29745.2	128.18	0.43%	[10.00]	mg/L
As 188.979†	210.5	5.10	2.42%	[0.40]	mg/L
Ba 233.527†	30255.2	613.42	2.03%	[1.00]	mg/L
Be 234.861†	14925.0	182.21	1.22%	[0.05]	mg/L
B 249.677†	13915.6	241.32	1.73%	[0.50]	mg/L
Ca 227.546†	662.0	11.80	1.78%	[10.00]	mg/L
Cd 228.802†	530.3	13.65	2.57%	[0.05]	mg/L
Co 228.616†	1962.2	49.55	2.53%	[0.20]	mg/L
Cr 267.716†	30817.1	580.77	1.88%	[0.50]	mg/L
Cu 327.393†	47801.0	747.13	1.56%	[0.50]	mg/L
Fe 239.562†	376.5	2.31	0.61%	[4.00]	mg/L
Mg 279.077†	2803.9	47.38	1.69%	[10.00]	mg/L
Mn 257.610†	127147.1	2463.90	1.94%	[0.50]	mg/L
Mo 202.031†	6934.5	127.04	1.83%	[1.00]	mg/L
Ni 231.604†	8400.0	199.58	2.38%	[0.50]	mg/L
Pb 220.353†	1388.3	33.78	2.43%	[0.50]	mg/L
Sb 206.836†	969.3	22.72	2.34%	[1.20]	mg/L
Se 196.026†	251.1	9.65	3.84%	[0.40]	mg/L
Si 251.611†	89342.3	1527.41	1.71%	[5.00]	mg/L
Sn 189.927†	2540.5	53.30	2.10%	[1.00]	mg/L
Ti 334.940†	471549.0	1167.24	0.25%	[1.00]	mg/L
Tl 190.801†	422.6	12.41	2.94%	[0.50]	mg/L
V 290.880†	83640.5	1462.72	1.75%	[1.00]	mg/L
Zn 206.200†	13342.2	361.19	2.71%	[1.00]	mg/L
K 766.490†	78814.2	237.39	0.30%	[50.00]	mg/L
Na 589.592†	448629.5	2185.32	0.49%	[50.00]	mg/L
Sr 407.771†	1102364.5	10784.65	0.98%	[1.00]	mg/L
Li 670.784†	60748.2	135.54	0.22%	[1.00]	mg/L

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Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S4 **Date Collected: 1/26/2012 10:21:31 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:48 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 27, 2012

Nebulizer Parameters: S4

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: S4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	3452616.5	45516.54	1.32%		
YRADIAL	267764.2	1999.06	0.75%		
Ga 417.206	765141.0	15745.03	2.06%		
GaRADIAL	42661.5	700.91	1.64%		
Ag 328.068†	98459.1	2436.96	2.48%	[0.80]	mg/L
Al 396.153†	59664.0	42.73	0.07%	[20.00]	mg/L
As 188.979†	418.5	12.31	2.94%	[0.80]	mg/L
Ba 233.527†	60484.9	1172.63	1.94%	[2.00]	mg/L
Be 234.861†	29953.5	745.27	2.49%	[0.10]	mg/L
B 249.677†	28343.2	819.03	2.89%	[1.00]	mg/L
Ca 227.546†	1344.6	28.47	2.12%	[20.00]	mg/L
Cd 228.802†	1064.8	24.03	2.26%	[0.10]	mg/L
Co 228.616†	3917.5	57.88	1.48%	[0.40]	mg/L
Cr 267.716†	61300.2	1160.13	1.89%	[1.00]	mg/L
Cu 327.393†	96554.3	2729.92	2.83%	[1.00]	mg/L
Fe 239.562†	760.1	8.47	1.11%	[8.00]	mg/L
Mg 279.077†	5694.9	64.72	1.14%	[20.00]	mg/L
Mn 257.610†	247611.0	639.22	0.26%	[1.00]	mg/L
Mo 202.031†	13869.6	253.32	1.83%	[2.00]	mg/L
Ni 231.604†	16718.2	273.91	1.64%	[1.00]	mg/L
Pb 220.353†	2774.9	32.23	1.16%	[1.00]	mg/L
Sb 206.836†	1945.0	41.17	2.12%	[2.40]	mg/L
Se 196.026†	507.7	11.46	2.26%	[0.80]	mg/L
Si 251.611†	175563.4	1330.95	0.76%	[10.00]	mg/L
Sn 189.927†	5067.1	75.46	1.49%	[2.00]	mg/L
Ti 334.940†	933665.0	3315.85	0.36%	[2.00]	mg/L
Tl 190.801†	829.5	15.36	1.85%	[1.00]	mg/L
V 290.880†	166470.4	581.39	0.35%	[2.00]	mg/L
Zn 206.200†	26692.5	479.12	1.79%	[2.00]	mg/L
K 766.490†	158740.5	565.51	0.36%	[100.00]	mg/L
Na 589.592†	885282.5	28803.57	3.25%	[100.00]	mg/L
Sr 407.771†	2233315.8	67780.34	3.03%	[2.00]	mg/L
Li 670.784†	119821.6	795.84	0.66%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin, Calc Int	-80.5	122900	0.00000	0.999987	
Al 396.153	4	Lin, Calc Int	5.2	2981	0.00000	0.999999	
As 188.979	3	Wt. Lin	3.2	518.8	0.00000	1.000000	
Ba 233.527	4	Lin, Calc Int	2.5	30240	0.00000	1.000000	
Be 234.861	4	Lin, Calc Int	-4.3	299400	0.00000	0.999998	
B 249.677	3	Lin, Calc Int	-45.8	28300	0.00000	0.999956	
Ca 227.546	3	Lin, Calc Int	0.0	67.02	0.00000	0.999958	
Cd 228.802	4	Lin, Calc Int	1.2	10620	0.00000	0.999992	
Co 228.616	4	Lin, Calc Int	2.1	9791	0.00000	0.999999	
Cr 267.716	4	Lin, Calc Int	36.5	61320	0.00000	0.999997	
Cu 327.393	4	Lin, Calc Int	-74.0	96450	0.00000	0.999989	
Fe 239.562	4	Lin, Calc Int	-0.2	94.87	0.00000	0.999988	
Mg 279.077	4	Lin, Calc Int	-7.2	284.3	0.00000	0.999973	
Mn 257.610	4	Lin, Calc Int	463.4	248400	0.00000	0.999915	
Mo 202.031	4	Lin, Calc Int	-1.3	6936	0.00000	1.000000	
Ni 231.604	4	Lin, Calc Int	6.5	16730	0.00000	0.999997	
Pb 220.353	4	Lin, Calc Int	2.4	2772	0.00000	0.999999	
Sb 206.836	4	Lin, Calc Int	0.5	809.6	0.00000	0.999998	
Se 196.026	3	Wt. Lin	4.1	623.5	0.00000	0.999953	
Si 251.611	4	Lin, Calc Int	282.6	17580	0.00000	0.999965	
Sn 189.927	4	Lin, Calc Int	1.3	2534	0.00000	0.999999	
Ti 334.940	4	Lin, Calc Int	616.4	467400	0.00000	0.999988	
Tl 190.801	3	Lin, Calc Int	1.7	830.6	0.00000	0.999953	
V 290.880	4	Lin, Calc Int	54.3	83280	0.00000	0.999997	

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Zn 206.200	4	Lin, Calc Int	0.8	13340	0.00000	1.000000
K 766.490	4	Non Lin, Calc Int	-6.4	1565	0.22087	1.000000
Na 589.592	4	Non Lin, Calc Int	568.1	9076	-2.29242	1.000000
Sr 407.771	4	Lin, Calc Int	-1773.0	1115000	0.00000	0.999980
Li 670.784	4	Lin, Calc Int	139.0	59990	0.00000	0.999978

Sequence No.: 6 **Autosampler Location: 11**
Sample ID: ICV 2nd Vendor **Date Collected: 1/26/2012 10:28:28 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:50 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	147.0 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	3442257.6						37350.23	1.09%
YRADIAL	267271.1						5274.77	1.97%
Ga 417.206	762794.0						8325.57	1.09%
GaRADIAL	42738.8						1466.00	3.43%
Ag 328.068†	48143.6	0.393	mg/L	0.0012	0.393	mg/L	0.0012	0.30%
QC value within limits for Ag 328.068 Recovery = 98.34%								
Al 396.153†	30239.0	10.1	mg/L	0.03	10.1	mg/L	0.03	0.26%
QC value within limits for Al 396.153 Recovery = 101.28%								
As 188.979†	211.0	0.396	mg/L	0.0096	0.396	mg/L	0.0096	2.43%
QC value within limits for As 188.979 Recovery = 99.12%								
Ba 233.527†	30692.1	1.02	mg/L	0.004	1.02	mg/L	0.004	0.38%
QC value within limits for Ba 233.527 Recovery = 101.74%								
Be 234.861†	14678.2	0.0498	mg/L	0.00003	0.0498	mg/L	0.00003	0.06%
QC value within limits for Be 234.861 Recovery = 99.60%								
B 249.677†	14007.6	0.503	mg/L	0.0032	0.503	mg/L	0.0032	0.63%
QC value within limits for B 249.677 Recovery = 100.62%								
Ca 227.546†	675.1	10.00	mg/L	0.192	10.00	mg/L	0.192	1.92%
QC value within limits for Ca 227.546 Recovery = 99.99%								
Cd 228.802†	535.1	0.0511	mg/L	0.00084	0.0511	mg/L	0.00084	1.64%
QC value within limits for Cd 228.802 Recovery = 102.29%								
Co 228.616†	2001.0	0.202	mg/L	0.0028	0.202	mg/L	0.0028	1.39%
QC value within limits for Co 228.616 Recovery = 100.83%								
Cr 267.716†	30754.2	0.501	mg/L	0.0017	0.501	mg/L	0.0017	0.34%
QC value within limits for Cr 267.716 Recovery = 100.23%								
Cu 327.393†	48354.4	0.504	mg/L	0.0006	0.504	mg/L	0.0006	0.12%
QC value within limits for Cu 327.393 Recovery = 100.76%								
Fe 239.562†	382.7	4.04	mg/L	0.023	4.04	mg/L	0.023	0.57%
QC value within limits for Fe 239.562 Recovery = 100.88%								
Mg 279.077†	2841.1	10.0	mg/L	0.16	10.0	mg/L	0.16	1.59%
QC value within limits for Mg 279.077 Recovery = 100.21%								
Mn 257.610†	128072.1	0.518	mg/L	0.0026	0.518	mg/L	0.0026	0.50%
QC value within limits for Mn 257.610 Recovery = 103.52%								
Mo 202.031†	6779.4	0.978	mg/L	0.0033	0.978	mg/L	0.0033	0.34%
QC value within limits for Mo 202.031 Recovery = 97.82%								
Ni 231.604†	8430.3	0.503	mg/L	0.0047	0.503	mg/L	0.0047	0.93%
QC value within limits for Ni 231.604 Recovery = 100.70%								
Pb 220.353†	1422.1	0.517	mg/L	0.0043	0.517	mg/L	0.0043	0.83%
QC value within limits for Pb 220.353 Recovery = 103.44%								
Sb 206.836†	998.3	1.24	mg/L	0.020	1.24	mg/L	0.020	1.58%
QC value within limits for Sb 206.836 Recovery = 103.09%								
Se 196.026†	256.4	0.408	mg/L	0.0036	0.408	mg/L	0.0036	0.88%
QC value within limits for Se 196.026 Recovery = 101.99%								
Si 251.611†	89505.9	5.06	mg/L	0.025	5.06	mg/L	0.025	0.49%
QC value within limits for Si 251.611 Recovery = 101.19%								
Sn 189.927†	2667.0	1.05	mg/L	0.016	1.05	mg/L	0.016	1.51%
QC value greater than the upper limit for Sn 189.927 Recovery = 105.19%								
Ti 334.940†	473498.2	1.01	mg/L	0.007	1.01	mg/L	0.007	0.70%
QC value within limits for Ti 334.940 Recovery = 101.17%								
Tl 190.801†	430.6	0.525	mg/L	0.0046	0.525	mg/L	0.0046	0.88%

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```
   QC value within limits for Tl 190.801  Recovery = 104.97%
V 290.880†            83210.1       0.998 mg/L        0.0052       0.998 mg/L        0.0052   0.52%
   QC value within limits for V 290.880  Recovery = 99.83%
Zn 206.200†           13472.0        1.01 mg/L         0.002        1.01 mg/L         0.002   0.17%
   QC value within limits for Zn 206.200  Recovery = 101.17%
K 766.490†            79735.8        50.5 mg/L          0.15        50.5 mg/L          0.15   0.30%
   QC value within limits for K 766.490  Recovery = 101.06%
Na 589.592†          444529.6        49.5 mg/L          0.37        49.5 mg/L          0.37   0.75%
   QC value within limits for Na 589.592  Recovery = 99.07%
Sr 407.771†         1117936.5        1.00 mg/L         0.013        1.00 mg/L         0.013   1.25%
   QC value within limits for Sr 407.771  Recovery = 100.34%
Li 670.784†           61735.2        1.03 mg/L         0.008        1.03 mg/L         0.008   0.74%
   QC value within limits for Li 670.784  Recovery = 102.67%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 7                                    Autosampler Location: 1
Sample ID: ICB                                     Date Collected: 1/26/2012 10:35:20 AM
Analyst:                                           Data Type: Reprocessed on 1/26/2012 11:29:51 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: ICB
Analyte                  Back Pressure    Flow
All                      147.0 kPa        0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: ICB
                    Mean Corrected        Calib.                          Sample
Analyte                Intensity     Conc. Units     Std.Dev.     Conc. Units     Std.Dev.   RSD
Y 371.029            3458834.7                                                   45978.52   1.33%
YRADIAL               268744.3                                                    6549.61   2.44%
Ga 417.206            708652.4                                                    6763.45   0.95%
GaRADIAL               42188.1                                                     564.79   1.34%
Ag 328.068†             -174.2    -0.00076 mg/L      0.001287    -0.00076 mg/L      0.001287 169.32%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               5.8     0.00021 mg/L      0.012531     0.00021 mg/L      0.012531 >999.9%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               3.5     0.00076 mg/L      0.006744     0.00076 mg/L      0.006744 887.73%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               2.6     0.00001 mg/L      0.000086     0.00001 mg/L      0.000086 >999.9%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†             -10.8    -0.00002 mg/L      0.000040    -0.00002 mg/L      0.000040 172.97%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               93.3     0.00492 mg/L      0.000303     0.00492 mg/L      0.000303   6.15%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               3.6      0.0526 mg/L       0.12293      0.0526 mg/L       0.12293 233.76%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               1.2     0.00000 mg/L      0.000240     0.00000 mg/L      0.000240 >999.9%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               2.1     0.00001 mg/L      0.000211     0.00001 mg/L      0.000211 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               6.0    -0.00050 mg/L      0.000202    -0.00050 mg/L      0.000202  40.67%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -56.3     0.00018 mg/L      0.000761     0.00018 mg/L      0.000761 414.29%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              -0.0     0.00186 mg/L      0.014433     0.00186 mg/L      0.014433 775.46%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              -3.8      0.0119 mg/L       0.01260      0.0119 mg/L       0.01260 105.97%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              35.0    -0.00173 mg/L      0.000045    -0.00173 mg/L      0.000045   2.58%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -3.7    -0.00034 mg/L      0.000029    -0.00034 mg/L      0.000029   8.56%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               4.0    -0.00015 mg/L      0.000548    -0.00015 mg/L      0.000548 371.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               8.1     0.00206 mg/L      0.001514     0.00206 mg/L      0.001514  73.56%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               2.2     0.00205 mg/L      0.002191     0.00205 mg/L      0.002191 106.69%
   QC value within limits for Sb 206.836  Recovery = Not calculated
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Se 196.026†	5.8	0.00260 mg/L	0.000830	0.00260 mg/L	0.000830	31.90%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	54.1	-0.0130 mg/L	0.00189	-0.0130 mg/L	0.00189	14.59%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	6.2	0.00192 mg/L	0.000499	0.00192 mg/L	0.000499	25.94%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	72.6	-0.00116 mg/L	0.000138	-0.00116 mg/L	0.000138	11.91%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.8	-0.00301 mg/L	0.002697	-0.00301 mg/L	0.002697	89.72%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	194.7	0.00169 mg/L	0.001498	0.00169 mg/L	0.001498	88.81%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	2.4	0.00012 mg/L	0.000083	0.00012 mg/L	0.000083	69.50%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	-23.5	-0.0109 mg/L	0.03669	-0.0109 mg/L	0.03669	335.52%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	310.0	-0.0284 mg/L	0.02647	-0.0284 mg/L	0.02647	93.06%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	18.7	0.00161 mg/L	0.000027	0.00161 mg/L	0.000027	1.65%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	13.9	-0.00208 mg/L	0.001726	-0.00208 mg/L	0.001726	82.79%
QC value within limits for Li 670.784 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 8 **Autosampler Location: 14**
Sample ID: LLICV **Date Collected: 1/26/2012 10:42:09 AM**
Analyst: KHR **Data Type: Reprocessed on 1/26/2012 11:29:53 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LLICV

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: LLICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3556038.1						83444.38	2.35%
YRADIAL	269135.7						3202.28	1.19%
Ga 417.206	729768.7						20919.76	2.87%
GaRADIAL	42239.5						196.89	0.47%
Ag 328.068†	83.4	0.00135	mg/L	0.000213	0.00135	mg/L	0.000213	15.84%
Al 396.153†	-19.3	-0.00821	mg/L	0.021763	-0.00821	mg/L	0.021763	265.14%
As 188.979†	2.5	-0.00118	mg/L	0.008964	-0.00118	mg/L	0.008964	760.17%
Ba 233.527†	329.5	0.0108	mg/L	0.00028	0.0108	mg/L	0.00028	2.61%
Be 234.861†	601.1	0.00202	mg/L	0.000019	0.00202	mg/L	0.000019	0.94%
B 249.677†	31.6	0.00235	mg/L	0.000463	0.00235	mg/L	0.000463	19.73%
Ca 227.546†	4.7	0.0999	mg/L	0.04047	0.0999	mg/L	0.04047	40.49%
Cd 228.802†	120.6	0.0112	mg/L	0.00045	0.0112	mg/L	0.00045	4.02%
Co 228.616†	202.7	0.0205	mg/L	0.00027	0.0205	mg/L	0.00027	1.32%
Cr 267.716†	1296.9	0.0206	mg/L	0.00107	0.0206	mg/L	0.00107	5.22%
Cu 327.393†	2003.5	0.0215	mg/L	0.00116	0.0215	mg/L	0.00116	5.41%
Fe 239.562†	0.4	0.00590	mg/L	0.004744	0.00590	mg/L	0.004744	80.38%
Mg 279.077†	-3.6	0.0126	mg/L	0.01241	0.0126	mg/L	0.01241	98.65%
Mn 257.610†	2729.0	0.00914	mg/L	0.000295	0.00914	mg/L	0.000295	3.23%
Mo 202.031†	-2.0	-0.00009	mg/L	0.000586	-0.00009	mg/L	0.000586	646.37%
Ni 231.604†	694.9	0.0412	mg/L	0.00102	0.0412	mg/L	0.00102	2.48%
Pb 220.353†	2.9	0.00017	mg/L	0.000373	0.00017	mg/L	0.000373	223.48%
Sb 206.836†	4.8	0.00518	mg/L	0.002240	0.00518	mg/L	0.002240	43.24%
Se 196.026†	3.1	-0.00170	mg/L	0.003265	-0.00170	mg/L	0.003265	191.68%
Si 251.611†	0.6	-0.0160	mg/L	0.00120	-0.0160	mg/L	0.00120	7.50%
Sn 189.927†	1.7	0.00014	mg/L	0.000311	0.00014	mg/L	0.000311	214.58%
Ti 334.940†	5.2	-0.00131	mg/L	0.000110	-0.00131	mg/L	0.000110	8.41%
Tl 190.801†	0.1	-0.00196	mg/L	0.002490	-0.00196	mg/L	0.002490	126.84%
V 290.880†	950.3	0.0108	mg/L	0.00149	0.0108	mg/L	0.00149	13.84%
Zn 206.200†	302.6	0.0227	mg/L	0.00052	0.0227	mg/L	0.00052	2.29%
K 766.490†	-0.6	0.00378	mg/L	0.036557	0.00378	mg/L	0.036557	966.63%
Na 589.592†	-46.8	-0.0678	mg/L	0.01706	-0.0678	mg/L	0.01706	25.19%

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Sr 407.771†	45.8	0.00163	mg/L	0.000043	0.00163	mg/L	0.000043	2.65%
Li 670.784†	36.1	-0.00172	mg/L	0.000630	-0.00172	mg/L	0.000630	36.72%

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Sequence No.: 9 **Autosampler Location: 15**
Sample ID: LLICV **Date Collected: 1/26/2012 10:48:59 AM**
Analyst: KHR **Data Type: Reprocessed on 1/26/2012 11:29:54 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LLICV

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: LLICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3519118.5						76582.50	2.18%
YRADIAL	266705.6						2853.85	1.07%
Ga 417.206	719518.9						18597.71	2.58%
GaRADIAL	41803.4						606.03	1.45%
Ag 328.068†	1020.5	0.00898	mg/L	0.001105	0.00898	mg/L	0.001105	12.31%
Al 396.153†	630.6	0.210	mg/L	0.0094	0.210	mg/L	0.0094	4.48%
As 188.979†	8.3	0.00980	mg/L	0.007182	0.00980	mg/L	0.007182	73.30%
Ba 233.527†	624.3	0.0206	mg/L	0.00046	0.0206	mg/L	0.00046	2.23%
Be 234.861†	326.4	0.00112	mg/L	0.000013	0.00112	mg/L	0.000013	1.19%
B 249.677†	328.0	0.0133	mg/L	0.00075	0.0133	mg/L	0.00075	5.63%
Ca 227.546†	14.7	0.217	mg/L	0.0557	0.217	mg/L	0.0557	25.60%
Cd 228.802†	12.7	0.00110	mg/L	0.000237	0.00110	mg/L	0.000237	21.48%
Co 228.616†	45.8	0.00442	mg/L	0.000548	0.00442	mg/L	0.000548	12.41%
Cr 267.716†	656.5	0.0101	mg/L	0.00016	0.0101	mg/L	0.00016	1.55%
Cu 327.393†	944.7	0.0106	mg/L	0.00084	0.0106	mg/L	0.00084	7.89%
Fe 239.562†	7.3	0.0786	mg/L	0.01117	0.0786	mg/L	0.01117	14.21%
Mg 279.077†	57.2	0.227	mg/L	0.0011	0.227	mg/L	0.0011	0.49%
Mn 257.610†	2679.8	0.00900	mg/L	0.000341	0.00900	mg/L	0.000341	3.79%
Mo 202.031†	139.4	0.0203	mg/L	0.00038	0.0203	mg/L	0.00038	1.89%
Ni 231.604†	181.1	0.0104	mg/L	0.00049	0.0104	mg/L	0.00049	4.74%
Pb 220.353†	32.5	0.0110	mg/L	0.00113	0.0110	mg/L	0.00113	10.32%
Sb 206.836†	25.0	0.0303	mg/L	0.00130	0.0303	mg/L	0.00130	4.27%
Se 196.026†	11.0	0.0110	mg/L	0.00289	0.0110	mg/L	0.00289	26.26%
Si 251.611†	1974.4	0.0959	mg/L	0.00312	0.0959	mg/L	0.00312	3.25%
Sn 189.927†	55.5	0.0214	mg/L	0.00067	0.0214	mg/L	0.00067	3.15%
Ti 334.940†	9650.3	0.0193	mg/L	0.00022	0.0193	mg/L	0.00022	1.14%
Tl 190.801†	9.2	0.00915	mg/L	0.002022	0.00915	mg/L	0.002022	22.09%
V 290.880†	1873.4	0.0218	mg/L	0.00319	0.0218	mg/L	0.00319	14.62%
Zn 206.200†	298.9	0.0224	mg/L	0.00080	0.0224	mg/L	0.00080	3.58%
K 766.490†	1659.6	1.06	mg/L	0.012	1.06	mg/L	0.012	1.11%
Na 589.592†	10372.0	1.08	mg/L	0.012	1.08	mg/L	0.012	1.12%
Sr 407.771†	22726.0	0.0220	mg/L	0.00021	0.0220	mg/L	0.00021	0.95%
Li 670.784†	1285.3	0.0191	mg/L	0.00210	0.0191	mg/L	0.00210	10.97%

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Sequence No.: 10 **Autosampler Location: 12**
Sample ID: ICSA **Date Collected: 1/26/2012 10:55:48 AM**
Analyst: **Data Type: Reprocessed on 1/26/2012 11:29:55 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	147.0 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	3323242.4						18701.13	0.56%

Approved: January 27, 2012

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YRADIAL              274584.7                                                    3924.28   1.43%
Ga 417.206           753856.4                                                   10076.00   1.34%
GaRADIAL              42615.1                                                    1287.43   3.02%
Ag 328.068†             312.6    -0.00022 mg/L      0.000429    -0.00022 mg/L      0.000429 198.69%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†          757471.1         254 mg/L          11.4         254 mg/L          11.4   4.49%
   QC value within limits for Al 396.153  Recovery = 101.63%
As 188.979†              22.2     0.00094 mg/L      0.004116     0.00094 mg/L      0.004116 438.89%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              76.1    -0.00104 mg/L      0.000340    -0.00104 mg/L      0.000340  32.76%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†            5815.4     0.00053 mg/L      0.001266     0.00053 mg/L      0.001266 238.05%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†            -6310.1     -0.0720 mg/L       0.04003     -0.0720 mg/L       0.04003  55.60%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†           17753.5         255 mg/L           0.6         255 mg/L           0.6   0.23%
   QC value within limits for Ca 227.546  Recovery = 102.20%
Cd 228.802†              -2.6    -0.00006 mg/L      0.000288    -0.00006 mg/L      0.000288 472.77%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              13.7    -0.00125 mg/L      0.000214    -0.00125 mg/L      0.000214  17.14%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             320.2     0.00162 mg/L      0.000659     0.00162 mg/L      0.000659  40.72%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -642.0     0.00052 mg/L      0.001422     0.00052 mg/L      0.001422 271.26%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†            8835.1        93.1 mg/L          4.21        93.1 mg/L          4.21   4.52%
   QC value within limits for Fe 239.562  Recovery = 93.12%
Mg 279.077†           67732.9         238 mg/L          10.2         238 mg/L          10.2   4.30%
   QC value within limits for Mg 279.077  Recovery = 95.28%
Mn 257.610†              11.1     0.00011 mg/L      0.000168     0.00011 mg/L      0.000168 153.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -11.6     0.00312 mg/L      0.002124     0.00312 mg/L      0.002124  68.04%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†             -45.2    -0.00316 mg/L      0.001135    -0.00316 mg/L      0.001135  35.87%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†             -50.9     0.00001 mg/L      0.002700     0.00001 mg/L      0.002700 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              23.0      0.0278 mg/L       0.00227      0.0278 mg/L       0.00227   8.16%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†             -48.1    -0.00009 mg/L      0.004786    -0.00009 mg/L      0.004786 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             545.8      0.0150 mg/L       0.00148      0.0150 mg/L       0.00148   9.87%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -60.0     -0.0242 mg/L       0.00427     -0.0242 mg/L       0.00427  17.62%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -1250.0    -0.00135 mg/L      0.000387    -0.00135 mg/L      0.000387  28.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             101.0      0.0135 mg/L       0.00575      0.0135 mg/L       0.00575  42.59%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -874.0     0.00183 mg/L      0.002132     0.00183 mg/L      0.002132 116.69%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              21.1    -0.00030 mg/L      0.000557    -0.00030 mg/L      0.000557 186.52%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -110.7     -0.0666 mg/L       0.03298     -0.0666 mg/L       0.03298  49.53%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              80.5     -0.0537 mg/L       0.00927     -0.0537 mg/L       0.00927  17.25%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            29837.8     0.00712 mg/L      0.000419     0.00712 mg/L      0.000419   5.88%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             176.3     0.00062 mg/L      0.000690     0.00062 mg/L      0.000690 110.96%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==============================================================================================
Sequence No.: 11                                    Autosampler Location: 13
Sample ID: ICSAB                                    Date Collected: 1/26/2012 11:01:41 AM
Analyst:                                            Data Type: Reprocessed on 1/26/2012 11:29:56 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Approved: January 27, 2012

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3286651.5						50301.34	1.53%
YRADIAL	268709.7						5968.06	2.22%
Ga 417.206	739037.9						18414.62	2.49%
GaRADIAL	42163.6						638.16	1.51%
Ag 328.068†	63506.7	0.514	mg/L	0.0157	0.514	mg/L	0.0157	3.05%
QC value within limits for Ag 328.068 Recovery = 102.83%								
Al 396.153†	750098.4	252	mg/L	7.7	252	mg/L	7.7	3.05%
QC value within limits for Al 396.153 Recovery = 100.64%								
As 188.979†	145.4	0.240	mg/L	0.0088	0.240	mg/L	0.0088	3.66%
QC value within limits for As 188.979 Recovery = 96.13%								
Ba 233.527†	7493.4	0.245	mg/L	0.0061	0.245	mg/L	0.0061	2.50%
QC value within limits for Ba 233.527 Recovery = 97.91%								
Be 234.861†	82045.5	0.255	mg/L	0.0041	0.255	mg/L	0.0041	1.59%
QC value within limits for Be 234.861 Recovery = 102.05%								
B 249.677†	-6466.2	-0.0858	mg/L	0.02553	-0.0858	mg/L	0.02553	29.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	18110.7	261	mg/L	5.2	261	mg/L	5.2	2.00%
QC value within limits for Ca 227.546 Recovery = 104.45%								
Cd 228.802†	4961.4	0.468	mg/L	0.0091	0.468	mg/L	0.0091	1.94%
QC value within limits for Cd 228.802 Recovery = 93.56%								
Co 228.616†	2300.0	0.232	mg/L	0.0037	0.232	mg/L	0.0037	1.60%
QC value within limits for Co 228.616 Recovery = 92.87%								
Cr 267.716†	15455.3	0.248	mg/L	0.0040	0.248	mg/L	0.0040	1.62%
QC value within limits for Cr 267.716 Recovery = 99.38%								
Cu 327.393†	23584.2	0.252	mg/L	0.0091	0.252	mg/L	0.0091	3.60%
QC value within limits for Cu 327.393 Recovery = 100.65%								
Fe 239.562†	8874.0	93.5	mg/L	3.06	93.5	mg/L	3.06	3.27%
QC value within limits for Fe 239.562 Recovery = 93.53%								
Mg 279.077†	68270.8	240	mg/L	7.2	240	mg/L	7.2	3.02%
QC value within limits for Mg 279.077 Recovery = 96.04%								
Mn 257.610†	62569.3	0.253	mg/L	0.0056	0.253	mg/L	0.0056	2.22%
QC value within limits for Mn 257.610 Recovery = 101.24%								
Mo 202.031†	-9.4	0.00352	mg/L	0.001531	0.00352	mg/L	0.001531	43.46%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	7858.9	0.469	mg/L	0.0078	0.469	mg/L	0.0078	1.66%
QC value within limits for Ni 231.604 Recovery = 93.85%								
Pb 220.353†	1306.2	0.489	mg/L	0.0087	0.489	mg/L	0.0087	1.79%
QC value within limits for Pb 220.353 Recovery = 97.88%								
Sb 206.836†	424.4	0.522	mg/L	0.0139	0.522	mg/L	0.0139	2.66%
QC value within limits for Sb 206.836 Recovery = 104.43%								
Se 196.026†	96.7	0.235	mg/L	0.0066	0.235	mg/L	0.0066	2.82%
QC value within limits for Se 196.026 Recovery = 93.81%								
Si 251.611†	161.7	-0.00686	mg/L	0.001122	-0.00686	mg/L	0.001122	16.37%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-58.5	-0.0236	mg/L	0.00698	-0.0236	mg/L	0.00698	29.56%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-1228.9	-0.00132	mg/L	0.000258	-0.00132	mg/L	0.000258	19.53%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	508.2	0.502	mg/L	0.0116	0.502	mg/L	0.0116	2.31%
QC value within limits for Tl 190.801 Recovery = 100.33%								
V 290.880†	20288.0	0.256	mg/L	0.0040	0.256	mg/L	0.0040	1.57%
QC value within limits for V 290.880 Recovery = 102.40%								
Zn 206.200†	6381.0	0.478	mg/L	0.0070	0.478	mg/L	0.0070	1.46%
QC value within limits for Zn 206.200 Recovery = 95.51%								
K 766.490†	7997.0	5.10	mg/L	0.062	5.10	mg/L	0.062	1.21%
QC value within limits for K 766.490 Recovery = 102.08%								
Na 589.592†	45104.1	4.91	mg/L	0.012	4.91	mg/L	0.012	0.25%
QC value within limits for Na 589.592 Recovery = 98.26%								
Sr 407.771†	30104.2	0.00727	mg/L	0.000154	0.00727	mg/L	0.000154	2.12%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	191.2	0.00087	mg/L	0.002249	0.00087	mg/L	0.002249	258.45%
QC value within limits for Li 670.784 Recovery = Not calculated								

All analyte(s) passed QC.

Approved: January 27, 2012

Sequence No.: 12
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : peicp2
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/26/2012 11:07:34 AM
Data Type: Reprocessed on 1/26/2012 11:29:57 AM
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	148.0 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	3534995.5						41842.13	1.18%
YRADIAL	274216.0						2786.86	1.02%
Ga 417.206	786213.4						12525.74	1.59%
GaRADIAL	43128.4						863.23	2.00%
Ag 328.068†	48537.0	0.397	mg/L	0.0062	0.397	mg/L	0.0062	1.56%
QC value within limits for Ag 328.068 Recovery = 99.15%								
Al 396.153†	30001.3	10.0	mg/L	0.07	10.0	mg/L	0.07	0.73%
QC value within limits for Al 396.153 Recovery = 100.48%								
As 188.979†	207.5	0.390	mg/L	0.0108	0.390	mg/L	0.0108	2.78%
QC value within limits for As 188.979 Recovery = 97.42%								
Ba 233.527†	30589.9	1.01	mg/L	0.022	1.01	mg/L	0.022	2.21%
QC value within limits for Ba 233.527 Recovery = 101.41%								
Be 234.861†	14950.5	0.0508	mg/L	0.00074	0.0508	mg/L	0.00074	1.45%
QC value within limits for Be 234.861 Recovery = 101.52%								
B 249.677†	13926.7	0.500	mg/L	0.0085	0.500	mg/L	0.0085	1.69%
QC value within limits for B 249.677 Recovery = 100.05%								
Ca 227.546†	663.2	9.83	mg/L	0.200	9.83	mg/L	0.200	2.03%
QC value within limits for Ca 227.546 Recovery = 98.26%								
Cd 228.802†	526.0	0.0503	mg/L	0.00065	0.0503	mg/L	0.00065	1.30%
QC value within limits for Cd 228.802 Recovery = 100.55%								
Co 228.616†	1980.2	0.200	mg/L	0.0023	0.200	mg/L	0.0023	1.16%
QC value within limits for Co 228.616 Recovery = 99.77%								
Cr 267.716†	30746.4	0.501	mg/L	0.0074	0.501	mg/L	0.0074	1.49%
QC value within limits for Cr 267.716 Recovery = 100.21%								
Cu 327.393†	47704.9	0.497	mg/L	0.0074	0.497	mg/L	0.0074	1.48%
QC value within limits for Cu 327.393 Recovery = 99.41%								
Fe 239.562†	378.9	3.99	mg/L	0.054	3.99	mg/L	0.054	1.35%
QC value within limits for Fe 239.562 Recovery = 99.86%								
Mg 279.077†	2813.8	9.93	mg/L	0.119	9.93	mg/L	0.119	1.20%
QC value within limits for Mg 279.077 Recovery = 99.25%								
Mn 257.610†	127361.3	0.515	mg/L	0.0062	0.515	mg/L	0.0062	1.21%
QC value within limits for Mn 257.610 Recovery = 102.95%								
Mo 202.031†	6983.3	1.01	mg/L	0.019	1.01	mg/L	0.019	1.86%
QC value within limits for Mo 202.031 Recovery = 100.76%								
Ni 231.604†	8429.7	0.503	mg/L	0.0066	0.503	mg/L	0.0066	1.32%
QC value within limits for Ni 231.604 Recovery = 100.69%								
Pb 220.353†	1404.3	0.511	mg/L	0.0062	0.511	mg/L	0.0062	1.21%
QC value within limits for Pb 220.353 Recovery = 102.19%								
Sb 206.836†	967.3	1.20	mg/L	0.020	1.20	mg/L	0.020	1.69%
QC value within limits for Sb 206.836 Recovery = 99.91%								
Se 196.026†	253.8	0.404	mg/L	0.0165	0.404	mg/L	0.0165	4.09%
QC value within limits for Se 196.026 Recovery = 100.93%								
Si 251.611†	89593.5	5.06	mg/L	0.072	5.06	mg/L	0.072	1.42%
QC value within limits for Si 251.611 Recovery = 101.28%								
Sn 189.927†	2564.2	1.01	mg/L	0.016	1.01	mg/L	0.016	1.60%
QC value within limits for Sn 189.927 Recovery = 101.13%								
Ti 334.940†	473950.3	1.01	mg/L	0.005	1.01	mg/L	0.005	0.49%
QC value within limits for Ti 334.940 Recovery = 101.26%								
Tl 190.801†	423.9	0.517	mg/L	0.0071	0.517	mg/L	0.0071	1.37%
QC value within limits for Tl 190.801 Recovery = 103.35%								
V 290.880†	84049.2	1.01	mg/L	0.017	1.01	mg/L	0.017	1.69%
QC value within limits for V 290.880 Recovery = 100.84%								
Zn 206.200†	13448.7	1.01	mg/L	0.012	1.01	mg/L	0.012	1.15%
QC value within limits for Zn 206.200 Recovery = 101.00%								
K 766.490†	79921.8	50.6	mg/L	0.23	50.6	mg/L	0.23	0.45%

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   QC value within limits for K 766.490  Recovery = 101.30%
Na 589.592†          446259.1        49.7 mg/L          0.82        49.7 mg/L          0.82   1.66%
   QC value within limits for Na 589.592  Recovery = 99.46%
Sr 407.771†         1111769.3       0.998 mg/L        0.0148       0.998 mg/L        0.0148   1.48%
   QC value within limits for Sr 407.771  Recovery = 99.79%
Li 670.784†           61186.9        1.02 mg/L         0.003        1.02 mg/L         0.003   0.26%
   QC value within limits for Li 670.784  Recovery = 101.76%
All analyte(s) passed QC.

==========================================================================================================
Sequence No.: 13                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 11:14:30 AM
Analyst:                                            Data Type: Reprocessed on 1/26/2012 11:29:58 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     148.0 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            3514903.3                                                   76676.95   2.18%
YRADIAL               275387.1                                                    5221.45   1.90%
Ga 417.206            722576.1                                                   21774.22   3.01%
GaRADIAL               43173.8                                                     868.24   2.01%
Ag 328.068†             -191.2    -0.00090 mg/L      0.000708    -0.00090 mg/L      0.000708  78.70%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               -6.1    -0.00380 mg/L      0.000482    -0.00380 mg/L      0.000482  12.68%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                6.1     0.00567 mg/L      0.001621     0.00567 mg/L      0.001621  28.60%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -5.8    -0.00027 mg/L      0.000080    -0.00027 mg/L      0.000080  29.68%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†                6.0     0.00003 mg/L      0.000068     0.00003 mg/L      0.000068 224.08%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                71.2     0.00423 mg/L      0.000975     0.00423 mg/L      0.000975  23.08%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                4.9      0.0703 mg/L       0.06495      0.0703 mg/L       0.06495  92.33%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -2.1    -0.00030 mg/L      0.000089    -0.00030 mg/L      0.000089  29.80%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                1.9    -0.00001 mg/L      0.000231    -0.00001 mg/L      0.000231 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -0.1    -0.00060 mg/L      0.000042    -0.00060 mg/L      0.000042   6.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -65.4     0.00009 mg/L      0.000713     0.00009 mg/L      0.000713 790.50%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                1.4      0.0172 mg/L       0.01046      0.0172 mg/L       0.01046  60.64%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               -0.2      0.0248 mg/L       0.01379      0.0248 mg/L       0.01379  55.59%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               39.5    -0.00171 mg/L      0.000039    -0.00171 mg/L      0.000039   2.26%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -3.9    -0.00037 mg/L      0.000614    -0.00037 mg/L      0.000614 164.84%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                2.4    -0.00024 mg/L      0.000238    -0.00024 mg/L      0.000238  97.62%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                1.5    -0.00032 mg/L      0.001897    -0.00032 mg/L      0.001897 590.64%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                0.3    -0.00017 mg/L      0.001120    -0.00017 mg/L      0.001120 651.60%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                3.1    -0.00166 mg/L      0.001306    -0.00166 mg/L      0.001306  78.72%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -6.3     -0.0164 mg/L       0.00046     -0.0164 mg/L       0.00046   2.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.4     0.00122 mg/L      0.001390     0.00122 mg/L      0.001390 113.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
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Ti 334.940†	-79.7	-0.00149	mg/L	0.000212	-0.00149	mg/L	0.000212	14.26%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	1.0	-0.00087	mg/L	0.004004	-0.00087	mg/L	0.004004	460.34%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	158.8	0.00126	mg/L	0.000625	0.00126	mg/L	0.000625	49.77%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	4.4	0.00027	mg/L	0.000161	0.00027	mg/L	0.000161	60.28%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	6.7	0.00841	mg/L	0.036979	0.00841	mg/L	0.036979	439.86%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	69.5	-0.0549	mg/L	0.00552	-0.0549	mg/L	0.00552	10.05%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	19.3	0.00160	mg/L	0.000036	0.00160	mg/L	0.000036	2.24%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	45.0	-0.00157	mg/L	0.001000	-0.00157	mg/L	0.001000	63.82%
QC value within limits for Li 670.784 Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 14 **Autosampler Location: 16**
Sample ID: PBW 74 WG387653-02 **Date Collected: 1/26/2012 11:21:18 AM**
Analyst: KHR **Data Type: Reprocessed on 1/26/2012 11:29:59 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 74 WG387653-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: PBW 74 WG387653-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3552821.8						34645.49	0.98%
YRADIAL	277268.6						2623.19	0.95%
Ga 417.206	756440.4						3472.91	0.46%
GaRADIAL	44060.6						395.15	0.90%
Ag 328.068†	-132.3	-0.00042	mg/L	0.000323	-0.00042	mg/L	0.000323	77.09%
Al 396.153†	34.8	0.00995	mg/L	0.010467	0.00995	mg/L	0.010467	105.23%
As 188.979†	2.6	-0.00114	mg/L	0.000814	-0.00114	mg/L	0.000814	71.27%
Ba 233.527†	7.5	0.00017	mg/L	0.000034	0.00017	mg/L	0.000034	20.24%
Be 234.861†	40.0	0.00015	mg/L	0.000021	0.00015	mg/L	0.000021	13.82%
B 249.677†	4.7	0.00170	mg/L	0.000125	0.00170	mg/L	0.000125	7.35%
Ca 227.546†	3.7	0.0554	mg/L	0.08717	0.0554	mg/L	0.08717	157.32%
Cd 228.802†	-1.7	-0.00027	mg/L	0.000199	-0.00027	mg/L	0.000199	72.82%
Co 228.616†	1.0	-0.00011	mg/L	0.000230	-0.00011	mg/L	0.000230	206.17%
Cr 267.716†	1.8	-0.00056	mg/L	0.000329	-0.00056	mg/L	0.000329	58.37%
Cu 327.393†	-32.5	0.00043	mg/L	0.000167	0.00043	mg/L	0.000167	38.97%
Fe 239.562†	-1.7	-0.0158	mg/L	0.00646	-0.0158	mg/L	0.00646	40.84%
Mg 279.077†	-3.1	0.0145	mg/L	0.00311	0.0145	mg/L	0.00311	21.38%
Mn 257.610†	33.1	-0.00174	mg/L	0.000016	-0.00174	mg/L	0.000016	0.91%
Mo 202.031†	-3.8	-0.00036	mg/L	0.000278	-0.00036	mg/L	0.000278	76.47%
Ni 231.604†	-1.5	-0.00048	mg/L	0.000270	-0.00048	mg/L	0.000270	56.60%
Pb 220.353†	9.6	0.00260	mg/L	0.001258	0.00260	mg/L	0.001258	48.32%
Sb 206.836†	1.6	0.00138	mg/L	0.003355	0.00138	mg/L	0.003355	243.79%
Se 196.026†	4.2	0.00006	mg/L	0.006422	0.00006	mg/L	0.006422	>999.9%
Si 251.611†	120.4	-0.00922	mg/L	0.000487	-0.00922	mg/L	0.000487	5.28%
Sn 189.927†	-0.1	-0.00058	mg/L	0.001254	-0.00058	mg/L	0.001254	215.94%
Ti 334.940†	6.1	-0.00131	mg/L	0.000204	-0.00131	mg/L	0.000204	15.60%
Tl 190.801†	2.0	0.00032	mg/L	0.002510	0.00032	mg/L	0.002510	778.77%
V 290.880†	123.8	0.00084	mg/L	0.001192	0.00084	mg/L	0.001192	142.33%
Zn 206.200†	36.9	0.00270	mg/L	0.000264	0.00270	mg/L	0.000264	9.78%
K 766.490†	-38.6	-0.0205	mg/L	0.01854	-0.0205	mg/L	0.01854	90.54%
Na 589.592†	-241.6	-0.0892	mg/L	0.00612	-0.0892	mg/L	0.00612	6.86%
Sr 407.771†	-2.2	0.00159	mg/L	0.000042	0.00159	mg/L	0.000042	2.62%
Li 670.784†	13.0	-0.00210	mg/L	0.001526	-0.00210	mg/L	0.001526	72.70%

Approved: January 27, 2012

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Analysis Begun

Start Time: 1/26/2012 11:30:58 AM **Plasma On Time: 1/26/2012 7:39:48 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\THURSDAY1.sif
Batch ID:
Results Data Set: 012612H2R
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 16**
Sample ID: PBW 74 WG387653-02 **Date Collected: 1/26/2012 11:30:59 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 74 WG387653-02

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: PBW 74 WG387653-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	4496926.6						1527445.57	33.97%
YRADIAL	278022.8						1007.10	0.36%
Ga 417.206	986133.2						382190.28	38.76%
GaRADIAL	44102.4						581.95	1.32%
Ag 328.068†	-239.1	-0.00131	mg/L	0.000732	-0.00131	mg/L	0.000732	55.93%
Al 396.153†	15.8	0.00358	mg/L	0.007952	0.00358	mg/L	0.007952	222.29%
As 188.979†	0.5	-0.00510	mg/L	0.001223	-0.00510	mg/L	0.001223	23.97%
Ba 233.527†	-0.3	-0.00012	mg/L	0.000314	-0.00012	mg/L	0.000314	266.24%
Be 234.861†	88.5	0.00031	mg/L	0.000313	0.00031	mg/L	0.000313	101.46%
B 249.677†	-34.7	0.00043	mg/L	0.001623	0.00043	mg/L	0.001623	380.79%
Ca 227.546†	4.9	0.0730	mg/L	0.02405	0.0730	mg/L	0.02405	32.93%
Cd 228.802†	-3.1	-0.00042	mg/L	0.000540	-0.00042	mg/L	0.000540	128.57%
Co 228.616†	4.3	0.00023	mg/L	0.000305	0.00023	mg/L	0.000305	134.12%
Cr 267.716†	-19.8	-0.00092	mg/L	0.000709	-0.00092	mg/L	0.000709	76.75%
Cu 327.393†	189.5	0.00272	mg/L	0.004791	0.00272	mg/L	0.004791	175.90%
Fe 239.562†	0.4	0.00620	mg/L	0.019033	0.00620	mg/L	0.019033	306.83%
Mg 279.077†	-1.4	0.0206	mg/L	0.00480	0.0206	mg/L	0.00480	23.31%
Mn 257.610†	-17.0	-0.00194	mg/L	0.000246	-0.00194	mg/L	0.000246	12.70%
Mo 202.031†	-1.6	-0.00005	mg/L	0.000391	-0.00005	mg/L	0.000391	851.37%
Ni 231.604†	2.9	-0.00022	mg/L	0.000597	-0.00022	mg/L	0.000597	277.76%
Pb 220.353†	0.5	-0.00070	mg/L	0.002598	-0.00070	mg/L	0.002598	373.13%
Sb 206.836†	-1.6	-0.00259	mg/L	0.004465	-0.00259	mg/L	0.004465	172.44%
Se 196.026†	4.0	-0.00018	mg/L	0.005489	-0.00018	mg/L	0.005489	>999.9%
Si 251.611†	39.3	-0.0138	mg/L	0.00626	-0.0138	mg/L	0.00626	45.25%
Sn 189.927†	0.2	-0.00043	mg/L	0.001471	-0.00043	mg/L	0.001471	338.87%
Ti 334.940†	-23.4	-0.00137	mg/L	0.000041	-0.00137	mg/L	0.000041	2.99%
Tl 190.801†	4.6	0.00338	mg/L	0.008323	0.00338	mg/L	0.008323	246.04%
V 290.880†	-834.5	-0.0107	mg/L	0.01768	-0.0107	mg/L	0.01768	165.73%
Zn 206.200†	22.2	0.00160	mg/L	0.001658	0.00160	mg/L	0.001658	103.80%
K 766.490†	5.8	0.00791	mg/L	0.009004	0.00791	mg/L	0.009004	113.89%
Na 589.592†	-356.4	-0.102	mg/L	0.0073	-0.102	mg/L	0.0073	7.17%
Sr 407.771†	20.4	0.00161	mg/L	0.000009	0.00161	mg/L	0.000009	0.54%
Li 670.784†	64.0	-0.00125	mg/L	0.000966	-0.00125	mg/L	0.000966	77.38%

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Sequence No.: 2 **Autosampler Location: 17**
Sample ID: LCSW 74 WG387653-03 **Date Collected: 1/26/2012 11:37:49 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 74 WG387653-03

Approved: January 27, 2012

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: LCSW 74 WG387653-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3511697.4						23677.12	0.67%
YRADIAL	276064.5						6574.63	2.38%
Ga 417.206	793015.9						5642.34	0.71%
GaRADIAL	43624.2						472.27	1.08%
Ag 328.068†	24429.6	0.200	mg/L	0.0015	0.200	mg/L	0.0015	0.76%
Al 396.153†	14696.8	4.92	mg/L	0.093	4.92	mg/L	0.093	1.89%
As 188.979†	104.9	0.194	mg/L	0.0020	0.194	mg/L	0.0020	1.03%
Ba 233.527†	15520.9	0.514	mg/L	0.0061	0.514	mg/L	0.0061	1.18%
Be 234.861†	7344.5	0.0250	mg/L	0.00025	0.0250	mg/L	0.00025	1.02%
B 249.677†	28478.7	1.01	mg/L	0.010	1.01	mg/L	0.010	0.96%
Ca 227.546†	328.6	4.88	mg/L	0.067	4.88	mg/L	0.067	1.37%
Cd 228.802†	254.8	0.0243	mg/L	0.00056	0.0243	mg/L	0.00056	2.29%
Co 228.616†	986.4	0.0993	mg/L	0.00034	0.0993	mg/L	0.00034	0.35%
Cr 267.716†	15615.6	0.254	mg/L	0.0015	0.254	mg/L	0.0015	0.59%
Cu 327.393†	23961.3	0.250	mg/L	0.0017	0.250	mg/L	0.0017	0.69%
Fe 239.562†	184.7	1.95	mg/L	0.049	1.95	mg/L	0.049	2.53%
Mg 279.077†	1396.6	4.94	mg/L	0.140	4.94	mg/L	0.140	2.83%
Mn 257.610†	63605.5	0.256	mg/L	0.0015	0.256	mg/L	0.0015	0.57%
Mo 202.031†	3489.7	0.504	mg/L	0.0056	0.504	mg/L	0.0056	1.12%
Ni 231.604†	4320.4	0.258	mg/L	0.0023	0.258	mg/L	0.0023	0.90%
Pb 220.353†	699.3	0.254	mg/L	0.0029	0.254	mg/L	0.0029	1.13%
Sb 206.836†	475.3	0.589	mg/L	0.0046	0.589	mg/L	0.0046	0.78%
Se 196.026†	129.9	0.203	mg/L	0.0074	0.203	mg/L	0.0074	3.65%
Si 251.611†	46339.9	2.61	mg/L	0.015	2.61	mg/L	0.015	0.56%
Sn 189.927†	1749.9	0.690	mg/L	0.0045	0.690	mg/L	0.0045	0.65%
Ti 334.940†	233706.0	0.499	mg/L	0.0026	0.499	mg/L	0.0026	0.51%
Tl 190.801†	216.8	0.263	mg/L	0.0038	0.263	mg/L	0.0038	1.44%
V 290.880†	42610.7	0.511	mg/L	0.0037	0.511	mg/L	0.0037	0.72%
Zn 206.200†	6804.2	0.511	mg/L	0.0056	0.511	mg/L	0.0056	1.09%
K 766.490†	39847.6	25.3	mg/L	0.28	25.3	mg/L	0.28	1.12%
Na 589.592†	229340.6	25.4	mg/L	0.26	25.4	mg/L	0.26	1.01%
Sr 407.771†	556654.6	0.500	mg/L	0.0039	0.500	mg/L	0.0039	0.78%
Li 670.784†	31095.5	0.516	mg/L	0.0150	0.516	mg/L	0.0150	2.90%

User canceled analysis.

Approved: January 27, 2012

Kim H. Rhoden

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Analysis Begun

Start Time: 1/26/2012 11:43:28 AM **Plasma On Time: 1/26/2012 7:39:48 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\THURSDAY1.sif
Batch ID:
Results Data Set: 012612H2R
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 18**
Sample ID: L1201053906 WG387653-01 **Date Collected: 1/26/2012 11:43:29 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053906 WG387653-01

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053906 WG387653-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3494408.8						28962.24	0.83%
YRADIAL	278072.6						3583.99	1.29%
Ga 417.206	821879.2						7179.76	0.87%
GaRADIAL	44478.4						1078.00	2.42%
Ag 328.068†	166.5	0.00182	mg/L	0.000591	0.00182	mg/L	0.000591	32.41%
Al 396.153†	-121.5	-0.0425	mg/L	0.00910	-0.0425	mg/L	0.00910	21.41%
As 188.979†	13.5	0.0177	mg/L	0.00415	0.0177	mg/L	0.00415	23.43%
Ba 233.527†	8260.9	0.273	mg/L	0.0084	0.273	mg/L	0.0084	3.07%
Be 234.861†	94.7	0.00040	mg/L	0.000013	0.00040	mg/L	0.000013	3.23%
B 249.677†	7728.6	0.275	mg/L	0.0070	0.275	mg/L	0.0070	2.55%
Ca 227.546†	7715.5	115	mg/L	1.6	115	mg/L	1.6	1.35%
Cd 228.802†	-6.0	-0.00064	mg/L	0.000096	-0.00064	mg/L	0.000096	15.17%
Co 228.616†	0.8	-0.00022	mg/L	0.000190	-0.00022	mg/L	0.000190	85.72%
Cr 267.716†	49.2	-0.00010	mg/L	0.000096	-0.00010	mg/L	0.000096	93.48%
Cu 327.393†	1715.0	0.0186	mg/L	0.00054	0.0186	mg/L	0.00054	2.90%
Fe 239.562†	9.8	0.105	mg/L	0.0074	0.105	mg/L	0.0074	7.01%
Mg 279.077†	3041.5	10.7	mg/L	0.21	10.7	mg/L	0.21	1.93%
Mn 257.610†	177172.8	0.712	mg/L	0.0020	0.712	mg/L	0.0020	0.28%
Mo 202.031†	-2.3	0.00001	mg/L	0.000231	0.00001	mg/L	0.000231	>999.9%
Ni 231.604†	29.5	0.00132	mg/L	0.000036	0.00132	mg/L	0.000036	2.75%
Pb 220.353†	3.4	0.00578	mg/L	0.001463	0.00578	mg/L	0.001463	25.31%
Sb 206.836†	10.6	0.0124	mg/L	0.00305	0.0124	mg/L	0.00305	24.51%
Se 196.026†	-14.4	0.00456	mg/L	0.007213	0.00456	mg/L	0.007213	158.01%
Si 251.611†	188376.9	10.7	mg/L	0.02	10.7	mg/L	0.02	0.17%
Sn 189.927†	0.3	-0.00040	mg/L	0.000752	-0.00040	mg/L	0.000752	189.49%
Ti 334.940†	-573.5	-0.00139	mg/L	0.000121	-0.00139	mg/L	0.000121	8.67%
Tl 190.801†	83.9	0.0540	mg/L	0.00203	0.0540	mg/L	0.00203	3.77%
V 290.880†	168.0	0.00225	mg/L	0.001766	0.00225	mg/L	0.001766	78.36%
Zn 206.200†	771.8	0.0578	mg/L	0.00113	0.0578	mg/L	0.00113	1.95%
K 766.490†	2602.2	1.62	mg/L	0.055	1.62	mg/L	0.055	3.42%
Na 589.592†	430196.7	47.9	mg/L	0.51	47.9	mg/L	0.51	1.06%
Sr 407.771†	507181.5	0.456	mg/L	0.0023	0.456	mg/L	0.0023	0.50%
Li 670.784†	1111.1	0.0162	mg/L	0.00241	0.0162	mg/L	0.00241	14.84%

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Sequence No.: 2 **Autosampler Location: 19**
Sample ID: L1201053906S WG387653-04 **Date Collected: 1/26/2012 11:50:24 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053906S WG387653-04

Approved: January 27, 2012

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201053906S WG387653-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3353086.8						65583.13	1.96%
YRADIAL	271310.1						4175.95	1.54%
Ga 417.206	780217.6						13697.93	1.76%
GaRADIAL	42405.4						509.37	1.20%
Ag 328.068†	24064.4	0.197	mg/L	0.0079	0.197	mg/L	0.0079	4.03%
Al 396.153†	14977.0	5.02	mg/L	0.028	5.02	mg/L	0.028	0.55%
As 188.979†	116.3	0.214	mg/L	0.0152	0.214	mg/L	0.0152	7.13%
Ba 233.527†	23624.3	0.782	mg/L	0.0281	0.782	mg/L	0.0281	3.59%
Be 234.861†	7381.7	0.0252	mg/L	0.00104	0.0252	mg/L	0.00104	4.14%
B 249.677†	36333.6	1.29	mg/L	0.056	1.29	mg/L	0.056	4.35%
Ca 227.546†	8151.9	122	mg/L	4.8	122	mg/L	4.8	3.98%
Cd 228.802†	249.7	0.0239	mg/L	0.00048	0.0239	mg/L	0.00048	2.03%
Co 228.616†	971.8	0.0977	mg/L	0.00150	0.0977	mg/L	0.00150	1.54%
Cr 267.716†	15503.3	0.252	mg/L	0.0096	0.252	mg/L	0.0096	3.81%
Cu 327.393†	24864.7	0.259	mg/L	0.0102	0.259	mg/L	0.0102	3.92%
Fe 239.562†	195.4	2.06	mg/L	0.031	2.06	mg/L	0.031	1.48%
Mg 279.077†	4309.7	15.2	mg/L	0.22	15.2	mg/L	0.22	1.46%
Mn 257.610†	238872.5	0.963	mg/L	0.0013	0.963	mg/L	0.0013	0.13%
Mo 202.031†	3578.9	0.517	mg/L	0.0103	0.517	mg/L	0.0103	2.00%
Ni 231.604†	4184.9	0.250	mg/L	0.0046	0.250	mg/L	0.0046	1.83%
Pb 220.353†	690.1	0.256	mg/L	0.0061	0.256	mg/L	0.0061	2.37%
Sb 206.836†	485.7	0.602	mg/L	0.0123	0.602	mg/L	0.0123	2.04%
Se 196.026†	113.7	0.212	mg/L	0.0042	0.212	mg/L	0.0042	2.00%
Si 251.611†	236814.2	13.4	mg/L	0.08	13.4	mg/L	0.08	0.61%
Sn 189.927†	1380.0	0.544	mg/L	0.0094	0.544	mg/L	0.0094	1.74%
Ti 334.940†	236237.0	0.505	mg/L	0.0015	0.505	mg/L	0.0015	0.29%
Tl 190.801†	288.8	0.304	mg/L	0.0073	0.304	mg/L	0.0073	2.41%
V 290.880†	42821.5	0.514	mg/L	0.0212	0.514	mg/L	0.0212	4.12%
Zn 206.200†	7293.7	0.548	mg/L	0.0198	0.548	mg/L	0.0198	3.62%
K 766.490†	43008.7	27.3	mg/L	0.15	27.3	mg/L	0.15	0.56%
Na 589.592†	678044.5	76.1	mg/L	2.46	76.1	mg/L	2.46	3.24%
Sr 407.771†	1064275.1	0.956	mg/L	0.0087	0.956	mg/L	0.0087	0.91%
Li 670.784†	32610.3	0.541	mg/L	0.0045	0.541	mg/L	0.0045	0.82%

Sequence No.: 3
Sample ID: L1201053906SD WG387653-05
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 1/26/2012 11:57:20 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201053906SD WG387653-05

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201053906SD WG387653-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3394992.9						24286.69	0.72%
YRADIAL	274313.5						3565.24	1.30%
Ga 417.206	794212.7						3158.27	0.40%
GaRADIAL	43362.4						593.33	1.37%
Ag 328.068†	23786.6	0.195	mg/L	0.0025	0.195	mg/L	0.0025	1.29%
Al 396.153†	14993.8	5.02	mg/L	0.028	5.02	mg/L	0.028	0.56%
As 188.979†	115.8	0.213	mg/L	0.0013	0.213	mg/L	0.0013	0.62%
Ba 233.527†	23931.0	0.793	mg/L	0.0136	0.793	mg/L	0.0136	1.71%
Be 234.861†	7379.2	0.0252	mg/L	0.00031	0.0252	mg/L	0.00031	1.24%
B 249.677†	36490.5	1.29	mg/L	0.019	1.29	mg/L	0.019	1.50%
Ca 227.546†	8246.4	123	mg/L	1.6	123	mg/L	1.6	1.28%
Cd 228.802†	246.3	0.0235	mg/L	0.00013	0.0235	mg/L	0.00013	0.55%
Co 228.616†	977.6	0.0983	mg/L	0.00112	0.0983	mg/L	0.00112	1.14%
Cr 267.716†	15607.9	0.254	mg/L	0.0033	0.254	mg/L	0.0033	1.31%
Cu 327.393†	24780.8	0.259	mg/L	0.0032	0.259	mg/L	0.0032	1.23%

Approved: January 27, 2012

Fe 239.562†	194.2	2.05	mg/L	0.016	2.05	mg/L	0.016	0.77%
Mg 279.077†	4394.2	15.5	mg/L	0.46	15.5	mg/L	0.46	2.95%
Mn 257.610†	242192.9	0.976	mg/L	0.0007	0.976	mg/L	0.0007	0.07%
Mo 202.031†	3577.1	0.516	mg/L	0.0041	0.516	mg/L	0.0041	0.80%
Ni 231.604†	4204.0	0.251	mg/L	0.0016	0.251	mg/L	0.0016	0.65%
Pb 220.353†	693.4	0.258	mg/L	0.0040	0.258	mg/L	0.0040	1.55%
Sb 206.836†	486.3	0.603	mg/L	0.0062	0.603	mg/L	0.0062	1.03%
Se 196.026†	107.4	0.202	mg/L	0.0013	0.202	mg/L	0.0013	0.62%
Si 251.611†	238313.5	13.5	mg/L	0.05	13.5	mg/L	0.05	0.39%
Sn 189.927†	1407.2	0.555	mg/L	0.0060	0.555	mg/L	0.0060	1.07%
Ti 334.940†	236452.6	0.506	mg/L	0.0010	0.506	mg/L	0.0010	0.21%
Tl 190.801†	289.3	0.304	mg/L	0.0041	0.304	mg/L	0.0041	1.33%
V 290.880†	43167.6	0.518	mg/L	0.0072	0.518	mg/L	0.0072	1.39%
Zn 206.200†	7386.0	0.555	mg/L	0.0061	0.555	mg/L	0.0061	1.11%
K 766.490†	43027.5	27.3	mg/L	0.14	27.3	mg/L	0.14	0.51%
Na 589.592†	669912.7	75.2	mg/L	3.19	75.2	mg/L	3.19	4.24%
Sr 407.771†	1065476.9	0.957	mg/L	0.0122	0.957	mg/L	0.0122	1.27%
Li 670.784†	32336.8	0.537	mg/L	0.0052	0.537	mg/L	0.0052	0.98%

Sequence No.: 4 **Autosampler Location: 21**
Sample ID: L1201053902 **Date Collected: 1/26/2012 12:04:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053902

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053902

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3507737.2						64732.34	1.85%
YRADIAL	272416.8						4598.11	1.69%
Ga 417.206	813374.8						22866.85	2.81%
GaRADIAL	43838.3						1328.34	3.03%
Ag 328.068†	32.5	0.00061	mg/L	0.000175	0.00061	mg/L	0.000175	28.67%
Al 396.153†	-144.3	-0.0502	mg/L	0.01418	-0.0502	mg/L	0.01418	28.24%
As 188.979†	25.3	0.0407	mg/L	0.00454	0.0407	mg/L	0.00454	11.13%
Ba 233.527†	8668.8	0.286	mg/L	0.0064	0.286	mg/L	0.0064	2.24%
Be 234.861†	274.5	0.00038	mg/L	0.000285	0.00038	mg/L	0.000285	74.28%
B 249.677†	6485.4	0.245	mg/L	0.0091	0.245	mg/L	0.0091	3.70%
Ca 227.546†	6458.0	96.1	mg/L	3.09	96.1	mg/L	3.09	3.21%
Cd 228.802†	-4.8	-0.00048	mg/L	0.000092	-0.00048	mg/L	0.000092	19.17%
Co 228.616†	-4.4	-0.00083	mg/L	0.000380	-0.00083	mg/L	0.000380	45.58%
Cr 267.716†	36.4	-0.00029	mg/L	0.000188	-0.00029	mg/L	0.000188	63.90%
Cu 327.393†	3030.0	0.0324	mg/L	0.00118	0.0324	mg/L	0.00118	3.63%
Fe 239.562†	280.4	2.96	mg/L	0.066	2.96	mg/L	0.066	2.24%
Mg 279.077†	3895.9	13.7	mg/L	0.28	13.7	mg/L	0.28	2.04%
Mn 257.610†	101961.2	0.410	mg/L	0.0116	0.410	mg/L	0.0116	2.82%
Mo 202.031†	-3.0	-0.00002	mg/L	0.000667	-0.00002	mg/L	0.000667	>999.9%
Ni 231.604†	9.6	0.00013	mg/L	0.000043	0.00013	mg/L	0.000043	33.29%
Pb 220.353†	0.6	0.00379	mg/L	0.002001	0.00379	mg/L	0.002001	52.86%
Sb 206.836†	13.4	0.0159	mg/L	0.00491	0.0159	mg/L	0.00491	30.82%
Se 196.026†	-15.0	-0.00053	mg/L	0.007060	-0.00053	mg/L	0.007060	>999.9%
Si 251.611†	190579.5	10.8	mg/L	0.13	10.8	mg/L	0.13	1.20%
Sn 189.927†	0.2	-0.00046	mg/L	0.000834	-0.00046	mg/L	0.000834	180.12%
Ti 334.940†	-485.4	-0.00139	mg/L	0.000162	-0.00139	mg/L	0.000162	11.64%
Tl 190.801†	77.9	0.0537	mg/L	0.00569	0.0537	mg/L	0.00569	10.59%
V 290.880†	-140.5	-0.00142	mg/L	0.002023	-0.00142	mg/L	0.002023	142.21%
Zn 206.200†	608.5	0.0455	mg/L	0.00105	0.0455	mg/L	0.00105	2.30%
K 766.490†	2970.7	1.86	mg/L	0.017	1.86	mg/L	0.017	0.91%
Na 589.592†	363464.0	40.4	mg/L	0.87	40.4	mg/L	0.87	2.16%
Sr 407.771†	790056.2	0.710	mg/L	0.0069	0.710	mg/L	0.0069	0.97%
Li 670.784†	947.0	0.0135	mg/L	0.00123	0.0135	mg/L	0.00123	9.16%

Sequence No.: 5 **Autosampler Location: 22**
Sample ID: L1201053903 **Date Collected: 1/26/2012 12:11:13 PM**

Approved: January 27, 2012

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

Nebulizer Parameters: L1201053903

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053903

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3494760.5						40986.27	1.17%
YRADIAL	274371.6						3972.22	1.45%
Ga 417.206	816585.6						13256.79	1.62%
GaRADIAL	44101.6						1149.61	2.61%
Ag 328.068†	82.0	0.00110	mg/L	0.000519	0.00110	mg/L	0.000519	47.16%
Al 396.153†	-137.5	-0.0479	mg/L	0.01397	-0.0479	mg/L	0.01397	29.18%
As 188.979†	13.6	0.0181	mg/L	0.00664	0.0181	mg/L	0.00664	36.76%
Ba 233.527†	8866.0	0.293	mg/L	0.0028	0.293	mg/L	0.0028	0.94%
Be 234.861†	126.7	0.00035	mg/L	0.000198	0.00035	mg/L	0.000198	56.98%
B 249.677†	9714.2	0.350	mg/L	0.0031	0.350	mg/L	0.0031	0.88%
Ca 227.546†	6882.4	103	mg/L	2.1	103	mg/L	2.1	2.05%
Cd 228.802†	-2.8	-0.00034	mg/L	0.000062	-0.00034	mg/L	0.000062	18.23%
Co 228.616†	-7.0	-0.00105	mg/L	0.000370	-0.00105	mg/L	0.000370	35.13%
Cr 267.716†	80.1	0.00031	mg/L	0.000099	0.00031	mg/L	0.000099	31.80%
Cu 327.393†	-277.2	-0.00204	mg/L	0.000450	-0.00204	mg/L	0.000450	22.07%
Fe 239.562†	92.1	0.972	mg/L	0.0138	0.972	mg/L	0.0138	1.42%
Mg 279.077†	3017.6	10.6	mg/L	0.14	10.6	mg/L	0.14	1.33%
Mn 257.610†	206434.8	0.830	mg/L	0.0013	0.830	mg/L	0.0013	0.15%
Mo 202.031†	-7.8	-0.00071	mg/L	0.000737	-0.00071	mg/L	0.000737	103.89%
Ni 231.604†	33.8	0.00158	mg/L	0.000479	0.00158	mg/L	0.000479	30.34%
Pb 220.353†	0.8	0.00423	mg/L	0.001057	0.00423	mg/L	0.001057	25.02%
Sb 206.836†	13.2	0.0156	mg/L	0.00064	0.0156	mg/L	0.00064	4.08%
Se 196.026†	-14.2	0.00151	mg/L	0.002332	0.00151	mg/L	0.002332	154.06%
Si 251.611†	218236.0	12.4	mg/L	0.03	12.4	mg/L	0.03	0.26%
Sn 189.927†	-3.3	-0.00181	mg/L	0.002904	-0.00181	mg/L	0.002904	160.60%
Ti 334.940†	-383.1	-0.00111	mg/L	0.000253	-0.00111	mg/L	0.000253	22.79%
Tl 190.801†	76.8	0.0505	mg/L	0.00962	0.0505	mg/L	0.00962	19.03%
V 290.880†	76.3	0.00108	mg/L	0.001174	0.00108	mg/L	0.001174	108.95%
Zn 206.200†	68.5	0.00506	mg/L	0.000203	0.00506	mg/L	0.000203	4.01%
K 766.490†	4191.5	2.61	mg/L	0.049	2.61	mg/L	0.049	1.86%
Na 589.592†	615127.3	68.9	mg/L	0.74	68.9	mg/L	0.74	1.08%
Sr 407.771†	436368.7	0.393	mg/L	0.0018	0.393	mg/L	0.0018	0.45%
Li 670.784†	1505.2	0.0228	mg/L	0.00120	0.0228	mg/L	0.00120	5.29%

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Sequence No.: 6 **Autosampler Location: 23**
Sample ID: L1201053904 **Date Collected: 1/26/2012 12:18:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053904

Analyte	Back Pressure	Flow
All	149.0 kPa	0.50 L/min

Mean Data: L1201053904

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3426954.0						60359.60	1.76%
YRADIAL	272916.6						6465.41	2.37%
Ga 417.206	804852.0						18532.81	2.30%
GaRADIAL	43750.5						1421.97	3.25%
Ag 328.068†	116.3	0.00151	mg/L	0.000568	0.00151	mg/L	0.000568	37.63%
Al 396.153†	-145.0	-0.0504	mg/L	0.01482	-0.0504	mg/L	0.01482	29.41%
As 188.979†	13.8	0.0187	mg/L	0.00393	0.0187	mg/L	0.00393	20.99%
Ba 233.527†	2966.7	0.0980	mg/L	0.00159	0.0980	mg/L	0.00159	1.63%
Be 234.861†	90.8	0.00032	mg/L	0.000060	0.00032	mg/L	0.000060	18.55%

Approved: January 27, 2012

B 249.677†	12160.1	0.432	mg/L	0.0107	0.432	mg/L	0.0107	2.49%
Ca 227.546†	6167.3	92.0	mg/L	1.90	92.0	mg/L	1.90	2.07%
Cd 228.802†	-0.3	-0.00011	mg/L	0.000074	-0.00011	mg/L	0.000074	70.44%
Co 228.616†	-2.5	-0.00050	mg/L	0.000534	-0.00050	mg/L	0.000534	106.73%
Cr 267.716†	24.3	-0.00029	mg/L	0.000195	-0.00029	mg/L	0.000195	67.38%
Cu 327.393†	1069.2	0.0119	mg/L	0.00093	0.0119	mg/L	0.00093	7.85%
Fe 239.562†	8.6	0.0928	mg/L	0.01040	0.0928	mg/L	0.01040	11.20%
Mg 279.077†	2670.6	9.42	mg/L	0.224	9.42	mg/L	0.224	2.38%
Mn 257.610†	50047.9	0.201	mg/L	0.0049	0.201	mg/L	0.0049	2.44%
Mo 202.031†	-8.6	-0.00100	mg/L	0.000621	-0.00100	mg/L	0.000621	62.16%
Ni 231.604†	11.7	0.00025	mg/L	0.000533	0.00025	mg/L	0.000533	210.47%
Pb 220.353†	-5.6	0.00148	mg/L	0.001681	0.00148	mg/L	0.001681	113.19%
Sb 206.836†	14.7	0.0175	mg/L	0.00287	0.0175	mg/L	0.00287	16.38%
Se 196.026†	-12.7	0.00059	mg/L	0.008236	0.00059	mg/L	0.008236	>999.9%
Si 251.611†	213949.1	12.2	mg/L	0.09	12.2	mg/L	0.09	0.76%
Sn 189.927†	4.0	0.00104	mg/L	0.001365	0.00104	mg/L	0.001365	130.94%
Ti 334.940†	-521.8	-0.00152	mg/L	0.000135	-0.00152	mg/L	0.000135	8.92%
Tl 190.801†	77.9	0.0552	mg/L	0.00115	0.0552	mg/L	0.00115	2.07%
V 290.880†	68.7	0.00096	mg/L	0.001319	0.00096	mg/L	0.001319	137.54%
Zn 206.200†	315.9	0.0236	mg/L	0.00068	0.0236	mg/L	0.00068	2.86%
K 766.490†	1959.9	1.18	mg/L	0.062	1.18	mg/L	0.062	5.23%
Na 589.592†	705119.5	79.2	mg/L	1.54	79.2	mg/L	1.54	1.94%
Sr 407.771†	338420.9	0.305	mg/L	0.0028	0.305	mg/L	0.0028	0.93%
Li 670.784†	1400.0	0.0210	mg/L	0.00166	0.0210	mg/L	0.00166	7.90%

Sequence No.: 7
Sample ID: L1201053904PS WG387681-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 24
Date Collected: 1/26/2012 12:25:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201053904PS WG387681-01

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053904PS WG387681-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3420235.4						59763.02	1.75%
YRADIAL	274035.9						3914.80	1.43%
Ga 417.206	798585.4						13248.66	1.66%
GaRADIAL	43202.6						1205.00	2.79%
Ag 328.068†	23571.9	0.193	mg/L	0.0020	0.193	mg/L	0.0020	1.02%
Al 396.153†	14995.4	5.02	mg/L	0.026	5.02	mg/L	0.026	0.53%
As 188.979†	116.1	0.214	mg/L	0.0027	0.214	mg/L	0.0027	1.27%
Ba 233.527†	17907.9	0.593	mg/L	0.0066	0.593	mg/L	0.0066	1.11%
Be 234.861†	7204.6	0.0245	mg/L	0.00014	0.0245	mg/L	0.00014	0.58%
B 249.677†	39311.0	1.39	mg/L	0.012	1.39	mg/L	0.012	0.89%
Ca 227.546†	5938.5	88.6	mg/L	1.61	88.6	mg/L	1.61	1.81%
Cd 228.802†	246.1	0.0235	mg/L	0.00060	0.0235	mg/L	0.00060	2.55%
Co 228.616†	961.4	0.0967	mg/L	0.00219	0.0967	mg/L	0.00219	2.26%
Cr 267.716†	15424.4	0.251	mg/L	0.0022	0.251	mg/L	0.0022	0.90%
Cu 327.393†	23635.5	0.247	mg/L	0.0029	0.247	mg/L	0.0029	1.16%
Fe 239.562†	193.4	2.04	mg/L	0.009	2.04	mg/L	0.009	0.46%
Mg 279.077†	3677.7	13.0	mg/L	0.14	13.0	mg/L	0.14	1.06%
Mn 257.610†	108432.9	0.438	mg/L	0.0041	0.438	mg/L	0.0041	0.94%
Mo 202.031†	3531.9	0.510	mg/L	0.0085	0.510	mg/L	0.0085	1.67%
Ni 231.604†	4167.5	0.249	mg/L	0.0039	0.249	mg/L	0.0039	1.59%
Pb 220.353†	685.5	0.253	mg/L	0.0047	0.253	mg/L	0.0047	1.85%
Sb 206.836†	479.5	0.594	mg/L	0.0113	0.594	mg/L	0.0113	1.89%
Se 196.026†	111.4	0.199	mg/L	0.0049	0.199	mg/L	0.0049	2.45%
Si 251.611†	238530.0	13.5	mg/L	0.10	13.5	mg/L	0.10	0.74%
Sn 189.927†	-9.3	-0.00419	mg/L	0.002107	-0.00419	mg/L	0.002107	50.23%
Ti 334.940†	236144.3	0.505	mg/L	0.0021	0.505	mg/L	0.0021	0.42%
Tl 190.801†	274.6	0.300	mg/L	0.0035	0.300	mg/L	0.0035	1.16%
V 290.880†	42575.9	0.511	mg/L	0.0055	0.511	mg/L	0.0055	1.08%
Zn 206.200†	6956.6	0.522	mg/L	0.0054	0.522	mg/L	0.0054	1.04%
K 766.490†	41811.1	26.5	mg/L	0.09	26.5	mg/L	0.09	0.36%
Na 589.592†	884604.8	99.9	mg/L	2.00	99.9	mg/L	2.00	2.01%

Approved: January 27, 2012

Sr 407.771†	866106.4	0.778 mg/L	0.0118	0.778 mg/L	0.0118	1.51%
Li 670.784†	32525.7	0.540 mg/L	0.0051	0.540 mg/L	0.0051	0.94%

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Sequence No.: 8 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 12:31:52 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	149.0 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	3488219.0				18491.01	0.53%
YRADIAL	278651.3				3730.57	1.34%
Ga 417.206	782223.0				12701.38	1.62%
GaRADIAL	43085.1				1508.90	3.50%
Ag 328.068†	49373.2	0.403 mg/L	0.0080	0.403 mg/L	0.0080	1.99%
QC value within limits for Ag 328.068 Recovery = 100.86%						
Al 396.153†	30603.5	10.2 mg/L	0.07	10.2 mg/L	0.07	0.66%
QC value within limits for Al 396.153 Recovery = 102.50%						
As 188.979†	212.5	0.399 mg/L	0.0037	0.399 mg/L	0.0037	0.92%
QC value within limits for As 188.979 Recovery = 99.78%						
Ba 233.527†	31725.1	1.05 mg/L	0.007	1.05 mg/L	0.007	0.65%
QC value within limits for Ba 233.527 Recovery = 105.17%						
Be 234.861†	15048.5	0.0511 mg/L	0.00094	0.0511 mg/L	0.00094	1.84%
QC value within limits for Be 234.861 Recovery = 102.29%						
B 249.677†	14421.6	0.517 mg/L	0.0110	0.517 mg/L	0.0110	2.12%
QC value within limits for B 249.677 Recovery = 103.49%						
Ca 227.546†	676.6	10.0 mg/L	0.18	10.0 mg/L	0.18	1.81%
QC value within limits for Ca 227.546 Recovery = 100.40%						
Cd 228.802†	527.9	0.0505 mg/L	0.00080	0.0505 mg/L	0.00080	1.59%
QC value within limits for Cd 228.802 Recovery = 100.95%						
Co 228.616†	2015.4	0.203 mg/L	0.0010	0.203 mg/L	0.0010	0.48%
QC value within limits for Co 228.616 Recovery = 101.54%						
Cr 267.716†	31645.5	0.516 mg/L	0.0056	0.516 mg/L	0.0056	1.08%
QC value within limits for Cr 267.716 Recovery = 103.14%						
Cu 327.393†	48541.7	0.506 mg/L	0.0098	0.506 mg/L	0.0098	1.94%
QC value within limits for Cu 327.393 Recovery = 101.16%						
Fe 239.562†	377.6	3.98 mg/L	0.070	3.98 mg/L	0.070	1.75%
QC value within limits for Fe 239.562 Recovery = 99.52%						
Mg 279.077†	2805.0	9.89 mg/L	0.127	9.89 mg/L	0.127	1.28%
QC value within limits for Mg 279.077 Recovery = 98.94%						
Mn 257.610†	131127.5	0.530 mg/L	0.0059	0.530 mg/L	0.0059	1.12%
QC value within limits for Mn 257.610 Recovery = 106.00%						
Mo 202.031†	7211.8	1.04 mg/L	0.007	1.04 mg/L	0.007	0.69%
QC value within limits for Mo 202.031 Recovery = 104.06%						
Ni 231.604†	8709.6	0.520 mg/L	0.0057	0.520 mg/L	0.0057	1.10%
QC value within limits for Ni 231.604 Recovery = 104.03%						
Pb 220.353†	1425.8	0.519 mg/L	0.0028	0.519 mg/L	0.0028	0.55%
QC value within limits for Pb 220.353 Recovery = 103.77%						
Sb 206.836†	980.2	1.22 mg/L	0.023	1.22 mg/L	0.023	1.92%
QC value within limits for Sb 206.836 Recovery = 101.26%						
Se 196.026†	257.5	0.410 mg/L	0.0036	0.410 mg/L	0.0036	0.87%
QC value within limits for Se 196.026 Recovery = 102.44%						
Si 251.611†	91593.4	5.18 mg/L	0.099	5.18 mg/L	0.099	1.92%
QC value within limits for Si 251.611 Recovery = 103.54%						
Sn 189.927†	2627.9	1.04 mg/L	0.005	1.04 mg/L	0.005	0.53%
QC value within limits for Sn 189.927 Recovery = 103.65%						
Ti 334.940†	483905.5	1.03 mg/L	0.003	1.03 mg/L	0.003	0.33%
QC value within limits for Ti 334.940 Recovery = 103.39%						
Tl 190.801†	432.9	0.528 mg/L	0.0052	0.528 mg/L	0.0052	0.99%
QC value within limits for Tl 190.801 Recovery = 105.57%						
V 290.880†	86640.4	1.04 mg/L	0.009	1.04 mg/L	0.009	0.91%
QC value within limits for V 290.880 Recovery = 103.95%						
Zn 206.200†	13797.3	1.04 mg/L	0.009	1.04 mg/L	0.009	0.89%

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   QC value within limits for Zn 206.200  Recovery = 103.62%
K 766.490†            82075.1        52.0 mg/L          0.14        52.0 mg/L          0.14   0.27%
   QC value within limits for K 766.490  Recovery = 104.00%
Na 589.592†          459668.8        51.2 mg/L          0.56        51.2 mg/L          0.56   1.09%
   QC value within limits for Na 589.592  Recovery = 102.49%
Sr 407.771†         1134102.2        1.02 mg/L         0.010        1.02 mg/L         0.010   1.03%
   QC value within limits for Sr 407.771  Recovery = 101.79%
Li 670.784†           63293.3        1.05 mg/L         0.006        1.05 mg/L         0.006   0.57%
   QC value within limits for Li 670.784  Recovery = 105.27%
All analyte(s) passed QC.

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Sequence No.: 9                                    Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 1/26/2012 12:38:48 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                    148.0 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            3552926.2                                                     17149.21   0.48%
YRADIAL               269695.9                                                      1339.06   0.50%
Ga 417.206            737961.5                                                      4153.58   0.56%
GaRADIAL               42621.8                                                       535.45   1.26%
Ag 328.068†             -202.9    -0.00099 mg/L      0.000917    -0.00099 mg/L      0.000917  92.23%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               19.4     0.00477 mg/L      0.006216     0.00477 mg/L      0.006216 130.32%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                2.6    -0.00105 mg/L      0.003140    -0.00105 mg/L      0.003140 299.82%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -3.9    -0.00021 mg/L      0.000054    -0.00021 mg/L      0.000054  25.63%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               41.1     0.00015 mg/L      0.000063     0.00015 mg/L      0.000063  42.26%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                98.1     0.00510 mg/L      0.000795     0.00510 mg/L      0.000795  15.60%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                3.7      0.0540 mg/L       0.03210      0.0540 mg/L       0.03210  59.42%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -4.1    -0.00051 mg/L      0.000172    -0.00051 mg/L      0.000172  33.86%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†               -3.4    -0.00056 mg/L      0.000067    -0.00056 mg/L      0.000067  12.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               14.1    -0.00036 mg/L      0.000079    -0.00036 mg/L      0.000079  21.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -124.5    -0.00052 mg/L      0.000525    -0.00052 mg/L      0.000525 100.01%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.2     0.00015 mg/L      0.013740     0.00015 mg/L      0.013740 >999.9%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                0.1      0.0257 mg/L       0.01350      0.0257 mg/L       0.01350  52.48%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               43.2    -0.00169 mg/L      0.000029    -0.00169 mg/L      0.000029   1.71%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -6.3    -0.00072 mg/L      0.000190    -0.00072 mg/L      0.000190  26.45%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                3.1    -0.00020 mg/L      0.000294    -0.00020 mg/L      0.000294 145.66%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                5.8     0.00121 mg/L      0.002400     0.00121 mg/L      0.002400 199.06%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                3.3     0.00347 mg/L      0.000933     0.00347 mg/L      0.000933  26.90%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                6.8     0.00435 mg/L      0.005447     0.00435 mg/L      0.005447 125.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                8.6     -0.0156 mg/L       0.00059     -0.0156 mg/L       0.00059   3.78%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                2.6     0.00048 mg/L      0.002170     0.00048 mg/L      0.002170 448.92%
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QC value within limits for Sn 189.927 Recovery = Not calculated

Ti 334.940†	-26.3	-0.00137	mg/L	0.000279	-0.00137	mg/L	0.000279	20.27%

QC value within limits for Ti 334.940 Recovery = Not calculated

Tl 190.801†	-1.7	-0.00416	mg/L	0.001708	-0.00416	mg/L	0.001708	41.09%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 290.880†	100.5	0.00056	mg/L	0.000575	0.00056	mg/L	0.000575	102.88%

QC value within limits for V 290.880 Recovery = Not calculated

Zn 206.200†	1.3	0.00004	mg/L	0.000142	0.00004	mg/L	0.000142	390.96%

QC value within limits for Zn 206.200 Recovery = Not calculated

K 766.490†	-57.2	-0.0324	mg/L	0.03238	-0.0324	mg/L	0.03238	99.90%

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	63.5	-0.0556	mg/L	0.01342	-0.0556	mg/L	0.01342	24.15%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	29.9	0.00162	mg/L	0.000102	0.00162	mg/L	0.000102	6.28%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	11.3	-0.00213	mg/L	0.001664	-0.00213	mg/L	0.001664	78.16%

QC value within limits for Li 670.784 Recovery = Not calculated

QC Failed. Continue with analysis.

==========

Sequence No.: 10 **Autosampler Location: 25**
Sample ID: L1201053904DL WG387681-02 **Date Collected: 1/26/2012 12:45:36 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053904DL WG387681-02

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053904DL WG387681-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3561934.2						94572.88	2.66%
YRADIAL	278360.7						6827.95	2.45%
Ga 417.206	795467.3						25618.08	3.22%
GaRADIAL	44708.4						1244.99	2.78%
Ag 328.068†	-81.7	-0.00003	mg/L	0.000234	-0.00003	mg/L	0.000234	815.07%
Al 396.153†	14.7	0.00321	mg/L	0.008109	0.00321	mg/L	0.008109	252.78%
As 188.979†	5.7	0.00453	mg/L	0.002699	0.00453	mg/L	0.002699	59.52%
Ba 233.527†	582.7	0.0192	mg/L	0.00059	0.0192	mg/L	0.00059	3.10%
Be 234.861†	77.2	0.00027	mg/L	0.000062	0.00027	mg/L	0.000062	22.88%
B 249.677†	2488.7	0.0897	mg/L	0.00495	0.0897	mg/L	0.00495	5.52%
Ca 227.546†	1208.7	18.0	mg/L	0.55	18.0	mg/L	0.55	3.04%
Cd 228.802†	-1.6	-0.00026	mg/L	0.000214	-0.00026	mg/L	0.000214	82.26%
Co 228.616†	-0.8	-0.00030	mg/L	0.000616	-0.00030	mg/L	0.000616	206.61%
Cr 267.716†	8.7	-0.00047	mg/L	0.000119	-0.00047	mg/L	0.000119	25.22%
Cu 327.393†	203.4	0.00288	mg/L	0.000136	0.00288	mg/L	0.000136	4.72%
Fe 239.562†	2.1	0.0238	mg/L	0.01623	0.0238	mg/L	0.01623	68.10%
Mg 279.077†	520.4	1.86	mg/L	0.050	1.86	mg/L	0.050	2.68%
Mn 257.610†	9974.5	0.0385	mg/L	0.00147	0.0385	mg/L	0.00147	3.81%
Mo 202.031†	-6.5	-0.00074	mg/L	0.000305	-0.00074	mg/L	0.000305	41.10%
Ni 231.604†	2.0	-0.00029	mg/L	0.000245	-0.00029	mg/L	0.000245	85.15%
Pb 220.353†	1.6	0.00056	mg/L	0.001110	0.00056	mg/L	0.001110	197.53%
Sb 206.836†	4.1	0.00446	mg/L	0.002949	0.00446	mg/L	0.002949	66.17%
Se 196.026†	-2.5	-0.00520	mg/L	0.002137	-0.00520	mg/L	0.002137	41.10%
Si 251.611†	44051.5	2.49	mg/L	0.108	2.49	mg/L	0.108	4.34%
Sn 189.927†	3.7	0.00093	mg/L	0.000429	0.00093	mg/L	0.000429	46.07%
Ti 334.940†	-97.5	-0.00135	mg/L	0.000164	-0.00135	mg/L	0.000164	12.18%
Tl 190.801†	27.4	0.0238	mg/L	0.00356	0.0238	mg/L	0.00356	14.95%
V 290.880†	18.3	-0.00028	mg/L	0.002132	-0.00028	mg/L	0.002132	769.75%
Zn 206.200†	89.6	0.00666	mg/L	0.000066	0.00666	mg/L	0.000066	0.99%
K 766.490†	341.0	0.206	mg/L	0.0477	0.206	mg/L	0.0477	23.12%
Na 589.592†	140038.8	15.4	mg/L	0.19	15.4	mg/L	0.19	1.24%
Sr 407.771†	66222.2	0.0610	mg/L	0.00041	0.0610	mg/L	0.00041	0.68%
Li 670.784†	214.3	0.00126	mg/L	0.000520	0.00126	mg/L	0.000520	41.46%

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Sequence No.: 11 **Autosampler Location: 26**
Sample ID: L1201053905 **Date Collected: 1/26/2012 12:52:25 PM**

Approved: January 27, 2012

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

Nebulizer Parameters: L1201053905

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053905

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3468815.1						20977.37	0.60%
YRADIAL	269383.8						3985.60	1.48%
Ga 417.206	809097.4						6491.67	0.80%
GaRADIAL	43347.4						811.08	1.87%
Ag 328.068†	63.5	0.00087	mg/L	0.000480	0.00087	mg/L	0.000480	55.35%
Al 396.153†	-150.0	-0.0521	mg/L	0.00577	-0.0521	mg/L	0.00577	11.07%
As 188.979†	23.8	0.0379	mg/L	0.00881	0.0379	mg/L	0.00881	23.23%
Ba 233.527†	8289.4	0.274	mg/L	0.0044	0.274	mg/L	0.0044	1.59%
Be 234.861†	240.4	0.00029	mg/L	0.000078	0.00029	mg/L	0.000078	27.21%
B 249.677†	5777.7	0.219	mg/L	0.0023	0.219	mg/L	0.0023	1.06%
Ca 227.546†	6469.6	96.2	mg/L	0.44	96.2	mg/L	0.44	0.46%
Cd 228.802†	-4.4	-0.00044	mg/L	0.000244	-0.00044	mg/L	0.000244	55.37%
Co 228.616†	-6.4	-0.00103	mg/L	0.000311	-0.00103	mg/L	0.000311	30.23%
Cr 267.716†	42.4	-0.00022	mg/L	0.000250	-0.00022	mg/L	0.000250	114.29%
Cu 327.393†	1056.8	0.0119	mg/L	0.00019	0.0119	mg/L	0.00019	1.60%
Fe 239.562†	274.8	2.90	mg/L	0.038	2.90	mg/L	0.038	1.30%
Mg 279.077†	3702.0	13.0	mg/L	0.13	13.0	mg/L	0.13	0.97%
Mn 257.610†	114502.8	0.460	mg/L	0.0058	0.460	mg/L	0.0058	1.26%
Mo 202.031†	-7.7	-0.00069	mg/L	0.000717	-0.00069	mg/L	0.000717	104.35%
Ni 231.604†	11.7	0.00026	mg/L	0.000121	0.00026	mg/L	0.000121	46.88%
Pb 220.353†	1.2	0.00401	mg/L	0.001436	0.00401	mg/L	0.001436	35.78%
Sb 206.836†	15.8	0.0189	mg/L	0.00078	0.0189	mg/L	0.00078	4.10%
Se 196.026†	-15.5	-0.00141	mg/L	0.011136	-0.00141	mg/L	0.011136	792.06%
Si 251.611†	188741.2	10.7	mg/L	0.13	10.7	mg/L	0.13	1.21%
Sn 189.927†	-3.0	-0.00169	mg/L	0.002585	-0.00169	mg/L	0.002585	152.68%
Ti 334.940†	-472.8	-0.00137	mg/L	0.000155	-0.00137	mg/L	0.000155	11.36%
Tl 190.801†	72.5	0.0473	mg/L	0.01037	0.0473	mg/L	0.01037	21.94%
V 290.880†	-216.2	-0.00238	mg/L	0.001143	-0.00238	mg/L	0.001143	47.99%
Zn 206.200†	335.9	0.0251	mg/L	0.00049	0.0251	mg/L	0.00049	1.97%
K 766.490†	2868.3	1.80	mg/L	0.034	1.80	mg/L	0.034	1.89%
Na 589.592†	345517.3	38.4	mg/L	0.44	38.4	mg/L	0.44	1.16%
Sr 407.771†	741426.1	0.666	mg/L	0.0079	0.666	mg/L	0.0079	1.19%
Li 670.784†	971.0	0.0139	mg/L	0.00181	0.0139	mg/L	0.00181	13.04%

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Sequence No.: 12 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 12:59:19 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	148.0 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	3474243.1						51792.10	1.49%
YRADIAL	268018.7						4269.52	1.59%
Ga 417.206	781322.0						14840.43	1.90%
GaRADIAL	43189.4						888.21	2.06%
Ag 328.068†	47564.3	0.389	mg/L	0.0070	0.389	mg/L	0.0070	1.80%
QC value within limits for Ag 328.068 Recovery = 97.17%								
Al 396.153†	30286.2	10.1	mg/L	0.02	10.1	mg/L	0.02	0.23%
QC value within limits for Al 396.153 Recovery = 101.44%								
As 188.979†	205.1	0.385	mg/L	0.0113	0.385	mg/L	0.0113	2.93%

Approved: January 27, 2012

QC value within limits for As 188.979 Recovery = 96.27%

Ba 233.527†	30546.5	1.01 mg/L	0.024	1.01 mg/L	0.024	2.39%
QC value within limits for Ba 233.527 Recovery = 101.26%						
Be 234.861†	14510.8	0.0493 mg/L	0.00127	0.0493 mg/L	0.00127	2.57%
QC value within limits for Be 234.861 Recovery = 98.53%						
B 249.677†	13761.7	0.494 mg/L	0.0126	0.494 mg/L	0.0126	2.54%
QC value within limits for B 249.677 Recovery = 98.87%						
Ca 227.546†	659.5	9.77 mg/L	0.221	9.77 mg/L	0.221	2.27%
QC value within limits for Ca 227.546 Recovery = 97.66%						
Cd 228.802†	519.3	0.0496 mg/L	0.00100	0.0496 mg/L	0.00100	2.01%
QC value within limits for Cd 228.802 Recovery = 99.27%						
Co 228.616†	1972.6	0.199 mg/L	0.0042	0.199 mg/L	0.0042	2.09%
QC value within limits for Co 228.616 Recovery = 99.37%						
Cr 267.716†	30477.5	0.497 mg/L	0.0069	0.497 mg/L	0.0069	1.39%
QC value within limits for Cr 267.716 Recovery = 99.33%						
Cu 327.393†	46611.8	0.486 mg/L	0.0095	0.486 mg/L	0.0095	1.95%
QC value within limits for Cu 327.393 Recovery = 97.15%						
Fe 239.562†	380.3	4.01 mg/L	0.076	4.01 mg/L	0.076	1.89%
QC value within limits for Fe 239.562 Recovery = 100.25%						
Mg 279.077†	2850.6	10.1 mg/L	0.24	10.1 mg/L	0.24	2.38%
QC value within limits for Mg 279.077 Recovery = 100.55%						
Mn 257.610†	125982.8	0.509 mg/L	0.0078	0.509 mg/L	0.0078	1.53%
QC value within limits for Mn 257.610 Recovery = 101.85%						
Mo 202.031†	6885.2	0.993 mg/L	0.0187	0.993 mg/L	0.0187	1.88%
QC value within limits for Mo 202.031 Recovery = 99.35%						
Ni 231.604†	8367.5	0.500 mg/L	0.0101	0.500 mg/L	0.0101	2.02%
QC value within limits for Ni 231.604 Recovery = 99.94%						
Pb 220.353†	1391.9	0.506 mg/L	0.0117	0.506 mg/L	0.0117	2.31%
QC value within limits for Pb 220.353 Recovery = 101.28%						
Sb 206.836†	952.7	1.18 mg/L	0.024	1.18 mg/L	0.024	2.07%
QC value within limits for Sb 206.836 Recovery = 98.41%						
Se 196.026†	256.3	0.408 mg/L	0.0150	0.408 mg/L	0.0150	3.67%
QC value within limits for Se 196.026 Recovery = 101.96%						
Si 251.611†	87564.9	4.95 mg/L	0.107	4.95 mg/L	0.107	2.16%
QC value within limits for Si 251.611 Recovery = 98.97%						
Sn 189.927†	2568.1	1.01 mg/L	0.020	1.01 mg/L	0.020	2.02%
QC value within limits for Sn 189.927 Recovery = 101.29%						
Ti 334.940†	479668.6	1.02 mg/L	0.007	1.02 mg/L	0.007	0.64%
QC value within limits for Ti 334.940 Recovery = 102.49%						
Tl 190.801†	423.8	0.517 mg/L	0.0092	0.517 mg/L	0.0092	1.77%
QC value within limits for Tl 190.801 Recovery = 103.36%						
V 290.880†	83452.8	1.00 mg/L	0.017	1.00 mg/L	0.017	1.68%
QC value within limits for V 290.880 Recovery = 100.12%						
Zn 206.200†	13249.9	0.995 mg/L	0.0182	0.995 mg/L	0.0182	1.83%
QC value within limits for Zn 206.200 Recovery = 99.51%						
K 766.490†	80991.9	51.3 mg/L	0.12	51.3 mg/L	0.12	0.23%
QC value within limits for K 766.490 Recovery = 102.64%						
Na 589.592†	446171.0	49.7 mg/L	0.30	49.7 mg/L	0.30	0.59%
QC value within limits for Na 589.592 Recovery = 99.44%						
Sr 407.771†	1128604.9	1.01 mg/L	0.007	1.01 mg/L	0.007	0.70%
QC value within limits for Sr 407.771 Recovery = 101.30%						
Li 670.784†	62825.5	1.04 mg/L	0.008	1.04 mg/L	0.008	0.80%
QC value within limits for Li 670.784 Recovery = 104.49%						

All analyte(s) passed QC.

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Sequence No.: 13 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/26/2012 1:06:15 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	147.0 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	3499167.4						49237.26	1.41%

Approved: January 27, 2012

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YRADIAL              270465.7                                                    1533.99   0.57%
Ga 417.206           727125.4                                                    4931.70   0.68%
GaRADIAL              42605.2                                                     519.60   1.22%
Ag 328.068†            -184.1    -0.00084 mg/L      0.000674    -0.00084 mg/L      0.000674  80.07%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              15.4     0.00343 mg/L      0.012645     0.00343 mg/L      0.012645 368.95%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               1.2    -0.00383 mg/L      0.001367    -0.00383 mg/L      0.001367  35.72%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -9.6    -0.00040 mg/L      0.000073    -0.00040 mg/L      0.000073  18.34%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              32.9     0.00012 mg/L      0.000025     0.00012 mg/L      0.000025  20.95%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               94.9     0.00505 mg/L      0.000597     0.00505 mg/L      0.000597  11.81%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -1.1     -0.0185 mg/L       0.08099     -0.0185 mg/L       0.08099 437.89%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -1.8    -0.00029 mg/L      0.000472    -0.00029 mg/L      0.000472 163.84%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               0.6    -0.00015 mg/L      0.000155    -0.00015 mg/L      0.000155 102.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              13.2    -0.00038 mg/L      0.000091    -0.00038 mg/L      0.000091  23.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -131.6    -0.00060 mg/L      0.000451    -0.00060 mg/L      0.000451  75.61%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               1.4      0.0168 mg/L       0.00557      0.0168 mg/L       0.00557  33.24%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              -1.8      0.0191 mg/L       0.00679      0.0191 mg/L       0.00679  35.49%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              46.4    -0.00168 mg/L      0.000009    -0.00168 mg/L      0.000009   0.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -5.2    -0.00056 mg/L      0.000749    -0.00056 mg/L      0.000749 133.41%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               9.2     0.00016 mg/L      0.000294     0.00016 mg/L      0.000294 179.51%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               7.8     0.00195 mg/L      0.000935     0.00195 mg/L      0.000935  47.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               4.8     0.00528 mg/L      0.001985     0.00528 mg/L      0.001985  37.60%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               3.6    -0.00090 mg/L      0.004859    -0.00090 mg/L      0.004859 537.49%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -0.5     -0.0161 mg/L       0.00035     -0.0161 mg/L       0.00035   2.20%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               0.1    -0.00047 mg/L      0.000879    -0.00047 mg/L      0.000879 187.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -84.3    -0.00150 mg/L      0.000011    -0.00150 mg/L      0.000011   0.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               0.9    -0.00100 mg/L      0.004467    -0.00100 mg/L      0.004467 446.39%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              122.1     0.00082 mg/L      0.001215     0.00082 mg/L      0.001215 148.90%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -2.3    -0.00023 mg/L      0.000118    -0.00023 mg/L      0.000118  50.60%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -8.6    -0.00136 mg/L      0.043996    -0.00136 mg/L      0.043996 >999.9%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              24.1     -0.0599 mg/L       0.00506     -0.0599 mg/L       0.00506   8.44%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              62.5     0.00164 mg/L      0.000011     0.00164 mg/L      0.000011   0.67%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              68.0    -0.00118 mg/L      0.000778    -0.00118 mg/L      0.000778  65.68%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 14 **Autosampler Location: 27**
Sample ID: LLCCV **Date Collected: 1/26/2012 1:13:03 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LLCCV

Approved: January 27, 2012

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3535711.0						62644.15	1.77%
YRADIAL	268312.3						1810.91	0.67%
Ga 417.206	734304.0						15681.95	2.14%
GaRADIAL	42370.5						760.58	1.80%
Ag 328.068†	27.1	0.00089	mg/L	0.000182	0.00089	mg/L	0.000182	20.44%
Al 396.153†	-44.8	-0.0168	mg/L	0.00345	-0.0168	mg/L	0.00345	20.59%
As 188.979†	1.9	-0.00234	mg/L	0.004027	-0.00234	mg/L	0.004027	172.40%
Ba 233.527†	333.3	0.0110	mg/L	0.00032	0.0110	mg/L	0.00032	2.94%
Be 234.861†	635.2	0.00214	mg/L	0.000013	0.00214	mg/L	0.000013	0.63%
B 249.677†	30.6	0.00235	mg/L	0.000526	0.00235	mg/L	0.000526	22.41%
Ca 227.546†	-1.2	0.0115	mg/L	0.04610	0.0115	mg/L	0.04610	400.55%
Cd 228.802†	120.8	0.0113	mg/L	0.00014	0.0113	mg/L	0.00014	1.25%
Co 228.616†	203.9	0.0206	mg/L	0.00054	0.0206	mg/L	0.00054	2.62%
Cr 267.716†	1264.4	0.0200	mg/L	0.00090	0.0200	mg/L	0.00090	4.49%
Cu 327.393†	1899.8	0.0205	mg/L	0.00113	0.0205	mg/L	0.00113	5.53%
Fe 239.562†	0.8	0.0109	mg/L	0.02427	0.0109	mg/L	0.02427	222.02%
Mg 279.077†	-3.7	0.0123	mg/L	0.00825	0.0123	mg/L	0.00825	66.88%
Mn 257.610†	2754.7	0.00924	mg/L	0.000478	0.00924	mg/L	0.000478	5.17%
Mo 202.031†	-4.8	-0.00050	mg/L	0.000225	-0.00050	mg/L	0.000225	45.16%
Ni 231.604†	703.7	0.0417	mg/L	0.00094	0.0417	mg/L	0.00094	2.26%
Pb 220.353†	4.1	0.00058	mg/L	0.000607	0.00058	mg/L	0.000607	104.34%
Sb 206.836†	2.5	0.00240	mg/L	0.002127	0.00240	mg/L	0.002127	88.50%
Se 196.026†	5.6	0.00243	mg/L	0.007381	0.00243	mg/L	0.007381	303.60%
Si 251.611†	-15.4	-0.0169	mg/L	0.00060	-0.0169	mg/L	0.00060	3.54%
Sn 189.927†	-0.0	-0.00054	mg/L	0.000682	-0.00054	mg/L	0.000682	127.03%
Ti 334.940†	-121.4	-0.00158	mg/L	0.000318	-0.00158	mg/L	0.000318	20.09%
Tl 190.801†	2.2	0.00058	mg/L	0.007749	0.00058	mg/L	0.007749	>999.9%
V 290.880†	952.2	0.0108	mg/L	0.00039	0.0108	mg/L	0.00039	3.62%
Zn 206.200†	311.2	0.0234	mg/L	0.00030	0.0234	mg/L	0.00030	1.26%
K 766.490†	-33.0	-0.0169	mg/L	0.03091	-0.0169	mg/L	0.03091	182.56%
Na 589.592†	-168.5	-0.0812	mg/L	0.01487	-0.0812	mg/L	0.01487	18.32%
Sr 407.771†	-21.3	0.00157	mg/L	0.000018	0.00157	mg/L	0.000018	1.14%
Li 670.784†	23.6	-0.00192	mg/L	0.002073	-0.00192	mg/L	0.002073	107.81%

Sequence No.: 15
Sample ID: LLCCV
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 28
Date Collected: 1/26/2012 1:19:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LLCCV

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3473501.3						16582.68	0.48%
YRADIAL	266188.5						4020.33	1.51%
Ga 417.206	726951.5						8339.67	1.15%
GaRADIAL	41940.5						323.55	0.77%
Ag 328.068†	897.9	0.00798	mg/L	0.000303	0.00798	mg/L	0.000303	3.80%
Al 396.153†	595.2	0.198	mg/L	0.0075	0.198	mg/L	0.0075	3.78%
As 188.979†	7.7	0.00867	mg/L	0.008424	0.00867	mg/L	0.008424	97.22%
Ba 233.527†	627.0	0.0207	mg/L	0.00021	0.0207	mg/L	0.00021	1.04%
Be 234.861†	349.1	0.00119	mg/L	0.000066	0.00119	mg/L	0.000066	5.48%
B 249.677†	304.2	0.0125	mg/L	0.00034	0.0125	mg/L	0.00034	2.71%
Ca 227.546†	17.5	0.259	mg/L	0.0227	0.259	mg/L	0.0227	8.78%
Cd 228.802†	9.4	0.00079	mg/L	0.000113	0.00079	mg/L	0.000113	14.41%
Co 228.616†	39.1	0.00373	mg/L	0.000472	0.00373	mg/L	0.000472	12.63%
Cr 267.716†	676.4	0.0104	mg/L	0.00009	0.0104	mg/L	0.00009	0.86%
Cu 327.393†	770.0	0.00879	mg/L	0.000708	0.00879	mg/L	0.000708	8.06%

Approved: January 27, 2012

Fe 239.562†	7.8	0.0845	mg/L	0.00631	0.0845	mg/L	0.00631	7.47%
Mg 279.077†	55.1	0.219	mg/L	0.0037	0.219	mg/L	0.0037	1.68%
Mn 257.610†	2654.0	0.00890	mg/L	0.000234	0.00890	mg/L	0.000234	2.63%
Mo 202.031†	134.5	0.0196	mg/L	0.00028	0.0196	mg/L	0.00028	1.43%
Ni 231.604†	175.6	0.0101	mg/L	0.00013	0.0101	mg/L	0.00013	1.29%
Pb 220.353†	35.8	0.0122	mg/L	0.00112	0.0122	mg/L	0.00112	9.18%
Sb 206.836†	24.7	0.0300	mg/L	0.00125	0.0300	mg/L	0.00125	4.15%
Se 196.026†	10.5	0.0103	mg/L	0.00900	0.0103	mg/L	0.00900	87.76%
Si 251.611†	1947.0	0.0944	mg/L	0.00174	0.0944	mg/L	0.00174	1.84%
Sn 189.927†	52.5	0.0202	mg/L	0.00139	0.0202	mg/L	0.00139	6.89%
Ti 334.940†	9726.1	0.0195	mg/L	0.00046	0.0195	mg/L	0.00046	2.34%
Tl 190.801†	9.3	0.00935	mg/L	0.002888	0.00935	mg/L	0.002888	30.88%
V 290.880†	1915.0	0.0223	mg/L	0.00128	0.0223	mg/L	0.00128	5.73%
Zn 206.200†	359.1	0.0269	mg/L	0.00022	0.0269	mg/L	0.00022	0.81%
K 766.490†	1598.5	1.02	mg/L	0.022	1.02	mg/L	0.022	2.12%
Na 589.592†	9345.0	0.967	mg/L	0.0136	0.967	mg/L	0.0136	1.40%
Sr 407.771†	23217.4	0.0224	mg/L	0.00025	0.0224	mg/L	0.00025	1.10%
Li 670.784†	1230.1	0.0182	mg/L	0.00100	0.0182	mg/L	0.00100	5.50%

Sequence No.: 16 **Autosampler Location: 29**
Sample ID: L1201055101 **Date Collected: 1/26/2012 1:26:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055101

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201055101

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3515264.6						54639.52	1.55%
YRADIAL	270515.5						2249.73	0.83%
Ga 417.206	750932.6						14043.96	1.87%
GaRADIAL	43196.3						749.70	1.74%
Ag 328.068†	-254.5	-0.00141	mg/L	0.000272	-0.00141	mg/L	0.000272	19.25%
Al 396.153†	23.6	0.00619	mg/L	0.014548	0.00619	mg/L	0.014548	235.00%
As 188.979†	1.5	-0.00320	mg/L	0.003618	-0.00320	mg/L	0.003618	113.04%
Ba 233.527†	-4.6	-0.00023	mg/L	0.000046	-0.00023	mg/L	0.000046	19.93%
Be 234.861†	48.0	0.00017	mg/L	0.000061	0.00017	mg/L	0.000061	35.56%
B 249.677†	53.1	0.00351	mg/L	0.000191	0.00351	mg/L	0.000191	5.46%
Ca 227.546†	1.6	0.0230	mg/L	0.04052	0.0230	mg/L	0.04052	175.82%
Cd 228.802†	-2.1	-0.00032	mg/L	0.000194	-0.00032	mg/L	0.000194	60.41%
Co 228.616†	2.4	0.00003	mg/L	0.000457	0.00003	mg/L	0.000457	>999.9%
Cr 267.716†	14.1	-0.00036	mg/L	0.000241	-0.00036	mg/L	0.000241	66.09%
Cu 327.393†	9.9	0.00087	mg/L	0.000596	0.00087	mg/L	0.000596	68.47%
Fe 239.562†	0.1	0.00291	mg/L	0.007860	0.00291	mg/L	0.007860	269.69%
Mg 279.077†	-4.8	0.00842	mg/L	0.016900	0.00842	mg/L	0.016900	200.61%
Mn 257.610†	44.5	-0.00169	mg/L	0.000019	-0.00169	mg/L	0.000019	1.11%
Mo 202.031†	-7.9	-0.00094	mg/L	0.000191	-0.00094	mg/L	0.000191	20.22%
Ni 231.604†	2.9	-0.00021	mg/L	0.000087	-0.00021	mg/L	0.000087	41.58%
Pb 220.353†	7.6	0.00187	mg/L	0.000714	0.00187	mg/L	0.000714	38.20%
Sb 206.836†	1.2	0.00081	mg/L	0.001861	0.00081	mg/L	0.001861	230.61%
Se 196.026†	1.2	-0.00473	mg/L	0.004596	-0.00473	mg/L	0.004596	97.20%
Si 251.611†	145.0	-0.00781	mg/L	0.000585	-0.00781	mg/L	0.000585	7.50%
Sn 189.927†	1.4	0.00002	mg/L	0.000622	0.00002	mg/L	0.000622	>999.9%
Ti 334.940†	-123.5	-0.00158	mg/L	0.000079	-0.00158	mg/L	0.000079	4.99%
Tl 190.801†	-2.8	-0.00548	mg/L	0.001189	-0.00548	mg/L	0.001189	21.70%
V 290.880†	161.1	0.00128	mg/L	0.001532	0.00128	mg/L	0.001532	119.26%
Zn 206.200†	36.3	0.00266	mg/L	0.000265	0.00266	mg/L	0.000265	9.96%
K 766.490†	-96.7	-0.0576	mg/L	0.03665	-0.0576	mg/L	0.03665	63.59%
Na 589.592†	-84.2	-0.0719	mg/L	0.01645	-0.0719	mg/L	0.01645	22.88%
Sr 407.771†	-48.6	0.00155	mg/L	0.000082	0.00155	mg/L	0.000082	5.33%
Li 670.784†	-32.3	-0.00285	mg/L	0.000932	-0.00285	mg/L	0.000932	32.66%

Sequence No.: 17 **Autosampler Location: 30**
Sample ID: L1201055103 **Date Collected: 1/26/2012 1:33:33 PM**

Approved: January 27, 2012

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

Nebulizer Parameters: L1201055103

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201055103

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3587123.0						43739.94	1.22%
YRADIAL	273256.0						6220.66	2.28%
Ga 417.206	763023.9						7059.96	0.93%
GaRADIAL	43594.4						426.15	0.98%
Ag 328.068†	-196.8	-0.00095	mg/L	0.000283	-0.00095	mg/L	0.000283	29.85%
Al 396.153†	26.5	0.00715	mg/L	0.003934	0.00715	mg/L	0.003934	55.06%
As 188.979†	1.1	-0.00386	mg/L	0.001864	-0.00386	mg/L	0.001864	48.35%
Ba 233.527†	-1.7	-0.00014	mg/L	0.000091	-0.00014	mg/L	0.000091	65.15%
Be 234.861†	64.7	0.00022	mg/L	0.000054	0.00022	mg/L	0.000054	24.19%
B 249.677†	15.0	0.00228	mg/L	0.000471	0.00228	mg/L	0.000471	20.68%
Ca 227.546†	4.2	0.0660	mg/L	0.06051	0.0660	mg/L	0.06051	91.68%
Cd 228.802†	-2.1	-0.00032	mg/L	0.000286	-0.00032	mg/L	0.000286	88.85%
Co 228.616†	-2.0	-0.00042	mg/L	0.000219	-0.00042	mg/L	0.000219	52.48%
Cr 267.716†	43.6	0.00012	mg/L	0.000108	0.00012	mg/L	0.000108	93.16%
Cu 327.393†	-41.3	0.00034	mg/L	0.000514	0.00034	mg/L	0.000514	151.61%
Fe 239.562†	2.5	0.0280	mg/L	0.00567	0.0280	mg/L	0.00567	20.28%
Mg 279.077†	-2.5	0.0165	mg/L	0.00896	0.0165	mg/L	0.00896	54.16%
Mn 257.610†	86.5	-0.00152	mg/L	0.000021	-0.00152	mg/L	0.000021	1.35%
Mo 202.031†	-6.3	-0.00072	mg/L	0.000118	-0.00072	mg/L	0.000118	16.42%
Ni 231.604†	120.5	0.00682	mg/L	0.000124	0.00682	mg/L	0.000124	1.82%
Pb 220.353†	10.7	0.00300	mg/L	0.002724	0.00300	mg/L	0.002724	90.85%
Sb 206.836†	2.2	0.00214	mg/L	0.001333	0.00214	mg/L	0.001333	62.25%
Se 196.026†	3.8	-0.00059	mg/L	0.001550	-0.00059	mg/L	0.001550	261.75%
Si 251.611†	266.9	-0.00088	mg/L	0.000351	-0.00088	mg/L	0.000351	39.95%
Sn 189.927†	0.7	-0.00023	mg/L	0.001011	-0.00023	mg/L	0.001011	435.31%
Ti 334.940†	-43.0	-0.00141	mg/L	0.000261	-0.00141	mg/L	0.000261	18.51%
Tl 190.801†	-2.1	-0.00458	mg/L	0.000848	-0.00458	mg/L	0.000848	18.51%
V 290.880†	70.2	0.00019	mg/L	0.000479	0.00019	mg/L	0.000479	250.17%
Zn 206.200†	47.1	0.00348	mg/L	0.000292	0.00348	mg/L	0.000292	8.42%
K 766.490†	-74.0	-0.0431	mg/L	0.00982	-0.0431	mg/L	0.00982	22.76%
Na 589.592†	-136.7	-0.0777	mg/L	0.02162	-0.0777	mg/L	0.02162	27.85%
Sr 407.771†	-79.9	0.00151	mg/L	0.000042	0.00151	mg/L	0.000042	2.77%
Li 670.784†	32.6	-0.00177	mg/L	0.000535	-0.00177	mg/L	0.000535	30.16%

Sequence No.: 18 **Autosampler Location: 31**
Sample ID: L1201055104 **Date Collected: 1/26/2012 1:40:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055104

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055104

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3476874.2						31086.87	0.89%
YRADIAL	272227.2						5695.25	2.09%
Ga 417.206	734478.0						8176.54	1.11%
GaRADIAL	43567.4						1281.68	2.94%
Ag 328.068†	-317.5	-0.00193	mg/L	0.000612	-0.00193	mg/L	0.000612	31.79%
Al 396.153†	22.3	0.00577	mg/L	0.004904	0.00577	mg/L	0.004904	85.02%
As 188.979†	3.4	0.00052	mg/L	0.000915	0.00052	mg/L	0.000915	175.10%
Ba 233.527†	-3.8	-0.00021	mg/L	0.000174	-0.00021	mg/L	0.000174	84.52%
Be 234.861†	36.9	0.00013	mg/L	0.000047	0.00013	mg/L	0.000047	37.32%

Approved: January 27, 2012

B 249.677†	29.2	0.00287	mg/L	0.000475	0.00287	mg/L	0.000475	16.59%
Ca 227.546†	3.4	0.0457	mg/L	0.06324	0.0457	mg/L	0.06324	138.48%
Cd 228.802†	-1.4	-0.00025	mg/L	0.000177	-0.00025	mg/L	0.000177	71.17%
Co 228.616†	-3.3	-0.00055	mg/L	0.000357	-0.00055	mg/L	0.000357	65.03%
Cr 267.716†	68.5	0.00052	mg/L	0.000164	0.00052	mg/L	0.000164	31.54%
Cu 327.393†	35.2	0.00114	mg/L	0.000993	0.00114	mg/L	0.000993	87.46%
Fe 239.562†	4.2	0.0466	mg/L	0.02417	0.0466	mg/L	0.02417	51.90%
Mg 279.077†	-3.3	0.0137	mg/L	0.01351	0.0137	mg/L	0.01351	98.69%
Mn 257.610†	114.7	-0.00140	mg/L	0.000012	-0.00140	mg/L	0.000012	0.86%
Mo 202.031†	-9.5	-0.00118	mg/L	0.001202	-0.00118	mg/L	0.001202	101.66%
Ni 231.604†	16.1	0.00058	mg/L	0.000108	0.00058	mg/L	0.000108	18.54%
Pb 220.353†	9.6	0.00258	mg/L	0.001310	0.00258	mg/L	0.001310	50.71%
Sb 206.836†	1.6	0.00133	mg/L	0.002679	0.00133	mg/L	0.002679	201.29%
Se 196.026†	3.9	-0.00033	mg/L	0.002506	-0.00033	mg/L	0.002506	754.88%
Si 251.611†	174.4	-0.00614	mg/L	0.000539	-0.00614	mg/L	0.000539	8.78%
Sn 189.927†	-0.7	-0.00082	mg/L	0.001710	-0.00082	mg/L	0.001710	209.58%
Ti 334.940†	-79.8	-0.00149	mg/L	0.000111	-0.00149	mg/L	0.000111	7.42%
Tl 190.801†	-3.9	-0.00672	mg/L	0.002035	-0.00672	mg/L	0.002035	30.27%
V 290.880†	201.8	0.00177	mg/L	0.001802	0.00177	mg/L	0.001802	101.80%
Zn 206.200†	44.6	0.00328	mg/L	0.000257	0.00328	mg/L	0.000257	7.83%
K 766.490†	-47.5	-0.0262	mg/L	0.05273	-0.0262	mg/L	0.05273	201.56%
Na 589.592†	-323.7	-0.0983	mg/L	0.00947	-0.0983	mg/L	0.00947	9.64%
Sr 407.771†	-45.2	0.00154	mg/L	0.000032	0.00154	mg/L	0.000032	2.11%
Li 670.784†	-0.3	-0.00232	mg/L	0.001434	-0.00232	mg/L	0.001434	61.76%

Sequence No.: 19
Sample ID: L1201055105
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 32
Date Collected: 1/26/2012 1:47:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201055105

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201055105

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3558691.3						64607.94	1.82%
YRADIAL	272357.5						5869.59	2.16%
Ga 417.206	756626.2						13224.13	1.75%
GaRADIAL	43647.8						848.32	1.94%
Ag 328.068†	-229.8	-0.00121	mg/L	0.000889	-0.00121	mg/L	0.000889	73.28%
Al 396.153†	-8.3	-0.00453	mg/L	0.013664	-0.00453	mg/L	0.013664	301.85%
As 188.979†	2.7	-0.00094	mg/L	0.005312	-0.00094	mg/L	0.005312	562.52%
Ba 233.527†	-0.1	-0.00008	mg/L	0.000085	-0.00008	mg/L	0.000085	102.64%
Be 234.861†	58.6	0.00021	mg/L	0.000038	0.00021	mg/L	0.000038	18.25%
B 249.677†	58.2	0.00373	mg/L	0.000179	0.00373	mg/L	0.000179	4.81%
Ca 227.546†	7.2	0.106	mg/L	0.0278	0.106	mg/L	0.0278	26.30%
Cd 228.802†	-0.1	-0.00012	mg/L	0.000110	-0.00012	mg/L	0.000110	89.71%
Co 228.616†	-1.2	-0.00033	mg/L	0.000187	-0.00033	mg/L	0.000187	55.88%
Cr 267.716†	51.4	0.00024	mg/L	0.000172	0.00024	mg/L	0.000172	70.62%
Cu 327.393†	-48.4	0.00027	mg/L	0.001368	0.00027	mg/L	0.001368	514.20%
Fe 239.562†	0.8	0.0102	mg/L	0.01487	0.0102	mg/L	0.01487	145.77%
Mg 279.077†	-3.6	0.0126	mg/L	0.00047	0.0126	mg/L	0.00047	3.72%
Mn 257.610†	45.9	-0.00168	mg/L	0.000013	-0.00168	mg/L	0.000013	0.80%
Mo 202.031†	-7.3	-0.00086	mg/L	0.000436	-0.00086	mg/L	0.000436	50.53%
Ni 231.604†	11.2	0.00028	mg/L	0.000135	0.00028	mg/L	0.000135	47.50%
Pb 220.353†	11.1	0.00313	mg/L	0.001208	0.00313	mg/L	0.001208	38.57%
Sb 206.836†	0.6	0.00018	mg/L	0.001879	0.00018	mg/L	0.001879	>999.9%
Se 196.026†	4.1	0.00000	mg/L	0.005093	0.00000	mg/L	0.005093	>999.9%
Si 251.611†	132.7	-0.00851	mg/L	0.000352	-0.00851	mg/L	0.000352	4.14%
Sn 189.927†	0.7	-0.00023	mg/L	0.000937	-0.00023	mg/L	0.000937	406.73%
Ti 334.940†	-71.0	-0.00147	mg/L	0.000101	-0.00147	mg/L	0.000101	6.89%
Tl 190.801†	-0.6	-0.00287	mg/L	0.003406	-0.00287	mg/L	0.003406	118.66%
V 290.880†	147.5	0.00112	mg/L	0.001148	0.00112	mg/L	0.001148	102.40%
Zn 206.200†	36.8	0.00270	mg/L	0.000264	0.00270	mg/L	0.000264	9.77%
K 766.490†	-54.2	-0.0305	mg/L	0.02260	-0.0305	mg/L	0.02260	74.17%
Na 589.592†	-190.4	-0.0836	mg/L	0.01460	-0.0836	mg/L	0.01460	17.47%

Approved: January 27, 2012

Sr 407.771†	34.3	0.00162 mg/L	0.000025	0.00162 mg/L	0.000025	1.52%
Li 670.784†	-108.0	-0.00412 mg/L	0.000910	-0.00412 mg/L	0.000910	22.10%

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Sequence No.: 20 **Autosampler Location: 33**
Sample ID: L1201055106 **Date Collected: 1/26/2012 1:54:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055106

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055106

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3526431.3						20751.38	0.59%
YRADIAL	272248.7						3970.42	1.46%
Ga 417.206	746280.5						5772.77	0.77%
GaRADIAL	43482.1						416.63	0.96%
Ag 328.068†	-142.0	-0.00050	mg/L	0.000701	-0.00050	mg/L	0.000701	140.16%
Al 396.153†	16.6	0.00383	mg/L	0.010836	0.00383	mg/L	0.010836	282.65%
As 188.979†	0.8	-0.00448	mg/L	0.003270	-0.00448	mg/L	0.003270	72.98%
Ba 233.527†	0.7	-0.00006	mg/L	0.000047	-0.00006	mg/L	0.000047	79.11%
Be 234.861†	51.2	0.00018	mg/L	0.000014	0.00018	mg/L	0.000014	7.67%
B 249.677†	62.5	0.00390	mg/L	0.000559	0.00390	mg/L	0.000559	14.33%
Ca 227.546†	4.7	0.0683	mg/L	0.07847	0.0683	mg/L	0.07847	114.84%
Cd 228.802†	-2.6	-0.00037	mg/L	0.000464	-0.00037	mg/L	0.000464	124.43%
Co 228.616†	-2.8	-0.00050	mg/L	0.000155	-0.00050	mg/L	0.000155	30.90%
Cr 267.716†	66.0	0.00048	mg/L	0.000108	0.00048	mg/L	0.000108	22.41%
Cu 327.393†	-116.7	-0.00044	mg/L	0.001532	-0.00044	mg/L	0.001532	346.55%
Fe 239.562†	1.2	0.0142	mg/L	0.02183	0.0142	mg/L	0.02183	153.21%
Mg 279.077†	-4.9	0.00806	mg/L	0.009685	0.00806	mg/L	0.009685	120.20%
Mn 257.610†	85.8	-0.00152	mg/L	0.000031	-0.00152	mg/L	0.000031	2.03%
Mo 202.031†	-7.2	-0.00084	mg/L	0.000329	-0.00084	mg/L	0.000329	39.27%
Ni 231.604†	13.0	0.00039	mg/L	0.000216	0.00039	mg/L	0.000216	55.18%
Pb 220.353†	9.2	0.00246	mg/L	0.001627	0.00246	mg/L	0.001627	66.25%
Sb 206.836†	2.0	0.00182	mg/L	0.000936	0.00182	mg/L	0.000936	51.51%
Se 196.026†	3.2	-0.00143	mg/L	0.005808	-0.00143	mg/L	0.005808	405.55%
Si 251.611†	280.1	-0.00013	mg/L	0.001362	-0.00013	mg/L	0.001362	>999.9%
Sn 189.927†	0.6	-0.00027	mg/L	0.001416	-0.00027	mg/L	0.001416	522.22%
Ti 334.940†	-13.4	-0.00135	mg/L	0.000123	-0.00135	mg/L	0.000123	9.12%
Tl 190.801†	-3.3	-0.00610	mg/L	0.004362	-0.00610	mg/L	0.004362	71.53%
V 290.880†	88.3	0.00041	mg/L	0.001056	0.00041	mg/L	0.001056	257.29%
Zn 206.200†	45.5	0.00335	mg/L	0.000180	0.00335	mg/L	0.000180	5.37%
K 766.490†	-56.5	-0.0319	mg/L	0.05204	-0.0319	mg/L	0.05204	163.01%
Na 589.592†	-163.6	-0.0806	mg/L	0.00431	-0.0806	mg/L	0.00431	5.34%
Sr 407.771†	57.9	0.00164	mg/L	0.000029	0.00164	mg/L	0.000029	1.76%
Li 670.784†	-49.8	-0.00315	mg/L	0.000610	-0.00315	mg/L	0.000610	19.38%

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Sequence No.: 21 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 2:01:24 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	148.0 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	3478039.0						30096.63	0.87%
YRADIAL	275614.2						6819.63	2.47%
Ga 417.206	779593.2						6915.07	0.89%

Approved: January 27, 2012

Kim H. Rhoden

GaRADIAL	42820.4				162.07	0.38%
Ag 328.068†	47647.5	0.389 mg/L	0.0108	0.389 mg/L	0.0108	2.77%
QC value within limits for Ag 328.068 Recovery = 97.34%						
Al 396.153†	30038.6	10.1 mg/L	0.03	10.1 mg/L	0.03	0.28%
QC value within limits for Al 396.153 Recovery = 100.61%						
As 188.979†	207.9	0.390 mg/L	0.0089	0.390 mg/L	0.0089	2.27%
QC value within limits for As 188.979 Recovery = 97.62%						
Ba 233.527†	30615.0	1.01 mg/L	0.022	1.01 mg/L	0.022	2.18%
QC value within limits for Ba 233.527 Recovery = 101.49%						
Be 234.861†	14508.6	0.0493 mg/L	0.00131	0.0493 mg/L	0.00131	2.65%
QC value within limits for Be 234.861 Recovery = 98.59%						
B 249.677†	13772.8	0.494 mg/L	0.0141	0.494 mg/L	0.0141	2.86%
QC value within limits for B 249.677 Recovery = 98.85%						
Ca 227.546†	664.9	9.86 mg/L	0.212	9.86 mg/L	0.212	2.15%
QC value within limits for Ca 227.546 Recovery = 98.62%						
Cd 228.802†	516.8	0.0494 mg/L	0.00056	0.0494 mg/L	0.00056	1.13%
QC value within limits for Cd 228.802 Recovery = 98.82%						
Co 228.616†	1972.7	0.199 mg/L	0.0021	0.199 mg/L	0.0021	1.04%
QC value within limits for Co 228.616 Recovery = 99.38%						
Cr 267.716†	30567.3	0.498 mg/L	0.0127	0.498 mg/L	0.0127	2.55%
QC value within limits for Cr 267.716 Recovery = 99.63%						
Cu 327.393†	46350.0	0.483 mg/L	0.0136	0.483 mg/L	0.0136	2.81%
QC value within limits for Cu 327.393 Recovery = 96.60%						
Fe 239.562†	367.5	3.88 mg/L	0.084	3.88 mg/L	0.084	2.18%
QC value within limits for Fe 239.562 Recovery = 96.88%						
Mg 279.077†	2748.4	9.70 mg/L	0.309	9.70 mg/L	0.309	3.18%
QC value within limits for Mg 279.077 Recovery = 96.95%						
Mn 257.610†	125984.0	0.509 mg/L	0.0152	0.509 mg/L	0.0152	2.99%
QC value within limits for Mn 257.610 Recovery = 101.85%						
Mo 202.031†	6916.6	0.998 mg/L	0.0286	0.998 mg/L	0.0286	2.86%
QC value within limits for Mo 202.031 Recovery = 99.80%						
Ni 231.604†	8388.5	0.501 mg/L	0.0132	0.501 mg/L	0.0132	2.63%
QC value within limits for Ni 231.604 Recovery = 100.20%						
Pb 220.353†	1389.9	0.506 mg/L	0.0047	0.506 mg/L	0.0047	0.93%
QC value within limits for Pb 220.353 Recovery = 101.14%						
Sb 206.836†	950.7	1.18 mg/L	0.011	1.18 mg/L	0.011	0.97%
QC value within limits for Sb 206.836 Recovery = 98.20%						
Se 196.026†	256.5	0.408 mg/L	0.0078	0.408 mg/L	0.0078	1.91%
QC value within limits for Se 196.026 Recovery = 102.01%						
Si 251.611†	87634.9	4.95 mg/L	0.154	4.95 mg/L	0.154	3.10%
QC value within limits for Si 251.611 Recovery = 99.05%						
Sn 189.927†	2567.1	1.01 mg/L	0.012	1.01 mg/L	0.012	1.21%
QC value within limits for Sn 189.927 Recovery = 101.25%						
Ti 334.940†	475741.1	1.02 mg/L	0.001	1.02 mg/L	0.001	0.06%
QC value within limits for Ti 334.940 Recovery = 101.65%						
Tl 190.801†	425.1	0.518 mg/L	0.0053	0.518 mg/L	0.0053	1.02%
QC value within limits for Tl 190.801 Recovery = 103.67%						
V 290.880†	83370.9	1.00 mg/L	0.028	1.00 mg/L	0.028	2.82%
QC value within limits for V 290.880 Recovery = 100.02%						
Zn 206.200†	13366.7	1.00 mg/L	0.028	1.00 mg/L	0.028	2.78%
QC value within limits for Zn 206.200 Recovery = 100.38%						
K 766.490†	80873.6	51.2 mg/L	0.19	51.2 mg/L	0.19	0.37%
QC value within limits for K 766.490 Recovery = 102.49%						
Na 589.592†	456931.1	50.9 mg/L	1.52	50.9 mg/L	1.52	2.99%
QC value within limits for Na 589.592 Recovery = 101.87%						
Sr 407.771†	1126774.8	1.01 mg/L	0.009	1.01 mg/L	0.009	0.92%
QC value within limits for Sr 407.771 Recovery = 101.14%						
Li 670.784†	62187.9	1.03 mg/L	0.005	1.03 mg/L	0.005	0.48%
QC value within limits for Li 670.784 Recovery = 103.42%						

All analyte(s) passed QC.

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Sequence No.: 22 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/26/2012 2:08:20 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	**Back Pressure**	**Flow**
All	148.0 kPa	0.50 L/min

Approved: January 27, 2012

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3510255.7						23952.66	0.68%
YRADIAL	264967.1						150.61	0.06%
Ga 417.206	727995.2						1241.07	0.17%
GaRADIAL	41984.2						724.06	1.72%
Ag 328.068†	-243.0	-0.00132	mg/L	0.000503	-0.00132	mg/L	0.000503	38.09%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	26.5	0.00715	mg/L	0.009480	0.00715	mg/L	0.009480	132.55%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.7	-0.00289	mg/L	0.002831	-0.00289	mg/L	0.002831	97.92%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-6.5	-0.00029	mg/L	0.000098	-0.00029	mg/L	0.000098	33.28%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	39.4	0.00014	mg/L	0.000030	0.00014	mg/L	0.000030	21.10%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	63.4	0.00387	mg/L	0.000173	0.00387	mg/L	0.000173	4.46%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	2.6	0.0379	mg/L	0.07909	0.0379	mg/L	0.07909	208.79%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	1.0	-0.00003	mg/L	0.000167	-0.00003	mg/L	0.000167	623.07%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-0.6	-0.00028	mg/L	0.000313	-0.00028	mg/L	0.000313	113.26%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-0.3	-0.00060	mg/L	0.000152	-0.00060	mg/L	0.000152	25.38%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-215.0	-0.00146	mg/L	0.000709	-0.00146	mg/L	0.000709	48.49%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	0.2	0.00464	mg/L	0.018329	0.00464	mg/L	0.018329	394.81%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	-1.2	0.0213	mg/L	0.01010	0.0213	mg/L	0.01010	47.33%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	23.0	-0.00178	mg/L	0.000026	-0.00178	mg/L	0.000026	1.49%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-9.1	-0.00113	mg/L	0.000271	-0.00113	mg/L	0.000271	23.99%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	5.1	-0.00008	mg/L	0.000135	-0.00008	mg/L	0.000135	168.80%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.2	0.00170	mg/L	0.000323	0.00170	mg/L	0.000323	18.97%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.7	0.00144	mg/L	0.001083	0.00144	mg/L	0.001083	75.30%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	3.2	-0.00142	mg/L	0.001882	-0.00142	mg/L	0.001882	132.18%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-8.9	-0.0166	mg/L	0.00036	-0.0166	mg/L	0.00036	2.16%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	2.8	0.00057	mg/L	0.001209	0.00057	mg/L	0.001209	211.33%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-71.2	-0.00147	mg/L	0.000280	-0.00147	mg/L	0.000280	19.05%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-1.2	-0.00356	mg/L	0.005591	-0.00356	mg/L	0.005591	156.99%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	131.5	0.00093	mg/L	0.000833	0.00093	mg/L	0.000833	89.54%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	2.4	0.00012	mg/L	0.000086	0.00012	mg/L	0.000086	71.42%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-62.9	-0.0361	mg/L	0.02481	-0.0361	mg/L	0.02481	68.80%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	72.2	-0.0546	mg/L	0.01614	-0.0546	mg/L	0.01614	29.53%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	14.7	0.00160	mg/L	0.000073	0.00160	mg/L	0.000073	4.55%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	-22.6	-0.00269	mg/L	0.000566	-0.00269	mg/L	0.000566	21.03%
QC value within limits for Li 670.784 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 34**
Sample ID: L1201053601 **Date Collected: 1/26/2012 2:15:08 PM**

Approved: January 27, 2012

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

Nebulizer Parameters: L1201053601

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3465400.5						63773.62	1.84%
YRADIAL	276363.1						3071.63	1.11%
Ga 417.206	794615.2						20063.82	2.52%
GaRADIAL	44845.0						109.61	0.24%
Ag 328.068†	-121.0	-0.00038	mg/L	0.000214	-0.00038	mg/L	0.000214	55.98%
Al 396.153†	-104.3	-0.0368	mg/L	0.00545	-0.0368	mg/L	0.00545	14.84%
As 188.979†	11.5	0.0154	mg/L	0.00071	0.0154	mg/L	0.00071	4.64%
Ba 233.527†	3672.6	0.121	mg/L	0.0016	0.121	mg/L	0.0016	1.32%
Be 234.861†	88.9	0.00030	mg/L	0.000079	0.00030	mg/L	0.000079	25.90%
B 249.677†	812.2	0.0306	mg/L	0.00088	0.0306	mg/L	0.00088	2.87%
Ca 227.546†	2401.3	35.8	mg/L	0.64	35.8	mg/L	0.64	1.79%
Cd 228.802†	-4.4	-0.00050	mg/L	0.000091	-0.00050	mg/L	0.000091	18.31%
Co 228.616†	-4.0	-0.00066	mg/L	0.000235	-0.00066	mg/L	0.000235	35.71%
Cr 267.716†	252.1	0.00352	mg/L	0.000210	0.00352	mg/L	0.000210	5.98%
Cu 327.393†	-194.1	-0.00123	mg/L	0.000680	-0.00123	mg/L	0.000680	55.06%
Fe 239.562†	5.3	0.0576	mg/L	0.00729	0.0576	mg/L	0.00729	12.64%
Mg 279.077†	1739.8	6.14	mg/L	0.141	6.14	mg/L	0.141	2.29%
Mn 257.610†	475.5	0.00042	mg/L	0.000032	0.00042	mg/L	0.000032	7.65%
Mo 202.031†	15.6	0.00245	mg/L	0.000199	0.00245	mg/L	0.000199	8.11%
Ni 231.604†	-1.2	-0.00050	mg/L	0.000277	-0.00050	mg/L	0.000277	55.89%
Pb 220.353†	4.7	0.00255	mg/L	0.002690	0.00255	mg/L	0.002690	105.45%
Sb 206.836†	8.5	0.00994	mg/L	0.003512	0.00994	mg/L	0.003512	35.33%
Se 196.026†	-5.9	-0.00528	mg/L	0.007180	-0.00528	mg/L	0.007180	136.03%
Si 251.611†	304105.9	17.3	mg/L	0.19	17.3	mg/L	0.19	1.11%
Sn 189.927†	2.2	0.00034	mg/L	0.001967	0.00034	mg/L	0.001967	582.45%
Ti 334.940†	-72.5	-0.00112	mg/L	0.000199	-0.00112	mg/L	0.000199	17.81%
Tl 190.801†	48.0	0.0414	mg/L	0.00380	0.0414	mg/L	0.00380	9.18%
V 290.880†	709.1	0.00837	mg/L	0.001111	0.00837	mg/L	0.001111	13.27%
Zn 206.200†	93.8	0.00699	mg/L	0.000049	0.00699	mg/L	0.000049	0.70%
K 766.490†	2825.7	1.79	mg/L	0.023	1.79	mg/L	0.023	1.28%
Na 589.592†	175937.9	19.4	mg/L	0.32	19.4	mg/L	0.32	1.64%
Sr 407.771†	351964.4	0.317	mg/L	0.0030	0.317	mg/L	0.0030	0.94%
Li 670.784†	673.6	0.00891	mg/L	0.000728	0.00891	mg/L	0.000728	8.17%

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Sequence No.: 24 **Autosampler Location: 35**
Sample ID: L1201053602 **Date Collected: 1/26/2012 2:22:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053602

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053602

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3384719.0						69850.10	2.06%
YRADIAL	270277.7						2591.95	0.96%
Ga 417.206	791790.3						17106.83	2.16%
GaRADIAL	43986.7						800.84	1.82%
Ag 328.068†	-27.3	0.00028	mg/L	0.000456	0.00028	mg/L	0.000456	162.26%
Al 396.153†	-132.2	-0.0461	mg/L	0.00369	-0.0461	mg/L	0.00369	8.02%
As 188.979†	14.5	0.0197	mg/L	0.00685	0.0197	mg/L	0.00685	34.77%
Ba 233.527†	1724.5	0.0569	mg/L	0.00117	0.0569	mg/L	0.00117	2.05%
Be 234.861†	111.8	0.00034	mg/L	0.000015	0.00034	mg/L	0.000015	4.54%

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B 249.677†	2844.6	0.103	mg/L	0.0026	0.103	mg/L	0.0026	2.50%
Ca 227.546†	7101.7	106	mg/L	2.2	106	mg/L	2.2	2.06%
Cd 228.802†	-4.7	-0.00052	mg/L	0.000311	-0.00052	mg/L	0.000311	60.26%
Co 228.616†	-1.4	-0.00038	mg/L	0.000114	-0.00038	mg/L	0.000114	29.90%
Cr 267.716†	143.0	0.00173	mg/L	0.000046	0.00173	mg/L	0.000046	2.66%
Cu 327.393†	-354.1	-0.00289	mg/L	0.000669	-0.00289	mg/L	0.000669	23.17%
Fe 239.562†	21.5	0.228	mg/L	0.0050	0.228	mg/L	0.0050	2.18%
Mg 279.077†	5000.3	17.6	mg/L	0.40	17.6	mg/L	0.40	2.29%
Mn 257.610†	428.5	0.00056	mg/L	0.000081	0.00056	mg/L	0.000081	14.51%
Mo 202.031†	-15.1	-0.00198	mg/L	0.000416	-0.00198	mg/L	0.000416	21.01%
Ni 231.604†	6.8	-0.00004	mg/L	0.000618	-0.00004	mg/L	0.000618	>999.9%
Pb 220.353†	-5.2	0.00230	mg/L	0.004235	0.00230	mg/L	0.004235	184.20%
Sb 206.836†	12.8	0.0152	mg/L	0.00080	0.0152	mg/L	0.00080	5.27%
Se 196.026†	-12.1	0.00583	mg/L	0.006364	0.00583	mg/L	0.006364	109.11%
Si 251.611†	326260.3	18.5	mg/L	0.02	18.5	mg/L	0.02	0.11%
Sn 189.927†	-2.1	-0.00135	mg/L	0.001897	-0.00135	mg/L	0.001897	140.07%
Ti 334.940†	-494.5	-0.00132	mg/L	0.000174	-0.00132	mg/L	0.000174	13.24%
Tl 190.801†	80.3	0.0523	mg/L	0.01019	0.0523	mg/L	0.01019	19.50%
V 290.880†	-2.4	0.00079	mg/L	0.001153	0.00079	mg/L	0.001153	145.39%
Zn 206.200†	99.5	0.00741	mg/L	0.000364	0.00741	mg/L	0.000364	4.91%
K 766.490†	5121.1	3.23	mg/L	0.091	3.23	mg/L	0.091	2.83%
Na 589.592†	390353.0	43.4	mg/L	0.65	43.4	mg/L	0.65	1.51%
Sr 407.771†	792615.6	0.712	mg/L	0.0104	0.712	mg/L	0.0104	1.46%
Li 670.784†	1022.6	0.0147	mg/L	0.00238	0.0147	mg/L	0.00238	16.13%

Sequence No.: 25 **Autosampler Location: 36**
Sample ID: L1201053603 **Date Collected: 1/26/2012 2:28:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053603

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053603

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3400456.9						42216.09	1.24%
YRADIAL	269665.6						6052.97	2.24%
Ga 417.206	797798.2						10038.66	1.26%
GaRADIAL	43946.4						1027.59	2.34%
Ag 328.068†	40.0	0.00083	mg/L	0.000159	0.00083	mg/L	0.000159	19.22%
Al 396.153†	-145.4	-0.0505	mg/L	0.00670	-0.0505	mg/L	0.00670	13.27%
As 188.979†	14.0	0.0187	mg/L	0.00338	0.0187	mg/L	0.00338	18.02%
Ba 233.527†	1749.5	0.0578	mg/L	0.00047	0.0578	mg/L	0.00047	0.81%
Be 234.861†	103.5	0.00031	mg/L	0.000047	0.00031	mg/L	0.000047	15.00%
B 249.677†	2850.9	0.103	mg/L	0.0022	0.103	mg/L	0.0022	2.11%
Ca 227.546†	7206.1	107	mg/L	1.1	107	mg/L	1.1	1.05%
Cd 228.802†	-3.4	-0.00040	mg/L	0.000293	-0.00040	mg/L	0.000293	73.78%
Co 228.616†	-3.4	-0.00058	mg/L	0.000262	-0.00058	mg/L	0.000262	45.39%
Cr 267.716†	117.4	0.00131	mg/L	0.000227	0.00131	mg/L	0.000227	17.35%
Cu 327.393†	-363.5	-0.00299	mg/L	0.000304	-0.00299	mg/L	0.000304	10.18%
Fe 239.562†	20.5	0.217	mg/L	0.0102	0.217	mg/L	0.0102	4.69%
Mg 279.077†	5031.9	17.7	mg/L	0.73	17.7	mg/L	0.73	4.11%
Mn 257.610†	493.1	0.00084	mg/L	0.000013	0.00084	mg/L	0.000013	1.54%
Mo 202.031†	-13.1	-0.00168	mg/L	0.000535	-0.00168	mg/L	0.000535	31.80%
Ni 231.604†	11.5	0.00024	mg/L	0.000682	0.00024	mg/L	0.000682	283.20%
Pb 220.353†	-1.0	0.00390	mg/L	0.000178	0.00390	mg/L	0.000178	4.57%
Sb 206.836†	15.2	0.0182	mg/L	0.00212	0.0182	mg/L	0.00212	11.67%
Se 196.026†	-15.4	0.00109	mg/L	0.005295	0.00109	mg/L	0.005295	487.14%
Si 251.611†	331949.2	18.9	mg/L	0.07	18.9	mg/L	0.07	0.38%
Sn 189.927†	-0.3	-0.00066	mg/L	0.000556	-0.00066	mg/L	0.000556	84.48%
Ti 334.940†	-485.1	-0.00128	mg/L	0.000095	-0.00128	mg/L	0.000095	7.43%
Tl 190.801†	80.1	0.0514	mg/L	0.00298	0.0514	mg/L	0.00298	5.81%
V 290.880†	47.4	0.00140	mg/L	0.000973	0.00140	mg/L	0.000973	69.36%
Zn 206.200†	95.2	0.00708	mg/L	0.000205	0.00708	mg/L	0.000205	2.89%
K 766.490†	5178.5	3.27	mg/L	0.029	3.27	mg/L	0.029	0.90%
Na 589.592†	402693.7	44.8	mg/L	1.85	44.8	mg/L	1.85	4.14%

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Sr 407.771†	814687.1	0.732	mg/L	0.0070	0.732	mg/L	0.0070	0.96%
Li 670.784†	1010.3	0.0145	mg/L	0.00090	0.0145	mg/L	0.00090	6.20%

Sequence No.: 26 **Autosampler Location: 37**
Sample ID: L1201053601 0.1 **Date Collected: 1/26/2012 2:35:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053601 0.1

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053601 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3596164.4						13096.43	0.36%
YRADIAL	275039.4						6470.99	2.35%
Ga 417.206	789424.2						8625.82	1.09%
GaRADIAL	45084.9						1370.04	3.04%
Ag 328.068†	-227.6	-0.00120	mg/L	0.000620	-0.00120	mg/L	0.000620	51.57%
Al 396.153†	23.8	0.00624	mg/L	0.034813	0.00624	mg/L	0.034813	557.86%
As 188.979†	4.8	0.00305	mg/L	0.003649	0.00305	mg/L	0.003649	119.47%
Ba 233.527†	344.8	0.0113	mg/L	0.00018	0.0113	mg/L	0.00018	1.56%
Be 234.861†	102.4	0.00036	mg/L	0.000040	0.00036	mg/L	0.000040	11.14%
B 249.677†	48.4	0.00334	mg/L	0.000435	0.00334	mg/L	0.000435	13.04%
Ca 227.546†	239.3	3.57	mg/L	0.084	3.57	mg/L	0.084	2.35%
Cd 228.802†	-4.1	-0.00049	mg/L	0.000271	-0.00049	mg/L	0.000271	55.33%
Co 228.616†	-3.2	-0.00054	mg/L	0.000194	-0.00054	mg/L	0.000194	35.79%
Cr 267.716†	-22.1	-0.00096	mg/L	0.000161	-0.00096	mg/L	0.000161	16.88%
Cu 327.393†	-90.7	-0.00017	mg/L	0.000291	-0.00017	mg/L	0.000291	168.31%
Fe 239.562†	-0.2	-0.00050	mg/L	0.009584	-0.00050	mg/L	0.009584	>999.9%
Mg 279.077†	170.8	0.626	mg/L	0.0075	0.626	mg/L	0.0075	1.20%
Mn 257.610†	45.9	-0.00165	mg/L	0.000023	-0.00165	mg/L	0.000023	1.37%
Mo 202.031†	-3.5	-0.00031	mg/L	0.000592	-0.00031	mg/L	0.000592	190.42%
Ni 231.604†	-6.0	-0.00075	mg/L	0.000399	-0.00075	mg/L	0.000399	53.29%
Pb 220.353†	6.0	0.00147	mg/L	0.002245	0.00147	mg/L	0.002245	152.60%
Sb 206.836†	1.8	0.00168	mg/L	0.000872	0.00168	mg/L	0.000872	51.95%
Se 196.026†	2.2	-0.00211	mg/L	0.007714	-0.00211	mg/L	0.007714	365.58%
Si 251.611†	30891.3	1.74	mg/L	0.034	1.74	mg/L	0.034	1.95%
Sn 189.927†	1.1	-0.00009	mg/L	0.001643	-0.00009	mg/L	0.001643	>999.9%
Ti 334.940†	-184.9	-0.00168	mg/L	0.000095	-0.00168	mg/L	0.000095	5.65%
Tl 190.801†	2.5	-0.00050	mg/L	0.001947	-0.00050	mg/L	0.001947	386.18%
V 290.880†	66.0	0.00019	mg/L	0.000622	0.00019	mg/L	0.000622	320.78%
Zn 206.200†	22.2	0.00160	mg/L	0.000120	0.00160	mg/L	0.000120	7.48%
K 766.490†	200.1	0.130	mg/L	0.0344	0.130	mg/L	0.0344	26.42%
Na 589.592†	17192.7	1.83	mg/L	0.039	1.83	mg/L	0.039	2.11%
Sr 407.771†	34423.1	0.0325	mg/L	0.00029	0.0325	mg/L	0.00029	0.88%
Li 670.784†	-37.4	-0.00294	mg/L	0.000512	-0.00294	mg/L	0.000512	17.42%

Sequence No.: 27 **Autosampler Location: 38**
Sample ID: L1201053602 0.1 **Date Collected: 1/26/2012 2:42:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201053602 0.1

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053602 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3570912.5						24151.01	0.68%
YRADIAL	270660.7						2196.43	0.81%
Ga 417.206	794812.7						4272.21	0.54%

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GaRADIAL	44510.8				728.58	1.64%
Ag 328.068†	-99.2	-0.00017 mg/L	0.000273	-0.00017 mg/L	0.000273	165.09%
Al 396.153†	-34.9	-0.0134 mg/L	0.01233	-0.0134 mg/L	0.01233	91.81%
As 188.979†	3.3	0.00012 mg/L	0.003846	0.00012 mg/L	0.003846	>999.9%
Ba 233.527†	161.3	0.00525 mg/L	0.000111	0.00525 mg/L	0.000111	2.11%
Be 234.861†	107.7	0.00037 mg/L	0.000060	0.00037 mg/L	0.000060	16.19%
B 249.677†	246.0	0.0104 mg/L	0.00022	0.0104 mg/L	0.00022	2.12%
Ca 227.546†	687.8	10.3 mg/L	0.16	10.3 mg/L	0.16	1.54%
Cd 228.802†	-5.7	-0.00065 mg/L	0.000287	-0.00065 mg/L	0.000287	43.96%
Co 228.616†	-1.1	-0.00032 mg/L	0.000430	-0.00032 mg/L	0.000430	132.65%
Cr 267.716†	-27.5	-0.00104 mg/L	0.000108	-0.00104 mg/L	0.000108	10.35%
Cu 327.393†	-123.3	-0.00051 mg/L	0.000862	-0.00051 mg/L	0.000862	169.13%
Fe 239.562†	1.0	0.0123 mg/L	0.01951	0.0123 mg/L	0.01951	158.21%
Mg 279.077†	510.8	1.82 mg/L	0.032	1.82 mg/L	0.032	1.78%
Mn 257.610†	17.6	-0.00173 mg/L	0.000012	-0.00173 mg/L	0.000012	0.70%
Mo 202.031†	-6.9	-0.00080 mg/L	0.000201	-0.00080 mg/L	0.000201	24.98%
Ni 231.604†	-3.1	-0.00058 mg/L	0.000054	-0.00058 mg/L	0.000054	9.24%
Pb 220.353†	3.0	0.00071 mg/L	0.000113	0.00071 mg/L	0.000113	16.02%
Sb 206.836†	3.0	0.00315 mg/L	0.002550	0.00315 mg/L	0.002550	80.95%
Se 196.026†	-1.3	-0.00558 mg/L	0.004638	-0.00558 mg/L	0.004638	83.11%
Si 251.611†	34208.2	1.93 mg/L	0.046	1.93 mg/L	0.046	2.37%
Sn 189.927†	-0.6	-0.00075 mg/L	0.000332	-0.00075 mg/L	0.000332	44.32%
Ti 334.940†	-204.8	-0.00165 mg/L	0.000061	-0.00165 mg/L	0.000061	3.69%
Tl 190.801†	15.4	0.0124 mg/L	0.00156	0.0124 mg/L	0.00156	12.58%
V 290.880†	140.2	0.00119 mg/L	0.001952	0.00119 mg/L	0.001952	164.57%
Zn 206.200†	22.4	0.00162 mg/L	0.000064	0.00162 mg/L	0.000064	3.92%
K 766.490†	444.1	0.283 mg/L	0.0331	0.283 mg/L	0.0331	11.69%
Na 589.592†	39377.9	4.28 mg/L	0.047	4.28 mg/L	0.047	1.09%
Sr 407.771†	80062.3	0.0734 mg/L	0.00037	0.0734 mg/L	0.00037	0.51%
Li 670.784†	31.5	-0.00179 mg/L	0.001283	-0.00179 mg/L	0.001283	71.61%

Sequence No.: 28
Sample ID: L1201053603 0.1
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 1/26/2012 2:49:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201053603 0.1

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201053603 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3492669.7						14236.72	0.41%
YRADIAL	277243.3						4700.81	1.70%
Ga 417.206	773604.9						3183.53	0.41%
GaRADIAL	45200.5						237.91	0.53%
Ag 328.068†	-183.9	-0.00085	mg/L	0.000572	-0.00085	mg/L	0.000572	67.00%
Al 396.153†	1.2	-0.00131	mg/L	0.010295	-0.00131	mg/L	0.010295	783.60%
As 188.979†	5.0	0.00335	mg/L	0.002918	0.00335	mg/L	0.002918	87.08%
Ba 233.527†	170.6	0.00556	mg/L	0.000080	0.00556	mg/L	0.000080	1.44%
Be 234.861†	95.0	0.00033	mg/L	0.000037	0.00033	mg/L	0.000037	11.19%
B 249.677†	257.5	0.0108	mg/L	0.00023	0.0108	mg/L	0.00023	2.11%
Ca 227.546†	719.8	10.7	mg/L	0.17	10.7	mg/L	0.17	1.56%
Cd 228.802†	-3.7	-0.00046	mg/L	0.000240	-0.00046	mg/L	0.000240	52.50%
Co 228.616†	-1.3	-0.00034	mg/L	0.000585	-0.00034	mg/L	0.000585	171.41%
Cr 267.716†	-28.6	-0.00106	mg/L	0.000066	-0.00106	mg/L	0.000066	6.19%
Cu 327.393†	-217.7	-0.00149	mg/L	0.000679	-0.00149	mg/L	0.000679	45.57%
Fe 239.562†	0.6	0.00873	mg/L	0.014545	0.00873	mg/L	0.014545	166.52%
Mg 279.077†	509.2	1.82	mg/L	0.049	1.82	mg/L	0.049	2.67%
Mn 257.610†	18.5	-0.00172	mg/L	0.000014	-0.00172	mg/L	0.000014	0.83%
Mo 202.031†	-11.2	-0.00142	mg/L	0.000450	-0.00142	mg/L	0.000450	31.58%
Ni 231.604†	-6.4	-0.00078	mg/L	0.000139	-0.00078	mg/L	0.000139	17.78%
Pb 220.353†	9.9	0.00322	mg/L	0.001534	0.00322	mg/L	0.001534	47.64%
Sb 206.836†	3.2	0.00329	mg/L	0.003092	0.00329	mg/L	0.003092	93.98%
Se 196.026†	1.1	-0.00169	mg/L	0.007394	-0.00169	mg/L	0.007394	436.68%
Si 251.611†	35221.6	1.99	mg/L	0.027	1.99	mg/L	0.027	1.37%
Sn 189.927†	-0.3	-0.00066	mg/L	0.001922	-0.00066	mg/L	0.001922	292.00%

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Ti 334.940†	-118.6	-0.00146 mg/L	0.000208	-0.00146 mg/L	0.000208	14.19%
Tl 190.801†	17.1	0.0143 mg/L	0.00271	0.0143 mg/L	0.00271	18.98%
V 290.880†	159.6	0.00142 mg/L	0.002216	0.00142 mg/L	0.002216	156.24%
Zn 206.200†	26.0	0.00188 mg/L	0.000227	0.00188 mg/L	0.000227	12.05%
K 766.490†	445.8	0.285 mg/L	0.0788	0.285 mg/L	0.0788	27.69%
Na 589.592†	39760.1	4.32 mg/L	0.094	4.32 mg/L	0.094	2.18%
Sr 407.771†	79822.6	0.0732 mg/L	0.00066	0.0732 mg/L	0.00066	0.91%
Li 670.784†	85.9	-0.00088 mg/L	0.001858	-0.00088 mg/L	0.001858	210.03%

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Sequence No.: 29 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 2:56:17 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	148.0 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	3428615.0						44884.58	1.31%
YRADIAL	267408.3						8038.36	3.01%
Ga 417.206	767269.5						8573.31	1.12%
GaRADIAL	42529.7						636.12	1.50%
Ag 328.068†	48405.3	0.396	mg/L	0.0060	0.396	mg/L	0.0060	1.52%
QC value within limits for Ag 328.068 Recovery = 98.88%								
Al 396.153†	30541.7	10.2	mg/L	0.03	10.2	mg/L	0.03	0.26%
QC value within limits for Al 396.153 Recovery = 102.29%								
As 188.979†	209.1	0.393	mg/L	0.0119	0.393	mg/L	0.0119	3.04%
QC value within limits for As 188.979 Recovery = 98.16%								
Ba 233.527†	31160.5	1.03	mg/L	0.015	1.03	mg/L	0.015	1.48%
QC value within limits for Ba 233.527 Recovery = 103.30%								
Be 234.861†	14687.8	0.0499	mg/L	0.00093	0.0499	mg/L	0.00093	1.87%
QC value within limits for Be 234.861 Recovery = 99.79%								
B 249.677†	13925.7	0.500	mg/L	0.0091	0.500	mg/L	0.0091	1.83%
QC value within limits for B 249.677 Recovery = 99.97%								
Ca 227.546†	680.7	10.1	mg/L	0.05	10.1	mg/L	0.05	0.47%
QC value within limits for Ca 227.546 Recovery = 100.97%								
Cd 228.802†	525.3	0.0502	mg/L	0.00069	0.0502	mg/L	0.00069	1.38%
QC value within limits for Cd 228.802 Recovery = 100.44%								
Co 228.616†	1997.2	0.201	mg/L	0.0013	0.201	mg/L	0.0013	0.64%
QC value within limits for Co 228.616 Recovery = 100.61%								
Cr 267.716†	30951.1	0.504	mg/L	0.0069	0.504	mg/L	0.0069	1.36%
QC value within limits for Cr 267.716 Recovery = 100.88%								
Cu 327.393†	47299.3	0.493	mg/L	0.0073	0.493	mg/L	0.0073	1.48%
QC value within limits for Cu 327.393 Recovery = 98.58%								
Fe 239.562†	375.6	3.96	mg/L	0.167	3.96	mg/L	0.167	4.21%
QC value within limits for Fe 239.562 Recovery = 99.01%								
Mg 279.077†	2798.0	9.87	mg/L	0.338	9.87	mg/L	0.338	3.43%
QC value within limits for Mg 279.077 Recovery = 98.70%								
Mn 257.610†	127633.7	0.516	mg/L	0.0074	0.516	mg/L	0.0074	1.43%
QC value within limits for Mn 257.610 Recovery = 103.19%								
Mo 202.031†	7011.0	1.01	mg/L	0.014	1.01	mg/L	0.014	1.41%
QC value within limits for Mo 202.031 Recovery = 101.16%								
Ni 231.604†	8552.9	0.511	mg/L	0.0070	0.511	mg/L	0.0070	1.36%
QC value within limits for Ni 231.604 Recovery = 102.16%								
Pb 220.353†	1413.9	0.514	mg/L	0.0056	0.514	mg/L	0.0056	1.09%
QC value within limits for Pb 220.353 Recovery = 102.89%								
Sb 206.836†	972.6	1.21	mg/L	0.016	1.21	mg/L	0.016	1.35%
QC value within limits for Sb 206.836 Recovery = 100.46%								
Se 196.026†	262.4	0.418	mg/L	0.0029	0.418	mg/L	0.0029	0.69%
QC value within limits for Se 196.026 Recovery = 104.40%								
Si 251.611†	89222.3	5.04	mg/L	0.089	5.04	mg/L	0.089	1.77%
QC value within limits for Si 251.611 Recovery = 100.85%								
Sn 189.927†	2596.2	1.02	mg/L	0.015	1.02	mg/L	0.015	1.48%
QC value within limits for Sn 189.927 Recovery = 102.40%								
Ti 334.940†	485343.4	1.04	mg/L	0.002	1.04	mg/L	0.002	0.18%

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   QC value within limits for Ti 334.940  Recovery = 103.70%
Tl 190.801†              428.2       0.522 mg/L        0.0080       0.522 mg/L        0.0080   1.54%
   QC value within limits for Tl 190.801  Recovery = 104.43%
V 290.880†             84643.6        1.02 mg/L         0.016        1.02 mg/L         0.016   1.56%
   QC value within limits for V 290.880  Recovery = 101.55%
Zn 206.200†            13441.5        1.01 mg/L         0.015        1.01 mg/L         0.015   1.53%
   QC value within limits for Zn 206.200  Recovery = 100.95%
K 766.490†             82414.9        52.2 mg/L          0.28        52.2 mg/L          0.28   0.53%
   QC value within limits for K 766.490  Recovery = 104.43%
Na 589.592†           459308.6        51.2 mg/L          0.89        51.2 mg/L          0.89   1.74%
   QC value within limits for Na 589.592  Recovery = 102.41%
Sr 407.771†          1149165.2        1.03 mg/L         0.006        1.03 mg/L         0.006   0.55%
   QC value within limits for Sr 407.771  Recovery = 103.14%
Li 670.784†            63751.3        1.06 mg/L         0.011        1.06 mg/L         0.011   1.03%
   QC value within limits for Li 670.784  Recovery = 106.03%
All analyte(s) passed QC.

==========================================================================================================
Sequence No.: 30                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 3:03:13 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                     148.0 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             3516197.8                                                      29420.52   0.84%
YRADIAL                269613.8                                                       4427.89   1.64%
Ga 417.206             727834.7                                                      13194.11   1.81%
GaRADIAL                42678.8                                                        838.64   1.97%
Ag 328.068†              -289.1    -0.00169 mg/L      0.000613    -0.00169 mg/L      0.000613  36.14%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               -22.0    -0.00911 mg/L      0.025020    -0.00911 mg/L      0.025020 274.65%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                 2.1    -0.00200 mg/L      0.005018    -0.00200 mg/L      0.005018 250.54%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†                -7.1    -0.00031 mg/L      0.000157    -0.00031 mg/L      0.000157  49.96%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†                52.3     0.00018 mg/L      0.000038     0.00018 mg/L      0.000038  20.87%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                 39.7     0.00313 mg/L      0.000833     0.00313 mg/L      0.000833  26.61%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                 0.7     0.00740 mg/L      0.061257     0.00740 mg/L      0.061257 827.93%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                -0.6    -0.00018 mg/L      0.000216    -0.00018 mg/L      0.000216 122.49%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                 0.7    -0.00014 mg/L      0.000156    -0.00014 mg/L      0.000156 113.66%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                13.1    -0.00038 mg/L      0.000271    -0.00038 mg/L      0.000271  71.22%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -197.9    -0.00128 mg/L      0.000272    -0.00128 mg/L      0.000272  21.19%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                 1.8      0.0208 mg/L       0.01085      0.0208 mg/L       0.01085  52.22%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                -1.3      0.0207 mg/L       0.00294      0.0207 mg/L       0.00294  14.19%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†                19.1    -0.00179 mg/L      0.000017    -0.00179 mg/L      0.000017   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -7.6    -0.00090 mg/L      0.000255    -0.00090 mg/L      0.000255  28.42%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                 2.3    -0.00025 mg/L      0.000198    -0.00025 mg/L      0.000198  80.39%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                 8.3     0.00213 mg/L      0.001925     0.00213 mg/L      0.001925  90.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                 3.1     0.00324 mg/L      0.002790     0.00324 mg/L      0.002790  86.08%
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   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1    -0.00001 mg/L      0.005804    -0.00001 mg/L      0.005804 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -3.7     -0.0163 mg/L       0.00065     -0.0163 mg/L       0.00065   4.01%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.9     0.00023 mg/L      0.000591     0.00023 mg/L      0.000591 259.20%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -110.2    -0.00155 mg/L      0.000132    -0.00155 mg/L      0.000132   8.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.0    -0.00203 mg/L      0.002952    -0.00203 mg/L      0.002952 145.71%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               179.2     0.00150 mg/L      0.000762     0.00150 mg/L      0.000762  50.71%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                3.8     0.00022 mg/L      0.000123     0.00022 mg/L      0.000123  54.87%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                10.8      0.0110 mg/L       0.03391      0.0110 mg/L       0.03391 308.07%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†               -7.4     -0.0634 mg/L       0.02471     -0.0634 mg/L       0.02471  38.96%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†               61.4     0.00164 mg/L      0.000016     0.00164 mg/L      0.000016   1.01%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               16.6    -0.00204 mg/L      0.002183    -0.00204 mg/L      0.002183 107.02%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
```

Approved: January 27, 2012

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Analysis Begun

Start Time: 1/26/2012 3:08:12 PM **Plasma On Time: 1/26/2012 7:39:48 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\THURSDAY1.sif
Batch ID:
Results Data Set: 012612H2R
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 40**
Sample ID: L1201000801 **Date Collected: 1/26/2012 3:08:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201000801

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3500829.5						74021.41	2.11%
YRADIAL	274661.8						4065.57	1.48%
Ga 417.206	734654.2						13980.74	1.90%
GaRADIAL	43670.5						1030.09	2.36%
Ag 328.068†	-392.0	-0.00253	mg/L	0.000411	-0.00253	mg/L	0.000411	16.22%
Al 396.153†	15.2	0.00337	mg/L	0.013439	0.00337	mg/L	0.013439	399.23%
As 188.979†	1.8	-0.00267	mg/L	0.002038	-0.00267	mg/L	0.002038	76.44%
Ba 233.527†	-12.0	-0.00048	mg/L	0.000047	-0.00048	mg/L	0.000047	9.78%
Be 234.861†	54.9	0.00019	mg/L	0.000033	0.00019	mg/L	0.000033	17.22%
B 249.677†	-5.2	0.00148	mg/L	0.000312	0.00148	mg/L	0.000312	21.17%
Ca 227.546†	-0.8	-0.0136	mg/L	0.06619	-0.0136	mg/L	0.06619	486.42%
Cd 228.802†	-1.5	-0.00026	mg/L	0.000271	-0.00026	mg/L	0.000271	104.70%
Co 228.616†	-1.6	-0.00038	mg/L	0.000198	-0.00038	mg/L	0.000198	52.42%
Cr 267.716†	9.4	-0.00044	mg/L	0.000101	-0.00044	mg/L	0.000101	22.76%
Cu 327.393†	-264.3	-0.00197	mg/L	0.000734	-0.00197	mg/L	0.000734	37.20%
Fe 239.562†	0.6	0.00833	mg/L	0.005349	0.00833	mg/L	0.005349	64.21%
Mg 279.077†	-4.9	0.00813	mg/L	0.008338	0.00813	mg/L	0.008338	102.55%
Mn 257.610†	1.4	-0.00186	mg/L	0.000013	-0.00186	mg/L	0.000013	0.71%
Mo 202.031†	-7.4	-0.00087	mg/L	0.000249	-0.00087	mg/L	0.000249	28.63%
Ni 231.604†	6.7	0.00001	mg/L	0.000219	0.00001	mg/L	0.000219	>999.9%
Pb 220.353†	4.0	0.00057	mg/L	0.001424	0.00057	mg/L	0.001424	248.74%
Sb 206.836†	1.6	0.00139	mg/L	0.003148	0.00139	mg/L	0.003148	226.65%
Se 196.026†	4.3	0.00024	mg/L	0.005978	0.00024	mg/L	0.005978	>999.9%
Si 251.611†	-29.3	-0.0177	mg/L	0.00025	-0.0177	mg/L	0.00025	1.40%
Sn 189.927†	2.1	0.00031	mg/L	0.000518	0.00031	mg/L	0.000518	167.50%
Ti 334.940†	-56.9	-0.00144	mg/L	0.000064	-0.00144	mg/L	0.000064	4.47%
Tl 190.801†	-2.0	-0.00442	mg/L	0.001896	-0.00442	mg/L	0.001896	42.94%
V 290.880†	127.9	0.00089	mg/L	0.002121	0.00089	mg/L	0.002121	239.57%
Zn 206.200†	15.8	0.00112	mg/L	0.000156	0.00112	mg/L	0.000156	13.91%
K 766.490†	-143.6	-0.0876	mg/L	0.04469	-0.0876	mg/L	0.04469	51.05%
Na 589.592†	-322.6	-0.0981	mg/L	0.00709	-0.0981	mg/L	0.00709	7.23%
Sr 407.771†	-163.5	0.00144	mg/L	0.000022	0.00144	mg/L	0.000022	1.54%
Li 670.784†	-31.7	-0.00285	mg/L	0.000681	-0.00285	mg/L	0.000681	23.92%

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Sequence No.: 2 **Autosampler Location: 41**
Sample ID: L1201000802 **Date Collected: 1/26/2012 3:15:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201000802

Approved: January 27, 2012

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000802

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3524077.6						99524.15	2.82%
YRADIAL	268320.4						4243.76	1.58%
Ga 417.206	738749.1						17600.36	2.38%
GaRADIAL	42725.3						609.14	1.43%
Ag 328.068†	-339.4	-0.00210	mg/L	0.000477	-0.00210	mg/L	0.000477	22.67%
Al 396.153†	-11.5	-0.00558	mg/L	0.007610	-0.00558	mg/L	0.007610	136.32%
As 188.979†	2.6	-0.00101	mg/L	0.005369	-0.00101	mg/L	0.005369	530.07%
Ba 233.527†	-7.9	-0.00034	mg/L	0.000067	-0.00034	mg/L	0.000067	19.70%
Be 234.861†	62.4	0.00022	mg/L	0.000110	0.00022	mg/L	0.000110	49.87%
B 249.677†	-21.7	0.00088	mg/L	0.000381	0.00088	mg/L	0.000381	43.17%
Ca 227.546†	1.4	0.0194	mg/L	0.01456	0.0194	mg/L	0.01456	74.88%
Cd 228.802†	0.9	-0.00003	mg/L	0.000099	-0.00003	mg/L	0.000099	343.52%
Co 228.616†	-4.3	-0.00065	mg/L	0.000398	-0.00065	mg/L	0.000398	60.81%
Cr 267.716†	14.6	-0.00036	mg/L	0.000342	-0.00036	mg/L	0.000342	95.81%
Cu 327.393†	-209.1	-0.00140	mg/L	0.000376	-0.00140	mg/L	0.000376	26.83%
Fe 239.562†	0.2	0.00462	mg/L	0.012146	0.00462	mg/L	0.012146	262.68%
Mg 279.077†	-3.9	0.0116	mg/L	0.00489	0.0116	mg/L	0.00489	42.05%
Mn 257.610†	9.9	-0.00183	mg/L	0.000016	-0.00183	mg/L	0.000016	0.90%
Mo 202.031†	-7.5	-0.00088	mg/L	0.000187	-0.00088	mg/L	0.000187	21.15%
Ni 231.604†	4.0	-0.00015	mg/L	0.000096	-0.00015	mg/L	0.000096	64.65%
Pb 220.353†	4.6	0.00080	mg/L	0.001190	0.00080	mg/L	0.001190	148.80%
Sb 206.836†	1.4	0.00108	mg/L	0.001726	0.00108	mg/L	0.001726	159.34%
Se 196.026†	3.1	-0.00160	mg/L	0.009813	-0.00160	mg/L	0.009813	614.33%
Si 251.611†	-30.9	-0.0178	mg/L	0.00055	-0.0178	mg/L	0.00055	3.10%
Sn 189.927†	2.4	0.00042	mg/L	0.001722	0.00042	mg/L	0.001722	414.76%
Ti 334.940†	-144.2	-0.00163	mg/L	0.000198	-0.00163	mg/L	0.000198	12.18%
Tl 190.801†	-1.0	-0.00332	mg/L	0.004090	-0.00332	mg/L	0.004090	123.30%
V 290.880†	138.6	0.00101	mg/L	0.001801	0.00101	mg/L	0.001801	177.68%
Zn 206.200†	13.9	0.00098	mg/L	0.000334	0.00098	mg/L	0.000334	33.95%
K 766.490†	-59.8	-0.0340	mg/L	0.03051	-0.0340	mg/L	0.03051	89.61%
Na 589.592†	-398.4	-0.106	mg/L	0.0083	-0.106	mg/L	0.0083	7.81%
Sr 407.771†	-71.4	0.00153	mg/L	0.000095	0.00153	mg/L	0.000095	6.25%
Li 670.784†	-53.4	-0.00321	mg/L	0.001916	-0.00321	mg/L	0.001916	59.78%

Sequence No.: 3
Sample ID: L1201000803
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 1/26/2012 3:21:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201000803

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000803

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3489367.4						114909.89	3.29%
YRADIAL	267921.5						3579.20	1.34%
Ga 417.206	723958.3						23035.47	3.18%
GaRADIAL	42559.9						456.80	1.07%
Ag 328.068†	-379.9	-0.00243	mg/L	0.000607	-0.00243	mg/L	0.000607	24.94%
Al 396.153†	-1.4	-0.00219	mg/L	0.010863	-0.00219	mg/L	0.010863	495.51%
As 188.979†	3.2	0.00013	mg/L	0.004472	0.00013	mg/L	0.004472	>999.9%
Ba 233.527†	-12.2	-0.00048	mg/L	0.000070	-0.00048	mg/L	0.000070	14.61%
Be 234.861†	55.5	0.00020	mg/L	0.000041	0.00020	mg/L	0.000041	20.69%
B 249.677†	-21.9	0.00089	mg/L	0.000350	0.00089	mg/L	0.000350	39.50%
Ca 227.546†	-1.7	-0.0271	mg/L	0.06284	-0.0271	mg/L	0.06284	231.73%
Cd 228.802†	-1.7	-0.00027	mg/L	0.000109	-0.00027	mg/L	0.000109	40.14%
Co 228.616†	-5.4	-0.00077	mg/L	0.000216	-0.00077	mg/L	0.000216	28.16%
Cr 267.716†	10.9	-0.00042	mg/L	0.000188	-0.00042	mg/L	0.000188	45.23%
Cu 327.393†	-256.9	-0.00189	mg/L	0.000783	-0.00189	mg/L	0.000783	41.34%

Approved: January 27, 2012

Fe 239.562†	0.4	0.00609	mg/L	0.010405	0.00609	mg/L	0.010405	170.87%
Mg 279.077†	-2.3	0.0171	mg/L	0.01540	0.0171	mg/L	0.01540	89.95%
Mn 257.610†	-4.2	-0.00189	mg/L	0.000044	-0.00189	mg/L	0.000044	2.34%
Mo 202.031†	-3.9	-0.00037	mg/L	0.000362	-0.00037	mg/L	0.000362	98.76%
Ni 231.604†	1.8	-0.00028	mg/L	0.000337	-0.00028	mg/L	0.000337	119.76%
Pb 220.353†	8.4	0.00214	mg/L	0.001566	0.00214	mg/L	0.001566	73.12%
Sb 206.836†	1.5	0.00123	mg/L	0.001194	0.00123	mg/L	0.001194	97.44%
Se 196.026†	2.3	-0.00295	mg/L	0.002360	-0.00295	mg/L	0.002360	80.01%
Si 251.611†	-24.4	-0.0175	mg/L	0.00093	-0.0175	mg/L	0.00093	5.34%
Sn 189.927†	-0.3	-0.00065	mg/L	0.000610	-0.00065	mg/L	0.000610	93.27%
Ti 334.940†	-115.7	-0.00157	mg/L	0.000165	-0.00157	mg/L	0.000165	10.54%
Tl 190.801†	-0.0	-0.00210	mg/L	0.003702	-0.00210	mg/L	0.003702	176.50%
V 290.880†	236.9	0.00219	mg/L	0.003272	0.00219	mg/L	0.003272	149.11%
Zn 206.200†	15.1	0.00107	mg/L	0.000088	0.00107	mg/L	0.000088	8.22%
K 766.490†	-61.7	-0.0353	mg/L	0.03712	-0.0353	mg/L	0.03712	105.27%
Na 589.592†	-369.8	-0.103	mg/L	0.0205	-0.103	mg/L	0.0205	19.81%
Sr 407.771†	-116.6	0.00148	mg/L	0.000038	0.00148	mg/L	0.000038	2.56%
Li 670.784†	-110.4	-0.00416	mg/L	0.002404	-0.00416	mg/L	0.002404	57.84%

Sequence No.: 4 **Autosampler Location: 43**
Sample ID: L1201000804 **Date Collected: 1/26/2012 3:28:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201000804

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000804

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3490632.9						102560.44	2.94%
YRADIAL	263633.8						6935.90	2.63%
Ga 417.206	722621.1						26925.71	3.73%
GaRADIAL	42063.3						491.79	1.17%
Ag 328.068†	-377.2	-0.00241	mg/L	0.000160	-0.00241	mg/L	0.000160	6.64%
Al 396.153†	-41.4	-0.0156	mg/L	0.00448	-0.0156	mg/L	0.00448	28.69%
As 188.979†	2.0	-0.00226	mg/L	0.003671	-0.00226	mg/L	0.003671	162.50%
Ba 233.527†	-2.1	-0.00015	mg/L	0.000673	-0.00015	mg/L	0.000673	462.38%
Be 234.861†	51.1	0.00018	mg/L	0.000099	0.00018	mg/L	0.000099	54.04%
B 249.677†	-15.1	0.00111	mg/L	0.000344	0.00111	mg/L	0.000344	30.94%
Ca 227.546†	-0.5	-0.00774	mg/L	0.043224	-0.00774	mg/L	0.043224	558.67%
Cd 228.802†	-1.2	-0.00023	mg/L	0.000219	-0.00023	mg/L	0.000219	94.19%
Co 228.616†	-3.8	-0.00060	mg/L	0.000520	-0.00060	mg/L	0.000520	87.16%
Cr 267.716†	12.9	-0.00038	mg/L	0.000089	-0.00038	mg/L	0.000089	23.26%
Cu 327.393†	-272.2	-0.00205	mg/L	0.001068	-0.00205	mg/L	0.001068	52.00%
Fe 239.562†	-0.1	0.00067	mg/L	0.016847	0.00067	mg/L	0.016847	>999.9%
Mg 279.077†	-3.1	0.0145	mg/L	0.00079	0.0145	mg/L	0.00079	5.44%
Mn 257.610†	-3.4	-0.00188	mg/L	0.000031	-0.00188	mg/L	0.000031	1.67%
Mo 202.031†	-6.1	-0.00069	mg/L	0.000280	-0.00069	mg/L	0.000280	40.55%
Ni 231.604†	8.0	0.00010	mg/L	0.000037	0.00010	mg/L	0.000037	38.44%
Pb 220.353†	5.8	0.00123	mg/L	0.000225	0.00123	mg/L	0.000225	18.35%
Sb 206.836†	4.8	0.00527	mg/L	0.003682	0.00527	mg/L	0.003682	69.88%
Se 196.026†	2.0	-0.00342	mg/L	0.001844	-0.00342	mg/L	0.001844	53.89%
Si 251.611†	-33.9	-0.0180	mg/L	0.00177	-0.0180	mg/L	0.00177	9.85%
Sn 189.927†	-1.7	-0.00118	mg/L	0.000543	-0.00118	mg/L	0.000543	45.91%
Ti 334.940†	-130.5	-0.00160	mg/L	0.000207	-0.00160	mg/L	0.000207	12.92%
Tl 190.801†	-3.7	-0.00653	mg/L	0.001982	-0.00653	mg/L	0.001982	30.36%
V 290.880†	285.2	0.00278	mg/L	0.002031	0.00278	mg/L	0.002031	73.19%
Zn 206.200†	25.1	0.00183	mg/L	0.000312	0.00183	mg/L	0.000312	17.06%
K 766.490†	-33.4	-0.0171	mg/L	0.04355	-0.0171	mg/L	0.04355	254.07%
Na 589.592†	-368.8	-0.103	mg/L	0.0071	-0.103	mg/L	0.0071	6.89%
Sr 407.771†	-158.7	0.00145	mg/L	0.000103	0.00145	mg/L	0.000103	7.12%
Li 670.784†	-28.3	-0.00279	mg/L	0.000831	-0.00279	mg/L	0.000831	29.81%

Sequence No.: 5 **Autosampler Location: 44**
Sample ID: L1201000805 **Date Collected: 1/26/2012 3:35:34 PM**

Approved: January 27, 2012

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

Nebulizer Parameters: L1201000805

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000805

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3505174.3						54406.78	1.55%
YRADIAL	270941.3						6888.08	2.54%
Ga 417.206	737408.9						14581.14	1.98%
GaRADIAL	42965.9						425.33	0.99%
Ag 328.068†	-301.4	-0.00179	mg/L	0.000623	-0.00179	mg/L	0.000623	34.73%
Al 396.153†	-5.9	-0.00370	mg/L	0.005550	-0.00370	mg/L	0.005550	149.84%
As 188.979†	1.2	-0.00382	mg/L	0.004154	-0.00382	mg/L	0.004154	108.69%
Ba 233.527†	-3.9	-0.00021	mg/L	0.000229	-0.00021	mg/L	0.000229	110.71%
Be 234.861†	67.7	0.00024	mg/L	0.000088	0.00024	mg/L	0.000088	36.91%
B 249.677†	-30.0	0.00060	mg/L	0.000301	0.00060	mg/L	0.000301	50.01%
Ca 227.546†	-0.9	-0.0147	mg/L	0.03671	-0.0147	mg/L	0.03671	250.05%
Cd 228.802†	-2.9	-0.00040	mg/L	0.000059	-0.00040	mg/L	0.000059	14.70%
Co 228.616†	-5.5	-0.00077	mg/L	0.000312	-0.00077	mg/L	0.000312	40.43%
Cr 267.716†	8.7	-0.00045	mg/L	0.000128	-0.00045	mg/L	0.000128	28.35%
Cu 327.393†	-226.2	-0.00158	mg/L	0.000463	-0.00158	mg/L	0.000463	29.34%
Fe 239.562†	0.4	0.00613	mg/L	0.018252	0.00613	mg/L	0.018252	297.79%
Mg 279.077†	-0.8	0.0227	mg/L	0.01228	0.0227	mg/L	0.01228	54.15%
Mn 257.610†	-7.3	-0.00190	mg/L	0.000022	-0.00190	mg/L	0.000022	1.14%
Mo 202.031†	-9.0	-0.00111	mg/L	0.000293	-0.00111	mg/L	0.000293	26.40%
Ni 231.604†	9.6	0.00019	mg/L	0.000349	0.00019	mg/L	0.000349	185.49%
Pb 220.353†	8.2	0.00207	mg/L	0.001166	0.00207	mg/L	0.001166	56.40%
Sb 206.836†	1.9	0.00169	mg/L	0.002613	0.00169	mg/L	0.002613	154.21%
Se 196.026†	6.8	0.00431	mg/L	0.000520	0.00431	mg/L	0.000520	12.09%
Si 251.611†	-29.9	-0.0178	mg/L	0.00023	-0.0178	mg/L	0.00023	1.28%
Sn 189.927†	-3.7	-0.00200	mg/L	0.001442	-0.00200	mg/L	0.001442	72.20%
Ti 334.940†	-141.1	-0.00162	mg/L	0.000080	-0.00162	mg/L	0.000080	4.94%
Tl 190.801†	-1.5	-0.00387	mg/L	0.003617	-0.00387	mg/L	0.003617	93.42%
V 290.880†	244.9	0.00229	mg/L	0.000217	0.00229	mg/L	0.000217	9.48%
Zn 206.200†	18.2	0.00130	mg/L	0.000227	0.00130	mg/L	0.000227	17.44%
K 766.490†	-115.8	-0.0698	mg/L	0.03681	-0.0698	mg/L	0.03681	52.75%
Na 589.592†	-372.0	-0.104	mg/L	0.0156	-0.104	mg/L	0.0156	15.03%
Sr 407.771†	-184.6	0.00142	mg/L	0.000040	0.00142	mg/L	0.000040	2.80%
Li 670.784†	-19.0	-0.00263	mg/L	0.001070	-0.00263	mg/L	0.001070	40.64%

Sequence No.: 6 **Autosampler Location: 45**
Sample ID: L1201000806 **Date Collected: 1/26/2012 3:42:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201000806

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000806

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3496295.2						34483.56	0.99%
YRADIAL	265962.4						3085.16	1.16%
Ga 417.206	730675.9						9709.99	1.33%
GaRADIAL	42490.1						967.45	2.28%
Ag 328.068†	-386.3	-0.00249	mg/L	0.000699	-0.00249	mg/L	0.000699	28.13%
Al 396.153†	5.0	-0.00005	mg/L	0.012845	-0.00005	mg/L	0.012845	>999.9%
As 188.979†	3.5	0.00072	mg/L	0.003771	0.00072	mg/L	0.003771	524.36%
Ba 233.527†	-11.9	-0.00048	mg/L	0.000094	-0.00048	mg/L	0.000094	19.67%
Be 234.861†	64.4	0.00023	mg/L	0.000059	0.00023	mg/L	0.000059	26.13%

Approved: January 27, 2012

B 249.677†	-31.9	0.00051	mg/L	0.000131	0.00051	mg/L	0.000131	25.90%
Ca 227.546†	-6.0	-0.0899	mg/L	0.04418	-0.0899	mg/L	0.04418	49.15%
Cd 228.802†	-1.7	-0.00028	mg/L	0.000197	-0.00028	mg/L	0.000197	71.50%
Co 228.616†	-2.5	-0.00047	mg/L	0.000739	-0.00047	mg/L	0.000739	158.78%
Cr 267.716†	11.7	-0.00040	mg/L	0.000116	-0.00040	mg/L	0.000116	28.81%
Cu 327.393†	-228.5	-0.00160	mg/L	0.000654	-0.00160	mg/L	0.000654	40.86%
Fe 239.562†	0.0	0.00212	mg/L	0.005571	0.00212	mg/L	0.005571	263.35%
Mg 279.077†	-6.3	0.00329	mg/L	0.010359	0.00329	mg/L	0.010359	314.87%
Mn 257.610†	-11.6	-0.00192	mg/L	0.000015	-0.00192	mg/L	0.000015	0.76%
Mo 202.031†	-10.4	-0.00131	mg/L	0.000661	-0.00131	mg/L	0.000661	50.63%
Ni 231.604†	5.3	-0.00007	mg/L	0.000476	-0.00007	mg/L	0.000476	710.26%
Pb 220.353†	6.9	0.00159	mg/L	0.001091	0.00159	mg/L	0.001091	68.69%
Sb 206.836†	3.8	0.00404	mg/L	0.004226	0.00404	mg/L	0.004226	104.49%
Se 196.026†	1.4	-0.00438	mg/L	0.004320	-0.00438	mg/L	0.004320	98.74%
Si 251.611†	-35.2	-0.0181	mg/L	0.00029	-0.0181	mg/L	0.00029	1.60%
Sn 189.927†	0.3	-0.00042	mg/L	0.001281	-0.00042	mg/L	0.001281	308.50%
Ti 334.940†	-170.5	-0.00168	mg/L	0.000067	-0.00168	mg/L	0.000067	3.99%
Tl 190.801†	-1.5	-0.00386	mg/L	0.001973	-0.00386	mg/L	0.001973	51.15%
V 290.880†	118.4	0.00077	mg/L	0.001912	0.00077	mg/L	0.001912	247.95%
Zn 206.200†	42.7	0.00314	mg/L	0.000233	0.00314	mg/L	0.000233	7.40%
K 766.490†	-57.7	-0.0327	mg/L	0.06306	-0.0327	mg/L	0.06306	192.76%
Na 589.592†	-233.8	-0.0884	mg/L	0.02252	-0.0884	mg/L	0.02252	25.49%
Sr 407.771†	-129.0	0.00147	mg/L	0.000046	0.00147	mg/L	0.000046	3.09%
Li 670.784†	-23.7	-0.00271	mg/L	0.000781	-0.00271	mg/L	0.000781	28.80%

Sequence No.: 7
Sample ID: L1201000807
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 1/26/2012 3:49:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201000807

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201000807

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3447725.9						8666.79	0.25%
YRADIAL	266069.8						7499.59	2.82%
Ga 417.206	712537.2						5720.65	0.80%
GaRADIAL	42429.4						1492.60	3.52%
Ag 328.068†	-367.2	-0.00233	mg/L	0.000419	-0.00233	mg/L	0.000419	17.99%
Al 396.153†	41.4	0.0122	mg/L	0.01493	0.0122	mg/L	0.01493	122.67%
As 188.979†	3.5	0.00077	mg/L	0.004405	0.00077	mg/L	0.004405	571.34%
Ba 233.527†	-15.2	-0.00058	mg/L	0.000115	-0.00058	mg/L	0.000115	19.82%
Be 234.861†	57.8	0.00020	mg/L	0.000014	0.00020	mg/L	0.000014	6.75%
B 249.677†	-39.6	0.00025	mg/L	0.000259	0.00025	mg/L	0.000259	105.45%
Ca 227.546†	-0.2	-0.00353	mg/L	0.104614	-0.00353	mg/L	0.104614	>999.9%
Cd 228.802†	-3.0	-0.00040	mg/L	0.000231	-0.00040	mg/L	0.000231	58.06%
Co 228.616†	-4.0	-0.00062	mg/L	0.000300	-0.00062	mg/L	0.000300	48.21%
Cr 267.716†	19.5	-0.00028	mg/L	0.000275	-0.00028	mg/L	0.000275	99.95%
Cu 327.393†	-294.9	-0.00229	mg/L	0.001461	-0.00229	mg/L	0.001461	63.80%
Fe 239.562†	0.4	0.00638	mg/L	0.010718	0.00638	mg/L	0.010718	168.08%
Mg 279.077†	-1.9	0.0187	mg/L	0.01071	0.0187	mg/L	0.01071	57.12%
Mn 257.610†	-5.9	-0.00189	mg/L	0.000029	-0.00189	mg/L	0.000029	1.51%
Mo 202.031†	-8.0	-0.00096	mg/L	0.000301	-0.00096	mg/L	0.000301	31.46%
Ni 231.604†	1.7	-0.00028	mg/L	0.000221	-0.00028	mg/L	0.000221	79.19%
Pb 220.353†	6.1	0.00131	mg/L	0.002915	0.00131	mg/L	0.002915	222.22%
Sb 206.836†	3.9	0.00426	mg/L	0.002012	0.00426	mg/L	0.002012	47.27%
Se 196.026†	7.8	0.00581	mg/L	0.002300	0.00581	mg/L	0.002300	39.59%
Si 251.611†	-25.1	-0.0175	mg/L	0.00037	-0.0175	mg/L	0.00037	2.12%
Sn 189.927†	-5.5	-0.00271	mg/L	0.000925	-0.00271	mg/L	0.000925	34.09%
Ti 334.940†	-154.8	-0.00165	mg/L	0.000223	-0.00165	mg/L	0.000223	13.51%
Tl 190.801†	-4.1	-0.00698	mg/L	0.001574	-0.00698	mg/L	0.001574	22.56%
V 290.880†	237.7	0.00220	mg/L	0.001403	0.00220	mg/L	0.001403	63.63%
Zn 206.200†	22.8	0.00165	mg/L	0.000312	0.00165	mg/L	0.000312	18.97%
K 766.490†	-126.6	-0.0767	mg/L	0.01512	-0.0767	mg/L	0.01512	19.71%
Na 589.592†	-359.8	-0.102	mg/L	0.0017	-0.102	mg/L	0.0017	1.66%

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Sr 407.771†	-190.0	0.00142 mg/L	0.000047	0.00142 mg/L	0.000047	3.29%
Li 670.784†	-48.8	-0.00313 mg/L	0.001155	-0.00313 mg/L	0.001155	36.91%

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Sequence No.: 8 **Autosampler Location: 47**
Sample ID: IDL **Date Collected: 1/26/2012 3:56:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: IDL

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: IDL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3500594.6						29185.03	0.83%
YRADIAL	267230.3						3872.93	1.45%
Ga 417.206	729695.0						8572.19	1.17%
GaRADIAL	42624.6						283.37	0.66%
Ag 328.068†	-384.0	-0.00247	mg/L	0.000463	-0.00247	mg/L	0.000463	18.76%
Al 396.153†	-24.1	-0.00979	mg/L	0.016705	-0.00979	mg/L	0.016705	170.58%
As 188.979†	3.0	-0.00037	mg/L	0.003480	-0.00037	mg/L	0.003480	938.03%
Ba 233.527†	-14.4	-0.00056	mg/L	0.000135	-0.00056	mg/L	0.000135	24.38%
Be 234.861†	60.4	0.00022	mg/L	0.000064	0.00022	mg/L	0.000064	29.49%
B 249.677†	-29.9	0.00054	mg/L	0.000657	0.00054	mg/L	0.000657	120.78%
Ca 227.546†	0.5	0.00853	mg/L	0.031134	0.00853	mg/L	0.031134	364.82%
Cd 228.802†	-3.0	-0.00040	mg/L	0.000386	-0.00040	mg/L	0.000386	96.76%
Co 228.616†	-2.4	-0.00045	mg/L	0.000107	-0.00045	mg/L	0.000107	23.69%
Cr 267.716†	10.0	-0.00043	mg/L	0.000058	-0.00043	mg/L	0.000058	13.37%
Cu 327.393†	-258.5	-0.00191	mg/L	0.000520	-0.00191	mg/L	0.000520	27.16%
Fe 239.562†	-1.0	-0.00860	mg/L	0.002177	-0.00860	mg/L	0.002177	25.31%
Mg 279.077†	-1.8	0.0191	mg/L	0.00779	0.0191	mg/L	0.00779	40.82%
Mn 257.610†	-17.1	-0.00194	mg/L	0.000011	-0.00194	mg/L	0.000011	0.57%
Mo 202.031†	-10.0	-0.00125	mg/L	0.000312	-0.00125	mg/L	0.000312	25.03%
Ni 231.604†	6.2	-0.00001	mg/L	0.000164	-0.00001	mg/L	0.000164	>999.9%
Pb 220.353†	14.0	0.00418	mg/L	0.001008	0.00418	mg/L	0.001008	24.09%
Sb 206.836†	2.2	0.00213	mg/L	0.002966	0.00213	mg/L	0.002966	139.16%
Se 196.026†	3.8	-0.00057	mg/L	0.003946	-0.00057	mg/L	0.003946	696.71%
Si 251.611†	-34.8	-0.0180	mg/L	0.00069	-0.0180	mg/L	0.00069	3.82%
Sn 189.927†	-3.6	-0.00196	mg/L	0.000780	-0.00196	mg/L	0.000780	39.86%
Ti 334.940†	-201.2	-0.00175	mg/L	0.000153	-0.00175	mg/L	0.000153	8.77%
Tl 190.801†	-4.0	-0.00692	mg/L	0.003918	-0.00692	mg/L	0.003918	56.63%
V 290.880†	137.5	0.00100	mg/L	0.001037	0.00100	mg/L	0.001037	103.38%
Zn 206.200†	19.8	0.00142	mg/L	0.000065	0.00142	mg/L	0.000065	4.57%
K 766.490†	-110.0	-0.0661	mg/L	0.01116	-0.0661	mg/L	0.01116	16.88%
Na 589.592†	-523.6	-0.120	mg/L	0.0101	-0.120	mg/L	0.0101	8.43%
Sr 407.771†	-201.2	0.00141	mg/L	0.000024	0.00141	mg/L	0.000024	1.67%
Li 670.784†	-40.0	-0.00298	mg/L	0.001126	-0.00298	mg/L	0.001126	37.74%

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Sequence No.: 9 **Autosampler Location: 48**
Sample ID: IDL **Date Collected: 1/26/2012 4:02:57 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: IDL

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: IDL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3501570.5						18143.32	0.52%
YRADIAL	261856.0						2856.59	1.09%
Ga 417.206	728575.3						11278.45	1.55%

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GaRADIAL	41922.2					448.97	1.07%
Ag 328.068†	-327.7	-0.00201 mg/L	0.000491	-0.00201 mg/L	0.000491	24.43%
Al 396.153†	-15.3	-0.00684 mg/L	0.023948	-0.00684 mg/L	0.023948	350.26%
As 188.979†	0.4	-0.00536 mg/L	0.003817	-0.00536 mg/L	0.003817	71.28%
Ba 233.527†	-13.0	-0.00051 mg/L	0.000206	-0.00051 mg/L	0.000206	40.53%
Be 234.861†	64.6	0.00023 mg/L	0.000050	0.00023 mg/L	0.000050	21.81%
B 249.677†	-33.6	0.00044 mg/L	0.000128	0.00044 mg/L	0.000128	29.39%
Ca 227.546†	-0.2	-0.00280 mg/L	0.020840	-0.00280 mg/L	0.020840	744.72%
Cd 228.802†	-3.9	-0.00049 mg/L	0.000356	-0.00049 mg/L	0.000356	72.44%
Co 228.616†	-2.9	-0.00051 mg/L	0.000243	-0.00051 mg/L	0.000243	47.88%
Cr 267.716†	15.1	-0.00035 mg/L	0.000093	-0.00035 mg/L	0.000093	26.81%
Cu 327.393†	-198.1	-0.00129 mg/L	0.000953	-0.00129 mg/L	0.000953	74.07%
Fe 239.562†	-0.5	-0.00314 mg/L	0.003399	-0.00314 mg/L	0.003399	108.28%
Mg 279.077†	-4.3	0.0102 mg/L	0.01271	0.0102 mg/L	0.01271	124.63%
Mn 257.610†	0.4	-0.00187 mg/L	0.000041	-0.00187 mg/L	0.000041	2.18%
Mo 202.031†	-11.2	-0.00142 mg/L	0.000491	-0.00142 mg/L	0.000491	34.57%
Ni 231.604†	4.9	-0.00009 mg/L	0.000300	-0.00009 mg/L	0.000300	319.94%
Pb 220.353†	6.1	0.00130 mg/L	0.000652	0.00130 mg/L	0.000652	50.06%
Sb 206.836†	2.8	0.00285 mg/L	0.002278	0.00285 mg/L	0.002278	80.00%
Se 196.026†	3.8	-0.00060 mg/L	0.006495	-0.00060 mg/L	0.006495	>999.9%
Si 251.611†	-44.3	-0.0186 mg/L	0.00036	-0.0186 mg/L	0.00036	1.96%
Sn 189.927†	-2.9	-0.00166 mg/L	0.000265	-0.00166 mg/L	0.000265	15.93%
Ti 334.940†	-89.0	-0.00151 mg/L	0.000129	-0.00151 mg/L	0.000129	8.57%
Tl 190.801†	-2.7	-0.00527 mg/L	0.003919	-0.00527 mg/L	0.003919	74.33%
V 290.880†	189.0	0.00162 mg/L	0.001267	0.00162 mg/L	0.001267	78.12%
Zn 206.200†	17.4	0.00124 mg/L	0.000175	0.00124 mg/L	0.000175	14.05%
K 766.490†	-166.6	-0.102 mg/L	0.0294	-0.102 mg/L	0.0294	28.75%
Na 589.592†	-318.7	-0.0977 mg/L	0.00759	-0.0977 mg/L	0.00759	7.77%
Sr 407.771†	-196.1	0.00142 mg/L	0.000022	0.00142 mg/L	0.000022	1.58%
Li 670.784†	-17.8	-0.00261 mg/L	0.001278	-0.00261 mg/L	0.001278	48.91%

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Sequence No.: 10 **Autosampler Location: 49**
Sample ID: IDL **Date Collected: 1/26/2012 4:09:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: IDL

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: IDL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3456649.4						34633.82	1.00%
YRADIAL	270358.0						1157.11	0.43%
Ga 417.206	724143.4						7957.75	1.10%
GaRADIAL	43042.7						504.01	1.17%
Ag 328.068†	-395.0	-0.00255	mg/L	0.001019	-0.00255	mg/L	0.001019	39.90%
Al 396.153†	42.1	0.0124	mg/L	0.00559	0.0124	mg/L	0.00559	45.07%
As 188.979†	1.6	-0.00298	mg/L	0.003335	-0.00298	mg/L	0.003335	111.74%
Ba 233.527†	-15.0	-0.00057	mg/L	0.000174	-0.00057	mg/L	0.000174	30.22%
Be 234.861†	51.1	0.00018	mg/L	0.000102	0.00018	mg/L	0.000102	56.37%
B 249.677†	-33.3	0.00048	mg/L	0.000245	0.00048	mg/L	0.000245	51.12%
Ca 227.546†	1.8	0.0253	mg/L	0.05829	0.0253	mg/L	0.05829	230.08%
Cd 228.802†	-2.0	-0.00031	mg/L	0.000091	-0.00031	mg/L	0.000091	29.66%
Co 228.616†	-7.6	-0.00099	mg/L	0.000070	-0.00099	mg/L	0.000070	7.05%
Cr 267.716†	19.1	-0.00028	mg/L	0.000124	-0.00028	mg/L	0.000124	43.87%
Cu 327.393†	-298.0	-0.00232	mg/L	0.000302	-0.00232	mg/L	0.000302	13.03%
Fe 239.562†	0.7	0.00914	mg/L	0.030004	0.00914	mg/L	0.030004	328.21%
Mg 279.077†	-2.6	0.0163	mg/L	0.01792	0.0163	mg/L	0.01792	110.18%
Mn 257.610†	-12.3	-0.00192	mg/L	0.000011	-0.00192	mg/L	0.000011	0.56%
Mo 202.031†	-9.5	-0.00118	mg/L	0.000489	-0.00118	mg/L	0.000489	41.48%
Ni 231.604†	5.2	-0.00008	mg/L	0.000273	-0.00008	mg/L	0.000273	357.07%
Pb 220.353†	12.1	0.00350	mg/L	0.001485	0.00350	mg/L	0.001485	42.50%
Sb 206.836†	3.4	0.00353	mg/L	0.001879	0.00353	mg/L	0.001879	53.26%
Se 196.026†	1.5	-0.00431	mg/L	0.005223	-0.00431	mg/L	0.005223	121.12%
Si 251.611†	-40.5	-0.0184	mg/L	0.00048	-0.0184	mg/L	0.00048	2.61%
Sn 189.927†	-2.8	-0.00163	mg/L	0.001143	-0.00163	mg/L	0.001143	70.23%

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Ti 334.940†	-187.0	-0.00172 mg/L	0.000031	-0.00172 mg/L	0.000031	1.79%
Tl 190.801†	-2.2	-0.00470 mg/L	0.003166	-0.00470 mg/L	0.003166	67.43%
V 290.880†	249.7	0.00235 mg/L	0.000515	0.00235 mg/L	0.000515	21.94%
Zn 206.200†	23.2	0.00168 mg/L	0.000140	0.00168 mg/L	0.000140	8.36%
K 766.490†	-112.3	-0.0676 mg/L	0.01875	-0.0676 mg/L	0.01875	27.74%
Na 589.592†	-389.3	-0.105 mg/L	0.0175	-0.105 mg/L	0.0175	16.61%
Sr 407.771†	-114.6	0.00149 mg/L	0.000053	0.00149 mg/L	0.000053	3.54%
Li 670.784†	-33.1	-0.00287 mg/L	0.001891	-0.00287 mg/L	0.001891	65.93%

Sequence No.: 11 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 4:16:34 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	148.0 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	3420746.4						26624.41	0.78%
YRADIAL	263857.4						1877.93	0.71%
Ga 417.206	772961.4						3225.10	0.42%
GaRADIAL	42547.4						1796.66	4.22%
Ag 328.068†	48150.4	0.393	mg/L	0.0113	0.393	mg/L	0.0113	2.86%
QC value within limits for Ag 328.068 Recovery = 98.37%								
Al 396.153†	30374.8	10.2	mg/L	0.05	10.2	mg/L	0.05	0.48%
QC value within limits for Al 396.153 Recovery = 101.73%								
As 188.979†	212.9	0.400	mg/L	0.0017	0.400	mg/L	0.0017	0.42%
QC value within limits for As 188.979 Recovery = 99.99%								
Ba 233.527†	31474.1	1.04	mg/L	0.033	1.04	mg/L	0.033	3.15%
QC value within limits for Ba 233.527 Recovery = 104.34%								
Be 234.861†	14608.5	0.0496	mg/L	0.00145	0.0496	mg/L	0.00145	2.93%
QC value within limits for Be 234.861 Recovery = 99.28%								
B 249.677†	13930.1	0.500	mg/L	0.0173	0.500	mg/L	0.0173	3.46%
QC value within limits for B 249.677 Recovery = 100.01%								
Ca 227.546†	683.5	10.1	mg/L	0.08	10.1	mg/L	0.08	0.79%
QC value within limits for Ca 227.546 Recovery = 101.39%								
Cd 228.802†	522.7	0.0500	mg/L	0.00019	0.0500	mg/L	0.00019	0.37%
QC value within limits for Cd 228.802 Recovery = 99.97%								
Co 228.616†	2020.6	0.204	mg/L	0.0015	0.204	mg/L	0.0015	0.71%
QC value within limits for Co 228.616 Recovery = 101.80%								
Cr 267.716†	31170.6	0.508	mg/L	0.0158	0.508	mg/L	0.0158	3.12%
QC value within limits for Cr 267.716 Recovery = 101.59%								
Cu 327.393†	46910.7	0.489	mg/L	0.0164	0.489	mg/L	0.0164	3.36%
QC value within limits for Cu 327.393 Recovery = 97.77%								
Fe 239.562†	375.8	3.96	mg/L	0.045	3.96	mg/L	0.045	1.15%
QC value within limits for Fe 239.562 Recovery = 99.04%								
Mg 279.077†	2821.0	9.95	mg/L	0.170	9.95	mg/L	0.170	1.71%
QC value within limits for Mg 279.077 Recovery = 99.50%								
Mn 257.610†	127974.0	0.517	mg/L	0.0157	0.517	mg/L	0.0157	3.04%
QC value within limits for Mn 257.610 Recovery = 103.47%								
Mo 202.031†	7041.0	1.02	mg/L	0.035	1.02	mg/L	0.035	3.41%
QC value within limits for Mo 202.031 Recovery = 101.59%								
Ni 231.604†	8600.0	0.514	mg/L	0.0178	0.514	mg/L	0.0178	3.46%
QC value within limits for Ni 231.604 Recovery = 102.72%								
Pb 220.353†	1423.1	0.518	mg/L	0.0029	0.518	mg/L	0.0029	0.57%
QC value within limits for Pb 220.353 Recovery = 103.55%								
Sb 206.836†	970.4	1.20	mg/L	0.008	1.20	mg/L	0.008	0.68%
QC value within limits for Sb 206.836 Recovery = 100.24%								
Se 196.026†	260.1	0.414	mg/L	0.0067	0.414	mg/L	0.0067	1.61%
QC value within limits for Se 196.026 Recovery = 103.47%								
Si 251.611†	88869.8	5.02	mg/L	0.166	5.02	mg/L	0.166	3.31%
QC value within limits for Si 251.611 Recovery = 100.45%								
Sn 189.927†	2630.7	1.04	mg/L	0.006	1.04	mg/L	0.006	0.62%
QC value within limits for Sn 189.927 Recovery = 103.76%								
Ti 334.940†	485102.1	1.04	mg/L	0.001	1.04	mg/L	0.001	0.08%

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   QC value within limits for Ti 334.940  Recovery = 103.65%
Tl 190.801†              434.4       0.530 mg/L        0.0037       0.530 mg/L        0.0037   0.70%
   QC value within limits for Tl 190.801  Recovery = 105.91%
V 290.880†             85037.4        1.02 mg/L         0.033        1.02 mg/L         0.033   3.21%
   QC value within limits for V 290.880  Recovery = 102.02%
Zn 206.200†            13580.7        1.02 mg/L         0.027        1.02 mg/L         0.027   2.68%
   QC value within limits for Zn 206.200  Recovery = 101.99%
K 766.490†             82936.8        52.5 mg/L          0.09        52.5 mg/L          0.09   0.17%
   QC value within limits for K 766.490  Recovery = 105.09%
Na 589.592†           457330.6        51.0 mg/L          1.27        51.0 mg/L          1.27   2.50%
   QC value within limits for Na 589.592  Recovery = 101.96%
Sr 407.771†          1146343.6        1.03 mg/L         0.010        1.03 mg/L         0.010   0.93%
   QC value within limits for Sr 407.771  Recovery = 102.89%
Li 670.784†            64099.8        1.07 mg/L         0.005        1.07 mg/L         0.005   0.49%
   QC value within limits for Li 670.784  Recovery = 106.61%
All analyte(s) passed QC.

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Sequence No.: 12                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 4:23:30 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                     148.0 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            3497915.6                                                    15214.72   0.43%
YRADIAL               264612.2                                                     2868.86   1.08%
Ga 417.206            733762.3                                                     8481.19   1.16%
GaRADIAL               42227.6                                                      921.50   2.18%
Ag 328.068†             -320.6    -0.00195 mg/L      0.000110    -0.00195 mg/L      0.000110   5.66%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               32.1     0.00905 mg/L      0.020257     0.00905 mg/L      0.020257 223.87%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                4.8     0.00324 mg/L      0.004879     0.00324 mg/L      0.004879 150.66%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -9.4    -0.00039 mg/L      0.000174    -0.00039 mg/L      0.000174  44.94%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               63.7     0.00023 mg/L      0.000026     0.00023 mg/L      0.000026  11.55%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                25.3     0.00250 mg/L      0.000409     0.00250 mg/L      0.000409  16.39%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                2.4      0.0358 mg/L       0.05052      0.0358 mg/L       0.05052 141.12%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -2.7    -0.00036 mg/L      0.000156    -0.00036 mg/L      0.000156  43.25%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -6.6    -0.00089 mg/L      0.000316    -0.00089 mg/L      0.000316  35.63%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               22.8    -0.00022 mg/L      0.000201    -0.00022 mg/L      0.000201  90.57%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -227.4    -0.00159 mg/L      0.001012    -0.00159 mg/L      0.001012  63.66%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.6    -0.00387 mg/L      0.000327    -0.00387 mg/L      0.000327   8.46%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               -2.2      0.0178 mg/L       0.00740      0.0178 mg/L       0.00740  41.63%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†                9.3    -0.00183 mg/L      0.000003    -0.00183 mg/L      0.000003   0.17%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -9.2    -0.00114 mg/L      0.000787    -0.00114 mg/L      0.000787  68.96%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               10.0     0.00021 mg/L      0.000084     0.00021 mg/L      0.000084  40.04%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               12.4     0.00360 mg/L      0.002393     0.00360 mg/L      0.002393  66.46%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                1.9     0.00177 mg/L      0.001629     0.00177 mg/L      0.001629  91.91%
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   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.3    -0.00619 mg/L      0.002216    -0.00619 mg/L      0.002216  35.80%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -23.4     -0.0174 mg/L       0.00052     -0.0174 mg/L       0.00052   2.99%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                2.8     0.00056 mg/L      0.000396     0.00056 mg/L      0.000396  70.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†               21.0    -0.00127 mg/L      0.000136    -0.00127 mg/L      0.000136  10.72%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.5    -0.00151 mg/L      0.001457    -0.00151 mg/L      0.001457  96.19%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               233.9     0.00216 mg/L      0.000084     0.00216 mg/L      0.000084   3.88%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                1.7     0.00007 mg/L      0.000190     0.00007 mg/L      0.000190 260.91%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -45.0     -0.0246 mg/L       0.03447     -0.0246 mg/L       0.03447 140.33%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -291.5     -0.0947 mg/L       0.00474     -0.0947 mg/L       0.00474   5.00%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -181.3     0.00143 mg/L      0.000024     0.00143 mg/L      0.000024   1.71%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               93.0    -0.00077 mg/L      0.000540    -0.00077 mg/L      0.000540  70.56%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 13                                    Autosampler Location: 50
Sample ID: PBW 51 WG387972-02                       Date Collected: 1/26/2012 4:30:18 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: PBW 51 WG387972-02
Analyte                 Back Pressure    Flow
All                    147.0 kPa         0.50 L/min

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Mean Data: PBW 51 WG387972-02
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            3607885.7                                                    39668.18   1.10%
YRADIAL               274462.9                                                    11557.99   4.21%
Ga 417.206            768424.0                                                    10339.10   1.35%
GaRADIAL               44137.6                                                     2083.04   4.72%
Ag 328.068†              -378.6    -0.00242 mg/L      0.000178    -0.00242 mg/L      0.000178   7.35%
Al 396.153†                34.1     0.00972 mg/L      0.010906     0.00972 mg/L      0.010906 112.26%
As 188.979†                 1.6    -0.00307 mg/L      0.005793    -0.00307 mg/L      0.005793 188.46%
Ba 233.527†                -7.1    -0.00032 mg/L      0.000035    -0.00032 mg/L      0.000035  11.09%
Be 234.861†               100.5     0.00035 mg/L      0.000023     0.00035 mg/L      0.000023   6.70%
B 249.677†                -23.9     0.00078 mg/L      0.000205     0.00078 mg/L      0.000205  26.45%
Ca 227.546†                 0.8      0.0120 mg/L       0.03597      0.0120 mg/L       0.03597 298.76%
Cd 228.802†                -4.7    -0.00056 mg/L      0.000120    -0.00056 mg/L      0.000120  21.43%
Co 228.616†                -3.8    -0.00060 mg/L      0.000431    -0.00060 mg/L      0.000431  71.73%
Cr 267.716†                16.0    -0.00033 mg/L      0.000117    -0.00033 mg/L      0.000117  35.03%
Cu 327.393†              -162.6    -0.00092 mg/L      0.000968    -0.00092 mg/L      0.000968 105.23%
Fe 239.562†                -0.3    -0.00062 mg/L      0.001416    -0.00062 mg/L      0.001416 230.10%
Mg 279.077†                -3.1      0.0144 mg/L       0.00393      0.0144 mg/L       0.00393  27.26%
Mn 257.610†                -3.6    -0.00188 mg/L      0.000019    -0.00188 mg/L      0.000019   1.01%
Mo 202.031†                -8.2    -0.00099 mg/L      0.000312    -0.00099 mg/L      0.000312  31.70%
Ni 231.604†                 9.9     0.00021 mg/L      0.000147     0.00021 mg/L      0.000147  70.74%
Pb 220.353†                 6.3     0.00140 mg/L      0.001709     0.00140 mg/L      0.001709 122.09%
Sb 206.836†                 3.1     0.00318 mg/L      0.001157     0.00318 mg/L      0.001157  36.42%
Se 196.026†                 3.0    -0.00177 mg/L      0.003908    -0.00177 mg/L      0.003908 220.78%
Si 251.611†                10.7     -0.0154 mg/L       0.00026     -0.0154 mg/L       0.00026   1.70%
Sn 189.927†                -2.3    -0.00143 mg/L      0.001029    -0.00143 mg/L      0.001029  71.76%
Ti 334.940†              -168.8    -0.00168 mg/L      0.000189    -0.00168 mg/L      0.000189  11.24%
Tl 190.801†                -0.4    -0.00250 mg/L      0.002975    -0.00250 mg/L      0.002975 119.07%
V 290.880†                 47.7    -0.00008 mg/L      0.001306    -0.00008 mg/L      0.001306 >999.9%
Zn 206.200†                36.3     0.00266 mg/L      0.000186     0.00266 mg/L      0.000186   6.97%
K 766.490†                -43.3     -0.0235 mg/L       0.00831     -0.0235 mg/L       0.00831  35.39%
Na 589.592†              -310.3     -0.0968 mg/L       0.02321     -0.0968 mg/L       0.02321  23.98%
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Sr 407.771†	-159.9	0.00145 mg/L	0.000039	0.00145 mg/L	0.000039	2.71%
Li 670.784†	29.1	-0.00183 mg/L	0.001642	-0.00183 mg/L	0.001642	89.67%

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Sequence No.: 14 **Autosampler Location: 51**
Sample ID: LCSW 51 WG387972-03 **Date Collected: 1/26/2012 4:37:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 51 WG387972-03

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: LCSW 51 WG387972-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3450108.8						51945.67	1.51%
YRADIAL	269403.1						8056.46	2.99%
Ga 417.206	783990.8						11486.04	1.47%
GaRADIAL	43369.3						1321.01	3.05%
Ag 328.068†	24094.8	0.197	mg/L	0.0031	0.197	mg/L	0.0031	1.57%
Al 396.153†	15337.4	5.14	mg/L	0.200	5.14	mg/L	0.200	3.89%
As 188.979†	105.3	0.195	mg/L	0.0063	0.195	mg/L	0.0063	3.25%
Ba 233.527†	15831.1	0.525	mg/L	0.0063	0.525	mg/L	0.0063	1.20%
Be 234.861†	7320.1	0.0249	mg/L	0.00020	0.0249	mg/L	0.00020	0.81%
B 249.677†	28498.2	1.01	mg/L	0.009	1.01	mg/L	0.009	0.89%
Ca 227.546†	336.3	4.99	mg/L	0.088	4.99	mg/L	0.088	1.76%
Cd 228.802†	255.3	0.0244	mg/L	0.00032	0.0244	mg/L	0.00032	1.33%
Co 228.616†	1020.6	0.103	mg/L	0.0015	0.103	mg/L	0.0015	1.41%
Cr 267.716†	15663.2	0.255	mg/L	0.0049	0.255	mg/L	0.0049	1.92%
Cu 327.393†	23320.0	0.243	mg/L	0.0040	0.243	mg/L	0.0040	1.63%
Fe 239.562†	188.6	1.99	mg/L	0.061	1.99	mg/L	0.061	3.05%
Mg 279.077†	1431.0	5.06	mg/L	0.154	5.06	mg/L	0.154	3.05%
Mn 257.610†	63897.9	0.257	mg/L	0.0039	0.257	mg/L	0.0039	1.51%
Mo 202.031†	3529.5	0.509	mg/L	0.0100	0.509	mg/L	0.0100	1.97%
Ni 231.604†	4332.1	0.259	mg/L	0.0062	0.259	mg/L	0.0062	2.39%
Pb 220.353†	727.4	0.264	mg/L	0.0048	0.264	mg/L	0.0048	1.83%
Sb 206.836†	488.5	0.605	mg/L	0.0107	0.605	mg/L	0.0107	1.76%
Se 196.026†	134.0	0.210	mg/L	0.0073	0.210	mg/L	0.0073	3.46%
Si 251.611†	45778.9	2.58	mg/L	0.028	2.58	mg/L	0.028	1.10%
Sn 189.927†	-9.4	-0.00422	mg/L	0.001927	-0.00422	mg/L	0.001927	45.64%
Ti 334.940†	242505.1	0.517	mg/L	0.0020	0.517	mg/L	0.0020	0.39%
Tl 190.801†	223.1	0.271	mg/L	0.0060	0.271	mg/L	0.0060	2.21%
V 290.880†	42967.3	0.515	mg/L	0.0082	0.515	mg/L	0.0082	1.58%
Zn 206.200†	6895.0	0.518	mg/L	0.0117	0.518	mg/L	0.0117	2.26%
K 766.490†	42078.2	26.8	mg/L	0.08	26.8	mg/L	0.08	0.29%
Na 589.592†	238280.5	26.4	mg/L	0.32	26.4	mg/L	0.32	1.21%
Sr 407.771†	584283.7	0.525	mg/L	0.0033	0.525	mg/L	0.0033	0.63%
Li 670.784†	33355.7	0.554	mg/L	0.0232	0.554	mg/L	0.0232	4.19%

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Sequence No.: 15 **Autosampler Location: 52**
Sample ID: L1201065706 **Date Collected: 1/26/2012 4:44:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065706

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065706

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3434048.9						13494.45	0.39%
YRADIAL	272486.7						1333.46	0.49%
Ga 417.206	801765.5						7309.54	0.91%

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GaRADIAL	44449.3					340.84	0.77%
Ag 328.068†	-185.8	-0.00090	mg/L	0.000322	-0.00090 mg/L	0.000322	35.95%
Al 396.153†	1.8	-0.00113	mg/L	0.003073	-0.00113 mg/L	0.003073	272.52%
As 188.979†	13.3	0.0188	mg/L	0.00418	0.0188 mg/L	0.00418	22.27%
Ba 233.527†	1424.8	0.0470	mg/L	0.00012	0.0470 mg/L	0.00012	0.25%
Be 234.861†	124.9	0.00041	mg/L	0.000062	0.00041 mg/L	0.000062	15.30%
B 249.677†	2221.0	0.0807	mg/L	0.00036	0.0807 mg/L	0.00036	0.44%
Ca 227.546†	3028.1	45.2	mg/L	0.58	45.2 mg/L	0.58	1.29%
Cd 228.802†	-5.6	-0.00060	mg/L	0.000207	-0.00060 mg/L	0.000207	34.51%
Co 228.616†	-1.1	-0.00035	mg/L	0.000127	-0.00035 mg/L	0.000127	36.42%
Cr 267.716†	33.6	-0.00006	mg/L	0.000215	-0.00006 mg/L	0.000215	339.30%
Cu 327.393†	938.3	0.0105	mg/L	0.00024	0.0105 mg/L	0.00024	2.25%
Fe 239.562†	12.2	0.131	mg/L	0.0116	0.131 mg/L	0.0116	8.90%
Mg 279.077†	1797.0	6.35	mg/L	0.107	6.35 mg/L	0.107	1.69%
Mn 257.610†	7149.9	0.0275	mg/L	0.00046	0.0275 mg/L	0.00046	1.67%
Mo 202.031†	-8.9	-0.00109	mg/L	0.000818	-0.00109 mg/L	0.000818	75.26%
Ni 231.604†	11.1	0.00024	mg/L	0.000268	0.00024 mg/L	0.000268	109.85%
Pb 220.353†	0.6	0.00148	mg/L	0.001608	0.00148 mg/L	0.001608	108.58%
Sb 206.836†	9.1	0.0106	mg/L	0.00263	0.0106 mg/L	0.00263	24.82%
Se 196.026†	-10.9	-0.0105	mg/L	0.00484	-0.0105 mg/L	0.00484	46.10%
Si 251.611†	93512.7	5.30	mg/L	0.100	5.30 mg/L	0.100	1.88%
Sn 189.927†	-2.9	-0.00165	mg/L	0.000696	-0.00165 mg/L	0.000696	42.07%
Ti 334.940†	359.8	-0.00010	mg/L	0.000367	-0.00010 mg/L	0.000367	377.68%
Tl 190.801†	45.9	0.0352	mg/L	0.00780	0.0352 mg/L	0.00780	22.13%
V 290.880†	183.7	0.00208	mg/L	0.002194	0.00208 mg/L	0.002194	105.60%
Zn 206.200†	392.9	0.0294	mg/L	0.00029	0.0294 mg/L	0.00029	0.99%
K 766.490†	12615.7	8.01	mg/L	0.095	8.01 mg/L	0.095	1.19%
Na 589.592†	371634.6	41.3	mg/L	0.54	41.3 mg/L	0.54	1.30%
Sr 407.771†	188985.2	0.171	mg/L	0.0008	0.171 mg/L	0.0008	0.48%
Li 670.784†	224.6	0.00143	mg/L	0.000276	0.00143 mg/L	0.000276	19.38%

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Sequence No.: 16 **Autosampler Location: 53**
Sample ID: L1201065901 **Date Collected: 1/26/2012 4:50:54 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065901

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065901

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3376167.0						55679.58	1.65%
YRADIAL	271491.3						2731.24	1.01%
Ga 417.206	805382.8						18217.82	2.26%
GaRADIAL	41942.9						602.04	1.44%
Ag 328.068†	-150.7	-0.00108	mg/L	0.000663	-0.00108	mg/L	0.000663	61.53%
Al 396.153†	3977.8	1.33	mg/L	0.012	1.33	mg/L	0.012	0.92%
As 188.979†	14.4	0.0205	mg/L	0.00249	0.0205	mg/L	0.00249	12.14%
Ba 233.527†	1245.7	0.0411	mg/L	0.00059	0.0411	mg/L	0.00059	1.43%
Be 234.861†	244.2	0.00098	mg/L	0.000171	0.00098	mg/L	0.000171	17.37%
B 249.677†	28502.1	1.01	mg/L	0.006	1.01	mg/L	0.006	0.56%
Ca 227.546†	1994.8	29.7	mg/L	0.59	29.7	mg/L	0.59	2.00%
Cd 228.802†	7.7	0.00065	mg/L	0.000351	0.00065	mg/L	0.000351	54.04%
Co 228.616†	17.1	0.00148	mg/L	0.000110	0.00148	mg/L	0.000110	7.44%
Cr 267.716†	1067.3	0.0159	mg/L	0.00023	0.0159	mg/L	0.00023	1.48%
Cu 327.393†	789.6	0.00891	mg/L	0.001074	0.00891	mg/L	0.001074	12.06%
Fe 239.562†	106.8	1.13	mg/L	0.008	1.13	mg/L	0.008	0.69%
Mg 279.077†	3506.7	12.4	mg/L	0.13	12.4	mg/L	0.13	1.04%
Mn 257.610†	515793.2	2.08	mg/L	0.006	2.08	mg/L	0.006	0.29%
Mo 202.031†	508.8	0.0740	mg/L	0.00200	0.0740	mg/L	0.00200	2.70%
Ni 231.604†	89.1	0.00491	mg/L	0.000194	0.00491	mg/L	0.000194	3.96%
Pb 220.353†	31.4	0.0120	mg/L	0.00084	0.0120	mg/L	0.00084	6.99%
Sb 206.836†	10.9	0.0133	mg/L	0.00183	0.0133	mg/L	0.00183	13.76%
Se 196.026†	-1.5	-0.00080	mg/L	0.011796	-0.00080	mg/L	0.011796	>999.9%
Si 251.611†	107254.2	6.08	mg/L	0.043	6.08	mg/L	0.043	0.71%
Sn 189.927†	-0.1	-0.00056	mg/L	0.000955	-0.00056	mg/L	0.000955	169.14%

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Ti 334.940†	5686.1	0.0111 mg/L	0.00015	0.0111 mg/L	0.00015	1.34%
Tl 190.801†	34.2	0.0304 mg/L	0.00445	0.0304 mg/L	0.00445	14.60%
V 290.880†	509.1	0.00638 mg/L	0.000740	0.00638 mg/L	0.000740	11.60%
Zn 206.200†	1394.8	0.104 mg/L	0.0013	0.104 mg/L	0.0013	1.22%
K 766.490†	181028.0	114 mg/L	2.1	114 mg/L	2.1	1.85%
Na 589.592†	2178848.2	257 mg/L	6.5	257 mg/L	6.5	2.54%
Sr 407.771†	1099244.5	0.987 mg/L	0.0092	0.987 mg/L	0.0092	0.93%
Li 670.784†	57468.5	0.956 mg/L	0.0009	0.956 mg/L	0.0009	0.10%

Sequence No.: 17 **Autosampler Location: 54**
Sample ID: L1201066301 **Date Collected: 1/26/2012 4:57:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201066301

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201066301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3374671.1						34295.20	1.02%
YRADIAL	266006.5						2449.75	0.92%
Ga 417.206	804321.1						14560.83	1.81%
GaRADIAL	42654.0						1186.01	2.78%
Ag 328.068†	-127.7	-0.00063	mg/L	0.000341	-0.00063	mg/L	0.000341	53.91%
Al 396.153†	3763.6	1.26	mg/L	0.024	1.26	mg/L	0.024	1.93%
As 188.979†	11.5	0.0142	mg/L	0.00488	0.0142	mg/L	0.00488	34.28%
Ba 233.527†	886.9	0.0293	mg/L	0.00032	0.0293	mg/L	0.00032	1.08%
Be 234.861†	198.7	0.00099	mg/L	0.000043	0.00099	mg/L	0.000043	4.32%
B 249.677†	9123.1	0.327	mg/L	0.0064	0.327	mg/L	0.0064	1.95%
Ca 227.546†	1475.2	21.9	mg/L	0.48	21.9	mg/L	0.48	2.20%
Cd 228.802†	0.8	-0.00001	mg/L	0.000210	-0.00001	mg/L	0.000210	>999.9%
Co 228.616†	-0.4	-0.00028	mg/L	0.000136	-0.00028	mg/L	0.000136	49.05%
Cr 267.716†	503.3	0.00704	mg/L	0.000087	0.00704	mg/L	0.000087	1.23%
Cu 327.393†	114.1	0.00201	mg/L	0.000602	0.00201	mg/L	0.000602	29.90%
Fe 239.562†	87.9	0.928	mg/L	0.0178	0.928	mg/L	0.0178	1.91%
Mg 279.077†	2049.3	7.23	mg/L	0.099	7.23	mg/L	0.099	1.37%
Mn 257.610†	310563.1	1.25	mg/L	0.004	1.25	mg/L	0.004	0.35%
Mo 202.031†	1570.5	0.227	mg/L	0.0030	0.227	mg/L	0.0030	1.34%
Ni 231.604†	61.7	0.00328	mg/L	0.000097	0.00328	mg/L	0.000097	2.97%
Pb 220.353†	14.4	0.00640	mg/L	0.002260	0.00640	mg/L	0.002260	35.30%
Sb 206.836†	7.5	0.0104	mg/L	0.00267	0.0104	mg/L	0.00267	25.78%
Se 196.026†	-2.6	-0.00469	mg/L	0.005951	-0.00469	mg/L	0.005951	126.97%
Si 251.611†	94797.2	5.37	mg/L	0.095	5.37	mg/L	0.095	1.76%
Sn 189.927†	-5.0	-0.00252	mg/L	0.001073	-0.00252	mg/L	0.001073	42.62%
Ti 334.940†	4009.2	0.00748	mg/L	0.000330	0.00748	mg/L	0.000330	4.41%
Tl 190.801†	28.2	0.0248	mg/L	0.00145	0.0248	mg/L	0.00145	5.84%
V 290.880†	546.2	0.00631	mg/L	0.001475	0.00631	mg/L	0.001475	23.36%
Zn 206.200†	710.6	0.0532	mg/L	0.00065	0.0532	mg/L	0.00065	1.21%
K 766.490†	42824.0	27.1	mg/L	0.15	27.1	mg/L	0.15	0.56%
Na 589.592†	1627973.9	188	mg/L	5.1	188	mg/L	5.1	2.72%
Sr 407.771†	218957.6	0.198	mg/L	0.0013	0.198	mg/L	0.0013	0.65%
Li 670.784†	13706.7	0.226	mg/L	0.0014	0.226	mg/L	0.0014	0.62%

Sequence No.: 18 **Autosampler Location: 55**
Sample ID: L1201067501 **Date Collected: 1/26/2012 5:04:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067501

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Approved: January 27, 2012

Mean Data: L1201067501

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3393630.7						88450.88	2.61%
YRADIAL	266262.4						7685.34	2.89%
Ga 417.206	787064.1						26049.67	3.31%
GaRADIAL	43545.9						1666.68	3.83%
Ag 328.068†	-299.5	-0.00190	mg/L	0.000367	-0.00190	mg/L	0.000367	19.37%
Al 396.153†	2687.4	0.899	mg/L	0.0055	0.899	mg/L	0.0055	0.62%
As 188.979†	26.5	0.0437	mg/L	0.00409	0.0437	mg/L	0.00409	9.37%
Ba 233.527†	3126.4	0.103	mg/L	0.0022	0.103	mg/L	0.0022	2.16%
Be 234.861†	233.9	0.00070	mg/L	0.000062	0.00070	mg/L	0.000062	8.76%
B 249.677†	7140.4	0.258	mg/L	0.0085	0.258	mg/L	0.0085	3.31%
Ca 227.546†	3285.0	48.9	mg/L	1.45	48.9	mg/L	1.45	2.96%
Cd 228.802†	-4.6	-0.00046	mg/L	0.000362	-0.00046	mg/L	0.000362	78.55%
Co 228.616†	6.0	0.00027	mg/L	0.000307	0.00027	mg/L	0.000307	113.12%
Cr 267.716†	350.8	0.00507	mg/L	0.000172	0.00507	mg/L	0.000172	3.40%
Cu 327.393†	203.2	0.00298	mg/L	0.001208	0.00298	mg/L	0.001208	40.48%
Fe 239.562†	89.8	0.948	mg/L	0.0458	0.948	mg/L	0.0458	4.83%
Mg 279.077†	3081.8	10.9	mg/L	0.26	10.9	mg/L	0.26	2.35%
Mn 257.610†	16159.0	0.0637	mg/L	0.00151	0.0637	mg/L	0.00151	2.36%
Mo 202.031†	422.3	0.0611	mg/L	0.00091	0.0611	mg/L	0.00091	1.49%
Ni 231.604†	94.4	0.00522	mg/L	0.000156	0.00522	mg/L	0.000156	2.98%
Pb 220.353†	9.4	0.00515	mg/L	0.000722	0.00515	mg/L	0.000722	14.02%
Sb 206.836†	14.7	0.0181	mg/L	0.00574	0.0181	mg/L	0.00574	31.78%
Se 196.026†	-12.1	-0.0110	mg/L	0.00581	-0.0110	mg/L	0.00581	52.58%
Si 251.611†	83977.4	4.76	mg/L	0.157	4.76	mg/L	0.157	3.29%
Sn 189.927†	-7.7	-0.00355	mg/L	0.000197	-0.00355	mg/L	0.000197	5.55%
Ti 334.940†	17394.2	0.0364	mg/L	0.00256	0.0364	mg/L	0.00256	7.03%
Tl 190.801†	48.2	0.0369	mg/L	0.00268	0.0369	mg/L	0.00268	7.29%
V 290.880†	689.1	0.00842	mg/L	0.000782	0.00842	mg/L	0.000782	9.29%
Zn 206.200†	147.3	0.0110	mg/L	0.00046	0.0110	mg/L	0.00046	4.19%
K 766.490†	5700.3	3.62	mg/L	0.107	3.62	mg/L	0.107	2.96%
Na 589.592†	205917.7	22.8	mg/L	0.26	22.8	mg/L	0.26	1.16%
Sr 407.771†	432701.7	0.389	mg/L	0.0039	0.389	mg/L	0.0039	0.99%
Li 670.784†	3121.2	0.0497	mg/L	0.00233	0.0497	mg/L	0.00233	4.68%

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Sequence No.: 19 **Autosampler Location: 56**
Sample ID: L1201067501PS WG388048-01 **Date Collected: 1/26/2012 5:11:36 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067501PS WG388048-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201067501PS WG388048-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3389965.3						54252.35	1.60%
YRADIAL	273493.5						2935.90	1.07%
Ga 417.206	783511.3						20252.82	2.58%
GaRADIAL	44569.3						825.08	1.85%
Ag 328.068†	23819.4	0.195	mg/L	0.0036	0.195	mg/L	0.0036	1.84%
Al 396.153†	17685.1	5.92	mg/L	0.090	5.92	mg/L	0.090	1.51%
As 188.979†	129.2	0.239	mg/L	0.0032	0.239	mg/L	0.0032	1.35%
Ba 233.527†	18811.8	0.623	mg/L	0.0029	0.623	mg/L	0.0029	0.47%
Be 234.861†	7454.6	0.0253	mg/L	0.00044	0.0253	mg/L	0.00044	1.76%
B 249.677†	35502.4	1.26	mg/L	0.012	1.26	mg/L	0.012	0.95%
Ca 227.546†	3339.8	49.7	mg/L	1.28	49.7	mg/L	1.28	2.57%
Cd 228.802†	252.3	0.0242	mg/L	0.00099	0.0242	mg/L	0.00099	4.09%
Co 228.616†	1005.3	0.101	mg/L	0.0014	0.101	mg/L	0.0014	1.35%
Cr 267.716†	16108.5	0.262	mg/L	0.0018	0.262	mg/L	0.0018	0.69%
Cu 327.393†	23160.4	0.242	mg/L	0.0027	0.242	mg/L	0.0027	1.13%
Fe 239.562†	259.8	2.74	mg/L	0.040	2.74	mg/L	0.040	1.48%
Mg 279.077†	4170.5	14.7	mg/L	0.22	14.7	mg/L	0.22	1.49%
Mn 257.610†	78842.2	0.318	mg/L	0.0019	0.318	mg/L	0.0019	0.60%
Mo 202.031†	4003.8	0.578	mg/L	0.0082	0.578	mg/L	0.0082	1.41%

Approved: January 27, 2012

Ni 231.604†	4403.7	0.263 mg/L	0.0040	0.263 mg/L	0.0040	1.53%
Pb 220.353†	706.9	0.259 mg/L	0.0040	0.259 mg/L	0.0040	1.53%
Sb 206.836†	490.3	0.608 mg/L	0.0144	0.608 mg/L	0.0144	2.37%
Se 196.026†	114.1	0.192 mg/L	0.0059	0.192 mg/L	0.0059	3.06%
Si 251.611†	125389.5	7.11 mg/L	0.072	7.11 mg/L	0.072	1.02%
Sn 189.927†	-9.4	-0.00424 mg/L	0.001753	-0.00424 mg/L	0.001753	41.37%
Ti 334.940†	255527.5	0.546 mg/L	0.0065	0.546 mg/L	0.0065	1.18%
Tl 190.801†	260.0	0.298 mg/L	0.0110	0.298 mg/L	0.0110	3.71%
V 290.880†	44010.4	0.528 mg/L	0.0044	0.528 mg/L	0.0044	0.83%
Zn 206.200†	7030.6	0.528 mg/L	0.0030	0.528 mg/L	0.0030	0.56%
K 766.490†	46845.5	29.8 mg/L	0.20	29.8 mg/L	0.20	0.68%
Na 589.592†	420076.8	46.8 mg/L	1.71	46.8 mg/L	1.71	3.67%
Sr 407.771†	961256.2	0.863 mg/L	0.0122	0.863 mg/L	0.0122	1.42%
Li 670.784†	35361.2	0.587 mg/L	0.0031	0.587 mg/L	0.0031	0.54%

Sequence No.: 20 **Autosampler Location: 57**
Sample ID: L1201067501DL WG388048-02 **Date Collected: 1/26/2012 5:18:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067501DL WG388048-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201067501DL WG388048-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3451528.7						35521.43	1.03%
YRADIAL	263863.8						10692.50	4.05%
Ga 417.206	756186.1						10839.52	1.43%
GaRADIAL	42953.1						1986.61	4.63%
Ag 328.068†	-325.1	-0.00201	mg/L	0.001027	-0.00201	mg/L	0.001027	51.09%
Al 396.153†	622.1	0.207	mg/L	0.0270	0.207	mg/L	0.0270	13.05%
As 188.979†	6.3	0.00587	mg/L	0.003400	0.00587	mg/L	0.003400	57.91%
Ba 233.527†	613.8	0.0202	mg/L	0.00022	0.0202	mg/L	0.00022	1.08%
Be 234.861†	129.5	0.00043	mg/L	0.000031	0.00043	mg/L	0.000031	7.31%
B 249.677†	1522.4	0.0561	mg/L	0.00192	0.0561	mg/L	0.00192	3.42%
Ca 227.546†	670.0	9.98	mg/L	0.094	9.98	mg/L	0.094	0.94%
Cd 228.802†	-5.1	-0.00059	mg/L	0.000136	-0.00059	mg/L	0.000136	23.15%
Co 228.616†	-1.2	-0.00035	mg/L	0.000541	-0.00035	mg/L	0.000541	153.44%
Cr 267.716†	87.1	0.00081	mg/L	0.000187	0.00081	mg/L	0.000187	23.03%
Cu 327.393†	-201.8	-0.00130	mg/L	0.001147	-0.00130	mg/L	0.001147	87.96%
Fe 239.562†	18.5	0.197	mg/L	0.0209	0.197	mg/L	0.0209	10.59%
Mg 279.077†	616.4	2.19	mg/L	0.078	2.19	mg/L	0.078	3.55%
Mn 257.610†	3237.1	0.0113	mg/L	0.00040	0.0113	mg/L	0.00040	3.58%
Mo 202.031†	77.6	0.0114	mg/L	0.00051	0.0114	mg/L	0.00051	4.50%
Ni 231.604†	19.7	0.00079	mg/L	0.000471	0.00079	mg/L	0.000471	59.91%
Pb 220.353†	11.5	0.00381	mg/L	0.000846	0.00381	mg/L	0.000846	22.21%
Sb 206.836†	5.7	0.00651	mg/L	0.001819	0.00651	mg/L	0.001819	27.93%
Se 196.026†	-1.5	-0.00603	mg/L	0.003539	-0.00603	mg/L	0.003539	58.68%
Si 251.611†	17688.5	0.990	mg/L	0.0482	0.990	mg/L	0.0482	4.87%
Sn 189.927†	-3.1	-0.00173	mg/L	0.001875	-0.00173	mg/L	0.001875	108.47%
Ti 334.940†	2385.1	0.00388	mg/L	0.000884	0.00388	mg/L	0.000884	22.76%
Tl 190.801†	10.9	0.00714	mg/L	0.005474	0.00714	mg/L	0.005474	76.66%
V 290.880†	310.7	0.00324	mg/L	0.001629	0.00324	mg/L	0.001629	50.23%
Zn 206.200†	50.7	0.00374	mg/L	0.000126	0.00374	mg/L	0.000126	3.37%
K 766.490†	1134.4	0.724	mg/L	0.0340	0.724	mg/L	0.0340	4.69%
Na 589.592†	41163.5	4.48	mg/L	0.091	4.48	mg/L	0.091	2.03%
Sr 407.771†	86094.8	0.0788	mg/L	0.00148	0.0788	mg/L	0.00148	1.88%
Li 670.784†	580.3	0.00736	mg/L	0.000808	0.00736	mg/L	0.000808	10.98%

Sequence No.: 21 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 5:25:23 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 27, 2012

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3420131.6						32396.32	0.95%
YRADIAL	267121.8						3228.65	1.21%
Ga 417.206	778352.8						8513.63	1.09%
GaRADIAL	42214.2						611.65	1.45%
Ag 328.068†	47770.3	0.390	mg/L	0.0034	0.390	mg/L	0.0034	0.86%
QC value within limits for Ag 328.068 Recovery = 97.59%								
Al 396.153†	30637.9	10.3	mg/L	0.03	10.3	mg/L	0.03	0.30%
QC value within limits for Al 396.153 Recovery = 102.62%								
As 188.979†	212.1	0.399	mg/L	0.0060	0.399	mg/L	0.0060	1.50%
QC value within limits for As 188.979 Recovery = 99.65%								
Ba 233.527†	31709.7	1.05	mg/L	0.016	1.05	mg/L	0.016	1.54%
QC value within limits for Ba 233.527 Recovery = 105.11%								
Be 234.861†	14479.7	0.0492	mg/L	0.00048	0.0492	mg/L	0.00048	0.97%
QC value within limits for Be 234.861 Recovery = 98.44%								
B 249.677†	13915.8	0.499	mg/L	0.0087	0.499	mg/L	0.0087	1.75%
QC value within limits for B 249.677 Recovery = 99.83%								
Ca 227.546†	686.8	10.2	mg/L	0.08	10.2	mg/L	0.08	0.75%
QC value within limits for Ca 227.546 Recovery = 101.92%								
Cd 228.802†	518.7	0.0496	mg/L	0.00059	0.0496	mg/L	0.00059	1.18%
QC value within limits for Cd 228.802 Recovery = 99.22%								
Co 228.616†	2032.1	0.205	mg/L	0.0015	0.205	mg/L	0.0015	0.72%
QC value within limits for Co 228.616 Recovery = 102.37%								
Cr 267.716†	31136.2	0.507	mg/L	0.0086	0.507	mg/L	0.0086	1.69%
QC value within limits for Cr 267.716 Recovery = 101.48%								
Cu 327.393†	46462.7	0.484	mg/L	0.0051	0.484	mg/L	0.0051	1.05%
QC value within limits for Cu 327.393 Recovery = 96.84%								
Fe 239.562†	369.5	3.90	mg/L	0.021	3.90	mg/L	0.021	0.55%
QC value within limits for Fe 239.562 Recovery = 97.39%								
Mg 279.077†	2785.1	9.82	mg/L	0.068	9.82	mg/L	0.068	0.69%
QC value within limits for Mg 279.077 Recovery = 98.24%								
Mn 257.610†	127763.5	0.517	mg/L	0.0075	0.517	mg/L	0.0075	1.45%
QC value within limits for Mn 257.610 Recovery = 103.31%								
Mo 202.031†	7043.0	1.02	mg/L	0.013	1.02	mg/L	0.013	1.32%
QC value within limits for Mo 202.031 Recovery = 101.62%								
Ni 231.604†	8559.4	0.511	mg/L	0.0071	0.511	mg/L	0.0071	1.39%
QC value within limits for Ni 231.604 Recovery = 102.24%								
Pb 220.353†	1436.3	0.523	mg/L	0.0033	0.523	mg/L	0.0033	0.64%
QC value within limits for Pb 220.353 Recovery = 104.51%								
Sb 206.836†	970.9	1.20	mg/L	0.016	1.20	mg/L	0.016	1.32%
QC value within limits for Sb 206.836 Recovery = 100.29%								
Se 196.026†	260.0	0.414	mg/L	0.0026	0.414	mg/L	0.0026	0.63%
QC value within limits for Se 196.026 Recovery = 103.43%								
Si 251.611†	88686.1	5.01	mg/L	0.062	5.01	mg/L	0.062	1.23%
QC value within limits for Si 251.611 Recovery = 100.24%								
Sn 189.927†	2667.6	1.05	mg/L	0.007	1.05	mg/L	0.007	0.64%
QC value within limits for Sn 189.927 Recovery = 105.22%								
Ti 334.940†	489022.6	1.04	mg/L	0.001	1.04	mg/L	0.001	0.10%
QC value within limits for Ti 334.940 Recovery = 104.49%								
Tl 190.801†	432.9	0.528	mg/L	0.0038	0.528	mg/L	0.0038	0.73%
QC value within limits for Tl 190.801 Recovery = 105.59%								
V 290.880†	85161.8	1.02	mg/L	0.015	1.02	mg/L	0.015	1.43%
QC value within limits for V 290.880 Recovery = 102.17%								
Zn 206.200†	13617.7	1.02	mg/L	0.017	1.02	mg/L	0.017	1.63%
QC value within limits for Zn 206.200 Recovery = 102.27%								
K 766.490†	84432.7	53.5	mg/L	0.10	53.5	mg/L	0.10	0.19%
QC value within limits for K 766.490 Recovery = 106.97%								
Na 589.592†	475001.6	53.0	mg/L	1.43	53.0	mg/L	1.43	2.69%
QC value within limits for Na 589.592 Recovery = 105.96%								
Sr 407.771†	1162158.2	1.04	mg/L	0.010	1.04	mg/L	0.010	0.92%
QC value within limits for Sr 407.771 Recovery = 104.31%								
Li 670.784†	65357.2	1.09	mg/L	0.007	1.09	mg/L	0.007	0.61%
QC value within limits for Li 670.784 Recovery = 108.71%								

All analyte(s) passed QC.

Approved: January 27, 2012

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Sequence No.: 22 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/26/2012 5:32:18 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	147.0 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	3444283.3						54681.42	1.59%
YRADIAL	262245.0						1762.35	0.67%
Ga 417.206	716484.8						10880.60	1.52%
GaRADIAL	42333.0						741.94	1.75%
Ag 328.068†	-540.0	-0.00373	mg/L	0.000986	-0.00373	mg/L	0.000986	26.41%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	-47.7	-0.0177	mg/L	0.01628	-0.0177	mg/L	0.01628	91.92%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.7	-0.00275	mg/L	0.001643	-0.00275	mg/L	0.001643	59.69%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-14.3	-0.00055	mg/L	0.000104	-0.00055	mg/L	0.000104	18.91%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	91.4	0.00031	mg/L	0.000067	0.00031	mg/L	0.000067	21.13%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	64.7	0.00399	mg/L	0.000648	0.00399	mg/L	0.000648	16.23%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-2.3	-0.0351	mg/L	0.01677	-0.0351	mg/L	0.01677	47.71%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-4.2	-0.00051	mg/L	0.000421	-0.00051	mg/L	0.000421	82.08%
QC value less than the lower limit for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-5.9	-0.00082	mg/L	0.000507	-0.00082	mg/L	0.000507	62.12%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	29.2	-0.00012	mg/L	0.000282	-0.00012	mg/L	0.000282	240.64%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-445.4	-0.00385	mg/L	0.000154	-0.00385	mg/L	0.000154	4.00%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	0.9	0.0114	mg/L	0.01856	0.0114	mg/L	0.01856	162.94%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	-0.4	0.0240	mg/L	0.00998	0.0240	mg/L	0.00998	41.57%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	19.7	-0.00179	mg/L	0.000010	-0.00179	mg/L	0.000010	0.58%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-12.0	-0.00154	mg/L	0.000477	-0.00154	mg/L	0.000477	30.95%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	6.2	-0.00001	mg/L	0.000097	-0.00001	mg/L	0.000097	654.14%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	15.8	0.00483	mg/L	0.002018	0.00483	mg/L	0.002018	41.80%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	3.7	0.00400	mg/L	0.003646	0.00400	mg/L	0.003646	91.23%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	6.7	0.00404	mg/L	0.005039	0.00404	mg/L	0.005039	124.75%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	56.6	-0.0128	mg/L	0.00051	-0.0128	mg/L	0.00051	4.00%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-0.3	-0.00064	mg/L	0.000393	-0.00064	mg/L	0.000393	61.89%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-191.5	-0.00173	mg/L	0.000150	-0.00173	mg/L	0.000150	8.66%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-2.8	-0.00541	mg/L	0.003747	-0.00541	mg/L	0.003747	69.32%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	286.8	0.00279	mg/L	0.001772	0.00279	mg/L	0.001772	63.40%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-0.3	-0.00008	mg/L	0.000064	-0.00008	mg/L	0.000064	81.07%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-136.0	-0.0827	mg/L	0.03043	-0.0827	mg/L	0.03043	36.79%

Approved: January 27, 2012

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	-156.8	-0.0799 mg/L	0.00568	-0.0799 mg/L	0.00568	7.11%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	-147.1	0.00146 mg/L	0.000019	0.00146 mg/L	0.000019	1.33%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	13.5	-0.00209 mg/L	0.000475	-0.00209 mg/L	0.000475	22.71%

QC value within limits for Li 670.784 Recovery = Not calculated

QC Failed. Continue with analysis.

Sequence No.: 23 **Autosampler Location: 58**
Sample ID: L1201067604 WG387972-01 **Date Collected: 1/26/2012 5:39:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067604 WG387972-01

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201067604 WG387972-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3155037.0						59874.31	1.90%
YRADIAL	253094.3						7609.21	3.01%
Ga 417.206	768303.1						17544.24	2.28%
GaRADIAL	41690.8						905.19	2.17%
Ag 328.068†	-273.9	-0.00162	mg/L	0.000349	-0.00162	mg/L	0.000349	21.55%
Al 396.153†	1088.8	0.363	mg/L	0.0211	0.363	mg/L	0.0211	5.82%
As 188.979†	9.3	0.0108	mg/L	0.00769	0.0108	mg/L	0.00769	71.08%
Ba 233.527†	507.5	0.0167	mg/L	0.00052	0.0167	mg/L	0.00052	3.13%
Be 234.861†	146.7	0.00055	mg/L	0.000049	0.00055	mg/L	0.000049	8.96%
B 249.677†	2865.8	0.103	mg/L	0.0028	0.103	mg/L	0.0028	2.69%
Ca 227.546†	2438.5	36.4	mg/L	0.81	36.4	mg/L	0.81	2.22%
Cd 228.802†	-6.6	-0.00070	mg/L	0.000205	-0.00070	mg/L	0.000205	29.42%
Co 228.616†	281.4	0.0285	mg/L	0.00118	0.0285	mg/L	0.00118	4.14%
Cr 267.716†	61.5	0.00041	mg/L	0.000180	0.00041	mg/L	0.000180	44.07%
Cu 327.393†	-382.9	-0.00453	mg/L	0.000581	-0.00453	mg/L	0.000581	12.81%
Fe 239.562†	5.8	0.0634	mg/L	0.02534	0.0634	mg/L	0.02534	39.97%
Mg 279.077†	2203.6	7.78	mg/L	0.267	7.78	mg/L	0.267	3.43%
Mn 257.610†	1014.6	0.00919	mg/L	0.000163	0.00919	mg/L	0.000163	1.78%
Mo 202.031†	266.4	0.0386	mg/L	0.00042	0.0386	mg/L	0.00042	1.09%
Ni 231.604†	1052.9	0.0625	mg/L	0.00104	0.0625	mg/L	0.00104	1.66%
Pb 220.353†	11.3	0.00514	mg/L	0.002218	0.00514	mg/L	0.002218	43.18%
Sb 206.836†	10.3	0.0124	mg/L	0.00229	0.0124	mg/L	0.00229	18.47%
Se 196.026†	-4.8	-0.00337	mg/L	0.010977	-0.00337	mg/L	0.010977	326.05%
Si 251.611†	31847.9	1.79	mg/L	0.042	1.79	mg/L	0.042	2.31%
Sn 189.927†	7.8	0.00255	mg/L	0.000962	0.00255	mg/L	0.000962	37.74%
Ti 334.940†	-329.1	-0.00166	mg/L	0.000097	-0.00166	mg/L	0.000097	5.87%
Tl 190.801†	39.8	0.0312	mg/L	0.00546	0.0312	mg/L	0.00546	17.49%
V 290.880†	576.0	0.00690	mg/L	0.000510	0.00690	mg/L	0.000510	7.40%
Zn 206.200†	148.8	0.0111	mg/L	0.00015	0.0111	mg/L	0.00015	1.36%
K 766.490†	7029.5	4.49	mg/L	0.169	4.49	mg/L	0.169	3.77%
Na 589.592†	Saturated2							
Sr 407.771†	277453.0	0.250	mg/L	0.0013	0.250	mg/L	0.0013	0.53%
Li 670.784†	515173.8	8.58	mg/L	0.091	8.58	mg/L	0.091	1.07%

Sequence No.: 24 **Autosampler Location: 59**
Sample ID: L1201067604DU WG387972-04 **Date Collected: 1/26/2012 5:46:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067604DU WG387972-04

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Approved: January 27, 2012

Kim H. Rhoden

Mean Data: L1201067604DU WG387972-04

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3128607.0						6662.54	0.21%
YRADIAL	257306.3						3524.13	1.37%
Ga 417.206	755195.4						2166.03	0.29%
GaRADIAL	41928.9						963.23	2.30%
Ag 328.068†	-374.1	-0.00243	mg/L	0.000352	-0.00243	mg/L	0.000352	14.47%
Al 396.153†	1132.9	0.378	mg/L	0.0055	0.378	mg/L	0.0055	1.46%
As 188.979†	9.5	0.0112	mg/L	0.00228	0.0112	mg/L	0.00228	20.43%
Ba 233.527†	519.5	0.0171	mg/L	0.00024	0.0171	mg/L	0.00024	1.41%
Be 234.861†	136.8	0.00052	mg/L	0.000027	0.00052	mg/L	0.000027	5.13%
B 249.677†	3021.6	0.108	mg/L	0.0009	0.108	mg/L	0.0009	0.87%
Ca 227.546†	2510.4	37.5	mg/L	0.33	37.5	mg/L	0.33	0.88%
Cd 228.802†	-4.8	-0.00052	mg/L	0.000167	-0.00052	mg/L	0.000167	31.92%
Co 228.616†	284.9	0.0289	mg/L	0.00041	0.0289	mg/L	0.00041	1.43%
Cr 267.716†	75.8	0.00064	mg/L	0.000125	0.00064	mg/L	0.000125	19.40%
Cu 327.393†	-475.9	-0.00553	mg/L	0.000967	-0.00553	mg/L	0.000967	17.49%
Fe 239.562†	5.5	0.0598	mg/L	0.02014	0.0598	mg/L	0.02014	33.69%
Mg 279.077†	2209.2	7.80	mg/L	0.033	7.80	mg/L	0.033	0.42%
Mn 257.610†	1041.4	0.00948	mg/L	0.000011	0.00948	mg/L	0.000011	0.11%
Mo 202.031†	280.0	0.0406	mg/L	0.00030	0.0406	mg/L	0.00030	0.75%
Ni 231.604†	1087.3	0.0646	mg/L	0.00026	0.0646	mg/L	0.00026	0.40%
Pb 220.353†	12.0	0.00548	mg/L	0.000547	0.00548	mg/L	0.000547	10.00%
Sb 206.836†	8.1	0.00972	mg/L	0.001242	0.00972	mg/L	0.001242	12.78%
Se 196.026†	-8.7	-0.00931	mg/L	0.004956	-0.00931	mg/L	0.004956	53.26%
Si 251.611†	33235.6	1.87	mg/L	0.018	1.87	mg/L	0.018	0.97%
Sn 189.927†	7.3	0.00236	mg/L	0.003323	0.00236	mg/L	0.003323	140.61%
Ti 334.940†	-345.4	-0.00168	mg/L	0.000210	-0.00168	mg/L	0.000210	12.46%
Tl 190.801†	37.2	0.0277	mg/L	0.00457	0.0277	mg/L	0.00457	16.51%
V 290.880†	766.0	0.00918	mg/L	0.001366	0.00918	mg/L	0.001366	14.88%
Zn 206.200†	148.9	0.0111	mg/L	0.00032	0.0111	mg/L	0.00032	2.92%
K 766.490†	7177.1	4.59	mg/L	0.144	4.59	mg/L	0.144	3.15%
Na 589.592†	Saturated2							
Sr 407.771†	280960.3	0.254	mg/L	0.0021	0.254	mg/L	0.0021	0.81%
Li 670.784†	528547.0	8.81	mg/L	0.043	8.81	mg/L	0.043	0.48%

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Sequence No.: 25 **Autosampler Location: 60**
Sample ID: L1201067604S WG387972-05 **Date Collected: 1/26/2012 5:52:55 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201067604S WG387972-05

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201067604S WG387972-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3149176.5						37446.71	1.19%
YRADIAL	253282.2						5194.26	2.05%
Ga 417.206	762824.3						9229.64	1.21%
GaRADIAL	41822.0						1045.14	2.50%
Ag 328.068†	23636.1	0.193	mg/L	0.0021	0.193	mg/L	0.0021	1.07%
Al 396.153†	16348.4	5.47	mg/L	0.118	5.47	mg/L	0.118	2.15%
As 188.979†	111.9	0.206	mg/L	0.0112	0.206	mg/L	0.0112	5.45%
Ba 233.527†	16524.5	0.548	mg/L	0.0107	0.548	mg/L	0.0107	1.96%
Be 234.861†	7044.7	0.0240	mg/L	0.00051	0.0240	mg/L	0.00051	2.12%
B 249.677†	31159.5	1.11	mg/L	0.016	1.11	mg/L	0.016	1.46%
Ca 227.546†	2843.9	42.4	mg/L	0.53	42.4	mg/L	0.53	1.25%
Cd 228.802†	240.8	0.0230	mg/L	0.00027	0.0230	mg/L	0.00027	1.16%
Co 228.616†	1253.4	0.127	mg/L	0.0011	0.127	mg/L	0.0011	0.84%
Cr 267.716†	15436.7	0.251	mg/L	0.0046	0.251	mg/L	0.0046	1.82%
Cu 327.393†	22834.2	0.237	mg/L	0.0027	0.237	mg/L	0.0027	1.15%
Fe 239.562†	190.4	2.01	mg/L	0.027	2.01	mg/L	0.027	1.34%
Mg 279.077†	3628.6	12.8	mg/L	0.17	12.8	mg/L	0.17	1.33%
Mn 257.610†	63042.3	0.261	mg/L	0.0039	0.261	mg/L	0.0039	1.50%
Mo 202.031†	3819.2	0.551	mg/L	0.0077	0.551	mg/L	0.0077	1.39%

Approved: January 27, 2012

Ni 231.604†	5276.5	0.315 mg/L	0.0035	0.315 mg/L	0.0035	1.10%
Pb 220.353†	680.0	0.249 mg/L	0.0039	0.249 mg/L	0.0039	1.56%
Sb 206.836†	460.0	0.570 mg/L	0.0100	0.570 mg/L	0.0100	1.76%
Se 196.026†	118.9	0.197 mg/L	0.0048	0.197 mg/L	0.0048	2.45%
Si 251.611†	77967.9	4.41 mg/L	0.065	4.41 mg/L	0.065	1.46%
Sn 189.927†	-6.4	-0.00307 mg/L	0.001294	-0.00307 mg/L	0.001294	42.18%
Ti 334.940†	242411.9	0.518 mg/L	0.0019	0.518 mg/L	0.0019	0.37%
Tl 190.801†	223.8	0.257 mg/L	0.0088	0.257 mg/L	0.0088	3.43%
V 290.880†	44074.8	0.529 mg/L	0.0075	0.529 mg/L	0.0075	1.42%
Zn 206.200†	7279.8	0.547 mg/L	0.0061	0.547 mg/L	0.0061	1.12%
K 766.490†	49936.0	31.8 mg/L	0.03	31.8 mg/L	0.03	0.10%
Na 589.592†	Saturated2					
Sr 407.771†	860031.6	0.773 mg/L	0.0034	0.773 mg/L	0.0034	0.44%
Li 670.784†	559350.1	9.32 mg/L	0.060	9.32 mg/L	0.060	0.64%

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Sequence No.: 26 **Autosampler Location: 61**
Sample ID: L1201057601 **Date Collected: 1/26/2012 5:59:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201057601

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201057601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3449040.9						48184.97	1.40%
YRADIAL	265087.9						4872.90	1.84%
Ga 417.206	802575.5						10530.54	1.31%
GaRADIAL	43873.6						1295.30	2.95%
Ag 328.068†	-355.0	-0.00229	mg/L	0.000253	-0.00229	mg/L	0.000253	11.05%
Al 396.153†	26.1	0.00697	mg/L	0.014773	0.00697	mg/L	0.014773	211.89%
As 188.979†	10.3	0.0131	mg/L	0.00413	0.0131	mg/L	0.00413	31.42%
Ba 233.527†	4424.7	0.146	mg/L	0.0020	0.146	mg/L	0.0020	1.39%
Be 234.861†	164.3	0.00054	mg/L	0.000057	0.00054	mg/L	0.000057	10.45%
B 249.677†	1019.9	0.0382	mg/L	0.00084	0.0382	mg/L	0.00084	2.20%
Ca 227.546†	2424.6	36.2	mg/L	0.55	36.2	mg/L	0.55	1.51%
Cd 228.802†	-7.3	-0.00077	mg/L	0.000297	-0.00077	mg/L	0.000297	38.50%
Co 228.616†	-10.3	-0.00132	mg/L	0.000319	-0.00132	mg/L	0.000319	24.21%
Cr 267.716†	320.3	0.00463	mg/L	0.000128	0.00463	mg/L	0.000128	2.77%
Cu 327.393†	-318.6	-0.00252	mg/L	0.000609	-0.00252	mg/L	0.000609	24.16%
Fe 239.562†	11.3	0.121	mg/L	0.0040	0.121	mg/L	0.0040	3.28%
Mg 279.077†	1598.3	5.65	mg/L	0.081	5.65	mg/L	0.081	1.44%
Mn 257.610†	1530.8	0.00470	mg/L	0.000076	0.00470	mg/L	0.000076	1.62%
Mo 202.031†	13.2	0.00211	mg/L	0.000256	0.00211	mg/L	0.000256	12.11%
Ni 231.604†	13.2	0.00037	mg/L	0.000111	0.00037	mg/L	0.000111	30.05%
Pb 220.353†	11.0	0.00485	mg/L	0.001754	0.00485	mg/L	0.001754	36.18%
Sb 206.836†	8.7	0.0101	mg/L	0.00161	0.0101	mg/L	0.00161	15.90%
Se 196.026†	-9.2	-0.0104	mg/L	0.00537	-0.0104	mg/L	0.00537	51.49%
Si 251.611†	301220.1	17.1	mg/L	0.11	17.1	mg/L	0.11	0.62%
Sn 189.927†	-8.5	-0.00389	mg/L	0.001927	-0.00389	mg/L	0.001927	49.56%
Ti 334.940†	533.9	0.00018	mg/L	0.000126	0.00018	mg/L	0.000126	68.51%
Tl 190.801†	41.7	0.0337	mg/L	0.00188	0.0337	mg/L	0.00188	5.58%
V 290.880†	851.2	0.0100	mg/L	0.00085	0.0100	mg/L	0.00085	8.50%
Zn 206.200†	156.9	0.0117	mg/L	0.00015	0.0117	mg/L	0.00015	1.32%
K 766.490†	3250.4	2.06	mg/L	0.044	2.06	mg/L	0.044	2.15%
Na 589.592†	179030.5	19.8	mg/L	0.21	19.8	mg/L	0.21	1.08%
Sr 407.771†	366951.7	0.331	mg/L	0.0034	0.331	mg/L	0.0034	1.02%
Li 670.784†	998.6	0.0143	mg/L	0.00165	0.0143	mg/L	0.00165	11.54%

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Sequence No.: 27 **Autosampler Location: 62**
Sample ID: L1201057601PS WG387825-03 **Date Collected: 1/26/2012 6:06:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: January 27, 2012

Nebulizer Parameters: L1201057601PS WG387825-03

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201057601PS WG387825-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3422873.5						22028.35	0.64%
YRADIAL	269093.2						2900.43	1.08%
Ga 417.206	802223.8						6976.10	0.87%
GaRADIAL	44269.0						1014.39	2.29%
Ag 328.068†	23090.0	0.189	mg/L	0.0050	0.189	mg/L	0.0050	2.66%
Al 396.153†	14986.0	5.02	mg/L	0.133	5.02	mg/L	0.133	2.64%
As 188.979†	111.7	0.207	mg/L	0.0071	0.207	mg/L	0.0071	3.42%
Ba 233.527†	19839.6	0.657	mg/L	0.0133	0.657	mg/L	0.0133	2.03%
Be 234.861†	7056.6	0.0240	mg/L	0.00083	0.0240	mg/L	0.00083	3.46%
B 249.677†	29153.3	1.04	mg/L	0.031	1.04	mg/L	0.031	2.96%
Ca 227.546†	2557.3	38.1	mg/L	0.39	38.1	mg/L	0.39	1.03%
Cd 228.802†	237.2	0.0227	mg/L	0.00032	0.0227	mg/L	0.00032	1.43%
Co 228.616†	986.5	0.0992	mg/L	0.00084	0.0992	mg/L	0.00084	0.85%
Cr 267.716†	15695.6	0.255	mg/L	0.0064	0.255	mg/L	0.0064	2.51%
Cu 327.393†	22114.6	0.231	mg/L	0.0073	0.231	mg/L	0.0073	3.14%
Fe 239.562†	191.3	2.02	mg/L	0.042	2.02	mg/L	0.042	2.09%
Mg 279.077†	2809.7	9.91	mg/L	0.050	9.91	mg/L	0.050	0.50%
Mn 257.610†	63892.9	0.258	mg/L	0.0057	0.258	mg/L	0.0057	2.22%
Mo 202.031†	3495.7	0.504	mg/L	0.0128	0.504	mg/L	0.0128	2.54%
Ni 231.604†	4218.2	0.252	mg/L	0.0030	0.252	mg/L	0.0030	1.21%
Pb 220.353†	709.3	0.259	mg/L	0.0023	0.259	mg/L	0.0023	0.89%
Sb 206.836†	475.4	0.589	mg/L	0.0069	0.589	mg/L	0.0069	1.17%
Se 196.026†	118.7	0.195	mg/L	0.0041	0.195	mg/L	0.0041	2.09%
Si 251.611†	314017.0	17.8	mg/L	0.09	17.8	mg/L	0.09	0.48%
Sn 189.927†	1432.1	0.565	mg/L	0.0020	0.565	mg/L	0.0020	0.35%
Ti 334.940†	240999.9	0.515	mg/L	0.0004	0.515	mg/L	0.0004	0.07%
Tl 190.801†	245.4	0.285	mg/L	0.0076	0.285	mg/L	0.0076	2.66%
V 290.880†	43187.6	0.518	mg/L	0.0136	0.518	mg/L	0.0136	2.63%
Zn 206.200†	6981.7	0.524	mg/L	0.0127	0.524	mg/L	0.0127	2.42%
K 766.490†	44777.6	28.5	mg/L	0.06	28.5	mg/L	0.06	0.21%
Na 589.592†	389300.7	43.3	mg/L	0.46	43.3	mg/L	0.46	1.07%
Sr 407.771†	903963.8	0.812	mg/L	0.0042	0.812	mg/L	0.0042	0.51%
Li 670.784†	33147.8	0.550	mg/L	0.0203	0.550	mg/L	0.0203	3.70%

Sequence No.: 28
Sample ID: L1201051906 0.01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 1/26/2012 6:13:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201051906 0.01

Analyte	Back Pressure	Flow
All	146.0 kPa	0.50 L/min

Mean Data: L1201051906 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3533753.3						101514.08	2.87%
YRADIAL	267204.8						2845.43	1.06%
Ga 417.206	777666.6						22225.91	2.86%
GaRADIAL	44366.3						825.17	1.86%
Ag 328.068†	-551.0	-0.00382	mg/L	0.000326	-0.00382	mg/L	0.000326	8.52%
Al 396.153†	7.7	0.00085	mg/L	0.013849	0.00085	mg/L	0.013849	>999.9%
As 188.979†	2.7	-0.00086	mg/L	0.002724	-0.00086	mg/L	0.002724	316.94%
Ba 233.527†	5.6	0.00011	mg/L	0.000133	0.00011	mg/L	0.000133	120.72%
Be 234.861†	162.0	0.00056	mg/L	0.000056	0.00056	mg/L	0.000056	10.05%
B 249.677†	148.4	0.00685	mg/L	0.000776	0.00685	mg/L	0.000776	11.33%
Ca 227.546†	0.4	0.00626	mg/L	0.041496	0.00626	mg/L	0.041496	663.21%
Cd 228.802†	-7.9	-0.00086	mg/L	0.000276	-0.00086	mg/L	0.000276	31.97%
Co 228.616†	-9.7	-0.00120	mg/L	0.000513	-0.00120	mg/L	0.000513	42.68%

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Cr 267.716†	-31.1	-0.00110	mg/L	0.000150	-0.00110	mg/L	0.000150	13.66%
Cu 327.393†	-365.0	-0.00302	mg/L	0.000313	-0.00302	mg/L	0.000313	10.39%
Fe 239.562†	-0.9	-0.00791	mg/L	0.007964	-0.00791	mg/L	0.007964	100.66%
Mg 279.077†	0.2	0.0259	mg/L	0.00491	0.0259	mg/L	0.00491	18.91%
Mn 257.610†	4.8	-0.00182	mg/L	0.000024	-0.00182	mg/L	0.000024	1.34%
Mo 202.031†	-6.3	-0.00071	mg/L	0.000416	-0.00071	mg/L	0.000416	58.41%
Ni 231.604†	-2.3	-0.00052	mg/L	0.000282	-0.00052	mg/L	0.000282	54.07%
Pb 220.353†	15.3	0.00465	mg/L	0.000909	0.00465	mg/L	0.000909	19.56%
Sb 206.836†	0.8	0.00036	mg/L	0.003408	0.00036	mg/L	0.003408	933.88%
Se 196.026†	1.6	-0.00403	mg/L	0.002597	-0.00403	mg/L	0.002597	64.43%
Si 251.611†	620.9	0.0192	mg/L	0.00212	0.0192	mg/L	0.00212	11.03%
Sn 189.927†	-2.7	-0.00157	mg/L	0.000735	-0.00157	mg/L	0.000735	46.73%
Ti 334.940†	-273.9	-0.00190	mg/L	0.000137	-0.00190	mg/L	0.000137	7.19%
Tl 190.801†	-0.6	-0.00282	mg/L	0.003273	-0.00282	mg/L	0.003273	115.89%
V 290.880†	249.5	0.00235	mg/L	0.000176	0.00235	mg/L	0.000176	7.48%
Zn 206.200†	22.5	0.00162	mg/L	0.000348	0.00162	mg/L	0.000348	21.45%
K 766.490†	-64.7	-0.0406	mg/L	0.04044	-0.0406	mg/L	0.04044	99.54%
Na 589.592†	31303.7	3.39	mg/L	0.071	3.39	mg/L	0.071	2.09%
Sr 407.771†	1005.8	0.00249	mg/L	0.000080	0.00249	mg/L	0.000080	3.19%
Li 670.784†	41.2	-0.00163	mg/L	0.000592	-0.00163	mg/L	0.000592	36.28%

Sequence No.: 29 **Autosampler Location: 71**
Sample ID: L1201060401 WG387751-02 **Date Collected: 1/26/2012 6:20:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060401 WG387751-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201060401 WG387751-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3449815.8						53023.67	1.54%
YRADIAL	262230.8						2863.60	1.09%
Ga 417.206	779011.8						22194.97	2.85%
GaRADIAL	43152.0						686.15	1.59%
Ag 328.068†	-478.2	-0.00339	mg/L	0.000442	-0.00339	mg/L	0.000442	13.04%
Al 396.153†	-112.2	-0.0394	mg/L	0.00540	-0.0394	mg/L	0.00540	13.70%
As 188.979†	4.5	0.00250	mg/L	0.006695	0.00250	mg/L	0.006695	267.44%
Ba 233.527†	567.9	0.0186	mg/L	0.00128	0.0186	mg/L	0.00128	6.86%
Be 234.861†	341.7	0.00063	mg/L	0.000137	0.00063	mg/L	0.000137	21.71%
B 249.677†	26562.8	0.953	mg/L	0.0815	0.953	mg/L	0.0815	8.56%
Ca 227.546†	699.6	10.2	mg/L	0.88	10.2	mg/L	0.88	8.65%
Cd 228.802†	-8.1	-0.00087	mg/L	0.000316	-0.00087	mg/L	0.000316	36.47%
Co 228.616†	-6.5	-0.00095	mg/L	0.000415	-0.00095	mg/L	0.000415	43.51%
Cr 267.716†	-23.9	-0.00114	mg/L	0.000183	-0.00114	mg/L	0.000183	16.09%
Cu 327.393†	-379.2	-0.00300	mg/L	0.000538	-0.00300	mg/L	0.000538	17.94%
Fe 239.562†	250.1	2.64	mg/L	0.255	2.64	mg/L	0.255	9.67%
Mg 279.077†	1658.3	5.86	mg/L	0.461	5.86	mg/L	0.461	7.87%
Mn 257.610†	30218.7	0.120	mg/L	0.0099	0.120	mg/L	0.0099	8.20%
Mo 202.031†	-14.1	-0.00168	mg/L	0.000396	-0.00168	mg/L	0.000396	23.58%
Ni 231.604†	-0.3	-0.00042	mg/L	0.000471	-0.00042	mg/L	0.000471	113.38%
Pb 220.353†	13.5	0.00437	mg/L	0.001996	0.00437	mg/L	0.001996	45.69%
Sb 206.836†	4.0	0.00429	mg/L	0.001857	0.00429	mg/L	0.001857	43.29%
Se 196.026†	-2.9	-0.00699	mg/L	0.006595	-0.00699	mg/L	0.006595	94.36%
Si 251.611†	13549.3	0.754	mg/L	0.0775	0.754	mg/L	0.0775	10.28%
Sn 189.927†	-8.3	-0.00381	mg/L	0.001621	-0.00381	mg/L	0.001621	42.58%
Ti 334.940†	-235.2	-0.00172	mg/L	0.000128	-0.00172	mg/L	0.000128	7.45%
Tl 190.801†	12.0	0.00838	mg/L	0.000902	0.00838	mg/L	0.000902	10.77%
V 290.880†	134.4	0.00125	mg/L	0.001633	0.00125	mg/L	0.001633	130.28%
Zn 206.200†	183.4	0.0136	mg/L	0.00088	0.0136	mg/L	0.00088	6.45%
K 766.490†	5896.3	3.75	mg/L	0.324	3.75	mg/L	0.324	8.63%
Na 589.592†	143151.4	15.8	mg/L	0.92	15.8	mg/L	0.92	5.82%
Sr 407.771†	263582.9	0.237	mg/L	0.0169	0.237	mg/L	0.0169	7.13%
Li 670.784†	5806.0	0.0945	mg/L	0.00757	0.0945	mg/L	0.00757	8.02%

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Sequence No.: 30 **Autosampler Location: 72**
Sample ID: L1201060404S WG387751-07 **Date Collected: 1/26/2012 6:27:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060404S WG387751-07

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201060404S WG387751-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3490461.8						48927.18	1.40%
YRADIAL	269347.5						3647.22	1.35%
Ga 417.206	788073.4						12655.74	1.61%
GaRADIAL	43866.4						798.22	1.82%
Ag 328.068†	788.8	0.00695	mg/L	0.000804	0.00695	mg/L	0.000804	11.57%
Al 396.153†	767.4	0.255	mg/L	0.0048	0.255	mg/L	0.0048	1.88%
As 188.979†	8.8	0.0107	mg/L	0.00695	0.0107	mg/L	0.00695	65.27%
Ba 233.527†	1380.4	0.0455	mg/L	0.00110	0.0455	mg/L	0.00110	2.42%
Be 234.861†	737.5	0.00204	mg/L	0.000077	0.00204	mg/L	0.000077	3.78%
B 249.677†	29127.2	1.04	mg/L	0.032	1.04	mg/L	0.032	3.04%
Ca 227.546†	821.1	12.0	mg/L	0.32	12.0	mg/L	0.32	2.70%
Cd 228.802†	3.7	0.00027	mg/L	0.000075	0.00027	mg/L	0.000075	28.08%
Co 228.616†	43.6	0.00411	mg/L	0.000422	0.00411	mg/L	0.000422	10.27%
Cr 267.716†	803.6	0.0124	mg/L	0.00101	0.0124	mg/L	0.00101	8.20%
Cu 327.393†	772.5	0.00897	mg/L	0.000629	0.00897	mg/L	0.000629	7.02%
Fe 239.562†	233.2	2.46	mg/L	0.116	2.46	mg/L	0.116	4.73%
Mg 279.077†	1626.4	5.74	mg/L	0.261	5.74	mg/L	0.261	4.55%
Mn 257.610†	39838.9	0.159	mg/L	0.0060	0.159	mg/L	0.0060	3.76%
Mo 202.031†	163.9	0.0240	mg/L	0.00006	0.0240	mg/L	0.00006	0.24%
Ni 231.604†	217.0	0.0126	mg/L	0.00051	0.0126	mg/L	0.00051	4.04%
Pb 220.353†	45.3	0.0160	mg/L	0.00131	0.0160	mg/L	0.00131	8.16%
Sb 206.836†	28.7	0.0350	mg/L	0.00158	0.0350	mg/L	0.00158	4.53%
Se 196.026†	1.7	0.00083	mg/L	0.003541	0.00083	mg/L	0.003541	427.06%
Si 251.611†	16747.9	0.936	mg/L	0.0349	0.936	mg/L	0.0349	3.73%
Sn 189.927†	-13.3	-0.00578	mg/L	0.001807	-0.00578	mg/L	0.001807	31.23%
Ti 334.940†	11897.9	0.0243	mg/L	0.00097	0.0243	mg/L	0.00097	4.01%
Tl 190.801†	22.7	0.0209	mg/L	0.00578	0.0209	mg/L	0.00578	27.69%
V 290.880†	2289.1	0.0271	mg/L	0.00200	0.0271	mg/L	0.00200	7.39%
Zn 206.200†	412.5	0.0309	mg/L	0.00093	0.0309	mg/L	0.00093	3.02%
K 766.490†	7986.3	5.09	mg/L	0.170	5.09	mg/L	0.170	3.34%
Na 589.592†	146016.2	16.1	mg/L	0.55	16.1	mg/L	0.55	3.41%
Sr 407.771†	294452.0	0.265	mg/L	0.0130	0.265	mg/L	0.0130	4.90%
Li 670.784†	7168.5	0.117	mg/L	0.0045	0.117	mg/L	0.0045	3.81%

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Sequence No.: 31 **Autosampler Location: 73**
Sample ID: L1201060405SD WG387751-08 **Date Collected: 1/26/2012 6:34:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201060405SD WG387751-08

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201060405SD WG387751-08

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3473855.3						40755.72	1.17%
YRADIAL	262216.7						8036.17	3.06%
Ga 417.206	789931.1						20708.33	2.62%
GaRADIAL	43301.9						1483.68	3.43%
Ag 328.068†	752.2	0.00664	mg/L	0.000446	0.00664	mg/L	0.000446	6.71%
Al 396.153†	882.4	0.294	mg/L	0.0204	0.294	mg/L	0.0204	6.94%
As 188.979†	13.0	0.0187	mg/L	0.00304	0.0187	mg/L	0.00304	16.26%

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Ba 233.527†	1359.3	0.0448	mg/L	0.00313	0.0448	mg/L	0.00313	6.99%
Be 234.861†	698.5	0.00186	mg/L	0.000092	0.00186	mg/L	0.000092	4.94%
B 249.677†	29122.5	1.04	mg/L	0.072	1.04	mg/L	0.072	6.91%
Ca 227.546†	807.6	11.8	mg/L	0.93	11.8	mg/L	0.93	7.91%
Cd 228.802†	4.2	0.00032	mg/L	0.000344	0.00032	mg/L	0.000344	106.94%
Co 228.616†	43.5	0.00410	mg/L	0.000318	0.00410	mg/L	0.000318	7.75%
Cr 267.716†	766.8	0.0118	mg/L	0.00124	0.0118	mg/L	0.00124	10.53%
Cu 327.393†	705.3	0.00828	mg/L	0.001257	0.00828	mg/L	0.001257	15.17%
Fe 239.562†	252.2	2.66	mg/L	0.257	2.66	mg/L	0.257	9.68%
Mg 279.077†	1750.4	6.18	mg/L	0.505	6.18	mg/L	0.505	8.16%
Mn 257.610†	39655.1	0.159	mg/L	0.0102	0.159	mg/L	0.0102	6.42%
Mo 202.031†	160.8	0.0236	mg/L	0.00148	0.0236	mg/L	0.00148	6.29%
Ni 231.604†	214.4	0.0124	mg/L	0.00074	0.0124	mg/L	0.00074	5.94%
Pb 220.353†	46.4	0.0164	mg/L	0.00025	0.0164	mg/L	0.00025	1.52%
Sb 206.836†	29.6	0.0360	mg/L	0.00436	0.0360	mg/L	0.00436	12.10%
Se 196.026†	4.8	0.00585	mg/L	0.006445	0.00585	mg/L	0.006445	110.11%
Si 251.611†	16582.9	0.927	mg/L	0.0693	0.927	mg/L	0.0693	7.48%
Sn 189.927†	-14.0	-0.00605	mg/L	0.000528	-0.00605	mg/L	0.000528	8.73%
Ti 334.940†	11751.4	0.0239	mg/L	0.00176	0.0239	mg/L	0.00176	7.36%
Tl 190.801†	27.0	0.0262	mg/L	0.00204	0.0262	mg/L	0.00204	7.77%
V 290.880†	2310.7	0.0274	mg/L	0.00372	0.0274	mg/L	0.00372	13.58%
Zn 206.200†	408.7	0.0306	mg/L	0.00212	0.0306	mg/L	0.00212	6.92%
K 766.490†	8940.2	5.69	mg/L	0.455	5.69	mg/L	0.455	7.99%
Na 589.592†	153942.1	17.0	mg/L	0.93	17.0	mg/L	0.93	5.46%
Sr 407.771†	316489.9	0.285	mg/L	0.0204	0.285	mg/L	0.0204	7.16%
Li 670.784†	8031.3	0.132	mg/L	0.0094	0.132	mg/L	0.0094	7.17%

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Sequence No.: 32 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 6:41:02 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3360381.0						57182.62	1.70%
YRADIAL	258349.8						1911.00	0.74%
Ga 417.206	774788.3						7812.84	1.01%
GaRADIAL	42618.3						886.72	2.08%
Ag 328.068†	47249.6	0.386	mg/L	0.0062	0.386	mg/L	0.0062	1.60%
QC value within limits for Ag 328.068 Recovery = 96.54%								
Al 396.153†	30730.7	10.3	mg/L	0.01	10.3	mg/L	0.01	0.11%
QC value within limits for Al 396.153 Recovery = 102.93%								
As 188.979†	209.2	0.393	mg/L	0.0015	0.393	mg/L	0.0015	0.39%
QC value within limits for As 188.979 Recovery = 98.23%								
Ba 233.527†	32358.4	1.07	mg/L	0.033	1.07	mg/L	0.033	3.07%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 234.861†	14185.3	0.0482	mg/L	0.00091	0.0482	mg/L	0.00091	1.89%
QC value within limits for Be 234.861 Recovery = 96.44%								
B 249.677†	13936.5	0.500	mg/L	0.0095	0.500	mg/L	0.0095	1.89%
QC value within limits for B 249.677 Recovery = 100.07%								
Ca 227.546†	685.9	10.2	mg/L	0.12	10.2	mg/L	0.12	1.18%
QC value within limits for Ca 227.546 Recovery = 101.74%								
Cd 228.802†	505.2	0.0483	mg/L	0.00012	0.0483	mg/L	0.00012	0.25%
QC value within limits for Cd 228.802 Recovery = 96.66%								
Co 228.616†	2040.9	0.206	mg/L	0.0033	0.206	mg/L	0.0033	1.62%
QC value within limits for Co 228.616 Recovery = 102.81%								
Cr 267.716†	31263.9	0.509	mg/L	0.0133	0.509	mg/L	0.0133	2.62%
QC value within limits for Cr 267.716 Recovery = 101.90%								
Cu 327.393†	45656.3	0.476	mg/L	0.0065	0.476	mg/L	0.0065	1.37%
QC value within limits for Cu 327.393 Recovery = 95.17%								
Fe 239.562†	379.0	4.00	mg/L	0.044	4.00	mg/L	0.044	1.09%
QC value within limits for Fe 239.562 Recovery = 99.91%								
Mg 279.077†	2836.7	10.0	mg/L	0.06	10.0	mg/L	0.06	0.64%

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   QC value within limits for Mg 279.077  Recovery = 100.06%
Mn 257.610†          127801.5       0.517 mg/L        0.0129       0.517 mg/L        0.0129   2.49%
   QC value within limits for Mn 257.610  Recovery = 103.35%
Mo 202.031†            7045.1        1.02 mg/L         0.023        1.02 mg/L         0.023   2.23%
   QC value within limits for Mo 202.031  Recovery = 101.65%
Ni 231.604†            8669.5       0.518 mg/L        0.0132       0.518 mg/L        0.0132   2.56%
   QC value within limits for Ni 231.604  Recovery = 103.55%
Pb 220.353†            1438.4       0.523 mg/L        0.0089       0.523 mg/L        0.0089   1.69%
   QC value within limits for Pb 220.353  Recovery = 104.66%
Sb 206.836†             957.8        1.19 mg/L         0.011        1.19 mg/L         0.011   0.97%
   QC value within limits for Sb 206.836  Recovery = 98.94%
Se 196.026†             257.0       0.409 mg/L        0.0140       0.409 mg/L        0.0140   3.42%
   QC value within limits for Se 196.026  Recovery = 102.25%
Si 251.611†           88157.9        4.98 mg/L         0.108        4.98 mg/L         0.108   2.16%
   QC value within limits for Si 251.611  Recovery = 99.64%
Sn 189.927†            2671.0        1.05 mg/L         0.017        1.05 mg/L         0.017   1.62%
   QC value within limits for Sn 189.927  Recovery = 105.35%
Ti 334.940†          494027.1        1.06 mg/L         0.003        1.06 mg/L         0.003   0.32%
   QC value within limits for Ti 334.940  Recovery = 105.56%
Tl 190.801†             432.8       0.528 mg/L        0.0083       0.528 mg/L        0.0083   1.56%
   QC value within limits for Tl 190.801  Recovery = 105.58%
V 290.880†            85735.5        1.03 mg/L         0.029        1.03 mg/L         0.029   2.82%
   QC value within limits for V 290.880  Recovery = 102.86%
Zn 206.200†           13643.0        1.02 mg/L         0.033        1.02 mg/L         0.033   3.18%
   QC value within limits for Zn 206.200  Recovery = 102.46%
K 766.490†            86032.2        54.5 mg/L          0.31        54.5 mg/L          0.31   0.57%
   QC value within limits for K 766.490  Recovery = 108.98%
Na 589.592†          470574.6        52.5 mg/L          1.10        52.5 mg/L          1.10   2.09%
   QC value within limits for Na 589.592  Recovery = 104.96%
Sr 407.771†         1172684.2        1.05 mg/L         0.007        1.05 mg/L         0.007   0.62%
   QC value within limits for Sr 407.771  Recovery = 105.25%
Li 670.784†           66987.0        1.11 mg/L         0.013        1.11 mg/L         0.013   1.15%
   QC value greater than the upper limit for Li 670.784  Recovery = 111.42%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 33                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 6:47:58 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     147.0 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            3411107.4                                                    23093.04   0.68%
YRADIAL               267309.3                                                    10222.42   3.82%
Ga 417.206            720202.1                                                     5877.79   0.82%
GaRADIAL               43095.0                                                     1395.92   3.24%
Ag 328.068†             -646.8    -0.00460 mg/L      0.000385    -0.00460 mg/L      0.000385   8.37%
   QC value less than the lower limit for Ag 328.068  Recovery = Not calculated
Al 396.153†               63.8      0.0197 mg/L       0.00945      0.0197 mg/L       0.00945  48.02%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                4.6     0.00271 mg/L      0.004926     0.00271 mg/L      0.004926 181.89%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -20.7    -0.00076 mg/L      0.000081    -0.00076 mg/L      0.000081  10.76%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              139.4     0.00048 mg/L      0.000026     0.00048 mg/L      0.000026   5.48%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                96.6     0.00503 mg/L      0.000351     0.00503 mg/L      0.000351   6.97%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -4.0     -0.0604 mg/L       0.06048     -0.0604 mg/L       0.06048 100.13%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -8.3    -0.00089 mg/L      0.000076    -0.00089 mg/L      0.000076   8.55%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†               -5.9    -0.00081 mg/L      0.000472    -0.00081 mg/L      0.000472  58.16%
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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              43.4     0.00012 mg/L      0.000069     0.00012 mg/L      0.000069  59.19%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -580.7    -0.00525 mg/L      0.001091    -0.00525 mg/L      0.001091  20.76%
   QC value less than the lower limit for Cu 327.393  Recovery = Not calculated
Fe 239.562†              -0.3    -0.00118 mg/L      0.019854    -0.00118 mg/L      0.019854 >999.9%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              -5.1     0.00737 mg/L      0.009988     0.00737 mg/L      0.009988 135.51%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              45.0    -0.00169 mg/L      0.000029    -0.00169 mg/L      0.000029   1.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -14.0    -0.00183 mg/L      0.000390    -0.00183 mg/L      0.000390  21.31%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               9.6     0.00019 mg/L      0.000042     0.00019 mg/L      0.000042  21.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              17.2     0.00534 mg/L      0.001294     0.00534 mg/L      0.001294  24.23%
   QC value greater than the upper limit for Pb 220.353  Recovery = Not calculated
Sb 206.836†               3.9     0.00419 mg/L      0.002169     0.00419 mg/L      0.002169  51.74%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               4.2     0.00006 mg/L      0.008985     0.00006 mg/L      0.008985 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -20.4     -0.0172 mg/L       0.00082     -0.0172 mg/L       0.00082   4.75%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.5    -0.00111 mg/L      0.001321    -0.00111 mg/L      0.001321 118.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -201.8    -0.00175 mg/L      0.000070    -0.00175 mg/L      0.000070   3.98%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -6.7     -0.0101 mg/L       0.00387     -0.0101 mg/L       0.00387  38.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              420.0     0.00439 mg/L      0.001442     0.00439 mg/L      0.001442  32.82%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               2.8     0.00015 mg/L      0.000248     0.00015 mg/L      0.000248 164.62%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -75.1     -0.0439 mg/L       0.02754     -0.0439 mg/L       0.02754  62.79%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             176.4     -0.0432 mg/L       0.01789     -0.0432 mg/L       0.01789  41.45%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            -215.3     0.00140 mg/L      0.000063     0.00140 mg/L      0.000063   4.54%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             113.2    -0.00043 mg/L      0.000849    -0.00043 mg/L      0.000849 197.77%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.
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Sequence No.: 34 **Autosampler Location: 74**
Sample ID: PBW 57 WG387991-02 **Date Collected: 1/26/2012 6:54:46 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 57 WG387991-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: PBW 57 WG387991-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3466176.6						46622.41	1.35%
YRADIAL	259779.0						4775.43	1.84%
Ga 417.206	719418.6						8608.98	1.20%
GaRADIAL	42739.4						1220.21	2.86%
Ag 328.068†	-710.0	-0.00511	mg/L	0.001137	-0.00511	mg/L	0.001137	22.22%
Al 396.153†	-55.5	-0.0203	mg/L	0.01499	-0.0203	mg/L	0.01499	73.72%
As 188.979†	0.5	-0.00503	mg/L	0.001595	-0.00503	mg/L	0.001595	31.71%
Ba 233.527†	-21.3	-0.00078	mg/L	0.000053	-0.00078	mg/L	0.000053	6.84%
Be 234.861†	75.9	0.00027	mg/L	0.000051	0.00027	mg/L	0.000051	19.12%
B 249.677†	64.2	0.00387	mg/L	0.000127	0.00387	mg/L	0.000127	3.27%
Ca 227.546†	2.7	0.0414	mg/L	0.02192	0.0414	mg/L	0.02192	52.98%
Cd 228.802†	-3.0	-0.00041	mg/L	0.000062	-0.00041	mg/L	0.000062	15.25%
Co 228.616†	-16.4	-0.00189	mg/L	0.000306	-0.00189	mg/L	0.000306	16.21%

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Cr 267.716†	-10.4	-0.00076 mg/L	0.000190	-0.00076 mg/L	0.000190	24.88%
Cu 327.393†	-458.4	-0.00399 mg/L	0.000429	-0.00399 mg/L	0.000429	10.75%
Fe 239.562†	-1.3	-0.0113 mg/L	0.01085	-0.0113 mg/L	0.01085	96.40%
Mg 279.077†	9.3	0.0580 mg/L	0.01257	0.0580 mg/L	0.01257	21.68%
Mn 257.610†	9.3	-0.00183 mg/L	0.000025	-0.00183 mg/L	0.000025	1.36%
Mo 202.031†	-19.1	-0.00257 mg/L	0.000500	-0.00257 mg/L	0.000500	19.46%
Ni 231.604†	4.0	-0.00015 mg/L	0.000263	-0.00015 mg/L	0.000263	180.97%
Pb 220.353†	21.2	0.00675 mg/L	0.000755	0.00675 mg/L	0.000755	11.19%
Sb 206.836†	3.3	0.00345 mg/L	0.003918	0.00345 mg/L	0.003918	113.72%
Se 196.026†	7.7	0.00564 mg/L	0.003887	0.00564 mg/L	0.003887	68.92%
Si 251.611†	-32.6	-0.0179 mg/L	0.00041	-0.0179 mg/L	0.00041	2.27%
Sn 189.927†	-3.0	-0.00170 mg/L	0.001112	-0.00170 mg/L	0.001112	65.28%
Ti 334.940†	-165.3	-0.00167 mg/L	0.000035	-0.00167 mg/L	0.000035	2.12%
Tl 190.801†	-6.3	-0.00962 mg/L	0.005991	-0.00962 mg/L	0.005991	62.25%
V 290.880†	332.7	0.00335 mg/L	0.000579	0.00335 mg/L	0.000579	17.28%
Zn 206.200†	25.5	0.00185 mg/L	0.000162	0.00185 mg/L	0.000162	8.72%
K 766.490†	-158.5	-0.0971 mg/L	0.03110	-0.0971 mg/L	0.03110	32.02%
Na 589.592†	205.0	-0.0400 mg/L	0.01507	-0.0400 mg/L	0.01507	37.66%
Sr 407.771†	764.9	0.00228 mg/L	0.000021	0.00228 mg/L	0.000021	0.90%
Li 670.784†	-4.6	-0.00239 mg/L	0.000949	-0.00239 mg/L	0.000949	39.67%

Sequence No.: 35
Sample ID: LCSW 57 WG387991-03
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 75
Date Collected: 1/26/2012 7:01:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW 57 WG387991-03

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: LCSW 57 WG387991-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3378055.5						18605.37	0.55%
YRADIAL	256298.4						8050.26	3.14%
Ga 417.206	745847.1						3739.91	0.50%
GaRADIAL	41887.7						1789.39	4.27%
Ag 328.068†	23677.7	0.194	mg/L	0.0007	0.194	mg/L	0.0007	0.34%
Al 396.153†	15722.8	5.27	mg/L	0.202	5.27	mg/L	0.202	3.84%
As 188.979†	101.1	0.187	mg/L	0.0010	0.187	mg/L	0.0010	0.54%
Ba 233.527†	16181.8	0.536	mg/L	0.0041	0.536	mg/L	0.0041	0.76%
Be 234.861†	6964.0	0.0237	mg/L	0.00013	0.0237	mg/L	0.00013	0.55%
B 249.677†	27562.2	0.978	mg/L	0.0099	0.978	mg/L	0.0099	1.01%
Ca 227.546†	335.3	4.97	mg/L	0.056	4.97	mg/L	0.056	1.13%
Cd 228.802†	243.5	0.0232	mg/L	0.00046	0.0232	mg/L	0.00046	1.97%
Co 228.616†	999.4	0.101	mg/L	0.0005	0.101	mg/L	0.0005	0.50%
Cr 267.716†	15759.6	0.257	mg/L	0.0034	0.257	mg/L	0.0034	1.32%
Cu 327.393†	23280.9	0.243	mg/L	0.0032	0.243	mg/L	0.0032	1.33%
Fe 239.562†	185.2	1.95	mg/L	0.059	1.95	mg/L	0.059	3.02%
Mg 279.077†	1411.7	4.99	mg/L	0.084	4.99	mg/L	0.084	1.69%
Mn 257.610†	63229.6	0.255	mg/L	0.0019	0.255	mg/L	0.0019	0.76%
Mo 202.031†	3551.0	0.512	mg/L	0.0011	0.512	mg/L	0.0011	0.22%
Ni 231.604†	4251.7	0.254	mg/L	0.0018	0.254	mg/L	0.0018	0.72%
Pb 220.353†	711.9	0.259	mg/L	0.0017	0.259	mg/L	0.0017	0.67%
Sb 206.836†	474.3	0.588	mg/L	0.0036	0.588	mg/L	0.0036	0.62%
Se 196.026†	122.1	0.191	mg/L	0.0048	0.191	mg/L	0.0048	2.53%
Si 251.611†	45442.5	2.56	mg/L	0.018	2.56	mg/L	0.018	0.69%
Sn 189.927†	-16.2	-0.00692	mg/L	0.001760	-0.00692	mg/L	0.001760	25.44%
Ti 334.940†	242085.9	0.517	mg/L	0.0022	0.517	mg/L	0.0022	0.42%
Tl 190.801†	203.1	0.247	mg/L	0.0040	0.247	mg/L	0.0040	1.62%
V 290.880†	43313.4	0.519	mg/L	0.0046	0.519	mg/L	0.0046	0.88%
Zn 206.200†	6654.9	0.500	mg/L	0.0056	0.500	mg/L	0.0056	1.11%
K 766.490†	42632.7	27.1	mg/L	0.19	27.1	mg/L	0.19	0.69%
Na 589.592†	238451.1	26.4	mg/L	0.32	26.4	mg/L	0.32	1.21%
Sr 407.771†	580672.6	0.522	mg/L	0.0043	0.522	mg/L	0.0043	0.82%
Li 670.784†	34836.0	0.578	mg/L	0.0264	0.578	mg/L	0.0264	4.57%

Approved: January 27, 2012

Sequence No.: 36 **Autosampler Location: 76**
Sample ID: L1201065301 WG387991-01 **Date Collected: 1/26/2012 7:08:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065301 WG387991-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065301 WG387991-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3305626.1						87058.87	2.63%
YRADIAL	258082.3						721.94	0.28%
Ga 417.206	764121.6						21717.95	2.84%
GaRADIAL	42067.7						936.55	2.23%
Ag 328.068†	-434.1	-0.00293	mg/L	0.000937	-0.00293	mg/L	0.000937	31.99%
Al 396.153†	-139.5	-0.0485	mg/L	0.01656	-0.0485	mg/L	0.01656	34.16%
As 188.979†	16.8	0.0245	mg/L	0.00570	0.0245	mg/L	0.00570	23.25%
Ba 233.527†	3491.8	0.115	mg/L	0.0038	0.115	mg/L	0.0038	3.29%
Be 234.861†	136.5	0.00045	mg/L	0.000010	0.00045	mg/L	0.000010	2.17%
B 249.677†	2086.9	0.0758	mg/L	0.00251	0.0758	mg/L	0.00251	3.31%
Ca 227.546†	5837.2	87.1	mg/L	2.96	87.1	mg/L	2.96	3.40%
Cd 228.802†	-0.0	-0.00007	mg/L	0.000229	-0.00007	mg/L	0.000229	347.73%
Co 228.616†	-19.6	-0.00225	mg/L	0.000487	-0.00225	mg/L	0.000487	21.65%
Cr 267.716†	14.0	-0.00038	mg/L	0.000123	-0.00038	mg/L	0.000123	32.61%
Cu 327.393†	3517.0	0.0372	mg/L	0.00077	0.0372	mg/L	0.00077	2.06%
Fe 239.562†	7.7	0.0828	mg/L	0.02238	0.0828	mg/L	0.02238	27.04%
Mg 279.077†	519.3	1.85	mg/L	0.027	1.85	mg/L	0.027	1.47%
Mn 257.610†	6652.9	0.0267	mg/L	0.00095	0.0267	mg/L	0.00095	3.57%
Mo 202.031†	-30.5	-0.00419	mg/L	0.000788	-0.00419	mg/L	0.000788	18.81%
Ni 231.604†	0.5	-0.00040	mg/L	0.000741	-0.00040	mg/L	0.000741	184.43%
Pb 220.353†	5.0	0.00507	mg/L	0.001640	0.00507	mg/L	0.001640	32.35%
Sb 206.836†	21.5	0.0260	mg/L	0.00129	0.0260	mg/L	0.00129	4.96%
Se 196.026†	-12.0	0.00033	mg/L	0.013424	0.00033	mg/L	0.013424	>999.9%
Si 251.611†	6085.9	0.330	mg/L	0.0127	0.330	mg/L	0.0127	3.86%
Sn 189.927†	-10.5	-0.00467	mg/L	0.001646	-0.00467	mg/L	0.001646	35.28%
Ti 334.940†	-490.5	-0.00150	mg/L	0.000072	-0.00150	mg/L	0.000072	4.83%
Tl 190.801†	59.0	0.0341	mg/L	0.00487	0.0341	mg/L	0.00487	14.28%
V 290.880†	625.5	0.00700	mg/L	0.002468	0.00700	mg/L	0.002468	35.24%
Zn 206.200†	433.4	0.0324	mg/L	0.00162	0.0324	mg/L	0.00162	5.00%
K 766.490†	1808.6	0.993	mg/L	0.0444	0.993	mg/L	0.0444	4.47%
Na 589.592†	1446360.2	166	mg/L	1.7	166	mg/L	1.7	1.01%
Sr 407.771†	302945.2	0.273	mg/L	0.0017	0.273	mg/L	0.0017	0.62%
Li 670.784†	227.9	0.00148	mg/L	0.000377	0.00148	mg/L	0.000377	25.44%

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Sequence No.: 37 **Autosampler Location: 77**
Sample ID: L1201065301S WG387991-04 **Date Collected: 1/26/2012 7:15:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065301S WG387991-04

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065301S WG387991-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3311449.6						46154.55	1.39%
YRADIAL	262370.9						9096.78	3.47%
Ga 417.206	765861.9						16916.56	2.21%
GaRADIAL	42213.0						1209.91	2.87%
Ag 328.068†	39575.6	0.323	mg/L	0.0068	0.323	mg/L	0.0068	2.12%
Al 396.153†	16172.0	5.42	mg/L	0.027	5.42	mg/L	0.027	0.49%
As 188.979†	115.6	0.213	mg/L	0.0065	0.213	mg/L	0.0065	3.05%

Approved: January 27, 2012

Ba 233.527†	19184.3	0.636	mg/L	0.0078	0.636	mg/L	0.0078	1.23%
Be 234.861†	6898.9	0.0234	mg/L	0.00060	0.0234	mg/L	0.00060	2.57%
B 249.677†	28459.2	1.01	mg/L	0.017	1.01	mg/L	0.017	1.70%
Ca 227.546†	6181.5	92.2	mg/L	1.85	92.2	mg/L	1.85	2.01%
Cd 228.802†	236.3	0.0226	mg/L	0.00088	0.0226	mg/L	0.00088	3.91%
Co 228.616†	967.0	0.0972	mg/L	0.00186	0.0972	mg/L	0.00186	1.91%
Cr 267.716†	15526.5	0.253	mg/L	0.0042	0.253	mg/L	0.0042	1.65%
Cu 327.393†	26300.7	0.274	mg/L	0.0058	0.274	mg/L	0.0058	2.12%
Fe 239.562†	205.8	2.17	mg/L	0.101	2.17	mg/L	0.101	4.67%
Mg 279.077†	1873.6	6.62	mg/L	0.319	6.62	mg/L	0.319	4.82%
Mn 257.610†	68749.3	0.279	mg/L	0.0045	0.279	mg/L	0.0045	1.61%
Mo 202.031†	3584.4	0.517	mg/L	0.0079	0.517	mg/L	0.0079	1.52%
Ni 231.604†	4221.3	0.252	mg/L	0.0040	0.252	mg/L	0.0040	1.58%
Pb 220.353†	685.7	0.253	mg/L	0.0033	0.253	mg/L	0.0033	1.30%
Sb 206.836†	471.6	0.584	mg/L	0.0143	0.584	mg/L	0.0143	2.45%
Se 196.026†	108.8	0.196	mg/L	0.0197	0.196	mg/L	0.0197	10.08%
Si 251.611†	54757.8	3.09	mg/L	0.070	3.09	mg/L	0.070	2.27%
Sn 189.927†	-19.3	-0.00813	mg/L	0.000676	-0.00813	mg/L	0.000676	8.31%
Ti 334.940†	245037.8	0.524	mg/L	0.0020	0.524	mg/L	0.0020	0.38%
Tl 190.801†	253.8	0.273	mg/L	0.0070	0.273	mg/L	0.0070	2.58%
V 290.880†	43364.5	0.520	mg/L	0.0083	0.520	mg/L	0.0083	1.60%
Zn 206.200†	7035.1	0.528	mg/L	0.0068	0.528	mg/L	0.0068	1.29%
K 766.490†	44836.8	28.3	mg/L	0.20	28.3	mg/L	0.20	0.71%
Na 589.592†	1676571.1	194	mg/L	10.0	194	mg/L	10.0	5.13%
Sr 407.771†	878050.6	0.789	mg/L	0.0085	0.789	mg/L	0.0085	1.08%
Li 670.784†	33426.1	0.555	mg/L	0.0059	0.555	mg/L	0.0059	1.07%

Sequence No.: 38 **Autosampler Location: 78**
Sample ID: L1201065301SD WG387991-05 **Date Collected: 1/26/2012 7:22:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065301SD WG387991-05

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065301SD WG387991-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3314562.7						19360.74	0.58%
YRADIAL	256358.5						1789.03	0.70%
Ga 417.206	769089.0						6572.86	0.85%
GaRADIAL	42433.8						147.76	0.35%
Ag 328.068†	23083.1	0.189	mg/L	0.0016	0.189	mg/L	0.0016	0.82%
Al 396.153†	15669.0	5.25	mg/L	0.024	5.25	mg/L	0.024	0.46%
As 188.979†	113.3	0.208	mg/L	0.0056	0.208	mg/L	0.0056	2.71%
Ba 233.527†	19547.2	0.648	mg/L	0.0036	0.648	mg/L	0.0036	0.55%
Be 234.861†	6895.3	0.0235	mg/L	0.00011	0.0235	mg/L	0.00011	0.46%
B 249.677†	28969.0	1.03	mg/L	0.002	1.03	mg/L	0.002	0.22%
Ca 227.546†	6228.6	92.9	mg/L	0.84	92.9	mg/L	0.84	0.91%
Cd 228.802†	238.2	0.0228	mg/L	0.00037	0.0228	mg/L	0.00037	1.63%
Co 228.616†	987.9	0.0993	mg/L	0.00128	0.0993	mg/L	0.00128	1.29%
Cr 267.716†	15804.0	0.257	mg/L	0.0011	0.257	mg/L	0.0011	0.44%
Cu 327.393†	26496.9	0.276	mg/L	0.0015	0.276	mg/L	0.0015	0.56%
Fe 239.562†	195.5	2.06	mg/L	0.009	2.06	mg/L	0.009	0.44%
Mg 279.077†	1957.8	6.91	mg/L	0.097	6.91	mg/L	0.097	1.40%
Mn 257.610†	69457.5	0.282	mg/L	0.0004	0.282	mg/L	0.0004	0.14%
Mo 202.031†	3647.2	0.526	mg/L	0.0021	0.526	mg/L	0.0021	0.41%
Ni 231.604†	4291.0	0.256	mg/L	0.0009	0.256	mg/L	0.0009	0.34%
Pb 220.353†	691.1	0.255	mg/L	0.0030	0.255	mg/L	0.0030	1.19%
Sb 206.836†	475.9	0.590	mg/L	0.0043	0.590	mg/L	0.0043	0.73%
Se 196.026†	107.1	0.193	mg/L	0.0064	0.193	mg/L	0.0064	3.29%
Si 251.611†	55401.2	3.13	mg/L	0.014	3.13	mg/L	0.014	0.46%
Sn 189.927†	-22.2	-0.00930	mg/L	0.001603	-0.00930	mg/L	0.001603	17.24%
Ti 334.940†	247369.2	0.529	mg/L	0.0008	0.529	mg/L	0.0008	0.15%
Tl 190.801†	250.4	0.269	mg/L	0.0048	0.269	mg/L	0.0048	1.79%
V 290.880†	44175.7	0.530	mg/L	0.0006	0.530	mg/L	0.0006	0.11%
Zn 206.200†	7165.0	0.538	mg/L	0.0021	0.538	mg/L	0.0021	0.40%

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K 766.490†	45278.6	28.6 mg/L	0.06	28.6 mg/L	0.06	0.21%
Na 589.592†	1645154.4	190 mg/L	4.5	190 mg/L	4.5	2.38%
Sr 407.771†	885828.9	0.796 mg/L	0.0067	0.796 mg/L	0.0067	0.84%
Li 670.784†	33932.8	0.563 mg/L	0.0028	0.563 mg/L	0.0028	0.49%

Sequence No.: 39 **Autosampler Location: 79**
Sample ID: L1201065301PS WG388024-01 **Date Collected: 1/26/2012 7:29:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065301PS WG388024-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065301PS WG388024-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3380572.3						32445.42	0.96%
YRADIAL	262913.2						3418.68	1.30%
Ga 417.206	780932.7						9568.03	1.23%
GaRADIAL	42054.5						619.72	1.47%
Ag 328.068†	22982.6	0.188	mg/L	0.0012	0.188	mg/L	0.0012	0.66%
Al 396.153†	15300.7	5.12	mg/L	0.011	5.12	mg/L	0.011	0.21%
As 188.979†	111.9	0.206	mg/L	0.0070	0.206	mg/L	0.0070	3.41%
Ba 233.527†	19206.1	0.636	mg/L	0.0077	0.636	mg/L	0.0077	1.21%
Be 234.861†	6905.4	0.0235	mg/L	0.00022	0.0235	mg/L	0.00022	0.95%
B 249.677†	29017.7	1.03	mg/L	0.019	1.03	mg/L	0.019	1.85%
Ca 227.546†	5517.8	82.3	mg/L	1.02	82.3	mg/L	1.02	1.25%
Cd 228.802†	229.8	0.0220	mg/L	0.00013	0.0220	mg/L	0.00013	0.57%
Co 228.616†	961.1	0.0966	mg/L	0.00095	0.0966	mg/L	0.00095	0.98%
Cr 267.716†	15703.1	0.256	mg/L	0.0039	0.256	mg/L	0.0039	1.52%
Cu 327.393†	26061.5	0.272	mg/L	0.0025	0.272	mg/L	0.0025	0.93%
Fe 239.562†	186.9	1.97	mg/L	0.049	1.97	mg/L	0.049	2.47%
Mg 279.077†	1813.3	6.40	mg/L	0.121	6.40	mg/L	0.121	1.89%
Mn 257.610†	68280.8	0.277	mg/L	0.0017	0.277	mg/L	0.0017	0.62%
Mo 202.031†	3559.2	0.514	mg/L	0.0045	0.514	mg/L	0.0045	0.87%
Ni 231.604†	4198.8	0.251	mg/L	0.0009	0.251	mg/L	0.0009	0.37%
Pb 220.353†	684.8	0.252	mg/L	0.0020	0.252	mg/L	0.0020	0.79%
Sb 206.836†	470.2	0.583	mg/L	0.0059	0.583	mg/L	0.0059	1.01%
Se 196.026†	112.1	0.198	mg/L	0.0063	0.198	mg/L	0.0063	3.18%
Si 251.611†	50282.9	2.84	mg/L	0.040	2.84	mg/L	0.040	1.43%
Sn 189.927†	-23.5	-0.00982	mg/L	0.001615	-0.00982	mg/L	0.001615	16.46%
Ti 334.940†	245120.3	0.524	mg/L	0.0008	0.524	mg/L	0.0008	0.16%
Tl 190.801†	246.1	0.268	mg/L	0.0033	0.268	mg/L	0.0033	1.23%
V 290.880†	43883.9	0.526	mg/L	0.0060	0.526	mg/L	0.0060	1.13%
Zn 206.200†	7179.4	0.539	mg/L	0.0021	0.539	mg/L	0.0021	0.39%
K 766.490†	44651.1	28.2	mg/L	0.03	28.2	mg/L	0.03	0.10%
Na 589.592†	1542873.0	178	mg/L	2.1	178	mg/L	2.1	1.18%
Sr 407.771†	847147.8	0.761	mg/L	0.0058	0.761	mg/L	0.0058	0.76%
Li 670.784†	33331.8	0.553	mg/L	0.0041	0.553	mg/L	0.0041	0.75%

Sequence No.: 40 **Autosampler Location: 80**
Sample ID: L1201065301DL WG388024-02 **Date Collected: 1/26/2012 7:36:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201065301DL WG388024-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201065301DL WG388024-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3383285.3						19951.17	0.59%

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YRADIAL	259278.9						4080.80	1.57%
Ga 417.206	759018.5						7187.17	0.95%
GaRADIAL	42218.8						606.26	1.44%
Ag 328.068†	-684.4	-0.00492	mg/L	0.000390	-0.00492	mg/L	0.000390	7.94%
Al 396.153†	-139.8	-0.0486	mg/L	0.00604	-0.0486	mg/L	0.00604	12.43%
As 188.979†	10.1	0.0130	mg/L	0.00769	0.0130	mg/L	0.00769	59.20%
Ba 233.527†	679.0	0.0224	mg/L	0.00008	0.0224	mg/L	0.00008	0.34%
Be 234.861†	189.3	0.00063	mg/L	0.000048	0.00063	mg/L	0.000048	7.55%
B 249.677†	544.5	0.0211	mg/L	0.00070	0.0211	mg/L	0.00070	3.29%
Ca 227.546†	1157.4	17.3	mg/L	0.25	17.3	mg/L	0.25	1.42%
Cd 228.802†	-7.2	-0.00077	mg/L	0.000296	-0.00077	mg/L	0.000296	38.52%
Co 228.616†	-15.8	-0.00183	mg/L	0.000340	-0.00183	mg/L	0.000340	18.58%
Cr 267.716†	36.2	-0.00001	mg/L	0.000239	-0.00001	mg/L	0.000239	>999.9%
Cu 327.393†	237.8	0.00324	mg/L	0.000403	0.00324	mg/L	0.000403	12.46%
Fe 239.562†	4.0	0.0442	mg/L	0.00861	0.0442	mg/L	0.00861	19.48%
Mg 279.077†	105.4	0.396	mg/L	0.0090	0.396	mg/L	0.0090	2.27%
Mn 257.610†	1357.1	0.00395	mg/L	0.000042	0.00395	mg/L	0.000042	1.07%
Mo 202.031†	-20.7	-0.00279	mg/L	0.001132	-0.00279	mg/L	0.001132	40.54%
Ni 231.604†	5.8	-0.00005	mg/L	0.000310	-0.00005	mg/L	0.000310	650.31%
Pb 220.353†	18.8	0.00672	mg/L	0.001857	0.00672	mg/L	0.001857	27.63%
Sb 206.836†	8.6	0.00995	mg/L	0.002748	0.00995	mg/L	0.002748	27.60%
Se 196.026†	-1.2	-0.00330	mg/L	0.002392	-0.00330	mg/L	0.002392	72.38%
Si 251.611†	1236.7	0.0543	mg/L	0.00104	0.0543	mg/L	0.00104	1.92%
Sn 189.927†	-11.1	-0.00492	mg/L	0.001176	-0.00492	mg/L	0.001176	23.92%
Ti 334.940†	-399.8	-0.00200	mg/L	0.000113	-0.00200	mg/L	0.000113	5.65%
Tl 190.801†	13.2	0.00695	mg/L	0.002426	0.00695	mg/L	0.002426	34.90%
V 290.880†	412.4	0.00433	mg/L	0.001460	0.00433	mg/L	0.001460	33.73%
Zn 206.200†	123.5	0.00920	mg/L	0.000288	0.00920	mg/L	0.000288	3.13%
K 766.490†	303.3	0.164	mg/L	0.0452	0.164	mg/L	0.0452	27.46%
Na 589.592†	300839.0	33.4	mg/L	0.26	33.4	mg/L	0.26	0.77%
Sr 407.771†	61887.5	0.0571	mg/L	0.00016	0.0571	mg/L	0.00016	0.29%
Li 670.784†	226.1	0.00145	mg/L	0.001154	0.00145	mg/L	0.001154	79.51%

Sequence No.: 41
Sample ID: FBLK WG387944-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 81
Date Collected: 1/26/2012 7:42:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: FBLK WG387944-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: FBLK WG387944-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3422871.6						25593.53	0.75%
YRADIAL	262536.4						2166.44	0.83%
Ga 417.206	774747.9						7511.83	0.97%
GaRADIAL	42111.1						756.97	1.80%
Ag 328.068†	-794.0	-0.00580	mg/L	0.000798	-0.00580	mg/L	0.000798	13.77%
Al 396.153†	-130.0	-0.0453	mg/L	0.01471	-0.0453	mg/L	0.01471	32.46%
As 188.979†	2.7	-0.00079	mg/L	0.002083	-0.00079	mg/L	0.002083	262.94%
Ba 233.527†	-21.4	-0.00078	mg/L	0.000073	-0.00078	mg/L	0.000073	9.33%
Be 234.861†	157.1	0.00054	mg/L	0.000023	0.00054	mg/L	0.000023	4.30%
B 249.677†	83.2	0.00459	mg/L	0.000689	0.00459	mg/L	0.000689	14.99%
Ca 227.546†	10.3	0.155	mg/L	0.0117	0.155	mg/L	0.0117	7.54%
Cd 228.802†	-8.5	-0.00092	mg/L	0.000093	-0.00092	mg/L	0.000093	10.13%
Co 228.616†	-12.8	-0.00152	mg/L	0.000247	-0.00152	mg/L	0.000247	16.28%
Cr 267.716†	9.7	-0.00043	mg/L	0.000111	-0.00043	mg/L	0.000111	25.63%
Cu 327.393†	-513.5	-0.00456	mg/L	0.000264	-0.00456	mg/L	0.000264	5.80%
Fe 239.562†	-1.0	-0.00856	mg/L	0.022044	-0.00856	mg/L	0.022044	257.39%
Mg 279.077†	32.8	0.141	mg/L	0.0054	0.141	mg/L	0.0054	3.81%
Mn 257.610†	65.2	-0.00016	mg/L	0.000023	-0.00016	mg/L	0.000023	14.23%
Mo 202.031†	-25.7	-0.00352	mg/L	0.000513	-0.00352	mg/L	0.000513	14.58%
Ni 231.604†	4.6	-0.00010	mg/L	0.000264	-0.00010	mg/L	0.000264	253.04%
Pb 220.353†	23.3	0.00750	mg/L	0.000977	0.00750	mg/L	0.000977	13.02%
Sb 206.836†	3.4	0.00360	mg/L	0.004096	0.00360	mg/L	0.004096	113.68%
Se 196.026†	7.4	0.00528	mg/L	0.011016	0.00528	mg/L	0.011016	208.81%

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Si 251.611†	195.9	-0.00488	mg/L	0.000441	-0.00488	mg/L	0.000441	9.05%
Sn 189.927†	-5.9	-0.00286	mg/L	0.001664	-0.00286	mg/L	0.001664	58.22%
Ti 334.940†	-142.4	-0.00162	mg/L	0.000115	-0.00162	mg/L	0.000115	7.08%
Tl 190.801†	-12.2	-0.0168	mg/L	0.00216	-0.0168	mg/L	0.00216	12.90%
V 290.880†	454.3	0.00482	mg/L	0.000856	0.00482	mg/L	0.000856	17.76%
Zn 206.200†	76.3	0.00566	mg/L	0.000421	0.00566	mg/L	0.000421	7.43%
K 766.490†	-8.9	-0.160	mg/L	0.0304	-0.160	mg/L	0.0304	19.06%
Na 589.592†	1376861.1	158	mg/L	1.7	158	mg/L	1.7	1.10%
Sr 407.771†	1491.0	0.00293	mg/L	0.000002	0.00293	mg/L	0.000002	0.07%
Li 670.784†	68.6	-0.00117	mg/L	0.000691	-0.00117	mg/L	0.000691	58.87%

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Sequence No.: 42 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 7:49:53 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3352451.3						35574.74	1.06%
YRADIAL	260337.8						6709.48	2.58%
Ga 417.206	774968.1						11248.99	1.45%
GaRADIAL	43608.7						572.20	1.31%
Ag 328.068†	47339.8	0.387	mg/L	0.0060	0.387	mg/L	0.0060	1.55%
QC value within limits for Ag 328.068 Recovery = 96.72%								
Al 396.153†	30728.0	10.3	mg/L	0.07	10.3	mg/L	0.07	0.68%
QC value within limits for Al 396.153 Recovery = 102.92%								
As 188.979†	212.3	0.399	mg/L	0.0063	0.399	mg/L	0.0063	1.59%
QC value within limits for As 188.979 Recovery = 99.70%								
Ba 233.527†	33044.1	1.10	mg/L	0.021	1.10	mg/L	0.021	1.88%
QC value within limits for Ba 233.527 Recovery = 109.53%								
Be 234.861†	14119.6	0.0480	mg/L	0.00070	0.0480	mg/L	0.00070	1.45%
QC value within limits for Be 234.861 Recovery = 96.06%								
B 249.677†	13958.1	0.501	mg/L	0.0122	0.501	mg/L	0.0122	2.43%
QC value within limits for B 249.677 Recovery = 100.14%								
Ca 227.546†	696.7	10.3	mg/L	0.19	10.3	mg/L	0.19	1.87%
QC value within limits for Ca 227.546 Recovery = 103.48%								
Cd 228.802†	490.7	0.0470	mg/L	0.00059	0.0470	mg/L	0.00059	1.25%
QC value within limits for Cd 228.802 Recovery = 93.95%								
Co 228.616†	2071.4	0.209	mg/L	0.0031	0.209	mg/L	0.0031	1.48%
QC value within limits for Co 228.616 Recovery = 104.35%								
Cr 267.716†	31725.6	0.517	mg/L	0.0062	0.517	mg/L	0.0062	1.20%
QC value within limits for Cr 267.716 Recovery = 103.41%								
Cu 327.393†	45774.6	0.477	mg/L	0.0084	0.477	mg/L	0.0084	1.76%
QC value within limits for Cu 327.393 Recovery = 95.42%								
Fe 239.562†	371.0	3.91	mg/L	0.093	3.91	mg/L	0.093	2.38%
QC value within limits for Fe 239.562 Recovery = 97.77%								
Mg 279.077†	2781.3	9.81	mg/L	0.302	9.81	mg/L	0.302	3.07%
QC value within limits for Mg 279.077 Recovery = 98.11%								
Mn 257.610†	128521.9	0.520	mg/L	0.0075	0.520	mg/L	0.0075	1.44%
QC value within limits for Mn 257.610 Recovery = 103.93%								
Mo 202.031†	7111.5	1.03	mg/L	0.017	1.03	mg/L	0.017	1.70%
QC value within limits for Mo 202.031 Recovery = 102.61%								
Ni 231.604†	8765.1	0.523	mg/L	0.0074	0.523	mg/L	0.0074	1.42%
QC value within limits for Ni 231.604 Recovery = 104.70%								
Pb 220.353†	1455.5	0.530	mg/L	0.0052	0.530	mg/L	0.0052	0.98%
QC value within limits for Pb 220.353 Recovery = 105.91%								
Sb 206.836†	947.6	1.17	mg/L	0.016	1.17	mg/L	0.016	1.36%
QC value within limits for Sb 206.836 Recovery = 97.89%								
Se 196.026†	258.1	0.411	mg/L	0.0057	0.411	mg/L	0.0057	1.40%
QC value within limits for Se 196.026 Recovery = 102.71%								
Si 251.611†	88780.6	5.02	mg/L	0.099	5.02	mg/L	0.099	1.98%
QC value within limits for Si 251.611 Recovery = 100.35%								
Sn 189.927†	2732.4	1.08	mg/L	0.012	1.08	mg/L	0.012	1.14%

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   QC value within limits for Sn 189.927  Recovery = 107.77%
Ti 334.940†          498365.6        1.06 mg/L        0.001        1.06 mg/L        0.001   0.13%
   QC value within limits for Ti 334.940  Recovery = 106.49%
Tl 190.801†             434.5       0.530 mg/L       0.0041       0.530 mg/L       0.0041   0.77%
   QC value within limits for Tl 190.801  Recovery = 106.01%
V 290.880†            86762.6        1.04 mg/L        0.016        1.04 mg/L        0.016   1.53%
   QC value within limits for V 290.880  Recovery = 104.09%
Zn 206.200†           13848.1        1.04 mg/L        0.020        1.04 mg/L        0.020   1.90%
   QC value within limits for Zn 206.200  Recovery = 104.00%
K 766.490†            86685.0        54.9 mg/L         0.17        54.9 mg/L         0.17   0.31%
   QC value within limits for K 766.490  Recovery = 109.81%
Na 589.592†          462328.3        51.5 mg/L         1.09        51.5 mg/L         1.09   2.12%
   QC value within limits for Na 589.592  Recovery = 103.09%
Sr 407.771†         1178160.9        1.06 mg/L        0.007        1.06 mg/L        0.007   0.64%
   QC value within limits for Sr 407.771  Recovery = 105.75%
Li 670.784†           67000.5        1.11 mg/L        0.005        1.11 mg/L        0.005   0.41%
   QC value greater than the upper limit for Li 670.784  Recovery = 111.45%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 43                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 7:56:49 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     147.0 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            3478074.3                                                    42735.31   1.23%
YRADIAL               257152.2                                                     6459.06   2.51%
Ga 417.206            745223.7                                                    13933.63   1.87%
GaRADIAL               42126.8                                                      567.05   1.35%
Ag 328.068†             -862.1    -0.00635 mg/L      0.000922    -0.00635 mg/L      0.000922  14.52%
   QC value less than the lower limit for Ag 328.068  Recovery = Not calculated
Al 396.153†              -35.7     -0.0137 mg/L       0.01821     -0.0137 mg/L       0.01821 133.13%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                2.0    -0.00229 mg/L      0.008546    -0.00229 mg/L      0.008546 372.87%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -25.9    -0.00094 mg/L      0.000108    -0.00094 mg/L      0.000108  11.51%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              210.5     0.00071 mg/L      0.000045     0.00071 mg/L      0.000045   6.27%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                27.4     0.00263 mg/L      0.000620     0.00263 mg/L      0.000620  23.53%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -5.4     -0.0803 mg/L       0.01306     -0.0803 mg/L       0.01306  16.26%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -10.3    -0.00109 mg/L      0.000336    -0.00109 mg/L      0.000336  30.77%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†               -9.8    -0.00121 mg/L      0.000155    -0.00121 mg/L      0.000155  12.74%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               50.1     0.00022 mg/L      0.000132     0.00022 mg/L      0.000132  59.10%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -554.6    -0.00498 mg/L      0.000765    -0.00498 mg/L      0.000765  15.35%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.1     0.00073 mg/L      0.016744     0.00073 mg/L      0.016744 >999.9%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               -1.0      0.0219 mg/L       0.00722      0.0219 mg/L       0.00722  32.93%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               52.8    -0.00166 mg/L      0.000032    -0.00166 mg/L      0.000032   1.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -17.6    -0.00235 mg/L      0.000733    -0.00235 mg/L      0.000733  31.20%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                8.1     0.00010 mg/L      0.000022     0.00010 mg/L      0.000022  22.44%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               20.0     0.00633 mg/L      0.001747     0.00633 mg/L      0.001747  27.62%
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   QC value greater than the upper limit for Pb 220.353  Recovery = Not calculated
Sb 206.836†                3.9     0.00425 mg/L      0.004778     0.00425 mg/L      0.004778 112.41%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.2    -0.00634 mg/L      0.005726    -0.00634 mg/L      0.005726  90.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -55.4     -0.0192 mg/L       0.00039     -0.0192 mg/L       0.00039   2.05%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -5.3    -0.00260 mg/L      0.000642    -0.00260 mg/L      0.000642  24.69%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -243.7    -0.00184 mg/L      0.000113    -0.00184 mg/L      0.000113   6.13%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -4.7    -0.00766 mg/L      0.000984    -0.00766 mg/L      0.000984  12.84%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               223.9     0.00204 mg/L      0.000632     0.00204 mg/L      0.000632  30.97%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                2.7     0.00015 mg/L      0.000009     0.00015 mg/L      0.000009   6.18%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -115.8     -0.0699 mg/L       0.01600     -0.0699 mg/L       0.01600  22.91%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -55.6     -0.0687 mg/L       0.00832     -0.0687 mg/L       0.00832  12.11%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -271.9     0.00135 mg/L      0.000035     0.00135 mg/L      0.000035   2.58%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               82.8    -0.00094 mg/L      0.001116    -0.00094 mg/L      0.001116 119.29%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 44                                    Autosampler Location: 82
Sample ID: PBW 46 WG387850-02                       Date Collected: 1/26/2012 8:03:37 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: PBW 46 WG387850-02
Analyte                  Back Pressure    Flow
All                    147.0 kPa         0.50 L/min

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Mean Data: PBW 46 WG387850-02
                   Mean Corrected          Calib.                          Sample
Analyte               Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            3479088.3                                                     22837.88   0.66%
YRADIAL               260704.4                                                      3809.39   1.46%
Ga 417.206            754338.6                                                      7077.27   0.94%
GaRADIAL               43124.8                                                       500.61   1.16%
Ag 328.068†             -861.5    -0.00634 mg/L      0.000563    -0.00634 mg/L      0.000563   8.88%
Al 396.153†               33.1     0.00940 mg/L      0.018140     0.00940 mg/L      0.018140 193.06%
As 188.979†                5.0     0.00358 mg/L      0.002285     0.00358 mg/L      0.002285  63.84%
Ba 233.527†              -26.8    -0.00096 mg/L      0.000071    -0.00096 mg/L      0.000071   7.45%
Be 234.861†              212.7     0.00072 mg/L      0.000046     0.00072 mg/L      0.000046   6.37%
B 249.677†               -18.7     0.00096 mg/L      0.000472     0.00096 mg/L      0.000472  49.40%
Ca 227.546†              -11.0      -0.164 mg/L        0.0420      -0.164 mg/L        0.0420  25.54%
Cd 228.802†               -9.5    -0.00100 mg/L      0.000168    -0.00100 mg/L      0.000168  16.75%
Co 228.616†               -9.5    -0.00118 mg/L      0.000044    -0.00118 mg/L      0.000044   3.76%
Cr 267.716†               50.6     0.00023 mg/L      0.000130     0.00023 mg/L      0.000130  55.93%
Cu 327.393†             -603.5    -0.00549 mg/L      0.000994    -0.00549 mg/L      0.000994  18.11%
Fe 239.562†               -0.6    -0.00383 mg/L      0.018504    -0.00383 mg/L      0.018504 483.10%
Mg 279.077†               -2.5      0.0166 mg/L       0.00630      0.0166 mg/L       0.00630  37.96%
Mn 257.610†              103.9    -0.00145 mg/L      0.000062    -0.00145 mg/L      0.000062   4.28%
Mo 202.031†              -16.8    -0.00223 mg/L      0.000314    -0.00223 mg/L      0.000314  14.08%
Ni 231.604†                7.1     0.00004 mg/L      0.000283     0.00004 mg/L      0.000283 686.02%
Pb 220.353†               18.8     0.00588 mg/L      0.002605     0.00588 mg/L      0.002605  44.32%
Sb 206.836†                3.2     0.00329 mg/L      0.002468     0.00329 mg/L      0.002468  75.00%
Se 196.026†                5.0     0.00139 mg/L      0.001303     0.00139 mg/L      0.001303  94.04%
Si 251.611†               13.8      -0.0152 mg/L       0.00043      -0.0152 mg/L       0.00043   2.84%
Sn 189.927†               -4.1    -0.00212 mg/L      0.000544    -0.00212 mg/L      0.000544  25.64%
Ti 334.940†              -244.9    -0.00184 mg/L      0.000070    -0.00184 mg/L      0.000070   3.81%
Tl 190.801†               -6.6    -0.00992 mg/L      0.005929    -0.00992 mg/L      0.005929  59.77%
V 290.880†               471.2     0.00501 mg/L      0.000564     0.00501 mg/L      0.000564  11.26%
Zn 206.200†               45.2     0.00333 mg/L      0.000042     0.00333 mg/L      0.000042   1.26%
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K 766.490†	-166.8	-0.102 mg/L	0.0248	-0.102 mg/L	0.0248	24.23%
Na 589.592†	-183.6	-0.0828 mg/L	0.01056	-0.0828 mg/L	0.01056	12.75%
Sr 407.771†	-369.7	0.00126 mg/L	0.000030	0.00126 mg/L	0.000030	2.38%
Li 670.784†	-8.4	-0.00246 mg/L	0.001810	-0.00246 mg/L	0.001810	73.71%

Sequence No.: 45 **Autosampler Location: 83**
Sample ID: LCSW 46 WG387850-03 **Date Collected: 1/26/2012 8:10:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 46 WG387850-03

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: LCSW 46 WG387850-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3422687.3						101110.99	2.95%
YRADIAL	265831.5						7624.99	2.87%
Ga 417.206	793546.1						24327.25	3.07%
GaRADIAL	44127.2						1305.32	2.96%
Ag 328.068†	22832.5	0.187	mg/L	0.0080	0.187	mg/L	0.0080	4.28%
Al 396.153†	14863.9	4.98	mg/L	0.021	4.98	mg/L	0.021	0.43%
As 188.979†	103.1	0.191	mg/L	0.0030	0.191	mg/L	0.0030	1.56%
Ba 233.527†	16182.3	0.536	mg/L	0.0215	0.536	mg/L	0.0215	4.01%
Be 234.861†	6813.5	0.0232	mg/L	0.00107	0.0232	mg/L	0.00107	4.62%
B 249.677†	27696.9	0.983	mg/L	0.0405	0.983	mg/L	0.0405	4.12%
Ca 227.546†	332.3	4.94	mg/L	0.218	4.94	mg/L	0.218	4.42%
Cd 228.802†	228.1	0.0218	mg/L	0.00065	0.0218	mg/L	0.00065	2.98%
Co 228.616†	1003.3	0.101	mg/L	0.0025	0.101	mg/L	0.0025	2.45%
Cr 267.716†	15562.2	0.253	mg/L	0.0107	0.253	mg/L	0.0107	4.22%
Cu 327.393†	21986.1	0.230	mg/L	0.0110	0.230	mg/L	0.0110	4.77%
Fe 239.562†	179.1	1.89	mg/L	0.053	1.89	mg/L	0.053	2.82%
Mg 279.077†	1360.0	4.81	mg/L	0.138	4.81	mg/L	0.138	2.87%
Mn 257.610†	62010.3	0.250	mg/L	0.0108	0.250	mg/L	0.0108	4.32%
Mo 202.031†	3447.0	0.497	mg/L	0.0238	0.497	mg/L	0.0238	4.78%
Ni 231.604†	4330.9	0.258	mg/L	0.0083	0.258	mg/L	0.0083	3.23%
Pb 220.353†	716.7	0.260	mg/L	0.0065	0.260	mg/L	0.0065	2.48%
Sb 206.836†	456.2	0.565	mg/L	0.0160	0.565	mg/L	0.0160	2.83%
Se 196.026†	130.5	0.204	mg/L	0.0196	0.204	mg/L	0.0196	9.58%
Si 251.611†	44460.8	2.50	mg/L	0.108	2.50	mg/L	0.108	4.33%
Sn 189.927†	1416.5	0.558	mg/L	0.0152	0.558	mg/L	0.0152	2.73%
Ti 334.940†	239087.3	0.510	mg/L	0.0011	0.510	mg/L	0.0011	0.22%
Tl 190.801†	213.3	0.259	mg/L	0.0051	0.259	mg/L	0.0051	1.95%
V 290.880†	42294.6	0.507	mg/L	0.0241	0.507	mg/L	0.0241	4.76%
Zn 206.200†	6919.7	0.520	mg/L	0.0181	0.520	mg/L	0.0181	3.49%
K 766.490†	42911.6	27.3	mg/L	0.05	27.3	mg/L	0.05	0.20%
Na 589.592†	235208.0	26.0	mg/L	0.34	26.0	mg/L	0.34	1.29%
Sr 407.771†	578668.5	0.520	mg/L	0.0024	0.520	mg/L	0.0024	0.46%
Li 670.784†	33364.3	0.554	mg/L	0.0058	0.554	mg/L	0.0058	1.05%

Sequence No.: 46 **Autosampler Location: 84**
Sample ID: L1201051401 **Date Collected: 1/26/2012 8:17:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201051401

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201051401

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3352673.0						13045.78	0.39%

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YRADIAL	262773.4						7651.55	2.91%
Ga 417.206	763289.4						3971.69	0.52%
GaRADIAL	43448.1						660.25	1.52%
Ag 328.068†	-822.2	-0.00604	mg/L	0.000239	-0.00604	mg/L	0.000239	3.96%
Al 396.153†	468.9	0.156	mg/L	0.0254	0.156	mg/L	0.0254	16.32%
As 188.979†	5.1	0.00370	mg/L	0.007886	0.00370	mg/L	0.007886	213.38%
Ba 233.527†	1671.0	0.0552	mg/L	0.00043	0.0552	mg/L	0.00043	0.77%
Be 234.861†	239.6	0.00078	mg/L	0.000019	0.00078	mg/L	0.000019	2.38%
B 249.677†	1787.8	0.0655	mg/L	0.00137	0.0655	mg/L	0.00137	2.09%
Ca 227.546†	80.9	1.19	mg/L	0.102	1.19	mg/L	0.102	8.51%
Cd 228.802†	-8.7	-0.00093	mg/L	0.000049	-0.00093	mg/L	0.000049	5.30%
Co 228.616†	-0.4	-0.00027	mg/L	0.000681	-0.00027	mg/L	0.000681	251.43%
Cr 267.716†	130.9	0.00152	mg/L	0.000063	0.00152	mg/L	0.000063	4.15%
Cu 327.393†	-503.7	-0.00444	mg/L	0.000296	-0.00444	mg/L	0.000296	6.68%
Fe 239.562†	17.8	0.190	mg/L	0.0196	0.190	mg/L	0.0196	10.32%
Mg 279.077†	87.2	0.332	mg/L	0.0242	0.332	mg/L	0.0242	7.30%
Mn 257.610†	10922.8	0.0428	mg/L	0.00079	0.0428	mg/L	0.00079	1.85%
Mo 202.031†	-12.4	-0.00157	mg/L	0.000102	-0.00157	mg/L	0.000102	6.50%
Ni 231.604†	151.3	0.00866	mg/L	0.000143	0.00866	mg/L	0.000143	1.65%
Pb 220.353†	20.1	0.00644	mg/L	0.000738	0.00644	mg/L	0.000738	11.46%
Sb 206.836†	3.8	0.00407	mg/L	0.002041	0.00407	mg/L	0.002041	50.21%
Se 196.026†	5.6	0.00281	mg/L	0.003228	0.00281	mg/L	0.003228	115.00%
Si 251.611†	6062.6	0.329	mg/L	0.0068	0.329	mg/L	0.0068	2.06%
Sn 189.927†	-5.2	-0.00259	mg/L	0.000444	-0.00259	mg/L	0.000444	17.13%
Ti 334.940†	-259.9	-0.00186	mg/L	0.000175	-0.00186	mg/L	0.000175	9.42%
Tl 190.801†	-5.8	-0.00946	mg/L	0.004808	-0.00946	mg/L	0.004808	50.83%
V 290.880†	514.5	0.00554	mg/L	0.001466	0.00554	mg/L	0.001466	26.47%
Zn 206.200†	923.5	0.0691	mg/L	0.00060	0.0691	mg/L	0.00060	0.87%
K 766.490†	46417.1	29.5	mg/L	0.16	29.5	mg/L	0.16	0.53%
Na 589.592†	73924.7	8.10	mg/L	0.104	8.10	mg/L	0.104	1.29%
Sr 407.771†	7252.2	0.00805	mg/L	0.000031	0.00805	mg/L	0.000031	0.38%
Li 670.784†	151.8	0.00021	mg/L	0.002213	0.00021	mg/L	0.002213	>999.9%

Sequence No.: 47 **Autosampler Location: 85**
Sample ID: L1201055801 **Date Collected: 1/26/2012 8:24:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055801

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3453637.8						11284.21	0.33%
YRADIAL	264255.2						5861.20	2.22%
Ga 417.206	751440.6						4651.19	0.62%
GaRADIAL	43569.0						887.51	2.04%
Ag 328.068†	-963.2	-0.00718	mg/L	0.000600	-0.00718	mg/L	0.000600	8.36%
Al 396.153†	8.5	0.00115	mg/L	0.028881	0.00115	mg/L	0.028881	>999.9%
As 188.979†	1.2	-0.00381	mg/L	0.004787	-0.00381	mg/L	0.004787	125.80%
Ba 233.527†	22.4	0.00067	mg/L	0.000036	0.00067	mg/L	0.000036	5.45%
Be 234.861†	220.9	0.00075	mg/L	0.000032	0.00075	mg/L	0.000032	4.22%
B 249.677†	122.7	0.00597	mg/L	0.000366	0.00597	mg/L	0.000366	6.12%
Ca 227.546†	47.2	0.704	mg/L	0.0352	0.704	mg/L	0.0352	5.00%
Cd 228.802†	-11.4	-0.00120	mg/L	0.000105	-0.00120	mg/L	0.000105	8.78%
Co 228.616†	-11.9	-0.00143	mg/L	0.000159	-0.00143	mg/L	0.000159	11.16%
Cr 267.716†	69.0	0.00053	mg/L	0.000099	0.00053	mg/L	0.000099	18.54%
Cu 327.393†	-482.5	-0.00423	mg/L	0.000150	-0.00423	mg/L	0.000150	3.54%
Fe 239.562†	-0.4	-0.00218	mg/L	0.004781	-0.00218	mg/L	0.004781	219.02%
Mg 279.077†	101.6	0.383	mg/L	0.0201	0.383	mg/L	0.0201	5.26%
Mn 257.610†	123.9	-0.00134	mg/L	0.000019	-0.00134	mg/L	0.000019	1.41%
Mo 202.031†	-15.4	-0.00203	mg/L	0.000538	-0.00203	mg/L	0.000538	26.45%
Ni 231.604†	14.5	0.00049	mg/L	0.000133	0.00049	mg/L	0.000133	27.27%
Pb 220.353†	18.6	0.00585	mg/L	0.001008	0.00585	mg/L	0.001008	17.24%
Sb 206.836†	2.8	0.00278	mg/L	0.001710	0.00278	mg/L	0.001710	61.57%
Se 196.026†	4.1	0.00012	mg/L	0.002024	0.00012	mg/L	0.002024	>999.9%

Approved: January 27, 2012

Si 251.611†	1931.8	0.0938	mg/L	0.00508	0.0938	mg/L	0.00508	5.42%
Sn 189.927†	-8.3	-0.00380	mg/L	0.001799	-0.00380	mg/L	0.001799	47.34%
Ti 334.940†	-289.8	-0.00193	mg/L	0.000110	-0.00193	mg/L	0.000110	5.68%
Tl 190.801†	-6.3	-0.00990	mg/L	0.002212	-0.00990	mg/L	0.002212	22.34%
V 290.880†	493.8	0.00531	mg/L	0.000829	0.00531	mg/L	0.000829	15.60%
Zn 206.200†	75.7	0.00562	mg/L	0.000286	0.00562	mg/L	0.000286	5.09%
K 766.490†	4.2	0.00631	mg/L	0.012524	0.00631	mg/L	0.012524	198.52%
Na 589.592†	4515.0	0.435	mg/L	0.0188	0.435	mg/L	0.0188	4.32%
Sr 407.771†	58045.0	0.0537	mg/L	0.00022	0.0537	mg/L	0.00022	0.41%
Li 670.784†	66.4	-0.00121	mg/L	0.002389	-0.00121	mg/L	0.002389	197.46%

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Sequence No.: 48 **Autosampler Location: 86**
Sample ID: L1201055802 **Date Collected: 1/26/2012 8:31:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055802

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055802

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3444643.0						51226.30	1.49%
YRADIAL	262618.5						5991.72	2.28%
Ga 417.206	745760.0						11539.05	1.55%
GaRADIAL	43437.0						1223.71	2.82%
Ag 328.068†	-912.7	-0.00676	mg/L	0.000213	-0.00676	mg/L	0.000213	3.14%
Al 396.153†	6.3	0.00042	mg/L	0.016711	0.00042	mg/L	0.016711	>999.9%
As 188.979†	4.0	0.00158	mg/L	0.002798	0.00158	mg/L	0.002798	176.73%
Ba 233.527†	-30.7	-0.00109	mg/L	0.000151	-0.00109	mg/L	0.000151	13.82%
Be 234.861†	231.8	0.00078	mg/L	0.000041	0.00078	mg/L	0.000041	5.18%
B 249.677†	18.4	0.00232	mg/L	0.000207	0.00232	mg/L	0.000207	8.92%
Ca 227.546†	-4.4	-0.0670	mg/L	0.02807	-0.0670	mg/L	0.02807	41.92%
Cd 228.802†	-10.5	-0.00110	mg/L	0.000253	-0.00110	mg/L	0.000253	23.05%
Co 228.616†	-12.7	-0.00150	mg/L	0.000408	-0.00150	mg/L	0.000408	27.15%
Cr 267.716†	94.6	0.00095	mg/L	0.000092	0.00095	mg/L	0.000092	9.65%
Cu 327.393†	-594.1	-0.00539	mg/L	0.000259	-0.00539	mg/L	0.000259	4.80%
Fe 239.562†	0.2	0.00467	mg/L	0.006388	0.00467	mg/L	0.006388	136.76%
Mg 279.077†	-5.0	0.00785	mg/L	0.004903	0.00785	mg/L	0.004903	62.49%
Mn 257.610†	40.9	-0.00171	mg/L	0.000019	-0.00171	mg/L	0.000019	1.11%
Mo 202.031†	-19.0	-0.00254	mg/L	0.000441	-0.00254	mg/L	0.000441	17.34%
Ni 231.604†	6.3	0.00000	mg/L	0.000144	0.00000	mg/L	0.000144	>999.9%
Pb 220.353†	20.7	0.00657	mg/L	0.001368	0.00657	mg/L	0.001368	20.83%
Sb 206.836†	4.2	0.00456	mg/L	0.001585	0.00456	mg/L	0.001585	34.75%
Se 196.026†	-0.2	-0.00702	mg/L	0.002103	-0.00702	mg/L	0.002103	29.98%
Si 251.611†	-15.6	-0.0169	mg/L	0.00001	-0.0169	mg/L	0.00001	0.08%
Sn 189.927†	-6.9	-0.00325	mg/L	0.001130	-0.00325	mg/L	0.001130	34.80%
Ti 334.940†	-345.0	-0.00206	mg/L	0.000287	-0.00206	mg/L	0.000287	13.92%
Tl 190.801†	-5.6	-0.00882	mg/L	0.003657	-0.00882	mg/L	0.003657	41.45%
V 290.880†	400.0	0.00415	mg/L	0.001276	0.00415	mg/L	0.001276	30.73%
Zn 206.200†	39.6	0.00292	mg/L	0.000116	0.00292	mg/L	0.000116	3.99%
K 766.490†	-168.1	-0.103	mg/L	0.0375	-0.103	mg/L	0.0375	36.35%
Na 589.592†	-336.2	-0.0996	mg/L	0.01720	-0.0996	mg/L	0.01720	17.26%
Sr 407.771†	-415.4	0.00122	mg/L	0.000034	0.00122	mg/L	0.000034	2.77%
Li 670.784†	-67.7	-0.00344	mg/L	0.000491	-0.00344	mg/L	0.000491	14.25%

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Sequence No.: 49 **Autosampler Location: 87**
Sample ID: L1201055803 **Date Collected: 1/26/2012 8:37:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055803

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Approved: January 27, 2012

Mean Data: L1201055803

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3428620.7						62301.26	1.82%
YRADIAL	253893.7						2869.52	1.13%
Ga 417.206	742694.6						13326.78	1.79%
GaRADIAL	42184.8						757.52	1.80%
Ag 328.068†	-906.6	-0.00671	mg/L	0.000448	-0.00671	mg/L	0.000448	6.68%
Al 396.153†	25.4	0.00680	mg/L	0.018773	0.00680	mg/L	0.018773	276.03%
As 188.979†	2.2	-0.00184	mg/L	0.003159	-0.00184	mg/L	0.003159	171.72%
Ba 233.527†	-27.8	-0.00099	mg/L	0.000156	-0.00099	mg/L	0.000156	15.71%
Be 234.861†	226.8	0.00077	mg/L	0.000061	0.00077	mg/L	0.000061	7.91%
B 249.677†	6.6	0.00190	mg/L	0.000232	0.00190	mg/L	0.000232	12.18%
Ca 227.546†	-5.8	-0.0871	mg/L	0.08368	-0.0871	mg/L	0.08368	96.05%
Cd 228.802†	-9.0	-0.00096	mg/L	0.000210	-0.00096	mg/L	0.000210	21.73%
Co 228.616†	-9.8	-0.00121	mg/L	0.000277	-0.00121	mg/L	0.000277	22.86%
Cr 267.716†	70.2	0.00055	mg/L	0.000209	0.00055	mg/L	0.000209	37.88%
Cu 327.393†	-657.2	-0.00604	mg/L	0.000229	-0.00604	mg/L	0.000229	3.78%
Fe 239.562†	0.5	0.00748	mg/L	0.008375	0.00748	mg/L	0.008375	111.90%
Mg 279.077†	-2.0	0.0183	mg/L	0.00959	0.0183	mg/L	0.00959	52.48%
Mn 257.610†	241.3	-0.00090	mg/L	0.000043	-0.00090	mg/L	0.000043	4.81%
Mo 202.031†	-20.0	-0.00269	mg/L	0.000352	-0.00269	mg/L	0.000352	13.11%
Ni 231.604†	7.5	0.00007	mg/L	0.000429	0.00007	mg/L	0.000429	627.50%
Pb 220.353†	24.4	0.00793	mg/L	0.001819	0.00793	mg/L	0.001819	22.95%
Sb 206.836†	5.6	0.00630	mg/L	0.003260	0.00630	mg/L	0.003260	51.73%
Se 196.026†	1.0	-0.00513	mg/L	0.010981	-0.00513	mg/L	0.010981	213.91%
Si 251.611†	297.6	0.00090	mg/L	0.000569	0.00090	mg/L	0.000569	63.38%
Sn 189.927†	-7.2	-0.00338	mg/L	0.000935	-0.00338	mg/L	0.000935	27.68%
Ti 334.940†	-208.6	-0.00177	mg/L	0.000237	-0.00177	mg/L	0.000237	13.40%
Tl 190.801†	-8.8	-0.0126	mg/L	0.00571	-0.0126	mg/L	0.00571	45.31%
V 290.880†	445.9	0.00471	mg/L	0.001075	0.00471	mg/L	0.001075	22.85%
Zn 206.200†	53.0	0.00392	mg/L	0.000246	0.00392	mg/L	0.000246	6.27%
K 766.490†	-216.9	-0.134	mg/L	0.0443	-0.134	mg/L	0.0443	32.93%
Na 589.592†	-412.4	-0.108	mg/L	0.0217	-0.108	mg/L	0.0217	20.09%
Sr 407.771†	-344.6	0.00128	mg/L	0.000092	0.00128	mg/L	0.000092	7.17%
Li 670.784†	-38.6	-0.00296	mg/L	0.000740	-0.00296	mg/L	0.000740	25.01%

Sequence No.: 50 **Autosampler Location: 88**
Sample ID: L1201055804 **Date Collected: 1/26/2012 8:44:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055804

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055804

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	3480746.0						49230.56	1.41%
YRADIAL	261261.0						1776.03	0.68%
Ga 417.206	757182.3						14593.83	1.93%
GaRADIAL	43254.1						693.98	1.60%
Ag 328.068†	-984.4	-0.00734	mg/L	0.000869	-0.00734	mg/L	0.000869	11.83%
Al 396.153†	57.4	0.0175	mg/L	0.00614	0.0175	mg/L	0.00614	34.99%
As 188.979†	2.2	-0.00172	mg/L	0.004970	-0.00172	mg/L	0.004970	289.46%
Ba 233.527†	-31.4	-0.00111	mg/L	0.000085	-0.00111	mg/L	0.000085	7.64%
Be 234.861†	246.2	0.00083	mg/L	0.000052	0.00083	mg/L	0.000052	6.28%
B 249.677†	-6.5	0.00136	mg/L	0.000315	0.00136	mg/L	0.000315	23.25%
Ca 227.546†	-9.6	-0.143	mg/L	0.0349	-0.143	mg/L	0.0349	24.45%
Cd 228.802†	-10.9	-0.00115	mg/L	0.000306	-0.00115	mg/L	0.000306	26.63%
Co 228.616†	-10.9	-0.00132	mg/L	0.000488	-0.00132	mg/L	0.000488	37.00%
Cr 267.716†	71.4	0.00057	mg/L	0.000061	0.00057	mg/L	0.000061	10.62%
Cu 327.393†	-574.4	-0.00519	mg/L	0.000081	-0.00519	mg/L	0.000081	1.56%
Fe 239.562†	-1.0	-0.00888	mg/L	0.009024	-0.00888	mg/L	0.009024	101.66%
Mg 279.077†	-7.4	-0.00063	mg/L	0.003762	-0.00063	mg/L	0.003762	598.80%

Approved: January 27, 2012

Mn 257.610†	62.4	-0.00162	mg/L	0.000034	-0.00162	mg/L	0.000034	2.09%
Mo 202.031†	-21.0	-0.00284	mg/L	0.000166	-0.00284	mg/L	0.000166	5.86%
Ni 231.604†	3.1	-0.00020	mg/L	0.000232	-0.00020	mg/L	0.000232	118.22%
Pb 220.353†	21.8	0.00698	mg/L	0.001921	0.00698	mg/L	0.001921	27.53%
Sb 206.836†	4.0	0.00435	mg/L	0.000280	0.00435	mg/L	0.000280	6.44%
Se 196.026†	5.5	0.00212	mg/L	0.004182	0.00212	mg/L	0.004182	197.29%
Si 251.611†	37.1	-0.0139	mg/L	0.00040	-0.0139	mg/L	0.00040	2.90%
Sn 189.927†	-8.1	-0.00372	mg/L	0.001821	-0.00372	mg/L	0.001821	48.96%
Ti 334.940†	-385.4	-0.00215	mg/L	0.000054	-0.00215	mg/L	0.000054	2.51%
Tl 190.801†	-7.5	-0.0110	mg/L	0.00712	-0.0110	mg/L	0.00712	64.78%
V 290.880†	371.0	0.00381	mg/L	0.002401	0.00381	mg/L	0.002401	63.09%
Zn 206.200†	38.3	0.00282	mg/L	0.000203	0.00282	mg/L	0.000203	7.18%
K 766.490†	-192.2	-0.119	mg/L	0.0374	-0.119	mg/L	0.0374	31.50%
Na 589.592†	-277.1	-0.0931	mg/L	0.00927	-0.0931	mg/L	0.00927	9.95%
Sr 407.771†	-394.7	0.00124	mg/L	0.000015	0.00124	mg/L	0.000015	1.20%
Li 670.784†	-33.6	-0.00288	mg/L	0.001601	-0.00288	mg/L	0.001601	55.67%

Sequence No.: 51 **Autosampler Location: 89**
Sample ID: L1201055805 **Date Collected: 1/26/2012 8:51:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055805

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055805

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3440779.8						48592.92	1.41%
YRADIAL	258407.6						904.53	0.35%
Ga 417.206	748663.3						17983.98	2.40%
GaRADIAL	42821.9						503.46	1.18%
Ag 328.068†	-972.4	-0.00725	mg/L	0.000465	-0.00725	mg/L	0.000465	6.42%
Al 396.153†	6.7	0.00055	mg/L	0.009710	0.00055	mg/L	0.009710	>999.9%
As 188.979†	0.4	-0.00525	mg/L	0.006901	-0.00525	mg/L	0.006901	131.39%
Ba 233.527†	-34.2	-0.00121	mg/L	0.000206	-0.00121	mg/L	0.000206	17.07%
Be 234.861†	239.6	0.00081	mg/L	0.000013	0.00081	mg/L	0.000013	1.65%
B 249.677†	-22.4	0.00083	mg/L	0.000172	0.00083	mg/L	0.000172	20.61%
Ca 227.546†	-10.3	-0.153	mg/L	0.0284	-0.153	mg/L	0.0284	18.61%
Cd 228.802†	-9.1	-0.00099	mg/L	0.000313	-0.00099	mg/L	0.000313	31.72%
Co 228.616†	-10.8	-0.00131	mg/L	0.000210	-0.00131	mg/L	0.000210	16.02%
Cr 267.716†	86.3	0.00081	mg/L	0.000264	0.00081	mg/L	0.000264	32.42%
Cu 327.393†	-573.0	-0.00517	mg/L	0.000650	-0.00517	mg/L	0.000650	12.56%
Fe 239.562†	-0.5	-0.00312	mg/L	0.008048	-0.00312	mg/L	0.008048	258.07%
Mg 279.077†	-5.0	0.00774	mg/L	0.008095	0.00774	mg/L	0.008095	104.57%
Mn 257.610†	51.8	-0.00167	mg/L	0.000019	-0.00167	mg/L	0.000019	1.15%
Mo 202.031†	-20.8	-0.00280	mg/L	0.000286	-0.00280	mg/L	0.000286	10.19%
Ni 231.604†	6.8	0.00003	mg/L	0.000240	0.00003	mg/L	0.000240	896.58%
Pb 220.353†	24.4	0.00791	mg/L	0.001069	0.00791	mg/L	0.001069	13.52%
Sb 206.836†	2.8	0.00282	mg/L	0.004309	0.00282	mg/L	0.004309	152.57%
Se 196.026†	2.8	-0.00225	mg/L	0.004472	-0.00225	mg/L	0.004472	198.69%
Si 251.611†	32.5	-0.0142	mg/L	0.00030	-0.0142	mg/L	0.00030	2.10%
Sn 189.927†	-8.4	-0.00382	mg/L	0.000247	-0.00382	mg/L	0.000247	6.47%
Ti 334.940†	-217.4	-0.00179	mg/L	0.000229	-0.00179	mg/L	0.000229	12.81%
Tl 190.801†	-9.6	-0.0135	mg/L	0.00381	-0.0135	mg/L	0.00381	28.23%
V 290.880†	284.5	0.00277	mg/L	0.000702	0.00277	mg/L	0.000702	25.37%
Zn 206.200†	33.4	0.00245	mg/L	0.000533	0.00245	mg/L	0.000533	21.77%
K 766.490†	-224.4	-0.139	mg/L	0.0295	-0.139	mg/L	0.0295	21.17%
Na 589.592†	-217.5	-0.0866	mg/L	0.00384	-0.0866	mg/L	0.00384	4.44%
Sr 407.771†	-396.2	0.00124	mg/L	0.000055	0.00124	mg/L	0.000055	4.49%
Li 670.784†	-75.1	-0.00357	mg/L	0.001424	-0.00357	mg/L	0.001424	39.91%

Sequence No.: 52 **Autosampler Location: 90**
Sample ID: L1201055805PS WG387954-01 **Date Collected: 1/26/2012 8:58:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: January 27, 2012

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055805PS WG387954-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055805PS WG387954-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3313213.3						42089.92	1.27%
YRADIAL	251918.4						557.84	0.22%
Ga 417.206	763233.4						18672.64	2.45%
GaRADIAL	42076.5						480.98	1.14%
Ag 328.068†	23290.0	0.191	mg/L	0.0031	0.191	mg/L	0.0031	1.65%
Al 396.153†	15180.1	5.08	mg/L	0.110	5.08	mg/L	0.110	2.17%
As 188.979†	105.0	0.194	mg/L	0.0038	0.194	mg/L	0.0038	1.96%
Ba 233.527†	16552.6	0.549	mg/L	0.0097	0.549	mg/L	0.0097	1.77%
Be 234.861†	6947.5	0.0236	mg/L	0.00032	0.0236	mg/L	0.00032	1.36%
B 249.677†	28489.1	1.01	mg/L	0.015	1.01	mg/L	0.015	1.52%
Ca 227.546†	339.0	5.04	mg/L	0.116	5.04	mg/L	0.116	2.31%
Cd 228.802†	229.8	0.0220	mg/L	0.00055	0.0220	mg/L	0.00055	2.50%
Co 228.616†	1020.1	0.103	mg/L	0.0009	0.103	mg/L	0.0009	0.86%
Cr 267.716†	15904.0	0.259	mg/L	0.0020	0.259	mg/L	0.0020	0.76%
Cu 327.393†	22423.7	0.234	mg/L	0.0042	0.234	mg/L	0.0042	1.78%
Fe 239.562†	185.1	1.95	mg/L	0.016	1.95	mg/L	0.016	0.80%
Mg 279.077†	1409.4	4.98	mg/L	0.058	4.98	mg/L	0.058	1.17%
Mn 257.610†	63095.2	0.254	mg/L	0.0030	0.254	mg/L	0.0030	1.18%
Mo 202.031†	3540.9	0.511	mg/L	0.0070	0.511	mg/L	0.0070	1.37%
Ni 231.604†	4405.4	0.263	mg/L	0.0043	0.263	mg/L	0.0043	1.64%
Pb 220.353†	735.1	0.267	mg/L	0.0030	0.267	mg/L	0.0030	1.13%
Sb 206.836†	463.6	0.574	mg/L	0.0130	0.574	mg/L	0.0130	2.27%
Se 196.026†	132.2	0.207	mg/L	0.0070	0.207	mg/L	0.0070	3.39%
Si 251.611†	45445.1	2.56	mg/L	0.043	2.56	mg/L	0.043	1.68%
Sn 189.927†	1433.0	0.565	mg/L	0.0046	0.565	mg/L	0.0046	0.81%
Ti 334.940†	244216.5	0.521	mg/L	0.0025	0.521	mg/L	0.0025	0.47%
Tl 190.801†	215.3	0.262	mg/L	0.0056	0.262	mg/L	0.0056	2.15%
V 290.880†	43444.0	0.521	mg/L	0.0062	0.521	mg/L	0.0062	1.19%
Zn 206.200†	7068.7	0.531	mg/L	0.0037	0.531	mg/L	0.0037	0.69%
K 766.490†	43388.8	27.6	mg/L	0.09	27.6	mg/L	0.09	0.32%
Na 589.592†	240354.9	26.6	mg/L	0.40	26.6	mg/L	0.40	1.50%
Sr 407.771†	584992.2	0.526	mg/L	0.0024	0.526	mg/L	0.0024	0.46%
Li 670.784†	34707.2	0.576	mg/L	0.0040	0.576	mg/L	0.0040	0.69%

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Sequence No.: 53 **Autosampler Location: 91**
Sample ID: L1201055805DL WG387954-02 **Date Collected: 1/26/2012 9:05:17 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055805DL WG387954-02

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055805DL WG387954-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3442149.0						58662.73	1.70%
YRADIAL	262146.3						4541.06	1.73%
Ga 417.206	741474.1						10445.35	1.41%
GaRADIAL	43286.3						397.01	0.92%
Ag 328.068†	-1030.5	-0.00772	mg/L	0.000270	-0.00772	mg/L	0.000270	3.50%
Al 396.153†	34.2	0.00978	mg/L	0.016928	0.00978	mg/L	0.016928	173.02%
As 188.979†	2.5	-0.00132	mg/L	0.008367	-0.00132	mg/L	0.008367	632.92%
Ba 233.527†	-33.7	-0.00119	mg/L	0.000094	-0.00119	mg/L	0.000094	7.94%
Be 234.861†	245.4	0.00083	mg/L	0.000053	0.00083	mg/L	0.000053	6.33%
B 249.677†	73.3	0.00424	mg/L	0.000499	0.00424	mg/L	0.000499	11.77%
Ca 227.546†	-8.5	-0.127	mg/L	0.0421	-0.127	mg/L	0.0421	33.07%

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Cd 228.802†	-12.3	-0.00127 mg/L	0.000250	-0.00127 mg/L	0.000250	19.65%
Co 228.616†	-11.1	-0.00134 mg/L	0.000019	-0.00134 mg/L	0.000019	1.44%
Cr 267.716†	58.0	0.00035 mg/L	0.000090	0.00035 mg/L	0.000090	25.52%
Cu 327.393†	-665.8	-0.00614 mg/L	0.000502	-0.00614 mg/L	0.000502	8.18%
Fe 239.562†	0.1	0.00264 mg/L	0.007030	0.00264 mg/L	0.007030	266.41%
Mg 279.077†	-1.2	0.0212 mg/L	0.01372	0.0212 mg/L	0.01372	64.65%
Mn 257.610†	40.5	-0.00171 mg/L	0.000035	-0.00171 mg/L	0.000035	2.07%
Mo 202.031†	-20.3	-0.00273 mg/L	0.000672	-0.00273 mg/L	0.000672	24.60%
Ni 231.604†	4.8	-0.00010 mg/L	0.000301	-0.00010 mg/L	0.000301	315.01%
Pb 220.353†	23.4	0.00754 mg/L	0.002455	0.00754 mg/L	0.002455	32.58%
Sb 206.836†	4.1	0.00447 mg/L	0.002802	0.00447 mg/L	0.002802	62.64%
Se 196.026†	4.9	0.00112 mg/L	0.004809	0.00112 mg/L	0.004809	427.94%
Si 251.611†	-43.2	-0.0185 mg/L	0.00029	-0.0185 mg/L	0.00029	1.58%
Sn 189.927†	-7.1	-0.00331 mg/L	0.000638	-0.00331 mg/L	0.000638	19.28%
Ti 334.940†	-374.9	-0.00212 mg/L	0.000262	-0.00212 mg/L	0.000262	12.37%
Tl 190.801†	-8.0	-0.0116 mg/L	0.00350	-0.0116 mg/L	0.00350	30.21%
V 290.880†	339.5	0.00343 mg/L	0.001090	0.00343 mg/L	0.001090	31.79%
Zn 206.200†	41.9	0.00308 mg/L	0.000541	0.00308 mg/L	0.000541	17.54%
K 766.490†	-218.0	-0.135 mg/L	0.0685	-0.135 mg/L	0.0685	50.70%
Na 589.592†	-377.7	-0.104 mg/L	0.0184	-0.104 mg/L	0.0184	17.68%
Sr 407.771†	-420.8	0.00121 mg/L	0.000020	0.00121 mg/L	0.000020	1.67%
Li 670.784†	-57.4	-0.00327 mg/L	0.000901	-0.00327 mg/L	0.000901	27.54%

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Sequence No.: 54 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 9:12:07 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3352954.7						21386.44	0.64%
YRADIAL	255774.8						1599.18	0.63%
Ga 417.206	779780.2						3373.64	0.43%
GaRADIAL	43223.6						824.15	1.91%
Ag 328.068†	45492.9	0.372	mg/L	0.0009	0.372	mg/L	0.0009	0.24%
QC value within limits for Ag 328.068 Recovery = 92.96%								
Al 396.153†	30575.7	10.2	mg/L	0.03	10.2	mg/L	0.03	0.28%
QC value within limits for Al 396.153 Recovery = 102.41%								
As 188.979†	205.6	0.386	mg/L	0.0071	0.386	mg/L	0.0071	1.84%
QC value within limits for As 188.979 Recovery = 96.51%								
Ba 233.527†	32367.5	1.07	mg/L	0.006	1.07	mg/L	0.006	0.53%
QC value within limits for Ba 233.527 Recovery = 107.29%								
Be 234.861†	13264.7	0.0451	mg/L	0.00036	0.0451	mg/L	0.00036	0.80%
QC value within limits for Be 234.861 Recovery = 90.30%								
B 249.677†	13468.7	0.483	mg/L	0.0003	0.483	mg/L	0.0003	0.07%
QC value within limits for B 249.677 Recovery = 96.66%								
Ca 227.546†	668.6	9.93	mg/L	0.078	9.93	mg/L	0.078	0.78%
QC value within limits for Ca 227.546 Recovery = 99.27%								
Cd 228.802†	457.6	0.0438	mg/L	0.00080	0.0438	mg/L	0.00080	1.83%
QC value less than the lower limit for Cd 228.802 Recovery = 87.67%								
Co 228.616†	2023.4	0.204	mg/L	0.0010	0.204	mg/L	0.0010	0.48%
QC value within limits for Co 228.616 Recovery = 101.92%								
Cr 267.716†	30835.5	0.503	mg/L	0.0014	0.503	mg/L	0.0014	0.28%
QC value within limits for Cr 267.716 Recovery = 100.50%								
Cu 327.393†	43515.0	0.454	mg/L	0.0011	0.454	mg/L	0.0011	0.25%
QC value within limits for Cu 327.393 Recovery = 90.73%								
Fe 239.562†	365.6	3.85	mg/L	0.028	3.85	mg/L	0.028	0.72%
QC value within limits for Fe 239.562 Recovery = 96.36%								
Mg 279.077†	2726.4	9.62	mg/L	0.124	9.62	mg/L	0.124	1.29%
QC value within limits for Mg 279.077 Recovery = 96.18%								
Mn 257.610†	123428.2	0.499	mg/L	0.0007	0.499	mg/L	0.0007	0.15%
QC value within limits for Mn 257.610 Recovery = 99.82%								
Mo 202.031†	6947.2	1.00	mg/L	0.012	1.00	mg/L	0.012	1.17%

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   QC value within limits for Mo 202.031  Recovery = 100.24%
Ni 231.604†            8565.5       0.512 mg/L        0.0019       0.512 mg/L        0.0019   0.37%
   QC value within limits for Ni 231.604  Recovery = 102.31%
Pb 220.353†            1413.3       0.514 mg/L        0.0065       0.514 mg/L        0.0065   1.26%
   QC value within limits for Pb 220.353  Recovery = 102.84%
Sb 206.836†             902.6        1.12 mg/L         0.010        1.12 mg/L         0.010   0.89%
   QC value within limits for Sb 206.836  Recovery = 93.25%
Se 196.026†             253.4       0.403 mg/L        0.0053       0.403 mg/L        0.0053   1.32%
   QC value within limits for Se 196.026  Recovery = 100.75%
Si 251.611†           85084.5        4.81 mg/L         0.010        4.81 mg/L         0.010   0.21%
   QC value within limits for Si 251.611  Recovery = 96.15%
Sn 189.927†            2671.0        1.05 mg/L         0.010        1.05 mg/L         0.010   0.91%
   QC value within limits for Sn 189.927  Recovery = 105.35%
Ti 334.940†          493982.0        1.06 mg/L         0.002        1.06 mg/L         0.002   0.24%
   QC value within limits for Ti 334.940  Recovery = 105.55%
Tl 190.801†             420.3       0.513 mg/L        0.0032       0.513 mg/L        0.0032   0.62%
   QC value within limits for Tl 190.801  Recovery = 102.59%
V 290.880†            83987.2        1.01 mg/L         0.005        1.01 mg/L         0.005   0.50%
   QC value within limits for V 290.880  Recovery = 100.76%
Zn 206.200†           13511.3        1.01 mg/L         0.001        1.01 mg/L         0.001   0.13%
   QC value within limits for Zn 206.200  Recovery = 101.47%
K 766.490†            87133.2        55.2 mg/L          0.13        55.2 mg/L          0.13   0.24%
   QC value greater than the upper limit for K 766.490  Recovery = 110.37%
Na 589.592†          461181.9        51.4 mg/L          0.39        51.4 mg/L          0.39   0.75%
   QC value within limits for Na 589.592  Recovery = 102.83%
Sr 407.771†         1171705.5        1.05 mg/L         0.006        1.05 mg/L         0.006   0.57%
   QC value within limits for Sr 407.771  Recovery = 105.17%
Li 670.784†           67344.0        1.12 mg/L         0.009        1.12 mg/L         0.009   0.78%
   QC value greater than the upper limit for Li 670.784  Recovery = 112.02%
QC Failed.  Continue with analysis.

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Sequence No.: 55                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 9:19:03 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     148.0 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            3426417.4                                                    18397.40   0.54%
YRADIAL               259979.2                                                     4450.30   1.71%
Ga 417.206            733595.8                                                     3244.48   0.44%
GaRADIAL               42864.1                                                      743.11   1.73%
Ag 328.068†            -1093.4    -0.00823 mg/L      0.000759    -0.00823 mg/L      0.000759   9.22%
   QC value less than the lower limit for Ag 328.068  Recovery = Not calculated
Al 396.153†               -3.1    -0.00274 mg/L      0.007847    -0.00274 mg/L      0.007847 286.26%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                1.5    -0.00309 mg/L      0.003314    -0.00309 mg/L      0.003314 107.09%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -30.4    -0.00108 mg/L      0.000013    -0.00108 mg/L      0.000013   1.16%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              254.9     0.00086 mg/L      0.000018     0.00086 mg/L      0.000018   2.09%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                12.0     0.00208 mg/L      0.000691     0.00208 mg/L      0.000691  33.18%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -13.3      -0.199 mg/L        0.0623      -0.199 mg/L        0.0623  31.29%
   QC value less than the lower limit for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -12.6    -0.00131 mg/L      0.000290    -0.00131 mg/L      0.000290  22.14%
   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†              -11.7    -0.00140 mg/L      0.000355    -0.00140 mg/L      0.000355  25.36%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               57.6     0.00035 mg/L      0.000211     0.00035 mg/L      0.000211  60.86%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -731.2    -0.00681 mg/L      0.001165    -0.00681 mg/L      0.001165  17.10%
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   QC value less than the lower limit for Cu 327.393  Recovery = Not calculated
Fe 239.562†              -0.1     0.00079 mg/L      0.016703     0.00079 mg/L      0.016703 >999.9%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              -3.1      0.0145 mg/L       0.00870      0.0145 mg/L       0.00870  59.87%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              25.4    -0.00177 mg/L      0.000036    -0.00177 mg/L      0.000036   2.06%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -16.5    -0.00219 mg/L      0.000376    -0.00219 mg/L      0.000376  17.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               5.9    -0.00003 mg/L      0.000225    -0.00003 mg/L      0.000225 710.40%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              23.8     0.00768 mg/L      0.000911     0.00768 mg/L      0.000911  11.87%
   QC value greater than the upper limit for Pb 220.353  Recovery = Not calculated
Sb 206.836†               4.4     0.00483 mg/L      0.002875     0.00483 mg/L      0.002875  59.55%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.3    -0.00462 mg/L      0.000897    -0.00462 mg/L      0.000897  19.42%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -69.7     -0.0200 mg/L       0.00035     -0.0200 mg/L       0.00035   1.77%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -6.5    -0.00307 mg/L      0.000848    -0.00307 mg/L      0.000848  27.58%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -330.0    -0.00203 mg/L      0.000102    -0.00203 mg/L      0.000102   5.05%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -7.2     -0.0107 mg/L       0.00156     -0.0107 mg/L       0.00156  14.62%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              422.9     0.00443 mg/L      0.000405     0.00443 mg/L      0.000405   9.15%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               4.0     0.00024 mg/L      0.000123     0.00024 mg/L      0.000123  50.58%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†             -198.8      -0.123 mg/L        0.0273      -0.123 mg/L        0.0273  22.24%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -205.0     -0.0852 mg/L       0.01855     -0.0852 mg/L       0.01855  21.78%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            -356.1     0.00127 mg/L      0.000028     0.00127 mg/L      0.000028   2.16%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               4.0    -0.00225 mg/L      0.000792    -0.00225 mg/L      0.000792  35.21%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.

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Sequence No.: 56                                    Autosampler Location: 92
Sample ID: L1201055806                              Date Collected: 1/26/2012 9:25:51 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1201055806
Analyte                  Back Pressure    Flow
All                    147.0 kPa         0.50 L/min

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Mean Data: L1201055806
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            3445144.2                                                    31640.87   0.92%
YRADIAL               258805.2                                                     6795.97   2.63%
Ga 417.206            751211.4                                                     7422.51   0.99%
GaRADIAL               43322.7                                                     1268.72   2.93%
Ag 328.068†            -1052.7    -0.00790 mg/L      0.000923    -0.00790 mg/L      0.000923  11.68%
Al 396.153†                8.1     0.00101 mg/L      0.018608     0.00101 mg/L      0.018608 >999.9%
As 188.979†                3.5     0.00071 mg/L      0.001865     0.00071 mg/L      0.001865 263.82%
Ba 233.527†              -30.5    -0.00108 mg/L      0.000070    -0.00108 mg/L      0.000070   6.44%
Be 234.861†              266.1     0.00090 mg/L      0.000031     0.00090 mg/L      0.000031   3.43%
B 249.677†                11.0     0.00208 mg/L      0.000139     0.00208 mg/L      0.000139   6.69%
Ca 227.546†               -8.7      -0.132 mg/L        0.0616      -0.132 mg/L        0.0616  46.85%
Cd 228.802†              -11.7    -0.00121 mg/L      0.000145    -0.00121 mg/L      0.000145  11.97%
Co 228.616†              -13.9    -0.00163 mg/L      0.000396    -0.00163 mg/L      0.000396  24.34%
Cr 267.716†               78.3     0.00068 mg/L      0.000118     0.00068 mg/L      0.000118  17.24%
Cu 327.393†             -563.0    -0.00507 mg/L      0.001479    -0.00507 mg/L      0.001479  29.18%
Fe 239.562†                0.7     0.00904 mg/L      0.011506     0.00904 mg/L      0.011506 127.31%
Mg 279.077†               -0.4      0.0241 mg/L       0.01489      0.0241 mg/L       0.01489  61.89%
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Mn 257.610†	117.1	-0.00140	mg/L	0.000021	-0.00140	mg/L	0.000021	1.51%
Mo 202.031†	-20.6	-0.00278	mg/L	0.000619	-0.00278	mg/L	0.000619	22.26%
Ni 231.604†	1.6	-0.00028	mg/L	0.000402	-0.00028	mg/L	0.000402	141.44%
Pb 220.353†	21.5	0.00686	mg/L	0.001601	0.00686	mg/L	0.001601	23.33%
Sb 206.836†	2.9	0.00301	mg/L	0.003578	0.00301	mg/L	0.003578	118.92%
Se 196.026†	2.6	-0.00245	mg/L	0.001871	-0.00245	mg/L	0.001871	76.49%
Si 251.611†	62.9	-0.0124	mg/L	0.00039	-0.0124	mg/L	0.00039	3.13%
Sn 189.927†	-8.7	-0.00394	mg/L	0.000806	-0.00394	mg/L	0.000806	20.44%
Ti 334.940†	-389.1	-0.00215	mg/L	0.000059	-0.00215	mg/L	0.000059	2.75%
Tl 190.801†	-6.2	-0.00943	mg/L	0.001376	-0.00943	mg/L	0.001376	14.59%
V 290.880†	327.8	0.00329	mg/L	0.002937	0.00329	mg/L	0.002937	89.37%
Zn 206.200†	41.9	0.00308	mg/L	0.000182	0.00308	mg/L	0.000182	5.90%
K 766.490†	-225.5	-0.140	mg/L	0.0254	-0.140	mg/L	0.0254	18.12%
Na 589.592†	-290.3	-0.0946	mg/L	0.01017	-0.0946	mg/L	0.01017	10.75%
Sr 407.771†	-396.9	0.00123	mg/L	0.000033	0.00123	mg/L	0.000033	2.68%
Li 670.784†	-51.8	-0.00318	mg/L	0.001520	-0.00318	mg/L	0.001520	47.78%

Sequence No.: 57 **Autosampler Location: 93**
Sample ID: L1201055807 **Date Collected: 1/26/2012 9:32:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201055807

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201055807

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3435290.6						16090.19	0.47%
YRADIAL	257126.8						2421.29	0.94%
Ga 417.206	754130.2						7447.51	0.99%
GaRADIAL	42963.7						294.27	0.68%
Ag 328.068†	-1008.8	-0.00754	mg/L	0.000898	-0.00754	mg/L	0.000898	11.90%
Al 396.153†	-3.3	-0.00281	mg/L	0.015806	-0.00281	mg/L	0.015806	563.25%
As 188.979†	3.0	-0.00025	mg/L	0.006580	-0.00025	mg/L	0.006580	>999.9%
Ba 233.527†	-36.9	-0.00129	mg/L	0.000101	-0.00129	mg/L	0.000101	7.79%
Be 234.861†	260.2	0.00088	mg/L	0.000078	0.00088	mg/L	0.000078	8.90%
B 249.677†	-11.6	0.00126	mg/L	0.000250	0.00126	mg/L	0.000250	19.81%
Ca 227.546†	-12.5	-0.187	mg/L	0.0167	-0.187	mg/L	0.0167	8.91%
Cd 228.802†	-12.8	-0.00132	mg/L	0.000059	-0.00132	mg/L	0.000059	4.49%
Co 228.616†	-13.9	-0.00163	mg/L	0.000235	-0.00163	mg/L	0.000235	14.41%
Cr 267.716†	66.5	0.00049	mg/L	0.000142	0.00049	mg/L	0.000142	28.83%
Cu 327.393†	-633.8	-0.00580	mg/L	0.001250	-0.00580	mg/L	0.001250	21.54%
Fe 239.562†	0.1	0.00350	mg/L	0.017165	0.00350	mg/L	0.017165	491.00%
Mg 279.077†	-6.0	0.00415	mg/L	0.000975	0.00415	mg/L	0.000975	23.47%
Mn 257.610†	108.6	-0.00143	mg/L	0.000021	-0.00143	mg/L	0.000021	1.49%
Mo 202.031†	-20.5	-0.00276	mg/L	0.000124	-0.00276	mg/L	0.000124	4.51%
Ni 231.604†	9.1	0.00016	mg/L	0.000161	0.00016	mg/L	0.000161	99.34%
Pb 220.353†	22.5	0.00723	mg/L	0.001141	0.00723	mg/L	0.001141	15.79%
Sb 206.836†	4.2	0.00449	mg/L	0.001831	0.00449	mg/L	0.001831	40.74%
Se 196.026†	4.3	0.00017	mg/L	0.003876	0.00017	mg/L	0.003876	>999.9%
Si 251.611†	-0.7	-0.0161	mg/L	0.00048	-0.0161	mg/L	0.00048	2.96%
Sn 189.927†	-9.9	-0.00443	mg/L	0.001873	-0.00443	mg/L	0.001873	42.33%
Ti 334.940†	-330.8	-0.00203	mg/L	0.000199	-0.00203	mg/L	0.000199	9.80%
Tl 190.801†	-9.0	-0.0128	mg/L	0.00140	-0.0128	mg/L	0.00140	10.96%
V 290.880†	375.0	0.00385	mg/L	0.001062	0.00385	mg/L	0.001062	27.56%
Zn 206.200†	42.5	0.00313	mg/L	0.000189	0.00313	mg/L	0.000189	6.03%
K 766.490†	-193.5	-0.119	mg/L	0.0286	-0.119	mg/L	0.0286	23.95%
Na 589.592†	-297.1	-0.0953	mg/L	0.01062	-0.0953	mg/L	0.01062	11.14%
Sr 407.771†	-445.3	0.00119	mg/L	0.000041	0.00119	mg/L	0.000041	3.41%
Li 670.784†	-49.8	-0.00315	mg/L	0.000148	-0.00315	mg/L	0.000148	4.70%

Sequence No.: 58 **Autosampler Location: 94**
Sample ID: L1201061301 WG387850-01 **Date Collected: 1/26/2012 9:39:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: January 27, 2012

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061301 WG387850-01

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201061301 WG387850-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3312455.8						47666.82	1.44%
YRADIAL	262250.6						926.38	0.35%
Ga 417.206	804467.0						19208.90	2.39%
GaRADIAL	44733.4						901.15	2.01%
Ag 328.068†	-684.1	-0.00506	mg/L	0.001001	-0.00506	mg/L	0.001001	19.79%
Al 396.153†	-100.3	-0.0354	mg/L	0.01556	-0.0354	mg/L	0.01556	44.00%
As 188.979†	12.2	0.0157	mg/L	0.00345	0.0157	mg/L	0.00345	21.97%
Ba 233.527†	2353.8	0.0777	mg/L	0.00141	0.0777	mg/L	0.00141	1.81%
Be 234.861†	315.6	0.00100	mg/L	0.000063	0.00100	mg/L	0.000063	6.26%
B 249.677†	736.6	0.0291	mg/L	0.00064	0.0291	mg/L	0.00064	2.19%
Ca 227.546†	6188.3	92.3	mg/L	2.70	92.3	mg/L	2.70	2.93%
Cd 228.802†	-14.7	-0.00146	mg/L	0.000138	-0.00146	mg/L	0.000138	9.46%
Co 228.616†	-16.1	-0.00188	mg/L	0.000153	-0.00188	mg/L	0.000153	8.14%
Cr 267.716†	223.6	0.00304	mg/L	0.000217	0.00304	mg/L	0.000217	7.13%
Cu 327.393†	-799.1	-0.00750	mg/L	0.000867	-0.00750	mg/L	0.000867	11.57%
Fe 239.562†	27.9	0.296	mg/L	0.0353	0.296	mg/L	0.0353	11.95%
Mg 279.077†	4374.9	15.4	mg/L	0.05	15.4	mg/L	0.05	0.31%
Mn 257.610†	151.2	-0.00062	mg/L	0.000032	-0.00062	mg/L	0.000032	5.19%
Mo 202.031†	-21.0	-0.00283	mg/L	0.000472	-0.00283	mg/L	0.000472	16.70%
Ni 231.604†	7.1	0.00000	mg/L	0.000199	0.00000	mg/L	0.000199	>999.9%
Pb 220.353†	15.9	0.00926	mg/L	0.001228	0.00926	mg/L	0.001228	13.26%
Sb 206.836†	17.6	0.0210	mg/L	0.00086	0.0210	mg/L	0.00086	4.11%
Se 196.026†	-7.0	0.00998	mg/L	0.012028	0.00998	mg/L	0.012028	120.56%
Si 251.611†	312972.4	17.8	mg/L	0.17	17.8	mg/L	0.17	0.98%
Sn 189.927†	-27.7	-0.0115	mg/L	0.00223	-0.0115	mg/L	0.00223	19.50%
Ti 334.940†	-536.3	-0.00154	mg/L	0.000135	-0.00154	mg/L	0.000135	8.73%
Tl 190.801†	53.0	0.0248	mg/L	0.00945	0.0248	mg/L	0.00945	38.08%
V 290.880†	158.8	0.00254	mg/L	0.001524	0.00254	mg/L	0.001524	60.07%
Zn 206.200†	162.4	0.0121	mg/L	0.00027	0.0121	mg/L	0.00027	2.23%
K 766.490†	4971.2	3.14	mg/L	0.046	3.14	mg/L	0.046	1.47%
Na 589.592†	318962.4	35.4	mg/L	0.59	35.4	mg/L	0.59	1.68%
Sr 407.771†	769825.5	0.692	mg/L	0.0057	0.692	mg/L	0.0057	0.82%
Li 670.784†	891.8	0.0125	mg/L	0.00114	0.0125	mg/L	0.00114	9.07%

Sequence No.: 59 **Autosampler Location: 95**
Sample ID: L1201061301S WG387850-04 **Date Collected: 1/26/2012 9:46:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061301S WG387850-04

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201061301S WG387850-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3305742.0						29571.57	0.89%
YRADIAL	255896.9						3767.80	1.47%
Ga 417.206	805738.7						9207.24	1.14%
GaRADIAL	43974.6						817.71	1.86%
Ag 328.068†	22263.7	0.182	mg/L	0.0032	0.182	mg/L	0.0032	1.75%
Al 396.153†	15438.8	5.17	mg/L	0.046	5.17	mg/L	0.046	0.88%
As 188.979†	113.7	0.209	mg/L	0.0073	0.209	mg/L	0.0073	3.51%
Ba 233.527†	18771.5	0.622	mg/L	0.0072	0.622	mg/L	0.0072	1.16%
Be 234.861†	6710.8	0.0228	mg/L	0.00031	0.0228	mg/L	0.00031	1.36%
B 249.677†	28937.4	1.03	mg/L	0.017	1.03	mg/L	0.017	1.68%
Ca 227.546†	6800.3	101	mg/L	1.6	101	mg/L	1.6	1.53%

Approved: January 27, 2012

Cd 228.802†	209.4	0.0201 mg/L	0.00028	0.0201 mg/L	0.00028	1.40%
Co 228.616†	983.0	0.0988 mg/L	0.00129	0.0988 mg/L	0.00129	1.31%
Cr 267.716†	15881.8	0.259 mg/L	0.0033	0.259 mg/L	0.0033	1.27%
Cu 327.393†	20620.0	0.215 mg/L	0.0038	0.215 mg/L	0.0038	1.77%
Fe 239.562†	212.4	2.24 mg/L	0.069	2.24 mg/L	0.069	3.08%
Mg 279.077†	5952.9	21.0 mg/L	0.88	21.0 mg/L	0.88	4.19%
Mn 257.610†	61966.7	0.250 mg/L	0.0032	0.250 mg/L	0.0032	1.30%
Mo 202.031†	3594.3	0.519 mg/L	0.0045	0.519 mg/L	0.0045	0.86%
Ni 231.604†	4230.5	0.252 mg/L	0.0027	0.252 mg/L	0.0027	1.06%
Pb 220.353†	706.9	0.261 mg/L	0.0011	0.261 mg/L	0.0011	0.41%
Sb 206.836†	456.8	0.566 mg/L	0.0072	0.566 mg/L	0.0072	1.28%
Se 196.026†	115.1	0.209 mg/L	0.0086	0.209 mg/L	0.0086	4.11%
Si 251.611†	364323.7	20.7 mg/L	0.10	20.7 mg/L	0.10	0.47%
Sn 189.927†	1451.5	0.572 mg/L	0.0067	0.572 mg/L	0.0067	1.17%
Ti 334.940†	248703.9	0.532 mg/L	0.0008	0.532 mg/L	0.0008	0.16%
Tl 190.801†	263.3	0.281 mg/L	0.0037	0.281 mg/L	0.0037	1.32%
V 290.880†	43266.2	0.520 mg/L	0.0078	0.520 mg/L	0.0078	1.50%
Zn 206.200†	7019.0	0.527 mg/L	0.0047	0.527 mg/L	0.0047	0.90%
K 766.490†	48886.5	31.0 mg/L	0.13	31.0 mg/L	0.13	0.43%
Na 589.592†	563162.7	63.0 mg/L	1.12	63.0 mg/L	1.12	1.78%
Sr 407.771†	1381868.5	1.24 mg/L	0.009	1.24 mg/L	0.009	0.75%
Li 670.784†	35255.2	0.585 mg/L	0.0014	0.585 mg/L	0.0014	0.24%

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Sequence No.: 60
Sample ID: L1201061301SD WG387850-05
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 96
Date Collected: 1/26/2012 9:53:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201061301SD WG387850-05

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201061301SD WG387850-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3341668.9						22737.30	0.68%
YRADIAL	261703.0						2317.00	0.89%
Ga 417.206	814495.7						1209.11	0.15%
GaRADIAL	44719.6						1228.26	2.75%
Ag 328.068†	21968.2	0.180	mg/L	0.0019	0.180	mg/L	0.0019	1.04%
Al 396.153†	14958.6	5.01	mg/L	0.063	5.01	mg/L	0.063	1.26%
As 188.979†	109.1	0.200	mg/L	0.0018	0.200	mg/L	0.0018	0.88%
Ba 233.527†	18597.7	0.616	mg/L	0.0057	0.616	mg/L	0.0057	0.92%
Be 234.861†	6649.8	0.0226	mg/L	0.00034	0.0226	mg/L	0.00034	1.52%
B 249.677†	28792.7	1.02	mg/L	0.016	1.02	mg/L	0.016	1.54%
Ca 227.546†	6527.8	97.3	mg/L	1.42	97.3	mg/L	1.42	1.46%
Cd 228.802†	201.0	0.0193	mg/L	0.00023	0.0193	mg/L	0.00023	1.20%
Co 228.616†	965.8	0.0971	mg/L	0.00028	0.0971	mg/L	0.00028	0.29%
Cr 267.716†	15801.3	0.257	mg/L	0.0031	0.257	mg/L	0.0031	1.22%
Cu 327.393†	20407.9	0.213	mg/L	0.0033	0.213	mg/L	0.0033	1.52%
Fe 239.562†	205.4	2.17	mg/L	0.061	2.17	mg/L	0.061	2.80%
Mg 279.077†	5612.3	19.8	mg/L	0.92	19.8	mg/L	0.92	4.67%
Mn 257.610†	61581.3	0.249	mg/L	0.0040	0.249	mg/L	0.0040	1.61%
Mo 202.031†	3527.3	0.509	mg/L	0.0013	0.509	mg/L	0.0013	0.25%
Ni 231.604†	4168.6	0.249	mg/L	0.0015	0.249	mg/L	0.0015	0.61%
Pb 220.353†	699.6	0.259	mg/L	0.0030	0.259	mg/L	0.0030	1.15%
Sb 206.836†	449.3	0.557	mg/L	0.0068	0.557	mg/L	0.0068	1.23%
Se 196.026†	111.7	0.202	mg/L	0.0069	0.202	mg/L	0.0069	3.44%
Si 251.611†	351036.4	19.9	mg/L	0.11	19.9	mg/L	0.11	0.57%
Sn 189.927†	1447.2	0.571	mg/L	0.0018	0.571	mg/L	0.0018	0.31%
Ti 334.940†	245479.1	0.525	mg/L	0.0029	0.525	mg/L	0.0029	0.54%
Tl 190.801†	261.2	0.280	mg/L	0.0092	0.280	mg/L	0.0092	3.29%
V 290.880†	42939.1	0.516	mg/L	0.0075	0.516	mg/L	0.0075	1.45%
Zn 206.200†	6889.8	0.517	mg/L	0.0018	0.517	mg/L	0.0018	0.36%
K 766.490†	47480.4	30.1	mg/L	0.12	30.1	mg/L	0.12	0.39%
Na 589.592†	537846.8	60.1	mg/L	0.58	60.1	mg/L	0.58	0.96%
Sr 407.771†	1327707.8	1.19	mg/L	0.010	1.19	mg/L	0.010	0.87%
Li 670.784†	34432.2	0.572	mg/L	0.0038	0.572	mg/L	0.0038	0.66%

Approved: January 27, 2012

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Sequence No.: 61 **Autosampler Location: 97**
Sample ID: L1201061301 WG387850-01 **Date Collected: 1/26/2012 10:00:17 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061301 WG387850-01

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201061301 WG387850-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3368025.2						55827.39	1.66%
YRADIAL	260048.0						702.75	0.27%
Ga 417.206	770329.9						20371.32	2.64%
GaRADIAL	44740.6						394.16	0.88%
Ag 328.068†	-937.2	-0.00698	mg/L	0.000868	-0.00698	mg/L	0.000868	12.44%
Al 396.153†	-5.0	-0.00340	mg/L	0.024172	-0.00340	mg/L	0.024172	711.14%
As 188.979†	2.0	-0.00245	mg/L	0.005440	-0.00245	mg/L	0.005440	221.76%
Ba 233.527†	206.6	0.00676	mg/L	0.000160	0.00676	mg/L	0.000160	2.37%
Be 234.861†	308.4	0.00104	mg/L	0.000048	0.00104	mg/L	0.000048	4.68%
B 249.677†	119.6	0.00601	mg/L	0.000848	0.00601	mg/L	0.000848	14.11%
Ca 227.546†	637.5	9.51	mg/L	0.314	9.51	mg/L	0.314	3.30%
Cd 228.802†	-13.6	-0.00140	mg/L	0.000129	-0.00140	mg/L	0.000129	9.18%
Co 228.616†	-8.4	-0.00107	mg/L	0.000424	-0.00107	mg/L	0.000424	39.75%
Cr 267.716†	18.2	-0.00030	mg/L	0.000135	-0.00030	mg/L	0.000135	45.52%
Cu 327.393†	-719.2	-0.00669	mg/L	0.000416	-0.00669	mg/L	0.000416	6.23%
Fe 239.562†	2.4	0.0269	mg/L	0.00722	0.0269	mg/L	0.00722	26.88%
Mg 279.077†	449.7	1.61	mg/L	0.023	1.61	mg/L	0.023	1.40%
Mn 257.610†	-14.3	-0.00187	mg/L	0.000016	-0.00187	mg/L	0.000016	0.84%
Mo 202.031†	-15.4	-0.00203	mg/L	0.000221	-0.00203	mg/L	0.000221	10.87%
Ni 231.604†	-6.6	-0.00079	mg/L	0.000098	-0.00079	mg/L	0.000098	12.44%
Pb 220.353†	22.2	0.00757	mg/L	0.001245	0.00757	mg/L	0.001245	16.46%
Sb 206.836†	5.6	0.00631	mg/L	0.001068	0.00631	mg/L	0.001068	16.93%
Se 196.026†	-1.9	-0.00678	mg/L	0.005147	-0.00678	mg/L	0.005147	75.94%
Si 251.611†	34213.9	1.93	mg/L	0.016	1.93	mg/L	0.016	0.81%
Sn 189.927†	-13.4	-0.00582	mg/L	0.000957	-0.00582	mg/L	0.000957	16.43%
Ti 334.940†	-530.0	-0.00236	mg/L	0.000195	-0.00236	mg/L	0.000195	8.29%
Tl 190.801†	10.7	0.00703	mg/L	0.001221	0.00703	mg/L	0.001221	17.38%
V 290.880†	380.5	0.00405	mg/L	0.000977	0.00405	mg/L	0.000977	24.09%
Zn 206.200†	31.7	0.00232	mg/L	0.000308	0.00232	mg/L	0.000308	13.27%
K 766.490†	310.2	0.199	mg/L	0.0265	0.199	mg/L	0.0265	13.32%
Na 589.592†	32105.1	3.48	mg/L	0.045	3.48	mg/L	0.045	1.31%
Sr 407.771†	77028.2	0.0707	mg/L	0.00073	0.0707	mg/L	0.00073	1.04%
Li 670.784†	126.6	-0.00021	mg/L	0.001539	-0.00021	mg/L	0.001539	746.07%

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Sequence No.: 62 **Autosampler Location: 98**
Sample ID: L1201061301S WG387850-04 **Date Collected: 1/26/2012 10:07:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061301S WG387850-04

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201061301S WG387850-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3391410.9						51586.89	1.52%
YRADIAL	255860.2						5377.76	2.10%
Ga 417.206	779928.8						8189.63	1.05%
GaRADIAL	44174.6						1111.53	2.52%
Ag 328.068†	1464.9	0.0126	mg/L	0.00112	0.0126	mg/L	0.00112	8.88%

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Kim H. Rhoden

Al 396.153†	1625.0	0.543	mg/L	0.0177	0.543	mg/L	0.0177	3.26%
As 188.979†	14.2	0.0208	mg/L	0.00519	0.0208	mg/L	0.00519	24.92%
Ba 233.527†	1875.6	0.0621	mg/L	0.00101	0.0621	mg/L	0.00101	1.62%
Be 234.861†	971.0	0.00329	mg/L	0.000060	0.00329	mg/L	0.000060	1.82%
B 249.677†	2897.1	0.104	mg/L	0.0013	0.104	mg/L	0.0013	1.29%
Ca 227.546†	677.8	10.1	mg/L	0.11	10.1	mg/L	0.11	1.11%
Cd 228.802†	8.1	0.00070	mg/L	0.000201	0.00070	mg/L	0.000201	28.86%
Co 228.616†	89.4	0.00879	mg/L	0.000443	0.00879	mg/L	0.000443	5.03%
Cr 267.716†	1569.8	0.0250	mg/L	0.00065	0.0250	mg/L	0.00065	2.62%
Cu 327.393†	1472.0	0.0161	mg/L	0.00069	0.0161	mg/L	0.00069	4.27%
Fe 239.562†	21.0	0.224	mg/L	0.0145	0.224	mg/L	0.0145	6.50%
Mg 279.077†	636.8	2.27	mg/L	0.085	2.27	mg/L	0.085	3.77%
Mn 257.610†	6205.8	0.0234	mg/L	0.00024	0.0234	mg/L	0.00024	1.02%
Mo 202.031†	333.5	0.0483	mg/L	0.00071	0.0483	mg/L	0.00071	1.47%
Ni 231.604†	429.9	0.0253	mg/L	0.00028	0.0253	mg/L	0.00028	1.10%
Pb 220.353†	92.1	0.0331	mg/L	0.00101	0.0331	mg/L	0.00101	3.04%
Sb 206.836†	53.0	0.0650	mg/L	0.00386	0.0650	mg/L	0.00386	5.94%
Se 196.026†	12.2	0.0160	mg/L	0.00625	0.0160	mg/L	0.00625	39.06%
Si 251.611†	38475.9	2.17	mg/L	0.042	2.17	mg/L	0.042	1.96%
Sn 189.927†	135.3	0.0528	mg/L	0.00196	0.0528	mg/L	0.00196	3.71%
Ti 334.940†	23600.5	0.0493	mg/L	0.00050	0.0493	mg/L	0.00050	1.01%
Tl 190.801†	27.5	0.0276	mg/L	0.00625	0.0276	mg/L	0.00625	22.61%
V 290.880†	4555.8	0.0542	mg/L	0.00067	0.0542	mg/L	0.00067	1.24%
Zn 206.200†	748.2	0.0561	mg/L	0.00111	0.0561	mg/L	0.00111	1.97%
K 766.490†	5037.4	3.21	mg/L	0.122	3.21	mg/L	0.122	3.78%
Na 589.592†	60916.8	6.66	mg/L	0.153	6.66	mg/L	0.153	2.30%
Sr 407.771†	149599.8	0.136	mg/L	0.0058	0.136	mg/L	0.0058	4.28%
Li 670.784†	3840.8	0.0617	mg/L	0.00245	0.0617	mg/L	0.00245	3.97%

Sequence No.: 63
Sample ID: L1201061301SD WG387850-05
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 99
Date Collected: 1/26/2012 10:13:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1201061301SD WG387850-05

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201061301SD WG387850-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3469984.9						45085.64	1.30%
YRADIAL	265050.7						5915.31	2.23%
Ga 417.206	804078.9						11923.07	1.48%
GaRADIAL	45530.7						786.87	1.73%
Ag 328.068†	1352.6	0.0117	mg/L	0.00029	0.0117	mg/L	0.00029	2.51%
Al 396.153†	1529.6	0.511	mg/L	0.0024	0.511	mg/L	0.0024	0.46%
As 188.979†	14.9	0.0222	mg/L	0.00433	0.0222	mg/L	0.00433	19.52%
Ba 233.527†	1821.8	0.0603	mg/L	0.00079	0.0603	mg/L	0.00079	1.31%
Be 234.861†	969.1	0.00328	mg/L	0.000050	0.00328	mg/L	0.000050	1.54%
B 249.677†	2790.6	0.101	mg/L	0.0035	0.101	mg/L	0.0035	3.43%
Ca 227.546†	638.3	9.52	mg/L	0.130	9.52	mg/L	0.130	1.37%
Cd 228.802†	8.8	0.00077	mg/L	0.000064	0.00077	mg/L	0.000064	8.37%
Co 228.616†	88.3	0.00868	mg/L	0.000228	0.00868	mg/L	0.000228	2.63%
Cr 267.716†	1541.1	0.0246	mg/L	0.00105	0.0246	mg/L	0.00105	4.29%
Cu 327.393†	1413.1	0.0155	mg/L	0.00051	0.0155	mg/L	0.00051	3.28%
Fe 239.562†	19.9	0.212	mg/L	0.0073	0.212	mg/L	0.0073	3.44%
Mg 279.077†	567.6	2.02	mg/L	0.055	2.02	mg/L	0.055	2.73%
Mn 257.610†	6063.4	0.0228	mg/L	0.00049	0.0228	mg/L	0.00049	2.14%
Mo 202.031†	323.7	0.0469	mg/L	0.00071	0.0469	mg/L	0.00071	1.52%
Ni 231.604†	419.0	0.0247	mg/L	0.00017	0.0247	mg/L	0.00017	0.69%
Pb 220.353†	89.0	0.0319	mg/L	0.00200	0.0319	mg/L	0.00200	6.27%
Sb 206.836†	47.9	0.0588	mg/L	0.00315	0.0588	mg/L	0.00315	5.35%
Se 196.026†	11.8	0.0152	mg/L	0.00276	0.0152	mg/L	0.00276	18.20%
Si 251.611†	36614.8	2.07	mg/L	0.056	2.07	mg/L	0.056	2.71%
Sn 189.927†	131.5	0.0514	mg/L	0.00088	0.0514	mg/L	0.00088	1.72%
Ti 334.940†	23472.8	0.0490	mg/L	0.00114	0.0490	mg/L	0.00114	2.33%
Tl 190.801†	26.6	0.0268	mg/L	0.00506	0.0268	mg/L	0.00506	18.87%

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V 290.880†	4449.0	0.0529 mg/L	0.00118	0.0529 mg/L	0.00118	2.24%
Zn 206.200†	724.0	0.0543 mg/L	0.00066	0.0543 mg/L	0.00066	1.22%
K 766.490†	4602.3	2.94 mg/L	0.005	2.94 mg/L	0.005	0.17%
Na 589.592†	54439.1	5.94 mg/L	0.121	5.94 mg/L	0.121	2.04%
Sr 407.771†	133764.2	0.122 mg/L	0.0002	0.122 mg/L	0.0002	0.20%
Li 670.784†	3462.9	0.0554 mg/L	0.00185	0.0554 mg/L	0.00185	3.34%

Sequence No.: 64 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 10:20:47 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3314405.5				21179.73	0.64%
YRADIAL	252184.9				2270.14	0.90%
Ga 417.206	777792.2				10921.01	1.40%
GaRADIAL	43047.5				234.76	0.55%
Ag 328.068†	45240.6	0.370 mg/L	0.0113	0.370 mg/L	0.0113	3.07%
QC value within limits for Ag 328.068 Recovery = 92.45%						
Al 396.153†	30649.5	10.3 mg/L	0.05	10.3 mg/L	0.05	0.45%
QC value within limits for Al 396.153 Recovery = 102.66%						
As 188.979†	203.6	0.382 mg/L	0.0062	0.382 mg/L	0.0062	1.63%
QC value within limits for As 188.979 Recovery = 95.56%						
Ba 233.527†	32595.9	1.08 mg/L	0.020	1.08 mg/L	0.020	1.89%
QC value within limits for Ba 233.527 Recovery = 108.04%						
Be 234.861†	13027.4	0.0444 mg/L	0.00178	0.0444 mg/L	0.00178	4.01%
QC value less than the lower limit for Be 234.861 Recovery = 88.70%						
B 249.677†	13419.1	0.481 mg/L	0.0164	0.481 mg/L	0.0164	3.40%
QC value within limits for B 249.677 Recovery = 96.29%						
Ca 227.546†	676.0	10.0 mg/L	0.15	10.0 mg/L	0.15	1.49%
QC value within limits for Ca 227.546 Recovery = 100.34%						
Cd 228.802†	447.9	0.0429 mg/L	0.00079	0.0429 mg/L	0.00079	1.85%
QC value less than the lower limit for Cd 228.802 Recovery = 85.82%						
Co 228.616†	2041.6	0.206 mg/L	0.0010	0.206 mg/L	0.0010	0.47%
QC value within limits for Co 228.616 Recovery = 102.84%						
Cr 267.716†	30883.2	0.503 mg/L	0.0112	0.503 mg/L	0.0112	2.23%
QC value within limits for Cr 267.716 Recovery = 100.66%						
Cu 327.393†	43337.7	0.452 mg/L	0.0178	0.452 mg/L	0.0178	3.93%
QC value within limits for Cu 327.393 Recovery = 90.36%						
Fe 239.562†	364.5	3.84 mg/L	0.036	3.84 mg/L	0.036	0.95%
QC value within limits for Fe 239.562 Recovery = 96.08%						
Mg 279.077†	2716.5	9.58 mg/L	0.106	9.58 mg/L	0.106	1.11%
QC value within limits for Mg 279.077 Recovery = 95.83%						
Mn 257.610†	123208.0	0.498 mg/L	0.0119	0.498 mg/L	0.0119	2.39%
QC value within limits for Mn 257.610 Recovery = 99.65%						
Mo 202.031†	6923.5	0.999 mg/L	0.0202	0.999 mg/L	0.0202	2.02%
QC value within limits for Mo 202.031 Recovery = 99.90%						
Ni 231.604†	8492.7	0.507 mg/L	0.0129	0.507 mg/L	0.0129	2.53%
QC value within limits for Ni 231.604 Recovery = 101.44%						
Pb 220.353†	1420.7	0.517 mg/L	0.0020	0.517 mg/L	0.0020	0.38%
QC value within limits for Pb 220.353 Recovery = 103.37%						
Sb 206.836†	897.2	1.11 mg/L	0.013	1.11 mg/L	0.013	1.20%
QC value within limits for Sb 206.836 Recovery = 92.69%						
Se 196.026†	253.3	0.403 mg/L	0.0058	0.403 mg/L	0.0058	1.44%
QC value within limits for Se 196.026 Recovery = 100.75%						
Si 251.611†	84775.2	4.79 mg/L	0.165	4.79 mg/L	0.165	3.43%
QC value within limits for Si 251.611 Recovery = 95.80%						
Sn 189.927†	2700.3	1.07 mg/L	0.008	1.07 mg/L	0.008	0.74%
QC value within limits for Sn 189.927 Recovery = 106.51%						
Ti 334.940†	496408.1	1.06 mg/L	0.002	1.06 mg/L	0.002	0.22%
QC value within limits for Ti 334.940 Recovery = 106.07%						
Tl 190.801†	426.8	0.521 mg/L	0.0042	0.521 mg/L	0.0042	0.80%

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QC value within limits for Tl 190.801 Recovery = 104.16%
V 290.880† 84231.8 1.01 mg/L 0.023 1.01 mg/L 0.023 2.29%
QC value within limits for V 290.880 Recovery = 101.06%
Zn 206.200† 13460.3 1.01 mg/L 0.019 1.01 mg/L 0.019 1.90%
QC value within limits for Zn 206.200 Recovery = 101.08%
K 766.490† 86819.1 55.0 mg/L 0.58 55.0 mg/L 0.58 1.05%
QC value within limits for K 766.490 Recovery = 109.97%
Na 589.592† 461959.8 51.5 mg/L 1.06 51.5 mg/L 1.06 2.06%
QC value within limits for Na 589.592 Recovery = 103.01%
Sr 407.771† 1181068.4 1.06 mg/L 0.002 1.06 mg/L 0.002 0.15%
QC value within limits for Sr 407.771 Recovery = 106.01%
Li 670.784† 67797.4 1.13 mg/L 0.011 1.13 mg/L 0.011 0.93%
QC value greater than the upper limit for Li 670.784 Recovery = 112.77%
QC Failed. Continue with analysis.

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Sequence No.: 65 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 1/26/2012 10:27:43 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	148.0 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	3479757.7						9338.38	0.27%
YRADIAL	255118.8						8996.08	3.53%
Ga 417.206	753799.5						4736.96	0.63%
GaRADIAL	42672.0						1734.17	4.06%
Ag 328.068†	-1146.2	-0.00866	mg/L	0.001497	-0.00866	mg/L	0.001497	17.27%
QC value less than the lower limit for Ag 328.068 Recovery = Not calculated								
Al 396.153†	-11.9	-0.00571	mg/L	0.032305	-0.00571	mg/L	0.032305	565.89%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.2	-0.00371	mg/L	0.004619	-0.00371	mg/L	0.004619	124.55%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-34.3	-0.00121	mg/L	0.000067	-0.00121	mg/L	0.000067	5.49%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	285.3	0.00096	mg/L	0.000025	0.00096	mg/L	0.000025	2.58%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	-23.5	0.00082	mg/L	0.000519	0.00082	mg/L	0.000519	62.95%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-11.5	-0.171	mg/L	0.0211	-0.171	mg/L	0.0211	12.34%
QC value less than the lower limit for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-13.4	-0.00138	mg/L	0.000286	-0.00138	mg/L	0.000286	20.66%
QC value less than the lower limit for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-13.8	-0.00162	mg/L	0.000154	-0.00162	mg/L	0.000154	9.48%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	64.1	0.00045	mg/L	0.000192	0.00045	mg/L	0.000192	42.61%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-704.5	-0.00654	mg/L	0.000359	-0.00654	mg/L	0.000359	5.49%
QC value less than the lower limit for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	-0.3	-0.00130	mg/L	0.001663	-0.00130	mg/L	0.001663	127.46%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	-2.7	0.0158	mg/L	0.00501	0.0158	mg/L	0.00501	31.64%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	10.6	-0.00183	mg/L	0.000019	-0.00183	mg/L	0.000019	1.02%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-16.6	-0.00220	mg/L	0.000086	-0.00220	mg/L	0.000086	3.92%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-2.9	-0.00055	mg/L	0.000142	-0.00055	mg/L	0.000142	25.58%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	26.7	0.00873	mg/L	0.000436	0.00873	mg/L	0.000436	5.00%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	3.2	0.00332	mg/L	0.002995	0.00332	mg/L	0.002995	90.19%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	4.0	-0.00032	mg/L	0.003160	-0.00032	mg/L	0.003160	974.88%

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QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† -79.4 -0.0206 mg/L 0.00074 -0.0206 mg/L 0.00074 3.61%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† -8.3 -0.00379 mg/L 0.000731 -0.00379 mg/L 0.000731 19.30%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† -450.5 -0.00228 mg/L 0.000168 -0.00228 mg/L 0.000168 7.36%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -9.6 -0.0136 mg/L 0.00535 -0.0136 mg/L 0.00535 39.45%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 220.3 0.00200 mg/L 0.001348 0.00200 mg/L 0.001348 67.50%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† 2.2 0.00011 mg/L 0.000037 0.00011 mg/L 0.000037 32.85%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† -222.0 -0.138 mg/L 0.0256 -0.138 mg/L 0.0256 18.63%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† -163.1 -0.0806 mg/L 0.01037 -0.0806 mg/L 0.01037 12.87%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† -411.0 0.00122 mg/L 0.000030 0.00122 mg/L 0.000030 2.44%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 55.3 -0.00140 mg/L 0.001048 -0.00140 mg/L 0.001048 75.09%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

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Sequence No.: 66 **Autosampler Location: 100**
Sample ID: L1201061601 **Date Collected: 1/26/2012 10:34:31 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061601

Analyte	Back Pressure	Flow
All	147.0 kPa	0.50 L/min

Mean Data: L1201061601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3279440.0						52326.72	1.60%
YRADIAL	257763.2						1016.35	0.39%
Ga 417.206	804425.0						17042.35	2.12%
GaRADIAL	43014.0						656.18	1.53%
Ag 328.068†	-926.7	-0.00709	mg/L	0.000371	-0.00709	mg/L	0.000371	5.24%
Al 396.153†	-40.3	-0.0153	mg/L	0.01210	-0.0153	mg/L	0.01210	79.32%
As 188.979†	4.0	0.00123	mg/L	0.000973	0.00123	mg/L	0.000973	79.16%
Ba 233.527†	7325.3	0.242	mg/L	0.0032	0.242	mg/L	0.0032	1.34%
Be 234.861†	355.0	0.00110	mg/L	0.000033	0.00110	mg/L	0.000033	3.05%
B 249.677†	1597.4	0.0605	mg/L	0.00125	0.0605	mg/L	0.00125	2.07%
Ca 227.546†	1472.3	21.9	mg/L	0.50	21.9	mg/L	0.50	2.30%
Cd 228.802†	-14.1	-0.00143	mg/L	0.000146	-0.00143	mg/L	0.000146	10.14%
Co 228.616†	-13.1	-0.00164	mg/L	0.000379	-0.00164	mg/L	0.000379	23.08%
Cr 267.716†	264.0	0.00367	mg/L	0.000151	0.00367	mg/L	0.000151	4.12%
Cu 327.393†	-715.8	-0.00663	mg/L	0.000244	-0.00663	mg/L	0.000244	3.68%
Fe 239.562†	48.7	0.515	mg/L	0.0024	0.515	mg/L	0.0024	0.46%
Mg 279.077†	8219.2	28.9	mg/L	0.24	28.9	mg/L	0.24	0.82%
Mn 257.610†	10795.8	0.0454	mg/L	0.00094	0.0454	mg/L	0.00094	2.06%
Mo 202.031†	-13.5	-0.00172	mg/L	0.000219	-0.00172	mg/L	0.000219	12.72%
Ni 231.604†	27.2	0.00123	mg/L	0.000217	0.00123	mg/L	0.000217	17.71%
Pb 220.353†	25.5	0.00935	mg/L	0.002644	0.00935	mg/L	0.002644	28.27%
Sb 206.836†	10.3	0.0121	mg/L	0.00145	0.0121	mg/L	0.00145	12.03%
Se 196.026†	-5.5	-0.00863	mg/L	0.004919	-0.00863	mg/L	0.004919	56.99%
Si 251.611†	179750.4	10.2	mg/L	0.08	10.2	mg/L	0.08	0.83%
Sn 189.927†	-19.3	-0.00813	mg/L	0.001903	-0.00813	mg/L	0.001903	23.40%
Ti 334.940†	-560.3	-0.00230	mg/L	0.000112	-0.00230	mg/L	0.000112	4.88%
Tl 190.801†	15.4	0.00774	mg/L	0.005970	0.00774	mg/L	0.005970	77.11%
V 290.880†	-456.2	-0.00372	mg/L	0.003201	-0.00372	mg/L	0.003201	86.10%
Zn 206.200†	135.9	0.0101	mg/L	0.00034	0.0101	mg/L	0.00034	3.34%
K 766.490†	3878.1	2.10	mg/L	0.023	2.10	mg/L	0.023	1.11%
Na 589.592†	3155510.3	385	mg/L	14.8	385	mg/L	14.8	3.85%
Sr 407.771†	964842.7	0.867	mg/L	0.0018	0.867	mg/L	0.0018	0.21%
Li 670.784†	2084.1	0.0324	mg/L	0.00055	0.0324	mg/L	0.00055	1.70%

Approved: January 27, 2012

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Sequence No.: 67 **Autosampler Location: 101**
Sample ID: L1201061602 **Date Collected: 1/26/2012 10:41:26 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1201061602

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: L1201061602

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3294495.8						53155.07	1.61%
YRADIAL	259161.9						644.43	0.25%
Ga 417.206	809853.1						14972.18	1.85%
GaRADIAL	43267.1						598.86	1.38%
Ag 328.068†	-923.8	-0.00705	mg/L	0.001413	-0.00705	mg/L	0.001413	20.04%
Al 396.153†	-23.9	-0.00975	mg/L	0.010110	-0.00975	mg/L	0.010110	103.70%
As 188.979†	6.8	0.00675	mg/L	0.000734	0.00675	mg/L	0.000734	10.87%
Ba 233.527†	6923.1	0.229	mg/L	0.0105	0.229	mg/L	0.0105	4.57%
Be 234.861†	354.0	0.00112	mg/L	0.000287	0.00112	mg/L	0.000287	25.77%
B 249.677†	1479.0	0.0559	mg/L	0.00300	0.0559	mg/L	0.00300	5.37%
Ca 227.546†	1416.4	21.1	mg/L	0.38	21.1	mg/L	0.38	1.82%
Cd 228.802†	-15.6	-0.00157	mg/L	0.000225	-0.00157	mg/L	0.000225	14.34%
Co 228.616†	-12.9	-0.00161	mg/L	0.000313	-0.00161	mg/L	0.000313	19.43%
Cr 267.716†	351.2	0.00509	mg/L	0.000211	0.00509	mg/L	0.000211	4.15%
Cu 327.393†	-651.6	-0.00597	mg/L	0.001163	-0.00597	mg/L	0.001163	19.48%
Fe 239.562†	39.3	0.416	mg/L	0.0043	0.416	mg/L	0.0043	1.03%
Mg 279.077†	7912.4	27.9	mg/L	0.73	27.9	mg/L	0.73	2.64%
Mn 257.610†	10800.4	0.0452	mg/L	0.00197	0.0452	mg/L	0.00197	4.35%
Mo 202.031†	-12.0	-0.00151	mg/L	0.000090	-0.00151	mg/L	0.000090	5.97%
Ni 231.604†	33.4	0.00160	mg/L	0.000332	0.00160	mg/L	0.000332	20.66%
Pb 220.353†	24.8	0.00907	mg/L	0.003958	0.00907	mg/L	0.003958	43.65%
Sb 206.836†	8.5	0.00991	mg/L	0.001650	0.00991	mg/L	0.001650	16.65%
Se 196.026†	-0.4	-0.00085	mg/L	0.006596	-0.00085	mg/L	0.006596	775.94%
Si 251.611†	177589.8	10.1	mg/L	0.02	10.1	mg/L	0.02	0.18%
Sn 189.927†	-16.9	-0.00720	mg/L	0.000938	-0.00720	mg/L	0.000938	13.02%
Ti 334.940†	-463.6	-0.00210	mg/L	0.000039	-0.00210	mg/L	0.000039	1.86%
Tl 190.801†	10.0	0.00160	mg/L	0.003432	0.00160	mg/L	0.003432	213.95%
V 290.880†	-406.2	-0.00320	mg/L	0.000762	-0.00320	mg/L	0.000762	23.78%
Zn 206.200†	208.3	0.0156	mg/L	0.00032	0.0156	mg/L	0.00032	2.08%
K 766.490†	3752.7	2.04	mg/L	0.051	2.04	mg/L	0.051	2.49%
Na 589.592†	3006657.2	365	mg/L	6.4	365	mg/L	6.4	1.76%
Sr 407.771†	917914.7	0.825	mg/L	0.0042	0.825	mg/L	0.0042	0.51%
Li 670.784†	1941.5	0.0300	mg/L	0.00100	0.0300	mg/L	0.00100	3.33%

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Sequence No.: 68 **Autosampler Location: 102**
Sample ID: FBLK WG387719-01 **Date Collected: 1/26/2012 10:48:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: FBLK WG387719-01

Analyte	Back Pressure	Flow
All	148.0 kPa	0.50 L/min

Mean Data: FBLK WG387719-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	3336910.3						75022.81	2.25%
YRADIAL	257825.0						2265.52	0.88%
Ga 417.206	739854.0						21662.86	2.93%
GaRADIAL	43573.6						644.88	1.48%
Ag 328.068†	-1188.3	-0.00900	mg/L	0.001167	-0.00900	mg/L	0.001167	12.96%

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Al 396.153†	5.9	0.00029	mg/L	0.007135	0.00029	mg/L	0.007135	>999.9%
As 188.979†	1.9	-0.00239	mg/L	0.002306	-0.00239	mg/L	0.002306	96.40%
Ba 233.527†	-40.4	-0.00141	mg/L	0.000099	-0.00141	mg/L	0.000099	7.06%
Be 234.861†	281.6	0.00095	mg/L	0.000043	0.00095	mg/L	0.000043	4.54%
B 249.677†	-78.8	-0.00107	mg/L	0.000241	-0.00107	mg/L	0.000241	22.41%
Ca 227.546†	-16.7	-0.250	mg/L	0.0502	-0.250	mg/L	0.0502	20.05%
Cd 228.802†	-14.8	-0.00152	mg/L	0.000184	-0.00152	mg/L	0.000184	12.16%
Co 228.616†	-15.0	-0.00174	mg/L	0.000242	-0.00174	mg/L	0.000242	13.91%
Cr 267.716†	88.4	0.00085	mg/L	0.000171	0.00085	mg/L	0.000171	20.17%
Cu 327.393†	-788.6	-0.00741	mg/L	0.001059	-0.00741	mg/L	0.001059	14.30%
Fe 239.562†	0.9	0.0113	mg/L	0.00935	0.0113	mg/L	0.00935	82.49%
Mg 279.077†	-3.8	0.0121	mg/L	0.00689	0.0121	mg/L	0.00689	56.83%
Mn 257.610†	-6.6	-0.00190	mg/L	0.000027	-0.00190	mg/L	0.000027	1.42%
Mo 202.031†	-23.4	-0.00318	mg/L	0.000583	-0.00318	mg/L	0.000583	18.32%
Ni 231.604†	-1.9	-0.00049	mg/L	0.000485	-0.00049	mg/L	0.000485	98.23%
Pb 220.353†	27.8	0.00913	mg/L	0.002070	0.00913	mg/L	0.002070	22.67%
Sb 206.836†	4.4	0.00482	mg/L	0.001775	0.00482	mg/L	0.001775	36.83%
Se 196.026†	2.9	-0.00211	mg/L	0.000854	-0.00211	mg/L	0.000854	40.55%
Si 251.611†	13.3	-0.0153	mg/L	0.00115	-0.0153	mg/L	0.00115	7.56%
Sn 189.927†	-8.5	-0.00386	mg/L	0.001203	-0.00386	mg/L	0.001203	31.15%
Ti 334.940†	-447.5	-0.00228	mg/L	0.000089	-0.00228	mg/L	0.000089	3.93%
Tl 190.801†	-9.8	-0.0137	mg/L	0.00318	-0.0137	mg/L	0.00318	23.11%
V 290.880†	535.0	0.00578	mg/L	0.001204	0.00578	mg/L	0.001204	20.84%
Zn 206.200†	49.1	0.00363	mg/L	0.000438	0.00363	mg/L	0.000438	12.09%
K 766.490†	-147.2	-0.0899	mg/L	0.02655	-0.0899	mg/L	0.02655	29.53%
Na 589.592†	211.3	-0.0393	mg/L	0.00385	-0.0393	mg/L	0.00385	9.79%
Sr 407.771†	-486.0	0.00115	mg/L	0.000034	0.00115	mg/L	0.000034	2.97%
Li 670.784†	-3.7	-0.00238	mg/L	0.002438	-0.00238	mg/L	0.002438	102.52%

Sequence No.: 69 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 1/26/2012 10:55:11 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	147.0 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	3319486.7						51116.54	1.54%
YRADIAL	249796.7						1995.12	0.80%
Ga 417.206	780775.2						16507.35	2.11%
GaRADIAL	42730.9						936.74	2.19%
Ag 328.068†	44793.6	0.366	mg/L	0.0121	0.366	mg/L	0.0121	3.29%
QC value within limits for Ag 328.068 Recovery = 91.53%								
Al 396.153†	30634.2	10.3	mg/L	0.08	10.3	mg/L	0.08	0.76%
QC value within limits for Al 396.153 Recovery = 102.61%								
As 188.979†	203.5	0.382	mg/L	0.0028	0.382	mg/L	0.0028	0.73%
QC value within limits for As 188.979 Recovery = 95.49%								
Ba 233.527†	32307.0	1.07	mg/L	0.026	1.07	mg/L	0.026	2.47%
QC value within limits for Ba 233.527 Recovery = 107.08%								
Be 234.861†	12735.5	0.0434	mg/L	0.00172	0.0434	mg/L	0.00172	3.97%
QC value less than the lower limit for Be 234.861 Recovery = 86.75%								
B 249.677†	13285.3	0.476	mg/L	0.0139	0.476	mg/L	0.0139	2.92%
QC value within limits for B 249.677 Recovery = 95.30%								
Ca 227.546†	675.8	10.0	mg/L	0.22	10.0	mg/L	0.22	2.21%
QC value within limits for Ca 227.546 Recovery = 100.32%								
Cd 228.802†	438.5	0.0420	mg/L	0.00100	0.0420	mg/L	0.00100	2.37%
QC value less than the lower limit for Cd 228.802 Recovery = 84.05%								
Co 228.616†	2023.5	0.204	mg/L	0.0039	0.204	mg/L	0.0039	1.90%
QC value within limits for Co 228.616 Recovery = 101.92%								
Cr 267.716†	30734.3	0.501	mg/L	0.0142	0.501	mg/L	0.0142	2.83%
QC value within limits for Cr 267.716 Recovery = 100.17%								
Cu 327.393†	43091.4	0.449	mg/L	0.0155	0.449	mg/L	0.0155	3.46%
QC value less than the lower limit for Cu 327.393 Recovery = 89.85%								
Fe 239.562†	359.2	3.79	mg/L	0.029	3.79	mg/L	0.029	0.77%

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   QC value within limits for Fe 239.562  Recovery = 94.67%
Mg 279.077†            2681.2        9.46 mg/L        0.134        9.46 mg/L        0.134   1.41%
   QC value within limits for Mg 279.077  Recovery = 94.59%
Mn 257.610†          121991.8       0.493 mg/L       0.0152       0.493 mg/L       0.0152   3.08%
   QC value within limits for Mn 257.610  Recovery = 98.66%
Mo 202.031†            6874.1       0.992 mg/L       0.0347       0.992 mg/L       0.0347   3.49%
   QC value within limits for Mo 202.031  Recovery = 99.18%
Ni 231.604†            8401.4       0.502 mg/L       0.0154       0.502 mg/L       0.0154   3.07%
   QC value within limits for Ni 231.604  Recovery = 100.35%
Pb 220.353†            1404.1       0.511 mg/L       0.0107       0.511 mg/L       0.0107   2.09%
   QC value within limits for Pb 220.353  Recovery = 102.16%
Sb 206.836†             879.1        1.09 mg/L        0.028        1.09 mg/L        0.028   2.59%
   QC value within limits for Sb 206.836  Recovery = 90.83%
Se 196.026†             248.9       0.396 mg/L       0.0094       0.396 mg/L       0.0094   2.38%
   QC value within limits for Se 196.026  Recovery = 98.96%
Si 251.611†           83858.3        4.74 mg/L        0.157        4.74 mg/L        0.157   3.31%
   QC value within limits for Si 251.611  Recovery = 94.76%
Sn 189.927†            2681.2        1.06 mg/L        0.019        1.06 mg/L        0.019   1.75%
   QC value within limits for Sn 189.927  Recovery = 105.75%
Ti 334.940†          494526.7        1.06 mg/L        0.001        1.06 mg/L        0.001   0.12%
   QC value within limits for Ti 334.940  Recovery = 105.67%
Tl 190.801†             422.5       0.516 mg/L       0.0108       0.516 mg/L       0.0108   2.09%
   QC value within limits for Tl 190.801  Recovery = 103.11%
V 290.880†            83504.4        1.00 mg/L        0.029        1.00 mg/L        0.029   2.89%
   QC value within limits for V 290.880  Recovery = 100.18%
Zn 206.200†           13253.5       0.995 mg/L       0.0304       0.995 mg/L       0.0304   3.06%
   QC value within limits for Zn 206.200  Recovery = 99.53%
K 766.490†            86773.2        55.0 mg/L         0.10        55.0 mg/L         0.10   0.18%
   QC value within limits for K 766.490  Recovery = 109.92%
Na 589.592†          457441.6        51.0 mg/L         1.31        51.0 mg/L         1.31   2.57%
   QC value within limits for Na 589.592  Recovery = 101.99%
Sr 407.771†         1185395.2        1.06 mg/L        0.003        1.06 mg/L        0.003   0.28%
   QC value within limits for Sr 407.771  Recovery = 106.40%
Li 670.784†           67589.6        1.12 mg/L        0.011        1.12 mg/L        0.011   1.01%
   QC value greater than the upper limit for Li 670.784  Recovery = 112.43%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 70                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 1/26/2012 11:02:07 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     148.0 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            3401174.0                                                  18081.42   0.53%
YRADIAL               260479.0                                                   9433.13   3.62%
Ga 417.206            737118.3                                                  10015.08   1.36%
GaRADIAL               43537.3                                                   1293.02   2.97%
Ag 328.068†            -1135.2    -0.00857 mg/L      0.000455    -0.00857 mg/L      0.000455   5.30%
   QC value less than the lower limit for Ag 328.068  Recovery = Not calculated
Al 396.153†              -10.8    -0.00531 mg/L      0.022836    -0.00531 mg/L      0.022836 429.78%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                1.3    -0.00357 mg/L      0.003500    -0.00357 mg/L      0.003500  97.97%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -38.2    -0.00134 mg/L      0.000221    -0.00134 mg/L      0.000221  16.50%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              293.2     0.00099 mg/L      0.000060     0.00099 mg/L      0.000060   6.03%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               -26.3     0.00073 mg/L      0.000538     0.00073 mg/L      0.000538  73.37%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -15.6      -0.233 mg/L        0.0655      -0.233 mg/L        0.0655  28.07%
   QC value less than the lower limit for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -14.8    -0.00152 mg/L      0.000228    -0.00152 mg/L      0.000228  15.00%
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   QC value less than the lower limit for Cd 228.802  Recovery = Not calculated
Co 228.616†              -12.9    -0.00153 mg/L      0.000374    -0.00153 mg/L      0.000374  24.55%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               71.8     0.00058 mg/L      0.000073     0.00058 mg/L      0.000073  12.60%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -777.7    -0.00730 mg/L      0.000957    -0.00730 mg/L      0.000957  13.11%
   QC value less than the lower limit for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -0.2     0.00016 mg/L      0.011742     0.00016 mg/L      0.011742 >999.9%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                2.3      0.0335 mg/L       0.00744      0.0335 mg/L       0.00744  22.19%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               11.1    -0.00183 mg/L      0.000003    -0.00183 mg/L      0.000003   0.16%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -22.5    -0.00305 mg/L      0.000608    -0.00305 mg/L      0.000608  19.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               -0.5    -0.00041 mg/L      0.000216    -0.00041 mg/L      0.000216  52.50%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               26.5     0.00867 mg/L      0.001648     0.00867 mg/L      0.001648  19.01%
   QC value greater than the upper limit for Pb 220.353  Recovery = Not calculated
Sb 206.836†                3.8     0.00407 mg/L      0.000693     0.00407 mg/L      0.000693  17.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.7     0.00084 mg/L      0.002380     0.00084 mg/L      0.002380 284.98%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -74.4     -0.0203 mg/L       0.00017     -0.0203 mg/L       0.00017   0.86%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -3.3    -0.00181 mg/L      0.000479    -0.00181 mg/L      0.000479  26.42%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -368.8    -0.00211 mg/L      0.000207    -0.00211 mg/L      0.000207   9.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -6.8     -0.0101 mg/L       0.00276     -0.0101 mg/L       0.00276  27.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               315.9     0.00315 mg/L      0.001023     0.00315 mg/L      0.001023  32.51%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                3.1     0.00017 mg/L      0.000316     0.00017 mg/L      0.000316 180.77%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -197.8      -0.122 mg/L        0.0290      -0.122 mg/L        0.0290  23.72%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -93.0     -0.0728 mg/L       0.00367     -0.0728 mg/L       0.00367   5.04%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             -298.8     0.00132 mg/L      0.000035     0.00132 mg/L      0.000035   2.63%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               96.5    -0.00071 mg/L      0.001126    -0.00071 mg/L      0.001126 158.91%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

Approved: January 27, 2012

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L12010576
Department: Metals
Analyst: Erin Long

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: WG387809 - The low level continuing calibration verification analyzed on 28-JAN-2012 at 19:53 yielded a noncompliant result of 126% recovery for cadmium which slightly exceeded the 120% acceptance limit. With permission of the project chemist, no further action was taken.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG387809 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 41452
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL18-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:05
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EL.012812.220550
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	0.00189		0.00100	0.000500
Barium, Total	7440-39-3	0.135		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00382		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1	0.00104		0.00100	0.000500
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00163		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	T40-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:13
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EL.012812.221337
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	0.00252		0.00100	0.000500
Barium, Total	7440-39-3	0.133		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00615		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
Nickel, Total	7440-02-0	0.00596		0.00400	0.00200
Selenium, Total	7782-49-2	0.00253		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL17-0112-1	**Prep Method:**	3015	**Prep Date:**	01/24/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	01/28/2012 10:56
Workgroup #:	WG387809	**Analyst:**	EDL	**Run Date:**	01/28/2012 22:21
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EL.012812.222124
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	0.00177		0.00100	0.000500
Barium, Total	7440-39-3	0.0746		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00185	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
Nickel, Total	7440-02-0	0.00353	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00454		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Certificate of Analysis

2.1.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN 6100

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	100
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/L)	0.25

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	200
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/kg)	40

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	40
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	50

50 ug/kg = 0.050 mg/kg

Perkin Elmer ELAN ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - LLICV
QC Std 4 - ICSA
QC Std 5 - ICSAB
QC Std 6 - CCV
QC Std 7 - CCB
QC Std 8 - LLCCV

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
U	1000	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG387787
Analyst: REK
Spike Analyst: REK
Run Date: 01/24/2012 10:26
Method: 3015
Balance: BAL016
Instrument: MW-2

SOP: ME407 Revison 12
Spike Solution: STD47574
Spike Witness: ERP
HNO3 Lot #: COA15827
Digestion Tubes Lot #: COA15882
MS FILTERS- WG375661 Lot COA15665

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG387787-02	BLANK	1	40 mL	100 mL	206.747 g	206.736 g		
2	WG387726-01	FBLK	18	40 mL	100 mL	207.763 g	207.766 g		
3	WG387787-03	LCS	1	40 mL	100 mL	207.257 g	207.253 g	.25 mL	
4	WG387787-01	REF	1	40 mL	100 mL	205.433 g	205.432 g		
5	L12010536-01	SAMP	1	40 mL	100 mL	205.433 g	205.432 g		01/31/12
6	L12010536-02	SAMP	1	40 mL	100 mL	205.475 g	205.475 g		01/31/12
7	L12010536-03	SAMP	1	40 mL	100 mL	205.548 g	205.538 g		01/31/12
8	L12010539-02	SAMP	1	40 mL	100 mL	206.889 g	206.886 g		01/31/12
9	L12010539-03	SAMP	1	40 mL	100 mL	208.029 g	208.02 g		01/31/12
10	L12010539-04	SAMP	1	40 mL	100 mL	206.569 g	206.566 g		01/31/12
11	L12010539-05	SAMP	1	40 mL	100 mL	209.573 g	209.561 g		01/31/12
12	L12010539-06	SAMP	1	40 mL	100 mL	208.137 g	208.126 g		01/31/12
13	L12010576-01	SAMP	1	40 mL	100 mL	209.046 g	209.041 g		02/03/12
14	L12010576-02	SAMP	1	40 mL	100 mL	206.607 g	206.605 g		02/03/12
15	L12010576-03	SAMP	1	40 mL	100 mL	210.454 g	210.444 g		02/03/12
16	L12010581-02	SAMP	18	40 mL	100 mL	207.691 g	207.684 g		01/26/12
17	L12010581-04	SAMP	18	40 mL	100 mL	207.937 g	207.931 g		01/26/12
18	WG387787-04	MS	1	40 mL	100 mL	208.097 g	208.099 g	.25 mL	
19	WG387787-05	MSD	1	40 mL	100 mL	207.722 g	207.713 g	.25 mL	

Analyst: _____

Reviewer: _____

MW_DIG - Modified 09/30/2009
PDF ID: 2287920
Report generated: 01/24/2012 11:46

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 012812A.REP
Analyst1: EDL Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40439

Calibration Std: STD49730 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49677 LLCCV: STD49510

Workgroups: 388019, 388129, 387531, 387809, 384033

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.012812.102553	Blank	Blank		1		01/28/12 10:25
2	EL.012812.103339	WG388229-01	Calibration Point		1		01/28/12 10:33
3	EL.012812.104125	WG388229-02	Calibration Point		1		01/28/12 10:41
4	EL.012812.104912	WG388229-03	Calibration Point		1		01/28/12 10:49
5	EL.012812.105659	WG388229-04	Calibration Point		1		01/28/12 10:56
6	EL.012812.110445	WG388229-05	Initial Calibration Verification		1		01/28/12 11:04
7	EL.012812.111221	WG388229-06	Initial Calib Blank		1		01/28/12 11:12
8	EL.012812.111959	WG388229-07	Low Level Initial Calibration V		1		01/28/12 11:19
9	EL.012812.113445	WG388229-08	Low Level Initial Calibration V		1		01/28/12 11:34
10	EL.012812.114224	WG388229-09	Interference Check		1		01/28/12 11:42
11	EL.012812.115002	WG388229-10	Interference Check		1		01/28/12 11:50
12	EL.012812.115741	WG388229-11	CCV		1		01/28/12 11:57
13	EL.012812.120518	WG388229-12	CCB		1		01/28/12 12:05
14	EL.012812.121253	WG388229-13	CCB		1		01/28/12 12:12
15	EL.012812.122701	WG387967-04	Method/Prep Blank	40/100	1		01/28/12 12:27
16	EL.012812.123447	WG387967-05	Laboratory Control S	40/100	1		01/28/12 12:34
17	EL.012812.124233	L12010613-01	MPL28-0112-1	40/100	1		01/28/12 12:42
18	EL.012812.125020	L12010651-01	MPL-16-0112-1		1	WG387967-02	01/28/12 12:50
19	EL.012812.125807	WG387967-08	Matrix Spike	40/100	1	L12010651-01	01/28/12 12:58
20	EL.012812.131104	WG387967-09	Matrix Spike Duplica	40/100	1	L12010651-01	01/28/12 13:11
21	EL.012812.131851	L12010652-01	MPL13-0112-1	40/100	1		01/28/12 13:18
22	EL.012812.132639	L12010652-02	MPL10-0112-1	40/100	1		01/28/12 13:26
23	EL.012812.133428	WG388019-04	Post Digestion Spike		1	L12010652-02	01/28/12 13:34
24	EL.012812.134216	WG388019-05	Serial Dilution		5	L12010652-02	01/28/12 13:42
25	EL.012812.135005	WG388229-14	CCV		1		01/28/12 13:50
26	EL.012812.135741	WG388229-15	CCB		1		01/28/12 13:57
27	EL.012812.140518	WG388092-02	Method/Prep Blank	.5/200	1		01/28/12 14:05
28	EL.012812.141306	WG388092-03	Laboratory Control S	.5/200	1		01/28/12 14:13
29	EL.012812.142051	L12010715-01	1109-112-C-001	.52/200	5		01/28/12 14:20
30	EL.012812.142837	L12010715-02	1109-112-C-002	.5/200	5		01/28/12 14:28
31	EL.012812.143623	L12010715-03	1109-112-C-003	.516/200	5		01/28/12 14:36
32	EL.012812.144410	L12010715-04	1109-112-C-004	.526/200	5		01/28/12 14:44
33	EL.012812.145157	L12010715-05	1109-112-C-005	.523/200	5		01/28/12 14:51
34	EL.012812.145944	L12010715-06	1109-112-C-006	.52/200	5		01/28/12 14:59

Page: 1 Approved: January 30, 2012

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 012812A.REP
Analyst1: EDL Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40439

Calibration Std: STD49730 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49677 LLCCV: STD49510

Workgroups: 388019, 388129, 387531, 387809, 384033

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	EL.012812.150731	WG388129-01	Post Digestion Spike		5	L12010715-06	01/28/12 15:07
36	EL.012812.151519	WG388129-02	Serial Dilution		25	L12010715-06	01/28/12 15:15
37	EL.012812.152307	WG388229-16	CCV		1		01/28/12 15:23
38	EL.012812.153044	WG388229-17	CCB		1		01/28/12 15:30
39	EL.012812.153820	L12010715-07	1109-112-C-007	.502/200	5		01/28/12 15:38
40	EL.012812.154609	L12010715-08	1109-112-C-008	.523/200	5		01/28/12 15:46
41	EL.012812.155357	L12010715-09	1109-112-C-009	.515/200	5		01/28/12 15:53
42	EL.012812.160144	L12010715-10	1109-112-C-010	.512/200	5		01/28/12 16:01
43	EL.012812.160930	L12010715-11	1109-112-C-011	.516/200	5		01/28/12 16:09
44	EL.012812.161716	L12010715-12	1109-112-C-012	.504/200	5		01/28/12 16:17
45	EL.012812.162502	L12010715-13	1109-112-C-013	.532/200	5		01/28/12 16:25
46	EL.012812.163249	L12010715-14	1109-112-C-014	.505/200	5		01/28/12 16:32
47	EL.012812.164035	L12010715-15	1109-112-C-015	.524/200	5		01/28/12 16:40
48	EL.012812.164823	L12010715-16	1109-112-C-016	.514/200	5		01/28/12 16:48
49	EL.012812.165610	WG388229-18	CCV		1		01/28/12 16:56
50	EL.012812.170347	WG388229-19	CCB		1		01/28/12 17:03
51	EL.012812.171124	WG388092-01	Reference Sample		5	L12010715-17	01/28/12 17:11
52	EL.012812.171911	WG388092-04	Matrix Spike	.543/200	5	L12010715-17	01/28/12 17:19
53	EL.012812.172659	WG388092-05	Matrix Spike Duplica	.543/200	5	L12010715-17	01/28/12 17:26
54	EL.012812.173447	WG388229-20	CCV		1		01/28/12 17:34
55	EL.012812.174224	WG388229-21	CCB		1		01/28/12 17:42
56	EL.012812.175001	WG387506-02	Method/Prep Blank	40/100	1		01/28/12 17:50
57	EL.012812.175750	WG387506-03	Laboratory Control S	40/100	1		01/28/12 17:57
58	EL.012812.180537	L12010479-01	MP05-0112-1	40/100	1		01/28/12 18:05
59	EL.012812.181323	L12010503-02	LF014CP0740112	40/100	5		01/28/12 18:13
60	EL.012812.182109	L12010503-03	LF012CP1020112	40/100	5		01/28/12 18:21
61	EL.012812.182855	L12010503-04	WP022CP1150112	40/100	5		01/28/12 18:28
62	EL.012812.183642	L12010503-05	SS002CP0270112	40/100	5		01/28/12 18:36
63	EL.012812.184428	WG387531-03	Post Digestion Spike		5	L12010503-05	01/28/12 18:44
64	EL.012812.185216	WG387531-04	Serial Dilution		25	L12010503-05	01/28/12 18:52
65	EL.012812.190003	WG388229-22	CCV		1		01/28/12 19:00
66	EL.012812.190740	WG388229-23	CCB		1		01/28/12 19:07
67	EL.012812.191516	WG387506-01	Reference Sample		5	L12010503-06	01/28/12 19:15
68	EL.012812.192304	WG387506-04	Matrix Spike	40/100	5	L12010503-06	01/28/12 19:23

Page: 2 Approved: January 30, 2012

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 012812A.REP
Analyst1: EDL Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40439

Calibration Std: STD49730 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49677 LLCCV: STD49510

Workgroups: 388019, 388129, 387531, 387809, 384033

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	EL.012812.193052	WG387506-05	Matrix Spike Duplica	40/100	5	L12010503-06	01/28/12 19:30
70	EL.012812.193840	WG388229-24	CCV		1		01/28/12 19:38
71	EL.012812.194617	WG388229-25	CCB		1		01/28/12 19:46
72	EL.012812.195355	WG388229-26	Low Level Continuing Calibra		1		01/28/12 19:53
73	EL.012812.200134	WG387787-02	Method/Prep Blank	40/100	1		01/28/12 20:01
74	EL.012812.200922	WG387787-03	Laboratory Control S	40/100	1		01/28/12 20:09
75	EL.012812.201710	WG387787-01	Reference Sample		1	L12010536-01	01/28/12 20:17
76	EL.012812.202456	WG387787-04	Matrix Spike	40/100	1	L12010536-01	01/28/12 20:24
77	EL.012812.203243	WG387787-05	Matrix Spike Duplica	40/100	1	L12010536-01	01/28/12 20:32
78	EL.012812.204029	L12010536-02	MPL07-0112-1	40/100	1		01/28/12 20:40
79	EL.012812.204815	L12010536-03	MPL07-0112-2	40/100	1		01/28/12 20:48
80	EL.012812.205602	L12010539-02	DUP-01-120119	40/100	1		01/28/12 20:56
81	EL.012812.210349	WG387809-03	Post Digestion Spike		1	L12010539-02	01/28/12 21:03
82	EL.012812.211137	WG387809-04	Serial Dilution		5	L12010539-02	01/28/12 21:11
83	EL.012812.211924	WG388229-27	CCV		1		01/28/12 21:19
84	EL.012812.212701	WG388229-28	CCB		1		01/28/12 21:27
85	EL.012812.213438	L12010539-03	ST006CP1660112	40/100	1		01/28/12 21:34
86	EL.012812.214226	L12010539-04	ST008CP2300112	40/100	1		01/28/12 21:42
87	EL.012812.215014	L12010539-05	SS040CP2800112	40/100	1		01/28/12 21:50
88	EL.012812.215803	L12010539-06	SS038CP0030112	40/100	5		01/28/12 21:58
89	EL.012812.220550	L12010576-01	MPL18-0112-1	40/100	1		01/28/12 22:05
90	EL.012812.221337	L12010576-02	T40-0112-1	40/100	1		01/28/12 22:13
91	EL.012812.222124	L12010576-03	MPL17-0112-1	40/100	1		01/28/12 22:21
92	EL.012812.222911	WG388229-29	CCV		1		01/28/12 22:29
93	EL.012812.223648	WG388229-30	CCB		1		01/28/12 22:36
94	EL.012812.224426	WG388229-31	Low Level Continuing Calibra		1		01/28/12 22:44
95	EL.012812.225204	WG382898-02	Method/Prep Blank	40/100	1		01/28/12 22:52
96	EL.012812.225951	WG382898-03	Laboratory Control S	40/100	1		01/28/12 22:59
97	EL.012812.230738	WG382898-01	Reference Sample		1	L11110727-01	01/28/12 23:07
98	EL.012812.231525	WG382898-04	Matrix Spike	40/100	1	L11110727-01	01/28/12 23:15
99	EL.012812.232312	WG382898-05	Matrix Spike Duplica	40/100	1	L11110727-01	01/28/12 23:23
100	EL.012812.233100	L11110787-02	W6	40/100	1		01/28/12 23:31
101	EL.012812.233848	L11110787-03	W6B	40/100	5		01/28/12 23:38
102	EL.012812.234636	L11110787-04	W51	40/100	5		01/28/12 23:46

Page: 3 Approved: January 30, 2012

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 012812A.REP
Analyst1: EDL Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40439

Calibration Std: STD49730 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49677 LLCCV: STD49510

Workgroups: 388019, 388129, 387531, 387809, 384033

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	EL.012812.235425	WG384033-03	Post Digestion Spike		5	L11110787-04	01/28/12 23:54
104	EL.012912.000213	WG384033-04	Serial Dilution		25	L11110787-04	01/29/12 00:02
105	EL.012912.001000	WG388229-32	CCV		1		01/29/12 00:10
106	EL.012912.001737	WG388229-33	CCB		1		01/29/12 00:17
107	EL.012912.002513	L11110787-06	W7A	40/100	1		01/29/12 00:25
108	EL.012912.003300	L11110787-07	W7B	40/100	5		01/29/12 00:33
109	EL.012912.004047	L11110787-09	W5	40/100	1		01/29/12 00:40
110	EL.012912.004835	L11110787-11	W17	40/100	1		01/29/12 00:48
111	EL.012912.005622	L11110787-13	W27	40/100	5		01/29/12 00:56
112	EL.012912.010409	WG388229-34	CCV		1		01/29/12 01:04
113	EL.012912.011146	WG388229-35	CCB		1		01/29/12 01:11

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8			Data not used due to LLICV failure for Tl.	
13			Data not used due to CCB failure for Tl.	

Page: 4 Approved: January 30, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 28-JAN-2012
Analyst: EDL
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 388229
Runlog ID: 44872
Analytical Workgroups: 388019, 388129, 387531, 387809, 384033

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	613, 651, 652, 715, 479, 503, 536
Case Narrative (Continued)	539, 576, 787
Client Forms	X
Level X	
Level 3	503, 539
Level 4	613, 651, 652, 715, 479, 536, 576
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	EDL
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
30-JAN-2012
Erin D. Long

Secondary Reviewer:
30-JAN-2012
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-30-2012 14:35:24

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG387809

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12					01/24/12	4	180		01/28/12	8.5	180	
T40-0112-1	02	01/20/12					01/24/12	3.9	180		01/28/12	8.4	180	
MPL17-0112-1	03	01/20/12					01/24/12	3.9	180		01/28/12	8.4	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2292951
Report generated 01/30/2012 09:07

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: EL.012812.200134
Prep Date: 01/24/12 10:26
Analyzed Date: 01/28/12 20:01
Analyst: EDL

Work Group: WG387809
Blank Sample ID: WG387787-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG387787-03	EL.012612.115510	01/26/12 11:55	01
LCS	WG387787-03	EL.012812.200922	01/28/12 20:09	02
MPL18-0112-1	L12010576-01	EL.012812.220550	01/28/12 22:05	01
T40-0112-1	L12010576-02	EL.012812.221337	01/28/12 22:13	01
MPL17-0112-1	L12010576-03	EL.012812.222124	01/28/12 22:21	01

Report Name: BLANK_SUMMARY
PDF File ID: 2292952
Report generated 01/30/2012 09:07

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/24/12 10:26 Sample ID: WG387787-02
Instrument ID: ELAN-ICP Run Date: 01/28/12 20:01 Prep Method: 3015
File ID: EL.012812.200134 Analyst: EDL Method: 6020
Workgroup (AAB#): WG387809 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-28-JAN-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
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: 2292953
30-JAN-2012 09:08

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/28/2012 Sample ID: WG387787-03
Instrument ID: ELAN-ICP Run Time: 20:09 Prep Method: 3015
File ID: EL.012812.200922 Analyst: EDL Method: 6020
Workgroup (AAB#): WG387809 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD47574 Cal ID: ELAN-I-28-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0612	97.9	80 - 120	
Arsenic, Total	0.0625	0.0586	93.8	80 - 120	
Barium, Total	0.0625	0.0640	102	80 - 120	
Cadmium, Total	0.0625	0.0592	94.7	80 - 120	
Chromium, Total	0.0625	0.0645	103	80 - 120	
Cobalt, Total	0.0625	0.0628	100	80 - 120	
Copper, Total	0.0625	0.0639	102	80 - 120	
Lead, Total	0.0625	0.0636	102	80 - 120	
Nickel, Total	0.0625	0.0626	100	80 - 120	
Selenium, Total	0.0625	0.0530	84.7	80 - 120	
Silver, Total	0.0625	0.0630	101	80 - 120	
Thallium, Total	0.0625	0.0632	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2292954
Report generated: 01/30/2012 09:08

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

Loginnum: L12010576 Cal ID: ELAN-ICP- Worknum: WG387809
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG387787-01 File ID: EL.012812.201710 Dil: 1 Matrix: WATER
Sample ID: WG387787-04 MS File ID: EL.012812.202456 Dil: 1 Units: mg/L
Sample ID: WG387787-05 MSD File ID: EL.012812.203243 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0612	97.9	0.0625	0.0633	101	3.51	80 - 120	20	
Arsenic, Total	0.00136	0.0625	0.0609	95.2	0.0625	0.0616	96.5	1.30	80 - 120	20	
Barium, Total	0.113	0.0625	0.176	101	0.0625	0.177	103	0.684	80 - 120	20	
Cadmium, Total	ND	0.0625	0.0614	98.2	0.0625	0.0618	98.9	0.761	80 - 120	20	
Chromium, Total	0.00356	0.0625	0.0661	100	0.0625	0.0682	103	3.08	80 - 120	20	
Cobalt, Total	ND	0.0625	0.0620	99.3	0.0625	0.0614	98.3	1.01	80 - 120	20	
Copper, Total	ND	0.0625	0.0644	103	0.0625	0.0636	102	1.19	80 - 120	20	
Lead, Total	ND	0.0625	0.0630	101	0.0625	0.0640	102	1.64	80 - 120	20	
Nickel, Total	ND	0.0625	0.0634	102	0.0625	0.0636	102	0.323	80 - 120	20	
Selenium, Total	0.00139	0.0625	0.0555	86.6	0.0625	0.0568	88.6	2.26	80 - 120	20	
Silver, Total	ND	0.0625	0.0607	97.1	0.0625	0.0621	99.3	2.26	80 - 120	20	
Thallium, Total	ND	0.0625	0.0619	99.1	0.0625	0.0629	101	1.59	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2292955
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12010576 **Worknum:** WG387809
Instrument: ELAN-ICP **Method:** 6020
Serial Dil: WG387809-04 **File ID:** EL.012812.211137 **Dil:** 5 **Units:** ug/L
Sample: L12010539-02 **File ID:** EL.012812.205602 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	9.85	X	11.4	X	16.20	
Barium	119		140		18.20	E
Cadmium	ND	U	ND	U		
Chromium	0.477	F	ND	U		
Cobalt	ND	U	ND	U		
Copper	14.7	X	16.9	X	14.80	
Lead	1.89	X	2.15	X	14.00	
Nickel	1.15	F	ND	U		
Selenium	1.20	X	1.70	F	41.40	
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: 2292949
01/30/2012 09:07

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12010576 **Worknum:** WG387809
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG387809-03 **File ID:** EL.012812.210349 **Dil:** 1 **Units:** ug/L
Sample ID: L12010539-02 **File ID:** EL.012812.205602 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	50.5		0	U	50	101.0	75 - 125	
ARSENIC	56.9		9.85		50	94.1	75 - 125	
BARIUM	170		119		50	102.9	75 - 125	
CADMIUM	48.2		0	U	50	96.3	75 - 125	
CHROMIUM	50.3		0.477	F	50	99.7	75 - 125	
COBALT	48.4		0	U	50	96.7	75 - 125	
COPPER	62.6		14.7		50	95.8	75 - 125	
LEAD	52.1		1.89		50	100.4	75 - 125	
NICKEL	48.9		1.15	F	50	95.5	75 - 125	
SELENIUM	43.4		1.20		50	84.4	75 - 125	
SILVER	48.4		0	U	50	96.8	75 - 125	
THALLIUM	50.9		0	U	50	101.9	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: 2292950
Report generated: 01/30/2012 09:07

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12010576**	Workgroup (AAB#):	**WG387809**
Analytical Method:	**6020**	Instrument ID:	**ELAN-ICP**
ICAL Worknum:	**WG388229**	Initial Calibration Date:	**28-JAN-2012 10:56**

	WG388229-01		WG388229-02		WG388229-03		WG388229-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	17.1	.4	1450	50	194000	100	369000	.999941	
ARSENIC	0	-108	.4	269	50	52400	100	98600	.99999	
BARIUM	0	24.0	.4	590	50	75500	100	142000	.999979	
CADMIUM	0	3.73	.4	444	50	58800	100	111000	.99998	
CHROMIUM	0	6570	.4	8870	50	352000	100	654000	.999981	
COBALT	0	72.7	.4	3340	50	417000	100	794000	.999998	
COPPER	0	95.3	.4	866	50	82800	100	156000	.999998	
LEAD	0	796	.4	8970	50	1050000	100	2010000	1	
NICKEL	0	91.3	.4	740	50	86700	100	162000	.999981	
SELENIUM	0	9.24	.4	37.6	50	4820	100	9150	1	
SILVER	0	69.3	.4	2070	50	263000	100	490000	1	
THALLIUM	0	19.3	.4	2400	50	309000	100	592000	.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: 2292958
Report generated: 30-JAN-2012 09:08

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-06
Instrument ID: ELAN-ICP
Run Time: 11:12
Method: 6020
File ID: EL.012812.111221
Analyst: EDL
Units: ug/L
Workgroup (AAB#): WG387809
Cal ID: ELAN-ICP - 28-JAN-12
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
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: 2292960
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-13
Instrument ID: ELAN-ICP
Run Time: 12:12
Method: 6020
File ID: EL.012812.121253
Analyst: EDL
Units: ug/L
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-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
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: 2292965
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-25
Instrument ID: ELAN-ICP
Run Time: 19:46
Method: 6020
File ID: EL.012812.194617
Analyst: EDL
Units: ug/L
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-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
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: 2292965
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-28
Instrument ID: ELAN-ICP
Run Time: 21:27
Method: 6020
File ID: EL.012812.212701
Analyst: EDL
Units: ug/L
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-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
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: 2292965
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-30
Instrument ID: ELAN-ICP
Run Time: 22:36
Method: 6020
File ID: EL.012812.223648
Analyst: EDL
Units: ug/L
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-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
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: 2292965
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12010576 Run Date: 01/28/2012 Sample ID: WG388229-05
Instrument ID: ELAN-ICP Run Time: 11:04 Method: 6020
File ID: EL.012812.110445 Analyst: EDL Units: ug/L
Workgroup (AAB#): WG387809 Cal ID: ELAN-I - 28-JAN-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	49.3	98.7	90 - 110	
Arsenic		50	51.1	102	90 - 110	
Barium		50	49.7	99.3	90 - 110	
Cadmium		50	49.8	99.5	90 - 110	
Chromium		50	51.1	102	90 - 110	
Cobalt		50	51.2	102	90 - 110	
Copper		50	51.1	102	90 - 110	
Lead		50	50.1	100	90 - 110	
Nickel		50	51.3	103	90 - 110	
Selenium		50	50.9	102	90 - 110	
Silver		50	50.2	100	90 - 110	
Thallium		50	49.1	98.3	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2292959
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-11
Instrument ID: ELAN-ICP
Run Time: 11:57
Method: 6020
File ID: EL.012812.115741
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.4	ug/L	101	90 - 110		
Arsenic		50.0	49.3	ug/L	98.6	90 - 110		
Barium		50.0	48.8	ug/L	97.7	90 - 110		
Cadmium		50.0	50.2	ug/L	100	90 - 110		
Chromium		50.0	49.7	ug/L	99.3	90 - 110		
Cobalt		50.0	50.3	ug/L	101	90 - 110		
Copper		50.0	51.2	ug/L	102	90 - 110		
Lead		50.0	49.8	ug/L	99.5	90 - 110		
Nickel		50.0	50.3	ug/L	101	90 - 110		
Selenium		50.0	49.2	ug/L	98.3	90 - 110		
Silver		50.0	50.2	ug/L	100	90 - 110		
Thallium		50.0	50.1	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2292964
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-24
Instrument ID: ELAN-ICP
Run Time: 19:38
Method: 6020
File ID: EL.012812.193840
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	51.0	ug/L	102	90 - 110		
Arsenic		50.0	50.6	ug/L	101	90 - 110		
Barium		50.0	51.2	ug/L	102	90 - 110		
Cadmium		50.0	50.4	ug/L	101	90 - 110		
Chromium		50.0	50.4	ug/L	101	90 - 110		
Cobalt		50.0	50.4	ug/L	101	90 - 110		
Copper		50.0	50.7	ug/L	101	90 - 110		
Lead		50.0	49.8	ug/L	99.6	90 - 110		
Nickel		50.0	50.3	ug/L	101	90 - 110		
Selenium		50.0	49.0	ug/L	98.0	90 - 110		
Silver		50.0	50.0	ug/L	100	90 - 110		
Thallium		50.0	50.6	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2292964
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-27
Instrument ID: ELAN-ICP
Run Time: 21:19
Method: 6020
File ID: EL.012812.211924
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	51.2	ug/L	102	90 - 110		
Arsenic		50.0	49.8	ug/L	99.6	90 - 110		
Barium		50.0	51.6	ug/L	103	90 - 110		
Cadmium		50.0	49.5	ug/L	99.1	90 - 110		
Chromium		50.0	49.8	ug/L	99.6	90 - 110		
Cobalt		50.0	48.9	ug/L	97.8	90 - 110		
Copper		50.0	50.0	ug/L	100	90 - 110		
Lead		50.0	50.1	ug/L	100	90 - 110		
Nickel		50.0	49.8	ug/L	99.7	90 - 110		
Selenium		50.0	47.4	ug/L	94.7	90 - 110		
Silver		50.0	48.0	ug/L	95.9	90 - 110		
Thallium		50.0	50.8	ug/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2292964
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-29
Instrument ID: ELAN-ICP
Run Time: 22:29
Method: 6020
File ID: EL.012812.222911
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	51.5	ug/L	103	90 - 110		
Arsenic		50.0	50.6	ug/L	101	90 - 110		
Barium		50.0	50.9	ug/L	102	90 - 110		
Cadmium		50.0	49.1	ug/L	98.3	90 - 110		
Chromium		50.0	50.2	ug/L	100	90 - 110		
Cobalt		50.0	50.3	ug/L	101	90 - 110		
Copper		50.0	50.0	ug/L	100	90 - 110		
Lead		50.0	50.9	ug/L	102	90 - 110		
Nickel		50.0	49.2	ug/L	98.5	90 - 110		
Selenium		50.0	48.4	ug/L	96.7	90 - 110		
Silver		50.0	50.1	ug/L	100	90 - 110		
Thallium		50.0	51.1	ug/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2292964
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L12010576
Run Date: 01/28/2012
Sample ID: WG388229-26
Instrument ID: ELAN-ICP
Run Time: 19:53
Method: 6020
File ID: EL.012812.195355
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG387809
Cal ID: ELAN-I - 28-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Cadmium		0.200	0.252	ug/L	126	80 - 120		*

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 2292966
Report generated 01/30/2012 16:41

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12010576 **Workgroup (AAB#):** WG387809
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG388229-09 **File ID:** EL.012812.114224 **Units:** ug/L
Sol. AB : WG388229-10 **File ID:** EL.012812.115002 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0626	NS	100	102	102	
Arsenic	NS	-0.0261	NS	100	99.3	99.3	
Barium	NS	0.0192	NS	100	97.9	97.9	
Cadmium	NS	0.105	NS	100	101	101	
Chromium	NS	0.0668	NS	100	96.6	96.6	
Cobalt	NS	0.00710	NS	100	97.0	97.0	
Copper	NS	0.0685	NS	100	100	100	
Lead	NS	0.0138	NS	100	97.9	97.9	
Nickel	NS	0.283	NS	100	98.1	98.1	
Selenium	NS	-0.0420	NS	100	98.8	98.8	
Silver	NS	0.0113	NS	100	100	100	
Thallium	NS	0.00970	NS	100	96.3	96.3	

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

ICS - Modified 03/06/2008
PDF File ID: 2292962
Report generated 01/30/2012 09:08

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12010576 **Analytical Method:** 6020
Analytical Workgroup: WG387809 **Matrix:** 1
Instrument: ELAN-ICP **Analyst:** EDL
ICAL Date: 28-JAN-2012 10:33

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12010539-02	SAMP	28-JAN-2012 20:56	83.591	83.481	81.981	84.62
L12010576-01	SAMP	28-JAN-2012 22:05	87.267	83.998	81.948	85.235
L12010576-02	SAMP	28-JAN-2012 22:13	88.045	85.831	82.957	86.009
L12010576-03	SAMP	28-JAN-2012 22:21	84.224	82.793	80.727	82.899
WG387787-02	BLANK	28-JAN-2012 20:01	92.995	92.592	91.932	93.71
WG387787-03	LCS	28-JAN-2012 20:09	89.356	88.678	87.107	88.681
WG387809-03	PSPK	28-JAN-2012 21:03	83.289	85.133	82.266	84.592
WG387809-04	SERIAL	28-JAN-2012 21:11	88.177	89.47	87.08	88.006
WG388229-05	ICV	28-JAN-2012 11:04	89.951	91.117	92.831	93.23
WG388229-06	ICB	28-JAN-2012 11:12	90.95	90.985	92.835	92.464
WG388229-08	LLICV	28-JAN-2012 11:34	92.739	92.438	90.553	92.092
WG388229-09	ICS	28-JAN-2012 11:42	87.534	83.362	84.583	85.251
WG388229-10	ICS	28-JAN-2012 11:50	86.97	79.288	78.114	80.935
WG388229-11	CCV	28-JAN-2012 11:57	89.293	89.318	88.179	89.731
WG388229-13	CCB	28-JAN-2012 12:12	91.091	90.107	89.543	90.057
WG388229-24	CCV	28-JAN-2012 19:38	90.458	90.989	88.806	90.651
WG388229-25	CCB	28-JAN-2012 19:46	88.413	88.679	85.68	87.432
WG388229-26	LLCCV	28-JAN-2012 19:53	89.393	87.97	84.659	86.935
WG388229-27	CCV	28-JAN-2012 21:19	84.859	89.215	87.017	87.673
WG388229-28	CCB	28-JAN-2012 21:27	91.665	92.053	91.893	90.007
WG388229-29	CCV	28-JAN-2012 22:29	96.081	100.604	97.202	98.938
WG388229-30	CCB	28-JAN-2012 22:36	105.87	105.609	104.484	105.112
WG388229-31	LLCCV	28-JAN-2012 22:44	96.713	100.291	96.257	94.624

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: 2292957
Report generated: 01/30/2012 09:08

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12010576 **Date:** 12/29/2011
Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Uranium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2292956
Report generated: 01/30/2012 09:08

2.1.2.3 Raw Data

Instrument Tuning Report

File Name: 06302008.tun
File Path: C:\Elandata\Tuning\06302008.tun

Sample Information

Sample Date/Time: Saturday, January 28, 2012 09:33:00

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.028	613	2060	0.647	
Li	7.016	6.979	1584	2060	0.644	
Co	58.933	58.929	14277	1970	0.724	
Ce	139.905	139.829	33979	2020	0.711	
Tl	204.975	204.977	49690	2263	0.706	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	2.893
3.000	2.135
4.000	36.948
5.000	25.487
6.000	5.232
7.000	3.519
8.000	34.716
9.000	3.126
58.000	2.712
59.000	2.211
60.000	7.092
139.000	2.636
140.000	1.782
141.000	7.849
204.000	4.309
205.000	1.528
206.000	1.993

Report Date/Time: Saturday, January 28, 2012 09:34:11
Page 1

Approved: January 30, 2012
Erin D. Long

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Saturday, January 28, 2012 09:36:47
Sample Description:
Method File: C:\Elandata\Method\6020 DAILY.mth
Dataset File: C:\elandata\Dataset\Default\Sample.468
Tuning File: C:\Elandata\Tuning\06302008.tun
Optimization File: C:\elandata\Optimize\default.dac
Dual Detector Mode: Dual

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

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	48822.8	48822.810	408.213	0.8
	Rh	102.9	265088.9	265088.904	1387.402	0.5
	In	114.9	463209.8	463209.754	3916.204	0.8
	Pb	208.0	172849.3	172849.306	1417.736	0.8
	U	238.1	109.2	109.201	1.037	0.9
⌈>	Ba	137.9	270291.4	270291.392	1207.676	0.4
⌊	Ba++	69.0	4050.0	0.015	0.000	2.0
⌈>	Ce	139.9	334663.0	334662.954	3242.232	1.0
⌊	CeO	155.9	7870.7	0.024	0.000	0.5
	Bkgd	220.0	8.9	8.900	1.597	17.9
	Ar2	79.9	4725578.8	4725578.789	37228.463	0.8

Current Optimization File Data

Current Value	Description
1.01	Nebulizer Gas Flow
7.50	Lens Voltage
1500.00	ICP RF Power
-1750.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
20.00	Discriminator Threshold
-10.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	37	6.8	2819.8
Co	59	37	7.0	89082.9
Rh	103	37	7.5	153239.8
Pb	208	37	10.0	124472.4

Sample ID: Sample
Report Date/Time: Saturday, January 28, 2012 09:38:55
Page 1

Approved: January 30, 2012
Erin D. Long

Method 6020 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, January 28, 2012 10:25:53
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10039.387					ug/L
	Be	9	8.000					ug/L
	Al	27	2283.655					ug/L
>	Sc	45	136170.209					ug/L
	Ti	49	60.006					ug/L
	V	51	2089.543					ug/L
	Cr	52	6339.809					ug/L
	Cr	53	813.455					ug/L
	Mn	55	533.689					ug/L
	Co	59	65.001					ug/L
	Ni	60	96.002					ug/L
	Cu	65	92.001					ug/L
	Zn	66	753.042					ug/L
>	Ge	72	312021.874					ug/L
	As	75	-99.110					ug/L
	Se	77	67.334					ug/L
	Se	82	6.873					ug/L
	Rb	85	31.000					mg/L
	Y	89	202390.583					ug/L
	Rh	103	29.000					ug/L
	Mo	98	8.201					ug/L
	Ag	107	62.668					ug/L
	Cd	114	2.798					ug/L
>	In	115	275833.946					ug/L
	Sn	118	618.156					ug/L
	Sb	123	12.702					ug/L
	Ba	135	22.000					ug/L
	Ce	140	183.354					ug/L
>	Tb	159	392087.526					ug/L
	Ho	165	13.335					ug/L
	Tl	203	21.000					ug/L
	Tl	205	40.004					ug/L
	Pb	206	184.671					ug/L
	Pb	207	151.670					ug/L
	Pb	208	737.020					ug/L
	U	238	13.667					ug/L
>	Bi	209	319080.089					ug/L

Sample ID: Blank
Report Date/Time: Saturday, January 28, 2012 10:28:05
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23	140525.602	mg/L
|	Mg	24	346.709	mg/L
|	K	39	479507.314	mg/L
|	Ca	43	180.020	mg/L
|	Fe	54	32535.172	mg/L
|	Fe	57	6533.213	mg/L
⌊>	Sc-1	45	136170.209	mg/L
	Cl	35	36924.302	mg/L
	Kr	83	53.001	mg/L
	Br	81	5076.215	mg/L
	P	31	7594.794	mg/L
	S	34	175600.455	mg/L
	Sr	88	53.339	mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115					
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159					
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209					

Sample ID: Blank
Report Date/Time: Saturday, January 28, 2012 10:28:05
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Approved: January 30, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Saturday, January 28, 2012 10:28:05
Page 3

Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, January 28, 2012 10:33:39
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9205.112	-0.01				ug/L
	Be	9	4.667	-0.00				ug/L
	Al	27	2100.287	-0.00				ug/L
>	Sc	45	139050.633	139050.63				ug/L
	Ti	49	66.674	0.00				ug/L
	V	51	2035.519	-0.00				ug/L
	Cr	52	6565.652	0.00				ug/L
	Cr	53	963.485	0.00				ug/L
	Mn	55	542.690	0.00				ug/L
	Co	59	72.668	0.00				ug/L
	Ni	60	91.335	-0.00				ug/L
	Cu	65	95.335	0.00				ug/L
	Zn	66	744.041	-0.00				ug/L
>	Ge	72	314649.966	314649.97				ug/L
	As	75	-108.323	-0.00				ug/L
	Se	77	62.667	-0.00				ug/L
	Se	82	9.235	0.00				ug/L
	Rb	85	32.000	0.00				mg/L
	Y	89	205626.351	3235.77				ug/L
	Rh	103	23.334	-5.67				ug/L
	Mo	98	11.196	0.00				ug/L
	Ag	107	69.334	0.00				ug/L
	Cd	114	3.732	0.00				ug/L
>	In	115	275976.017	275976.02				ug/L
	Sn	118	624.023	0.00				ug/L
	Sb	123	17.075	0.00				ug/L
	Ba	135	24.000	0.00				ug/L
	Ce	140	180.020	-0.00				ug/L
>	Tb	159	399028.223	399028.22				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	19.334	-0.00				ug/L
	Tl	205	53.339	0.00				ug/L
	Pb	206	200.671	0.00				ug/L
	Pb	207	176.004	0.00				ug/L
	Pb	208	796.356	0.00				ug/L
	U	238	18.667	0.00				ug/L
>	Bi	209	313275.567	313275.57				ug/L

Sample ID: Standard 1
Report Date/Time: Saturday, January 28, 2012 10:35:51
Page 1

Approved: January 30, 2012
Erin D. Long

Na	23	141240.042	-0.02		mg/L
Mg	24	373.379	0.00		mg/L
K	39	495293.295	0.04		mg/L
Ca	43	200.023	0.00		mg/L
Fe	54	30795.357	-0.02		mg/L
Fe	57	7267.232	0.00		mg/L
Sc-1	45	139050.633	139050.63		mg/L
Cl	35	39995.751	3071.45		mg/L
Kr	83	49.667	-3.33		mg/L
Br	81	5230.308	154.09		mg/L
P	31	8495.028	900.23		mg/L
S	34	192959.917	17359.46		mg/L
Sr	88	60.006	6.67		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 10:41:25
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 2
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8204.046	-0.01				ug/L
	Be	9	117.334	0.00				ug/L
	Al	27	4467.877	0.02				ug/L
>	Sc	45	132090.361	132090.36				ug/L
	Ti	49	350.042	0.00				ug/L
	V	51	5008.976	0.01				ug/L
	Cr	52	8866.136	0.01				ug/L
	Cr	53	1146.861	0.00				ug/L
	Mn	55	4623.996	0.01				ug/L
	Co	59	3339.036	0.01				ug/L
	Ni	60	740.040	0.00				ug/L
	Cu	65	866.054	0.00				ug/L
	Zn	66	950.730	0.00				ug/L
>	Ge	72	301939.740	301939.74				ug/L
	As	75	269.439	0.00				ug/L
	Se	77	77.334	0.00				ug/L
	Se	82	37.563	0.00				ug/L
	Rb	85	39.000	0.00				mg/L
	Y	89	196397.610	-5992.97				ug/L
	Rh	103	18.334	-10.67				ug/L
	Mo	98	1943.630	0.01				ug/L
	Ag	107	2070.278	0.01				ug/L
	Cd	114	443.993	0.00				ug/L
>	In	115	271362.370	271362.37				ug/L
	Sn	118	1590.552	0.00				ug/L
	Sb	123	1454.927	0.01				ug/L
	Ba	135	590.027	0.00				ug/L
	Ce	140	130.014	-0.00				ug/L
>	Tb	159	374170.910	374170.91				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	2402.370	0.01				ug/L
	Tl	205	5795.928	0.02				ug/L
	Pb	206	2145.631	0.01				ug/L
	Pb	207	1991.258	0.01				ug/L
	Pb	208	8973.340	0.03				ug/L
	U	238	10426.294	0.03				ug/L
>	Bi	209	304635.929	304635.93				ug/L

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Na	23	193738.857	0.44		mg/L
Mg	24	102959.049	0.78		mg/L
K	39	719719.544	1.94		mg/L
Ca	43	670.094	0.00		mg/L
Fe	54	51602.459	0.15		mg/L
Fe	57	15966.893	0.07		mg/L
Sc-1	45	132090.361	132090.36		mg/L
Cl	35	35690.944	-1233.36		mg/L
Kr	83	50.334	-2.67		mg/L
Br	81	5086.219	10.00		mg/L
P	31	7265.844	-328.95		mg/L
S	34	171146.953	-4453.50		mg/L
Sr	88	130.014	76.68		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 10:49:12
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 3
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9038.237	-0.01				ug/L
	Be	9	13481.566	0.10	50.0000	0.748	1.495	ug/L
	Al	27	220804.749	1.56	50.0000	0.818	1.636	ug/L
>	Sc	45	140373.271	140373.27				ug/L
	Ti	49	45712.933	0.14	100.0000	1.690	1.690	ug/L
	V	51	395807.605	1.25	50.0000	1.185	2.370	ug/L
	Cr	52	352470.475	1.10	50.0000	0.775	1.550	ug/L
	Cr	53	43273.055	0.13	50.0000	1.044	2.088	ug/L
	Mn	55	549833.684	1.74	50.0000	1.088	2.175	ug/L
	Co	59	417285.018	1.32	50.0000	0.874	1.748	ug/L
	Ni	60	86746.357	0.27	50.0000	0.471	0.942	ug/L
	Cu	65	82848.982	0.26	50.0000	1.017	2.035	ug/L
	Zn	66	49857.533	0.16	50.0000	0.725	1.450	ug/L
>	Ge	72	315499.019	315499.02				ug/L
	As	75	52431.478	0.17	50.0000	1.241	2.481	ug/L
	Se	77	4020.303	0.01	50.0000	1.960	3.920	ug/L
	Se	82	4818.684	0.02	50.0000	3.180	6.360	ug/L
	Rb	85	1926.909	0.01				mg/L
	Y	89	207984.886	5594.30				ug/L
	Rh	103	36.000	7.00				ug/L
	Mo	98	255044.934	0.90	100.0000	1.321	1.321	ug/L
	Ag	107	263317.515	0.93	50.0000	0.567	1.133	ug/L
	Cd	114	58847.356	0.21	50.0000	1.682	3.364	ug/L
>	In	115	283190.913	283190.91				ug/L
	Sn	118	204394.410	0.72	50.0000	0.454	0.907	ug/L
	Sb	123	193857.882	0.68	50.0000	0.397	0.793	ug/L
	Ba	135	75505.621	0.19	50.0000	0.473	0.946	ug/L
	Ce	140	220.025	0.00				ug/L
>	Tb	159	396291.886	396291.89				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	309149.775	0.99	50.0000	0.531	1.061	ug/L
	Tl	205	764984.636	2.46	50.0000	0.734	1.467	ug/L
	Pb	206	251045.964	0.81	50.0000	0.591	1.182	ug/L
	Pb	207	236517.142	0.76	50.0000	0.158	0.316	ug/L
	Pb	208	1053663.612	3.39	50.0000	0.143	0.286	ug/L
	U	238	1384268.119	4.45	50.0000	0.836	1.672	ug/L
>	Bi	209	311001.795	311001.80				ug/L

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Na	23	19468286.437	137.72	5.0000	0.115	2.292	mg/L
Mg	24	12346149.217	87.98	5.0000	0.076	1.529	mg/L
K	39	29051104.950	203.45	5.0000	0.106	2.119	mg/L
Ca	43	59709.184	0.42	5.0000	0.115	2.297	mg/L
Fe	54	2517030.317	17.71	5.0000	0.252	5.034	mg/L
Fe	57	1121591.925	7.95	5.0000	0.221	4.416	mg/L
Sc-1	45	140373.271	140373.27				mg/L
Cl	35	39735.186	2810.88				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	5538.518	462.30				mg/L
P	31	9038.232	1443.44				mg/L
S	34	200200.650	24600.19				mg/L
Sr	88	4184.803	4131.46				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 10:56:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 4
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9021.572	-0.00				ug/L
	Be	9	25674.837	0.20	101.0077	6.181	6.120	ug/L
	Al	27	402386.953	3.05	99.0966	4.299	4.339	ug/L
>	Sc	45	131294.843	131294.84				ug/L
	Ti	49	86485.541	0.29	199.7729	5.616	2.811	ug/L
	V	51	761312.152	2.54	100.8714	0.946	0.938	ug/L
	Cr	52	654016.157	2.17	99.3930	1.147	1.154	ug/L
	Cr	53	77876.629	0.26	97.8858	1.301	1.329	ug/L
	Mn	55	1041917.955	3.48	100.0065	0.311	0.311	ug/L
	Co	59	794101.358	2.66	100.2170	2.973	2.967	ug/L
	Ni	60	162348.223	0.54	99.3856	1.097	1.104	ug/L
	Cu	65	156183.453	0.52	99.7896	0.434	0.435	ug/L
	Zn	66	93423.063	0.31	99.7180	0.464	0.465	ug/L
>	Ge	72	299027.232	299027.23				ug/L
	As	75	98648.996	0.33	99.5578	0.871	0.875	ug/L
	Se	77	7368.592	0.02	98.6018	2.058	2.087	ug/L
	Se	82	9150.377	0.03	100.0789	0.402	0.402	ug/L
	Rb	85	3555.128	0.01				mg/L
	Y	89	193268.773	-9121.81				ug/L
	Rh	103	42.001	13.00				ug/L
	Mo	98	482623.384	1.83	201.5015	5.528	2.743	ug/L
	Ag	107	489880.133	1.86	99.9118	2.588	2.590	ug/L
	Cd	114	111120.034	0.42	100.6211	3.785	3.762	ug/L
>	In	115	263965.902	263965.90				ug/L
	Sn	118	392188.136	1.48	101.4362	0.758	0.748	ug/L
	Sb	123	369281.409	1.40	101.0748	2.846	2.816	ug/L
	Ba	135	141914.994	0.38	99.3504	0.725	0.730	ug/L
	Ce	140	273.365	0.00				ug/L
>	Tb	159	377382.402	377382.40				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	591854.698	1.99	100.1029	1.313	1.312	ug/L
	Tl	205	1448216.946	4.88	99.5449	2.494	2.506	ug/L
	Pb	206	477419.836	1.61	99.7899	0.813	0.815	ug/L
	Pb	207	452029.680	1.52	100.0318	1.561	1.560	ug/L
	Pb	208	2009780.947	6.76	99.9381	0.446	0.446	ug/L
	U	238	2487100.668	8.37	96.9343	0.762	0.786	ug/L
>	Bi	209	297075.509	297075.51				ug/L

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Na	23	37127092.929	282.12	10.1070	0.566	5.605	mg/L
Mg	24	23021775.554	175.67	9.9939	0.518	5.180	mg/L
K	39	54586719.400	413.04	10.0783	0.574	5.694	mg/L
Ca	43	115905.347	0.88	10.2014	0.491	4.817	mg/L
Fe	54	4686690.814	35.54	10.0186	0.716	7.142	mg/L
Fe	57	1950262.285	14.84	9.6589	0.593	6.137	mg/L
Sc-1	45	131294.843	131294.84				mg/L
Cl	35	35445.899	-1478.40				mg/L
Kr	83	53.001	0.00				mg/L
Br	81	4862.085	-214.13				mg/L
P	31	7976.516	381.72				mg/L
S	34	171134.833	-4465.62				mg/L
Sr	88	8134.792	8081.45				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 4
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Method 6020 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, January 28, 2012 11:04:45
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 11
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9171.714	-0.00				ug/L
	Be	9	12460.645	0.09	48.4886	0.236	0.487	ug/L
	Al	27	255460.642	1.91	62.0570	2.957	4.765	ug/L
>	Sc	45	132393.782	132393.78				ug/L
	Ti	49	42623.042	0.15	103.5652	2.380	2.298	ug/L
	V	51	357856.030	1.25	49.7361	0.760	1.528	ug/L
	Cr	52	322643.441	1.11	51.1115	0.604	1.182	ug/L
	Cr	53	38800.671	0.13	50.7949	0.676	1.331	ug/L
	Mn	55	504882.279	1.77	50.9520	0.845	1.658	ug/L
	Co	59	386100.704	1.36	51.2329	0.691	1.350	ug/L
	Ni	60	79647.287	0.28	51.2607	0.788	1.536	ug/L
	Cu	65	76150.794	0.27	51.1034	0.264	0.516	ug/L
	Zn	66	45203.404	0.16	50.4480	0.727	1.441	ug/L
>	Ge	72	284304.361	284304.36				ug/L
	As	75	48048.403	0.17	51.0639	1.239	2.427	ug/L
	Se	77	3653.467	0.01	51.1268	0.665	1.300	ug/L
	Se	82	4425.822	0.02	50.9123	1.179	2.317	ug/L
	Rb	85	1495.816	0.01				mg/L
	Y	89	191311.684	-11078.90				ug/L
	Rh	103	18.667	-10.33				ug/L
	Mo	98	247476.448	0.97	106.5256	3.094	2.905	ug/L
	Ag	107	238932.212	0.93	50.2319	1.361	2.710	ug/L
	Cd	114	53300.540	0.21	49.7680	2.139	4.298	ug/L
>	In	115	256059.625	256059.63				ug/L
	Sn	118	222444.697	0.87	59.3236	1.358	2.289	ug/L
	Sb	123	174807.610	0.68	49.3295	0.564	1.144	ug/L
	Ba	135	68705.774	0.19	49.6588	0.858	1.728	ug/L
	Ce	140	270.032	0.00				ug/L
>	Tb	159	365543.517	365543.52				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	280598.569	0.98	49.1268	0.244	0.496	ug/L
	Tl	205	699075.720	2.44	49.7401	0.273	0.548	ug/L
	Pb	206	240605.755	0.84	52.0427	0.766	1.471	ug/L
	Pb	207	210760.651	0.73	48.2648	0.539	1.117	ug/L
	Pb	208	974362.322	3.39	50.1400	0.789	1.575	ug/L
	U	238	1259297.704	4.39	50.8144	1.103	2.171	ug/L
>	Bi	209	287015.567	287015.57				ug/L

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Na	23	17641167.824	132.22	4.7497	0.254	5.341	mg/L
Mg	24	11165966.760	84.36	4.7971	0.145	3.015	mg/L
K	39	27718812.022	205.83	5.0187	0.135	2.695	mg/L
Ca	43	56443.016	0.42	4.9070	0.090	1.826	mg/L
Fe	54	2315595.196	17.25	4.8613	0.041	0.841	mg/L
Fe	57	1046798.760	7.86	5.1132	0.094	1.846	mg/L
Sc-1	45	132393.782	132393.78				mg/L
Cl	35	37658.230	733.93				mg/L
Kr	83	48.667	-4.33				mg/L
Br	81	5010.840	-65.38				mg/L
P	31	8796.641	1201.85				mg/L
S	34	179944.135	4343.68				mg/L
Sr	88	1320.237	1266.90				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9	96.977				
Al	27	124.114				
Sc	45					
Ti	49	103.565				
V	51	99.472				
Cr	52	102.223				
Cr	53					
Mn	55	101.904				
Co	59	102.466				
Ni	60	102.521				
Cu	65	102.207				
Zn	66	100.896				
Ge	72		91.117			
As	75	102.128				
Se	77					
Se	82	101.825				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	100.464				
Cd	114	99.536				
In	115		92.831			
Sn	118					
Sb	123	98.659				
Ba	135	99.318				
Ce	140					
Tb	159		93.230			
Ho	165					
Tl	203	98.254				
Tl	205					
Pb	206					
Pb	207					
Pb	208	100.280				
U	238	101.629				
Bi	209		89.951			

Sample ID: QC Std 1
Report Date/Time: Saturday, January 28, 2012 11:06:58
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⌈	Na	23	94.995
|	Mg	24	95.942
|	K	39	100.374
|	Ca	43	98.139
|	Fe	54	97.227
|	Fe	57	102.265
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 1
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, January 28, 2012 11:12:21
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8354.186	-0.01				ug/L
	Be	9	8.000	0.00	-0.0255	0.014	55.244	ug/L
	Al	27	1883.551	-0.00	-0.2320	0.074	31.694	ug/L
>	Sc	45	128807.383	128807.38				ug/L
	Ti	49	66.674	0.00	0.1614	0.062	38.126	ug/L
	V	51	1815.589	-0.00	-0.0049	0.012	238.291	ug/L
	Cr	52	5944.847	0.00	0.0135	0.024	179.423	ug/L
	Cr	53	846.796	0.00	0.0908	0.269	296.125	ug/L
	Mn	55	575.359	0.00	0.0184	0.003	13.762	ug/L
	Co	59	94.668	0.00	-0.0047	0.001	23.194	ug/L
	Ni	60	89.001	0.00	0.0085	0.011	126.253	ug/L
	Cu	65	115.669	0.00	-0.0709	0.011	15.433	ug/L
	Zn	66	696.369	0.00	0.1765	0.038	21.405	ug/L
>	Ge	72	283894.584	283894.58				ug/L
	As	75	-130.609	-0.00	-0.0075	0.042	556.507	ug/L
	Se	77	56.667	-0.00	0.1725	0.199	115.310	ug/L
	Se	82	4.244	-0.00	0.0422	0.054	127.767	ug/L
	Rb	85	30.667	0.00				mg/L
	Y	89	194609.087	-7781.50				ug/L
	Rh	103	10.000	-19.00				ug/L
	Mo	98	63.864	0.00	0.0382	0.004	9.221	ug/L
	Ag	107	86.335	0.00	0.0075	0.004	57.250	ug/L
	Cd	114	3.285	0.00	0.0121	0.007	57.590	ug/L
>	In	115	256071.255	256071.25				ug/L
	Sn	118	704.830	0.00	0.1877	0.004	1.986	ug/L
	Sb	123	250.706	0.00	0.0835	0.003	4.037	ug/L
	Ba	135	30.334	0.00	0.0055	0.002	30.821	ug/L
	Ce	140	80.008	-0.00				ug/L
>	Tb	159	362540.380	362540.38				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	57.667	0.00	0.0137	0.003	22.442	ug/L
	Tl	205	130.014	0.00	0.0207	0.003	14.816	ug/L
	Pb	206	211.005	0.00	0.0076	0.006	82.534	ug/L
	Pb	207	208.338	0.00	0.0173	0.003	17.466	ug/L
	Pb	208	864.026	0.00	0.0087	0.003	37.785	ug/L
	U	238	156.336	0.00	0.0099	0.001	8.645	ug/L
>	Bi	209	290203.141	290203.14				ug/L

Sample ID: QC Std 2
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Erin D. Long

Na	23	126861.541	-0.05	0.0228	0.001	6.497	mg/L
Mg	24	1643.664	0.01	-0.0037	0.000	3.274	mg/L
K	39	485630.362	0.26	-0.0009	0.006	696.185	mg/L
Ca	43	200.022	0.00	-0.0010	0.002	216.149	mg/L
Fe	54	31937.177	0.01	-0.0001	0.007	6263.004	mg/L
Fe	57	6800.125	0.00	-0.0044	0.001	15.511	mg/L
Sc-1	45	128807.383	128807.38				mg/L
Cl	35	32859.993	-4064.31				mg/L
Kr	83	48.667	-4.33				mg/L
Br	81	4864.755	-211.46				mg/L
P	31	7020.292	-574.50				mg/L
S	34	154463.884	-21136.57				mg/L
Sr	88	86.676	33.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.985			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.835			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.464			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.950			

Sample ID: QC Std 2
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 2
Report Date/Time: Saturday, January 28, 2012 11:14:33
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, January 28, 2012 11:19:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8838.019	-0.01				ug/L
	Be	9	7.333	-0.00	-0.0291	0.016	53.593	ug/L
	Al	27	3300.668	0.01	0.0871	0.156	179.265	ug/L
>	Sc	45	135492.790	135492.79				ug/L
	Ti	49	43.338	-0.00	0.1007	0.072	71.041	ug/L
	V	51	4965.514	0.01	0.4054	0.023	5.603	ug/L
	Cr	52	11719.686	0.02	0.8651	0.036	4.179	ug/L
	Cr	53	1763.696	0.00	1.2153	0.041	3.353	ug/L
	Mn	55	5708.011	0.02	0.5127	0.014	2.648	ug/L
	Co	59	3475.426	0.01	0.4248	0.011	2.623	ug/L
	Ni	60	2830.509	0.01	1.6988	0.069	4.044	ug/L
	Cu	65	1419.468	0.00	0.7663	0.013	1.755	ug/L
	Zn	66	6202.037	0.02	6.1002	0.135	2.218	ug/L
>	Ge	72	296772.384	296772.38				ug/L
	As	75	310.031	0.00	0.4474	0.119	26.648	ug/L
	Se	77	98.667	0.00	0.7106	0.186	26.133	ug/L
	Se	82	35.572	0.00	0.3873	0.162	41.726	ug/L
	Rb	85	32.667	0.00				mg/L
	Y	89	194596.566	-7794.02				ug/L
	Rh	103	13.333	-15.67				ug/L
	Mo	98	58.197	0.00	0.0350	0.005	15.360	ug/L
	Ag	107	2172.972	0.01	0.4322	0.023	5.430	ug/L
	Cd	114	239.918	0.00	0.2264	0.028	12.571	ug/L
>	In	115	264144.364	264144.36				ug/L
	Sn	118	182.669	-0.00	0.0470	0.003	6.313	ug/L
	Sb	123	1593.870	0.01	0.4487	0.011	2.397	ug/L
	Ba	135	1131.422	0.00	0.7645	0.022	2.844	ug/L
	Ce	140	56.673	-0.00				ug/L
>	Tb	159	382674.699	382674.70				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	576.692	0.00	0.0984	0.007	7.098	ug/L
	Tl	205	1396.924	0.00	0.1048	0.012	11.382	ug/L
	Pb	206	2214.316	0.01	0.4117	0.008	1.922	ug/L
	Pb	207	2059.942	0.01	0.4125	0.006	1.401	ug/L
	Pb	208	9229.781	0.03	0.4101	0.003	0.725	ug/L
	U	238	11290.758	0.04	0.4307	0.014	3.198	ug/L
>	Bi	209	306210.638	306210.64				ug/L

Sample ID: QC Std 3
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Erin D. Long

Na	23	50400.460	-0.66	0.0008	0.001	86.104	mg/L
Mg	24	1400.264	0.01	-0.0038	0.000	4.717	mg/L
K	39	504334.563	0.20	-0.0023	0.003	110.758	mg/L
Ca	43	190.021	0.00	-0.0027	0.002	56.016	mg/L
Fe	54	32707.999	0.00	-0.0022	0.005	211.845	mg/L
Fe	57	7487.444	0.01	-0.0028	0.001	22.832	mg/L
Sc-1	45	135492.790	135492.79				mg/L
Cl	35	36246.660	-677.64				mg/L
Kr	83	49.334	-3.67				mg/L
Br	81	5261.661	185.45				mg/L
P	31	7469.390	-125.40				mg/L
S	34	173479.955	-2120.50				mg/L
Sr	88	176.688	123.35				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	101.346				
Cr	52	108.137				
Cr	53					
Mn	55	102.545				
Co	59	106.200				
Ni	60	106.173				
Cu	65	95.790				
Zn	66	97.603				
Ge	72		95.113			
As	75	111.851				
Se	77					
Se	82	96.814				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	108.045				
Cd	114	113.211				
In	115		95.762			
Sn	118					
Sb	123	112.167				
Ba	135	101.935				
Ce	140					
Tb	159		97.599			
Ho	165					
Tl	203	123.038				
Tl	205					
Pb	206					
Pb	207					
Pb	208	102.532				
U	238	107.684				
Bi	209		95.967			

Sample ID: QC Std 3
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Tl	203	LLICV IS OUT OF LIMITS (+/-20%)

Sample ID: QC Std 3
Report Date/Time: Saturday, January 28, 2012 11:22:14
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, January 28, 2012 11:34:45
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8504.337	-0.01				ug/L
	Be	9	9.333	0.00	-0.0187	0.004	23.814	ug/L
	Al	27	12425.976	0.08	2.5132	0.409	16.290	ug/L
>	Sc	45	125894.892	125894.89				ug/L
	Ti	49	80.008	0.00	0.1908	0.111	58.057	ug/L
	V	51	4500.834	0.01	0.3612	0.040	10.954	ug/L
	Cr	52	10615.531	0.02	0.7416	0.034	4.557	ug/L
	Cr	53	1380.253	0.00	0.7759	0.122	15.764	ug/L
	Mn	55	5446.834	0.02	0.5026	0.010	1.992	ug/L
	Co	59	3230.658	0.01	0.4054	0.005	1.227	ug/L
	Ni	60	2682.792	0.01	1.6550	0.046	2.803	ug/L
	Cu	65	1377.794	0.00	0.7653	0.025	3.316	ug/L
	Zn	66	6079.611	0.02	6.1590	0.137	2.221	ug/L
>	Ge	72	288425.291	288425.29				ug/L
	As	75	256.918	0.00	0.4000	0.059	14.789	ug/L
	Se	77	80.000	0.00	0.4864	0.087	17.851	ug/L
	Se	82	26.835	0.00	0.2981	0.138	46.309	ug/L
	Rb	85	22.667	-0.00				mg/L
	Y	89	188930.761	-13459.82				ug/L
	Rh	103	13.667	-15.33				ug/L
	Mo	98	92.901	0.00	0.0517	0.001	1.549	ug/L
	Ag	107	2001.260	0.01	0.4206	0.010	2.319	ug/L
	Cd	114	227.814	0.00	0.2272	0.044	19.585	ug/L
>	In	115	249775.944	249775.94				ug/L
	Sn	118	138.001	-0.00	0.0375	0.002	5.108	ug/L
	Sb	123	1486.723	0.01	0.4427	0.002	0.382	ug/L
	Ba	135	1065.079	0.00	0.7629	0.049	6.374	ug/L
	Ce	140	70.007	-0.00				ug/L
>	Tb	159	361080.372	361080.37				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	518.021	0.00	0.0917	0.002	1.776	ug/L
	Tl	205	1300.233	0.00	0.1012	0.015	15.124	ug/L
	Pb	206	2103.953	0.01	0.4041	0.004	1.099	ug/L
	Pb	207	1921.241	0.01	0.3971	0.003	0.864	ug/L
	Pb	208	8766.256	0.03	0.4025	0.003	0.817	ug/L
	U	238	10692.296	0.04	0.4221	0.009	2.172	ug/L
>	Bi	209	295910.886	295910.89				ug/L

Sample ID: QC Std 3
Report Date/Time: Saturday, January 28, 2012 11:36:59
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Erin D. Long

Na	23	53432.883	-0.61	0.0027	0.001	34.551	mg/L
Mg	24	1980.448	0.01	-0.0035	0.000	7.143	mg/L
K	39	475486.298	0.26	-0.0009	0.003	307.597	mg/L
Ca	43	183.354	0.00	-0.0020	0.004	213.391	mg/L
Fe	54	32176.784	0.02	0.0018	0.002	102.372	mg/L
Fe	57	7881.188	0.01	0.0020	0.004	181.831	mg/L
Sc-1	45	125894.892	125894.89				mg/L
Cl	35	35561.722	-1362.58				mg/L
Kr	83	57.334	4.33				mg/L
Br	81	4978.157	-98.06				mg/L
P	31	6975.595	-619.20				mg/L
S	34	154521.545	-21078.91				mg/L
Sr	88	53.339	0.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	90.312				
Cr	52	92.699				
Cr	53					
Mn	55	100.518				
Co	59	101.355				
Ni	60	103.435				
Cu	65	95.663				
Zn	66	98.545				
Ge	72		92.438			
As	75	99.992				
Se	77					
Se	82	74.513				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	105.142				
Cd	114	113.589				
In	115		90.553			
Sn	118					
Sb	123	110.675				
Ba	135	101.717				
Ce	140					
Tb	159		92.092			
Ho	165					
Tl	203	114.666				
Tl	205					
Pb	206					
Pb	207					
Pb	208	100.623				
U	238	105.514				
Bi	209		92.739			

Sample ID: QC Std 3
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 11:36:59
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Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, January 28, 2012 11:42:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 6
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8204.061	-0.00				ug/L
	Be	9	4.000	-0.00	-0.0391	0.018	46.653	ug/L
	Al	27	15578277.348	131.52	4276.3687	173.060	4.047	ug/L
>	Sc	45	118554.904	118554.90				ug/L
	Ti	49	37809.370	0.15	100.4417	2.635	2.624	ug/L
	V	51	1322.758	-0.00	-0.0570	0.015	25.844	ug/L
	Cr	52	5747.706	0.00	0.0668	0.019	28.700	ug/L
	Cr	53	1496.952	0.00	1.1453	0.232	20.230	ug/L
	Mn	55	1836.221	0.01	0.1630	0.008	5.120	ug/L
	Co	59	168.337	0.00	0.0071	0.002	25.736	ug/L
	Ni	60	471.018	0.00	0.2827	0.008	2.937	ug/L
	Cu	65	295.342	0.00	0.0685	0.012	17.911	ug/L
	Zn	66	387.346	-0.00	-0.1329	0.024	18.254	ug/L
>	Ge	72	260107.855	260107.85				ug/L
	As	75	-135.855	-0.00	-0.0261	0.071	272.367	ug/L
	Se	77	100.001	0.00	0.9175	0.207	22.581	ug/L
	Se	82	-2.806	-0.00	-0.0420	0.008	19.992	ug/L
	Rb	85	1612.506	0.01				mg/L
	Y	89	169289.095	-33101.49				ug/L
	Rh	103	18.334	-10.67				ug/L
	Mo	98	216891.560	0.93	102.4417	2.002	1.954	ug/L
	Ag	107	95.668	0.00	0.0113	0.003	29.203	ug/L
	Cd	114	93.630	0.00	0.1050	0.018	16.716	ug/L
>	In	115	233309.230	233309.23				ug/L
	Sn	118	107.734	-0.00	0.0313	0.001	2.523	ug/L
	Sb	123	161.038	0.00	0.0626	0.005	7.968	ug/L
	Ba	135	45.334	0.00	0.0192	0.006	29.091	ug/L
	Ce	140	640.089	0.00				ug/L
>	Tb	159	334258.113	334258.11				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	33.000	0.00	0.0097	0.001	9.347	ug/L
	Tl	205	56.673	0.00	0.0157	0.001	7.070	ug/L
	Pb	206	230.672	0.00	0.0137	0.007	49.068	ug/L
	Pb	207	212.672	0.00	0.0202	0.002	11.815	ug/L
	Pb	208	928.696	0.00	0.0138	0.001	6.756	ug/L
	U	238	34.000	0.00	0.0051	0.000	3.767	ug/L
>	Bi	209	279303.045	279303.04				ug/L

Sample ID: QC Std 4
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Erin D. Long

Na	23	41021478.085	345.26	12.3637	0.520	4.208	mg/L
Mg	24	10398944.914	87.77	4.9913	0.151	3.025	mg/L
K	39	24216881.756	201.07	4.9025	0.311	6.346	mg/L
Ca	43	150413.937	1.27	14.6591	0.626	4.273	mg/L
Fe	54	5060929.256	42.48	11.9777	0.372	3.106	mg/L
Fe	57	2100370.925	17.70	11.5256	0.956	8.296	mg/L
Sc-1	45	118554.904	118554.90				mg/L
Cl	35	1566397.422	1529473.12				mg/L
Kr	83	54.334	1.33				mg/L
Br	81	4422.508	-653.71				mg/L
P	31	1217677.512	1210082.72				mg/L
S	34	256551.579	80951.12				mg/L
Sr	88	543.405	490.07				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		83.362			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.583			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		85.251			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		87.534			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 4
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Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, January 28, 2012 11:50:02
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 7
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8387.595	0.00				ug/L
	Be	9	23554.577	0.21	109.3111	4.759	4.353	ug/L
	Al	27	14888593.670	134.06	4358.9380	243.094	5.577	ug/L
>	Sc	45	111221.569	111221.57				ug/L
	Ti	49	37628.599	0.15	105.0947	4.444	4.229	ug/L
	V	51	580911.062	2.34	93.0106	1.549	1.665	ug/L
	Cr	52	525875.129	2.11	96.5641	0.503	0.521	ug/L
	Cr	53	97507.119	0.39	148.6829	5.082	3.418	ug/L
	Mn	55	824632.283	3.33	95.6692	0.469	0.490	ug/L
	Co	59	635957.680	2.57	96.9835	1.415	1.459	ug/L
	Ni	60	132581.836	0.54	98.0937	1.014	1.034	ug/L
	Cu	65	129734.792	0.52	100.1916	0.725	0.723	ug/L
	Zn	66	76431.701	0.31	98.6035	1.372	1.392	ug/L
>	Ge	72	247395.080	247395.08				ug/L
	As	75	81395.381	0.33	99.2932	2.216	2.231	ug/L
	Se	77	8031.202	0.03	130.1131	0.188	0.145	ug/L
	Se	82	7472.318	0.03	98.7797	0.499	0.505	ug/L
	Rb	85	1471.478	0.01				mg/L
	Y	89	160034.792	-42355.79				ug/L
	Rh	103	55.667	26.67				ug/L
	Mo	98	205664.637	0.96	105.2347	2.943	2.796	ug/L
	Ag	107	402227.487	1.87	100.4808	0.300	0.299	ug/L
	Cd	114	91207.174	0.42	101.2255	2.083	2.058	ug/L
>	In	115	215465.228	215465.23				ug/L
	Sn	118	798.172	0.00	0.2530	0.012	4.834	ug/L
	Sb	123	304137.678	1.41	102.0247	2.662	2.609	ug/L
	Ba	135	117549.650	0.37	97.8510	1.193	1.219	ug/L
	Ce	140	563.409	0.00				ug/L
>	Tb	159	317337.985	317337.98				ug/L
	Ho	165	33.337	0.00				ug/L
	Tl	203	531979.013	1.92	96.3302	1.334	1.385	ug/L
	Tl	205	1329777.611	4.79	97.8505	2.985	3.050	ug/L
	Pb	206	451363.946	1.63	100.9880	0.805	0.798	ug/L
	Pb	207	394253.782	1.42	93.4056	0.333	0.357	ug/L
	Pb	208	1839174.080	6.63	97.9109	0.713	0.728	ug/L
	U	238	2330565.847	8.40	97.2524	1.683	1.731	ug/L
>	Bi	209	277504.371	277504.37				ug/L

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Erin D. Long

Na	23	38400376.752	344.75	12.3455	0.694	5.621	mg/L
Mg	24	9897998.697	89.12	5.0680	0.257	5.076	mg/L
K	39	21791295.013	192.54	4.6943	0.119	2.532	mg/L
Ca	43	137607.272	1.24	14.2968	0.581	4.062	mg/L
Fe	54	4714824.333	42.22	11.9018	0.615	5.164	mg/L
Fe	57	1924961.716	17.28	11.2502	0.527	4.681	mg/L
Sc-1	45	111221.569	111221.57				mg/L
Cl	35	53609805.137	53572880.84				mg/L
Kr	83	56.334	3.33				mg/L
Br	81	8365.531	3289.32				mg/L
P	31	1116983.319	1109388.52				mg/L
S	34	248333.991	72733.54				mg/L
Sr	88	476.728	423.39				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	93.011				
Cr	52	96.564				
Cr	53					
Mn	55	95.669				
Co	59	96.983				
Ni	60	98.094				
Cu	65	100.192				
Zn	66	98.603				
Ge	72		79.288			
As	75	99.293				
Se	77					
Se	82	98.780				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	100.481				
Cd	114	101.226				
In	115		78.114			
Sn	118					
Sb	123	102.025				
Ba	135	97.851				
Ce	140					
Tb	159		80.935			
Ho	165					
Tl	203	96.330				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.911				
U	238	97.252				
Bi	209		86.970			

Sample ID: QC Std 5
Report Date/Time: Saturday, January 28, 2012 11:52:16
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ge 72 Int Std for QC S	Ge	72	Rerun for AFCEE QC
In 115 Int Std for QC S	In	115	Rerun for AFCEE QC

Sample ID: QC Std 5
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Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 11:57:41
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9004.880	-0.00				ug/L
	Be	9	12115.469	0.09	48.9231	2.023	4.134	ug/L
	Al	27	198746.389	1.54	49.9060	2.203	4.415	ug/L
>	Sc	45	127791.393	127791.39				ug/L
	Ti	49	40354.873	0.14	100.0517	2.872	2.871	ug/L
	V	51	347301.359	1.24	49.2379	0.584	1.185	ug/L
	Cr	52	307504.256	1.08	49.6730	0.553	1.114	ug/L
	Cr	53	43668.540	0.15	58.4658	1.091	1.866	ug/L
	Mn	55	478355.377	1.71	49.2449	1.262	2.562	ug/L
	Co	59	371783.226	1.33	50.3299	0.992	1.971	ug/L
	Ni	60	76543.774	0.27	50.2514	0.763	1.518	ug/L
	Cu	65	74788.328	0.27	51.1943	0.716	1.399	ug/L
	Zn	66	44166.509	0.16	50.2859	0.705	1.401	ug/L
>	Ge	72	278692.087	278692.09				ug/L
	As	75	45481.275	0.16	49.3206	0.883	1.790	ug/L
	Se	77	3525.412	0.01	50.3252	1.569	3.118	ug/L
	Se	82	4190.402	0.02	49.1703	0.348	0.707	ug/L
	Rb	85	1662.849	0.01				mg/L
	Y	89	182487.857	-19902.73				ug/L
	Rh	103	24.334	-4.67				ug/L
	Mo	98	221561.980	0.91	100.3758	1.159	1.155	ug/L
	Ag	107	227048.310	0.93	50.2423	0.940	1.871	ug/L
	Cd	114	51036.196	0.21	50.1708	2.142	4.270	ug/L
>	In	115	243228.003	243228.00				ug/L
	Sn	118	175387.140	0.72	49.2355	1.168	2.372	ug/L
	Sb	123	169538.613	0.70	50.3661	1.029	2.043	ug/L
	Ba	135	65044.892	0.18	48.8378	0.575	1.178	ug/L
	Ce	140	80.008	-0.00				ug/L
>	Tb	159	351825.422	351825.42				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	284002.506	1.00	50.0988	1.153	2.301	ug/L
	Tl	205	710083.829	2.49	50.9078	1.340	2.633	ug/L
	Pb	206	227351.990	0.80	49.5404	1.132	2.285	ug/L
	Pb	207	214154.997	0.75	49.4112	0.983	1.990	ug/L
	Pb	208	960042.669	3.37	49.7653	0.632	1.271	ug/L
	U	238	1302024.012	4.57	52.9305	1.642	3.102	ug/L
>	Bi	209	284915.612	284915.61				ug/L

Sample ID: QC Std 6
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Na	23	16815959.566	130.72	4.6962	0.143	3.052	mg/L
Mg	24	10759321.488	84.36	4.7970	0.243	5.073	mg/L
K	39	25833939.584	199.07	4.8535	0.267	5.505	mg/L
Ca	43	52520.292	0.41	4.7407	0.267	5.642	mg/L
Fe	54	2192330.522	16.96	4.7796	0.297	6.216	mg/L
Fe	57	985143.335	7.67	4.9905	0.267	5.354	mg/L
> Sc-1	45	127791.393	127791.39				mg/L
Cl	35	102983.411	66059.11				mg/L
Kr	83	44.001	-9.00				mg/L
Br	81	4773.367	-302.85				mg/L
P	31	6883.529	-711.27				mg/L
S	34	146834.761	-28765.69				mg/L
Sr	88	3671.177	3617.84				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51	98.476				
Cr	52	99.346				
Cr	53					
Mn	55	98.490				
Co	59	100.660				
Ni	60	100.503				
Cu	65	102.389				
Zn	66	100.572				
> Ge	72		89.318			
As	75	98.641				
Se	77					
Se	82	98.341				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	100.485				
Cd	114	100.342				
> In	115		88.179			
Sn	118					
Sb	123	100.732				
Ba	135	97.676				
Ce	140					
> Tb	159		89.731			
Ho	165					
Tl	203	100.198				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.531				
U	238	105.861				
> Bi	209		89.293			

Sample ID: QC Std 6
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 11:59:54
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Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 12:05:18
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8003.873	-0.01				ug/L
	Be	9	10.667	0.00	-0.0137	0.015	107.069	ug/L
	Al	27	3817.548	0.01	0.2569	0.089	34.496	ug/L
>	Sc	45	128840.931	128840.93				ug/L
	Ti	49	86.676	0.00	0.2127	0.088	41.592	ug/L
	V	51	1774.651	-0.00	-0.0076	0.034	452.080	ug/L
	Cr	52	6064.934	0.00	0.0441	0.037	84.291	ug/L
	Cr	53	4661.789	0.01	5.2549	0.836	15.915	ug/L
	Mn	55	608.028	0.00	0.0225	0.003	15.220	ug/L
	Co	59	108.668	0.00	-0.0027	0.003	131.105	ug/L
	Ni	60	103.335	0.00	0.0186	0.011	58.455	ug/L
	Cu	65	113.335	0.00	-0.0717	0.002	2.948	ug/L
	Zn	66	745.707	0.00	0.2418	0.026	10.587	ug/L
>	Ge	72	280833.034	280833.03				ug/L
	As	75	-109.010	-0.00	0.0141	0.022	153.857	ug/L
	Se	77	98.667	0.00	0.7849	0.116	14.754	ug/L
	Se	82	6.620	0.00	0.0712	0.074	103.372	ug/L
	Rb	85	28.334	0.00				mg/L
	Y	89	181953.841	-20436.74				ug/L
	Rh	103	14.667	-14.33				ug/L
	Mo	98	81.750	0.00	0.0469	0.010	22.072	ug/L
	Ag	107	113.002	0.00	0.0136	0.004	26.834	ug/L
	Cd	114	11.863	0.00	0.0204	0.006	31.155	ug/L
>	In	115	249684.432	249684.43				ug/L
	Sn	118	656.159	0.00	0.1792	0.004	2.179	ug/L
	Sb	123	62.367	0.00	0.0308	0.003	8.416	ug/L
	Ba	135	32.334	0.00	0.0070	0.007	102.925	ug/L
	Ce	140	16.668	-0.00				ug/L
>	Tb	159	361207.285	361207.29				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	418.348	0.00	0.0755	0.009	11.764	ug/L
	Tl	205	940.148	0.00	0.0771	0.010	13.320	ug/L
	Pb	206	216.005	0.00	0.0084	0.002	29.494	ug/L
	Pb	207	187.004	0.00	0.0122	0.002	16.272	ug/L
	Pb	208	880.361	0.00	0.0092	0.003	27.725	ug/L
	U	238	209.338	0.00	0.0120	0.002	19.705	ug/L
>	Bi	209	292357.095	292357.09				ug/L

Sample ID: QC Std 7
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Erin D. Long

Na	23	127358.611	-0.04	0.0229	0.002	8.362	mg/L
Mg	24	1950.440	0.01	-0.0036	0.000	8.183	mg/L
K	39	475213.689	0.18	-0.0030	0.005	179.381	mg/L
Ca	43	250.029	0.00	0.0036	0.001	27.567	mg/L
Fe	54	31502.191	0.01	-0.0011	0.007	661.856	mg/L
Fe	57	7487.445	0.01	-0.0009	0.001	163.402	mg/L
Sc-1	45	128840.931	128840.93				mg/L
Cl	35	57658.177	20733.88				mg/L
Kr	83	43.667	-9.33				mg/L
Br	81	4879.440	-196.77				mg/L
P	31	7842.365	247.57				mg/L
S	34	159004.655	-16595.80				mg/L
Sr	88	76.675	23.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.004			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		90.520			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.124			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.625			

Sample ID: QC Std 7
Report Date/Time: Saturday, January 28, 2012 12:07:30
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Tl	203	CCB IS OUT OF LIMITS (+/-1/2RL)

Sample ID: QC Std 7
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 12:12:53
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8704.549	-0.01				ug/L
	Be	9	11.333	0.00	-0.0108	0.013	123.876	ug/L
	Al	27	2717.110	0.00	-0.0124	0.009	70.163	ug/L
>	Sc	45	127350.015	127350.01				ug/L
	Ti	49	66.674	0.00	0.1631	0.052	31.815	ug/L
	V	51	1543.031	-0.00	-0.0409	0.026	64.513	ug/L
	Cr	52	5844.775	0.00	0.0067	0.022	322.211	ug/L
	Cr	53	3037.529	0.01	3.0610	0.499	16.307	ug/L
	Mn	55	581.693	0.00	0.0197	0.004	18.062	ug/L
	Co	59	77.668	0.00	-0.0069	0.002	29.638	ug/L
	Ni	60	83.668	-0.00	0.0056	0.004	77.598	ug/L
	Cu	65	103.002	0.00	-0.0788	0.007	8.891	ug/L
	Zn	66	717.371	0.00	0.2084	0.041	19.832	ug/L
>	Ge	72	281154.534	281154.53				ug/L
	As	75	-135.134	-0.00	-0.0138	0.064	466.847	ug/L
	Se	77	86.667	0.00	0.6101	0.232	38.039	ug/L
	Se	82	-7.847	-0.00	-0.0980	0.178	181.948	ug/L
	Rb	85	28.000	0.00				mg/L
	Y	89	184484.831	-17905.75				ug/L
	Rh	103	15.334	-13.67				ug/L
	Mo	98	34.009	0.00	0.0259	0.004	16.316	ug/L
	Ag	107	68.001	0.00	0.0041	0.003	71.049	ug/L
	Cd	114	-0.019	-0.00	0.0090	0.007	79.898	ug/L
>	In	115	246990.635	246990.64				ug/L
	Sn	118	583.887	0.00	0.1612	0.004	2.466	ug/L
	Sb	123	35.450	0.00	0.0231	0.003	13.878	ug/L
	Ba	135	27.000	0.00	0.0036	0.003	91.352	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	353103.197	353103.20				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	189.004	0.00	0.0364	0.003	8.274	ug/L
	Tl	205	443.390	0.00	0.0427	0.004	10.044	ug/L
	Pb	206	196.338	0.00	0.0044	0.003	57.025	ug/L
	Pb	207	174.004	0.00	0.0095	0.003	28.137	ug/L
	Pb	208	784.356	0.00	0.0046	0.003	65.558	ug/L
	U	238	89.335	0.00	0.0072	0.001	14.517	ug/L
>	Bi	209	290651.761	290651.76				ug/L

Sample ID: QC Std 7
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Erin D. Long

Na	23	123439.975	-0.06	0.0222	0.001	4.133	mg/L
Mg	24	880.137	0.00	-0.0040	0.000	2.711	mg/L
K	39	444384.765	-0.03	-0.0079	0.004	50.346	mg/L
Ca	43	190.021	0.00	-0.0016	0.002	142.095	mg/L
Fe	54	30296.992	-0.00	-0.0032	0.001	37.653	mg/L
Fe	57	6623.306	0.00	-0.0050	0.002	37.504	mg/L
Sc-1	45	127350.015	127350.01				mg/L
Cl	35	44304.136	7379.83				mg/L
Kr	83	59.001	6.00				mg/L
Br	81	4777.370	-298.84				mg/L
P	31	7226.499	-368.29				mg/L
S	34	138064.960	-37535.50				mg/L
Sr	88	60.006	6.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.107			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.543			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.057			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.091			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: PBW 60 WG387967-04

Sample Date/Time: Saturday, January 28, 2012 12:27:01
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 12
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8988.192	-0.00				ug/L
	Be	9	11.333	0.00	-0.0121	0.015	124.196	ug/L
	Al	27	17702.227	0.12	3.7296	0.271	7.259	ug/L
>	Sc	45	129583.773	129583.77				ug/L
	Ti	49	96.677	0.00	0.2320	0.081	35.084	ug/L
	V	51	1824.922	-0.00	-0.0054	0.011	207.906	ug/L
	Cr	52	6656.057	0.00	0.1210	0.026	21.294	ug/L
	Cr	53	2027.117	0.00	1.6519	0.254	15.349	ug/L
	Mn	55	2045.938	0.01	0.1658	0.010	6.315	ug/L
	Co	59	117.002	0.00	-0.0019	0.001	49.890	ug/L
	Ni	60	83.001	-0.00	0.0043	0.002	54.879	ug/L
	Cu	65	270.007	0.00	0.0318	0.003	10.491	ug/L
	Zn	66	1268.776	0.00	0.8137	0.036	4.387	ug/L
>	Ge	72	285982.232	285982.23				ug/L
	As	75	-149.664	-0.00	-0.0262	0.035	132.267	ug/L
	Se	77	76.667	0.00	0.4506	0.185	41.152	ug/L
	Se	82	-3.519	-0.00	-0.0440	0.207	469.714	ug/L
	Rb	85	85.668	0.00				mg/L
	Y	89	193159.215	-9231.37				ug/L
	Rh	103	17.334	-11.67				ug/L
	Mo	98	29.758	0.00	0.0239	0.003	13.534	ug/L
	Ag	107	64.668	0.00	0.0032	0.002	55.307	ug/L
	Cd	114	2.584	-0.00	0.0114	0.007	58.604	ug/L
>	In	115	248772.370	248772.37				ug/L
	Sn	118	1104.340	0.00	0.3029	0.012	3.854	ug/L
	Sb	123	92.910	0.00	0.0397	0.004	11.146	ug/L
	Ba	135	261.673	0.00	0.1728	0.004	2.513	ug/L
	Ce	140	196.689	0.00				ug/L
>	Tb	159	364964.911	364964.91				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	112.669	0.00	0.0230	0.002	6.739	ug/L
	Tl	205	256.696	0.00	0.0294	0.001	3.834	ug/L
	Pb	206	360.345	0.00	0.0386	0.005	12.117	ug/L
	Pb	207	308.009	0.00	0.0390	0.002	5.280	ug/L
	Pb	208	1439.730	0.00	0.0370	0.001	3.016	ug/L
	U	238	90.668	0.00	0.0072	0.001	19.934	ug/L
>	Bi	209	294200.194	294200.19				ug/L

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Na	23	574111.753	3.40	0.1459	0.005	3.093	mg/L
Mg	24	2980.838	0.02	-0.0031	0.000	6.273	mg/L
K	39	439852.860	-0.12	-0.0103	0.003	26.791	mg/L
Ca	43	340.041	0.00	0.0115	0.004	36.297	mg/L
Fe	54	66942.046	0.28	0.0756	0.013	16.826	mg/L
Fe	57	7367.326	0.01	-0.0018	0.002	109.776	mg/L
Sc-1	45	129583.773	129583.77				mg/L
Cl	35	44349.089	7424.79				mg/L
Kr	83	59.667	6.67				mg/L
Br	81	4934.128	-142.09				mg/L
P	31	11809.038	4214.24				mg/L
S	34	143598.297	-32002.16				mg/L
Sr	88	610.083	556.74				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		91.655			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		90.189			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.083			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.203			

Sample ID: PBW 60 WG387967-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 60 WG387967-04
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: LCSW 60 WG387967-05

Sample Date/Time: Saturday, January 28, 2012 12:34:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 13
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9438.680	-0.00				ug/L
	Be	9	6431.817	0.05	24.1245	0.561	2.325	ug/L
	Al	27	113045.548	0.81	26.1011	1.192	4.567	ug/L
>	Sc	45	137204.572	137204.57				ug/L
	Ti	49	110.012	0.00	0.2524	0.084	33.146	ug/L
	V	51	190596.078	0.63	24.9644	0.698	2.795	ug/L
	Cr	52	176685.162	0.57	26.0574	0.448	1.719	ug/L
	Cr	53	22419.028	0.07	27.3304	0.617	2.259	ug/L
	Mn	55	268261.420	0.89	25.6226	0.218	0.852	ug/L
	Co	59	206648.574	0.69	25.9626	0.417	1.605	ug/L
	Ni	60	42385.975	0.14	25.8129	0.470	1.820	ug/L
	Cu	65	41814.756	0.14	26.5070	0.328	1.236	ug/L
	Zn	66	23316.480	0.08	24.3341	0.258	1.060	ug/L
>	Ge	72	300146.107	300146.11				ug/L
	As	75	23581.143	0.08	23.8078	0.380	1.596	ug/L
	Se	77	1752.851	0.01	22.8862	0.810	3.537	ug/L
	Se	82	2021.154	0.01	22.0189	0.370	1.679	ug/L
	Rb	85	62.001	0.00				mg/L
	Y	89	199521.585	-2869.00				ug/L
	Rh	103	23.334	-5.67				ug/L
	Mo	98	37.420	0.00	0.0266	0.001	4.692	ug/L
	Ag	107	126730.723	0.49	26.2451	0.480	1.829	ug/L
	Cd	114	26804.565	0.10	24.6593	0.376	1.525	ug/L
>	In	115	259864.990	259864.99				ug/L
	Sn	118	198.669	-0.00	0.0520	0.003	5.821	ug/L
	Sb	123	89329.436	0.34	24.8448	0.269	1.082	ug/L
	Ba	135	36988.331	0.10	25.4793	0.950	3.729	ug/L
	Ce	140	106.678	-0.00				ug/L
>	Tb	159	383393.488	383393.49				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	155615.967	0.51	25.6022	0.057	0.224	ug/L
	Tl	205	388347.622	1.27	25.9711	0.195	0.750	ug/L
	Pb	206	131353.495	0.43	26.6775	0.337	1.264	ug/L
	Pb	207	115970.226	0.38	24.9419	0.338	1.355	ug/L
	Pb	208	537980.315	1.76	25.9936	0.174	0.671	ug/L
	U	238	700392.471	2.29	26.5544	0.193	0.728	ug/L
>	Bi	209	305441.923	305441.92				ug/L

Sample ID: LCSW 60 WG387967-05
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Na	23	531701.364	2.84	0.1260	0.004	3.125	mg/L
Mg	24	30870.201	0.22	0.0084	0.000	5.608	mg/L
K	39	469538.216	-0.10	-0.0096	0.003	32.935	mg/L
Ca	43	643.423	0.00	0.0355	0.009	24.165	mg/L
Fe	54	67978.692	0.26	0.0696	0.011	15.918	mg/L
Fe	57	8485.169	0.01	0.0015	0.002	165.137	mg/L
Sc-1	45	137204.572	137204.57				mg/L
Cl	35	42884.077	5959.78				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	5583.872	507.66				mg/L
P	31	14283.612	6688.82				mg/L
S	34	152428.777	-23171.68				mg/L
Sr	88	3391.030	3337.69				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.194			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		94.211			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		97.783			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.726			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 60 WG387967-05
Report Date/Time: Saturday, January 28, 2012 12:36:59
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201061301

Sample Date/Time: Saturday, January 28, 2012 12:42:33
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 14
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9905.892	0.00				ug/L
	Be	9	9.333	0.00	-0.0207	0.023	112.288	ug/L
	Al	27	35963.930	0.25	8.0582	1.896	23.528	ug/L
>	Sc	45	133021.952	133021.95				ug/L
	Ti	49	486.730	0.00	1.2177	0.198	16.286	ug/L
	V	51	11484.302	0.03	1.3934	0.036	2.618	ug/L
	Cr	52	12063.524	0.02	1.0578	0.080	7.532	ug/L
	Cr	53	3000.842	0.01	3.0884	0.310	10.039	ug/L
	Mn	55	4025.679	0.01	0.3791	0.004	0.950	ug/L
	Co	59	535.023	0.00	0.0558	0.002	4.255	ug/L
	Ni	60	1665.517	0.01	1.0556	0.065	6.165	ug/L
	Cu	65	551.024	0.00	0.2328	0.023	9.924	ug/L
	Zn	66	3522.446	0.01	3.4874	0.053	1.519	ug/L
>	Ge	72	276032.860	276032.86				ug/L
	As	75	4523.410	0.02	5.0694	0.448	8.838	ug/L
	Se	77	136.001	0.00	1.3543	0.222	16.382	ug/L
	Se	82	1669.164	0.01	19.7716	1.609	8.136	ug/L
	Rb	85	9553.910	0.03				mg/L
	Y	89	177908.475	-24482.11				ug/L
	Rh	103	81.335	52.33				ug/L
	Mo	98	1266.237	0.01	0.5907	0.025	4.244	ug/L
	Ag	107	79.335	0.00	0.0070	0.002	24.176	ug/L
	Cd	114	23.795	0.00	0.0329	0.010	29.533	ug/L
>	In	115	240319.120	240319.12				ug/L
	Sn	118	288.938	-0.00	0.0819	0.002	2.363	ug/L
	Sb	123	231.082	0.00	0.0821	0.005	6.210	ug/L
	Ba	135	38629.759	0.11	28.0498	0.612	2.180	ug/L
	Ce	140	396.716	0.00				ug/L
>	Tb	159	363660.705	363660.71				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	133.669	0.00	0.0263	0.001	4.457	ug/L
	Tl	205	346.709	0.00	0.0352	0.004	11.028	ug/L
	Pb	206	344.344	0.00	0.0341	0.004	13.108	ug/L
	Pb	207	272.341	0.00	0.0303	0.003	8.961	ug/L
	Pb	208	1352.058	0.00	0.0318	0.002	6.617	ug/L
	U	238	12688.456	0.04	0.4964	0.008	1.645	ug/L
>	Bi	209	298177.978	298177.98				ug/L

Sample ID: L1201061301
Report Date/Time: Saturday, January 28, 2012 12:44:46
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Na	23	49558690.838	372.03	13.3205	0.508	3.814	mg/L
Mg	24	14746879.833	111.10	6.3189	0.382	6.047	mg/L
K	39	6353499.027	44.34	1.0753	0.068	6.328	mg/L
Ca	43	393499.031	2.96	34.2204	1.414	4.133	mg/L
Fe	54	102878.478	0.54	0.1481	0.009	6.107	mg/L
Fe	57	38217.977	0.24	0.1489	0.017	11.096	mg/L
Sc-1	45	133021.952	133021.95				mg/L
Cl	35	507892.180	470967.88				mg/L
Kr	83	41.667	-11.33				mg/L
Br	81	1299678.269	1294602.05				mg/L
P	31	16055.617	8460.82				mg/L
S	34	597465.387	421864.93				mg/L
Sr	88	2198676.724	2198623.39				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.466			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.125			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.750			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		93.449			

Sample ID: L1201061301
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201061301
Report Date/Time: Saturday, January 28, 2012 12:44:46
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065101 ~~WG387967-01~~ WG387967-02

Sample Date/Time: Saturday, January 28, 2012 12:50:20
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 15
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9555.542	-0.01				ug/L
	Be	9	8.667	0.00	-0.0253	0.019	73.318	ug/L
	Al	27	21661.480	0.13	4.2023	0.315	7.486	ug/L
>	Sc	45	143713.691	143713.69				ug/L
	Ti	49	303.369	0.00	0.7814	0.172	22.048	ug/L
	V	51	14840.079	0.05	1.9426	0.069	3.571	ug/L
	Cr	52	10816.794	0.02	0.9060	0.029	3.176	ug/L
	Cr	53	2433.933	0.01	2.4089	0.184	7.645	ug/L
	Mn	55	3641.499	0.01	0.3508	0.009	2.651	ug/L
	Co	59	291.675	0.00	0.0238	0.002	9.425	ug/L
	Ni	60	1343.122	0.00	0.8700	0.027	3.143	ug/L
	Cu	65	477.018	0.00	0.1919	0.016	8.553	ug/L
	Zn	66	1694.523	0.00	1.4210	0.041	2.896	ug/L
>	Ge	72	267754.295	267754.30				ug/L
	As	75	879.133	0.00	1.1201	0.066	5.909	ug/L
	Se	77	132.001	0.00	1.3538	0.439	32.454	ug/L
	Se	82	327.571	0.00	3.9924	0.264	6.621	ug/L
	Rb	85	13606.245	0.05				mg/L
	Y	89	175993.191	-26397.39				ug/L
	Rh	103	59.001	30.00				ug/L
	Mo	98	1786.515	0.01	0.8480	0.035	4.087	ug/L
	Ag	107	98.668	0.00	0.0118	0.002	15.768	ug/L
	Cd	114	2.659	0.00	0.0117	0.006	55.379	ug/L
>	In	115	235151.309	235151.31				ug/L
	Sn	118	322.273	-0.00	0.0934	0.003	3.174	ug/L
	Sb	123	170.162	0.00	0.0650	0.004	5.636	ug/L
	Ba	135	35265.837	0.10	26.1048	0.487	1.865	ug/L
	Ce	140	273.366	0.00				ug/L
>	Tb	159	356720.676	356720.68				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	116.002	0.00	0.0232	0.004	19.230	ug/L
	Tl	205	246.695	0.00	0.0283	0.004	15.705	ug/L
	Pb	206	280.008	0.00	0.0204	0.005	24.910	ug/L
	Pb	207	227.005	0.00	0.0199	0.002	8.605	ug/L
	Pb	208	1086.039	0.00	0.0182	0.001	5.532	ug/L
	U	238	7271.580	0.02	0.2844	0.006	2.175	ug/L
>	Bi	209	299865.293	299865.29				ug/L

Sample ID: L1201065101 WG387967-01
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Na	23	38830498.239	269.74	9.6646	0.674	6.979	mg/L
Mg	24	7495773.961	52.25	2.9694	0.174	5.861	mg/L
K	39	6635430.051	42.75	1.0366	0.083	7.994	mg/L
Ca	43	232129.689	1.62	18.6922	1.402	7.503	mg/L
Fe	54	90573.782	0.39	0.1079	0.016	14.517	mg/L
Fe	57	31282.690	0.17	0.1038	0.029	27.951	mg/L
Sc-1	45	143713.691	143713.69				mg/L
Cl	35	275667.646	238743.34				mg/L
Kr	83	50.667	-2.33				mg/L
Br	81	215840.526	210764.31				mg/L
P	31	14138.706	6543.91				mg/L
S	34	393493.384	217892.93				mg/L
Sr	88	1502195.380	1502142.04				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		85.813			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.251			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.980			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		93.978			

Sample ID: L1201065101 WG387967-01
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201065101 WG387967-01
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065102S WG387967-08

Sample Date/Time: Saturday, January 28, 2012 12:58:07
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 16
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9889.205	0.00				ug/L
	Be	9	6607.286	0.05	26.1945	0.209	0.798	ug/L
	Al	27	115748.771	0.88	28.2941	0.988	3.492	ug/L
>	Sc	45	129803.322	129803.32				ug/L
	Ti	49	333.374	0.00	0.8684	0.217	25.004	ug/L
	V	51	179996.542	0.68	26.8337	0.972	3.621	ug/L
	Cr	52	152335.803	0.56	25.5276	0.327	1.282	ug/L
	Cr	53	19234.114	0.07	26.6523	0.916	3.435	ug/L
	Mn	55	234119.335	0.89	25.4456	0.589	2.316	ug/L
	Co	59	174948.510	0.66	25.0185	0.824	3.294	ug/L
	Ni	60	37046.259	0.14	25.6677	0.502	1.956	ug/L
	Cu	65	35560.158	0.13	25.6334	0.204	0.796	ug/L
	Zn	66	25827.578	0.10	30.8304	0.766	2.484	ug/L
>	Ge	72	263950.514	263950.51				ug/L
	As	75	21850.461	0.08	25.0862	0.443	1.764	ug/L
	Se	77	1566.148	0.01	23.2494	1.427	6.139	ug/L
	Se	82	2063.260	0.01	25.5711	0.571	2.234	ug/L
	Rb	85	12829.673	0.05				mg/L
	Y	89	167908.270	-34482.31				ug/L
	Rh	103	56.001	27.00				ug/L
	Mo	98	1709.133	0.01	0.8399	0.024	2.884	ug/L
	Ag	107	95168.370	0.42	22.5561	0.671	2.976	ug/L
	Cd	114	23775.798	0.10	25.0438	0.126	0.503	ug/L
>	In	115	227010.907	227010.91				ug/L
	Sn	118	866.312	0.00	0.2603	0.001	0.299	ug/L
	Sb	123	80538.545	0.35	25.6378	0.143	0.557	ug/L
	Ba	135	65969.883	0.19	49.8584	0.512	1.027	ug/L
	Ce	140	336.707	0.00				ug/L
>	Tb	159	349467.651	349467.65				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	147506.040	0.50	25.1888	0.203	0.807	ug/L
	Tl	205	363385.339	1.23	25.2239	0.304	1.207	ug/L
	Pb	206	125021.249	0.42	26.3464	0.355	1.349	ug/L
	Pb	207	110268.038	0.37	24.6080	0.068	0.275	ug/L
	Pb	208	515723.918	1.75	25.8593	0.077	0.300	ug/L
	U	238	710177.748	2.41	27.9326	0.598	2.139	ug/L
>	Bi	209	294316.154	294316.15				ug/L

Sample ID: L1201065102S WG387967-08
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⌈	Na	23	37305663.222	286.51	10.2641	0.591	5.761	mg/L
|	Mg	24	7503489.493	57.81	3.2861	0.125	3.818	mg/L
|	K	39	6312156.206	45.10	1.0940	0.045	4.130	mg/L
|	Ca	43	218099.513	1.68	19.4011	1.219	6.283	mg/L
|	Fe	54	66200.990	0.27	0.0735	0.003	4.613	mg/L
|	Fe	57	18525.859	0.09	0.0542	0.009	16.325	mg/L
⌊>	Sc-1	45	129803.322	129803.32				mg/L
	Cl	35	262628.745	225704.44				mg/L
	Kr	83	41.334	-11.67				mg/L
	Br	81	180555.107	175478.89				mg/L
	P	31	14743.085	7148.29				mg/L
	S	34	373973.832	198373.38				mg/L
	Sr	88	1365723.408	1365670.07				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		84.594			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		82.300			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		89.130			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		92.239			

Sample ID: L1201065102S WG387967-08
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201065102S WG387967-08
Report Date/Time: Saturday, January 28, 2012 13:00:20
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065103SD WG387967-09

Sample Date/Time: Saturday, January 28, 2012 13:11:04
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 17
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8671.183	-0.00				ug/L
	Be	9	5817.366	0.05	25.2364	1.930	7.646	ug/L
	Al	27	117522.947	0.97	31.4833	1.397	4.438	ug/L
>	Sc	45	118825.108	118825.11				ug/L
	Ti	49	266.698	0.00	0.8147	0.211	25.876	ug/L
	V	51	154282.659	0.67	26.8008	0.288	1.076	ug/L
	Cr	52	132793.591	0.57	25.9564	0.444	1.712	ug/L
	Cr	53	16972.306	0.07	27.4376	1.238	4.514	ug/L
	Mn	55	198663.040	0.88	25.1504	0.081	0.321	ug/L
	Co	59	151025.527	0.67	25.1493	0.239	0.952	ug/L
	Ni	60	31721.587	0.14	25.6075	0.241	0.941	ug/L
	Cu	65	30871.057	0.14	25.9407	0.412	1.588	ug/L
	Zn	66	18920.648	0.08	26.2210	0.012	0.047	ug/L
>	Ge	72	226443.516	226443.52				ug/L
	As	75	19000.098	0.08	25.4188	0.272	1.069	ug/L
	Se	77	1357.444	0.01	23.5122	1.140	4.850	ug/L
	Se	82	1827.159	0.01	26.3807	0.313	1.187	ug/L
	Rb	85	11587.503	0.05				mg/L
	Y	89	150058.288	-52332.30				ug/L
	Rh	103	47.667	18.67				ug/L
	Mo	98	1681.200	0.01	0.9455	0.015	1.556	ug/L
	Ag	107	87976.743	0.44	23.8839	0.452	1.894	ug/L
	Cd	114	20330.794	0.10	24.5331	0.648	2.643	ug/L
>	In	115	198179.255	198179.26				ug/L
	Sn	118	236.270	-0.00	0.0812	0.004	5.003	ug/L
	Sb	123	70958.977	0.36	25.8784	0.338	1.307	ug/L
	Ba	135	58145.079	0.19	51.0392	1.039	2.036	ug/L
	Ce	140	446.724	0.00				ug/L
>	Tb	159	301006.627	301006.63				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	125088.747	0.49	24.7159	0.630	2.551	ug/L
	Tl	205	313436.713	1.23	25.1722	0.657	2.611	ug/L
	Pb	206	107866.028	0.42	26.3067	0.663	2.521	ug/L
	Pb	207	94001.603	0.37	24.2686	0.151	0.623	ug/L
	Pb	208	438791.459	1.72	25.4550	0.348	1.366	ug/L
	U	238	604508.734	2.38	27.5168	0.336	1.221	ug/L
>	Bi	209	254440.725	254440.73				ug/L

Sample ID: L1201065103SD WG387967-09
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Na	23	32771530.584	275.17	9.8586	0.658	6.675	mg/L
Mg	24	6548061.706	55.17	3.1356	0.168	5.363	mg/L
K	39	5703534.795	44.52	1.0798	0.048	4.443	mg/L
Ca	43	198348.201	1.67	19.2968	1.260	6.530	mg/L
Fe	54	58499.647	0.25	0.0686	0.007	10.097	mg/L
Fe	57	15876.698	0.09	0.0482	0.002	3.500	mg/L
Sc-1	45	118825.108	118825.11				mg/L
Cl	35	241785.915	204861.61				mg/L
Kr	83	46.334	-6.67				mg/L
Br	81	233476.015	228399.80				mg/L
P	31	10792.344	3197.55				mg/L
S	34	328807.423	153206.97				mg/L
Sr	88	1231677.253	1231623.91				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		72.573			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		71.847			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		76.770			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		79.742			

Sample ID: L1201065103SD WG387967-09
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201065103SD WG387967-09
Report Date/Time: Saturday, January 28, 2012 13:13:17
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Method 6020 - Summary Report

Sample ID: L1201065201

Sample Date/Time: Saturday, January 28, 2012 13:18:51
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 18
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10657.021	-0.00				ug/L
	Be	9	6.667	-0.00	-0.0345	0.016	46.347	ug/L
	Al	27	414615.072	2.78	90.3480	6.036	6.681	ug/L
>	Sc	45	148516.074	148516.07				ug/L
	Ti	49	1570.306	0.01	3.6739	0.692	18.823	ug/L
	V	51	16291.321	0.05	1.9138	0.070	3.676	ug/L
	Cr	52	14066.692	0.03	1.2204	0.055	4.527	ug/L
	Cr	53	2347.237	0.01	1.9477	0.396	20.336	ug/L
	Mn	55	17234.685	0.06	1.6220	0.039	2.424	ug/L
	Co	59	542.023	0.00	0.0512	0.004	7.470	ug/L
	Ni	60	1206.100	0.00	0.6918	0.019	2.684	ug/L
	Cu	65	514.354	0.00	0.1810	0.008	4.448	ug/L
	Zn	66	3465.091	0.01	3.1238	0.130	4.149	ug/L
>	Ge	72	298100.217	298100.22				ug/L
	As	75	836.238	0.00	0.9747	0.064	6.571	ug/L
	Se	77	116.001	0.00	0.9325	0.083	8.934	ug/L
	Se	82	326.968	0.00	3.5844	0.142	3.969	ug/L
	Rb	85	9998.457	0.03				mg/L
	Y	89	193594.734	-8795.85				ug/L
	Rh	103	62.668	33.67				ug/L
	Mo	98	2931.779	0.01	1.2592	0.016	1.288	ug/L
	Ag	107	75.001	0.00	0.0048	0.002	35.303	ug/L
	Cd	114	16.325	0.00	0.0240	0.006	23.131	ug/L
>	In	115	258868.295	258868.30				ug/L
	Sn	118	294.405	-0.00	0.0775	0.001	1.784	ug/L
	Sb	123	172.204	0.00	0.0610	0.005	7.571	ug/L
	Ba	135	54093.494	0.14	36.4973	0.514	1.407	ug/L
	Ce	140	4264.851	0.01				ug/L
>	Tb	159	391628.575	391628.58				ug/L
	Ho	165	53.339	0.00				ug/L
	Tl	203	129.336	0.00	0.0233	0.004	15.082	ug/L
	Tl	205	300.035	0.00	0.0301	0.001	3.921	ug/L
	Pb	206	778.711	0.00	0.1089	0.003	3.088	ug/L
	Pb	207	623.030	0.00	0.0938	0.008	8.494	ug/L
	Pb	208	3051.588	0.01	0.1010	0.002	1.871	ug/L
	U	238	5120.295	0.02	0.1829	0.005	2.868	ug/L
>	Bi	209	330615.360	330615.36				ug/L

Sample ID: L1201065201
Report Date/Time: Saturday, January 28, 2012 13:21:05
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Na	23	33333638.809	223.58	8.0149	0.126	1.567	mg/L
Mg	24	6368963.391	42.92	2.4386	0.056	2.277	mg/L
K	39	4990377.756	30.16	0.7291	0.040	5.453	mg/L
Ca	43	200777.131	1.35	15.6074	0.161	1.029	mg/L
Fe	54	118892.992	0.56	0.1553	0.003	2.204	mg/L
Fe	57	36691.703	0.20	0.1221	0.016	12.852	mg/L
Sc-1	45	148516.074	148516.07				mg/L
Cl	35	225916.294	188991.99				mg/L
Kr	83	43.334	-9.67				mg/L
Br	81	185164.016	180087.80				mg/L
P	31	16929.896	9335.10				mg/L
S	34	363275.247	187674.79				mg/L
Sr	88	1435646.017	1435592.68				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		95.538			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.849			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.883			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.615			

Sample ID: L1201065201
Report Date/Time: Saturday, January 28, 2012 13:21:05
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201065201
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065202

Sample Date/Time: Saturday, January 28, 2012 13:26:39
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 19
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10706.901	0.01				ug/L
	Be	9	8.000	0.00	-0.0263	0.020	77.678	ug/L
	Al	27	31143.234	0.22	6.8476	1.821	26.593	ug/L
>	Sc	45	134527.803	134527.80				ug/L
	Ti	49	630.098	0.00	1.5695	1.305	83.143	ug/L
	V	51	11771.447	0.04	1.4209	0.085	6.008	ug/L
	Cr	52	11364.193	0.02	0.9262	0.039	4.245	ug/L
	Cr	53	2113.813	0.00	1.8429	0.125	6.776	ug/L
	Mn	55	4173.755	0.01	0.3910	0.024	6.137	ug/L
	Co	59	335.010	0.00	0.0281	0.004	13.280	ug/L
	Ni	60	1122.420	0.00	0.6896	0.042	6.093	ug/L
	Cu	65	526.355	0.00	0.2131	0.026	12.003	ug/L
	Zn	66	4317.495	0.01	4.3710	0.044	1.017	ug/L
>	Ge	72	278292.390	278292.39				ug/L
	As	75	2525.230	0.01	2.8664	0.127	4.442	ug/L
	Se	77	113.334	0.00	1.0096	0.179	17.720	ug/L
	Se	82	951.997	0.00	11.1845	0.590	5.274	ug/L
	Rb	85	3500.437	0.01				mg/L
	Y	89	185299.165	-17091.42				ug/L
	Rh	103	53.667	24.67				ug/L
	Mo	98	2301.501	0.01	1.0572	0.021	2.030	ug/L
	Ag	107	210.671	0.00	0.0360	0.001	3.048	ug/L
	Cd	114	10.757	0.00	0.0196	0.006	29.549	ug/L
>	In	115	242359.419	242359.42				ug/L
	Sn	118	315.606	-0.00	0.0887	0.002	2.449	ug/L
	Sb	123	112.869	0.00	0.0464	0.001	1.999	ug/L
	Ba	135	66584.955	0.18	47.7628	0.217	0.454	ug/L
	Ce	140	296.702	0.00				ug/L
>	Tb	159	368223.722	368223.72				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	97.002	0.00	0.0197	0.000	1.929	ug/L
	Tl	205	226.692	0.00	0.0267	0.002	7.835	ug/L
	Pb	206	644.698	0.00	0.0936	0.012	12.349	ug/L
	Pb	207	564.358	0.00	0.0916	0.004	3.902	ug/L
	Pb	208	2613.855	0.01	0.0912	0.004	4.167	ug/L
	U	238	4564.295	0.01	0.1767	0.003	1.653	ug/L
>	Bi	209	305467.984	305467.98				ug/L

Sample ID: L1201065202
Report Date/Time: Saturday, January 28, 2012 13:28:53
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23	44597542.285	330.42	11.8331	0.401	3.393	mg/L
|	Mg	24	10413420.722	77.41	4.4016	0.210	4.763	mg/L
|	K	39	5371971.198	36.45	0.8827	0.049	5.548	mg/L
|	Ca	43	257582.801	1.91	22.1208	0.589	2.662	mg/L
|	Fe	54	87414.449	0.41	0.1131	0.010	8.742	mg/L
|	Fe	57	26461.312	0.15	0.0893	0.006	6.421	mg/L
⌊>	Sc-1	45	134527.803	134527.80				mg/L
	Cl	35	298499.857	261575.56				mg/L
	Kr	83	46.667	-6.33				mg/L
	Br	81	752023.074	746946.86				mg/L
	P	31	14296.991	6702.20				mg/L
	S	34	469135.452	293535.00				mg/L
	Sr	88	1688400.781	1688347.44				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		89.190			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		87.864			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		93.914			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		95.734			

Sample ID: L1201065202
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Approved: January 30, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201065202
Report Date/Time: Saturday, January 28, 2012 13:28:53
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065202PS ~~WG388019-03~~ WG388019-04

Sample Date/Time: Saturday, January 28, 2012 13:34:28
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 20
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10940.528	-0.00				ug/L
	Be	9	13812.107	0.09	47.2976	1.698	3.590	ug/L
	Al	27	232863.711	1.53	49.6288	2.946	5.937	ug/L
>	Sc	45	150583.463	150583.46				ug/L
	Ti	49	406.717	0.00	0.9437	0.107	11.354	ug/L
	V	51	360962.333	1.21	47.9507	0.742	1.547	ug/L
	Cr	52	311248.103	1.03	47.0650	0.835	1.775	ug/L
	Cr	53	38485.940	0.13	48.1179	2.339	4.860	ug/L
	Mn	55	478295.283	1.61	46.1398	0.760	1.647	ug/L
	Co	59	362726.287	1.22	46.0117	1.555	3.379	ug/L
	Ni	60	75642.849	0.25	46.5378	1.055	2.267	ug/L
	Cu	65	72739.823	0.24	46.6584	1.156	2.477	ug/L
	Zn	66	44384.336	0.15	47.3129	0.529	1.118	ug/L
>	Ge	72	297447.933	297447.93				ug/L
	As	75	46274.433	0.16	47.0164	0.207	0.440	ug/L
	Se	77	3210.618	0.01	42.8490	0.951	2.219	ug/L
	Se	82	4875.728	0.02	53.6065	0.370	0.690	ug/L
	Rb	85	3956.312	0.01				mg/L
	Y	89	195302.094	-7088.49				ug/L
	Rh	103	78.334	49.33				ug/L
	Mo	98	2560.762	0.01	1.0892	0.010	0.903	ug/L
	Ag	107	221478.122	0.85	45.5637	0.203	0.446	ug/L
	Cd	114	48286.239	0.18	44.1313	0.692	1.568	ug/L
>	In	115	261599.960	261599.96				ug/L
	Sn	118	425.878	-0.00	0.1109	0.004	3.261	ug/L
	Sb	123	162719.632	0.62	44.9421	0.018	0.041	ug/L
	Ba	135	140971.129	0.36	93.9018	1.778	1.893	ug/L
	Ce	140	346.709	0.00				ug/L
>	Tb	159	396696.767	396696.77				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	308696.023	0.93	46.8199	0.528	1.127	ug/L
	Tl	205	758334.940	2.29	46.7339	1.133	2.425	ug/L
	Pb	206	261185.214	0.79	48.9355	0.964	1.971	ug/L
	Pb	207	230955.353	0.70	45.8170	0.655	1.429	ug/L
	Pb	208	1070698.597	3.23	47.7252	0.729	1.528	ug/L
	U	238	1486242.181	4.49	51.9488	1.358	2.614	ug/L
>	Bi	209	331318.930	331318.93				ug/L

Sample ID: L1201065202PS WG388019-03
Report Date/Time: Saturday, January 28, 2012 13:36:41
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23	49395648.397	327.26	11.7203	0.410	3.496	mg/L
|	Mg	24	11792027.064	78.35	4.4551	0.115	2.580	mg/L
|	K	39	5727318.173	34.58	0.8370	0.054	6.396	mg/L
|	Ca	43	280474.860	1.86	21.5240	0.644	2.990	mg/L
|	Fe	54	98336.167	0.42	0.1141	0.010	8.882	mg/L
|	Fe	57	32011.506	0.17	0.1002	0.018	17.841	mg/L
⌊>	Sc-1	45	150583.463	150583.46				mg/L
	Cl	35	322151.074	285226.77				mg/L
	Kr	83	51.001	-2.00				mg/L
	Br	81	813054.159	807977.94				mg/L
	P	31	18967.061	11372.27				mg/L
	S	34	522275.366	346674.91				mg/L
	Sr	88	1808726.745	1808673.41				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		95.329			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		94.840			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		101.176			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		103.836			

Sample ID: L1201065202PS WG388019-03
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Approved: January 30, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201065202PS WG388019-03
Report Date/Time: Saturday, January 28, 2012 13:36:41
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201065202SDL ~~WG388019-04~~ WG388019-05

Sample Date/Time: Saturday, January 28, 2012 13:42:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 21
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10690.191	0.00				ug/L
	Be	9	10.000	0.00	-0.0205	0.030	145.089	ug/L
	Al	27	15486.087	0.09	2.8745	2.389	83.094	ug/L
>	Sc	45	137307.794	137307.79				ug/L
	Ti	49	156.684	0.00	0.3679	0.042	11.346	ug/L
	V	51	4309.242	0.01	0.3249	0.036	10.962	ug/L
	Cr	52	7104.765	0.00	0.1652	0.021	12.670	ug/L
	Cr	53	1076.845	0.00	0.3526	0.146	41.506	ug/L
	Mn	55	1815.216	0.00	0.1381	0.004	3.055	ug/L
	Co	59	143.336	0.00	0.0012	0.001	115.966	ug/L
	Ni	60	329.343	0.00	0.1567	0.018	11.177	ug/L
	Cu	65	267.674	0.00	0.0258	0.014	52.999	ug/L
	Zn	66	2735.143	0.01	2.3878	0.175	7.341	ug/L
>	Ge	72	293086.638	293086.64				ug/L
	As	75	550.242	0.00	0.6964	0.082	11.750	ug/L
	Se	77	58.000	-0.00	0.1648	0.167	101.071	ug/L
	Se	82	246.906	0.00	2.7489	0.140	5.092	ug/L
	Rb	85	915.726	0.00				mg/L
	Y	89	187134.301	-15256.28				ug/L
	Rh	103	22.000	-7.00				ug/L
	Mo	98	607.261	0.00	0.2689	0.017	6.389	ug/L
	Ag	107	106.335	0.00	0.0113	0.002	14.746	ug/L
	Cd	114	7.163	0.00	0.0156	0.005	35.266	ug/L
>	In	115	259221.472	259221.47				ug/L
	Sn	118	238.137	-0.00	0.0625	0.003	4.606	ug/L
	Sb	123	261.832	0.00	0.0857	0.002	1.752	ug/L
	Ba	135	16897.284	0.04	11.8794	0.325	2.738	ug/L
	Ce	140	226.694	0.00				ug/L
>	Tb	159	375442.267	375442.27				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	77.334	0.00	0.0158	0.002	14.970	ug/L
	Tl	205	173.353	0.00	0.0226	0.004	15.664	ug/L
	Pb	206	319.343	0.00	0.0242	0.002	8.047	ug/L
	Pb	207	285.341	0.00	0.0285	0.002	5.804	ug/L
	Pb	208	1335.723	0.00	0.0261	0.002	8.837	ug/L
	U	238	1169.427	0.00	0.0458	0.001	1.836	ug/L
>	Bi	209	321519.079	321519.08				ug/L

Sample ID: L1201065202SDL WG388019-04
Report Date/Time: Saturday, January 28, 2012 13:44:30
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Approved: January 30, 2012
Erin D. Long

Na	23	11819121.216	85.30	3.0728	0.242	7.876	mg/L
Mg	24	2676211.846	19.55	1.1083	0.088	7.896	mg/L
K	39	1827003.318	9.83	0.2326	0.026	11.177	mg/L
Ca	43	65873.142	0.48	5.5495	0.628	11.322	mg/L
Fe	54	44252.178	0.08	0.0208	0.007	32.092	mg/L
Fe	57	10968.369	0.03	0.0135	0.008	62.107	mg/L
Sc-1	45	137307.794	137307.79				mg/L
Cl	35	99204.406	62280.10				mg/L
Kr	83	50.001	-3.00				mg/L
Br	81	197132.694	192056.48				mg/L
P	31	8940.797	1346.00				mg/L
S	34	243079.587	67479.13				mg/L
Sr	88	400723.915	400670.58				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.931			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.977			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.755			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		100.764			

Sample ID: L1201065202SDL WG388019-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201065202SDL WG388019-04
Report Date/Time: Saturday, January 28, 2012 13:44:30
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 13:50:05
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10039.439	0.00				ug/L
	Be	9	14103.936	0.11	56.8444	2.539	4.467	ug/L
	Al	27	202380.155	1.57	50.7652	2.285	4.500	ug/L
>	Sc	45	127873.682	127873.68				ug/L
	Ti	49	41024.879	0.14	97.0433	1.876	1.933	ug/L
	V	51	349325.836	1.19	47.2541	1.368	2.896	ug/L
	Cr	52	309738.938	1.04	47.7068	0.375	0.787	ug/L
	Cr	53	38361.954	0.13	48.8497	0.848	1.736	ug/L
	Mn	55	489182.957	1.67	48.0582	0.074	0.154	ug/L
	Co	59	375278.679	1.28	48.4796	0.791	1.632	ug/L
	Ni	60	78021.657	0.27	48.8805	0.179	0.365	ug/L
	Cu	65	76484.826	0.26	49.9666	0.189	0.379	ug/L
	Zn	66	45614.654	0.15	49.5500	1.034	2.086	ug/L
>	Ge	72	292033.678	292033.68				ug/L
	As	75	46477.565	0.16	48.1018	1.409	2.930	ug/L
	Se	77	3657.469	0.01	49.8169	1.634	3.280	ug/L
	Se	82	4339.161	0.01	48.5992	1.821	3.747	ug/L
	Rb	85	1741.866	0.01				mg/L
	Y	89	182035.226	-20355.36				ug/L
	Rh	103	21.334	-7.67				ug/L
	Mo	98	226441.475	0.91	99.9453	1.456	1.457	ug/L
	Ag	107	229174.133	0.92	49.3985	0.888	1.798	ug/L
	Cd	114	52735.609	0.21	50.4885	1.289	2.553	ug/L
>	In	115	249671.815	249671.82				ug/L
	Sn	118	183474.018	0.73	50.1748	1.169	2.329	ug/L
	Sb	123	175491.411	0.70	50.7872	0.388	0.765	ug/L
	Ba	135	69986.029	0.19	50.4546	0.548	1.086	ug/L
	Ce	140	83.342	-0.00				ug/L
>	Tb	159	366430.568	366430.57				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	300388.936	0.98	49.1408	0.798	1.624	ug/L
	Tl	205	714786.146	2.33	47.5218	1.315	2.766	ug/L
	Pb	206	242867.107	0.79	49.0805	1.006	2.049	ug/L
	Pb	207	228636.547	0.74	48.9234	0.404	0.826	ug/L
	Pb	208	1018539.781	3.31	48.9676	0.232	0.475	ug/L
	U	238	1435557.919	4.67	54.1179	0.197	0.364	ug/L
>	Bi	209	307152.017	307152.02				ug/L

Sample ID: QC Std 6
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Na	23	19029479.059	147.83	5.3076	0.270	5.090	mg/L
Mg	24	11588239.046	90.63	5.1538	0.102	1.977	mg/L
K	39	26522121.428	203.90	4.9716	0.241	4.850	mg/L
Ca	43	55657.481	0.43	5.0114	0.025	0.499	mg/L
Fe	54	2180368.798	16.81	4.7383	0.063	1.330	mg/L
Fe	57	1019627.957	7.93	5.1555	0.068	1.312	mg/L
Sc-1	45	127873.682	127873.68				mg/L
Cl	35	31919.018	-5005.28				mg/L
Kr	83	42.334	-10.67				mg/L
Br	81	11459.903	6383.69				mg/L
P	31	7747.664	152.87				mg/L
S	34	166796.840	-8803.61				mg/L
Sr	88	3807.917	3754.58				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	94.508				
Cr	52	95.414				
Cr	53					
Mn	55	96.116				
Co	59	96.959				
Ni	60	97.761				
Cu	65	99.933				
Zn	66	99.100				
Ge	72		93.594			
As	75	96.204				
Se	77					
Se	82	97.198				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	98.797				
Cd	114	100.977				
In	115		90.515			
Sn	118					
Sb	123	101.574				
Ba	135	100.909				
Ce	140					
Tb	159		93.456			
Ho	165					
Tl	203	98.282				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.935				
U	238	108.236				
Bi	209		96.262			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 13:57:41
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10573.388	0.01				ug/L
	Be	9	8.667	0.00	-0.0223	0.017	74.353	ug/L
	Al	27	1916.888	-0.00	-0.2196	0.052	23.819	ug/L
>	Sc	45	128314.209	128314.21				ug/L
	Ti	49	70.007	0.00	0.1650	0.042	25.474	ug/L
	V	51	1889.416	-0.00	-0.0018	0.008	453.312	ug/L
	Cr	52	5601.939	-0.00	-0.0668	0.015	23.073	ug/L
	Cr	53	1056.840	0.00	0.3314	0.202	60.993	ug/L
	Mn	55	478.019	-0.00	0.0073	0.004	51.780	ug/L
	Co	59	94.335	0.00	-0.0051	0.001	25.759	ug/L
	Ni	60	70.334	-0.00	-0.0048	0.002	47.860	ug/L
	Cu	65	100.335	0.00	-0.0832	0.008	10.011	ug/L
	Zn	66	579.026	-0.00	0.0255	0.054	213.816	ug/L
>	Ge	72	291956.891	291956.89				ug/L
	As	75	-63.008	0.00	0.0660	0.038	57.039	ug/L
	Se	77	53.334	-0.00	0.1044	0.043	41.252	ug/L
	Se	82	14.583	0.00	0.1570	0.103	65.472	ug/L
	Rb	85	30.000	0.00				mg/L
	Y	89	190215.235	-12175.35				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	60.494	0.00	0.0369	0.005	12.792	ug/L
	Ag	107	80.335	0.00	0.0062	0.003	51.782	ug/L
	Cd	114	0.263	-0.00	0.0093	0.011	114.307	ug/L
>	In	115	255006.275	255006.27				ug/L
	Sn	118	504.815	-0.00	0.1350	0.004	3.259	ug/L
	Sb	123	69.994	0.00	0.0326	0.005	16.728	ug/L
	Ba	135	26.334	0.00	0.0018	0.003	164.426	ug/L
	Ce	140	16.668	-0.00				ug/L
>	Tb	159	377896.444	377896.44				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	70.334	0.00	0.0150	0.002	14.220	ug/L
	Tl	205	170.019	0.00	0.0226	0.004	16.113	ug/L
	Pb	206	222.005	0.00	0.0063	0.003	50.979	ug/L
	Pb	207	179.670	0.00	0.0077	0.001	14.509	ug/L
	Pb	208	865.693	0.00	0.0054	0.001	17.874	ug/L
	U	238	136.336	0.00	0.0087	0.002	18.161	ug/L
>	Bi	209	314281.481	314281.48				ug/L

Sample ID: QC Std 7
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Erin D. Long

Na	23	91604.100	-0.32	0.0130	0.001	6.092	mg/L
Mg	24	1236.897	0.01	-0.0039	0.000	6.620	mg/L
K	39	444635.582	-0.05	-0.0086	0.002	28.913	mg/L
Ca	43	186.688	0.00	-0.0022	0.006	266.914	mg/L
Fe	54	30330.637	-0.00	-0.0036	0.004	113.302	mg/L
Fe	57	6726.720	0.00	-0.0047	0.001	28.400	mg/L
Sc-1	45	128314.209	128314.21				mg/L
Cl	35	30036.046	-6888.26				mg/L
Kr	83	48.001	-5.00				mg/L
Br	81	8655.828	3579.61				mg/L
P	31	8553.730	958.94				mg/L
S	34	156188.500	-19411.96				mg/L
Sr	88	90.010	36.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.569			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.449			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		96.381			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.496			

Sample ID: QC Std 7
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 13:59:53
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: PBS 95 WG388092-02

Sample Date/Time: Saturday, January 28, 2012 14:05:18
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 22
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10673.591	0.01				ug/L
	Be	9	9.333	0.00	-0.0209	0.010	49.276	ug/L
	Al	27	26542.249	0.18	5.8104	0.207	3.562	ug/L
>	Sc	45	132565.320	132565.32				ug/L
	Ti	49	73.341	0.00	0.1689	0.056	32.974	ug/L
	V	51	1797.896	-0.00	-0.0193	0.025	131.230	ug/L
	Cr	52	6251.407	0.00	0.0167	0.015	89.135	ug/L
	Cr	53	893.472	0.00	0.0966	0.190	196.502	ug/L
	Mn	55	577.692	0.00	0.0160	0.003	16.286	ug/L
	Co	59	81.335	0.00	-0.0070	0.001	8.790	ug/L
	Ni	60	87.335	-0.00	0.0049	0.002	34.304	ug/L
	Cu	65	143.336	0.00	-0.0569	0.010	17.274	ug/L
	Zn	66	476.352	-0.00	-0.0973	0.028	28.538	ug/L
>	Ge	72	297623.858	297623.86				ug/L
	As	75	-139.894	-0.00	-0.0096	0.077	800.679	ug/L
	Se	77	56.000	-0.00	0.1266	0.212	167.475	ug/L
	Se	82	-5.841	-0.00	-0.0688	0.211	306.446	ug/L
	Rb	85	41.001	0.00				mg/L
	Y	89	195183.249	-7207.33				ug/L
	Rh	103	14.667	-14.33				ug/L
	Mo	98	28.676	0.00	0.0227	0.002	9.769	ug/L
	Ag	107	64.334	0.00	0.0024	0.001	35.847	ug/L
	Cd	114	7.254	0.00	0.0156	0.005	30.073	ug/L
>	In	115	263086.379	263086.38				ug/L
	Sn	118	127.868	-0.00	0.0330	0.001	1.986	ug/L
	Sb	123	129.413	0.00	0.0483	0.004	8.436	ug/L
	Ba	135	81.668	0.00	0.0391	0.005	13.964	ug/L
	Ce	140	96.677	-0.00				ug/L
>	Tb	159	387256.056	387256.06				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	44.334	0.00	0.0108	0.001	4.932	ug/L
	Tl	205	103.344	0.00	0.0182	0.003	14.353	ug/L
	Pb	206	214.672	0.00	0.0045	0.003	74.419	ug/L
	Pb	207	209.005	0.00	0.0135	0.004	32.608	ug/L
	Pb	208	895.694	0.00	0.0064	0.001	19.770	ug/L
	U	238	31.000	0.00	0.0048	0.000	4.352	ug/L
>	Bi	209	317194.863	317194.86				ug/L

Sample ID: PBS 95 WG388092-02
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Na	23	37032.480	-0.75	-0.0025	0.001	27.844	mg/L
Mg	24	1493.617	0.01	-0.0038	0.000	1.137	mg/L
K	39	443454.836	-0.17	-0.0113	0.006	50.087	mg/L
Ca	43	320.038	0.00	0.0093	0.009	95.249	mg/L
Fe	54	56279.956	0.19	0.0498	0.011	21.457	mg/L
Fe	57	7547.508	0.01	-0.0017	0.001	60.991	mg/L
Sc-1	45	132565.320	132565.32				mg/L
Cl	35	32959.741	-3964.56				mg/L
Kr	83	58.334	5.33				mg/L
Br	81	7618.148	2541.93				mg/L
P	31	12998.331	5403.54				mg/L
S	34	165714.266	-9886.19				mg/L
Sr	88	830.125	776.79				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		95.386			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.379			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.768			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.409			

Sample ID: PBS 95 WG388092-02
Report Date/Time: Saturday, January 28, 2012 14:07:32
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 95 WG388092-02
Report Date/Time: Saturday, January 28, 2012 14:07:32
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: LCSS 95 WG388092-03

Sample Date/Time: Saturday, January 28, 2012 14:13:06
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 23
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10489.934	0.00				ug/L
	Be	9	7074.335	0.05	26.5243	0.433	1.633	ug/L
	Al	27	118673.842	0.85	27.4124	1.660	6.056	ug/L
>	Sc	45	137271.459	137271.46				ug/L
	Ti	49	126.680	0.00	0.2894	0.073	25.391	ug/L
	V	51	187645.212	0.61	24.4160	0.599	2.453	ug/L
	Cr	52	169978.569	0.54	24.8747	0.913	3.671	ug/L
	Cr	53	21128.890	0.07	25.5321	1.236	4.843	ug/L
	Mn	55	262339.535	0.87	24.8994	0.555	2.229	ug/L
	Co	59	197875.435	0.65	24.7032	0.417	1.689	ug/L
	Ni	60	41354.783	0.14	25.0235	0.127	0.509	ug/L
	Cu	65	40649.310	0.13	25.6046	0.518	2.022	ug/L
	Zn	66	22595.821	0.07	23.4154	0.601	2.565	ug/L
>	Ge	72	302077.980	302077.98				ug/L
	As	75	23347.241	0.08	23.4247	0.379	1.619	ug/L
	Se	77	1750.851	0.01	22.7169	0.613	2.699	ug/L
	Se	82	2097.210	0.01	22.7066	0.869	3.826	ug/L
	Rb	85	41.334	0.00				mg/L
	Y	89	199718.301	-2672.28				ug/L
	Rh	103	17.334	-11.67				ug/L
	Mo	98	46.863	0.00	0.0303	0.003	9.308	ug/L
	Ag	107	118085.056	0.45	24.1137	0.695	2.883	ug/L
	Cd	114	26085.909	0.10	23.6667	0.254	1.075	ug/L
>	In	115	263582.472	263582.47				ug/L
	Sn	118	132.401	-0.00	0.0341	0.002	5.864	ug/L
	Sb	123	86853.446	0.33	23.8163	0.272	1.140	ug/L
	Ba	135	35939.031	0.09	24.4402	0.556	2.275	ug/L
	Ce	140	33.337	-0.00				ug/L
>	Tb	159	388324.744	388324.74				ug/L
	Ho	165	13.335	-0.00				ug/L
	Tl	203	158248.386	0.49	24.5747	0.598	2.433	ug/L
	Tl	205	390635.108	1.21	24.6500	0.505	2.050	ug/L
	Pb	206	135707.804	0.42	26.0113	0.593	2.280	ug/L
	Pb	207	118648.862	0.37	24.0860	0.747	3.102	ug/L
	Pb	208	550285.547	1.70	25.0999	0.888	3.537	ug/L
	U	238	730092.816	2.26	26.1319	0.953	3.648	ug/L
>	Bi	209	323759.574	323759.57				ug/L

Sample ID: LCSS 95 WG388092-03
Report Date/Time: Saturday, January 28, 2012 14:15:18
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Na	23	32754.656	-0.79	-0.0040	0.001	23.883	mg/L
Mg	24	856.797	0.00	-0.0041	0.000	0.616	mg/L
K	39	435832.760	-0.35	-0.0157	0.002	13.609	mg/L
Ca	43	240.027	0.00	0.0013	0.002	164.282	mg/L
Fe	54	57524.098	0.18	0.0478	0.005	9.771	mg/L
Fe	57	7000.306	0.00	-0.0056	0.001	9.913	mg/L
Sc-1	45	137271.459	137271.46				mg/L
Cl	35	32016.052	-4908.25				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	7224.465	2148.25				mg/L
P	31	14196.772	6601.98				mg/L
S	34	165883.464	-9716.99				mg/L
Sr	88	270.032	216.69				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.813			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.558			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.040			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		101.467			

Sample ID: LCSS 95 WG388092-03
Report Date/Time: Saturday, January 28, 2012 14:15:18
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 95 WG388092-03
Report Date/Time: Saturday, January 28, 2012 14:15:18
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071501

Sample Date/Time: Saturday, January 28, 2012 14:20:51
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 24
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10790.319	0.01				ug/L
	Be	9	25.333	0.00	0.0451	0.012	26.301	ug/L
	Al	27	3615732.874	28.37	922.3795	53.703	5.822	ug/L
>	Sc	45	127604.433	127604.43				ug/L
	Ti	49	2577.323	0.01	6.2557	0.045	0.724	ug/L
	V	51	16896.973	0.05	2.0989	0.023	1.078	ug/L
	Cr	52	12381.983	0.02	1.0487	0.009	0.876	ug/L
	Cr	53	1960.427	0.00	1.5743	0.143	9.065	ug/L
	Mn	55	717434.216	2.52	72.3338	0.922	1.275	ug/L
	Co	59	8237.820	0.03	1.0749	0.020	1.887	ug/L
	Ni	60	3992.997	0.01	2.5206	0.053	2.121	ug/L
	Cu	65	2529.743	0.01	1.5521	0.041	2.668	ug/L
	Zn	66	6458.233	0.02	6.6753	0.050	0.752	ug/L
>	Ge	72	284611.792	284611.79				ug/L
	As	75	875.087	0.00	1.0573	0.080	7.563	ug/L
	Se	77	64.667	0.00	0.2831	0.150	53.153	ug/L
	Se	82	14.574	0.00	0.1605	0.100	62.309	ug/L
	Rb	85	7740.007	0.03				mg/L
	Y	89	216510.379	14119.80				ug/L
	Rh	103	8.333	-20.67				ug/L
	Mo	98	558.622	0.00	0.2612	0.017	6.614	ug/L
	Ag	107	94.001	0.00	0.0099	0.001	13.679	ug/L
	Cd	114	27.170	0.00	0.0354	0.003	9.534	ug/L
>	In	115	245644.958	245644.96				ug/L
	Sn	118	2218.162	0.01	0.6164	0.019	3.043	ug/L
	Sb	123	119.452	0.00	0.0479	0.002	3.872	ug/L
	Ba	135	5389.131	0.01	3.9306	0.189	4.806	ug/L
	Ce	140	135659.153	0.38				ug/L
>	Tb	159	360845.335	360845.34				ug/L
	Ho	165	2533.974	0.01				ug/L
	Tl	203	150.336	0.00	0.0285	0.002	7.994	ug/L
	Tl	205	400.050	0.00	0.0384	0.003	7.538	ug/L
	Pb	206	6799.508	0.02	1.3479	0.036	2.656	ug/L
	Pb	207	5562.912	0.02	1.1700	0.023	1.984	ug/L
	Pb	208	26375.003	0.08	1.2429	0.011	0.851	ug/L
	U	238	5288.064	0.02	0.2045	0.004	1.990	ug/L
>	Bi	209	304963.399	304963.40				ug/L

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Na	23	49387.594	-0.64		0.0013	0.000	23.057	mg/L
Mg	24	675599.410	5.29		0.2970	0.003	1.127	mg/L
K	39	853551.668	3.18		0.0704	0.009	12.174	mg/L
Ca	43	6753.411	0.05		0.5939	0.033	5.631	mg/L
Fe	54	1112758.159	8.49		2.3914	0.096	4.000	mg/L
Fe	57	453623.912	3.51		2.2802	0.098	4.296	mg/L
Sc-1	45	127604.433	127604.43					mg/L
Cl	35	28447.147	-8477.15					mg/L
Kr	83	49.001	-4.00					mg/L
Br	81	5819.365	743.15					mg/L
P	31	70729.340	63134.55					mg/L
S	34	147453.226	-28147.23					mg/L
Sr	88	19421.277	19367.94					mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		91.215			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.055			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.032			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.576			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071501
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Method 6020 - Summary Report

Sample ID: L1201071502

Sample Date/Time: Saturday, January 28, 2012 14:28:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 25
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10590.098	0.01				ug/L
	Be	9	24.000	0.00	0.0354	0.008	22.291	ug/L
	Al	27	3462413.797	25.83	839.5474	27.955	3.330	ug/L
>	Sc	45	134070.512	134070.51				ug/L
	Ti	49	2754.064	0.01	6.2132	0.211	3.390	ug/L
	V	51	16009.151	0.05	1.8173	0.048	2.632	ug/L
	Cr	52	13057.358	0.02	1.0088	0.052	5.148	ug/L
	Cr	53	1660.332	0.00	1.0167	0.085	8.322	ug/L
	Mn	55	615337.223	2.01	57.6574	0.595	1.032	ug/L
	Co	59	7911.833	0.03	0.9576	0.010	1.018	ug/L
	Ni	60	3278.344	0.01	1.9118	0.041	2.123	ug/L
	Cu	65	1937.578	0.01	1.0619	0.029	2.739	ug/L
	Zn	66	5435.160	0.02	5.0889	0.107	2.098	ug/L
>	Ge	72	306256.053	306256.05				ug/L
	As	75	747.717	0.00	0.8669	0.020	2.298	ug/L
	Se	77	57.334	-0.00	0.1230	0.062	50.530	ug/L
	Se	82	7.528	0.00	0.0725	0.138	190.780	ug/L
	Rb	85	7686.287	0.03				mg/L
	Y	89	221555.753	19165.17				ug/L
	Rh	103	7.333	-21.67				ug/L
	Mo	98	497.143	0.00	0.2219	0.004	1.634	ug/L
	Ag	107	88.335	0.00	0.0076	0.003	44.801	ug/L
	Cd	114	25.149	0.00	0.0322	0.007	22.495	ug/L
>	In	115	259371.762	259371.76				ug/L
	Sn	118	150.535	-0.00	0.0394	0.002	4.541	ug/L
	Sb	123	117.743	0.00	0.0455	0.006	12.452	ug/L
	Ba	135	3528.116	0.01	2.4705	0.043	1.752	ug/L
	Ce	140	106456.641	0.28				ug/L
>	Tb	159	374803.682	374803.68				ug/L
	Ho	165	1850.390	0.01				ug/L
	Tl	203	136.669	0.00	0.0251	0.002	7.239	ug/L
	Tl	205	296.702	0.00	0.0303	0.002	5.127	ug/L
	Pb	206	6122.977	0.02	1.1423	0.029	2.579	ug/L
	Pb	207	5001.217	0.02	0.9904	0.024	2.429	ug/L
	Pb	208	23801.623	0.07	1.0558	0.027	2.601	ug/L
	U	238	4168.751	0.01	0.1533	0.001	0.487	ug/L
>	Bi	209	322492.570	322492.57				ug/L

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Erin D. Long

Na	23	48596.246	-0.67	0.0005	0.000	56.180	mg/L
Mg	24	654003.367	4.88	0.2733	0.004	1.638	mg/L
K	39	820806.833	2.60	0.0563	0.004	6.433	mg/L
Ca	43	4945.295	0.04	0.4077	0.017	4.140	mg/L
Fe	54	991665.995	7.16	2.0164	0.047	2.319	mg/L
Fe	57	402593.859	2.96	1.9192	0.095	4.965	mg/L
Sc-1	45	134070.512	134070.51				mg/L
Cl	35	29311.488	-7612.81				mg/L
Kr	83	54.334	1.33				mg/L
Br	81	6301.722	1225.51				mg/L
P	31	58946.491	51351.70				mg/L
S	34	154590.946	-21009.51				mg/L
Sr	88	15793.204	15739.86				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.152			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		94.032			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.592			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		101.069			

Sample ID: L1201071502
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071502
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071503

Sample Date/Time: Saturday, January 28, 2012 14:36:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 26
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9939.262	0.01				ug/L
	Be	9	23.333	0.00	0.0390	0.055	140.168	ug/L
	Al	27	5044399.373	40.01	1300.6929	17.304	1.330	ug/L
>	Sc	45	126046.239	126046.24				ug/L
	Ti	49	5138.767	0.02	12.1634	0.659	5.418	ug/L
	V	51	16563.823	0.05	1.9950	0.071	3.581	ug/L
	Cr	52	14350.497	0.03	1.3080	0.060	4.597	ug/L
	Cr	53	1937.086	0.00	1.4775	0.144	9.717	ug/L
	Mn	55	331407.885	1.13	32.5560	0.610	1.872	ug/L
	Co	59	6545.302	0.02	0.8288	0.017	2.068	ug/L
	Ni	60	3160.298	0.01	1.9340	0.109	5.624	ug/L
	Cu	65	2199.646	0.01	1.2929	0.037	2.859	ug/L
	Zn	66	6441.219	0.02	6.4752	0.084	1.294	ug/L
>	Ge	72	291910.840	291910.84				ug/L
	As	75	659.876	0.00	0.8122	0.042	5.118	ug/L
	Se	77	68.000	0.00	0.3072	0.100	32.662	ug/L
	Se	82	12.580	0.00	0.1336	0.135	100.871	ug/L
	Rb	85	10374.233	0.04				mg/L
	Y	89	204324.889	1934.31				ug/L
	Rh	103	6.000	-23.00				ug/L
	Mo	98	550.366	0.00	0.2520	0.010	3.808	ug/L
	Ag	107	91.668	0.00	0.0089	0.000	3.359	ug/L
	Cd	114	18.690	0.00	0.0268	0.003	9.513	ug/L
>	In	115	251424.873	251424.87				ug/L
	Sn	118	550.418	-0.00	0.1493	0.003	1.916	ug/L
	Sb	123	93.538	0.00	0.0397	0.003	8.021	ug/L
	Ba	135	6400.855	0.02	4.6786	0.134	2.857	ug/L
	Ce	140	117961.476	0.33				ug/L
>	Tb	159	360342.281	360342.28				ug/L
	Ho	165	1503.622	0.00				ug/L
	Tl	203	148.336	0.00	0.0280	0.003	10.212	ug/L
	Tl	205	353.376	0.00	0.0351	0.005	15.411	ug/L
	Pb	206	8238.820	0.03	1.6289	0.053	3.269	ug/L
	Pb	207	7105.099	0.02	1.4918	0.051	3.409	ug/L
	Pb	208	33054.567	0.11	1.5554	0.055	3.563	ug/L
	U	238	4626.664	0.02	0.1781	0.005	2.862	ug/L
>	Bi	209	307242.839	307242.84				ug/L

Sample ID: L1201071503
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Na	23	49186.416	-0.64	0.0015	0.001	45.587	mg/L
Mg	24	708535.910	5.62	0.3156	0.012	3.689	mg/L
K	39	913968.850	3.73	0.0838	0.003	3.142	mg/L
Ca	43	6002.765	0.05	0.5318	0.034	6.437	mg/L
Fe	54	1069621.762	8.25	2.3239	0.120	5.168	mg/L
Fe	57	436780.395	3.42	2.2194	0.084	3.782	mg/L
Sc-1	45	126046.239	126046.24				mg/L
Cl	35	29707.525	-7216.78				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	5910.764	834.55				mg/L
P	31	68905.751	61310.96				mg/L
S	34	149014.356	-26586.10				mg/L
Sr	88	15465.886	15412.55				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.555			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.151			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		91.904			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		96.290			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071503
Report Date/Time: Saturday, January 28, 2012 14:38:36
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071504

Sample Date/Time: Saturday, January 28, 2012 14:44:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 27
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11324.357	0.02				ug/L
	Be	9	23.333	0.00	0.0374	0.019	51.992	ug/L
	Al	27	4967865.919	39.08	1270.6256	131.889	10.380	ug/L
>	Sc	45	127520.046	127520.05				ug/L
	Ti	49	4151.450	0.01	9.5978	0.450	4.689	ug/L
	V	51	16052.654	0.05	1.8745	0.031	1.657	ug/L
	Cr	52	14096.062	0.03	1.2169	0.083	6.801	ug/L
	Cr	53	1717.016	0.00	1.1402	0.141	12.404	ug/L
	Mn	55	331256.602	1.11	31.7856	0.446	1.402	ug/L
	Co	59	7511.794	0.02	0.9311	0.022	2.339	ug/L
	Ni	60	3458.419	0.01	2.0704	0.019	0.905	ug/L
	Cu	65	1915.906	0.01	1.0777	0.018	1.706	ug/L
	Zn	66	5591.601	0.02	5.3962	0.289	5.364	ug/L
>	Ge	72	298854.121	298854.12				ug/L
	As	75	586.214	0.00	0.7223	0.029	4.000	ug/L
	Se	77	64.000	-0.00	0.2309	0.067	29.059	ug/L
	Se	82	6.522	-0.00	0.0644	0.155	240.360	ug/L
	Rb	85	8430.015	0.03				mg/L
	Y	89	213064.001	10673.42				ug/L
	Rh	103	13.000	-16.00				ug/L
	Mo	98	432.732	0.00	0.1981	0.014	7.139	ug/L
	Ag	107	88.335	0.00	0.0079	0.001	6.821	ug/L
	Cd	114	17.387	0.00	0.0254	0.013	52.771	ug/L
>	In	115	254558.077	254558.08				ug/L
	Sn	118	107.867	-0.00	0.0287	0.002	8.299	ug/L
	Sb	123	90.992	0.00	0.0386	0.002	3.981	ug/L
	Ba	135	6527.621	0.02	4.6952	0.052	1.118	ug/L
	Ce	140	120557.808	0.33				ug/L
>	Tb	159	366044.247	366044.25				ug/L
	Ho	165	1626.991	0.01				ug/L
	Tl	203	114.002	0.00	0.0222	0.001	5.807	ug/L
	Tl	205	280.033	0.00	0.0300	0.001	4.017	ug/L
	Pb	206	5729.693	0.02	1.1089	0.019	1.691	ug/L
	Pb	207	4629.999	0.01	0.9512	0.034	3.524	ug/L
	Pb	208	22015.955	0.07	1.0129	0.026	2.573	ug/L
	U	238	4082.040	0.01	0.1559	0.004	2.365	ug/L
>	Bi	209	310516.491	310516.49				ug/L

Sample ID: L1201071504
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Na	23	50564.875	-0.63		0.0017	0.001	83.224	mg/L
Mg	24	712893.153	5.60		0.3145	0.022	6.952	mg/L
K	39	791638.964	2.70		0.0586	0.006	10.593	mg/L
Ca	43	5252.183	0.04		0.4575	0.024	5.199	mg/L
Fe	54	1056901.141	8.06		2.2688	0.085	3.762	mg/L
Fe	57	433049.400	3.35		2.1759	0.098	4.518	mg/L
Sc-1	45	127520.046	127520.05					mg/L
Cl	35	28730.778	-8193.52					mg/L
Kr	83	55.001	2.00					mg/L
Br	81	5719.298	643.08					mg/L
P	31	59924.021	52329.23					mg/L
S	34	146658.975	-28941.48					mg/L
Sr	88	18726.231	18672.89					mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		95.780			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.287			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.358			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.316			

Sample ID: L1201071504
Report Date/Time: Saturday, January 28, 2012 14:46:22
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071504
Report Date/Time: Saturday, January 28, 2012 14:46:22
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Method 6020 - Summary Report

Sample ID: L1201071505

Sample Date/Time: Saturday, January 28, 2012 14:51:57
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 28
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10423.259	0.01				ug/L
	Be	9	18.000	0.00	0.0192	0.016	82.189	ug/L
	Al	27	3141023.725	25.69	835.0695	17.431	2.087	ug/L
>	Sc	45	122240.402	122240.40				ug/L
	Ti	49	2357.236	0.01	5.8558	0.230	3.933	ug/L
	V	51	16668.505	0.05	2.1218	0.025	1.194	ug/L
	Cr	52	12847.031	0.03	1.1721	0.035	2.981	ug/L
	Cr	53	1723.685	0.00	1.3138	0.206	15.678	ug/L
	Mn	55	775160.689	2.79	80.0204	1.385	1.731	ug/L
	Co	59	8633.892	0.03	1.1543	0.010	0.885	ug/L
	Ni	60	5012.891	0.02	3.2531	0.073	2.253	ug/L
	Cu	65	3438.077	0.01	2.2178	0.090	4.043	ug/L
	Zn	66	7854.115	0.03	8.4581	0.223	2.638	ug/L
>	Ge	72	278056.811	278056.81				ug/L
	As	75	981.187	0.00	1.1948	0.036	3.015	ug/L
	Se	77	58.667	-0.00	0.2197	0.185	84.109	ug/L
	Se	82	1.893	-0.00	0.0149	0.213	1426.024	ug/L
	Rb	85	6271.755	0.02				mg/L
	Y	89	204817.686	2427.10				ug/L
	Rh	103	8.667	-20.33				ug/L
	Mo	98	692.972	0.00	0.3305	0.005	1.604	ug/L
	Ag	107	103.002	0.00	0.0125	0.004	32.148	ug/L
	Cd	114	43.069	0.00	0.0521	0.004	7.555	ug/L
>	In	115	238774.647	238774.65				ug/L
	Sn	118	911.517	0.00	0.2604	0.002	0.899	ug/L
	Sb	123	82.826	0.00	0.0378	0.002	6.553	ug/L
	Ba	135	4418.215	0.01	3.2852	0.075	2.279	ug/L
	Ce	140	138797.057	0.39				ug/L
>	Tb	159	353687.230	353687.23				ug/L
	Ho	165	1877.066	0.01				ug/L
	Tl	203	145.003	0.00	0.0285	0.001	4.993	ug/L
	Tl	205	413.386	0.00	0.0401	0.009	22.567	ug/L
	Pb	206	9225.863	0.03	1.9099	0.009	0.483	ug/L
	Pb	207	7601.209	0.03	1.6691	0.045	2.707	ug/L
	Pb	208	36024.018	0.12	1.7738	0.019	1.064	ug/L
	U	238	6008.892	0.02	0.2401	0.003	1.062	ug/L
>	Bi	209	294281.631	294281.63				ug/L

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Na	23	58658.267	-0.55		0.0047	0.001	12.025	mg/L
Mg	24	1642936.103	13.44		0.7608	0.021	2.699	mg/L
K	39	877052.266	3.66		0.0821	0.007	8.418	mg/L
Ca	43	26203.757	0.21		2.4595	0.066	2.680	mg/L
Fe	54	1185475.000	9.46		2.6659	0.084	3.159	mg/L
Fe	57	482382.425	3.90		2.5338	0.116	4.595	mg/L
Sc-1	45	122240.402	122240.40					mg/L
Cl	35	28136.088	-8788.21					mg/L
Kr	83	50.667	-2.33					mg/L
Br	81	5056.868	-19.35					mg/L
P	31	66568.978	58974.18					mg/L
S	34	143778.698	-31821.76					mg/L
Sr	88	37019.126	36965.79					mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.115			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.565			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.206			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.228			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071505
Report Date/Time: Saturday, January 28, 2012 14:54:09
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071506

Sample Date/Time: Saturday, January 28, 2012 14:59:44
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 29
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11190.844	0.01				ug/L
	Be	9	23.333	0.00	0.0324	0.037	114.133	ug/L
	Al	27	3536173.386	26.03	846.2053	17.287	2.043	ug/L
>	Sc	45	135815.172	135815.17				ug/L
	Ti	49	2610.670	0.01	5.9447	0.313	5.258	ug/L
	V	51	19725.222	0.06	2.3234	0.094	4.059	ug/L
	Cr	52	14212.919	0.03	1.2017	0.030	2.469	ug/L
	Cr	53	1790.374	0.00	1.1973	0.282	23.525	ug/L
	Mn	55	959119.143	3.16	90.7210	1.533	1.690	ug/L
	Co	59	9547.896	0.03	1.1701	0.019	1.663	ug/L
	Ni	60	5419.483	0.02	3.2221	0.063	1.946	ug/L
	Cu	65	3706.196	0.01	2.1885	0.129	5.895	ug/L
	Zn	66	8610.199	0.03	8.5008	0.061	0.715	ug/L
>	Ge	72	303441.325	303441.33				ug/L
	As	75	1059.324	0.00	1.1833	0.055	4.655	ug/L
	Se	77	62.667	-0.00	0.2018	0.287	142.236	ug/L
	Se	82	4.597	-0.00	0.0424	0.110	258.518	ug/L
	Rb	85	9293.275	0.03				mg/L
	Y	89	232197.080	29806.50				ug/L
	Rh	103	12.333	-16.67				ug/L
	Mo	98	654.046	0.00	0.2875	0.010	3.441	ug/L
	Ag	107	87.668	0.00	0.0074	0.001	9.837	ug/L
	Cd	114	34.971	0.00	0.0411	0.003	6.183	ug/L
>	In	115	260363.503	260363.50				ug/L
	Sn	118	112.667	-0.00	0.0293	0.003	8.628	ug/L
	Sb	123	75.661	0.00	0.0338	0.002	7.358	ug/L
	Ba	135	6240.732	0.02	4.3834	0.074	1.683	ug/L
	Ce	140	159385.840	0.42				ug/L
>	Tb	159	374826.291	374826.29				ug/L
	Ho	165	2277.205	0.01				ug/L
	Tl	203	175.004	0.00	0.0315	0.002	6.565	ug/L
	Tl	205	446.724	0.00	0.0403	0.007	17.164	ug/L
	Pb	206	7906.829	0.02	1.5103	0.026	1.711	ug/L
	Pb	207	6360.824	0.02	1.2885	0.032	2.489	ug/L
	Pb	208	30840.953	0.09	1.4010	0.001	0.071	ug/L
	U	238	5589.931	0.02	0.2076	0.002	1.198	ug/L
>	Bi	209	317315.792	317315.79				ug/L

Sample ID: L1201071506
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Na	23	65019.268	-0.55	0.0046	0.000	9.513	mg/L
Mg	24	2508650.088	18.48	1.0474	0.030	2.841	mg/L
K	39	981193.074	3.71	0.0833	0.006	6.850	mg/L
Ca	43	46678.417	0.34	3.9537	0.028	0.710	mg/L
Fe	54	1356150.339	9.76	2.7481	0.122	4.438	mg/L
Fe	57	571581.865	4.16	2.7055	0.139	5.145	mg/L
Sc-1	45	135815.172	135815.17				mg/L
Cl	35	29743.670	-7180.63				mg/L
Kr	83	46.334	-6.67				mg/L
Br	81	5961.468	885.25				mg/L
P	31	93801.215	86206.42				mg/L
S	34	166470.758	-9129.70				mg/L
Sr	88	54013.495	53960.16				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.250			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		94.391			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.598			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.447			

Sample ID: L1201071506
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071506
Report Date/Time: Saturday, January 28, 2012 15:01:57
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071506PS WG388129-01

Sample Date/Time: Saturday, January 28, 2012 15:07:31
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 30
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8971.553	-0.00				ug/L
	Be	9	14831.191	0.11	58.9129	2.048	3.476	ug/L
	Al	27	3467709.357	26.71	868.3442	8.753	1.008	ug/L
>	Sc	45	129752.423	129752.42				ug/L
	Ti	49	2537.307	0.01	6.0275	0.235	3.894	ug/L
	V	51	380071.421	1.30	51.6675	0.652	1.262	ug/L
	Cr	52	337259.270	1.14	52.2769	1.868	3.574	ug/L
	Cr	53	41239.256	0.14	52.8426	1.456	2.756	ug/L
	Mn	55	1404265.451	4.83	138.6300	2.533	1.827	ug/L
	Co	59	398613.956	1.37	51.7221	0.443	0.856	ug/L
	Ni	60	86098.037	0.30	54.1849	0.275	0.508	ug/L
	Cu	65	82373.773	0.28	54.0675	1.438	2.660	ug/L
	Zn	66	56815.597	0.19	62.1439	0.261	0.419	ug/L
>	Ge	72	290742.829	290742.83				ug/L
	As	75	51943.124	0.18	53.9791	2.703	5.008	ug/L
	Se	77	3980.953	0.01	54.5116	3.014	5.530	ug/L
	Se	82	4731.932	0.02	53.2278	2.684	5.042	ug/L
	Rb	85	8761.359	0.03				mg/L
	Y	89	213772.510	11381.93				ug/L
	Rh	103	23.000	-6.00				ug/L
	Mo	98	664.933	0.00	0.3078	0.012	4.040	ug/L
	Ag	107	237770.953	0.96	51.8784	0.998	1.924	ug/L
	Cd	114	54014.790	0.22	52.3596	0.994	1.899	ug/L
>	In	115	246647.396	246647.40				ug/L
	Sn	118	123.868	-0.00	0.0341	0.002	6.432	ug/L
	Sb	123	178845.573	0.73	52.3935	0.544	1.038	ug/L
	Ba	135	74462.989	0.21	55.6107	1.420	2.554	ug/L
	Ce	140	146793.207	0.41				ug/L
>	Tb	159	353755.961	353755.96				ug/L
	Ho	165	2333.896	0.01				ug/L
	Tl	203	303445.369	1.00	50.3544	0.781	1.551	ug/L
	Tl	205	742199.700	2.45	50.0478	0.768	1.535	ug/L
	Pb	206	259309.655	0.86	53.1559	1.055	1.985	ug/L
	Pb	207	229964.202	0.76	49.9113	0.842	1.686	ug/L
	Pb	208	1074050.960	3.54	52.3806	0.894	1.707	ug/L
	U	238	1440052.343	4.75	55.0576	0.652	1.183	ug/L
>	Bi	209	302860.938	302860.94				ug/L

Sample ID: L1201071506PS WG388129-01
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Erin D. Long

Na	23	64051.805	-0.54		0.0051	0.001	16.178	mg/L
Mg	24	2411311.917	18.58		1.0534	0.011	1.015	mg/L
K	39	921822.445	3.58		0.0802	0.001	1.247	mg/L
Ca	43	43390.337	0.33		3.8461	0.012	0.306	mg/L
Fe	54	1295249.996	9.74		2.7448	0.050	1.835	mg/L
Fe	57	517327.903	3.94		2.5581	0.070	2.746	mg/L
Sc-1	45	129752.423	129752.42					mg/L
Cl	35	28140.775	-8783.53					mg/L
Kr	83	56.667	3.67					mg/L
Br	81	5117.572	41.36					mg/L
P	31	89870.793	82276.00					mg/L
S	34	149760.895	-25839.56					mg/L
Sr	88	51527.412	51474.07					mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.180			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.419			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.224			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.917			

Sample ID: L1201071506PS WG388129-01
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071506PS WG388129-01
Report Date/Time: Saturday, January 28, 2012 15:09:44
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071506SDL WG388129-02

Sample Date/Time: Saturday, January 28, 2012 15:15:19
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 31
Method File: C:\elandata\Method\6020a.mth
Sample Description: 25

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10172.890	0.00				ug/L
	Be	9	16.667	0.00	0.0078	0.021	268.752	ug/L
	Al	27	765430.908	5.79	187.9402	4.310	2.293	ug/L
>	Sc	45	131886.216	131886.22				ug/L
	Ti	49	513.401	0.00	1.1842	0.078	6.575	ug/L
	V	51	5137.970	0.01	0.4224	0.015	3.605	ug/L
	Cr	52	6962.978	0.00	0.1194	0.012	9.658	ug/L
	Cr	53	860.131	0.00	0.0485	0.101	208.283	ug/L
	Mn	55	181480.289	0.60	17.3653	0.755	4.346	ug/L
	Co	59	1962.918	0.01	0.2300	0.014	5.912	ug/L
	Ni	60	1072.747	0.00	0.6074	0.036	5.884	ug/L
	Cu	65	804.380	0.00	0.3650	0.009	2.509	ug/L
	Zn	66	2017.265	0.00	1.5526	0.116	7.498	ug/L
>	Ge	72	299528.948	299528.95				ug/L
	As	75	150.317	0.00	0.2824	0.028	10.072	ug/L
	Se	77	55.334	-0.00	0.1146	0.175	152.425	ug/L
	Se	82	12.310	0.00	0.1278	0.089	70.039	ug/L
	Rb	85	1752.869	0.01				mg/L
	Y	89	194851.493	-7539.09				ug/L
	Rh	103	8.333	-20.67				ug/L
	Mo	98	136.829	0.00	0.0700	0.010	14.251	ug/L
	Ag	107	90.335	0.00	0.0083	0.003	35.065	ug/L
	Cd	114	5.389	0.00	0.0140	0.003	21.352	ug/L
>	In	115	255136.613	255136.61				ug/L
	Sn	118	70.934	-0.00	0.0189	0.006	33.743	ug/L
	Sb	123	262.916	0.00	0.0873	0.006	6.352	ug/L
	Ba	135	1227.103	0.00	0.8665	0.056	6.503	ug/L
	Ce	140	31412.283	0.09				ug/L
>	Tb	159	366896.084	366896.08				ug/L
	Ho	165	503.399	0.00				ug/L
	Tl	203	94.001	0.00	0.0190	0.001	6.108	ug/L
	Tl	205	226.693	0.00	0.0265	0.003	12.889	ug/L
	Pb	206	1695.856	0.00	0.3025	0.010	3.344	ug/L
	Pb	207	1401.132	0.00	0.2675	0.003	1.286	ug/L
	Pb	208	6593.757	0.02	0.2792	0.002	0.643	ug/L
	U	238	1169.094	0.00	0.0474	0.002	4.019	ug/L
>	Bi	209	309821.092	309821.09				ug/L

Sample ID: L1201071506SDL WG388129-02
Report Date/Time: Saturday, January 28, 2012 15:17:32
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Approved: January 30, 2012
Erin D. Long

Na	23	39153.892	-0.73	-0.0019	0.002	89.139	mg/L
Mg	24	512243.809	3.88	0.2167	0.002	0.911	mg/L
K	39	559169.437	0.72	0.0104	0.004	41.300	mg/L
Ca	43	8815.543	0.07	0.7541	0.027	3.555	mg/L
Fe	54	266287.241	1.78	0.4991	0.011	2.293	mg/L
Fe	57	109857.410	0.79	0.5040	0.015	2.893	mg/L
Sc-1	45	131886.216	131886.22				mg/L
Cl	35	28342.120	-8582.18				mg/L
Kr	83	41.001	-12.00				mg/L
Br	81	5424.434	348.22				mg/L
P	31	20954.313	13359.52				mg/L
S	34	157605.539	-17994.92				mg/L
Sr	88	10040.392	9987.05				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		95.996			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.496			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.575			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.098			

Sample ID: L1201071506SDL WG388129-02
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071506SDL WG388129-02
Report Date/Time: Saturday, January 28, 2012 15:17:32
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Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 15:23:07
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10222.936	0.00				ug/L
	Be	9	14093.252	0.11	54.1864	3.856	7.117	ug/L
	Al	27	211757.601	1.56	50.6428	2.502	4.940	ug/L
>	Sc	45	134223.151	134223.15				ug/L
	Ti	49	42405.185	0.14	96.4037	1.512	1.568	ug/L
	V	51	371986.390	1.22	48.3473	1.192	2.465	ug/L
	Cr	52	330167.158	1.07	48.8840	0.703	1.437	ug/L
	Cr	53	39651.425	0.13	48.5081	0.461	0.950	ug/L
	Mn	55	518855.417	1.71	48.9786	0.185	0.377	ug/L
	Co	59	406178.960	1.34	50.4073	1.303	2.585	ug/L
	Ni	60	83289.155	0.27	50.1348	0.803	1.602	ug/L
	Cu	65	78891.983	0.26	49.5160	0.991	2.002	ug/L
	Zn	66	47793.204	0.15	49.8811	0.836	1.677	ug/L
>	Ge	72	303927.122	303927.12				ug/L
	As	75	50226.137	0.17	49.9336	0.260	0.520	ug/L
	Se	77	3751.511	0.01	49.0764	0.852	1.737	ug/L
	Se	82	4556.483	0.01	49.0200	1.152	2.350	ug/L
	Rb	85	1777.541	0.01				mg/L
	Y	89	192215.524	-10175.06				ug/L
	Rh	103	23.334	-5.67				ug/L
	Mo	98	238110.672	0.91	100.1026	3.242	3.239	ug/L
	Ag	107	240700.591	0.92	49.4174	0.778	1.574	ug/L
	Cd	114	54230.551	0.21	49.4509	1.039	2.101	ug/L
>	In	115	262174.598	262174.60				ug/L
	Sn	118	187618.405	0.71	48.8715	1.519	3.109	ug/L
	Sb	123	181082.115	0.69	49.9070	1.018	2.040	ug/L
	Ba	135	72197.588	0.19	49.7732	1.174	2.359	ug/L
	Ce	140	276.699	0.00				ug/L
>	Tb	159	383121.516	383121.52				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	306998.856	0.96	48.2827	0.086	0.179	ug/L
	Tl	205	749992.812	2.35	47.9453	1.586	3.308	ug/L
	Pb	206	242610.131	0.76	47.1337	0.748	1.587	ug/L
	Pb	207	232233.793	0.73	47.7721	0.577	1.208	ug/L
	Pb	208	1036432.058	3.24	47.9039	0.395	0.824	ug/L
	U	238	1470522.517	4.60	53.2930	0.606	1.138	ug/L
>	Bi	209	319503.864	319503.86				ug/L

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 15:25:20
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Na	23	19299566.626	142.92	5.1323	0.280	5.450	mg/L
Mg	24	12130775.655	90.47	5.1449	0.250	4.868	mg/L
K	39	26903502.991	197.16	4.8070	0.258	5.358	mg/L
Ca	43	56791.912	0.42	4.8768	0.251	5.147	mg/L
Fe	54	2351648.233	17.29	4.8737	0.143	2.934	mg/L
Fe	57	1059879.301	7.86	5.1119	0.289	5.658	mg/L
> Sc-1	45	134223.151	134223.15				mg/L
Cl	35	28584.278	-8340.02				mg/L
Kr	83	58.334	5.33				mg/L
Br	81	5557.186	480.97				mg/L
P	31	7927.783	332.99				mg/L
S	34	164432.473	-11167.98				mg/L
Sr	88	3931.321	3877.98				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51	96.695				
Cr	52	97.768				
Cr	53					
Mn	55	97.957				
Co	59	100.815				
Ni	60	100.270				
Cu	65	99.032				
Zn	66	99.762				
> Ge	72		97.406			
As	75	99.867				
Se	77					
Se	82	98.040				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	98.835				
Cd	114	98.902				
> In	115		95.048			
Sn	118					
Sb	123	99.814				
Ba	135	99.546				
Ce	140					
> Tb	159		97.713			
Ho	165					
Tl	203	96.565				
Tl	205					
Pb	206					
Pb	207					
Pb	208	95.808				
U	238	106.586				
> Bi	209		100.133			

Sample ID: QC Std 6
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 15:25:20
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 15:30:44
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9638.916	-0.00				ug/L
	Be	9	8.667	0.00	-0.0232	0.009	37.419	ug/L
	Al	27	3017.221	0.01	0.0366	0.116	317.518	ug/L
>	Sc	45	132173.369	132173.37				ug/L
	Ti	49	56.673	-0.00	0.1272	0.066	51.933	ug/L
	V	51	1864.066	-0.00	-0.0171	0.009	51.055	ug/L
	Cr	52	6055.927	-0.00	-0.0397	0.011	27.606	ug/L
	Cr	53	690.099	-0.00	-0.1869	0.232	124.252	ug/L
	Mn	55	465.351	-0.00	0.0039	0.004	101.627	ug/L
	Co	59	73.668	0.00	-0.0082	0.001	7.781	ug/L
	Ni	60	70.334	-0.00	-0.0068	0.003	38.776	ug/L
	Cu	65	100.002	0.00	-0.0864	0.003	3.475	ug/L
	Zn	66	623.030	-0.00	0.0422	0.015	34.565	ug/L
>	Ge	72	306163.850	306163.85				ug/L
	As	75	-118.311	-0.00	0.0148	0.034	229.930	ug/L
	Se	77	60.667	-0.00	0.1669	0.071	42.440	ug/L
	Se	82	4.942	-0.00	0.0461	0.080	173.513	ug/L
	Rb	85	29.334	-0.00				mg/L
	Y	89	199038.731	-3351.85				ug/L
	Rh	103	12.667	-16.33				ug/L
	Mo	98	40.489	0.00	0.0278	0.002	8.020	ug/L
	Ag	107	84.001	0.00	0.0065	0.003	41.213	ug/L
	Cd	114	2.661	0.00	0.0114	0.004	31.060	ug/L
>	In	115	261974.554	261974.55				ug/L
	Sn	118	507.215	-0.00	0.1320	0.007	5.326	ug/L
	Sb	123	85.495	0.00	0.0363	0.002	5.934	ug/L
	Ba	135	26.667	0.00	0.0022	0.001	45.334	ug/L
	Ce	140	150.016	-0.00				ug/L
>	Tb	159	375371.941	375371.94				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	49.334	0.00	0.0115	0.001	12.058	ug/L
	Tl	205	103.344	0.00	0.0181	0.002	12.285	ug/L
	Pb	206	199.004	0.00	0.0009	0.002	238.213	ug/L
	Pb	207	175.670	0.00	0.0060	0.002	40.152	ug/L
	Pb	208	810.357	0.00	0.0019	0.000	16.809	ug/L
	U	238	89.668	0.00	0.0069	0.001	11.731	ug/L
>	Bi	209	321963.481	321963.48				ug/L

Sample ID: QC Std 7
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Na	23	92362.077	-0.33	0.0125	0.001	9.734	mg/L
Mg	24	690.101	0.00	-0.0041	0.000	3.228	mg/L
K	39	460457.999	-0.04	-0.0082	0.002	19.996	mg/L
Ca	43	156.684	-0.00	-0.0052	0.004	76.731	mg/L
Fe	54	33225.932	0.01	0.0006	0.003	546.760	mg/L
Fe	57	7227.189	0.01	-0.0032	0.000	6.041	mg/L
> Sc-1	45	132173.369	132173.37				mg/L
Cl	35	30398.011	-6526.29				mg/L
Kr	83	45.001	-8.00				mg/L
Br	81	5763.340	687.12				mg/L
P	31	8261.446	666.65				mg/L
S	34	173382.081	-2218.37				mg/L
Sr	88	46.671	-6.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		98.123			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		94.975			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		95.737			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		100.904			

Sample ID: QC Std 7
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 15:32:56
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071507

Sample Date/Time: Saturday, January 28, 2012 15:38:20
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 32
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9305.235	-0.00				ug/L
	Be	9	41.333	0.00	0.1072	0.051	47.390	ug/L
	Al	27	4949205.374	38.33	1246.1784	65.709	5.273	ug/L
>	Sc	45	129160.390	129160.39				ug/L
	Ti	49	3761.233	0.01	8.7442	0.992	11.344	ug/L
	V	51	20945.414	0.06	2.5424	0.040	1.555	ug/L
	Cr	52	15437.111	0.03	1.4373	0.036	2.486	ug/L
	Cr	53	1873.732	0.00	1.3541	0.184	13.601	ug/L
	Mn	55	816562.354	2.75	78.9203	1.826	2.314	ug/L
	Co	59	9171.469	0.03	1.1481	0.012	1.006	ug/L
	Ni	60	4921.502	0.02	2.9860	0.021	0.716	ug/L
	Cu	65	3761.553	0.01	2.2748	0.027	1.187	ug/L
	Zn	66	25357.444	0.08	26.8106	0.462	1.725	ug/L
>	Ge	72	296977.572	296977.57				ug/L
	As	75	1024.248	0.00	1.1704	0.054	4.655	ug/L
	Se	77	64.000	-0.00	0.2364	0.164	69.277	ug/L
	Se	82	4.844	-0.00	0.0463	0.083	179.292	ug/L
	Rb	85	10348.527	0.03				mg/L
	Y	89	216542.831	14152.25				ug/L
	Rh	103	11.000	-18.00				ug/L
	Mo	98	607.115	0.00	0.2725	0.007	2.408	ug/L
	Ag	107	105.335	0.00	0.0115	0.002	21.201	ug/L
	Cd	114	616.592	0.00	0.5862	0.058	9.847	ug/L
>	In	115	255446.111	255446.11				ug/L
	Sn	118	377.075	-0.00	0.1006	0.003	2.523	ug/L
	Sb	123	116.538	0.00	0.0457	0.006	12.992	ug/L
	Ba	135	10159.958	0.03	7.3916	0.067	0.906	ug/L
	Ce	140	153917.445	0.42				ug/L
>	Tb	159	362392.784	362392.78				ug/L
	Ho	165	2300.548	0.01				ug/L
	Tl	203	182.004	0.00	0.0328	0.003	8.124	ug/L
	Tl	205	416.719	0.00	0.0385	0.005	13.336	ug/L
	Pb	206	47933.626	0.15	9.4044	0.100	1.058	ug/L
	Pb	207	40506.284	0.13	8.4177	0.063	0.744	ug/L
	Pb	208	191544.848	0.61	8.9408	0.140	1.560	ug/L
	U	238	5210.014	0.02	0.1950	0.003	1.669	ug/L
>	Bi	209	315337.301	315337.30				ug/L

Sample ID: L1201071507
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Erin D. Long

Na	23	59437.472	-0.57	0.0039	0.000	10.519	mg/L
Mg	24	1836805.086	14.22	0.8052	0.022	2.784	mg/L
K	39	963664.110	3.95	0.0891	0.009	10.034	mg/L
Ca	43	30498.832	0.24	2.7134	0.192	7.093	mg/L
Fe	54	1376420.333	10.43	2.9373	0.149	5.072	mg/L
Fe	57	572356.328	4.39	2.8491	0.087	3.042	mg/L
Sc-1	45	129160.390	129160.39				mg/L
Cl	35	27685.247	-9239.05				mg/L
Kr	83	56.334	3.33				mg/L
Br	81	5078.881	2.67				mg/L
P	31	79313.707	71718.91				mg/L
S	34	149329.574	-26270.88				mg/L
Sr	88	47939.036	47885.70				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		95.178			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.609			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.427			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.827			

Sample ID: L1201071507
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071507
Report Date/Time: Saturday, January 28, 2012 15:40:34
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071508

Sample Date/Time: Saturday, January 28, 2012 15:46:09
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 33
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10139.643	0.00				ug/L
	Be	9	24.667	0.00	0.0424	0.036	85.744	ug/L
	Al	27	4485591.684	34.82	1132.1329	100.233	8.854	ug/L
>	Sc	45	128991.426	128991.43				ug/L
	Ti	49	4208.151	0.01	9.6332	0.492	5.103	ug/L
	V	51	18521.414	0.05	2.1778	0.013	0.606	ug/L
	Cr	52	16415.322	0.03	1.5472	0.029	1.878	ug/L
	Cr	53	1970.430	0.00	1.4360	0.105	7.345	ug/L
	Mn	55	685589.285	2.27	65.1528	1.209	1.855	ug/L
	Co	59	8064.652	0.03	0.9904	0.023	2.286	ug/L
	Ni	60	4432.224	0.01	2.6393	0.087	3.303	ug/L
	Cu	65	6666.402	0.02	4.0752	0.090	2.211	ug/L
	Zn	66	55933.644	0.18	58.8601	1.927	3.274	ug/L
>	Ge	72	301899.936	301899.94				ug/L
	As	75	931.969	0.00	1.0614	0.014	1.290	ug/L
	Se	77	54.667	-0.00	0.0992	0.100	101.178	ug/L
	Se	82	22.337	0.00	0.2363	0.098	41.597	ug/L
	Rb	85	10545.115	0.03				mg/L
	Y	89	211498.064	9107.48				ug/L
	Rh	103	15.667	-13.33				ug/L
	Mo	98	666.969	0.00	0.3044	0.008	2.697	ug/L
	Ag	107	117.335	0.00	0.0145	0.005	35.295	ug/L
	Cd	114	445.694	0.00	0.4351	0.031	7.150	ug/L
>	In	115	250232.703	250232.70				ug/L
	Sn	118	125.334	-0.00	0.0340	0.000	0.453	ug/L
	Sb	123	168.621	0.00	0.0614	0.001	2.304	ug/L
	Ba	135	12441.420	0.03	9.0120	0.424	4.710	ug/L
	Ce	140	128655.069	0.35				ug/L
>	Tb	159	364072.857	364072.86				ug/L
	Ho	165	1847.056	0.01				ug/L
	Tl	203	181.337	0.00	0.0335	0.001	4.158	ug/L
	Tl	205	480.062	0.00	0.0436	0.007	17.137	ug/L
	Pb	206	269558.614	0.88	54.6725	1.117	2.043	ug/L
	Pb	207	244167.707	0.80	52.4526	0.442	0.842	ug/L
	Pb	208	1118329.695	3.65	53.9685	0.898	1.663	ug/L
	U	238	5156.648	0.02	0.1988	0.006	2.816	ug/L
>	Bi	209	305964.446	305964.45				ug/L

Sample ID: L1201071508
Report Date/Time: Saturday, January 28, 2012 15:48:22
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Approved: January 30, 2012
Erin D. Long

Na	23	60122.165	-0.57	0.0042	0.001	20.377	mg/L
Mg	24	1721100.409	13.36	0.7559	0.045	5.901	mg/L
K	39	922448.560	3.64	0.0815	0.008	10.324	mg/L
Ca	43	27518.154	0.21	2.4503	0.169	6.901	mg/L
Fe	54	1242735.999	9.41	2.6519	0.245	9.237	mg/L
Fe	57	517996.535	3.97	2.5806	0.230	8.896	mg/L
Sc-1	45	128991.426	128991.43				mg/L
Cl	35	29286.719	-7637.58				mg/L
Kr	83	38.000	-15.00				mg/L
Br	81	5250.320	174.11				mg/L
P	31	71122.587	63527.79				mg/L
S	34	162109.613	-13490.84				mg/L
Sr	88	44452.786	44399.45				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.756			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		90.719			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.855			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.890			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071509

Sample Date/Time: Saturday, January 28, 2012 15:53:57
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 34
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10156.211	0.00				ug/L
	Be	9	28.000	0.00	0.0546	0.021	38.285	ug/L
	Al	27	3937122.946	30.38	987.7715	19.154	1.939	ug/L
>	Sc	45	129515.514	129515.51				ug/L
	Ti	49	3634.491	0.01	8.5175	0.412	4.843	ug/L
	V	51	14868.555	0.04	1.7455	0.006	0.349	ug/L
	Cr	52	13260.007	0.02	1.1180	0.041	3.624	ug/L
	Cr	53	1660.333	0.00	1.1015	0.301	27.335	ug/L
	Mn	55	592210.904	2.01	57.6872	1.765	3.060	ug/L
	Co	59	6906.264	0.02	0.8672	0.017	1.969	ug/L
	Ni	60	3483.763	0.01	2.1178	0.093	4.372	ug/L
	Cu	65	2854.518	0.01	1.7051	0.053	3.101	ug/L
	Zn	66	20674.493	0.07	21.9235	0.078	0.356	ug/L
>	Ge	72	294631.948	294631.95				ug/L
	As	75	717.200	0.00	0.8649	0.072	8.327	ug/L
	Se	77	62.667	-0.00	0.2271	0.157	69.189	ug/L
	Se	82	4.884	-0.00	0.0468	0.078	166.791	ug/L
	Rb	85	9293.272	0.03				mg/L
	Y	89	208743.241	6352.66				ug/L
	Rh	103	23.334	-5.67				ug/L
	Mo	98	561.403	0.00	0.2571	0.010	3.940	ug/L
	Ag	107	92.001	0.00	0.0090	0.001	12.753	ug/L
	Cd	114	318.498	0.00	0.3122	0.011	3.556	ug/L
>	In	115	251060.013	251060.01				ug/L
	Sn	118	751.767	0.00	0.2042	0.003	1.256	ug/L
	Sb	123	109.913	0.00	0.0444	0.003	5.825	ug/L
	Ba	135	13671.678	0.04	9.9169	0.074	0.748	ug/L
	Ce	140	114834.659	0.32				ug/L
>	Tb	159	363655.558	363655.56				ug/L
	Ho	165	1660.332	0.01				ug/L
	Tl	203	136.002	0.00	0.0258	0.001	3.039	ug/L
	Tl	205	256.696	0.00	0.0284	0.003	10.438	ug/L
	Pb	206	519750.011	1.67	103.8767	1.635	1.574	ug/L
	Pb	207	487964.843	1.57	103.2620	2.205	2.135	ug/L
	Pb	208	2192481.135	7.05	104.2459	1.298	1.245	ug/L
	U	238	4093.379	0.01	0.1562	0.000	0.160	ug/L
>	Bi	209	310714.930	310714.93				ug/L

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Na	23	52309.068	-0.63		0.0019	0.001	35.854	mg/L
Mg	24	1632168.946	12.60		0.7130	0.018	2.516	mg/L
K	39	829831.453	2.89		0.0633	0.005	8.009	mg/L
Ca	43	28728.993	0.22		2.5453	0.086	3.384	mg/L
Fe	54	1044303.930	7.83		2.2040	0.067	3.041	mg/L
Fe	57	424813.680	3.23		2.0987	0.078	3.731	mg/L
Sc-1	45	129515.514	129515.51					mg/L
Cl	35	27628.392	-9295.91					mg/L
Kr	83	51.667	-1.33					mg/L
Br	81	5004.837	-71.38					mg/L
P	31	66319.526	58724.73					mg/L
S	34	152247.035	-23353.42					mg/L
Sr	88	53315.324	53261.98					mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		94.427			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.019			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.749			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.378			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Pb 206 Upper, S, EEE	Pb	206	
Pb 208 Upper, S, EEE	Pb	208	

Sample ID: L1201071509
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071510

Sample Date/Time: Saturday, January 28, 2012 16:01:44
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 35
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10222.985	0.01				ug/L
	Be	9	20.000	0.00	0.0253	0.001	3.099	ug/L
	Al	27	3506417.381	27.94	908.4147	30.990	3.411	ug/L
>	Sc	45	125403.234	125403.23				ug/L
	Ti	49	5228.830	0.02	12.7729	0.388	3.039	ug/L
	V	51	19675.286	0.06	2.5042	0.040	1.582	ug/L
	Cr	52	13468.348	0.03	1.2376	0.064	5.169	ug/L
	Cr	53	1680.337	0.00	1.2143	0.013	1.103	ug/L
	Mn	55	735519.762	2.60	74.6347	1.337	1.792	ug/L
	Co	59	8787.053	0.03	1.1550	0.019	1.665	ug/L
	Ni	60	3851.595	0.01	2.4452	0.033	1.366	ug/L
	Cu	65	2444.050	0.01	1.5047	0.044	2.940	ug/L
	Zn	66	6200.369	0.02	6.4292	0.196	3.048	ug/L
>	Ge	72	282831.027	282831.03				ug/L
	As	75	915.667	0.00	1.1069	0.031	2.796	ug/L
	Se	77	55.334	-0.00	0.1563	0.097	62.315	ug/L
	Se	82	10.594	0.00	0.1157	0.106	91.761	ug/L
	Rb	85	10468.678	0.04				mg/L
	Y	89	219446.522	17055.94				ug/L
	Rh	103	9.333	-19.67				ug/L
	Mo	98	614.673	0.00	0.2895	0.005	1.752	ug/L
	Ag	107	79.668	0.00	0.0069	0.002	28.386	ug/L
	Cd	114	34.500	0.00	0.0429	0.013	31.283	ug/L
>	In	115	242936.337	242936.34				ug/L
	Sn	118	597.888	0.00	0.1679	0.007	4.414	ug/L
	Sb	123	98.953	0.00	0.0422	0.001	2.791	ug/L
	Ba	135	4381.862	0.01	3.2594	0.066	2.013	ug/L
	Ce	140	139549.893	0.39				ug/L
>	Tb	159	353465.181	353465.18				ug/L
	Ho	165	2257.198	0.01				ug/L
	Tl	203	149.336	0.00	0.0285	0.003	9.480	ug/L
	Tl	205	296.702	0.00	0.0315	0.001	3.955	ug/L
	Pb	206	6730.118	0.02	1.3395	0.043	3.203	ug/L
	Pb	207	5382.125	0.02	1.1360	0.038	3.368	ug/L
	Pb	208	25935.506	0.08	1.2269	0.018	1.463	ug/L
	U	238	5329.425	0.02	0.2069	0.009	4.147	ug/L
>	Bi	209	303704.205	303704.21				ug/L

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Na	23	49374.118	-0.64	0.0016	0.000	22.700	mg/L
Mg	24	757815.393	6.04	0.3395	0.010	2.999	mg/L
K	39	983785.972	4.32	0.0983	0.002	2.217	mg/L
Ca	43	7801.097	0.06	0.7000	0.011	1.621	mg/L
Fe	54	1146607.279	8.90	2.5080	0.018	0.726	mg/L
Fe	57	461246.843	3.63	2.3576	0.073	3.115	mg/L
Sc-1	45	125403.234	125403.23				mg/L
Cl	35	28156.168	-8768.13				mg/L
Kr	83	46.667	-6.33				mg/L
Br	81	4873.425	-202.79				mg/L
P	31	78550.618	70955.82				mg/L
S	34	144527.193	-31073.26				mg/L
Sr	88	22917.150	22863.81				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.645			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		88.073			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.150			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.181			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071510
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Method 6020 - Summary Report

Sample ID: L1201071511

Sample Date/Time: Saturday, January 28, 2012 16:09:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 36
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11341.078	0.01				ug/L
	Be	9	36.000	0.00	0.0834	0.024	28.190	ug/L
	Al	27	7174601.518	54.08	1758.2051	11.047	0.628	ug/L
>	Sc	45	132630.851	132630.85				ug/L
	Ti	49	3988.022	0.01	9.4240	0.545	5.779	ug/L
	V	51	34648.581	0.11	4.4502	0.101	2.259	ug/L
	Cr	52	20469.991	0.05	2.2664	0.059	2.620	ug/L
	Cr	53	2377.244	0.01	2.0465	0.134	6.524	ug/L
	Mn	55	1183520.902	4.05	116.2693	1.396	1.201	ug/L
	Co	59	12756.218	0.04	1.6303	0.040	2.454	ug/L
	Ni	60	8540.126	0.03	5.3035	0.012	0.218	ug/L
	Cu	65	5137.635	0.02	3.2158	0.082	2.539	ug/L
	Zn	66	11484.694	0.04	12.0136	0.473	3.934	ug/L
>	Ge	72	292212.192	292212.19				ug/L
	As	75	1949.742	0.01	2.1415	0.043	2.028	ug/L
	Se	77	62.000	-0.00	0.2242	0.111	49.596	ug/L
	Se	82	3.586	-0.00	0.0325	0.137	420.983	ug/L
	Rb	85	13467.677	0.05				mg/L
	Y	89	238986.724	36596.14				ug/L
	Rh	103	11.000	-18.00				ug/L
	Mo	98	1001.486	0.00	0.4663	0.028	6.007	ug/L
	Ag	107	109.668	0.00	0.0136	0.003	23.156	ug/L
	Cd	114	36.933	0.00	0.0453	0.014	30.168	ug/L
>	In	115	242400.902	242400.90				ug/L
	Sn	118	311.606	-0.00	0.0876	0.003	3.722	ug/L
	Sb	123	80.908	0.00	0.0369	0.002	6.190	ug/L
	Ba	135	9141.770	0.03	6.6628	0.102	1.524	ug/L
	Ce	140	274846.037	0.76				ug/L
>	Tb	159	361669.169	361669.17				ug/L
	Ho	165	3714.534	0.01				ug/L
	Tl	203	248.340	0.00	0.0440	0.004	8.466	ug/L
	Tl	205	570.077	0.00	0.0492	0.007	15.222	ug/L
	Pb	206	11969.377	0.04	2.3644	0.012	0.520	ug/L
	Pb	207	9948.369	0.03	2.0837	0.020	0.939	ug/L
	Pb	208	47561.740	0.15	2.2353	0.006	0.289	ug/L
	U	238	8439.356	0.03	0.3194	0.008	2.481	ug/L
>	Bi	209	309555.338	309555.34				ug/L

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Na	23	66017.137	-0.53	0.0053	0.000	4.869	mg/L
Mg	24	1020687.980	7.69	0.4337	0.006	1.358	mg/L
K	39	1288311.489	6.19	0.1440	0.006	4.454	mg/L
Ca	43	10180.568	0.08	0.8683	0.013	1.479	mg/L
Fe	54	1953797.652	14.50	4.0849	0.077	1.886	mg/L
Fe	57	898108.828	6.72	4.3732	0.183	4.180	mg/L
Sc-1	45	132630.851	132630.85				mg/L
Cl	35	26519.476	-10404.83				mg/L
Kr	83	47.667	-5.33				mg/L
Br	81	5056.202	-20.01				mg/L
P	31	104260.605	96665.81				mg/L
S	34	137796.558	-37803.90				mg/L
Sr	88	43061.955	43008.62				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.651			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.879			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.242			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.015			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071511
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Method 6020 - Summary Report

Sample ID: L1201071512

Sample Date/Time: Saturday, January 28, 2012 16:17:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 37
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10289.684	0.01				ug/L
	Be	9	21.333	0.00	0.0342	0.013	37.785	ug/L
	Al	27	2475296.153	20.44	664.4720	12.440	1.872	ug/L
>	Sc	45	121039.932	121039.93				ug/L
	Ti	49	1430.266	0.01	3.6022	0.157	4.347	ug/L
	V	51	14527.330	0.05	1.8442	0.027	1.490	ug/L
	Cr	52	11837.521	0.02	1.0324	0.021	2.053	ug/L
	Cr	53	1423.597	0.00	0.9292	0.113	12.170	ug/L
	Mn	55	709273.765	2.58	74.1994	0.679	0.915	ug/L
	Co	59	7197.847	0.03	0.9730	0.034	3.545	ug/L
	Ni	60	4266.802	0.02	2.8003	0.107	3.834	ug/L
	Cu	65	2965.557	0.01	1.9198	0.045	2.347	ug/L
	Zn	66	6329.133	0.02	6.7972	0.064	0.942	ug/L
>	Ge	72	274341.445	274341.44				ug/L
	As	75	888.586	0.00	1.1078	0.078	7.038	ug/L
	Se	77	68.000	0.00	0.3678	0.259	70.333	ug/L
	Se	82	13.238	0.00	0.1512	0.030	19.729	ug/L
	Rb	85	4410.544	0.02				mg/L
	Y	89	204920.605	2530.02				ug/L
	Rh	103	9.333	-19.67				ug/L
	Mo	98	400.653	0.00	0.1993	0.011	5.595	ug/L
	Ag	107	77.668	0.00	0.0071	0.003	36.603	ug/L
	Cd	114	17.168	0.00	0.0267	0.014	52.805	ug/L
>	In	115	234007.571	234007.57				ug/L
	Sn	118	712.830	0.00	0.2079	0.007	3.186	ug/L
	Sb	123	92.493	0.00	0.0413	0.003	7.391	ug/L
	Ba	135	3379.719	0.01	2.6102	0.090	3.442	ug/L
	Ce	140	129183.287	0.38				ug/L
>	Tb	159	340037.773	340037.77				ug/L
	Ho	165	2260.533	0.01				ug/L
	Tl	203	135.669	0.00	0.0273	0.001	5.022	ug/L
	Tl	205	336.707	0.00	0.0352	0.003	8.797	ug/L
	Pb	206	6350.484	0.02	1.3220	0.046	3.507	ug/L
	Pb	207	5050.915	0.02	1.1148	0.017	1.510	ug/L
	Pb	208	24728.848	0.08	1.2241	0.005	0.408	ug/L
	U	238	3854.598	0.01	0.1574	0.006	4.004	ug/L
>	Bi	209	290170.734	290170.73				ug/L

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⌈	Na	23	43199.398	-0.68	0.0003	0.000	28.027	mg/L
|	Mg	24	1000221.963	8.27	0.4662	0.017	3.617	mg/L
|	K	39	767058.524	2.82	0.0616	0.006	10.292	mg/L
|	Ca	43	16865.403	0.14	1.5929	0.068	4.292	mg/L
|	Fe	54	950976.177	7.62	2.1469	0.078	3.651	mg/L
|	Fe	57	392589.316	3.20	2.0757	0.115	5.525	mg/L
⌊>	Sc-1	45	121039.932	121039.93				mg/L
	Cl	35	26078.081	-10846.22				mg/L
	Kr	83	49.334	-3.67				mg/L
	Br	81	4368.478	-707.74				mg/L
	P	31	73336.047	65741.25				mg/L
	S	34	139215.521	-36384.93				mg/L
	Sr	88	30207.671	30154.33				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		87.924			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		84.836			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		86.725			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		90.940			

Sample ID: L1201071512
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071512
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071513

Sample Date/Time: Saturday, January 28, 2012 16:25:02
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 38
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9989.362	0.00				ug/L
	Be	9	18.000	0.00	0.0160	0.017	108.021	ug/L
	Al	27	1861434.059	14.52	471.8081	11.041	2.340	ug/L
>	Sc	45	128128.537	128128.54				ug/L
	Ti	49	1296.898	0.00	3.0816	0.424	13.766	ug/L
	V	51	12868.816	0.04	1.4962	0.026	1.724	ug/L
	Cr	52	10340.857	0.02	0.6815	0.039	5.743	ug/L
	Cr	53	1126.856	0.00	0.4286	0.089	20.767	ug/L
	Mn	55	1343392.081	4.61	132.4827	4.867	3.674	ug/L
	Co	59	7397.357	0.03	0.9417	0.030	3.220	ug/L
	Ni	60	4644.341	0.02	2.8725	0.073	2.549	ug/L
	Cu	65	2689.128	0.01	1.6180	0.040	2.488	ug/L
	Zn	66	5850.445	0.02	5.8424	0.142	2.433	ug/L
>	Ge	72	291191.725	291191.73				ug/L
	As	75	717.136	0.00	0.8738	0.048	5.500	ug/L
	Se	77	48.000	-0.00	0.0358	0.340	949.322	ug/L
	Se	82	7.919	0.00	0.0826	0.036	43.378	ug/L
	Rb	85	3509.441	0.01				mg/L
	Y	89	215892.262	13501.68				ug/L
	Rh	103	12.000	-17.00				ug/L
	Mo	98	332.613	0.00	0.1556	0.011	6.930	ug/L
	Ag	107	63.001	0.00	0.0027	0.002	66.352	ug/L
	Cd	114	26.979	0.00	0.0346	0.013	37.775	ug/L
>	In	115	253236.250	253236.25				ug/L
	Sn	118	58.000	-0.00	0.0154	0.001	5.150	ug/L
	Sb	123	68.745	0.00	0.0324	0.003	10.481	ug/L
	Ba	135	3385.388	0.01	2.5197	0.046	1.817	ug/L
	Ce	140	102308.663	0.29				ug/L
>	Tb	159	352679.789	352679.79				ug/L
	Ho	165	1840.387	0.01				ug/L
	Tl	203	108.668	0.00	0.0219	0.001	4.570	ug/L
	Tl	205	276.699	0.00	0.0303	0.001	2.139	ug/L
	Pb	206	5570.584	0.02	1.1127	0.044	3.967	ug/L
	Pb	207	4563.962	0.01	0.9677	0.036	3.738	ug/L
	Pb	208	21491.727	0.07	1.0203	0.036	3.485	ug/L
	U	238	4451.900	0.01	0.1750	0.007	3.994	ug/L
>	Bi	209	301035.315	301035.32				ug/L

Sample ID: L1201071513
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⌈	Na	23	62910.008	-0.54	0.0051	0.002	32.633	mg/L
|	Mg	24	6216881.684	48.59	2.7612	0.161	5.819	mg/L
|	K	39	730682.449	2.19	0.0462	0.007	14.169	mg/L
|	Ca	43	135438.572	1.06	12.2116	0.521	4.269	mg/L
|	Fe	54	797845.190	5.99	1.6873	0.062	3.701	mg/L
|	Fe	57	326891.352	2.51	1.6255	0.090	5.519	mg/L
⌊>	Sc-1	45	128128.537	128128.54				mg/L
	Cl	35	29035.185	-7889.12				mg/L
	Kr	83	47.667	-5.33				mg/L
	Br	81	4813.392	-262.82				mg/L
	P	31	63365.442	55770.65				mg/L
	S	34	173745.515	-1854.94				mg/L
	Sr	88	112320.121	112266.78				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		93.324			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		91.808			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		89.949			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		94.345			

Sample ID: L1201071513
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071513
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071514

Sample Date/Time: Saturday, January 28, 2012 16:32:49
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 39
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9538.813	0.00				ug/L
	Be	9	20.667	0.00	0.0272	0.035	129.126	ug/L
	Al	27	2319581.465	18.07	587.5138	73.975	12.591	ug/L
>	Sc	45	129113.645	129113.65				ug/L
	Ti	49	1877.066	0.01	4.5393	0.204	4.494	ug/L
	V	51	15524.575	0.05	1.9017	0.071	3.714	ug/L
	Cr	52	12373.304	0.02	1.0415	0.042	4.035	ug/L
	Cr	53	1390.255	0.00	0.8079	0.117	14.459	ug/L
	Mn	55	743918.261	2.60	74.8043	2.154	2.880	ug/L
	Co	59	8400.983	0.03	1.0934	0.020	1.862	ug/L
	Ni	60	4761.741	0.02	3.0058	0.013	0.420	ug/L
	Cu	65	2945.217	0.01	1.8258	0.065	3.540	ug/L
	Zn	66	8355.938	0.03	8.7903	0.273	3.106	ug/L
>	Ge	72	285491.318	285491.32				ug/L
	As	75	1124.713	0.00	1.3197	0.129	9.753	ug/L
	Se	77	67.334	0.00	0.3202	0.153	47.916	ug/L
	Se	82	4.238	-0.00	0.0429	0.100	233.294	ug/L
	Rb	85	4046.356	0.01				mg/L
	Y	89	203139.691	749.11				ug/L
	Rh	103	16.667	-12.33				ug/L
	Mo	98	540.589	0.00	0.2509	0.010	3.814	ug/L
	Ag	107	82.335	0.00	0.0071	0.002	22.154	ug/L
	Cd	114	16.267	0.00	0.0247	0.004	17.620	ug/L
>	In	115	248003.051	248003.05				ug/L
	Sn	118	82.534	-0.00	0.0225	0.001	3.595	ug/L
	Sb	123	35.201	0.00	0.0230	0.001	5.117	ug/L
	Ba	135	4013.340	0.01	3.0360	0.018	0.604	ug/L
	Ce	140	104447.563	0.30				ug/L
>	Tb	159	347375.018	347375.02				ug/L
	Ho	165	1626.988	0.01				ug/L
	Tl	203	133.669	0.00	0.0268	0.003	10.927	ug/L
	Tl	205	356.710	0.00	0.0366	0.003	7.088	ug/L
	Pb	206	6035.913	0.02	1.2503	0.033	2.601	ug/L
	Pb	207	4764.409	0.02	1.0462	0.011	1.030	ug/L
	Pb	208	22969.322	0.08	1.1305	0.012	1.042	ug/L
	U	238	4888.816	0.02	0.1980	0.004	1.960	ug/L
>	Bi	209	291173.937	291173.94				ug/L

Sample ID: L1201071514
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Erin D. Long

Na	23	68688.792	-0.50	0.0066	0.002	27.836	mg/L
Mg	24	5924842.678	46.10	2.6192	0.233	8.880	mg/L
K	39	904401.594	3.51	0.0785	0.013	17.053	mg/L
Ca	43	116845.101	0.91	10.4921	0.945	9.008	mg/L
Fe	54	1085293.942	8.20	2.3102	0.199	8.621	mg/L
Fe	57	443175.417	3.40	2.2051	0.143	6.480	mg/L
Sc-1	45	129113.645	129113.65				mg/L
Cl	35	28202.310	-8721.99				mg/L
Kr	83	49.334	-3.67				mg/L
Br	81	4745.351	-330.86				mg/L
P	31	59675.060	52080.27				mg/L
S	34	160389.629	-15210.83				mg/L
Sr	88	96222.280	96168.94				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		91.497			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.910			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.596			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.254			

Sample ID: L1201071514
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071514
Report Date/Time: Saturday, January 28, 2012 16:35:01
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071515

Sample Date/Time: Saturday, January 28, 2012 16:40:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 40
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10423.189	0.00				ug/L
	Be	9	23.333	0.00	0.0315	0.036	115.558	ug/L
	Al	27	2569481.474	18.85	612.6196	13.045	2.129	ug/L
>	Sc	45	136255.332	136255.33				ug/L
	Ti	49	4434.958	0.01	9.9206	0.461	4.649	ug/L
	V	51	17005.265	0.05	1.9275	0.017	0.893	ug/L
	Cr	52	13381.204	0.02	1.0403	0.050	4.782	ug/L
	Cr	53	1516.957	0.00	0.8235	0.188	22.776	ug/L
	Mn	55	785650.484	2.54	72.9873	0.923	1.264	ug/L
	Co	59	8203.118	0.03	0.9849	0.023	2.349	ug/L
	Ni	60	4723.720	0.01	2.7511	0.077	2.794	ug/L
	Cu	65	3029.915	0.01	1.7278	0.065	3.747	ug/L
	Zn	66	8098.349	0.02	7.8064	0.159	2.031	ug/L
>	Ge	72	308926.014	308926.01				ug/L
	As	75	960.957	0.00	1.0687	0.040	3.788	ug/L
	Se	77	71.334	0.00	0.2981	0.083	27.692	ug/L
	Se	82	9.542	0.00	0.0949	0.109	114.781	ug/L
	Rb	85	5009.222	0.02				mg/L
	Y	89	224232.662	21842.08				ug/L
	Rh	103	13.667	-15.33				ug/L
	Mo	98	648.379	0.00	0.2784	0.005	1.911	ug/L
	Ag	107	90.001	0.00	0.0074	0.000	6.067	ug/L
	Cd	114	47.250	0.00	0.0513	0.009	18.479	ug/L
>	In	115	266877.362	266877.36				ug/L
	Sn	118	290.805	-0.00	0.0742	0.001	1.309	ug/L
	Sb	123	72.992	0.00	0.0325	0.005	16.187	ug/L
	Ba	135	3349.707	0.01	2.3211	0.081	3.497	ug/L
	Ce	140	138160.286	0.36				ug/L
>	Tb	159	378746.970	378746.97				ug/L
	Ho	165	1877.067	0.01				ug/L
	Tl	203	156.336	0.00	0.0291	0.002	8.183	ug/L
	Tl	205	376.713	0.00	0.0364	0.002	5.155	ug/L
	Pb	206	7411.703	0.02	1.4496	0.020	1.405	ug/L
	Pb	207	6158.671	0.02	1.2784	0.024	1.863	ug/L
	Pb	208	29248.935	0.09	1.3609	0.018	1.286	ug/L
	U	238	5606.608	0.02	0.2134	0.002	0.960	ug/L
>	Bi	209	309569.087	309569.09				ug/L

Sample ID: L1201071515
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Na	23	112631.074	-0.20	0.0171	0.002	8.974	mg/L
Mg	24	8201561.427	60.22	3.4231	0.115	3.372	mg/L
K	39	981949.184	3.69	0.0828	0.004	5.218	mg/L
Ca	43	180992.523	1.33	15.3377	0.332	2.164	mg/L
Fe	54	1128579.995	8.04	2.2655	0.045	1.971	mg/L
Fe	57	464622.518	3.36	2.1824	0.011	0.507	mg/L
Sc-1	45	136255.332	136255.33				mg/L
Cl	35	30821.571	-6102.73				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	5305.691	229.48				mg/L
P	31	71594.253	63999.46				mg/L
S	34	179301.154	3700.70				mg/L
Sr	88	155122.668	155069.33				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.008			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		96.753			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		96.598			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.019			

Sample ID: L1201071515
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071515
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Method 6020 - Summary Report

Sample ID: L1201071516

Sample Date/Time: Saturday, January 28, 2012 16:48:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 41
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10072.768	0.00				ug/L
	Be	9	21.333	0.00	0.0292	0.037	125.541	ug/L
	Al	27	2480969.968	19.13	621.7250	69.771	11.222	ug/L
>	Sc	45	130264.017	130264.02				ug/L
	Ti	49	4464.976	0.01	10.2617	0.111	1.085	ug/L
	V	51	18646.462	0.06	2.2050	0.030	1.366	ug/L
	Cr	52	14228.951	0.03	1.2242	0.034	2.812	ug/L
	Cr	53	1660.332	0.00	1.0567	0.148	14.027	ug/L
	Mn	55	903291.770	3.00	86.2578	2.697	3.127	ug/L
	Co	59	7989.910	0.03	0.9857	0.026	2.662	ug/L
	Ni	60	4874.142	0.02	2.9204	0.091	3.127	ug/L
	Cu	65	2911.538	0.01	1.7047	0.036	2.113	ug/L
	Zn	66	6780.160	0.02	6.6341	0.305	4.603	ug/L
>	Ge	72	300603.746	300603.75				ug/L
	As	75	1043.684	0.00	1.1774	0.055	4.654	ug/L
	Se	77	58.667	-0.00	0.1543	0.098	63.232	ug/L
	Se	82	14.554	0.00	0.1513	0.094	62.066	ug/L
	Rb	85	4476.247	0.01				mg/L
	Y	89	225162.546	22771.96				ug/L
	Rh	103	16.667	-12.33				ug/L
	Mo	98	628.080	0.00	0.2739	0.009	3.418	ug/L
	Ag	107	77.001	0.00	0.0050	0.001	22.924	ug/L
	Cd	114	26.022	0.00	0.0327	0.007	20.439	ug/L
>	In	115	263004.972	263004.97				ug/L
	Sn	118	79.067	-0.00	0.0203	0.001	5.060	ug/L
	Sb	123	83.952	0.00	0.0358	0.001	3.675	ug/L
	Ba	135	3874.273	0.01	2.7796	0.057	2.035	ug/L
	Ce	140	142493.119	0.39				ug/L
>	Tb	159	366201.122	366201.12				ug/L
	Ho	165	2103.811	0.01				ug/L
	Tl	203	125.669	0.00	0.0245	0.001	3.443	ug/L
	Tl	205	270.032	0.00	0.0297	0.006	19.096	ug/L
	Pb	206	6068.272	0.02	1.2006	0.063	5.219	ug/L
	Pb	207	4877.811	0.02	1.0239	0.058	5.659	ug/L
	Pb	208	23266.978	0.07	1.0940	0.048	4.409	ug/L
	U	238	5305.742	0.02	0.2054	0.007	3.380	ug/L
>	Bi	209	304552.183	304552.18				ug/L

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Na	23	94944.081	-0.30	0.0137	0.002	15.975	mg/L
Mg	24	9782755.593	75.34	4.2838	0.302	7.043	mg/L
K	39	903629.163	3.44	0.0767	0.011	14.139	mg/L
Ca	43	207264.261	1.59	18.4194	1.019	5.530	mg/L
Fe	54	1158800.940	8.68	2.4445	0.126	5.169	mg/L
Fe	57	476501.546	3.63	2.3542	0.199	8.454	mg/L
Sc-1	45	130264.017	130264.02				mg/L
Cl	35	28814.398	-8109.90				mg/L
Kr	83	51.334	-1.67				mg/L
Br	81	5180.281	104.07				mg/L
P	31	85070.695	77475.90				mg/L
S	34	170232.058	-5368.40				mg/L
Sr	88	185174.039	185120.70				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.341			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.349			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.398			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.447			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071516
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 16:56:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10206.255	0.00				ug/L
	Be	9	14335.000	0.11	55.1807	3.592	6.510	ug/L
	Al	27	220170.677	1.63	52.8325	3.890	7.362	ug/L
>	Sc	45	134226.767	134226.77				ug/L
	Ti	49	44395.897	0.14	96.2424	6.626	6.884	ug/L
	V	51	386543.461	1.21	47.8799	1.215	2.537	ug/L
	Cr	52	349205.379	1.07	49.2655	0.979	1.988	ug/L
	Cr	53	42961.428	0.13	50.1267	1.271	2.535	ug/L
	Mn	55	539044.730	1.69	48.4995	2.067	4.262	ug/L
	Co	59	423677.703	1.33	50.1148	0.893	1.782	ug/L
	Ni	60	87643.798	0.27	50.2988	2.093	4.160	ug/L
	Cu	65	83504.156	0.26	49.9579	1.302	2.606	ug/L
	Zn	66	49433.042	0.15	49.1635	1.078	2.193	ug/L
>	Ge	72	318991.986	318991.99				ug/L
	As	75	52521.679	0.17	49.7624	1.085	2.180	ug/L
	Se	77	4024.305	0.01	50.1819	0.676	1.347	ug/L
	Se	82	4799.325	0.02	49.2184	1.223	2.484	ug/L
	Rb	85	1926.575	0.01				mg/L
	Y	89	204940.207	2549.62				ug/L
	Rh	103	20.000	-9.00				ug/L
	Mo	98	252329.615	0.93	102.7124	0.307	0.299	ug/L
	Ag	107	249722.114	0.92	49.6435	0.728	1.466	ug/L
	Cd	114	56618.042	0.21	50.0050	0.762	1.524	ug/L
>	In	115	270697.505	270697.51				ug/L
	Sn	118	196562.540	0.72	49.5769	0.450	0.908	ug/L
	Sb	123	189634.527	0.70	50.6184	0.775	1.532	ug/L
	Ba	135	73571.124	0.19	51.1289	1.375	2.689	ug/L
	Ce	140	420.053	0.00				ug/L
>	Tb	159	380150.053	380150.05				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	311877.553	1.00	50.0264	0.805	1.609	ug/L
	Tl	205	771373.183	2.46	50.2779	0.288	0.572	ug/L
	Pb	206	250741.432	0.80	49.6862	1.448	2.914	ug/L
	Pb	207	233060.984	0.74	48.8894	0.611	1.249	ug/L
	Pb	208	1055367.617	3.37	49.7448	0.349	0.702	ug/L
	U	238	1476361.574	4.71	54.5688	1.656	3.036	ug/L
>	Bi	209	313293.260	313293.26				ug/L

Sample ID: QC Std 6
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Na	23	19339939.040	143.35	5.1475	0.205	3.975	mg/L
Mg	24	12201954.498	91.16	5.1839	0.324	6.247	mg/L
K	39	27706946.818	203.62	4.9647	0.333	6.717	mg/L
Ca	43	59316.695	0.44	5.1067	0.445	8.706	mg/L
Fe	54	2482625.389	18.31	5.1598	0.277	5.375	mg/L
Fe	57	1116272.368	8.30	5.3969	0.345	6.399	mg/L
Sc-1	45	134226.767	134226.77				mg/L
Cl	35	31720.938	-5203.36				mg/L
Kr	83	54.001	1.00				mg/L
Br	81	5172.939	96.72				mg/L
P	31	8922.775	1327.98				mg/L
S	34	185635.828	10035.37				mg/L
Sr	88	4158.126	4104.79				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	95.760				
Cr	52	98.531				
Cr	53					
Mn	55	96.999				
Co	59	100.230				
Ni	60	100.598				
Cu	65	99.916				
Zn	66	98.327				
Ge	72		102.234			
As	75	99.525				
Se	77					
Se	82	98.437				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	99.287				
Cd	114	100.010				
In	115		98.138			
Sn	118					
Sb	123	101.237				
Ba	135	102.258				
Ce	140					
Tb	159		96.955			
Ho	165					
Tl	203	100.053				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.490				
U	238	109.138				
Bi	209		98.186			

Sample ID: QC Std 6
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 16:58:23
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 17:03:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9655.628	-0.00				ug/L
	Be	9	12.000	0.00	-0.0100	0.016	157.841	ug/L
	Al	27	2667.102	0.00	-0.0464	0.121	261.357	ug/L
>	Sc	45	131665.632	131665.63				ug/L
	Ti	49	46.671	-0.00	0.1088	0.057	52.245	ug/L
	V	51	1864.091	-0.00	-0.0046	0.012	268.716	ug/L
	Cr	52	5885.470	-0.00	-0.0197	0.021	108.895	ug/L
	Cr	53	660.093	-0.00	-0.1794	0.144	80.149	ug/L
	Mn	55	475.352	-0.00	0.0071	0.002	31.878	ug/L
	Co	59	71.001	0.00	-0.0081	0.001	7.815	ug/L
	Ni	60	75.001	-0.00	-0.0018	0.002	88.119	ug/L
	Cu	65	94.668	0.00	-0.0867	0.003	3.393	ug/L
	Zn	66	580.359	-0.00	0.0285	0.022	77.254	ug/L
>	Ge	72	291260.673	291260.67				ug/L
	As	75	-89.903	0.00	0.0378	0.047	124.971	ug/L
	Se	77	47.333	-0.00	0.0223	0.053	239.766	ug/L
	Se	82	8.939	0.00	0.0945	0.154	163.401	ug/L
	Rb	85	25.334	-0.00				mg/L
	Y	89	188651.818	-13738.77				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	41.754	0.00	0.0285	0.002	8.711	ug/L
	Ag	107	70.334	0.00	0.0040	0.001	25.979	ug/L
	Cd	114	4.284	0.00	0.0130	0.003	26.236	ug/L
>	In	115	257997.145	257997.14				ug/L
	Sn	118	496.281	-0.00	0.1312	0.004	3.087	ug/L
	Sb	123	37.285	0.00	0.0232	0.002	6.861	ug/L
	Ba	135	28.334	0.00	0.0038	0.002	43.184	ug/L
	Ce	140	230.026	0.00				ug/L
>	Tb	159	367069.666	367069.67				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	48.334	0.00	0.0117	0.000	3.945	ug/L
	Tl	205	83.342	0.00	0.0171	0.003	16.396	ug/L
	Pb	206	195.338	0.00	0.0023	0.002	92.680	ug/L
	Pb	207	165.670	0.00	0.0059	0.001	14.144	ug/L
	Pb	208	769.022	0.00	0.0020	0.000	19.246	ug/L
	U	238	90.335	0.00	0.0071	0.001	8.890	ug/L
>	Bi	209	304641.151	304641.15				ug/L

Sample ID: QC Std 7
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Erin D. Long

Na	23	86017.516	-0.38	0.0109	0.002	14.309	mg/L
Mg	24	956.817	0.00	-0.0040	0.000	0.941	mg/L
K	39	456546.852	-0.05	-0.0085	0.003	38.795	mg/L
Ca	43	206.690	0.00	-0.0007	0.005	736.141	mg/L
Fe	54	33120.223	0.01	0.0006	0.002	390.648	mg/L
Fe	57	7363.993	0.01	-0.0024	0.002	98.172	mg/L
> Sc-1	45	131665.632	131665.63				mg/L
Cl	35	28031.737	-8892.56				mg/L
Kr	83	45.334	-7.67				mg/L
Br	81	4848.747	-227.47				mg/L
P	31	8128.631	533.84				mg/L
S	34	154873.461	-20726.99				mg/L
Sr	88	40.004	-13.33				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		93.346			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		93.534			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		93.619			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		95.475			

Sample ID: QC Std 7
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 17:05:59
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071517 WG388092-01

Sample Date/Time: Saturday, January 28, 2012 17:11:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 42
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9922.575	0.00				ug/L
	Be	9	15.333	0.00	0.0035	0.006	181.334	ug/L
	Al	27	3078863.934	23.49	763.7790	40.483	5.300	ug/L
>	Sc	45	131090.424	131090.42				ug/L
	Ti	49	3387.694	0.01	7.7797	0.116	1.489	ug/L
	V	51	23563.684	0.07	2.8536	0.148	5.196	ug/L
	Cr	52	15106.502	0.03	1.3571	0.075	5.544	ug/L
	Cr	53	1650.329	0.00	1.0412	0.106	10.192	ug/L
	Mn	55	749549.539	2.49	71.5368	3.567	4.987	ug/L
	Co	59	6937.958	0.02	0.8533	0.036	4.198	ug/L
	Ni	60	3244.332	0.01	1.9270	0.144	7.454	ug/L
	Cu	65	2475.392	0.01	1.4258	0.025	1.786	ug/L
	Zn	66	5365.781	0.02	5.1176	0.133	2.600	ug/L
>	Ge	72	300838.338	300838.34				ug/L
	As	75	816.812	0.00	0.9494	0.037	3.861	ug/L
	Se	77	64.000	-0.00	0.2246	0.083	37.114	ug/L
	Se	82	4.571	-0.00	0.0432	0.156	360.418	ug/L
	Rb	85	6546.305	0.02				mg/L
	Y	89	221296.703	18906.12				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	442.322	0.00	0.2032	0.009	4.205	ug/L
	Ag	107	78.001	0.00	0.0059	0.003	48.358	ug/L
	Cd	114	12.060	0.00	0.0204	0.005	22.436	ug/L
>	In	115	253118.177	253118.18				ug/L
	Sn	118	123.201	-0.00	0.0330	0.003	8.298	ug/L
	Sb	123	90.910	0.00	0.0387	0.003	8.932	ug/L
	Ba	135	2627.774	0.01	1.8673	0.073	3.914	ug/L
	Ce	140	141390.541	0.38				ug/L
>	Tb	159	368591.911	368591.91				ug/L
	Ho	165	2083.803	0.01				ug/L
	Tl	203	131.336	0.00	0.0254	0.001	5.204	ug/L
	Tl	205	340.041	0.00	0.0343	0.006	17.341	ug/L
	Pb	206	6884.247	0.02	1.3646	0.051	3.742	ug/L
	Pb	207	5293.734	0.02	1.1117	0.017	1.514	ug/L
	Pb	208	26039.312	0.08	1.2264	0.035	2.862	ug/L
	U	238	4120.393	0.01	0.1601	0.002	1.274	ug/L
>	Bi	209	304963.312	304963.31				ug/L

Sample ID: L1201071517 WG388092-01
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⌈	Na	23	43189.486	-0.70	-0.0007	0.001	137.018	mg/L
|	Mg	24	648294.099	4.95	0.2773	0.013	4.849	mg/L
|	K	39	799010.470	2.58	0.0557	0.004	6.553	mg/L
|	Ca	43	9723.316	0.07	0.8396	0.064	7.571	mg/L
|	Fe	54	1279141.151	9.52	2.6817	0.060	2.239	mg/L
|	Fe	57	519130.201	3.91	2.5421	0.074	2.913	mg/L
⌊>	Sc-1	45	131090.424	131090.42				mg/L
	Cl	35	28679.268	-8245.03				mg/L
	Kr	83	49.334	-3.67				mg/L
	Br	81	5004.172	-72.04				mg/L
	P	31	108294.566	100699.77				mg/L
	S	34	159231.921	-16368.53				mg/L
	Sr	88	21580.138	21526.80				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		96.416			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		91.765			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		94.008			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		95.576			

Sample ID: L1201071517 WG388092-01
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071517 WG388092-01
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Method 6020 - Summary Report

Sample ID: L1201071517S WG388092-04

Sample Date/Time: Saturday, January 28, 2012 17:19:11
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 43
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8521.021	-0.01				ug/L
	Be	9	1406.119	0.01	5.7645	0.240	4.166	ug/L
	Al	27	3187296.834	25.55	830.5936	8.874	1.068	ug/L
>	Sc	45	124693.317	124693.32				ug/L
	Ti	49	4071.402	0.01	10.0497	0.438	4.357	ug/L
	V	51	57993.843	0.20	7.9706	0.083	1.046	ug/L
	Cr	52	46324.531	0.15	6.6452	0.064	0.960	ug/L
	Cr	53	5532.389	0.02	6.4662	0.227	3.513	ug/L
	Mn	55	813151.057	2.90	83.3877	2.118	2.541	ug/L
	Co	59	44618.637	0.16	5.9995	0.233	3.883	ug/L
	Ni	60	11175.600	0.04	7.2635	0.092	1.263	ug/L
	Cu	65	10067.180	0.04	6.7332	0.146	2.175	ug/L
	Zn	66	10111.234	0.03	10.9894	0.304	2.764	ug/L
>	Ge	72	279916.687	279916.69				ug/L
	As	75	5433.687	0.02	5.9822	0.178	2.976	ug/L
	Se	77	384.676	0.00	4.9012	0.292	5.953	ug/L
	Se	82	388.891	0.00	4.5412	0.523	11.513	ug/L
	Rb	85	6545.971	0.02				mg/L
	Y	89	207916.456	5525.87				ug/L
	Rh	103	13.000	-16.00				ug/L
	Mo	98	396.095	0.00	0.1925	0.005	2.799	ug/L
	Ag	107	22969.517	0.10	5.1390	0.125	2.440	ug/L
	Cd	114	5183.195	0.02	5.1687	0.088	1.696	ug/L
>	In	115	240107.991	240107.99				ug/L
	Sn	118	126.401	-0.00	0.0357	0.001	2.469	ug/L
	Sb	123	1914.731	0.01	0.5888	0.013	2.206	ug/L
	Ba	135	9388.049	0.03	7.1172	0.294	4.130	ug/L
	Ce	140	141665.159	0.41				ug/L
>	Tb	159	347823.835	347823.83				ug/L
	Ho	165	2187.173	0.01				ug/L
	Tl	203	29386.015	0.10	5.1351	0.008	0.158	ug/L
	Tl	205	71751.612	0.25	5.1024	0.157	3.086	ug/L
	Pb	206	31746.371	0.11	6.8153	0.162	2.383	ug/L
	Pb	207	26601.010	0.09	6.0494	0.141	2.335	ug/L
	Pb	208	127181.226	0.44	6.4961	0.101	1.548	ug/L
	U	238	135155.354	0.47	5.4413	0.220	4.051	ug/L
>	Bi	209	287740.613	287740.61				ug/L

Sample ID: L1201071517S WG388092-04
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Na	23	41353.163	-0.70	-0.0006	0.000	30.471	mg/L
Mg	24	578443.830	4.64	0.2597	0.005	1.959	mg/L
K	39	769949.946	2.66	0.0577	0.006	10.657	mg/L
Ca	43	8642.012	0.07	0.7827	0.036	4.621	mg/L
Fe	54	1249765.514	9.79	2.7580	0.099	3.597	mg/L
Fe	57	506134.052	4.02	2.6089	0.190	7.272	mg/L
Sc-1	45	124693.317	124693.32				mg/L
Cl	35	25810.584	-11113.72				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	4431.847	-644.37				mg/L
P	31	107893.369	100298.58				mg/L
S	34	136183.808	-39416.65				mg/L
Sr	88	19955.860	19902.52				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.711			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.048			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.711			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.178			

Sample ID: L1201071517S WG388092-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071517S WG388092-04
Report Date/Time: Saturday, January 28, 2012 17:21:24
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201071517SD WG388092-05

Sample Date/Time: Saturday, January 28, 2012 17:26:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 44
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9238.458	-0.00				ug/L
	Be	9	1450.126	0.01	5.8423	0.331	5.665	ug/L
	Al	27	2907640.820	22.91	744.6534	9.646	1.295	ug/L
>	Sc	45	126841.550	126841.55				ug/L
	Ti	49	3691.190	0.01	8.9396	0.817	9.134	ug/L
	V	51	59175.619	0.20	7.9778	0.122	1.530	ug/L
	Cr	52	47249.403	0.15	6.6493	0.082	1.239	ug/L
	Cr	53	5492.359	0.02	6.2697	0.103	1.642	ug/L
	Mn	55	808138.281	2.83	81.2977	2.158	2.655	ug/L
	Co	59	44301.236	0.16	5.8416	0.029	0.501	ug/L
	Ni	60	11174.600	0.04	7.1242	0.116	1.627	ug/L
	Cu	65	10108.237	0.04	6.6292	0.292	4.402	ug/L
	Zn	66	9645.680	0.03	10.2450	0.378	3.692	ug/L
>	Ge	72	285325.893	285325.89				ug/L
	As	75	5409.541	0.02	5.8452	0.063	1.070	ug/L
	Se	77	432.011	0.00	5.4656	0.362	6.629	ug/L
	Se	82	393.888	0.00	4.5094	0.296	6.566	ug/L
	Rb	85	6615.027	0.02				mg/L
	Y	89	215849.391	13458.81				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	316.836	0.00	0.1536	0.002	1.592	ug/L
	Ag	107	23184.796	0.09	5.0977	0.220	4.316	ug/L
	Cd	114	5426.429	0.02	5.3176	0.188	3.538	ug/L
>	In	115	244375.981	244375.98				ug/L
	Sn	118	154.668	-0.00	0.0430	0.001	2.008	ug/L
	Sb	123	2103.737	0.01	0.6345	0.008	1.285	ug/L
	Ba	135	9742.459	0.03	7.3915	0.126	1.710	ug/L
	Ce	140	142767.099	0.41				ug/L
>	Tb	159	347429.590	347429.59				ug/L
	Ho	165	2227.187	0.01				ug/L
	Tl	203	30041.359	0.10	5.1036	0.130	2.543	ug/L
	Tl	205	72343.249	0.24	5.0017	0.137	2.738	ug/L
	Pb	206	31237.753	0.10	6.5180	0.131	2.008	ug/L
	Pb	207	27134.048	0.09	5.9985	0.122	2.028	ug/L
	Pb	208	127240.575	0.43	6.3173	0.113	1.793	ug/L
	U	238	139027.115	0.47	5.4413	0.109	1.996	ug/L
>	Bi	209	296042.588	296042.59				ug/L

Sample ID: L1201071517SD WG388092-05
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Na	23	38673.476	-0.73	-0.0016	0.001	34.605	mg/L
Mg	24	542312.255	4.27	0.2390	0.010	4.233	mg/L
K	39	766671.584	2.52	0.0544	0.004	8.021	mg/L
Ca	43	8565.256	0.07	0.7617	0.014	1.890	mg/L
Fe	54	1171914.025	9.00	2.5353	0.035	1.386	mg/L
Fe	57	472689.018	3.68	2.3888	0.025	1.031	mg/L
Sc-1	45	126841.550	126841.55				mg/L
Cl	35	27118.723	-9805.58				mg/L
Kr	83	53.001	0.00				mg/L
Br	81	4418.507	-657.71				mg/L
P	31	106710.540	99115.75				mg/L
S	34	148930.651	-26669.80				mg/L
Sr	88	18352.035	18298.70				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		91.444			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		88.595			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.610			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.780			

Sample ID: L1201071517SD WG388092-05
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201071517SD WG388092-05
Report Date/Time: Saturday, January 28, 2012 17:29:12
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 17:34:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9271.852	0.00				ug/L
	Be	9	12960.100	0.10	53.0435	6.809	12.836	ug/L
	Al	27	204581.693	1.60	51.9951	3.319	6.384	ug/L
>	Sc	45	126522.258	126522.26				ug/L
	Ti	49	39966.294	0.14	96.5741	1.574	1.630	ug/L
	V	51	350681.753	1.22	48.4602	0.379	0.781	ug/L
	Cr	52	315615.386	1.08	49.6891	0.474	0.954	ug/L
	Cr	53	38907.975	0.13	50.6262	1.581	3.123	ug/L
	Mn	55	494270.095	1.73	49.6191	1.735	3.497	ug/L
	Co	59	383557.350	1.34	50.6153	0.928	1.833	ug/L
	Ni	60	79724.689	0.28	51.0236	0.626	1.227	ug/L
	Cu	65	76970.987	0.27	51.3698	0.918	1.787	ug/L
	Zn	66	46093.942	0.16	51.1605	0.198	0.388	ug/L
>	Ge	72	285924.410	285924.41				ug/L
	As	75	47316.512	0.17	50.0183	1.318	2.634	ug/L
	Se	77	3645.464	0.01	50.7327	1.454	2.865	ug/L
	Se	82	4243.487	0.01	48.5481	1.159	2.386	ug/L
	Rb	85	1686.188	0.01				mg/L
	Y	89	184352.611	-18037.97				ug/L
	Rh	103	30.667	1.67				ug/L
	Mo	98	227920.257	0.93	102.6930	3.458	3.368	ug/L
	Ag	107	226887.510	0.93	49.9246	0.298	0.596	ug/L
	Cd	114	51949.382	0.21	50.7695	2.344	4.617	ug/L
>	In	115	244580.147	244580.15				ug/L
	Sn	118	177629.551	0.72	49.5820	0.479	0.966	ug/L
	Sb	123	170789.542	0.70	50.4524	0.521	1.033	ug/L
	Ba	135	68083.675	0.19	51.4953	0.453	0.879	ug/L
	Ce	140	293.368	0.00				ug/L
>	Tb	159	349232.156	349232.16				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	286659.665	1.01	50.9334	0.966	1.897	ug/L
	Tl	205	698876.343	2.47	50.4450	0.121	0.240	ug/L
	Pb	206	228255.680	0.81	50.0903	0.543	1.084	ug/L
	Pb	207	215282.094	0.76	50.0299	0.823	1.645	ug/L
	Pb	208	950892.961	3.36	49.6482	0.828	1.669	ug/L
	U	238	1341047.126	4.74	54.8969	0.633	1.154	ug/L
>	Bi	209	282903.833	282903.83				ug/L

Sample ID: QC Std 6
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Na	23	17443575.913	137.39	4.9347	0.545	11.043	mg/L
Mg	24	11094249.054	87.94	5.0010	0.395	7.908	mg/L
K	39	26091584.018	203.22	4.9549	0.314	6.346	mg/L
Ca	43	54013.224	0.43	4.9247	0.235	4.780	mg/L
Fe	54	2237867.914	17.50	4.9329	0.380	7.702	mg/L
Fe	57	1014874.359	8.00	5.2009	0.362	6.964	mg/L
Sc-1	45	126522.258	126522.26				mg/L
Cl	35	27815.014	-9109.29				mg/L
Kr	83	37.000	-16.00				mg/L
Br	81	4665.973	-410.24				mg/L
P	31	7473.353	-121.44				mg/L
S	34	158058.453	-17542.00				mg/L
Sr	88	3854.611	3801.27				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	96.920				
Cr	52	99.378				
Cr	53					
Mn	55	99.238				
Co	59	101.231				
Ni	60	102.047				
Cu	65	102.740				
Zn	66	102.321				
Ge	72		91.636			
As	75	100.037				
Se	77					
Se	82	97.096				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	99.849				
Cd	114	101.539				
In	115		88.669			
Sn	118					
Sb	123	100.905				
Ba	135	102.991				
Ce	140					
Tb	159		89.070			
Ho	165					
Tl	203	101.867				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.296				
U	238	109.794				
Bi	209		88.662			

Sample ID: QC Std 6
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 17:37:00
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Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 17:42:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10273.008	0.01				ug/L
	Be	9	8.667	0.00	-0.0216	0.010	44.762	ug/L
	Al	27	2717.111	0.00	-0.0085	0.046	537.121	ug/L
>	Sc	45	126553.797	126553.80				ug/L
	Ti	49	53.339	-0.00	0.1248	0.015	11.820	ug/L
	V	51	1876.125	-0.00	-0.0049	0.007	146.700	ug/L
	Cr	52	5849.111	-0.00	-0.0328	0.009	28.440	ug/L
	Cr	53	593.414	-0.00	-0.2735	0.158	57.688	ug/L
	Mn	55	564.692	0.00	0.0155	0.009	58.923	ug/L
	Co	59	88.335	0.00	-0.0059	0.005	78.466	ug/L
	Ni	60	72.334	-0.00	-0.0037	0.004	101.288	ug/L
	Cu	65	110.002	0.00	-0.0772	0.003	4.065	ug/L
	Zn	66	551.690	-0.00	-0.0075	0.025	334.590	ug/L
>	Ge	72	293480.210	293480.21				ug/L
	As	75	-109.454	-0.00	0.0188	0.008	45.043	ug/L
	Se	77	52.000	-0.00	0.0825	0.059	71.345	ug/L
	Se	82	4.919	-0.00	0.0480	0.094	194.936	ug/L
	Rb	85	25.667	-0.00				mg/L
	Y	89	191870.311	-10520.27				ug/L
	Rh	103	8.000	-21.00				ug/L
	Mo	98	56.233	0.00	0.0351	0.006	17.837	ug/L
	Ag	107	79.668	0.00	0.0062	0.002	39.231	ug/L
	Cd	114	8.626	0.00	0.0171	0.004	25.856	ug/L
>	In	115	253254.028	253254.03				ug/L
	Sn	118	518.683	-0.00	0.1397	0.010	7.088	ug/L
	Sb	123	45.035	0.00	0.0256	0.001	4.584	ug/L
	Ba	135	30.000	0.00	0.0054	0.003	59.809	ug/L
	Ce	140	146.683	-0.00				ug/L
>	Tb	159	360157.498	360157.50				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	56.334	0.00	0.0134	0.002	12.672	ug/L
	Tl	205	133.348	0.00	0.0208	0.004	18.748	ug/L
	Pb	206	206.671	0.00	0.0063	0.003	51.457	ug/L
	Pb	207	188.337	0.00	0.0124	0.004	29.251	ug/L
	Pb	208	839.692	0.00	0.0070	0.001	11.642	ug/L
	U	238	146.336	0.00	0.0094	0.003	29.388	ug/L
>	Bi	209	293090.591	293090.59				ug/L

Sample ID: QC Std 7
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Erin D. Long

Na	23	87340.811	-0.34	0.0122	0.001	6.504	mg/L
Mg	24	1410.269	0.01	-0.0038	0.000	5.521	mg/L
K	39	457462.958	0.09	-0.0050	0.001	22.216	mg/L
Ca	43	153.350	-0.00	-0.0048	0.005	106.993	mg/L
Fe	54	31735.801	0.01	0.0004	0.004	1008.454	mg/L
Fe	57	7323.955	0.01	-0.0011	0.002	210.879	mg/L
Sc-1	45	126553.797	126553.80				mg/L
Cl	35	27776.883	-9147.42				mg/L
Kr	83	47.667	-5.33				mg/L
Br	81	5030.188	-46.03				mg/L
P	31	7307.203	-287.59				mg/L
S	34	153424.959	-22175.50				mg/L
Sr	88	83.342	30.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		94.058			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.814			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		91.856			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.855			

Sample ID: QC Std 7
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 17:44:36
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: PBW B6 WG387506-02

Sample Date/Time: Saturday, January 28, 2012 17:50:01
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 45
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9688.990	-0.00				ug/L
	Be	9	6.667	-0.00	-0.0316	0.016	50.226	ug/L
	Al	27	31844.135	0.22	6.9403	0.325	4.687	ug/L
>	Sc	45	135407.955	135407.96				ug/L
	Ti	49	66.674	0.00	0.1579	0.025	15.824	ug/L
	V	51	1940.843	0.00	0.0074	0.023	312.790	ug/L
	Cr	52	6458.570	0.00	0.0762	0.055	72.685	ug/L
	Cr	53	756.777	0.00	-0.0497	0.018	35.976	ug/L
	Mn	55	1112.752	0.00	0.0706	0.003	4.686	ug/L
	Co	59	87.335	0.00	-0.0059	0.001	19.726	ug/L
	Ni	60	110.002	0.00	0.0207	0.005	26.280	ug/L
	Cu	65	271.674	0.00	0.0307	0.016	50.822	ug/L
	Zn	66	1416.801	0.00	0.9600	0.035	3.661	ug/L
>	Ge	72	289605.273	289605.27				ug/L
	As	75	-108.647	-0.00	0.0182	0.048	266.784	ug/L
	Se	77	53.334	-0.00	0.1099	0.048	43.696	ug/L
	Se	82	2.974	-0.00	0.0276	0.079	287.944	ug/L
	Rb	85	46.334	0.00				mg/L
	Y	89	198599.312	-3791.27				ug/L
	Rh	103	12.333	-16.67				ug/L
	Mo	98	101.458	0.00	0.0549	0.005	9.943	ug/L
	Ag	107	70.668	0.00	0.0043	0.002	41.998	ug/L
	Cd	114	2.560	-0.00	0.0114	0.001	7.818	ug/L
>	In	115	253034.277	253034.28				ug/L
	Sn	118	173.068	-0.00	0.0465	0.002	4.903	ug/L
	Sb	123	99.657	0.00	0.0412	0.007	16.699	ug/L
	Ba	135	69.001	0.00	0.0318	0.008	24.444	ug/L
	Ce	140	1110.187	0.00				ug/L
>	Tb	159	376649.988	376649.99				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	27.334	0.00	0.0084	0.000	0.897	ug/L
	Tl	205	63.340	0.00	0.0159	0.002	13.879	ug/L
	Pb	206	222.672	0.00	0.0096	0.002	19.173	ug/L
	Pb	207	211.671	0.00	0.0175	0.005	27.558	ug/L
	Pb	208	883.693	0.00	0.0092	0.002	21.007	ug/L
	U	238	63.001	0.00	0.0061	0.001	12.069	ug/L
>	Bi	209	293795.113	293795.11				ug/L

Sample ID: PBW B6 WG387506-02
Report Date/Time: Saturday, January 28, 2012 17:52:14
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Approved: January 30, 2012
Erin D. Long

Na	23	276781.879	1.01	0.0605	0.002	3.166	mg/L
Mg	24	4038.050	0.03	-0.0027	0.000	2.985	mg/L
K	39	449906.967	-0.20	-0.0121	0.001	10.805	mg/L
Ca	43	380.047	0.00	0.0136	0.007	50.059	mg/L
Fe	54	67720.681	0.26	0.0707	0.009	12.034	mg/L
Fe	57	7941.259	0.01	-0.0006	0.003	533.604	mg/L
> Sc-1	45	135407.955	135407.96				mg/L
Cl	35	31116.654	-5807.65				mg/L
Kr	83	41.334	-11.67				mg/L
Br	81	4909.448	-166.77				mg/L
P	31	13911.667	6316.87				mg/L
S	34	148716.654	-26883.80				mg/L
Sr	88	1096.849	1043.51				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		92.816			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		91.734			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		96.063			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		92.076			

Sample ID: PBW B6 WG387506-02
Report Date/Time: Saturday, January 28, 2012 17:52:14
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW B6 WG387506-02
Report Date/Time: Saturday, January 28, 2012 17:52:14
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: LCSW B6 WG387506-03

Sample Date/Time: Saturday, January 28, 2012 17:57:50
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 46
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8904.770	-0.01				ug/L
	Be	9	6255.686	0.05	24.5565	1.471	5.988	ug/L
	Al	27	115545.906	0.86	27.9575	0.942	3.370	ug/L
>	Sc	45	131089.731	131089.73				ug/L
	Ti	49	73.341	0.00	0.1747	0.038	21.587	ug/L
	V	51	181644.080	0.62	24.7156	0.444	1.798	ug/L
	Cr	52	170217.289	0.57	26.0841	0.504	1.931	ug/L
	Cr	53	19638.424	0.07	24.7785	0.883	3.562	ug/L
	Mn	55	254893.653	0.88	25.2944	0.394	1.557	ug/L
	Co	59	192026.688	0.66	25.0667	0.427	1.704	ug/L
	Ni	60	40801.049	0.14	25.8202	0.596	2.308	ug/L
	Cu	65	39621.363	0.14	26.0962	0.427	1.638	ug/L
	Zn	66	21817.416	0.07	23.6378	0.243	1.028	ug/L
>	Ge	72	288923.723	288923.72				ug/L
	As	75	22561.659	0.08	23.6705	0.775	3.275	ug/L
	Se	77	1556.146	0.01	21.0529	0.762	3.619	ug/L
	Se	82	1912.849	0.01	21.6521	0.625	2.889	ug/L
	Rb	85	36.000	0.00				mg/L
	Y	89	189496.927	-12893.66				ug/L
	Rh	103	14.000	-15.00				ug/L
	Mo	98	71.161	0.00	0.0422	0.004	8.515	ug/L
	Ag	107	118186.468	0.47	25.5286	0.675	2.645	ug/L
	Cd	114	25342.591	0.10	24.3286	0.974	4.004	ug/L
>	In	115	249152.715	249152.72				ug/L
	Sn	118	380.809	-0.00	0.1042	0.008	7.901	ug/L
	Sb	123	84823.754	0.34	24.6054	0.366	1.486	ug/L
	Ba	135	34243.224	0.09	25.0187	0.271	1.083	ug/L
	Ce	140	463.393	0.00				ug/L
>	Tb	159	361411.947	361411.95				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	146698.427	0.50	25.1597	0.163	0.648	ug/L
	Tl	205	359843.771	1.23	25.0832	0.881	3.514	ug/L
	Pb	206	120664.883	0.41	25.5426	0.166	0.650	ug/L
	Pb	207	107963.625	0.37	24.2016	0.073	0.301	ug/L
	Pb	208	500541.002	1.71	25.2087	0.061	0.241	ug/L
	U	238	680638.617	2.32	26.8989	0.262	0.972	ug/L
>	Bi	209	293011.605	293011.61				ug/L

Sample ID: LCSW B6 WG387506-03
Report Date/Time: Saturday, January 28, 2012 18:00:03
Page 1

Approved: January 30, 2012
Erin D. Long

Na	23	254596.966	0.91	0.0569	0.002	3.630	mg/L
Mg	24	3267.634	0.02	-0.0030	0.000	1.653	mg/L
K	39	441739.298	-0.15	-0.0110	0.000	2.914	mg/L
Ca	43	313.371	0.00	0.0088	0.003	38.956	mg/L
Fe	54	60261.652	0.22	0.0593	0.002	2.825	mg/L
Fe	57	6833.489	0.00	-0.0049	0.002	40.336	mg/L
Sc-1	45	131089.731	131089.73				mg/L
Cl	35	29245.228	-7679.07				mg/L
Kr	83	46.001	-7.00				mg/L
Br	81	5303.701	227.49				mg/L
P	31	12530.869	4936.07				mg/L
S	34	140815.530	-34784.92				mg/L
Sr	88	553.407	500.07				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		92.597			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		90.327			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.176			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.830			

Sample ID: LCSW B6 WG387506-03
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 B6 WG387506-03
Report Date/Time: Saturday, January 28, 2012 18:00:03
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201047901

Sample Date/Time: Saturday, January 28, 2012 18:05:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 47
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9422.087	-0.00				ug/L
	Be	9	10.000	0.00	-0.0184	0.007	39.686	ug/L
	Al	27	63962.087	0.46	14.8437	1.042	7.019	ug/L
>	Sc	45	133714.495	133714.50				ug/L
	Ti	49	313.371	0.00	0.7861	0.117	14.902	ug/L
	V	51	16448.940	0.05	2.1160	0.106	5.031	ug/L
	Cr	52	12671.755	0.03	1.1655	0.011	0.973	ug/L
	Cr	53	1717.016	0.00	1.3282	0.165	12.438	ug/L
	Mn	55	17547.632	0.06	1.7916	0.031	1.741	ug/L
	Co	59	563.358	0.00	0.0600	0.004	7.137	ug/L
	Ni	60	1184.096	0.00	0.7397	0.072	9.673	ug/L
	Cu	65	1187.430	0.00	0.6767	0.034	5.032	ug/L
	Zn	66	4203.770	0.01	4.2957	0.223	5.197	ug/L
>	Ge	72	275154.886	275154.89				ug/L
	As	75	398.322	0.00	0.5669	0.074	13.010	ug/L
	Se	77	118.668	0.00	1.1063	0.393	35.481	ug/L
	Se	82	106.289	0.00	1.2560	0.111	8.840	ug/L
	Rb	85	11214.655	0.04				mg/L
	Y	89	178885.847	-23504.74				ug/L
	Rh	103	50.334	21.33				ug/L
	Mo	98	2313.797	0.01	1.0831	0.032	2.934	ug/L
	Ag	107	193.338	0.00	0.0330	0.002	7.357	ug/L
	Cd	114	25.318	0.00	0.0345	0.006	18.390	ug/L
>	In	115	237713.652	237713.65				ug/L
	Sn	118	280.538	-0.00	0.0804	0.003	3.122	ug/L
	Sb	123	190.372	0.00	0.0706	0.002	2.539	ug/L
	Ba	135	56835.415	0.16	42.7258	1.049	2.455	ug/L
	Ce	140	603.416	0.00				ug/L
>	Tb	159	351411.836	351411.84				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	63.668	0.00	0.0147	0.001	5.214	ug/L
	Tl	205	143.349	0.00	0.0215	0.001	3.734	ug/L
	Pb	206	1232.437	0.00	0.2236	0.007	2.948	ug/L
	Pb	207	987.735	0.00	0.1917	0.005	2.442	ug/L
	Pb	208	4703.900	0.01	0.2018	0.002	1.175	ug/L
	U	238	10297.468	0.04	0.4103	0.016	3.847	ug/L
>	Bi	209	293168.956	293168.96				ug/L

Sample ID: L1201047901
Report Date/Time: Saturday, January 28, 2012 18:07:49
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Approved: January 30, 2012
Erin D. Long

Na	23	34072764.540	253.99	9.1018	0.602	6.618	mg/L
Mg	24	7824308.658	58.54	3.3278	0.177	5.326	mg/L
K	39	5837998.280	40.16	0.9733	0.038	3.902	mg/L
Ca	43	211935.746	1.58	18.3017	0.239	1.308	mg/L
Fe	54	147554.841	0.86	0.2409	0.005	2.193	mg/L
Fe	57	49001.979	0.32	0.2000	0.011	5.311	mg/L
Sc-1	45	133714.495	133714.50				mg/L
Cl	35	298329.727	261405.43				mg/L
Kr	83	43.667	-9.33				mg/L
Br	81	49424.221	44348.01				mg/L
P	31	15191.837	7597.04				mg/L
S	34	319448.223	143847.77				mg/L
Sr	88	1618837.959	1618784.62				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.184			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.180			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		89.626			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.879			

Sample ID: L1201047901
Report Date/Time: Saturday, January 28, 2012 18:07:49
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201047901
Report Date/Time: Saturday, January 28, 2012 18:07:49
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050302

Sample Date/Time: Saturday, January 28, 2012 18:13:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 48
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9271.838	0.00				ug/L
	Be	9	8.667	0.00	-0.0210	0.024	112.810	ug/L
	Al	27	19021.736	0.14	4.3171	0.306	7.080	ug/L
>	Sc	45	123153.669	123153.67				ug/L
	Ti	49	56.673	0.00	0.1449	0.078	54.145	ug/L
	V	51	1770.781	-0.00	0.0035	0.013	367.100	ug/L
	Cr	52	5320.085	-0.00	-0.0368	0.011	29.729	ug/L
	Cr	53	516.734	-0.00	-0.3096	0.069	22.335	ug/L
	Mn	55	294099.087	1.10	31.4645	1.043	3.316	ug/L
	Co	59	446.016	0.00	0.0455	0.003	7.221	ug/L
	Ni	60	553.357	0.00	0.3293	0.023	7.022	ug/L
	Cu	65	2840.846	0.01	1.8785	0.026	1.387	ug/L
	Zn	66	4663.685	0.01	4.9753	0.131	2.629	ug/L
>	Ge	72	268124.380	268124.38				ug/L
	As	75	889.917	0.00	1.1314	0.020	1.770	ug/L
	Se	77	45.333	-0.00	0.0488	0.088	180.095	ug/L
	Se	82	22.626	0.00	0.2698	0.059	21.766	ug/L
	Rb	85	702.370	0.00				mg/L
	Y	89	173998.505	-28392.08				ug/L
	Rh	103	19.667	-9.33				ug/L
	Mo	98	367.427	0.00	0.1859	0.019	10.042	ug/L
	Ag	107	55.667	0.00	0.0022	0.002	86.578	ug/L
	Cd	114	3.380	0.00	0.0125	0.002	14.649	ug/L
>	In	115	231216.039	231216.04				ug/L
	Sn	118	149.335	-0.00	0.0439	0.000	0.874	ug/L
	Sb	123	73.784	0.00	0.0358	0.002	4.785	ug/L
	Ba	135	14653.690	0.04	11.4253	0.266	2.327	ug/L
	Ce	140	210.024	0.00				ug/L
>	Tb	159	338387.689	338387.69				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	33.334	0.00	0.0096	0.001	9.183	ug/L
	Tl	205	66.674	0.00	0.0163	0.001	4.440	ug/L
	Pb	206	761.709	0.00	0.1279	0.012	9.546	ug/L
	Pb	207	708.037	0.00	0.1329	0.004	2.660	ug/L
	Pb	208	3117.592	0.01	0.1257	0.007	5.217	ug/L
	U	238	1388.463	0.00	0.0598	0.000	0.517	ug/L
>	Bi	209	286191.206	286191.21				ug/L

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Erin D. Long

Na	23	10879928.823	87.38	3.1471	0.156	4.960	mg/L
Mg	24	3129370.753	25.42	1.4424	0.039	2.692	mg/L
K	39	1600253.806	9.48	0.2241	0.004	1.829	mg/L
Ca	43	98390.685	0.80	9.2159	0.127	1.377	mg/L
Fe	54	278686.486	2.03	0.5682	0.026	4.528	mg/L
Fe	57	109441.983	0.84	0.5406	0.031	5.822	mg/L
Sc-1	45	123153.669	123153.67				mg/L
Cl	35	60710.350	23786.05				mg/L
Kr	83	43.001	-10.00				mg/L
Br	81	19713.290	14637.08				mg/L
P	31	8638.476	1043.68				mg/L
S	34	181820.859	6220.40				mg/L
Sr	88	490905.563	490852.22				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		85.931			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		83.824			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		86.304			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.693			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050302
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050303

Sample Date/Time: Saturday, January 28, 2012 18:21:09
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 49
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9305.250	0.00				ug/L
	Be	9	6.000	-0.00	-0.0315	0.022	71.147	ug/L
	Al	27	17885.921	0.13	4.1147	0.471	11.442	ug/L
>	Sc	45	120768.994	120768.99				ug/L
	Ti	49	116.679	0.00	0.2951	0.032	10.999	ug/L
	V	51	2051.205	0.00	0.0399	0.012	31.027	ug/L
	Cr	52	6246.403	0.00	0.1045	0.034	32.316	ug/L
	Cr	53	693.432	-0.00	-0.0750	0.190	253.326	ug/L
	Mn	55	221042.511	0.81	23.2504	0.407	1.752	ug/L
	Co	59	493.020	0.00	0.0510	0.002	3.428	ug/L
	Ni	60	1358.124	0.00	0.8639	0.025	2.865	ug/L
	Cu	65	1837.221	0.01	1.1410	0.009	0.777	ug/L
	Zn	66	4257.463	0.01	4.4061	0.134	3.036	ug/L
>	Ge	72	272549.317	272549.32				ug/L
	As	75	218.109	0.00	0.3724	0.030	8.104	ug/L
	Se	77	56.667	-0.00	0.2067	0.195	94.493	ug/L
	Se	82	22.221	0.00	0.2608	0.114	43.590	ug/L
	Rb	85	1467.477	0.01				mg/L
	Y	89	173685.586	-28705.00				ug/L
	Rh	103	32.334	3.33				ug/L
	Mo	98	204.237	0.00	0.1061	0.011	10.180	ug/L
	Ag	107	53.334	-0.00	0.0014	0.004	253.671	ug/L
	Cd	114	2.137	-0.00	0.0111	0.007	63.249	ug/L
>	In	115	236273.699	236273.70				ug/L
	Sn	118	150.935	-0.00	0.0434	0.002	3.882	ug/L
	Sb	123	30.825	0.00	0.0222	0.002	7.128	ug/L
	Ba	135	14980.270	0.04	11.4394	0.333	2.907	ug/L
	Ce	140	136.682	-0.00				ug/L
>	Tb	159	345637.170	345637.17				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	30.667	0.00	0.0091	0.000	4.810	ug/L
	Tl	205	93.343	0.00	0.0181	0.001	8.130	ug/L
	Pb	206	505.020	0.00	0.0708	0.004	6.058	ug/L
	Pb	207	436.016	0.00	0.0691	0.004	6.203	ug/L
	Pb	208	2031.119	0.00	0.0683	0.005	6.701	ug/L
	U	238	5036.238	0.02	0.2050	0.001	0.613	ug/L
>	Bi	209	289625.530	289625.53				ug/L

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Erin D. Long

Na	23	17026337.691	140.03	5.0288	0.229	4.548	mg/L
Mg	24	4503764.170	37.31	2.1193	0.101	4.787	mg/L
K	39	3508313.110	25.53	0.6162	0.006	1.039	mg/L
Ca	43	148140.073	1.23	14.1581	0.073	0.517	mg/L
Fe	54	105891.704	0.64	0.1770	0.007	4.022	mg/L
Fe	57	41008.079	0.29	0.1824	0.003	1.541	mg/L
Sc-1	45	120768.994	120768.99				mg/L
Cl	35	115215.751	78291.45				mg/L
Kr	83	51.334	-1.67				mg/L
Br	81	23933.657	18857.44				mg/L
P	31	8440.940	846.15				mg/L
S	34	259921.150	84320.69				mg/L
Sr	88	692621.569	692568.23				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.349			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.658			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.153			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.769			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050303
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050304

Sample Date/Time: Saturday, January 28, 2012 18:28:55
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 50
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8754.608	0.00				ug/L
	Be	9	6.000	-0.00	-0.0297	0.009	31.644	ug/L
	Al	27	3917.594	0.02	0.4142	0.124	29.982	ug/L
>	Sc	45	113720.918	113720.92				ug/L
	Ti	49	46.671	-0.00	0.1287	0.042	32.813	ug/L
	V	51	1874.825	0.00	0.0406	0.014	33.839	ug/L
	Cr	52	5236.030	0.00	0.0190	0.015	80.708	ug/L
	Cr	53	606.750	-0.00	-0.1149	0.088	76.470	ug/L
	Mn	55	426407.195	1.71	49.2022	0.829	1.685	ug/L
	Co	59	299.342	0.00	0.0281	0.005	18.002	ug/L
	Ni	60	1921.908	0.01	1.3664	0.014	1.012	ug/L
	Cu	65	660.700	0.00	0.3597	0.028	7.922	ug/L
	Zn	66	2740.812	0.01	2.9281	0.097	3.318	ug/L
>	Ge	72	248670.740	248670.74				ug/L
	As	75	472.994	0.00	0.7042	0.039	5.483	ug/L
	Se	77	42.667	-0.00	0.0587	0.172	292.743	ug/L
	Se	82	17.281	0.00	0.2212	0.137	61.775	ug/L
	Rb	85	596.027	0.00				mg/L
	Y	89	159069.879	-43320.70				ug/L
	Rh	103	15.667	-13.33				ug/L
	Mo	98	387.173	0.00	0.2108	0.019	9.010	ug/L
	Ag	107	50.001	0.00	0.0019	0.002	105.411	ug/L
	Cd	114	0.285	-0.00	0.0093	0.001	11.851	ug/L
>	In	115	213126.584	213126.58				ug/L
	Sn	118	381.742	-0.00	0.1221	0.005	4.282	ug/L
	Sb	123	81.036	0.00	0.0402	0.003	7.171	ug/L
	Ba	135	20306.585	0.06	16.8967	0.285	1.687	ug/L
	Ce	140	46.671	-0.00				ug/L
>	Tb	159	317250.065	317250.07				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	21.334	0.00	0.0078	0.000	5.404	ug/L
	Tl	205	60.006	0.00	0.0161	0.003	20.768	ug/L
	Pb	206	641.031	0.00	0.1108	0.002	2.037	ug/L
	Pb	207	512.021	0.00	0.0957	0.012	12.123	ug/L
	Pb	208	2470.503	0.01	0.1007	0.001	1.387	ug/L
	U	238	2384.698	0.01	0.1065	0.000	0.412	ug/L
>	Bi	209	268359.284	268359.28				ug/L

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Na	23	10234188.561	88.97	3.2042	0.047	1.453	mg/L
Mg	24	3115164.377	27.40	1.5551	0.034	2.218	mg/L
K	39	1228144.069	7.28	0.1705	0.004	2.311	mg/L
Ca	43	92985.661	0.82	9.4289	0.165	1.746	mg/L
Fe	54	74277.462	0.41	0.1139	0.007	6.335	mg/L
Fe	57	26772.306	0.19	0.1146	0.008	7.133	mg/L
Sc-1	45	113720.918	113720.92				mg/L
Cl	35	52184.216	15259.91				mg/L
Kr	83	44.334	-8.67				mg/L
Br	81	17818.389	12742.17				mg/L
P	31	8087.287	492.49				mg/L
S	34	161148.625	-14451.83				mg/L
Sr	88	427520.688	427467.35				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		79.697			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		77.266			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		80.913			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		84.104			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050304
Report Date/Time: Saturday, January 28, 2012 18:31:07
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050305

Sample Date/Time: Saturday, January 28, 2012 18:36:42
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 51
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9071.657	0.00				ug/L
	Be	9	7.333	0.00	-0.0251	0.006	23.760	ug/L
	Al	27	6635.983	0.04	1.1017	0.079	7.149	ug/L
>	Sc	45	119298.866	119298.87				ug/L
	Ti	49	100.011	0.00	0.2508	0.028	11.277	ug/L
	V	51	2299.284	0.00	0.0734	0.005	7.473	ug/L
	Cr	52	5919.161	0.00	0.0413	0.021	51.872	ug/L
	Cr	53	530.070	-0.00	-0.3094	0.127	41.170	ug/L
	Mn	55	479116.762	1.74	50.0262	0.405	0.810	ug/L
	Co	59	652.032	0.00	0.0723	0.004	5.010	ug/L
	Ni	60	1274.110	0.00	0.8005	0.041	5.121	ug/L
	Cu	65	712.704	0.00	0.3474	0.022	6.406	ug/L
	Zn	66	2426.378	0.01	2.2243	0.055	2.473	ug/L
>	Ge	72	274797.532	274797.53				ug/L
	As	75	126.772	0.00	0.2702	0.007	2.755	ug/L
	Se	77	54.667	-0.00	0.1703	0.090	52.605	ug/L
	Se	82	21.615	0.00	0.2505	0.019	7.706	ug/L
	Rb	85	703.703	0.00				mg/L
	Y	89	179834.635	-22555.95				ug/L
	Rh	103	19.334	-9.67				ug/L
	Mo	98	583.181	0.00	0.2784	0.007	2.605	ug/L
	Ag	107	55.001	0.00	0.0016	0.002	131.184	ug/L
	Cd	114	2.362	-0.00	0.0113	0.007	61.339	ug/L
>	In	115	240001.355	240001.36				ug/L
	Sn	118	219.203	-0.00	0.0621	0.003	4.624	ug/L
	Sb	123	72.577	0.00	0.0346	0.001	2.890	ug/L
	Ba	135	18396.137	0.05	14.0317	0.132	0.942	ug/L
	Ce	140	90.010	-0.00				ug/L
>	Tb	159	345983.422	345983.42				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	37.334	0.00	0.0102	0.001	4.946	ug/L
	Tl	205	43.338	0.00	0.0146	0.001	7.626	ug/L
	Pb	206	1464.477	0.00	0.2759	0.004	1.463	ug/L
	Pb	207	1186.096	0.00	0.2389	0.010	4.279	ug/L
	Pb	208	5706.164	0.02	0.2553	0.003	1.342	ug/L
	U	238	2278.335	0.01	0.0945	0.003	3.396	ug/L
>	Bi	209	290239.630	290239.63				ug/L

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Na	23	8726531.230	72.20	2.6048	0.108	4.128	mg/L
Mg	24	2736148.057	22.95	1.3019	0.038	2.901	mg/L
K	39	1708502.640	10.81	0.2567	0.011	4.257	mg/L
Ca	43	92537.042	0.77	8.9504	0.165	1.846	mg/L
Fe	54	60562.794	0.27	0.0730	0.006	8.598	mg/L
Fe	57	20216.566	0.12	0.0716	0.004	5.468	mg/L
Sc-1	45	119298.866	119298.87				mg/L
Cl	35	45964.431	9040.13				mg/L
Kr	83	44.334	-8.67				mg/L
Br	81	15107.689	10031.47				mg/L
P	31	10849.157	3254.36				mg/L
S	34	192944.717	17344.26				mg/L
Sr	88	433608.558	433555.22				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.070			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.009			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.241			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.961			

Sample ID: L1201050305
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050305
Report Date/Time: Saturday, January 28, 2012 18:38:54
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Method 6020 - Summary Report

Sample ID: L1201050305PS WG387531-03

Sample Date/Time: Saturday, January 28, 2012 18:44:28
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 52
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9338.565	0.01				ug/L
	Be	9	12644.255	0.11	57.1373	2.918	5.107	ug/L
	Al	27	185696.834	1.61	52.2366	2.385	4.566	ug/L
>	Sc	45	114143.604	114143.60				ug/L
	Ti	49	100.011	0.00	0.2742	0.125	45.677	ug/L
	V	51	317719.462	1.26	49.9564	1.773	3.550	ug/L
	Cr	52	285392.422	1.12	51.1449	1.445	2.826	ug/L
	Cr	53	34069.587	0.13	50.4314	0.595	1.180	ug/L
	Mn	55	892921.940	3.55	101.9739	3.522	3.454	ug/L
	Co	59	339726.547	1.35	51.0127	2.820	5.527	ug/L
	Ni	60	70738.701	0.28	51.5025	1.688	3.277	ug/L
	Cu	65	70290.704	0.28	53.3859	2.637	4.940	ug/L
	Zn	66	42544.768	0.17	53.7448	1.313	2.443	ug/L
>	Ge	72	251430.251	251430.25				ug/L
	As	75	42034.950	0.17	50.5371	1.365	2.702	ug/L
	Se	77	3121.918	0.01	49.3982	1.358	2.750	ug/L
	Se	82	3659.537	0.01	47.6190	1.371	2.880	ug/L
	Rb	85	719.038	0.00				mg/L
	Y	89	162801.056	-39589.53				ug/L
	Rh	103	30.000	1.00				ug/L
	Mo	98	573.185	0.00	0.2999	0.014	4.708	ug/L
	Ag	107	207195.014	0.95	51.0757	2.127	4.164	ug/L
	Cd	114	46168.139	0.21	50.5438	1.987	3.931	ug/L
>	In	115	218468.545	218468.54				ug/L
	Sn	118	203.869	-0.00	0.0635	0.002	3.490	ug/L
	Sb	123	155565.707	0.71	51.4829	1.878	3.648	ug/L
	Ba	135	79997.291	0.25	66.4684	1.135	1.708	ug/L
	Ce	140	36.670	-0.00				ug/L
>	Tb	159	317950.423	317950.42				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	271455.859	1.02	51.4146	1.188	2.310	ug/L
	Tl	205	668886.466	2.52	51.4826	0.739	1.436	ug/L
	Pb	206	229139.310	0.86	53.6175	1.620	3.022	ug/L
	Pb	207	201947.974	0.76	50.0309	1.779	3.556	ug/L
	Pb	208	928491.049	3.50	51.6865	1.761	3.406	ug/L
	U	238	1268075.663	4.78	55.3505	1.704	3.079	ug/L
>	Bi	209	265359.053	265359.05				ug/L

Sample ID: L1201050305PS WG387531-03
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Na	23	7833170.261	67.64	2.4419	0.082	3.370	mg/L
Mg	24	2555580.117	22.41	1.2714	0.078	6.133	mg/L
K	39	1637493.482	10.84	0.2574	0.016	6.204	mg/L
Ca	43	91222.480	0.80	9.2269	0.455	4.932	mg/L
Fe	54	54078.162	0.24	0.0633	0.003	4.756	mg/L
Fe	57	17804.127	0.11	0.0629	0.005	8.747	mg/L
Sc-1	45	114143.604	114143.60				mg/L
Cl	35	42601.974	5677.67				mg/L
Kr	83	36.667	-16.33				mg/L
Br	81	13221.149	8144.93				mg/L
P	31	7335.228	-259.57				mg/L
S	34	159117.453	-16483.00				mg/L
Sr	88	399793.420	399740.08				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		80.581			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		79.203			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		81.092			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		83.164			

Sample ID: L1201050305PS WG387531-03
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050305PS WG387531-03
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050305SDL WG387531-04

Sample Date/Time: Saturday, January 28, 2012 18:52:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 53
Method File: C:\elandata\Method\6020a.mth
Sample Description: 25

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8904.766	0.00				ug/L
	Be	9	8.000	0.00	-0.0208	0.017	80.820	ug/L
	Al	27	2617.086	0.01	0.0315	0.115	363.739	ug/L
>	Sc	45	115038.997	115039.00				ug/L
	Ti	49	83.342	0.00	0.2185	0.041	18.814	ug/L
	V	51	1812.931	0.00	0.0153	0.017	109.017	ug/L
	Cr	52	5447.502	0.00	0.0045	0.016	347.873	ug/L
	Cr	53	536.738	-0.00	-0.2653	0.083	31.129	ug/L
	Mn	55	91105.891	0.35	9.9240	0.131	1.319	ug/L
	Co	59	180.004	0.00	0.0086	0.002	24.170	ug/L
	Ni	60	302.342	0.00	0.1620	0.010	6.029	ug/L
	Cu	65	224.339	0.00	0.0146	0.004	27.556	ug/L
	Zn	66	595.694	-0.00	0.1171	0.030	25.767	ug/L
>	Ge	72	262574.160	262574.16				ug/L
	As	75	-102.574	-0.00	0.0134	0.031	228.633	ug/L
	Se	77	57.334	0.00	0.2497	0.217	87.072	ug/L
	Se	82	-6.455	-0.00	-0.0869	0.091	104.621	ug/L
	Rb	85	167.337	0.00				mg/L
	Y	89	167608.882	-34781.70				ug/L
	Rh	103	14.000	-15.00				ug/L
	Mo	98	112.646	0.00	0.0652	0.004	5.777	ug/L
	Ag	107	71.334	0.00	0.0061	0.002	30.141	ug/L
	Cd	114	-0.302	-0.00	0.0087	0.003	36.617	ug/L
>	In	115	227774.475	227774.47				ug/L
	Sn	118	1227.157	0.00	0.3677	0.009	2.411	ug/L
	Sb	123	252.083	0.00	0.0927	0.009	9.850	ug/L
	Ba	135	3649.836	0.01	2.8986	0.024	0.826	ug/L
	Ce	140	86.676	-0.00				ug/L
>	Tb	159	330830.533	330830.53				ug/L
	Ho	165	0.000	-0.00				ug/L
	Tl	203	47.334	0.00	0.0122	0.001	9.884	ug/L
	Tl	205	96.677	0.00	0.0186	0.003	16.387	ug/L
	Pb	206	439.683	0.00	0.0594	0.006	10.242	ug/L
	Pb	207	383.013	0.00	0.0596	0.007	11.825	ug/L
	Pb	208	1699.084	0.00	0.0538	0.001	1.934	ug/L
	U	238	516.021	0.00	0.0249	0.001	4.359	ug/L
>	Bi	209	281775.100	281775.10				ug/L

Sample ID: L1201050305SDL WG387531-04
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Na	23	1602600.598	12.91	0.4857	0.021	4.353	mg/L
Mg	24	548788.039	4.77	0.2672	0.005	1.989	mg/L
K	39	678435.290	2.38	0.0508	0.004	6.961	mg/L
Ca	43	18031.305	0.16	1.7925	0.031	1.756	mg/L
Fe	54	32272.446	0.04	0.0088	0.003	30.311	mg/L
Fe	57	8478.509	0.03	0.0092	0.004	46.275	mg/L
Sc-1	45	115038.997	115039.00				mg/L
Cl	35	30214.008	-6710.29				mg/L
Kr	83	52.334	-0.67				mg/L
Br	81	7054.325	1978.11				mg/L
P	31	7427.316	-167.48				mg/L
S	34	166459.958	-9140.50				mg/L
Sr	88	82504.672	82451.33				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.152			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.577			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		84.377			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		88.309			

Sample ID: L1201050305SDL WG387531-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050305SDL WG387531-04
Report Date/Time: Saturday, January 28, 2012 18:54:28
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 19:00:03
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8587.761	0.00				ug/L
	Be	9	12453.322	0.11	55.3482	3.740	6.758	ug/L
	Al	27	192532.617	1.64	53.2935	1.848	3.467	ug/L
>	Sc	45	115968.115	115968.11				ug/L
	Ti	49	37615.123	0.14	98.2607	4.687	4.770	ug/L
	V	51	324275.439	1.22	48.3810	0.767	1.585	ug/L
	Cr	52	289013.509	1.07	49.1333	1.350	2.748	ug/L
	Cr	53	34608.530	0.13	48.6445	2.082	4.280	ug/L
	Mn	55	455114.961	1.72	49.3489	1.720	3.485	ug/L
	Co	59	352269.154	1.33	50.1758	0.392	0.782	ug/L
	Ni	60	73416.339	0.28	50.7311	0.706	1.391	ug/L
	Cu	65	71382.513	0.27	51.4275	0.563	1.095	ug/L
	Zn	66	42884.538	0.16	51.4213	1.326	2.579	ug/L
>	Ge	72	264898.152	264898.15				ug/L
	As	75	43677.811	0.17	49.8118	0.319	0.641	ug/L
	Se	77	3307.990	0.01	49.7176	1.656	3.330	ug/L
	Se	82	3924.950	0.01	48.4662	0.944	1.948	ug/L
	Rb	85	1511.486	0.01				mg/L
	Y	89	165592.279	-36798.30				ug/L
	Rh	103	16.667	-12.33				ug/L
	Mo	98	211558.403	0.92	101.7393	1.692	1.663	ug/L
	Ag	107	211237.696	0.92	49.6205	0.408	0.822	ug/L
	Cd	114	46441.926	0.20	48.5188	2.804	5.779	ug/L
>	In	115	229147.734	229147.73				ug/L
	Sn	118	166239.728	0.72	49.5433	0.646	1.305	ug/L
	Sb	123	160351.009	0.70	50.5651	0.338	0.669	ug/L
	Ba	135	63060.048	0.19	50.7064	1.527	3.012	ug/L
	Ce	140	56.673	-0.00				ug/L
>	Tb	159	328672.154	328672.15				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	271204.129	1.00	50.3311	0.812	1.613	ug/L
	Tl	205	675410.855	2.49	50.9314	1.596	3.134	ug/L
	Pb	206	220268.945	0.81	50.4998	0.605	1.198	ug/L
	Pb	207	204894.418	0.76	49.7400	0.245	0.492	ug/L
	Pb	208	914874.552	3.38	49.9006	0.962	1.929	ug/L
	U	238	1297162.665	4.79	55.4787	0.407	0.734	ug/L
>	Bi	209	270736.468	270736.47				ug/L

Sample ID: QC Std 6
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Na	23	16850727.395	144.32		5.1824	0.345	6.652	mg/L
Mg	24	10651426.510	91.86		5.2241	0.171	3.268	mg/L
K	39	23743968.617	201.25		4.9069	0.181	3.683	mg/L
Ca	43	51523.975	0.44		5.1157	0.038	0.748	mg/L
Fe	54	2051327.463	17.45		4.9193	0.160	3.248	mg/L
Fe	57	932069.700	7.99		5.1992	0.324	6.227	mg/L
> Sc-1	45	115968.115	115968.11					mg/L
Cl	35	25305.705	-11618.60					mg/L
Kr	83	42.334	-10.67					mg/L
Br	81	4591.939	-484.28					mg/L
P	31	7237.142	-357.65					mg/L
S	34	148898.481	-26701.97					mg/L
Sr	88	3341.004	3287.66					mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51	96.762				
	Cr	52	98.267				
	Cr	53					
	Mn	55	98.698				
	Co	59	100.352				
	Ni	60	101.462				
	Cu	65	102.855				
	Zn	66	102.843				
>	Ge	72		84.897			
	As	75	99.624				
	Se	77					
	Se	82	96.932				
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107	99.241				
	Cd	114	97.038				
>	In	115		83.075			
	Sn	118					
	Sb	123	101.130				
	Ba	135	101.413				
	Ce	140					
>	Tb	159		83.826			
	Ho	165					
	Tl	203	100.662				
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208	99.801				
	U	238	110.957				
>	Bi	209		84.849			

Sample ID: QC Std 6
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 19:02:16
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 19:07:40
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9121.670	0.00				ug/L
	Be	9	9.333	0.00	-0.0165	0.021	126.359	ug/L
	Al	27	1950.232	-0.00	-0.1666	0.117	70.197	ug/L
>	Sc	45	118420.494	118420.49				ug/L
	Ti	49	70.007	0.00	0.1785	0.044	24.646	ug/L
	V	51	1734.419	-0.00	-0.0033	0.015	456.683	ug/L
	Cr	52	5558.576	0.00	-0.0009	0.011	1179.358	ug/L
	Cr	53	520.069	-0.00	-0.3098	0.197	63.722	ug/L
	Mn	55	588.694	0.00	0.0230	0.010	42.543	ug/L
	Co	59	123.336	0.00	-0.0000	0.006	18498.546	ug/L
	Ni	60	77.001	-0.00	0.0034	0.002	68.893	ug/L
	Cu	65	97.002	0.00	-0.0800	0.011	13.168	ug/L
	Zn	66	544.023	-0.00	0.0370	0.025	67.342	ug/L
>	Ge	72	269517.832	269517.83				ug/L
	As	75	-103.006	-0.00	0.0158	0.023	144.656	ug/L
	Se	77	56.667	-0.00	0.2148	0.222	103.314	ug/L
	Se	82	1.913	-0.00	0.0166	0.019	111.756	ug/L
	Rb	85	24.000	-0.00				mg/L
	Y	89	177243.134	-25147.45				ug/L
	Rh	103	9.667	-19.33				ug/L
	Mo	98	69.161	0.00	0.0431	0.007	16.942	ug/L
	Ag	107	100.335	0.00	0.0123	0.006	45.801	ug/L
	Cd	114	9.366	0.00	0.0185	0.005	26.067	ug/L
>	In	115	235088.649	235088.65				ug/L
	Sn	118	507.082	-0.00	0.1471	0.003	2.182	ug/L
	Sb	123	88.034	0.00	0.0398	0.006	15.856	ug/L
	Ba	135	42.001	0.00	0.0161	0.007	42.047	ug/L
	Ce	140	33.337	-0.00				ug/L
>	Tb	159	339065.910	339065.91				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	89.335	0.00	0.0196	0.006	32.443	ug/L
	Tl	205	256.696	0.00	0.0300	0.005	17.514	ug/L
	Pb	206	236.339	0.00	0.0140	0.007	51.895	ug/L
	Pb	207	217.672	0.00	0.0203	0.003	13.578	ug/L
	Pb	208	960.031	0.00	0.0145	0.006	39.756	ug/L
	U	238	271.008	0.00	0.0147	0.005	33.031	ug/L
>	Bi	209	285101.467	285101.47				ug/L

Sample ID: QC Std 7
Report Date/Time: Saturday, January 28, 2012 19:09:52
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Na	23	83656.495	-0.32	0.0128	0.002	12.292	mg/L
Mg	24	2827.535	0.02	-0.0030	0.001	26.542	mg/L
K	39	466669.920	0.43	0.0032	0.007	228.322	mg/L
Ca	43	223.359	0.00	0.0030	0.003	113.893	mg/L
Fe	54	29659.429	0.01	0.0006	0.008	1344.356	mg/L
Fe	57	6783.439	0.01	-0.0015	0.001	88.202	mg/L
Sc-1	45	118420.494	118420.49				mg/L
Cl	35	27360.845	-9563.46				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	4880.769	-195.45				mg/L
P	31	7139.745	-455.05				mg/L
S	34	168161.633	-7438.82				mg/L
Sr	88	103.344	50.01				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		86.378			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.228			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		86.477			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.351			

Sample ID: QC Std 7
Report Date/Time: Saturday, January 28, 2012 19:09:52
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 19:09:52
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050306 WG387506-01

Sample Date/Time: Saturday, January 28, 2012 19:15:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 54
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9472.050	0.01				ug/L
	Be	9	4.000	-0.00	-0.0403	0.017	41.144	ug/L
	Al	27	5835.386	0.03	0.8728	0.148	16.993	ug/L
>	Sc	45	120313.636	120313.64				ug/L
	Ti	49	103.344	0.00	0.2634	0.030	11.394	ug/L
	V	51	1805.056	-0.00	0.0066	0.013	204.673	ug/L
	Cr	52	7733.333	0.01	0.3665	0.056	15.214	ug/L
	Cr	53	656.758	-0.00	-0.1178	0.097	81.999	ug/L
	Mn	55	565673.659	2.09	60.0836	1.111	1.849	ug/L
	Co	59	896.391	0.00	0.1079	0.001	1.374	ug/L
	Ni	60	6537.631	0.02	4.3854	0.224	5.118	ug/L
	Cu	65	9206.175	0.03	6.3738	0.197	3.097	ug/L
	Zn	66	2233.988	0.01	2.0444	0.028	1.372	ug/L
>	Ge	72	270173.147	270173.15				ug/L
	As	75	24.793	0.00	0.1595	0.059	37.115	ug/L
	Se	77	50.667	-0.00	0.1237	0.173	140.185	ug/L
	Se	82	21.276	0.00	0.2537	0.253	99.581	ug/L
	Rb	85	895.724	0.00				mg/L
	Y	89	173533.191	-28857.39				ug/L
	Rh	103	23.667	-5.33				ug/L
	Mo	98	136.459	0.00	0.0749	0.007	9.644	ug/L
	Ag	107	69.668	0.00	0.0052	0.002	39.031	ug/L
	Cd	114	9.734	0.00	0.0189	0.001	5.562	ug/L
>	In	115	234140.928	234140.93				ug/L
	Sn	118	113.467	-0.00	0.0329	0.001	3.386	ug/L
	Sb	123	114.410	0.00	0.0482	0.009	17.736	ug/L
	Ba	135	17771.110	0.05	13.9099	0.188	1.352	ug/L
	Ce	140	43.338	-0.00				ug/L
>	Tb	159	337147.630	337147.63				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	45.001	0.00	0.0119	0.002	13.583	ug/L
	Tl	205	76.675	0.00	0.0172	0.000	2.269	ug/L
	Pb	206	2444.716	0.01	0.5096	0.014	2.717	ug/L
	Pb	207	2006.595	0.01	0.4456	0.014	3.123	ug/L
	Pb	208	9420.176	0.03	0.4662	0.009	1.895	ug/L
	U	238	643.031	0.00	0.0305	0.001	2.024	ug/L
>	Bi	209	277581.579	277581.58				ug/L

Sample ID: L1201050306 WG387506-01
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Na	23	12893430.179	106.30	3.8236	0.188	4.921	mg/L
Mg	24	2751628.109	22.91	1.2996	0.073	5.610	mg/L
K	39	2105808.896	13.99	0.3344	0.009	2.668	mg/L
Ca	43	146714.908	1.22	14.0934	0.590	4.189	mg/L
Fe	54	172538.100	1.20	0.3348	0.024	7.182	mg/L
Fe	57	71526.274	0.55	0.3488	0.015	4.346	mg/L
Sc-1	45	120313.636	120313.64				mg/L
Cl	35	107939.944	71015.64				mg/L
Kr	83	45.001	-8.00				mg/L
Br	81	18689.618	13613.40				mg/L
P	31	8412.975	818.18				mg/L
S	34	185803.654	10203.20				mg/L
Sr	88	600278.883	600225.54				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		86.588			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.885			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		85.988			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		86.994			

Sample ID: L1201050306 WG387506-01
Report Date/Time: Saturday, January 28, 2012 19:17:29
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050306 WG387506-01
Report Date/Time: Saturday, January 28, 2012 19:17:29
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050306S WG387506-04

Sample Date/Time: Saturday, January 28, 2012 19:23:04
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 55
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9271.823	0.00				ug/L
	Be	9	1318.771	0.01	5.4630	0.386	7.071	ug/L
	Al	27	26224.553	0.20	6.2087	0.116	1.867	ug/L
>	Sc	45	123357.282	123357.28				ug/L
	Ti	49	113.346	0.00	0.2861	0.101	35.255	ug/L
	V	51	34975.786	0.12	4.8383	0.092	1.897	ug/L
	Cr	52	36629.037	0.11	5.2185	0.093	1.775	ug/L
	Cr	53	4404.938	0.01	5.0970	0.182	3.580	ug/L
	Mn	55	601132.762	2.20	63.2950	0.238	0.375	ug/L
	Co	59	36102.742	0.13	4.9816	0.074	1.495	ug/L
	Ni	60	12810.301	0.05	8.5601	0.151	1.762	ug/L
	Cu	65	16079.325	0.06	11.1407	0.076	0.683	ug/L
	Zn	66	6253.409	0.02	6.7569	0.132	1.954	ug/L
>	Ge	72	272532.878	272532.88				ug/L
	As	75	4425.616	0.02	5.0249	0.145	2.894	ug/L
	Se	77	390.676	0.00	5.1405	0.365	7.094	ug/L
	Se	82	405.639	0.00	4.8618	0.177	3.642	ug/L
	Rb	85	897.724	0.00				mg/L
	Y	89	172368.974	-30021.61				ug/L
	Rh	103	26.667	-2.33				ug/L
	Mo	98	143.829	0.00	0.0780	0.005	6.932	ug/L
	Ag	107	21082.181	0.09	4.8110	0.048	0.997	ug/L
	Cd	114	4855.018	0.02	4.9407	0.248	5.026	ug/L
>	In	115	235353.533	235353.53				ug/L
	Sn	118	128.401	-0.00	0.0371	0.002	6.176	ug/L
	Sb	123	16526.827	0.07	5.0848	0.058	1.137	ug/L
	Ba	135	23840.636	0.07	18.3586	0.520	2.832	ug/L
	Ce	140	63.340	-0.00				ug/L
>	Tb	159	342889.139	342889.14				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	28267.145	0.10	4.9404	0.024	0.483	ug/L
	Tl	205	68746.100	0.24	4.8907	0.186	3.801	ug/L
	Pb	206	26290.673	0.09	5.6394	0.123	2.183	ug/L
	Pb	207	22649.632	0.08	5.1477	0.058	1.122	ug/L
	Pb	208	105311.281	0.36	5.3738	0.009	0.159	ug/L
	U	238	134431.947	0.47	5.4137	0.116	2.141	ug/L
>	Bi	209	287711.544	287711.54				ug/L

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Na	23	12827436.810	103.08	3.7083	0.168	4.527	mg/L
Mg	24	2689511.953	21.82	1.2374	0.035	2.788	mg/L
K	39	2101889.141	13.53	0.3230	0.008	2.581	mg/L
Ca	43	147503.623	1.19	13.7994	0.096	0.693	mg/L
Fe	54	173271.126	1.17	0.3260	0.010	3.059	mg/L
Fe	57	67374.802	0.50	0.3176	0.025	7.859	mg/L
Sc-1	45	123357.282	123357.28				mg/L
Cl	35	107694.193	70769.89				mg/L
Kr	83	43.334	-9.67				mg/L
Br	81	19226.843	14150.63				mg/L
P	31	8593.776	998.98				mg/L
S	34	194812.850	19212.40				mg/L
Sr	88	591402.907	591349.57				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.344			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.324			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.452			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.169			

Sample ID: L1201050306S WG387506-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050306S WG387506-04
Report Date/Time: Saturday, January 28, 2012 19:25:17
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201050306SD WG387506-05

Sample Date/Time: Saturday, January 28, 2012 19:30:52
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 56
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8470.994	0.00				ug/L
	Be	9	1312.104	0.01	5.9303	0.131	2.212	ug/L
	Al	27	31308.742	0.26	8.3193	0.620	7.450	ug/L
>	Sc	45	112978.012	112978.01				ug/L
	Ti	49	130.014	0.00	0.3421	0.123	35.995	ug/L
	V	51	34065.994	0.12	4.8980	0.053	1.088	ug/L
	Cr	52	35727.123	0.12	5.2994	0.053	1.003	ug/L
	Cr	53	4241.507	0.01	5.0969	0.439	8.614	ug/L
	Mn	55	584504.888	2.23	63.9266	1.535	2.401	ug/L
	Co	59	35755.971	0.14	5.1246	0.150	2.934	ug/L
	Ni	60	12449.765	0.05	8.6399	0.360	4.164	ug/L
	Cu	65	16119.070	0.06	11.6077	0.209	1.801	ug/L
	Zn	66	7887.477	0.03	9.0423	0.123	1.357	ug/L
>	Ge	72	262367.610	262367.61				ug/L
	As	75	4457.407	0.02	5.2507	0.168	3.191	ug/L
	Se	77	380.009	0.00	5.2034	0.358	6.884	ug/L
	Se	82	412.930	0.00	5.1408	0.469	9.129	ug/L
	Rb	85	911.726	0.00				mg/L
	Y	89	169265.550	-33125.03				ug/L
	Rh	103	22.667	-6.33				ug/L
	Mo	98	133.610	0.00	0.0754	0.007	8.976	ug/L
	Ag	107	21497.576	0.09	5.0728	0.042	0.822	ug/L
	Cd	114	4772.916	0.02	5.0202	0.047	0.934	ug/L
>	In	115	227644.889	227644.89				ug/L
	Sn	118	121.734	-0.00	0.0363	0.003	9.471	ug/L
	Sb	123	16141.026	0.07	5.1346	0.119	2.313	ug/L
	Ba	135	23242.935	0.07	18.7014	0.320	1.712	ug/L
	Ce	140	126.681	-0.00				ug/L
>	Tb	159	328134.291	328134.29				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	27688.879	0.10	5.0049	0.104	2.073	ug/L
	Tl	205	69182.986	0.25	5.0894	0.152	2.979	ug/L
	Pb	206	25358.455	0.09	5.6252	0.149	2.642	ug/L
	Pb	207	22103.166	0.08	5.1950	0.039	0.753	ug/L
	Pb	208	102310.199	0.37	5.3990	0.079	1.467	ug/L
	U	238	128036.386	0.46	5.3326	0.060	1.121	ug/L
>	Bi	209	278203.050	278203.05				ug/L

Sample ID: L1201050306SD WG387506-05
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Na	23	12024380.003	105.44	3.7928	0.065	1.721	mg/L
Mg	24	2591732.895	22.95	1.3021	0.046	3.550	mg/L
K	39	2029161.795	14.46	0.3458	0.024	6.863	mg/L
Ca	43	140609.285	1.24	14.3841	1.080	7.508	mg/L
Fe	54	168702.794	1.26	0.3512	0.019	5.493	mg/L
Fe	57	65839.324	0.53	0.3407	0.004	1.164	mg/L
Sc-1	45	112978.012	112978.01				mg/L
Cl	35	104356.147	67431.85				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	19846.278	14770.06				mg/L
P	31	7504.714	-90.08				mg/L
S	34	186220.524	10620.07				mg/L
Sr	88	574782.564	574729.23				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.086			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.530			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		83.689			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		87.189			

Sample ID: L1201050306SD WG387506-05
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201050306SD WG387506-05
Report Date/Time: Saturday, January 28, 2012 19:33:05
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 19:38:40
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8971.524	-0.00				ug/L
	Be	9	13162.391	0.11	54.5260	2.286	4.192	ug/L
	Al	27	199105.277	1.58	51.3499	3.508	6.831	ug/L
>	Sc	45	124456.294	124456.29				ug/L
	Ti	49	40301.255	0.14	98.0697	1.351	1.377	ug/L
	V	51	357751.496	1.25	49.7872	1.213	2.436	ug/L
	Cr	52	318080.379	1.10	50.4479	1.414	2.802	ug/L
	Cr	53	39125.602	0.14	51.3049	1.787	3.484	ug/L
	Mn	55	496194.994	1.75	50.1465	0.588	1.173	ug/L
	Co	59	379063.772	1.33	50.3638	0.564	1.120	ug/L
	Ni	60	78072.150	0.27	50.3118	0.248	0.494	ug/L
	Cu	65	75516.375	0.27	50.7490	0.416	0.820	ug/L
	Zn	66	45263.043	0.16	50.5875	0.305	0.602	ug/L
>	Ge	72	283907.131	283907.13				ug/L
	As	75	47506.328	0.17	50.5584	0.625	1.237	ug/L
	Se	77	3562.095	0.01	49.8990	0.356	0.714	ug/L
	Se	82	4252.052	0.01	48.9799	1.129	2.305	ug/L
	Rb	85	1623.508	0.01				mg/L
	Y	89	176419.738	-25970.85				ug/L
	Rh	103	21.334	-7.67				ug/L
	Mo	98	224573.481	0.92	101.0500	3.345	3.310	ug/L
	Ag	107	227485.213	0.93	49.9832	0.528	1.057	ug/L
	Cd	114	51654.801	0.21	50.4451	3.507	6.953	ug/L
>	In	115	244955.851	244955.85				ug/L
	Sn	118	181098.592	0.74	50.4875	1.468	2.907	ug/L
	Sb	123	172830.057	0.71	50.9848	0.887	1.740	ug/L
	Ba	135	68951.198	0.19	51.2362	0.670	1.308	ug/L
	Ce	140	73.341	-0.00				ug/L
>	Tb	159	355433.049	355433.05				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	290548.272	1.01	50.5946	1.119	2.211	ug/L
	Tl	205	720579.112	2.50	50.9930	1.595	3.128	ug/L
	Pb	206	231726.466	0.80	49.8380	0.647	1.299	ug/L
	Pb	207	220395.357	0.76	50.1998	1.386	2.761	ug/L
	Pb	208	973401.957	3.37	49.8068	0.515	1.034	ug/L
	U	238	1379516.959	4.78	55.3501	1.713	3.096	ug/L
>	Bi	209	288632.811	288632.81				ug/L

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 19:40:53
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Na	23	17757917.857	141.71	5.0891	0.200	3.924	mg/L
Mg	24	11311851.548	90.98	5.1736	0.288	5.576	mg/L
K	39	25744103.038	203.51	4.9620	0.233	4.701	mg/L
Ca	43	54150.812	0.43	5.0141	0.238	4.753	mg/L
Fe	54	2239746.479	17.77	5.0074	0.211	4.210	mg/L
Fe	57	1003422.718	8.02	5.2192	0.309	5.922	mg/L
Sc-1	45	124456.294	124456.29				mg/L
Cl	35	27343.461	-9580.84				mg/L
Kr	83	50.001	-3.00				mg/L
Br	81	5601.216	525.00				mg/L
P	31	8184.691	589.90				mg/L
S	34	166209.485	-9390.97				mg/L
Sr	88	3777.902	3724.56				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	99.574				
Cr	52	100.896				
Cr	53					
Mn	55	100.293				
Co	59	100.728				
Ni	60	100.624				
Cu	65	101.498				
Zn	66	101.175				
Ge	72		90.989			
As	75	101.117				
Se	77					
Se	82	97.960				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	99.966				
Cd	114	100.890				
In	115		88.806			
Sn	118					
Sb	123	101.970				
Ba	135	102.472				
Ce	140					
Tb	159		90.651			
Ho	165					
Tl	203	101.189				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.614				
U	238	110.700				
Bi	209		90.458			

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 19:40:53
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 19:40:53
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 19:46:17
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9104.974	-0.00				ug/L
	Be	9	8.000	0.00	-0.0239	0.008	34.726	ug/L
	Al	27	1866.886	-0.00	-0.2207	0.123	55.750	ug/L
>	Sc	45	124693.472	124693.47				ug/L
	Ti	49	60.006	0.00	0.1486	0.021	14.372	ug/L
	V	51	1859.727	0.00	0.0082	0.010	125.357	ug/L
	Cr	52	5759.714	0.00	0.0081	0.015	189.405	ug/L
	Cr	53	550.073	-0.00	-0.2883	0.105	36.418	ug/L
	Mn	55	624.363	0.00	0.0251	0.004	14.142	ug/L
	Co	59	144.669	0.00	0.0024	0.001	60.479	ug/L
	Ni	60	73.334	-0.00	-0.0004	0.002	492.866	ug/L
	Cu	65	99.668	0.00	-0.0799	0.002	3.063	ug/L
	Zn	66	555.691	-0.00	0.0339	0.015	43.166	ug/L
>	Ge	72	276698.122	276698.12				ug/L
	As	75	-57.867	0.00	0.0683	0.016	22.759	ug/L
	Se	77	42.667	-0.00	-0.0071	0.187	2640.513	ug/L
	Se	82	9.589	0.00	0.1084	0.111	102.730	ug/L
	Rb	85	32.667	0.00				mg/L
	Y	89	174414.019	-27976.56				ug/L
	Rh	103	10.333	-18.67				ug/L
	Mo	98	90.714	0.00	0.0530	0.002	4.311	ug/L
	Ag	107	132.336	0.00	0.0194	0.001	3.273	ug/L
	Cd	114	8.393	0.00	0.0175	0.005	26.523	ug/L
>	In	115	236335.115	236335.11				ug/L
	Sn	118	498.682	-0.00	0.1438	0.003	2.024	ug/L
	Sb	123	77.579	0.00	0.0365	0.006	15.810	ug/L
	Ba	135	50.667	0.00	0.0224	0.004	17.967	ug/L
	Ce	140	23.336	-0.00				ug/L
>	Tb	159	342811.848	342811.85				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	104.335	0.00	0.0224	0.004	15.764	ug/L
	Tl	205	230.026	0.00	0.0282	0.001	3.887	ug/L
	Pb	206	239.339	0.00	0.0151	0.005	33.966	ug/L
	Pb	207	221.338	0.00	0.0217	0.004	16.880	ug/L
	Pb	208	1015.035	0.00	0.0179	0.003	18.855	ug/L
	U	238	368.012	0.00	0.0188	0.003	15.558	ug/L
>	Bi	209	282107.647	282107.65				ug/L

Sample ID: QC Std 7
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Approved: January 30, 2012
Erin D. Long

Na	23	88297.512	-0.32	0.0128	0.001	8.679	mg/L
Mg	24	3564.465	0.03	-0.0028	0.000	9.952	mg/L
K	39	463838.472	0.20	-0.0023	0.004	177.856	mg/L
Ca	43	210.024	0.00	0.0006	0.003	391.803	mg/L
Fe	54	29573.369	-0.00	-0.0034	0.002	70.140	mg/L
Fe	57	7000.308	0.01	-0.0022	0.003	120.844	mg/L
Sc-1	45	124693.472	124693.47				mg/L
Cl	35	27184.958	-9739.34				mg/L
Kr	83	47.334	-5.67				mg/L
Br	81	4892.103	-184.11				mg/L
P	31	7707.575	112.78				mg/L
S	34	164957.491	-10642.96				mg/L
Sr	88	130.014	76.68				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.679			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.680			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.432			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		88.413			

Sample ID: QC Std 7
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 19:48:29
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, January 28, 2012 19:53:55
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9722.368	0.01				ug/L
	Be	9	9.333	0.00	-0.0176	0.020	113.021	ug/L
	Al	27	2800.471	0.01	0.0507	0.050	99.111	ug/L
>	Sc	45	120499.599	120499.60				ug/L
	Ti	49	76.675	0.00	0.1920	0.127	66.234	ug/L
	V	51	4521.060	0.01	0.3954	0.024	6.011	ug/L
	Cr	52	10497.046	0.02	0.8074	0.029	3.613	ug/L
	Cr	53	1103.517	0.00	0.4854	0.170	35.114	ug/L
	Mn	55	5337.098	0.02	0.5187	0.032	6.158	ug/L
	Co	59	3161.965	0.01	0.4175	0.017	4.126	ug/L
	Ni	60	2525.741	0.01	1.6363	0.038	2.348	ug/L
	Cu	65	1273.443	0.00	0.7389	0.012	1.675	ug/L
	Zn	66	5836.436	0.02	6.2183	0.222	3.578	ug/L
>	Ge	72	274484.992	274484.99				ug/L
	As	75	227.479	0.00	0.3805	0.056	14.682	ug/L
	Se	77	74.667	0.00	0.4640	0.250	53.774	ug/L
	Se	82	25.603	0.00	0.2981	0.076	25.385	ug/L
	Rb	85	24.667	-0.00				mg/L
	Y	89	174353.238	-28037.35				ug/L
	Rh	103	4.333	-24.67				ug/L
	Mo	98	49.973	0.00	0.0343	0.006	17.422	ug/L
	Ag	107	1932.577	0.01	0.4347	0.011	2.616	ug/L
	Cd	114	237.439	0.00	0.2521	0.026	10.347	ug/L
>	In	115	233519.211	233519.21				ug/L
	Sn	118	159.468	-0.00	0.0464	0.003	7.421	ug/L
	Sb	123	1427.752	0.01	0.4544	0.022	4.768	ug/L
	Ba	135	1025.740	0.00	0.7784	0.015	1.956	ug/L
	Ce	140	10.001	-0.00				ug/L
>	Tb	159	340862.884	340862.88				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	516.355	0.00	0.0947	0.004	3.887	ug/L
	Tl	205	1240.217	0.00	0.1003	0.009	9.377	ug/L
	Pb	206	2062.276	0.01	0.4116	0.008	1.831	ug/L
	Pb	207	1911.238	0.01	0.4108	0.010	2.434	ug/L
	Pb	208	8608.516	0.03	0.4107	0.006	1.379	ug/L
	U	238	11013.717	0.04	0.4507	0.004	0.780	ug/L
>	Bi	209	285234.190	285234.19				ug/L

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 19:56:09
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Na	23	34561.770	-0.75	-0.0022	0.000	20.795	mg/L
Mg	24	953.491	0.01	-0.0040	0.000	4.981	mg/L
K	39	438931.891	0.13	-0.0042	0.005	114.229	mg/L
Ca	43	166.685	0.00	-0.0029	0.002	60.070	mg/L
Fe	54	29048.262	0.00	-0.0022	0.005	221.390	mg/L
Fe	57	6079.497	0.00	-0.0060	0.002	25.250	mg/L
Sc-1	45	120499.599	120499.60				mg/L
Cl	35	25040.231	-11884.07				mg/L
Kr	83	45.667	-7.33				mg/L
Br	81	4527.899	-548.32				mg/L
P	31	6416.486	-1178.31				mg/L
S	34	155401.900	-20198.56				mg/L
Sr	88	83.342	30.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	98.853				
Cr	52	100.923				
Cr	53					
Mn	55	103.749				
Co	59	104.364				
Ni	60	102.271				
Cu	65	92.365				
Zn	66	99.493				
Ge	72		87.970			
As	75	95.133				
Se	77					
Se	82	74.513				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	108.675				
Cd	114	126.038				
In	115		84.659			
Sn	118					
Sb	123	113.601				
Ba	135	103.792				
Ce	140					
Tb	159		86.935			
Ho	165					
Tl	203	118.401				
Tl	205					
Pb	206					
Pb	207					
Pb	208	102.672				
U	238	112.680				
Bi	209		89.393			

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 19:56:09
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 8	Cd	114	LLCCV IS OUT OF LIMITS (+/-20%)

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 19:56:09
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: PBW 89 WG387787-02

Sample Date/Time: Saturday, January 28, 2012 20:01:34
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 57
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10139.504	0.00				ug/L
	Be	9	6.667	-0.00	-0.0311	0.005	16.337	ug/L
	Al	27	5468.478	0.02	0.6350	0.232	36.569	ug/L
>	Sc	45	133462.660	133462.66				ug/L
	Ti	49	70.007	0.00	0.1661	0.062	37.312	ug/L
	V	51	1834.535	-0.00	-0.0066	0.017	263.048	ug/L
	Cr	52	6343.811	0.00	0.0602	0.004	6.457	ug/L
	Cr	53	546.739	-0.00	-0.3233	0.035	10.875	ug/L
	Mn	55	694.036	0.00	0.0292	0.001	4.490	ug/L
	Co	59	76.668	0.00	-0.0073	0.001	16.358	ug/L
	Ni	60	78.001	-0.00	0.0006	0.006	955.786	ug/L
	Cu	65	130.669	0.00	-0.0623	0.006	10.150	ug/L
	Zn	66	670.367	-0.00	0.1337	0.032	24.083	ug/L
>	Ge	72	288908.276	288908.28				ug/L
	As	75	-119.159	-0.00	0.0067	0.022	333.832	ug/L
	Se	77	52.000	-0.00	0.0926	0.138	149.221	ug/L
	Se	82	0.577	-0.00	0.0002	0.069	42438.957	ug/L
	Rb	85	36.667	0.00				mg/L
	Y	89	192057.621	-10332.96				ug/L
	Rh	103	11.667	-17.33				ug/L
	Mo	98	110.792	0.00	0.0589	0.003	5.590	ug/L
	Ag	107	62.668	0.00	0.0026	0.003	112.338	ug/L
	Cd	114	3.192	0.00	0.0120	0.005	41.435	ug/L
>	In	115	253578.639	253578.64				ug/L
	Sn	118	120.801	-0.00	0.0323	0.001	1.981	ug/L
	Sb	123	135.371	0.00	0.0513	0.004	7.584	ug/L
	Ba	135	42.667	0.00	0.0141	0.004	31.039	ug/L
	Ce	140	50.005	-0.00				ug/L
>	Tb	159	367423.455	367423.45				ug/L
	Ho	165	26.669	0.00				ug/L
	Tl	203	29.667	0.00	0.0088	0.001	7.480	ug/L
	Tl	205	46.671	0.00	0.0148	0.000	2.626	ug/L
	Pb	206	194.671	0.00	0.0032	0.004	137.949	ug/L
	Pb	207	155.003	0.00	0.0045	0.003	68.610	ug/L
	Pb	208	738.354	0.00	0.0015	0.002	166.202	ug/L
	U	238	43.667	0.00	0.0054	0.000	6.181	ug/L
>	Bi	209	296727.818	296727.82				ug/L

Sample ID: PBW 89 WG387787-02
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Approved: January 30, 2012
Erin D. Long

Na	23	42348.388	-0.71	-0.0011	0.001	106.982	mg/L
Mg	24	1296.904	0.01	-0.0039	0.000	5.131	mg/L
K	39	446248.239	-0.17	-0.0114	0.006	51.085	mg/L
Ca	43	276.699	0.00	0.0051	0.002	36.866	mg/L
Fe	54	64221.918	0.24	0.0656	0.007	10.946	mg/L
Fe	57	7040.351	0.00	-0.0045	0.002	35.111	mg/L
Sc-1	45	133462.660	133462.66				mg/L
Cl	35	31378.315	-5545.99				mg/L
Kr	83	48.667	-4.33				mg/L
Br	81	5445.112	368.90				mg/L
P	31	14689.990	7095.20				mg/L
S	34	170978.449	-4622.01				mg/L
Sr	88	276.699	223.36				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		92.592			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.932			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.710			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.995			

Sample ID: PBW 89 WG387787-02
Report Date/Time: Saturday, January 28, 2012 20:03:47
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 89 WG387787-02
Report Date/Time: Saturday, January 28, 2012 20:03:47
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: LCSW 89 WG387787-03

Sample Date/Time: Saturday, January 28, 2012 20:09:22
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 58
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9755.714	0.00				ug/L
	Be	9	6271.026	0.05	25.5473	1.024	4.009	ug/L
	Al	27	117844.139	0.92	29.6182	0.850	2.870	ug/L
>	Sc	45	126453.241	126453.24				ug/L
	Ti	49	90.010	0.00	0.2234	0.047	21.098	ug/L
	V	51	173442.464	0.62	24.6366	0.194	0.789	ug/L
	Cr	52	161252.234	0.56	25.7880	0.121	0.469	ug/L
	Cr	53	18362.042	0.06	24.1683	0.469	1.941	ug/L
	Mn	55	244324.205	0.88	25.3171	0.460	1.815	ug/L
	Co	59	184290.592	0.67	25.1179	0.341	1.359	ug/L
	Ni	60	37895.712	0.14	25.0346	0.547	2.184	ug/L
	Cu	65	37157.044	0.13	25.5510	0.642	2.513	ug/L
	Zn	66	20923.781	0.07	23.6733	0.164	0.692	ug/L
>	Ge	72	276693.829	276693.83				ug/L
	As	75	21415.649	0.08	23.4596	0.344	1.465	ug/L
	Se	77	1503.469	0.01	21.2580	0.818	3.849	ug/L
	Se	82	1792.852	0.01	21.1857	0.597	2.820	ug/L
	Rb	85	45.334	0.00				mg/L
	Y	89	178925.395	-23465.19				ug/L
	Rh	103	23.000	-6.00				ug/L
	Mo	98	52.055	0.00	0.0346	0.008	22.985	ug/L
	Ag	107	112527.667	0.47	25.1969	0.522	2.071	ug/L
	Cd	114	23778.439	0.10	23.6705	0.804	3.398	ug/L
>	In	115	240271.589	240271.59				ug/L
	Sn	118	587.354	0.00	0.1668	0.010	5.925	ug/L
	Sb	123	81312.203	0.34	24.4679	0.765	3.128	ug/L
	Ba	135	33685.988	0.10	25.5854	0.908	3.551	ug/L
	Ce	140	100.011	-0.00				ug/L
>	Tb	159	347707.856	347707.86				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	143337.831	0.50	25.2747	0.850	3.362	ug/L
	Tl	205	357117.421	1.25	25.5740	0.718	2.808	ug/L
	Pb	206	120761.046	0.42	26.2732	0.148	0.564	ug/L
	Pb	207	105701.195	0.37	24.3571	0.487	1.999	ug/L
	Pb	208	491331.699	1.72	25.4344	0.324	1.273	ug/L
	U	238	674219.934	2.37	27.3878	0.565	2.062	ug/L
>	Bi	209	285117.486	285117.49				ug/L

Sample ID: LCSW 89 WG387787-03
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	Na	23	96427.878	-0.27	0.0148	0.001	5.674	mg/L
	Mg	24	2970.830	0.02	-0.0031	0.000	3.665	mg/L
	K	39	428967.710	-0.13	-0.0103	0.003	27.151	mg/L
	Ca	43	443.390	0.00	0.0218	0.006	25.929	mg/L
	Fe	54	63364.261	0.26	0.0711	0.004	6.274	mg/L
	Fe	57	6189.584	0.00	-0.0069	0.002	23.742	mg/L
>	Sc-1	45	126453.241	126453.24				mg/L
	Cl	35	26735.486	-10188.82				mg/L
	Kr	83	42.334	-10.67				mg/L
	Br	81	4665.306	-410.91				mg/L
	P	31	13088.272	5493.48				mg/L
	S	34	151232.566	-24367.89				mg/L
	Sr	88	343.375	290.04				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72		88.678			
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115		87.107			
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159		88.681			
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209		89.356			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 89 WG387787-03
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Method 6020 - Summary Report

Sample ID: L1201053601 WG387787-01

Sample Date/Time: Saturday, January 28, 2012 20:17:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 59
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9789.149	-0.00				ug/L
	Be	9	5.333	-0.00	-0.0369	0.012	32.608	ug/L
	Al	27	27997.591	0.18	5.7287	0.453	7.914	ug/L
>	Sc	45	141020.616	141020.62				ug/L
	Ti	49	210.024	0.00	0.4923	0.068	13.795	ug/L
	V	51	19965.736	0.06	2.4450	0.047	1.923	ug/L
	Cr	52	15170.623	0.03	1.4258	0.054	3.810	ug/L
	Cr	53	1707.013	0.00	1.1670	0.062	5.344	ug/L
	Mn	55	8738.670	0.03	0.8156	0.005	0.617	ug/L
	Co	59	301.342	0.00	0.0214	0.003	11.689	ug/L
	Ni	60	711.038	0.00	0.3945	0.032	8.199	ug/L
	Cu	65	294.008	0.00	0.0431	0.014	32.121	ug/L
	Zn	66	2778.158	0.01	2.4292	0.041	1.701	ug/L
>	Ge	72	293352.455	293352.46				ug/L
	As	75	403.725	0.00	0.5455	0.041	7.580	ug/L
	Se	77	97.334	0.00	0.7044	0.063	8.991	ug/L
	Se	82	50.233	0.00	0.5554	0.133	23.963	ug/L
	Rb	85	9956.715	0.03				mg/L
	Y	89	193943.633	-8446.95				ug/L
	Rh	103	41.334	12.33				ug/L
	Mo	98	3559.957	0.01	1.5707	0.055	3.476	ug/L
	Ag	107	513.354	0.00	0.0992	0.003	2.657	ug/L
	Cd	114	17.886	0.00	0.0261	0.004	14.381	ug/L
>	In	115	251457.180	251457.18				ug/L
	Sn	118	375.075	-0.00	0.1017	0.004	3.985	ug/L
	Sb	123	268.625	0.00	0.0899	0.001	1.634	ug/L
	Ba	135	63048.727	0.17	45.2446	0.958	2.116	ug/L
	Ce	140	350.043	0.00				ug/L
>	Tb	159	368109.794	368109.79				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	65.334	0.00	0.0146	0.002	10.514	ug/L
	Tl	205	163.351	0.00	0.0226	0.002	10.298	ug/L
	Pb	206	387.680	0.00	0.0420	0.003	7.846	ug/L
	Pb	207	324.676	0.00	0.0407	0.006	13.927	ug/L
	Pb	208	1534.071	0.00	0.0396	0.001	2.447	ug/L
	U	238	7088.421	0.02	0.2748	0.010	3.575	ug/L
>	Bi	209	302757.893	302757.89				ug/L

Sample ID: L1201053601 WG387787-01
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Na	23	28013796.886	197.79	7.0930	0.138	1.949	mg/L
Mg	24	5764065.689	40.91	2.3242	0.051	2.188	mg/L
K	39	3944121.001	24.51	0.5913	0.034	5.671	mg/L
Ca	43	148379.567	1.05	12.1548	0.304	2.503	mg/L
Fe	54	65600.356	0.23	0.0607	0.003	4.576	mg/L
Fe	57	14176.838	0.05	0.0268	0.005	18.359	mg/L
> Sc-1	45	141020.616	141020.62				mg/L
Cl	35	142617.598	105693.30				mg/L
Kr	83	50.001	-3.00				mg/L
Br	81	19768.790	14692.57				mg/L
P	31	17085.878	9491.08				mg/L
S	34	293421.498	117821.04				mg/L
Sr	88	1131505.016	1131451.68				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		94.017			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		91.163			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		93.885			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		94.885			

Sample ID: L1201053601 WG387787-01
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053601 WG387787-01
Report Date/Time: Saturday, January 28, 2012 20:19:22
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Method 6020 - Summary Report

Sample ID: L1201053601S WG387787-04

Sample Date/Time: Saturday, January 28, 2012 20:24:56
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 60
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10540.017	0.01				ug/L
	Be	9	6679.346	0.05	25.6992	0.295	1.148	ug/L
	Al	27	119720.559	0.88	28.4329	1.291	4.540	ug/L
>	Sc	45	133732.093	133732.09				ug/L
	Ti	49	153.350	0.00	0.3925	0.205	52.191	ug/L
	V	51	187175.834	0.69	27.2976	0.895	3.280	ug/L
	Cr	52	161108.737	0.58	26.4551	0.860	3.251	ug/L
	Cr	53	18950.082	0.07	25.6457	0.317	1.235	ug/L
	Mn	55	239145.303	0.89	25.4269	0.860	3.384	ug/L
	Co	59	177518.789	0.66	24.8162	0.551	2.222	ug/L
	Ni	60	37438.953	0.14	25.3750	0.395	1.557	ug/L
	Cu	65	36499.798	0.14	25.7478	0.470	1.825	ug/L
	Zn	66	24463.778	0.09	28.5132	0.299	1.048	ug/L
>	Ge	72	269739.685	269739.69				ug/L
	As	75	21666.989	0.08	24.3416	0.233	0.956	ug/L
	Se	77	1555.479	0.01	22.5972	0.466	2.064	ug/L
	Se	82	1831.853	0.01	22.2041	0.717	3.228	ug/L
	Rb	85	9849.918	0.04				mg/L
	Y	89	177778.570	-24612.01				ug/L
	Rh	103	51.334	22.33				ug/L
	Mo	98	3345.198	0.01	1.5494	0.030	1.944	ug/L
	Ag	107	108087.508	0.45	24.2768	0.673	2.772	ug/L
	Cd	114	24601.813	0.10	24.5468	0.389	1.585	ug/L
>	In	115	239610.101	239610.10				ug/L
	Sn	118	282.271	-0.00	0.0803	0.005	5.836	ug/L
	Sb	123	81056.756	0.34	24.4630	0.945	3.864	ug/L
	Ba	135	94129.825	0.27	70.4934	2.242	3.180	ug/L
	Ce	140	176.686	0.00				ug/L
>	Tb	159	352789.520	352789.52				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	147309.753	0.49	24.7644	0.414	1.673	ug/L
	Tl	205	363435.064	1.22	24.8374	0.793	3.193	ug/L
	Pb	206	125113.729	0.42	25.9673	0.840	3.235	ug/L
	Pb	207	111178.121	0.37	24.4364	0.887	3.631	ug/L
	Pb	208	510113.462	1.70	25.1861	0.497	1.973	ug/L
	U	238	734486.127	2.46	28.4550	0.473	1.662	ug/L
>	Bi	209	298931.057	298931.06				ug/L

Sample ID: L1201053601S WG387787-04
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	Na	23	28192367.178	209.74	7.5204	0.067	0.893	mg/L
	Mg	24	5738567.693	42.91	2.4378	0.001	0.027	mg/L
	K	39	3802029.883	24.93	0.6015	0.025	4.164	mg/L
	Ca	43	143557.197	1.07	12.3954	0.390	3.145	mg/L
	Fe	54	63076.041	0.23	0.0628	0.007	11.222	mg/L
	Fe	57	12059.956	0.04	0.0199	0.004	19.891	mg/L
>	Sc-1	45	133732.093	133732.09				mg/L
	Cl	35	131367.444	94443.14				mg/L
	Kr	83	43.334	-9.67				mg/L
	Br	81	19097.864	14021.65				mg/L
	P	31	15039.576	7444.78				mg/L
	S	34	268784.933	93184.48				mg/L
	Sr	88	1076201.692	1076148.35				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72		86.449			
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115		86.868			
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159		89.977			
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209		93.685			

Sample ID: L1201053601S WG387787-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053601S WG387787-04
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Method 6020 - Summary Report

Sample ID: L1201053601SD WG387787-05

Sample Date/Time: Saturday, January 28, 2012 20:32:43
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 61
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9755.711	-0.00				ug/L
	Be	9	6558.583	0.05	25.3445	2.885	11.385	ug/L
	Al	27	118893.930	0.88	28.3312	3.551	12.534	ug/L
>	Sc	45	133938.476	133938.48				ug/L
	Ti	49	236.694	0.00	0.6057	0.054	8.890	ug/L
	V	51	188365.055	0.69	27.5146	0.786	2.855	ug/L
	Cr	52	165809.662	0.60	27.2839	0.339	1.243	ug/L
	Cr	53	19972.589	0.07	27.1107	0.805	2.969	ug/L
	Mn	55	245243.169	0.91	26.0974	0.419	1.606	ug/L
	Co	59	175534.353	0.65	24.5679	0.361	1.471	ug/L
	Ni	60	37526.385	0.14	25.4570	0.442	1.737	ug/L
	Cu	65	36033.444	0.13	25.4424	0.319	1.252	ug/L
	Zn	66	21787.670	0.08	25.3594	0.541	2.133	ug/L
>	Ge	72	269419.145	269419.15				ug/L
	As	75	21928.032	0.08	24.6592	0.369	1.496	ug/L
	Se	77	1544.810	0.01	22.4628	1.384	6.162	ug/L
	Se	82	1871.509	0.01	22.7107	0.996	4.388	ug/L
	Rb	85	9614.643	0.04				mg/L
	Y	89	176443.930	-25946.65				ug/L
	Rh	103	43.334	14.33				ug/L
	Mo	98	3473.106	0.01	1.6463	0.047	2.839	ug/L
	Ag	107	107976.802	0.46	24.8308	0.380	1.530	ug/L
	Cd	114	24202.942	0.10	24.7342	0.730	2.953	ug/L
>	In	115	234015.092	234015.09				ug/L
	Sn	118	260.137	-0.00	0.0757	0.003	3.303	ug/L
	Sb	123	82028.006	0.35	25.3373	0.528	2.082	ug/L
	Ba	135	95083.999	0.27	70.9775	0.217	0.306	ug/L
	Ce	140	256.697	0.00				ug/L
>	Tb	159	353876.292	353876.29				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	149601.057	0.50	25.1620	0.294	1.169	ug/L
	Tl	205	372406.985	1.25	25.4610	0.348	1.365	ug/L
	Pb	206	128016.103	0.43	26.5833	0.572	2.151	ug/L
	Pb	207	111331.590	0.37	24.4816	0.619	2.528	ug/L
	Pb	208	518246.180	1.73	25.6031	0.543	2.121	ug/L
	U	238	739241.764	2.47	28.6585	0.779	2.717	ug/L
>	Bi	209	298772.957	298772.96				ug/L

Sample ID: L1201053601SD WG387787-05
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Na	23	26942375.132	201.25	7.2170	0.800	11.082	mg/L
Mg	24	5564588.572	41.78	2.3739	0.273	11.494	mg/L
K	39	3723926.117	24.39	0.5884	0.055	9.421	mg/L
Ca	43	143767.136	1.08	12.4301	0.860	6.922	mg/L
Fe	54	58985.943	0.20	0.0543	0.013	23.192	mg/L
Fe	57	11929.736	0.04	0.0195	0.007	33.948	mg/L
Sc-1	45	133938.476	133938.48				mg/L
Cl	35	135381.517	98457.22				mg/L
Kr	83	45.667	-7.33				mg/L
Br	81	18919.469	13843.25				mg/L
P	31	13105.055	5510.26				mg/L
S	34	277885.500	102285.04				mg/L
Sr	88	1089194.906	1089141.57				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		86.346			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.839			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.254			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		93.636			

Sample ID: L1201053601SD WG387787-05
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053601SD WG387787-05
Report Date/Time: Saturday, January 28, 2012 20:34:55
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Method 6020 - Summary Report

Sample ID: L1201053602

Sample Date/Time: Saturday, January 28, 2012 20:40:29
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 62
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10172.903	0.00				ug/L
	Be	9	4.000	-0.00	-0.0416	0.016	38.271	ug/L
	Al	27	13277.473	0.08	2.4933	0.690	27.673	ug/L
>	Sc	45	135731.842	135731.84				ug/L
	Ti	49	430.054	0.00	1.0980	0.238	21.704	ug/L
	V	51	7740.815	0.02	0.8753	0.012	1.391	ug/L
	Cr	52	9331.649	0.01	0.6322	0.019	3.081	ug/L
	Cr	53	1860.394	0.00	1.5650	0.061	3.926	ug/L
	Mn	55	7011.019	0.02	0.7030	0.019	2.732	ug/L
	Co	59	551.357	0.00	0.0595	0.001	2.373	ug/L
	Ni	60	1825.885	0.01	1.1843	0.023	1.909	ug/L
	Cu	65	364.345	0.00	0.1082	0.020	18.518	ug/L
	Zn	66	2074.279	0.01	1.8460	0.014	0.764	ug/L
>	Ge	72	271093.739	271093.74				ug/L
	As	75	1983.516	0.01	2.3357	0.101	4.341	ug/L
	Se	77	134.668	0.00	1.3686	0.045	3.308	ug/L
	Se	82	784.060	0.00	9.4519	0.448	4.743	ug/L
	Rb	85	5487.530	0.02				mg/L
	Y	89	178210.971	-24179.61				ug/L
	Rh	103	69.668	40.67				ug/L
	Mo	98	495.659	0.00	0.2436	0.009	3.770	ug/L
	Ag	107	93.335	0.00	0.0107	0.001	7.972	ug/L
	Cd	114	13.723	0.00	0.0227	0.011	50.150	ug/L
>	In	115	234635.859	234635.86				ug/L
	Sn	118	1637.361	0.00	0.4763	0.017	3.598	ug/L
	Sb	123	215.121	0.00	0.0789	0.005	6.761	ug/L
	Ba	135	28487.916	0.08	20.8499	0.274	1.316	ug/L
	Ce	140	196.689	0.00				ug/L
>	Tb	159	360704.481	360704.48				ug/L
	Ho	165	36.670	0.00				ug/L
	Tl	203	66.334	0.00	0.0149	0.001	6.484	ug/L
	Tl	205	160.018	0.00	0.0225	0.004	18.650	ug/L
	Pb	206	316.009	0.00	0.0281	0.007	25.621	ug/L
	Pb	207	276.341	0.00	0.0308	0.003	9.880	ug/L
	Pb	208	1261.050	0.00	0.0269	0.002	7.833	ug/L
	U	238	17942.810	0.06	0.6971	0.009	1.280	ug/L
>	Bi	209	299622.928	299622.93				ug/L

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⌈	Na	23	63005810.234	464.74	16.6338	1.587	9.544	mg/L
|	Mg	24	16029789.086	118.54	6.7426	0.751	11.141	mg/L
|	K	39	6330377.770	43.24	1.0486	0.085	8.151	mg/L
|	Ca	43	415078.460	3.06	35.3766	1.517	4.289	mg/L
|	Fe	54	84103.801	0.38	0.1047	0.011	10.119	mg/L
|	Fe	57	32787.975	0.19	0.1193	0.022	18.077	mg/L
⌊>	Sc-1	45	135731.842	135731.84				mg/L
	Cl	35	586518.610	549594.31				mg/L
	Kr	83	37.000	-16.00				mg/L
	Br	81	588244.765	583168.55				mg/L
	P	31	13186.427	5591.63				mg/L
	S	34	562842.820	387242.36				mg/L
	Sr	88	2151856.300	2151802.96				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		86.883			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		85.064			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		91.996			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		93.902			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201053603

Sample Date/Time: Saturday, January 28, 2012 20:48:15
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 63
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10156.196	0.00				ug/L
	Be	9	9.333	0.00	-0.0203	0.013	63.284	ug/L
	Al	27	10356.436	0.06	1.8434	0.060	3.242	ug/L
>	Sc	45	132123.745	132123.74				ug/L
	Ti	49	386.714	0.00	0.9564	0.070	7.284	ug/L
	V	51	8365.514	0.02	0.9322	0.074	7.953	ug/L
	Cr	52	9525.542	0.01	0.6193	0.053	8.486	ug/L
	Cr	53	1880.401	0.00	1.5155	0.197	12.975	ug/L
	Mn	55	8618.207	0.03	0.8476	0.026	3.114	ug/L
	Co	59	571.359	0.00	0.0600	0.001	2.258	ug/L
	Ni	60	1976.921	0.01	1.2487	0.017	1.369	ug/L
	Cu	65	452.350	0.00	0.1614	0.008	4.898	ug/L
	Zn	66	12297.860	0.04	13.5450	0.080	0.594	ug/L
>	Ge	72	278972.676	278972.68				ug/L
	As	75	1330.771	0.01	1.5686	0.154	9.792	ug/L
	Se	77	144.001	0.00	1.4481	0.160	11.036	ug/L
	Se	82	556.941	0.00	6.5228	0.402	6.161	ug/L
	Rb	85	5682.660	0.02				mg/L
	Y	89	177985.001	-24405.58				ug/L
	Rh	103	87.335	58.33				ug/L
	Mo	98	538.593	0.00	0.2608	0.007	2.698	ug/L
	Ag	107	85.668	0.00	0.0087	0.003	33.861	ug/L
	Cd	114	5.160	0.00	0.0142	0.004	25.642	ug/L
>	In	115	237353.610	237353.61				ug/L
	Sn	118	252.271	-0.00	0.0724	0.006	8.287	ug/L
	Sb	123	140.413	0.00	0.0555	0.001	2.594	ug/L
	Ba	135	29774.734	0.08	21.8376	0.407	1.865	ug/L
	Ce	140	116.679	-0.00				ug/L
>	Tb	159	360080.273	360080.27				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	60.667	0.00	0.0139	0.002	10.813	ug/L
	Tl	205	126.680	0.00	0.0202	0.000	2.355	ug/L
	Pb	206	322.009	0.00	0.0291	0.002	5.502	ug/L
	Pb	207	269.007	0.00	0.0290	0.006	19.725	ug/L
	Pb	208	1251.383	0.00	0.0263	0.000	0.710	ug/L
	U	238	18884.904	0.06	0.7316	0.018	2.481	ug/L
>	Bi	209	300379.107	300379.11				ug/L

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Na	23	64501142.333	487.84	17.4594	0.922	5.280	mg/L
Mg	24	16797325.301	127.23	7.2368	0.235	3.252	mg/L
K	39	6743223.312	47.52	1.1532	0.023	1.988	mg/L
Ca	43	423430.955	3.20	37.0338	0.869	2.346	mg/L
Fe	54	83447.926	0.39	0.1081	0.010	9.247	mg/L
Fe	57	33025.284	0.20	0.1242	0.008	6.725	mg/L
Sc-1	45	132123.745	132123.74				mg/L
Cl	35	600315.783	563391.48				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	405465.693	400389.48				mg/L
P	31	13418.811	5824.02				mg/L
S	34	582677.370	407076.91				mg/L
Sr	88	2281862.526	2281809.19				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.408			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.049			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		91.837			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.139			

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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053603
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201053902

Sample Date/Time: Saturday, January 28, 2012 20:56:02
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 64
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8904.768	-0.00				ug/L
	Be	9	10.000	0.00	-0.0142	0.010	68.572	ug/L
	Al	27	5385.080	0.03	0.7378	0.096	13.010	ug/L
>	Sc	45	121243.412	121243.41				ug/L
	Ti	49	130.014	0.00	0.3439	0.070	20.219	ug/L
	V	51	3080.285	0.01	0.2108	0.007	3.549	ug/L
	Cr	52	8084.334	0.01	0.4767	0.016	3.306	ug/L
	Cr	53	850.128	0.00	0.1975	0.048	24.510	ug/L
	Mn	55	1501571.876	5.76	165.4889	1.832	1.107	ug/L
	Co	59	530.689	0.00	0.0596	0.003	4.233	ug/L
	Ni	60	1700.190	0.01	1.1465	0.019	1.697	ug/L
	Cu	65	20263.149	0.08	14.7375	0.387	2.629	ug/L
	Zn	66	14641.665	0.05	17.4398	0.171	0.982	ug/L
>	Ge	72	260477.892	260477.89				ug/L
	As	75	8401.470	0.03	9.8517	0.083	0.838	ug/L
	Se	77	58.000	0.00	0.2652	0.303	114.265	ug/L
	Se	82	96.225	0.00	1.2023	0.251	20.912	ug/L
	Rb	85	1603.170	0.01				mg/L
	Y	89	166632.784	-35757.80				ug/L
	Rh	103	74.334	45.33				ug/L
	Mo	98	893.070	0.00	0.4461	0.023	5.128	ug/L
	Ag	107	111.335	0.00	0.0157	0.002	10.887	ug/L
	Cd	114	7.145	0.00	0.0164	0.008	50.861	ug/L
>	In	115	226130.265	226130.26				ug/L
	Sn	118	222.403	-0.00	0.0670	0.002	3.499	ug/L
	Sb	123	164.831	0.00	0.0654	0.003	3.836	ug/L
	Ba	135	148925.451	0.45	118.5928	1.706	1.438	ug/L
	Ce	140	106.678	-0.00				ug/L
>	Tb	159	331783.555	331783.55				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	34.334	0.00	0.0102	0.001	5.894	ug/L
	Tl	205	80.008	0.00	0.0177	0.002	13.305	ug/L
	Pb	206	8922.865	0.03	2.0408	0.049	2.397	ug/L
	Pb	207	7280.253	0.03	1.7654	0.057	3.221	ug/L
	Pb	208	34679.429	0.13	1.8863	0.023	1.207	ug/L
	U	238	482.352	0.00	0.0246	0.001	4.879	ug/L
>	Bi	209	266721.175	266721.18				ug/L

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Erin D. Long

Na	23	55838153.983	459.79	16.4567	0.756	4.595	mg/L
Mg	24	12398418.884	102.30	5.8183	0.207	3.550	mg/L
K	39	3985013.579	29.40	0.7106	0.044	6.150	mg/L
Ca	43	395032.805	3.26	37.6697	1.116	2.964	mg/L
Fe	54	601522.432	4.73	1.3306	0.064	4.790	mg/L
Fe	57	239467.776	1.93	1.2506	0.096	7.665	mg/L
Sc-1	45	121243.412	121243.41				mg/L
Cl	35	210866.202	173941.90				mg/L
Kr	83	51.001	-2.00				mg/L
Br	81	83623.507	78547.29				mg/L
P	31	14770.444	7175.65				mg/L
S	34	165108.995	-10491.46				mg/L
Sr	88	2204293.877	2204240.54				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		83.481			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		81.981			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		84.620			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		83.591			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053902
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Method 6020 - Summary Report

Sample ID: L1201053902PS WG387809-03

Sample Date/Time: Saturday, January 28, 2012 21:03:49
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 65
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9555.567	0.00				ug/L
	Be	9	11962.581	0.09	48.4181	4.138	8.546	ug/L
	Al	27	187758.789	1.46	47.2721	4.368	9.240	ug/L
>	Sc	45	127826.517	127826.52				ug/L
	Ti	49	193.355	0.00	0.5024	0.070	14.018	ug/L
	V	51	332394.967	1.24	49.4524	1.247	2.521	ug/L
	Cr	52	296924.918	1.10	50.3313	0.575	1.143	ug/L
	Cr	53	36145.167	0.13	50.6515	1.239	2.446	ug/L
	Mn	55	1946837.497	7.33	210.4377	5.436	2.583	ug/L
	Co	59	340527.946	1.28	48.3623	0.522	1.080	ug/L
	Ni	60	70955.849	0.27	48.8764	0.715	1.463	ug/L
	Cu	65	87155.337	0.33	62.6307	0.271	0.433	ug/L
	Zn	66	50857.594	0.19	60.8691	0.551	0.905	ug/L
>	Ge	72	265632.556	265632.56				ug/L
	As	75	50048.545	0.19	56.9164	0.632	1.111	ug/L
	Se	77	2965.194	0.01	44.3202	0.891	2.010	ug/L
	Se	82	3523.039	0.01	43.3794	1.067	2.461	ug/L
	Rb	85	1643.845	0.01				mg/L
	Y	89	169013.791	-33376.79				ug/L
	Rh	103	85.001	56.00				ug/L
	Mo	98	930.148	0.00	0.4626	0.022	4.853	ug/L
	Ag	107	204001.222	0.90	48.3861	0.249	0.515	ug/L
	Cd	114	45690.590	0.20	48.1512	1.298	2.695	ug/L
>	In	115	226917.663	226917.66				ug/L
	Sn	118	262.804	-0.00	0.0789	0.003	3.178	ug/L
	Sb	123	158562.618	0.70	50.5058	1.480	2.930	ug/L
	Ba	135	213489.656	0.64	170.0577	1.591	0.936	ug/L
	Ce	140	116.679	-0.00				ug/L
>	Tb	159	331674.197	331674.20				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	269424.652	1.01	50.9413	0.868	1.704	ug/L
	Tl	205	666221.572	2.51	51.1915	0.667	1.303	ug/L
	Pb	206	231050.807	0.87	53.9659	0.517	0.958	ug/L
	Pb	207	201237.333	0.76	49.7676	0.557	1.119	ug/L
	Pb	208	937174.719	3.52	52.0761	0.563	1.081	ug/L
	U	238	1277099.838	4.81	55.6413	1.051	1.889	ug/L
>	Bi	209	265759.463	265759.46				ug/L

Sample ID: L1201053902PS WG387809-03
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Na	23	56867650.538	445.60	15.9497	1.276	7.999	mg/L
Mg	24	12477705.159	98.09	5.5785	0.543	9.729	mg/L
K	39	4033348.396	28.12	0.6794	0.044	6.459	mg/L
Ca	43	390434.615	3.06	35.3862	2.360	6.669	mg/L
Fe	54	588647.326	4.38	1.2308	0.058	4.676	mg/L
Fe	57	235408.961	1.80	1.1657	0.097	8.333	mg/L
Sc-1	45	127826.517	127826.52				mg/L
Cl	35	213549.070	176624.77				mg/L
Kr	83	49.334	-3.67				mg/L
Br	81	82149.915	77073.70				mg/L
P	31	14448.544	6853.75				mg/L
S	34	162466.716	-13133.74				mg/L
Sr	88	2213222.876	2213169.54				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		85.133			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.266			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		84.592			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		83.289			

Sample ID: L1201053902PS WG387809-03
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053902PS WG387809-03
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Method 6020 - Summary Report

Sample ID: L1201053902SDL WG387809-04

Sample Date/Time: Saturday, January 28, 2012 21:11:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 66
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10122.813	0.01				ug/L
	Be	9	10.667	0.00	-0.0127	0.007	57.518	ug/L
	Al	27	2417.020	0.00	-0.0745	0.100	134.277	ug/L
>	Sc	45	125100.551	125100.55				ug/L
	Ti	49	83.342	0.00	0.2049	0.033	16.092	ug/L
	V	51	2110.645	0.00	0.0413	0.003	7.898	ug/L
	Cr	52	6449.227	0.00	0.1129	0.016	13.961	ug/L
	Cr	53	586.746	-0.00	-0.2421	0.099	41.041	ug/L
	Mn	55	367774.750	1.32	37.7794	0.546	1.446	ug/L
	Co	59	175.337	0.00	0.0064	0.001	15.288	ug/L
	Ni	60	499.353	0.00	0.2787	0.020	7.034	ug/L
	Cu	65	5154.980	0.02	3.3846	0.009	0.255	ug/L
	Zn	66	4823.779	0.01	4.9392	0.216	4.373	ug/L
>	Ge	72	279164.438	279164.44				ug/L
	As	75	2000.351	0.01	2.2895	0.064	2.809	ug/L
	Se	77	59.334	-0.00	0.2268	0.125	54.894	ug/L
	Se	82	29.612	0.00	0.3401	0.051	14.847	ug/L
	Rb	85	418.348	0.00				mg/L
	Y	89	180536.574	-21854.01				ug/L
	Rh	103	29.667	0.67				ug/L
	Mo	98	244.093	0.00	0.1226	0.010	7.978	ug/L
	Ag	107	85.335	0.00	0.0084	0.003	36.172	ug/L
	Cd	114	1.571	-0.00	0.0106	0.002	17.423	ug/L
>	In	115	240196.267	240196.27				ug/L
	Sn	118	247.604	-0.00	0.0702	0.003	4.297	ug/L
	Sb	123	255.916	0.00	0.0897	0.012	13.509	ug/L
	Ba	135	36636.107	0.11	28.0335	0.568	2.025	ug/L
	Ce	140	36.670	-0.00				ug/L
>	Tb	159	345061.034	345061.03				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	28.000	0.00	0.0088	0.001	16.973	ug/L
	Tl	205	83.342	0.00	0.0176	0.002	11.882	ug/L
	Pb	206	2249.326	0.01	0.4591	0.015	3.210	ug/L
	Pb	207	1890.567	0.01	0.4121	0.009	2.254	ug/L
	Pb	208	8857.611	0.03	0.4300	0.020	4.564	ug/L
	U	238	173.004	0.00	0.0108	0.000	3.651	ug/L
>	Bi	209	281356.472	281356.47				ug/L

Sample ID: L1201053902SDL WG387809-04
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Na	23	13422711.555	106.33	3.8246	0.073	1.907	mg/L
Mg	24	3007293.893	24.05	1.3645	0.029	2.140	mg/L
K	39	1440391.688	8.00	0.1882	0.010	5.492	mg/L
Ca	43	95164.309	0.76	8.7754	0.313	3.568	mg/L
Fe	54	168863.409	1.11	0.3107	0.011	3.506	mg/L
Fe	57	63870.302	0.46	0.2942	0.014	4.633	mg/L
Sc-1	45	125100.551	125100.55				mg/L
Cl	35	71707.299	34783.00				mg/L
Kr	83	44.667	-8.33				mg/L
Br	81	25450.152	20373.94				mg/L
P	31	8801.326	1206.53				mg/L
S	34	164621.823	-10978.63				mg/L
Sr	88	611405.164	611351.83				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.470			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.080			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.006			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		88.177			

Sample ID: L1201053902SDL WG387809-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053902SDL WG387809-04
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Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 21:19:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8504.348	-0.00				ug/L
	Be	9	12469.331	0.10	53.2616	1.990	3.736	ug/L
	Al	27	195927.710	1.61	52.1133	1.630	3.128	ug/L
>	Sc	45	120616.640	120616.64				ug/L
	Ti	49	39102.117	0.14	97.0720	2.875	2.962	ug/L
	V	51	343767.966	1.23	48.7990	1.004	2.057	ug/L
	Cr	52	307922.399	1.09	49.7977	0.657	1.319	ug/L
	Cr	53	36469.963	0.13	48.7214	0.811	1.665	ug/L
	Mn	55	473529.243	1.70	48.8134	0.725	1.485	ug/L
	Co	59	360895.924	1.30	48.8980	0.664	1.357	ug/L
	Ni	60	75819.114	0.27	49.8428	0.901	1.808	ug/L
	Cu	65	72913.019	0.26	49.9899	1.597	3.194	ug/L
	Zn	66	43604.553	0.15	49.7048	1.081	2.175	ug/L
>	Ge	72	278371.565	278371.57				ug/L
	As	75	45900.574	0.17	49.8226	0.354	0.710	ug/L
	Se	77	3379.352	0.01	48.2594	1.338	2.772	ug/L
	Se	82	4031.917	0.01	47.3570	0.638	1.348	ug/L
	Rb	85	1592.168	0.01				mg/L
	Y	89	172099.422	-30291.16				ug/L
	Rh	103	17.000	-12.00				ug/L
	Mo	98	215780.110	0.90	99.0701	1.540	1.554	ug/L
	Ag	107	213905.019	0.89	47.9618	0.481	1.004	ug/L
	Cd	114	49732.051	0.21	49.5393	1.841	3.716	ug/L
>	In	115	240021.948	240021.95				ug/L
	Sn	118	175462.403	0.73	49.9126	0.904	1.812	ug/L
	Sb	123	170163.077	0.71	51.2316	1.310	2.557	ug/L
	Ba	135	67195.834	0.20	51.6323	0.133	0.259	ug/L
	Ce	140	100.011	-0.00				ug/L
>	Tb	159	343755.593	343755.59				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	273837.010	1.01	50.8161	0.338	0.666	ug/L
	Tl	205	680657.686	2.51	51.3368	1.221	2.377	ug/L
	Pb	206	220464.554	0.81	50.5348	1.056	2.091	ug/L
	Pb	207	205819.261	0.76	49.9569	0.383	0.767	ug/L
	Pb	208	918242.893	3.39	50.0774	0.464	0.927	ug/L
	U	238	1267180.490	4.68	54.1893	0.694	1.280	ug/L
>	Bi	209	270767.561	270767.56				ug/L

Sample ID: QC Std 6
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Na	23	16847743.137	138.66	4.9799	0.203	4.066	mg/L
Mg	24	10745972.393	89.09	5.0663	0.200	3.952	mg/L
K	39	25047446.049	204.14	4.9774	0.026	0.529	mg/L
Ca	43	51550.800	0.43	4.9207	0.092	1.879	mg/L
Fe	54	2165074.712	17.71	4.9916	0.042	0.851	mg/L
Fe	57	960872.264	7.92	5.1508	0.231	4.477	mg/L
Sc-1	45	120616.640	120616.64				mg/L
Cl	35	25684.189	-11240.11				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	5561.856	485.64				mg/L
P	31	6346.433	-1248.36				mg/L
S	34	152710.751	-22889.70				mg/L
Sr	88	3717.868	3664.53				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	97.598				
Cr	52	99.595				
Cr	53					
Mn	55	97.627				
Co	59	97.796				
Ni	60	99.686				
Cu	65	99.980				
Zn	66	99.410				
Ge	72		89.215			
As	75	99.645				
Se	77					
Se	82	94.714				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	95.924				
Cd	114	99.079				
In	115		87.017			
Sn	118					
Sb	123	102.463				
Ba	135	103.265				
Ce	140					
Tb	159		87.673			
Ho	165					
Tl	203	101.632				
Tl	205					
Pb	206					
Pb	207					
Pb	208	100.155				
U	238	108.379				
Bi	209		84.859			

Sample ID: QC Std 6
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 21:21:38
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 21:27:01
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9004.901	0.00				ug/L
	Be	9	10.667	0.00	-0.0112	0.030	269.897	ug/L
	Al	27	1666.838	-0.00	-0.2594	0.088	34.084	ug/L
>	Sc	45	121073.360	121073.36				ug/L
	Ti	49	83.342	0.00	0.1997	0.029	14.717	ug/L
	V	51	1932.016	0.00	0.0082	0.022	270.421	ug/L
	Cr	52	6113.304	0.00	0.0294	0.032	107.946	ug/L
	Cr	53	486.730	-0.00	-0.3980	0.157	39.434	ug/L
	Mn	55	739.374	0.00	0.0342	0.006	17.369	ug/L
	Co	59	161.003	0.00	0.0038	0.004	99.202	ug/L
	Ni	60	94.668	0.00	0.0115	0.001	13.003	ug/L
	Cu	65	122.335	0.00	-0.0674	0.004	5.663	ug/L
	Zn	66	569.692	-0.00	0.0257	0.008	29.354	ug/L
>	Ge	72	287224.764	287224.76				ug/L
	As	75	-82.241	0.00	0.0448	0.031	68.648	ug/L
	Se	77	36.000	-0.00	-0.1270	0.070	54.856	ug/L
	Se	82	5.907	-0.00	0.0606	0.070	115.807	ug/L
	Rb	85	25.334	-0.00				mg/L
	Y	89	181241.180	-21149.40				ug/L
	Rh	103	7.000	-22.00				ug/L
	Mo	98	92.453	0.00	0.0509	0.004	7.733	ug/L
	Ag	107	142.336	0.00	0.0195	0.002	11.847	ug/L
	Cd	114	23.336	0.00	0.0310	0.003	11.008	ug/L
>	In	115	253473.039	253473.04				ug/L
	Sn	118	553.618	-0.00	0.1489	0.003	2.125	ug/L
	Sb	123	112.368	0.00	0.0448	0.000	0.966	ug/L
	Ba	135	58.334	0.00	0.0271	0.003	11.560	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	352908.077	352908.08				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	129.336	0.00	0.0260	0.004	14.023	ug/L
	Tl	205	296.702	0.00	0.0322	0.006	19.410	ug/L
	Pb	206	273.674	0.00	0.0206	0.005	22.920	ug/L
	Pb	207	230.339	0.00	0.0219	0.005	24.189	ug/L
	Pb	208	1083.039	0.00	0.0194	0.002	9.983	ug/L
	U	238	471.685	0.00	0.0223	0.002	11.027	ug/L
>	Bi	209	292485.363	292485.36				ug/L

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Na	23	99939.109	-0.21	0.0170	0.001	6.029	mg/L
Mg	24	4968.675	0.04	-0.0021	0.000	19.797	mg/L
K	39	483081.318	0.47	0.0042	0.002	58.420	mg/L
Ca	43	223.359	0.00	0.0024	0.003	124.034	mg/L
Fe	54	30941.971	0.02	0.0017	0.003	173.911	mg/L
Fe	57	6853.505	0.01	-0.0019	0.002	98.527	mg/L
Sc-1	45	121073.360	121073.36				mg/L
Cl	35	28039.096	-8885.21				mg/L
Kr	83	49.001	-4.00				mg/L
Br	81	5576.540	500.33				mg/L
P	31	7563.443	-31.35				mg/L
S	34	169874.651	-5725.80				mg/L
Sr	88	306.703	253.36				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		92.053			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.893			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.007			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.665			

Sample ID: QC Std 7
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 21:29:13
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Method 6020 - Summary Report

Sample ID: L1201053903

Sample Date/Time: Saturday, January 28, 2012 21:34:38
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 67
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9822.494	0.00				ug/L
	Be	9	11.333	0.00	-0.0129	0.025	192.172	ug/L
	Al	27	17201.136	0.11	3.5261	0.472	13.372	ug/L
>	Sc	45	132633.090	132633.09				ug/L
	Ti	49	193.355	0.00	0.4846	0.144	29.700	ug/L
	V	51	9300.360	0.03	1.0889	0.023	2.114	ug/L
	Cr	52	8060.311	0.01	0.4020	0.024	6.037	ug/L
	Cr	53	1053.505	0.00	0.4178	0.078	18.771	ug/L
	Mn	55	2955329.349	10.78	309.6479	7.954	2.569	ug/L
	Co	59	1074.413	0.00	0.1306	0.002	1.875	ug/L
	Ni	60	2565.087	0.01	1.6653	0.063	3.764	ug/L
	Cu	65	583.693	0.00	0.2584	0.013	5.080	ug/L
	Zn	66	3831.919	0.01	3.8795	0.124	3.209	ug/L
>	Ge	72	274100.737	274100.74				ug/L
	As	75	1472.044	0.01	1.7499	0.050	2.830	ug/L
	Se	77	62.000	0.00	0.2790	0.157	56.108	ug/L
	Se	82	87.906	0.00	1.0427	0.102	9.778	ug/L
	Rb	85	2450.718	0.01				mg/L
	Y	89	174369.502	-28021.08				ug/L
	Rh	103	46.001	17.00				ug/L
	Mo	98	907.035	0.00	0.4336	0.007	1.647	ug/L
	Ag	107	76.668	0.00	0.0067	0.002	31.186	ug/L
	Cd	114	2.651	0.00	0.0117	0.006	52.020	ug/L
>	In	115	236331.883	236331.88				ug/L
	Sn	118	448.545	-0.00	0.1294	0.003	2.033	ug/L
	Sb	123	219.371	0.00	0.0798	0.001	1.200	ug/L
	Ba	135	160376.863	0.46	121.2399	2.723	2.246	ug/L
	Ce	140	153.350	-0.00				ug/L
>	Tb	159	349477.344	349477.34				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	113.335	0.00	0.0245	0.001	5.804	ug/L
	Tl	205	283.367	0.00	0.0326	0.003	9.236	ug/L
	Pb	206	1100.751	0.00	0.2115	0.020	9.513	ug/L
	Pb	207	968.066	0.00	0.2020	0.010	5.083	ug/L
	Pb	208	4428.508	0.01	0.2030	0.004	1.764	ug/L
	U	238	6931.284	0.03	0.2959	0.002	0.749	ug/L
>	Bi	209	274613.275	274613.27				ug/L

Sample ID: L1201053903
Report Date/Time: Saturday, January 28, 2012 21:36:51
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⌈	Na	23	100695011.388	758.75	27.1412	0.528	1.944	mg/L
|	Mg	24	9923055.805	74.91	4.2595	0.159	3.744	mg/L
|	K	39	5828198.893	40.49	0.9814	0.043	4.401	mg/L
|	Ca	43	447455.071	3.38	39.0536	2.076	5.315	mg/L
|	Fe	54	244519.880	1.61	0.4514	0.044	9.757	mg/L
|	Fe	57	96979.050	0.68	0.4381	0.031	7.174	mg/L
⌊>	Sc-1	45	132633.090	132633.09				mg/L
	Cl	35	258121.322	221197.02				mg/L
	Kr	83	49.334	-3.67				mg/L
	Br	81	68064.425	62988.21				mg/L
	P	31	13428.824	5834.03				mg/L
	S	34	225855.079	50254.62				mg/L
	Sr	88	1426602.207	1426548.87				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		87.847			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		85.679			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		89.132			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		86.064			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053903
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Method 6020 - Summary Report

Sample ID: L1201053904

Sample Date/Time: Saturday, January 28, 2012 21:42:26
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 68
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9872.515	0.00				ug/L
	Be	9	10.000	0.00	-0.0155	0.023	145.316	ug/L
	Al	27	127013.560	0.99	32.0146	3.254	10.166	ug/L
>	Sc	45	126572.854	126572.85				ug/L
	Ti	49	213.357	0.00	0.5374	0.105	19.555	ug/L
	V	51	6932.640	0.02	0.7461	0.047	6.294	ug/L
	Cr	52	6875.905	0.00	0.2045	0.010	4.844	ug/L
	Cr	53	830.125	0.00	0.1064	0.166	155.625	ug/L
	Mn	55	767990.546	2.80	80.4767	1.240	1.541	ug/L
	Co	59	965.732	0.00	0.1157	0.001	0.627	ug/L
	Ni	60	2286.003	0.01	1.4801	0.051	3.452	ug/L
	Cu	65	8911.521	0.03	6.0755	0.107	1.760	ug/L
	Zn	66	7632.237	0.03	8.3388	0.209	2.509	ug/L
>	Ge	72	273937.288	273937.29				ug/L
	As	75	1020.849	0.00	1.2540	0.034	2.697	ug/L
	Se	77	74.000	0.00	0.4570	0.026	5.625	ug/L
	Se	82	162.952	0.00	1.9361	0.176	9.069	ug/L
	Rb	85	1031.741	0.00				mg/L
	Y	89	178923.550	-23467.03				ug/L
	Rh	103	43.334	14.33				ug/L
	Mo	98	710.197	0.00	0.3469	0.008	2.369	ug/L
	Ag	107	128.336	0.00	0.0190	0.005	27.925	ug/L
	Cd	114	9.525	0.00	0.0187	0.006	31.159	ug/L
>	In	115	232711.965	232711.97				ug/L
	Sn	118	692.962	0.00	0.2030	0.003	1.423	ug/L
	Sb	123	171.199	0.00	0.0658	0.006	8.807	ug/L
	Ba	135	52644.042	0.15	39.4369	0.312	0.790	ug/L
	Ce	140	1226.880	0.00				ug/L
>	Tb	159	352557.296	352557.30				ug/L
	Ho	165	36.670	0.00				ug/L
	Tl	203	81.335	0.00	0.0181	0.002	12.410	ug/L
	Tl	205	176.686	0.00	0.0242	0.002	7.498	ug/L
	Pb	206	1734.865	0.01	0.3401	0.017	4.907	ug/L
	Pb	207	1456.475	0.00	0.3056	0.017	5.426	ug/L
	Pb	208	6855.182	0.02	0.3196	0.011	3.421	ug/L
	U	238	9445.113	0.03	0.3867	0.009	2.395	ug/L
>	Bi	209	285626.753	285626.75				ug/L

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Na	23	115103304.792	910.92	32.5798	2.577	7.911	mg/L
Mg	24	8641983.584	68.51	3.8947	0.386	9.919	mg/L
K	39	2908564.117	19.52	0.4693	0.038	8.035	mg/L
Ca	43	370670.190	2.93	33.8778	1.324	3.909	mg/L
Fe	54	133348.483	0.82	0.2276	0.025	11.113	mg/L
Fe	57	49568.944	0.34	0.2168	0.019	8.857	mg/L
Sc-1	45	126572.854	126572.85				mg/L
Cl	35	209121.051	172196.75				mg/L
Kr	83	44.334	-8.67				mg/L
Br	81	113653.030	108576.81				mg/L
P	31	17144.042	9549.25				mg/L
S	34	277032.853	101432.40				mg/L
Sr	88	1089850.182	1089796.84				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.794			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.367			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		89.918			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.516			

Sample ID: L1201053904
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053904
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Method 6020 - Summary Report

Sample ID: L1201053905

Sample Date/Time: Saturday, January 28, 2012 21:50:14
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 69
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10673.500	0.00				ug/L
	Be	9	6.667	-0.00	-0.0326	0.012	37.292	ug/L
	Al	27	27813.404	0.18	5.6018	0.440	7.859	ug/L
>	Sc	45	143086.235	143086.23				ug/L
	Ti	49	126.680	0.00	0.2798	0.103	36.767	ug/L
	V	51	3012.315	0.00	0.1253	0.003	2.166	ug/L
	Cr	52	7539.486	0.00	0.1635	0.023	14.335	ug/L
	Cr	53	820.123	0.00	-0.0418	0.140	335.154	ug/L
	Mn	55	1938810.761	6.22	178.7411	1.615	0.904	ug/L
	Co	59	937.396	0.00	0.0963	0.006	6.555	ug/L
	Ni	60	2252.994	0.01	1.2763	0.050	3.951	ug/L
	Cu	65	10710.320	0.03	6.4327	0.132	2.049	ug/L
	Zn	66	11115.521	0.03	10.8512	0.168	1.544	ug/L
>	Ge	72	311401.445	311401.45				ug/L
	As	75	9958.572	0.03	9.7695	0.145	1.481	ug/L
	Se	77	64.000	-0.00	0.1960	0.085	43.435	ug/L
	Se	82	95.266	0.00	0.9937	0.073	7.368	ug/L
	Rb	85	1656.848	0.01				mg/L
	Y	89	197530.273	-4860.31				ug/L
	Rh	103	78.668	49.67				ug/L
	Mo	98	3850.016	0.01	1.5901	0.068	4.249	ug/L
	Ag	107	89.668	0.00	0.0073	0.003	47.041	ug/L
	Cd	114	50.653	0.00	0.0541	0.003	4.714	ug/L
>	In	115	268521.225	268521.22				ug/L
	Sn	118	456.146	-0.00	0.1158	0.003	2.669	ug/L
	Sb	123	197.163	0.00	0.0658	0.007	11.033	ug/L
	Ba	135	163195.907	0.42	109.7048	0.883	0.804	ug/L
	Ce	140	283.367	0.00				ug/L
>	Tb	159	392965.096	392965.10				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	36.000	0.00	0.0097	0.000	3.111	ug/L
	Tl	205	103.344	0.00	0.0185	0.001	8.099	ug/L
	Pb	206	4840.454	0.02	0.9433	0.014	1.487	ug/L
	Pb	207	4014.007	0.01	0.8313	0.021	2.536	ug/L
	Pb	208	18759.115	0.06	0.8690	0.024	2.723	ug/L
	U	238	1332.453	0.00	0.0540	0.002	2.857	ug/L
>	Bi	209	306591.488	306591.49				ug/L

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⌈	Na	23	60249616.594	420.87	15.0658	1.129	7.491	mg/L
|	Mg	24	13233386.398	92.58	5.2651	0.236	4.485	mg/L
|	K	39	4277459.081	26.43	0.6381	0.051	7.967	mg/L
|	Ca	43	443341.179	3.10	35.8342	1.479	4.126	mg/L
|	Fe	54	715225.783	4.76	1.3406	0.077	5.741	mg/L
|	Fe	57	288246.722	1.97	1.2756	0.097	7.603	mg/L
⌊>	Sc-1	45	143086.235	143086.23				mg/L
	Cl	35	214416.086	177491.78				mg/L
	Kr	83	46.334	-6.67				mg/L
	Br	81	87352.517	82276.30				mg/L
	P	31	17743.138	10148.34				mg/L
	S	34	191786.619	16186.16				mg/L
	Sr	88	2284914.621	2284861.28				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		99.801			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		97.349			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		100.224			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		96.086			

Sample ID: L1201053905
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053905
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Method 6020 - Summary Report

Sample ID: L1201053906

Sample Date/Time: Saturday, January 28, 2012 21:58:03
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 70
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9622.229	0.00				ug/L
	Be	9	9.333	0.00	-0.0199	0.009	44.331	ug/L
	Al	27	4984.856	0.02	0.5421	0.220	40.566	ug/L
>	Sc	45	129820.400	129820.40				ug/L
	Ti	49	60.006	0.00	0.1371	0.061	44.773	ug/L
	V	51	3847.962	0.01	0.2488	0.011	4.531	ug/L
	Cr	52	6267.753	0.00	0.0080	0.013	167.983	ug/L
	Cr	53	586.746	-0.00	-0.3021	0.028	9.346	ug/L
	Mn	55	606488.575	2.01	57.8341	2.656	4.592	ug/L
	Co	59	599.361	0.00	0.0578	0.003	5.062	ug/L
	Ni	60	687.702	0.00	0.3697	0.028	7.641	ug/L
	Cu	65	3271.009	0.01	1.9318	0.155	8.047	ug/L
	Zn	66	5471.518	0.02	5.2281	0.263	5.034	ug/L
>	Ge	72	301054.158	301054.16				ug/L
	As	75	93.875	0.00	0.2250	0.012	5.382	ug/L
	Se	77	70.000	0.00	0.3057	0.115	37.631	ug/L
	Se	82	27.914	0.00	0.2971	0.168	56.594	ug/L
	Rb	85	599.028	0.00				mg/L
	Y	89	184253.266	-18137.32				ug/L
	Rh	103	18.334	-10.67				ug/L
	Mo	98	300.506	0.00	0.1391	0.008	5.445	ug/L
	Ag	107	56.667	-0.00	0.0011	0.002	198.808	ug/L
	Cd	114	7.454	0.00	0.0159	0.002	10.735	ug/L
>	In	115	257756.766	257756.77				ug/L
	Sn	118	204.136	-0.00	0.0539	0.006	10.476	ug/L
	Sb	123	99.701	0.00	0.0407	0.001	3.268	ug/L
	Ba	135	32602.683	0.09	23.3055	0.572	2.456	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	369325.452	369325.45				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	40.667	0.00	0.0105	0.001	9.576	ug/L
	Tl	205	80.008	0.00	0.0170	0.001	8.559	ug/L
	Pb	206	1587.167	0.00	0.2894	0.015	5.275	ug/L
	Pb	207	1358.124	0.00	0.2663	0.012	4.583	ug/L
	Pb	208	6302.668	0.02	0.2735	0.009	3.389	ug/L
	U	238	1645.512	0.01	0.0668	0.004	5.771	ug/L
>	Bi	209	301737.006	301737.01				ug/L

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Na	23	14432968.131	110.21	3.9633	0.166	4.196	mg/L
Mg	24	2187414.529	16.85	0.9546	0.030	3.094	mg/L
K	39	1316834.892	6.62	0.1545	0.004	2.382	mg/L
Ca	43	106578.153	0.82	9.4692	0.143	1.515	mg/L
Fe	54	37133.539	0.05	0.0104	0.004	40.263	mg/L
Fe	57	10667.904	0.03	0.0147	0.004	26.646	mg/L
Sc-1	45	129820.400	129820.40				mg/L
Cl	35	77810.946	40886.64				mg/L
Kr	83	48.334	-4.67				mg/L
Br	81	26025.917	20949.70				mg/L
P	31	8570.407	975.61				mg/L
S	34	203299.430	27698.97				mg/L
Sr	88	354680.956	354627.62				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.485			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.446			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		94.195			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.565			

Sample ID: L1201053906
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201053906
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Method 6020 - Summary Report

Sample ID: L1201057601

Sample Date/Time: Saturday, January 28, 2012 22:05:50
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 71
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8954.826	-0.00				ug/L
	Be	9	6.000	-0.00	-0.0326	0.021	65.468	ug/L
	Al	27	67270.946	0.52	16.6307	1.252	7.528	ug/L
>	Sc	45	126283.225	126283.23				ug/L
	Ti	49	323.372	0.00	0.8538	0.150	17.617	ug/L
	V	51	22417.402	0.08	3.1388	0.036	1.160	ug/L
	Cr	52	14131.448	0.03	1.5269	0.040	2.638	ug/L
	Cr	53	1750.359	0.00	1.4941	0.075	5.046	ug/L
	Mn	55	21632.934	0.08	2.3305	0.030	1.278	ug/L
	Co	59	235.006	0.00	0.0165	0.001	5.455	ug/L
	Ni	60	648.698	0.00	0.4046	0.020	4.879	ug/L
	Cu	65	407.014	0.00	0.1484	0.024	16.037	ug/L
	Zn	66	3251.667	0.01	3.3724	0.038	1.129	ug/L
>	Ge	72	262090.802	262090.80				ug/L
	As	75	544.923	0.00	0.7574	0.023	3.097	ug/L
	Se	77	90.000	0.00	0.7488	0.180	24.015	ug/L
	Se	82	52.624	0.00	0.6524	0.145	22.179	ug/L
	Rb	85	7629.569	0.03				mg/L
	Y	89	167549.606	-34840.98				ug/L
	Rh	103	32.000	3.00				ug/L
	Mo	98	3257.496	0.01	1.5986	0.037	2.322	ug/L
	Ag	107	95.001	0.00	0.0119	0.001	9.260	ug/L
	Cd	114	14.810	0.00	0.0246	0.002	6.415	ug/L
>	In	115	226039.873	226039.87				ug/L
	Sn	118	243.737	-0.00	0.0734	0.003	4.311	ug/L
	Sb	123	194.456	0.00	0.0749	0.002	2.755	ug/L
	Ba	135	68373.451	0.20	54.0428	1.188	2.198	ug/L
	Ce	140	1216.879	0.00				ug/L
>	Tb	159	334196.987	334196.99				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	28.000	0.00	0.0088	0.000	3.031	ug/L
	Tl	205	66.674	0.00	0.0164	0.002	9.348	ug/L
	Pb	206	2098.619	0.01	0.4306	0.003	0.789	ug/L
	Pb	207	1816.217	0.01	0.3989	0.023	5.739	ug/L
	Pb	208	8500.810	0.03	0.4158	0.009	2.215	ug/L
	U	238	9432.764	0.03	0.3960	0.011	2.821	ug/L
>	Bi	209	278451.793	278451.79				ug/L

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⌈	Na	23	25799525.262	203.39	7.2932	0.363	4.979	mg/L
|	Mg	24	4959494.921	39.28	2.2312	0.039	1.766	mg/L
|	K	39	4012637.258	28.26	0.6828	0.011	1.663	mg/L
|	Ca	43	139590.176	1.10	12.7626	0.476	3.733	mg/L
|	Fe	54	67527.144	0.30	0.0806	0.008	9.827	mg/L
|	Fe	57	15586.124	0.08	0.0416	0.001	3.036	mg/L
⌊>	Sc-1	45	126283.225	126283.23				mg/L
	Cl	35	103775.543	66851.24				mg/L
	Kr	83	43.334	-9.67				mg/L
	Br	81	16944.546	11868.33				mg/L
	P	31	12363.842	4769.05				mg/L
	S	34	252118.762	76518.31				mg/L
	Sr	88	1065905.062	1065851.72				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		83.998			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		81.948			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		85.235			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		87.267			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201057601
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Method 6020 - Summary Report

Sample ID: L1201057602

Sample Date/Time: Saturday, January 28, 2012 22:13:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 72
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9772.400	0.00				ug/L
	Be	9	10.000	0.00	-0.0177	0.013	72.665	ug/L
	Al	27	37250.396	0.27	8.5341	0.678	7.939	ug/L
>	Sc	45	130888.025	130888.03				ug/L
	Ti	49	193.355	0.00	0.4979	0.054	10.876	ug/L
	V	51	18720.338	0.06	2.5175	0.073	2.891	ug/L
	Cr	52	19886.903	0.05	2.4594	0.045	1.850	ug/L
	Cr	53	2490.624	0.01	2.4908	0.404	16.218	ug/L
	Mn	55	16905.301	0.06	1.7727	0.023	1.284	ug/L
	Co	59	268.007	0.00	0.0205	0.004	19.882	ug/L
	Ni	60	3556.461	0.01	2.3831	0.039	1.657	ug/L
	Cu	65	438.016	0.00	0.1641	0.002	1.276	ug/L
	Zn	66	3052.590	0.01	3.0491	0.103	3.386	ug/L
>	Ge	72	267810.964	267810.96				ug/L
	As	75	779.946	0.00	1.0088	0.041	4.085	ug/L
	Se	77	110.667	0.00	1.0334	0.320	30.981	ug/L
	Se	82	83.289	0.00	1.0106	0.123	12.205	ug/L
	Rb	85	13474.354	0.05				mg/L
	Y	89	166962.548	-35428.03				ug/L
	Rh	103	37.000	8.00				ug/L
	Mo	98	3293.657	0.01	1.5976	0.037	2.339	ug/L
	Ag	107	48.667	-0.00	0.0007	0.001	127.967	ug/L
	Cd	114	14.866	0.00	0.0244	0.007	29.447	ug/L
>	In	115	228822.619	228822.62				ug/L
	Sn	118	546.285	0.00	0.1627	0.004	2.378	ug/L
	Sb	123	331.087	0.00	0.1175	0.008	6.927	ug/L
	Ba	135	67988.388	0.20	53.2835	1.033	1.939	ug/L
	Ce	140	1817.047	0.00				ug/L
>	Tb	159	337232.245	337232.24				ug/L
	Ho	165	26.669	0.00				ug/L
	Tl	203	42.001	0.00	0.0113	0.002	13.835	ug/L
	Tl	205	113.346	0.00	0.0198	0.005	24.922	ug/L
	Pb	206	368.345	0.00	0.0439	0.003	5.827	ug/L
	Pb	207	311.009	0.00	0.0429	0.000	1.085	ug/L
	Pb	208	1437.729	0.00	0.0403	0.001	2.559	ug/L
	U	238	9240.882	0.03	0.3845	0.006	1.587	ug/L
>	Bi	209	280933.868	280933.87				ug/L

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⌈	Na	23	26543309.349	202.10	7.2474	0.392	5.403	mg/L
|	Mg	24	6233194.523	47.71	2.7109	0.160	5.906	mg/L
|	K	39	7022479.368	50.17	1.2179	0.044	3.598	mg/L
|	Ca	43	179916.225	1.37	15.8841	0.531	3.343	mg/L
|	Fe	54	60249.424	0.22	0.0596	0.005	8.869	mg/L
|	Fe	57	14283.705	0.06	0.0322	0.003	9.021	mg/L
⌊>	Sc-1	45	130888.025	130888.03				mg/L
	Cl	35	174506.195	137581.89				mg/L
	Kr	83	43.667	-9.33				mg/L
	Br	81	22989.684	17913.47				mg/L
	P	31	19509.509	11914.71				mg/L
	S	34	247455.448	71854.99				mg/L
	Sr	88	1258818.912	1258765.57				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		85.831			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		82.957			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		86.009			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		88.045			

Sample ID: L1201057602
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201057602
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1201057603

Sample Date/Time: Saturday, January 28, 2012 22:21:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 73
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9338.573	0.00				ug/L
	Be	9	8.667	0.00	-0.0210	0.025	121.126	ug/L
	Al	27	31208.668	0.24	7.5989	0.468	6.154	ug/L
>	Sc	45	122021.014	122021.01				ug/L
	Ti	49	246.695	0.00	0.6590	0.131	19.920	ug/L
	V	51	14941.425	0.05	2.0384	0.066	3.255	ug/L
	Cr	52	9507.184	0.02	0.7416	0.030	4.061	ug/L
	Cr	53	1570.305	0.00	1.2687	0.104	8.211	ug/L
	Mn	55	3880.276	0.01	0.3917	0.011	2.909	ug/L
	Co	59	247.339	0.00	0.0188	0.001	6.533	ug/L
	Ni	60	2058.608	0.01	1.4111	0.026	1.825	ug/L
	Cu	65	530.689	0.00	0.2445	0.012	4.945	ug/L
	Zn	66	3694.189	0.01	3.9839	0.150	3.761	ug/L
>	Ge	72	258332.276	258332.28				ug/L
	As	75	492.935	0.00	0.7072	0.052	7.358	ug/L
	Se	77	120.668	0.00	1.2512	0.094	7.547	ug/L
	Se	82	143.986	0.00	1.8158	0.049	2.705	ug/L
	Rb	85	12019.788	0.05				mg/L
	Y	89	161628.897	-40761.69				ug/L
	Rh	103	39.667	10.67				ug/L
	Mo	98	1780.596	0.01	0.8923	0.033	3.693	ug/L
	Ag	107	60.334	0.00	0.0038	0.003	70.701	ug/L
	Cd	114	11.476	0.00	0.0212	0.010	47.429	ug/L
>	In	115	222671.113	222671.11				ug/L
	Sn	118	1150.613	0.00	0.3526	0.003	0.961	ug/L
	Sb	123	181.039	0.00	0.0715	0.003	3.990	ug/L
	Ba	135	36711.064	0.11	29.8284	0.194	0.651	ug/L
	Ce	140	366.712	0.00				ug/L
>	Tb	159	325036.410	325036.41				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	22.667	0.00	0.0080	0.000	5.535	ug/L
	Tl	205	43.338	0.00	0.0149	0.001	8.163	ug/L
	Pb	206	465.018	0.00	0.0700	0.004	5.320	ug/L
	Pb	207	394.013	0.00	0.0665	0.006	9.337	ug/L
	Pb	208	1841.432	0.00	0.0660	0.003	4.862	ug/L
	U	238	4880.478	0.02	0.2139	0.004	1.757	ug/L
>	Bi	209	268743.493	268743.49				ug/L

Sample ID: L1201057603
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⌈	Na	23	33928355.521	277.17	9.9303	0.227	2.290	mg/L
|	Mg	24	6769387.250	55.50	3.1544	0.078	2.466	mg/L
|	K	39	4698620.860	35.02	0.8478	0.033	3.851	mg/L
|	Ca	43	193821.955	1.59	18.3460	0.460	2.509	mg/L
|	Fe	54	62255.046	0.27	0.0736	0.004	5.746	mg/L
|	Fe	57	16661.646	0.09	0.0501	0.001	2.971	mg/L
⌊>	Sc-1	45	122021.014	122021.01				mg/L
	Cl	35	278566.304	241642.00				mg/L
	Kr	83	40.334	-12.67				mg/L
	Br	81	75471.588	70395.37				mg/L
	P	31	11330.384	3735.59				mg/L
	S	34	315076.124	139475.67				mg/L
	Sr	88	1236009.301	1235955.96				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		82.793			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		80.727			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		82.899			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		84.224			

Sample ID: L1201057603
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1201057603
Report Date/Time: Saturday, January 28, 2012 22:23:36
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Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, January 28, 2012 22:29:11
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9605.537	-0.00				ug/L
	Be	9	14444.520	0.11	55.8193	3.750	6.718	ug/L
	Al	27	220051.143	1.63	52.9390	2.536	4.790	ug/L
>	Sc	45	133528.918	133528.92				ug/L
	Ti	49	43454.084	0.14	95.6321	2.843	2.973	ug/L
	V	51	397160.598	1.26	49.9917	0.910	1.820	ug/L
	Cr	52	350143.078	1.10	50.2244	1.117	2.223	ug/L
	Cr	53	41594.380	0.13	49.2862	0.620	1.258	ug/L
	Mn	55	538766.834	1.71	49.2412	0.928	1.885	ug/L
	Co	59	418758.346	1.33	50.3238	1.609	3.197	ug/L
	Ni	60	84486.529	0.27	49.2451	1.557	3.162	ug/L
	Cu	65	82304.300	0.26	50.0239	0.852	1.704	ug/L
	Zn	66	50285.782	0.16	50.8334	0.805	1.584	ug/L
>	Ge	72	313905.419	313905.42				ug/L
	As	75	52528.777	0.17	50.5622	1.299	2.570	ug/L
	Se	77	3846.888	0.01	48.7238	0.864	1.772	ug/L
	Se	82	4642.906	0.01	48.3706	1.363	2.817	ug/L
	Rb	85	1861.894	0.01				mg/L
	Y	89	196028.393	-6362.19				ug/L
	Rh	103	17.000	-12.00				ug/L
	Mo	98	245331.512	0.92	100.8587	2.269	2.250	ug/L
	Ag	107	249577.098	0.93	50.1144	1.268	2.531	ug/L
	Cd	114	55082.058	0.21	49.1355	1.759	3.581	ug/L
>	In	115	268115.126	268115.13				ug/L
	Sn	118	199425.824	0.74	50.7971	0.947	1.864	ug/L
	Sb	123	191171.255	0.71	51.5350	1.245	2.415	ug/L
	Ba	135	74743.793	0.19	50.8929	0.217	0.427	ug/L
	Ce	140	90.010	-0.00				ug/L
>	Tb	159	387923.515	387923.51				ug/L
	Ho	165	10.001	-0.00				ug/L
	Tl	203	311656.147	1.02	51.0951	1.145	2.241	ug/L
	Tl	205	770353.677	2.51	51.3397	2.101	4.092	ug/L
	Pb	206	253509.152	0.83	51.3462	1.566	3.050	ug/L
	Pb	207	236531.145	0.77	50.7288	1.696	3.343	ug/L
	Pb	208	1056350.683	3.44	50.8986	1.211	2.379	ug/L
	U	238	1498450.563	4.89	56.6011	0.641	1.133	ug/L
>	Bi	209	306576.508	306576.51				ug/L

Sample ID: QC Std 6
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Na	23	19400497.660	144.43	5.1861	0.343	6.617	mg/L
Mg	24	12485665.629	93.62	5.3239	0.341	6.413	mg/L
K	39	28608702.336	210.85	5.1414	0.185	3.606	mg/L
Ca	43	58802.723	0.44	5.0740	0.193	3.796	mg/L
Fe	54	2393014.389	17.70	4.9876	0.180	3.606	mg/L
Fe	57	1095045.157	8.16	5.3102	0.292	5.507	mg/L
Sc-1	45	133528.918	133528.92				mg/L
Cl	35	28096.626	-8827.68				mg/L
Kr	83	53.334	0.33				mg/L
Br	81	7217.799	2141.58				mg/L
P	31	8258.104	663.31				mg/L
S	34	175376.378	-224.08				mg/L
Sr	88	4111.425	4058.09				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	99.983				
Cr	52	100.449				
Cr	53					
Mn	55	98.482				
Co	59	100.648				
Ni	60	98.490				
Cu	65	100.048				
Zn	66	101.667				
Ge	72		100.604			
As	75	101.124				
Se	77					
Se	82	96.741				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	100.229				
Cd	114	98.271				
In	115		97.202			
Sn	118					
Sb	123	103.070				
Ba	135	101.786				
Ce	140					
Tb	159		98.938			
Ho	165					
Tl	203	102.190				
Tl	205					
Pb	206					
Pb	207					
Pb	208	101.797				
U	238	113.202				
Bi	209		96.081			

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 22:31:25
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Saturday, January 28, 2012 22:31:25
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, January 28, 2012 22:36:48
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10006.041	-0.00				ug/L
	Be	9	10.000	0.00	-0.0207	0.020	95.069	ug/L
	Al	27	1866.879	-0.00	-0.2833	0.076	26.675	ug/L
>	Sc	45	144017.903	144017.90				ug/L
	Ti	49	60.006	-0.00	0.1252	0.023	18.687	ug/L
	V	51	2171.685	-0.00	0.0028	0.013	470.959	ug/L
	Cr	52	6450.895	-0.00	-0.0489	0.018	36.184	ug/L
	Cr	53	420.053	-0.00	-0.5590	0.071	12.733	ug/L
	Mn	55	644.032	0.00	0.0164	0.006	38.451	ug/L
	Co	59	152.003	0.00	0.0002	0.006	3222.195	ug/L
	Ni	60	90.335	-0.00	0.0013	0.004	308.654	ug/L
	Cu	65	120.335	0.00	-0.0790	0.001	1.577	ug/L
	Zn	66	639.031	-0.00	0.0118	0.024	201.444	ug/L
>	Ge	72	329521.667	329521.67				ug/L
	As	75	-116.707	-0.00	0.0237	0.059	249.531	ug/L
	Se	77	59.334	-0.00	0.0956	0.160	166.950	ug/L
	Se	82	5.577	-0.00	0.0476	0.097	204.809	ug/L
	Rb	85	25.334	-0.00				mg/L
	Y	89	208806.725	6416.14				ug/L
	Rh	103	13.000	-16.00				ug/L
	Mo	98	88.823	0.00	0.0448	0.007	16.333	ug/L
	Ag	107	137.336	0.00	0.0150	0.006	39.941	ug/L
	Cd	114	7.180	0.00	0.0148	0.006	37.329	ug/L
>	In	115	288202.072	288202.07				ug/L
	Sn	118	629.490	-0.00	0.1489	0.004	2.545	ug/L
	Sb	123	69.868	0.00	0.0304	0.005	15.908	ug/L
	Ba	135	45.001	0.00	0.0122	0.004	35.356	ug/L
	Ce	140	30.003	-0.00				ug/L
>	Tb	159	412130.795	412130.79				ug/L
	Ho	165	13.335	-0.00				ug/L
	Tl	203	131.669	0.00	0.0232	0.007	28.573	ug/L
	Tl	205	276.699	0.00	0.0281	0.007	24.143	ug/L
	Pb	206	268.340	0.00	0.0118	0.003	26.903	ug/L
	Pb	207	231.006	0.00	0.0151	0.001	9.483	ug/L
	Pb	208	1080.039	0.00	0.0119	0.002	19.573	ug/L
	U	238	334.677	0.00	0.0151	0.004	28.031	ug/L
>	Bi	209	337809.851	337809.85				ug/L

Sample ID: QC Std 7
Report Date/Time: Saturday, January 28, 2012 22:39:00
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Erin D. Long

Na	23	111994.295	-0.25	0.0153	0.002	15.239	mg/L
Mg	24	3527.853	0.02	-0.0030	0.001	19.511	mg/L
K	39	491353.066	-0.11	-0.0099	0.003	32.926	mg/L
Ca	43	216.691	0.00	-0.0015	0.002	141.721	mg/L
Fe	54	35712.061	0.01	-0.0003	0.004	1272.401	mg/L
Fe	57	7387.347	0.00	-0.0054	0.002	28.408	mg/L
Sc-1	45	144017.903	144017.90				mg/L
Cl	35	29439.242	-7485.06				mg/L
Kr	83	48.667	-4.33				mg/L
Br	81	6992.937	1916.72				mg/L
P	31	10158.231	2563.44				mg/L
S	34	199827.170	24226.71				mg/L
Sr	88	120.013	66.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		105.609			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		104.484			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		105.112			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		105.870			

Sample ID: QC Std 7
Report Date/Time: Saturday, January 28, 2012 22:39:00
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: Saturday, January 28, 2012 22:39:00
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, January 28, 2012 22:44:26
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10156.200	0.00				ug/L
	Be	9	8.000	0.00	-0.0260	0.013	49.223	ug/L
	Al	27	3183.963	0.01	0.0788	0.187	237.582	ug/L
>	Sc	45	132224.854	132224.85				ug/L
	Ti	49	73.341	0.00	0.1607	0.049	30.403	ug/L
	V	51	4987.495	0.01	0.3741	0.016	4.313	ug/L
	Cr	52	11261.722	0.02	0.7036	0.018	2.571	ug/L
	Cr	53	1096.849	0.00	0.2903	0.094	32.546	ug/L
	Mn	55	5941.844	0.02	0.5055	0.006	1.105	ug/L
	Co	59	3490.100	0.01	0.4035	0.012	3.055	ug/L
	Ni	60	2884.529	0.01	1.6386	0.058	3.561	ug/L
	Cu	65	1438.472	0.00	0.7306	0.007	1.012	ug/L
	Zn	66	6600.012	0.02	6.1639	0.150	2.427	ug/L
>	Ge	72	312929.524	312929.52				ug/L
	As	75	339.078	0.00	0.4575	0.022	4.702	ug/L
	Se	77	72.667	0.00	0.3037	0.178	58.578	ug/L
	Se	82	47.633	0.00	0.4917	0.069	14.019	ug/L
	Rb	85	28.667	-0.00				mg/L
	Y	89	191944.993	-10445.59				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	75.161	0.00	0.0419	0.006	15.164	ug/L
	Ag	107	2149.632	0.01	0.4251	0.007	1.543	ug/L
	Cd	114	254.288	0.00	0.2381	0.023	9.572	ug/L
>	In	115	265509.620	265509.62				ug/L
	Sn	118	186.002	-0.00	0.0476	0.004	7.725	ug/L
	Sb	123	1557.695	0.01	0.4365	0.008	1.723	ug/L
	Ba	135	1171.761	0.00	0.8182	0.036	4.377	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	371007.043	371007.04				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	596.694	0.00	0.1009	0.004	4.189	ug/L
	Tl	205	1450.271	0.00	0.1075	0.005	4.832	ug/L
	Pb	206	2284.669	0.01	0.4225	0.009	2.031	ug/L
	Pb	207	2174.305	0.01	0.4336	0.008	1.871	ug/L
	Pb	208	9597.611	0.03	0.4243	0.009	2.023	ug/L
	U	238	12263.147	0.04	0.4637	0.009	2.033	ug/L
>	Bi	209	308591.420	308591.42				ug/L

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 22:46:40
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Na	23	43206.628	-0.70	-0.0008	0.001	184.091	mg/L
Mg	24	2113.858	0.01	-0.0035	0.000	14.041	mg/L
K	39	458184.247	-0.05	-0.0086	0.003	30.104	mg/L
Ca	43	143.349	-0.00	-0.0063	0.003	54.431	mg/L
Fe	54	32038.053	0.00	-0.0019	0.003	131.394	mg/L
Fe	57	6396.429	0.00	-0.0073	0.001	19.704	mg/L
Sc-1	45	132224.854	132224.85				mg/L
Cl	35	25741.029	-11183.27				mg/L
Kr	83	42.334	-10.67				mg/L
Br	81	5520.497	444.28				mg/L
P	31	7620.162	25.37				mg/L
S	34	165782.871	-9817.58				mg/L
Sr	88	103.344	50.01				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	93.530				
Cr	52	87.955				
Cr	53					
Mn	55	101.108				
Co	59	100.871				
Ni	60	102.412				
Cu	65	91.330				
Zn	66	98.622				
Ge	72		100.291			
As	75	114.381				
Se	77					
Se	82	122.913				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	106.273				
Cd	114	119.047				
In	115		96.257			
Sn	118					
Sb	123	109.114				
Ba	135	109.088				
Ce	140					
Tb	159		94.624			
Ho	165					
Tl	203	126.135				
Tl	205					
Pb	206					
Pb	207					
Pb	208	106.081				
U	238	115.917				
Bi	209		96.713			

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 22:46:40
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 8	Tl	203	LLCCV IS OUT OF LIMITS (+/-20%)

Sample ID: QC Std 8
Report Date/Time: Saturday, January 28, 2012 22:46:40
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: PBW 74 WG382898-02

Sample Date/Time: Saturday, January 28, 2012 22:52:04
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 74
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10139.502	-0.01				ug/L
	Be	9	8.667	-0.00	-0.0272	0.005	18.402	ug/L
	Al	27	23249.061	0.14	4.3023	0.172	4.000	ug/L
>	Sc	45	151023.840	151023.84				ug/L
	Ti	49	90.010	0.00	0.1862	0.077	41.298	ug/L
	V	51	2182.483	-0.00	0.0008	0.019	2272.128	ug/L
	Cr	52	8984.265	0.01	0.2874	0.008	2.679	ug/L
	Cr	53	723.437	-0.00	-0.2189	0.027	12.449	ug/L
	Mn	55	1052.744	0.00	0.0508	0.004	8.252	ug/L
	Co	59	96.002	0.00	-0.0065	0.001	10.400	ug/L
	Ni	60	88.335	-0.00	-0.0004	0.005	1266.411	ug/L
	Cu	65	148.336	0.00	-0.0638	0.005	8.069	ug/L
	Zn	66	3478.761	0.01	2.7353	0.038	1.387	ug/L
>	Ge	72	333855.126	333855.13				ug/L
	As	75	-118.022	-0.00	0.0248	0.041	165.851	ug/L
	Se	77	57.334	-0.00	0.0605	0.053	88.285	ug/L
	Se	82	5.916	-0.00	0.0517	0.058	112.244	ug/L
	Rb	85	40.667	0.00				mg/L
	Y	89	216193.795	13803.21				ug/L
	Rh	103	6.667	-22.33				ug/L
	Mo	98	37.119	0.00	0.0246	0.002	7.871	ug/L
	Ag	107	89.335	0.00	0.0056	0.001	12.642	ug/L
	Cd	114	3.123	0.00	0.0116	0.006	48.069	ug/L
>	In	115	293942.193	293942.19				ug/L
	Sn	118	203.869	-0.00	0.0471	0.002	5.026	ug/L
	Sb	123	118.160	0.00	0.0418	0.000	0.961	ug/L
	Ba	135	59.334	0.00	0.0203	0.010	50.107	ug/L
	Ce	140	40.004	-0.00				ug/L
>	Tb	159	424187.641	424187.64				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	24.000	0.00	0.0074	0.001	12.284	ug/L
	Tl	205	50.005	0.00	0.0146	0.002	14.658	ug/L
	Pb	206	241.006	0.00	0.0077	0.002	31.676	ug/L
	Pb	207	205.338	0.00	0.0109	0.003	28.311	ug/L
	Pb	208	922.029	0.00	0.0058	0.001	20.664	ug/L
	U	238	38.000	0.00	0.0050	0.000	4.286	ug/L
>	Bi	209	331077.358	331077.36				ug/L

Sample ID: PBW 74 WG382898-02
Report Date/Time: Saturday, January 28, 2012 22:54:17
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Approved: January 30, 2012
Erin D. Long

Na	23	49618.936	-0.70	-0.0008	0.000	35.665	mg/L
Mg	24	6296.341	0.04	-0.0021	0.000	2.884	mg/L
K	39	468631.433	-0.42	-0.0174	0.002	9.055	mg/L
Ca	43	630.087	0.00	0.0293	0.005	16.887	mg/L
Fe	54	72722.243	0.24	0.0655	0.005	7.446	mg/L
Fe	57	7447.427	0.00	-0.0066	0.004	64.749	mg/L
Sc-1	45	151023.840	151023.84				mg/L
Cl	35	38863.759	1939.46				mg/L
Kr	83	48.001	-5.00				mg/L
Br	81	7006.278	1930.06				mg/L
P	31	16298.615	8703.82				mg/L
S	34	190703.395	15102.94				mg/L
Sr	88	543.405	490.07				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		106.997			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		106.565			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		108.187			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.760			

Sample ID: PBW 74 WG382898-02
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 74 WG382898-02
Report Date/Time: Saturday, January 28, 2012 22:54:17
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: LCSW 74 WG382898-03

Sample Date/Time: Saturday, January 28, 2012 22:59:51
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 75
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10139.499	0.00				ug/L
	Be	9	7100.360	0.05	26.7054	0.164	0.612	ug/L
	Al	27	145391.174	1.05	33.8560	0.756	2.232	ug/L
>	Sc	45	136849.034	136849.03				ug/L
	Ti	49	110.012	0.00	0.2411	0.076	31.625	ug/L
	V	51	204322.363	0.65	25.6506	0.496	1.935	ug/L
	Cr	52	188885.330	0.58	26.7127	0.283	1.060	ug/L
	Cr	53	22312.089	0.07	26.0071	0.568	2.184	ug/L
	Mn	55	290400.996	0.93	26.5860	0.396	1.490	ug/L
	Co	59	216214.715	0.69	26.0324	0.302	1.162	ug/L
	Ni	60	44189.981	0.14	25.7899	0.236	0.914	ug/L
	Cu	65	43640.073	0.14	26.5183	0.642	2.421	ug/L
	Zn	66	24331.380	0.08	24.3402	0.529	2.173	ug/L
>	Ge	72	313226.767	313226.77				ug/L
	As	75	25530.387	0.08	24.6970	0.242	0.980	ug/L
	Se	77	1906.885	0.01	23.8870	0.090	0.375	ug/L
	Se	82	2101.842	0.01	21.9396	0.130	0.593	ug/L
	Rb	85	101.668	0.00				mg/L
	Y	89	200691.486	-1699.10				ug/L
	Rh	103	16.334	-12.67				ug/L
	Mo	98	46.717	0.00	0.0293	0.003	9.744	ug/L
	Ag	107	132395.325	0.48	25.6867	0.353	1.376	ug/L
	Cd	114	27770.721	0.10	23.9600	1.352	5.641	ug/L
>	In	115	277357.183	277357.18				ug/L
	Sn	118	217.603	-0.00	0.0534	0.005	9.656	ug/L
	Sb	123	95838.043	0.35	24.9727	0.186	0.745	ug/L
	Ba	135	38889.926	0.10	26.0371	0.072	0.276	ug/L
	Ce	140	36.670	-0.00				ug/L
>	Tb	159	394396.247	394396.25				ug/L
	Ho	165	0.000	-0.00				ug/L
	Tl	203	165460.572	0.51	25.8717	0.382	1.476	ug/L
	Tl	205	409533.149	1.27	26.0332	0.513	1.970	ug/L
	Pb	206	141364.502	0.44	27.2883	0.175	0.640	ug/L
	Pb	207	121327.434	0.38	24.7973	0.355	1.433	ug/L
	Pb	208	568643.766	1.77	26.1158	0.200	0.764	ug/L
	U	238	777715.294	2.42	28.0256	0.252	0.900	ug/L
>	Bi	209	321348.863	321348.86				ug/L

Sample ID: LCSW 74 WG382898-03
Report Date/Time: Saturday, January 28, 2012 23:02:04
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Approved: January 30, 2012
Erin D. Long

Na	23	65812.535	-0.55	0.0047	0.000	4.476	mg/L
Mg	24	8648.692	0.06	-0.0008	0.000	13.967	mg/L
K	39	452611.286	-0.21	-0.0124	0.003	20.950	mg/L
Ca	43	370.045	0.00	0.0124	0.001	5.747	mg/L
Fe	54	74332.459	0.30	0.0828	0.000	0.112	mg/L
Fe	57	7674.299	0.01	-0.0023	0.002	75.893	mg/L
Sc-1	45	136849.034	136849.03				mg/L
Cl	35	31738.996	-5185.31				mg/L
Kr	83	52.667	-0.33				mg/L
Br	81	5851.387	775.17				mg/L
P	31	14398.463	6803.67				mg/L
S	34	167707.956	-7892.50				mg/L
Sr	88	563.409	510.07				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.386			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.552			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		100.589			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		100.711			

Sample ID: LCSW 74 WG382898-03
Report Date/Time: Saturday, January 28, 2012 23:02:04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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 74 WG382898-03
Report Date/Time: Saturday, January 28, 2012 23:02:04
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111072701 WG382898-01

Sample Date/Time: Saturday, January 28, 2012 23:07:38
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 76
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10423.212	-0.00				ug/L
	Be	9	12.000	0.00	-0.0150	0.023	156.055	ug/L
	Al	27	14880.005	0.09	2.6338	0.440	16.703	ug/L
>	Sc	45	145477.558	145477.56				ug/L
	Ti	49	200.023	0.00	0.4479	0.183	40.790	ug/L
	V	51	2380.465	0.00	0.0468	0.007	15.005	ug/L
	Cr	52	8253.836	0.01	0.2777	0.026	9.491	ug/L
	Cr	53	1306.900	0.00	0.5638	0.050	8.855	ug/L
	Mn	55	13944644.045	45.11	1295.3614	27.084	2.091	ug/L
	Co	59	1365.459	0.00	0.1495	0.010	6.651	ug/L
	Ni	60	1492.149	0.00	0.8352	0.030	3.603	ug/L
	Cu	65	379.346	0.00	0.0860	0.012	13.687	ug/L
	Zn	66	2945.550	0.01	2.4501	0.152	6.224	ug/L
>	Ge	72	309164.339	309164.34				ug/L
	As	75	190.971	0.00	0.3172	0.015	4.713	ug/L
	Se	77	90.667	0.00	0.5518	0.178	32.172	ug/L
	Se	82	34.624	0.00	0.3603	0.137	37.937	ug/L
	Rb	85	3542.788	0.01				mg/L
	Y	89	197291.332	-5099.25				ug/L
	Rh	103	21.334	-7.67				ug/L
	Mo	98	84.088	0.00	0.0458	0.003	7.627	ug/L
	Ag	107	70.668	0.00	0.0037	0.001	18.370	ug/L
	Cd	114	11.122	0.00	0.0191	0.002	8.197	ug/L
>	In	115	264004.166	264004.17				ug/L
	Sn	118	493.748	-0.00	0.1275	0.002	1.447	ug/L
	Sb	123	121.494	0.00	0.0459	0.004	7.722	ug/L
	Ba	135	255716.965	0.68	178.7338	1.347	0.753	ug/L
	Ce	140	423.387	0.00				ug/L
>	Tb	159	377973.837	377973.84				ug/L
	Ho	165	43.338	0.00				ug/L
	Tl	203	33.000	0.00	0.0090	0.001	7.621	ug/L
	Tl	205	33.337	-0.00	0.0137	0.001	5.192	ug/L
	Pb	206	253.340	0.00	0.0121	0.003	26.916	ug/L
	Pb	207	221.338	0.00	0.0161	0.003	20.566	ug/L
	Pb	208	1022.368	0.00	0.0123	0.002	14.819	ug/L
	U	238	71.668	0.00	0.0063	0.001	15.983	ug/L
>	Bi	209	317226.427	317226.43				ug/L

Sample ID: L1111072701 WG382898-01
Report Date/Time: Saturday, January 28, 2012 23:09:51
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Approved: January 30, 2012
Erin D. Long

Na	23	52762086.602	362.52	12.9804	0.985	7.591	mg/L
Mg	24	9029499.235	62.14	3.5325	0.138	3.918	mg/L
K	39	2589395.421	14.29	0.3416	0.009	2.497	mg/L
Ca	43	105382.762	0.72	8.3620	0.265	3.165	mg/L
Fe	54	10184050.762	69.84	19.6934	0.680	3.453	mg/L
Fe	57	4081169.423	28.04	18.2608	0.763	4.177	mg/L
Sc-1	45	145477.558	145477.56				mg/L
Cl	35	665130.783	628206.48				mg/L
Kr	83	43.334	-9.67				mg/L
Br	81	22561.845	17485.63				mg/L
P	31	39134.360	31539.57				mg/L
S	34	363735.998	188135.54				mg/L
Sr	88	471820.732	471767.39				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.084			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.711			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		96.400			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.419			

Sample ID: L1111072701 WG382898-01
Report Date/Time: Saturday, January 28, 2012 23:09:51
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Approved: January 30, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

Sample ID: L1111072701 WG382898-01
Report Date/Time: Saturday, January 28, 2012 23:09:51
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111072702S WG382898-04

Sample Date/Time: Saturday, January 28, 2012 23:15:25
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 77
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9755.741	0.00				ug/L
	Be	9	6601.948	0.05	26.8465	1.426	5.312	ug/L
	Al	27	110764.672	0.86	27.7316	0.827	2.982	ug/L
>	Sc	45	126740.842	126740.84				ug/L
	Ti	49	240.027	0.00	0.5957	0.040	6.778	ug/L
	V	51	178138.534	0.63	25.2020	0.342	1.357	ug/L
	Cr	52	160437.762	0.56	25.5382	0.612	2.396	ug/L
	Cr	53	19107.128	0.07	25.0724	0.411	1.640	ug/L
	Mn	55	13119463.710	47.21	1355.7120	29.591	2.183	ug/L
	Co	59	185189.756	0.67	25.1308	0.503	2.000	ug/L
	Ni	60	39122.680	0.14	25.7355	0.345	1.339	ug/L
	Cu	65	36897.911	0.13	25.2600	0.763	3.022	ug/L
	Zn	66	23843.636	0.08	26.9423	0.228	0.846	ug/L
>	Ge	72	277897.296	277897.30				ug/L
	As	75	22285.935	0.08	24.2980	0.385	1.583	ug/L
	Se	77	1640.162	0.01	23.1357	0.616	2.664	ug/L
	Se	82	1896.167	0.01	22.3081	0.238	1.067	ug/L
	Rb	85	3239.329	0.01				mg/L
	Y	89	176174.806	-26215.78				ug/L
	Rh	103	25.000	-4.00				ug/L
	Mo	98	68.649	0.00	0.0434	0.002	3.810	ug/L
	Ag	107	52345.416	0.23	12.1776	0.358	2.936	ug/L
	Cd	114	24690.285	0.11	25.5341	0.763	2.989	ug/L
>	In	115	231290.591	231290.59				ug/L
	Sn	118	468.547	-0.00	0.1382	0.007	5.275	ug/L
	Sb	123	84624.576	0.37	26.4462	0.583	2.204	ug/L
	Ba	135	261581.694	0.76	201.9578	2.745	1.359	ug/L
	Ce	140	333.374	0.00				ug/L
>	Tb	159	342212.608	342212.61				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	147566.702	0.52	26.3016	0.134	0.508	ug/L
	Tl	205	367513.398	1.30	26.6265	0.557	2.094	ug/L
	Pb	206	125848.720	0.45	27.6953	0.898	3.242	ug/L
	Pb	207	110989.163	0.39	25.8586	0.360	1.392	ug/L
	Pb	208	510275.332	1.81	26.7117	0.273	1.022	ug/L
	U	238	703701.516	2.50	28.9049	0.442	1.528	ug/L
>	Bi	209	281950.519	281950.52				ug/L

Sample ID: L1111072702S WG382898-04
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Approved: January 30, 2012
Erin D. Long

Na	23	48414288.183	381.45	13.6570	0.665	4.867	mg/L
Mg	24	8359056.253	65.97	3.7503	0.044	1.175	mg/L
K	39	2468942.411	15.98	0.3829	0.020	5.217	mg/L
Ca	43	99166.824	0.78	9.0341	0.487	5.393	mg/L
Fe	54	9359587.695	73.64	20.7645	0.478	2.300	mg/L
Fe	57	3771025.605	29.75	19.3736	1.129	5.826	mg/L
Sc-1	45	126740.842	126740.84				mg/L
Cl	35	637209.546	600285.24				mg/L
Kr	83	47.334	-5.67				mg/L
Br	81	24851.001	19774.79				mg/L
P	31	33927.147	26332.35				mg/L
S	34	322538.092	146937.64				mg/L
Sr	88	444798.631	444745.29				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.063			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		83.851			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.280			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		88.364			

Sample ID: L1111072702S WG382898-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111072702S WG382898-04
Report Date/Time: Saturday, January 28, 2012 23:17:38
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111072703SD WG382898-05

Sample Date/Time: Saturday, January 28, 2012 23:23:12
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 78
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10206.254	-0.00				ug/L
	Be	9	7118.374	0.05	25.8482	0.282	1.089	ug/L
	Al	27	120363.065	0.83	26.9275	1.040	3.862	ug/L
>	Sc	45	141746.369	141746.37				ug/L
	Ti	49	233.360	0.00	0.5251	0.166	31.638	ug/L
	V	51	191609.521	0.62	24.5410	1.456	5.932	ug/L
	Cr	52	176497.143	0.55	25.4349	1.238	4.867	ug/L
	Cr	53	21830.794	0.07	25.9789	1.735	6.679	ug/L
	Mn	55	14308599.985	46.62	1338.6106	50.411	3.766	ug/L
	Co	59	203392.107	0.66	24.9898	0.882	3.528	ug/L
	Ni	60	43941.336	0.14	26.1632	0.134	0.510	ug/L
	Cu	65	41095.829	0.13	25.4676	0.348	1.367	ug/L
	Zn	66	24109.406	0.08	24.6123	0.660	2.684	ug/L
>	Ge	72	306999.087	306999.09				ug/L
	As	75	24886.511	0.08	24.5628	0.253	1.028	ug/L
	Se	77	1798.194	0.01	22.9586	0.056	0.242	ug/L
	Se	82	2054.899	0.01	21.8857	0.158	0.721	ug/L
	Rb	85	3591.810	0.01				mg/L
	Y	89	198404.191	-3986.39				ug/L
	Rh	103	30.334	1.33				ug/L
	Mo	98	48.160	0.00	0.0313	0.005	14.516	ug/L
	Ag	107	70908.130	0.27	14.7773	0.232	1.568	ug/L
	Cd	114	27025.908	0.10	25.0314	0.408	1.631	ug/L
>	In	115	258153.144	258153.14				ug/L
	Sn	118	466.146	-0.00	0.1231	0.003	2.265	ug/L
	Sb	123	92229.222	0.36	25.8204	0.286	1.108	ug/L
	Ba	135	288023.301	0.77	203.2861	3.715	1.827	ug/L
	Ce	140	376.713	0.00				ug/L
>	Tb	159	374322.287	374322.29				ug/L
	Ho	165	33.337	0.00				ug/L
	Tl	203	159759.504	0.52	26.1031	0.373	1.428	ug/L
	Tl	205	396931.254	1.29	26.3588	0.508	1.928	ug/L
	Pb	206	135986.246	0.44	27.4269	0.321	1.172	ug/L
	Pb	207	119424.637	0.39	25.5091	0.686	2.690	ug/L
	Pb	208	552624.565	1.79	26.5179	0.422	1.593	ug/L
	U	238	769821.027	2.50	28.9761	0.612	2.112	ug/L
>	Bi	209	307588.650	307588.65				ug/L

Sample ID: L1111072703SD WG382898-05
Report Date/Time: Saturday, January 28, 2012 23:25:25
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Approved: January 30, 2012
Erin D. Long

Na	23	54496547.614	383.81	13.7414	0.561	4.085	mg/L
Mg	24	9035794.130	63.80	3.6271	0.145	3.997	mg/L
K	39	2641332.174	15.12	0.3619	0.007	1.996	mg/L
Ca	43	107963.190	0.76	8.7821	0.090	1.030	mg/L
Fe	54	10077489.061	70.82	19.9678	0.668	3.346	mg/L
Fe	57	4221896.272	29.74	19.3663	0.403	2.083	mg/L
Sc-1	45	141746.369	141746.37				mg/L
Cl	35	667218.428	630294.13				mg/L
Kr	83	44.334	-8.67				mg/L
Br	81	26566.333	21490.12				mg/L
P	31	38414.586	30819.79				mg/L
S	34	349350.098	173749.64				mg/L
Sr	88	482492.830	482439.49				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.390			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.590			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.469			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		96.399			

Sample ID: L1111072703SD WG382898-05
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111072703SD WG382898-05
Report Date/Time: Saturday, January 28, 2012 23:25:25
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111078702

Sample Date/Time: Saturday, January 28, 2012 23:31:00
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 79
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9622.259	-0.01				ug/L
	Be	9	12.000	0.00	-0.0127	0.021	162.947	ug/L
	Al	27	28481.934	0.19	5.8631	0.338	5.768	ug/L
>	Sc	45	141274.024	141274.02				ug/L
	Ti	49	836.793	0.00	1.8881	0.193	10.229	ug/L
	V	51	2390.259	0.00	0.0515	0.029	55.921	ug/L
	Cr	52	10313.482	0.01	0.5996	0.026	4.366	ug/L
	Cr	53	1667.002	0.00	1.0294	0.277	26.905	ug/L
	Mn	55	4611996.634	15.07	432.8569	6.318	1.460	ug/L
	Co	59	9206.842	0.03	1.1185	0.020	1.829	ug/L
	Ni	60	6132.985	0.02	3.6227	0.086	2.367	ug/L
	Cu	65	1021.406	0.00	0.4899	0.013	2.738	ug/L
	Zn	66	8547.802	0.03	8.3601	0.136	1.622	ug/L
>	Ge	72	305937.074	305937.07				ug/L
	As	75	935.635	0.00	1.0532	0.086	8.119	ug/L
	Se	77	99.334	0.00	0.6766	0.097	14.356	ug/L
	Se	82	247.527	0.00	2.6402	0.150	5.684	ug/L
	Rb	85	3935.969	0.01				mg/L
	Y	89	191598.057	-10792.53				ug/L
	Rh	103	39.667	10.67				ug/L
	Mo	98	615.819	0.00	0.2742	0.008	2.967	ug/L
	Ag	107	72.334	0.00	0.0044	0.001	23.639	ug/L
	Cd	114	19.702	0.00	0.0274	0.007	24.974	ug/L
>	In	115	257528.847	257528.85				ug/L
	Sn	118	1280.498	0.00	0.3392	0.007	1.949	ug/L
	Sb	123	667.360	0.00	0.1999	0.004	1.991	ug/L
	Ba	135	44276.786	0.12	30.6496	0.310	1.011	ug/L
	Ce	140	1576.974	0.00				ug/L
>	Tb	159	381566.286	381566.29				ug/L
	Ho	165	96.677	0.00				ug/L
	Tl	203	92.668	0.00	0.0194	0.003	14.029	ug/L
	Tl	205	193.355	0.00	0.0248	0.001	3.385	ug/L
	Pb	206	786.045	0.00	0.1270	0.007	5.135	ug/L
	Pb	207	657.032	0.00	0.1157	0.001	0.904	ug/L
	Pb	208	3082.922	0.01	0.1181	0.004	3.559	ug/L
	U	238	68509.502	0.23	2.6756	0.033	1.241	ug/L
>	Bi	209	296892.417	296892.42				ug/L

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Na	23	184470875.785	1306.54	46.7190	1.501	3.214	mg/L
Mg	24	55485206.710	393.35	22.3831	0.795	3.551	mg/L
K	39	3143749.414	18.74	0.4503	0.018	4.097	mg/L
Ca	43	778757.759	5.52	63.8203	3.064	4.801	mg/L
Fe	54	138607.405	0.75	0.2072	0.020	9.575	mg/L
Fe	57	68016.681	0.43	0.2757	0.023	8.161	mg/L
> Sc-1	45	141274.024	141274.02				mg/L
Cl	35	1210452.153	1173527.85				mg/L
Kr	83	55.334	2.33				mg/L
Br	81	217969.288	212893.07				mg/L
P	31	15529.225	7934.43				mg/L
S	34	1047371.917	871771.46				mg/L
Sr	88	1052628.191	1052574.85				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72		98.050			
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115		93.364			
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159		97.317			
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209		93.046			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078703

Sample Date/Time: Saturday, January 28, 2012 23:38:48
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 80
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9088.295	0.00				ug/L
	Be	9	12.667	0.00	-0.0015	0.005	328.463	ug/L
	Al	27	9188.403	0.06	1.8342	0.216	11.788	ug/L
>	Sc	45	117947.559	117947.56				ug/L
	Ti	49	366.712	0.00	0.9215	0.156	16.966	ug/L
	V	51	1920.992	0.00	0.0187	0.022	118.965	ug/L
	Cr	52	6543.304	0.00	0.1488	0.035	23.612	ug/L
	Cr	53	1140.192	0.00	0.5413	0.116	21.488	ug/L
	Mn	55	1223017.846	4.46	128.0165	0.438	0.342	ug/L
	Co	59	1796.545	0.01	0.2301	0.007	3.111	ug/L
	Ni	60	3083.604	0.01	2.0086	0.045	2.246	ug/L
	Cu	65	426.349	0.00	0.1497	0.025	16.524	ug/L
	Zn	66	4243.124	0.01	4.3618	0.114	2.605	ug/L
>	Ge	72	274245.960	274245.96				ug/L
	As	75	2546.915	0.01	2.9280	0.063	2.158	ug/L
	Se	77	83.334	0.00	0.5954	0.332	55.699	ug/L
	Se	82	168.935	0.00	2.0008	0.236	11.815	ug/L
	Rb	85	3165.967	0.01				mg/L
	Y	89	170854.780	-31535.80				ug/L
	Rh	103	71.334	42.33				ug/L
	Mo	98	295.392	0.00	0.1534	0.002	1.349	ug/L
	Ag	107	58.334	0.00	0.0031	0.003	82.471	ug/L
	Cd	114	-9.973	-0.00	-0.0014	0.002	144.905	ug/L
>	In	115	228241.798	228241.80				ug/L
	Sn	118	5924.781	0.02	1.7702	0.062	3.504	ug/L
	Sb	123	76.621	0.00	0.0370	0.002	4.267	ug/L
	Ba	135	3606.818	0.01	2.8036	0.063	2.240	ug/L
	Ce	140	113.345	-0.00				ug/L
>	Tb	159	337800.590	337800.59				ug/L
	Ho	165	40.004	0.00				ug/L
	Tl	203	27.000	0.00	0.0088	0.001	9.765	ug/L
	Tl	205	56.673	0.00	0.0158	0.003	18.642	ug/L
	Pb	206	234.339	0.00	0.0168	0.006	36.624	ug/L
	Pb	207	210.005	0.00	0.0217	0.002	11.030	ug/L
	Pb	208	953.698	0.00	0.0173	0.002	10.109	ug/L
	U	238	11651.281	0.04	0.5071	0.020	3.973	ug/L
>	Bi	209	267773.374	267773.37				ug/L

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Na	23	108932536.607	922.23	32.9840	0.754	2.287	mg/L
Mg	24	20646861.353	175.26	9.9706	0.447	4.485	mg/L
K	39	1860132.323	12.30	0.2932	0.032	11.048	mg/L
Ca	43	329218.645	2.79	32.2787	1.088	3.370	mg/L
Fe	54	541604.352	4.36	1.2255	0.055	4.491	mg/L
Fe	57	233129.045	1.93	1.2481	0.043	3.428	mg/L
Sc-1	45	117947.559	117947.56				mg/L
Cl	35	1012498.836	975574.53				mg/L
Kr	83	46.334	-6.67				mg/L
Br	81	135365.757	130289.54				mg/L
P	31	10696.195	3101.40				mg/L
S	34	504071.262	328470.81				mg/L
Sr	88	2229684.703	2229631.36				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.893			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.746			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		86.154			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		83.920			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078704

Sample Date/Time: Saturday, January 28, 2012 23:46:36
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 81
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9588.862	0.01				ug/L
	Be	9	9.333	0.00	-0.0171	0.010	60.848	ug/L
	Al	27	23332.627	0.18	5.5538	0.135	2.436	ug/L
>	Sc	45	121225.836	121225.84				ug/L
	Ti	49	330.040	0.00	0.7931	0.097	12.170	ug/L
	V	51	2150.505	0.00	0.0387	0.027	68.577	ug/L
	Cr	52	7023.363	0.00	0.1751	0.034	19.549	ug/L
	Cr	53	1170.199	0.00	0.5053	0.024	4.820	ug/L
	Mn	55	1341074.356	4.67	134.0605	3.222	2.404	ug/L
	Co	59	1920.241	0.01	0.2350	0.007	3.002	ug/L
	Ni	60	3578.471	0.01	2.2336	0.059	2.639	ug/L
	Cu	65	502.687	0.00	0.1861	0.006	3.255	ug/L
	Zn	66	4242.122	0.01	4.1320	0.054	1.317	ug/L
>	Ge	72	287186.565	287186.56				ug/L
	As	75	2718.277	0.01	2.9845	0.092	3.078	ug/L
	Se	77	82.000	0.00	0.5186	0.113	21.711	ug/L
	Se	82	172.477	0.00	1.9596	0.364	18.570	ug/L
	Rb	85	3492.767	0.01				mg/L
	Y	89	184971.193	-17419.39				ug/L
	Rh	103	96.002	67.00				ug/L
	Mo	98	317.685	0.00	0.1524	0.009	5.734	ug/L
	Ag	107	174.004	0.00	0.0272	0.006	20.847	ug/L
	Cd	114	-15.049	-0.00	-0.0055	0.006	111.968	ug/L
>	In	115	247148.941	247148.94				ug/L
	Sn	118	5395.080	0.02	1.4903	0.010	0.699	ug/L
	Sb	123	91.994	0.00	0.0396	0.001	3.511	ug/L
	Ba	135	3935.969	0.01	2.9039	0.082	2.827	ug/L
	Ce	140	183.354	0.00				ug/L
>	Tb	159	356217.460	356217.46				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	31.667	0.00	0.0093	0.001	13.819	ug/L
	Tl	205	46.671	0.00	0.0149	0.002	11.023	ug/L
	Pb	206	273.007	0.00	0.0219	0.001	5.044	ug/L
	Pb	207	251.673	0.00	0.0281	0.002	8.526	ug/L
	Pb	208	1097.039	0.00	0.0215	0.003	11.965	ug/L
	U	238	11702.333	0.04	0.4787	0.017	3.623	ug/L
>	Bi	209	285273.248	285273.25				ug/L

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Na	23	116660748.297	961.97	34.4042	1.549	4.502	mg/L
Mg	24	22393167.901	184.83	10.5155	0.343	3.263	mg/L
K	39	1846999.129	11.72	0.2790	0.013	4.762	mg/L
Ca	43	358438.850	2.96	34.1563	0.538	1.574	mg/L
Fe	54	611325.894	4.80	1.3518	0.044	3.244	mg/L
Fe	57	251707.648	2.03	1.3139	0.051	3.906	mg/L
Sc-1	45	121225.836	121225.84				mg/L
Cl	35	1114855.322	1077931.02				mg/L
Kr	83	60.667	7.67				mg/L
Br	81	145524.559	140448.34				mg/L
P	31	12370.509	4775.71				mg/L
S	34	548347.333	372746.88				mg/L
Sr	88	2480573.341	2480520.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		92.041			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.601			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.852			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.405			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078704
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Method 6020 - Summary Report

Sample ID: L1111078704PS WG384033-03

Sample Date/Time: Saturday, January 28, 2012 23:54:25
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 82
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9238.488	0.00				ug/L
	Be	9	13118.323	0.11	54.9947	1.091	1.984	ug/L
	Al	27	206169.362	1.66	53.8535	1.336	2.481	ug/L
>	Sc	45	122934.132	122934.13				ug/L
	Ti	49	396.716	0.00	0.9924	0.096	9.679	ug/L
	V	51	349173.533	1.26	50.0171	0.560	1.120	ug/L
	Cr	52	304823.317	1.08	49.7524	0.978	1.965	ug/L
	Cr	53	37524.709	0.13	50.6514	1.814	3.582	ug/L
	Mn	55	1816398.074	6.58	189.0386	2.578	1.364	ug/L
	Co	59	362328.816	1.31	49.5563	0.953	1.922	ug/L
	Ni	60	76193.641	0.28	50.5314	0.497	0.984	ug/L
	Cu	65	72187.733	0.26	49.9350	1.170	2.343	ug/L
	Zn	66	45139.043	0.16	51.9494	1.213	2.335	ug/L
>	Ge	72	275915.101	275915.10				ug/L
	As	75	48272.585	0.18	52.8712	0.858	1.622	ug/L
	Se	77	3376.017	0.01	48.6819	1.786	3.668	ug/L
	Se	82	4068.319	0.01	48.1984	0.970	2.013	ug/L
	Rb	85	3230.658	0.01				mg/L
	Y	89	176081.983	-26308.60				ug/L
	Rh	103	79.668	50.67				ug/L
	Mo	98	350.171	0.00	0.1770	0.015	8.540	ug/L
	Ag	107	202403.129	0.87	46.9183	1.930	4.113	ug/L
	Cd	114	49947.507	0.22	51.4244	2.377	4.623	ug/L
>	In	115	232396.063	232396.06				ug/L
	Sn	118	4628.619	0.02	1.3604	0.036	2.623	ug/L
	Sb	123	170333.669	0.73	53.0090	2.124	4.007	ug/L
	Ba	135	69518.530	0.20	53.5203	1.619	3.025	ug/L
	Ce	140	173.353	0.00				ug/L
>	Tb	159	343281.365	343281.36				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	283019.185	1.02	51.4621	0.582	1.132	ug/L
	Tl	205	708667.080	2.56	52.3620	0.538	1.028	ug/L
	Pb	206	237483.700	0.86	53.3434	0.395	0.740	ug/L
	Pb	207	205774.432	0.74	48.9463	0.979	2.000	ug/L
	Pb	208	960396.542	3.47	51.3204	0.449	0.875	ug/L
	U	238	1364046.442	4.94	57.1694	1.746	3.053	ug/L
>	Bi	209	276367.640	276367.64				ug/L

Sample ID: L1111078704PS WG384033-03
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Na	23	115968206.120	942.32	33.7019	1.017	3.016	mg/L
Mg	24	21765833.923	177.12	10.0763	0.326	3.233	mg/L
K	39	1852746.338	11.56	0.2751	0.015	5.374	mg/L
Ca	43	350730.930	2.85	32.9892	1.594	4.833	mg/L
Fe	54	595235.147	4.60	1.2954	0.023	1.807	mg/L
Fe	57	241916.451	1.92	1.2448	0.077	6.153	mg/L
Sc-1	45	122934.132	122934.13				mg/L
Cl	35	1098071.254	1061146.95				mg/L
Kr	83	46.667	-6.33				mg/L
Br	81	134554.359	129478.14				mg/L
P	31	10311.044	2716.25				mg/L
S	34	518821.724	343221.27				mg/L
Sr	88	2414174.058	2414120.72				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.428			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.252			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.552			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		86.614			

Sample ID: L1111078704PS WG384033-03
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078704PS WG384033-03
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Method 6020 - Summary Report

Sample ID: L1111078704SDL WG384033-04

Sample Date/Time: Sunday, January 29, 2012 00:02:13
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 83
Method File: C:\elandata\Method\6020a.mth
Sample Description: 25

User ID: EDL
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9371.953	0.00				ug/L
	Be	9	9.333	0.00	-0.0178	0.020	112.537	ug/L
	Al	27	8687.908	0.06	1.6365	0.405	24.741	ug/L
>	Sc	45	121175.746	121175.75				ug/L
	Ti	49	130.014	0.00	0.3171	0.107	33.767	ug/L
	V	51	1948.506	0.00	0.0149	0.020	134.241	ug/L
	Cr	52	6510.608	0.00	0.1098	0.012	11.278	ug/L
	Cr	53	860.131	0.00	0.1141	0.203	178.305	ug/L
	Mn	55	266722.800	0.94	27.0611	0.349	1.291	ug/L
	Co	59	422.348	0.00	0.0391	0.001	2.651	ug/L
	Ni	60	827.716	0.00	0.4875	0.016	3.339	ug/L
	Cu	65	273.674	0.00	0.0364	0.010	26.609	ug/L
	Zn	66	3505.773	0.01	3.3725	0.111	3.303	ug/L
>	Ge	72	282590.345	282590.34				ug/L
	As	75	454.291	0.00	0.6156	0.010	1.687	ug/L
	Se	77	58.667	-0.00	0.2046	0.327	159.776	ug/L
	Se	82	41.934	0.00	0.4787	0.114	23.852	ug/L
	Rb	85	687.702	0.00				mg/L
	Y	89	174189.350	-28201.23				ug/L
	Rh	103	22.000	-7.00				ug/L
	Mo	98	88.239	0.00	0.0512	0.007	13.456	ug/L
	Ag	107	104.002	0.00	0.0126	0.003	27.835	ug/L
	Cd	114	-0.918	-0.00	0.0081	0.008	97.883	ug/L
>	In	115	240218.644	240218.64				ug/L
	Sn	118	4982.156	0.02	1.4158	0.008	0.537	ug/L
	Sb	123	280.625	0.00	0.0971	0.003	3.189	ug/L
	Ba	135	780.711	0.00	0.5890	0.020	3.360	ug/L
	Ce	140	46.671	-0.00				ug/L
>	Tb	159	340699.449	340699.45				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	33.000	0.00	0.0097	0.001	8.585	ug/L
	Tl	205	66.674	0.00	0.0164	0.004	26.464	ug/L
	Pb	206	225.339	0.00	0.0123	0.005	44.182	ug/L
	Pb	207	179.004	0.00	0.0120	0.001	9.603	ug/L
	Pb	208	841.025	0.00	0.0089	0.002	26.252	ug/L
	U	238	2440.716	0.01	0.1043	0.005	4.688	ug/L
>	Bi	209	280989.036	280989.04				ug/L

Sample ID: L1111078704SDL WG384033-04
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Na	23	23032462.126	189.22	6.7868	0.299	4.402	mg/L
Mg	24	4405103.336	36.38	2.0665	0.074	3.572	mg/L
K	39	785293.097	2.97	0.0652	0.006	9.540	mg/L
Ca	43	69851.960	0.58	6.6482	0.202	3.039	mg/L
Fe	54	140701.504	0.92	0.2573	0.008	3.162	mg/L
Fe	57	54318.644	0.40	0.2533	0.004	1.601	mg/L
Sc-1	45	121175.746	121175.75				mg/L
Cl	35	246631.209	209706.91				mg/L
Kr	83	46.001	-7.00				mg/L
Br	81	35494.112	30417.90				mg/L
P	31	7089.015	-505.78				mg/L
S	34	240123.460	64523.01				mg/L
Sr	88	536347.516	536294.18				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.567			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.088			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		86.894			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		88.062			

Sample ID: L1111078704SDL WG384033-04
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078704SDL WG384033-04
Report Date/Time: Sunday, January 29, 2012 00:04:25
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, January 29, 2012 00:10:00
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9038.250	0.00				ug/L
	Be	9	12855.913	0.11	56.3544	2.182	3.871	ug/L
	Al	27	192498.301	1.62	52.5608	2.476	4.711	ug/L
>	Sc	45	117693.517	117693.52				ug/L
	Ti	49	38757.120	0.14	98.1541	2.132	2.172	ug/L
	V	51	339765.012	1.24	49.2121	1.312	2.666	ug/L
	Cr	52	301373.246	1.08	49.7242	1.189	2.390	ug/L
	Cr	53	36285.800	0.13	49.4773	1.255	2.537	ug/L
	Mn	55	469964.830	1.72	49.4209	0.554	1.120	ug/L
	Co	59	356462.196	1.31	49.2803	0.345	0.699	ug/L
	Ni	60	73614.790	0.27	49.3662	0.637	1.291	ug/L
	Cu	65	72066.054	0.26	50.3958	1.164	2.309	ug/L
	Zn	66	43648.785	0.16	50.7652	0.627	1.235	ug/L
>	Ge	72	272860.951	272860.95				ug/L
	As	75	44889.300	0.16	49.7079	0.733	1.474	ug/L
	Se	77	3313.992	0.01	48.2970	1.267	2.623	ug/L
	Se	82	3998.564	0.01	47.9329	1.144	2.387	ug/L
	Rb	85	1570.497	0.01				mg/L
	Y	89	170912.067	-31478.52				ug/L
	Rh	103	18.000	-11.00				ug/L
	Mo	98	214562.603	0.91	100.3975	1.885	1.877	ug/L
	Ag	107	217175.762	0.92	49.6360	1.204	2.426	ug/L
	Cd	114	50860.559	0.22	51.6254	1.024	1.983	ug/L
>	In	115	235490.724	235490.72				ug/L
	Sn	118	173959.386	0.74	50.4411	1.387	2.749	ug/L
	Sb	123	167295.749	0.71	51.3316	0.748	1.457	ug/L
	Ba	135	65783.332	0.19	50.6317	1.026	2.027	ug/L
	Ce	140	96.677	-0.00				ug/L
>	Tb	159	343229.324	343229.32				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	276877.909	1.00	50.3480	0.176	0.349	ug/L
	Tl	205	694844.491	2.51	51.3485	0.913	1.778	ug/L
	Pb	206	223603.319	0.81	50.2273	0.747	1.487	ug/L
	Pb	207	210311.172	0.76	50.0230	0.823	1.645	ug/L
	Pb	208	942899.259	3.41	50.3892	0.475	0.943	ug/L
	U	238	1343723.938	4.86	56.3055	0.820	1.456	ug/L
>	Bi	209	276335.022	276335.02				ug/L

Sample ID: QC Std 6
Report Date/Time: Sunday, January 29, 2012 00:12:13
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Erin D. Long

Na	23	17553629.561	148.26	5.3229	0.141	2.640	mg/L
Mg	24	11081316.353	94.27	5.3609	0.186	3.469	mg/L
K	39	25077956.575	209.88	5.1177	0.230	4.504	mg/L
Ca	43	51906.337	0.44	5.0897	0.318	6.245	mg/L
Fe	54	2188127.751	18.39	5.1826	0.316	6.100	mg/L
Fe	57	965749.956	8.19	5.3247	0.536	10.064	mg/L
> Sc-1	45	117693.517	117693.52				mg/L
Cl	35	25797.210	-11127.09				mg/L
Kr	83	53.001	0.00				mg/L
Br	81	6655.324	1579.11				mg/L
P	31	6622.633	-972.16				mg/L
S	34	153914.424	-21686.03				mg/L
Sr	88	3597.803	3544.46				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51	98.424				
Cr	52	99.448				
Cr	53					
Mn	55	98.842				
Co	59	98.561				
Ni	60	98.732				
Cu	65	100.792				
Zn	66	101.530				
> Ge	72		87.449			
As	75	99.416				
Se	77					
Se	82	95.866				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	99.272				
Cd	114	103.251				
> In	115		85.374			
Sn	118					
Sb	123	102.663				
Ba	135	101.263				
Ce	140					
> Tb	159		87.539			
Ho	165					
Tl	203	100.696				
Tl	205					
Pb	206					
Pb	207					
Pb	208	100.778				
U	238	112.611				
> Bi	209		86.604			

Sample ID: QC Std 6
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Sunday, January 29, 2012 00:12:13
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, January 29, 2012 00:17:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9004.887	0.00				ug/L
	Be	9	12.667	0.00	-0.0022	0.011	480.741	ug/L
	Al	27	2183.627	0.00	-0.1117	0.120	107.037	ug/L
>	Sc	45	119586.026	119586.03				ug/L
	Ti	49	80.008	0.00	0.1949	0.085	43.871	ug/L
	V	51	1828.330	-0.00	-0.0009	0.013	1529.748	ug/L
	Cr	52	5695.669	-0.00	-0.0181	0.011	58.916	ug/L
	Cr	53	580.078	-0.00	-0.2586	0.078	29.994	ug/L
	Mn	55	565.692	0.00	0.0180	0.003	17.397	ug/L
	Co	59	107.668	0.00	-0.0028	0.003	111.002	ug/L
	Ni	60	78.001	-0.00	0.0019	0.001	68.338	ug/L
	Cu	65	105.668	0.00	-0.0770	0.011	14.730	ug/L
	Zn	66	571.025	-0.00	0.0408	0.035	85.387	ug/L
>	Ge	72	281283.402	281283.40				ug/L
	As	75	-102.795	-0.00	0.0206	0.048	232.131	ug/L
	Se	77	51.333	-0.00	0.1043	0.162	155.523	ug/L
	Se	82	6.881	0.00	0.0724	0.109	150.045	ug/L
	Rb	85	33.667	0.00				mg/L
	Y	89	177093.204	-25297.38				ug/L
	Rh	103	10.667	-18.33				ug/L
	Mo	98	62.160	0.00	0.0392	0.004	9.574	ug/L
	Ag	107	88.668	0.00	0.0091	0.005	49.457	ug/L
	Cd	114	11.690	0.00	0.0206	0.001	6.047	ug/L
>	In	115	240330.668	240330.67				ug/L
	Sn	118	511.882	-0.00	0.1452	0.006	4.114	ug/L
	Sb	123	76.409	0.00	0.0357	0.003	8.470	ug/L
	Ba	135	34.334	0.00	0.0096	0.006	63.581	ug/L
	Ce	140	36.670	-0.00				ug/L
>	Tb	159	346801.391	346801.39				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	67.001	0.00	0.0156	0.001	9.293	ug/L
	Tl	205	126.680	0.00	0.0206	0.002	8.290	ug/L
	Pb	206	216.005	0.00	0.0097	0.003	27.825	ug/L
	Pb	207	188.004	0.00	0.0136	0.003	19.015	ug/L
	Pb	208	825.357	0.00	0.0076	0.001	7.155	ug/L
	U	238	212.338	0.00	0.0123	0.001	8.998	ug/L
>	Bi	209	284557.909	284557.91				ug/L

Sample ID: QC Std 7
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Approved: January 30, 2012
Erin D. Long

Na	23	100563.434	-0.19	0.0176	0.002	9.041	mg/L
Mg	24	2477.293	0.02	-0.0032	0.000	8.471	mg/L
K	39	458610.450	0.32	0.0005	0.004	843.692	mg/L
Ca	43	226.692	0.00	0.0031	0.002	72.983	mg/L
Fe	54	29906.467	0.01	0.0002	0.001	542.847	mg/L
Fe	57	6746.739	0.01	-0.0020	0.002	88.556	mg/L
> Sc-1	45	119586.026	119586.03				mg/L
Cl	35	25953.022	-10971.28				mg/L
Kr	83	52.001	-1.00				mg/L
Br	81	6164.947	1088.73				mg/L
P	31	6633.311	-961.48				mg/L
S	34	158542.827	-17057.63				mg/L
Sr	88	186.688	133.35				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		90.149			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		87.129			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		88.450			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		89.181			

Sample ID: QC Std 7
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Sunday, January 29, 2012 00:19:49
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111078706

Sample Date/Time: Sunday, January 29, 2012 00:25:13
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 84
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	8337.508	0.00				ug/L
	Be	9	11.333	0.00	-0.0047	0.029	627.018	ug/L
	Al	27	65674.649	0.57	18.3542	0.099	0.539	ug/L
>	Sc	45	112049.061	112049.06				ug/L
	Ti	49	573.410	0.00	1.5815	0.040	2.506	ug/L
	V	51	2205.870	0.00	0.0913	0.009	10.233	ug/L
	Cr	52	8513.432	0.01	0.6152	0.070	11.452	ug/L
	Cr	53	1456.940	0.00	1.1694	0.037	3.188	ug/L
	Mn	55	3835866.745	15.34	440.4138	14.705	3.339	ug/L
	Co	59	2879.860	0.01	0.4171	0.006	1.443	ug/L
	Ni	60	4178.423	0.02	3.0101	0.064	2.139	ug/L
	Cu	65	644.365	0.00	0.3441	0.011	3.069	ug/L
	Zn	66	2874.524	0.01	3.0799	0.114	3.692	ug/L
>	Ge	72	250237.879	250237.88				ug/L
	As	75	254.745	0.00	0.4377	0.073	16.742	ug/L
	Se	77	88.000	0.00	0.7866	0.435	55.316	ug/L
	Se	82	100.234	0.00	1.3079	0.285	21.818	ug/L
	Rb	85	1868.562	0.01				mg/L
	Y	89	163249.792	-39140.79				ug/L
	Rh	103	80.668	51.67				ug/L
	Mo	98	267.797	0.00	0.1481	0.008	5.105	ug/L
	Ag	107	79.668	0.00	0.0092	0.002	25.826	ug/L
	Cd	114	13.284	0.00	0.0238	0.007	28.166	ug/L
>	In	115	214839.490	214839.49				ug/L
	Sn	118	1920.355	0.01	0.6098	0.018	3.006	ug/L
	Sb	123	212.662	0.00	0.0843	0.001	0.957	ug/L
	Ba	135	24441.381	0.08	20.2063	0.278	1.375	ug/L
	Ce	140	1917.080	0.01				ug/L
>	Tb	159	319332.095	319332.10				ug/L
	Ho	165	30.003	0.00				ug/L
	Tl	203	69.334	0.00	0.0176	0.000	2.036	ug/L
	Tl	205	160.018	0.00	0.0245	0.003	13.916	ug/L
	Pb	206	277.341	0.00	0.0307	0.007	24.237	ug/L
	Pb	207	249.006	0.00	0.0350	0.007	20.045	ug/L
	Pb	208	1139.042	0.00	0.0314	0.002	4.797	ug/L
	U	238	27311.958	0.11	1.2562	0.014	1.101	ug/L
>	Bi	209	252483.656	252483.66				ug/L

Sample ID: L1111078706
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Na	23	127109439.569	1135.33	40.6001	2.643	6.510	mg/L
Mg	24	36282105.080	324.26	18.4512	1.021	5.533	mg/L
K	39	3524204.009	27.98	0.6758	0.041	6.078	mg/L
Ca	43	593875.269	5.31	61.3283	3.601	5.871	mg/L
Fe	54	138174.160	1.00	0.2778	0.016	5.804	mg/L
Fe	57	65083.012	0.53	0.3399	0.014	4.111	mg/L
Sc-1	45	112049.061	112049.06				mg/L
Cl	35	1003724.772	966800.47				mg/L
Kr	83	50.001	-3.00				mg/L
Br	81	76362.300	71286.08				mg/L
P	31	11149.463	3554.67				mg/L
S	34	752656.915	577056.46				mg/L
Sr	88	2309558.658	2309505.32				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		80.199			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		77.887			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		81.444			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		79.129			

Sample ID: L1111078706
Report Date/Time: Sunday, January 29, 2012 00:27:26
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Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078706
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Method 6020 - Summary Report

Sample ID: L1111078707

Sample Date/Time: Sunday, January 29, 2012 00:33:00
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 85
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10273.027	0.00				ug/L
	Be	9	8.000	0.00	-0.0261	0.008	30.851	ug/L
	Al	27	77727.542	0.56	18.1565	0.698	3.843	ug/L
>	Sc	45	134053.256	134053.26				ug/L
	Ti	49	253.363	0.00	0.5511	0.055	10.054	ug/L
	V	51	2266.140	0.00	0.0252	0.008	30.598	ug/L
	Cr	52	8636.226	0.01	0.3035	0.011	3.652	ug/L
	Cr	53	1376.918	0.00	0.6088	0.110	18.088	ug/L
	Mn	55	470395.739	1.48	42.5921	0.993	2.330	ug/L
	Co	59	983.068	0.00	0.0998	0.005	5.136	ug/L
	Ni	60	2162.969	0.01	1.2013	0.017	1.416	ug/L
	Cu	65	357.011	0.00	0.0667	0.002	2.732	ug/L
	Zn	66	3489.432	0.01	2.9255	0.017	0.598	ug/L
>	Ge	72	316822.838	316822.84				ug/L
	As	75	204.388	0.00	0.3257	0.022	6.844	ug/L
	Se	77	94.667	0.00	0.5726	0.238	41.578	ug/L
	Se	82	87.185	0.00	0.8944	0.113	12.608	ug/L
	Rb	85	2185.975	0.01				mg/L
	Y	89	201738.947	-651.64				ug/L
	Rh	103	115.335	86.33				ug/L
	Mo	98	135.865	0.00	0.0664	0.002	2.370	ug/L
	Ag	107	72.001	0.00	0.0037	0.001	25.034	ug/L
	Cd	114	-13.075	-0.00	-0.0026	0.003	113.949	ug/L
>	In	115	269029.562	269029.56				ug/L
	Sn	118	3572.766	0.01	0.9066	0.019	2.076	ug/L
	Sb	123	128.872	0.00	0.0474	0.004	9.443	ug/L
	Ba	135	16046.607	0.04	10.9854	0.310	2.824	ug/L
	Ce	140	950.150	0.00				ug/L
>	Tb	159	385353.348	385353.35				ug/L
	Ho	165	40.004	0.00				ug/L
	Tl	203	25.334	0.00	0.0079	0.001	7.111	ug/L
	Tl	205	66.674	0.00	0.0159	0.002	12.600	ug/L
	Pb	206	416.681	0.00	0.0458	0.003	6.008	ug/L
	Pb	207	350.011	0.00	0.0442	0.004	9.000	ug/L
	Pb	208	1662.749	0.00	0.0438	0.004	8.032	ug/L
	U	238	6450.896	0.02	0.2441	0.010	4.106	ug/L
>	Bi	209	310714.725	310714.72				ug/L

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⌈	Na	23	80501040.516	599.53	21.4511	0.240	1.120	mg/L
|	Mg	24	10231530.119	76.32	4.3392	0.025	0.565	mg/L
|	K	39	2132823.423	12.39	0.2953	0.001	0.392	mg/L
|	Ca	43	199544.664	1.49	17.1804	0.670	3.900	mg/L
|	Fe	54	137196.860	0.78	0.2181	0.012	5.711	mg/L
|	Fe	57	52875.882	0.35	0.2182	0.008	3.513	mg/L
⌊>	Sc-1	45	134053.256	134053.26				mg/L
	Cl	35	760652.565	723728.26				mg/L
	Kr	83	55.667	2.67				mg/L
	Br	81	76882.381	71806.17				mg/L
	P	31	9392.625	1797.83				mg/L
	S	34	298082.348	122481.89				mg/L
	Sr	88	3347595.383	3347542.04				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		101.539			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		97.533			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		98.282			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		97.378			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078707
Report Date/Time: Sunday, January 29, 2012 00:35:13
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111078709

Sample Date/Time: Sunday, January 29, 2012 00:40:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 86
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	10273.042	-0.00				ug/L
	Be	9	8.667	0.00	-0.0266	0.005	20.426	ug/L
	Al	27	57346.678	0.37	11.8923	0.710	5.969	ug/L
>	Sc	45	148259.129	148259.13				ug/L
	Ti	49	466.727	0.00	1.0091	0.169	16.761	ug/L
	V	51	2505.811	0.00	0.0529	0.008	15.405	ug/L
	Cr	52	9579.933	0.01	0.4307	0.030	7.060	ug/L
	Cr	53	1300.232	0.00	0.5042	0.054	10.758	ug/L
	Mn	55	5502251.828	17.25	495.3201	15.887	3.207	ug/L
	Co	59	4655.014	0.01	0.5331	0.007	1.280	ug/L
	Ni	60	6455.899	0.02	3.6566	0.074	2.030	ug/L
	Cu	65	897.057	0.00	0.3893	0.022	5.573	ug/L
	Zn	66	5714.683	0.02	5.1428	0.175	3.398	ug/L
>	Ge	72	319110.165	319110.16				ug/L
	As	75	351.728	0.00	0.4642	0.050	10.696	ug/L
	Se	77	71.334	0.00	0.2671	0.128	47.735	ug/L
	Se	82	60.917	0.00	0.6194	0.088	14.269	ug/L
	Rb	85	1612.172	0.00				mg/L
	Y	89	199167.988	-3222.60				ug/L
	Rh	103	39.667	10.67				ug/L
	Mo	98	359.577	0.00	0.1561	0.005	3.514	ug/L
	Ag	107	67.668	0.00	0.0027	0.002	81.215	ug/L
	Cd	114	19.829	0.00	0.0263	0.012	46.163	ug/L
>	In	115	272666.926	272666.93				ug/L
	Sn	118	1529.874	0.00	0.3831	0.013	3.485	ug/L
	Sb	123	324.044	0.00	0.0987	0.006	5.832	ug/L
	Ba	135	31068.126	0.08	20.1815	0.346	1.715	ug/L
	Ce	140	1046.838	0.00				ug/L
>	Tb	159	406475.446	406475.45				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	46.001	0.00	0.0110	0.001	5.719	ug/L
	Tl	205	83.342	0.00	0.0169	0.001	3.942	ug/L
	Pb	206	470.685	0.00	0.0541	0.003	5.088	ug/L
	Pb	207	418.348	0.00	0.0564	0.003	5.966	ug/L
	Pb	208	1905.105	0.00	0.0530	0.002	3.960	ug/L
	U	238	19206.975	0.06	0.7009	0.006	0.851	ug/L
>	Bi	209	318999.099	318999.10				ug/L

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Na	23	34572761.358	232.23	8.3240	0.081	0.976	mg/L
Mg	24	30858208.620	208.28	11.8499	0.273	2.307	mg/L
K	39	2905227.028	16.11	0.3860	0.025	6.413	mg/L
Ca	43	466847.322	3.15	36.4021	1.415	3.886	mg/L
Fe	54	390285.250	2.40	0.6730	0.033	4.892	mg/L
Fe	57	160721.289	1.04	0.6687	0.042	6.307	mg/L
Sc-1	45	148259.129	148259.13				mg/L
Cl	35	331522.945	294598.64				mg/L
Kr	83	48.001	-5.00				mg/L
Br	81	31496.131	26419.92				mg/L
P	31	16036.156	8441.36				mg/L
S	34	518377.599	342777.14				mg/L
Sr	88	890974.363	890921.02				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		102.272			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.852			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		103.670			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.975			

Sample ID: L1111078709
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078709
Report Date/Time: Sunday, January 29, 2012 00:43:00
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: L1111078711

Sample Date/Time: Sunday, January 29, 2012 00:48:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 87
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9855.826	0.00				ug/L
	Be	9	10.667	0.00	-0.0153	0.016	107.604	ug/L
	Al	27	92411.296	0.68	22.0240	1.563	7.098	ug/L
>	Sc	45	132173.293	132173.29				ug/L
	Ti	49	380.047	0.00	0.8584	0.238	27.780	ug/L
	V	51	2207.731	0.00	0.0277	0.016	56.938	ug/L
	Cr	52	9821.217	0.01	0.5263	0.014	2.674	ug/L
	Cr	53	1216.879	0.00	0.4673	0.210	44.865	ug/L
	Mn	55	4181524.151	13.68	392.7149	10.450	2.661	ug/L
	Co	59	2385.032	0.01	0.2771	0.007	2.652	ug/L
	Ni	60	4450.566	0.01	2.6177	0.093	3.561	ug/L
	Cu	65	586.026	0.00	0.2180	0.017	7.637	ug/L
	Zn	66	4056.028	0.01	3.6486	0.036	0.973	ug/L
>	Ge	72	305766.655	305766.65				ug/L
	As	75	420.541	0.00	0.5456	0.032	5.936	ug/L
	Se	77	87.334	0.00	0.5182	0.119	22.921	ug/L
	Se	82	53.279	0.00	0.5626	0.069	12.266	ug/L
	Rb	85	9203.506	0.03				mg/L
	Y	89	196138.850	-6251.73				ug/L
	Rh	103	63.334	34.33				ug/L
	Mo	98	460.994	0.00	0.2049	0.006	2.714	ug/L
	Ag	107	55.334	-0.00	0.0006	0.003	426.254	ug/L
	Cd	114	12.620	0.00	0.0206	0.010	46.448	ug/L
>	In	115	261501.292	261501.29				ug/L
	Sn	118	1510.804	0.00	0.3943	0.012	3.087	ug/L
	Sb	123	151.077	0.00	0.0545	0.006	11.530	ug/L
	Ba	135	61757.955	0.16	42.9932	0.736	1.712	ug/L
	Ce	140	1150.194	0.00				ug/L
>	Tb	159	379452.630	379452.63				ug/L
	Ho	165	33.337	0.00				ug/L
	Tl	203	31.334	0.00	0.0090	0.001	9.380	ug/L
	Tl	205	73.341	0.00	0.0165	0.000	2.469	ug/L
	Pb	206	1950.248	0.01	0.3642	0.019	5.249	ug/L
	Pb	207	1704.858	0.01	0.3419	0.017	4.941	ug/L
	Pb	208	7740.482	0.02	0.3439	0.008	2.225	ug/L
	U	238	55364.917	0.18	2.1292	0.076	3.578	ug/L
>	Bi	209	301694.483	301694.48				ug/L

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Na	23	50470175.721	380.80	13.6338	0.394	2.888	mg/L
Mg	24	43049434.855	325.69	18.5321	0.411	2.220	mg/L
K	39	2612172.376	16.24	0.3893	0.009	2.209	mg/L
Ca	43	651467.861	4.93	56.9450	1.224	2.150	mg/L
Fe	54	181660.265	1.14	0.3173	0.014	4.531	mg/L
Fe	57	82804.459	0.58	0.3693	0.012	3.139	mg/L
Sc-1	45	132173.293	132173.29				mg/L
Cl	35	485560.742	448636.44				mg/L
Kr	83	44.667	-8.33				mg/L
Br	81	34348.020	29271.81				mg/L
P	31	15265.454	7670.66				mg/L
S	34	494323.339	318722.88				mg/L
Sr	88	1845965.028	1845911.69				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.995			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		94.804			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		96.778			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.551			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078711
Report Date/Time: Sunday, January 29, 2012 00:50:47
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Method 6020 - Summary Report

Sample ID: L1111078713

Sample Date/Time: Sunday, January 29, 2012 00:56:22
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 88
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9522.136	-0.01				ug/L
	Be	9	8.667	0.00	-0.0249	0.006	22.908	ug/L
	Al	27	16132.309	0.10	3.0347	0.142	4.666	ug/L
>	Sc	45	140170.364	140170.36				ug/L
	Ti	49	186.688	0.00	0.4045	0.117	28.979	ug/L
	V	51	1622.332	-0.00	-0.0554	0.042	76.065	ug/L
	Cr	52	7939.528	0.00	0.1992	0.041	20.501	ug/L
	Cr	53	2590.664	0.01	2.0456	0.112	5.494	ug/L
	Mn	55	2418.376	0.01	0.1785	0.002	1.174	ug/L
	Co	59	310.009	0.00	0.0195	0.003	13.726	ug/L
	Ni	60	813.381	0.00	0.4197	0.019	4.628	ug/L
	Cu	65	478.019	0.00	0.1384	0.011	7.806	ug/L
	Zn	66	3786.566	0.01	3.2132	0.083	2.587	ug/L
>	Ge	72	318219.685	318219.69				ug/L
	As	75	569.637	0.00	0.6720	0.064	9.596	ug/L
	Se	77	168.668	0.00	1.5113	0.202	13.336	ug/L
	Se	82	166.877	0.00	1.7132	0.117	6.821	ug/L
	Rb	85	11221.335	0.04				mg/L
	Y	89	202363.847	-26.74				ug/L
	Rh	103	44.001	15.00				ug/L
	Mo	98	9961.029	0.04	4.0022	0.114	2.843	ug/L
	Ag	107	61.334	-0.00	0.0013	0.000	29.971	ug/L
	Cd	114	-7.354	-0.00	0.0028	0.007	247.502	ug/L
>	In	115	275146.506	275146.51				ug/L
	Sn	118	4191.324	0.01	1.0400	0.062	5.991	ug/L
	Sb	123	117.785	0.00	0.0438	0.006	14.453	ug/L
	Ba	135	83024.744	0.21	55.6095	0.629	1.131	ug/L
	Ce	140	176.686	-0.00				ug/L
>	Tb	159	394488.482	394488.48				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	32.334	0.00	0.0092	0.002	17.442	ug/L
	Tl	205	73.341	0.00	0.0166	0.001	6.055	ug/L
	Pb	206	238.672	0.00	0.0125	0.003	25.725	ug/L
	Pb	207	213.672	0.00	0.0173	0.006	32.574	ug/L
	Pb	208	986.033	0.00	0.0138	0.002	13.005	ug/L
	U	238	124.669	0.00	0.0085	0.001	11.803	ug/L
>	Bi	209	296991.662	296991.66				ug/L

Sample ID: L1111078713
Report Date/Time: Sunday, January 29, 2012 00:58:34
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⌈	Na	23	S	S	S	S	S	mg/L
|	Mg	24	193140.350	1.38	0.0740	0.000	0.634	mg/L
|	K	39	5251677.097	33.94	0.8216	0.004	0.494	mg/L
|	Ca	43	175581.790	1.25	14.4522	0.263	1.822	mg/L
|	Fe	54	42841.454	0.07	0.0158	0.003	21.344	mg/L
|	Fe	57	15589.544	0.06	0.0337	0.007	22.199	mg/L
⌊>	Sc-1	45	140170.364	140170.36				mg/L
	Cl	35	2192446.072	2155521.77				mg/L
	Kr	83	53.001	0.00				mg/L
	Br	81	149503.491	144427.28				mg/L
	P	31	9402.033	1807.24				mg/L
	S	34	199415.346	23814.89				mg/L
	Sr	88	1071959.038	1071905.70				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		101.986			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		99.751			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		100.612			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		93.077			

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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	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: L1111078713
Report Date/Time: Sunday, January 29, 2012 00:58:34
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Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, January 29, 2012 01:04:09
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9155.070	-0.01				ug/L
	Be	9	14310.949	0.10	53.1937	4.571	8.594	ug/L
	Al	27	237562.696	1.69	54.8352	1.147	2.092	ug/L
>	Sc	45	139121.458	139121.46				ug/L
	Ti	49	47164.787	0.14	97.4218	6.512	6.684	ug/L
	V	51	419587.538	1.25	49.5650	2.691	5.429	ug/L
	Cr	52	370101.271	1.09	49.8025	1.755	3.523	ug/L
	Cr	53	44814.732	0.13	49.8355	1.602	3.216	ug/L
	Mn	55	589664.801	1.76	50.5710	0.613	1.212	ug/L
	Co	59	436015.386	1.30	49.1637	1.117	2.273	ug/L
	Ni	60	91282.836	0.27	49.9186	0.250	0.500	ug/L
	Cu	65	86195.021	0.26	49.1526	0.772	1.570	ug/L
	Zn	66	53129.697	0.16	50.3910	0.950	1.885	ug/L
>	Ge	72	334576.299	334576.30				ug/L
	As	75	56153.844	0.17	50.7044	0.823	1.624	ug/L
	Se	77	4329.792	0.01	51.4887	1.356	2.634	ug/L
	Se	82	5120.546	0.02	50.0414	0.865	1.728	ug/L
	Rb	85	2013.930	0.01				mg/L
	Y	89	221273.163	18882.58				ug/L
	Rh	103	26.334	-2.67				ug/L
	Mo	98	268224.181	0.92	100.8712	3.542	3.512	ug/L
	Ag	107	275963.477	0.94	50.7223	2.752	5.426	ug/L
	Cd	114	59509.192	0.20	48.5039	2.117	4.365	ug/L
>	In	115	293213.703	293213.70				ug/L
	Sn	118	211912.283	0.72	49.3652	0.942	1.909	ug/L
	Sb	123	202942.621	0.69	50.0266	0.757	1.512	ug/L
	Ba	135	80026.275	0.19	51.0976	1.305	2.554	ug/L
	Ce	140	93.343	-0.00				ug/L
>	Tb	159	413748.748	413748.75				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	327606.660	1.00	50.2569	0.280	0.557	ug/L
	Tl	205	817928.703	2.50	50.9835	0.956	1.876	ug/L
	Pb	206	268794.866	0.82	50.9435	1.146	2.249	ug/L
	Pb	207	250265.944	0.76	50.2183	0.434	0.865	ug/L
	Pb	208	1122089.926	3.42	50.5897	0.724	1.431	ug/L
	U	238	1586759.139	4.84	56.0805	1.457	2.597	ug/L
>	Bi	209	327569.670	327569.67				ug/L

Sample ID: QC Std 6
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Erin D. Long

Na	23	21529608.723	153.92	5.5253	0.166	3.005	mg/L
Mg	24	13476266.444	97.00	5.5163	0.183	3.321	mg/L
K	39	30086767.773	213.16	5.1978	0.269	5.180	mg/L
Ca	43	62946.595	0.45	5.2246	0.366	6.997	mg/L
Fe	54	2706941.012	19.27	5.4304	0.325	5.991	mg/L
Fe	57	1177314.616	8.43	5.4821	0.191	3.488	mg/L
> Sc-1	45	139121.458	139121.46				mg/L
Cl	35	33704.091	-3220.21				mg/L
Kr	83	51.001	-2.00				mg/L
Br	81	9079.614	4003.40				mg/L
P	31	8987.569	1392.77				mg/L
S	34	196978.249	21377.79				mg/L
Sr	88	4921.954	4868.61				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51	99.130				
	Cr	52	99.605				
	Cr	53					
	Mn	55	101.142				
	Co	59	98.327				
	Ni	60	99.837				
	Cu	65	98.305				
	Zn	66	100.782				
>	Ge	72		107.228			
	As	75	101.409				
	Se	77					
	Se	82	100.083				
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107	101.445				
	Cd	114	97.008				
>	In	115		106.301			
	Sn	118					
	Sb	123	100.053				
	Ba	135	102.195				
	Ce	140					
>	Tb	159		105.525			
	Ho	165					
	Tl	203	100.514				
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208	101.179				
	U	238	112.161				
>	Bi	209		102.661			

Sample ID: QC Std 6
Report Date/Time: Sunday, January 29, 2012 01:06:22
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Approved: January 30, 2012
Erin D. Long

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Sunday, January 29, 2012 01:06:22
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Approved: January 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, January 29, 2012 01:11:46
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: EDL

Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	9605.539	-0.01				ug/L
	Be	9	10.667	0.00	-0.0198	0.004	20.114	ug/L
	Al	27	2066.924	-0.00	-0.2529	0.016	6.260	ug/L
>	Sc	45	148122.112	148122.11				ug/L
	Ti	49	70.007	0.00	0.1420	0.078	55.150	ug/L
	V	51	2116.866	-0.00	-0.0139	0.012	87.649	ug/L
	Cr	52	6580.667	-0.00	-0.0664	0.010	15.728	ug/L
	Cr	53	710.101	-0.00	-0.2554	0.057	22.361	ug/L
	Mn	55	707.037	0.00	0.0193	0.007	34.697	ug/L
	Co	59	134.336	0.00	-0.0026	0.003	113.930	ug/L
	Ni	60	86.668	-0.00	-0.0027	0.005	200.009	ug/L
	Cu	65	127.669	0.00	-0.0776	0.008	10.043	ug/L
	Zn	66	689.035	-0.00	0.0344	0.028	81.722	ug/L
>	Ge	72	342694.699	342694.70				ug/L
	As	75	-108.707	-0.00	0.0351	0.029	81.376	ug/L
	Se	77	65.334	-0.00	0.1349	0.148	110.023	ug/L
	Se	82	8.591	0.00	0.0721	0.136	187.982	ug/L
	Rb	85	33.334	-0.00				mg/L
	Y	89	222950.080	20559.50				ug/L
	Rh	103	13.667	-15.33				ug/L
	Mo	98	103.901	0.00	0.0490	0.011	22.718	ug/L
	Ag	107	143.003	0.00	0.0150	0.007	46.342	ug/L
	Cd	114	14.687	0.00	0.0208	0.001	5.115	ug/L
>	In	115	298142.468	298142.47				ug/L
	Sn	118	663.893	-0.00	0.1518	0.000	0.283	ug/L
	Sb	123	65.828	0.00	0.0287	0.002	6.721	ug/L
	Ba	135	45.667	0.00	0.0117	0.002	19.051	ug/L
	Ce	140	40.004	-0.00				ug/L
>	Tb	159	425775.072	425775.07				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	94.668	0.00	0.0175	0.004	24.750	ug/L
	Tl	205	203.356	0.00	0.0236	0.004	16.111	ug/L
	Pb	206	272.007	0.00	0.0116	0.004	32.919	ug/L
	Pb	207	232.006	0.00	0.0146	0.002	13.115	ug/L
	Pb	208	1055.370	0.00	0.0101	0.003	30.880	ug/L
	U	238	305.009	0.00	0.0139	0.003	18.025	ug/L
>	Bi	209	343236.839	343236.84				ug/L

Sample ID: QC Std 7
Report Date/Time: Sunday, January 29, 2012 01:13:58
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Erin D. Long

⌈	Na	23	148633.137	-0.03	0.0233	0.003	14.240	mg/L
|	Mg	24	3994.826	0.02	-0.0029	0.001	23.371	mg/L
|	K	39	485962.110	-0.24	-0.0131	0.000	1.515	mg/L
|	Ca	43	183.354	-0.00	-0.0046	0.003	65.070	mg/L
|	Fe	54	36290.911	0.01	-0.0012	0.001	116.503	mg/L
|	Fe	57	7003.656	-0.00	-0.0081	0.002	23.604	mg/L
⌊>	Sc-1	45	148122.112	148122.11				mg/L
	Cl	35	29037.883	-7886.42				mg/L
	Kr	83	47.001	-6.00				mg/L
	Br	81	7561.434	2485.22				mg/L
	P	31	8572.430	977.64				mg/L
	S	34	187290.967	11690.51				mg/L
	Sr	88	280.034	226.69				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		109.830			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		108.088			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		108.592			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		107.571			

Sample ID: QC Std 7
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⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Sunday, January 29, 2012 01:13:58
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Approved: January 30, 2012

2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Login Number: L12010576
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: WG387939 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 41363
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL18-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:54
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	HY.012612.085447
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 #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	T40-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:56
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	HY.012612.085630
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 #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0112-1	**Prep Method:**	7470A	**Prep Date:**	01/25/2012 08:14
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	01/26/2012 08:01
Workgroup #:	WG387939	**Analyst:**	PDM	**Run Date:**	01/26/2012 08:58
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	HY.012612.085825
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

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

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG387854
Analyst: REK
Spike Analyst: REK
Method: 7470A
Run Date: 01/25/2012 08:14
Hotblock Start Temp: 94.9 @ 07:50
Hotblock End Temp: 95.1 @ 09:50

SOP: ME404 Revison 13
Spike Solution: STD49703
Spike Witness: VC
H2SO4 Lot #: COA15776
HNO3 Lot #: COA15827
Digestion Tubes Lot #: COA15882
K2S2O8 1:1 Lot #: RGT16927
KMnO4 1:1 Lot #: RGT16964
Mercury Water ICV Lot #: STD49705
HG H2O STDS 10PPM Lot #: STD49711

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG387854-04	BLANK	1	40 mL	40 mL		
2	WG387719-01	FBLK	18	40 mL	40 mL		
3	WG387854-05	LCS	1	40 mL	40 mL	4 mL	
4	L12010514-01	SAMP	18	40 mL	40 mL		01/30/12
5	WG387854-01	REF	1	40 mL	40 mL		
6	L12010536-01	SAMP	1	40 mL	40 mL		01/31/12
7	L12010536-02	SAMP	1	40 mL	40 mL		01/31/12
8	L12010536-03	SAMP	1	40 mL	40 mL		01/31/12
9	L12010539-02	SAMP	1	40 mL	40 mL		01/31/12
10	L12010539-03	SAMP	1	40 mL	40 mL		01/31/12
11	L12010539-04	SAMP	1	40 mL	40 mL		01/31/12
12	L12010539-05	SAMP	1	40 mL	40 mL		01/31/12
13	L12010539-06	SAMP	1	40 mL	40 mL		01/31/12
14	L12010576-01	SAMP	1	40 mL	40 mL		02/03/12
15	L12010576-02	SAMP	1	40 mL	40 mL		02/03/12
16	L12010576-03	SAMP	1	40 mL	40 mL		02/03/12
17	WG387854-02	REF	2	40 mL	40 mL		
18	L12010604-01	RS01	2	40 mL	40 mL		02/03/12
19	WG387854-03	REF	2	40 mL	40 mL		
20	L12010604-02	SAMP	2	40 mL	40 mL		02/03/12
21	WG387854-08	MS	2	36 mL	40 mL	4 mL	
22	L12010604-04	MS01	2	36 mL	40 mL	4 mL	02/03/12
23	WG387854-09	MSD	2	36 mL	40 mL	4 mL	
24	L12010604-05	SD01	2	36 mL	40 mL	4 mL	02/03/12
25	L12010605-01	SAMP	2	40 mL	40 mL		02/03/12
26	L12010605-02	SAMP	2	40 mL	40 mL		02/03/12
27	WG387854-06	MS	1	36 mL	40 mL	4 mL	
28	WG387854-07	MSD	1	36 mL	40 mL	4 mL	
29	WG387854-10	DUP	1	40 mL	40 mL		

Analyst: [signature]

Reviewer: [signature]

HB_DIG - Modified 09/30/2009
PDF ID: 2288832
Report generated: 01/25/2012 10:16

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA Dataset: 012612A.PRN
Analyst1: PDM Analyst2: N/A
Method: 7470 SOP: ME404 Rev: 13
Maintenance Log ID: 40420

Calibration Std: STD49711 ICV Std: STD49705 Post Spike: STD49711
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV:

Workgroups: 387939

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.012612.075302	WG388051-01	Calibration Point		1		01/26/12 07:53
2	HY.012612.075447	WG388051-02	Calibration Point		1		01/26/12 07:54
3	HY.012612.075628	WG388051-03	Calibration Point		1		01/26/12 07:56
4	HY.012612.075815	WG388051-04	Calibration Point		1		01/26/12 07:58
5	HY.012612.075958	WG388051-05	Calibration Point		1		01/26/12 07:59
6	HY.012612.080152	WG388051-06	Calibration Point		1		01/26/12 08:01
7	HY.012612.081136	WG388051-07	Initial Calibration Verification		1		01/26/12 08:11
8	HY.012612.081329	WG388051-08	Initial Calib Blank		1		01/26/12 08:13
9	HY.012612.081512	WG388051-09	CCV		1		01/26/12 08:15
10	HY.012612.081655	WG388051-10	CCB		1		01/26/12 08:16
11	HY.012612.081907	WG387854-04	Method/Prep Blank	40/40	1		01/26/12 08:19
12	HY.012612.082048	WG387854-05	Laboratory Control S	40/40	1		01/26/12 08:20
13	HY.012612.082250	WG387719-01	Fluid Blank		1		01/26/12 08:22
14	HY.012612.082444	L12010514-01	SAND PAD	40/40	1		01/26/12 08:24
15	HY.012612.082649	WG387939-01	Post Digestion Spike		1	L12010514-01	01/26/12 08:26
16	HY.012612.082851	WG387854-01	Reference Sample	40/40	1	L12010536-01	01/26/12 08:28
17	HY.012612.083035	WG387854-06	Matrix Spike	36/40	1	L12010536-01	01/26/12 08:30
18	HY.012612.083223	WG387854-07	Matrix Spike Duplica	36/40	1	L12010536-01	01/26/12 08:32
19	HY.012612.083419	L12010536-02	MPL07-0112-1	40/40	1		01/26/12 08:34
20	HY.012612.083724	L12010536-03	MPL07-0112-2	40/40	1		01/26/12 08:37
21	HY.012612.083928	WG388051-11	CCV		1		01/26/12 08:39
22	HY.012612.084110	WG388051-12	CCB		1		01/26/12 08:41
23	HY.012612.084415	WG387939-02	Post Digestion Spike		1	L12010536-03	01/26/12 08:44
24	HY.012612.084557	L12010539-02	DUP-01-120119	40/40	1		01/26/12 08:45
25	HY.012612.084739	L12010539-03	ST006CP1660112	40/40	1		01/26/12 08:47
26	HY.012612.084921	L12010539-04	ST008CP2300112	40/40	1		01/26/12 08:49
27	HY.012612.085103	L12010539-05	SS040CP2800112	40/40	1		01/26/12 08:51
28	HY.012612.085255	L12010539-06	SS038CP0030112	40/40	1		01/26/12 08:52
29	HY.012612.085447	L12010576-01	MPL18-0112-1	40/40	1		01/26/12 08:54
30	HY.012612.085630	L12010576-02	T40-0112-1	40/40	1		01/26/12 08:56
31	HY.012612.085825	L12010576-03	MPL17-0112-1	40/40	1		01/26/12 08:58
32	HY.012612.090009	WG387854-02	Reference Sample		1	L12010604-01	01/26/12 09:00
33	HY.012612.090206	WG388051-13	CCV		1		01/26/12 09:02
34	HY.012612.090348	WG388051-14	CCB		1		01/26/12 09:03

Page: 1 Approved: January 26, 2012

Marcia Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA
Dataset: 012612A.PRN
Analyst1: PDM
Analyst2: N/A
Method: 7470
SOP: ME404
Rev: 13
Maintenance Log ID: 40420

Calibration Std: STD49711
ICV Std: STD49705
Post Spike: STD49711
ICSA: N/A
ICSAB: N/A
Int. Std:
CCV:
LLCCV:

Workgroups: 387939

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	HY.012612.090530	WG387854-03	Reference Sample		1	L12010604-02	01/26/12 09:05
36	HY.012612.090718	WG387854-10	Duplicate		1	L12010604-02	01/26/12 09:07
37	HY.012612.090906	L12010604-04	DRL-Z-LM1-MS		1	WG387854-08	01/26/12 09:09
38	HY.012612.091101	L12010604-05	DRL-Z-LM1-MSD		1	WG387854-09	01/26/12 09:11
39	HY.012612.091246	L12010605-01	LCL-Z-LM1		1		01/26/12 09:12
40	HY.012612.091428	L12010605-02	LCL-K-EQBLK-2		1		01/26/12 09:14
41	HY.012612.091610	WG388051-15	CCV		1		01/26/12 09:16
42	HY.012612.091822	WG388051-16	CCB		1		01/26/12 09:18

Comments

Seq.	Rerun	Dil.	Reason	Analytes
32			Data not used due to CCV failure for NPDES criteria at 08:39.	
35			Data not used from 09:05 through 09:18 due to CCV failure for NPDES criteria at 08:39.	

Page: 2 Approved: January 26, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 26-JAN-2012
Analyst: PDM
Analyst: NA
Method: 7470
Instrument: HYDRA
Curve Workgroup: 388051
Runlog ID: 44841
Analytical Workgroups: 387939

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	536, 539, 576
Client Forms	X
Level X	
Level 3	539
Level 4	536, 576
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	EDL
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
26-JAN-2012
Erin D. Long

Secondary Reviewer:
26-JAN-2012
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 16:04:31

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A

AAB#: WG387939

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12					01/25/12	4.9	28		01/26/12	5.9	28	
T40-0112-1	02	01/20/12					01/25/12	4.8	28		01/26/12	5.9	28	
MPL17-0112-1	03	01/20/12					01/25/12	4.8	28		01/26/12	5.8	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2290481
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: HY.012612.081907
Prep Date: 01/25/12 08:14
Analyzed Date: 01/26/12 08:19
Analyst: PDM

Work Group: WG387939
Blank Sample ID: WG387854-04
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	WG387854-05	HY.012612.082048	01/26/12 08:20	01
MPL18-0112-1	L12010576-01	HY.012612.085447	01/26/12 08:54	01
T40-0112-1	L12010576-02	HY.012612.085630	01/26/12 08:56	01
MPL17-0112-1	L12010576-03	HY.012612.085825	01/26/12 08:58	01
DUP	WG387854-10	HY.012612.090718	01/26/12 09:07	01

Report Name: BLANK_SUMMARY
PDF File ID: 2290482
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/25/12 08:14 Sample ID: WG387854-04
Instrument ID: HYDRA Run Date: 01/26/12 08:19 Prep Method: 7470A
File ID: HY.012612.081907 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG387939 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-26-JAN-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: 2290483
26-JAN-2012 13:06

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/26/2012 Sample ID: WG387854-05
Instrument ID: HYDRA Run Time: 08:20 Prep Method: 7470A
File ID: HY.012612.082048 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG387939 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49703 Cal ID: HYDRA-26-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00386	96.5	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2290484
Report generated: 01/26/2012 13:06

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

Loginnum: L12010576 Cal ID: HYDRA- Worknum: WG387939
Instrument ID: HYDRA Contract #: Method: 7470A
Parent ID: WG387854-01 File ID: HY.012612.082851 Dil: 1 Matrix: WATER
Sample ID: WG387854-06 MS File ID: HY.012612.083035 Dil: 1 Units: mg/L
Sample ID: WG387854-07 MSD File ID: HY.012612.083223 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00342	77.0	0.00444	0.00418	94.0	19.9	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2290485
Report generated 01/26/2012 13:06

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

Loginnum: L12010576 Cal ID: HYDRA- Worknum: WG387939
Instrument ID: HYDRA Contract #: Method: 7470A
Parent ID: WG387854-02 File ID: HY.012612.090009 Dil: 1 Matrix: WATER
Sample ID: WG387854-08 MS File ID: HY.012612.090906 Dil: 1 Units: mg/L
Sample ID: WG387854-09 MSD File ID: HY.012612.091101 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.000724	16.3	0.00444	0.000226	5.07	105	80 - 120	20	*#

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2290485
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12010576 **Worknum:** WG387939
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG387939-02 **File ID:** HY.012612.084415 **Dil:** 1 **Units:** ug/L
Sample ID: L12010536-03 **File ID:** HY.012612.083724 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	1.04		0.129	F	1	92.4	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: 2290480
Report generated: 01/26/2012 13:06

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12010576
Analytical Method: 7470A
ICAL Worknum: WG388051

Workgroup (AAB#): WG387939
Instrument ID: HYDRA
Initial Calibration Date: 01/26/2012 08:01

Analyte	WG388051-01		WG388051-02		WG388051-03		WG388051-04		WG388051-05		WG388051-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	168	0.200	692	1.00	3563	2.00	6893	5.00	18224	10.0	35505

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: 2290486
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12010576
Analytical Method: 7470A
ICAL Worknum: WG388051

Workgroup (AAB#): WG387939
Instrument ID: HYDRA
Initial Calibration Date: 01/26/2012 08:01

Analyte	R	Q
Mercury	1.000	

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

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2290486
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12010576
Instrument ID: HYDRA
File ID: HY.012612.081329
Workgroup (AAB#): WG387939
Matrix: WATER

Run Date: 01/26/2012
Run Time: 08:13
Analyst: PDM
Cal ID: HYDRA - 26-JAN-12

Sample ID: WG388051-08
Method: 7470A
Units: ug/L

Analytes	MDL	RDL	Concentration	Qualifier
MERCURY	.1	.2	.1	U

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

ICB - Modified 07/14/2009
PDF File ID: 2290488
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-10
Instrument ID: HYDRA
Run Time: 08:16
Method: 7470A
File ID: HY.012612.081655
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-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: 2290490
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-12
Instrument ID: HYDRA
Run Time: 08:41
Method: 7470A
File ID: HY.012612.084110
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-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: 2290490
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-14
Instrument ID: HYDRA
Run Time: 09:03
Method: 7470A
File ID: HY.012612.090348
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-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: 2290490
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12010576 Run Date: 01/26/2012 Sample ID: WG388051-07
Instrument ID: HYDRA Run Time: 08:11 Method: 7470A
File ID: HY.012612.081136 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG387939 Cal ID: HYDRA - 26-JAN-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.03	102	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2290487
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-09
Instrument ID: HYDRA
Run Time: 08:15
Method: 7470A
File ID: HY.012612.081512
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00197	mg/L	98.5	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2290489
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-11
Instrument ID: HYDRA
Run Time: 08:39
Method: 7470A
File ID: HY.012612.083928
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00222	mg/L	111	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2290489
Report generated 01/26/2012 13:06

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/26/2012
Sample ID: WG388051-13
Instrument ID: HYDRA
Run Time: 09:02
Method: 7470A
File ID: HY.012612.090206
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG387939
Cal ID: HYDRA - 26-JAN-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00208	mg/L	104	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2290489
Report generated 01/26/2012 13:06

2.1.3.3 Raw Data

Protocol: standard

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       07:53:02 26 Jan 12   HG

Hg    .000    ppb      168

*** Standard: 2 Rep: 1              Seq:  2       07:54:47 26 Jan 12   HG

Hg    .200    ppb      692

*** Standard: 3 Rep: 1              Seq:  3       07:56:28 26 Jan 12   HG

Hg    1.00    ppb      3563

*** Standard: 4 Rep: 1              Seq:  4       07:58:15 26 Jan 12   HG

Hg    2.00    ppb      6893

*** Standard: 5 Rep: 1              Seq:  5       07:59:58 26 Jan 12   HG

Hg    5.00    ppb      18224

*** Standard: 6 Rep: 1              Seq:  6       08:01:52 26 Jan 12   HG

Hg    10.0    ppb      35505

*** Check Standard: 2  Ck2ICV       Seq:  7       08:11:36 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     2.03    2.00   ppb        .000

*** Check Standard: 3  Ck3ICB       Seq:  8       08:13:29 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          13.3     .027    .200   ppb        .000

*** Check Standard: 4  Ck4CCV       Seq:  9       08:15:12 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          98.3     1.97    2.00   ppb        .000

*** Check Standard: 5  Ck5CCB       Seq:  10      08:16:55 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -11.8    -.024    .200   ppb        .000

*** Sample ID: WG38785404            Seq:  11      08:19:07 26 Jan 12   HG
                          PBW 64
Hg    .063    ppb       .000      .063

==============================================================================
*** Sample ID: WG38785405            Seq:  12      08:20:48 26 Jan 12   HG
                          LCSW 64
Hg    3.86    ppb       .000      3.86
                                                                            =
==============================================================================
```

Approved: January 26, 2012

Erin D. Long

Protocol: standard

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: WG38771901            Seq:  13     08:22:50 26 Jan 12   HG
                            FBLK
Hg    .015    ppb       .000      .015
                                                                              =
===============================================================================
*** Sample ID: 1201051401            Seq:  14     08:24:44 26 Jan 12   HG

Hg    .118    ppb       .000      .118
                                                                              =
===============================================================================
*** Sample ID: WG38793901            Seq:  15     08:26:49 26 Jan 12   HG
                            1201051401PS.9
Hg    .968    ppb       .000      .968
                                                                              =
===============================================================================
*** Sample ID: 1201053601            Seq:  16     08:28:51 26 Jan 12   HG
                            WG38785401
Hg   -.057    ppb       .000     -.057
                                                                              =
===============================================================================
*** Sample ID: WG38785406            Seq:  17     08:30:35 26 Jan 12   HG
                            1201053601S
Hg    3.08    ppb       .000      3.08
                                                                              =
===============================================================================
*** Sample ID: WG38785407            Seq:  18     08:32:23 26 Jan 12   HG
                            1201053601SD
Hg    3.76    ppb       .000      3.76
                                                                              =
===============================================================================
*** Sample ID: 1201053602            Seq:  19     08:34:19 26 Jan 12   HG

Hg   -.037    ppb       .000     -.037
                                                                              =
===============================================================================
*** Sample ID: 1201053603            Seq:  20     08:37:24 26 Jan 12   HG

Hg    .129    ppb       .000      .129
                                                                              =
*** Check Standard: 4  Ck4CCV        Seq:  21     08:39:28 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          111.     2.22    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB        Seq:  22     08:41:10 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -18.9    -.038    .200   ppb        .000
                                                                              =
```

Approved: January 26, 2012

Erin D. Long

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG38793902           Seq:  23     08:44:15 26 Jan 12   HG
                          1201053603PS.9
Hg    1.04    ppb       .000      1.04
                                                                                =
================================================================================
*** Sample ID: 1201053902           Seq:  24     08:45:57 26 Jan 12   HG

Hg   -.101    ppb       .000     -.101
                                                                                =
================================================================================
*** Sample ID: 1201053903           Seq:  25     08:47:39 26 Jan 12   HG

Hg   -.017    ppb       .000     -.017
                                                                                =
================================================================================
*** Sample ID: 1201053904           Seq:  26     08:49:21 26 Jan 12   HG

Hg    .007    ppb       .000      .007
                                                                                =
================================================================================
*** Sample ID: 1201053905           Seq:  27     08:51:03 26 Jan 12   HG

Hg    .056    ppb       .000      .056
                                                                                =
================================================================================
*** Sample ID: 1201053906           Seq:  28     08:52:55 26 Jan 12   HG

Hg   -.009    ppb       .000     -.009
                                                                                =
================================================================================
*** Sample ID: 1201057601           Seq:  29     08:54:47 26 Jan 12   HG

Hg    .100    ppb       .000      .100
                                                                                =
================================================================================
*** Sample ID: 1201057602           Seq:  30     08:56:30 26 Jan 12   HG

Hg    .017    ppb       .000      .017
                                                                                =
================================================================================
*** Sample ID: 1201057603           Seq:  31     08:58:25 26 Jan 12   HG

Hg    .042    ppb       .000      .042
                                                                                =
================================================================================
*** Sample ID: 1201060401           Seq:  32     09:00:09 26 Jan 12   HG
                          WG38785402
Hg    .012    ppb       .000      .012
                                                                                =
```

Approved: January 26, 2012

Erin D. Long

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Check Standard: 4  Ck4CCV       Seq:  33      09:02:06 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          104.     2.08    2.00   ppb        .000
                                                                                =
*** Check Standard: 5  Ck5CCB       Seq:  34      09:03:48 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -13.7    -.027    .200   ppb        .000
                                                                                =
*** Sample ID: 1201060402            Seq:  35     09:05:30 26 Jan 12   HG
                           WG38785403
Hg    .052    ppb       .000      .052
                                                                                =
================================================================================
*** Sample ID: WG38785410            Seq:  36     09:07:18 26 Jan 12   HG

Hg   -.096    ppb       .000     -.096
                                                                                =
================================================================================
*** Sample ID: WG38785408            Seq:  37     09:09:06 26 Jan 12   HG
                           1201060404S
Hg    .652    ppb       .000      .652
                                                                                =
================================================================================
*** Sample ID: WG38785409            Seq:  38     09:11:01 26 Jan 12   HG
                           1201060405SD
Hg    .203    ppb       .000      .203
                                                                                =
================================================================================
*** Sample ID: 1201060501            Seq:  39     09:12:46 26 Jan 12   HG

Hg   -.070    ppb       .000     -.070
                                                                                =
================================================================================
*** Sample ID: 1201060502            Seq:  40     09:14:28 26 Jan 12   HG

Hg    .040    ppb       .000      .040
                                                                                =
*** Check Standard: 4  Ck4CCV       Seq:  41      09:16:10 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          111.     2.21    2.00   ppb        .000
                                                                                =
*** Check Standard: 5  Ck5CCB       Seq:  42      09:18:22 26 Jan 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          7.25     .015    .200   ppb        .000
                                                                                =
```

Approved: January 26, 2012

Erin D. Long

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L12010576
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis SW-846 9056/300.0

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There was no specified MS/MSD. See appropriate QC forms for non-client MS/MSD results.

SAMPLES

Samples: At first analysis fraction -03 was analyzed at a dilution only due to its Cl concentration which was greater than the ICAL. Per the client's request, the sample was reanalyzed neat for F only.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor

will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 41597
Approved By: Jeremy Kinney

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL18-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:08
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	I20131121808.10
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	13.1		0.200	0.100
Fluoride	16984-48-8	0.282		0.200	0.100
Sulfate	14808-79-8	34.3		1.00	0.500

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	T40-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:27
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	I20131121827.11
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	29.1	J	0.200	0.100
Fluoride	16984-48-8	0.159	J	0.200	0.100
Sulfate	14808-79-8	32.6		1.00	0.500

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	T40-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	02/01/2012 08:24
Collect Date:	01/20/2012 12:10	**Dilution:**	2	**File ID:**	I20201120824.31
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	27.6		0.400	0.200
Fluoride	16984-48-8	0.240	J	0.400	0.200
Sulfate	14808-79-8	31.8		2.00	1.00

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0112-1	**Prep Method:**	300.0	**Prep Date:**	02/17/2012 08:22
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	02/10/2012 10:32
Workgroup #:	WG389994	**Analyst:**	JBK	**Run Date:**	02/17/2012 09:32
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	I10217120932.07
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.245		0.200	0.100

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL17-0112-1	**Prep Method:**	300.0	**Prep Date:**	01/31/2012 16:00
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG388430	**Analyst:**	JBK	**Run Date:**	01/31/2012 18:45
Collect Date:	01/20/2012 13:45	**Dilution:**	4	**File ID:**	I20131121845.12
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	43.8		0.800	0.400
Sulfate	14808-79-8	52.0		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: IC2 Dataset: 122111 ICAL IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 12

Maintenance Log ID: Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG385452
Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: STD48131

Comments: Linear regression ICAL for IC2.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21221111140.01	COLUMN RINSE	1	1		12/21/11 11:40
2	I21221111158.02	COLUMN RINSE	1	1		12/21/11 11:58
3	I21221111217.03	WG385452-01 STD \#6	1	1		12/21/11 12:17
4	I21221111235.04	WG385452-02 STD \#5	1	1		12/21/11 12:35
5	I21221111254.05	WG385452-03 STD \#4	1	1		12/21/11 12:54
6	I21221111312.06	WG385452-04 STD \#3	1	1		12/21/11 13:12
7	I21221111331.07	WG385452-05 STD \#2	1	1		12/21/11 13:31
8	I21221111349.08	WG385452-06 STD \#1	1	1		12/21/11 13:49
9	I21221111407.09	WG385452-07 ALT STD	1	1		12/21/11 14:07
10	I21221111426.10	LCR Test Level \#6	1	1		12/21/11 14:26
11	I21221111444.11	LCR Test Level \#2	1	1		12/21/11 14:44
12	I21221111503.12	LCR Test Level \#0	1	1		12/21/11 15:03
13	I21221111521.13	ANION CCV	1	1		12/21/11 15:21
14	I21221111539.14	ANION CCB	1	1		12/21/11 15:39
15	I21221111558.15	END	1	1		12/21/11 15:58

Comments

Seq.	Rerun	Dil.	Reason	Analytes

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC2 Dataset: 013112 IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC1 Rev: 12

Maintenance Log ID: 40484 Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM

Workgroups: WG388430

Internal STD: NA Surrogate STD: NA Calibration STD NA

CCV STD: STD43577 8.0ML/100ML LCS STD: STD43577 8.0ML/100ML MS/MSD STD: STD43577 0.8ML/10ML

Comments: L12010576-03; L12010726-01; L12010686-01, -02, and -03 were all analyzed at dilutions only due to Cl concentrations greater than the ICAL. L12010710-01 was analyzed at a dilution only due to Cl concentrations greater than 200 ppm.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20131121522.01	ELUENT	1	1		01/31/12 15:22
2	I20131121541.02	DI WATER	1	1		01/31/12 15:41
3	I20131121559.03	WG388508-01 ANION CCV	1	1		01/31/12 15:59
4	I20131121618.04	WG388508-02 ANION CCB	1	1		01/31/12 16:18
5	I20131121636.05	WG388430-01 ANION BLANK	1	1		01/31/12 16:36
6	I20131121655.06	WG388430-02 ANION LCS	1	1		01/31/12 16:55
7	I20131121713.07	L12010730-01 (BR,SO4)	2	1		01/31/12 17:13
8	I20131121731.08	L12010799-01 (NO3)	1	1		01/31/12 17:31
9	I20131121750.09	L12010800-01 (NO3)	1	1		01/31/12 17:50
10	I20131121808.10	L12010576-01 (F,CL,SO4)	1	1		01/31/12 18:08
11	I20131121827.11	L12010576-02 (F,CL,SO4)	1	1		01/31/12 18:27
12	I20131121845.12	L12010576-03 1/4 (F,CL,SO4)	1	4		01/31/12 18:45
13	I20131121903.13	L12010726-01 1/15 (F,CL,SO4)	1	15		01/31/12 19:03
14	I20131121922.14	L12010726-02 (F,CL,SO4)	1	1		01/31/12 19:22
15	I20131121940.15	WG388508-03 ANION CCV	1	1		01/31/12 19:40
16	I20131121959.16	WG388508-04 ANION CCB	1	1		01/31/12 19:59
17	I20131122017.17	L12010686-01 1/4 (F,CL,SO4)	1	4		01/31/12 20:17
18	I20131122036.18	L12010686-02 1/4 (F,CL,SO4)	1	4		01/31/12 20:36
19	I20131122054.19	L12010686-03 1/10 (F,CL,SO4)	1	10		01/31/12 20:54
20	I20131122112.20	L12010710-01 1/25 (SO4)	2	25		01/31/12 21:12
21	I20131122131.21	L12010767-01 RS (F,CL,SO4)	1	1		01/31/12 21:31
22	I20131122149.22	WG388430-04 DUP 767-01	1	1		01/31/12 21:49
23	I20131122208.23	L12010767-02 MS	1	1		01/31/12 22:08
24	I20131122226.24	L12010767-03 SD	1	1		01/31/12 22:26
25	I20131122244.25	L12010515-10 (BR)	1	1		01/31/12 22:44
26	I20131122303.26	WG388430-08 DUP 515-10	1	1		01/31/12 23:03
27	I20131122321.27	WG388508-05 ANION CCV	1	1		01/31/12 23:21
28	I20131122340.28	WG388508-06 ANION CCB	1	1		01/31/12 23:40
29	I20201120747.29	WG388508-07 ANION CCV	1	1		02/01/12 07:47
30	I20201120806.30	WG388508-08 ANION CCB	1	1		02/01/12 08:06
31	I20201120824.31	L12010576-02 1/2 RR CL	1	2		02/01/12 08:24
32	I20201120842.32	WG388508-09 ANION CCV	1	1		02/01/12 08:42
33	I20201120901.33	WG388508-10 ANION CCB	1	1		02/01/12 09:01

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC2 Dataset: 013112 IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC1 Rev: 12

Maintenance Log ID: 40484 Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG388430
Internal STD: NA Surrogate STD: NA NA
CCV STD: STD43577 8.0ML/100ML LCS STD: STD43577 8.0ML/100ML STD43577 0.8ML/10ML

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I20201120919.34	END	1	1		02/01/12 09:19

Comments

Seq.	Rerun	Dil.	Reason	Analytes

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 021012 ICAL IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: SOP: Rev:

Maintenance Log ID: Syringe Filter Lot#:

Column 1 ID: Column 2 ID: NA
Workgroups:

Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: LCS STD: MS/MSD STD:

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I10210120831.01	COLUMN RINSE	1	1		02/10/12 08:31
2	I10210120848.02	COLUMN RINSE	1	1		02/10/12 08:48
3	I10210120905.03	WG389189-01 STD\#6	1	1		02/10/12 09:05
4	I10210120923.04	WG389189-02 STD\#5	1	1		02/10/12 09:23
5	I10210120940.05	WG389189-03 STD\#4	1	1		02/10/12 09:40
6	I10210120958.06	WG389189-04 STD\#3	1	1		02/10/12 09:58
7	I10210121015.07	WG389189-05 STD\#2	1	1		02/10/12 10:15
8	I10210121032.08	WG389189-06 STD\#1	1	1		02/10/12 10:32
9	I10210121050.09	WG389189-07 ALT STD	1	1		02/10/12 10:50
10	I10210121107.10	LCR Test Level \#6	1	1		02/10/12 11:07
11	I10210121125.11	LCR Test Level \#2	1	1		02/10/12 11:25
12	I10210121142.12	LCR Test Level \#0	1	1		02/10/12 11:42
13	I10210121234.13	END	1	1		02/10/12 12:34

Comments

Seq.	Rerun	Dil.	Reason	Analytes

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 021712 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 12

Maintenance Log ID: 40672 Syringe Filter Lot#:

Column 1 ID: AS14A-4MM Column 2 ID: AG14A-4MM
Workgroups: WG389994 (WATER) WG389995 (SOIL)
Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: STD48131

Comments: L12020319-01 was analyzed at a dilution only due to its extremely high Cl concetration. L1201576-03 was reanalyzed at client's request.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I10217120747.01	ELUENT	1	1		02/17/12 07:47
2	I10217120805.02	DI WATER	1	1		02/17/12 08:05
3	I10217120822.03	WG389996-01 ANION CCV	1	1		02/17/12 08:22
4	I10217120839.04	WG389996-02 ANION CCB	1	1		02/17/12 08:39
5	I10217120857.05	WG389994-01 ANION BLANK	1	1		02/17/12 08:57
6	I10217120914.06	WG389994-02 ANION LCS	1	1		02/17/12 09:14
7	I10217120932.07	L12010576-03 RR F ONLY	1	1		02/17/12 09:32
8	I10217120949.08	WG389994-04 DUP 576-03	1	1		02/17/12 09:49
9	I10217121006.09	WG389994-05 MS 576-03	1	1		02/17/12 10:06
10	I10217121024.10	WG389994-06 SD 576-03	1	1		02/17/12 10:24
11	I10217121041.11	WG389995-01 SOIL BLANK	10	1		02/17/12 10:41
12	I10217121059.12	WG389995-02 SOIL LCS	10	1		02/17/12 10:59
13	I10217121116.13	WG389995-03 SOIL LCSDUP	10	1		02/17/12 11:16
14	I10217121133.14	L12020319-01 1/500 (ALL-BR)	10	500		02/17/12 11:33
15	I10217121151.15	WG389996-03 ANION CCV	1	1		02/17/12 11:51
16	I10217121208.16	WG389996-04 ANION CCB	1	1		02/17/12 12:08
17	I10217121226.17	WG389995-05 1/500 DUP 319-01	10	500		02/17/12 12:26
18	I10217121243.18	WG389995-06 1/500 MS 319-01	10	500		02/17/12 12:43
19	I10217121300.19	WG389996-05 ANION CCV	1	1		02/17/12 13:00
20	I10217121318.20	WG389996-06 ANION CCB	1	1		02/17/12 13:18
21	I10217121335.21	END	1	1		02/17/12 13:35

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 20-FEB-12

Microbac Laboratories Inc.

Data Checklist

Date: 21-DEC-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC2
Curve Workgroup: NA
Runlog ID: 44440
Analytical Workgroups: WG3854752

ANALYTICAL	
System Performance Check	X
Eluent check (IC)/system pressure (HPLC)	X
Initial Calibration	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Continuing calibration blank (CCB) (IC)	X
Blanks	NA
TCL hits	NA
LCS/LCSD (Laboratory Control Sample)	ALT STD
Recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	NA
TCL hits	NA
Calculations & correct factors	NA
Compounds above calibration range	NA
Reruns	NA
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
28-DEC-2011

Secondary Reviewer:
09-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-09-2012 16:53:16

Microbac Laboratories Inc.

Data Checklist

Date: 31-JAN-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC2
Curve Workgroup: NA
Runlog ID: 44933
Analytical Workgroups: WG388430 (01-576, 686, 767, 726, 710, 730, 799, 800, 515)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
01-FEB-2012

Secondary Reviewer:
01-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-01-2012 12:56:15

Microbac Laboratories Inc.

Data Checklist

Date: 10-FEB-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 45180
Analytical Workgroups: WG389189 ICAL

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	MDC

Primary Reviewer:
16-FEB-2012

Secondary Reviewer:
17-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-17-2012 07:57:54

Microbac Laboratories Inc.

Data Checklist

Date: 17-FEB-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 45214
Analytical Workgroups: WG389994 (RR 01-576-03) WG389995 (02-319)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
17-FEB-2012

Secondary Reviewer:
20-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-20-2012 13:54:27

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG388430

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12					01/31/12	11.2	28		01/31/12	.1	28	
T40-0112-1	02	01/20/12					01/31/12	11.2	28		02/01/12	.7	28	
T40-0112-1	02	01/20/12					01/31/12	11.2	28		01/31/12	.1	28	
MPL17-0112-1	03	01/20/12					01/31/12	11.1	28		01/31/12	.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2295863
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG389994

Login Number: L12010576

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
MPL17-0112-1	03	01/20/12					02/17/12	27.8	28		02/17/12	0	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2295863
Report generated 02/20/2012 13:58

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 2312831
Report generated: 02/20/2012 13:58

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: I10217120857.05
Prep Date: 02/17/12 08:22
Analyzed Date: 02/17/12 08:57
Analyst: JBK

Work Group: WG389994
Blank Sample ID: WG389994-01
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	WG389994-02	I10217120914.06	02/17/12 09:14	01
MPL17-0112-1	L12010576-03	I10217120932.07	02/17/12 09:32	01
DUP	WG389994-04	I10217120949.08	02/17/12 09:49	01

Report Name: BLANK_SUMMARY
PDF File ID: 2295864
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: I20131121636.05
Prep Date: 01/31/12 16:00
Analyzed Date: 01/31/12 16:36
Analyst: JBK

Work Group: WG388430
Blank Sample ID: WG388430-01
Instrument ID: IC2
Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388430-02	I20131121655.06	01/31/12 16:55	01
MPL18-0112-1	L12010576-01	I20131121808.10	01/31/12 18:08	01
T40-0112-1	L12010576-02	I20131121827.11	01/31/12 18:27	01
MPL17-0112-1	L12010576-03	I20131121845.12	01/31/12 18:45	DL01
DUP	WG388430-04	I20131122149.22	01/31/12 21:49	01
DUP	WG388430-08	I20131122303.26	01/31/12 23:03	01
T40-0112-1	L12010576-02	I20201120824.31	02/01/12 08:24	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2295864
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 02/17/12 08:22 Sample ID: WG389994-01
Instrument ID: IC1 Run Date: 02/17/12 08:57 Prep Method: 300.0
File ID: I10217120857.05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG389994 Matrix: Water Units: mg/L
Contract #: Cal ID: IC1-10-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Fluoride	0.100	0.200	0.100	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: 2295865
20-FEB-2012 13:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/31/12 16:00 Sample ID: WG388430-01
Instrument ID: IC2 Run Date: 01/31/12 16:36 Prep Method: 300.0
File ID: I20131121636.05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG388430 Matrix: Water Units: mg/L
Contract #: Cal ID: IC2-21-DEC-11

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U
Fluoride	0.100	0.200	0.100	1	U
Sulfate	0.500	1.00	0.500	1	U

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

Report Name:BLANK
PDF ID: 2295865
20-FEB-2012 13:58

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 02/17/2012 Sample ID: WG389994-02
Instrument ID: IC1 Run Time: 09:14 Prep Method: 300.0
File ID: I10217120914.06 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG389994 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48131 Cal ID: IC1-10-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Fluoride	8.00	8.28	104	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2295866
Report generated: 02/20/2012 13:58

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/31/2012 Sample ID: WG388430-02
Instrument ID: IC2 Run Time: 16:55 Prep Method: 300.0
File ID: I20131121655.06 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG388430 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48131 Cal ID: IC2-21-DEC-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	8.00	7.53	94.1	90 - 110	
Fluoride	8.00	7.64	95.5	90 - 110	
Sulfate	40.0	37.9	94.8	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2295866
Report generated: 02/20/2012 13:58

Microbac Laboratories Inc.

DUPLICATE (DUP)

Sample Ref: L12010576-03 Cal ID: IC1 - Worknum: WG389994

Instrument ID: IC1 Method: 9056

Sample ID: WG389994-03 File ID: I10217120932.07 Dil: 1 Matrix: WATER

Duplicate ID: WG389994-04 File ID: I10217120949.08 Dil: 1 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Fluoride	0.245	0.203	18.8	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_DUP_DRYWT - Modified 03/06/2008

PDF File ID: 2306255

Report generated 02/17/2012 15:01

Microbac Laboratories Inc.

DUPLICATE (DUP)

Sample Ref: L12010515-10 Cal ID: IC2 - Worknum: WG388430

Instrument ID: IC2 Method: 9056

Sample ID: WG388430-07 File ID: I20131122244.25 Dil: 1 Matrix: WATER

Duplicate ID: WG388430-08 File ID: I20131122303.26 Dil: 1 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	ND	ND	0	20	
Fluoride	ND	ND	0	20	
Sulfate	ND	ND	0	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_DUP_DRYWT - Modified 03/06/2008

PDF File ID: 2306255

Report generated 02/17/2012 15:01

Microbac Laboratories Inc.

DUPLICATE (DUP)

Sample Ref: L12010767-01 Cal ID: IC2 - Worknum: WG388430

Instrument ID: IC2 Method: 9056

Sample ID: WG388430-03 File ID: I20131122131.21 Dil: 1 Matrix: WATER

Duplicate ID: WG388430-04 File ID: I20131122149.22 Dil: 1 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	12.2	11.8	3.78	20	
Fluoride	0.312	0.334	6.81	20	
Sulfate	45.0	45.2	0.395	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_DUP_DRYWT - Modified 03/06/2008

PDF File ID: 2306255

Report generated 02/17/2012 15:01

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

Loginnum: L12010576 Cal ID: IC2 - Worknum: WG388430
Instrument ID: IC2 Contract #: Method: 300.0
Parent ID: WG388430-03 File ID: I20131122131.21 Dil: 1 Matrix: WATER
Sample ID: WG388430-05 MS File ID: I20131122208.23 Dil: 1 Units: mg/L
Sample ID: WG388430-06 MSD File ID: I20131122226.24 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Chloride	12.2	8.00	19.1	86.6	8.00	19.1	85.8	0.309	90 - 110	20	*
Fluoride	0.312	8.00	7.52	90.1	8.00	7.48	89.6	0.453	90 - 110	20	*
Sulfate	45.0	40.0	86.5	104	40.0	86.1	103	0.419	90 - 110	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2306254
Report generated 02/20/2012 13:58

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

Loginnum: L12010576 Cal ID: IC1 - Worknum: WG389994
Instrument ID: IC1 Contract #: Method: 300.0
Parent ID: WG389994-03 File ID: I10217120932.07 Dil: 1 Matrix: WATER
Sample ID: WG389994-05 MS File ID: I10217121006.09 Dil: 1 Units: mg/L
Sample ID: WG389994-06 MSD File ID: I10217121024.10 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Fluoride	0.245	8.00	8.03	97.3	8.00	8.01	97.1	0.224	90 - 110	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2306254
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12010576
Analytical Method: 300.0
ICAL Workgroup: WG389189

Instrument ID: IC1
Initial Calibration Date: 10-FEB-12 10:32
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		6.623	4.24	0.99900	
Fluoride		5.802	11.4	0.99800	
Sulfate		8.363	6.25	0.99800	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12010576
Analytical Method: 300.0
ICAL Workgroup: WG385452

Instrument ID: IC2
Initial Calibration Date: 21-DEC-11 13:49
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		6.902	7.72	0.99700	
Fluoride		5.106	10.9	0.99800	
Sulfate		9.060	11.1	0.99700	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12010576

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 10-FEB-12 10:32

Column ID: F

Analyte	WG389189-01			WG389189-02			WG389189-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	3.77300000	6.361	12.0	1.76200000	6.810	4.00	0.592000000	6.757
Fluoride	24.0	4.82900000	4.970	12.0	2.19600000	5.464	4.00	0.702000000	5.698
Sulfate	120	15.7890000	7.600	60.0	7.30300000	8.216	20.0	2.23600000	8.945

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12010576

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 10-FEB-12 10:32

Column ID: F

Analyte	WG389189-05			WG389189-06		
	CONC	RESP	RF	CONC	RESP	RF
Chloride	1.00	0.159000000	6.289	0.200	0.0290000000	6.897
Fluoride	1.00	0.161000000	6.211	0.200	0.0300000000	6.667
Sulfate	5.00	0.578000000	8.651	1.00	0.119000000	8.403

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12010576

Analytical Method: 300.0

Instrument ID: IC2

Initial Calibration Date: 21-DEC-11 13:49

Column ID: F

Analyte	WG385452-01			WG385452-02			WG385452-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	3.84300000	6.245	12.0	1.80700000	6.641	8.00	1.19900000	6.672
Fluoride	24.0	5.38100000	4.460	12.0	2.54100000	4.723	8.00	1.68200000	4.756
Sulfate	120	15.6190000	7.683	60.0	7.06400000	8.494	40.0	4.62700000	8.645

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12010576

Analytical Method: 300.0

Instrument ID: IC2

Initial Calibration Date: 21-DEC-11 13:49

Column ID: F

Analyte	WG385452-04			WG385452-05			WG385452-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	4.00	0.585000000	6.838	1.00	0.127000000	7.874	0.200	0.0280000000	7.143
Fluoride	4.00	0.765000000	5.229	1.00	0.185000000	5.405	0.200	0.0330000000	6.061
Sulfate	20.0	2.14500000	9.324	5.00	0.516000000	9.690	1.00	0.0950000000	10.53

INT_CAL - Modified 03/06/2008
PDF File ID: 2295867
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12010576 Run Date: 02/10/2012 Sample ID: WG389189-07
Instrument ID: IC1 Run Time: 10:50 Method: 300.0
File ID: I10210121050.09 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG389189 Cal ID: IC1 - 10-FEB-12

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	7.80	mg/L	6.77	2.50	10	
Fluoride		8.00	7.91	mg/L	5.32	1.10	10	
Sulfate		40.0	39.2	mg/L	8.19	2.00	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2295868
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12010576 Run Date: 12/21/2011 Sample ID: WG385452-07
Instrument ID: IC2 Run Time: 14:07 Method: 300.0
File ID: I21221111407.09 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG385452 Cal ID: IC2 - 21-DEC-11

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	7.85	mg/L	6.88	1.80	10	
Fluoride		8.00	7.84	mg/L	4.94	2.10	10	
Sulfate		40.0	38.1	mg/L	9.05	4.80	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2295868
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-02
Instrument ID: IC2
Run Time: 16:18
Method: 300.0
File ID: I20131121618.04
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-04
Instrument ID: IC2
Run Time: 19:59
Method: 300.0
File ID: I20131121959.16
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-06
Instrument ID: IC2
Run Time: 23:40
Method: 300.0
File ID: I20131122340.28
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 02/01/2012
Sample ID: WG388508-08
Instrument ID: IC2
Run Time: 08:06
Method: 300.0
File ID: I20201120806.30
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576
Run Date: 02/01/2012
Sample ID: WG388508-10
Instrument ID: IC2
Run Time: 09:01
Method: 300.0
File ID: I20201120901.33
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576 Run Date: 02/17/2012 Sample ID: WG389996-02

Instrument ID: IC1 Run Time: 08:39 Method: 300.0

File ID: I10217120839.04 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG389994 Cal ID: IC1 - 10-FEB-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Fluoride	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: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12010576 Run Date: 02/17/2012 Sample ID: WG389996-04

Instrument ID: IC1 Run Time: 12:08 Method: 300.0

File ID: I10217121208.16 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG389994 Cal ID: IC1 - 10-FEB-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Fluoride	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: 2295870
Report generated 02/17/2012 15:01

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-01
Instrument ID: IC2
Run Time: 15:59
Method: 300.0
File ID: I20131121559.03
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.58	mg/L	7.13	5.20	10	
Fluoride		8.00	7.70	mg/L	5.03	3.74	10	
Sulfate		40.0	38.5	mg/L	8.96	3.84	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-03
Instrument ID: IC2
Run Time: 19:40
Method: 300.0
File ID: I20131121940.15
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.50	mg/L	7.21	6.23	10	
Fluoride		8.00	7.69	mg/L	5.03	3.90	10	
Sulfate		40.0	38.2	mg/L	9.04	4.62	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 01/31/2012
Sample ID: WG388508-05
Instrument ID: IC2
Run Time: 23:21
Method: 300.0
File ID: I20131122321.27
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.54	mg/L	7.17	5.74	10	
Fluoride		8.00	7.72	mg/L	5.01	3.49	10	
Sulfate		40.0	38.2	mg/L	9.04	4.60	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 02/01/2012
Sample ID: WG388508-07
Instrument ID: IC2
Run Time: 07:47
Method: 300.0
File ID: I20201120747.29
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.72	mg/L	7.01	3.51	10	
Fluoride		8.00	7.88	mg/L	4.91	1.48	10	
Sulfate		40.0	38.5	mg/L	8.95	3.66	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 02/01/2012
Sample ID: WG388508-09
Instrument ID: IC2
Run Time: 08:42
Method: 300.0
File ID: I20201120842.32
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG388430
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.72	mg/L	7.01	3.55	10	
Fluoride		8.00	7.77	mg/L	4.98	2.85	10	
Sulfate		40.0	38.6	mg/L	8.94	3.62	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 02/17/2012
Sample ID: WG389996-01
Instrument ID: IC1
Run Time: 08:22
Method: 300.0
File ID: I10217120822.03
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389994
Cal ID: IC1 - 10-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Fluoride		8.00	8.13	mg/L	5.18	1.56	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12010576
Run Date: 02/17/2012
Sample ID: WG389996-03
Instrument ID: IC1
Run Time: 11:51
Method: 300.0
File ID: I10217121151.15
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389994
Cal ID: IC1 - 10-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Fluoride		8.00	7.69	mg/L	5.48	3.89	10	

* Exceeds %D Criteria

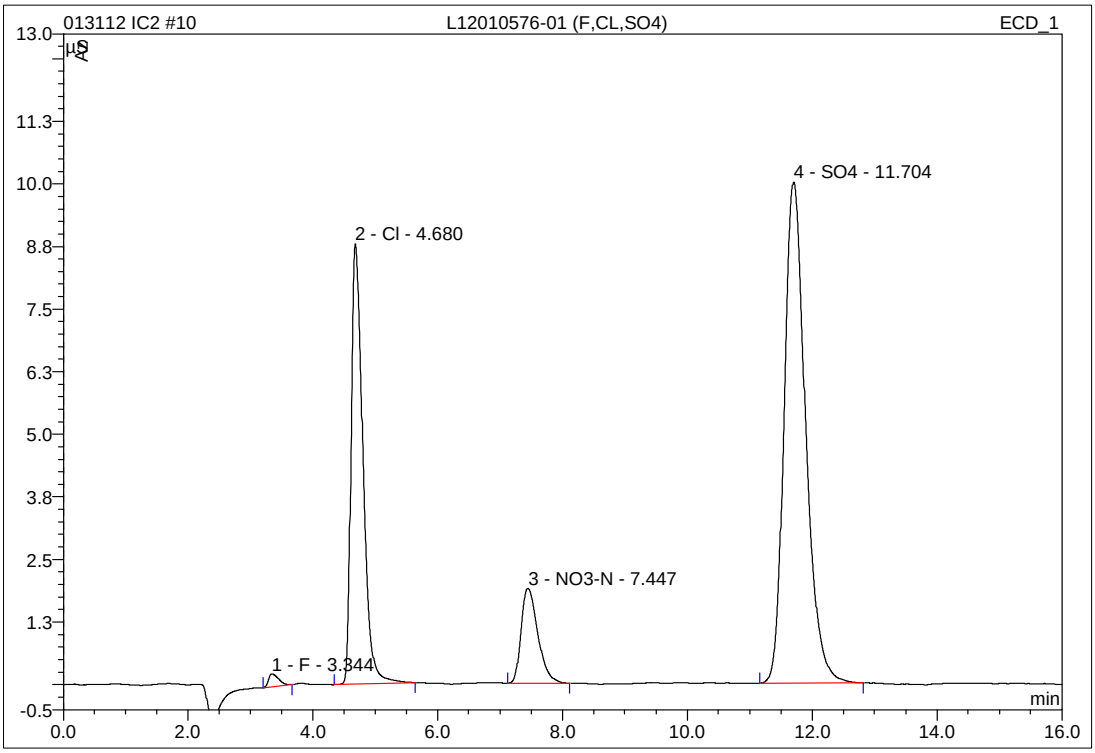
CCV - Modified 03/05/2008
PDF File ID: 2295869
Report generated 02/20/2012 13:58

2.2.1.3 Sample Data

10 L12010576-01 (F,CL,SO4)

1,1 JBK

Sample Name:	**L12010576-01 (F,CL,SO4)**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 18:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.34	F	0.263	0.049	0.75	0.282	BMB
2	4.68	Cl	8.792	1.933	29.55	13.057	BMB
3	7.45	NO3-N	1.895	0.587	8.97	1.647	BMB
4	11.70	SO4	10.008	3.973	60.73	34.263	BMB
Total:			20.958	6.542	100.00	49.248	

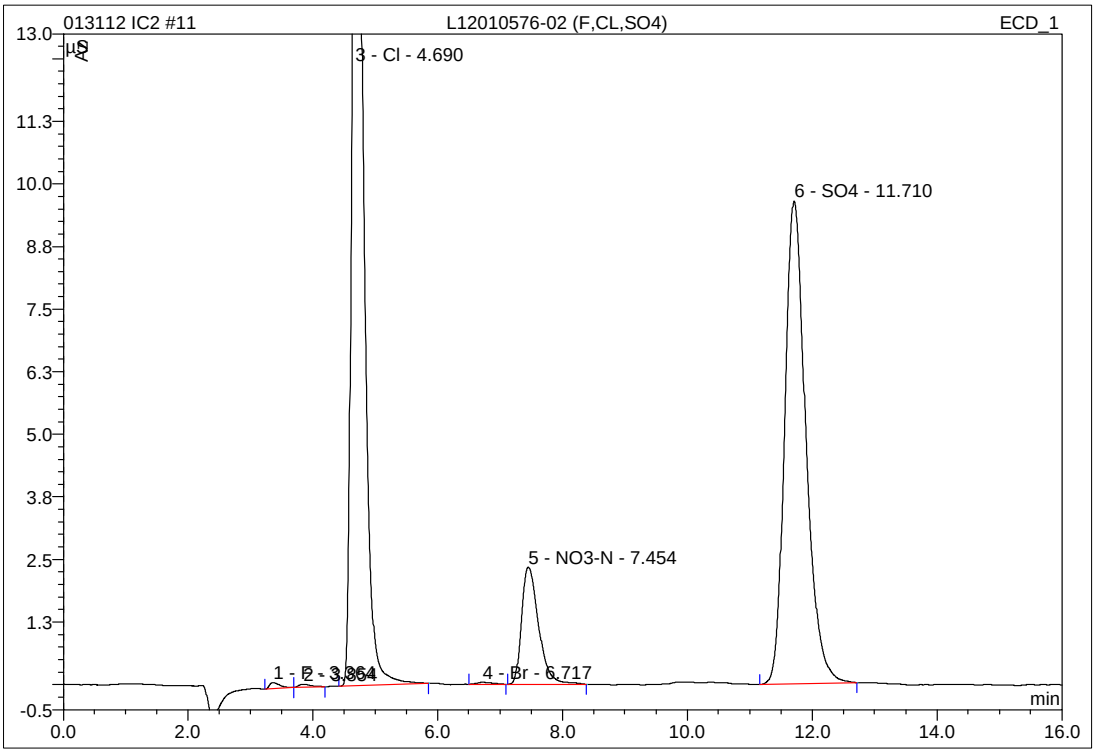
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

11 L12010576-02 (F,CL,SO4)

1,1 JBK

Sample Name:	**L12010576-02 (F,CL,SO4)**	*Injection Volume:*	**25.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 18:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.36	F	0.121	0.024	0.27	0.159	BMB
2	3.85	n.a.	0.059	0.013	0.15	n.a.	BMB
3	4.69	Cl	19.885	4.314	48.61	29.117	BMB
4	6.72	Br	0.039	0.011	0.12	0.240	BMB
5	7.45	NO3-N	2.337	0.736	8.29	2.061	BMB
6	11.71	SO4	9.644	3.777	42.56	32.583	BMB
Total:			32.085	8.874	100.00	64.160	

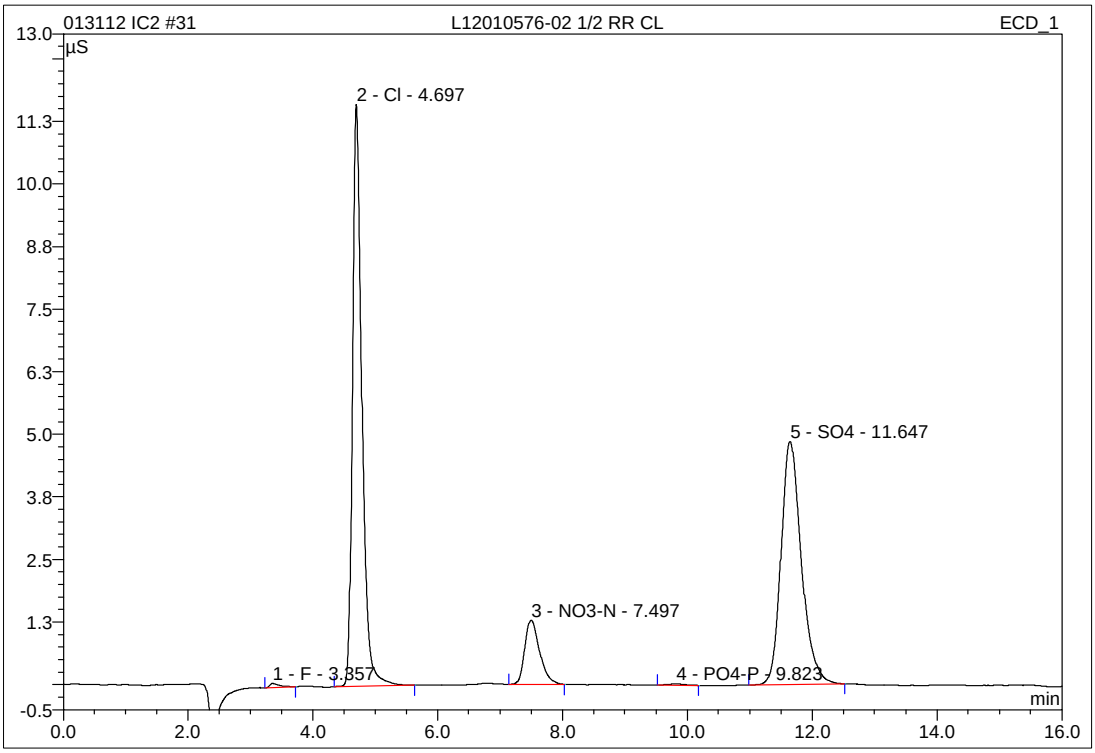
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

31 L12010576-02 1/2 RR CL

1,2 JBK (ANNEX CL>ICAL)

Sample Name:	**L12010576-02 1/2 RR CL**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 8:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.36	F	0.084	0.016	0.37	0.120	BMB
2	4.70	Cl	11.617	2.043	48.04	13.797	BMB
3	7.50	NO3-N	1.282	0.353	8.31	0.999	BMB
4	9.82	PO4-P	0.029	0.009	0.21	0.114	BMB
5	11.65	SO4	4.857	1.832	43.07	15.909	BMB
Total:			17.869	4.253	100.00	30.939	

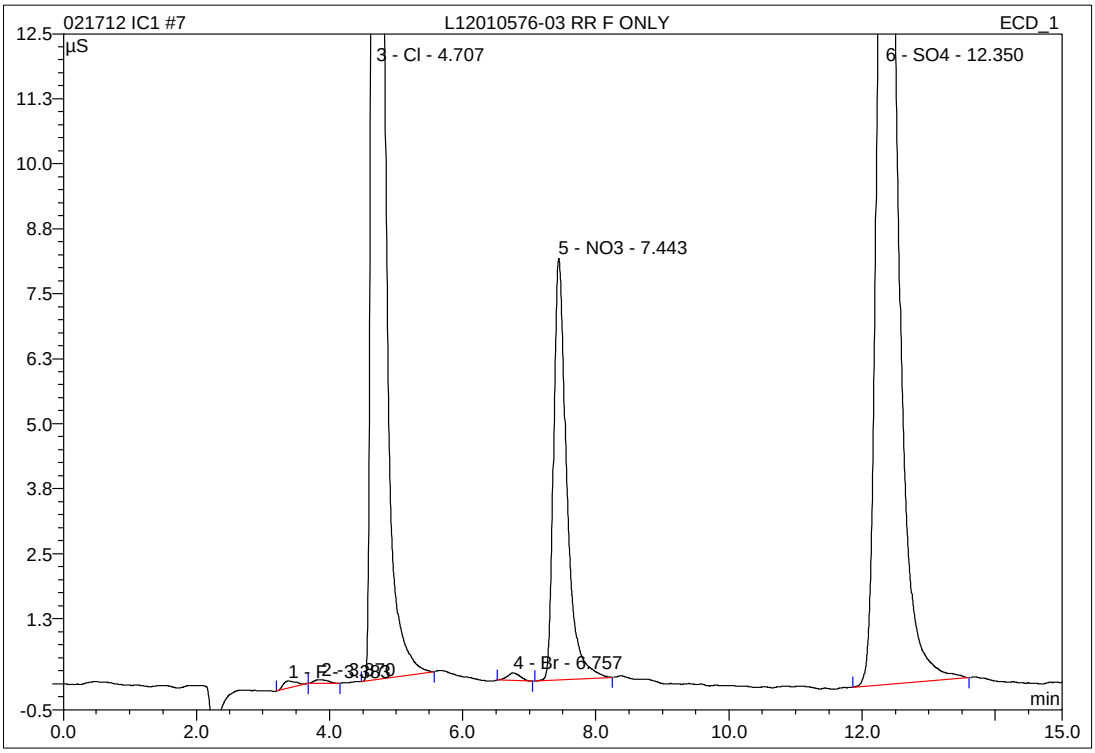
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 L12010576-03 RR F ONLY

1,1 JBK WG389994-03 REF

Sample Name:	**L12010576-03 RR F ONLY**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/17/2012 9:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	0.140	0.032	0.17	0.245	BMB
2	3.87	n.a.	0.072	0.017	0.09	n.a.	bMB
3	4.71	Cl	57.173	9.004	48.70	59.350	BMB
4	6.76	Br	0.146	0.033	0.18	0.439	BMB
5	7.44	NO3	8.111	1.856	10.04	4.868	BMB
6	12.35	SO4	23.189	7.549	40.83	60.512	BMB
Total:			88.831	18.491	100.00	125.413	

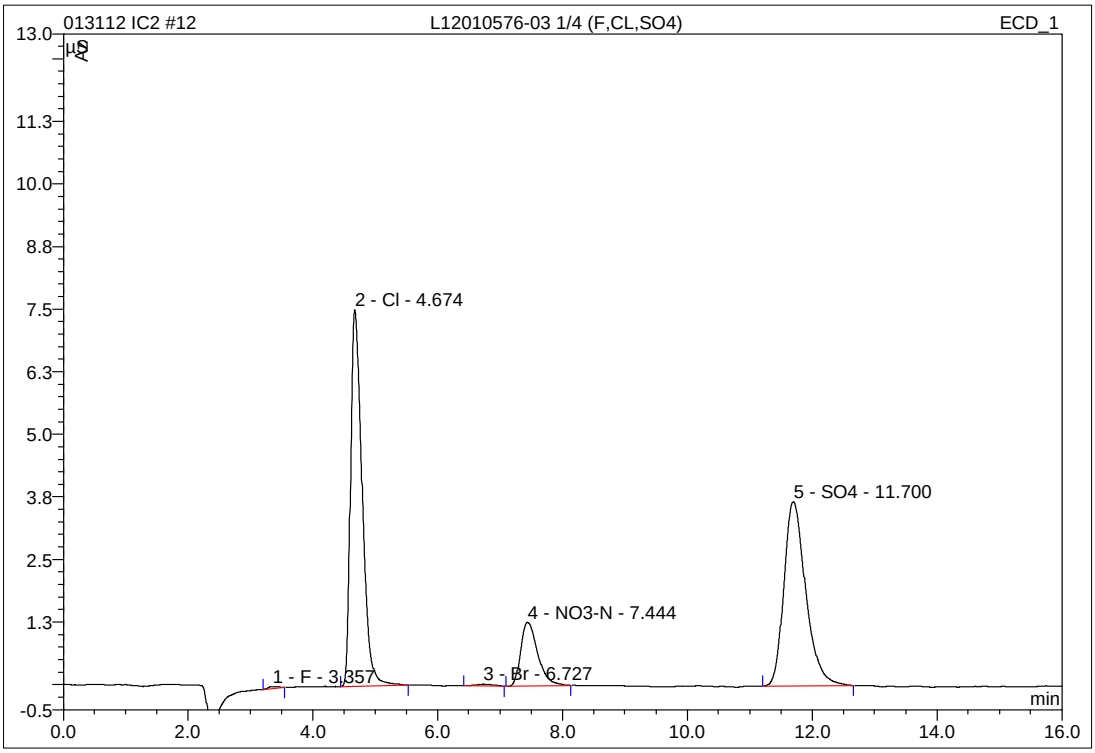
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

12 L12010576-03 1/4 (F,CL,SO4)

1,4 JBK (CL>ICAL)

Sample Name:	**L12010576-03 1/4 (F,CL,SO4)**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 18:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.36	F	0.039	0.007	0.20	0.078	BMB
2	4.67	Cl	7.522	1.620	45.87	10.947	BMB
3	6.73	Br	0.039	0.013	0.38	0.282	BMB
4	7.44	NO3-N	1.273	0.400	11.32	1.129	BMB
5	11.70	SO4	3.678	1.492	42.23	12.996	BMB
Total:			12.550	3.533	100.00	25.431	

IC/Integration

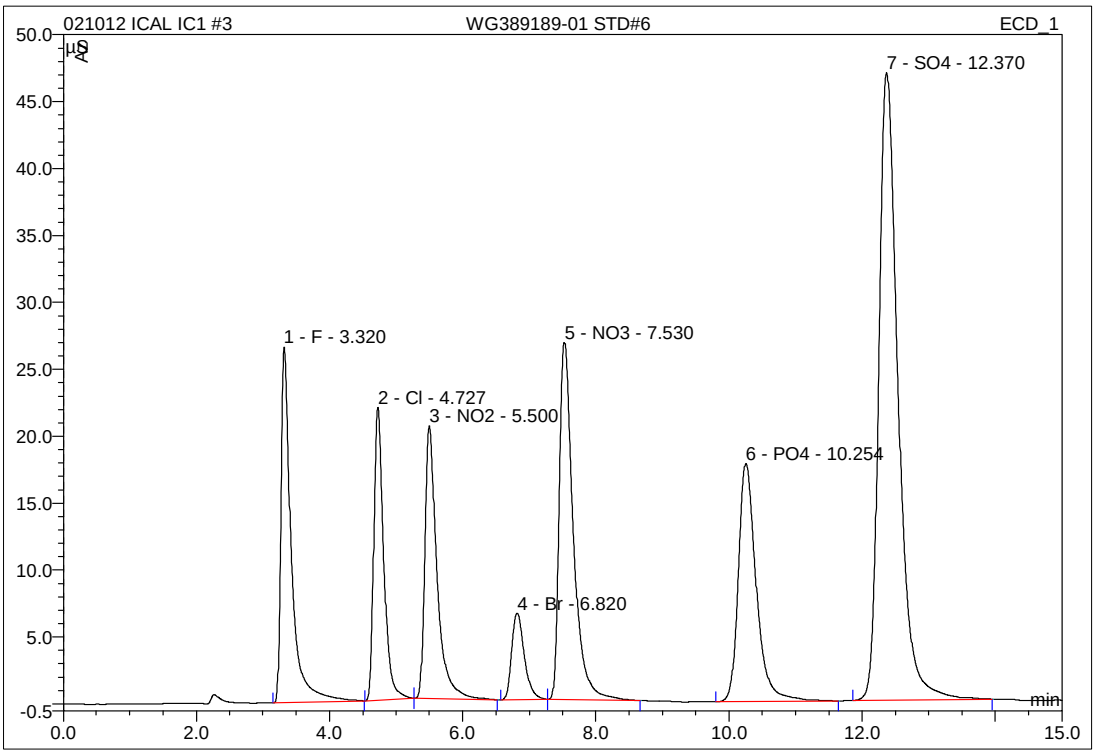
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2.2.1.4 Standards Data

3 WG389189-01 STD#6

1,1 JBK STD48131

Sample Name:	**WG389189-01 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:	**2/10/2012 9:05**	*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	3.32	F	26.576	4.829	11.44	25.240	BMB
2	4.73	Cl	21.858	3.773	8.94	24.880	BMb
3	5.50	NO2	20.381	4.315	10.22	14.814	bMB
4	6.82	Br	6.465	1.424	3.37	24.332	BMb
5	7.53	NO3	26.684	6.533	15.47	17.057	bMB
6	10.25	PO4	17.782	5.560	13.17	40.846	BMB
7	12.37	SO4	46.877	15.789	37.39	126.313	BMB
Total:			166.623	42.223	100.00	273.482	

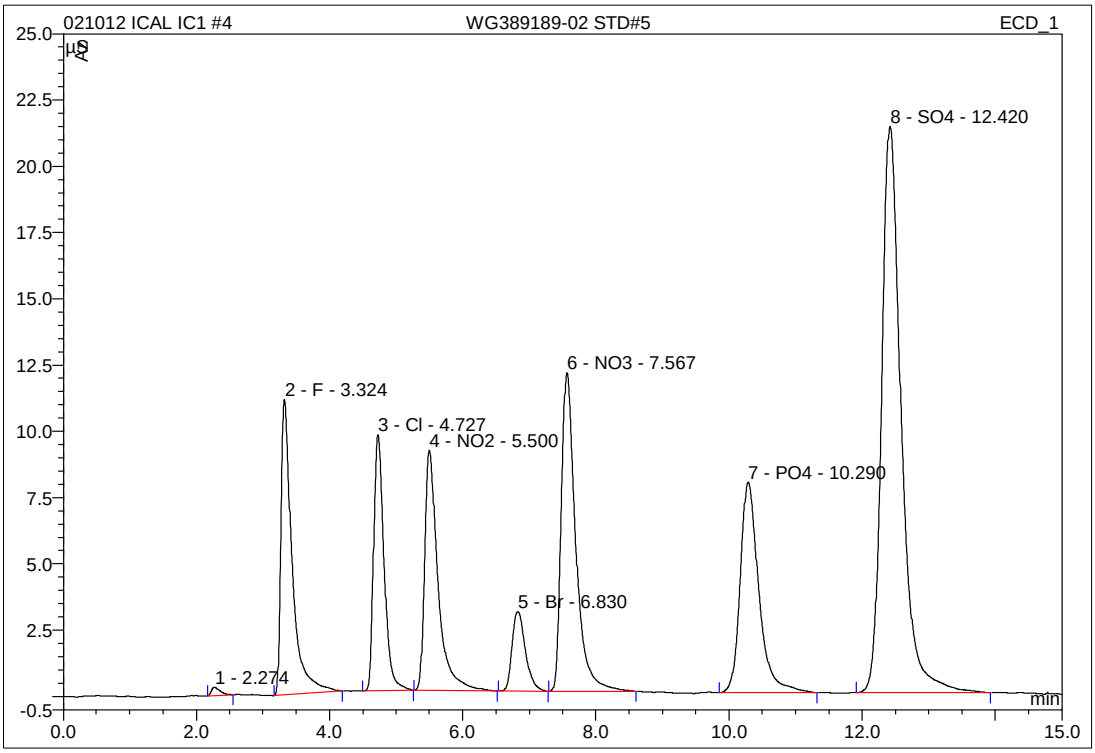
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG389189-02 STD#5

1,1 JBK STD48131

Sample Name:	**WG389189-02 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:	**2/10/2012 9:23**	*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	2.27	n.a.	0.316	0.048	0.24	n.a.	BMB
2	3.32	F	11.154	2.196	11.13	11.524	BMB
3	4.73	Cl	9.661	1.762	8.92	11.622	BMB
4	5.50	NO2	9.066	2.112	10.70	7.282	BMB
5	6.83	Br	2.996	0.699	3.54	11.889	BMB
6	7.57	NO3	12.020	3.036	15.38	7.943	BMB
7	10.29	PO4	7.950	2.586	13.10	19.130	BMB
8	12.42	SO4	21.372	7.303	36.99	58.542	BMB
Total:			74.534	19.742	100.00	127.933	

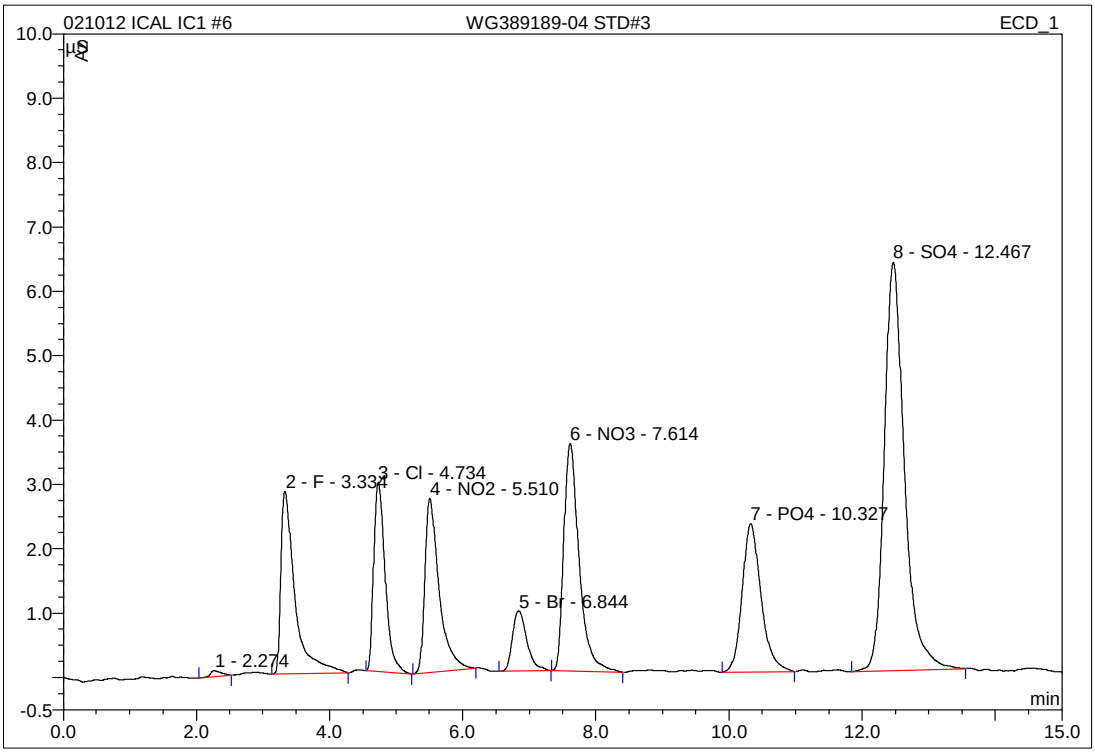
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG389189-04 STD#3

1,1 JBK STD48131

Sample Name:	**WG389189-04 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:	**2/10/2012 9:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.27	n.a.	0.093	0.018	0.29	n.a.	BMB
2	3.33	F	2.840	0.702	11.40	3.739	BMB
3	4.73	Cl	2.943	0.592	9.61	3.914	BMB
4	5.51	NO2	2.705	0.674	10.94	2.362	BMB
5	6.84	Br	0.935	0.235	3.81	3.905	BMB
6	7.61	NO3	3.533	0.944	15.33	2.492	BMB
7	10.33	PO4	2.306	0.758	12.31	5.789	BMB
8	12.47	SO4	6.339	2.236	36.31	18.083	BMB
Total:			21.693	6.159	100.00	40.284	

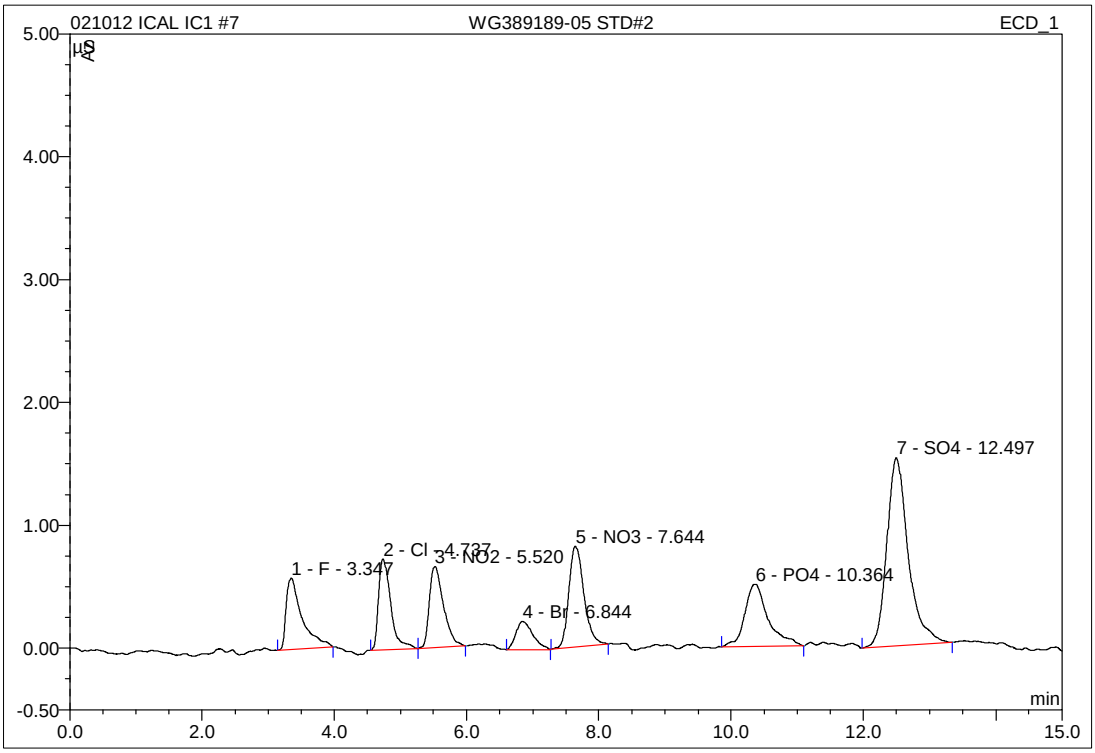
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG389189-05 STD#2

1,1 JBK STD48131

Sample Name:	**WG389189-05 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:	**2/10/2012 10:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.35	F	0.579	0.161	10.37	0.919	BMB
2	4.74	Cl	0.740	0.159	10.26	1.063	BMB
3	5.52	NO2	0.660	0.162	10.44	0.614	BMB
4	6.84	Br	0.228	0.068	4.36	1.040	BMB
5	7.64	NO3	0.823	0.218	14.05	0.601	BMB
6	10.36	PO4	0.505	0.206	13.28	1.758	BMB
7	12.50	SO4	1.533	0.578	37.23	4.843	BMB
Total:			5.068	1.553	100.00	10.838	

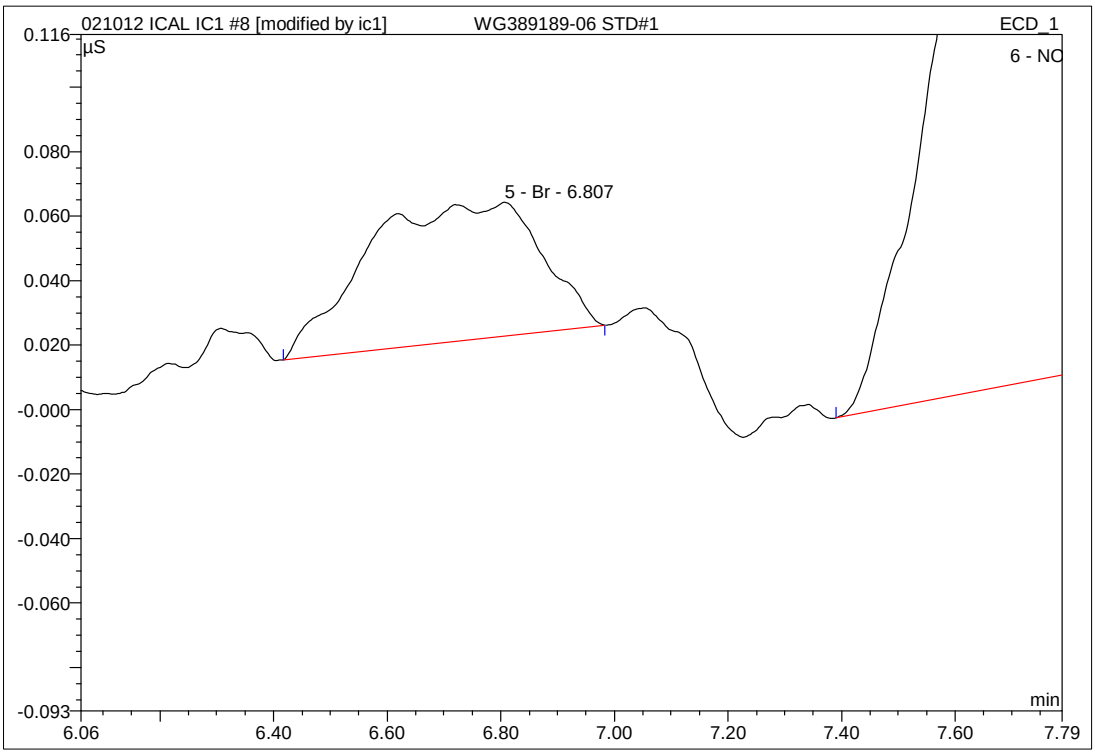
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG389189-06 STD#1

1,1 JBK STD48131

Sample Name:	**WG389189-06 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:	**2/10/2012 10:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.37	F	0.121	0.030	10.29	0.238	BMB
2	3.84	n.a.	0.034	0.005	1.81	n.a.	BMB
3	4.74	Cl	0.155	0.029	9.73	0.203	BMB
4	5.50	NO2	0.110	0.020	6.64	0.126	BMB
5	6.81	Br	0.041	0.015	5.11	0.136	BMB*
6	7.70	NO3	0.173	0.052	17.45	0.167	BMB
7	8.47	n.a.	0.027	0.007	2.39	n.a.	BMB
8	10.36	PO4	0.055	0.013	4.42	0.348	BMB
9	11.68	n.a.	0.040	0.006	2.01	n.a.	BMB
10	12.55	SO4	0.265	0.119	40.14	1.173	BMB
Total:			1.022	0.296	100.00	2.391	

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

IC/Integration

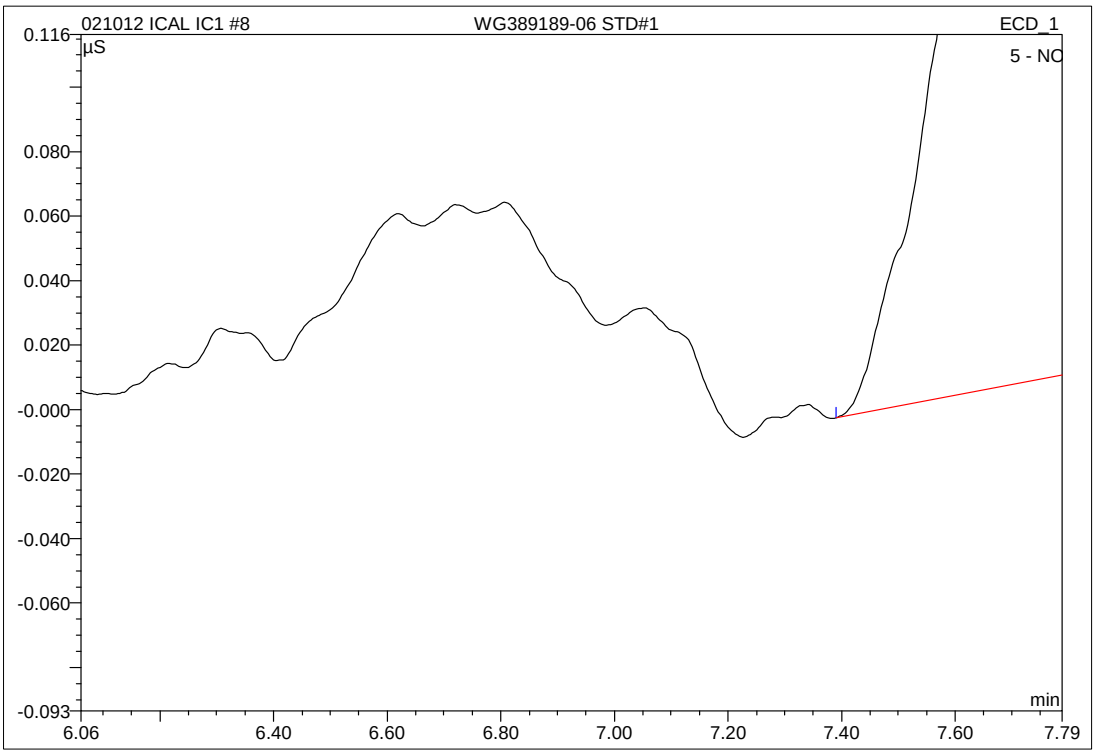
Analyst: 02/16/2012 15:21
Supervisor: 02/17/2012 08:04

#1 - Data system fails to select correct peak

8 WG389189-06 STD#1

1,1 JBK STD48131

Sample Name:	**WG389189-06 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:	**2/10/2012 10:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.37	F	0.121	0.030	10.84	0.238	BMB
2	3.84	n.a.	0.034	0.005	1.91	n.a.	BMB
3	4.74	Cl	0.155	0.029	10.26	0.203	BMB
4	5.50	NO2	0.110	0.020	7.00	0.126	BMB
5	7.70	NO3	0.173	0.052	18.39	0.167	BMB
6	8.47	n.a.	0.027	0.007	2.52	n.a.	BMB
7	10.36	PO4	0.055	0.013	4.66	0.348	BMB
8	11.68	n.a.	0.040	0.006	2.12	n.a.	BMB
9	12.55	SO4	0.265	0.119	42.30	1.173	BMB
Total:			0.981	0.281	100.00	2.254	

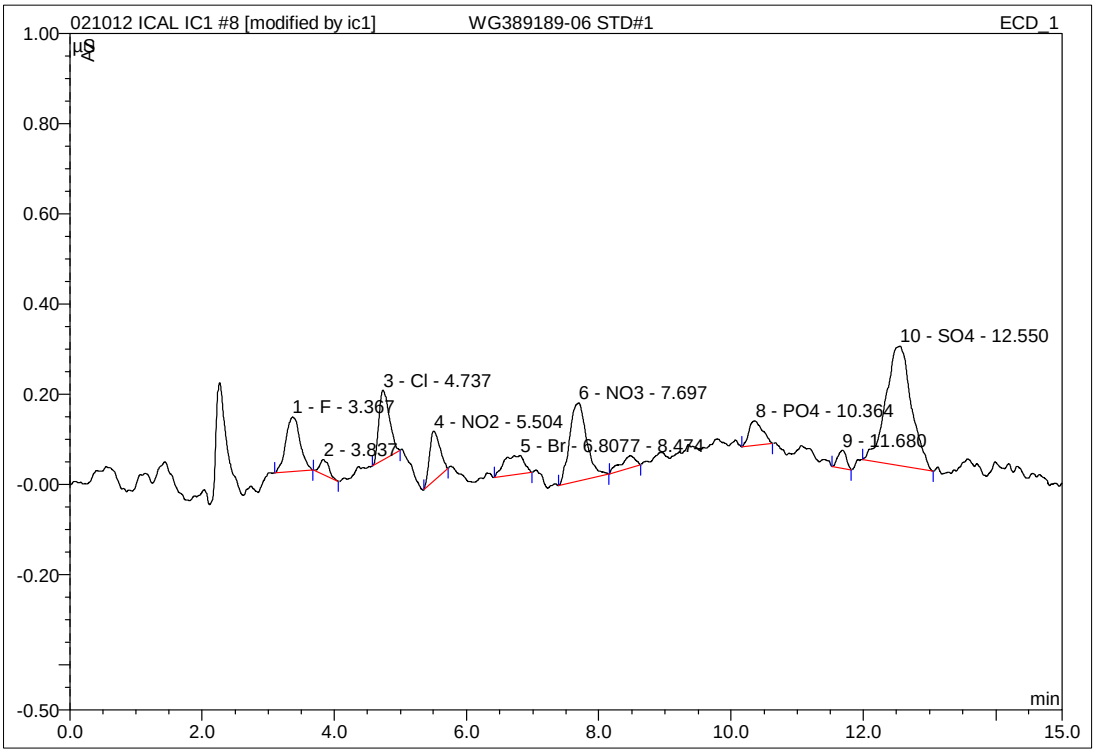
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG389189-06 STD#1

1,1 JBK STD48131

Sample Name:	**WG389189-06 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:	**2/10/2012 10:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.37	F	0.121	0.030	10.29	0.238	BMB
2	3.84	n.a.	0.034	0.005	1.81	n.a.	BMB
3	4.74	Cl	0.155	0.029	9.73	0.203	BMB
4	5.50	NO2	0.110	0.020	6.64	0.126	BMB
5	6.81	Br	0.041	0.015	5.11	0.136	BMB*
6	7.70	NO3	0.173	0.052	17.45	0.167	BMB
7	8.47	n.a.	0.027	0.007	2.39	n.a.	BMB
8	10.36	PO4	0.055	0.013	4.42	0.348	BMB
9	11.68	n.a.	0.040	0.006	2.01	n.a.	BMB
10	12.55	SO4	0.265	0.119	40.14	1.173	BMB
Total:			1.022	0.296	100.00	2.391	

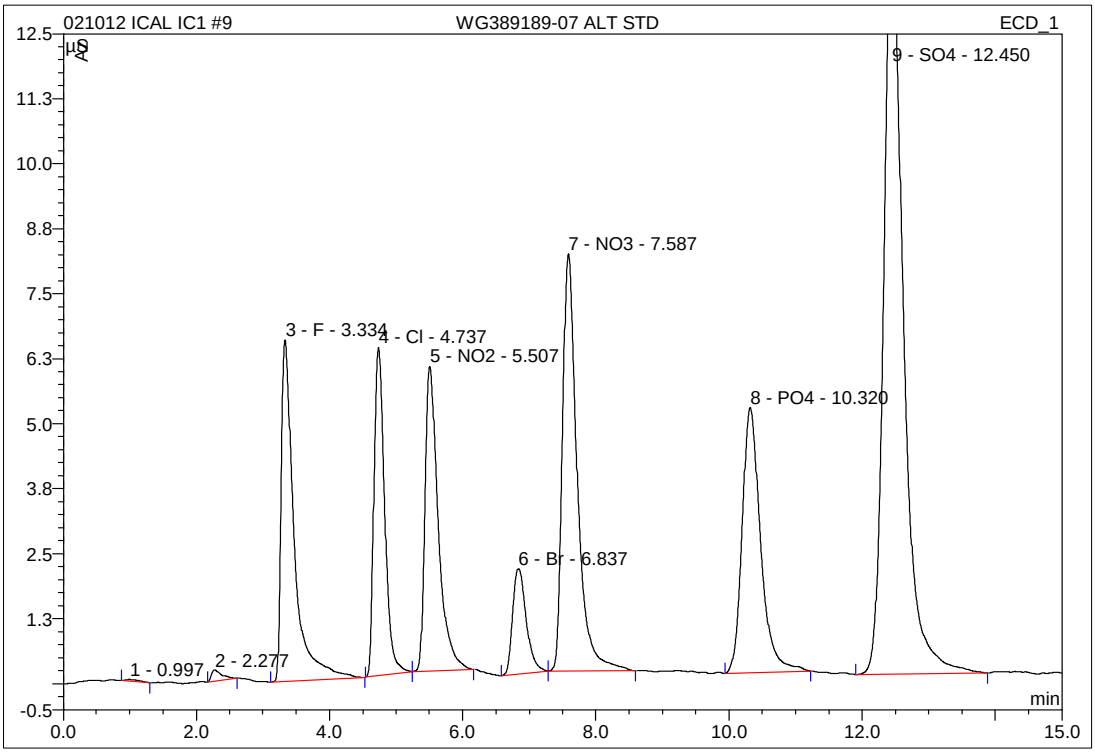
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG389189-07 ALT STD

1,1 JBK STD48132

Sample Name:	**WG389189-07 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:	**2/10/2012 10:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	1.00	n.a.	0.031	0.008	0.06	n.a.	BMB
2	2.28	n.a.	0.213	0.038	0.29	n.a.	BMB
3	3.33	F	6.570	1.503	11.43	7.914	BMB
4	4.74	Cl	6.309	1.181	8.98	7.797	BMb
5	5.51	NO2	5.857	1.356	10.31	4.695	bMB
6	6.84	Br	2.020	0.478	3.63	8.089	BMb
7	7.59	NO3	8.027	2.067	15.71	5.417	bMB
8	10.32	PO4	5.096	1.640	12.47	12.223	BMB
9	12.45	SO4	14.148	4.883	37.12	39.219	BMB
Total:			48.273	13.153	100.00	85.353	

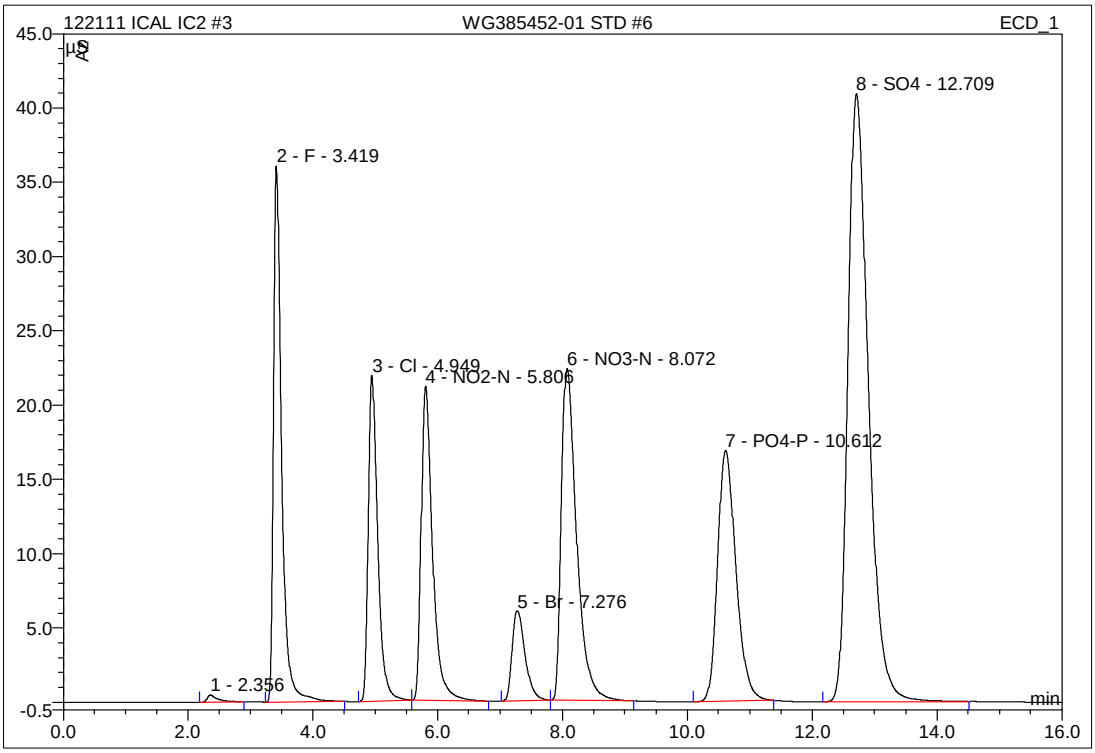
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG385452-01 STD #6

1,1 JBK STD48131

Sample Name:	**WG385452-01 STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.36	n.a.	0.480	0.092	0.21	n.a.	BMB
2	3.42	F	36.097	5.381	12.51	25.930	BMB
3	4.95	Cl	21.965	3.843	8.93	25.938	BMB
4	5.81	NO2-N	21.160	4.468	10.39	15.345	bMB
5	7.28	Br	6.075	1.468	3.41	24.458	BMB
6	8.07	NO3-N	22.316	6.374	14.82	17.724	BMB
7	10.61	PO4-P	16.878	5.762	13.40	43.273	BMB
8	12.71	SO4	40.931	15.619	36.32	134.117	BMB
Total:			165.902	43.008	100.00	286.784	

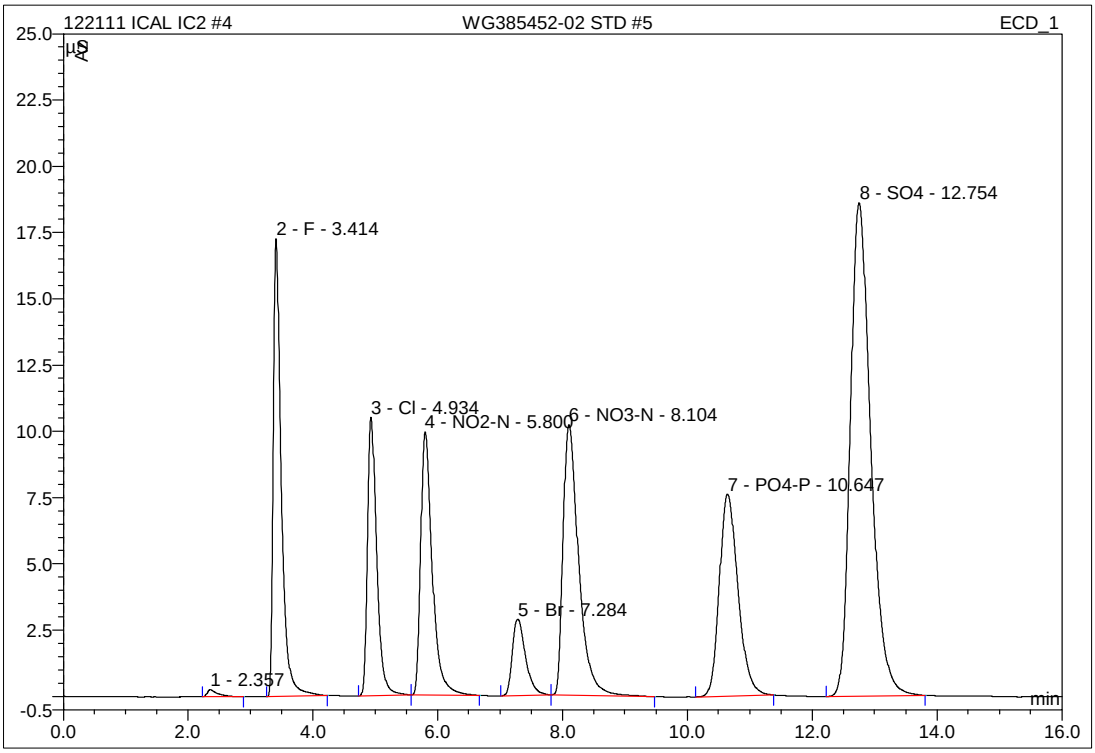
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG385452-02 STD #5

1,1 JBK STD48131

Sample Name:	**WG385452-02 STD #5**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.36	n.a.	0.270	0.053	0.26	n.a.	BMB
2	3.41	F	17.277	2.541	12.76	12.269	BMB
3	4.93	Cl	10.509	1.807	9.07	12.208	BMb
4	5.80	NO2-N	9.922	2.133	10.71	7.336	bMB
5	7.28	Br	2.875	0.706	3.55	11.793	BMb
6	8.10	NO3-N	10.190	2.969	14.90	8.264	bMB
7	10.65	PO4-P	7.628	2.645	13.28	19.888	BMB
8	12.75	SO4	18.618	7.064	35.47	60.768	BMB
Total:			77.288	19.918	100.00	132.526	

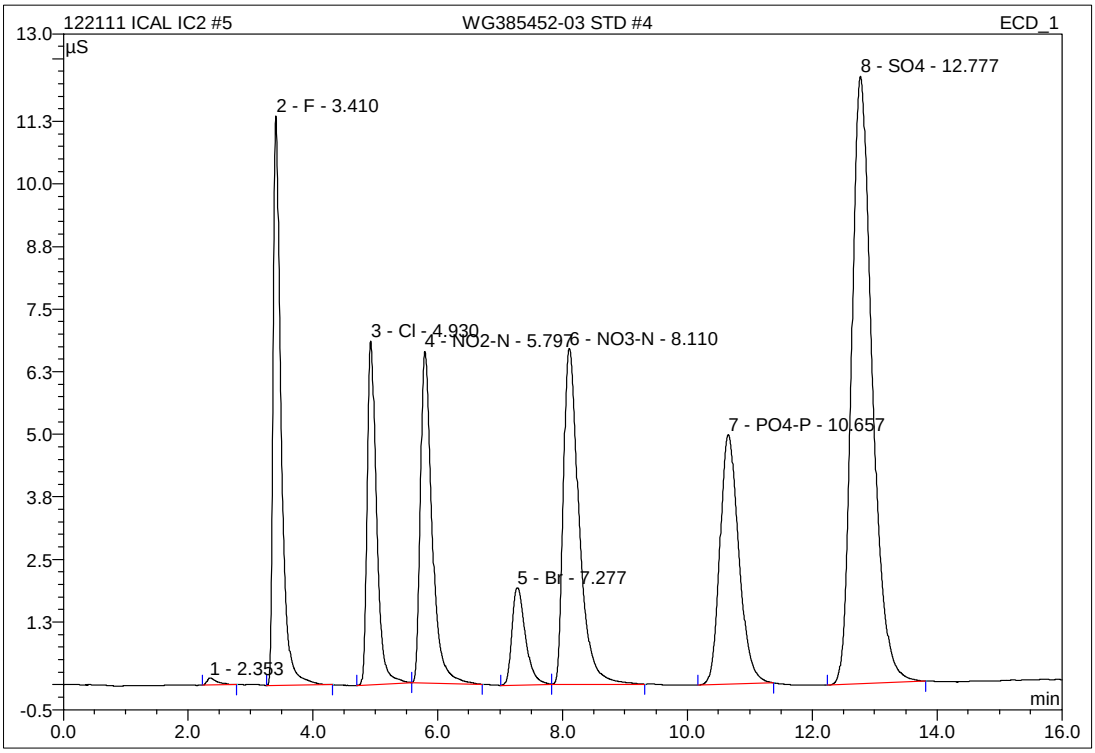
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 WG385452-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.35	n.a.	0.145	0.028	0.21	n.a.	BMB
2	3.41	F	11.364	1.682	12.77	8.138	BMB
3	4.93	Cl	6.868	1.199	9.11	8.106	BMB
4	5.80	NO2-N	6.623	1.435	10.89	4.943	BMB
5	7.28	Br	1.938	0.484	3.67	8.099	BMB
6	8.11	NO3-N	6.710	1.966	14.93	5.479	BMB
7	10.66	PO4-P	4.983	1.749	13.28	13.165	BMB
8	12.78	SO4	12.131	4.627	35.13	39.871	BMB
Total:			50.763	13.170	100.00	87.801	

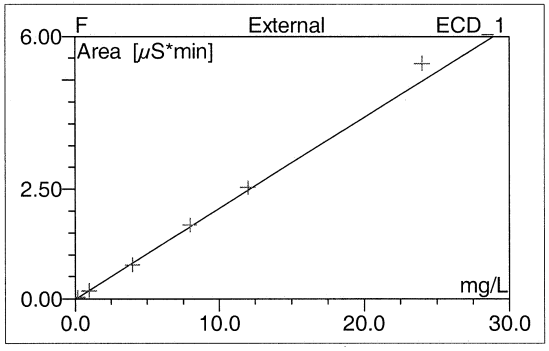
IC/Integration

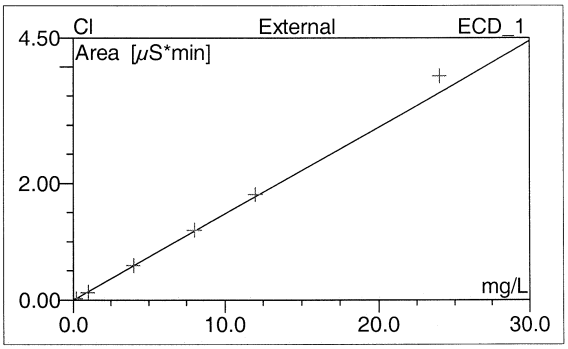
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

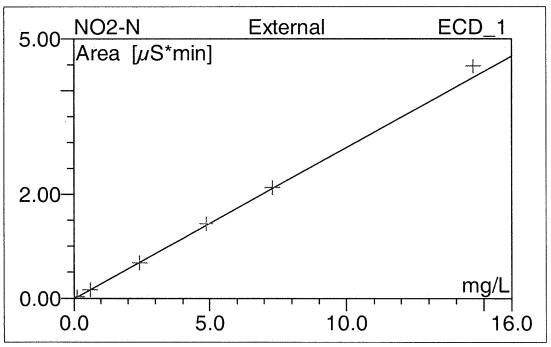
5 WG385452-03 STD #4

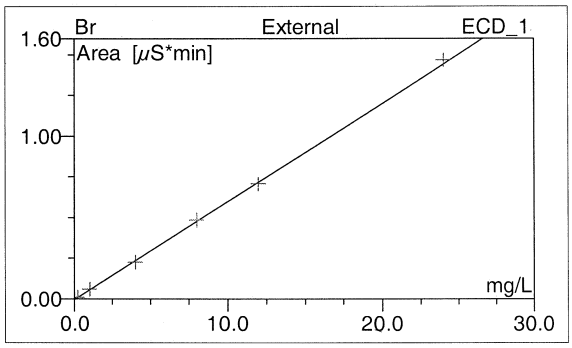
1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**##############**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**









No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.41	F	XXLOff	6	99.8106	-0.0092	0.2079	0.0000
3	4.93	Cl	XXLOff	6	99.7324	-0.0023	0.1482	0.0000
4	5.80	NO2-N	XXLOff	6	99.9310	-0.0067	0.2916	0.0000
5	7.28	Br	XXLOff	6	99.9357	-0.0035	0.0602	0.0000
6	8.11	NO3-N	XXLOff	6	99.7758	-0.0064	0.3600	0.0000
7	10.66	PO4-P	XXLOff	6	99.7256	-0.0060	0.1333	0.0000
8	12.78	SO4	XXLOff	6	99.7187	-0.0237	0.1166	0.0000
Average:					99.8043	-0.0083	0.1883	0.0000

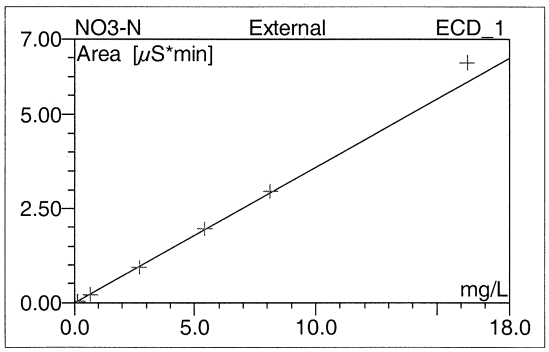
IC/Calibration(Batch)

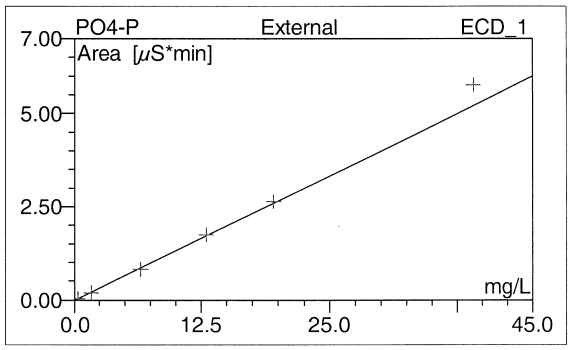
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

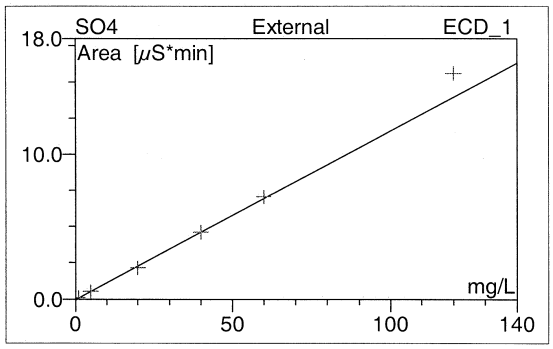
5 WG385452-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**##############**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**







No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.41	F	XXLOff	6	99.8106	-0.0092	0.2079	0.0000
3	4.93	Cl	XXLOff	6	99.7324	-0.0023	0.1482	0.0000
4	5.80	NO2-N	XXLOff	6	99.9310	-0.0067	0.2916	0.0000
5	7.28	Br	XXLOff	6	99.9357	-0.0035	0.0602	0.0000
6	8.11	NO3-N	XXLOff	6	99.7758	-0.0064	0.3600	0.0000
7	10.66	PO4-P	XXLOff	6	99.7256	-0.0060	0.1333	0.0000
8	12.78	SO4	XXLOff	6	99.7187	-0.0237	0.1166	0.0000
Average:					99.8043	-0.0083	0.1883	0.0000

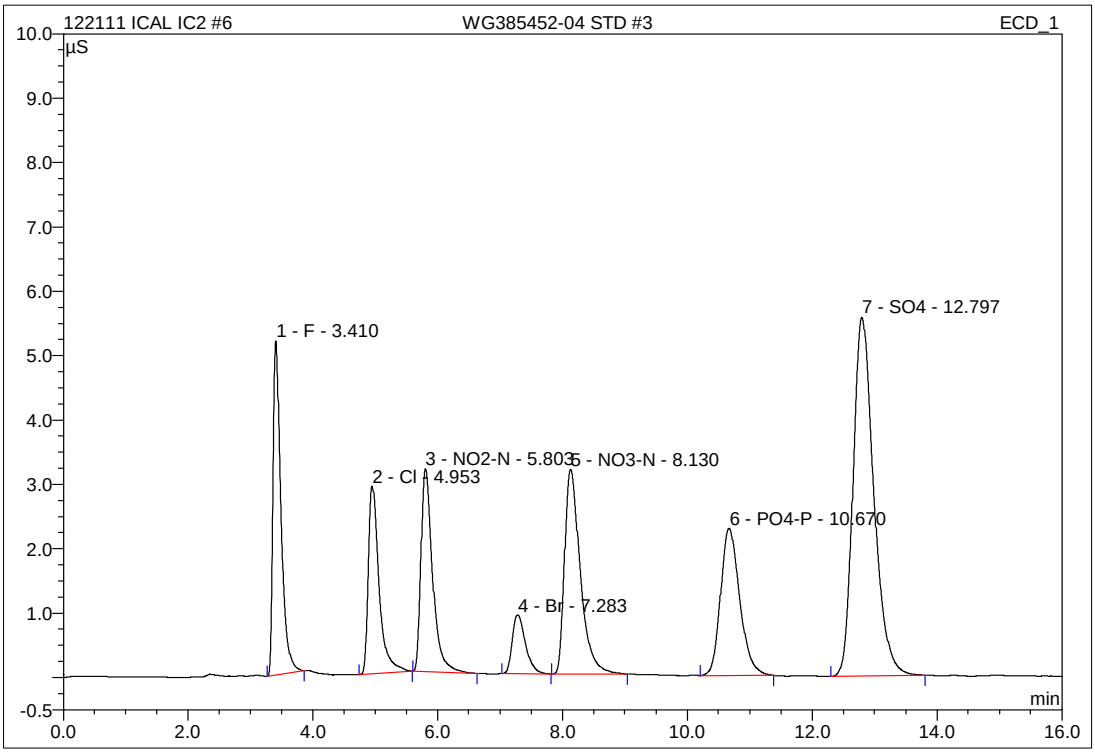
IC/Calibration(Batch)(2)

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG385452-04 STD #3

1,1 JBK STD48131

Sample Name:	**WG385452-04 STD #3**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.41	F	5.190	0.765	12.45	3.723	BMB
2	4.95	Cl	2.921	0.585	9.52	3.961	BMB
3	5.80	NO2-N	3.152	0.681	11.08	2.358	BMB
4	7.28	Br	0.914	0.225	3.65	3.790	BMB
5	8.13	NO3-N	3.178	0.930	15.14	2.602	BMB
6	10.67	PO4-P	2.284	0.814	13.25	6.152	BMB
7	12.80	SO4	5.576	2.145	34.91	18.592	BMB
Total:			23.216	6.144	100.00	41.176	

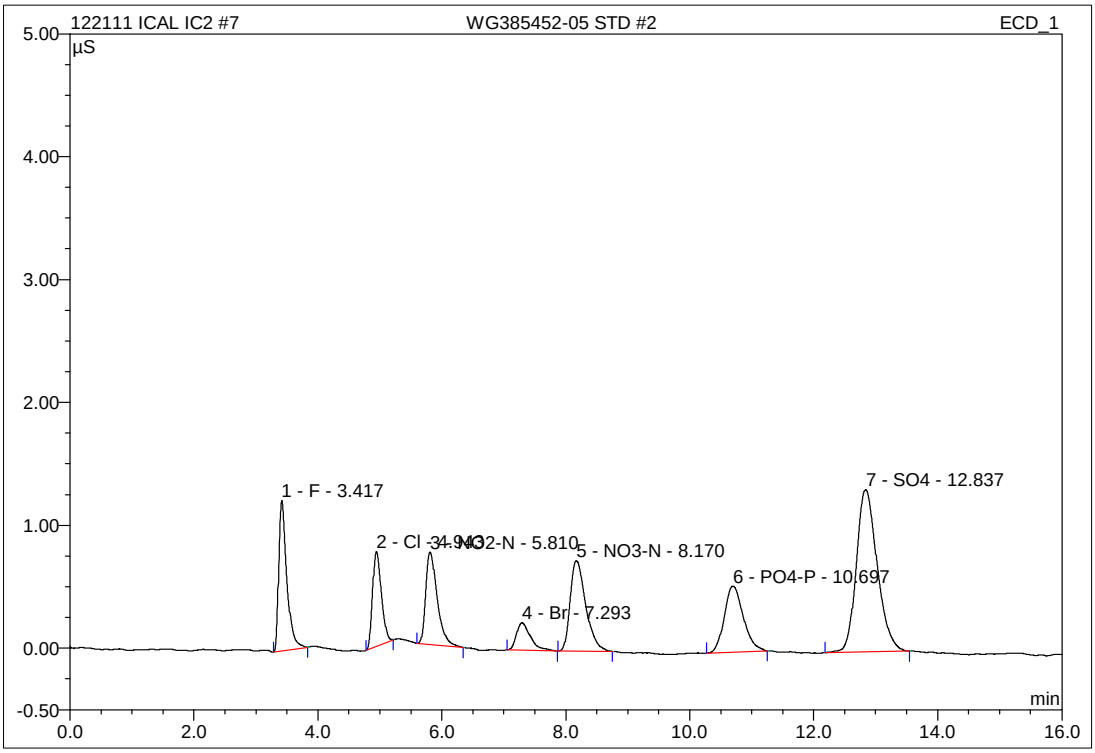
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG385452-05 STD #2

1,1 JBK STD48131

Sample Name:	**WG385452-05 STD #2**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	1.226	0.185	12.71	0.934	BMB
2	4.94	Cl	0.773	0.127	8.74	0.874	BMB
3	5.81	NO2-N	0.750	0.163	11.17	0.580	BMB
4	7.29	Br	0.224	0.059	4.08	1.045	BMB
5	8.17	NO3-N	0.734	0.214	14.71	0.612	BMB
6	10.70	PO4-P	0.536	0.191	13.11	1.476	BMB
7	12.84	SO4	1.321	0.516	35.48	4.630	BMB
Total:			5.565	1.455	100.00	10.152	

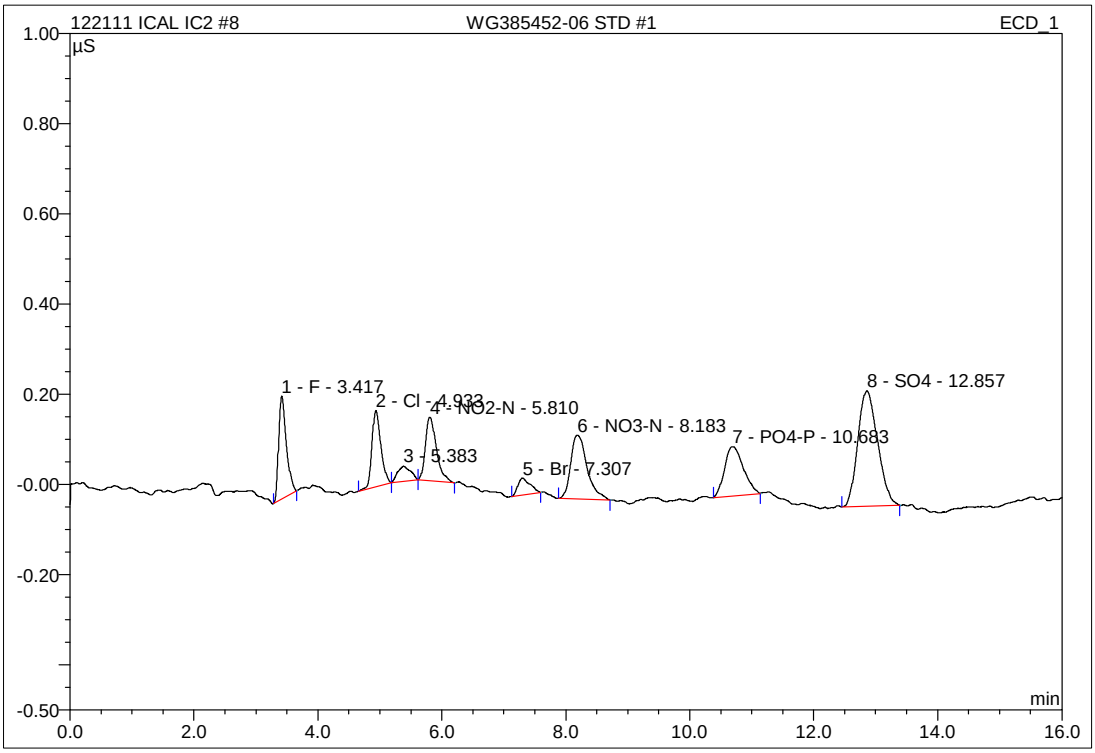
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG385452-06 STD #1

1,1 JBK STD48131

Sample Name:	**WG385452-06 STD #1**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	0.229	0.033	11.66	0.203	BMB
2	4.93	Cl	0.169	0.028	9.90	0.205	BMB
3	5.38	n.a.	0.033	0.008	2.77	n.a.	BMB
4	5.81	NO2-N	0.141	0.029	10.30	0.123	BMB
5	7.31	Br	0.037	0.008	2.99	0.199	BMB
6	8.18	NO3-N	0.142	0.043	15.30	0.138	BMB
7	10.68	PO4-P	0.110	0.038	13.54	0.333	BMB
8	12.86	SO4	0.256	0.095	33.53	1.017	BMB
Total:			1.116	0.283	100.00	2.218	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG385452-07 ALT STD

1,1 JBK STD48132

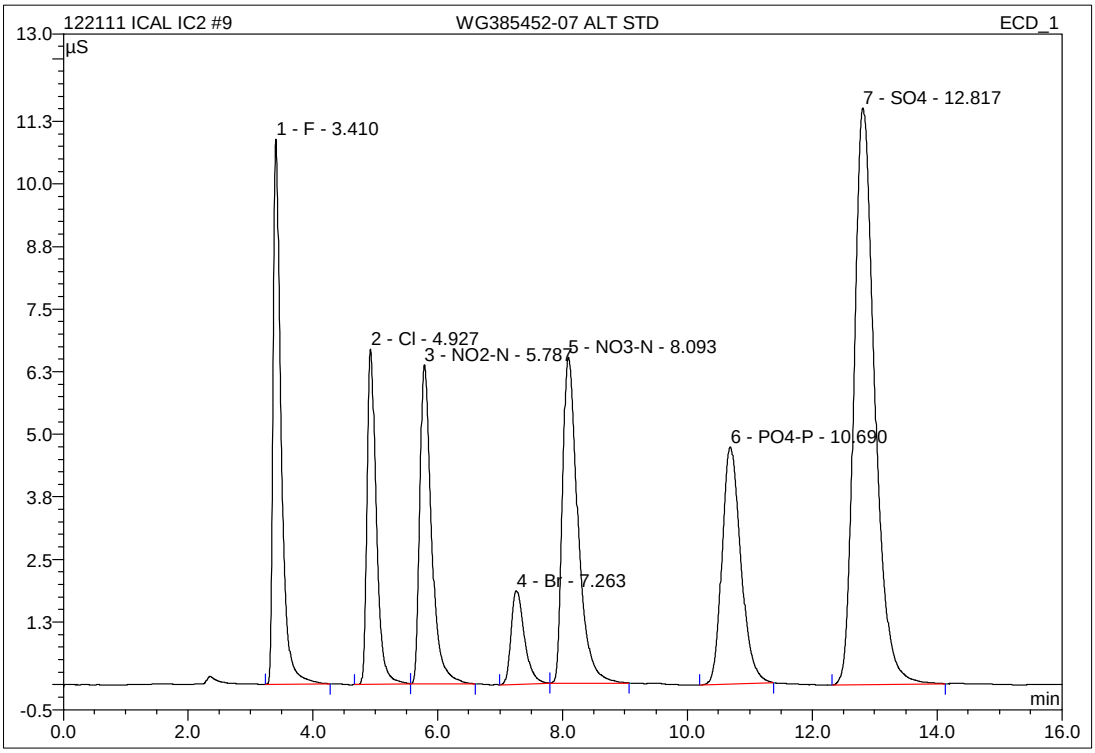
Sample Name:	**WG385452-07 ALT STD**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 14:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG385452-07 ALT	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.8350	-2.06	PASS
Cl	8	7.8544	-1.82	PASS
NO2-N	4.8714	4.7901	-1.67	PASS
NO3-N	5.4216	5.2280	-3.57	PASS
Br	8	7.7140	-3.58	PASS
SO4	40	38.0903	-4.77	PASS
PO4-P	13.0456	12.4781	-4.35	PASS

9 WG385452-07 ALT STD

1,1 JBK STD48132

Sample Name:	**WG385452-07 ALT STD**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 14:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.41	F	10.889	1.620	12.87	7.835	BMB
2	4.93	Cl	6.698	1.162	9.23	7.854	BMB
3	5.79	NO2-N	6.377	1.390	11.05	4.790	BMB
4	7.26	Br	1.863	0.461	3.66	7.714	BMb
5	8.09	NO3-N	6.508	1.876	14.91	5.228	bMB
6	10.69	PO4-P	4.738	1.657	13.17	12.478	BMB
7	12.82	SO4	11.518	4.419	35.11	38.090	BMB
Total:			48.590	12.584	100.00	83.990	

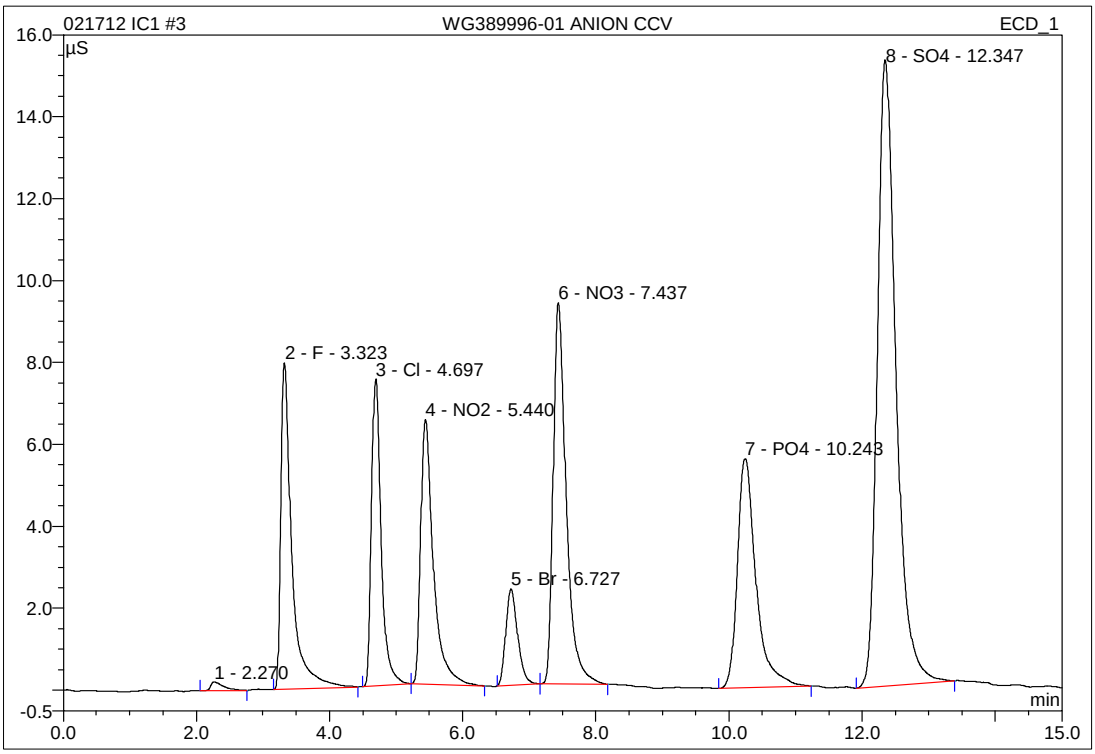
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG389996-01 ANION CCV

1,1 JBK STD48131 _____ psi @ _____

Sample Name:	**WG389996-01 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:	**2/17/2012 8:22**	*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	2.27	n.a.	0.215	0.047	0.34	n.a.	BMB
2	3.32	F	7.971	1.544	11.29	8.125	BMB
3	4.70	Cl	7.490	1.266	9.26	8.352	BMb
4	5.44	NO2	6.454	1.425	10.42	4.930	bMB
5	6.73	Br	2.349	0.486	3.56	8.232	BMb
6	7.44	NO3	9.301	2.109	15.43	5.528	bMB
7	10.24	PO4	5.597	1.814	13.27	13.497	BMB
8	12.35	SO4	15.292	4.982	36.44	40.010	BMB
Total:			54.669	13.673	100.00	88.675	

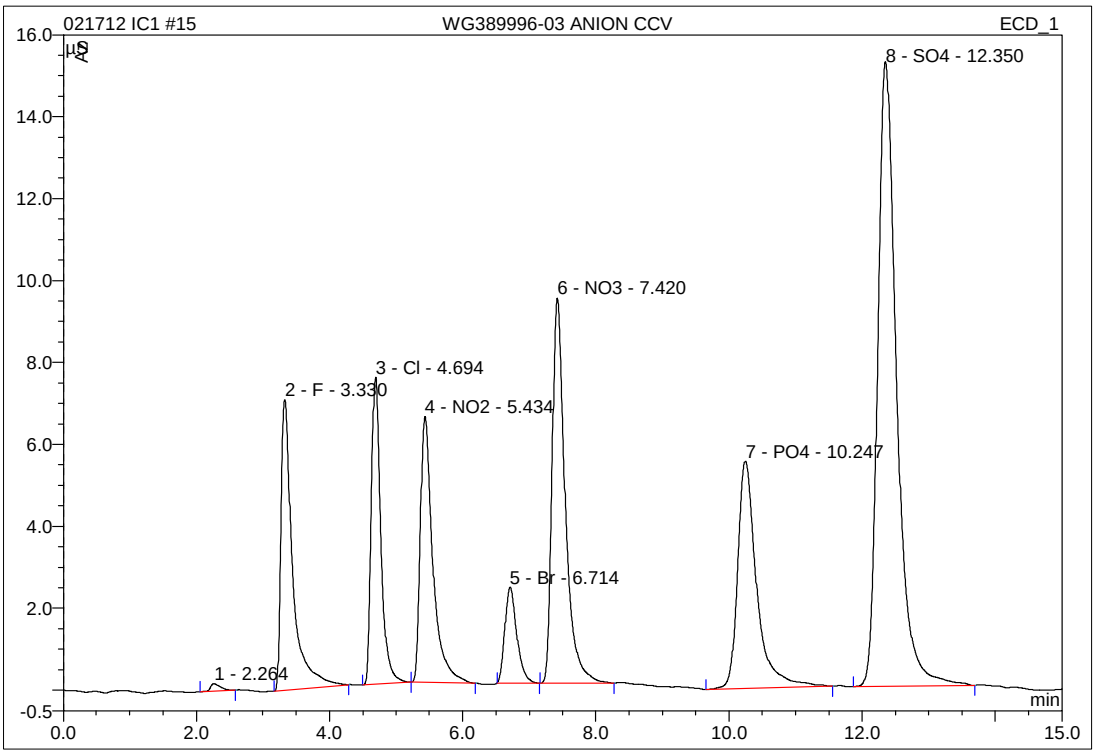
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG389996-03 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG389996-03 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:	**2/17/2012 11:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.26	n.a.	0.182	0.031	0.23	n.a.	BMB
2	3.33	F	7.092	1.460	10.68	7.689	BMB
3	4.69	Cl	7.488	1.251	9.15	8.257	BMb
4	5.43	NO2	6.483	1.421	10.39	4.918	bMB
5	6.71	Br	2.344	0.488	3.57	8.252	BMB
6	7.42	NO3	9.402	2.149	15.72	5.633	BMB
7	10.25	PO4	5.547	1.843	13.48	13.711	BMB
8	12.35	SO4	15.252	5.028	36.78	40.380	BMB
Total:			53.791	13.672	100.00	88.839	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG388508-01 ANION CCV

1,1 JBK STD48131 _____ psi @_____

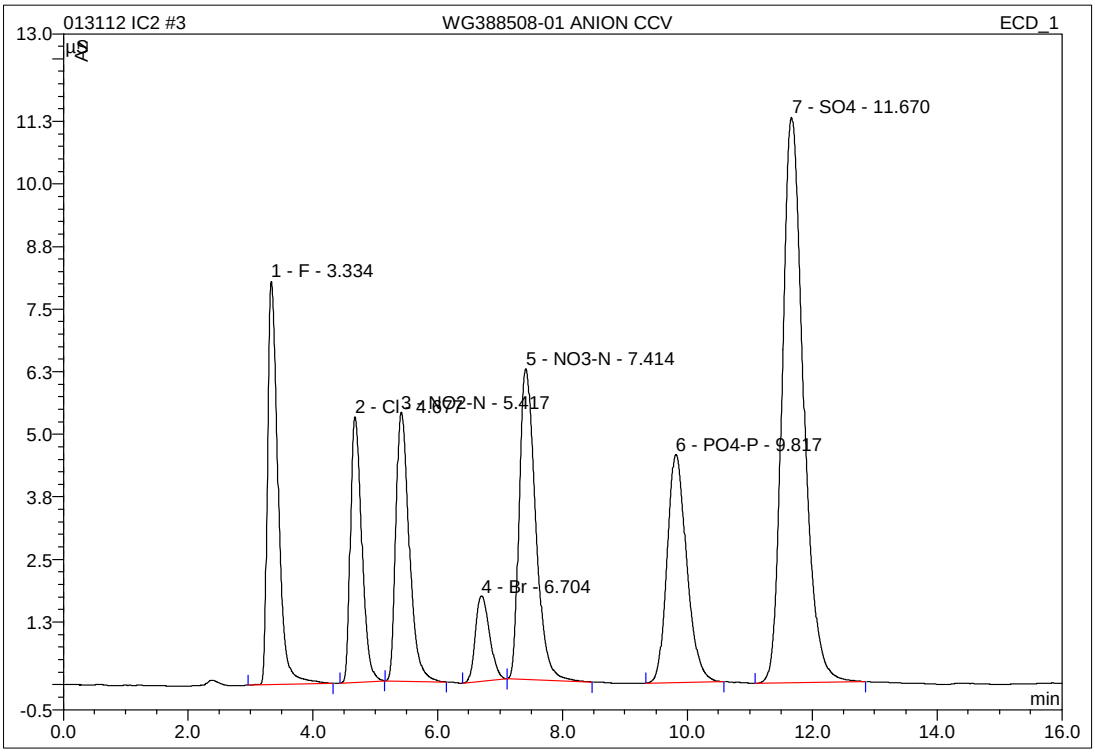
Sample Name:	**WG388508-01 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 15:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG388508-01 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.7011	-3.74	PASS
Cl	8	7.5838	-5.20	PASS
NO2-N	4.8714	4.6010	-5.55	PASS
NO3-N	5.4216	5.2531	-3.11	PASS
Br	8	7.5033	-6.21	PASS
SO4	40	38.4630	-3.84	PASS
PO4-P	13.0456	12.4887	-4.27	PASS

3 WG388508-01 ANION CCV

1,1 JBK STD48131 _____ psi @_____

Sample Name:	**WG388508-01 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 15:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.33	F	8.059	1.592	12.73	7.701	BMB
2	4.68	Cl	5.304	1.122	8.97	7.584	BMB
3	5.42	NO2-N	5.375	1.335	10.68	4.601	BMB
4	6.70	Br	1.704	0.448	3.58	7.503	BMB
5	7.41	NO3-N	6.209	1.885	15.08	5.253	bMB
6	9.82	PO4-P	4.552	1.659	13.27	12.489	BMB
7	11.67	SO4	11.295	4.462	35.69	38.463	BMB
Total:			42.499	12.503	100.00	83.594	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG388508-03 ANION CCV

1,1 JBK STD48131

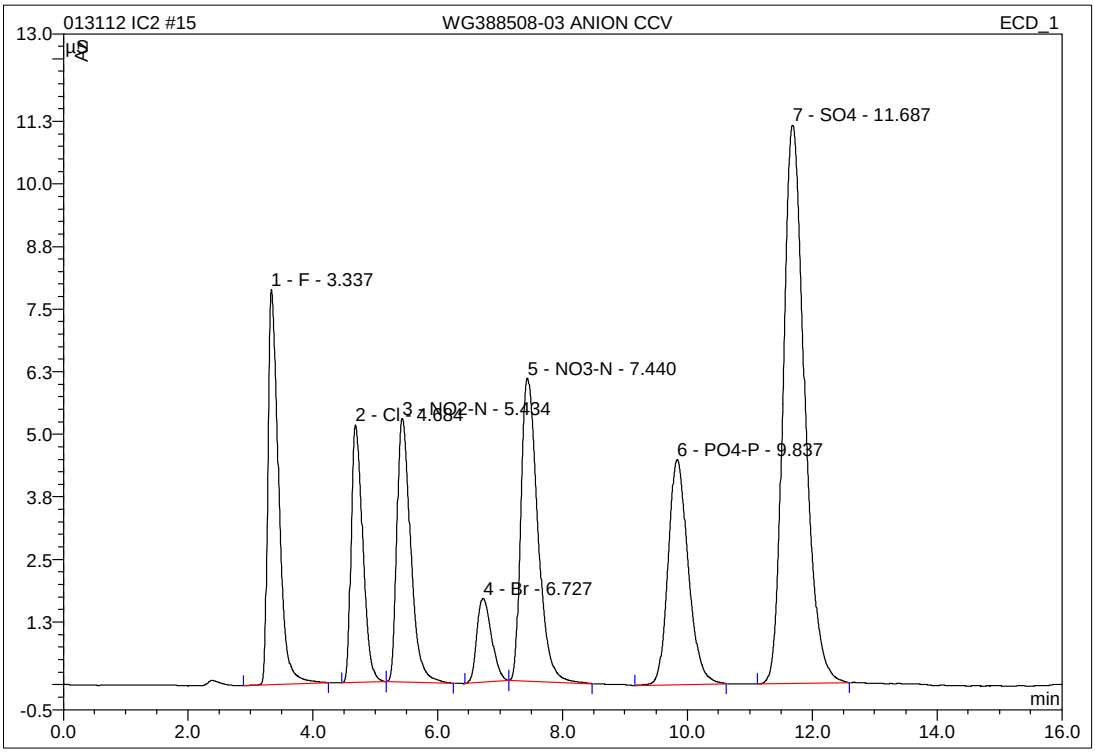
Sample Name:	**WG388508-03 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG388508-03 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.6882	-3.90	PASS
Cl	8	7.5018	-6.23	PASS
NO2-N	4.8714	4.6394	-4.76	PASS
NO3-N	5.4216	5.2692	-2.81	PASS
Br	8	7.6314	-4.61	PASS
SO4	40	38.1508	-4.62	PASS
PO4-P	13.0456	12.6165	-3.29	PASS

15 WG388508-03 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG388508-03 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 19:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.34	F	7.895	1.589	12.72	7.688	BMB
2	4.68	Cl	5.145	1.110	8.88	7.502	BMB
3	5.43	NO2-N	5.265	1.346	10.78	4.639	BMB
4	6.73	Br	1.677	0.456	3.65	7.631	BMB
5	7.44	NO3-N	6.051	1.891	15.13	5.269	BMB
6	9.84	PO4-P	4.496	1.676	13.41	12.617	BMB
7	11.69	SO4	11.148	4.426	35.43	38.151	BMB
Total:			41.678	12.493	100.00	83.497	

IC/Integration

Chromeleon (c) Dionex 1996-2001
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27 WG388508-05 ANION CCV

1,1 JBK STD48131

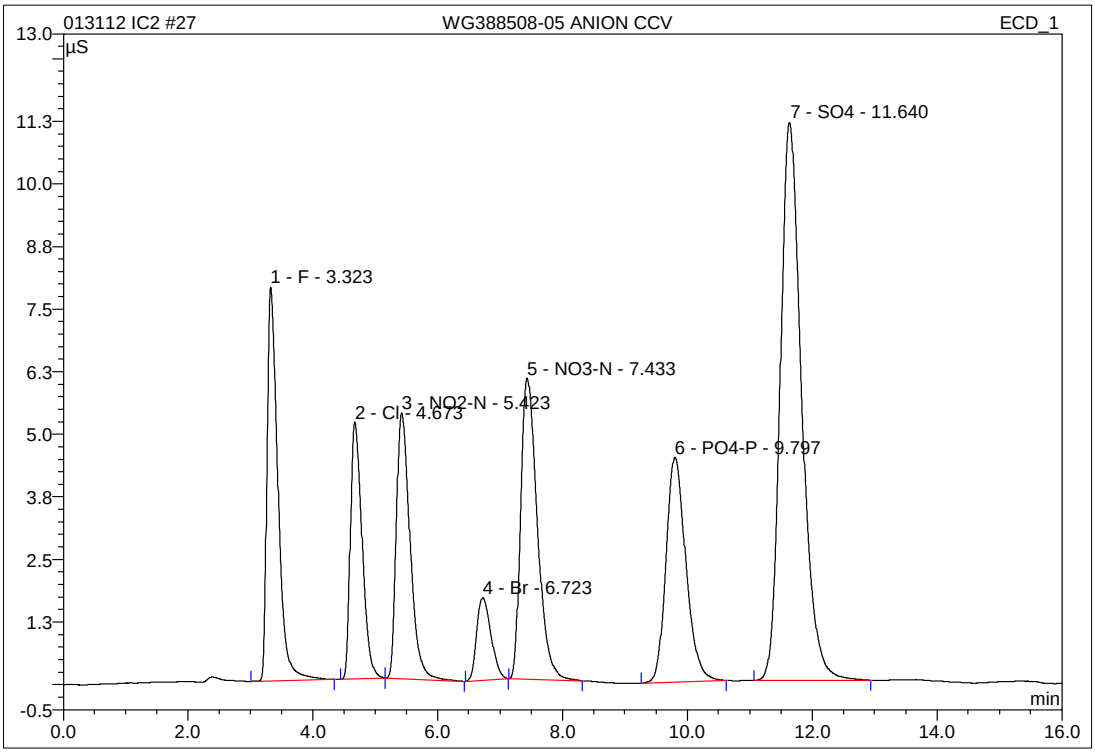
Sample Name:	**WG388508-05 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 23:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG388508-05 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.7211	-3.49	PASS
Cl	8	7.5408	-5.74	PASS
NO2-N	4.8714	4.6690	-4.15	PASS
NO3-N	5.4216	5.1725	-4.59	PASS
Br	8	7.3655	-7.93	PASS
SO4	40	38.1616	-4.60	PASS
PO4-P	13.0456	12.4851	-4.30	PASS

27 WG388508-05 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG388508-05 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 23:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	7.864	1.596	12.82	7.721	BMB
2	4.67	Cl	5.131	1.116	8.96	7.541	BMB
3	5.42	NO2-N	5.308	1.355	10.88	4.669	BMB
4	6.72	Br	1.647	0.440	3.53	7.365	BMB
5	7.43	NO3-N	6.018	1.856	14.91	5.173	BMB
6	9.80	PO4-P	4.488	1.658	13.32	12.485	BMB
7	11.64	SO4	11.151	4.427	35.57	38.162	BMB
Total:			41.607	12.447	100.00	83.116	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

29 WG388508-07 ANION CCV

1,1 JBK STD48131

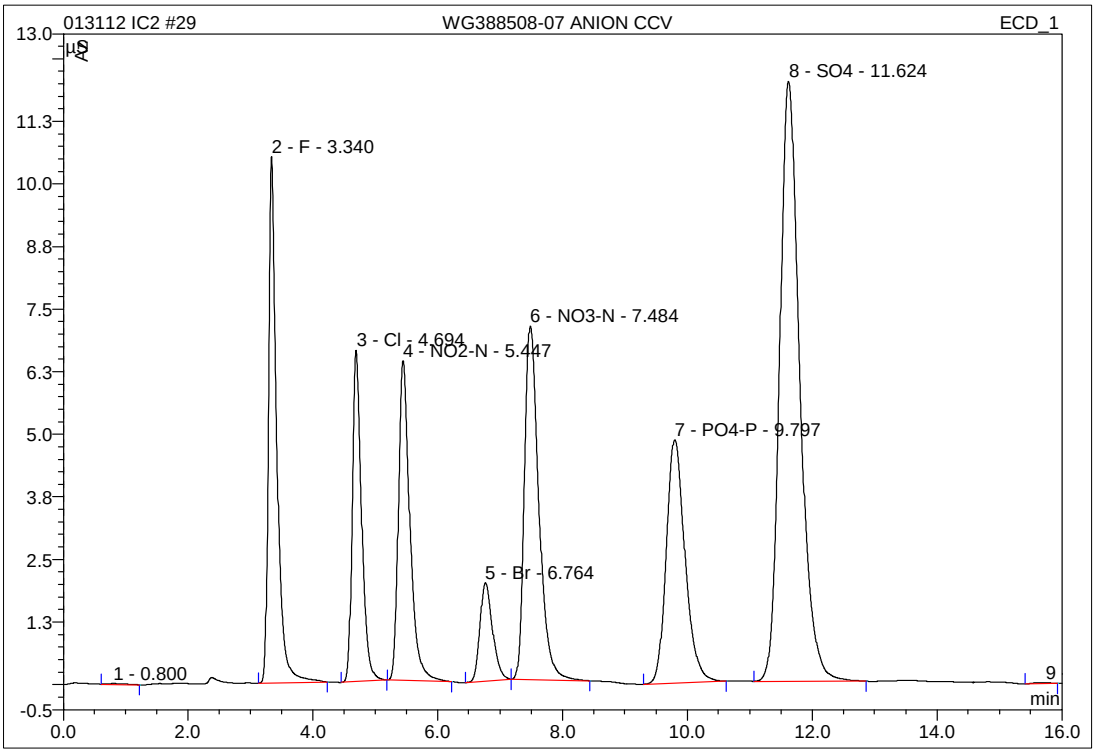
Sample Name:	**WG388508-07 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 7:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG388508-07 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.8820	-1.48	PASS
Cl	8	7.7188	-3.52	PASS
NO2-N	4.8714	4.6863	-3.80	PASS
NO3-N	5.4216	5.2662	-2.87	PASS
Br	8	7.6912	-3.86	PASS
SO4	40	38.5375	-3.66	PASS
PO4-P	13.0456	12.7399	-2.34	PASS

29 WG388508-07 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG388508-07 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 7:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.80	n.a.	0.018	0.006	0.05	n.a.	BMB
2	3.34	F	10.509	1.629	12.87	7.882	BMB
3	4.69	Cl	6.620	1.142	9.02	7.719	BMB
4	5.45	NO2-N	6.389	1.360	10.74	4.686	BMB
5	6.76	Br	1.964	0.459	3.63	7.691	BMb
6	7.48	NO3-N	7.058	1.889	14.93	5.266	bMB
7	9.80	PO4-P	4.860	1.692	13.37	12.740	BMB
8	11.62	SO4	11.983	4.471	35.33	38.538	BMB
9	15.75	n.a.	0.023	0.007	0.05	n.a.	BMB
Total:			49.424	12.656	100.00	84.522	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

32 WG388508-09 ANION CCV

1,1 JBK STD48131

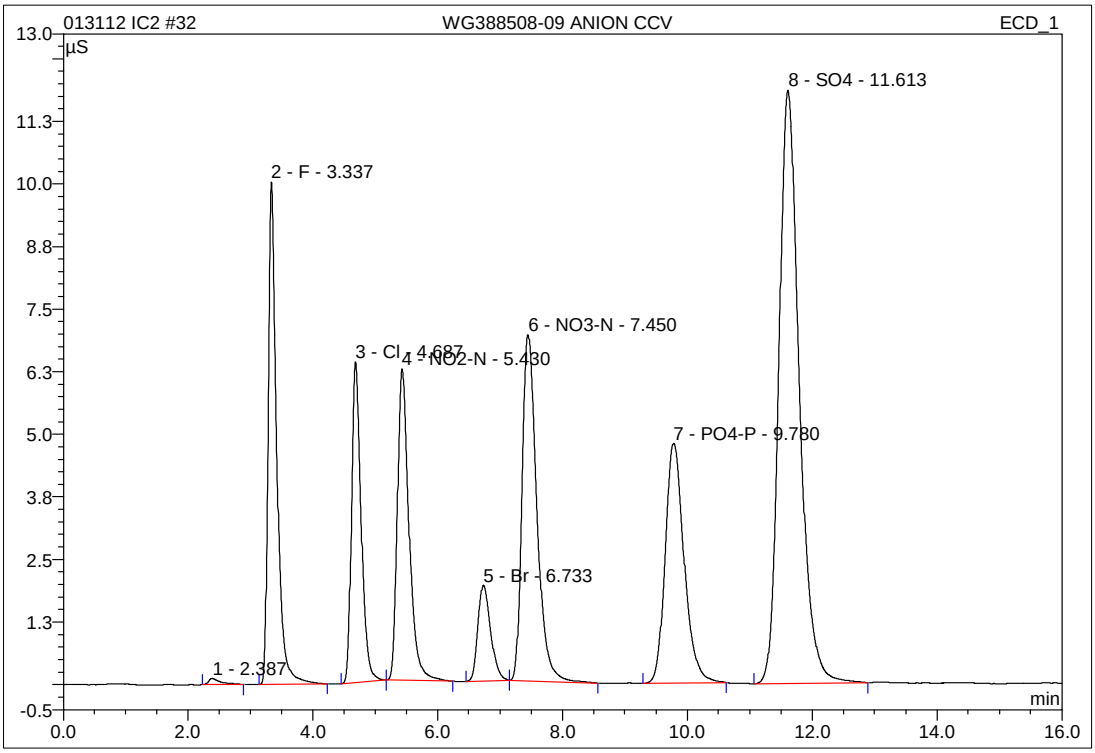
Sample Name:	**WG388508-09 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 8:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG388508-09 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.7718	-2.85	PASS
Cl	8	7.7161	-3.55	PASS
NO2-N	4.8714	4.6416	-4.72	PASS
NO3-N	5.4216	5.2849	-2.52	PASS
Br	8	7.5740	-5.33	PASS
SO4	40	38.5523	-3.62	PASS
PO4-P	13.0456	12.6546	-3.00	PASS

32 WG388508-09 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG388508-09 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 8:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.39	n.a.	0.125	0.028	0.22	n.a.	BMB
2	3.34	F	10.034	1.606	12.72	7.772	BMB
3	4.69	Cl	6.409	1.141	9.04	7.716	BMB
4	5.43	NO2-N	6.218	1.347	10.67	4.642	bMB
5	6.73	Br	1.912	0.452	3.58	7.574	BMB
6	7.45	NO3-N	6.915	1.896	15.02	5.285	BMB
7	9.78	PO4-P	4.789	1.681	13.31	12.655	BMB
8	11.61	SO4	11.846	4.473	35.43	38.552	BMB
Total:			48.248	12.625	100.00	84.195	

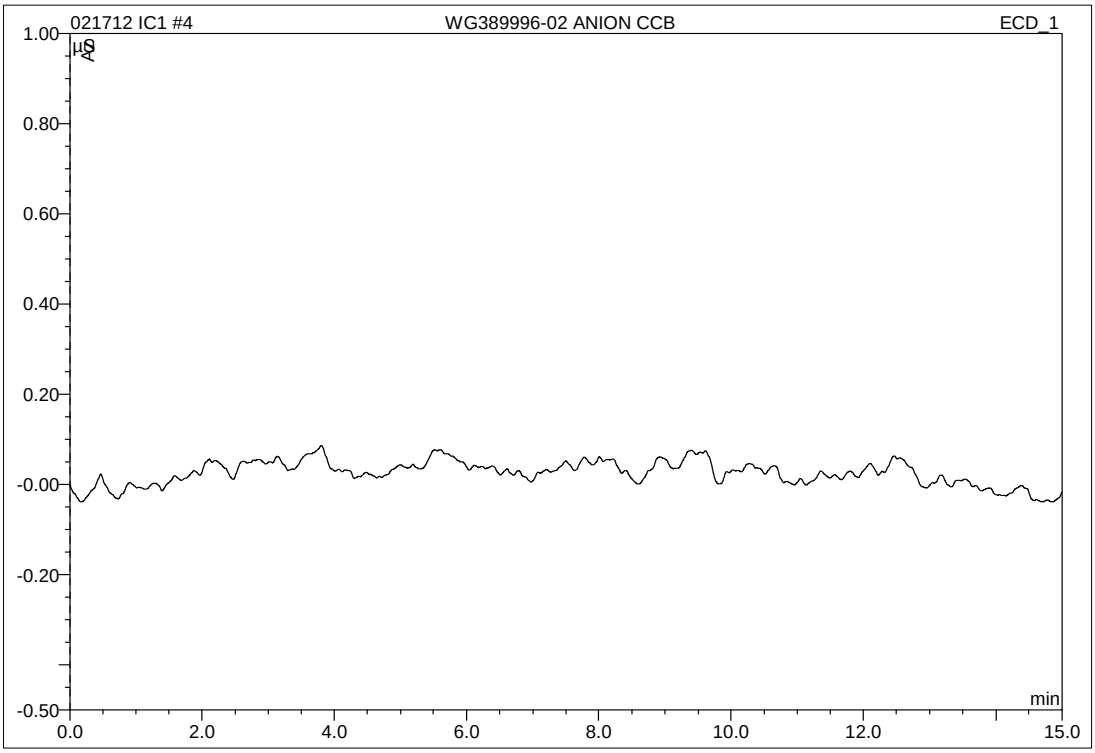
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG389996-02 ANION CCB

1,1 JBK

Sample Name:	**WG389996-02 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:	**2/17/2012 8:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

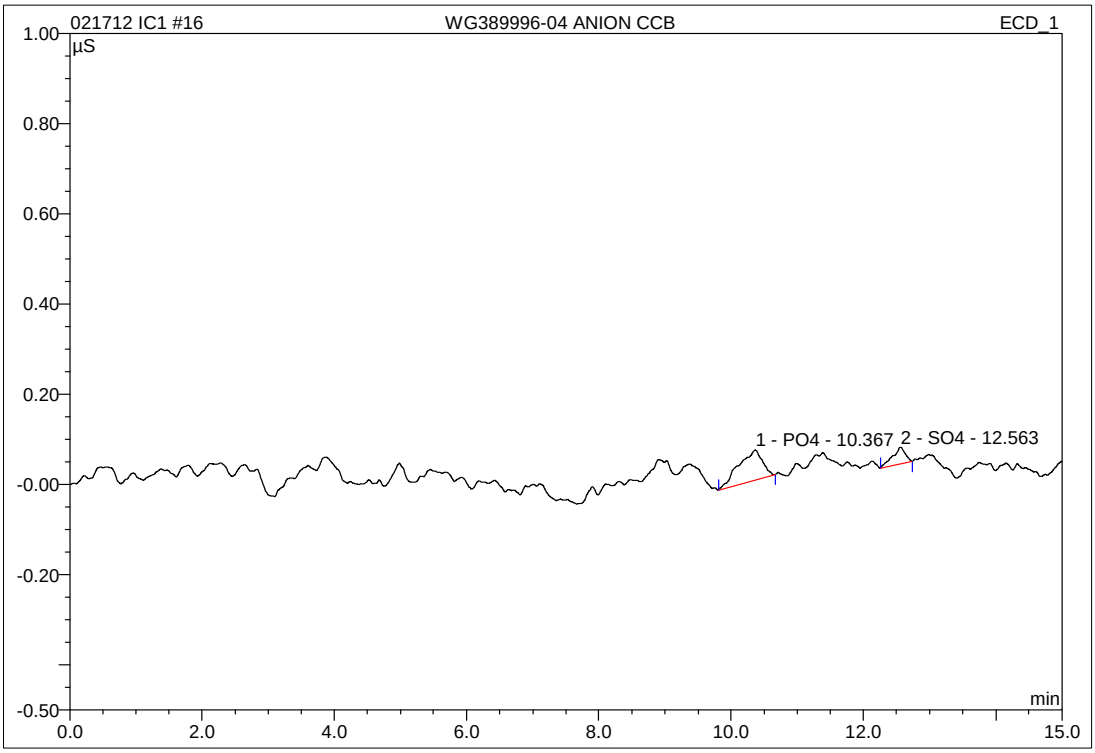


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

16 WG389996-04 ANION CCB

1,1 JBK

Sample Name:	**WG389996-04 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:	**2/17/2012 12:08**	*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	10.37	PO4	0.066	0.028	77.47	0.459	BMB
2	12.56	SO4	0.037	0.008	22.53	0.290	BMB
Total:			0.103	0.037	100.00	0.748	

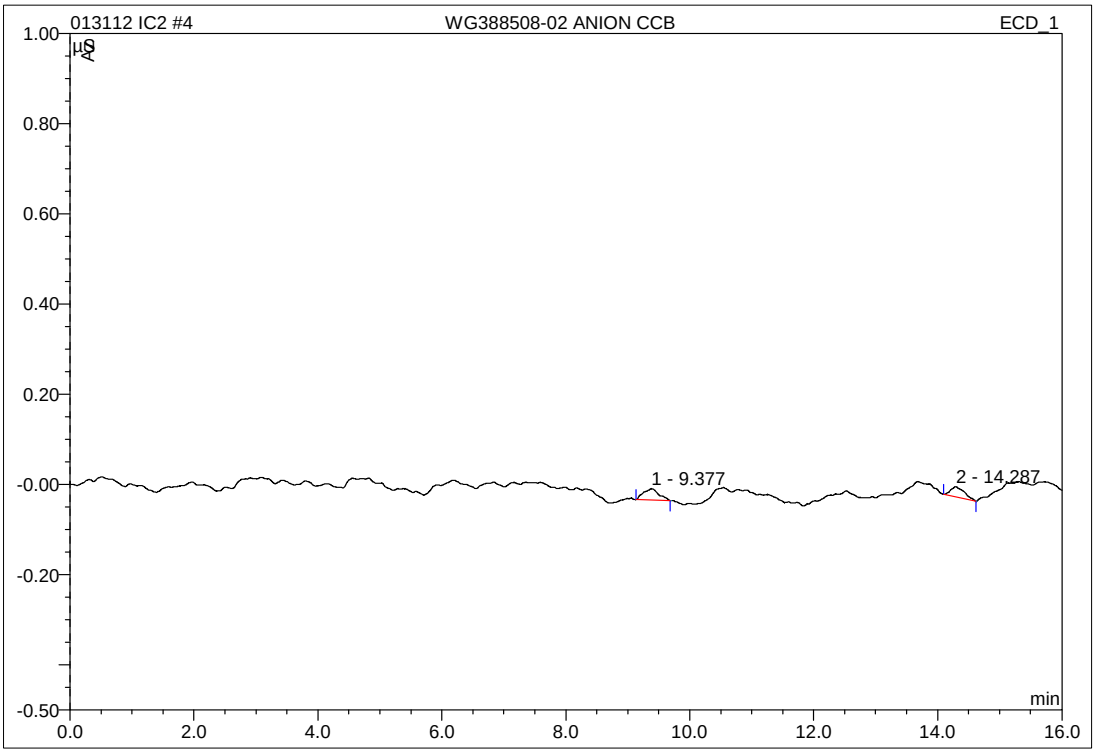
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG388508-02 ANION CCB

1,1 JBK

Sample Name:	**WG388508-02 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 16:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

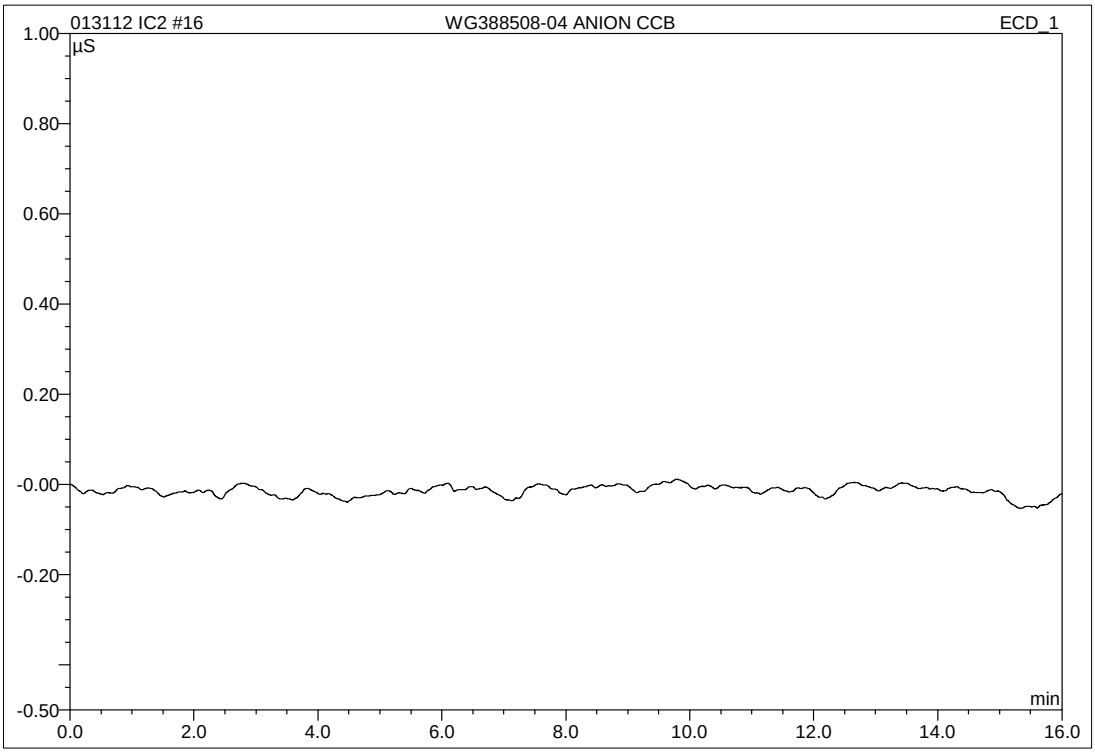


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.38	n.a.	0.025	0.007	54.96	n.a.	BMB
2	14.29	n.a.	0.023	0.006	45.04	n.a.	BMB
Total:			0.049	0.014	100.00	0.000	

16 WG388508-04 ANION CCB

1,1 JBK

Sample Name:	**WG388508-04 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 19:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

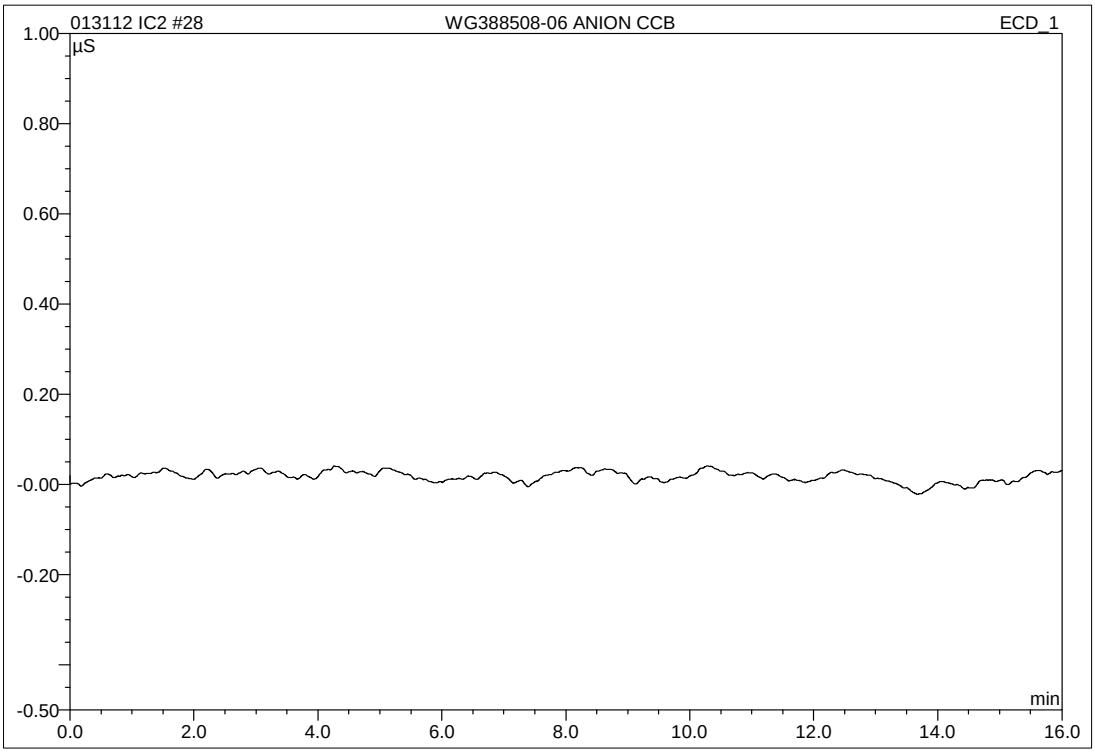


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

28 WG388508-06 ANION CCB

1,1 JBK

Sample Name:	**WG388508-06 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 23:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

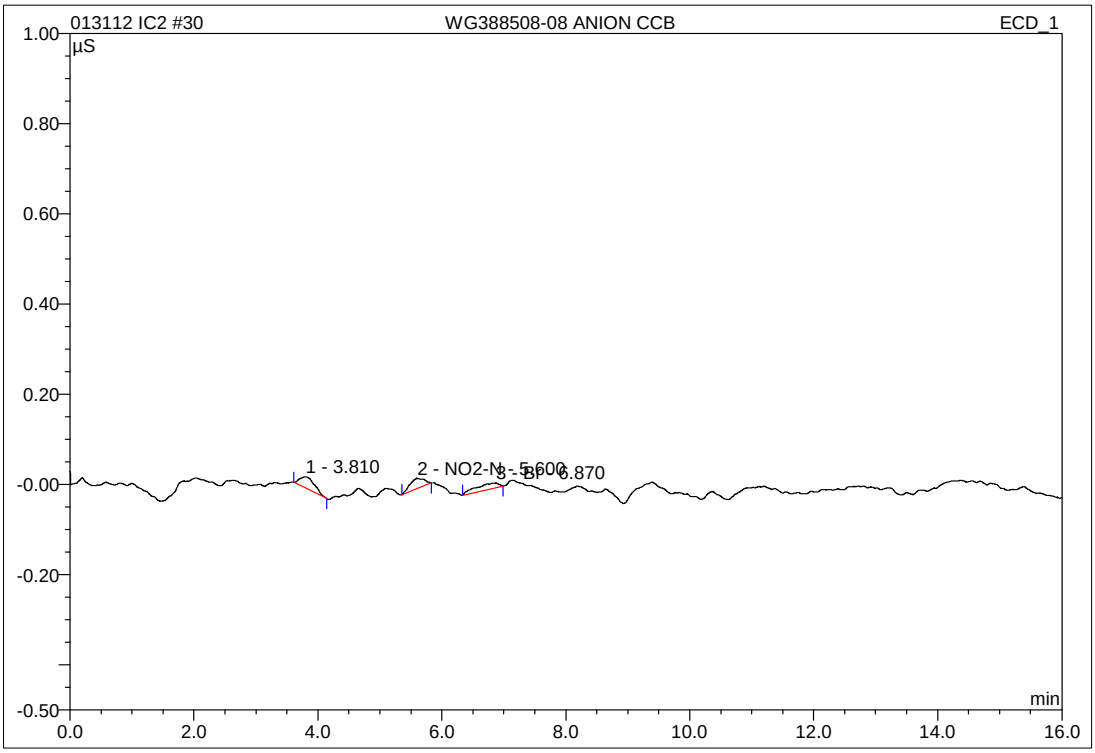


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

30 WG388508-08 ANION CCB

1,1 JBK

Sample Name:	**WG388508-08 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 8:06**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.81	n.a.	0.026	0.007	38.71	n.a.	BMB
2	5.60	NO2-N	0.022	0.006	31.08	0.043	BMB
3	6.87	Br	0.010	0.006	30.21	0.153	BMB
Total:			0.059	0.019	100.00	0.196	

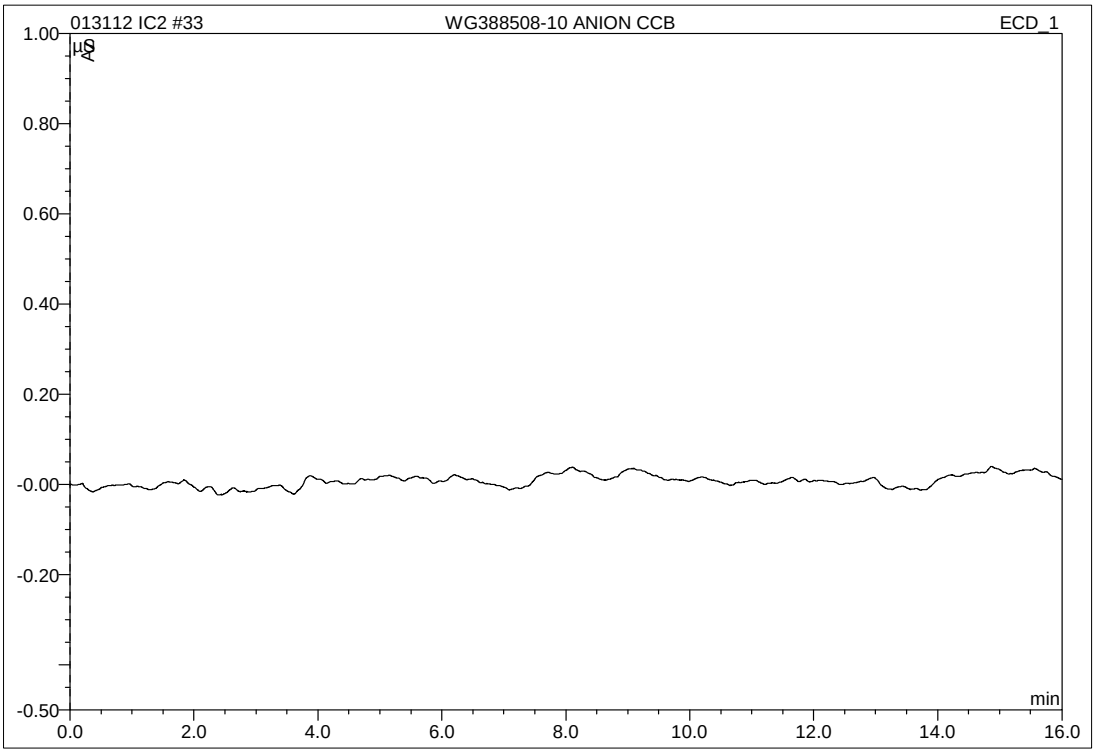
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

33 WG388508-10 ANION CCB

1,1 JBK

Sample Name:	**WG388508-10 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/1/2012 9:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

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

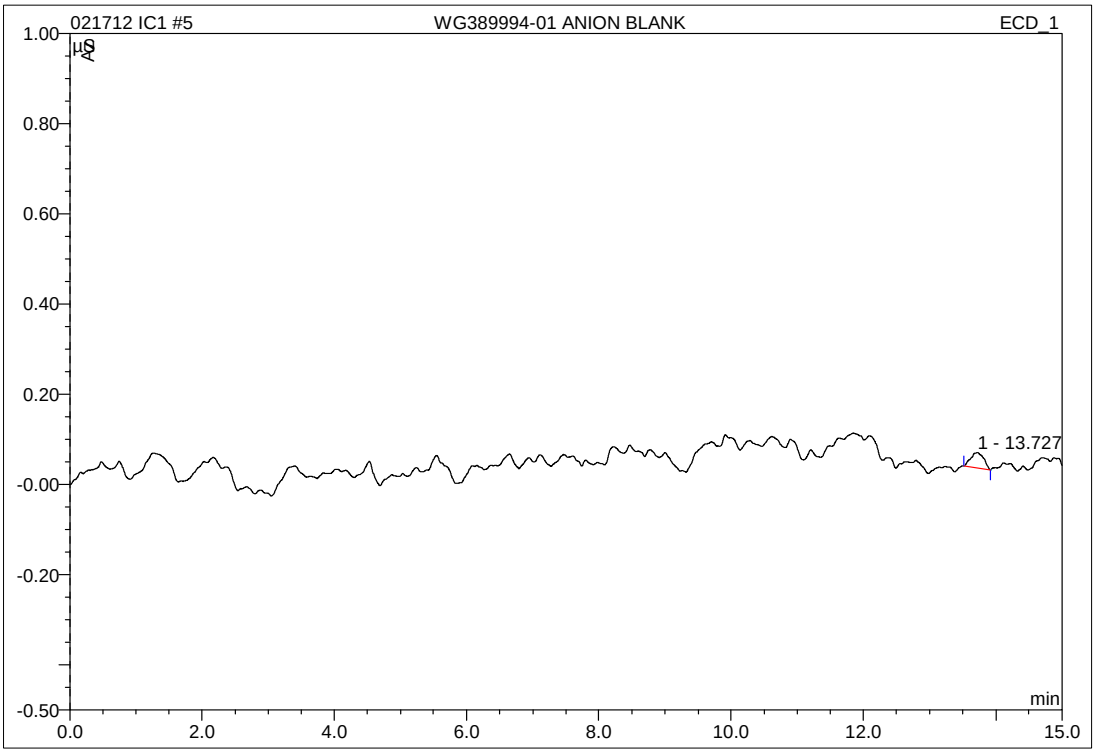
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.387	3.377	3.367	0.030
Cl	4.867	4.864	4.837	0.050
NO2-N	5.724	5.717	5.684	0.064
Br	7.174	7.160	7.117	0.089
NO3-N	8.020	8.007	7.954	0.105
PO4-P	10.640	10.607	10.580	0.090
SO4	12.580	12.574	12.507	0.122

2.2.1.5 Raw QC Data

5 WG389994-01 ANION BLANK

1,1 JBK

Sample Name:	**WG389994-01 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:	**2/17/2012 8:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	13.73	n.a.	0.035	0.008	100.00	n.a.	BMB
Total:			0.035	0.008	100.00	0.000	

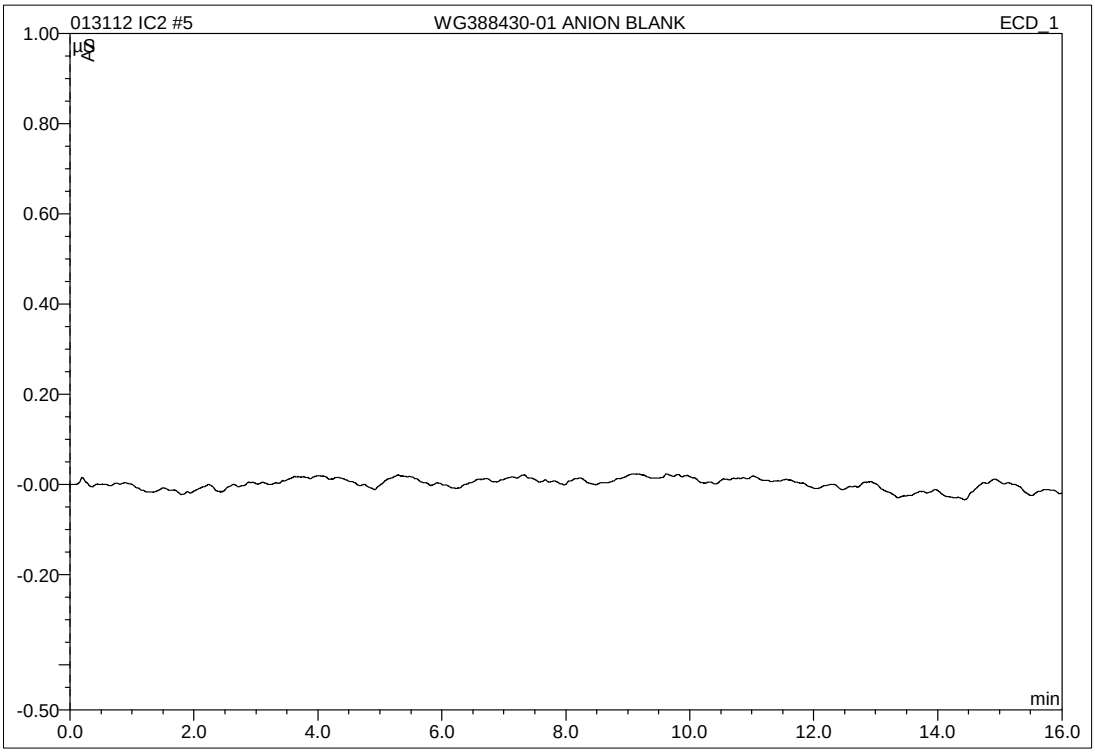
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 WG388430-01 ANION BLANK

1,1 JBK

Sample Name:	**WG388430-01 ANION BLANK**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 16:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

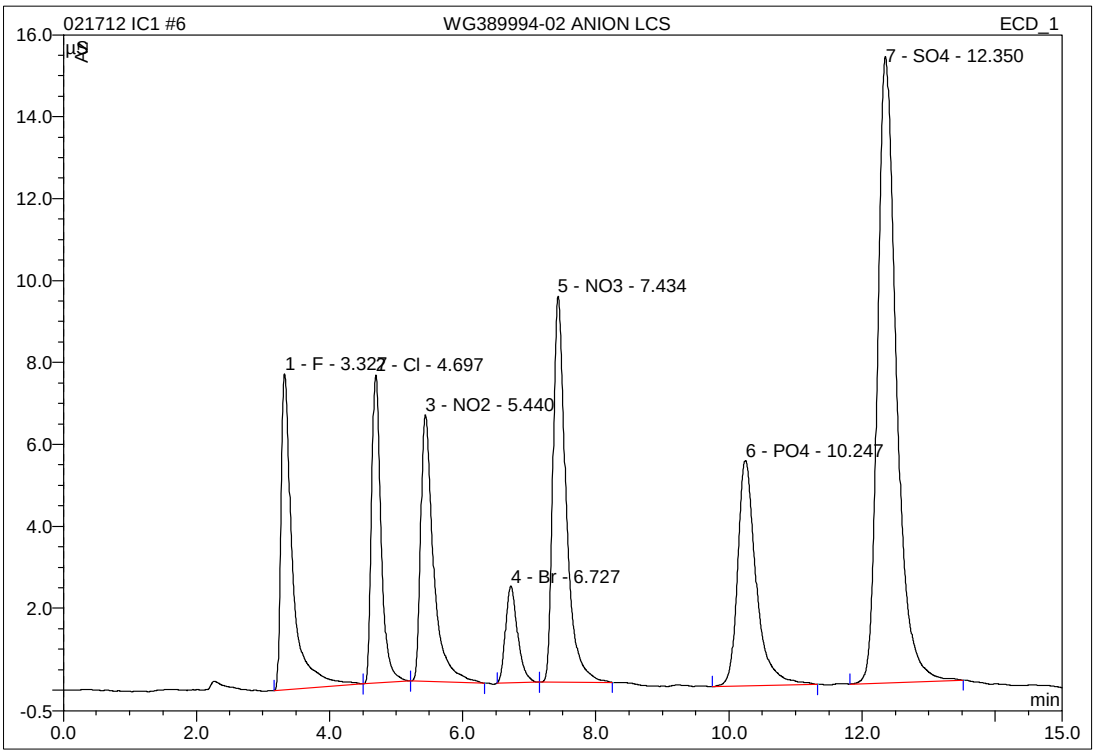
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG389994-02 ANION LCS

1,1 JBK STD48131

Sample Name:	**WG389994-02 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:	**2/17/2012 9:14**	*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	3.33	F	7.713	1.574	11.47	8.281	BMB
2	4.70	Cl	7.522	1.258	9.16	8.301	BMb
3	5.44	NO2	6.508	1.466	10.68	5.072	bMB
4	6.73	Br	2.363	0.496	3.61	8.393	BMB
5	7.43	NO3	9.421	2.148	15.65	5.630	bMB
6	10.25	PO4	5.504	1.774	12.93	13.203	BMB
7	12.35	SO4	15.292	5.009	36.50	40.226	BMB
Total:			54.324	13.725	100.00	89.106	

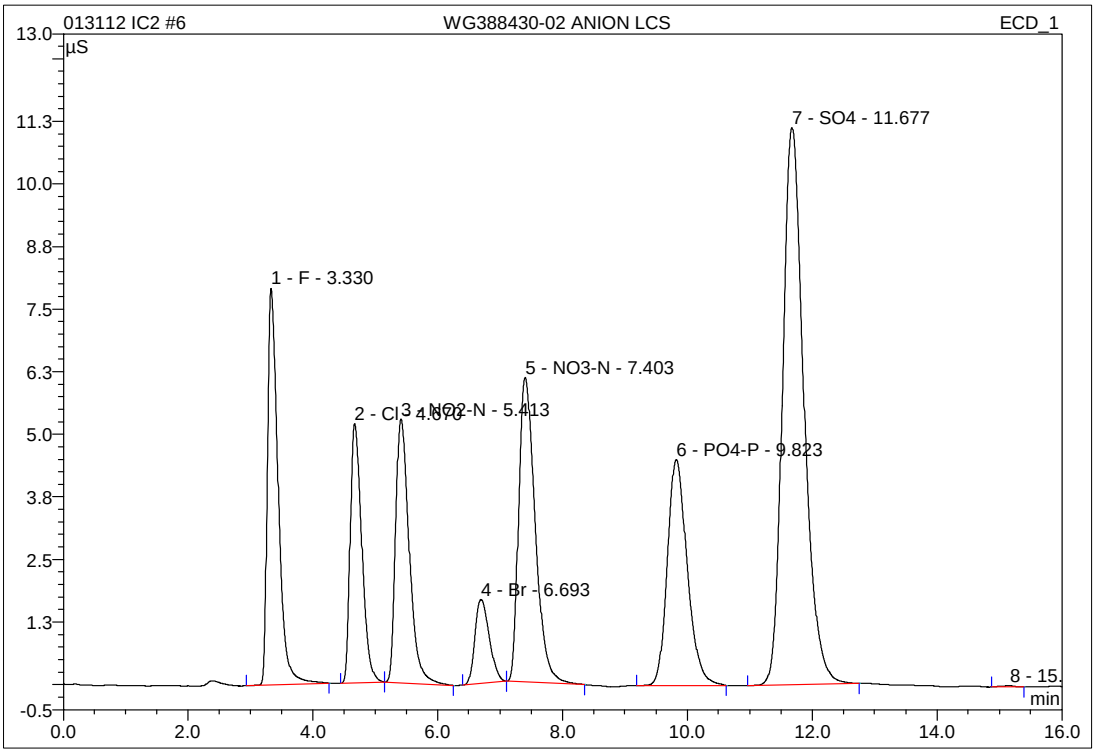
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG388430-02 ANION LCS

1,1 JBK STD48131

Sample Name:	**WG388430-02 ANION LCS**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 16:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.33	F	7.923	1.579	12.72	7.638	BMB
2	4.67	Cl	5.184	1.114	8.98	7.530	BMb
3	5.41	NO2-N	5.272	1.335	10.76	4.601	bMB
4	6.69	Br	1.673	0.446	3.59	7.469	BMB
5	7.40	NO3-N	6.082	1.860	14.99	5.185	bMB
6	9.82	PO4-P	4.514	1.671	13.47	12.581	BMB
7	11.68	SO4	11.132	4.398	35.44	37.906	BMB
8	15.16	n.a.	0.025	0.007	0.05	n.a.	BMB
Total:			41.804	12.409	100.00	82.912	

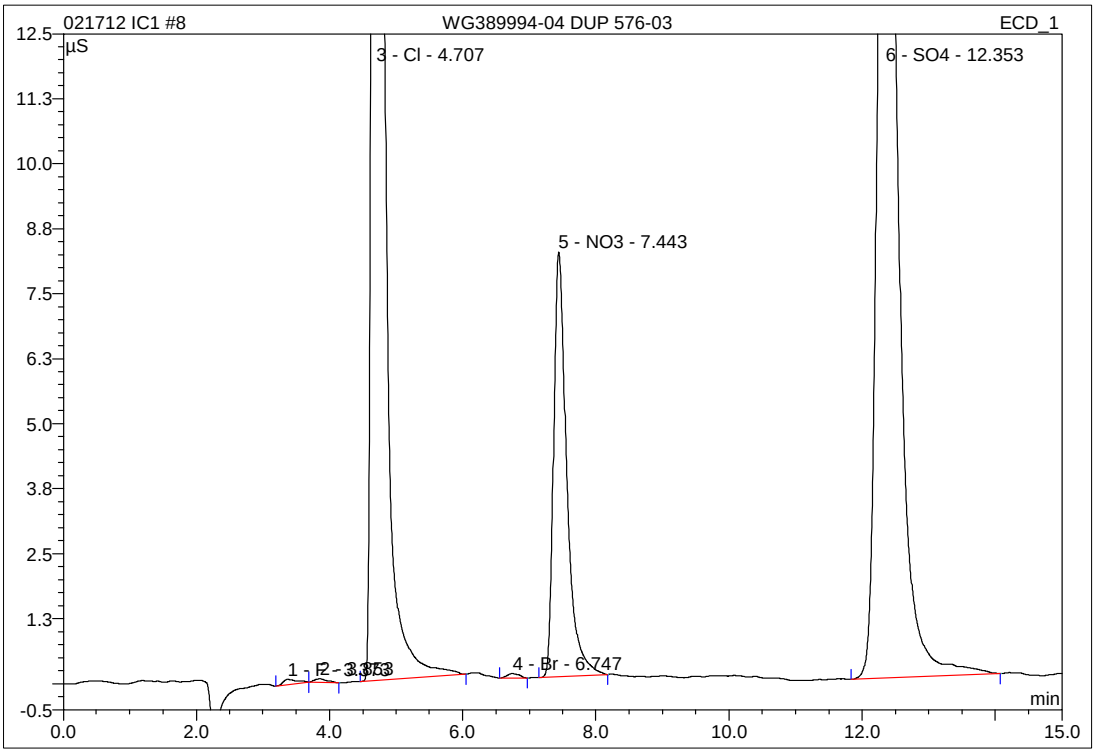
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG389994-04 DUP 576-03

1,1 JBK

Sample Name:	**WG389994-04 DUP 576-03**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/17/2012 9:49**	*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	3.37	F	0.099	0.024	0.13	0.203	BMb
2	3.85	n.a.	0.068	0.015	0.08	n.a.	bMB
3	4.71	Cl	57.347	9.189	48.91	60.570	BMB
4	6.75	Br	0.086	0.018	0.09	0.181	BMB
5	7.44	NO3	8.167	1.869	9.95	4.901	BMB
6	12.35	SO4	23.309	7.675	40.85	61.512	BMB
Total:			89.076	18.789	100.00	127.368	

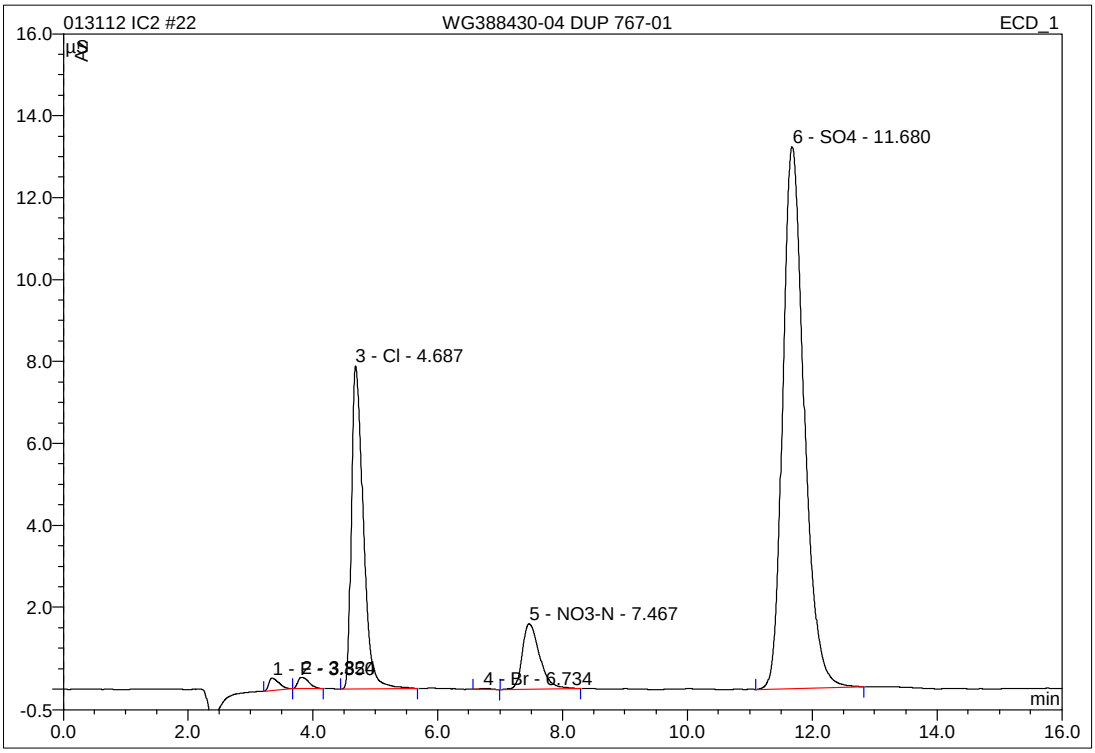
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

22 WG388430-04 DUP 767-01

1,1 JBK

Sample Name:	**WG388430-04 DUP 767-01**	*Injection Volume:*	**25.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 21:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.35	F	0.309	0.060	0.79	0.334	BMB
2	3.82	n.a.	0.279	0.056	0.74	n.a.	bMB
3	4.69	Cl	7.891	1.742	22.86	11.768	BMB
4	6.73	Br	0.023	0.005	0.07	0.145	BMB
5	7.47	NO3-N	1.592	0.513	6.74	1.444	BMB
6	11.68	SO4	13.225	5.245	68.81	45.173	BMB
Total:			23.319	7.622	100.00	58.864	

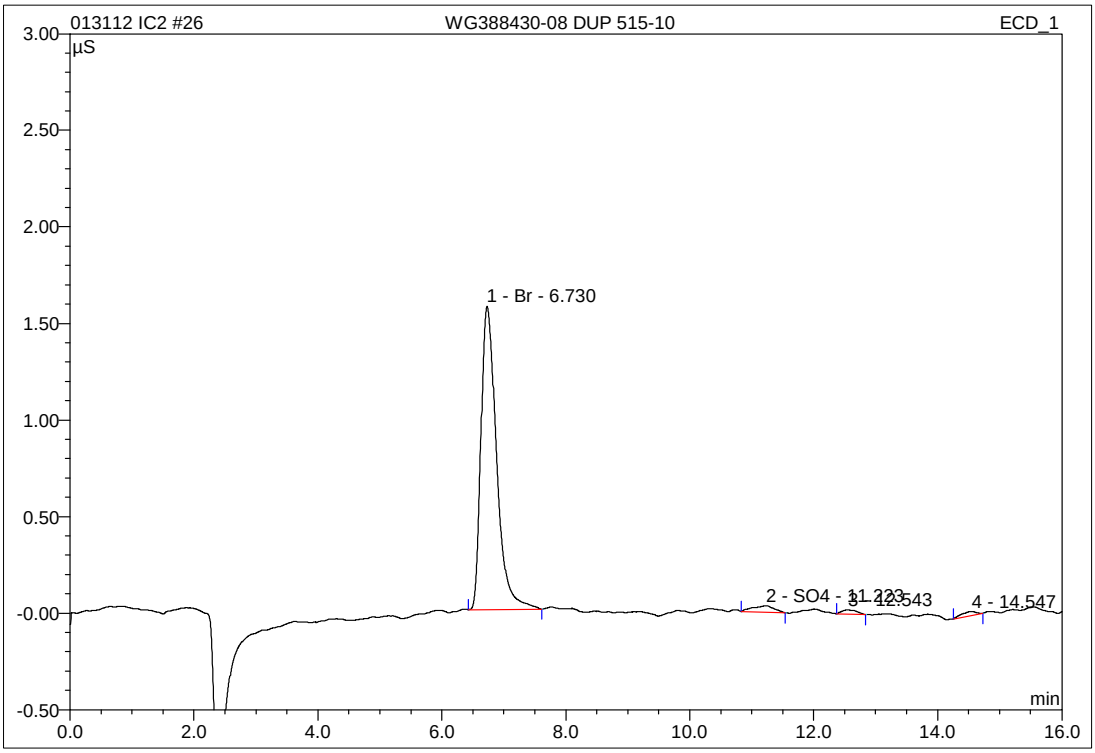
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

26 WG388430-08 DUP 515-10

1,1 JBK

Sample Name:	**WG388430-08 DUP 515-10**	*Injection Volume:*	**25.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 23:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	6.73	Br	1.569	0.457	94.89	7.657	BMB
2	11.22	SO4	0.033	0.013	2.70	0.315	BMB
3	12.54	n.a.	0.022	0.006	1.21	n.a.	BMB
4	14.55	n.a.	0.020	0.006	1.20	n.a.	BMB
Total:			1.644	0.482	100.00	7.972	

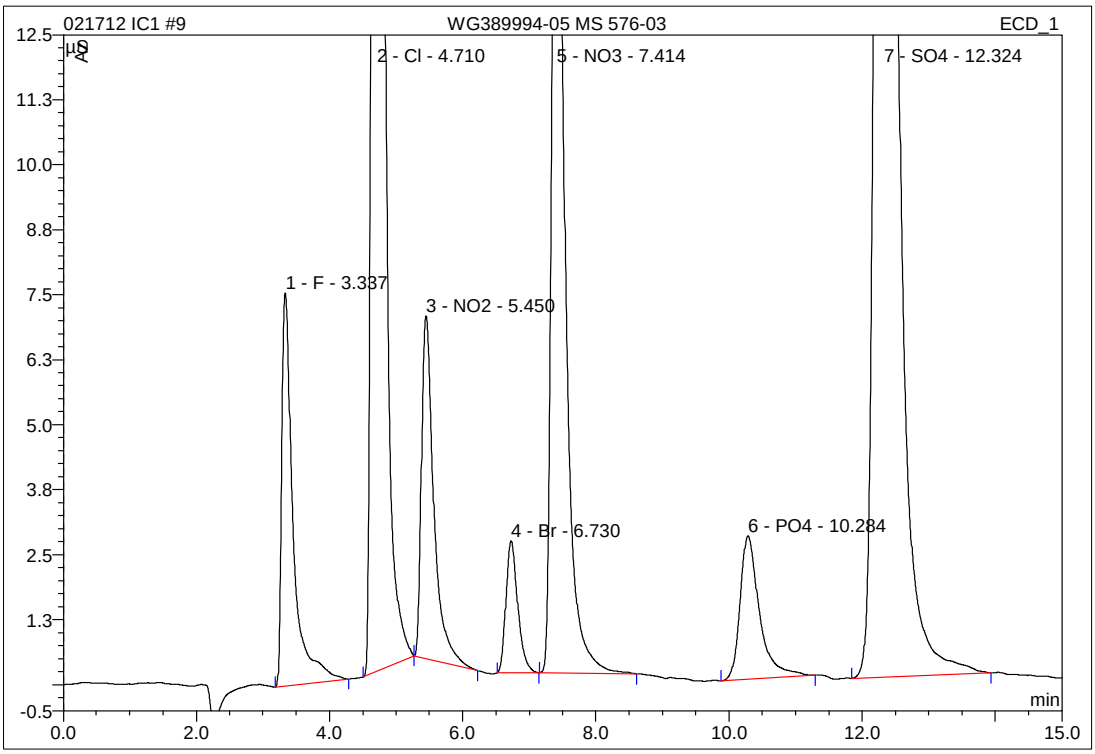
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG389994-05 MS 576-03

1,1 JBK

Sample Name:	**WG389994-05 MS 576-03**	*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:	**2/17/2012 10:06**	*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	3.34	F	7.559	1.526	4.78	8.029	BMB
2	4.71	Cl	62.836	9.951	31.16	65.591	BMb
3	5.45	NO2	6.590	1.418	4.44	4.910	bMB
4	6.73	Br	2.542	0.525	1.64	8.890	BMB
5	7.41	NO3	19.048	4.241	13.28	11.085	BMB
6	10.28	PO4	2.755	0.936	2.93	7.087	BMB
7	12.32	SO4	40.805	13.340	41.77	106.751	BMB
Total:			142.134	31.937	100.00	212.342	

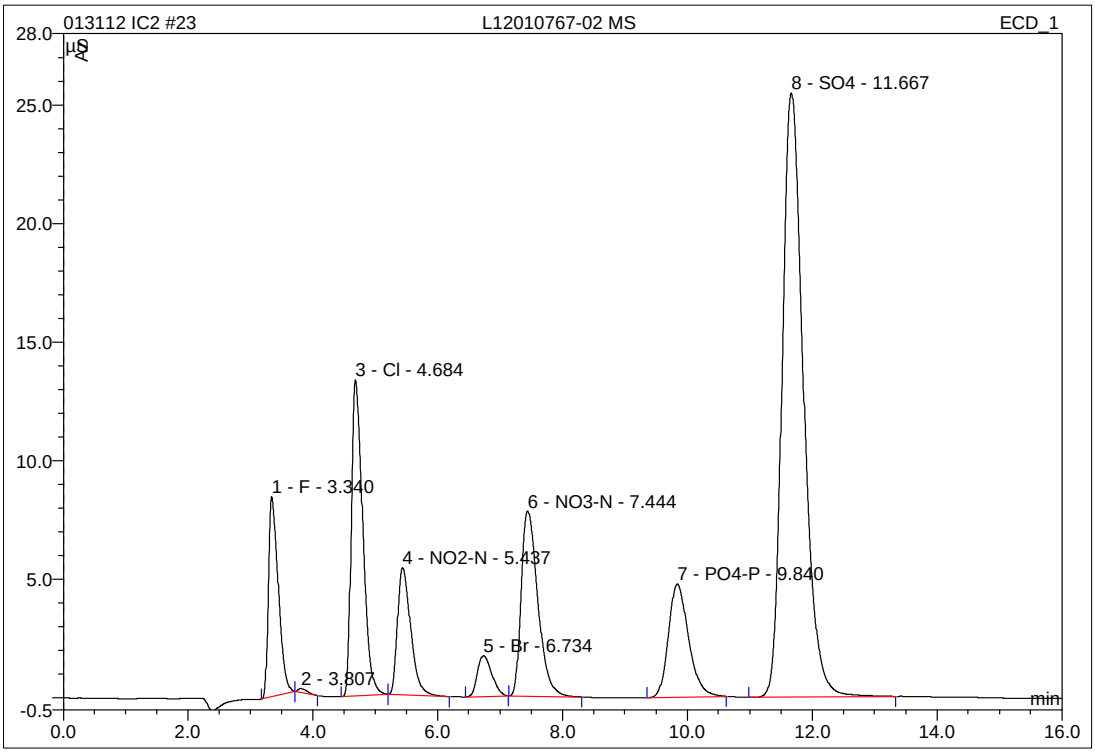
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

23 L12010767-02 MS

1,1 JBK WG388430-05 MS

Sample Name:	**L12010767-02 MS**	*Injection Volume:*	**25.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 22:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.34	F	8.448	1.553	7.59	7.516	BMb
2	3.81	n.a.	0.170	0.030	0.15	n.a.	bMB
3	4.68	Cl	13.338	2.836	13.87	19.148	BMb
4	5.44	NO2-N	5.353	1.318	6.44	4.541	bMB
5	6.73	Br	1.718	0.459	2.24	7.679	BMB
6	7.44	NO3-N	7.809	2.406	11.76	6.701	BMB
7	9.84	PO4-P	4.770	1.788	8.74	13.456	BMB
8	11.67	SO4	25.481	10.066	49.21	86.507	BMB
Total:			67.088	20.455	100.00	145.550	

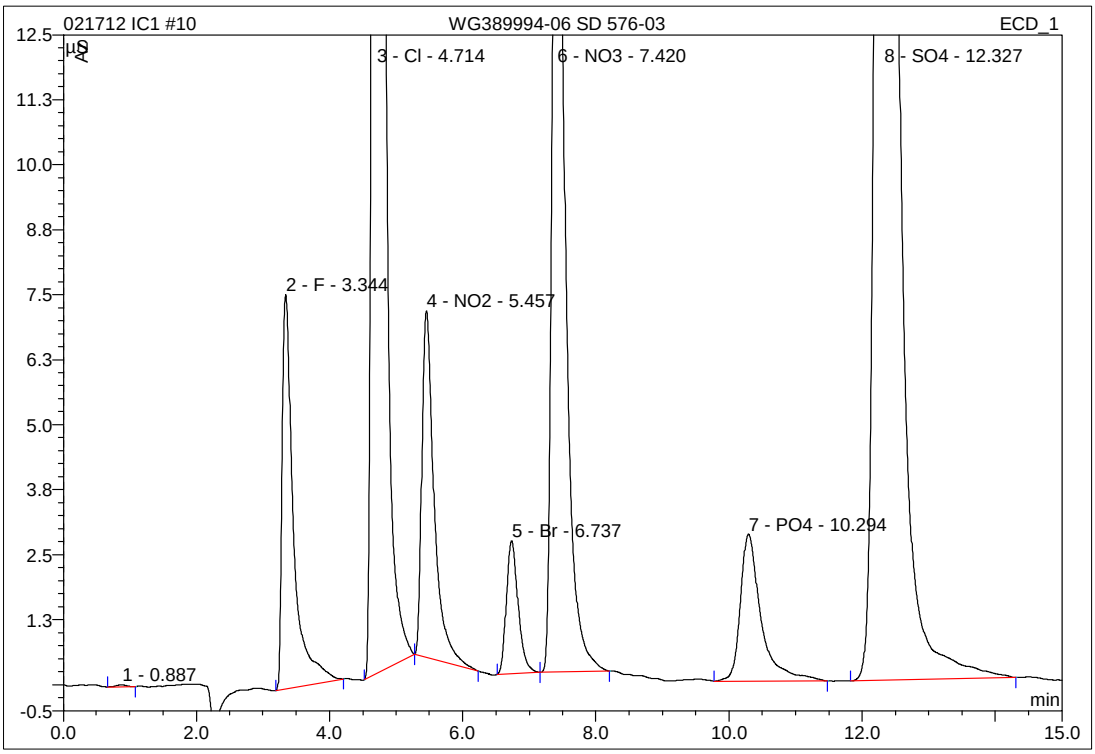
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

10 WG389994-06 SD 576-03

1,1 JBK

Sample Name:	**WG389994-06 SD 576-03**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/17/2012 10:24**	*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	0.89	n.a.	0.034	0.006	0.02	n.a.	BMB
2	3.34	F	7.580	1.522	4.74	8.011	BMB
3	4.71	Cl	62.889	9.959	30.98	65.641	BMb
4	5.46	NO2	6.664	1.432	4.45	4.955	bMB
5	6.74	Br	2.558	0.526	1.64	8.908	BMB
6	7.42	NO3	19.093	4.178	13.00	10.919	BMB
7	10.29	PO4	2.831	1.023	3.18	7.722	BMB
8	12.33	SO4	40.819	13.496	41.99	107.999	BMB
Total:			142.467	32.141	100.00	214.154	

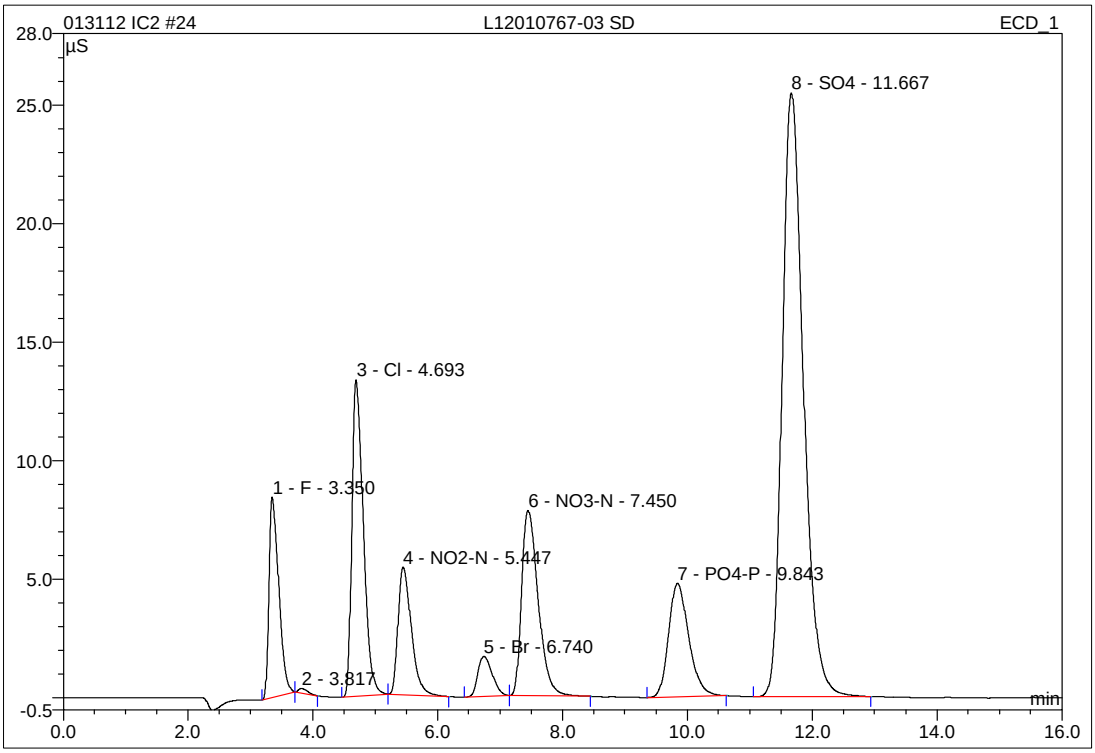
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

24 L12010767-03 SD

1,1 JBK WG388430-06 SD

Sample Name:	**L12010767-03 SD**	*Injection Volume:*	**25.0**
Vial Number:	**24**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**1/31/2012 22:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.35	F	8.448	1.546	7.58	7.482	BMb
2	3.82	n.a.	0.192	0.033	0.16	n.a.	bMB
3	4.69	Cl	13.341	2.827	13.86	19.089	BMb
4	5.45	NO2-N	5.366	1.329	6.52	4.582	bMB
5	6.74	Br	1.689	0.450	2.20	7.530	BMB
6	7.45	NO3-N	7.802	2.401	11.77	6.686	BMB
7	9.84	PO4-P	4.784	1.793	8.79	13.497	BMB
8	11.67	SO4	25.454	10.024	49.13	86.145	BMB
Total:			67.076	20.404	100.00	145.012	

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: L12010576
Department: Conventionals
Analyst: Deanna 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.

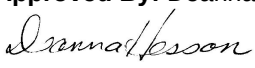
Duplicates: All acceptance criteria were met.

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: 41651
Approved By: Deanna Hesson



Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL18-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	OS12012413032101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.94		0.000	0.000

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	T40-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	OS12012413032601
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.15		0.000	0.000

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0112-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG387650	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:35
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	OS12012413033101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.67		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: 22-JAN-2012
Analyst: DIH
Analyst: NA
Method: PH
Instrument: ORION 4*
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387650

Calibration/Linearity	1/22/12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	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:
26-JAN-2012

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 10:59:59

2.2.2.3 Raw Data

wg 387650

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 #9 std49325	7, 10	0932	8.96			0935
MPL18 01-576-01	↓	↓	7.94			↓
tyo -02	↓	↓	8.15			↓
MPL17 -03	↓	↓	7.67			↓
pH 9	↓	↓				↓
DUP 18 -01	↓	↓	7.93			↓
DUP						
LCS 9	↓	↓	8.97			

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: Deanna Dobson Date: 1/22/12

DCN#89672

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 41649
Approved By: Deanna Hesson

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		103		20.0	10.0

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120124002.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		103		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		125		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:06
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120124002.029
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		125		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		87.1		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		87.1		20.0	10.0

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	01/24/2012 13:54
Workgroup #:	WG387734	**Analyst:**	DIH	**Run Date:**	01/24/2012 14:07
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120124002.030
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

2.2.3.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 24-JAN-2012
Analyst: DIH
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387734 WG387830

Calibration/Linearity	1/24/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
26-JAN-2012

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 10:54:47

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG387734

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							14		01/24/12	4.2	14	
T40-0112-1	02	01/20/12							14		01/24/12	4.1	14	
MPL17-0112-1	03	01/20/12							14		01/24/12	4	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2288791
Report generated 01/25/2012 09:58

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: SC120124002.010
Prep Date: 01/24/12 13:55
Analyzed Date: 01/24/12 13:55
Analyst: DIH

Work Group: WG387734
Blank Sample ID: WG387734-01
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	WG387734-02	SC120124002.011	01/24/12 13:55	01
LCS2	WG387734-03	SC120124002.012	01/24/12 13:56	01
MPL18-0112-1	L12010576-01	SC120124002.028	01/24/12 14:06	01
MPL18-0112-1	L12010576-01	SC120124002.028	01/24/12 14:06	01
MPL18-0112-1	L12010576-01	SC120124002.028	01/24/12 14:06	01
T40-0112-1	L12010576-02	SC120124002.029	01/24/12 14:06	01
T40-0112-1	L12010576-02	SC120124002.029	01/24/12 14:06	01
T40-0112-1	L12010576-02	SC120124002.029	01/24/12 14:06	01
MPL17-0112-1	L12010576-03	SC120124002.030	01/24/12 14:07	01
MPL17-0112-1	L12010576-03	SC120124002.030	01/24/12 14:07	01
MPL17-0112-1	L12010576-03	SC120124002.030	01/24/12 14:07	01
DUP	WG387734-05	SC120124002.034	01/24/12 14:09	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2288792
Report generated 01/25/2012 09:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/24/12 13:55 Sample ID: WG387734-01
Instrument ID: SMARTCHEM Run Date: 01/24/12 13:55 Prep Method: 310.2
File ID: SC120124002.010 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG387734 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-24-JAN-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Total (as CaCO3)	10.0	20.0	10.0	1	U

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

Report Name: BLANK
PDF ID: 2288793
25-JAN-2012 09:58

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: DIH Prep Method: 310.2
Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
Workgroup (AAB#): WG387734 Units: mg/L
QC Key: DOD4 Lot #: STD49459

Sample ID: WG387734-02 LCS File ID: SC120124002.011 Run Date: 01/24/2012 13:55
Sample ID: WG387734-03 LCS2 File ID: SC120124002.012 Run Date: 01/24/2012 13:56

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	200	187	93.4	200	192	96.0	2.64	85 - 115	25	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2288794
Report generated: 01/25/2012 09:58

2.2.3.3 Raw Data

WORKGROUP: WG387734

387830

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 # 20120124002
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Analyte	1	2	3
	ALK		
	Dilution		
SC Prepared Curve			
Position			
1-1 ICV 250			
1-2 BLK			
1-3 LCS 200			
1-4 LCSDUP			
1-5 01-487-01	1/25		TCLP
1-6 02	1/25		↓
1-7 03	1/25		↓
1-8 01-489-01	1/25		↓
1-9 01-547-02	1/4		color
1-10 03	1/4		↓
1-11 05	1/4		↓
1-12 06	1/4		↓
1-13 08	1/4		↓
1-14 09	1/4		↓
1-15 01-536-01			+BC
1-16 02			↓
1-17 03			↓
1-18 01-576-01			+BC
1-19 02			↓
1-20 03			↓
1-21 01-604-01	1/10		
1-22 DUP 01	1/10		
2-1 MS 03 04	1/10		
2-2 MS 04 05	1/10		
2-3 02 BLK			

Position	Analyte	1	2	3
2-4	wg387722 01	1/25		+CLP #1
2-5	-02			+CLP #2
2-6	BLK			
2-7	LCS			
2-8	LCSDUP			
2-9	A 01-633-02	1/4		color
2-10	B 03	1/4		↓
2-11	C 05	1/4		↓
2-12	D 08	1/4		↓
2-13	DUP D 08	1/4		↓
2-14	01-613-01			+BC
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

+CLP fluid 1 (acetic/NaOH)
" " 2 (acetic)

DCN#89685

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3				
3-4				
3-5				
3-6				
3-7				
3-8				
3-9				
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

Position	Analyte	1	2	3
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] 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 302 R14		Rgt 169677
Curve Stock (SC made)	std 47063		
Curve ID (user made)			
ICV	std49458		
CCV	std49513		
LCS	std49459		
MS	std47064 Dilution 0.2/5(2500)=100		

Comments: 01-536, 01-576 & 01-613 all pH <8.3

Analyst: Deanna Hosson Date: 1/24/12

DCN#89685

TCLP Daily (Wet Chem)

Date: 01-23-12

Start Time:

Solids: 1530

Filtration:

	Kemron#	Client	Dup	CL	F	Alk	NH3					Comments
#1	01-487-01	AKERIS	1/66	✓	✓	✓	✓					F1 *
#2	02			✓	✓	✓	✓					
#3	03			✓	✓	✓	✓					
#4	01-489-01			✓	✓	✓	✓					F1 *
#5	FBLK(1)	—	—	✓	✓	✓	✓					
#6	FBLK(2)	—	—	✓	✓	✓	✓					
#7												
#8												
#9												
#10												
#11												
#12												
#13												
#14												
#15												
#16												
#17												
#18												
#19												
#20												
#21												
#22												

☑ perform analysis
★ perform analysis and spike sample

Comments: *F1 is TCLP Fluid prepared w/NaOH & Acetic Acid

Work Groups / Run ID's

Filtered:

TC-Me:	WG	R
TC-Sv:	WG	R
TC-Pest:	WG	R
TC-Herb:	WG	R
TC-Voa:	WG	R
TC-Me(org):	WG	R
TC-Sv(org):	WG	R
TC-Voa(org):	WG	R

Agitated:

TC-Me:	WG	R
TC-Sv:	WG	R
TC-Pest:	WG	R
TC-Herb:	WG	R
TC-Voa:	WG	R
pH-L:	WG	R
CL	WG 387724	R
F	WG 387721	R
Alk	WG 387722	R
NH3	WG 387723	R
	WG	R
	WG	R
	WG	R

Generated: 02/21/2012 11:16

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	0.7110	0.00		1:48:16 PM
DIL-1	RBL	0.0	0.7244	0.00		1:48:34 PM
DIL-1	RBL	0.0	0.7325	0.00		1:49:28 PM
DIL-1	Std-1	0.0	-0.0074	0.00		1:49:46 PM
SR5-1	Std-2	10.0	-0.0160	0.00		1:50:40 PM
SR5-2	Std-3	20.0	-0.0323	0.00		1:50:58 PM
SR5-3	Std-4	50.0	-0.0820	0.00		1:51:52 PM
SR5-4	Std-5	100.0	-0.1613	0.00		1:52:10 PM
SR5-5	Std-6	200.0	-0.3428	0.00		1:53:04 PM
SR5-6	Std-7	250.0	-0.4247	0.00		1:53:22 PM
SR5-7	Std-8	300.0	-0.4985	0.00		1:54:16 PM
1	ICV 250	236.0	-0.3967	0.00		1:54:34 PM
2	WG387734-01 BLK	-7.6	0.0125	0.00	INV,><,LL	1:55:28 PM
3	WG387734-02 LCS	186.9	-0.3144	0.00		1:55:46 PM
4	WG387734-03 LCSDUP	191.9	-0.3228	0.00		1:56:40 PM
5	L12010487-01 (25)	152.3	-0.2563	0.00		1:56:58 PM
6	L12010487-02 (25)	193.9	-0.3262	0.00		1:57:52 PM
7	L12010487-03 (25)	228.3	-0.3839	0.00		1:58:10 PM
8	L12010489-01 (25)	165.6	-0.2786	0.00		1:59:04 PM
9	L12010547-02 (4)	202.5	-0.3405	0.00		1:59:22 PM
10	L12010547-03 (4)	274.5	-0.4612	0.00		2:00:16 PM
ST-2	CCV (150 mg/L)	156.7	-0.2638	104.50		2:00:34 PM
ST-3	CCB (0 mg/L)	5.7	-0.0099	0.00		2:01:28 PM
11	L12010547-05 (4)	307.6 X	-0.5167	0.00	><,LH	2:01:46 PM
12	L12010547-06 (4)	203.8	-0.3427	0.00		2:02:40 PM
13	L12010547-08 (4)	310.2 X	-0.5210	0.00	><,LH	2:02:58 PM
14	dm 1/25 L12010~~487~~547-09 (4)	227.3	-0.3821	0.00		2:03:52 PM
15	L12010536-01	91.7	-0.1546	0.00		2:04:10 PM
16	L12010536-02	113.6	-0.1914	0.00		2:05:05 PM
17	L12010536-03	116.3	-0.1959	0.00		2:05:23 PM
18	L12010576-01	103.0	-0.1736	0.00		2:06:17 PM
19	L12010576-02	125.1	-0.2107	0.00		2:06:34 PM

Report Date :01/24/2012 **Run Date :1/24/2012** **Operator : WESTCO** **Plan # :20120124002**

Plan Description : ALK-A-DIH/1/24/2012

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	L12010576-03	87.1	-0.1468	0.00		2:07:28 PM
ST-2	CCV (150 mg/L)	167.6	-0.2820	111.72		2:07:47 PM
ST-3	CCB (0 mg/L)	8.0	-0.0138	0.00		2:08:41 PM
21	L12010604-01 (10)	169.9	-0.2859	0.00		2:08:58 PM
22	WG387734-05 (10) DUP	167.6	-0.2821	0.00		2:09:53 PM
23	L12010604-04 (10) MS	177.0	-0.2978	0.00		2:10:11 PM
24	L12010604-05 (10) MS	173.7	-0.2922	0.00		2:11:05 PM
25	L12010604-02	25.1	-0.0425	0.00		2:11:23 PM
26	WG387722-01 (25)	124.6	-0.2098	0.00		2:12:17 PM
27	WG387722-02	-71.5	0.1201	0.00	INV,><,LL	2:12:35 PM
28	BLANK wg387830-01	9.0	-0.0155	0.00		2:13:29 PM
29	LCS 02	196.6	-0.3307	0.00		2:13:47 PM
30	LCSDUP 03	200.5	-0.3372	0.00		2:14:41 PM
ST-2	CCV (150 mg/L)	159.5	-0.2685	106.36		2:14:59 PM
ST-3	CCB (0 mg/L)	9.3	-0.0160	0.00		2:15:53 PM
31	ID 31 01-633-02(4)	297.0	-0.4990	0.00	><	2:16:11 PM
32	ID 32 -03(4)	268.7	-0.4516	0.00		2:17:05 PM
33	ID 33 -05(4)	295.7	-0.4967	0.00		2:17:23 PM
34	ID 34 -06(4)	230.3	-0.3872	0.00		2:18:17 PM
35	DUP -06(4)	231.6	-0.3894	0.00		2:18:35 PM
36	ID 36 01-613-01	101.5	-0.1711	0.00		2:19:29 PM
37	ID 37	11.7Y	-0.0200	0.00		2:19:47 PM
ST-2	CCV (150 mg/L)	160.6	-0.2702	107.04		2:20:41 PM
ST-3	CCB (0 mg/L)	13.1	-0.0223	0.00		2:20:59 PM
11-[1/2]	L12010547-05 (4)	385.8	-0.3245	0.00	LH	2:28:39 PM
13-[1/2]	L12010547-08 (4)	360.6	-0.3033	0.00	LH	2:29:51 PM
ST-2	CCV (150 mg/L)	164.4	-0.2767	109.62		2:29:51 PM
ST-3	CCB (0 mg/L)	14.1	-0.0241	0.00		2:30:45 PM

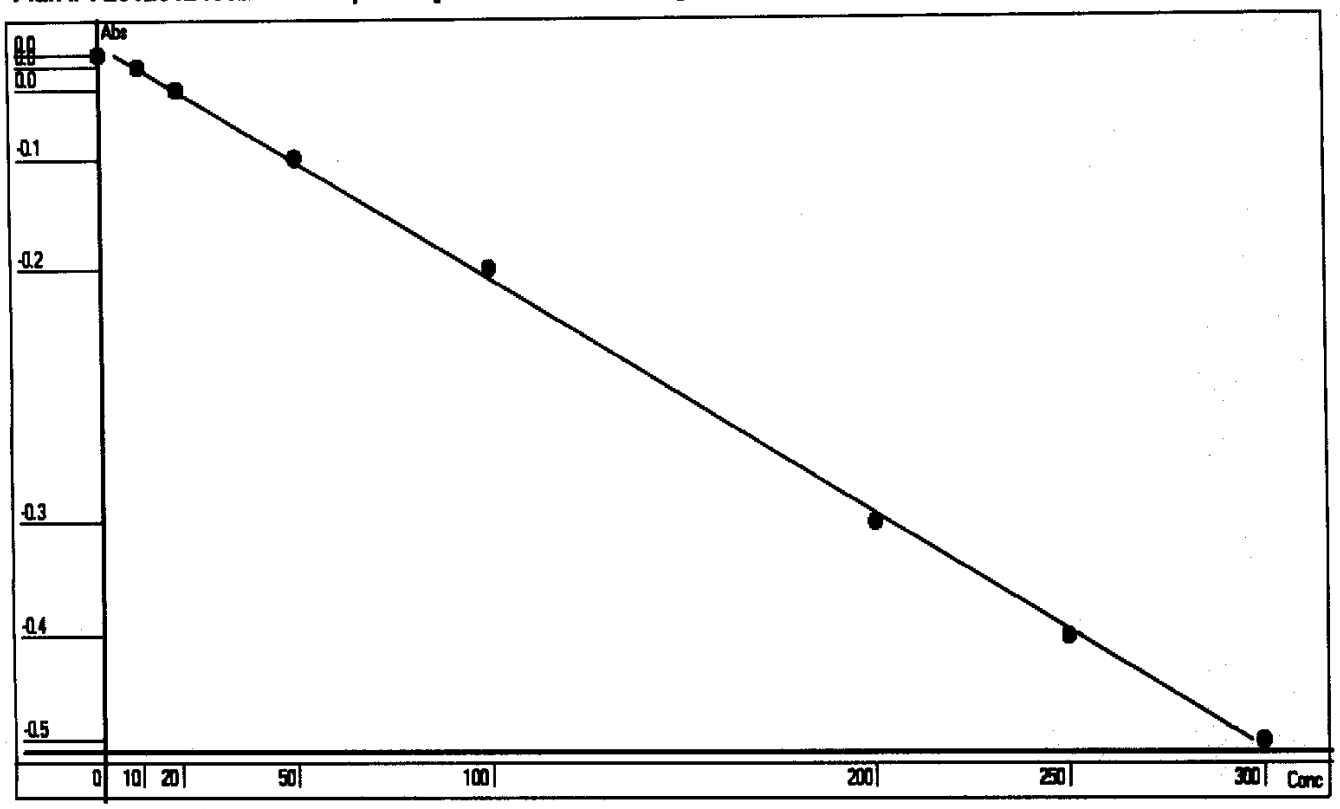
Report Date :01/24/2012 **Run Date :1/24/2012** **Operator : WESTCO** **Plan # :20120124002**

Plan Description : ALK-A-DIH/1/24/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120124002 Description : [ALK-A-DIH/1/24/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0074	0	4.2286	422.86
2	-0.0160	10	9.3386	-6.61
3	-0.0323	20	19.0249	-4.88
4	-0.0820	50	48.5696	-2.86
5	-0.1613	100	95.7421	-4.26
6	-0.3428	200	203.8570	1.93
7	-0.4247	250	252.7100	1.08
8	-0.4985	300	296.7671	-1.08

Conc= +3.1154*Abso^2 -594.1039*Abso -0.1679 R^2=0.9993

RBL
0.7285
0

Report Date 1/24/2012 Run Date 1/24/2012

2.2.4 Cyanide Data

2.2.4.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Jeremy Kinney

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: 41405
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201241530-08
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201271150-07
Sample Tag:	CN-A	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201241510-10
Sample Tag:	WD	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201241530-09
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201271150-08
Sample Tag:	CN-A	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201241510-11
Sample Tag:	WD	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	01/24/2012 14:50
Workgroup #:	WG387757	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:30
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201241530-10
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0549		0.0100	0.00500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	01/27/2012 11:15
Workgroup #:	WG388028	**Analyst:**	JBK	**Run Date:**	01/27/2012 11:50
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201271150-09
Sample Tag:	CN-A	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0496		0.0100	0.00500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	01/24/2012 14:55
Workgroup #:	WG387762	**Analyst:**	JBK	**Run Date:**	01/24/2012 15:10
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201241510-12
Sample Tag:	WD	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.00605	J	0.0100	0.00500

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

Certificate of Analysis

2.2.4.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809
Value of b from plot:	0.0004135
Absorbance of unknown from quantitation report (y):	0.31
Calculated concentration (x):	0.03964483
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	0.0396 mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796
Value of B from plot:	318.9056
Value of C from plot:	-2.2712
Absorbance of unknown from quantitation report (x):	0.1583
Calculated concentration (y):	50.7495108
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	50.75 mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 24-JAN-2012
Analyst: JBK
Analyst: NA
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387757

Calibration/Linearity	01/24/2012
Second Source Check	X
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	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:
25-JAN-2012

Secondary Reviewer:
25-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-25-2012 16:06:19

Microbac Laboratories Inc.

Data Checklist

Date: 24-JAN-2012
Analyst: JBK
Analyst: NA
Method: CN-WD
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387762

Calibration/Linearity	01/24/12
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:
27-JAN-2012

Secondary Reviewer:
27-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 15:50:09

Microbac Laboratories Inc.

Data Checklist

Date: 27-JAN-2012
Analyst: JBK
Analyst: NA
Method: CN-A
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388028

Calibration/Linearity	01/27/2012
Second Source Check	X
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	JBK
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JAN-2012

Secondary Reviewer:
27-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 15:49:31

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C

AAB#: WG387757

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							14		01/24/12	4.2	14	
T40-0112-1	02	01/20/12							14		01/24/12	4.1	14	
MPL17-0112-1	03	01/20/12							14		01/24/12	4.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2289663
Report generated 01/25/2012 15:47

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G

AAB#: WG388028

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							14		01/27/12	7.1	14	
T40-0112-1	02	01/20/12							14		01/27/12	7	14	
MPL17-0112-1	03	01/20/12							14		01/27/12	6.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2292148
Report generated 01/27/2012 15:09

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I

AAB#: WG387762

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							14		01/24/12	4.2	14	
T40-0112-1	02	01/20/12							14		01/24/12	4.1	14	
MPL17-0112-1	03	01/20/12							14		01/24/12	4.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2292125
Report generated 01/27/2012 15:07

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: 1V.1201241530-01
Prep Date: 01/24/12 15:30
Analyzed Date: 01/24/12 15:30
Analyst: JBK

Work Group: WG387757
Blank Sample ID: WG387757-01
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	WG387757-02	1V.1201241530-02	01/24/12 15:30	
LCS	WG387757-03	1V.1201241530-03	01/24/12 15:30	
MPL18-0112-1	L12010576-01	1V.1201241530-08	01/24/12 15:30	
T40-0112-1	L12010576-02	1V.1201241530-09	01/24/12 15:30	
MPL17-0112-1	L12010576-03	1V.1201241530-10	01/24/12 15:30	
DUP	WG387757-08	1V.1201241530-20	01/24/12 15:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2289664
Report generated 01/25/2012 15:47

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: 1V.1201271150-01
Prep Date: 01/27/12 11:50
Analyzed Date: 01/27/12 11:50
Analyst: JBK

Work Group: WG388028
Blank Sample ID: WG388028-01
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	WG388028-02	1V.1201271150-02	01/27/12 11:50	CN-A
MPL18-0112-1	L12010576-01	1V.1201271150-07	01/27/12 11:50	CN-A
T40-0112-1	L12010576-02	1V.1201271150-08	01/27/12 11:50	CN-A
MPL17-0112-1	L12010576-03	1V.1201271150-09	01/27/12 11:50	CN-A
DUP	WG388028-04	1V.1201271150-12	01/27/12 11:50	CN-A

Report Name: BLANK_SUMMARY
PDF File ID: 2292149
Report generated 01/27/2012 15:09

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: 1V.1201241510-01
Prep Date: 01/24/12 15:10
Analyzed Date: 01/24/12 15:10
Analyst: JBK

Work Group: WG387762
Blank Sample ID: WG387762-01
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	WG387762-02	1V.1201241510-02	01/24/12 15:10	WD
DUP	WG387762-04	1V.1201241510-04	01/24/12 15:10	WD
MPL18-0112-1	L12010576-01	1V.1201241510-10	01/24/12 15:10	WD
T40-0112-1	L12010576-02	1V.1201241510-11	01/24/12 15:10	WD
MPL17-0112-1	L12010576-03	1V.1201241510-12	01/24/12 15:10	WD

Report Name: BLANK_SUMMARY
PDF File ID: 2292126
Report generated 01/27/2012 15:07

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/24/12 15:30 Sample ID: WG387757-01
Instrument ID: UV-120-1V Run Date: 01/24/12 15:30 Prep Method: 9014-9010C
File ID: 1V.1201241530-01 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG387757 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 24-JAN-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: 2289665
25-JAN-2012 15:47

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/27/12 11:50 Sample ID: WG388028-01
Instrument ID: UV-120-1V Run Date: 01/27/12 11:50 Prep Method: SM4500-CN-C,G
File ID: 1V.1201271150-01 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG388028 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 27-JAN-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: 2292150
27-JAN-2012 15:09

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/24/12 15:10 Sample ID: WG387762-01
Instrument ID: UV-120-1V Run Date: 01/24/12 15:10 Prep Method: SM4500-CN-I
File ID: 1V.1201241510-01 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG387762 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-24-JAN-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: 2292127
27-JAN-2012 15:07

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/24/2012 Sample ID: WG387757-02
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1201241530-02 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG387757 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 24-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.198	98.9	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2289666
Report generated: 01/25/2012 15:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/24/2012 Sample ID: WG387757-03
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1201241530-03 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG387757 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 24-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0409	102	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2289666
Report generated: 01/25/2012 15:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/27/2012 Sample ID: WG388028-02
Instrument ID: UV-120-1V Run Time: 11:50 Prep Method: SM4500-CN-C,G
File ID: 1V.1201271150-02 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG388028 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	2.00	0.000965	0.0482	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2292151
Report generated: 01/27/2012 15:09

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/24/2012 Sample ID: WG387762-02
Instrument ID: UV-120-1V Run Time: 15:10 Prep Method: SM4500-CN-I
File ID: 1V.1201241510-02 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG387762 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 24-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0402	101	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2292128
Report generated: 01/27/2012 15:07

2.2.4.3 Raw Data

387959

Curves

Parameter: Cyanide - Low

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: STD48861

Concentration: 990 mg/L

Recipe for preparation of curve standards found in:
SOP: K3354 Revision: 14 Page: 15

Second Source Stock: STD48862 (concentration: 1000 mg/L)

Daily Preparation: 5(1000)/250=20
10(20)/100=2
concentration = 1(2)/50=0.04

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.000	50	5	578	0.000
0.00495	↓	↓	↓	0.036
0.0099				0.072
0.0198				0.154
0.0297				0.226
0.0396				0.311
0.0495				0.396
(0.04) ICV				0.320

Analyst: [signature] Date/Time: 1/24/12 1455

DCN#89698

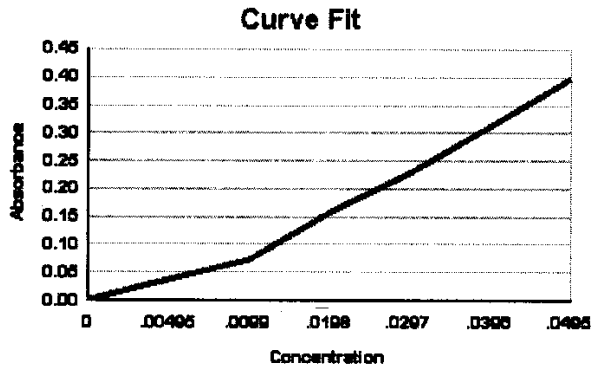
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG387959
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: JBK
Initial Calibration Date: 01/24/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 7.98256
Y-Intercept: -0.00427474
Coef. Of Correlation (R^2): 0.999236
Coef. Of Correlation (R): 0.999618

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00427474
0.00495	0.0360	0.0000245	0.000178	0.0352389
0.00990	0.0720	0.0000980	0.000713	0.0747526
0.0198	0.154	0.000392	0.00305	0.153780
0.0297	0.226	0.000882	0.00671	0.232807
0.0396	0.311	0.00157	0.0123	0.311834
0.0495	0.396	0.00245	0.0196	0.390862



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 01/25/2012 15:17

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG387959
File ID: 1V.1201241455-08
CCV ID: WG387959-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 14:55
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12 14:55:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0406	8.00	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 01/25/2012 15:17

[redacted]

387958

Curves

Parameter: Cyanide - High

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: STD 48861

Concentration: 990 mg/L

Recipe for preparation of curve standards found in:

SOP: K3354 Revision: 14 Page: 15

Second Source Stock: STD 48862 (concentration: 1000 mg/L

Daily Preparation: 5(1000)/250=20
10(20)/100=2

concentration = 5(2)/50=0.2

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.000	50	1	578	0.000
0.0198	↓	↓	↓	0.030
0.0396				0.061
0.099				0.160
0.198				~~0.309~~ 0.319
0.292				0.483
0.396				0.640
TCV (0.2)				0.323

Analyst: [signature] Date/Time: 1/24/12/1450

DCN#89697

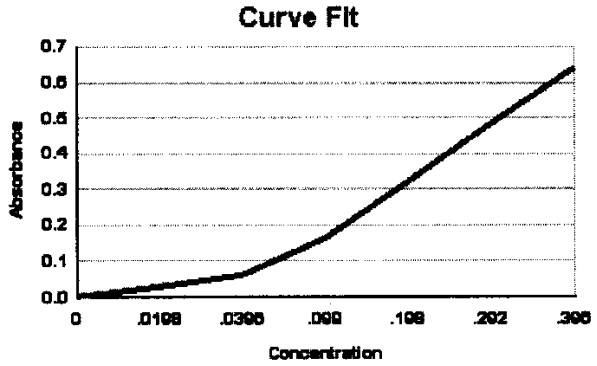
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG387958
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: JBK
Initial Calibration Date: 01/24/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 1.63162
Y-Intercept: -0.00158048
Coef. Of Correlation (R^2): 0.999725
Coef. Of Correlation (R): 0.999863

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00158048
0.0198	0.0300	0.000392	0.000594	0.0307256
0.0396	0.0610	0.00157	0.00242	0.0630316
0.0990	0.160	0.00980	0.0158	0.159950
0.198	0.319	0.0392	0.0632	0.321480
0.292	0.483	0.0853	0.141	0.474852
0.396	0.640	0.157	0.253	0.644541



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 01/25/2012 15:14

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG387958
File ID: 1V.1201241450-08
CCV ID: WG387958-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 14:50
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12 14:50:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.199	1.62	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 01/25/2012 15:15

[redacted]

388164

Curves

Parameter: Cyanide - low

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: STD48861

Concentration: 990mg/L

Recipe for preparation of curve standards found in:

SOP: L3354 Revision: 12 Page: 15

Second Source Stock: STD48862 (concentration: 1000mg/L

Daily Preparation: 5(1000)/250=20
10(20)/100=2
concentration = 1(2)/50=0.04

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.000	50	5	578	0.000
0.00495	↓	↓	↓	0.037
0.0099				0.074
0.0198				0.154
0.0297				0.239
0.0396				0.318
0.0495				0.402
Tcn (0.04)				0.323

Analyst: [signature] Date/Time: 1/27/12/1115

DCN#89740

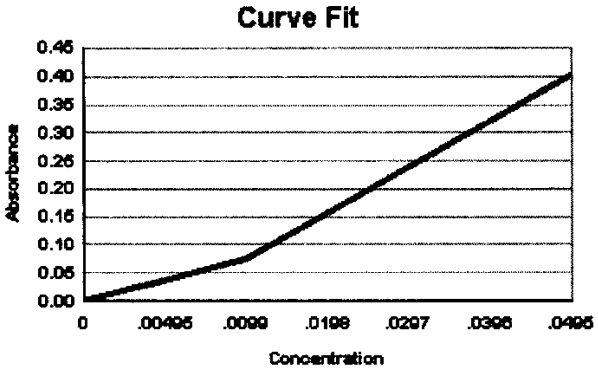
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG388164
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: JBK
Initial Calibration Date: 01/27/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 8.15286
Y-Intercept: -0.00386519
Coef. Of Correlation (R^2): 0.999686
Coef. Of Correlation (R): 0.999843

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00386519
0.00495	0.0370	0.0000245	0.000183	0.0364915
0.00990	0.0740	0.0000980	0.000733	0.0768481
0.0198	0.154	0.000392	0.00305	0.157561
0.0297	0.239	0.000882	0.00710	0.238275
0.0396	0.318	0.00157	0.0126	0.318988
0.0495	0.402	0.00245	0.0199	0.399701



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 01/27/2012 13:19

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG388164
File ID: 1V.1201271115-08
CCV ID: WG388164-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/27/2012
Run Time: 11:15
Analyst: JBK
Cal ID: UV-120 - 27-JAN-12 11:15:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0401	8.08	0.3	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 01/27/2012 13:19

[redacted]

WORKGROUP: WG387762

CYANIDE

[] Total method 9010B/9014
SM4500 CN C,E
EPA 335.2
[✓] WD method SM4500 CN I

Matrix: Liquid (mg/L) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 48861 TRUE VALUE: 990
Daily dilution: 5(990)/250=19.8
20(19.8)/100=1.98
10(1.98)/100=0.198 %Ka(0.198)=0.0198

LCS STOCK: 48862 TRUE VALUE: 1000
Daily dilution: 5(1000)/250=20
10(20)/100=2 spk1/2
5(2)/50=0.2
1(2)/50=0.04

curve reference: 1/24/12
Spec: UV-120-1V

SPIKE: (daily dilution) 1(2)/50=0.021
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV (high): 0.2 ppm	50	✓	X=none			
CCV (low): 0.02 ppm		✓	X		5	~~0.0~~ 0.156
Blank		✓	X			0.003
LCS: 0.2 ppm		✓	X			
LCS: 0.04 ppm		✓	X		5	0.317
01-416-02		✓	X			0.283
DuP		✓	X			0.279
ms(0.04)		✓	X			0.598
01-475-01		✓	X			0.069
01-536-01		✓	X			0.021
-02		✓	X			0.219
-03		✓	X			0.248
01-576-01		✓	X			0.025
-02		✓	X			0.008
-03		✓	X			0.044
CCV(0.02)	50	✓	X			0.156
Duplicate:						
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)						
CCV (low): (ppm)						

ANALYST: [signature]

DATE/TIME: (on) 1/24/12 / 1125
(off) 1305
(color) 1510

DCN#89688

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG387762
Analyte: CYANIDE

Analyst: JBK
Date: 01/24/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG387762-01	50	50	0.00300	7.983	-0.004275	0.00091133	0.00091133	1	mg/L
WG387762-02	50	50	0.317	7.983	-0.004275	0.040247	0.040247	1	mg/L
L12010416-02	50	50	0.283	7.983	-0.004275	0.035988	0.035988	1	mg/L
WG387762-03	50	50	0.283	7.983	-0.004275	0.035988	0.035988	1	mg/L
WG387762-04	50	50	0.279	7.983	-0.004275	0.035487	0.035487	1	mg/L
WG387762-05	50	50	0.598	7.983	-0.004275	0.075449	0.075449	1	mg/L
L12010479-01	50	50	0.0690	7.983	-0.004275	0.0091794	0.0091794 F	1	mg/L
L12010536-01	50	50	0.0210	7.983	-0.004275	0.0031662	ND	1	mg/L
L12010536-02	50	50	0.219	7.983	-0.004275	0.027970	0.027970	1	mg/L
L12010536-03	50	50	0.248	7.983	-0.004275	0.031603	0.031603	1	mg/L
L12010576-01	50	50	0.0250	7.983	-0.004275	0.0036673	ND	1	mg/L
L12010576-02	50	50	0.00800	7.983	-0.004275	0.0015377	ND	1	mg/L
L12010576-03	50	50	0.0440	7.983	-0.004275	0.0060475	0.0060475 F	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/27/2012 13:13

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388162
File ID: 1V.1201241510-13
CCV ID: WG388162-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:10
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.88	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:13

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388162
File ID: 1V.1201241510-14
CCV ID: WG388162-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:10
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.88	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:13

[redacted]

WORKGROUP: WG388028

CYANIDE

☑ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2 (Amenable)
☐ WD method SM4500 CN I

Matrix: Liquid (mg/L) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 48862 TRUE VALUE: 990
Daily dilution: 5(990)/250 = 19.8
10(99)/100 = 0.99 5/50(1.98) = 0.198
10(1.98)/100 = 0.198 5/50(0.198) = 0.0198

LCS STOCK: 48862 TRUE VALUE: 1000
Daily dilution: 5(1000)/250 = 20
5(20)/250 = 2 *

curve reference: 1/27/12
Spec: UV-120-1V

SPIKE: (daily dilution) 5(2)/50 = 0.2
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV (high): 0.2 ppm	50	✓	X-none		1	0.313
CCV (low): 0.02 ppm		✓	X		5	0.155
Blank		✓	X			0.003
LCS: 0.2 ppm		✓	X			0.004
LCS: 40K/1177 ppm		✓	X	—	—	—
01-479-01		✓	X		5	0.017
01-536-01		✓	X			0.021
-02		✓	X			0.019
-03		✓	X		1,5	0.054, 0.276
01-576-01		✓	X		5	0.027
-02		✓	X			0.041
-03		✓	X			0.039
01-613-01		✓	X		1	0.410
01-651-01		✓	X			0.162
DuP *		✓	X			0.104
MS(0.2)-02		✓	X			0.100
SD(0.2)-03		✓	X			0.104
01-652-01		✓	X		5	0.019
-02		✓	Y			0.023
CCV (0.2)	50	✓	X		1	0.313
CCV (0.02)	50	✓	Y		5	0.157
* LCS analyzed at 2mg/L to verify that even at high concentrations the spike sol'n is 100% Amenable						
Duplicate:						
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)						
CCV (low): (ppm)						

ANALYST: [signature]

DATE/TIME: (on) 01/26/12 1410
(off) 1555
(color) 01/27/12 1150

DCN#89729

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG387757 **Analyst:** JBK
Analyte: CYANIDE (TOTAL) **Date:** 01/24/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG387757-01	50	50	0.00600	7.983	-0.004275	0.0012871	0.0012871	1	mg/L
WG387757-02	50	50	0.321	1.632	-0.001580	0.19771	0.19771	1	mg/L
WG387757-03	50	50	0.322	7.983	-0.004275	0.040873	0.040873	1	mg/L
L12010479-01	50	50	0.143	1.632	-0.001580	0.088612	0.088612 ✓	1	mg/L
L12010536-01	50	50	0.0350	7.983	-0.004275	0.0049201	ND ✓	1	mg/L
L12010536-02	50	50	0.302	1.632	-0.001580	0.18606	0.37212 ✓	2	mg/L
L12010536-03	50	50	0.310	1.632	-0.001580	0.19096	0.38193 ✓	2	mg/L
L12010576-01	50	50	0.0260	7.983	-0.004275	0.0037926	ND ✓	1	mg/L
L12010576-02	50	50	0.0140	7.983	-0.004275	0.0022893	ND ✓	1	mg/L
L12010576-03	50	50	0.0880	1.632	-0.001580	0.054903	0.054903 ✓	1	mg/L
L12010604-01	50	50	0.00400	7.983	-0.004275	0.0010366	ND	1	mg/L
WG387757-04	50	50	0.00400	7.983	-0.004275	0.0010366	0.0010366	1	mg/L
L12010604-02	50	50	0.00400	7.983	-0.004275	0.0010366	ND	1	mg/L
L12010604-04	50	50	0.00600	7.983	-0.004275	0.0012871	ND	1	mg/L
WG387757-05	50	50	0.00600	7.983	-0.004275	0.0012871	0.0012871	1	mg/L
L12010604-05	50	50	0.00500	7.983	-0.004275	0.0011619	ND	1	mg/L
WG387757-06	50	50	0.00500	7.983	-0.004275	0.0011619	0.0011619	1	mg/L
L12010449-02	50	50	0.0630	7.983	-0.004275	0.0084277	ND	1	mg/L
L12010567-01	50	50	0.0340	7.983	-0.004275	0.0047948	ND	1	mg/L
L12010586-03	50	50	0.0230	7.983	-0.004275	0.0034168	ND	1	mg/L
L12010586-04	50	50	0.0530	7.983	-0.004275	0.0071750	0.0071750 F	1	mg/L
L12010514-01	50	50	0.0120	7.983	-0.004275	0.0020388	ND	1	mg/L
WG387757-07	50	50	0.0120	7.983	-0.004275	0.0020388	0.0020388	1	mg/L
WG387757-08	50	50	0.0130	7.983	-0.004275	0.0021641	0.0021641	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/27/2012 13:30

[redacted]

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG388027 **Analyst:** JBK
Analyte: CYANIDE (TOTAL) **Date:** 01/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG388027-01	50	50	0.00500	8.153	-0.003865	0.0010874	0.0010874	1	mg/L
WG388027-02	50	50	0.316	1.575	-0.000008882	0.20062	0.20062	1	mg/L
WG388027-03	50	50	0.318	8.153	-0.003865	0.039479	0.039479	1	mg/L
L12010654-02	50	50	0.0480	8.153	-0.003865	0.0063616	ND	1	mg/L
L12010651-01	50	50	0.166	1.575	-0.000008882	0.10539	0.10539 ✓	1	mg/L
WG388027-04	50	50	0.166	1.575	-0.000008882	0.10539	0.10539	1	mg/L
WG388027-05	50	50	0.169	1.575	-0.000008882	0.10730	0.10730	1	mg/L
L12010651-02	50	50	0.484	1.575	-0.000008882	0.30728	0.30728 ✓ MSY	1	mg/L
WG388027-06	50	50	0.484	1.575	-0.000008882	0.30728	0.30728	1	mg/L
L12010651-03	50	50	0.484	1.575	-0.000008882	0.30728	0.30728 ✓ SDY	1	mg/L
WG388027-07	50	50	0.484	1.575	-0.000008882	0.30728	0.30728	1	mg/L
L12010652-01	50	50	0.202	1.575	-0.000008882	0.12825	0.12825 ✓	1	mg/L
L12010652-02	50	50	0.465	1.575	-0.000008882	0.29522	0.29522 ✓	1	mg/L
L12010613-01	50	50	0.270	1.575	-0.000008882	0.17142	0.34284 ✓	2	mg/L
L12010626-01	5	50	0.484	1.575	-0.000008882	0.30728	1536.4	500	mg/L
L12010626-02	50	50	0.380	1.575	-0.000008882	0.24126	24.126	100	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/27/2012 13:24

[redacted]

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG388028 **Analyst:** JBK
Analyte: CYANIDE (TREATED) **Date:** 01/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG388028-01	50	50	0.00300	8.153	-0.003865	0.00084206	0.00084206	1	mg/L
WG388028-02	50	50	0.00400	8.153	-0.003865	0.00096472	0.00096472	1	mg/L
L12010479-01	50	50	0.0170	8.153	-0.003865	0.0025592	ND	1	mg/L
L12010536-01	50	50	0.0210	8.153	-0.003865	0.0030499	ND	1	mg/L
L12010536-02	50	50	0.0490	8.153	-0.003865	0.0064843	0.0064843 F	1	mg/L
L12010536-03	50	50	0.276	8.153	-0.003865	0.034327	0.034327	1	mg/L
L12010576-01	50	50	0.0270	8.153	-0.003865	0.0037858	ND	1	mg/L
L12010576-02	50	50	0.0410	8.153	-0.003865	0.0055030	0.0055030 F	1	mg/L
L12010576-03	50	50	0.0390	8.153	-0.003865	0.0052577	0.0052577 F	1	mg/L
L12010613-01	50	50	0.410	1.575	-0.000008882	0.26030	0.26030	1	mg/L
L12010651-01	50	50	0.102	1.575	-0.000008882	0.064762	0.064762	1	mg/L
WG388028-03	50	50	0.102	1.575	-0.000008882	0.064762	0.064762	1	mg/L
WG388028-04	50	50	0.104	1.575	-0.000008882	0.066032	0.066032	1	mg/L
L12010651-02	50	50	0.100	1.575	-0.000008882	0.063493	0.063493	1	mg/L
WG388028-05	50	50	0.100	1.575	-0.000008882	0.063493	0.063493	1	mg/L
L12010651-03	50	50	0.104	1.575	-0.000008882	0.066032	0.066032	1	mg/L
WG388028-06	50	50	0.104	1.575	-0.000008882	0.066032	0.066032	1	mg/L
L12010652-01	50	50	0.0190	8.153	-0.003865	0.0028046	ND	1	mg/L
L12010652-02	50	50	0.0230	8.153	-0.003865	0.0032952	ND	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/27/2012 13:34

[redacted]

Cyanide, Amenable to Chlorination (mg/L)
CN (Total) - CN (Treated) = CN-A

SAMPLE	1/24/2012 CN (Total)	1/27/2012 CN (Treated)	CN-A
L12010479-01	0.088612	0.0025592	0.086053
L12010536-01	0.0049201	0.0030499	0.00187
L12010536-02	0.37212	0.0064843	0.365636
L12010536-03	0.38193	0.034327	0.347603
L12010576-01	0.0037926	0.0037858	6.8E-06
L12010576-02	0.0022893	0.005503	-0.003214
L12010576-03	0.054903	0.0052577	0.049645
L12010613-01	0.34284	0.2603	0.08254
L12010651-01	0.10539	0.064762	0.040628
L12010651-02	0.10539	0.063493	0.041897
L12010651-03	0.10539	0.066032	0.039358
L12010652-01	0.12825	0.0028046	0.125445
L12010652-02	0.29522	0.0032952	0.291925
			0
			0
			0
			0
			0
			0

Cyanide, Amenable to Chlorination (CN-A) is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to verify that all of the cyanide in the spike solution is amenable (the treated portion is ND)

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388167
File ID: 1V.1201271150-17
CCV ID: WG388167-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/27/2012
Run Time: 11:50
Analyst: JBK
Cal ID: UV-120 - 27-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.199	1.58	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388167
File ID: 1V.1201271150-18
CCV ID: WG388167-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/27/2012
Run Time: 11:50
Analyst: JBK
Cal ID: UV-120 - 27-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0195	7.83	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388167
File ID: 1V.1201271150-19
CCV ID: WG388167-03
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/27/2012
Run Time: 11:50
Analyst: JBK
Cal ID: UV-120 - 27-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.199	1.58	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG388167
File ID: 1V.1201271150-20
CCV ID: WG388167-04
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/27/2012
Run Time: 11:50
Analyst: JBK
Cal ID: UV-120 - 27-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0197	7.93	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/27/2012 13:35

[redacted]

WORKGROUP: WG387757

CYANIDE

☒ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2
☐ WD method SM4500 CN I

Matrix: Liquid (mg/L) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 48861 TRUE VALUE: 990
Daily dilution: 5(990)/250 = 19.8
10(19.8)/100 = 1.98 5/50(1.98) = 0.198
10(1.98)/100 = 0.198 5/50(0.198) = 0.0198

LCS STOCK: 48842 TRUE VALUE: 1000
Daily dilution: 5(1000)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
1(2)/50 = 0.04

curve reference: 1/24/12
Spec: UV-120-1V

SPIKE: (daily dilution) 1(2)/50 = 0.04
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV (high): 0.2 ppm	50	✓	X=none		1/24 8	0.317
CCV (low): 0.02 ppm		✓	X		5	0.154
Blank		✓	X		1	0.004
LCS: 0.2 ppm		✓	X		1	0.321
LCS: 0.04 ppm		✓	X		5	0.322
STD (0.198)		✓	X		1	0.319
STD (0.0198)		✓	X		5	0.156
01-479-01		✓	X		1	0.143
01-534-01		✓	X		5	0.035
-02		✓	X	1/2	1	0.302
-03		✓	X	1/2	1	0.310
01-574-01		✓	X		5	0.026
-02		✓	X		5	0.014
-03		✓	X		5, 1	0.371, 0.058
01-604-01 25 *		✓	X		5	0.004
-02		✓	X			0.004
-04 MS (0.04)*		✓	X			0.006
-05 SD (0.04)*		✓	X			0.005
01-449-02		✓	X			0.063
01-547-01		✓	X			0.034
01-556-03		✓	X			0.023
-04		✓	X			0.053
01-514-01		✓	X			0.012
DUP ↓	↓	✓	X		↓	0.013
Duplicate:						
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)	50	✓	X		1	0.318
CCV (low): (ppm)	↓	✓	X		5	0.157

ANALYST: [signature]

DATE/TIME: (on) 01/24/12 0920
(off) 1100
(color) 1530

* 01-604-01,04,05: Add'n of 1:1 H_2SO_4 caused violent rxn w/ gas formation.

DCN#89687

D3987 Daily

Date: 01-23-12

	Microbac#	Client	Dye	ME		F		TAHN	CN		
1	01-514-01	Chabock	1/30	✓		✓		✓	✓		
2	FBLK	—	—	✓		✓		✓	✓		
3											
4											
5											
6											
7											
8											
9											
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
0											
1											
2											

Start Time:

Solids: 1530

Filtration:

Agitated:

Work Groups		Run ID's
ME	WG 387719	R
F	WG 387718	R
TAHN	WG 387717	R
CN	WG 387716	R
	WG	R
	WG	R
	WG	R
	WG	R
	WG	R
	WG	R
	WG	R
	WG	R
	WG	R

☑ perform analysis

★ perform analysis and spike sample

Comments:

Generated: 02/21/2012 11:16

L12010576 / Revision: / 1044 total pages

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG387757
Analyte: CYANIDE

Analyst: JBK
Date: 01/24/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG387757-01	50	50	0.00600	7.983	-0.004275	0.0012871	0.0012871	1	mg/L
WG387757-02	50	50	0.321	1.632	-0.001580	0.19771	0.19771	1	mg/L
WG387757-03	50	50	0.322	7.983	-0.004275	0.040873	0.040873	1	mg/L
L12010479-01	50	50	0.143	1.632	-0.001580	0.088612	0.088612	1	mg/L
L12010536-01	50	50	0.0350	7.983	-0.004275	0.0049201	ND	1	mg/L
L12010536-02	50	50	0.302	1.632	-0.001580	0.18606	0.37212	2	mg/L
L12010536-03	50	50	0.310	1.632	-0.001580	0.19096	0.38193	2	mg/L
L12010576-01	50	50	0.0260	7.983	-0.004275	0.0037926	ND	1	mg/L
L12010576-02	50	50	0.0140	7.983	-0.004275	0.0022893	ND	1	mg/L
L12010576-03	50	50	0.0880	1.632	-0.001580	0.054903	0.054903	1	mg/L
L12010604-01	50	50	0.00400	7.983	-0.004275	0.0010366	ND	1	mg/L
WG387757-04	50	50	0.00400	7.983	-0.004275	0.0010366	0.0010366	1	mg/L
L12010604-02	50	50	0.00400	7.983	-0.004275	0.0010366	ND	1	mg/L
L12010604-04	50	50	0.00600	7.983	-0.004275	0.0012871	ND	1	mg/L
WG387757-05	50	50	0.00600	7.983	-0.004275	0.0012871	0.0012871	1	mg/L
L12010604-05	50	50	0.00500	7.983	-0.004275	0.0011619	ND	1	mg/L
WG387757-06	50	50	0.00500	7.983	-0.004275	0.0011619	0.0011619	1	mg/L
L12010449-02	50	50	0.0630	7.983	-0.004275	0.0084277	ND	1	mg/L
L12010567-01	50	50	0.0340	7.983	-0.004275	0.0047948	ND	1	mg/L
L12010586-03	50	50	0.0230	7.983	-0.004275	0.0034168	ND	1	mg/L
L12010586-04	50	50	0.0530	7.983	-0.004275	0.0071750	0.0071750 F	1	mg/L
L12010514-01	50	50	0.0120	7.983	-0.004275	0.0020388	ND	1	mg/L
WG387757-07	50	50	0.0120	7.983	-0.004275	0.0020388	0.0020388	1	mg/L
WG387757-08	50	50	0.0130	7.983	-0.004275	0.0021641	0.0021641	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/25/2012 15:22

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-23
CCV ID: WG387960-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.196	1.61	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 01/25/2012 15:24

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-24
CCV ID: WG387960-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.88	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 01/25/2012 15:24

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-21
CCV ID: WG387960-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.195	1.60	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/25/2012 15:23

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-22
CCV ID: WG387960-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0198	7.78	0.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/25/2012 15:23

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-25
CCV ID: WG387960-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.196	1.61	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/25/2012 15:23

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387960
File ID: 1V.1201241530-26
CCV ID: WG387960-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 01/24/2012
Run Time: 15:30
Analyst: JBK
Cal ID: UV-120 - 24-JAN-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0202	7.93	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/25/2012 15:23

[redacted]

2.2.5 Conductivity Data

2.2.5.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 41650
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL18-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	32.1201271120-03
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		318		1.00	0.500

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	T40-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	32.1201271120-04
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		402		1.00	0.500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL17-0112-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388141	**Analyst:**	DLP	**Run Date:**	01/27/2012 11:20
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	32.1201271120-05
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		458		1.00	0.500

2.2.5.2 QC Summary Data

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 27-JAN-2012
Analyst: DLP
Analyst: NA
Method: COND
Instrument: YSI-32
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388141

Calibration/Linearity	01-13-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	
Primary Reviewer	DLP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
31-JAN-2012

Secondary Reviewer:
01-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-01-2012 15:43:24

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 AAB#: WG388141

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							28		01/27/12	7	28	
T40-0112-1	02	01/20/12							28		01/27/12	7	28	
MPL17-0112-1	03	01/20/12							28		01/27/12	6.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2296130
Report generated 02/01/2012 14:45

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: 32.1201271120-01
Prep Date: 01/27/12 11:20
Analyzed Date: 01/27/12 11:20
Analyst: DLP

Work Group: WG388141
Blank Sample ID: WG388141-01
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	WG388141-02	32.1201271120-02	01/27/12 11:20	
MPL18-0112-1	L12010576-01	32.1201271120-03	01/27/12 11:20	
T40-0112-1	L12010576-02	32.1201271120-04	01/27/12 11:20	
MPL17-0112-1	L12010576-03	32.1201271120-05	01/27/12 11:20	
DUP	WG388141-06	32.1201271120-16	01/27/12 11:20	
DUP	WG388141-07	32.1201271120-17	01/27/12 11:20	
LCS2	WG388141-03	32.1201271120-18	01/27/12 11:20	

Report Name: BLANK_SUMMARY
PDF File ID: 2296131
Report generated 02/01/2012 14:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/27/12 11:20 Sample ID: WG388141-01
Instrument ID: YSI-32 Run Date: 01/27/12 11:20 Prep Method: 120.1
File ID: 32.1201271120-01 Analyst: DLP Method: 120.1
Workgroup (AAB#): WG388141 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: 2296132
01-FEB-2012 14:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: DLP Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG388141 Units: umhos/cm
QC Key: DOD4 Lot #: STD49280

Sample ID: WG388141-02 LCS File ID: 32.1201271120-02 Run Date: 01/27/2012 11:20
Sample ID: WG388141-03 LCS2 File ID: 32.1201271120-18 Run Date: 01/27/2012 11:20

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1460	103	1410	1460	103	0.149	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2296133
Report generated: 02/01/2012 14:46

2.2.5.3 Raw Data

CONDUCTIVITY

☐EPA 120.1/SM2510B SOP K1201 Revision#: 13

LCS: STD 49280
Daily Dilution: 10(01)/100 = 1412

☑Cell Constants Determined 1-13-12
☑Cells Clean

SAMPLE	DILUTION	CELL	MULTIPLIER	Direct Instrument READING
BLANK		01	WS	3.60
LCS: 1412		1.0	mS 01 01-27-12	~~1.339~~ 1.339
01-576-01		1.0	mS	0.292
-02		1.0	mS	0.370
-03		1.0	mS	0.421
01-613-01		1.0	mS	0.685
Ref 01-651-01		1.0	mS	0.454
MS -02		1.0	mS	0.457
MSD -03		1.0	mS	0.457
01-652-01		1.0	mS	0.368
-02		1.0	mS	0.488
01-686-01		1.0	mS	0.620
-02		1.0	mS	0.681
-03		1.0	mS	1.32
01-710-01		1.0	mS	8.39
DUP 01-576-02		1.0	mS	0.374
DUP 01-686-01		1.0	mS	0.621
LCS: 1412		1.0	mS	1.341

Analyst: [signature] Date/Time: 01-27-12/1120

*LCS/CCV required at end of run
* Duplicate required on 10% of samples

DCN#89742

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG388141
Product: 120.1\
Analyte: Conductivity

Analyst: DLP
Run Date: 01/27/2012 11:20

SAMPLE NUMBER	Cell	Multiplier	Reading	Dil	Analytical	Reported	Units
WG388141-01	.1008	1	3.6	1	0.3629	0.3629	umhos/cm
WG388141-02	1.0874	1000	1.339	1	1456	1456	umhos/cm
L12010576-01	1.0874	1000	.292	1	317.5	317.5	umhos/cm
L12010576-02	1.0874	1000	.37	1	402.3	402.3	umhos/cm
WG388141-04	1.0874	1000	.37	1	402.3	402.3	umhos/cm
L12010576-03	1.0874	1000	.421	1	457.8	457.8	umhos/cm
L12010613-01	1.0874	1000	.685	1	744.9	744.9	umhos/cm
L12010651-01	1.0874	1000	.454	1	493.7	493.7	umhos/cm
L12010651-02	1.0874	1000	.457	1	496.9	496.9	umhos/cm
L12010651-03	1.0874	1000	.457	1	496.9	496.9	umhos/cm
L12010652-01	1.0874	1000	.368	1	400.2	400.2	umhos/cm
L12010652-02	1.0874	1000	.488	1	530.7	530.7	umhos/cm
L12010686-01	1.0874	1000	.62	1	674.2	674.2	umhos/cm
WG388141-05	1.0874	1000	.62	1	674.2	674.2	umhos/cm
L12010686-02	1.0874	1000	.681	1	740.5	740.5	umhos/cm
L12010686-03	1.0874	1000	1.32	1	1435	1435	umhos/cm
L12010710-01	1.0874	1000	8.39	1	9123	9123	umhos/cm
WG388141-06	1.0874	1000	.374	1	406.7	406.7	umhos/cm
WG388141-07	1.0874	1000	.621	1	675.3	675.3	umhos/cm
WG388141-03	1.0874	1000	1.341	1	1458	1458	umhos/cm

COND_REPORT - Modified 03/05/2008
Report generated 01/31/2012 13:53

[redacted]

2.2.6 Ammonia Data

2.2.6.1 Summary Data

Login Number: L12010576
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: 41652
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:00
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC120127002.020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.230		0.100	0.0500

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:00
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	SC120127002.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.173		0.100	0.0500

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	01/27/2012 11:48
Workgroup #:	WG388059	**Analyst:**	DIH	**Run Date:**	01/27/2012 12:02
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	SC120127002.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.148		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: 27-JAN-2012
Analyst: DIH
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388059

Calibration/Linearity	1/30/12
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:
01-FEB-2012

Secondary Reviewer:
01-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-01-2012 14:08:17

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 AAB#: WG388059

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							28		01/27/12	7.1	28	
T40-0112-1	02	01/20/12							28		01/27/12	7	28	
MPL17-0112-1	03	01/20/12							28		01/27/12	6.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2293797
Report generated 01/31/2012 09:26

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: SC120127002.009
Prep Date: 01/27/12 11:50
Analyzed Date: 01/27/12 11:50
Analyst: DIH

Work Group: WG388059
Blank Sample ID: WG388059-01
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	WG388059-02	SC120127002.010	01/27/12 11:51	01
MPL18-0112-1	L12010576-01	SC120127002.020	01/27/12 12:00	01
T40-0112-1	L12010576-02	SC120127002.021	01/27/12 12:00	01
MPL17-0112-1	L12010576-03	SC120127002.022	01/27/12 12:02	01
DUP	WG388059-04	SC120127002.038	01/27/12 12:16	01

Report Name: BLANK_SUMMARY
PDF File ID: 2293798
Report generated 01/31/2012 09:26

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/27/12 11:50 Sample ID: WG388059-01
Instrument ID: SMARTCHEM Run Date: 01/27/12 11:50 Prep Method: 350.1
File ID: SC120127002.009 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG388059 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-27-JAN-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: 2293799
31-JAN-2012 09:26

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Run Date: 01/27/2012 Sample ID: WG388059-02
Instrument ID: SMARTCHEM Run Time: 11:51 Prep Method: 350.1
File ID: SC120127002.010 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG388059 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD46741 Cal ID: SMARTC-27-JAN-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	2.06	103	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2293800
Report generated: 01/31/2012 09:26

2.2.6.3 Raw Data

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] 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 # 20120127002
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	01-661-01	5ml/50*	1/20	1/200
1-5	02	5ml/50*	1/20	1/200
1-6	03	5ml/50*	1/20	1/200
1-7	06	5ml/50*	1/2	1/20
1-8	01-674-01	1/100		
1-9	02	1/50		
1-10	01-679-01			
1-11	01-576-01			
1-12	02			
1-13	03			
1-14	01-604-01	1/20		
1-15	MS04	1/20		
1-16	MSd05	1/20		
1-17	02			
1-18	01-606-01			
1-19	01-613-01			
1-20	01-651-01			
1-21	MS02			
1-22	MSd03			
2-1	01-652-01			
2-2	02			
2-3	01-684-01		1/5	

Position	Analyte	1	2	3
2-4	01-684-02		1/5	
2-5	DUP 576-01		~~1/5~~	
2-6 R	New ICV			
2-7 R				
2-8 R				
2-9				
2-10				
2-11				
2-12				
2-13				
2-14				
2-15				
2-16				
2-17				
2-18				
2-19				
2-20				
2-21				
2-22				
2-23				
2-24				
2-25				
2-26				
3-1				
3-2				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#89734

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3				
3-4				
3-5				
3-6				
3-7				
3-8				
3-9				
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

Position	Analyte	1	2	3
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] 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	R3501 Rev 17		Rot 16729
Curve Stock (SC made)	std 49628		Rot 16833
Curve ID (user made)			Rot 16835
ICV	std 49784		
CCV	std 49630		
LCS			
MS	All dilut log Dilution		

Comments: ICV >90% LCS same source was 103%

Analyst: Deanna Gibson Date: 1/27/12

DCN#89734

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 17

LCS: STD46741 1ml(100) 1100 = 10
DAILY DIL. 10(10) 1500 = 2

SPIKE: STD46741 1ml(100) 1100 = 10
DAILY DIL. 5(10) 1500 = 1

WATER (mg/L)
SOIL (mg/Kg)

☒ easy-dist method ☐ macro method

RGT 16894
RGT 16972

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	No	yes	
LCS( ) ✓	50			
01-661-01 ✓	5			
-02 ✓	5			
-03 ✓	5			
06 ✓	5			
01-674-01 ✓	50			
-02 ✓	50	yes		
Re5 01-572-01 ✓	50	No		
-02 ✓	50			
03 ✓	50			
01-604-01 ✓	50			
-02 ✓	50			
01-606-01 ✓	50			
01-613-01 ✓	50			
Re5 01-651-01 ✓	50			
ms -02 ✓	50			
msD -03 ✓	50			
01-652-01 ✓	50			
-02 ✓	50			
01-679-01 ✓	50			
01-684-01 ✓	50			
DUP 01-576-01	50			
MS 01-604-04 ✓	50			
MSD 01-604-05 ✓	50			

Analyst: Dorothy Payne Date/Time: 01-26-12/0830

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

01-684-02 ✓	50	No	yes	

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	0.0465	0.00		11:40:51 AM
DIL-1	RBL	0.000	0.0435	0.00		11:41:09 AM
DIL-1	RBL	0.000	0.0451	0.00		11:42:39 AM
DIL-1	Std-1	0.000	-0.0017	0.00	INV	11:42:57 AM
SR5-1	Std-2	0.030	0.0046	0.00		11:44:27 AM
SR5-2	Std-3	0.094	0.0191	0.00		11:44:45 AM
SR5-3	Std-4	0.600	0.1368	0.00		11:46:15 AM
SR5-4	Std-5	1.050	0.2479	0.00		11:46:33 AM
SR5-5	Std-6	2.100	0.5016	0.00		11:48:03 AM
ST-1	Std-7	3.000	0.7344	0.00		11:48:21 AM
1	ICV 1.5	2.032 X	0.4914	0.00		11:49:52 AM
2	WG388059-01 BLK	0.026	0.0009	0.00		11:50:10 AM
3	WG388059-02 LCS	2.062	0.4988	0.00		11:51:40 AM
4	L12010661-01 (200)	2.869	0.6960	0.00		11:51:58 AM
5	L12010661-02 (200)	2.593	0.6286	0.00		11:53:28 AM
6	L12010661-03 (200)	1.691	0.4079	0.00		11:53:46 AM
7	L12010661-06 (20)	2.272	0.5500	0.00		11:55:16 AM
8	L12010674-01 (100)	1.494	0.3598	0.00		11:55:34 AM
9	L12010674-02 (50)	1.592	0.3837	0.00		11:57:04 AM
10	L12010679-01	0.406	0.0939	0.00		11:57:22 AM
ST-2	CCV (1.5 mg/L)	1.415	0.3406	94.35		11:58:52 AM
ST-3	CCB (0 mg/L)	0.023	0.0001	0.00		11:59:10 AM
11	L12010576-01	0.230	0.0509	0.00		12:00:40 PM
12	L12010576-02	0.173	0.0368	0.00		12:00:58 PM
13	L12010576-03	0.149	0.0309	0.00		12:02:28 PM
14	L12010604-01 (20)	2.180	0.5275	0.00		12:02:46 PM
15 =	L12010604-04 (20) MS	2.146	0.5192	0.00		12:04:16 PM
16	L12010604-05 (20) MS	1.841	0.4447	0.00		12:04:34 PM
17	L12010604-02	0.169	0.0359	0.00		12:06:04 PM
18	L12010606-01	0.207	0.0452	0.00		12:06:22 PM
19	L12010613-01	0.137	0.0281	0.00		12:07:52 PM
20	L12010651-01	0.107	0.0207	0.00		12:08:10 PM

Report Date :01/27/2012 **Run Date :1/27/2012** **Operator : WESTCO** **Plan # :20120127002**

Plan Description : NH3-B-DIH/1/27/2012

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)	1.408	0.3389	93.88		12:09:40 PM
ST-3	CCB (0 mg/L)	0.028	0.0013	0.00		12:09:58 PM
21	L12010651-02 MS	1.028	0.2458	0.00		12:11:28 PM
22	L12010651-03 MSD	0.920	0.2196	0.00		12:11:46 PM
23	L12010652-01	0.195	0.0423	0.00		12:13:16 PM
24	L12010652-02	0.093	0.0174	0.00		12:13:34 PM
25	L12010684-01 (5)	1.480	0.3565	0.00		12:15:04 PM
26	L12010684-02 (5)	1.529	0.3685	0.00		12:15:22 PM
27	WG388059-04 DUP	0.165	0.0349	0.00		12:16:52 PM
28	ID 28 new ICV	1.652	0.3986	0.00		12:17:10 PM
29	ID 29	1.703	0.4109	0.00		12:18:40 PM
30	ID 30	1.310	0.3148	0.00		12:18:58 PM
ST-2	CCV (1.5 mg/L)	1.391	0.3346	92.71		12:20:28 PM
ST-3	CCB (0 mg/L)	0.027	0.0011	0.00		12:20:46 PM

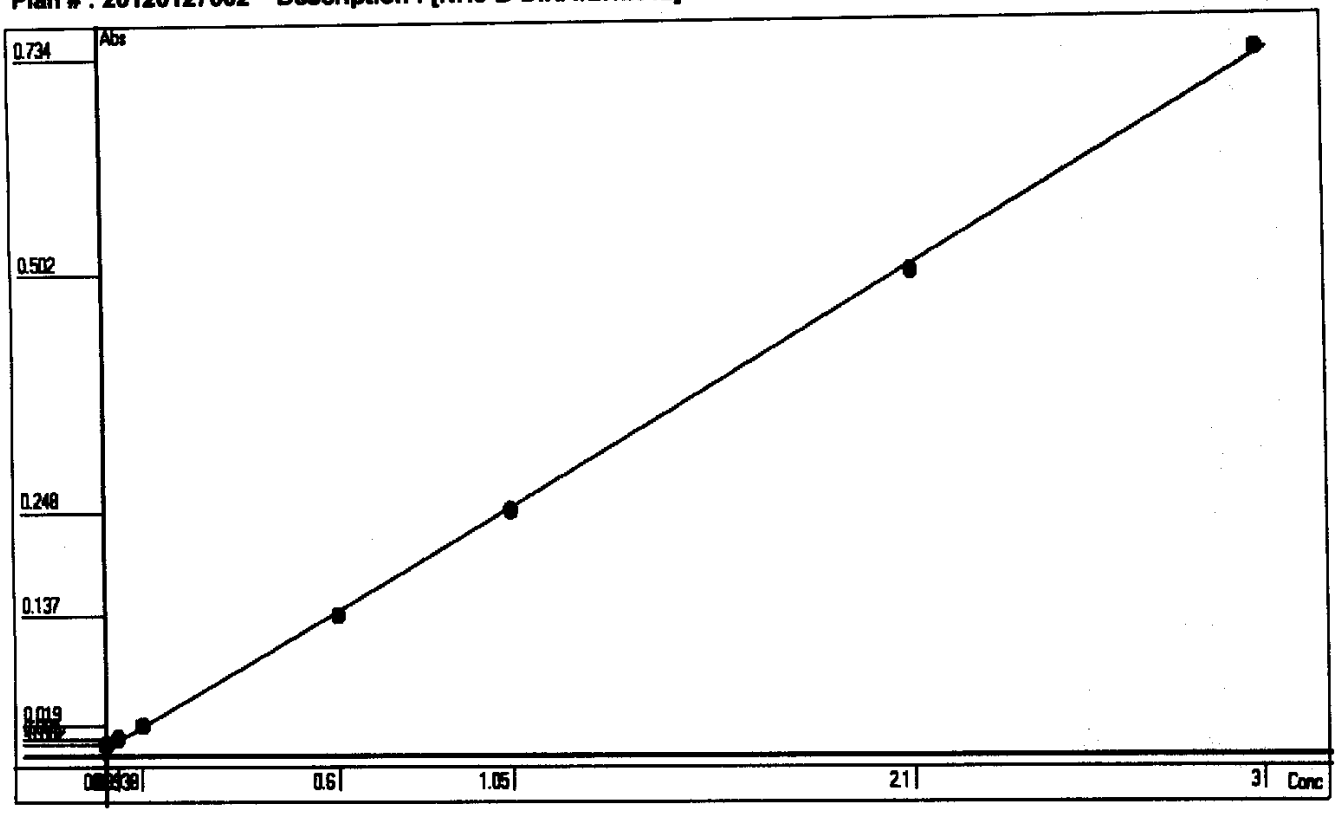
Report Date :01/27/2012 **Run Date :1/27/2012** **Operator : WESTCO** **Plan # :20120127002**

Plan Description : NH3-B-DIH/1/27/2012

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20120127002 Description : [NH3-B-DIH/1/27/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0017	0	0.0152	1.52
2	0.0046	0.03	0.0410	36.67
3	0.0191	0.0938	0.1003	6.93
4	0.1368	0.6	0.5817	-3.05
5	0.2479	1.05	1.0361	-1.32
6	0.5016	2.1	2.0737	-1.25
7	0.7344	3	3.0259	0.86

Conc= +4.09*Abso +0.0222 R^2=0.9997

RBL
0.0458
0

Report Date 1/27/2012 Run Date 1/27/2012

2.2.7 Nitrate Data

2.2.7.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

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

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 41653
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	SC12012514291401
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.64		0.0500	0.0250

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	T40-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 12:10	**Dilution:**	4	**File ID:**	SC12012514292201
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.30		0.200	0.100

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0112-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	01/20/2012 11:48
Workgroup #:	WG387663	**Analyst:**	DIH	**Run Date:**	01/23/2012 13:39
Collect Date:	01/20/2012 13:45	**Dilution:**	4	**File ID:**	SC12012514293101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.36		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: 23-JAN-2012
Analyst: DIH
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387663

Calibration/Linearity	1/23/2012
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	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:
26-JAN-2012

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 10:54:50

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG387663

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							28		01/23/12	3.1	28	
T40-0112-1	02	01/20/12							28		01/23/12	3.1	28	
MPL17-0112-1	03	01/20/12							28		01/23/12	3	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2289626
Report generated 01/25/2012 15:15

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: SC12012514222701
Prep Date: 01/23/12 13:39
Analyzed Date: 01/23/12 13:39
Analyst: DIH

Work Group: WG387663
Blank Sample ID: WG387663-01
Instrument ID: SMARTCHEM
Method: 353.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG387663-02	SC12012514232901	01/23/12 13:39	
T40-0112-1	L12010576-02	SC12012514292201	01/23/12 13:39	
MPL18-0112-1	L12010576-01	SC12012514291401	01/23/12 13:39	
DUP	WG387663-05	SC12012514240801	01/23/12 13:39	
LCS2	WG387663-03	SC12012514233601	01/23/12 13:39	
MPL17-0112-1	L12010576-03	SC12012514293101	01/23/12 13:39	

Report Name: BLANK_SUMMARY
PDF File ID: 2289627
Report generated 01/25/2012 15:15

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/23/12 13:39 Sample ID: WG387663-01
Instrument ID: SMARTCHEM Run Date: 01/23/12 13:39 Prep Method: 353.2
File ID: SC12012514222701 Analyst: DIH Method: 353.2
Workgroup (AAB#): WG387663 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-20-JAN-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: 2289628
25-JAN-2012 15:15

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: DIH Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG387663 Units: mg/L
QC Key: DOD4 Lot #: STD48835

Sample ID: WG387663-02 LCS File ID: SC12012514232901 Run Date: 01/23/2012 13:39
Sample ID: WG387663-03 LCS2 File ID: SC12012514233601 Run Date: 01/23/2012 13:39

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	0.972	97.2	1.00	0.995	99.5	2.34	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2289629
Report generated: 01/25/2012 15:15

2.2.7.3 Raw Data

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [x] NO3 Reagent bottle connected / purged
- [x] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # 131442

1) **Workgroup** _____
Plan # 20120123001
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	01-466-01	1/50			✓
1-7	01-475-01		Auto 1/2		✓
1-8	02				✓
1-9	01-524-02		Auto 1/3		✓
1-10	01-473-01	1/5		Color	
1-11	02	1/5		↓	
1-12	03	1/5		↓	
1-13	01-479-01				✓
1-14	01-486-02				
1-15	01-491-01				
1-16	01-492-01				
1-17	01-500-01				
1-18	01-506-01				
1-19	01-536-01				✓
1-20	02		Auto	1/2	✓
1-21	03		Auto	1/2	
1-22	01-576-01				
2-1	02				
2-2	03				
2-3	DUP 576-03				

Position	Analyte	1	2	3
2-4	MS 576-03			
2-5	MS 479-01			
2-6				
2-7				
2-8				
2-9				
2-10				
2-11				
2-12				
2-13				
2-14				
2-15				
2-16				
2-17				
2-18				
2-19				
2-20				
2-21				
2-22				
2-23				
2-24				
2-25				
2-26				
3-1				
3-2				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#89678

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3				
3-4				
3-5				
3-6				
3-7				
3-8				
3-9				
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

Position	Analyte	1	2	3
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	NO3		Reagents
SOP & Revision	K 3532 R18		Rot 166628
Curve Stock (SC made)	Std 49275		Rot 166820
Curve ID (user made) NO2	Std 49488		
ICV	Std 49277		
CCV	Std 49276		
LCS	Std 49278		
MS	Std 48249 Dilution 0.1/5(25) = 0.5		

Comments: _____

Analyst: [signature] Date: 1/23/12

DCN#89678

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0490	0.00		1:27:08 PM
DIL-1	RBL	0.000	0.0205	0.00		1:28:20 PM
DIL-1	RBL	0.000	0.0180	0.00		1:29:32 PM
DIL-1	RBL	0.000	0.0118	0.00		1:30:44 PM
DIL-1	Std-1	0.000	-0.0033	0.00	INV	1:31:57 PM
SR5-1	Std-2	0.040	0.0030	0.00		1:33:09 PM
SR5-2	Std-3	0.100	0.0172	0.00		1:34:21 PM
SR5-3	Std-4	0.500	0.1116	0.00		1:35:33 PM
SR5-4	Std-5	1.000	0.2260	0.00		1:36:45 PM
ST-1	Std-6	2.000	0.4616	0.00		1:37:57 PM
1	ICV 1.5	1.514	0.3475	0.00		1:39:09 PM
2	WG387663-01 BLK	0.007	-0.0040	0.00	INV,><	1:40:21 PM
3	WG387663-02 LCS	0.972	0.2211	0.00		1:41:33 PM
4	WG387663-03 LCSDUP	0.995	0.2266	0.00		1:42:45 PM
5	NO2 1	1.036	0.2362	0.00		1:43:57 PM
6	L12010466-01 (50)	2.790	0.6450	0.00	>,LH	1:45:09 PM
7	L12010475-01	10.882	2.5313	0.00	EPL,>,LH	1:46:21 PM
8	L12010475-02	3.163	0.7320	0.00	>,LH	1:47:33 PM
9	L12010524-02	14.815	3.4481	0.00	>,LH	1:48:45 PM
10	L12010473-01 (5)	0.009	-0.0035	0.00	INV,><	1:49:57 PM
ST-2	CCV (1 mg/L)	0.953	0.2167	95.28		1:51:09 PM
ST-3	CCB (0 mg/L)	-0.005	-0.0067	0.00	INV,><,LL	1:52:21 PM
11	L12010473-02 (5)	0.010	-0.0030	0.00	INV	1:53:33 PM
12	L12010473-03 (5)	0.015	-0.0019	0.00	INV	1:54:45 PM
13	L12010479-01	4.476	1.0379	0.00	>,LH	1:55:57 PM
14	L12010486-02	0.731	0.1649	0.00		1:57:09 PM
15	L12010491-01	1.457	0.3342	0.00		1:58:21 PM
16	L12010492-01	0.200	0.0412	0.00		1:59:33 PM
17	L12010500-01	0.731	0.1651	0.00		2:00:45 PM
18	L12010506-01	0.706	0.1591	0.00		2:01:57 PM
19	L12010536-01	2.198	0.5070	0.00	>,LH	2:03:09 PM
20	L12010536-02	10.945	2.5460	0.00	EPL,>,LH	2:04:21 PM

Report Date :01/23/2012 **Run Date :1/23/2012** **Operator : WESTCO** **Plan # :20120123001**

Plan Description : NO3-A-DIH/1/23/2012

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)	0.960	0.2183	95.96			2:05:33 PM
ST-3	CCB (0 mg/L)	-0.015	-0.0090	0.00	INV,><,LL		2:06:45 PM
21	L12010536-03	10.862	2.5266	0.00	><,LH		2:07:57 PM
22	L12010576-01	1.642	0.3774	0.00			2:09:10 PM
23	L12010576-02	2.090	0.4819	0.00	><,LH		2:10:22 PM
24	L12010576-03	4.616	1.0707	0.00	><,LH		2:11:34 PM
25	DUP 576-03	4.707	1.0919	0.00	><,LH		2:12:46 PM
26	MS 576-03	5.018	1.1644	0.00	><,LH		2:13:58 PM
27	MS 479-01	4.971	1.1535	0.00	><,LH		2:15:10 PM
28	ID 28	0.008	-0.0037	0.00	INV,><		2:16:22 PM
29	ID 29	0.007	-0.0040	0.00	INV,><		2:17:34 PM
30	ID 30	0.007	-0.0040	0.00	INV,><		2:18:46 PM
ST-2	CCV (1 mg/L)	0.957	0.2177	95.71			2:19:58 PM
ST-3	CCB (0 mg/L)	-0.003	-0.0063	0.00	INV,><,LL	NO2	2:21:10 PM
6-[1/4]	L12010466-01 (50)	3.015	0.1703	0.00	LH	0.254	2:30:20 PM
7-[1/4]	L12010475-01 (2)	5.508	0.3156	0.00	LH	0.016	2:32:27 PM
8-[1/4]	L12010475-02	3.338	0.1891	0.00	LH	0.003	2:34:33 PM
9-[1/4]	L12010524-02 (3)	6.001	0.3443	0.00	LH	0.064	2:36:39 PM
13-[1/4]	L12010479-01	5.057	0.2893	0.00	LH		2:38:45 PM
19-[1/4]	L12010536-01	2.445	0.1371	0.00	LH		2:40:51 PM
20-[1/4]	L12010536-02 (2)	5.949	0.3413	0.00	LH		2:42:56 PM
21-[1/4]	L12010536-03 (2)	6.179	0.3547	0.00	LH		2:45:02 PM
23-[1/4]	L12010576-02	2.301	0.1287	0.00	LH		2:47:08 PM
24-[1/4]	L12010576-03	5.362	0.3071	0.00	LH		2:49:14 PM
ST-2	CCV (1 mg/L)	1.020	0.2323	101.97			2:50:08 PM
ST-3	CCB (0 mg/L)	-0.011	-0.0080	0.00	INV,><,LL		2:51:20 PM
25-[1/4]	DUP 576-03	5.477	0.3138	0.00	LH		2:53:44 PM
26-[1/4]	MS 576-03	6.054	0.3474	0.00	LH		2:55:50 PM
27-[1/4]	MS 479-01	5.450	0.3122	0.00	LH		2:57:56 PM
ST-2	CCV (1 mg/L)	0.980	0.2230	97.98			2:58:50 PM
ST-3	CCB (0 mg/L)	0.000	-0.0056	0.00	INV,><,LL		3:00:02 PM

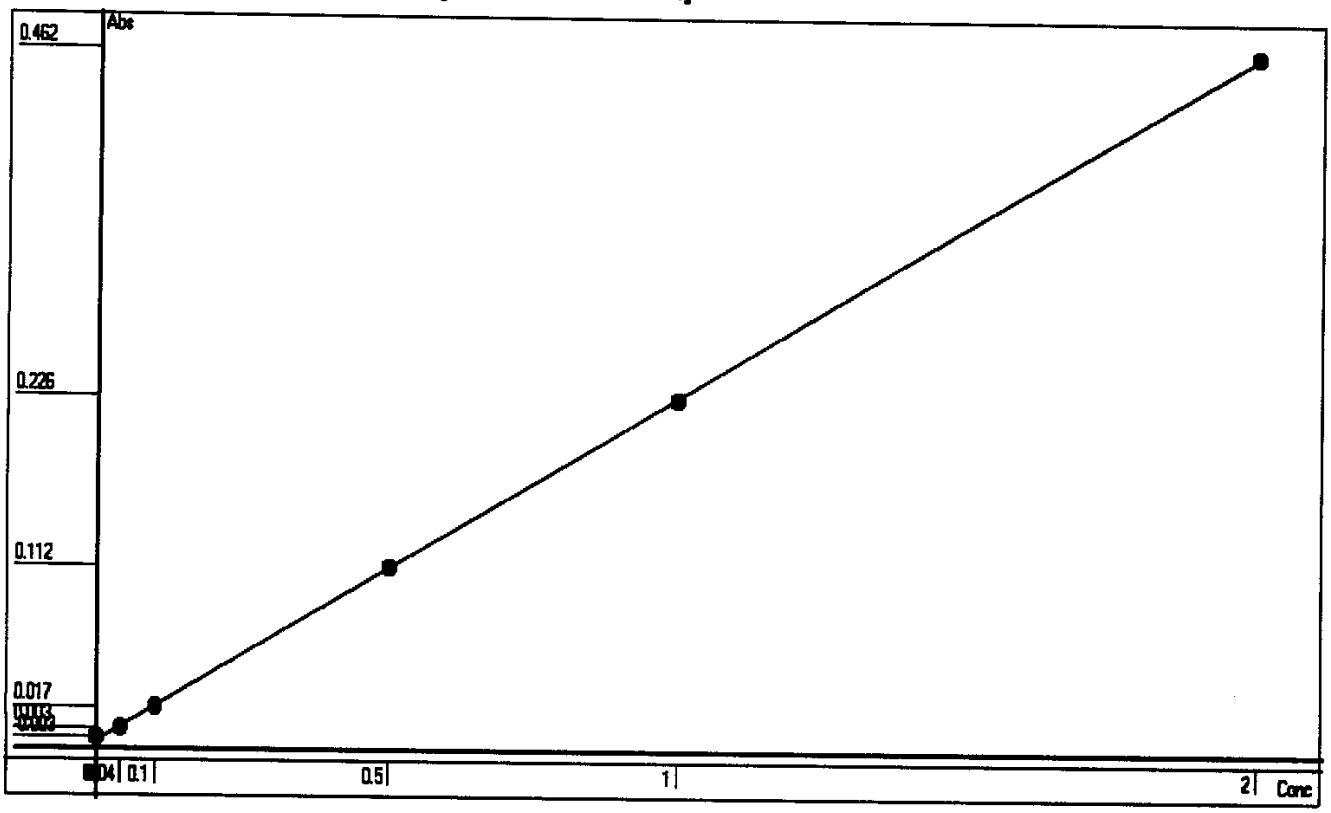
Report Date :01/23/2012 **Run Date :1/23/2012** **Operator : WESTCO** **Plan # :20120123001**

Plan Description : NO3-A-DIH/1/23/2012

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20120123001 Description : [NO3-A-DIH/1/23/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0033	0	0.0092	0.92
2	0.0030	0.04	0.0363	-9.25
3	0.0172	0.1	0.0972	-2.80
4	0.1116	0.5	0.5021	0.42
5	0.2260	1	0.9929	-0.71
6	0.4616	2	2.0035	0.18

Conc= +4.2897*Abso +0.0234 R^2=0.9999

RBL
0.0193
0

Report Date 1/23/2012 Run Date 1/23/2012

2.2.8 Orthophosphate Data

2.2.8.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Deanna Hesson

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: 41654
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	1V.1201220940-05
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 #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	T40-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	1V.1201220940-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.0948		0.0500	0.0250

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0112-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG387651	**Analyst:**	DIH	**Run Date:**	01/22/2012 09:40
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	1V.1201220940-07
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

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: 22-JAN-2012
Analyst: DIH
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387651

Calibration/Linearity	12/21/2011
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:
26-JAN-2012

Secondary Reviewer:
26-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-26-2012 11:00:00

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-20th AAB#: WG387651

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							2		01/22/12	2	2	
T40-0112-1	02	01/20/12							2		01/22/12	1.9	2	
MPL17-0112-1	03	01/20/12							2		01/22/12	1.8	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2287785
Report generated 01/24/2012 10:55

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: 1V.1201220940-02
Prep Date: 01/22/12 09:40
Analyzed Date: 01/22/12 09:40
Analyst: DIH

Work Group: WG387651
Blank Sample ID: WG387651-01
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	WG387651-02	1V.1201220940-03	01/22/12 09:40	
LCS2	WG387651-03	1V.1201220940-04	01/22/12 09:40	
MPL18-0112-1	L12010576-01	1V.1201220940-05	01/22/12 09:40	
T40-0112-1	L12010576-02	1V.1201220940-06	01/22/12 09:40	
MPL17-0112-1	L12010576-03	1V.1201220940-07	01/22/12 09:40	
DUP	WG387651-06	1V.1201220940-08	01/22/12 09:40	

Report Name: BLANK_SUMMARY
PDF File ID: 2287786
Report generated 01/24/2012 10:55

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/22/12 09:40 Sample ID: WG387651-01
Instrument ID: UV-120-1V Run Date: 01/22/12 09:40 Prep Method: SM4500-P-E-20th
File ID: 1V.1201220940-02 Analyst: DIH Method: SM4500-P-E-20th
Workgroup (AAB#): WG387651 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 12-JAN-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: 2287787
24-JAN-2012 10:55

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: DIH Prep Method: SM4500-P-E-20th
Instrument ID: UV-120-1V Matrix: Water Method: SM4500-P-E-20th
Workgroup (AAB#): WG387651 Units: mg/L
QC Key: DOD4 Lot #: STD49682

Sample ID: WG387651-02 LCS File ID: 1V.1201220940-03 Run Date: 01/22/2012 09:40
Sample ID: WG387651-03 LCS2 File ID: 1V.1201220940-04 Run Date: 01/22/2012 09:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	0.944	94.4	1.00	0.961	96.1	1.78	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2287788
Report generated: 01/24/2012 10:55

2.2.8.3 Raw Data

W G385 747

Curves

Parameter: PO4

Spectrophotometer: UV-120-IV

Calibration (Curve) standard stock: Std 47333

Concentration: 1000 mg/L

12/2/11 Recipe for preparation of curve standards found in:

SOP: ~~SCL3653~~ Revision: 13 Page: 9

Second Source Stock: Std 49228 (concentration: 10 mg/L)

Daily Preparation: 5(10)/50

concentration = 1.0 mg/L

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
1.0	50	1cm	880	0.643
0.7	50	1cm	880	0.475
0.5	50	1cm	880	0.321
0.2	50	1cm	880	0.133
0.1	50	1cm	880	0.068
0.05	50	1cm	880	0.033
0.00	50	1cm	880	0.001
Second Source (1.0)	50	1cm	880	0.647

Analyst: Holly Ferd Date/Time: 12/21/11 1435

DCN#89407

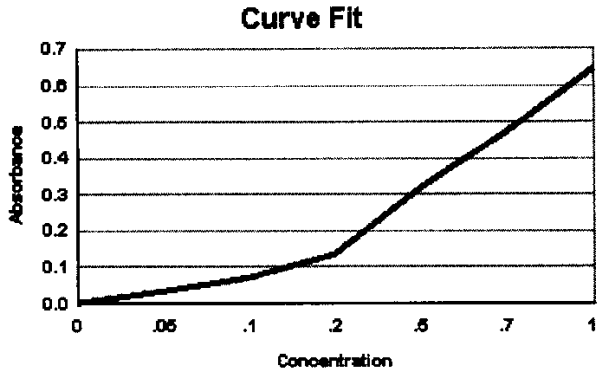
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG385747
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 12/21/2011

Analyte: ORTHOPHOSPHATE
Number of Points: 7
Slope: 0.649901
Y-Intercept: 0.00239330
Coef. Of Correlation (R^2): 0.998781
Coef. Of Correlation (R): 0.999390

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	0.00239330
0.0500	0.0330	0.00250	0.00165	0.0348883
0.100	0.0680	0.0100	0.00680	0.0673834
0.200	0.133	0.0400	0.0266	0.132373
0.500	0.321	0.250	0.161	0.327344
0.700	0.475	0.490	0.333	0.457324
1.00	0.643	1.00	0.643	0.652294



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 12/27/2011 10:18

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG385747
File ID: 1V.1112211435-08
CCV ID: WG385747-08
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 12/21/2011
Run Time: 14:35
Analyst: HJR
Cal ID: UV-120 - 21-DEC-11 14:35:07

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	1	0.992	0.647	0.8	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 12/27/2011 10:19

[redacted]

wg387651

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 13

Color Reagent Chemicals
Rgt 16866
Rgt 16865
RGT 168566, 1/22/12
COA 15323

CCV: std49681
Daily Dilution: 2/50(5)
Daily Dilution: = 0.5
Spectrophotometer: UV-120-1V

LCS: std49682
Daily Dilution: 5/50(10)
Daily Dilution: 1.0
Curve ID: 12/21/11

Spike: std49682
Daily Dilution: 2/50(10)
Daily Dilution: = 0.4

	SAMPLE	VOLUME	pH 7 ± 0.2	DILUTION	ABSORBANCE @ 800 nm
	CCV: 0.5 mg/L	50	✓		0.312
	BLANK	50	✓	~~0~~ 1/22/12	0.002
	LCS: 1.0 ppm	50	✓		0.616
	LCSDUP: 1.0 ppm	50	✓		0.627
18	01-576-01	50	✓		0.011
17	02	50	✓		0.064
	-03	50	✓		0.008
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
		50			
18	DUP: 576-01	50	✓		0.009
17	MS: (0.4) 576-03	50	✓		0.246
	MSD: (____) ____	50			
	CCV: (1.0) ____	50	✓		0.316

ANALYST: Deann Gibson DATE / TIME: 1/22/12 / 0940

DCN#89671

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG387651
Analyte: ORTHOPHOSPHATE

Analyst: DIH
Date: 01/22/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG387651-01	50	50	0.00200	0.6499	0.002393	-0.00060517	-0.00060517	1	mg/L
WG387651-02	50	50	0.616	0.6499	0.002393	0.94415	0.94415	1	mg/L
WG387651-03	50	50	0.627	0.6499	0.002393	0.96108	0.96108	1	mg/L
L12010576-01	50	50	0.0110	0.6499	0.002393	0.013243	ND	1	mg/L
WG387651-04	50	50	0.0110	0.6499	0.002393	0.013243	0.013243	1	mg/L
L12010576-02	50	50	0.0640	0.6499	0.002393	0.094794	0.094794	1	mg/L
L12010576-03	50	50	0.00800	0.6499	0.002393	0.0086270	ND	1	mg/L
WG387651-05	50	50	0.00800	0.6499	0.002393	0.0086270	0.0086270	1	mg/L
WG387651-06	50	50	0.00900	0.6499	0.002393	0.010166	0.010166	1	mg/L
WG387651-07	50	50	0.246	0.6499	0.002393	0.37484	0.37484	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 01/24/2012 10:54

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387793
File ID: 1V.1201220940-01
CCV ID: WG387793-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 01/22/2012
Run Time: 09:40
Analyst: DIM
Cal ID: UV-120 - 12-JAN-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.476	0.624	4.8	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/24/2012 10:53

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG387793
File ID: 1V.1201220940-10
CCV ID: WG387793-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 01/22/2012
Run Time: 09:40
Analyst: DIN
Cal ID: UV-120 - 12-JAN-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.483	0.632	3.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 01/24/2012 10:53

[redacted]

2.2.9 Total Dissolved Solids Data

2.2.9.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

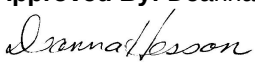
Matrix Spikes: All acceptance criteria were met.

Samples: All acceptance criteria were met.

SAMPLES

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: 41657
Approved By: Deanna Hesson



Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EN.1201251610-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		208		20.0	10.0

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	T40-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EN.1201251610-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		302		20.0	10.0

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0112-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG387937	**Analyst:**	HJR	**Run Date:**	01/25/2012 16:10
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EN.1201251610-16
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		324		20.0	10.0

2.2.9.2 QC Summary Data

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: HJR
Analyst: NA
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387937

Calibration/Linearity	1/25/12
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	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JAN-2012

Secondary Reviewer:
27-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 15:48:49

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG387937

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							7		01/25/12	5.2	7	
T40-0112-1	02	01/20/12							7		01/25/12	5.2	7	
MPL17-0112-1	03	01/20/12							7		01/25/12	5.1	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2292306
Report generated 01/27/2012 15:26

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: EN.1201251610-01
Prep Date: 01/25/12 16:10
Analyzed Date: 01/25/12 16:10
Analyst: HJR

Work Group: WG387937
Blank Sample ID: WG387937-01
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	WG387937-02	EN.1201251610-02	01/25/12 16:10	
LCS2	WG387937-03	EN.1201251610-03	01/25/12 16:10	
MPL18-0112-1	L12010576-01	EN.1201251610-14	01/25/12 16:10	
T40-0112-1	L12010576-02	EN.1201251610-15	01/25/12 16:10	
MPL17-0112-1	L12010576-03	EN.1201251610-16	01/25/12 16:10	
DUP	WG387937-05	EN.1201251610-24	01/25/12 16:10	
DUP	WG387937-07	EN.1201251610-25	01/25/12 16:10	

Report Name: BLANK_SUMMARY
PDF File ID: 2292307
Report generated 01/27/2012 15:26

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/25/12 16:10 Sample ID: WG387937-01
Instrument ID: OVEN Run Date: 01/25/12 16:10 Prep Method: 160.1/SM2540C
File ID: EN.1201251610-01 Analyst: HJR Method: 160.1
Workgroup (AAB#): WG387937 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: 2292308
27-JAN-2012 15:26

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: HJR Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG387937 Units: mg/L
QC Key: DOD4 Lot #: STD48299

Sample ID: WG387937-02 LCS File ID: EN.1201251610-02 Run Date: 01/25/2012 16:10
Sample ID: WG387937-03 LCS2 File ID: EN.1201251610-03 Run Date: 01/25/2012 16:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	504	101	500	502	100	0.398	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2292309
Report generated: 01/27/2012 15:26

2.2.9.3 Raw Data

TOTAL DISSOLVED SOLIDS

Oven: ☑ TDS1 ☐ MISC1

SOP K1601 Revision #: 12

☑ EPA 160.1/ SM2540C

Balance: AND GR-202 / Other

LCS: Std48299

Daily Dilution:

Matrix Spike:

Daily Dilution:

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	K	100	66.9846			
LCS: _____mg/L	V	50	51.9066			
LCSDUP: _____mg/L	C2	50	66.5210			
01-0519-01	U	50	57.2600			
-03	8X	50	55.4244			
-05	C4	50	64.4439			
-07	P4	100	74.5314			
01-0531-01	C6	50	62.7200			
01-0536-01	7K	56	56.9671			
-02	C12	50	69.4122			
-03	11	50	49.5543			
01-0540-01	F4	50	59.9325			
-02	C1	50	64.4723			
01-0576-01	9	56	51.5946			
-02	F6	50	56.2184			
-03	J4	50	57.9850			
01-0604-01	5T	50	60.6097			
-02	D3	100	80.9261			
-04	C3	50	65.4891			
-05	B11	50	51.7261			
01-0605-01	C10	50	71.8699			
-02	H	100	66.9196			
01-0613-01	J1		56.9512			
DUP: ~~01-0519-05~~ 01-0531-01	A	50	51.4050			
DUP: ~~01-0613-01~~	X	50	61.3527			

ANALYST: Holly Feed

DATE/TIME: (on) 1/25/12 1610

DATE/TIME: (off)

DATE/TIME: (off)

DATE/TIME: (off)

1/25/12

* Duplicate required on 10% of samples

01-0652-01					
02					

DCN#89714

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG387937
Analyst: HJR
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: K1601 Revison 12
Spike Solution: STD48299
Daily Dilution: 5(5000)/50=500

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG387937-01	K	100	66.9846	66.9845	66.9845		-1.000	-1.000	mg/L
WG387937-02	V	50	51.9066	51.9317	51.9318		504.0	504.0	mg/L
WG387937-03	C2	50	66.521	66.5465	66.5461		502.0	502.0	mg/L
L12010519-01	U	50	57.26	57.4226	57.4225		3250	3250	mg/L
L12010519-03	8X	50	55.4244	55.5367	55.5369		2250	2250	mg/L
L12010519-05	C4	50	64.4439	64.4855	64.4851		824.0	824.0	mg/L
L12010519-07	P4	100	74.5314	74.5315	74.5315		1.000	ND	mg/L
L12010531-01	C6	50	62.72	62.7264	62.7267		134.0	134.0	mg/L
WG387937-04	C6	50	62.72	62.7264	62.7267		134.0	134.0	mg/L
L12010536-01	7K	50	56.9671	56.9777	56.978		218.0	218.0	mg/L
L12010536-02	C12	50	69.4122	69.4434	69.4432		620.0	620.0	mg/L
L12010536-03	11	50	49.5543	49.5846	49.5846		606.0	606.0	mg/L
L12010540-01	F4	50	59.9325	59.9476	59.9475		300.0	300.0	mg/L
L12010540-02	C1	50	64.4723	64.5104	64.5101		756.0	756.0	mg/L
L12010576-01	9	50	51.5946	51.6051	51.605		208.0	208.0	mg/L
L12010576-02	F6	50	56.2184	56.2333	56.2335		302.0	302.0	mg/L
L12010576-03	J4	50	57.985	58.001	58.0012		324.0	324.0	mg/L
L12010604-01	T	50	60.0097	60.0915	60.0912		1630	1630	mg/L
WG387937-08	T	50	60.0097	60.0915	60.0912		1630	1630	mg/L
L12010604-02	D3	100	80.9261	80.9262	80.9261		0	ND	mg/L
L12010604-04	C3	50	65.4891	65.5974	65.5975		2168	2168	mg/L
WG387937-09	C3	50	65.4891	65.5974	65.5975		2168	2168	mg/L
L12010604-05	B11	50	51.7261	51.8348	51.8351		2180	2180	mg/L
WG387937-10	B11	50	51.7261	51.8348	51.8351		2180	2180	mg/L
L12010605-01	C10	50	71.8699	71.9265	71.9264		1130	1130	mg/L
L12010605-02	H	100	66.9696	66.9698	66.9697		1.000	ND	mg/L
L12010613-01	J1	50	56.9512	56.9767	56.9768		512.0	512.0	mg/L
WG387937-06	J1	50	56.9512	56.9767	56.9768		512.0	512.0	mg/L
WG387937-05	A	50	51.405	51.4111	51.4116		132.0	132.0	mg/L
WG387937-07	X	50	61.3527	61.3781	61.3781		508.0	508.0	mg/L

L12010604-05	msd=5(5000)/50=500
L12010604-04	ms=5(5000)/50=500
WG387937-09	ms=5(5000)/50=500
WG387937-10	msd=5(5000)/50=500

Analyst: HJR

*Duplicate required on 10% of samples

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2290115
Report generated: 01/27/2012 14:09

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Date/Time (on) :01/25/2012 16:10
Date/Time (off):01/26/2012 15:50
Date/Time (off):01/27/2012 13:55
Date/Time (off):

Analyte:
Balance:
Instrument:

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2290115
Report generated: 01/27/2012 14:09

2.2.10 Total Organic Carbon Data

2.2.10.1 Summary Data

Login Number: L12010576
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: 41655
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL18-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:18
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	TC01252012.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.534	J	1.00	0.500

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	T40-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:30
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	TC01252012.058
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.601	J	1.00	0.500

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0112-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG387864	**Analyst:**	DIH	**Run Date:**	01/26/2012 04:41
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	TC01252012.059
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.582	J	1.00	0.500

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

Certificate of Analysis

2.2.10.2 QC Summary Data

Total Organic Carbon Example Calculations
(Direct Readout Parameter)

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 25-JAN-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387852 WG387861 WG387864

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:
26-JAN-2012

Secondary Reviewer:
27-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 15:47:47

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG387864

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							28		01/26/12	5.7	28	
T40-0112-1	02	01/20/12							28		01/26/12	5.7	28	
MPL17-0112-1	03	01/20/12							28		01/26/12	5.6	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2291131
Report generated 01/27/2012 09:42

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: TC01252012.049
Prep Date: 01/26/12 02:44
Analyzed Date: 01/26/12 02:44
Analyst: DIH

Work Group: WG387864
Blank Sample ID: WG387864-01
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	WG387864-02	TC01252012.052	01/26/12 03:18	01
LCS2	WG387864-03	TC01252012.053	01/26/12 03:31	01
MPL18-0112-1	L12010576-01	TC01252012.057	01/26/12 04:18	01
T40-0112-1	L12010576-02	TC01252012.058	01/26/12 04:30	01
MPL17-0112-1	L12010576-03	TC01252012.059	01/26/12 04:41	01
DUP	WG387864-05	TC01252012.060	01/26/12 04:53	01

Report Name: BLANK_SUMMARY
PDF File ID: 2291132
Report generated 01/27/2012 09:42

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/26/12 02:44 Sample ID: WG387864-01
Instrument ID: TOC-VWP Run Date: 01/26/12 02:44 Prep Method: 415.1
File ID: TC01252012.049 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG387864 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: 2291133
27-JAN-2012 09:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG387864 Units: mg/L
QC Key: DOD4 Lot #: STD49306

Sample ID: WG387864-02 LCS File ID: TC01252012.052 Run Date: 01/26/2012 03:18
Sample ID: WG387864-03 LCS2 File ID: TC01252012.053 Run Date: 01/26/2012 03:31

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	23.3	93.0	25.0	25.0	99.9	7.17	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2291134
Report generated: 01/27/2012 09:42

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

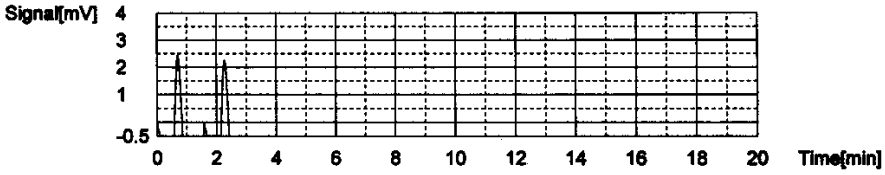
Sample Name: TC CURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-12-06-2011.2011_12_06_08_40_57.cal
Status Completed

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

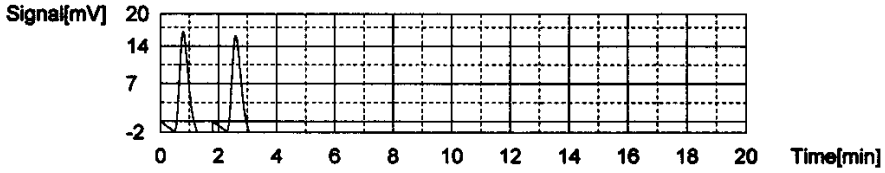
Acid Add. 0.000%
Mean Area 5.716



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

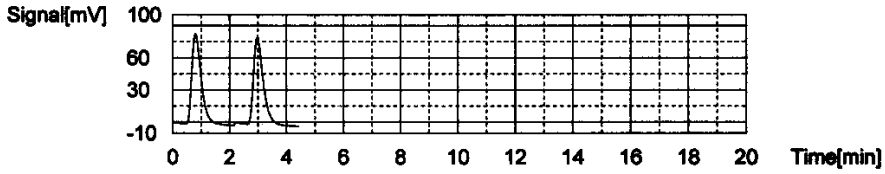
Acid Add. 0.000%
Mean Area 39.48



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

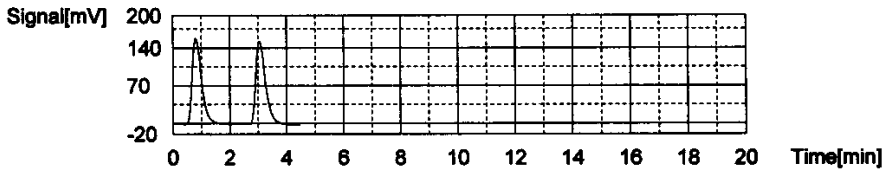
Acid Add. 0.000%
Mean Area 190.6



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

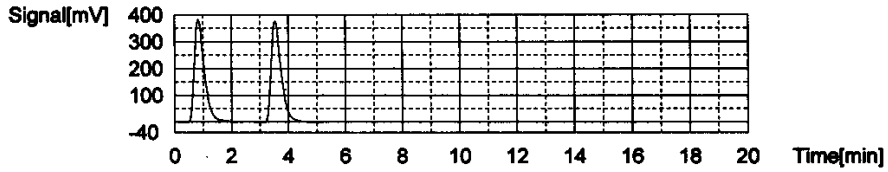
Acid Add. 0.000%
Mean Area 367.4



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

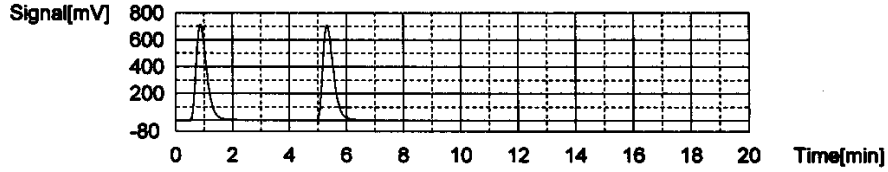
Acid Add. 0.000%
Mean Area 933.4



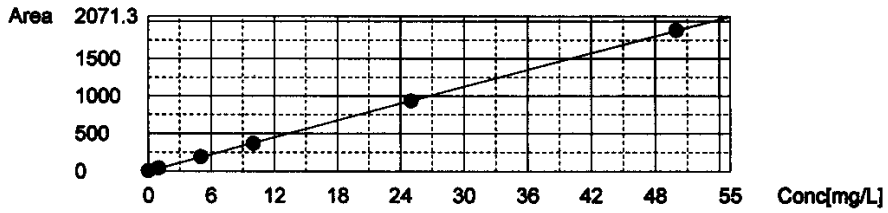
Conc: 50.00mg/L

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

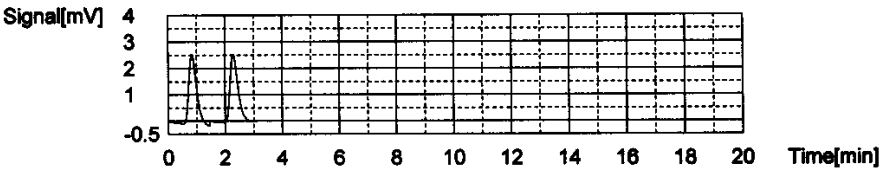
Sample Name: TIC CURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-12-06-2011B.2011_12_06_15_47_44.cal
Status Completed

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

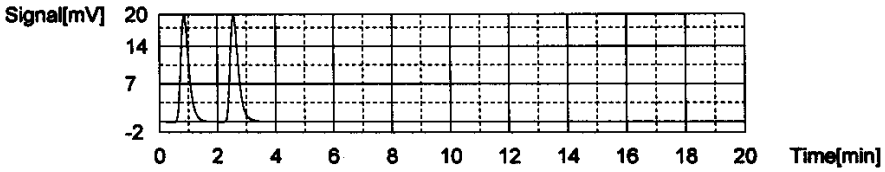
Acid Add. 10.00%
Mean Area 4.883



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

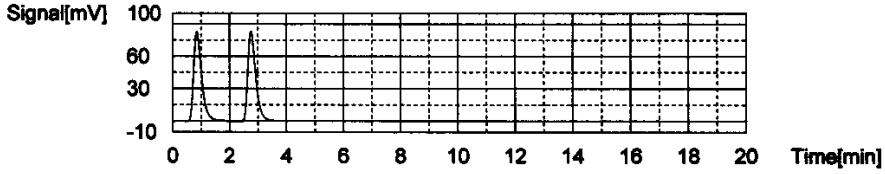
Acid Add. 10.00%
Mean Area 38.90



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

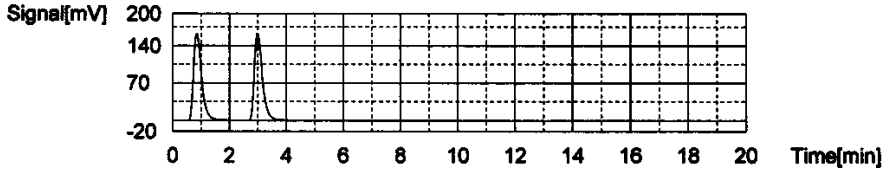
Acid Add. 10.00%
Mean Area 161.3



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

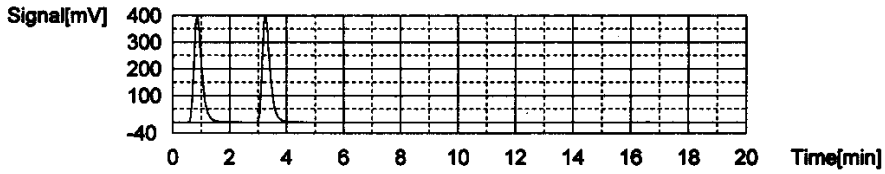
Acid Add. 10.00%
Mean Area 318.9



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

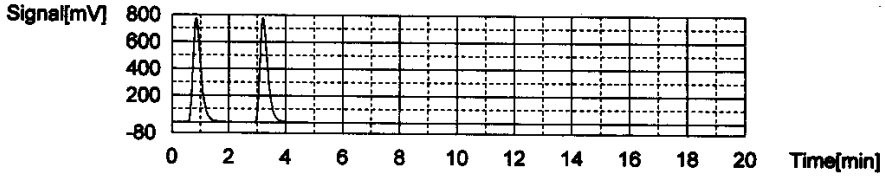
Acid Add. 10.00%
Mean Area 765.5



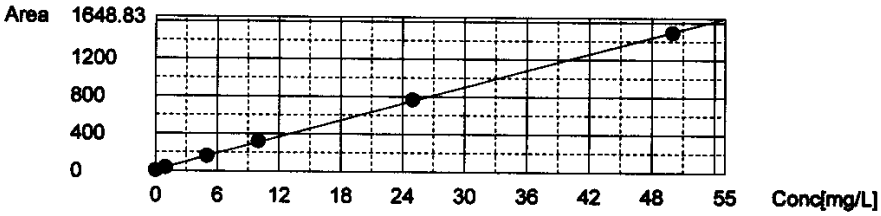
Conc: 50.00mg/L

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

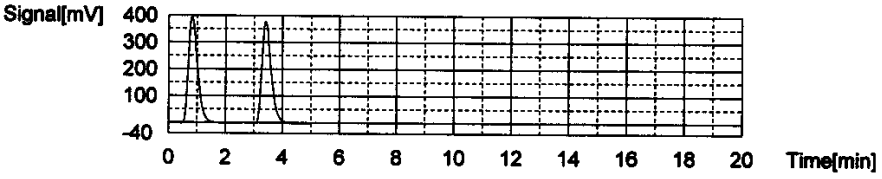
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:23.27mg/L

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

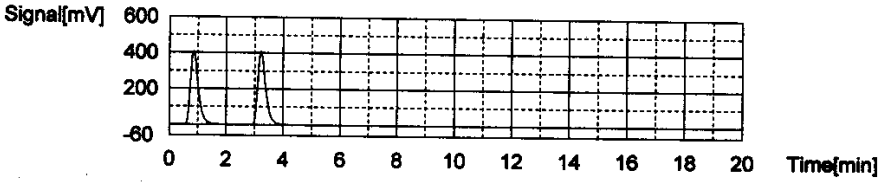
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:26.21mg/L

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



WORKGROUP: WG387852

387861

Total Organic Carbon

MAKE DAILY

CCV (TOC): std 47222
(5/200)(1000) = 25mg/L

LCS (TOC): std 49306
(5/200)(1000) = 25mg/L

387864

CCV (TIC): std 47189
(5/200)(1000) = 25mg/L

MS (TOC): 0.4/40(1000)=10

Calibration Curve Date: 12/6/12

Reagent: ROT 16782
ROT 16590

☐ SM5310-C : Matrix 2 WG _____

☑ EPA 415.1/9060A(mod): Matrix 1 WG 387852, 387864 SOP: K 4151 Rev. 4

☑ 9060A WG 387861 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	CCV 25	
2	CCV TIC25	
3	BLK	
4	LCS 25	
5	LCSDUP	
6	01-541-02D	
7	04D	
8	06D	
9	BK 08D	
10	DISS. BLK	
11	01-481-01	
12	02	
13	03	
14	CCV	
15	CCB	
16	01-481-04	
17	05	
18	06	
19	07	
20	08	
21	09	
22	10	
23	11	
24	12	
25	13	

Position	Sample ID	Dilution
26	CCV	
27	CCB	
28	01-481-14	
29	15	
30	01-613-01	
31	DUP ↓	
32	MS ↓	
33	BLK	
34	LCS 25	
35	LCSDUP	
36	01-454-05 BLK	
37	08	
38	CCV	
39	CCB	
40	01-454-09	
41	15	
42	DUP 15	
43	MS 16	
44	MSD 17	
45	18	
46	19	
47	01-478-01 BLK	
48	03	
49	BLK	
50	CCV	

Position	Sample ID	Dilution
51	CCB	
52	LCS	
53	LCSDUP	
54	01-536-01	
55	02	
56	03	
57	01-576-01	
58	02	
59	03	
60	DUP ↓	
61	MS ↓	
62	CCV	
63	CCB	
64 R	01-541-02D	1/3
65 R	04D	1/3
66 R	06D	1/3
67 R	01-481-02	1/2
68 R	07	1/2
3 69 R	09	1/2
15 70 R	12	1/4
1 71 R	CCV	
0 72 R	CCB	
73		
74		
75		

Analyst: Deanna Hoosen Date/Time: 1/25/12

*541 filtered before analysis
filters washed 1:10 HNO3

DCN#89702

C:\TOC3201\Data\01-25-2012-DIH-TOC.t32

	Analysi	Sample Name	Result	Status	Date / Time	Vial
1	TOC	CCV 25	!!Error!! TOC:21.74mg/L TC:21.52mg/L IC:-0.2159mg	Complet	01/25/2012 09:36:37 AM	1
2	TOC	TIC 25	TOC:1.660mg/L TC:26.54mg/L IC:24.88mg/L	Complet	01/25/2012 09:49:53 AM	2
3	TOC	WG387852-01 BLK	!!Error!! TOC:0.4795mg/L TC:0.2794mg/L IC:-0.2002m	Complet	01/25/2012 09:59:03 AM	0
4	TOC	WG387852-02 LCS	!!Error!! TOC:26.01mg/L TC:25.74mg/L IC:-0.2740mg	Complet	01/25/2012 10:11:12 AM	4
5	TOC	WG387852-03 LCSDUP	!!Error!! TOC:25.93mg/L TC:25.66mg/L IC:-0.2670mg	Complet	01/25/2012 10:23:55 AM	5
6	TOC		!!Error!! TOC:-0.9482mg/L TC:70.32mg/L IC:71.27mg	Complet	01/25/2012 10:40:05 AM	6
7	TOC		!!Error!! TOC:-6.174mg/L TC:75.46mg/L IC:81.63mg/L	Complet	01/25/2012 10:56:19 AM	7
8	TOC		!!Error!! TOC:-3.893mg/L TC:69.49mg/L IC:73.39mg/L	Complet	01/25/2012 11:10:29 AM	8
9	TOC	L12010541-08	TOC:1.116mg/L TC:1.245mg/L IC:0.1293mg/L	Complet	01/25/2012 11:22:26 AM	9
10	TOC	DISS BLK	!!Error!! TOC:0.5863mg/L TC:0.4085mg/L IC:-0.1778m	Complet	01/25/2012 11:34:04 AM	10
11	TOC	L12010481-01	TOC:7.053mg/L TC:34.25mg/L IC:27.20mg/L	Complet	01/25/2012 11:47:53 AM	11
12	TOC		TOC:7.374mg/L TC:67.47mg/L IC:60.10mg/L	Complet	01/25/2012 12:04:29 PM	12
13	TOC	L12010481-03	TOC:6.996mg/L TC:36.30mg/L IC:29.31mg/L	Complet	01/25/2012 12:18:06 PM	13
14	TOC	CCV	!!Error!! TOC:24.26mg/L TC:24.19mg/L IC:-0.06984mg	Complet	01/25/2012 12:30:19 PM	14
15	TOC	CCB	!!Error!! TOC:0.4294mg/L TC:0.2209mg/L IC:-0.2085m	Complet	01/25/2012 12:39:32 PM	0
16	TOC	L12010481-04	TOC:4.566mg/L TC:19.11mg/L IC:14.54mg/L	Complet	01/25/2012 12:52:23 PM	16
17	TOC	L12010481-05	TOC:9.455mg/L TC:36.62mg/L IC:27.17mg/L	Complet	01/25/2012 01:06:20 PM	17
18	TOC	L12010481-06	TOC:2.648mg/L TC:36.06mg/L IC:33.41mg/L	Complet	01/25/2012 01:19:43 PM	18
19	TOC		TOC:48.83mg/L TC:65.05mg/L IC:16.21mg/L	Complet	01/25/2012 01:35:31 PM	19
20	TOC	L12010481-08	TOC:16.59mg/L TC:49.53mg/L IC:32.94mg/L	Complet	01/25/2012 01:49:27 PM	20
21	TOC		TOC:12.90mg/L TC:68.99mg/L IC:56.09mg/L	Complet	01/25/2012 02:04:49 PM	21
22	TOC	L12010481-10	TOC:7.153mg/L TC:31.09mg/L IC:23.93mg/L	Complet	01/25/2012 02:18:15 PM	22
23	TOC	L12010481-11	TOC:2.823mg/L TC:19.66mg/L IC:16.83mg/L	Complet	01/25/2012 02:31:09 PM	23
24	TOC		TOC:36.25mg/L TC:96.38mg/L IC:60.13mg/L	Complet	01/25/2012 02:47:41 PM	24
25	TOC	L12010481-13	TOC:6.398mg/L TC:23.64mg/L IC:17.24mg/L	Complet	01/25/2012 03:00:59 PM	25
26	TOC	CCV	!!Error!! TOC:24.82mg/L TC:24.72mg/L IC:-0.1035mg	Complet	01/25/2012 03:13:25 PM	26
27	TOC	CCB	!!Error!! TOC:0.4361mg/L TC:0.2314mg/L IC:-0.2047m	Complet	01/25/2012 03:22:45 PM	0
28	TOC	L12010481-14	TOC:3.739mg/L TC:28.58mg/L IC:24.84mg/L	Complet	01/25/2012 03:36:11 PM	28
29	TOC	L12010481-15	TOC:25.94mg/L TC:43.25mg/L IC:17.30mg/L	Complet	01/25/2012 03:50:34 PM	29
30	TOC	L12010613-01	TOC:1.665mg/L TC:7.530mg/L IC:5.865mg/L	Complet	01/25/2012 04:03:09 PM	30
31	TOC	WG387852-05 DUP	TOC:1.482mg/L TC:6.809mg/L IC:5.327mg/L	Complet	01/25/2012 04:15:23 PM	31
32	TOC	WG387852-06 MS	TOC:11.21mg/L TC:19.88mg/L IC:8.668mg/L	Complet	01/25/2012 04:27:48 PM	32
33	TOC	WG387861-01 BLK	!!Error!! TOC:0.4027mg/L TC:0.1875mg/L IC:-0.2152m	Complet	01/25/2012 05:04:22 PM	0
34	TOC	WG387861-02 LCS	!!Error!! TOC:25.86mg/L TC:25.63mg/L IC:-0.2326mg	Complet	01/25/2012 05:44:40 PM	34
35	TOC	WG387861-03 LCSDUP	!!Error!! TOC:25.20mg/L TC:24.97mg/L IC:-0.2294mg	Complet	01/25/2012 06:24:11 PM	35
36	TOC	L12010454-05	!!Error!! TOC:0.5844mg/L TC:0.4449mg/L IC:-0.1395m	Complet	01/25/2012 07:00:51 PM	36
37	TOC	L12010454-08	TOC:6.575mg/L TC:31.38mg/L IC:24.80mg/L	Complet	01/25/2012 07:47:22 PM	37
38	TOC	CCV	!!Error!! TOC:24.62mg/L TC:24.55mg/L IC:-0.07018mg	Complet	01/25/2012 07:59:57 PM	38
39	TOC	CCB	!!Error!! TOC:0.4093mg/L TC:0.2157mg/L IC:-0.1935m	Complet	01/25/2012 08:09:17 PM	0
40	TOC	L12010454-09	TOC:4.904mg/L TC:26.35mg/L IC:21.44mg/L	Complet	01/25/2012 08:53:02 PM	40
41	TOC	L12010454-15	TOC:5.035mg/L TC:28.70mg/L IC:23.67mg/L	Complet	01/25/2012 09:37:27 PM	41
42	TOC	WG387861-05 DUP	TOC:5.286mg/L TC:28.32mg/L IC:23.03mg/L	Complet	01/25/2012 10:20:50 PM	42
43	TOC	L12010454-16 MS	TOC:14.51mg/L TC:31.74mg/L IC:17.24mg/L	Complet	01/25/2012 11:04:29 PM	43
44	TOC	L12010454-17 MSD	TOC:14.77mg/L TC:33.66mg/L IC:18.89mg/L	Complet	01/25/2012 11:50:03 PM	44
45	TOC	L12010454-18	TOC:5.121mg/L TC:23.84mg/L IC:18.72mg/L	Complet	01/26/2012 12:34:46 AM	45
46	TOC	L12010454-19	TOC:3.886mg/L TC:21.39mg/L IC:17.50mg/L	Complet	01/26/2012 01:19:11 AM	46
47	TOC	L12010478-01	!!Error!! TOC:0.5841mg/L TC:0.4427mg/L IC:-0.1414m	Complet	01/26/2012 01:55:39 AM	47
48	TOC	L12010478-03	TOC:4.231mg/L TC:15.11mg/L IC:10.87mg/L	Complet	01/26/2012 02:39:37 AM	48
49	TOC	WG387864-01 BLK	!!Error!! TOC:0.3543mg/L TC:0.1964mg/L IC:-0.1578m	Complet	01/26/2012 02:48:55 AM	0
50	TOC	CCV	!!Error!! TOC:23.20mg/L TC:23.01mg/L IC:-0.1878mg	Complet	01/26/2012 03:01:06 AM	50
51	TOC	CCB	!!Error!! TOC:0.4011mg/L TC:0.1945mg/L IC:-0.2066m	Complet	01/26/2012 03:10:27 AM	0
52	TOC	WG387864-02 LCS	!!Error!! TOC:23.25mg/L TC:23.04mg/L IC:-0.2137mg	Complet	01/26/2012 03:22:54 AM	52
53	TOC	WG387864-03 LCSDUP	!!Error!! TOC:24.98mg/L TC:24.76mg/L IC:-0.2130mg	Complet	01/26/2012 03:35:27 AM	53
54	TOC	L12010536-01	TOC:0.5692mg/L TC:1.011mg/L IC:0.4416mg/L	Complet	01/26/2012 03:47:24 AM	54
55	TOC	L12010536-02	TOC:0.9278mg/L TC:1.525mg/L IC:0.5967mg/L	Complet	01/26/2012 03:59:16 AM	55
56	TOC	L12010536-03	TOC:0.8487mg/L TC:1.302mg/L IC:0.4530mg/L	Complet	01/26/2012 04:11:10 AM	56
57	TOC	L12010576-01	TOC:0.5339mg/L TC:1.342mg/L IC:0.8080mg/L	Complet	01/26/2012 04:23:00 AM	57
58	TOC	L12010576-02	TOC:0.6007mg/L TC:1.118mg/L IC:0.5176mg/L	Complet	01/26/2012 04:34:49 AM	58
59	TOC	L12010576-03	TOC:0.5817mg/L TC:0.8490mg/L IC:0.2673mg/L	Complet	01/26/2012 04:46:28 AM	59
60	TOC	WG387864-05 DUP	TOC:0.5791mg/L TC:0.9554mg/L IC:0.3763mg/L	Complet	01/26/2012 04:58:12 AM	60
61	TOC	WG387864-06 MS	TOC:9.351mg/L TC:11.62mg/L IC:2.270mg/L	Complet	01/26/2012 05:10:36 AM	61
62	TOC	CCV	!!Error!! TOC:22.67mg/L TC:22.47mg/L IC:-0.1985mg	Complet	01/26/2012 05:23:02 AM	62
63	TOC	CCB	!!Error!! TOC:0.3882mg/L TC:0.1835mg/L IC:-0.2048m	Complet	01/26/2012 05:32:23 AM	0
64	TOC	L12010541-02 (3)	TOC:1.238mg/L TC:23.21mg/L IC:21.97mg/L	Complet	01/26/2012 05:45:44 AM	64
65	TOC	L12010541-04 (3)	TOC:1.349mg/L TC:23.45mg/L IC:22.11mg/L	Complet	01/26/2012 05:59:19 AM	65
66	TOC	L12010541-06 (3)	TOC:1.863mg/L TC:20.43mg/L IC:18.56mg/L	Complet	01/26/2012 06:12:12 AM	66
67	TOC	L12010481-02 (2)	TOC:1.577mg/L TC:3.008mg/L IC:1.430mg/L	Complet	01/26/2012 06:24:25 AM	67

01/26/2012 08:04:40 AM

1/2

C:\TOC3201\Data\01-25-2012-DIH-TOC.t32

	Analysi	Sample Name	Result	Status	Date / Time	Vial
68	TOC	L12010481-07 (2)	TOC:19.89mg/L TC:20.22mg/L IC:0.3346mg/L	Complet	01/26/2012 06:37:13 AM	68
69	TOC	L12010481-09 (2)	TOC:3.534mg/L TC:5.441mg/L IC:1.906mg/L	Complet	01/26/2012 06:49:56 AM	3
70	TOC	L12010481-12 (4)	TOC:9.198mg/L TC:10.03mg/L IC:0.8369mg/L	Complet	01/26/2012 07:02:14 AM	15
71	TOC	CCV	!!Error!! TOC:24.60mg/L TC:24.40mg/L IC:-0.2047mg	Complet	01/26/2012 07:14:47 AM	1
72	TOC	CCB	!!Error!! TOC:0.4094mg/L TC:0.2083mg/L IC:-0.2011m	Complet	01/26/2012 07:24:05 AM	0

01/26/2012 08:04:40 AM

2/2

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

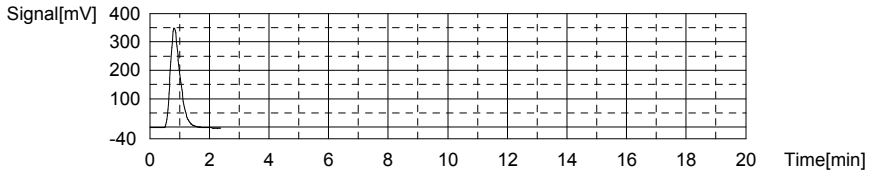
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:21.58mg/L TC:21.35mg/L IC:-0.2283mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	802.4	21.35mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 03:38:58 PM

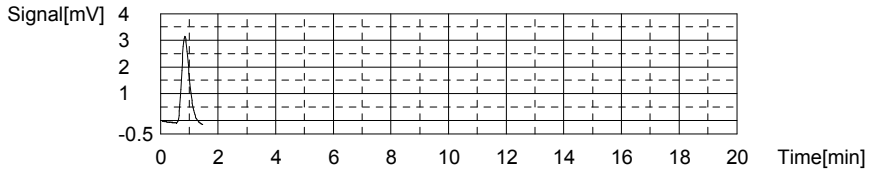
Mean Area 802.4
Mean Conc. 21.35mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.100	-0.2283mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 03:43:17 PM

Mean Area 6.100
Mean Conc. -0.2283mg/L



Sample

Sample Name: TIC25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

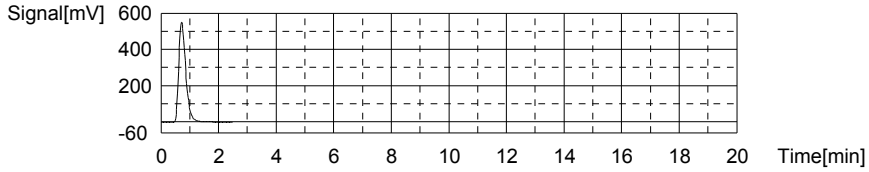
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.131mg/L TC:25.17mg/L IC:24.04mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	945.7	25.17mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 03:51:11 PM

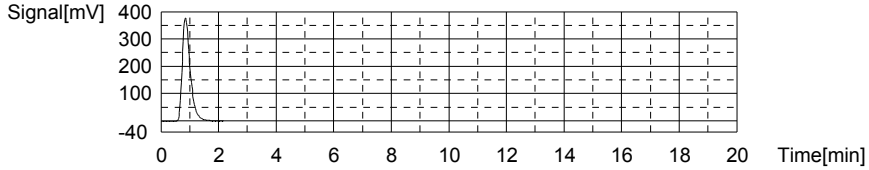
Mean Area 945.7
Mean Conc. 25.17mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	727.3	24.04mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 03:56:32 PM

Mean Area 727.3
Mean Conc. 24.04mg/L



Sample

Sample Name: WG388050-01 BLK
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

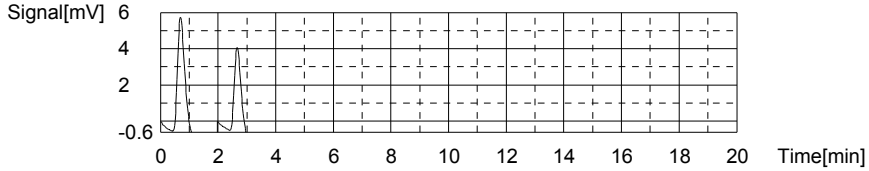
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4614mg/L TC:0.2660mg/L IC:-0.1954mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.36	0.3265mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:02:08 PM
2	7.813	0.2055mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:06:16 PM

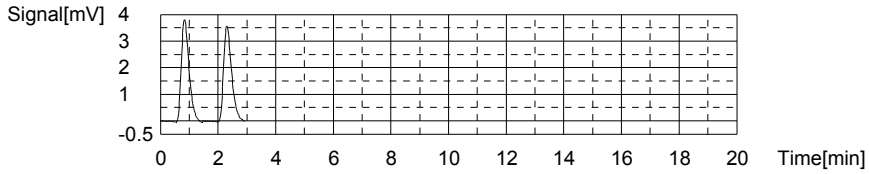
Mean Area 10.09
Mean Conc. 0.2660mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.259	-0.1893mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:10:11 PM
2	6.898	-0.2015mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:14:04 PM

Mean Area 7.079
Mean Conc. -0.1954mg/L



Sample

Sample Name: WG388050-02 LCS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

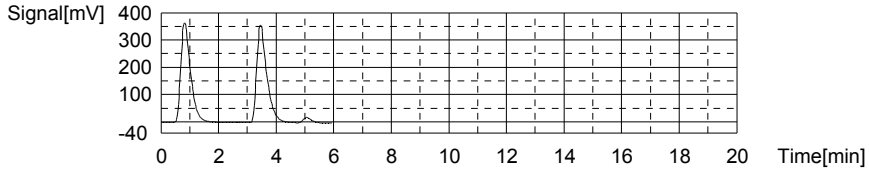
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.79mg/L TC:23.50mg/L IC:-0.2924mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	856.2	22.79mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:22:08 PM
2	909.8	24.21mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:27:43 PM

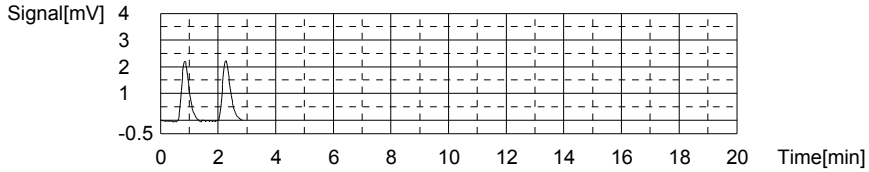
Mean Area 883.0
Mean Conc. 23.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.214	-0.2918mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:32:01 PM
2	4.175	-0.2931mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:36:02 PM

Mean Area 4.194
Mean Conc. -0.2924mg/L



Sample

Sample Name: WG388050-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

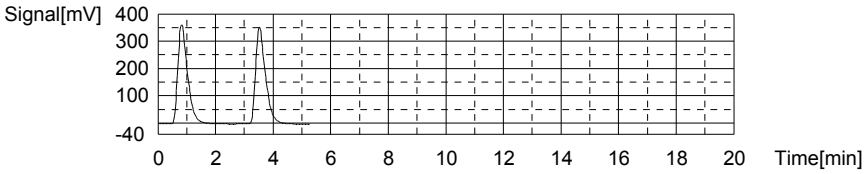
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:22.67mg/L TC:22.39mg/L IC:-0.2799mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	845.7	22.51mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:44:10 PM
2	836.7	22.27mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 04:49:01 PM

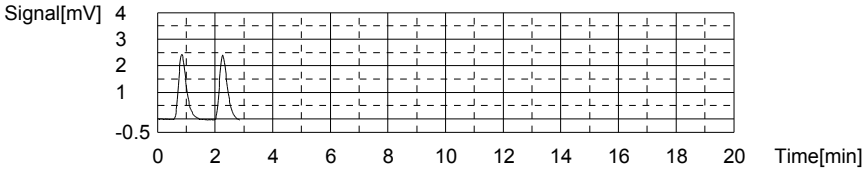
Mean Area 841.2
Mean Conc. 22.39mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.543	-0.2807mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:53:17 PM
2	4.588	-0.2792mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 04:57:20 PM

Mean Area 4.566
Mean Conc. -0.2799mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

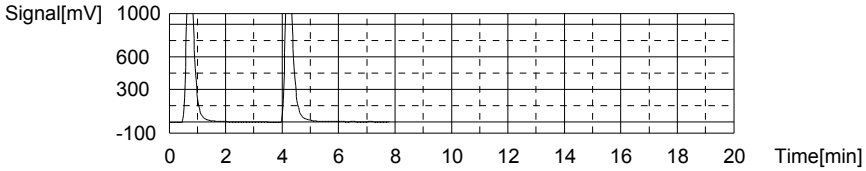
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:31.86mg/L TC:71.34mg/L IC:39.49mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2663	70.88mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 05:06:16 PM
2	2698	71.81mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 05:13:39 PM

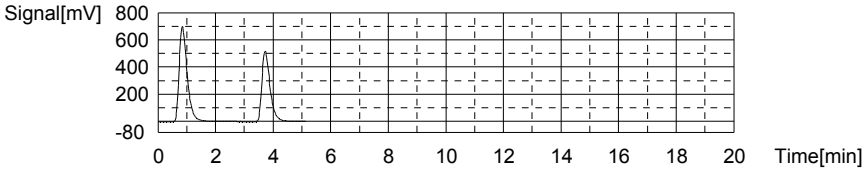
Mean Area 2681
Mean Conc. 71.34mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1360	45.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 05:19:56 PM
2	1013	33.65mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 05:25:20 PM

Mean Area 1187
Mean Conc. 39.49mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

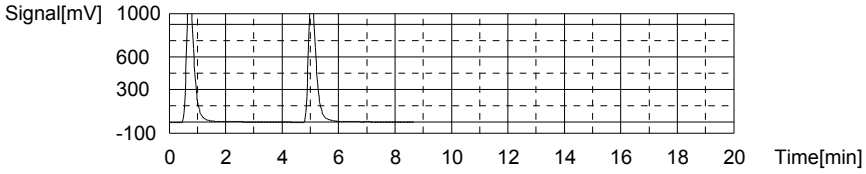
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.58mg/L TC:59.96mg/L IC:49.38mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2257	60.07mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 05:35:05 PM
2	2249	59.86mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 05:41:49 PM

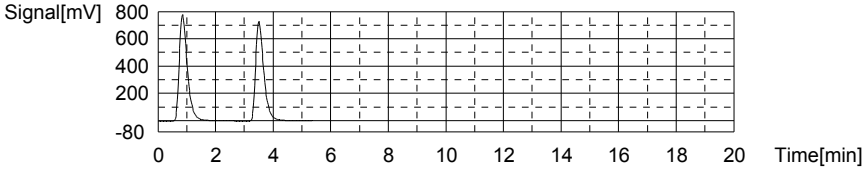
Mean Area 2253
Mean Conc. 59.96mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1522	50.78mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 05:48:01 PM
2	1439	47.98mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 05:53:57 PM

Mean Area 1481
Mean Conc. 49.38mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

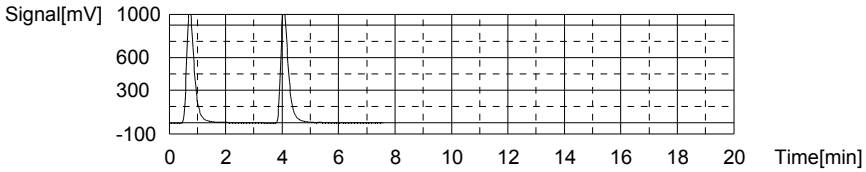
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.69mg/L TC:53.28mg/L IC:40.60mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1992	53.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 06:02:43 PM
2	2012	53.55mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 06:10:08 PM

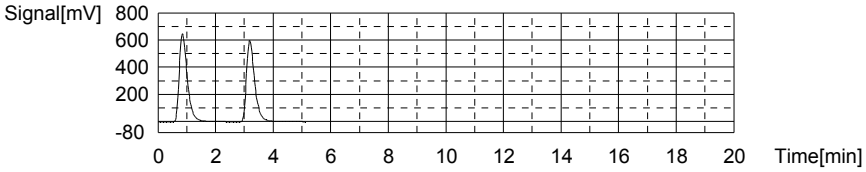
Mean Area 2002
Mean Conc. 53.28mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1260	41.96mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 06:15:52 PM
2	1179	39.24mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 06:21:45 PM

Mean Area 1220
Mean Conc. 40.60mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

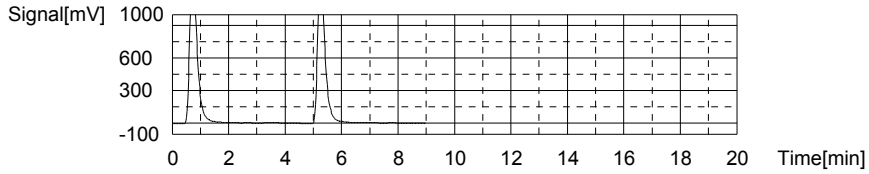
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:34.08mg/L TC:68.07mg/L IC:33.99mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2617	69.65mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 06:31:43 PM
2	2498	66.49mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 06:38:28 PM

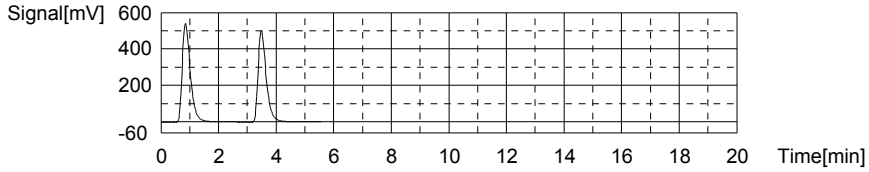
Mean Area 2558
Mean Conc. 68.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1060	35.23mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 06:44:33 PM
2	986.3	32.75mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 06:50:28 PM

Mean Area 1023
Mean Conc. 33.99mg/L



Sample

Sample Name: L12010604-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

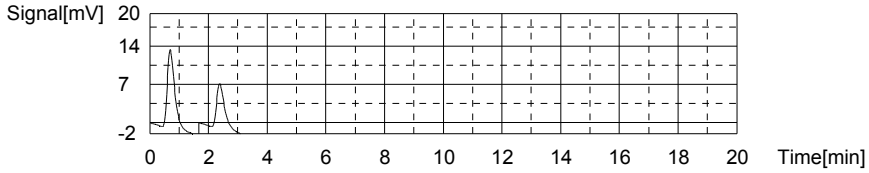
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.6255mg/L TC:0.5285mg/L IC:-0.09698mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24.73	0.6557mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 06:57:34 PM
2	15.17	0.4013mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 07:01:38 PM

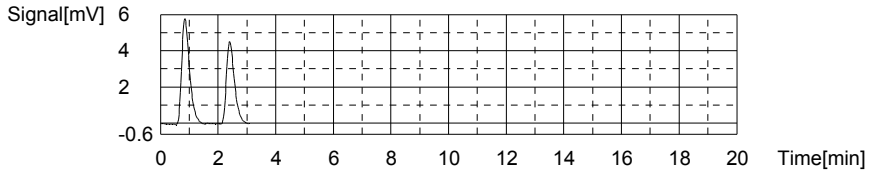
Mean Area 19.95
Mean Conc. 0.5285mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.23	-0.05571mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 07:06:12 PM
2	8.777	-0.1382mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 07:10:22 PM

Mean Area 10.00
Mean Conc. -0.09698mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

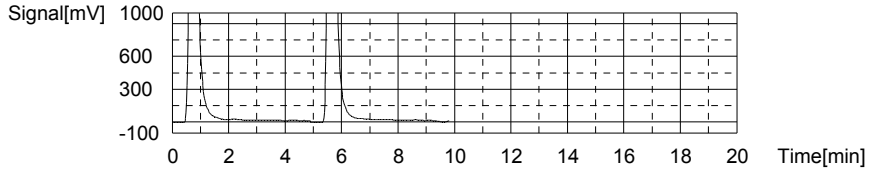
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-12.06mg/L TC:109.4mg/L IC:121.5mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4096	109.0mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 07:20:41 PM
2	4128	109.9mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 07:29:14 PM

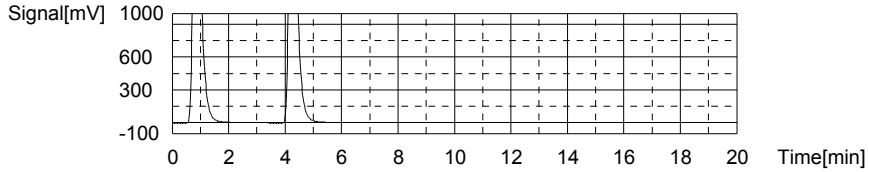
Mean Area 4112
Mean Conc. 109.4mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3635	121.9mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 07:36:38 PM
2	3613	121.1mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 07:43:33 PM

Mean Area 3624
Mean Conc. 121.5mg/L



Sample

Sample Name: L12010605-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

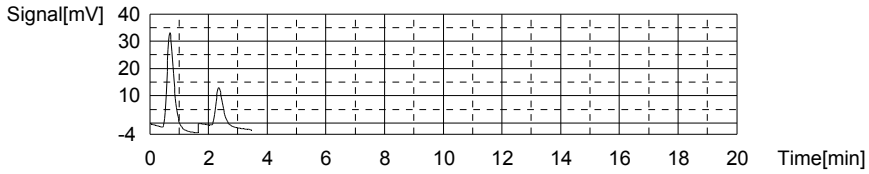
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7997mg/L TC:1.057mg/L IC:0.2577mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.99	1.488mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 07:50:38 PM
2	23.65	0.6270mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 07:54:43 PM

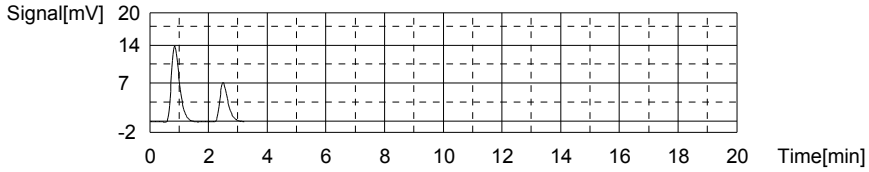
Mean Area 39.82
Mean Conc. 1.057mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.26	0.4836mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 07:59:43 PM
2	13.83	0.03177mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 08:03:58 PM

Mean Area 20.55
Mean Conc. 0.2577mg/L



Sample

Sample Name: L12010688-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

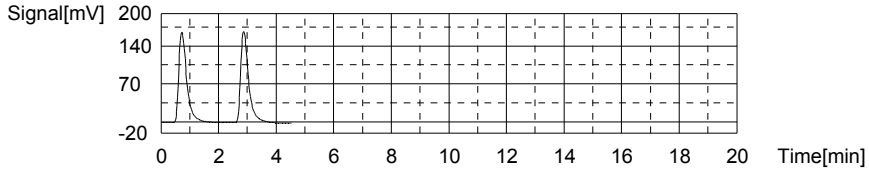
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.703mg/L TC:8.599mg/L IC:5.895mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	322.4	8.579mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 08:11:33 PM
2	323.9	8.619mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 08:16:11 PM

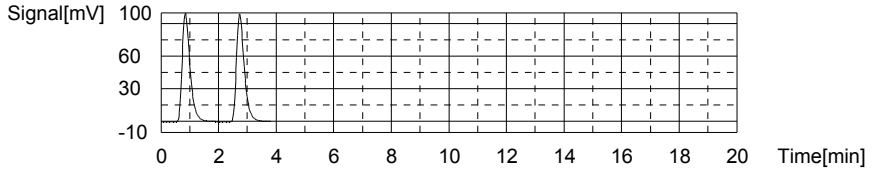
Mean Area 323.2
Mean Conc. 8.599mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	188.7	5.915mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 08:21:02 PM
2	187.5	5.875mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 08:25:42 PM

Mean Area 188.1
Mean Conc. 5.895mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

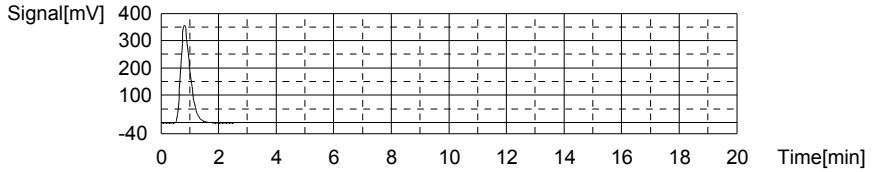
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:22.01mg/L TC:21.84mg/L IC:-0.1711mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	820.7	21.84mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 08:33:40 PM

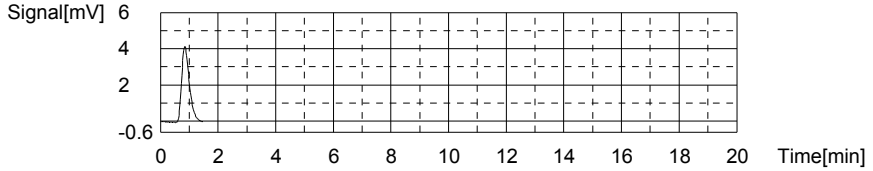
Mean Area 820.7
Mean Conc. 21.84mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.801	-0.1711mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 08:38:00 PM

Mean Area 7.801
Mean Conc. -0.1711mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

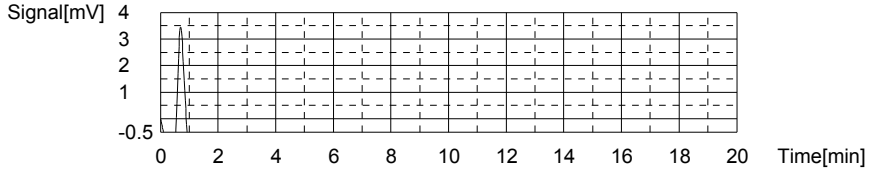
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4060mg/L TC:0.2268mg/L IC:-0.1792mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.613	0.2268mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 08:43:24 PM

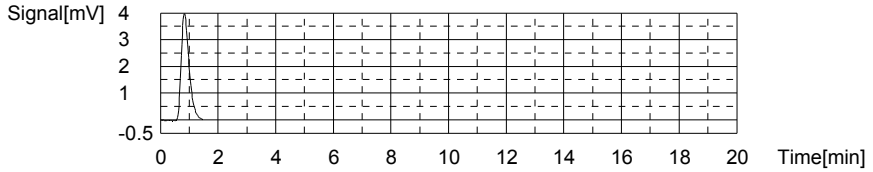
Mean Area 8.613
Mean Conc. 0.2268mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.559	-0.1792mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	01/26/2012 08:47:16 PM

Mean Area 7.559
Mean Conc. -0.1792mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

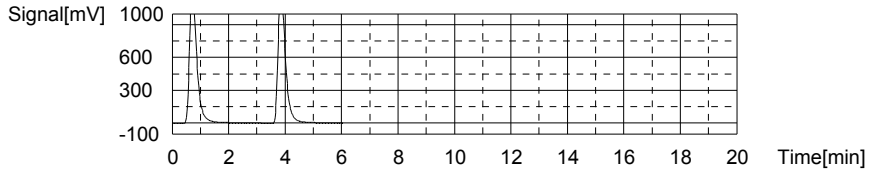
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.376mg/L TC:59.19mg/L IC:49.82mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2222	59.14mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 08:55:51 PM
2	2226	59.25mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 09:01:02 PM

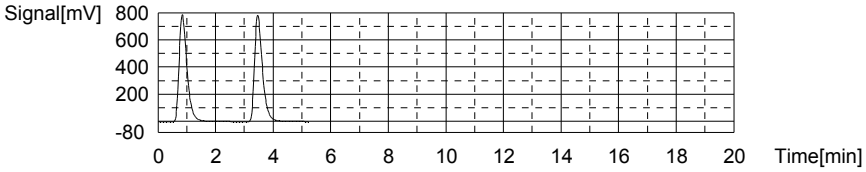
Mean Area 2224
Mean Conc. 59.19mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1496	49.90mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:07:02 PM
2	1491	49.73mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:12:42 PM

Mean Area 1494
Mean Conc. 49.82mg/L



Sample

Sample Name: L12010688-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

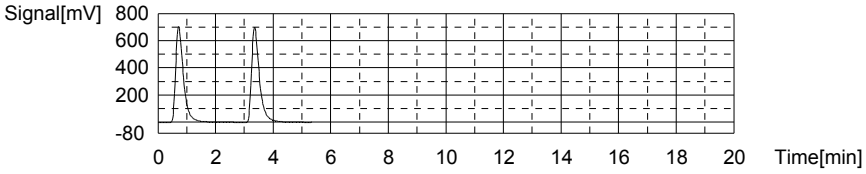
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.965mg/L TC:35.44mg/L IC:27.47mg/L

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	01/26/2012 09:20:47 PM
2	1336	35.56mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 09:26:41 PM

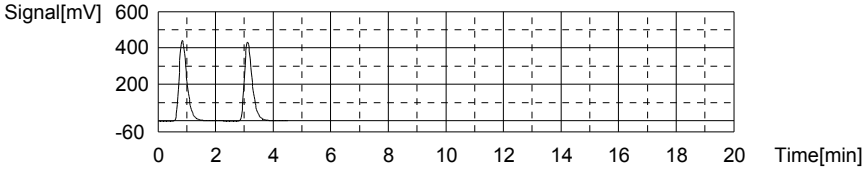
Mean Area 1332
Mean Conc. 35.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	838.8	27.79mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:32:17 PM
2	820.0	27.16mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:37:27 PM

Mean Area 829.4
Mean Conc. 27.47mg/L



Sample

Sample Name: L12010688-04
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

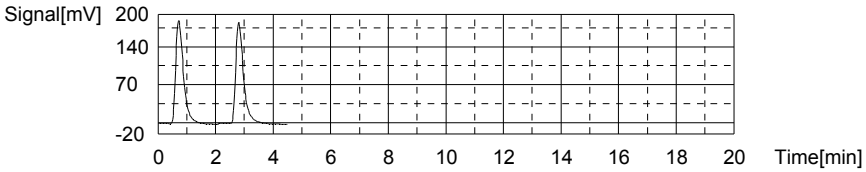
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.504mg/L TC:9.456mg/L IC:6.952mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	357.1	9.502mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 09:44:58 PM
2	353.6	9.409mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 09:49:46 PM

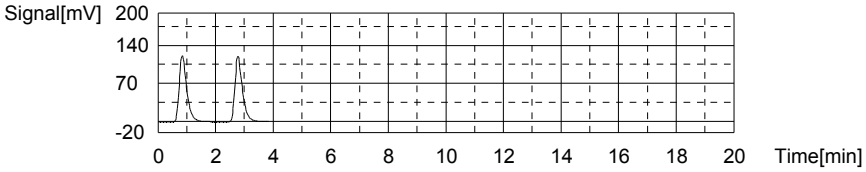
Mean Area 355.4
Mean Conc. 9.456mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	220.3	6.979mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:54:48 PM
2	218.7	6.925mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 09:59:28 PM

Mean Area 219.5
Mean Conc. 6.952mg/L



Sample

Sample Name: L12010651-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

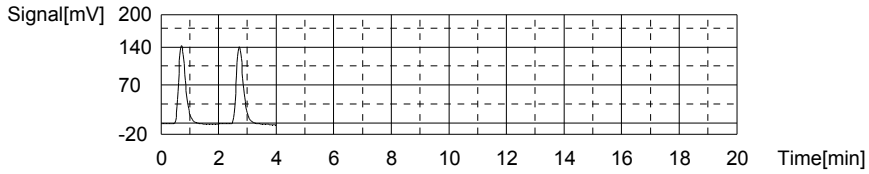
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.062mg/L TC:6.533mg/L IC:5.471mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	245.0	6.519mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:06:53 PM
2	246.1	6.548mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:11:09 PM

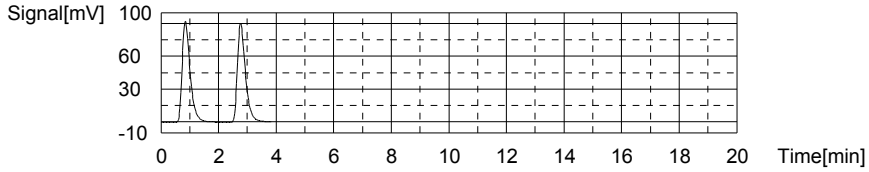
Mean Area 245.6
Mean Conc. 6.533mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	176.4	5.502mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 10:16:02 PM
2	174.6	5.441mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 10:20:42 PM

Mean Area 175.5
Mean Conc. 5.471mg/L



Sample

Sample Name: L12010651-02 MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

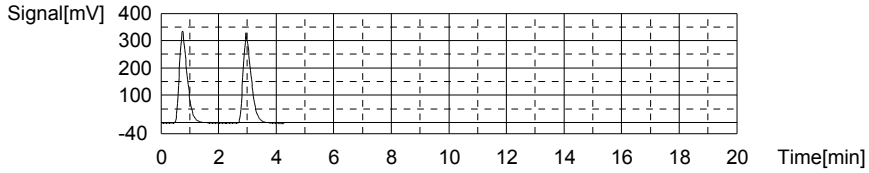
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.364mg/L TC:16.90mg/L IC:7.541mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	638.7	17.00mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:28:22 PM
2	631.7	16.81mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:32:40 PM

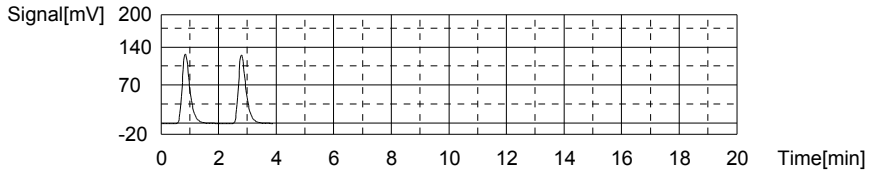
Mean Area 635.2
Mean Conc. 16.90mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	238.6	7.594mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 10:37:37 PM
2	235.4	7.487mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 10:42:20 PM

Mean Area 237.0
Mean Conc. 7.541mg/L



Sample

Sample Name: L12010651-03 MSD
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

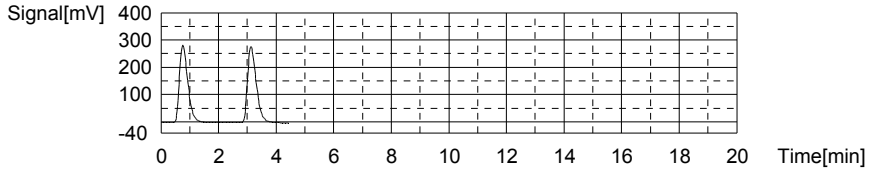
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.25mg/L TC:15.39mg/L IC:5.145mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	574.5	15.29mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:50:09 PM
2	582.2	15.49mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 10:54:33 PM

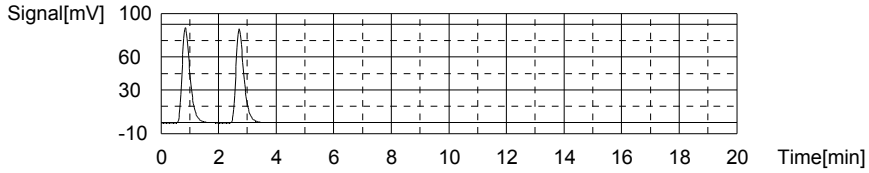
Mean Area 578.4
Mean Conc. 15.39mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	166.2	5.158mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 10:59:21 PM
2	165.4	5.132mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 11:04:02 PM

Mean Area 165.8
Mean Conc. 5.145mg/L



Sample

Sample Name: L12010652-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

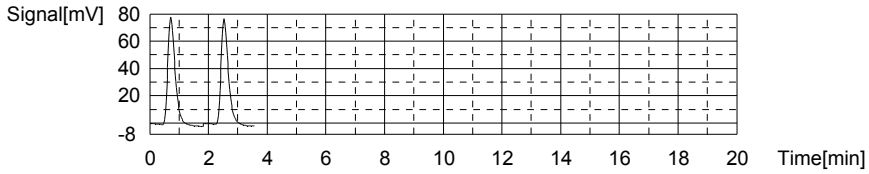
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8001mg/L TC:3.596mg/L IC:2.796mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	136.6	3.633mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 11:11:16 PM
2	133.8	3.559mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 11:15:16 PM

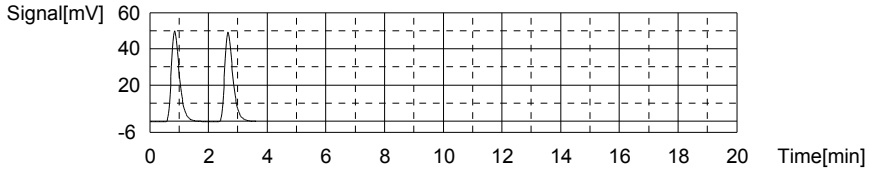
Mean Area 135.2
Mean Conc. 3.596mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	96.32	2.807mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 11:20:02 PM
2	95.65	2.785mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 11:24:33 PM

Mean Area 95.99
Mean Conc. 2.796mg/L



Sample

Sample Name: L12010652-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

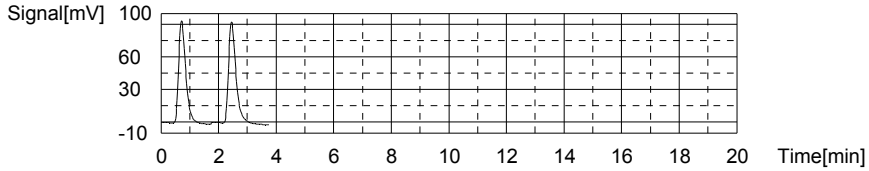
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9715mg/L TC:4.372mg/L IC:3.400mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	162.2	4.315mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 11:31:44 PM
2	166.5	4.429mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 11:36:06 PM

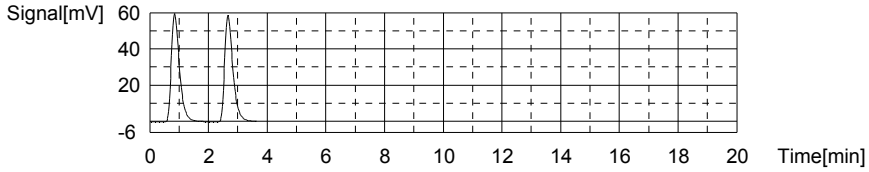
Mean Area 164.4
Mean Conc. 4.372mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	114.5	3.419mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 11:40:54 PM
2	113.4	3.382mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/26/2012 11:45:25 PM

Mean Area 114.0
Mean Conc. 3.400mg/L



Sample

Sample Name: L12010684-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

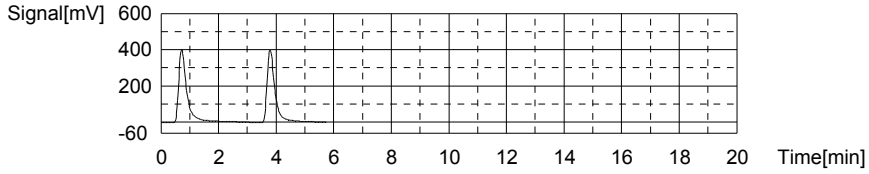
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.910mg/L TC:20.88mg/L IC:15.97mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	797.5	21.22mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/26/2012 11:53:56 PM
2	771.8	20.54mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 12:00:05 AM

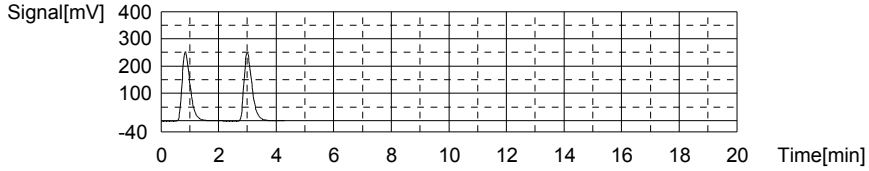
Mean Area 784.7
Mean Conc. 20.88mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	489.9	16.05mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:05:16 AM
2	485.3	15.89mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:10:16 AM

Mean Area 487.6
Mean Conc. 15.97mg/L



Sample

Sample Name: L12010684-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

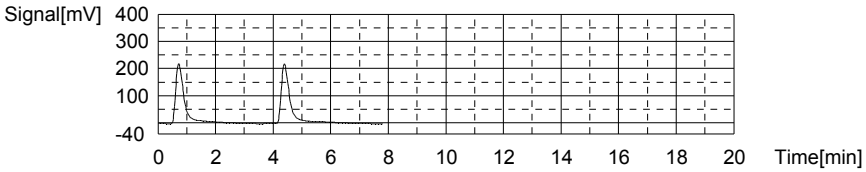
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.194mg/L TC:12.85mg/L IC:8.651mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	486.2	12.94mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 12:19:21 AM
2	479.2	12.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 12:25:45 AM

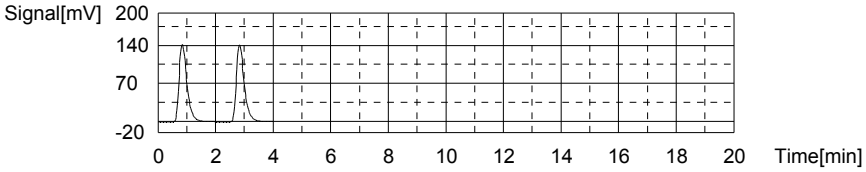
Mean Area 482.7
Mean Conc. 12.85mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	269.5	8.634mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:30:44 AM
2	270.5	8.668mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:35:30 AM

Mean Area 270.0
Mean Conc. 8.651mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

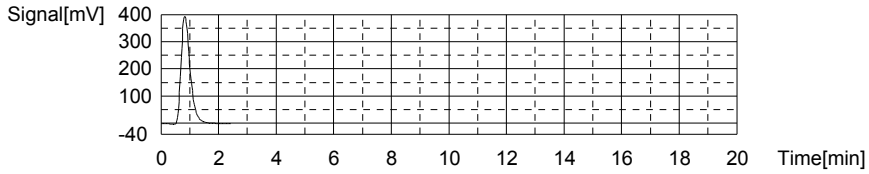
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.52mg/L TC:23.33mg/L IC:-0.1861mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	876.6	23.33mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 12:43:21 AM

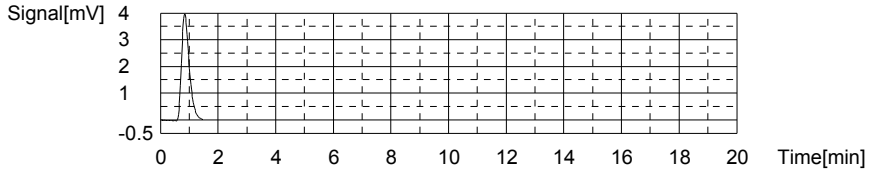
Mean Area 876.6
Mean Conc. 23.33mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.356	-0.1861mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:47:39 AM

Mean Area 7.356
Mean Conc. -0.1861mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

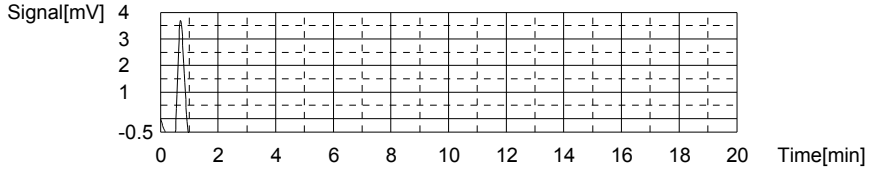
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4225mg/L TC:0.2277mg/L IC:-0.1948mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.648	0.2277mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 12:53:09 AM

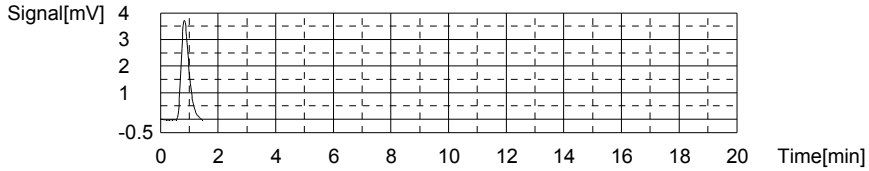
Mean Area 8.648
Mean Conc. 0.2277mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.095	-0.1948mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 12:57:01 AM

Mean Area 7.095
Mean Conc. -0.1948mg/L



Sample

Sample Name: L12010686-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

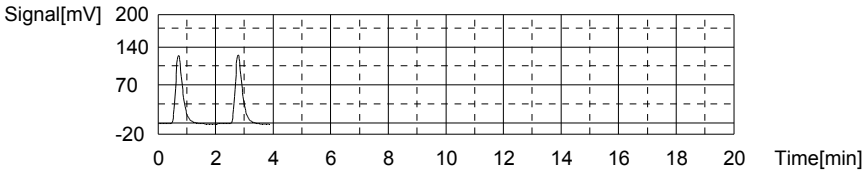
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.508mg/L TC:5.800mg/L IC:4.292mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	216.8	5.768mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:04:31 AM
2	219.2	5.832mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:08:35 AM

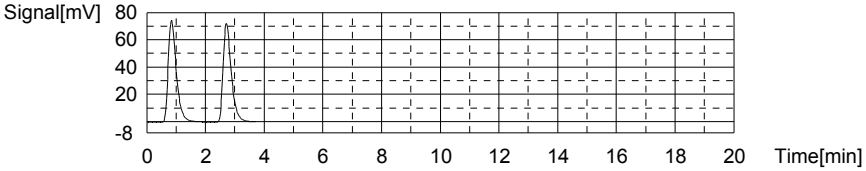
Mean Area 218.0
Mean Conc. 5.800mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	142.1	4.348mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 01:13:23 AM
2	138.8	4.237mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 01:17:55 AM

Mean Area 140.4
Mean Conc. 4.292mg/L



Sample

Sample Name: L12010686-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

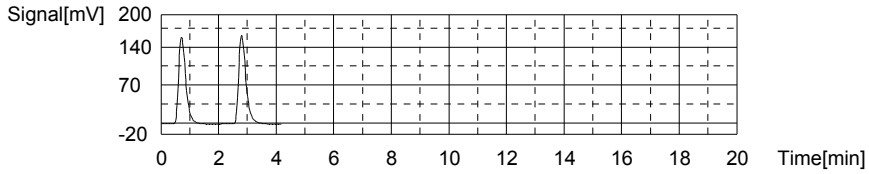
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.323mg/L TC:7.537mg/L IC:6.213mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	276.0	7.344mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:25:27 AM
2	290.5	7.730mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:29:50 AM

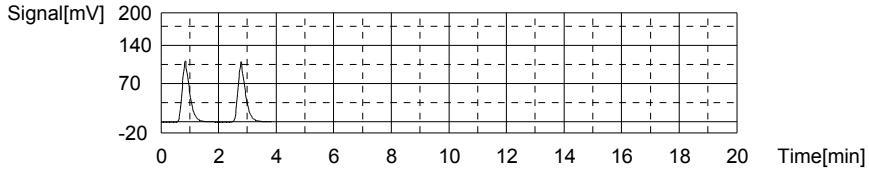
Mean Area 283.3
Mean Conc. 7.537mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	199.1	6.265mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 01:34:43 AM
2	196.0	6.161mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 01:39:21 AM

Mean Area 197.6
Mean Conc. 6.213mg/L



Sample

Sample Name: L12010686-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

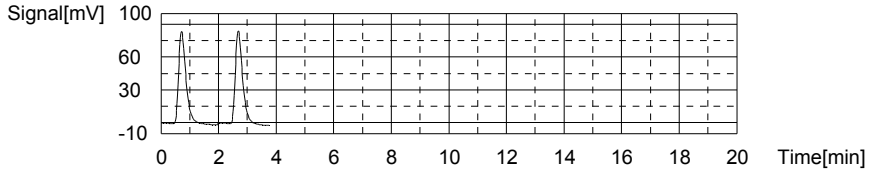
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9954mg/L TC:3.982mg/L IC:2.987mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	150.6	4.006mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:46:46 AM
2	148.8	3.958mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 01:50:52 AM

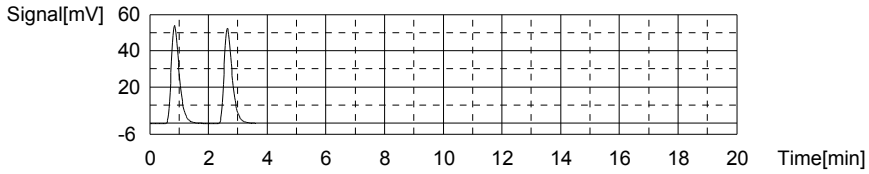
Mean Area 149.7
Mean Conc. 3.982mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	102.7	3.022mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 01:55:36 AM
2	100.6	2.951mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 02:00:08 AM

Mean Area 101.7
Mean Conc. 2.987mg/L



Sample

Sample Name: L12010693-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

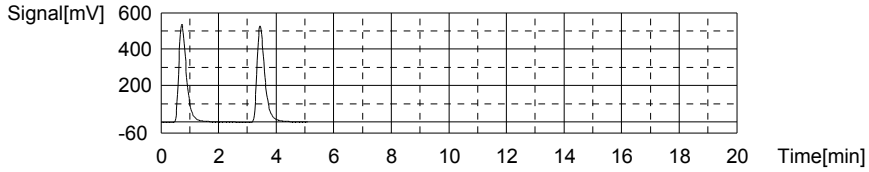
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.099mg/L TC:26.72mg/L IC:21.62mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1002	26.67mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 02:08:18 AM
2	1006	26.77mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 02:13:47 AM

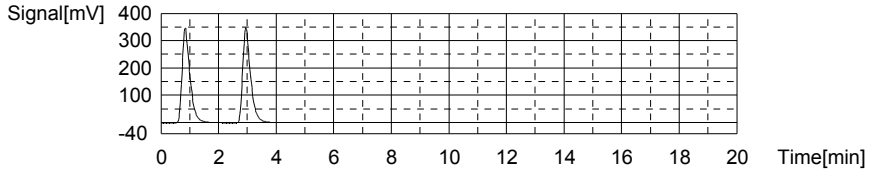
Mean Area 1004
Mean Conc. 26.72mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	651.2	21.48mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 02:19:05 AM
2	659.8	21.77mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 02:24:16 AM

Mean Area 655.5
Mean Conc. 21.62mg/L



Sample

Sample Name: L12010693-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

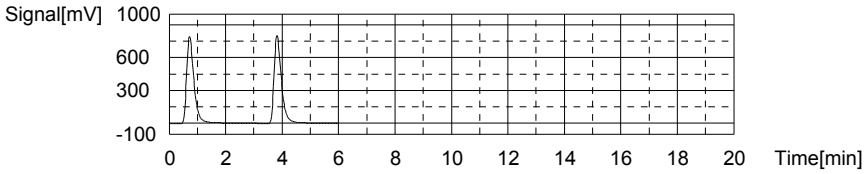
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.335mg/L TC:38.79mg/L IC:32.46mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1456	38.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 02:32:49 AM
2	1459	38.83mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 02:38:46 AM

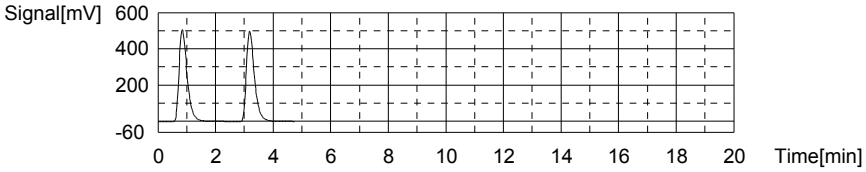
Mean Area 1458
Mean Conc. 38.79mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	983.9	32.67mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 02:44:22 AM
2	971.1	32.24mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 02:49:46 AM

Mean Area 977.5
Mean Conc. 32.46mg/L



Sample

Sample Name: L12010693-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

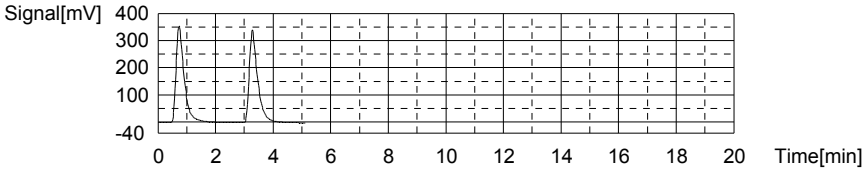
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.408mg/L TC:18.41mg/L IC:12.00mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	700.2	18.63mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 02:57:46 AM
2	683.5	18.19mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 03:02:35 AM

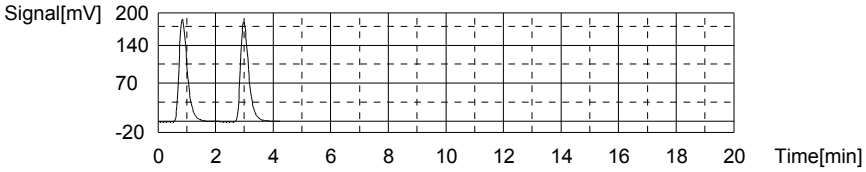
Mean Area 691.9
Mean Conc. 18.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	375.9	12.21mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 03:07:50 AM
2	363.4	11.79mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 03:12:43 AM

Mean Area 369.7
Mean Conc. 12.00mg/L



Sample

Sample Name: L12010698-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

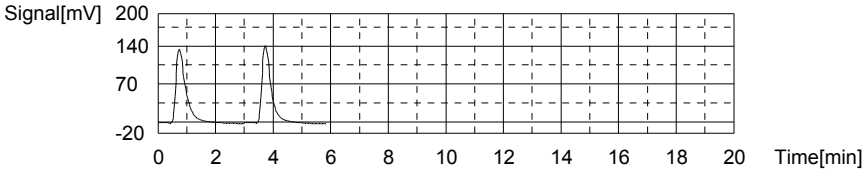
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.391mg/L TC:8.587mg/L IC:4.196mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	327.7	8.720mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 03:21:10 AM
2	317.7	8.454mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 03:26:18 AM

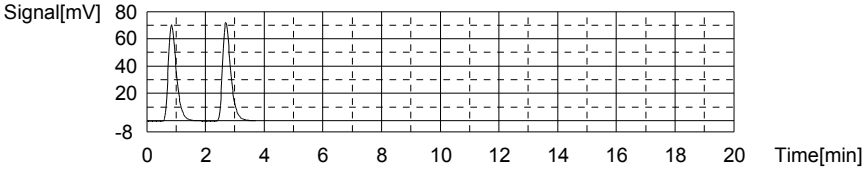
Mean Area 322.7
Mean Conc. 8.587mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	135.9	4.139mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 03:31:07 AM
2	139.3	4.253mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 03:35:42 AM

Mean Area 137.6
Mean Conc. 4.196mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

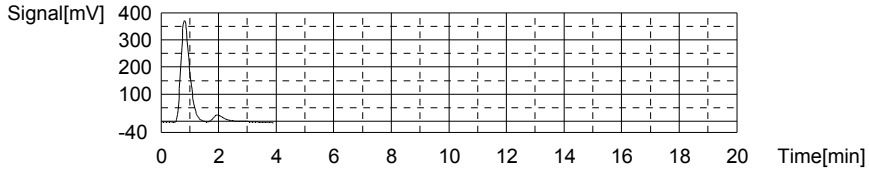
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.96mg/L TC:23.76mg/L IC:-0.1999mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	892.7	23.76mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 03:45:04 AM

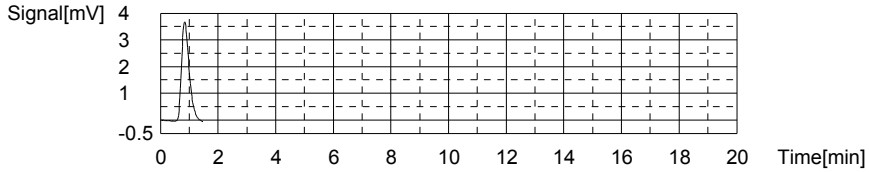
Mean Area 892.7
Mean Conc. 23.76mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.945	-0.1999mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	01/27/2012 03:49:24 AM

Mean Area 6.945
Mean Conc. -0.1999mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

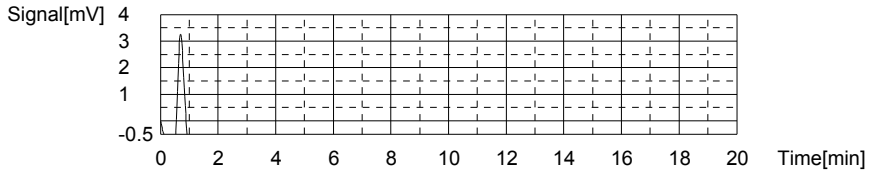
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4076mg/L TC:0.2142mg/L IC:-0.1935mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.140	0.2142mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 03:54:56 AM

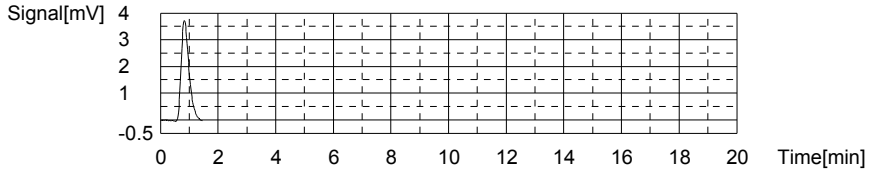
Mean Area 8.140
Mean Conc. 0.2142mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.136	-0.1935mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	01/27/2012 03:58:51 AM

Mean Area 7.136
Mean Conc. -0.1935mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

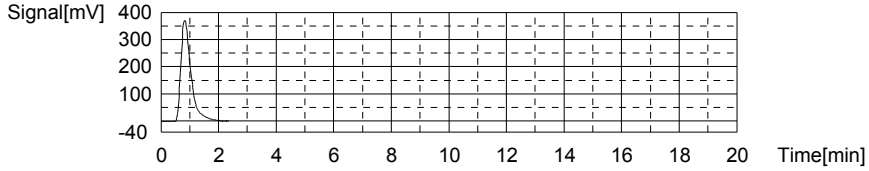
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.16mg/L TC:23.93mg/L IC:-0.2216mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	899.3	23.93mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 07:48:15 AM

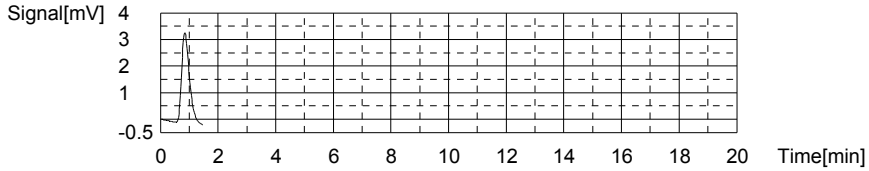
Mean Area 899.3
Mean Conc. 23.93mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.299	-0.2216mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 07:52:35 AM

Mean Area 6.299
Mean Conc. -0.2216mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

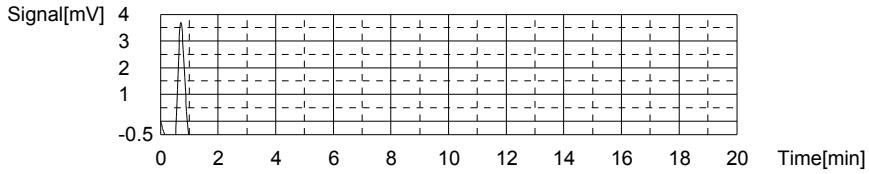
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4384mg/L TC:0.2410mg/L IC:-0.1973mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.149	0.2410mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 07:58:06 AM

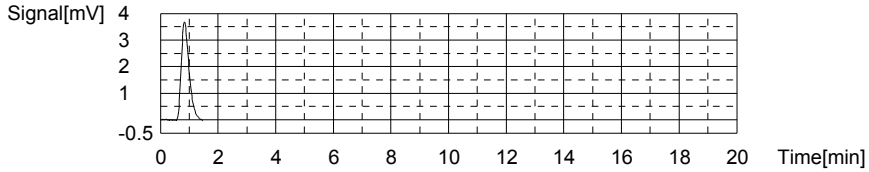
Mean Area 9.149
Mean Conc. 0.2410mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.021	-0.1973mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	01/27/2012 08:01:59 AM

Mean Area 7.021
Mean Conc. -0.1973mg/L



Sample

Sample Name: L12010604-01 (10)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

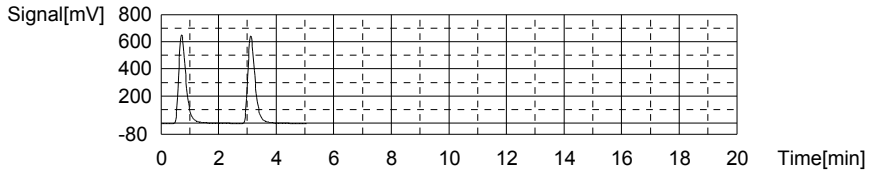
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.895mg/L TC:30.41mg/L IC:26.51mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1149	30.58mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 08:09:58 AM
2	1136	30.23mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 08:15:47 AM

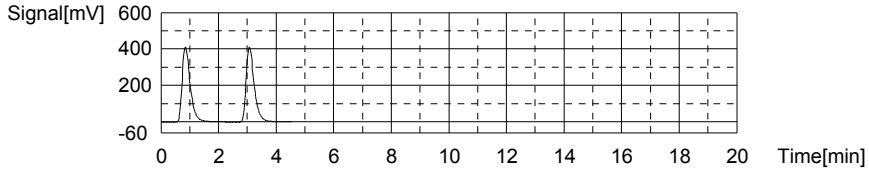
Mean Area 1143
Mean Conc. 30.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	798.1	26.42mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 08:21:07 AM
2	803.6	26.60mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 08:26:27 AM

Mean Area 800.9
Mean Conc. 26.51mg/L



Sample

Sample Name: WG388050-05 (10) DUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

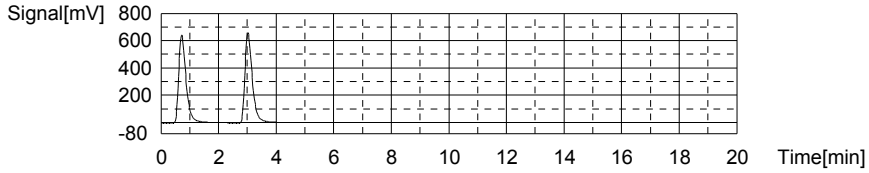
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.153mg/L TC:30.77mg/L IC:26.61mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1138	30.29mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 08:34:13 AM
2	1174	31.25mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 08:39:35 AM

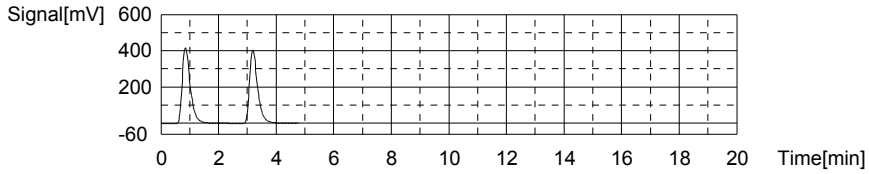
Mean Area 1156
Mean Conc. 30.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	813.6	26.94mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 08:45:03 AM
2	794.1	26.28mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 08:50:28 AM

Mean Area 803.9
Mean Conc. 26.61mg/L



Sample

Sample Name: L12010604-04 (10) MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

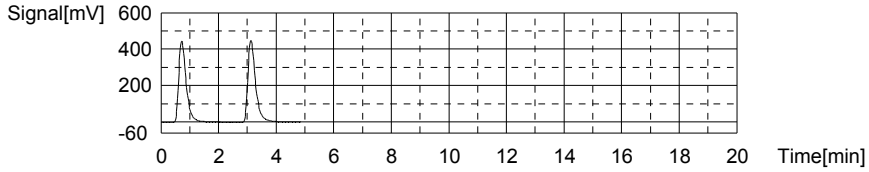
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.955mg/L TC:21.86mg/L IC:16.90mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	806.1	21.45mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 08:58:20 AM
2	836.6	22.26mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 09:04:04 AM

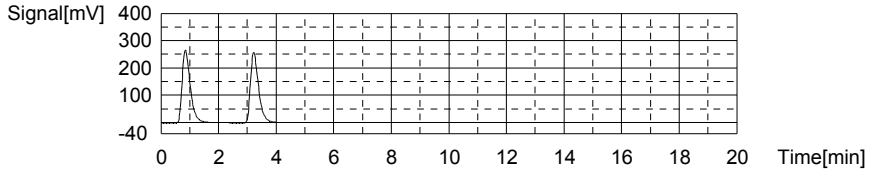
Mean Area 821.4
Mean Conc. 21.86mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	524.4	17.21mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 09:09:34 AM
2	506.2	16.60mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 09:14:44 AM

Mean Area 515.3
Mean Conc. 16.90mg/L



Sample

Sample Name: L12010604-05 (10) MSD
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

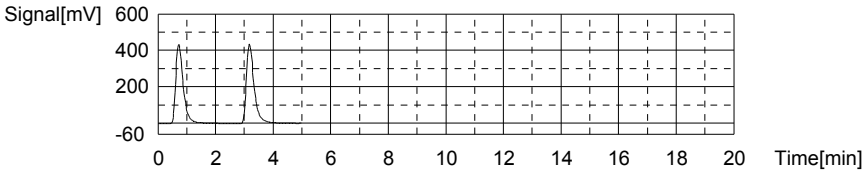
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.557mg/L TC:21.30mg/L IC:16.74mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	789.2	21.00mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 09:22:40 AM
2	811.2	21.59mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 09:28:19 AM

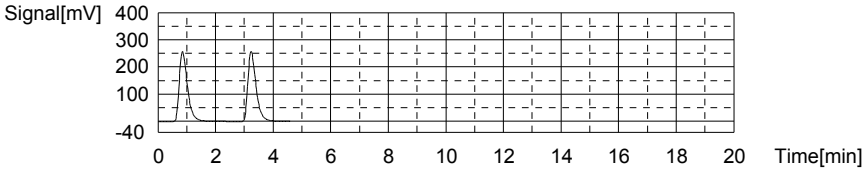
Mean Area 800.2
Mean Conc. 21.30mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	511.9	16.79mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 09:33:48 AM
2	508.9	16.69mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 09:38:50 AM

Mean Area 510.4
Mean Conc. 16.74mg/L



Sample

Sample Name: L12010605-01 (5)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

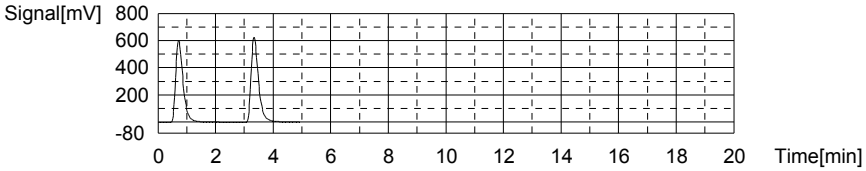
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.723mg/L TC:29.36mg/L IC:25.63mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1078	28.69mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 09:46:55 AM
2	1128	30.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 09:52:20 AM

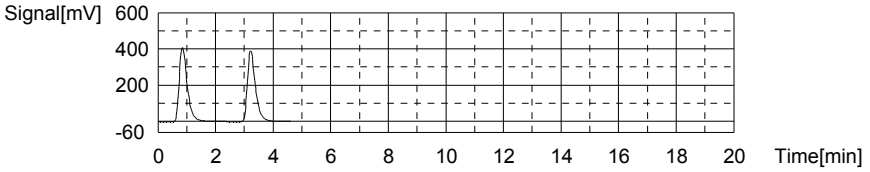
Mean Area 1103
Mean Conc. 29.36mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	792.3	26.22mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 09:57:52 AM
2	757.1	25.04mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 10:03:01 AM

Mean Area 774.7
Mean Conc. 25.63mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

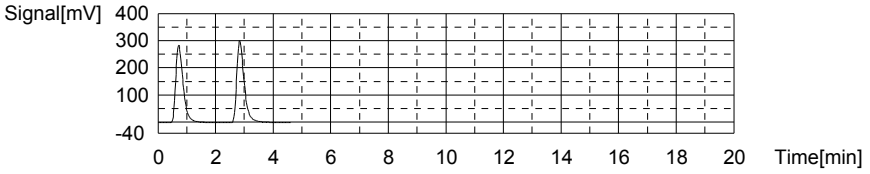
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.170mg/L TC:14.01mg/L IC:11.84mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	507.2	13.50mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 10:10:36 AM
2	545.9	14.53mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 10:16:09 AM

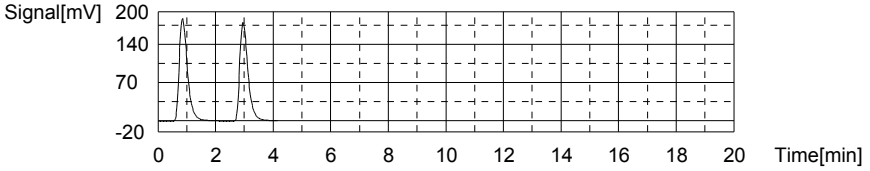
Mean Area 526.5
Mean Conc. 14.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	371.5	12.07mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 10:21:20 AM
2	358.2	11.62mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 10:26:16 AM

Mean Area 364.9
Mean Conc. 11.84mg/L



Sample

Sample Name: L12010688-02 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

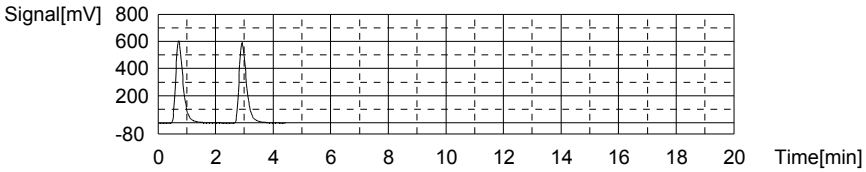
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.398mg/L TC:28.72mg/L IC:24.32mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1083	28.82mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 10:33:56 AM
2	1075	28.61mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 10:39:22 AM

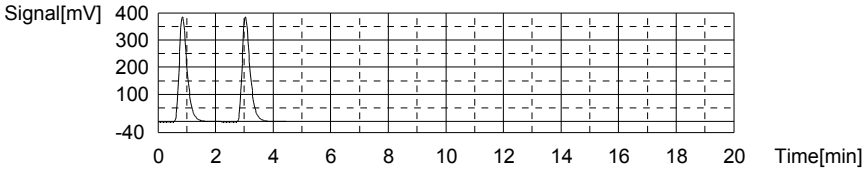
Mean Area 1079
Mean Conc. 28.72mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	735.3	24.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 10:44:46 AM
2	736.0	24.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 10:50:00 AM

Mean Area 735.7
Mean Conc. 24.32mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

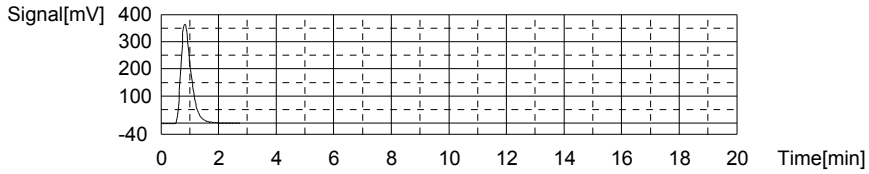
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.24mg/L TC:24.13mg/L IC:-0.1090mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	906.7	24.13mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 10:58:21 AM

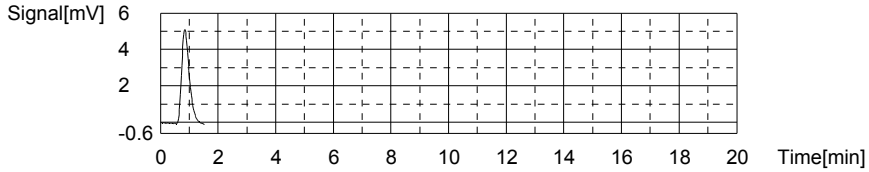
Mean Area 906.7
Mean Conc. 24.13mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.646	-0.1090mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 11:02:48 AM

Mean Area 9.646
Mean Conc. -0.1090mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

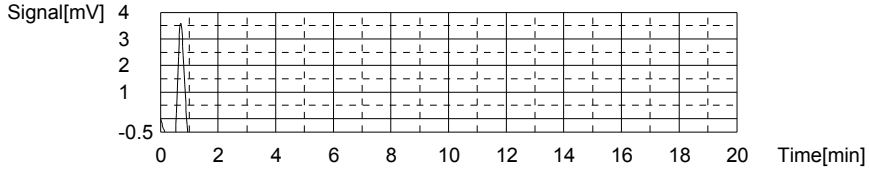
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4017mg/L TC:0.2242mg/L IC:-0.1775mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.516	0.2242mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	01/27/2012 11:08:18 AM

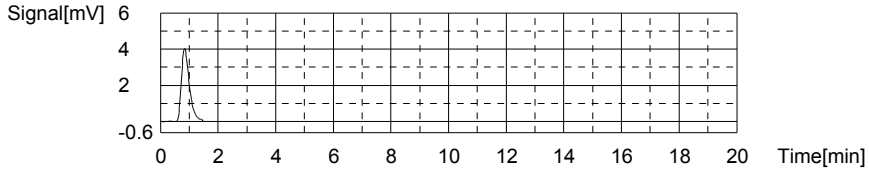
Mean Area 8.516
Mean Conc. 0.2242mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.609	-0.1775mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	01/27/2012 11:12:15 AM

Mean Area 7.609
Mean Conc. -0.1775mg/L



2.2.11 Total Suspended Solids Data

2.2.11.1 Summary Data

Login Number: L12010576
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 160.2/SM2540 D (Total Suspended Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: 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: 41656
Approved By: Deanna Hesson

Microbac

Lab Report #: L12010576
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12010576-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 10:30	**Dilution:**	1	**File ID:**	EN.1201261453-04
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	T40-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 12:10	**Dilution:**	1	**File ID:**	EN.1201261453-05
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12010576-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0112-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG387936	**Analyst:**	HJR	**Run Date:**	01/26/2012 14:53
Collect Date:	01/20/2012 13:45	**Dilution:**	1	**File ID:**	EN.1201261453-06
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

2.2.11.2 QC Summary Data

Example Total Suspended 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: 26-JAN-2012
Analyst: HJR
Analyst: NA
Method: TSS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG387936

Calibration/Linearity	1/26/12
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	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JAN-2012

Secondary Reviewer:
27-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-27-2012 15:53:15

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.2 AAB#: WG387936

Login Number: L12010576

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
MPL18-0112-1	01	01/20/12							7		01/26/12	6.2	7	
T40-0112-1	02	01/20/12							7		01/26/12	6.1	7	
MPL17-0112-1	03	01/20/12							7		01/26/12	6	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2291673
Report generated 01/27/2012 14:09

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12010576
Blank File ID: EN.1201261453-01
Prep Date: 01/26/12 14:53
Analyzed Date: 01/26/12 14:53
Analyst: HJR

Work Group: WG387936
Blank Sample ID: WG387936-01
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	WG387936-02	EN.1201261453-02	01/26/12 14:53	
LCS2	WG387936-03	EN.1201261453-03	01/26/12 14:53	
MPL18-0112-1	L12010576-01	EN.1201261453-04	01/26/12 14:53	
T40-0112-1	L12010576-02	EN.1201261453-05	01/26/12 14:53	
MPL17-0112-1	L12010576-03	EN.1201261453-06	01/26/12 14:53	
DUP	WG387936-05	EN.1201261453-24	01/26/12 14:53	
DUP	WG387936-07	EN.1201261453-25	01/26/12 14:53	

Report Name: BLANK_SUMMARY
PDF File ID: 2291674
Report generated 01/27/2012 14:09

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12010576 Prep Date: 01/26/12 14:53 Sample ID: WG387936-01
Instrument ID: OVEN Run Date: 01/26/12 14:53 Prep Method: 160.2/SM2540D
File ID: EN.1201261453-01 Analyst: HJR Method: 160.2
Workgroup (AAB#): WG387936 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: 2291675
27-JAN-2012 14:09

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12010576 Analyst: HJR Prep Method: 160.2/SM2540D
Instrument ID: OVEN Matrix: Water Method: 160.2
Workgroup (AAB#): WG387936 Units: mg/L
QC Key: DOD4 Lot #: STD49755

Sample ID: WG387936-02 LCS File ID: EN.1201261453-02 Run Date: 01/26/2012 14:53
Sample ID: WG387936-03 LCS2 File ID: EN.1201261453-03 Run Date: 01/26/2012 14:53

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	49.0	98.0	50.0	49.0	98.0	0.00	75 - 125	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2291676
Report generated: 01/27/2012 14:09

2.2.11.3 Raw Data

Tray 7

WORKGROUP: WG387936

TOTAL SUSPENDED SOLIDS

Oven: ☑ TSS1 ☐ Other

LCS: Std 49755

MS: _____ mL LCS & _____ mL sample

Balance: AND GR-202 Other

Method: EPA 160.2 / SM2540D SOP #: K1602 Revision #: 13

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BK	200				
LCS: _____mg/L	LCS	100				
LCSDUP: _____mg/L	LCSD	100				
01-0576-01	1	200				
-02	2	200				
-03	3	200				
01-0587-01	4	200				
01-0604-01	5	50				
-02	6	200				
-04	7	50				
-05	8	50				
01-0605-01	9	200				
-02	10	200				
01-0606-01	11	200				
01-0613-01	12	200				
01-0634-01	13	200				
-03	14	200				
01-0633-01	15	100				
-02	16	30				
-04	17	100				
-05	18	30				
01-0652-01	19	200				
-02	20	200				
DUP: 01-0576-01	DP1	200				
DUP: 01-0652-02	DP2	200				

ANALYST: Holly Zielend

DATE/TIME: (on) 1/26/12

DATE/TIME: (off)

DATE/TIME: (off)

DATE/TIME: (off)

* Duplicate required on 10% of samples

DCN#89713

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG387936
Analyst: HJR
Analyte: TOTAL SUSPENDED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.2/SM2540D
SOP: K1602 Revison 13
Spike Solution: STD49755
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG387936-01	BLK	200	0.0979	0.098	0.098		0.5000	0.5000	mg/L
WG387936-02	LCS	100	0.0933	0.0981	0.0982		49.00	49.00	mg/L
WG387936-03	LCS2	100	0.0962	0.101	0.1011		49.00	49.00	mg/L
L12010576-01	1	200	0.0964	0.0971	0.0972		4.000	4.000	mg/L
WG387936-04	1	200	0.0964	0.0971	0.0972		4.000	4.000	mg/L
L12010576-02	2	200	0.0945	0.0954	0.0953		4.000	4.000	mg/L
L12010576-03	3	200	0.0956	0.0957	0.0957		0.5000	ND	mg/L
L12010587-01	4	200	0.0928	0.093	0.0929		0.5000	ND	mg/L
L12010604-01	5	50	0.0977	0.105	0.1053		152.0	152.0	mg/L
WG387936-08	5	50	0.0977	0.105	0.1053		152.0	152.0	mg/L
L12010604-02	6	200	0.0968	0.0969	0.0969		0.5000	ND	mg/L
L12010604-04	7	50	0.098	0.11	0.11		240.0	240.0	mg/L
WG387936-09	7	50	0.098	0.11	0.11		240.0	240.0	mg/L
L12010604-05	8	50	0.0969	0.1095	0.1098		258.0	258.0	mg/L
WG387936-10	8	50	0.0969	0.1095	0.1098		258.0	258.0	mg/L
L12010605-01	9	200	0.0948	0.1011	0.101		31.00	31.00	mg/L
L12010605-02	10	200	0.093	0.0937	0.0936		3.000	3.000	mg/L
L12010606-01	11	200	0.0952	0.0974	0.0975		11.50	11.50	mg/L
L12010613-01	12	200	0.0971	0.0982	0.0981		5.000	5.000	mg/L
L12010634-01	13	200	0.0977	0.0995	0.0994		8.500	8.500	mg/L
L12010634-03	14	200	0.0942	0.0957	0.0956		7.000	7.000	mg/L
L12010633-01	15	100	0.0969	0.1044	0.1043		74.00	74.00	mg/L
L12010633-02	16	30	0.0958	0.1034	0.1033		250.0	250.0	mg/L
L12010633-04	17	100	0.0941	0.1032	0.1031		90.00	90.00	mg/L
L12010633-05	18	30	0.0948	0.0998	0.0998		166.7	166.7	mg/L
L12010652-01	19	200	0.0972	0.0985	0.0984		6.000	6.000	mg/L
L12010652-02	20	200	0.0972	0.0973	0.0974		1.000	ND	mg/L
WG387936-06	20	200	0.0972	0.0973	0.0974		1.000	1.000	mg/L
WG387936-05	DUP1	200	0.0946	0.0953	0.0953		3.500	3.500	mg/L
WG387936-07	DUP2	200	0.0953	0.0955	0.0955		1.000	1.000	mg/L

L12010604-04	ms=100ml of lcs to 50ml of sample
L12010604-05	msd=100ml of lcs to 50ml of sample
WG387936-09	ms=100ml of lcs to 50ml of sample
WG387936-10	msd=100ml of lcs to 50ml of sample

Analyst: HJR

*Duplicate required on 10% of samples

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2290690
Report generated: 01/27/2012 11:18

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Date/Time (on) :01/26/2012 14:53
Date/Time (off):01/27/2012 09:35
Date/Time (off):01/27/2012 10:55
Date/Time (off):

Analyte:
Balance:
Instrument:

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2290690
Report generated: 01/27/2012 11:18

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
February 21, 2012

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DHG - DEBORAH H. GRIFFITHS
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH	DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON
EDL - ERIN D. LONG	ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN
HAV - HEMA VILASAGAR	HJR - HOLLY J. REED	JAL - JOHN A. LENT
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD
JLL - JOHN L. LENT	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS	PWD - PAUL W. DENT	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG		

Microbac Laboratories Inc.
List of Valid Qualifiers
February 21, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

Qualkey: DOD

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

COC No. A 28524

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Zia Shaw

Project Contact: Mark Lyon

Contact Phone #: 262-8920 505-~~526~~-

Turn Around Requirements: Normal

Location: WSMR

Project ID: STP

Sampler (print): Bradley T. Davis

Signature: Bradley T. Davis

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Anions	Cond, pH, PO_4	Alkalinity	Total, Free, Amenable CN	Metals	NH_3, TOC, NO_3/NO_2	TSS, TDS								TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MPL 18-0112-1		X	1-20-12	1030	W	7		X	X	X	X	X	X	X									
T40-0112-1		X	1-20-12	1210	W	7		X	X	X	X	X	X	X									
MPL 17-0112-1		X	1-20-12	1345	W	7		X	X	X	X	X	X	X									

Program
- ☐ CWA
- ☐ RCRA
- ☐ DOD
- ☐ AFCEE
- ☐ Other _____

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Received by: (Signature)
Bradley T. Davis	1-20-12	1700				
Relinquished by: (Signature)	Date	Time				

Microbac OVD 221000021799
Received: 01/21/2012 16:26
By: BOB BUCHANAN
RF Buchanan

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-01	930487	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	31-JAN-2012 10:30	JBK	RLK	
3	STORE	SEM	A1	03-FEB-2012 11:19	RLK	JBK	

Samplenum	Container ID	Products
L12010576-01	930488	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:25	DIH	JKS	
3	STORE	WET	A1	25-JAN-2012 08:39	JKS	DIH	
4	ANALYZ	A1	WET	31-JAN-2012 09:54	JDH	RLK	
5	STORE	WET	A1	02-FEB-2012 07:37	AZH	DIH	

Samplenum	Container ID	Products
L12010576-01	930489	COR-PH PO4 COND

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	23-JAN-2012 10:27	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

Samplenum	Container ID	Products
L12010576-01	930490	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	25-JAN-2012 09:21	HJR	RLK	
3	STORE	WET	A1	31-JAN-2012 08:52	RLK	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-01	930491	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		<2
2	ANALYZ	W1	WET	23-JAN-2012 12:10	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

Samplenum	Container ID	Products
L12010576-01	930492	CR-MS CU-MS HG K MG MN NA NI-MS PB-MS SB-MS SE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	DIG	23-JAN-2012 14:08	ERP	RLK	
3	STORE	DIG	A1	25-JAN-2012 14:15	RLK	ERP	

Samplenum	Container ID	Products
L12010576-01	930493	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:15	JBK	RLK	
3	STORE	WET	A1	01-FEB-2012 08:50	RLK	JBK	

Samplenum	Container ID	Products
L12010576-02	930494	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	31-JAN-2012 10:30	JBK	RLK	
3	STORE	SEM	A1	03-FEB-2012 11:19	RLK	JBK	

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: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-02	930495	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:25	DIH	JKS	
3	STORE	WET	A1	25-JAN-2012 08:39	JKS	DIH	
4	ANALYZ	A1	WET	31-JAN-2012 09:53	JDH	RLK	
5	STORE	WET	A1	02-FEB-2012 07:37	AZH	DIH	

Samplenum	Container ID	Products
L12010576-02	930496	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	23-JAN-2012 10:27	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

Samplenum	Container ID	Products
L12010576-02	930497	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	25-JAN-2012 09:21	HJR	RLK	
3	STORE	WET	A1	31-JAN-2012 08:52	RLK	HJR	

Samplenum	Container ID	Products
L12010576-02	930498	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		<2
2	ANALYZ	W1	WET	23-JAN-2012 12:10	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

A1 - Sample Archive (COLD)
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F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-02	930499	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	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	DIG	23-JAN-2012 14:08	ERP	RLK	
3	STORE	DIG	A1	25-JAN-2012 14:15	RLK	ERP	

Samplenum	Container ID	Products
L12010576-02	930500	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:14	JBK	RLK	
3	STORE	WET	A1	01-FEB-2012 08:50	RLK	JBK	

Samplenum	Container ID	Products
L12010576-03	930501	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	31-JAN-2012 10:30	JBK	RLK	
3	STORE	SEM	A1	03-FEB-2012 11:19	RLK	JBK	

Samplenum	Container ID	Products
L12010576-03	930502	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:25	DIH	JKS	
3	STORE	WET	A1	25-JAN-2012 08:39	JKS	DIH	
4	ANALYZ	A1	WET	31-JAN-2012 09:53	JDH	RLK	
5	STORE	WET	A1	02-FEB-2012 07:37	AZH	DIH	

A1 - Sample Archive (COLD)
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F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-03	930503	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	23-JAN-2012 10:27	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

Samplenum	Container ID	Products
L12010576-03	930504	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	25-JAN-2012 09:21	HJR	RLK	
3	STORE	WET	A1	31-JAN-2012 08:52	RLK	HJR	

Samplenum	Container ID	Products
L12010576-03	930505	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		<2
2	ANALYZ	W1	WET	23-JAN-2012 12:10	DIH	JKS	
3	STORE	WET	A1	30-JAN-2012 08:11	JKS	DLP	

Samplenum	Container ID	Products
L12010576-03	930506	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	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	DIG	23-JAN-2012 14:08	ERP	RLK	
3	STORE	DIG	A1	25-JAN-2012 14:15	RLK	ERP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L12010576
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 03-FEB-2012

Samplenum	Container ID	Products
L12010576-03	930507	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-JAN-2012 09:56	JKT		
2	ANALYZ	W1	WET	24-JAN-2012 08:15	JBK	RLK	
3	STORE	WET	A1	01-FEB-2012 08:50	RLK	JBK	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login