Microbac

Laboratory Report Number: L13051242

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

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

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

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

This report was certified on June 05 2013

David L. Vandenberg

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

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

The following discrepancies were noted:

Discrepancy	Resolution
Fluoride was changed from method 300 to method SM 4500 F with the client's permission SLM	

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0014187	I	3.0		1002239543310004575000801944418921

Inspection Checklist

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

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL19-0513-1	L13051242-01	05/22/2013 12:15	05/23/2013 11:24
MPL20-0513-1	L13051242-02	05/22/2013 13:50	05/23/2013 11:24
MPL20-0513-2	L13051242-03	05/22/2013 13:50	05/23/2013 11:24
MPL6-0513-1	L13051242-04	05/22/2013 15:25	05/23/2013 11:24

Microbac REPORT L13051242
PREPARED FOR Environmental Waste Solutions
WORK ID:

1.0 Summary Data

1.1 Narratives

Login Number: L13051242
Department: Conventionals
Analyst: Tammy Morris

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.

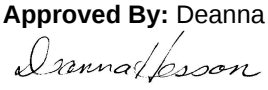
Duplicates: All acceptance criteria were met.

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: 65227
Approved By: Deanna Hesson



Login Number: L13051242
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG432602 - Due to continuing calibration verification failure on 03-JUN-2013 at 12:39, client samples 01 through 04 were analyzed on a later calibration for all analytes.

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.

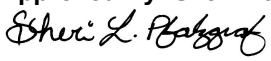
Serial Dilution/Post Digestion Spikes: WG432602 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG432602 - Client samples 01 through 04 required dilution analyses in order to obtain results for calcium within the calibration range.

Narrative ID: 65224
Approved By: Sheri Pfalzgraf



Login Number: L13051242
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: WG432851 - The continuing calibration blanks analyzed on 04-June-2013 at 18:31 and 19:16 yielded results for antimony which exceeded the LOD but were below the LOQ. Client samples 01 through 04 yielded nondetected results for antimony. With permission of the project chemist, the antimony results were reported with 'B' qualifiers to indicate the association with noncompliant CCBs and no further action was taken.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

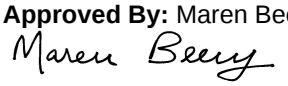
Serial Dilution/Post Digestion Spikes: WG432851 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 65329
Approved By: Maren Beery



Login Number: L13051242
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.

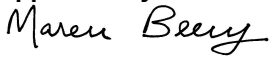
Serial Dilution/Post Digestion Spikes: WG431944 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 64690
Approved By: Maren Beery



Login Number: L13051242
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis EPA300.0/SW846 9056

HOLDING TIMES

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

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The client did not specify an MS/MSD for this sample delivery group. The laboratory selected sample 01 for MS/MSD analysis and all acceptance criteria were met.

SAMPLES

Samples: Fractions -02 and -03 were analyzed at dilutions only due to concentrations of the target analytes greater than the ICAL.

MANUAL INTEGRATION: No manual integration was required.

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Narrative ID: 65112
Approved By: Eric Lawson

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 65225
Approved By: Deanna Hesson

Login Number: L13051242
Department: Conventionals
Analyst: Holly Reed

METHOD

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

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

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

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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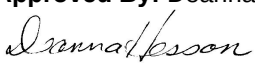
Narrative ID: 65161
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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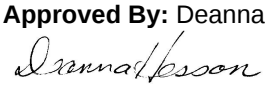
Narrative ID: 65226
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: Tammy Morris

METHOD

Analysis SM4500-F-C (Fluoride)

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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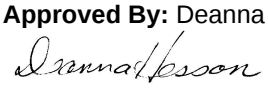
Narrative ID: 65233
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

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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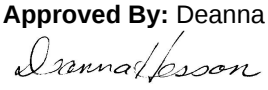
Narrative ID: 65228
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

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

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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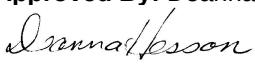
Narrative ID: 65229
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 365.2/SM4500-P E (Orthophosphate)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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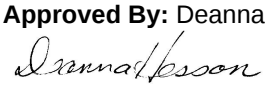
Narrative ID: 65230
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: April Greene

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: 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: 65234
Approved By: Deanna Hesson

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

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

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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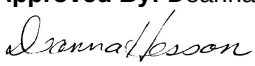
Narrative ID: 65231
Approved By: Deanna Hesson



Login Number: L13051242
Department: Conventionals
Analyst: April Greene

METHOD

Analysis EPA 160.2/SM2540 D (Total Suspended Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 65232
Approved By: Deanna Hesson

1.2 Certificate of Analysis

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:51
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	T2.060313.145103
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	5.78		0.500	0.250
Potassium, Total	7440-09-7	2.06		1.00	0.500
Sodium, Total	7440-23-5	20.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00738	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:04
Collect Date:	05/22/2013 12:15	**Dilution:**	10	**File ID:**	T2.060413.190458
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	33.4		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:35
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	NI.060413.183505
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00193		0.00100	0.000500
Barium, Total	7440-39-3	0.0808		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00295		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00247		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL19-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:01
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	M7.052813.150143
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 #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL19-0513-1	**Prep Method:**	300.0	**Prep Date:**	05/31/2013 11:49
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	05/01/2013 13:02
Workgroup #:	WG432606	**Analyst:**	JBK	**Run Date:**	05/31/2013 20:02
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	I1_053113-30
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.7		0.200	0.100
Sulfate	14808-79-8	49.7		1.00	0.500

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL19-0513-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG431562	**Analyst:**	TMM	**Run Date:**	05/23/2013 16:03
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	OS13052912145201
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.60		0.000	0.000

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311310-12
Sample Tag:		**Units:**	mg/L		

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311320-07
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 #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311300-06
Sample Tag:	a	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL19-0513-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG431689	**Analyst:**	BAF	**Run Date:**	05/24/2013 16:35
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	TI.052413.1635CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		331		50.0	10.0

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-710A1
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-F-C-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-F-C-1997	**Cal Date:**	
Workgroup #:	WG432165	**Analyst:**	TMM	**Run Date:**	05/29/2013 15:28
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	O113053011034301
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.194		0.100	0.0500

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:54
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130531001.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0736	J	0.100	0.0500

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	05/31/2013 13:14
Workgroup #:	WG432373	**Analyst:**	BAF	**Run Date:**	05/31/2013 16:10
Collect Date:	05/22/2013 12:15	**Dilution:**	4	**File ID:**	SC13060408295901
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.66		0.200	0.100

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305231430-05
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 #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL19-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	EN.1305250920-17
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		262		20.0	10.0

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL19-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:18
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	TC05302013.046
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL19-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	EN.1305250934-13
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:54
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	T2.060313.145434
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	12.5		0.500	0.250
Potassium, Total	7440-09-7	2.73		1.00	0.500
Sodium, Total	7440-23-5	32.8		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	0.0101	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:08
Collect Date:	05/22/2013 13:50	**Dilution:**	10	**File ID:**	T2.060413.190830
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	68.8		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:38
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	NI.060413.183851
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00318		0.00100	0.000500
Barium, Total	7440-39-3	0.0677		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00158	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00126	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00104	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00262	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0130		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL20-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:04
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	M7.052813.150414
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 #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL20-0513-1	**Prep Method:**	300.0	**Prep Date:**	05/31/2013 11:49
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	05/01/2013 13:02
Workgroup #:	WG432606	**Analyst:**	JBK	**Run Date:**	05/31/2013 16:03
Collect Date:	05/22/2013 13:50	**Dilution:**	5	**File ID:**	I1_053113-17
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	71.9		1.00	0.500
Sulfate	14808-79-8	92.0		5.00	2.50

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL20-0513-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG431562	**Analyst:**	TMM	**Run Date:**	05/23/2013 16:04
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	OS13052912145501
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.51		0.000	0.000

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	69.5		20.0	10.0

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	69.5		20.0	10.0

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.017
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311300-07
Sample Tag:	a	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.338		0.0100	0.00500

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311320-08
Sample Tag:	wd	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0303		0.0100	0.00500

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311310-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.343		0.0100	0.00500

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL20-0513-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG431689	**Analyst:**	BAF	**Run Date:**	05/24/2013 16:37
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TI.052413.1637CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		663		50.0	10.0

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-710A1
Client ID:	MPL20-0513-1	**Prep Method:**	SM4500-F-C-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-F-C-1997	**Cal Date:**	
Workgroup #:	WG432165	**Analyst:**	TMM	**Run Date:**	05/29/2013 15:28
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	O113053011034801
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.0747	J	0.100	0.0500

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:56
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130531001.058
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0628	J	0.100	0.0500

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	05/31/2013 13:14
Workgroup #:	WG432373	**Analyst:**	BAF	**Run Date:**	05/31/2013 16:10
Collect Date:	05/22/2013 13:50	**Dilution:**	8	**File ID:**	SC13060408300601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		7.58		0.400	0.200

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305231430-06
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250920-18
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		252		20.0	10.0

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL20-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:38
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TC05302013.047
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250934-14
Sample Tag:		**Units:**	mg/L		

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

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:58
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	T2.060313.145803
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	13.0		0.500	0.250
Potassium, Total	7440-09-7	2.81		1.00	0.500
Sodium, Total	7440-23-5	34.3		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	0.0134	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:12
Collect Date:	05/22/2013 13:50	**Dilution:**	10	**File ID:**	T2.060413.191202
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	70.0		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:42
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	NI.060413.184237
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00458		0.00100	0.000500
Barium, Total	7440-39-3	0.0673		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00151	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00174	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00372		0.00200	0.00100
Nickel, Total	7440-02-0	0.00358	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0188		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL20-0513-2	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:06
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	M7.052813.150646
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 #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL20-0513-2	**Prep Method:**	300.0	**Prep Date:**	05/31/2013 11:49
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	05/01/2013 13:02
Workgroup #:	WG432606	**Analyst:**	JBK	**Run Date:**	05/31/2013 16:22
Collect Date:	05/22/2013 13:50	**Dilution:**	5	**File ID:**	I1_053113-18
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	72.8		1.00	0.500
Sulfate	14808-79-8	92.6		5.00	2.50

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL20-0513-2	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG431562	**Analyst:**	TMM	**Run Date:**	05/23/2013 16:06
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	OS13052912145801
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.53		0.000	0.000

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-2	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:49
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	70.9		20.0	10.0

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-2	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:49
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	70.9		20.0	10.0

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-2	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:49
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.018
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311310-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.188		0.0100	0.00500

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311300-08
Sample Tag:	a	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.184		0.0100	0.00500

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311320-09
Sample Tag:	wd	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0462		0.0100	0.00500

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL20-0513-2	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG431689	**Analyst:**	BAF	**Run Date:**	05/24/2013 16:39
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TI.052413.1639CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		661		50.0	10.0

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-710A1
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-F-C-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-F-C-1997	**Cal Date:**	
Workgroup #:	WG432165	**Analyst:**	TMM	**Run Date:**	05/29/2013 15:28
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	O113053011035301
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.0705	J	0.100	0.0500

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-2	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:56
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130531001.059
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.104		0.100	0.0500

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-2	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	05/31/2013 13:14
Workgroup #:	WG432375	**Analyst:**	BAF	**Run Date:**	05/31/2013 16:50
Collect Date:	05/22/2013 13:50	**Dilution:**	8	**File ID:**	SC13060408185601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		8.30		0.400	0.200

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305231430-07
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-2	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250920-19
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		486		20.0	10.0

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL20-0513-2	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:58
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TC05302013.048
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-2	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250934-15
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 15:01
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	T2.060313.150132
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	6.63		0.500	0.250
Potassium, Total	7440-09-7	1.88		1.00	0.500
Sodium, Total	7440-23-5	20.2		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00688	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0357		0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:15
Collect Date:	05/22/2013 15:25	**Dilution:**	10	**File ID:**	T2.060413.191532
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	34.4		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:46
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	NI.060413.184624
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00176		0.00100	0.000500
Barium, Total	7440-39-3	0.116		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00355		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00300		0.00200	0.00100
Nickel, Total	7440-02-0	0.00220	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00278		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL6-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:09
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	M7.052813.150917
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 #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL6-0513-1	**Prep Method:**	300.0	**Prep Date:**	05/31/2013 11:49
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	05/01/2013 13:02
Workgroup #:	WG432606	**Analyst:**	JBK	**Run Date:**	05/31/2013 16:40
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	I1_053113-19
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	20.0		0.200	0.100
Sulfate	14808-79-8	38.1		1.00	0.500

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL6-0513-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG431562	**Analyst:**	TMM	**Run Date:**	05/23/2013 16:08
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	OS13052912150401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.73		0.000	0.000

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	86.9		20.0	10.0

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	86.9		20.0	10.0

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311300-09
Sample Tag:	a	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311310-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00572	J	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311320-10
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 #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL6-0513-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG431689	**Analyst:**	BAF	**Run Date:**	05/24/2013 16:41
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	TI.052413.1641CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		331		50.0	10.0

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ORION-710A1
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-F-C-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-F-C-1997	**Cal Date:**	
Workgroup #:	WG432165	**Analyst:**	TMM	**Run Date:**	05/29/2013 15:28
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	O113053011035701
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.172		0.100	0.0500

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:58
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130531001.060
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.115		0.100	0.0500

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	05/31/2013 13:14
Workgroup #:	WG432375	**Analyst:**	BAF	**Run Date:**	05/31/2013 16:50
Collect Date:	05/22/2013 15:25	**Dilution:**	4	**File ID:**	SC13060408200601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.59		0.200	0.100

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305231430-08
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL6-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	EN.1305250920-20
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		506		20.0	10.0

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL6-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 05:19
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	TC05302013.049
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL6-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	EN.1305250934-16
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

2.0 Full Sample Data Package

2.1 Metals Data

2.1.1 Metals I C P Data

2.1.1.1 Summary Data

Login Number: L13051242
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG432602 - Due to continuing calibration verification failure on 03-JUN-2013 at 12:39, client samples 01 through 04 were analyzed on a later calibration for all analytes.

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: WG432602 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG432602 - Client samples 01 through 04 required dilution analyses in order to obtain results for calcium within the calibration range.

Narrative ID: 65224
Approved By: Sheri Pfalzgraf

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:51
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	T2.060313.145103
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	5.78		0.500	0.250
Potassium, Total	7440-09-7	2.06		1.00	0.500
Sodium, Total	7440-23-5	20.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00738	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:04
Collect Date:	05/22/2013 12:15	**Dilution:**	10	**File ID:**	T2.060413.190458
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	33.4		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:54
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	T2.060313.145434
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	12.5		0.500	0.250
Potassium, Total	7440-09-7	2.73		1.00	0.500
Sodium, Total	7440-23-5	32.8		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	0.0101	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:08
Collect Date:	05/22/2013 13:50	**Dilution:**	10	**File ID:**	T2.060413.190830
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	68.8		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 14:58
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	T2.060313.145803
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	13.0		0.500	0.250
Potassium, Total	7440-09-7	2.81		1.00	0.500
Sodium, Total	7440-23-5	34.3		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	0.0134	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:12
Collect Date:	05/22/2013 13:50	**Dilution:**	10	**File ID:**	T2.060413.191202
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	70.0		5.00	2.50

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/03/2013 13:34
Workgroup #:	WG432602	**Analyst:**	KHR	**Run Date:**	06/03/2013 15:01
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	T2.060313.150132
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	6.63		0.500	0.250
Potassium, Total	7440-09-7	1.88		1.00	0.500
Sodium, Total	7440-23-5	20.2		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00688	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0357		0.0200	0.0100

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	05/31/2013 14:01
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/04/2013 09:20
Workgroup #:	WG432602	**Analyst:**	JYH	**Run Date:**	06/04/2013 19:15
Collect Date:	05/22/2013 15:25	**Dilution:**	10	**File ID:**	T2.060413.191532
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	34.4		5.00	2.50

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

Certificate of Analysis

2.1.1.2 QC Summary Data

Example 6010 Calculations
Thermo Scientific iCAP 6500

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

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

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

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

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

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

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

4.0 Adjusting the concentration to dry weight:

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

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

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG432478
Analyst: ERP
Spike Analyst: ERP
Run Date: 05/31/2013 14:01
Method: 3015
Balance: BAL002
Instrument: MW-1
Instrument Start: 05/31/2013 14:15

SOP: ME407 Revison 14
Spike Solution: STD58074
Spike Witness: REK
HNO3 Lot #: COA16631
HCL Lot #: COA16547
Digestion Tubes Lot #: COA16806
ICP Filters- fisher-Lot# RGT26838
10000 PPM P Lot #: COA16487
1000 ppm Zr Lot #: COA16584

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG432478-02	BLANK	1	40 mL	50 mL	204.264 g	204.258 g		
2	WG432478-03	LCS	1	40 mL	50 mL	208.352 g	208.344 g	5 mL	
3	L13050002-21	ML21	1	40 mL	50 mL	209.835 g	209.829 g	5 mL	05/31/13
4	L13050002-22	ML22	1	40 mL	50 mL	208.653 g	208.647 g	5 mL	05/31/13
5	L13050002-23	ML23	1	40 mL	50 mL	207.221 g	207.216 g	5 mL	05/31/13
6	L13050002-24	ML24	1	40 mL	50 mL	210.173 g	210.163 g	5 mL	05/31/13
7	L13051242-01	SAMP	1	40 mL	50 mL	204.847 g	204.844 g		06/03/13
8	L13051242-02	SAMP	1	40 mL	50 mL	203.024 g	203.016 g		06/03/13
9	L13051242-03	SAMP	1	40 mL	50 mL	203.935 g	203.927 g		06/03/13
10	L13051242-04	SAMP	1	40 mL	50 mL	204.824 g	204.817 g		06/03/13
11	L13051243-04	SAMP	1	40 mL	50 mL	204.082 g	204.065 g		06/03/13
12	L13051243-05	SAMP	1	40 mL	50 mL	203.723 g	203.715 g		06/03/13
13	L13051244-01	SAMP	1	40 mL	50 mL	204.804 g	204.798 g		06/03/13
14	L13051351-06	SAMP	1	40 mL	50 mL	205.1 g	205.099 g		06/04/13
15	L13051351-07	SAMP	1	40 mL	50 mL	204.591 g	204.58 g		06/04/13
16	L13051351-08	SAMP	1	40 mL	50 mL	206.491 g	206.474 g		06/04/13
17	L13051351-09	SAMP	1	40 mL	50 mL	204.808 g	204.787 g		06/04/13
18	L13051351-10	SAMP	1	40 mL	50 mL	204.813 g	204.799 g		06/04/13
19	L13051351-11	SAMP	1	40 mL	50 mL	204.993 g	204.984 g		06/04/13
20	L13051351-17	SAMP	1	40 mL	50 mL	204.238 g	204.226 g		06/04/13
21	L13051378-35	SAMP	1	40 mL	50 mL	205.525 g	205.515 g		06/07/13
22	WG432478-01	REF	1	40 mL	50 mL	203.728 g	203.719 g		
23	L13051378-37	SAMP	1	40 mL	50 mL	203.728 g	203.719 g		06/07/13
24	WG432478-04	MS	1	40 mL	50 mL	208.933 g	208.924 g	5 mL	
25	WG432478-05	MSD	1	40 mL	50 mL	210.019 g	210.002 g	5 mL	

Analyst: Erin Poten

Reviewer: Brenda Gregory

MW_DIG - Modified 09/30/2009
PDF ID: 2903617
Report generated: 05/31/2013 15:00

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.2R.TXT
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: STD58077 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432268, 432602, 432679, 432675

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T2.060313.084036	WG432707-01	Calibration Point		1		06/03/13 08:40
2	T2.060313.084413	WG432707-02	Calibration Point		1		06/03/13 08:44
3	T2.060313.084751	WG432707-03	Calibration Point		1		06/03/13 08:47
4	T2.060313.085125	WG432707-04	Calibration Point		1		06/03/13 08:51
5	T2.060313.085442	WG432707-05	Calibration Point		1		06/03/13 08:54
6	T2.060313.085803	WG432707-06	Initial Calibration Verification		1		06/03/13 08:58
7	T2.060313.090119	WG432707-07	Initial Calib Blank		1		06/03/13 09:01
8	T2.060313.090455	WG432707-08	Low Level Initial Calibration V		1		06/03/13 09:04
9	T2.060313.090830	WG432707-09	Interference Check		1		06/03/13 09:08
10	T2.060313.091156	WG432707-10	Interference Check		1		06/03/13 09:11
11	T2.060313.091519	WG432707-11	CCV		1		06/03/13 09:15
12	T2.060313.091835	WG432707-12	CCB		1		06/03/13 09:18
13	T2.060313.093409	WG432008-02	Method/Prep Blank	40/50	1		06/03/13 09:34
14	T2.060313.093744	WG432008-03	Laboratory Control S	40/50	1		06/03/13 09:37
15	T2.060313.094100	WG432008-01	Reference Sample		1	L13050840-24	06/03/13 09:41
16	T2.060313.094430	WG432008-04	Matrix Spike	40/50	1	L13050840-24	06/03/13 09:44
17	T2.060313.094742	WG432008-05	Matrix Spike Duplica	40/50	1	L13050840-24	06/03/13 09:47
18	T2.060313.095056	L13051176-01	LH18/24-SP650-6081-GRAB	40/50	1		06/03/13 09:50
19	T2.060313.095434	L13051176-02	LH18/24-SP650-6081-COMP	40/50	1		06/03/13 09:54
20	T2.060313.095812	WG432268-03	Post Digestion Spike		1	L13051176-02	06/03/13 09:58
21	T2.060313.100135	WG432268-04	Serial Dilution		5	L13051176-02	06/03/13 10:01
22	T2.060313.101116	WG432707-13	CCV		1		06/03/13 10:11
23	T2.060313.101432	WG432707-14	CCB		1		06/03/13 10:14
24	T2.060313.101817	WG432707-15	Low Level Continuing Calibra		1		06/03/13 10:18
25	T2.060313.102153	WG432478-02	Method/Prep Blank	40/50	1		06/03/13 10:21
26	T2.060313.102530	WG432478-03	Laboratory Control S	40/50	1		06/03/13 10:25
27	T2.060313.102846	WG432478-01	Reference Sample		1	L13051378-37	06/03/13 10:28
28	T2.060313.103223	WG432478-04	Matrix Spike	40/50	1	L13051378-37	06/03/13 10:32
29	T2.060313.103539	WG432478-05	Matrix Spike Duplica	40/50	1	L13051378-37	06/03/13 10:35
30	T2.060313.103858	L13051243-04	FT02-FT13S-22MAY2103	40/50	1		06/03/13 10:38
31	T2.060313.104228	L13051243-05	FT02-FT13S-22MAY2103	40/50	1		06/03/13 10:42
32	T2.060313.104558	WG432602-01	Post Digestion Spike		1	L13051243-05	06/03/13 10:45
33	T2.060313.105016	WG432602-02	Serial Dilution		5	L13051243-05	06/03/13 10:50
34	T2.060313.105353	WG432707-16	CCV		1		06/03/13 10:53

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.2R.TXT
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: STD58077 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432268, 432602, 432679, 432675

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T2.060313.105710	WG432707-17	CCB		1		06/03/13 10:57
36	T2.060313.112350	WG432619-03	Method/Prep Blank	40/50	1		06/03/13 11:23
37	T2.060313.112726	WG432619-04	Laboratory Control S	40/50	1		06/03/13 11:27
38	T2.060313.113044	WG432619-01	Reference Sample		1	L13051421-01	06/03/13 11:30
39	T2.060313.113409	WG432619-05	Duplicate	40/50	1	L13051421-01	06/03/13 11:34
40	T2.060313.113734	WG432619-06	Matrix Spike	40/50	1	L13051421-01	06/03/13 11:37
41	T2.060313.114048	WG432619-02	Reference Sample		1	L13051422-01	06/03/13 11:40
42	T2.060313.114417	WG432619-07	Matrix Spike	40/50	1	L13051422-01	06/03/13 11:44
43	T2.060313.114732	L13060027-01	3051694-01	40/50	1		06/03/13 11:47
44	T2.060313.115101	WG432679-01	Post Digestion Spike		1	L13060027-01	06/03/13 11:51
45	T2.060313.115417	WG432679-02	Serial Dilution		5	L13060027-01	06/03/13 11:54
46	T2.060313.115754	WG432707-18	CCV		1		06/03/13 11:57
47	T2.060313.120109	WG432707-19	CCB		1		06/03/13 12:01
48	T2.060313.120450	WG432604-03	Method/Prep Blank	40/50	1		06/03/13 12:04
49	T2.060313.120827	WG432604-04	Laboratory Control S	40/50	1		06/03/13 12:08
50	T2.060313.121144	L13051262-01	TW16D		1	WG432604-01	06/03/13 12:11
51	T2.060313.121520	L13051262-03	TW16D/MS	40/50	1	WG432604-05	06/03/13 12:15
52	T2.060313.121843	L13051262-05	TW16D/MSD	40/50	1	WG432604-06	06/03/13 12:18
53	T2.060313.122206	L13051295-01	CALCIUM CHLORIDE SLN.	20/50	50		06/03/13 12:22
54	T2.060313.122550	L13051262-07	TW16S	40/50	1		06/03/13 12:25
55	T2.060313.122914	L13051262-08	TW16S	40/50	1		06/03/13 12:29
56	T2.060313.123242	WG432675-01	Post Digestion Spike		1	L13051262-08	06/03/13 12:32
57	T2.060313.123556	WG432675-02	Serial Dilution		5	L13051262-08	06/03/13 12:35
58	T2.060313.123933	WG432707-20	CCV		1		06/03/13 12:39
59	T2.060313.124248	WG432707-21	CCB		1		06/03/13 12:42

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.3
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432675, 432602, 432679, 432732

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T2.060313.132006	WG432737-01	Calibration Point		1		06/03/13 13:20
2	T2.060313.132343	WG432737-02	Calibration Point		1		06/03/13 13:23
3	T2.060313.132718	WG432737-03	Calibration Point		1		06/03/13 13:27
4	T2.060313.133054	WG432737-04	Calibration Point		1		06/03/13 13:30
5	T2.060313.133411	WG432737-05	Calibration Point		1		06/03/13 13:34
6	T2.060313.133728	WG432737-06	Initial Calibration Verification		1		06/03/13 13:37
7	T2.060313.134048	WG432737-07	Initial Calib Blank		1		06/03/13 13:40
8	T2.060313.134425	WG432737-08	Interference Check		1		06/03/13 13:44
9	T2.060313.134750	WG432737-09	Interference Check		1		06/03/13 13:47
10	T2.060313.135119	WG432737-10	CCV		1		06/03/13 13:51
11	T2.060313.135445	WG432737-11	CCB		1		06/03/13 13:54
12	T2.060313.135825	WG432604-03	Method/Prep Blank	40/50	1		06/03/13 13:58
13	T2.060313.140205	WG432604-04	Laboratory Control S	40/50	1		06/03/13 14:02
14	T2.060313.140526	L13051295010.0-01	L13051295010.001	20/50	1000		06/03/13 14:05
15	T2.060313.140912	WG432604-01	REFERANCE SAMPLE		100	L13051262-01	06/03/13 14:09
16	T2.060313.141244	WG432604-05	Matrix Spike	40/50	100	L13051262-01	06/03/13 14:12
17	T2.060313.141615	WG432604-06	Matrix Spike Duplica	40/50	100	L13051262-01	06/03/13 14:16
18	T2.060313.141947	L13051262-07	TW16S	40/50	1		06/03/13 14:19
19	T2.060313.142312	L13051262-08	TW16S	40/50	1		06/03/13 14:23
20	T2.060313.142640	WG432675-01	Post Digestion Spike		1	L13051262-08	06/03/13 14:26
21	T2.060313.142956	WG432675-02	Serial Dilution		5	L13051262-08	06/03/13 14:29
22	T2.060313.143331	WG432737-12	CCV		1		06/03/13 14:33
23	T2.060313.143646	WG432737-13	CCB		1		06/03/13 14:36
24	T2.060313.144029	L13051295-01	CALCIUM CHLORIDE SLN.	20/50	2000		06/03/13 14:40
25	T2.060313.144409	WG432737-14	CCV		1		06/03/13 14:44
26	T2.060313.144723	WG432737-15	CCB		1		06/03/13 14:47
27	T2.060313.145103	L13051242-01	MPL19-0513-1	40/50	1		06/03/13 14:51
28	T2.060313.145434	L13051242-02	MPL20-0513-1	40/50	1		06/03/13 14:54
29	T2.060313.145803	L13051242-03	MPL20-0513-2	40/50	1		06/03/13 14:58
30	T2.060313.150132	L13051242-04	MPL6-0513-1	40/50	1		06/03/13 15:01
31	T2.060313.150502	L13051244-01	J. PUSKARICH W-1	40/50	1		06/03/13 15:05
32	T2.060313.150831	L13051351-06	L-171MW13B(052213)	40/50	1		06/03/13 15:08
33	T2.060313.151226	L13051351-07	L-171MW13(052213)	40/50	1		06/03/13 15:12
34	T2.060313.151553	L13051351-08	L-171MW16(052213)	40/50	1		06/03/13 15:15

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Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.3
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432675, 432602, 432679, 432732

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T2.060313.151921	L13051351-09	L-171MW16B(052213)	40/50	1		06/03/13 15:19
36	T2.060313.152256	WG432737-16	CCV		1		06/03/13 15:22
37	T2.060313.152610	WG432737-17	CCB		1		06/03/13 15:26
38	T2.060313.152951	L13051351-10	L-171MW17(052213)	40/50	1		06/03/13 15:29
39	T2.060313.153321	L13051351-11	L-171MW17B(052213)	40/50	1		06/03/13 15:33
40	T2.060313.153649	L13051351-17	FB001(052313)	40/50	1		06/03/13 15:36
41	T2.060313.154026	L13051378-35	ORG.SO1.285.14	40/50	1		06/03/13 15:40
42	T2.060313.154407	WG432737-18	CCV		1		06/03/13 15:44
43	T2.060313.154723	WG432737-19	CCB		1		06/03/13 15:47
44	T2.060313.155101	L13051315-02	OUTFALL 002	40/50	1		06/03/13 15:51
45	T2.060313.155429	L13051315-03	OUTFALL 003	40/50	1		06/03/13 15:54
46	T2.060313.155752	L13051315-04	OUTFALL 004	40/50	1		06/03/13 15:57
47	T2.060313.160122	L13051315-05	OUTFALL 005	40/50	1		06/03/13 16:01
48	T2.060313.160453	L13051315-06	OUTFALL 006	40/50	1		06/03/13 16:04
49	T2.060313.160823	L13051315-07	OUTFALL 007	40/50	1		06/03/13 16:08
50	T2.060313.161152	L13051315-08	OUTFALL 008	40/50	1		06/03/13 16:11
51	T2.060313.161518	L13051315-09	OUTFALL 009	40/50	1		06/03/13 16:15
52	T2.060313.161846	L13051315-10	OUTFALL 010	40/50	1		06/03/13 16:18
53	T2.060313.162211	L13051421-02	002	40/50	1		06/03/13 16:22
54	T2.060313.162545	WG432737-20	CCV		1		06/03/13 16:25
55	T2.060313.162900	WG432737-21	CCB		1		06/03/13 16:29
56	T2.060313.163240	L13051422-02	001	40/50	1		06/03/13 16:32
57	T2.060313.163609	L13051422-03	003	40/50	1		06/03/13 16:36
58	T2.060313.163938	L13051422-04	003	40/50	1		06/03/13 16:39
59	T2.060313.164307	L13051425-03	024	40/50	1		06/03/13 16:43
60	T2.060313.164636	L13051425-04	024	40/50	1		06/03/13 16:46
61	T2.060313.165008	WG432737-22	CCV		1		06/03/13 16:50
62	T2.060313.165322	WG432737-23	CCB		1		06/03/13 16:53
63	T2.060313.165701	WG432604-02	Reference Sample		1	L13051262-02	06/03/13 16:57
64	T2.060313.170037	WG432604-07	Matrix Spike	40/50	1	L13051262-02	06/03/13 17:00
65	T2.060313.170401	WG432604-08	Matrix Spike Duplica	40/50	1	L13051262-02	06/03/13 17:04
66	T2.060313.170723	L13051262-09	TW11D	40/50	1		06/03/13 17:07
67	T2.060313.171051	L13051262-10	TW11D	40/50	1		06/03/13 17:10
68	T2.060313.171418	L13051262-11	TW11S	40/50	1		06/03/13 17:14

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Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.3
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432675, 432602, 432679, 432732

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T2.060313.171741	L13051262-12	TW11S	40/50	1		06/03/13 17:17
70	T2.060313.172109	L13051262-13	TW78	40/50	5		06/03/13 17:21
71	T2.060313.172432	L13051262-14	TW78	40/50	1		06/03/13 17:24
72	T2.060313.172806	L13051262-15	TW59D	40/50	1		06/03/13 17:28
73	T2.060313.173145	WG432737-24	CCV		1		06/03/13 17:31
74	T2.060313.173500	WG432737-25	CCB		1		06/03/13 17:35
75	T2.060313.173837	L13051262-16	TW59D	40/50	1		06/03/13 17:38
76	T2.060313.174213	L13051262-18	SL20	40/50	1		06/03/13 17:42
77	T2.060313.174551	L13051262-19	SL20	40/50	1		06/03/13 17:45
78	T2.060313.174929	L13051321-09	4104-MW9	40/50	1		06/03/13 17:49
79	T2.060313.175257	L13051321-10	4104-MW9DR	40/50	1		06/03/13 17:52
80	T2.060313.175631	L13051321-11	4104-MW10	40/50	1		06/03/13 17:56
81	T2.060313.180003	WG432737-26	CCV		1		06/03/13 18:00
82	T2.060313.180319	WG432737-27	CCB		1		06/03/13 18:03
83	T2.060313.180659	WG432659-03	Method/Prep Blank	40/50	1		06/03/13 18:06
84	T2.060313.181035	WG432659-04	Laboratory Control S	40/50	1		06/03/13 18:10
85	T2.060313.181354	L13051423-01	001	40/50	1		06/03/13 18:13
86	T2.060313.181722	L13051423-02	001	40/50	1		06/03/13 18:17
87	T2.060313.182051	L13051423-03	002	40/50	1		06/03/13 18:20
88	T2.060313.182418	L13051423-04	002	40/50	1		06/03/13 18:24
89	T2.060313.182745	L13051423-05	003	40/50	1		06/03/13 18:27
90	T2.060313.183114	L13051423-06	003	40/50	1		06/03/13 18:31
91	T2.060313.183443	WG432732-01	Post Digestion Spike		1	L13051423-06	06/03/13 18:34
92	T2.060313.183759	WG432732-02	Serial Dilution		5	L13051423-06	06/03/13 18:37
93	T2.060313.184132	WG432737-28	CCV		1		06/03/13 18:41
94	T2.060313.184447	WG432737-29	CCB		1		06/03/13 18:44
95	T2.060313.184824	L13051423-07	004	40/50	1		06/03/13 18:48
96	T2.060313.185152	L13051423-08	004	40/50	1		06/03/13 18:51
97	T2.060313.185521	L13051424-01	024	40/50	1		06/03/13 18:55
98	T2.060313.185848	L13051424-02	024	40/50	1		06/03/13 18:58
99	T2.060313.190216	L13051424-03	027	40/50	1		06/03/13 19:02
100	T2.060313.190545	L13051424-04	027	40/50	1		06/03/13 19:05
101	T2.060313.190914	L13051424-05	029	40/50	1		06/03/13 19:09
102	T2.060313.191243	L13051424-06	029	40/50	1		06/03/13 19:12

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Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060313T2.3
Analyst1: KHR Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46153

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432675, 432602, 432679, 432732

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T2.060313.191611	L13051424-07	035	40/50	1		06/03/13 19:16
104	T2.060313.191938	L13051424-08	035	40/50	1		06/03/13 19:19
105	T2.060313.192308	WG432737-30	CCV		1		06/03/13 19:23
106	T2.060313.192624	WG432737-31	CCB		1		06/03/13 19:26
107	T2.060313.193001	L13051426-01	DSBF		1	WG432659-01	06/03/13 19:30
108	T2.060313.193330	WG432659-05	Matrix Spike	40/50	1	L13051426-01	06/03/13 19:33
109	T2.060313.193646	L13051426-02	DSBF		1	WG432659-02	06/03/13 19:36
110	T2.060313.194014	WG432659-07	Duplicate	40/50	1	L13051426-02	06/03/13 19:40
111	T2.060313.194343	WG432659-06	Matrix Spike	40/50	1	L13051426-02	06/03/13 19:43
112	T2.060313.194701	WG432737-32	CCV		1		06/03/13 19:47
113	T2.060313.195017	WG432737-33	CCB		1		06/03/13 19:50

 Approved: June 04, 2013

Maren Berry

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Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T2.060413.090607	WG432844-01	Calibration Point		1		06/04/13 09:06
2	T2.060413.090944	WG432844-02	Calibration Point		1		06/04/13 09:09
3	T2.060413.091320	WG432844-03	Calibration Point		1		06/04/13 09:13
4	T2.060413.091654	WG432844-04	Calibration Point		1		06/04/13 09:16
5	T2.060413.092010	WG432844-05	Calibration Point		1		06/04/13 09:20
6	T2.060413.092326	WG432844-06	Initial Calibration Verification		1		06/04/13 09:23
7	T2.060413.092641	WG432844-07	Initial Calib Blank		1		06/04/13 09:26
8	T2.060413.093017	WG432844-08	Interference Check		1		06/04/13 09:30
9	T2.060413.093342	WG432844-09	Interference Check		1		06/04/13 09:33
10	T2.060413.093703	WG432844-10	CCV		1		06/04/13 09:37
11	T2.060413.094018	WG432844-11	CCB		1		06/04/13 09:40
12	T2.060413.094358	WG432720-03	Method/Prep Blank	40/50	1		06/04/13 09:43
13	T2.060413.094734	WG432720-04	Laboratory Control S	40/50	1		06/04/13 09:47
14	T2.060413.095053	WG432720-01	Reference Sample		1	L13051447-01	06/04/13 09:50
15	T2.060413.095421	WG432720-05	Duplicate	40/50	1	L13051447-01	06/04/13 09:54
16	T2.060413.095749	WG432720-06	Matrix Spike	40/50	1	L13051447-01	06/04/13 09:57
17	T2.060413.100104	L13051447-02	DSPO	40/50	1		06/04/13 10:01
18	T2.060413.100433	L13051447-03	DSTM	40/50	1		06/04/13 10:04
19	T2.060413.100800	L13051447-04	DSTM	40/50	1		06/04/13 10:08
20	T2.060413.101128	WG432807-01	Post Digestion Spike		1	L13051447-04	06/04/13 10:11
21	T2.060413.101444	WG432807-02	Serial Dilution		5	L13051447-04	06/04/13 10:14
22	T2.060413.101816	WG432844-12	CCV		1		06/04/13 10:18
23	T2.060413.102133	WG432844-13	CCB		1		06/04/13 10:21
24	T2.060413.102511	L13051447-05	USPO	40/50	1		06/04/13 10:25
25	T2.060413.102840	L13051447-06	USPO	40/50	1		06/04/13 10:28
26	T2.060413.103208	L13051447-07	USTM	40/50	1		06/04/13 10:32
27	T2.060413.103536	L13051447-08	USTM	40/50	1		06/04/13 10:35
28	T2.060413.103905	WG432720-02	Reference Sample		1	L13051448-01	06/04/13 10:39
29	T2.060413.104233	WG432720-07	Matrix Spike	40/50	1	L13051448-01	06/04/13 10:42
30	T2.060413.104548	L13051448-02	DSPO	40/50	1		06/04/13 10:45
31	T2.060413.104916	L13051448-03	DSPO	40/50	1		06/04/13 10:49
32	T2.060413.105243	L13051448-04	DSTM	40/50	1		06/04/13 10:52
33	T2.060413.105611	L13051448-05	DSTM	40/50	1		06/04/13 10:56
34	T2.060413.105941	WG432844-14	CCV		1		06/04/13 10:59

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Sheri L. Babgard

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Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T2.060413.110256	WG432844-15	CCB		1		06/04/13 11:02
36	T2.060413.110635	L13051448-06	P-62	40/50	1		06/04/13 11:06
37	T2.060413.111004	L13051448-07	USPO	40/50	1		06/04/13 11:10
38	T2.060413.111332	L13051448-08	USPO	40/50	1		06/04/13 11:13
39	T2.060413.111700	L13051448-09	USTM	40/50	1		06/04/13 11:17
40	T2.060413.112029	L13051458-05	007	40/50	1		06/04/13 11:20
41	T2.060413.112356	L13051458-06	007	40/50	1		06/04/13 11:23
42	T2.060413.112729	WG432844-16	CCV		1		06/04/13 11:27
43	T2.060413.113043	WG432844-17	CCB		1		06/04/13 11:30
44	T2.060413.113423	WG432718-03	Method/Prep Blank	40/50	1		06/04/13 11:34
45	T2.060413.113759	WG432718-04	Laboratory Control S	40/50	1		06/04/13 11:37
46	T2.060413.114118	WG432718-01	Reference Sample		1	L13051443-06	06/04/13 11:41
47	T2.060413.114446	WG432718-05	Matrix Spike	40/50	1	L13051443-06	06/04/13 11:44
48	T2.060413.114802	WG432718-06	Duplicate	40/50	1	L13051443-06	06/04/13 11:48
49	T2.060413.115132	L13051443-01	DSPO	40/50	1		06/04/13 11:51
50	T2.060413.115502	L13051443-02	DSPO	40/50	1		06/04/13 11:55
51	T2.060413.115830	L13051443-03	DSTM	40/50	1		06/04/13 11:58
52	T2.060413.120158	WG432808-01	Post Digestion Spike		1	L13051443-03	06/04/13 12:01
53	T2.060413.120513	WG432808-02	Serial Dilution		5	L13051443-03	06/04/13 12:05
54	T2.060413.120848	WG432844-18	CCV		1		06/04/13 12:08
55	T2.060413.121203	WG432844-19	CCB		1		06/04/13 12:12
56	T2.060413.121542	L13051443-04	DSTM		1		06/04/13 12:15
57	T2.060413.121911	L13051443-05	USPO		1		06/04/13 12:19
58	T2.060413.122239	L13051444-01	DSPO		1		06/04/13 12:22
59	T2.060413.122607	L13051444-02	DSPO		1		06/04/13 12:26
60	T2.060413.122937	L13051444-03	DSTM		1		06/04/13 12:29
61	T2.060413.123304	L13051444-04	DSTM		1		06/04/13 12:33
62	T2.060413.123631	L13051444-05	FD-28		1		06/04/13 12:36
63	T2.060413.123959	L13051444-06	FDG-3		1		06/04/13 12:39
64	T2.060413.124331	L13051444-07	PODN		1		06/04/13 12:43
65	T2.060413.124700	L13051444-08	POUP		1		06/04/13 12:47
66	T2.060413.125033	WG432844-20	CCV		1		06/04/13 12:50
67	T2.060413.125351	WG432844-21	CCB		1		06/04/13 12:53
68	T2.060413.125729	L13051444-09	USPO		1		06/04/13 12:57

 Approved: June 05, 2013

Microbac

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Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T2.060413.130059	WG432718-02	Reference Sample		1	L13051444-10	06/04/13 13:00
70	T2.060413.130428	WG432718-07	Matrix Spike		1	L13051444-10	06/04/13 13:04
71	T2.060413.130747	L13051450-01	DNRF		1		06/04/13 13:07
72	T2.060413.140839	WG432844-22	CCV		1		06/04/13 14:08
73	T2.060413.141153	WG432844-23	CCB		1		06/04/13 14:11
74	T2.060413.141534	L13051443-04	DSTM	40/50	1		06/04/13 14:15
75	T2.060413.141902	L13051443-05	USPO	40/50	1		06/04/13 14:19
76	T2.060413.142231	L13051444-01	DSPO	40/50	1		06/04/13 14:22
77	T2.060413.142557	L13051444-02	DSPO	40/50	1		06/04/13 14:25
78	T2.060413.142925	L13051444-03	DSTM	40/50	1		06/04/13 14:29
79	T2.060413.143252	L13051444-04	DSTM	40/50	1		06/04/13 14:32
80	T2.060413.143620	L13051444-05	FD-28	40/50	1		06/04/13 14:36
81	T2.060413.143950	L13051444-06	FDG-3	40/50	1		06/04/13 14:39
82	T2.060413.144320	L13051444-07	PODN	40/50	1		06/04/13 14:43
83	T2.060413.144647	L13051444-08	POUP	40/50	1		06/04/13 14:46
84	T2.060413.145020	WG432844-24	CCV		1		06/04/13 14:50
85	T2.060413.145335	WG432844-25	CCB		1		06/04/13 14:53
86	T2.060413.145715	L13051444-09	USPO	40/50	1		06/04/13 14:57
87	T2.060413.150042	WG432718-02	Reference Sample		1	L13051444-10	06/04/13 15:00
88	T2.060413.150411	WG432718-07	Matrix Spike	40/50	1	L13051444-10	06/04/13 15:04
89	T2.060413.150726	L13051450-01	DNRF	40/50	1		06/04/13 15:07
90	T2.060413.151054	L13051452-01	DNRF	40/50	1		06/04/13 15:10
91	T2.060413.151421	L13051452-02	DNRF	40/50	1		06/04/13 15:14
92	T2.060413.151753	WG432844-26	CCV		1		06/04/13 15:17
93	T2.060413.152110	WG432844-27	CCB		1		06/04/13 15:21
94	T2.060413.152448	WG432767-03	Method/Prep Blank	40/50	1		06/04/13 15:24
95	T2.060413.152823	WG432767-04	Laboratory Control S	40/50	1		06/04/13 15:28
96	T2.060413.153140	WG432767-01	Reference Sample		1	L13051451-01	06/04/13 15:31
97	T2.060413.153507	WG432767-05	Duplicate	40/50	1	L13051451-01	06/04/13 15:35
98	T2.060413.153833	WG432767-06	Matrix Spike	40/50	1	L13051451-01	06/04/13 15:38
99	T2.060413.154147	L13051451-02	DNLWC	40/50	1		06/04/13 15:41
100	T2.060413.154515	L13051451-03	DNRF	40/50	1		06/04/13 15:45
101	T2.060413.154843	L13051451-04	DNRF	40/50	1		06/04/13 15:48
102	T2.060413.155208	WG432825-01	Post Digestion Spike		1	L13051451-04	06/04/13 15:52

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Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T2.060413.155524	WG432825-02	Serial Dilution		5	L13051451-04	06/04/13 15:55
104	T2.060413.155900	WG432844-28	CCV		1		06/04/13 15:59
105	T2.060413.160216	WG432844-29	CCB		1		06/04/13 16:02
106	T2.060413.160556	L13051451-05	UPLWC	40/50	1		06/04/13 16:05
107	T2.060413.160923	L13051451-06	UPLWC	40/50	1		06/04/13 16:09
108	T2.060413.161249	WG432767-02	Reference Sample		1	L13051454-01	06/04/13 16:12
109	T2.060413.161615	WG432767-07	Matrix Spike	40/50	1	L13051454-01	06/04/13 16:16
110	T2.060413.161929	L13051454-02	DCCH	40/50	1		06/04/13 16:19
111	T2.060413.162255	L13051454-03	DSBF	40/50	1		06/04/13 16:22
112	T2.060413.162621	L13051454-04	DSBF	40/50	1		06/04/13 16:26
113	T2.060413.162949	L13051454-05	RFLCUS-1	40/50	1		06/04/13 16:29
114	T2.060413.163314	L13051454-06	RFLCUS-1	40/50	1		06/04/13 16:33
115	T2.060413.163642	L13051454-07	USRFLC	40/50	1		06/04/13 16:36
116	T2.060413.164010	WG432844-30	CCV		1		06/04/13 16:40
117	T2.060413.164326	WG432844-31	CCB		1		06/04/13 16:43
118	T2.060413.164705	L13051454-08	USRFLC	40/50	1		06/04/13 16:47
119	T2.060413.165032	L13051525-01	DSPC	40/50	1		06/04/13 16:50
120	T2.060413.165400	L13051525-02	DSPC	40/50	1		06/04/13 16:54
121	T2.060413.165728	L13051525-03	UPC	40/50	1		06/04/13 16:57
122	T2.060413.170057	L13051525-04	UPC	40/50	1		06/04/13 17:00
123	T2.060413.170426	L13060031-01	3051693-01	40/50	1		06/04/13 17:04
124	T2.060413.170757	L13051451-02	DNLWC		10		06/04/13 17:07
125	T2.060413.171126	L13051451-03	DNRF		10		06/04/13 17:11
126	T2.060413.171459	WG432844-32	CCV		1		06/04/13 17:14
127	T2.060413.171814	WG432844-33	CCB		1		06/04/13 17:18
128	T2.060413.172151	WG432768-03	Method/Prep Blank	40/50	1		06/04/13 17:21
129	T2.060413.172527	WG432768-04	Laboratory Control S	40/50	1		06/04/13 17:25
130	T2.060413.172845	WG432768-01	Reference Sample		1	L13051432-01	06/04/13 17:28
131	T2.060413.173212	WG432768-05	Duplicate	40/50	1	L13051432-01	06/04/13 17:32
132	T2.060413.173540	WG432768-06	Matrix Spike	40/50	1	L13051432-01	06/04/13 17:35
133	T2.060413.173854	L13051432-02	DSLB	40/50	1		06/04/13 17:38
134	T2.060413.174223	L13051432-03	DSRC	40/50	1		06/04/13 17:42
135	T2.060413.174552	L13051432-04	DSRC	40/50	1		06/04/13 17:45
136	T2.060413.174921	WG432827-01	Post Digestion Spike		1	L13051432-04	06/04/13 17:49

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Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T2.060413.175237	WG432827-02	Serial Dilution		5	L13051432-04	06/04/13 17:52
138	T2.060413.175610	WG432844-34	CCV		1		06/04/13 17:56
139	T2.060413.175925	WG432844-35	CCB		1		06/04/13 17:59
140	T2.060413.180302	L13051432-07	USRC	40/50	1		06/04/13 18:03
141	T2.060413.180631	L13051432-08	USRC	40/50	1		06/04/13 18:06
142	T2.060413.180959	L13051433-01	DLC-19	40/50	1		06/04/13 18:09
143	T2.060413.181326	L13051433-02	DLC-19	40/50	1		06/04/13 18:13
144	T2.060413.181652	L13051433-03	ULC-7	40/50	1		06/04/13 18:16
145	T2.060413.182019	L13051433-04	ULC-7	40/50	1		06/04/13 18:20
146	T2.060413.182345	L13051434-01	G-4	40/50	1		06/04/13 18:23
147	T2.060413.182718	L13051434-02	LWBC	40/50	1		06/04/13 18:27
148	T2.060413.183046	L13051434-03	P-33	40/50	1		06/04/13 18:30
149	T2.060413.183410	L13051434-04	S3-1A	40/50	1		06/04/13 18:34
150	T2.060413.183740	WG432844-36	CCV		1		06/04/13 18:37
151	T2.060413.184055	WG432844-37	CCB		1		06/04/13 18:40
152	T2.060413.184434	L13051434-05	UPLWC/P-29	40/50	1		06/04/13 18:44
153	T2.060413.184800	WG432768-02	Reference Sample		1	L13051435-01	06/04/13 18:48
154	T2.060413.185125	WG432768-07	Matrix Spike	40/50	1	L13051435-01	06/04/13 18:51
155	T2.060413.185439	L13051435-02	DLC	40/50	1		06/04/13 18:54
156	T2.060413.185806	WG432844-38	CCV		1		06/04/13 18:58
157	T2.060413.190122	WG432844-39	CCB		1		06/04/13 19:01
158	T2.060413.190458	L13051242-01	MPL19-0513-1	40/50	10		06/04/13 19:04
159	T2.060413.190830	L13051242-02	MPL20-0513-1	40/50	10		06/04/13 19:08
160	T2.060413.191202	L13051242-03	MPL20-0513-2	40/50	10		06/04/13 19:12
161	T2.060413.191532	L13051242-04	MPL6-0513-1	40/50	10		06/04/13 19:15
162	T2.060413.191905	WG432604-02	Reference Sample		100	L13051262-02	06/04/13 19:19
163	T2.060413.192236	WG432604-07	Matrix Spike	40/50	100	L13051262-02	06/04/13 19:22
164	T2.060413.192608	WG432604-08	Matrix Spike Duplica	40/50	100	L13051262-02	06/04/13 19:26
165	T2.060413.192940	L13051262-14	TW78	40/50	100		06/04/13 19:29
166	T2.060413.193314	WG432844-40	CCV		1		06/04/13 19:33
167	T2.060413.193630	WG432844-41	CCB		1		06/04/13 19:36
168	T2.060413.194009	L13050888-37	GW1H13-MW-47		100		06/04/13 19:40
169	T2.060413.194340	L13050888-38	GW1H13-MW-47-Z		100		06/04/13 19:43
170	T2.060413.194712	WG431949-01	Reference Sample		100	L13050888-45	06/04/13 19:47

Page: 5 Approved: June 05, 2013

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 060413T2.1
Analyst1: JYH Analyst2: N/A
Method: 6010B/6010C/200.7 SOP: ME600G Rev: 13
Maintenance Log ID: 46200

Calibration Std: STD58233 ICV Std: STD57869 Post Spike: STD56572
ICSA: STD57968 ICSAB: STD58081 Int. Std: RGT17680
CCV: STD58131 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 432807,432808,432825,432827,432602,432675,432494

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	T2.060413.195044	L13050888-46	GW1H13-MW-59-D		100		06/04/13 19:50
172	T2.060413.195415	WG431949-04	Matrix Spike		100	L13050888-45	06/04/13 19:54
173	T2.060413.195747	WG431949-05	Matrix Spike Duplica		100	L13050888-45	06/04/13 19:57
174	T2.060413.200118	L13050888-49	GW1H13-MW-59-Z		100		06/04/13 20:01
175	T2.060413.200453	WG432844-42	CCV		1		06/04/13 20:04
176	T2.060413.200808	WG432844-43	CCB		1		06/04/13 20:08
177	T2.060413.201146	RINSE	RINSE		1		06/04/13 20:11
178	T2.060413.201524	RINSE1	RINSE1		1		06/04/13 20:15
179	T2.060413.201901	RINSE2	RINSE2		1		06/04/13 20:19
180	T2.060413.202238	RINSE3	RINSE3		1		06/04/13 20:22
181	T2.060413.202615	RINSE4	RINSE4		1		06/04/13 20:26
182	T2.060413.202952	RINSE5	RINSE5		1		06/04/13 20:29
183	T2.060413.203329	RINSE6	RINSE6		1		06/04/13 20:33
184	T2.060413.203707	RINSE7	RINSE7		1		06/04/13 20:37
185	T2.060413.204045	RINSE8	RINSE8		1		06/04/13 20:40
186	T2.060513.073940	WG432844-44	CCV		1		06/05/13 07:39
187	T2.060513.074256	WG432844-45	CCB		1		06/05/13 07:42
188	T2.060513.074634	L13051451-02	DNLWC		10		06/05/13 07:46
189	T2.060513.075003	L13051451-03	DNRF	40/50	10		06/05/13 07:50
190	T2.060513.075334	L13050888-37	GW1H13-MW-47	40/50	100		06/05/13 07:53
191	T2.060513.075700	L13050888-38	GW1H13-MW-47-Z	40/50	100		06/05/13 07:57
192	T2.060513.080028	L13050888-45	GW1H13-MW-59		100	WG431949-01	06/05/13 08:00
193	T2.060513.080356	L13050888-46	GW1H13-MW-59-D	40/50	100		06/05/13 08:03
194	T2.060513.080724	L13050888-47	GW1H13-MW-59	40/50	100	WG431949-04	06/05/13 08:07
195	T2.060513.081050	L13050888-48	GW1H13-MW-59	40/50	100	WG431949-05	06/05/13 08:10
196	T2.060513.081417	L13050888-49	GW1H13-MW-59-Z	40/50	100		06/05/13 08:14
197	T2.060513.081751	WG432844-46	CCV		1		06/05/13 08:17
198	T2.060513.082106	WG432844-47	CCB		1		06/05/13 08:21

Comments

Seq.	Rerun	Dil.	Reason	Analytes
124			Tubes for samples 02 and 03 were not placed at the right position, rerun.	
168			Tubes for samples 37, 38, and 45 through 49 were not placed at the right position, rerun.	

Page: 6 Approved: June 05, 2013

Microbac Laboratories Inc.

Data Checklist

Date: 03-JUN-2013
Analyst: KHR
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: PE-ICP2
Curve Workgroup: 432707
Runlog ID: 53555
Analytical Workgroups: 432268, 432602, 432679, 432675

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
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	1176, 1242, 1243, 1351, 1262, 1295
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:
04-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 11:43:16

Microbac Laboratories Inc.

Data Checklist

Date: 03-JUN-2013
Analyst: KHR
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: ICP-THERMO2
Curve Workgroup: 432737
Runlog ID: 53562
Analytical Workgroups: 432675, 432602, 432679, 432732

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	1242, 1351, 1262
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:
04-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 14:10:06

Microbac Laboratories Inc.

Data Checklist

Date: 04-JUN-2013
Analyst: JYH
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: ICP-THERMO2
Curve Workgroup: 432844
Runlog ID: 53578
Analytical Workgroups: 432807,432808,432825,432827,432602,432675,432494

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	1443,1444,1451,1262,888
Client Forms	X
Level X	
Level 3	
Level 4	
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	SLP
Comments	

Primary Reviewer:
05-JUN-2013

Secondary Reviewer:
05-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-05-2013 11:01:49

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B AAB#: WG432602

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9.1	180		06/04/13	13.3	180	
MPL19-0513-1	01	05/22/13					05/31/2013	9.1	180		06/03/13	12.1	180	
MPL20-0513-1	02	05/22/13					05/31/2013	9	180		06/04/13	13.2	180	
MPL20-0513-1	02	05/22/13					05/31/2013	9	180		06/03/13	12	180	
MPL20-0513-2	03	05/22/13					05/31/2013	9	180		06/03/13	12	180	
MPL20-0513-2	03	05/22/13					05/31/2013	9	180		06/04/13	13.2	180	
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	180		06/03/13	12	180	
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	180		06/04/13	13.2	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2907277
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG432602
Blank File ID: T2.060313.102153
Blank Sample ID: WG432478-02
Prep Date: 05/31/13 14:01
Instrument ID: ICP-THERMO2
Analyzed Date: 06/03/13 10:21
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432478-03	T2.060313.102530	06/03/13 10:25	01
MPL19-0513-1	L13051242-01	T2.060313.145103	06/03/13 14:51	01
MPL20-0513-1	L13051242-02	T2.060313.145434	06/03/13 14:54	01
MPL20-0513-2	L13051242-03	T2.060313.145803	06/03/13 14:58	01
MPL6-0513-1	L13051242-04	T2.060313.150132	06/03/13 15:01	01
MPL19-0513-1	L13051242-01	T2.060413.190458	06/04/13 19:04	DL01
MPL20-0513-1	L13051242-02	T2.060413.190830	06/04/13 19:08	DL01
MPL20-0513-2	L13051242-03	T2.060413.191202	06/04/13 19:12	DL01
MPL6-0513-1	L13051242-04	T2.060413.191532	06/04/13 19:15	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2907278
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 14:01 Sample ID: WG432478-02
Instrument ID: ICP-THERMO2 Run Date: 06/03/13 10:21 Prep Method: 3015
File ID: T2.060313.102153 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG432602 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-03-JUN-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Tin, Total	0.250	0.500	0.250	1	U
Vanadium, Total	0.00500	0.0100	0.00500	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: 2907279
05-JUN-2013 09:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 06/03/2013 **Sample ID:** WG432478-03
Instrument ID: ICP-THERMO2 **Run Time:** 10:25 **Prep Method:** 3015
File ID: T2.060313.102530 **Analyst:** KHR **Method:** 6010B
Workgroup (AAB#): WG432602 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD58074 **Cal ID:** ICP-TH-03-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Total	0.0313	0.0311	99.6	80 - 120	
Calcium, Total	6.25	6.39	102	80 - 120	
Magnesium, Total	6.25	6.07	97.2	80 - 120	
Potassium, Total	31.3	30.9	99.0	80 - 120	
Sodium, Total	31.3	30.7	98.2	80 - 120	
Tin, Total	0.625	0.639	102	80 - 120	
Vanadium, Total	0.625	0.620	99.3	80 - 120	
Zinc, Total	0.625	0.637	102	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2907280
Report generated: 06/05/2013 09:49

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13051242 Cal ID:ICP-THERMO2 - Worknum:WG432602

Instrument ID:ICP-THERMO2 Contract #: Method:6010B

Parent ID:WG432478-01 File ID:T2.060313.102846 Dil:1 Matrix:WATER

Sample ID:WG432478-04 MS File ID:T2.060313.103223 Dil:1 Units:mg/L

Sample ID:WG432478-05 MSD File ID:T2.060313.103539 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	0.0313	0.0295	94.5	0.0313	0.0311	99.5	5.15	80 - 120	20	
Calcium, Total	ND	6.25	6.17	98.6	6.25	6.37	102	3.29	80 - 120	20	
Magnesium, Total	ND	6.25	5.86	93.7	6.25	6.09	97.5	3.98	80 - 120	20	
Potassium, Total	ND	31.3	29.7	95.0	31.3	30.9	98.7	3.88	80 - 120	20	
Sodium, Total	0.858	31.3	30.4	94.4	31.3	31.5	97.9	3.57	80 - 120	20	
Tin, Total	ND	0.625	0.628	101	0.625	0.647	103	2.90	80 - 120	20	
Vanadium, Total	ND	0.625	0.591	94.5	0.625	0.618	98.9	4.57	80 - 120	20	
Zinc, Total	ND	0.625	0.601	96.2	0.625	0.636	102	5.62	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: 2907281

Report generated 06/04/2013 09:07

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13051242 **Worknum:** WG432602
Instrument: ICP-THERMO2 **Method:** 6010B
Serial Dil: WG432602-02 **File ID:** T2.060313.105016 **Dil:** 5 **Units:** mg/L
Sample: L13051243-05 **File ID:** T2.060313.104228 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Beryllium			ND	U		
Calcium	53.6		54.9		2.42	
Magnesium	2.93	X	3.04	X	3.75	
Potassium	1.73	X	ND	U		
Sodium	0.864	X	ND	U		
Tin	ND	U	ND	U		
Vanadium	ND	U	ND	U		
Zinc	1.14		1.18		3.60	

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: 2907275
06/05/2013 09:49

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13051242 **Worknum:** WG432602
Instrument ID: ICP-THERMO2 **Method:** 6010B
Post Spike ID: WG432602-01 **File ID:** T2.060313.104558 **Dil:** 1 **Units:** mg/L
Sample ID: L13051243-05 **File ID:** T2.060313.104228 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0256		0		.025	102.5	75 - 125	
CALCIUM	54.1		53.6		5	117.2	75 - 125	
MAGNESIUM	7.53		2.93		5	97.8	75 - 125	
POTASSIUM	27.0		1.73		25	102.0	75 - 125	
SODIUM	26.1		0.864		25	101.3	75 - 125	
TIN	0.527		0	U	.5	105.3	75 - 125	
VANADIUM	0.509		0	U	.5	101.8	75 - 125	
ZINC	1.53		1.14		.5	100.3	75 - 125	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2907276
Report generated: 06/05/2013 09:49

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L13051242**	Workgroup (AAB#):	**WG432602**
Analytical Method:	**6010B**	Instrument ID:	**ICP-THERMO2**
ICAL Worknum:	**WG432707**	Initial Calibration Date:	**03-JUN-2013 08:54**

	WG432707-01		WG432707-02		WG432707-03		WG432707-04		WG432707-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-0.000720	.0005	0.00466	.001	0.00965	.05	0.625	.1	1.26	.999988	
CALCIUM	0	-0.00108	.1	0.000750	.2	0.00249	10	0.209	20	0.431	.999917	
MAGNESIUM	0	0.0000700	.1	0.000680	.2	0.00133	10	0.0781	20	0.159	.999962	
POTASSIUM	0	-0.00102	.5	0.00878	1	0.0185	50	1.14	100	2.33	.999941	
SODIUM	0	0.000280	.5	0.0324	1	0.0634	50	3.81	100	7.77	.999953	
TIN	0	0.000240	.01	0.00143	.02	0.00258	1	0.146	2	0.286	.999949	
VANADIUM	0	-0.0000500	.01	0.0126	.02	0.0251	1	1.51	2	3.02	.999993	
ZINC	0	0.000220	.01	0.00549	.02	0.0108	1	0.638	2	1.25	.999961	

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: 2907284
Report generated: 05-JUN-2013 09:49

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L13051242**	Workgroup (AAB#):	**WG432602**
Analytical Method:	**6010B**	Instrument ID:	**ICP-THERMO2**
ICAL Worknum:	**WG432737**	Initial Calibration Date:	**03-JUN-2013 13:34**

	WG432737-01		WG432737-02		WG432737-03		WG432737-04		WG432737-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-0.00101	.0005	0.00447	.001	0.00956	.05	0.631	.1	1.27	.999985	
CALCIUM	0	-0.000640	.1	0.00113	.2	0.00346	10	0.240	20	0.485	.999973	
MAGNESIUM	0	0.0000600	.1	0.000640	.2	0.00135	10	0.0789	20	0.158	.99999	
POTASSIUM	0	-0.000290	.5	0.00899	1	0.0183	50	1.17	100	2.35	1	
SODIUM	0	0.000800	.5	0.0326	1	0.0626	50	3.92	100	7.82	.999998	
TIN	0	0.000210	.01	0.00143	.02	0.00269	1	0.149	2	0.297	.999994	
VANADIUM	0	0.000220	.01	0.0123	.02	0.0249	1	1.50	2	3.00	.999997	
ZINC	0	-0.000130	.01	0.00547	.02	0.0110	1	0.655	2	1.33	.999974	

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: 2907284
Report generated: 05-JUN-2013 09:49

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L13051242**	Workgroup (AAB#):	**WG432602**
Analytical Method:	**6010B**	Instrument ID:	**ICP-THERMO2**
ICAL Worknum:	**WG432844**	Initial Calibration Date:	**04-JUN-2013 09:20**

	WG432844-01		WG432844-02		WG432844-03		WG432844-04		WG432844-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-0.000410	.0005	0.00273	.001	0.00617	.05	0.413	.1	0.822	.999992	
CALCIUM	0	-0.000720	.1	0.000580	.2	0.00192	10	0.168	20	0.339	.999992	
MAGNESIUM	0	0.0000100	.1	0.000480	.2	0.000890	10	0.0526	20	0.105	.999977	
POTASSIUM	0	0.000220	.5	0.00686	1	0.0129	50	0.778	100	1.56	.999993	
SODIUM	0	-0.000230	.5	0.0191	1	0.0404	50	2.52	100	5.02	.999995	
TIN	0	0.000190	.01	0.000980	.02	0.00176	1	0.0912	2	0.198	.999301	
VANADIUM	0	-0.000150	.01	0.00819	.02	0.0159	1	0.994	2	1.98	.999993	
ZINC	0	-0.000150	.01	0.00361	.02	0.00719	1	0.455	2	0.892	.999953	

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: 2907284
Report generated: 05-JUN-2013 09:49

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-07
Instrument ID: ICP-THERMO2 Run Time: 09:01 Method: 6010B
File ID: T2.060313.090119 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-THERI - 03-JUN-13
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SODIUM	.2	.4	.2	U
TIN	.2	.4	.2	U
VANADIUM	.004	.008	.004	U
ZINC	.008	.016	.008	U

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

ICB - Modified 07/14/2009
PDF File ID: 2907286
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-07
Instrument ID: ICP-THERMO2 Run Time: 13:40 Method: 6010B
File ID: T2.060313.134048 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-THERI - 03-JUN-13
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SODIUM	.2	.4	.2	U
TIN	.2	.4	.2	U
VANADIUM	.004	.008	.004	U
ZINC	.008	.016	.008	U

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

ICB - Modified 07/14/2009
PDF File ID: 2907286
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-07
Instrument ID: ICP-THERMO2 Run Time: 09:26 Method: 6010B
File ID: T2.060413.092641 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-THERI - 04-JUN-13
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SODIUM	.2	.4	.2	U
TIN	.2	.4	.2	U
VANADIUM	.004	.008	.004	U
ZINC	.008	.016	.008	U

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

ICB - Modified 07/14/2009
PDF File ID: 2907286
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-12

Instrument ID: ICP-THERMO2 Run Time: 09:18 Method: 6010B

File ID: T2.060313.091835 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-14

Instrument ID: ICP-THERMO2 Run Time: 10:14 Method: 6010B

File ID: T2.060313.101432 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-17

Instrument ID: ICP-THERMO2 Run Time: 10:57 Method: 6010B

File ID: T2.060313.105710 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-11

Instrument ID: ICP-THERMO2 Run Time: 13:54 Method: 6010B

File ID: T2.060313.135445 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-15

Instrument ID: ICP-THERMO2 Run Time: 14:47 Method: 6010B

File ID: T2.060313.144723 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-17

Instrument ID: ICP-THERMO2 Run Time: 15:26 Method: 6010B

File ID: T2.060313.152610 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-11

Instrument ID: ICP-THERMO2 Run Time: 09:40 Method: 6010B

File ID: T2.060413.094018 Analyst: JYH Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-39

Instrument ID: ICP-THERMO2 Run Time: 19:01 Method: 6010B

File ID: T2.060413.190122 Analyst: JYH Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-41

Instrument ID: ICP-THERMO2 Run Time: 19:36 Method: 6010B

File ID: T2.060413.193630 Analyst: JYH Units: mg/L

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	U

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

CCB - Modified 03/05/2008
PDF File ID: 2907289
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-06
Instrument ID: ICP-THERMO2 Run Time: 13:37 Method: 6010B
File ID: T2.060313.133728 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0505	101	90 - 110	
Calcium		10	10.4	104	90 - 110	
Magnesium		10	10.4	104	90 - 110	
Potassium		50	51.5	103	90 - 110	
Sodium		50	51.1	102	90 - 110	
Tin		1	0.962	96.2	90 - 110	
Vanadium		1	1.00	100	90 - 110	
Zinc		1	1.03	103	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2907285
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-06
Instrument ID: ICP-THERMO2 Run Time: 08:58 Method: 6010B
File ID: T2.060313.085803 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0505	101	90 - 110	
Calcium		10	10.1	101	90 - 110	
Magnesium		10	10.1	101	90 - 110	
Potassium		50	50.4	101	90 - 110	
Sodium		50	50.3	101	90 - 110	
Tin		1	0.969	96.9	90 - 110	
Vanadium		1	1.00	100	90 - 110	
Zinc		1	1.04	104	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2907285
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-06
Instrument ID: ICP-THERMO2 Run Time: 09:23 Method: 6010B
File ID: T2.060413.092326 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0501	100	90 - 110	
Calcium		10	10.1	101	90 - 110	
Magnesium		10	10.0	100	90 - 110	
Potassium		50	50.3	101	90 - 110	
Sodium		50	50.3	101	90 - 110	
Tin		1	0.948	94.8	90 - 110	
Vanadium		1	1.00	100	90 - 110	
Zinc		1	1.01	101	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2907285
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-11

Instrument ID: ICP-THERMO2 Run Time: 09:15 Method: 6010B

File ID: T2.060313.091519 Analyst: KHR QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0504	mg/L	101	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	51.0	mg/L	102	90 - 110		
Sodium		50.0	50.9	mg/L	102	90 - 110		
Tin		1.00	0.936	mg/L	93.6	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

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-13

Instrument ID: ICP-THERMO2 Run Time: 10:11 Method: 6010B

File ID: T2.060313.101116 Analyst: KHR QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0507	mg/L	101	90 - 110		
Calcium		10.0	10.6	mg/L	106	90 - 110		
Magnesium		10.0	9.98	mg/L	99.8	90 - 110		
Potassium		50.0	50.7	mg/L	101	90 - 110		
Sodium		50.0	50.5	mg/L	101	90 - 110		
Tin		1.00	0.944	mg/L	94.4	90 - 110		
Vanadium		1.00	1.02	mg/L	102	90 - 110		
Zinc		1.00	1.04	mg/L	104	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432707-16

Instrument ID: ICP-THERMO2 Run Time: 10:53 Method: 6010B

File ID: T2.060313.105353 Analyst: KHR QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.8	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	9.82	mg/L	98.2	90 - 110		
Potassium		50.0	49.7	mg/L	99.4	90 - 110		
Sodium		50.0	49.5	mg/L	98.9	90 - 110		
Tin		1.00	0.930	mg/L	93.0	90 - 110		
Vanadium		1.00	0.995	mg/L	99.5	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-10

Instrument ID: ICP-THERMO2 Run Time: 13:51 Method: 6010B

File ID: T2.060313.135119 Analyst: KHR QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0504	mg/L	101	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	51.0	mg/L	102	90 - 110		
Sodium		50.0	50.6	mg/L	101	90 - 110		
Tin		1.00	0.933	mg/L	93.3	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.03	mg/L	103	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-14
Instrument ID: ICP-THERMO2 Run Time: 14:44 Method: 6010B
File ID: T2.060313.144409 Analyst: KHR QC Key: DOD4
Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0499	mg/L	99.7	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	50.6	mg/L	101	90 - 110		
Sodium		50.0	50.2	mg/L	100	90 - 110		
Tin		1.00	0.921	mg/L	92.1	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
PDF File ID: 2907288
Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/03/2013 Sample ID: WG432737-16

Instrument ID: ICP-THERMO2 Run Time: 15:22 Method: 6010B

File ID: T2.060313.152256 Analyst: KHR QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 03-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0497	mg/L	99.3	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	50.9	mg/L	102	90 - 110		
Sodium		50.0	50.4	mg/L	101	90 - 110		
Tin		1.00	0.924	mg/L	92.4	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.00	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-10

Instrument ID: ICP-THERMO2 Run Time: 09:37 Method: 6010B

File ID: T2.060413.093703 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0489	mg/L	97.8	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	9.86	mg/L	98.6	90 - 110		
Potassium		50.0	49.4	mg/L	98.9	90 - 110		
Sodium		50.0	49.2	mg/L	98.5	90 - 110		
Tin		1.00	0.930	mg/L	93.0	90 - 110		
Vanadium		1.00	0.981	mg/L	98.1	90 - 110		
Zinc		1.00	0.993	mg/L	99.3	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-38

Instrument ID: ICP-THERMO2 Run Time: 18:58 Method: 6010B

File ID: T2.060413.185806 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0501	mg/L	100	90 - 110		
Calcium		10.0	9.81	mg/L	98.1	90 - 110		
Magnesium		10.0	9.91	mg/L	99.1	90 - 110		
Potassium		50.0	49.6	mg/L	99.1	90 - 110		
Sodium		50.0	50.7	mg/L	101	90 - 110		
Tin		1.00	0.941	mg/L	94.1	90 - 110		
Vanadium		1.00	0.984	mg/L	98.4	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432844-40

Instrument ID: ICP-THERMO2 Run Time: 19:33 Method: 6010B

File ID: T2.060413.193314 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432602 Cal ID: ICP-TH - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0501	mg/L	100	90 - 110		
Calcium		10.0	9.64	mg/L	96.4	90 - 110		
Magnesium		10.0	9.50	mg/L	95.0	90 - 110		
Potassium		50.0	48.5	mg/L	97.0	90 - 110		
Sodium		50.0	50.1	mg/L	100	90 - 110		
Tin		1.00	0.943	mg/L	94.3	90 - 110		
Vanadium		1.00	0.981	mg/L	98.1	90 - 110		
Zinc		1.00	1.00	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2907288

Report generated 06/05/2013 09:49

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L13051242 **Workgroup (AAB#):** WG432602
Instrument ID: ICP-THERMO2 **Method:** 6010B
Sol. A : WG432707-09 **File ID:** T2.060313.090830 **Units:** mg/L
Sol. AB : WG432707-10 **File ID:** T2.060313.091156 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.0000100	NS	0.250	0.241	96.4	
Calcium	250	252	101	250	251	100	
Magnesium	250	251	100	250	246	98.4	
Potassium	NS	0.0377	NS	5.00	5.11	102	
Sodium	NS	0.0217	NS	5.00	5.05	101	
Tin	NS	0.0163	NS	NS	-0.000630	NS	
Vanadium	NS	0.00127	NS	0.250	0.249	99.6	
Zinc	NS	0.00336	NS	0.500	0.476	95.2	

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

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L13051242 **Workgroup (AAB#):** WG432602
Instrument ID: ICP-THERMO2 **Method:** 6010B
Sol. A : WG432737-08 **File ID:** T2.060313.134425 **Units:** mg/L
Sol. AB : WG432737-09 **File ID:** T2.060313.134750 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0	NS	0.250	0.242	96.8	
Calcium	250	254	102	250	254	102	
Magnesium	250	254	102	250	252	101	
Potassium	NS	0.0226	NS	5.00	5.19	104	
Sodium	NS	-0.00233	NS	5.00	5.09	102	
Tin	NS	0.0145	NS	NS	0.00111	NS	
Vanadium	NS	0.000990	NS	0.250	0.249	99.6	
Zinc	NS	0.00397	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: L13051242 **Workgroup (AAB#):** WG432602
Instrument ID: ICP-THERMO2 **Method:** 6010B
Sol. A : WG432844-08 **File ID:** T2.060413.093017 **Units:** mg/L
Sol. AB : WG432844-09 **File ID:** T2.060413.093342 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0	NS	0.250	0.239	95.6	
Calcium	250	254	102	250	255	102	
Magnesium	250	249	99.6	250	246	98.4	
Potassium	NS	-0.00240	NS	5.00	5.08	102	
Sodium	NS	0.0113	NS	5.00	5.10	102	
Tin	NS	0.0145	NS	NS	-0.00131	NS	
Vanadium	NS	0.000740	NS	0.250	0.244	97.6	
Zinc	NS	0.00357	NS	0.500	0.472	94.4	

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

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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	AL	AS	B	BA	BE
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0.0000210	0	0	0	0
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0.00000500	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0.00756	0	-0.000140	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	-0.000660	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0	0	0	0
IRON	261.20	0	0	0	0	0
LEAD	220.30	0.000390	0	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	-0.000690	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	-0.0000360	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	-0.0000120	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0.00000100	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	CA	CD	CO	CR	CU
ALUMINUM	308.20	0	0	-0.000820	0	0
ANTIMONY	206.80	0	0	0	0.00950	0
ARSENIC	189.00	0	0	0	-0.00220	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0.00343	0	0
CADMIUM	228.80	0	0	-0.00247	0	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	0	-0.000160	0	0
COBALT	228.60	0	0	0	0.000108	0
COPPER	224.70	0	0	0.0000770	0	0
IRON	261.20	-0.000120	-0.00000600	0	-0.0000460	-0.0000290
LEAD	220.30	0	0	-0.0000930	-0.000172	0.000809
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	0
MANGANESE	257.60	0	0	0	-0.0000910	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0.000100	0	0
PHOSPHORUS	214.90	0	0	0	0	0.00200
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0.00000500	0	0	0	0
THALLIUM	190.80	0	0	0.00397	0.000276	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	FE	LI	MG	MN	MO
ALUMINUM	308.20	0	0	0	0	0.0153
ANTIMONY	206.80	0.0000560	0	0	0	0.000670
ARSENIC	189.00	-0.0000190	0	0	0	0.000107
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	-0.0000710	0	0	0	-0.00169
CADMIUM	228.80	0.00000600	0	0	0	0.0000220
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0.0000230	0	0	0.000160	0
COBALT	228.60	0	0	0	0	0.00300
COPPER	224.70	0.000320	0	0	0	0.00260
IRON	261.20	0	0	0	0	0
LEAD	220.30	0	0	0	0	0.00110
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	-0.00190	-0.0110
MANGANESE	257.60	0	0	0.00000800	0	-0.0000720
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0.0000320	0	0	0	0
PHOSPHORUS	214.90	0.00120	0	0	0	0.00800
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0.000156
SILICON	212.40	0	0	0	0	0.0187
SILVER	328.00	0	0	0	0	-0.0000440
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	-0.000153
VANADIUM	292.40	-0.00000200	0	0	0	-0.00600
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	-0.0000300	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	NA	NI	PB	SB	SN
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0	0	0	-0.00840
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	-0.000180	0	0	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0.000420	0	0	0
COPPER	224.70	0	-0.00400	0.00173	0	0
IRON	261.20	0	0	0	0	0
LEAD	220.30	0	0.000110	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	SR	TI	TL	V	ZN
ALUMINUM	308.20	0	0	0	0.00300	0
ANTIMONY	206.80	0	-0.000990	0	-0.00120	0
ARSENIC	189.00	0	0	0	0.000107	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	-0.00160	0	0.000170	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0	0	0.0000820	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	0.0000550	0	-0.000120	-0.000740
COBALT	228.60	0	0.00200	-0.00120	0.0000200	0
COPPER	224.70	0	0.000460	0	0	0
IRON	261.20	0	0	0	0	0
LEAD	220.30	0	0	0	-0.000126	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	-0.00290	0	0	0
MANGANESE	257.60	0	0	0	-0.00000600	0
MOLYBDENUM	202.03	0	0	0	-0.000110	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	-0.00500	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	-0.00620	0	-0.00617	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	0	-0.00120	0	-0.00540	0
TIN	189.90	0	-0.00220	0	0	0
TITANIUM	337.30	0	0	0	0.000200	0
VANADIUM	292.40	0	0.00104	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13051242 **Date:** 12/28/2012
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	ZR
ALUMINUM	308.20	0
ANTIMONY	206.80	0
ARSENIC	189.00	0
BARIUM	455.40	0
BERYLLIUM	313.00	0
BORON	249.70	0
CADMIUM	228.80	0
CALCIUM	422.70	0
CHROMIUM	267.70	0
COBALT	228.60	0
COPPER	224.70	0
IRON	261.20	0
LEAD	220.30	0
LITHIUM	670.80	0
MAGNESIUM	279.10	0
MANGANESE	257.60	0
MOLYBDENUM	202.03	0
NICKEL	231.60	0
PHOSPHORUS	214.90	0.00200
POTASSIUM	766.40	0
SELENIUM	196.00	0
SILICON	212.40	0
SILVER	328.00	0
SODIUM	589.50	0
STRONTIUM	407.80	0
THALLIUM	190.80	0
TIN	189.90	0
TITANIUM	337.30	0
VANADIUM	292.40	
ZINC	206.20	0
ZIRCONIUM	339.20	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2907283
Report generated: 06/05/2013 09:49

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L13051242 **Date:** 03/11/2013
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	810.0
Antimony	10.00	90.0
Arsenic	10.00	90.0
Barium	10.00	81.0
Beryllium	15.00	4.5
Boron	10.00	90.0
Cadmium	10.00	9.0
Calcium	10.00	270.0
Chromium	10.00	18.0
Cobalt	10.00	9.0
Copper	10.00	180.0
Iron	5.00	810.0
Lead	10.00	180.0
Lithium	10.00	27.0
Magnesium	15.00	900.0
Manganese	15.00	27.0
Molybdenum	10.00	9.0
Nickel	10.00	45.0
Phosphorus	10.00	810.0
Potassium	10.00	360.0
Selenium	10.00	90.0
Silicon	10.00	81.0
Silver	5.00	9.0
Sodium	10.00	360.0
Strontium	10.00	4.5
Thallium	10.00	9.0
Tin	10.00	90.0
Titanium	15.00	90.0
Vanadium	10.00	90.0
Zinc	10.00	45.0
Zirconium	10.00	36.0

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2907282
Report generated: 06/05/2013 09:49

2.1.1.3 Raw Data

Sample Name: S0 Acquired: 6/3/2013 8:40:36 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00140**	**.00069**	**-.00016**	**.00109**	**.00445**	**-.00072**	**-.00108**
Stddev	.00017	.00016	.00006	.00009	.00023	.00024	.00009
%RSD	12.087	22.882	36.170	8.5811	5.0700	33.552	8.1729
#1	-.00121	.00058	-.00019	.00113	.00430	-.00073	-.00105
#2	-.00149	.00061	-.00010	.00099	.00434	-.00096	-.00118
#3	-.00150	.00087	-.00021	.00116	.00471	-.00048	-.00101

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00010**	**-.00012**	**.00125**	**-.00003**	**.00005**	**.00009**	**.00005**
Stddev	.00011	.00005	.00030	.00005	.00009	.00003	.00003
%RSD	110.99	43.462	23.764	169.76	196.26	38.125	72.965
#1	.00020	-.00011	.00115	-.00004	.00007	.00012	.00007
#2	-.00002	-.00007	.00101	.00002	.00013	.00008	.00001
#3	.00013	-.00018	.00158	-.00007	-.00005	.00006	.00007

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**-.00027**	**-.00102**	**.00350**	**.00007**	**.00089**	**.00005**
Stddev	.00005	.00001	.00046	.00041	.00007	.00012	.00002
%RSD	82.210	2.6377	44.844	11.776	100.35	13.624	42.573
#1	.00001	-.00028	-.00091	.00315	.00005	.00080	.00003
#2	.00010	-.00027	-.00063	.00396	.00002	.00103	.00007
#3	.00007	-.00026	-.00153	.00340	.00016	.00084	.00006

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00028**	**-.00049**	**.00018**	**-.00033**	**-.00284**	**-.00021**	**-.00010**
Stddev	.00069	.00009	.00003	.00006	.00026	.00001	.00002
%RSD	246.76	17.270	17.164	18.195	9.1459	6.3145	23.553
#1	.00036	-.00041	.00021	-.00027	-.00304	-.00020	-.00009
#2	-.00045	-.00049	.00018	-.00034	-.00294	-.00020	-.00009
#3	.00092	-.00058	.00015	-.00038	-.00255	-.00022	-.00013

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: S0 Acquired: 6/3/2013 8:40:36 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00004**	**-.00018**	**.00028**	**.00024**	**.00097**	**-.00055**	**-.00016**
Stddev	.00004	.00005	.00006	.00003	.00012	.00005	.00001
%RSD	107.47	26.871	20.047	13.371	12.229	9.9050	8.3143
#1	.00000	-.00024	.00025	.00027	.00107	-.00050	-.00015
#2	-.00003	-.00016	.00024	.00021	.00084	-.00060	-.00018
#3	-.00009	-.00014	.00034	.00026	.00100	-.00056	-.00016

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00005**	**.00022**	**-.00395**
Stddev	.00028	.00003	.00012
%RSD	592.82	13.273	2.9691
#1	-.00035	.00019	-.00391
#2	.00000	.00025	-.00408
#3	.00021	.00021	-.00385

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15056.**	**21218.**
Stddev	41.	265.
%RSD	.26927	1.2506
#1	15076.	21352.
#2	15083.	21390.
#3	15009.	20913.

Approved: June 04, 2013

Sample Name: S1 Acquired: 6/3/2013 8:44:13 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00219**	**.00127**	**.02310**	**.00466**	**.00075**	**.00043**	**.00074**
Stddev	.00027	.00034	.00032	.00014	.00007	.00001	.00005
%RSD	12.277	26.673	1.3637	3.0001	9.0834	2.8229	7.2658
#1	.00189	.00121	.02301	.00452	.00077	.00043	.00069
#2	.00230	.00097	.02285	.00480	.00080	.00045	.00080
#3	.00239	.00163	.02345	.00468	.00067	.00042	.00073

Elem	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641	Hf2773	Hf3399
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00458**	**.00077**	**.00123**	**.00028**	**-.00002**	**.00013**	**-.00030**
Stddev	.00018	.00002	.00007	.00006	.00013	.00014	.00003
%RSD	3.8713	2.9382	5.8768	20.773	640.50	104.70	11.358
#1	.00456	.00075	.00126	.00033	.00010	.00001	-.00033
#2	.00441	.00079	.00128	.00030	-.00015	.00029	-.00030
#3	.00476	.00078	.00114	.00022	-.00001	.00010	-.00026

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00878**	**.00702**	**.00068**	**.01453**	**.00162**	**.03243**	**.00015**
Stddev	.00073	.00085	.00015	.00005	.00003	.00011	.00002
%RSD	8.2727	12.108	21.640	.34288	2.0539	.35299	12.463
#1	.00960	.00674	.00053	.01457	.00164	.03241	.00014
#2	.00821	.00635	.00069	.01448	.00163	.03255	.00017
#3	.00854	.00798	.00083	.01453	.00158	.03232	.00016

Elem	P_2149	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00019**	**-.00004**	**-.00266**	**-.00015**	**-.00012**	**.00042**	**.00117**
Stddev	.00001	.00007	.00074	.00002	.00002	.00004	.00003
%RSD	6.5327	181.99	28.004	16.438	15.311	9.0941	2.9130
#1	.00019	-.00010	-.00223	-.00018	-.00011	.00038	.00120
#2	.00019	-.00003	-.00352	-.00013	-.00010	.00041	.00113
#3	.00017	.00003	-.00223	-.00015	-.00014	.00046	.00116

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: S1 Acquired: 6/3/2013 8:44:13 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00143**	**.02262**	**.00126**	**.01260**	**.00549**	**-.00377**
Stddev	.00005	.00012	.00016	.00025	.00011	.00020
%RSD	3.4448	.54817	12.398	1.9554	1.9297	5.3288
#1	.00138	.02251	.00136	.01231	.00559	-.00363
#2	.00143	.02259	.00134	.01272	.00550	-.00400
#3	.00148	.02276	.00108	.01276	.00538	-.00368

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15258.**	**20478.**
Stddev	53.	61.
%RSD	.34630	.29832
#1	15215.	20486.
#2	15317.	20535.
#3	15242.	20413.

Approved: June 04, 2013

Sample Name: S2 Acquired: 6/3/2013 8:47:51 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00605**	**.00196**	**.00010**	**.00391**	**.04072**	**.00965**	**.00249**
Stddev	.00055	.00006	.00002	.00022	.00051	.00013	.00005
%RSD	9.0741	3.2766	14.712	5.5033	1.2613	1.2978	1.9376
#1	.00599	.00200	.00011	.00400	.04052	.00951	.00254
#2	.00663	.00200	.00009	.00366	.04034	.00970	.00244
#3	.00554	.00189	.00012	.00406	.04131	.00974	.00251

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00080**	**.00163**	**.00787**	**.00155**	**.00237**	**.00045**	**-.00002**
Stddev	.00012	.00007	.00006	.00005	.00011	.00003	.00004
%RSD	15.092	4.3807	.72750	3.3508	4.6389	6.2041	185.40
#1	.00082	.00158	.00786	.00152	.00249	.00047	.00002
#2	.00091	.00171	.00782	.00151	.00228	.00042	-.00003
#3	.00067	.00161	.00793	.00161	.00233	.00047	-.00006

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00007**	**-.00024**	**.01845**	**.01215**	**.00133**	**.02753**	**.00315**
Stddev	.00009	.00014	.00019	.00030	.00003	.00012	.00004
%RSD	116.60	57.453	1.0084	2.4851	2.5087	.44810	1.3615
#1	.00002	-.00020	.01841	.01203	.00133	.02766	.00320
#2	.00017	-.00013	.01828	.01192	.00129	.02741	.00314
#3	.00003	-.00039	.01865	.01249	.00136	.02751	.00312

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06340**	**.00068**	**.00014**	**.00040**	**-.00298**	**-.00012**	**-.00016**
Stddev	.00033	.00001	.00003	.00004	.00007	.00002	.00001
%RSD	.51418	1.2713	23.618	9.6449	2.4452	18.215	3.9249
#1	.06378	.00067	.00016	.00038	-.00294	-.00011	-.00015
#2	.06319	.00068	.00010	.00038	-.00307	-.00010	-.00016
#3	.06324	.00068	.00015	.00044	-.00295	-.00014	-.00017

Approved: June 04, 2013

Sample Name: S2 Acquired: 6/3/2013 8:47:51 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00098**	**-.00009**	**.00202**	**.00258**	**.04320**	**.00317**	**.00009**
Stddev	.00004	.00004	.00004	.00004	.00017	.00012	.00003
%RSD	4.0378	46.283	2.0394	1.4096	.40327	3.6457	30.441
#1	.00096	-.00010	.00204	.00256	.04330	.00327	.00012
#2	.00102	-.00005	.00197	.00262	.04300	.00304	.00009
#3	.00095	-.00013	.00204	.00256	.04330	.00319	.00007

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.02513**	**.01077**	**-.00335**
Stddev	.00021	.00006	.00027
%RSD	.82545	.59390	8.1731
#1	.02528	.01081	-.00365
#2	.02489	.01079	-.00312
#3	.02520	.01069	-.00328

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15389.**	**20918.**
Stddev	52.	178.
%RSD	.33797	.85300
#1	15350.	20907.
#2	15368.	21101.
#3	15448.	20745.

Approved: June 04, 2013

Sample Name: S3 Acquired: 6/3/2013 8:51:25 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.45222**	**.07926**	**.01666**	**.18074**	**2.1636**	**.62501**	**.20936**
Stddev	.00326	.00047	.00003	.00178	.0271	.00360	.00286
%RSD	.72017	.59510	.16992	.98667	1.2540	.57604	1.3672
#1	.45594	.07928	.01666	.18279	2.1601	.62903	.20930
#2	.44988	.07878	.01669	.17988	2.1383	.62391	.20652
#3	.45084	.07972	.01663	.17955	2.1922	.62208	.21225

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04492**	**.10540**	**.40201**	**.09405**	**.13499**	**.01933**	**.00014**
Stddev	.00017	.00036	.00286	.00038	.00117	.00009	.00006
%RSD	.38446	.34297	.71129	.40120	.86803	.49136	45.154
#1	.04506	.10574	.40531	.09441	.13505	.01944	.00012
#2	.04497	.10543	.40034	.09410	.13378	.01926	.00009
#3	.04472	.10502	.40038	.09366	.13612	.01929	.00021

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**-.00052**	**1.1414**	**.51029**	**.07805**	**1.5530**	**.19227**
Stddev	.00016	.00017	.0128	.00681	.00103	.0140	.00083
%RSD	257.75	32.590	1.1229	1.3338	1.3136	.90432	.43109
#1	-.00009	-.00060	1.1405	.50844	.07781	1.5604	.19293
#2	.00004	-.00032	1.1291	.50459	.07716	1.5368	.19255
#3	.00022	-.00063	1.1546	.51783	.07917	1.5617	.19134

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.8061**	**.07148**	**.00027**	**.04382**	**-.00264**	**.00557**	**-.00036**
Stddev	.0450	.00033	.00005	.00023	.00030	.00003	.00004
%RSD	1.1815	.46604	17.332	.51693	11.532	.49032	11.325
#1	3.8042	.07185	.00026	.04402	-.00254	.00560	-.00035
#2	3.7622	.07138	.00024	.04385	-.00240	.00555	-.00032
#3	3.8520	.07121	.00033	.04358	-.00298	.00556	-.00040

Approved: June 04, 2013

Sample Name: S3 Acquired: 6/3/2013 8:51:25 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.05603**	**.00876**	**.10592**	**.14635**	**2.5742**	**.22326**	**.01555**
Stddev	.00039	.00006	.00084	.00090	.0288	.00295	.00009
%RSD	.68987	.70036	.78997	.61422	1.1178	1.3208	.54695
#1	.05643	.00878	.10663	.14736	2.5748	.22207	.01564
#2	.05598	.00881	.10613	.14607	2.5452	.22109	.01551
#3	.05566	.00869	.10500	.14563	2.6027	.22662	.01549

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**1.5099**	**.63819**	**-.00235**
Stddev	.0104	.00358	.00006
%RSD	.68669	.56090	2.7396
#1	1.5218	.64228	-.00232
#2	1.5052	.63671	-.00231
#3	1.5027	.63560	-.00243

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15195.**	**20881.**
Stddev	68.	183.
%RSD	.44832	.87871
#1	15118.	20818.
#2	15216.	21087.
#3	15249.	20737.

Approved: June 04, 2013

Sample Name: S4 Acquired: 6/3/2013 8:54:42 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

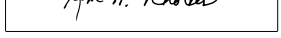
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.90967**	**.16131**	**.03354**	**.36595**	**4.4376**	**1.2573**	**.43084**
Stddev	.00119	.00031	.00006	.00046	.0125	.0038	.00225
%RSD	.13108	.19241	.16538	.12500	.28137	.30414	.52146
#1	.91014	.16164	.03353	.36628	4.4510	1.2600	.43032
#2	.91055	.16103	.03360	.36543	4.4263	1.2588	.42889
#3	.90831	.16127	.03349	.36614	4.4356	1.2529	.43330

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.08928**	**.20634**	**.80365**	**.18403**	**.27544**	**.03778**	**.00046**
Stddev	.00015	.00026	.00177	.00011	.00084	.00006	.00003
%RSD	.16997	.12666	.22060	.06208	.30382	.15967	5.7355
#1	.08918	.20660	.80459	.18398	.27588	.03772	.00046
#2	.08946	.20634	.80475	.18416	.27447	.03784	.00048
#3	.08920	.20608	.80160	.18395	.27597	.03780	.00043

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00020**	**-.00056**	**2.3321**	**1.0385**	**.15888**	**3.1167**	**.37927**
Stddev	.00002	.00023	.0075	.0043	.00006	.0152	.00063
%RSD	12.561	40.311	.32183	.41776	.03643	.48626	.16672
#1	.00017	-.00067	2.3397	1.0432	.15884	3.0997	.37992
#2	.00020	-.00030	2.3318	1.0347	.15885	3.1288	.37923
#3	.00022	-.00071	2.3247	1.0376	.15894	3.1216	.37866

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.7652**	**.14047**	**.00035**	**.08598**	**-.00273**	**.01100**	**-.00050**
Stddev	.0138	.00014	.00006	.00028	.00022	.00009	.00003
%RSD	.17777	.10302	18.052	.32582	8.1658	.79815	5.4694
#1	7.7806	.14063	.00032	.08629	-.00298	.01108	-.00051
#2	7.7610	.14045	.00030	.08588	-.00266	.01101	-.00052
#3	7.7540	.14034	.00042	.08576	-.00255	.01090	-.00047

Approved: June 04, 2013



Sample Name: S4 Acquired: 6/3/2013 8:54:42 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2453) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.11158**	**.01772**	**.20907**	**.28635**	**5.2842**	**.45337**	**.03040**
Stddev	.00011	.00006	.00041	.00057	.0087	.00102	.00009
%RSD	.09967	.34441	.19510	.19952	.16423	.22542	.30564
#1	.11164	.01770	.20887	.28649	5.2941	.45454	.03032
#2	.11164	.01778	.20881	.28684	5.2781	.45296	.03050
#3	.11145	.01766	.20954	.28573	5.2803	.45263	.03038

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**3.0230**	**1.2549**	**-.00290**
Stddev	.0019	.0037	.00014
%RSD	.06270	.29879	4.7365
#1	3.0242	1.2572	-.00306
#2	3.0209	1.2569	-.00284
#3	3.0241	1.2505	-.00281

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15200.**	**20732.**
Stddev	9.	142.
%RSD	.06164	.68699
#1	15211.	20887.
#2	15195.	20606.
#3	15195.	20702.

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICV Acquired: 6/3/2013 8:58:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41040**	**10.088**	**.41614**	**.50419**	**1.0078**	**.05049**	**10.119**
Stddev	.00045	.103	.00353	.00242	.0072	.00016	.035
%RSD	.10876	1.0181	.84797	.48045	.71534	.32186	.34937
#1	.40988	10.014	.41725	.50165	1.0025	.05054	10.138
#2	.41068	10.044	.41897	.50446	1.0049	.05031	10.079
#3	.41064	10.205	.41219	.50647	1.0160	.05062	10.141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05129**	**.20702**	**.50905**	**.52084**	**4.0420**	**1.0281**	F **.86001**
Stddev	.00004	.00062	.00177	.00176	.0272	.0041	.63965
%RSD	.08644	.30046	.34756	.33773	.67173	.39525	74.378
#1	.05125	.20753	.51070	.52187	4.0202	1.0311	1.2001
#2	.05133	.20720	.50718	.52184	4.0334	1.0296	.12215
#3	.05129	.20633	.50926	.51881	4.0724	1.0234	1.2577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-5.0000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1.3843**	**.96912**	**50.428**	**1.0096**	**10.075**	**.50324**	**1.0144**
Stddev	.9946	1.0464	.312	.0076	.127	.00317	.0035
%RSD	71.846	107.97	.61901	.74795	1.2579	.63081	.34897
#1	.89696	.35223	50.180	1.0035	9.9679	.49964	1.0177
#2	.72741	2.1773	50.325	1.0073	10.041	.50442	1.0148
#3	2.5286	.37782	50.778	1.0181	10.215	.50565	1.0106
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000						
Range	5.0000%						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICV Acquired: 6/3/2013 8:58:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.302**	**.51797**	F **5.4629**	**.51567**	F **26.083**	**10.457**	**10.047**
Stddev	.388	.00062	11.519	.00093	32.209	.037	.469
%RSD	.77195	.11933	210.86	.18059	123.49	.35597	4.6700
#1	49.979	.51805	13.931	.51467	-10.722	10.496	10.376
#2	50.194	.51731	-7.6540	.51651	39.853	10.422	10.256
#3	50.733	.51853	10.112	.51582	49.119	10.453	9.5100
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			-5.0000%		5.0000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2298**	**.41694**	**5.0708**	**.96902**	**1.0058**	**1.0135**	F **.52715**
Stddev	.0010	.00318	.0234	.00285	.0072	.0108	.00159
%RSD	.07742	.76199	.46252	.29390	.71651	1.0624	.30125
#1	1.2288	.41745	5.0731	.96574	.99996	1.0058	.52532
#2	1.2307	.41983	5.0930	.97090	1.0036	1.0089	.52792
#3	1.2298	.41354	5.0462	.97041	1.0139	1.0258	.52820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							.50000
Range							5.0000%

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0045**	**1.0376**	F **.12368**
Stddev	.0041	.0011	.13611
%RSD	.40508	.10680	110.05
#1	1.0009	1.0373	.26717
#2	1.0038	1.0388	.10748
#3	1.0089	1.0366	-.00360
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-5.0000%

Approved: June 04, 2013

Sample Name: ICV Acquired: 6/3/2013 8:58:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15248.**	**20991.**
Stddev	44.	94.
%RSD	.28699	.44639
#1	15277.	21095.
#2	15269.	20963.
#3	15197.	20914.

Approved: June 04, 2013

Sample Name: ICB Acquired: 6/3/2013 9:01:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.00654**	**.00086**	**.00232**	**.00039**	**.00003**	**-.00921**
Stddev	.00016	.02816	.00148	.00101	.00015	.00001	.01043
%RSD	57.888	430.65	171.04	43.526	38.962	41.525	113.15
#1	-.00039	-.02399	.00250	.00347	.00024	.00005	-.00270
#2	-.00034	.01212	-.00037	.00188	.00054	.00003	-.02124
#3	-.00009	.03149	.00046	.00160	.00040	.00002	-.00370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00001**	**.00023**	**.00144**	**.00019**	**-.00211**	F **-.22173**
Stddev	.00011	.00025	.00017	.00007	.00241	.00279	.33975
%RSD	1424.7	1785.6	74.913	4.7833	1244.9	132.23	153.23
#1	-.00012	-.00027	.00023	.00149	-.00167	-.00329	-.52941
#2	.00000	.00010	.00005	.00147	.00292	-.00413	.14289
#3	.00010	.00021	.00039	.00136	-.00067	.00108	-.27867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.14137**	F **-.28007**	**.04916**	**.00331**	**-.00321**	**.00010**	**.00231**
Stddev	.87071	2.0459	.00548	.00054	.01662	.00004	.00082
%RSD	615.92	730.48	11.155	16.356	516.83	44.137	35.322
#1	-.34600	-1.4590	.05524	.00359	-.02065	.00012	.00182
#2	1.1466	2.0823	.04764	.00268	.01244	.00005	.00186
#3	-.37653	-1.4635	.04459	.00365	-.00144	.00013	.00325
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICB Acquired: 6/3/2013 9:01:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02233**	**.00109**	**-.21800**	**-.00025**	F **-19.415**	**-.12428**	F **5.8632**
Stddev	.00964	.00053	2.8682	.00078	38.932	.06932	.9312
%RSD	43.170	48.286	1315.7	315.87	200.52	55.782	15.882
#1	.03245	.00118	1.1645	.00038	-10.251	-.08242	4.9128
#2	.02129	.00156	-3.5156	.00000	-62.112	-.08612	5.9031
#3	.01326	.00052	1.6971	-.00112	14.117	-.20430	6.7738
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					1.0400		1.0400
Low Limit					-1.2000		-1.0400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00251**	**-.00190**	**.00266**	**.00030**	**.00016**	**.00048**	**.00170**
Stddev	.00227	.00119	.00093	.00085	.00004	.00084	.00132
%RSD	90.506	62.820	35.112	286.03	24.454	176.38	77.257
#1	.00441	-.00219	.00205	-.00032	.00017	.00144	.00042
#2	-.00001	-.00059	.00374	-.00006	.00012	-.00014	.00165
#3	.00313	-.00292	.00219	.00127	.00020	.00013	.00305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00028**	**.00060**	F **-.15517**
Stddev	.00024	.00040	.21779
%RSD	83.856	66.607	140.36
#1	.00009	.00036	-.31072
#2	.00054	.00038	-.24851
#3	.00021	.00106	.09374
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013

Sample Name: ICB Acquired: 6/3/2013 9:01:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15240.**	**20413.**
Stddev	42.	70.
%RSD	.27307	.34108
#1	15265.	20366.
#2	15263.	20380.
#3	15192.	20493.

Approved: June 04, 2013

Sample Name: LLICV Acquired: 6/3/2013 9:04:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.15276**	**.00023**	**.00141**	**.00027**	**.00188**	**.33840**
Stddev	.00018	.02251	.00070	.00014	.00010	.00001	.00707
%RSD	203.00	14.735	301.17	10.150	37.520	.54644	2.0890
#1	-.00019	.13561	-.00048	.00143	.00031	.00189	.33355
#2	-.00020	.17825	.00027	.00126	.00035	.00189	.34651
#3	.00012	.14442	.00091	.00155	.00016	.00187	.33514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00001**	**.00029**	**.00017**	**.08483**	**-.00460**	F **-.54193**
Stddev	.00004	.00001	.00024	.00037	.00280	.00187	.51572
%RSD	156.60	94.356	81.901	212.83	3.2990	40.694	95.163
#1	.00001	.00000	.00013	.00057	.08728	-.00248	-.48988
#2	-.00007	.00001	.00057	.00010	.08178	-.00604	-1.0817
#3	-.00002	.00002	.00018	-.00016	.08543	-.00526	-.05421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.56051**	**.34928**	**.89435**	**.00128**	**.42606**	**.01104**	**.00035**
Stddev	.58667	1.4534	.02825	.00011	.00689	.00009	.00016
%RSD	104.67	416.13	3.1586	8.2251	1.6178	.79570	44.685
#1	.00576	.93846	.92112	.00125	.42648	.01107	.00053
#2	1.1746	1.4156	.86483	.00120	.43274	.01094	.00023
#3	.50119	-1.3062	.89709	.00140	.41897	.01111	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013

Sample Name: LLICV Acquired: 6/3/2013 9:04:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43907**	**.00033**	F **-2.4990**	**-.00086**	F **-44.083**	**.23158**	**6.0002**
Stddev	.00727	.00013	4.4670	.00077	11.984	.08623	1.6255
%RSD	1.6558	37.888	178.75	89.034	27.185	37.238	27.091
#1	.43552	.00047	-6.6374	-.00146	-55.684	.15189	7.0945
#2	.43425	.00024	-3.0961	-.00114	-31.750	.32313	6.7737
#3	.44743	.00029	2.2365	.00000	-44.815	.21971	4.1324
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit			450.00		9.0000		
Low Limit			-.00400		-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00252**	**.01532**	**.00111**	**.32794**	**.00020**	**.00007**	**.00039**
Stddev	.00087	.00238	.00223	.01481	.00005	.00064	.00047
%RSD	34.343	15.563	200.36	4.5149	25.153	855.60	119.97
#1	.00347	.01733	-.00015	.34250	.00025	-.00064	.00037
#2	.00178	.01595	-.00020	.32841	.00015	.00026	.00088
#3	.00231	.01269	.00368	.31290	.00022	.00060	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.00079**	**.29083**
Stddev	.00023	.00005	.23259
%RSD	85.657	6.6476	79.975
#1	.00008	.00073	.33557
#2	.00053	.00081	.03912
#3	.00020	.00083	.49779
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: LLICV Acquired: 6/3/2013 9:04:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15365.**	**20662.**
Stddev	22.	117.
%RSD	.14338	.56481
#1	15341.	20724.
#2	15369.	20734.
#3	15385.	20527.

Approved: June 04, 2013

Sample Name: ICSA Acquired: 6/3/2013 9:08:30 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**258.22**	**-.00228**	**.00595**	**.00040**	**.00001**	**252.27**
Stddev	.00006	4.48	.00119	.00056	.00019	.00001	5.62
%RSD	16.177	1.7347	52.273	9.4867	47.121	44.415	2.2260
#1	-.00044	256.13	-.00183	.00581	.00029	.00001	248.86
#2	-.00038	255.16	-.00363	.00547	.00061	.00001	249.20
#3	-.00031	263.36	-.00138	.00657	.00029	.00002	258.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00026**	**-.00035**	**-.00004**	**97.400**	F **.27029**	F **32.402**
Stddev	.00007	.00005	.00014	.00006	2.028	.00252	.883
%RSD	4799.8	18.392	41.354	146.55	2.0826	.93185	2.7251
#1	-.00003	.00022	-.00022	-.00010	96.302	.26738	31.507
#2	-.00005	.00031	-.00051	-.00005	96.158	.27170	32.428
#3	.00008	.00023	-.00031	.00002	99.741	.27179	33.272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						.10000	.10000
Low Limit						-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.72164**	F **7.1053**	**.03766**	**.00835**	**250.74**	**-.00004**	**-.00105**
Stddev	1.5811	1.0323	.01493	.00067	4.64	.00008	.00017
%RSD	219.10	14.528	39.636	8.0405	1.8486	174.69	16.607
#1	.20594	6.0157	.02207	.00883	248.18	-.00005	-.00088
#2	.17644	7.2314	.05182	.00758	247.95	-.00012	-.00104
#3	-2.5473	8.0687	.03910	.00864	256.09	.00004	-.00123
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICSA Acquired: 6/3/2013 9:08:30 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02169**	**-.00067**	F **-141.81**	**-.00005**	F **-34.405**	F **245.46**	F **57.688**
Stddev	.00293	.00021	6.41	.00108	40.617	.85	.032
%RSD	13.521	31.233	4.5207	2195.6	118.05	.34605	.05515
#1	.02462	-.00043	-144.34	-.00130	-69.746	245.16	57.651
#2	.01875	-.00075	-134.52	.00060	9.9677	246.42	57.700
#3	.02169	-.00082	-146.56	.00055	-43.438	244.80	57.711
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000		.04000	.04000	.04000
Low Limit			-.50000		-.04000	-.04000	-.04000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00490**	**.00001**	**.05838**	**.01631**	**.00012**	**-.00281**	**-.00128**
Stddev	.00344	.00264	.00088	.00079	.00012	.00071	.00027
%RSD	70.102	31907.	1.5022	4.8518	98.008	25.171	21.448
#1	-.00635	-.00155	.05825	.01570	.00009	-.00359	-.00099
#2	-.00738	.00305	.05931	.01603	.00002	-.00261	-.00153
#3	-.00098	-.00148	.05757	.01721	.00024	-.00222	-.00131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00127**	**.00336**	F **-12.425**
Stddev	.00013	.00007	.147
%RSD	10.519	2.2234	1.1846
#1	.00124	.00341	-12.324
#2	.00115	.00327	-12.358
#3	.00141	.00339	-12.594
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICSA Acquired: 6/3/2013 9:08:30 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14667.**	**20908.**
Stddev	46.	245.
%RSD	.31205	1.1698
#1	14684.	21056.
#2	14615.	21043.
#3	14702.	20626.

Approved: June 04, 2013

Sample Name: ICSAB Acquired: 6/3/2013 9:11:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51241**	**252.35**	**.25273**	**.00011**	**.24715**	**.24088**	**251.15**
Stddev	.00283	1.52	.00075	.00109	.00108	.00119	1.29
%RSD	.55282	.60090	.29541	1016.6	.43507	.49501	.51458
#1	.50995	250.64	.25218	.00095	.24591	.24020	249.74
#2	.51178	252.87	.25243	.00050	.24764	.24018	252.28
#3	.51551	253.54	.25358	-.00113	.24788	.24226	251.43
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46511**	**.24316**	**.24830**	**.24275**	**95.745**	F **.23518**	F **32.994**
Stddev	.00070	.00075	.00069	.00087	.646	.00233	1.605
%RSD	.15026	.30854	.27877	.36022	.67422	.98917	4.8651
#1	.46430	.24402	.24799	.24275	95.043	.23250	31.291
#2	.46546	.24273	.24782	.24363	96.313	.23628	34.479
#3	.46556	.24272	.24909	.24188	95.878	.23674	33.213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						.10000	.10000
Low Limit						-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.3322**	F **7.3928**	**5.1139**	**.00661**	**246.06**	**.23328**	**-.00111**
Stddev	.7633	.8718	.0273	.00077	1.47	.00219	.00030
%RSD	32.729	11.793	.53398	11.597	.59628	.93680	26.755
#1	-2.9557	7.9640	5.0865	.00678	244.52	.23091	-.00114
#2	-2.5599	6.3893	5.1141	.00577	247.44	.23521	-.00079
#3	-1.4809	7.8250	5.1411	.00727	246.21	.23371	-.00138
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICSAB Acquired: 6/3/2013 9:11:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0502**	**.47799**	F **-147.16**	**.48355**	F **-16.838**	F **242.04**	F **57.515**
Stddev	.0267	.00035	3.54	.00061	39.481	.39	2.526
%RSD	.52845	.07349	2.4028	.12715	234.47	.16269	4.3919
#1	5.0217	.47822	-149.51	.48396	28.736	242.23	55.716
#2	5.0745	.47759	-148.89	.48284	-38.625	241.59	56.426
#3	5.0545	.47817	-143.10	.48385	-40.626	242.31	60.403
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000		.60000	.60000	.60000
Low Limit			-.50000		.40000	.40000	.40000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49522**	**.24563**	**-.00206**	**-.00063**	**.00005**	**-.00272**	**.47185**
Stddev	.00297	.00384	.00343	.00031	.00005	.00091	.00199
%RSD	.60052	1.5647	166.51	48.862	91.462	33.398	.42259
#1	.49810	.24351	-.00204	-.00078	.00009	-.00180	.47254
#2	.49541	.25006	-.00550	-.00085	.00000	-.00361	.46960
#3	.49216	.24331	.00136	-.00028	.00006	-.00274	.47341
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.24863**	**.47566**	F **-12.764**
Stddev	.00135	.00179	.116
%RSD	.54236	.37675	.90830
#1	.24743	.47552	-12.893
#2	.24838	.47395	-12.670
#3	.25009	.47752	-12.728
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICSAB Acquired: 6/3/2013 9:11:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14635.**	**20894.**
Stddev	36.	166.
%RSD	.24871	.79298
#1	14674.	21066.
#2	14631.	20736.
#3	14602.	20879.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 9:15:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41023**	**10.190**	**.40819**	**.51174**	**1.0193**	**.05043**	**10.361**
Stddev	.00064	.019	.00363	.00035	.0039	.00021	.114
%RSD	.15670	.19040	.88875	.06749	.38029	.42193	1.0960
#1	.40949	10.178	.40743	.51172	1.0156	.05063	10.233
#2	.41051	10.213	.40501	.51140	1.0234	.05021	10.451
#3	.41068	10.181	.41214	.51209	1.0189	.05045	10.398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05108**	**.20538**	**.51111**	**.51321**	**4.0939**	**1.0221**	F **1.8972**
Stddev	.00018	.00085	.00224	.00116	.0115	.0053	.0251
%RSD	.34556	.41318	.43810	.22642	.28162	.51595	1.3220
#1	.05102	.20469	.51306	.51254	4.0843	1.0161	1.8848
#2	.05095	.20513	.50867	.51254	4.1067	1.0244	1.8807
#3	.05128	.20633	.51161	.51455	4.0908	1.0259	1.9260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.21853**	F **.36808**	**51.045**	**1.0235**	**10.117**	**.50583**	**1.0160**
Stddev	1.6356	1.0755	.229	.0026	.073	.00187	.0019
%RSD	748.45	292.18	.44860	.25376	.72089	.37005	.18794
#1	.67550	.11565	50.781	1.0205	10.037	.50382	1.0144
#2	-1.5970	-.55869	51.164	1.0250	10.178	.50613	1.0156
#3	1.5771	1.5473	51.189	1.0250	10.137	.50753	1.0181
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	-10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 9:15:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.924**	**.51579**	F **6.8827**	**.51489**	F **14.049**	**10.285**	F **15.185**
Stddev	.103	.00077	3.4145	.00178	23.174	.036	.447
%RSD	.20189	.14906	49.609	.34529	164.95	.34559	2.9469
#1	50.842	.51597	9.5255	.51316	39.600	10.264	14.675
#2	51.040	.51495	3.0275	.51481	8.1571	10.326	15.366
#3	50.891	.51646	8.0951	.51671	-5.6105	10.265	15.513
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2253**	**.41250**	**5.0708**	**.93638**	**1.0159**	**1.0181**	**.51966**
Stddev	.0040	.00095	.0173	.00285	.0022	.0043	.00260
%RSD	.33018	.22915	.34064	.30462	.21591	.42339	.50002
#1	1.2224	.41342	5.0537	.93493	1.0172	1.0143	.52081
#2	1.2235	.41253	5.0883	.93455	1.0170	1.0227	.51668
#3	1.2299	.41153	5.0705	.93967	1.0133	1.0172	.52147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0169**	**1.0249**	F **-.25112**
Stddev	.0014	.0038	.28784
%RSD	.13373	.37207	114.62
#1	1.0172	1.0227	-.47813
#2	1.0154	1.0227	-.34784
#3	1.0181	1.0293	.07262
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 9:15:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15245.**	**20901.**
Stddev	36.	98.
%RSD	.23428	.47054
#1	15238.	20996.
#2	15284.	20907.
#3	15214.	20800.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 9:18:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00976**	**.00118**	**.00169**	**.00033**	**.00004**	**.02188**
Stddev	.00034	.01598	.00068	.00035	.00014	.00002	.00957
%RSD	330.36	163.64	57.305	20.879	42.782	40.896	43.718
#1	-.00041	.02217	.00084	.00196	.00045	.00005	.01865
#2	.00026	-.00826	.00196	.00181	.00037	.00002	.03264
#3	-.00015	.01538	.00074	.00129	.00017	.00005	.01435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00012**	**.00019**	**.00072**	**.01095**	**-.00233**	**-.03060**
Stddev	.00005	.00014	.00012	.00012	.00243	.00153	.14846
%RSD	73.783	121.05	60.991	16.634	22.218	65.633	485.18
#1	.00003	.00002	.00011	.00086	.01180	-.00382	.10650
#2	.00011	.00005	.00033	.00062	.00820	-.00240	-.01002
#3	.00005	.00028	.00014	.00069	.01284	-.00077	-.18828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.79642**	F **.29571**	**.03291**	**.00036**	**.01773**	**.00004**	**.00161**
Stddev	.45305	1.2191	.04211	.00104	.00330	.00002	.00063
%RSD	56.885	412.26	127.98	291.40	18.583	38.962	39.206
#1	1.1495	1.4448	.08036	-.00077	.01736	.00003	.00132
#2	.95413	.42537	.01839	.00128	.01464	.00006	.00117
#3	.28560	-.98302	-.00003	.00057	.02120	.00004	.00233
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 9:18:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01104**	**.00019**	F **-6.3787**	**-.00052**	F **-42.890**	**-.18681**	F **8.3617**
Stddev	.00191	.00039	6.3158	.00086	13.608	.04093	1.2981
%RSD	17.329	203.26	99.015	163.94	31.728	21.909	15.525
#1	.00921	-.00020	-7.7648	-.00027	-58.118	-.21253	7.9603
#2	.01302	.00057	.51509	-.00148	-31.921	-.13962	7.3117
#3	.01090	.00020	-11.886	.00018	-38.630	-.20829	9.8131
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00161**	**.00060**	**.00138**	**.00039**	**.00022**	**.00026**	**.00140**
Stddev	.00141	.00212	.00348	.00041	.00005	.00089	.00105
%RSD	87.789	352.98	251.31	105.16	22.238	340.13	74.467
#1	.00043	.00086	.00068	.00021	.00025	.00054	.00059
#2	.00317	.00257	-.00169	.00010	.00016	.00098	.00104
#3	.00123	-.00164	.00516	.00087	.00024	-.00074	.00258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00029**	**-.00020**	**.08534**
Stddev	.00007	.00015	.13642
%RSD	24.934	77.208	159.86
#1	.00027	-.00026	.24190
#2	.00023	-.00032	-.00804
#3	.00037	-.00002	.02216
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 9:18:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15355.**	**21056.**
Stddev	52.	168.
%RSD	.33978	.79811
#1	15386.	21096.
#2	15383.	21200.
#3	15294.	20872.

Approved: June 04, 2013

Sample Name: PBW M Acquired: 6/3/2013 9:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**-.00573**	**-.00043**	**-.00098**	**.00010**	**.00002**	**.00853**
Stddev	.00015	.00612	.00084	.00015	.00001	.00001	.00417
%RSD	56.771	106.93	195.10	14.949	12.110	55.410	48.876
#1	-.00042	-.01193	-.00099	-.00103	.00010	.00002	.00373
#2	-.00019	.00031	-.00082	-.00081	.00010	.00001	.01064
#3	-.00015	-.00556	.00053	-.00109	.00008	.00004	.01122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00000**	**.00011**	**-.00010**	**.00952**	**.00017**	F **-.42182**
Stddev	.00010	.00009	.00024	.00034	.00084	.00436	.30835
%RSD	1078.3	4681.6	224.04	346.49	8.8401	2552.1	73.099
#1	-.00009	.00010	.00035	.00020	.01049	.00464	-.43299
#2	.00011	-.00002	-.00012	-.00002	.00911	-.00006	-.72444
#3	.00001	-.00007	.00009	-.00047	.00897	-.00406	-.10804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.17104**	**1.1000**	**-.00188**	**-.00044**	**.00401**	**.00010**	**.00002**
Stddev	.41260	.4198	.01409	.00029	.01118	.00003	.00021
%RSD	241.22	38.164	750.05	66.672	278.75	31.562	1159.7
#1	.06952	1.4857	-.00687	-.00073	.01541	.00013	-.00020
#2	.06481	.65286	-.01280	-.00014	.00356	.00010	.00003
#3	-.64746	1.1615	.01403	-.00045	-.00694	.00007	.00022
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: PBW M Acquired: 6/3/2013 9:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01795**	**.00033**	**8.9017**	**-.00049**	F **19.857**	F **-.16220**	**7.9616**
Stddev	.00894	.00042	5.6522	.00129	10.225	.05331	1.7546
%RSD	49.822	126.97	63.495	265.03	51.496	32.865	22.039
#1	.01090	-.00014	7.0172	.00071	31.417	-.18924	7.9603
#2	.02801	.00047	15.255	-.00032	11.996	-.19658	6.2076
#3	.01493	.00067	4.4325	-.00185	16.157	-.10079	9.7169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00145**	**-.00110**	**-.00169**	**-.00149**	**-.00002**	**.00024**	**-.00067**
Stddev	.00045	.00157	.00118	.00021	.00003	.00054	.00129
%RSD	30.915	143.40	69.953	13.745	138.53	228.50	192.27
#1	.00151	.00041	-.00097	-.00173	-.00001	-.00032	-.00211
#2	.00097	-.00097	-.00104	-.00138	-.00005	.00075	-.00026
#3	.00186	-.00273	-.00305	-.00137	.00000	.00028	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00015**	**.00133**	F **-.45830**
Stddev	.00022	.00005	.20408
%RSD	153.56	4.0799	44.529
#1	.00038	.00133	-.32194
#2	-.00007	.00128	-.36004
#3	.00012	.00139	-.69291
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: PBW M Acquired: 6/3/2013 9:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15164.**	**21193.**
Stddev	39.	93.
%RSD	.25881	.43752
#1	15173.	21170.
#2	15121.	21115.
#3	15197.	21296.

Approved: June 04, 2013

Sample Name: LCSW M Acquired: 6/3/2013 9:37:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20635**	**4.9635**	**.20238**	**1.0074**	**.49897**	**.02533**	**5.1255**
Stddev	.00113	.0319	.00234	.0065	.00456	.00013	.0330
%RSD	.54533	.64173	1.1572	.64729	.91344	.49512	.64298
#1	.20738	5.0002	.20458	1.0111	.50423	.02543	5.1612
#2	.20515	4.9427	.19992	.99987	.49659	.02519	5.0963
#3	.20652	4.9476	.20265	1.0113	.49610	.02538	5.1190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02539**	**.10210**	**.25596**	**.25585**	**2.0173**	**.50611**	**.72294**
Stddev	.00005	.00019	.00096	.00121	.0088	.00405	.53438
%RSD	.19535	.18268	.37345	.47186	.43645	.80116	73.918
#1	.02542	.10205	.25706	.25571	2.0274	.50156	.82658
#2	.02534	.10195	.25531	.25473	2.0135	.50935	1.1979
#3	.02543	.10231	.25552	.25713	2.0111	.50741	.14433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14068**	**7.3961**	**25.006**	**.50057**	**4.9685**	**.25146**	**.50346**
Stddev	.34650	.2892	.263	.00494	.0366	.00224	.00096
%RSD	246.30	3.9102	1.0499	.98778	.73736	.89217	.19130
#1	-.21513	7.1923	25.306	.50599	5.0106	.25405	.50264
#2	.16012	7.2689	24.889	.49942	4.9511	.25023	.50321
#3	.47705	7.7271	24.822	.49631	4.9438	.25011	.50452
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: LCSW M Acquired: 6/3/2013 9:37:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.091**	**.25738**	F **11760.**	**.25546**	F **-14.960**	**5.1650**	**8.5233**
Stddev	.275	.00055	37.	.00105	14.624	.0688	1.4082
%RSD	1.0958	.21518	.31163	.41053	97.752	1.3318	16.522
#1	25.399	.25757	11766.	.25665	-26.049	5.1369	7.9715
#2	25.002	.25676	11720.	.25470	-20.445	5.1147	7.4745
#3	24.871	.25782	11793.	.25502	1.6132	5.2434	10.124
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit			450.00		9.0000		
Low Limit			-.00400		-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59859**	**.19921**	**2.4505**	**.51197**	**.49907**	**.49629**	**.26113**
Stddev	.00162	.00129	.0164	.00107	.00421	.00551	.00133
%RSD	.27021	.64982	.66786	.20992	.84364	1.1109	.50838
#1	.59679	.20065	2.4316	.51238	.50386	.50252	.26249
#2	.59991	.19814	2.4613	.51076	.49739	.49432	.25983
#3	.59908	.19885	2.4584	.51279	.49595	.49204	.26108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50354**	**.51408**	F **1429.6**
Stddev	.00244	.00180	9.8
%RSD	.48386	.35034	.68827
#1	.50514	.51586	1437.3
#2	.50073	.51226	1418.5
#3	.50474	.51412	1433.1
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: LCSW M Acquired: 6/3/2013 9:37:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15245.**	**20912.**
Stddev	43.	163.
%RSD	.28030	.78130
#1	15202.	20736.
#2	15288.	20942.
#3	15244.	21058.

Approved: June 04, 2013

Sample Name: L1305084024 Acquired: 6/3/2013 9:41:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00447**	**.00073**	**.01150**	**.02746**	**.00004**	**66.200**
Stddev	.00030	.01868	.00058	.00031	.00037	.00002	.255
%RSD	83.189	418.02	78.566	2.6829	1.3519	42.592	.38580
#1	-.00005	.01905	.00034	.01118	.02703	.00002	66.164
#2	-.00038	.01094	.00046	.01179	.02766	.00005	65.964
#3	-.00065	-.01659	.00139	.01152	.02769	.00005	66.471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00002**	**.00074**	**.00015**	**.01132**	**.13928**	**3.6066**
Stddev	.00008	.00009	.00008	.00019	.00270	.00183	.5520
%RSD	25.453	579.92	10.885	128.50	23.865	1.3128	15.305
#1	.00035	.00005	.00071	-.00007	.01341	.14028	3.9352
#2	.00041	-.00009	.00068	.00025	.00827	.14039	2.9693
#3	.00024	.00008	.00083	.00026	.01228	.13717	3.9153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97656**	**.52110**	**.36493**	**.00463**	**16.520**	**.00039**	**.00071**
Stddev	1.9288	.27282	.01196	.00052	.109	.00003	.00043
%RSD	197.51	52.354	3.2784	11.128	.65997	8.9386	60.222
#1	1.5645	.36545	.36447	.00458	16.437	.00040	.00056
#2	2.5430	.36173	.35321	.00517	16.643	.00042	.00037
#3	-1.1778	.83612	.37712	.00414	16.479	.00035	.00119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305084024 Acquired: 6/3/2013 9:41:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.0909**	**.00053**	**25.683**	**.00017**	F **-.82305**	F **308.69**	F **-8085.5**
Stddev	.0233	.00044	2.727	.00146	25.128	1.64	11.6
%RSD	.75270	83.102	10.616	850.27	3053.0	.53005	.14335
#1	3.0779	.00081	24.316	.00135	-29.467	307.30	-8095.2
#2	3.1177	.00076	28.823	-.00146	9.4940	308.28	-8088.6
#3	3.0769	.00002	23.911	.00063	17.504	310.49	-8072.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00113**	**.01029**	**3.7858**	**-.00114**	**.13718**	**-.00075**	**.00162**
Stddev	.00136	.00155	.0211	.00031	.00065	.00003	.00103
%RSD	120.94	15.094	.55730	27.001	.47535	3.8139	63.498
#1	.00152	.01173	3.7679	-.00147	.13695	-.00072	.00085
#2	-.00039	.01050	3.7803	-.00085	.13792	-.00076	.00279
#3	.00225	.00864	3.8090	-.00110	.13668	-.00078	.00122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00036**	**.00277**	**1.1508**
Stddev	.00009	.00016	.1730
%RSD	25.787	5.9440	15.032
#1	.00027	.00258	.96799
#2	.00045	.00285	1.1724
#3	.00034	.00288	1.3119
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305084024 Acquired: 6/3/2013 9:41:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15132.**	**21202.**
Stddev	51.	109.
%RSD	.33449	.51535
#1	15088.	21304.
#2	15188.	21086.
#3	15122.	21215.

Approved: June 04, 2013

Sample Name: L1305084026MS Acquired: 6/3/2013 9:44:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20171**	**4.9157**	**.19987**	**.99852**	**.51384**	**.02513**	**70.506**
Stddev	.00109	.0637	.00106	.00544	.00569	.00010	1.091
%RSD	.53953	1.2959	.53169	.54442	1.1077	.39996	1.5470
#1	.20053	4.9886	.20097	.99306	.52009	.02509	71.572
#2	.20192	4.8711	.19978	.99857	.51248	.02506	70.555
#3	.20268	4.8873	.19885	1.0039	.50895	.02524	69.392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02507**	**.09811**	**.24913**	**.24727**	**1.9621**	**.62749**	**3.7030**
Stddev	.00004	.00018	.00063	.00020	.0192	.00441	.4585
%RSD	.14651	.18828	.25298	.08176	.97903	.70264	12.382
#1	.02511	.09801	.24848	.24748	1.9807	.62819	3.3313
#2	.02507	.09833	.24916	.24707	1.9633	.62278	3.5624
#3	.02504	.09800	.24974	.24726	1.9424	.63151	4.2154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.42046**	**7.3227**	**24.962**	**.49985**	**21.359**	**.24308**	**.49438**
Stddev	1.1951	.2851	.341	.00355	.229	.00301	.00076
%RSD	284.24	3.8928	1.3667	.71065	1.0725	1.2398	.15275
#1	1.3281	7.2804	25.325	.50281	21.570	.24648	.49499
#2	-.93359	7.6265	24.913	.50083	21.393	.24205	.49462
#3	.86682	7.0612	24.648	.49591	21.115	.24072	.49353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013

Sample Name: L1305084026MS Acquired: 6/3/2013 9:44:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.800**	**.24623**	F **12038.**	**.24630**	F **-25.581**	F **309.55**	F **-7988.5**
Stddev	.304	.00050	18.	.00216	27.420	.87	24.1
%RSD	1.0944	.20200	.14848	.87887	107.19	.27948	.30144
#1	28.135	.24589	12018.	.24634	-5.4844	310.24	-7960.9
#2	27.726	.24601	12052.	.24844	-56.819	309.84	-7999.4
#3	27.540	.24680	12044.	.24412	-14.441	308.58	-8005.2
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59100**	**.20367**	**6.1693**	**.54777**	**.62730**	**.48711**	**.25185**
Stddev	.00182	.00061	.0309	.00038	.00618	.00557	.00168
%RSD	.30809	.30027	.50036	.06992	.98511	1.1431	.66796
#1	.58890	.20311	6.1943	.54741	.63430	.49247	.25365
#2	.59209	.20432	6.1788	.54772	.62500	.48750	.25160
#3	.59202	.20359	6.1348	.54817	.62260	.48135	.25031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49474**	**.49022**	F **1431.5**
Stddev	.00204	.00049	5.5
%RSD	.41285	.10070	.38461
#1	.49293	.48965	1428.3
#2	.49433	.49052	1428.4
#3	.49696	.49049	1437.9
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305084026MS Acquired: 6/3/2013 9:44:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15131.**	**20909.**
Stddev	42.	257.
%RSD	.27916	1.2284
#1	15175.	20634.
#2	15128.	20951.
#3	15091.	21143.

Approved: June 04, 2013

Sample Name: L1305084028MSD Acquired: 6/3/2013 9:47:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20104**	**4.9244**	**.19940**	**.99587**	**.51436**	**.02488**	**69.141**
Stddev	.00085	.0673	.00053	.00193	.00716	.00004	.681
%RSD	.42416	1.3667	.26636	.19374	1.3922	.16847	.98546
#1	.20167	4.9773	.19881	.99648	.52025	.02493	69.706
#2	.20007	4.9472	.19956	.99371	.51645	.02486	69.333
#3	.20137	4.8487	.19983	.99742	.50639	.02485	68.385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02493**	**.09792**	**.24651**	**.24679**	**1.9610**	**.62046**	**5.0878**
Stddev	.00009	.00009	.00047	.00064	.0208	.00381	.2513
%RSD	.35971	.09220	.18876	.25802	1.0629	.61400	4.9398
#1	.02495	.09799	.24678	.24723	1.9804	.62472	5.3562
#2	.02483	.09797	.24597	.24606	1.9638	.61929	4.8580
#3	.02501	.09782	.24678	.24707	1.9389	.61737	5.0491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.83888**	**7.2241**	**24.972**	**.50076**	**20.993**	**.24154**	**.49360**
Stddev	1.2401	.5541	.290	.00648	.222	.00285	.00031
%RSD	147.83	7.6701	1.1631	1.2932	1.0596	1.1789	.06326
#1	-2.2626	6.5872	25.255	.50643	21.142	.24345	.49396
#2	.00564	7.5952	24.987	.50215	21.099	.24291	.49341
#3	-.25966	7.4899	24.675	.49370	20.737	.23827	.49342
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305084028MSD Acquired: 6/3/2013 9:47:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.767**	**.24624**	F **11929.**	**.24576**	F **24.435**	F **303.10**	F **-7788.1**
Stddev	.401	.00086	50.	.00031	18.585	.40	15.7
%RSD	1.4450	.34872	.41677	.12436	76.059	.13135	.20179
#1	28.120	.24682	11969.	.24555	42.000	302.65	-7799.0
#2	27.850	.24526	11874.	.24561	4.9748	303.27	-7795.2
#3	27.331	.24666	11945.	.24611	26.331	303.39	-7770.1
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58750**	**.20439**	**6.0822**	**.49985**	**.62559**	**.48783**	**.25049**
Stddev	.00225	.00213	.0138	.00171	.00980	.00507	.00144
%RSD	.38322	1.0404	.22741	.34246	1.5672	1.0393	.57576
#1	.58523	.20657	6.0882	.50034	.63402	.49102	.25082
#2	.58753	.20429	6.0921	.49795	.62792	.49049	.25174
#3	.58973	.20232	6.0664	.50127	.61483	.48198	.24891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49265**	**.48928**	F **1420.4**
Stddev	.00183	.00275	6.5
%RSD	.37220	.56263	.45920
#1	.49476	.49190	1427.1
#2	.49171	.48641	1419.9
#3	.49147	.48954	1414.1
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305084028MSD Acquired: 6/3/2013 9:47:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432008-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15221.**	**21035.**
Stddev	59.	196.
%RSD	.38709	.93266
#1	15166.	20845.
#2	15283.	21023.
#3	15214.	21236.

Approved: June 04, 2013

Sample Name: L1305117601 Acquired: 6/3/2013 9:50:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.05038**	**.00017**	**.02238**	**.07855**	**.00002**	**14.306**
Stddev	.00019	.00531	.00050	.00068	.00106	.00002	.299
%RSD	535.33	10.547	288.61	3.0548	1.3457	105.10	2.0913
#1	.00017	.05632	.00008	.02191	.07796	.00002	14.140
#2	-.00018	.04610	.00072	.02207	.07977	.00005	14.652
#3	.00012	.04871	-.00027	.02317	.07792	.00000	14.127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00069**	**.00411**	**.00129**	**.26620**	**.21985**	**7.5391**
Stddev	.00005	.00027	.00016	.00023	.00311	.00320	.2256
%RSD	9.2751	39.301	3.8173	17.674	1.1676	1.4552	2.9925
#1	.00055	.00039	.00395	.00103	.26407	.22260	7.4069
#2	.00061	.00077	.00426	.00147	.26976	.21634	7.7996
#3	.00050	.00091	.00412	.00135	.26475	.22061	7.4108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.93515**	**.76879**	**2.4529**	**.02899**	**31.942**	**.19517**	**.00407**
Stddev	1.7780	.30182	.0652	.00176	.433	.00248	.00052
%RSD	190.13	39.259	2.6562	6.0716	1.3541	1.2700	12.842
#1	2.4866	.92156	2.4143	.02750	31.654	.19340	.00361
#2	-1.0051	.96369	2.5282	.03093	32.440	.19801	.00396
#3	1.3240	.42113	2.4163	.02855	31.733	.19411	.00463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013

Sample Name: L1305117601 Acquired: 6/3/2013 9:50:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **452.92**	**.00333**	F **6131.2**	**.00171**	F **27.290**	F **1539.7**	F **-51827.**
Stddev	7.02	.00022	63.7	.00084	32.489	6.2	495.
%RSD	1.5491	6.5973	1.0392	48.820	119.05	.40382	.95490
#1	457.40	.00358	6158.7	.00242	59.818	1543.3	-52057.
#2	456.53	.00321	6058.3	.00079	27.210	1532.5	-51258.
#3	444.84	.00319	6176.5	.00193	-5.1592	1543.3	-52164.
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit	360.00		450.00		9.0000	9.0000	9.0000
Low Limit	-.50000		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00118**	**-.00037**	**9.3109**	**-.00096**	**.21561**	**.00064**	**.00019**
Stddev	.00107	.00168	.0529	.00073	.00373	.00089	.00026
%RSD	91.301	456.56	.56814	76.346	1.7319	139.85	134.12
#1	.00230	-.00083	9.3437	-.00170	.21399	.00164	.00047
#2	.00016	-.00177	9.2499	-.00095	.21988	.00034	.00015
#3	.00108	.00150	9.3391	-.00023	.21295	-.00007	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00042**	**.01393**	**.36999**
Stddev	.00011	.00041	.26119
%RSD	26.054	2.9480	70.594
#1	.00053	.01365	.10778
#2	.00040	.01374	.37204
#3	.00032	.01440	.63016
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305117601 Acquired: 6/3/2013 9:50:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14545.**	**20742.**
Stddev	104.	223.
%RSD	.71219	1.0773
#1	14522.	20876.
#2	14658.	20484.
#3	14455.	20866.

Approved: June 04, 2013

Sample Name: L1305117602 Acquired: 6/3/2013 9:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.03131**	**-.00097**	**.01866**	**.06304**	**.00001**	**11.290**
Stddev	.00057	.01358	.00120	.00021	.00100	.00001	.058
%RSD	357.39	43.358	124.02	1.1180	1.5908	117.70	.51599
#1	.00050	.02071	-.00012	.01890	.06189	.00001	11.225
#2	-.00048	.04661	-.00044	.01853	.06366	.00000	11.335
#3	-.00050	.02662	-.00234	.01856	.06358	.00002	11.311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00034**	**.00387**	**.00070**	**.16060**	**.17104**	**6.0752**
Stddev	.00009	.00003	.00004	.00059	.00381	.00560	1.0263
%RSD	21.638	8.1224	1.1541	84.625	2.3745	3.2764	16.893
#1	.00045	.00036	.00388	.00062	.15622	.17470	7.0049
#2	.00030	.00031	.00392	.00015	.16244	.16459	6.2467
#3	.00046	.00034	.00383	.00132	.16315	.17382	4.9739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.66804**	**.32301**	**2.1943**	**.02762**	**26.675**	**.15782**	**.00343**
Stddev	.21379	.63032	.0141	.00119	.184	.00098	.00010
%RSD	32.003	195.14	.64418	4.3000	.69091	.62245	2.9971
#1	-.43718	-.36695	2.1824	.02625	26.519	.15823	.00339
#2	-.70774	.86866	2.1905	.02824	26.878	.15853	.00336
#3	-.85920	.46732	2.2099	.02837	26.627	.15670	.00355
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305117602 Acquired: 6/3/2013 9:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **448.32**	**.00258**	F **5822.0**	**.00082**	F **12.716**	F **1574.7**	F **-53025.**
Stddev	13.32	.00058	57.8	.00030	26.524	6.0	495.
%RSD	2.9700	22.472	.99275	36.573	208.58	.38406	.93415
#1	459.38	.00238	5859.5	.00088	-2.5826	1572.5	-53390.
#2	433.54	.00323	5755.4	.00049	43.344	1570.0	-52461.
#3	452.03	.00212	5851.0	.00109	-2.6123	1581.5	-53223.
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit	360.00		450.00		9.0000	9.0000	9.0000
Low Limit	-.50000		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00135**	**8.1835**	**-.00176**	**.16915**	**.00080**	**.00187**
Stddev	.00044	.00015	.0374	.00035	.00140	.00068	.00075
%RSD	712.02	11.286	.45661	19.769	.82477	84.276	40.380
#1	.00044	-.00136	8.1491	-.00216	.16754	.00148	.00231
#2	-.00040	-.00150	8.1782	-.00157	.16988	.00080	.00100
#3	-.00022	-.00119	8.2233	-.00154	.17004	.00013	.00230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00022**	**.00974**	**.40869**
Stddev	.00011	.00017	.25047
%RSD	51.788	1.7497	61.286
#1	.00009	.00992	.12858
#2	.00026	.00958	.48640
#3	.00031	.00974	.61110
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305117602 Acquired: 6/3/2013 9:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14573.**	**21018.**
Stddev	154.	79.
%RSD	1.0598	.37616
#1	14459.	21060.
#2	14749.	20927.
#3	14511.	21067.

Approved: June 04, 2013

Sample Name: L1305117602PS Acquired: 6/3/2013 9:58:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432268-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21077**	**5.0162**	**.21204**	**1.0574**	**.55914**	**.02573**	**15.514**
Stddev	.00040	.0383	.00062	.0022	.00577	.00001	.110
%RSD	.19062	.76328	.29127	.20393	1.0326	.02009	.70874
#1	.21081	5.0403	.21137	1.0571	.56157	.02572	15.557
#2	.21035	5.0363	.21215	1.0553	.56330	.02573	15.596
#3	.21115	4.9720	.21259	1.0596	.55255	.02573	15.389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02639**	**.10114**	**.25999**	**.25303**	**2.1636**	**.65575**	**7.3136**
Stddev	.00011	.00050	.00059	.00091	.0135	.00309	.7318
%RSD	.42654	.49219	.22534	.36145	.62181	.47092	10.005
#1	.02644	.10154	.25932	.25398	2.1668	.65722	7.0763
#2	.02647	.10130	.26040	.25294	2.1751	.65782	6.7299
#3	.02626	.10058	.26025	.25216	2.1488	.65220	8.1345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.31084**	**1.0654**	**27.532**	**.53313**	**29.134**	**.38123**	**.51213**
Stddev	1.5438	.4324	.273	.00602	.175	.00212	.00155
%RSD	496.64	40.588	.98994	1.1299	.59960	.55514	.30224
#1	-1.8321	1.5181	27.721	.53565	29.198	.38352	.51363
#2	-.35497	.65660	27.655	.53748	29.268	.37934	.51221
#3	1.2545	1.0215	27.219	.52625	28.937	.38084	.51054
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305117602PS Acquired: 6/3/2013 9:58:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432268-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **430.12**	**.25536**	F **5196.9**	**.25070**	F **-13.040**	F **1405.8**	F **-47855.**
Stddev	5.80	.00022	20.0	.00087	15.940	6.6	72.
%RSD	1.3488	.08576	.38560	.34658	122.24	.46611	.15078
#1	429.06	.25557	5206.7	.25143	-14.614	1412.8	-47930.
#2	424.92	.25537	5210.2	.24974	-28.135	1404.8	-47848.
#3	436.37	.25513	5173.8	.25094	3.6284	1399.8	-47786.
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit	360.00		450.00		9.0000	9.0000	9.0000
Low Limit	-.50000		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.61531**	**.20462**	**9.8715**	**.00042**	**.65845**	**.50602**	**.24580**
Stddev	.00279	.00286	.0436	.00019	.00692	.00362	.00089
%RSD	.45377	1.3979	.44176	46.402	1.0509	.71637	.36148
#1	.61842	.20531	9.9208	.00022	.66071	.50466	.24675
#2	.61447	.20708	9.8558	.00041	.66396	.51012	.24568
#3	.61303	.20148	9.8379	.00061	.65069	.50326	.24498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.51100**	**.52512**	**1.1368**
Stddev	.00078	.00167	.3806
%RSD	.15179	.31719	33.476
#1	.51035	.52642	1.4967
#2	.51080	.52569	.73850
#3	.51186	.52324	1.1751
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305117602PS Acquired: 6/3/2013 9:58:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432268-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14469.**	**20743.**
Stddev	12.	86.
%RSD	.08395	.41479
#1	14479.	20647.
#2	14474.	20812.
#3	14456.	20770.

Approved: June 04, 2013

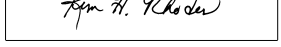
Sample Name: L1305117602SDL Acquired: 6/3/2013 10:01:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432268-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00044**	**-.00113**	**.00118**	**.00628**	**.01318**	**.00002**	**2.3600**
Stddev	.00023	.01579	.00069	.00077	.00027	.00002	.0214
%RSD	52.754	1396.4	58.484	12.200	2.0180	108.71	.90759
#1	-.00051	-.00532	.00198	.00642	.01309	.00004	2.3654
#2	-.00018	-.01441	.00088	.00545	.01348	.00001	2.3365
#3	-.00064	.01633	.00069	.00697	.01297	.00000	2.3783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.00024**	**.00088**	**.00058**	**.03401**	**.03382**	**.74927**
Stddev	.00005	.00019	.00042	.00017	.00178	.00733	1.0912
%RSD	75.055	79.723	47.443	28.551	5.2367	21.665	145.64
#1	.00001	.00008	.00111	.00076	.03509	.03940	1.8073
#2	.00008	.00046	.00040	.00044	.03195	.02552	.81281
#3	.00012	.00019	.00113	.00054	.03498	.03655	-.37235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14897**	**.36013**	**.47905**	**.00679**	**5.4573**	**.03388**	**.00133**
Stddev	1.0091	.56059	.02047	.00078	.0271	.00010	.00034
%RSD	677.43	155.66	4.2740	11.449	.49642	.28791	25.434
#1	-.18316	-.02045	.46953	.00756	5.4267	.03391	.00110
#2	-.65224	.09696	.50255	.00601	5.4674	.03377	.00117
#3	1.2823	1.0039	.46506	.00681	5.4780	.03396	.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305117602SDL Acquired: 6/3/2013 10:01:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432268-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.926**	**.00057**	F **1151.2**	**.00170**	F **-13.315**	F **308.88**	F **-10427.**
Stddev	.284	.00031	3.7	.00019	12.719	.80	40.
%RSD	.29565	53.946	.32097	11.140	95.525	.25850	.38127
#1	96.068	.00022	1147.7	.00164	1.3459	308.29	-10400.
#2	96.110	.00070	1150.7	.00191	-21.400	309.79	-10472.
#3	95.599	.00081	1155.1	.00154	-19.892	308.55	-10408.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00142**	**-.00152**	**1.6394**	**-.00069**	**.03491**	**.00035**	**.00050**
Stddev	.00073	.00269	.0060	.00005	.00033	.00040	.00108
%RSD	51.616	176.69	.36793	7.2116	.95787	114.13	215.00
#1	.00120	.00124	1.6325	-.00075	.03471	.00027	.00035
#2	.00224	-.00413	1.6434	-.00068	.03530	.00000	-.00049
#3	.00082	-.00168	1.6423	-.00065	.03472	.00079	.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00022**	**.00254**	**.13426**
Stddev	.00042	.00009	.24336
%RSD	185.87	3.5211	181.26
#1	.00070	.00246	.06004
#2	-.00007	.00251	-.06335
#3	.00004	.00264	.40608
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305117602SDL Acquired: 6/3/2013 10:01:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432268-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14952.**	**20631.**
Stddev	24.	101.
%RSD	.16050	.48953
#1	14968.	20581.
#2	14924.	20747.
#3	14963.	20565.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 10:11:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41419**	**9.9622**	**.40429**	**.51652**	**1.0135**	**.05067**	**10.553**
Stddev	.00364	.1052	.00095	.00461	.0101	.00011	.078
%RSD	.87816	1.0559	.23385	.89323	.99557	.22280	.73729
#1	.41036	9.8410	.40387	.51128	1.0021	.05065	10.466
#2	.41759	10.029	.40537	.51996	1.0212	.05057	10.577
#3	.41463	10.016	.40363	.51833	1.0172	.05079	10.616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05111**	**.20516**	**.51865**	**.51307**	**4.0460**	**1.0213**	**.95132**
Stddev	.00027	.00048	.00160	.00162	.0260	.0051	.78683
%RSD	.52104	.23378	.30936	.31654	.64288	.50090	82.710
#1	.05081	.20466	.51695	.51119	4.0221	1.0157	.71539
#2	.05120	.20562	.51885	.51396	4.0737	1.0256	1.8291
#3	.05132	.20519	.52014	.51405	4.0420	1.0226	.30945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.88193**	**1.0366**	**50.729**	**1.0111**	**9.9842**	**.49963**	**1.0086**
Stddev	.80425	.5639	.358	.0087	.0838	.00102	.0052
%RSD	91.192	54.402	.70503	.86182	.83947	.20332	.51928
#1	1.8058	.82298	50.317	1.0011	9.9055	.50063	1.0025
#2	.33840	.61063	50.920	1.0170	10.072	.49968	1.0118
#3	.50158	1.6760	50.951	1.0152	9.9749	.49860	1.0114
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000						
Range	-10.000%						

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 10:11:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.490**	**.51770**	F **12.305**	**.51901**	F **40.450**	**10.346**	F **12.611**
Stddev	.431	.00286	8.944	.00553	18.486	.132	1.394
%RSD	.85409	.55315	72.686	1.0651	45.701	1.2741	11.050
#1	49.999	.51458	18.726	.51265	20.665	10.493	13.901
#2	50.809	.52020	16.099	.52165	57.282	10.305	11.133
#3	50.662	.51834	2.0892	.52272	43.401	10.239	12.801
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2263**	**.41120**	**4.9276**	**.94428**	**1.0058**	**1.0035**	**.52112**
Stddev	.0059	.00275	.0090	.00693	.0107	.0104	.00447
%RSD	.47978	.66952	.18206	.73342	1.0659	1.0316	.85823
#1	1.2197	.40822	4.9379	.93632	.99378	.99183	.51607
#2	1.2309	.41365	4.9217	.94894	1.0145	1.0116	.52459
#3	1.2284	.41173	4.9231	.94758	1.0090	1.0070	.52270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0197**	**1.0358**	F **.25561**
Stddev	.0057	.0095	.28014
%RSD	.56052	.91862	109.60
#1	1.0131	1.0249	.47427
#2	1.0229	1.0406	-.06017
#3	1.0230	1.0420	.35272
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 10:11:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15018.**	**20828.**
Stddev	98.	17.
%RSD	.64938	.07944
#1	15130.	20847.
#2	14970.	20824.
#3	14954.	20815.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 10:14:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**.00555**	**.00172**	**.00219**	**.00012**	**.00003**	**.00960**
Stddev	.00023	.01786	.00093	.00018	.00023	.00002	.00572
%RSD	108.68	321.56	54.311	8.0612	189.20	86.896	59.631
#1	.00031	-.01312	.00081	.00214	.00004	.00005	.00844
#2	.00037	.02247	.00167	.00205	.00038	.00000	.01581
#3	-.00005	.00731	.00268	.00239	-.00005	.00003	.00454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00017**	**.00001**	**.00032**	**.00269**	**.00324**	F **-.26599**
Stddev	.00008	.00009	.00042	.00045	.00141	.00245	1.3258
%RSD	248.36	56.243	2805.1	139.64	52.463	75.699	498.43
#1	-.00001	.00023	.00028	-.00013	.00281	.00578	1.2215
#2	.00012	.00006	-.00046	.00032	.00403	.00307	-1.3231
#3	-.00001	.00022	.00023	.00077	.00122	.00088	-.69636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.58634**	F **1.1927**	**.02775**	**.00118**	**.01391**	**-.00004**	**.00156**
Stddev	1.2375	.5657	.02209	.00037	.01775	.00005	.00079
%RSD	211.06	47.426	79.593	30.910	127.58	141.20	50.441
#1	2.0007	1.8423	.04236	.00160	.03083	-.00001	.00092
#2	-.29705	.92736	.00234	.00091	.01549	-.00001	.00133
#3	.05531	.80853	.03856	.00103	-.00457	-.00010	.00244
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 10:14:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03472**	**.00025**	F **1.4706**	**-.00009**	F **-8.7164**	**-.13500**	F **6.3293**
Stddev	.01310	.00013	11.759	.00051	26.427	.02132	1.0647
%RSD	37.720	51.032	799.63	603.23	303.19	15.795	16.821
#1	.04805	.00031	1.5738	.00011	-8.2324	-.11281	7.2365
#2	.02187	.00010	13.178	-.00067	17.466	-.15534	6.5942
#3	.03424	.00034	-10.340	.00030	-35.382	-.13686	5.1572
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00269**	**.00116**	**.00228**	**.00065**	**.00019**	**-.00025**	**.00042**
Stddev	.00138	.00092	.00223	.00086	.00001	.00121	.00087
%RSD	51.365	79.356	97.496	131.17	4.9830	474.72	207.16
#1	.00266	.00114	.00048	-.00001	.00018	-.00064	-.00026
#2	.00132	.00025	.00160	.00035	.00020	-.00122	.00012
#3	.00408	.00209	.00477	.00162	.00018	.00110	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00011**	**-.00032**	**-.03263**
Stddev	.00008	.00042	.39569
%RSD	73.069	132.88	1212.7
#1	.00004	-.00056	.21348
#2	.00020	-.00057	.17769
#3	.00010	.00017	-.48906
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 10:14:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15135.**	**20453.**
Stddev	43.	112.
%RSD	.28211	.54859
#1	15086.	20470.
#2	15155.	20334.
#3	15164.	20556.

Approved: June 04, 2013

Sample Name: LLCCV Acquired: 6/3/2013 10:18:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.15570**	**.00016**	**.00088**	**-.00007**	**.00189**	**.36331**
Stddev	.00045	.00758	.00056	.00023	.00008	.00001	.00379
%RSD	576.00	4.8685	344.29	26.379	105.66	.68529	1.0443
#1	.00034	.15064	.00071	.00074	-.00007	.00190	.35904
#2	-.00045	.16442	-.00041	.00115	-.00015	.00189	.36628
#3	.00034	.15205	.00019	.00076	.00000	.00188	.36462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**-.00012**	**.00012**	**.00021**	**.08421**	**.00269**	F **-.82999**
Stddev	.00009	.00003	.00022	.00033	.00298	.00560	.20638
%RSD	566.67	27.660	181.17	155.05	3.5442	208.29	24.865
#1	-.00012	-.00011	-.00013	.00027	.08087	-.00348	-.96951
#2	.00007	-.00009	.00029	.00050	.08663	.00747	-.59292
#3	-.00001	-.00015	.00021	-.00014	.08513	.00408	-.92753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.1082**	**.37592**	**.87318**	**.00137**	**.40810**	**.01076**	**.00010**
Stddev	.5159	.61634	.01759	.00188	.00798	.00007	.00011
%RSD	46.552	163.96	2.0149	137.85	1.9549	.62095	110.97
#1	-1.4642	.49524	.85498	.00023	.40561	.01069	-.00001
#2	-.51658	-.29136	.87446	.00033	.41703	.01082	.00021
#3	-1.3438	.92388	.89010	.00354	.40166	.01078	.00010
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: LLCCV Acquired: 6/3/2013 10:18:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46002**	**.00026**	F **-1.5964**	**-.00050**	F **-7.2682**	**.17306**	**6.7621**
Stddev	.00665	.00032	1.9719	.00071	33.394	.02110	1.8487
%RSD	1.4446	126.06	123.53	143.36	459.45	12.194	27.339
#1	.45894	.00049	.50746	-.00074	20.252	.19460	4.9219
#2	.45398	-.00011	-3.4026	-.00105	-44.419	.15243	8.6192
#3	.46714	.00039	-1.8941	.00030	2.3625	.17213	6.7453
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit			450.00		9.0000		
Low Limit			-.00400		-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00370**	**.01890**	**-.00062**	**.37850**	**.00007**	**.00010**	**.00061**
Stddev	.00096	.00152	.00050	.00606	.00004	.00093	.00129
%RSD	26.037	8.0195	80.059	1.5999	60.622	960.06	211.21
#1	.00292	.01860	-.00099	.38413	.00012	.00105	.00206
#2	.00478	.01756	-.00006	.37926	.00004	.00005	.00020
#3	.00341	.02055	-.00082	.37209	.00005	-.00081	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00028**	**.00018**	F **-.01327**
Stddev	.00018	.00004	.25638
%RSD	64.393	24.003	1932.0
#1	.00048	.00013	-.26741
#2	.00020	.00022	-.01770
#3	.00015	.00018	.24530
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: LLCCV Acquired: 6/3/2013 10:18:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15254.**	**20811.**
Stddev	79.	89.
%RSD	.51960	.42733
#1	15164.	20793.
#2	15313.	20908.
#3	15285.	20733.

Approved: June 04, 2013

Sample Name: PBW 23 Acquired: 6/3/2013 10:21:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**-.00871**	**.00006**	**-.00049**	**.00080**	**.00002**	**.02224**
Stddev	.00023	.02980	.00054	.00051	.00012	.00002	.00712
%RSD	197.25	342.25	966.35	103.09	14.698	101.63	32.034
#1	.00026	.00511	.00049	-.00002	.00078	.00004	.01421
#2	-.00015	.01167	.00021	-.00103	.00093	.00001	.02472
#3	.00023	-.04291	-.00054	-.00043	.00070	.00000	.02780
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**-.00008**	**-.00017**	**-.00023**	**.00426**	**-.00195**	F **-.46275**
Stddev	.00002	.00011	.00022	.00016	.00087	.00399	.10818
%RSD	32.726	144.45	134.56	69.644	20.472	205.07	23.377
#1	-.00008	.00003	-.00019	-.00040	.00505	-.00653	-.36017
#2	-.00005	-.00007	-.00038	-.00021	.00332	.00081	-.57577
#3	-.00009	-.00018	.00007	-.00008	.00440	-.00013	-.45231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.44082**	F **-.30371**	**.00718**	**.00144**	**-.00424**	**.00033**	**-.00016**
Stddev	1.0292	.99756	.01108	.00105	.00623	.00004	.00021
%RSD	233.47	328.46	154.31	72.390	146.80	11.868	131.17
#1	-.15283	.45049	-.00542	.00031	-.00197	.00036	-.00038
#2	-.15392	.07319	.01153	.00166	-.01129	.00035	.00003
#3	1.6292	-1.4348	.01544	.00237	.00053	.00029	-.00012
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: PBW 23 Acquired: 6/3/2013 10:21:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02836**	**.00073**	**7.3144**	**.00110**	F **-35.819**	F **-.08647**	**5.3716**
Stddev	.00419	.00013	7.1260	.00062	12.130	.04035	.4665
%RSD	14.781	17.077	97.424	56.457	33.865	46.660	8.6847
#1	.03318	.00062	15.264	.00171	-49.297	-.05972	5.8950
#2	.02551	.00087	1.4992	.00046	-25.781	-.06682	5.2204
#3	.02640	.00071	5.1804	.00114	-32.378	-.13288	4.9995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00048**	**-.00124**	**-.00370**	**.00075**	**-.00002**	**.00060**	**.00018**
Stddev	.00036	.00297	.00064	.00122	.00005	.00074	.00102
%RSD	76.256	240.08	17.361	161.85	310.99	123.73	565.20
#1	.00090	.00095	-.00442	-.00019	-.00007	.00129	.00117
#2	.00025	-.00462	-.00320	.00033	.00000	.00070	-.00086
#3	.00029	-.00004	-.00347	.00213	.00002	-.00019	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00024**	**.00116**	**.11594**
Stddev	.00027	.00003	.17267
%RSD	112.56	2.1870	148.93
#1	.00037	.00117	.08277
#2	-.00007	.00113	.30280
#3	.00041	.00117	-.03773
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: PBW 23 Acquired: 6/3/2013 10:21:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15333.**	**20804.**
Stddev	65.	52.
%RSD	.42193	.25206
#1	15391.	20854.
#2	15344.	20750.
#3	15263.	20809.

Approved: June 04, 2013

Sample Name: LCSW 23 Acquired: 6/3/2013 10:25:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20453**	**4.8037**	**.20130**	**.99139**	**.48951**	**.02491**	**5.1093**
Stddev	.00101	.0249	.00227	.00274	.00298	.00007	.0773
%RSD	.49576	.51734	1.1297	.27596	.60852	.28697	1.5124
#1	.20552	4.8109	.20177	.99398	.48714	.02495	5.0257
#2	.20349	4.7760	.20330	.98853	.48854	.02483	5.1239
#3	.20459	4.8241	.19882	.99166	.49285	.02495	5.1782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02501**	**.10077**	**.25274**	**.25352**	**1.9859**	**.50341**	**.51313**
Stddev	.00018	.00039	.00060	.00122	.0102	.00326	.16438
%RSD	.71928	.38369	.23672	.48102	.51358	.64784	32.035
#1	.02522	.10111	.25293	.25444	1.9741	.50314	.32500
#2	.02491	.10086	.25207	.25398	1.9918	.50680	.58532
#3	.02491	.10035	.25322	.25213	1.9918	.50029	.62906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.10878**	**7.5376**	**24.740**	**.49523**	**4.8575**	**.24510**	**.49657**
Stddev	.65594	1.0291	.196	.00408	.0605	.00219	.00254
%RSD	603.01	13.653	.79157	.82364	1.2463	.89456	.51070
#1	.10309	8.6593	24.570	.49323	4.7908	.24295	.49865
#2	-.84447	6.6370	24.697	.49253	4.8726	.24502	.49731
#3	.41505	7.3166	24.954	.49992	4.9090	.24733	.49374
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: LCSW 23 Acquired: 6/3/2013 10:25:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.560**	**.25609**	F **11734.**	**.25574**	**1.4584**	**5.1533**	**5.7457**
Stddev	.158	.00097	49.	.00196	21.251	.0711	.5056
%RSD	.64467	.37841	.42094	.76820	1457.2	1.3796	8.7999
#1	24.418	.25718	11783.	.25777	23.549	5.0887	5.1797
#2	24.532	.25575	11735.	.25559	-.33447	5.2295	5.9047
#3	24.730	.25533	11685.	.25385	-18.839	5.1417	6.1527
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			450.00				
Low Limit			-.00400				

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59540**	**.19420**	**2.3863**	**.51126**	**.48500**	**.48746**	**.25929**
Stddev	.00356	.00156	.0172	.00173	.00271	.00454	.00155
%RSD	.59770	.80536	.71933	.33854	.55864	.93230	.59745
#1	.59923	.19393	2.4010	.51280	.48345	.48310	.26075
#2	.59478	.19588	2.3903	.51159	.48343	.48711	.25945
#3	.59220	.19279	2.3674	.50939	.48813	.49216	.25766
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49634**	**.50935**	F **1421.6**
Stddev	.00197	.00248	6.0
%RSD	.39640	.48622	.42146
#1	.49861	.51203	1428.3
#2	.49528	.50889	1419.3
#3	.49512	.50714	1417.0
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: LCSW 23 Acquired: 6/3/2013 10:25:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15118.**	**20881.**
Stddev	28.	223.
%RSD	.18632	1.0694
#1	15086.	21124.
#2	15126.	20835.
#3	15141.	20684.

Approved: June 04, 2013

Sample Name: L1305137837 Acquired: 6/3/2013 10:28:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**-.01391**	**-.00040**	**.00143**	**.00066**	**.00002**	**.04353**
Stddev	.00038	.01779	.00043	.00095	.00010	.00001	.00765
%RSD	1046.4	127.94	107.90	66.583	14.614	52.875	17.579
#1	-.00040	-.03348	-.00076	.00243	.00064	.00001	.05154
#2	.00021	-.00953	.00008	.00053	.00057	.00002	.03629
#3	.00030	.00129	-.00052	.00134	.00076	.00003	.04277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**-.00006**	**.00013**	**.00008**	**.00480**	**.00196**	F **-.35746**
Stddev	.00005	.00009	.00047	.00039	.00142	.00571	.59750
%RSD	138.85	156.09	366.68	507.43	29.537	291.37	167.15
#1	.00006	-.00005	.00026	.00051	.00615	.00349	.19389
#2	-.00002	-.00014	.00052	-.00002	.00332	-.00436	-.99232
#3	.00008	.00003	-.00039	-.00026	.00492	.00674	-.27395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06733**	**.57117**	**.05877**	**.00013**	**.00823**	**.00047**	**.00063**
Stddev	1.9821	.87534	.03867	.00199	.01010	.00004	.00029
%RSD	2943.8	153.25	65.790	1489.3	122.64	7.9733	46.131
#1	2.1471	1.3972	.04536	-.00173	.01091	.00044	.00032
#2	-.67331	-.34628	.10236	-.00011	-.00293	.00051	.00067
#3	-1.6758	.66257	.02860	.00224	.01672	.00047	.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305137837 Acquired: 6/3/2013 10:28:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.68654**	**.00040**	**12.414**	**.00067**	F **14.006**	**.74206**	F **-20.783**
Stddev	.00985	.00024	5.442	.00021	28.949	.02077	.520
%RSD	1.4352	60.424	43.833	31.271	206.69	2.7988	2.5039
#1	.67556	.00034	17.622	.00052	31.755	.72496	-21.180
#2	.69462	.00019	6.7661	.00058	29.663	.76517	-20.977
#3	.68944	.00067	12.853	.00091	-19.399	.73604	-20.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**-.00122**	**.17202**	**-.00054**	**.00043**	**.00021**	**-.00054**
Stddev	.00051	.00086	.00266	.00038	.00004	.00018	.00079
%RSD	35.969	70.342	1.5480	69.706	9.4796	87.958	146.30
#1	.00102	-.00055	.17082	-.00050	.00040	.00016	-.00140
#2	.00200	-.00219	.17017	-.00094	.00041	.00041	-.00036
#3	.00126	-.00093	.17507	-.00019	.00048	.00005	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00013**	**.00279**	**.72145**
Stddev	.00016	.00021	.28402
%RSD	121.05	7.5453	39.367
#1	-.00005	.00261	.41833
#2	.00026	.00274	.76460
#3	.00018	.00302	.98143
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305137837 Acquired: 6/3/2013 10:28:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15293.**	**20888.**
Stddev	66.	142.
%RSD	.43090	.68172
#1	15233.	20806.
#2	15284.	21052.
#3	15364.	20805.

Approved: June 04, 2013

Sample Name: L1305137837MS Acquired: 6/3/2013 10:32:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19331**	**4.6217**	**.18950**	**.93938**	**.47201**	**.02363**	**4.9324**
Stddev	.00150	.0466	.00191	.00501	.00401	.00012	.0457
%RSD	.77409	1.0071	1.0062	.53309	.84869	.51515	.92703
#1	.19196	4.6734	.18730	.93479	.47633	.02355	4.9806
#2	.19304	4.6087	.19068	.93862	.47129	.02357	4.9268
#3	.19492	4.5831	.19051	.94472	.46841	.02377	4.8897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02383**	**.09581**	**.24061**	**.23955**	**1.9021**	**.47458**	**.04517**
Stddev	.00005	.00048	.00059	.00061	.0130	.00223	.84012
%RSD	.21175	.49800	.24402	.25357	.68358	.47028	1860.1
#1	.02379	.09527	.24000	.23908	1.9154	.47647	1.0047
#2	.02389	.09596	.24066	.23933	1.9016	.47212	-.55805
#3	.02382	.09619	.24117	.24023	1.8894	.47516	-.31118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0599**	**6.7238**	**23.741**	**.47489**	**4.6842**	**.23932**	**.47233**
Stddev	1.4689	1.0040	.200	.00342	.0294	.00179	.00162
%RSD	138.59	14.932	.84191	.72008	.62720	.74639	.34200
#1	1.4008	7.7649	23.948	.47806	4.7171	.24056	.47158
#2	-.54947	5.7616	23.728	.47535	4.6749	.24011	.47122
#3	2.3285	6.6448	23.549	.47127	4.6606	.23727	.47418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305137837MS Acquired: 6/3/2013 10:32:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.289**	**.24176**	F **11449.**	**.24167**	**4.8667**	**5.7916**	F **-24.488**
Stddev	.214	.00154	48.	.00189	10.668	.0562	.643
%RSD	.88162	.63778	.41492	.78267	219.20	.97095	2.6241
#1	24.512	.24013	11400.	.24176	16.843	5.8060	-25.202
#2	24.272	.24194	11451.	.23973	1.3745	5.7295	-24.303
#3	24.084	.24320	11495.	.24351	-3.6174	5.8392	-23.958
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			450.00				9.0000
Low Limit			-.00400				-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.56541**	**.18502**	**2.4493**	**.50267**	**.46764**	**.46866**	**.24488**
Stddev	.00341	.00318	.0121	.00209	.00402	.00110	.00115
%RSD	.60238	1.7188	.49359	.41499	.85891	.23409	.47024
#1	.56385	.18167	2.4489	.50033	.47185	.46887	.24378
#2	.56307	.18540	2.4374	.50337	.46723	.46963	.24608
#3	.56932	.18800	2.4616	.50432	.46385	.46747	.24478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.47248**	**.48088**	F **1259.3**
Stddev	.00263	.00233	8.8
%RSD	.55709	.48542	.69648
#1	.47028	.47842	1253.0
#2	.47175	.48116	1255.7
#3	.47539	.48307	1269.3
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305137837MS Acquired: 6/3/2013 10:32:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15273.**	**20707.**
Stddev	60.	185.
%RSD	.39022	.89312
#1	15313.	20549.
#2	15302.	20661.
#3	15205.	20910.

Approved: June 04, 2013

Sample Name: L1305137837MSD Acquired: 6/3/2013 10:35:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20313**	**4.7852**	**.20145**	**.98578**	**.48991**	**.02488**	**5.0973**
Stddev	.00082	.0893	.00021	.00256	.00711	.00001	.0653
%RSD	.40248	1.8655	.10510	.25990	1.4520	.03192	1.2803
#1	.20378	4.6986	.20170	.98874	.48685	.02488	5.1119
#2	.20341	4.7801	.20136	.98443	.48484	.02487	5.0260
#3	.20221	4.8769	.20131	.98418	.49805	.02488	5.1541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02504**	**.10082**	**.25290**	**.25327**	**1.9632**	**.50470**	**.68501**
Stddev	.00006	.00042	.00110	.00140	.0302	.00658	.77658
%RSD	.25108	.41236	.43572	.55378	1.5404	1.3038	113.37
#1	.02507	.10102	.25415	.25343	1.9466	.50107	-.06603
#2	.02509	.10110	.25210	.25458	1.9448	.51230	1.4848
#3	.02497	.10034	.25244	.25179	1.9981	.50074	.63623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.16584**	**8.0052**	**24.681**	**.49179**	**4.8745**	**.24527**	**.49695**
Stddev	.70461	.9191	.248	.00516	.0202	.00118	.00231
%RSD	424.88	11.481	1.0060	1.0501	.41486	.48280	.46544
#1	.23699	7.1191	24.645	.49021	4.8566	.24503	.49839
#2	-.57165	8.9541	24.453	.48761	4.8705	.24423	.49816
#3	.83217	7.9425	24.945	.49756	4.8964	.24656	.49428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013

Sample Name: L1305137837MSD Acquired: 6/3/2013 10:35:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.173**	**.25546**	F **11810.**	**.25464**	F **-7.3146**	**5.6939**	F **-11.041**
Stddev	.361	.00150	44.	.00034	5.6419	.0580	1.226
%RSD	1.4350	.58778	.37541	.13267	77.132	1.0182	11.106
#1	24.957	.25626	11849.	.25479	-13.809	5.6870	-11.912
#2	24.972	.25640	11818.	.25425	-4.5175	5.7551	-9.6386
#3	25.590	.25373	11762.	.25487	-3.6177	5.6397	-11.572
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59613**	**.19803**	**2.5541**	**.51748**	**.48386**	**.48567**	**.25953**
Stddev	.00214	.00277	.0160	.00163	.00728	.00501	.00109
%RSD	.35828	1.3990	.62712	.31409	1.5038	1.0312	.42011
#1	.59822	.19515	2.5678	.51805	.47969	.48210	.26079
#2	.59622	.20068	2.5580	.51875	.47962	.48351	.25884
#3	.59395	.19827	2.5365	.51565	.49226	.49139	.25896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49460**	**.50869**	F **1374.6**
Stddev	.00160	.00135	4.2
%RSD	.32320	.26574	.30480
#1	.49616	.50992	1379.4
#2	.49297	.50891	1372.9
#3	.49467	.50724	1371.6
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305137837MSD Acquired: 6/3/2013 10:35:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432478-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15152.**	**20873.**
Stddev	26.	84.
%RSD	.17151	.40198
#1	15124.	20875.
#2	15157.	20955.
#3	15175.	20787.

Approved: June 04, 2013

Sample Name: L1305124304 Acquired: 6/3/2013 10:38:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**-.02494**	**.01124**	**.01093**	**.01157**	**.00001**	**55.046**
Stddev	.00008	.02111	.00113	.00085	.00009	.00002	.652
%RSD	2084.6	84.642	10.052	7.7857	.78850	207.82	1.1839
#1	.00005	-.01576	.01214	.00997	.01163	.00002	54.710
#2	-.00009	-.00998	.01161	.01122	.01146	-.00001	54.632
#3	.00005	-.04909	.00997	.01159	.01162	.00003	55.797
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00043**	**.00196**	**.00006**	**3.7456**	**.04682**	**.26917**
Stddev	.00009	.00035	.00019	.00009	.0267	.00385	.42634
%RSD	31.923	81.344	9.6013	159.30	.71209	8.2238	158.39
#1	.00025	.00007	.00195	.00001	3.7362	.05013	-.10833
#2	.00037	.00044	.00178	.00000	3.7249	.04260	.73158
#3	.00020	.00077	.00215	.00016	3.7757	.04774	.18428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.34226**	**.52135**	**1.7639**	**.00128**	**3.0019**	**.15065**	**.00319**
Stddev	.69548	.62520	.0174	.00058	.0294	.00067	.00034
%RSD	203.20	119.92	.98805	45.525	.97992	.44586	10.659
#1	-1.1449	.27048	1.7675	.00121	2.9895	.15043	.00304
#2	.08242	.06055	1.7793	.00073	2.9807	.15012	.00295
#3	.03568	1.2330	1.7450	.00188	3.0354	.15141	.00358
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

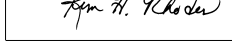
Sample Name: L1305124304 Acquired: 6/3/2013 10:38:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.89144**	**.00151**	**41.668**	**.01283**	F **22.501**	F **134.98**	F **-2654.4**
Stddev	.01358	.00044	5.699	.00068	26.207	.47	8.5
%RSD	1.5235	28.975	13.678	5.2895	116.47	.34617	.31859
#1	.88790	.00104	44.923	.01341	10.447	134.86	-2645.8
#2	.87998	.00158	35.087	.01208	4.4894	134.59	-2662.7
#3	.90644	.00190	44.993	.01301	52.567	135.50	-2654.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00168**	**.00040**	**2.7034**	**-.00083**	**.03653**	**-.00045**	**-.00088**
Stddev	.00050	.00108	.0065	.00028	.00042	.00017	.00035
%RSD	29.561	266.26	.23844	34.008	1.1374	38.129	40.010
#1	.00196	.00131	2.7058	-.00105	.03640	-.00047	-.00121
#2	.00197	.00070	2.6961	-.00094	.03619	-.00061	-.00051
#3	.00111	-.00079	2.7083	-.00051	.03699	-.00027	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00040**	**1.5056**	**.70023**
Stddev	.00031	.0029	.35588
%RSD	77.846	.19113	50.824
#1	.00024	1.5023	.38863
#2	.00076	1.5072	.62400
#3	.00020	1.5073	1.0881
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013



Sample Name: L1305124304 Acquired: 6/3/2013 10:38:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15153.**	**21281.**
Stddev	31.	91.
%RSD	.20283	.42646
#1	15189.	21321.
#2	15139.	21345.
#3	15132.	21177.

Approved: June 04, 2013

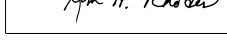
Sample Name: L1305124305 Acquired: 6/3/2013 10:42:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**-.00674**	**.00631**	**.00936**	**.01101**	**.00000**	**53.576**
Stddev	.00013	.02389	.00041	.00017	.00010	.00002	.965
%RSD	238.66	354.68	6.5643	1.7990	.92273	755.65	1.8019
#1	.00004	.01718	.00643	.00946	.01090	-.00002	52.600
#2	-.00007	-.03060	.00665	.00917	.01102	.00002	53.598
#3	.00019	-.00679	.00585	.00946	.01110	.00001	54.530
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00011**	**.00121**	**.00014**	**2.5979**	**.04569**	**.30473**
Stddev	.00003	.00015	.00038	.00018	.0356	.00660	.47933
%RSD	19.714	144.42	31.791	131.76	1.3709	14.454	157.30
#1	.00011	-.00004	.00100	-.00005	2.5696	.03935	.49613
#2	.00013	.00026	.00097	.00032	2.5863	.04518	-.24073
#3	.00016	.00010	.00165	.00015	2.6379	.05253	.65878
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.65293**	**.74867**	**1.7308**	**.00024**	**2.9283**	**.14657**	**.00247**
Stddev	.35007	1.2512	.0118	.00055	.0282	.00159	.00015
%RSD	53.616	167.12	.68458	229.29	.96164	1.0836	6.2400
#1	1.0466	1.8261	1.7227	.00003	2.9251	.14570	.00262
#2	.53566	-.62358	1.7253	-.00017	2.9019	.14561	.00231
#3	.37655	1.0435	1.7444	.00087	2.9579	.14840	.00248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305124305 Acquired: 6/3/2013 10:42:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.86388**	**.00096**	**22.275**	**.00082**	F **15.118**	F **128.72**	F **-2508.7**
Stddev	.00777	.00024	3.272	.00051	26.637	.94	20.2
%RSD	.90000	25.115	14.690	62.623	176.19	.73080	.80592
#1	.85490	.00102	24.499	.00115	7.2206	127.66	-2487.0
#2	.86831	.00116	18.518	.00023	44.810	129.03	-2512.1
#3	.86842	.00069	23.810	.00108	-6.6772	129.47	-2527.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**-.00044**	**2.5546**	**-.00156**	**.03557**	**-.00122**	**-.00022**
Stddev	.00160	.00117	.0179	.00027	.00037	.00029	.00014
%RSD	171.27	263.18	.70029	17.445	1.0420	23.980	63.380
#1	.00142	-.00168	2.5367	-.00185	.03519	-.00142	-.00019
#2	.00224	-.00028	2.5546	-.00153	.03558	-.00135	-.00038
#3	-.00085	.00063	2.5725	-.00131	.03593	-.00088	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00032**	**1.1438**	**.38869**
Stddev	.00017	.0041	.38467
%RSD	54.528	.35578	98.967
#1	.00052	1.1392	.04953
#2	.00021	1.1457	.30988
#3	.00022	1.1466	.80667
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305124305 Acquired: 6/3/2013 10:42:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15097.**	**21236.**
Stddev	37.	213.
%RSD	.24274	1.0020
#1	15136.	21345.
#2	15093.	21372.
#3	15063.	20991.

Approved: June 04, 2013

Sample Name: L1305124305PS Acquired: 6/3/2013 10:45:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432602-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20894**	**4.9471**	**.20986**	**1.0327**	**.51232**	**.02563**	**54.079**
Stddev	.00213	.0530	.00150	.0090	.00242	.00020	.366
%RSD	1.0199	1.0705	.71261	.87483	.47191	.77183	.67726
#1	.20664	4.9750	.20974	1.0230	.51320	.02543	53.815
#2	.21084	4.9802	.21142	1.0410	.51417	.02582	54.498
#3	.20936	4.8860	.20843	1.0340	.50958	.02563	53.926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02579**	**.10191**	**.25954**	**.25578**	**4.3347**	**.53832**	**1.1604**
Stddev	.00005	.00019	.00170	.00060	.0231	.00182	.5110
%RSD	.17882	.18619	.65589	.23512	.53191	.33889	44.039
#1	.02577	.10207	.25774	.25647	4.3455	.53890	1.7504
#2	.02585	.10196	.26113	.25540	4.3503	.53627	.87346
#3	.02576	.10170	.25977	.25546	4.3082	.53977	.85730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.17666**	**.54098**	**27.044**	**.51051**	**7.5273**	**.37795**	**.50716**
Stddev	.63877	.78732	.170	.00212	.0999	.00571	.00163
%RSD	361.58	145.54	.62702	.41578	1.3271	1.5107	.32183
#1	-.91043	-.23424	27.064	.51007	7.5641	.37554	.50894
#2	.25520	1.3399	27.202	.51282	7.6036	.38448	.50679
#3	.12524	.51731	26.865	.50865	7.4143	.37385	.50574
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

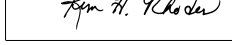
Sample Name: L1305124305PS Acquired: 6/3/2013 10:45:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432602-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.101**	**.25842**	**19.939**	**.25873**	F **19.939**	F **119.90**	F **-2262.6**
Stddev	.082	.00051	9.797	.00145	13.897	.19	6.0
%RSD	.31464	.19727	49.132	.56062	69.699	.15606	.26574
#1	26.144	.25899	18.412	.25747	6.6447	120.10	-2269.4
#2	26.153	.25824	10.996	.26031	18.803	119.89	-2260.2
#3	26.007	.25802	30.410	.25839	34.369	119.72	-2258.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.61412**	**.20210**	**4.7629**	**.52650**	**.53026**	**.49837**	**.26097**
Stddev	.00408	.00091	.0169	.00124	.00193	.00473	.00054
%RSD	.66448	.45207	.35428	.23568	.36485	.94880	.20861
#1	.61524	.20310	4.7823	.52731	.53170	.50160	.26034
#2	.61753	.20130	4.7511	.52712	.53102	.50057	.26133
#3	.60960	.20192	4.7555	.52508	.52806	.49294	.26123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50873**	**1.5307**	**1.5998**
Stddev	.00516	.0053	.3286
%RSD	1.0146	.34375	20.537
#1	.50371	1.5279	1.2466
#2	.51402	1.5368	1.8964
#3	.50845	1.5274	1.6564
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013



Sample Name: L1305124305PS Acquired: 6/3/2013 10:45:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432602-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15012.**	**20931.**
Stddev	62.	198.
%RSD	.41587	.94500
#1	15074.	20930.
#2	14949.	20734.
#3	15014.	21130.

Approved: June 04, 2013

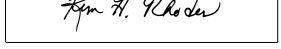
Sample Name: L1305124305SDL Acquired: 6/3/2013 10:50:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432602-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**-.01683**	**.00173**	**.00471**	**.00233**	**.00002**	**10.975**
Stddev	.00013	.00514	.00151	.00092	.00017	.00003	.188
%RSD	2063.2	30.548	87.093	19.631	7.1029	135.06	1.7114
#1	-.00013	-.02188	.00122	.00533	.00251	-.00001	11.125
#2	.00003	-.01701	.00054	.00365	.00230	.00004	11.034
#3	.00012	-.01160	.00343	.00515	.00218	.00002	10.764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00019**	**.00034**	**.00018**	**.53314**	**.00626**	**.11564**
Stddev	.00007	.00013	.00015	.00024	.00516	.00511	.59892
%RSD	108.48	69.755	43.363	131.83	.96804	81.656	517.94
#1	-.00002	.00034	.00049	.00017	.53430	.00460	-.35990
#2	.00010	.00009	.00020	.00042	.53762	.00219	-.08146
#3	.00011	.00014	.00034	-.00005	.52749	.01199	.78826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.90255**	**.94584**	**.39621**	**.00008**	**.60765**	**.03122**	**.00099**
Stddev	.58670	.42779	.01546	.00031	.00726	.00058	.00022
%RSD	65.005	45.229	3.9023	375.49	1.1942	1.8618	22.091
#1	.32390	1.4250	.37983	.00033	.60293	.03169	.00090
#2	1.4970	.81013	.39827	.00018	.60402	.03140	.00084
#3	.88678	.60236	.41055	-.00026	.61601	.03057	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305124305SDL Acquired: 6/3/2013 10:50:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432602-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18762**	**.00030**	**1.1378**	**-.00018**	F **66.474**	F **25.879**	F **-489.39**
Stddev	.00919	.00024	8.0317	.00040	20.650	.180	2.46
%RSD	4.8965	79.394	705.90	217.10	31.065	.69409	.50293
#1	.19199	.00003	-4.1421	-.00028	67.923	25.774	-486.82
#2	.19380	.00040	10.381	.00025	86.361	25.777	-489.63
#3	.17706	.00048	-2.8252	-.00053	45.137	26.086	-491.73
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00104**	**.00062**	**.51076**	**.00006**	**.00721**	**-.00046**	**-.00039**
Stddev	.00083	.00065	.00386	.00043	.00002	.00046	.00146
%RSD	79.859	105.07	.75533	772.29	.29407	98.889	376.91
#1	.00013	.00062	.50715	-.00028	.00723	-.00089	-.00193
#2	.00124	.00128	.51030	-.00009	.00721	-.00053	-.00023
#3	.00177	-.00003	.51482	.00053	.00719	.00002	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00015**	**.23699**	F **-.00610**
Stddev	.00008	.00215	.09473
%RSD	53.546	.90649	1552.6
#1	.00013	.23471	.07838
#2	.00024	.23727	-.10851
#3	.00008	.23898	.01183
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305124305SDL Acquired: 6/3/2013 10:50:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432602-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15282.**	**20761.**
Stddev	94.	244.
%RSD	.61558	1.1755
#1	15389.	20586.
#2	15243.	20657.
#3	15213.	21040.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 10:53:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40445**	**9.7845**	**.40082**	**.50511**	**.99175**	**.04941**	**10.328**
Stddev	.00213	.0456	.00345	.00251	.00373	.00026	.093
%RSD	.52610	.46590	.85982	.49748	.37643	.51758	.89756
#1	.40656	9.7410	.40437	.50716	.99274	.04971	10.363
#2	.40231	9.8319	.39749	.50231	.99489	.04925	10.398
#3	.40448	9.7805	.40060	.50587	.98762	.04928	10.223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05027**	**.20216**	**.50585**	**.50615**	**3.9559**	**1.0052**	F **1.3092**
Stddev	.00026	.00120	.00230	.00342	.0344	.0071	1.0440
%RSD	.51646	.59589	.45396	.67563	.86864	.71063	79.744
#1	.05053	.20355	.50849	.51008	3.9679	1.0134	.33358
#2	.05001	.20141	.50468	.50389	3.9827	1.0018	2.4103
#3	.05026	.20152	.50437	.50447	3.9172	1.0004	1.1837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0398**	F **-.01163**	**49.704**	**.98707**	**9.8210**	**.49298**	**.99680**
Stddev	.8910	.50197	.264	.00549	.0654	.00421	.00671
%RSD	85.684	4315.3	.53212	.55589	.66647	.85308	.67360
#1	.05889	-.58963	49.828	.98817	9.7591	.49456	1.0037
#2	1.2617	.31486	49.883	.99192	9.8895	.49618	.99651
#3	1.7989	.23988	49.400	.98112	9.8145	.48822	.99024
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		1.0000					
Range		-10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 10:53:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.454**	**.50989**	**9.9090**	**.51074**	F **45.345**	**10.120**	F **14.882**
Stddev	.229	.00347	7.4992	.00410	16.188	.163	2.056
%RSD	.46288	.68090	75.681	.80247	35.699	1.6107	13.815
#1	49.505	.51385	1.9358	.51547	52.331	10.291	13.409
#2	49.653	.50737	16.821	.50824	56.865	10.103	17.231
#3	49.204	.50845	10.970	.50851	26.837	9.9663	14.007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value					10.000		10.000
Range					10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2086**	**.40089**	**4.8854**	**.93017**	**.98286**	**.98197**	**.51338**
Stddev	.0095	.00221	.0296	.00485	.00229	.00234	.00094
%RSD	.78213	.55092	.60677	.52165	.23310	.23837	.18289
#1	1.2185	.40234	4.9067	.93540	.98352	.98074	.51441
#2	1.2076	.40198	4.8978	.92928	.98475	.98467	.51314
#3	1.1997	.39835	4.8515	.92582	.98031	.98051	.51257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99494**	**1.0211**	F **-.31373**
Stddev	.00411	.0070	.18351
%RSD	.41276	.68460	58.491
#1	.99952	1.0290	-.45329
#2	.99159	1.0183	-.10587
#3	.99370	1.0159	-.38204
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 10:53:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15228.**	**20919.**
Stddev	73.	188.
%RSD	.48008	.89848
#1	15144.	20864.
#2	15274.	20765.
#3	15267.	21129.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 10:57:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**-.00344**	**-.00032**	**.00295**	**.00017**	**.00001**	**-.00068**
Stddev	.00024	.03171	.00131	.00035	.00006	.00002	.00696
%RSD	142.06	921.52	408.68	11.851	37.172	259.34	1021.6
#1	-.00033	.02555	-.00071	.00318	.00023	.00000	-.00116
#2	.00011	.00142	.00114	.00311	.00015	.00003	.00650
#3	-.00028	-.03730	-.00139	.00255	.00011	-.00001	-.00739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**-.00003**	**-.00012**	**.00100**	**-.00061**	**.00343**	F **-.12952**
Stddev	.00000	.00010	.00007	.00011	.00453	.00302	.64643
%RSD	15.233	353.12	60.978	11.352	745.04	88.167	499.09
#1	.00002	-.00010	-.00015	.00107	.00290	.00532	-.70813
#2	.00002	.00009	-.00018	.00106	-.00572	.00502	-.24861
#3	.00002	-.00007	-.00004	.00087	.00099	-.00006	.56817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.76220**	F **-.46961**	**.02689**	**.00005**	**-.00683**	**.00003**	**.00161**
Stddev	.76900	.10836	.01862	.00061	.01139	.00001	.00075
%RSD	100.89	23.074	69.263	1198.4	166.79	52.778	46.354
#1	-1.0500	-.53265	.03816	.00046	.00054	.00001	.00122
#2	-1.3458	-.53168	.03710	-.00065	-.01995	.00004	.00115
#3	.10919	-.34449	.00539	.00034	-.00107	.00003	.00248
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 10:57:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02156**	**.00057**	F **-2.4307**	**.00066**	F **27.930**	**-.21437**	F **7.5249**
Stddev	.00266	.00017	3.7477	.00075	20.992	.04805	1.4508
%RSD	12.348	30.391	154.18	113.17	75.158	22.413	19.280
#1	.02124	.00042	-2.4174	.00029	51.369	-.26692	9.0923
#2	.02436	.00054	1.3104	.00017	21.562	-.20351	7.2533
#3	.01907	.00076	-6.1849	.00152	10.860	-.17269	6.2290
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00191**	**.00128**	**.00128**	**.00028**	**.00013**	**-.00065**	**.00022**
Stddev	.00145	.00280	.00251	.00062	.00003	.00156	.00039
%RSD	75.857	217.94	196.33	221.73	23.331	240.67	175.81
#1	.00231	.00194	-.00118	-.00018	.00013	.00103	.00039
#2	.00030	.00369	.00384	.00004	.00016	-.00091	.00050
#3	.00312	-.00178	.00118	.00099	.00010	-.00207	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00013**	**-.00032**	F **-.19898**
Stddev	.00015	.00046	.49559
%RSD	120.23	144.15	249.07
#1	.00021	-.00061	-.77014
#2	-.00005	-.00055	.05588
#3	.00022	.00021	.11733
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 10:57:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15089.**	**20864.**
Stddev	34.	177.
%RSD	.22810	.84641
#1	15075.	20986.
#2	15064.	20661.
#3	15128.	20944.

Approved: June 04, 2013

Sample Name: PBW 71 Acquired: 6/3/2013 11:23:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**-.03315**	**-.00065**	**-.00115**	**.00008**	**.00000**	**.04230**
Stddev	.00043	.01752	.00008	.00039	.00008	.00002	.00421
%RSD	365.61	52.856	12.244	34.110	95.322	610.45	9.9436
#1	-.00059	-.01477	-.00070	-.00144	.00014	-.00002	.04223
#2	-.00003	-.03502	-.00056	-.00070	-.00001	.00001	.04653
#3	.00026	-.04966	-.00068	-.00131	.00011	.00002	.03812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**-.00010**	**.00001**	**-.00013**	**.00165**	**.00381**	F **-.72733**
Stddev	.00006	.00009	.00038	.00006	.00351	.00471	.10269
%RSD	154.79	93.446	3157.0	43.381	212.24	123.68	14.119
#1	.00000	-.00006	.00044	-.00007	.00553	.00190	-.69226
#2	.00001	-.00021	-.00019	-.00014	.00071	.00036	-.84296
#3	.00011	-.00003	-.00022	-.00019	-.00128	.00918	-.64676
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.19109**	**.20785**	**.03673**	**-.00031**	**.01310**	**.00063**	**-.00002**
Stddev	1.5285	.32180	.00471	.00040	.01799	.00003	.00028
%RSD	799.90	154.82	12.832	130.38	137.39	5.2288	1133.6
#1	-.19486	-.16341	.03153	.00007	-.00151	.00066	-.00028
#2	-1.7177	.38013	.03793	-.00073	.00761	.00064	-.00006
#3	1.3393	.40684	.04072	-.00026	.03320	.00059	.00027
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: PBW 71 Acquired: 6/3/2013 11:23:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01446**	**.00025**	**3.7160**	**-.00081**	F **-12.890**	**.04837**	F **-.71005**
Stddev	.00555	.00086	4.6562	.00086	36.053	.03726	.36162
%RSD	38.408	342.76	125.30	106.79	279.69	77.044	50.929
#1	.02085	.00111	8.8309	-.00118	-28.920	.07033	-.40346
#2	.01178	-.00061	-.27639	-.00142	28.398	.00534	-1.1088
#3	.01076	.00025	2.5935	.00018	-38.149	.06943	-.61784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**-.00020**	**.00067**	**-.00142**	**.00021**	**-.00023**	**.00015**
Stddev	.00012	.00217	.00052	.00006	.00004	.00108	.00143
%RSD	14.684	1080.8	78.081	4.4092	18.250	463.30	982.70
#1	.00091	.00107	.00010	-.00142	.00020	-.00092	-.00113
#2	.00068	-.00270	.00080	-.00135	.00026	-.00080	-.00012
#3	.00085	.00103	.00112	-.00148	.00018	.00101	.00169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00014**	**.00395**	**.20836**
Stddev	.00010	.00008	.19646
%RSD	69.579	1.9281	94.285
#1	.00022	.00402	.08267
#2	.00016	.00396	.43475
#3	.00003	.00387	.10767
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: PBW 71 Acquired: 6/3/2013 11:23:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14889.**	**20447.**
Stddev	22.	60.
%RSD	.14565	.29429
#1	14892.	20414.
#2	14866.	20411.
#3	14909.	20517.

Approved: June 04, 2013

Sample Name: LCSW 71 Acquired: 6/3/2013 11:27:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20224**	**4.8493**	**.19670**	**.98344**	**.50015**	**.02480**	**5.4130**
Stddev	.00027	.0482	.00260	.00256	.00465	.00013	.0979
%RSD	.13399	.99435	1.3206	.25998	.92986	.50761	1.8083
#1	.20195	4.9050	.19854	.98075	.50508	.02468	5.5224
#2	.20230	4.8208	.19373	.98373	.49954	.02478	5.3830
#3	.20248	4.8222	.19783	.98584	.49583	.02493	5.3337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02476**	**.09914**	**.25724**	**.24899**	**2.0214**	**.49260**	**.89904**
Stddev	.00014	.00089	.00072	.00126	.0187	.00751	.22555
%RSD	.56686	.89481	.27975	.50770	.92781	1.5236	25.087
#1	.02471	.09841	.25642	.24789	2.0379	.49160	.85622
#2	.02466	.09890	.25778	.24870	2.0253	.48564	.69798
#3	.02492	.10013	.25752	.25037	2.0010	.50055	1.1429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02128**	**1.0510**	**25.085**	**.50003**	**4.9114**	**.24738**	**.48543**
Stddev	.57007	.3583	.284	.00252	.0416	.00158	.00292
%RSD	2678.3	34.087	1.1327	.50458	.84626	.64060	.60217
#1	.13540	.75859	25.393	.50285	4.9400	.24880	.48325
#2	.45406	1.4506	25.029	.49799	4.9305	.24766	.48428
#3	-.65331	.94379	24.832	.49925	4.8637	.24567	.48875
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: LCSW 71 Acquired: 6/3/2013 11:27:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.985**	**.25416**	**7.1107**	**.25364**	F **-36.665**	**5.0366**	**7.0955**
Stddev	.230	.00062	6.5051	.00142	45.946	.0361	1.4926
%RSD	.92252	.24294	91.483	.56107	125.31	.71734	21.035
#1	25.231	.25345	5.8138	.25411	-69.491	4.9955	5.6664
#2	24.947	.25448	1.3518	.25204	15.844	5.0635	6.9759
#3	24.775	.25456	14.167	.25476	-56.348	5.0508	8.6443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58965**	**.19249**	**2.2899**	**.49891**	**.49482**	**.48908**	**.25621**
Stddev	.00515	.00336	.0147	.00203	.00497	.00486	.00176
%RSD	.87348	1.7431	.64020	.40716	1.0050	.99298	.68543
#1	.58907	.19623	2.2756	.49774	.50020	.49457	.25462
#2	.58482	.18974	2.2893	.49774	.49385	.48733	.25593
#3	.59507	.19151	2.3049	.50126	.49040	.48535	.25809
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49063**	**.51187**	**1.1766**
Stddev	.00218	.00175	.5623
%RSD	.44513	.34173	47.794
#1	.48819	.51048	1.8068
#2	.49129	.51129	.99661
#3	.49240	.51383	.72624
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: LCSW 71 Acquired: 6/3/2013 11:27:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14843.**	**19990.**
Stddev	26.	204.
%RSD	.17321	1.0224
#1	14869.	19806.
#2	14842.	19954.
#3	14817.	20210.

Approved: June 04, 2013

Sample Name: L1305142101 Acquired: 6/3/2013 11:30:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**2.3950**	**.00123**	**.01213**	**.03054**	**.00199**
Stddev	.00021	.0236	.00143	.00045	.00034	.00001
%RSD	110.67	.98328	116.01	3.6963	1.1095	.71179
#1	-.00024	2.3693	-.00025	.01192	.03073	.00199
#2	-.00036	2.4001	.00261	.01182	.03074	.00200
#3	.00004	2.4155	.00134	.01264	.03015	.00197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.058**	**.00093**	**.05457**	**.00285**	**.03716**	**1.6410**
Stddev	.405	.00009	.00008	.00039	.00024	.0072
%RSD	.88033	9.5187	.14543	13.722	.63562	.44012
#1	46.510	.00095	.05466	.00296	.03699	1.6417
#2	45.936	.00084	.05453	.00242	.03743	1.6479
#3	45.728	.00101	.05451	.00317	.03707	1.6335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.23520**	**4.4250**	F **-.13439**	**1.1366**	**2.4461**	**.04245**
Stddev	.00357	.2983	1.1807	.5235	.0287	.00037
%RSD	1.5198	6.7420	878.53	46.059	1.1742	.87096
#1	.23848	4.1060	1.1340	1.7361	2.4749	.04270
#2	.23139	4.4719	-1.2014	.76966	2.4460	.04203
#3	.23574	4.6971	-.33577	.90401	2.4174	.04264
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

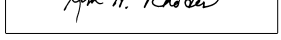
Sample Name: L1305142101 Acquired: 6/3/2013 11:30:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.172**	**.99470**	**.00046**	**103.06**	**.07449**	**10.363**
Stddev	.069	.00871	.00017	.60	.00088	5.955
%RSD	.36080	.87551	37.661	.58360	1.1831	57.465
#1	19.187	1.0018	.00035	103.73	.07545	16.068
#2	19.232	.99726	.00036	102.91	.07431	10.835
#3	19.096	.98500	.00065	102.55	.07372	4.1861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	F **-42.363**	F **2994.9**	F **-107600.**	**.00117**	**.00486**
Stddev	.00042	13.915	4.1	94.	.00178	.00188
%RSD	44.092	32.847	.13554	.08701	152.40	38.711
#1	.00142	-34.257	2994.0	-107610.	.00217	.00504
#2	.00064	-34.401	2991.3	-107690.	-.00089	.00289
#3	.00078	-58.431	2999.3	-107500.	.00223	.00664
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5248**	**-.00137**	**.23190**	**.00436**	**.00143**	**.00024**
Stddev	.0028	.00017	.00072	.00074	.00130	.00016
%RSD	.10956	12.075	.31148	16.916	91.186	69.063
#1	2.5235	-.00123	.23273	.00519	.00209	.00005
#2	2.5228	-.00156	.23139	.00410	-.00007	.00034
#3	2.5279	-.00134	.23159	.00378	.00227	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142101 Acquired: 6/3/2013 11:30:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.19914**	**.48565**
Stddev	.00017	.16701
%RSD	.08586	34.389
#1	.19903	.62495
#2	.19906	.53149
#3	.19934	.30050
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14755.**	**20300.**
Stddev	10.	136.
%RSD	.07020	.66753
#1	14749.	20212.
#2	14749.	20232.
#3	14767.	20456.

Approved: June 04, 2013

Sample Name: L1305142101DUP Acquired: 6/3/2013 11:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**2.4449**	**.00114**	**.01179**	**.03072**	**.00199**
Stddev	.00044	.0476	.00048	.00069	.00022	.00003
%RSD	206.77	1.9473	42.562	5.8792	.70465	1.4831
#1	.00057	2.4521	.00168	.01201	.03089	.00196
#2	.00033	2.4885	.00075	.01102	.03079	.00202
#3	-.00027	2.3941	.00097	.01235	.03048	.00198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.040**	**.00101**	**.05426**	**.00326**	**.03619**	**1.6477**
Stddev	.147	.00010	.00026	.00035	.00033	.0024
%RSD	.32011	9.6897	.47245	10.801	.91816	.14281
#1	46.134	.00111	.05414	.00301	.03629	1.6503
#2	46.117	.00091	.05408	.00311	.03582	1.6472
#3	45.871	.00102	.05455	.00366	.03646	1.6457
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.22917**	**5.0511**	F **-.29170**	**1.2245**	**2.4657**	**.04241**
Stddev	.00386	.3867	.39862	.3763	.0415	.00086
%RSD	1.6832	7.6557	136.66	30.732	1.6819	2.0380
#1	.22694	5.4768	.07143	1.6055	2.4400	.04169
#2	.22695	4.7215	-.22831	.85308	2.4435	.04218
#3	.23362	4.9550	-.71822	1.2149	2.5135	.04337
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142101DUP Acquired: 6/3/2013 11:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-05

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.046**	**.98692**	**.00010**	**103.12**	**.07407**	**13.531**
Stddev	.004	.00925	.00036	.24	.00034	3.622
%RSD	.01978	.93705	350.69	.23188	.45724	26.768
#1	19.048	.98572	-.00020	103.39	.07443	13.642
#2	19.048	.99672	.00001	102.95	.07376	17.096
#3	19.041	.97834	.00050	103.01	.07403	9.8543
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	F **-37.462**	F **2983.6**	F **-107590.**	**-.00069**	**.00415**
Stddev	.00039	73.175	18.3	560.	.00172	.00082
%RSD	196.02	195.33	.61400	.52075	247.82	19.738
#1	-.00065	-67.528	2975.5	-107790.	-.00266	.00461
#2	.00008	45.957	2970.7	-106960.	.00054	.00464
#3	-.00004	-90.815	3004.6	-108020.	.00004	.00321
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6704**	**-.00146**	**.23288**	**.00483**	**-.00021**	**.00031**
Stddev	.0198	.00040	.00044	.00076	.00232	.00005
%RSD	.74215	27.622	.18929	15.705	1083.0	14.513
#1	2.6652	-.00160	.23337	.00570	-.00064	.00030
#2	2.6538	-.00101	.23252	.00428	.00229	.00028
#3	2.6923	-.00179	.23275	.00452	-.00229	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142101DUP Acquired: 6/3/2013 11:34:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-05

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.19941**	**.46254**
Stddev	.00138	.54046
%RSD	.69144	116.85
#1	.20037	.58107
#2	.19783	.93390
#3	.20003	-.12734
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14721.**	**20255.**
Stddev	45.	73.
%RSD	.30483	.36268
#1	14690.	20264.
#2	14773.	20177.
#3	14701.	20323.

Approved: June 04, 2013

Sample Name: L1305142101MS Acquired: 6/3/2013 11:37:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20665**	**7.3483**	**.20611**	**1.0338**	**.53662**	**.02763**
Stddev	.00028	.1043	.00180	.0031	.00307	.00011
%RSD	.13748	1.4188	.87173	.29507	.57165	.40108
#1	.20649	7.4669	.20501	1.0356	.54014	.02768
#2	.20649	7.2709	.20819	1.0303	.53517	.02750
#3	.20698	7.3071	.20515	1.0356	.53454	.02771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.373**	**.02659**	**.15356**	**.26598**	**.28589**	**3.6499**
Stddev	.179	.00007	.00035	.00134	.00136	.0213
%RSD	.35620	.25100	.22640	.50453	.47433	.58317
#1	50.277	.02663	.15396	.26672	.28703	3.6736
#2	50.580	.02651	.15344	.26443	.28626	3.6437
#3	50.262	.02663	.15330	.26679	.28439	3.6324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.72237**	**5.4869**	F **-.44709**	**.61269**	**27.800**	**.54746**
Stddev	.00474	.6845	.59385	.47382	.098	.00126
%RSD	.65628	12.476	132.83	77.333	.35302	.23010
#1	.72755	5.8772	.20023	.31366	27.876	.54853
#2	.72130	4.6965	-.96669	.36543	27.835	.54777
#3	.71825	5.8869	-.57482	1.1590	27.690	.54607
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305142101MS Acquired: 6/3/2013 11:37:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-06

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.615**	**1.1996**	**.49842**	**126.52**	**.32950**	**23.958**
Stddev	.006	.0063	.00161	.75	.00102	6.820
%RSD	.02578	.52541	.32281	.58897	.30851	28.468
#1	23.616	1.1956	.49972	127.38	.33056	16.114
#2	23.608	1.2068	.49892	126.14	.32940	28.490
#3	23.620	1.1963	.49662	126.04	.32854	27.270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25857**	F **-43.075**	F **2934.5**	F **-106530.**	**.60892**	**.20656**
Stddev	.00224	57.748	13.3	379.	.00185	.00325
%RSD	.86668	134.06	.45267	.35560	.30410	1.5745
#1	.26083	8.8151	2945.4	-106960.	.61105	.20961
#2	.25853	-105.29	2938.5	-106250.	.60772	.20694
#3	.25634	-32.752	2919.7	-106380.	.60798	.20313
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.9244**	**.53550**	**.74031**	**.50169**	**.25519**	**.50375**
Stddev	.0316	.00017	.00604	.00090	.00230	.00065
%RSD	.64065	.03138	.81582	.17960	.90076	.12823
#1	4.9540	.53556	.74727	.50270	.25757	.50381
#2	4.9281	.53531	.73721	.50097	.25299	.50436
#3	4.8912	.53564	.73644	.50139	.25502	.50308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142101MS Acquired: 6/3/2013 11:37:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-06

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.71000**	**.83666**
Stddev	.00133	.30462
%RSD	.18689	36.408
#1	.71112	.48495
#2	.71036	1.0159
#3	.70854	1.0092
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14400.**	**19998.**
Stddev	45.	41.
%RSD	.31337	.20401
#1	14355.	20017.
#2	14445.	19952.
#3	14401.	20027.

Approved: June 04, 2013

Sample Name: L1305142201 Acquired: 6/3/2013 11:40:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.13401**	**.00062**	**.01315**	**.03270**	**.00002**	**65.258**
Stddev	.00031	.01232	.00220	.00138	.00044	.00002	.816
%RSD	228.64	9.1969	352.55	10.467	1.3393	75.304	1.2498
#1	.00047	.14077	-.00083	.01397	.03302	.00000	65.799
#2	.00008	.11978	-.00046	.01392	.03288	.00003	65.655
#3	-.00014	.14147	.00315	.01156	.03220	.00003	64.320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00098**	**.00033**	**.00065**	**.03257**	**.43608**	**5.4438**
Stddev	.00007	.00017	.00039	.00033	.00091	.00334	.3532
%RSD	20.162	16.835	116.79	50.139	2.7974	.76496	6.4875
#1	.00035	.00081	.00070	.00067	.03282	.43423	5.6827
#2	.00039	.00114	.00037	.00032	.03156	.43993	5.0381
#3	.00026	.00100	-.00007	.00097	.03333	.43408	5.6106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.66925**	F **-.60737**	**4.9566**	**.00689**	**20.981**	**.11077**	**.00041**
Stddev	1.2475	.64462	.0546	.00056	.184	.00112	.00023
%RSD	186.40	106.13	1.1014	8.1631	.87660	1.0130	56.454
#1	-1.3976	-.45137	4.9725	.00710	21.082	.11166	.00025
#2	.77117	-.05507	5.0015	.00731	21.091	.11114	.00030
#3	-1.3813	-1.3157	4.8959	.00625	20.768	.10951	.00067
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142201 Acquired: 6/3/2013 11:40:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.008**	**.00238**	**7.4643**	**.00128**	F **-24.167**	F **2101.2**	F **-74064.**
Stddev	.492	.00032	5.0932	.00123	48.101	6.9	426.
%RSD	1.0032	13.403	68.233	95.704	199.03	.32880	.57504
#1	49.254	.00208	12.919	.00056	-55.841	2099.5	-74356.
#2	49.328	.00271	2.8326	.00270	31.183	2108.9	-74262.
#3	48.442	.00234	6.6416	.00059	-47.844	2095.4	-73576.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00136**	**.00346**	**1.2041**	**-.00131**	**.44896**	**-.00102**	**.00003**
Stddev	.00085	.00111	.0052	.00011	.00460	.00103	.00098
%RSD	62.575	32.096	.43533	8.2873	1.0242	101.20	3173.7
#1	.00222	.00246	1.2076	-.00144	.45124	-.00090	-.00019
#2	.00136	.00465	1.2065	-.00125	.45197	-.00210	.00111
#3	.00051	.00327	1.1980	-.00125	.44367	-.00005	-.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00024**	**.00180**	F **-.39680**
Stddev	.00005	.00012	.53308
%RSD	20.553	6.4321	134.35
#1	.00018	.00182	.02449
#2	.00026	.00167	-.99610
#3	.00026	.00190	-.21878
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142201 Acquired: 6/3/2013 11:40:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14596.**	**19898.**
Stddev	43.	210.
%RSD	.29682	1.0562
#1	14565.	19785.
#2	14577.	19768.
#3	14646.	20140.

Approved: June 04, 2013

Sample Name: L1305142201MS Acquired: 6/3/2013 11:44:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20474**	**4.9948**	**.20381**	**1.0234**	**.52798**	**.02521**	**67.870**
Stddev	.00073	.0469	.00060	.0019	.00629	.00014	.822
%RSD	.35670	.94006	.29574	.18831	1.1922	.54641	1.2113
#1	.20390	4.9773	.20449	1.0212	.52599	.02508	67.619
#2	.20521	4.9591	.20357	1.0247	.52291	.02520	67.202
#3	.20510	5.0480	.20336	1.0244	.53502	.02535	68.788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02574**	**.10094**	**.25851**	**.25073**	**2.0146**	**.92130**	**5.8109**
Stddev	.00008	.00020	.00052	.00038	.0230	.00874	.1947
%RSD	.29348	.19400	.20243	.15174	1.1435	.94872	3.3503
#1	.02566	.10072	.25826	.25045	2.0179	.91362	5.9224
#2	.02579	.10107	.25911	.25058	1.9901	.91948	5.5861
#3	.02579	.10105	.25816	.25116	2.0358	.93081	5.9241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.36647**	**.59044**	**29.803**	**.50507**	**25.255**	**.34566**	**.49787**
Stddev	1.8794	1.4543	.276	.00699	.399	.00443	.00052
%RSD	512.83	246.31	.92453	1.3846	1.5812	1.2821	.10384
#1	1.3251	1.3224	29.722	.50369	25.108	.34642	.49734
#2	-2.3895	1.5333	29.578	.49887	24.950	.34089	.49790
#3	-.03497	-1.0844	30.110	.51265	25.707	.34965	.49837
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305142201MS Acquired: 6/3/2013 11:44:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-07

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**72.521**	**.25730**	**28.047**	**.25552**	F **-28.710**	F **2108.3**	F **-73528.**
Stddev	.769	.00041	4.008	.00144	9.639	3.5	100.
%RSD	1.0602	.15932	14.289	.56180	33.575	.16391	.13589
#1	72.362	.25720	26.103	.25395	-19.877	2112.2	-73472.
#2	71.843	.25695	32.655	.25675	-38.992	2105.6	-73643.
#3	73.356	.25775	25.382	.25587	-27.260	2107.1	-73469.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60664**	**.20044**	**3.5888**	**.52762**	**.93588**	**.48575**	**.25410**
Stddev	.00097	.00227	.0128	.00199	.00987	.00567	.00059
%RSD	.16048	1.1313	.35727	.37626	1.0544	1.1672	.23332
#1	.60552	.19963	3.6031	.52582	.93264	.48225	.25429
#2	.60719	.19869	3.5784	.52975	.92804	.48272	.25343
#3	.60722	.20300	3.5849	.52728	.94696	.49229	.25457
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49981**	**.51481**	F **-.10782**
Stddev	.00116	.00143	.17040
%RSD	.23124	.27757	158.04
#1	.49936	.51325	-.12141
#2	.49894	.51606	-.27101
#3	.50112	.51513	.06897
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142201MS Acquired: 6/3/2013 11:44:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432619-07

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14458.**	**20271.**
Stddev	33.	201.
%RSD	.22947	.99011
#1	14490.	20234.
#2	14424.	20488.
#3	14460.	20092.

Approved: June 04, 2013

Sample Name: L1306002701 Acquired: 6/3/2013 11:47:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.25969**	**-.00052**	**.04196**	**.03824**	**.00002**	**26.038**
Stddev	.00010	.01748	.00141	.00074	.00023	.00001	.090
%RSD	197.40	6.7314	273.31	1.7665	.60341	59.372	.34649
#1	-.00002	.26471	.00101	.04231	.03809	.00001	26.130
#2	.00001	.24025	-.00178	.04245	.03811	.00002	26.036
#3	.00016	.27412	-.00078	.04111	.03850	.00004	25.949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00039**	**.00059**	**.00199**	**.39543**	**.14210**	**.74700**
Stddev	.00002	.00011	.00018	.00050	.00172	.00291	.22662
%RSD	13.412	29.436	31.130	25.153	.43599	2.0459	30.338
#1	.00019	.00044	.00064	.00155	.39345	.14545	.56280
#2	.00018	.00046	.00038	.00253	.39626	.14028	.67812
#3	.00014	.00026	.00074	.00188	.39659	.14056	1.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33174**	**.25164**	**1.7801**	**.00743**	**6.6411**	**.06124**	**.00152**
Stddev	.55532	.58552	.0074	.00113	.0306	.00038	.00026
%RSD	167.39	232.68	.41349	15.239	.46066	.61817	16.824
#1	-.08976	.50539	1.7748	.00706	6.6573	.06155	.00162
#2	.96097	.66749	1.7885	.00653	6.6058	.06082	.00123
#3	.12401	-.41795	1.7769	.00870	6.6603	.06136	.00171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1306002701 Acquired: 6/3/2013 11:47:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.088**	**.00239**	**68.124**	**.00152**	F **-28.653**	F **449.06**	F **-15024.**
Stddev	.031	.00030	10.194	.00081	48.045	1.61	68.
%RSD	.17230	12.534	14.964	53.305	167.68	.35913	.45296
#1	18.102	.00205	70.590	.00120	-2.1886	450.90	-15088.
#2	18.053	.00256	76.859	.00091	-84.111	448.37	-15031.
#3	18.110	.00258	56.923	.00244	.3411	447.90	-14953.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00006**	**1.3573**	**-.00114**	**.13772**	**.00508**	**.00068**
Stddev	.00126	.00225	.0123	.00007	.00048	.00104	.00074
%RSD	396.53	3681.3	.90469	5.9201	.35148	20.490	108.45
#1	.00097	.00050	1.3710	-.00111	.13780	.00422	-.00010
#2	-.00114	.00206	1.3534	-.00122	.13720	.00623	.00077
#3	.00112	-.00237	1.3474	-.00110	.13816	.00478	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00077**	**.00620**	**.75516**
Stddev	.00019	.00006	.17364
%RSD	25.055	.95119	22.994
#1	.00056	.00616	.58830
#2	.00081	.00618	.74232
#3	.00094	.00627	.93488
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1306002701 Acquired: 6/3/2013 11:47:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14851.**	**20068.**
Stddev	66.	79.
%RSD	.44755	.39192
#1	14790.	20105.
#2	14841.	20122.
#3	14922.	19978.

Approved: June 04, 2013

Sample Name: L1306002701PS Acquired: 6/3/2013 11:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432679-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20761**	**5.2113**	**.20575**	**1.0539**	**.54205**	**.02564**	**28.800**
Stddev	.00084	.1212	.00083	.0064	.00716	.00012	.203
%RSD	.40304	2.3254	.40459	.60881	1.3209	.46541	.70435
#1	.20698	5.1055	.20486	1.0497	.53696	.02556	28.658
#2	.20730	5.1848	.20651	1.0508	.53896	.02558	28.709
#3	.20856	5.3435	.20589	1.0613	.55024	.02577	29.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02581**	**.10343**	**.26347**	**.26041**	**2.4108**	**.63860**	**2.0025**
Stddev	.00005	.00014	.00133	.00033	.0297	.00563	.8247
%RSD	.21162	.13349	.50418	.12816	1.2307	.88151	41.182
#1	.02575	.10332	.26262	.26012	2.3880	.63358	2.7031
#2	.02581	.10359	.26280	.26077	2.4000	.63754	2.2107
#3	.02586	.10340	.26500	.26032	2.4444	.64468	1.0937
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.2244**	**.65380**	**27.280**	**.51487**	**11.008**	**.30839**	**.50978**
Stddev	.1708	.56722	.269	.00625	.189	.00253	.00084
%RSD	13.949	86.756	.98433	1.2148	1.7169	.82100	.16473
#1	-1.3938	.01393	27.024	.50938	10.809	.30611	.50883
#2	-1.0522	.85267	27.257	.51355	11.032	.30794	.51045
#3	-1.2271	1.0948	27.559	.52168	11.185	.31112	.51005
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1306002701PS Acquired: 6/3/2013 11:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432679-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.812**	**.26417**	**69.690**	**.26292**	F **32.206**	F **414.19**	F **-13559.**
Stddev	.592	.00054	.096	.00323	22.723	.64	12.
%RSD	1.4157	.20470	.13739	1.2277	70.555	.15552	.08976
#1	41.351	.26434	69.737	.26132	35.709	413.58	-13549.
#2	41.606	.26357	69.753	.26080	7.9347	414.86	-13556.
#3	42.479	.26461	69.580	.26663	52.974	414.12	-13573.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60908**	**.20186**	**3.6531**	**.00046**	**.62993**	**.50903**	**.26285**
Stddev	.00179	.00222	.0171	.00007	.01070	.01126	.00124
%RSD	.29348	1.0977	.46854	15.186	1.6990	2.2117	.47155
#1	.60831	.20237	3.6350	.00054	.62180	.49782	.26241
#2	.60781	.20377	3.6690	.00042	.62594	.50893	.26189
#3	.61112	.19943	3.6554	.00042	.64206	.52034	.26425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50740**	**.53511**	**.24632**
Stddev	.00177	.00178	.41515
%RSD	.34826	.33240	168.54
#1	.50639	.53321	.22977
#2	.50637	.53537	.66949
#3	.50944	.53674	-.16031
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1306002701PS Acquired: 6/3/2013 11:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432679-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14813.**	**19989.**
Stddev	51.	167.
%RSD	.34105	.83446
#1	14845.	20169.
#2	14839.	19961.
#3	14755.	19839.

Approved: June 04, 2013

Sample Name: L1306002701SDL Acquired: 6/3/2013 11:54:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432679-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**.05377**	**-.00006**	**.01155**	**.00766**	**.00002**	**5.3374**
Stddev	.00042	.01181	.00080	.00067	.00011	.00001	.0791
%RSD	218.51	21.958	1320.6	5.7682	1.4251	69.552	1.4820
#1	.00028	.04288	-.00069	.01228	.00755	.00002	5.3155
#2	-.00055	.06632	-.00032	.01139	.00767	.00000	5.2715
#3	-.00031	.05211	.00083	.01098	.00776	.00002	5.4251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00023**	**.00017**	**.00099**	**.07934**	**.03067**	F **-.32464**
Stddev	.00007	.00016	.00054	.00019	.00471	.00231	.49388
%RSD	672.27	68.729	320.57	19.290	5.9402	7.5375	152.13
#1	.00002	.00005	-.00039	.00078	.08007	.03322	-.01205
#2	-.00006	.00028	.00070	.00105	.07431	.03007	-.89402
#3	.00008	.00035	.00020	.00115	.08365	.02871	-.06785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.46021**	F **-.43003**	**.40575**	**.00143**	**1.3515**	**.01265**	**.00053**
Stddev	.92498	1.0976	.01096	.00162	.0236	.00005	.00049
%RSD	200.99	255.23	2.7010	112.94	1.7426	.40254	91.205
#1	.57705	-1.6421	.41039	-.00042	1.3460	.01260	.00019
#2	-.75824	-.14487	.41363	.00217	1.3312	.01270	.00033
#3	-1.1994	.49683	.39324	.00255	1.3773	.01265	.00109
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1306002701SDL Acquired: 6/3/2013 11:54:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432679-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.6421**	**.00051**	**13.141**	**.00009**	**1.3231**	F **91.338**	F **-3021.1**
Stddev	.0079	.00020	5.765	.00078	72.932	.686	12.3
%RSD	.21608	39.389	43.868	859.90	5512.1	.75152	.40669
#1	3.6410	.00073	9.7344	.00001	79.378	90.685	-3008.4
#2	3.6349	.00033	19.797	-.00064	-10.323	91.276	-3022.1
#3	3.6505	.00049	9.8919	.00090	-65.086	92.053	-3032.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00152**	**-.00008**	**.26792**	**-.00053**	**.02803**	**-.00031**	**.00053**
Stddev	.00108	.00089	.00653	.00038	.00016	.00022	.00010
%RSD	71.087	1112.5	2.4382	72.811	.56796	69.621	18.397
#1	.00027	-.00111	.26369	-.00077	.02803	-.00042	.00063
#2	.00218	.00038	.26463	-.00073	.02788	-.00045	.00052
#3	.00212	.00049	.27544	-.00008	.02820	-.00006	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00025**	**.00349**	F **-.10034**
Stddev	.00012	.00010	.36143
%RSD	50.023	2.9228	360.20
#1	.00029	.00339	.02637
#2	.00011	.00348	-.50806
#3	.00035	.00359	.18067
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1306002701SDL Acquired: 6/3/2013 11:54:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432679-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15015.**	**19843.**
Stddev	41.	53.
%RSD	.27187	.26931
#1	15062.	19890.
#2	14994.	19853.
#3	14990.	19785.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 11:57:54 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39994**	**9.8702**	**.39775**	**.50007**	**1.0001**	**.04936**	**10.676**
Stddev	.00134	.0632	.00046	.00125	.0139	.00034	.264
%RSD	.33390	.64013	.11602	.25024	1.3899	.69486	2.4724
#1	.40141	9.9397	.39722	.50132	1.0161	.04967	10.973
#2	.39880	9.8162	.39804	.50008	.99286	.04941	10.588
#3	.39960	9.8547	.39800	.49882	.99135	.04899	10.468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05016**	**.20052**	**.50723**	**.50284**	**4.0386**	**.99561**	F **1.2696**
Stddev	.00017	.00080	.00297	.00150	.0609	.00705	.2149
%RSD	.33111	.40014	.58596	.29817	1.5077	.70810	16.928
#1	.05030	.20145	.50961	.50458	4.1086	.99960	1.0703
#2	.04998	.20006	.50818	.50196	4.0096	.99976	1.4973
#3	.05020	.20005	.50390	.50200	3.9976	.98747	1.2411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.10032**	**.98355**	**50.422**	**.98862**	**10.043**	**.50643**	**.99020**
Stddev	.66763	1.3205	.743	.01201	.088	.00854	.00306
%RSD	665.53	134.25	1.4730	1.2150	.87972	1.6856	.30874
#1	-.39728	2.4745	51.231	1.0024	10.144	.51549	.99369
#2	.85905	-.03817	50.262	.98314	9.9838	.50527	.98892
#3	-.16082	.51427	49.772	.98032	10.000	.49853	.98800
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000						
Range	-10.000%						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 11:57:54 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.950**	**.50896**	F **8.8587**	**.51190**	F **59.799**	**10.191**	F **13.227**
Stddev	.684	.00167	1.9676	.00081	47.338	.049	1.171
%RSD	1.3703	.32799	22.210	.15833	79.161	.48251	8.8487
#1	50.741	.51057	7.4750	.51271	25.111	10.136	12.803
#2	49.565	.50723	11.111	.51191	113.73	10.232	12.329
#3	49.545	.50907	7.9901	.51109	40.558	10.204	14.551
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2096**	**.39899**	**4.8013**	**.92929**	**.99065**	**.98978**	**.51368**
Stddev	.0068	.00027	.0249	.00334	.01134	.00641	.00447
%RSD	.56495	.06752	.51778	.35910	1.1451	.64740	.87071
#1	1.2164	.39904	4.8299	.93246	1.0037	.99698	.51870
#2	1.2028	.39923	4.7892	.92581	.98302	.98767	.51012
#3	1.2096	.39870	4.7848	.92960	.98525	.98470	.51221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98526**	**1.0184**	F **-.14234**
Stddev	.00476	.0030	.25307
%RSD	.48340	.29855	177.79
#1	.99072	1.0217	-.42500
#2	.98304	1.0157	-.06527
#3	.98201	1.0177	.06323
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 11:57:54 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15220.**	**20204.**
Stddev	65.	289.
%RSD	.42742	1.4297
#1	15145.	19896.
#2	15257.	20247.
#3	15257.	20469.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 12:01:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00044**	**-.01180**	**.00039**	**.00327**	**-.00009**	**-.00001**	**.01117**
Stddev	.00030	.00539	.00025	.00012	.00017	.00001	.00891
%RSD	67.920	45.693	64.022	3.5418	177.97	69.811	79.761
#1	-.00078	-.01266	.00017	.00322	.00000	.00000	.00128
#2	-.00029	-.01671	.00033	.00320	-.00029	-.00001	.01856
#3	-.00024	-.00603	.00066	.00341	.00001	-.00002	.01366
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00014**	**.00008**	**.00024**	**.00281**	**.00294**	F **-.29793**
Stddev	.00006	.00009	.00016	.00039	.00267	.00149	.26272
%RSD	456.89	64.988	187.85	160.26	94.766	50.875	88.180
#1	.00008	.00014	-.00010	-.00017	.00111	.00306	-.34788
#2	-.00005	.00022	.00016	.00030	.00144	.00436	-.01383
#3	.00002	.00005	.00019	.00060	.00589	.00138	-.53209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.66219**	F **.74846**	**.06954**	**-.00143**	**-.00256**	**.00003**	**.00135**
Stddev	.45223	.96573	.01389	.00046	.00599	.00007	.00053
%RSD	68.293	129.03	19.978	32.109	233.84	264.64	39.253
#1	.28175	1.5107	.08268	-.00090	-.00731	.00003	.00077
#2	.54263	-.33754	.05500	-.00173	-.00454	-.00004	.00150
#3	1.1622	1.0722	.07094	-.00166	.00417	.00010	.00180
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

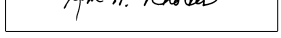
Sample Name: CCB Acquired: 6/3/2013 12:01:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01257**	**.00052**	F **-2.7893**	**-.00057**	F **29.015**	**-.18299**	F **6.6544**
Stddev	.00385	.00043	6.6940	.00079	28.290	.03517	.7221
%RSD	30.621	81.770	239.99	138.53	97.499	19.218	10.851
#1	.01686	.00010	-9.1196	-.00077	32.128	-.15160	6.8408
#2	.00942	.00096	-3.4655	-.00124	55.620	-.22100	5.8575
#3	.01142	.00051	4.2172	.00030	-.70196	-.17638	7.2650
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00191**	**.00138**	**-.00014**	**-.00002**	**.00005**	**-.00004**	**.00076**
Stddev	.00039	.00098	.00245	.00045	.00006	.00059	.00070
%RSD	20.303	70.945	1776.1	2592.7	128.47	1524.8	92.118
#1	.00173	.00103	.00106	-.00016	.00008	-.00052	.00035
#2	.00236	.00249	.00148	-.00038	.00010	-.00021	.00036
#3	.00165	.00062	-.00296	.00048	-.00002	.00061	.00157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**-.00044**	**-.05217**
Stddev	.00020	.00015	.26596
%RSD	105.34	35.004	509.82
#1	.00039	-.00050	.09985
#2	-.00001	-.00054	.10291
#3	.00018	-.00026	-.35927
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013



Sample Name: CCB Acquired: 6/3/2013 12:01:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15187.**	**20919.**
Stddev	36.	122.
%RSD	.23626	.58555
#1	15169.	20836.
#2	15163.	21060.
#3	15228.	20861.

Approved: June 04, 2013

Sample Name: PBW 86 Acquired: 6/3/2013 12:04:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00111**	**.00011**	**.00186**	**.00022**	**.00001**	**.03896**
Stddev	.00043	.02493	.00074	.00057	.00013	.00003	.01241
%RSD	374.26	2255.3	671.66	30.418	59.621	480.04	31.845
#1	-.00007	-.02360	-.00073	.00125	.00019	.00000	.03441
#2	.00029	.02627	.00065	.00197	.00011	.00004	.05300
#3	-.00056	.00065	.00041	.00237	.00037	-.00002	.02947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00003**	**-.00021**	**.00038**	**.00448**	**-.00011**	**.44173**
Stddev	.00006	.00023	.00043	.00009	.00221	.00479	.38189
%RSD	610.36	769.09	203.84	24.073	49.201	4240.4	86.452
#1	-.00003	-.00019	-.00038	.00046	.00201	-.00312	.08195
#2	-.00001	.00001	-.00053	.00039	.00517	-.00264	.84243
#3	.00008	.00028	.00028	.00028	.00626	.00542	.40081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97027**	F **-.27026**	**.04015**	**-.00055**	**-.00174**	**.00013**	**.00020**
Stddev	.60379	.57327	.02011	.00083	.02179	.00005	.00012
%RSD	62.230	212.12	50.091	151.56	1252.9	42.896	58.572
#1	.66581	-.92775	.04840	.00038	-.00793	.00008	.00013
#2	.57931	-.00802	.01723	-.00122	.02247	.00012	.00014
#3	1.6657	.12500	.05483	-.00079	-.01976	.00019	.00033
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013

Sample Name: PBW 86 Acquired: 6/3/2013 12:04:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01345**	**.00059**	**1.0710**	**.00021**	**8.8123**	F **-.06359**	**2.9037**
Stddev	.00537	.00024	5.5994	.00117	27.281	.01789	1.2344
%RSD	39.971	40.840	522.83	543.12	309.58	28.130	42.511
#1	.00724	.00032	6.8314	-.00055	-9.6423	-.06991	1.5577
#2	.01650	.00066	-4.3520	.00156	40.149	-.04340	3.1706
#3	.01660	.00078	.73353	-.00036	-4.0700	-.07746	3.9828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						9.0000	
Low Limit						-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00149**	**-.00172**	**-.00278**	**-.00140**	**.00024**	**-.00035**	**.00132**
Stddev	.00083	.00078	.00044	.00016	.00007	.00102	.00107
%RSD	55.860	45.352	15.903	11.718	28.875	293.26	81.052
#1	.00154	-.00164	-.00302	-.00122	.00031	-.00105	.00164
#2	.00230	-.00254	-.00227	-.00145	.00021	.00083	.00219
#3	.00064	-.00099	-.00305	-.00154	.00019	-.00083	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.00332**	**.06979**
Stddev	.00014	.00007	.40193
%RSD	52.119	1.9744	575.95
#1	.00011	.00339	-.35565
#2	.00031	.00326	.44312
#3	.00038	.00332	.12189
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: PBW 86 Acquired: 6/3/2013 12:04:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15279.**	**21043.**
Stddev	79.	96.
%RSD	.51775	.45557
#1	15247.	21136.
#2	15369.	20944.
#3	15221.	21049.

Approved: June 04, 2013

Sample Name: LCSW 86 Acquired: 6/3/2013 12:08:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20681**	**4.8372**	**.20370**	**1.0285**	**.50281**	**.02513**	**5.4177**
Stddev	.00096	.0262	.00037	.0038	.00077	.00013	.0206
%RSD	.46556	.54234	.18174	.36964	.15386	.50567	.37945
#1	.20740	4.8358	.20392	1.0303	.50328	.02525	5.4413
#2	.20732	4.8642	.20391	1.0310	.50322	.02514	5.4081
#3	.20569	4.8118	.20327	1.0241	.50191	.02499	5.4038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02541**	**.10174**	**.25977**	**.25595**	**2.0078**	**.50381**	**.68969**
Stddev	.00014	.00043	.00076	.00063	.0068	.00334	.25623
%RSD	.53667	.42249	.29428	.24571	.33728	.66341	37.151
#1	.02552	.10205	.26016	.25664	2.0070	.50679	.40268
#2	.02526	.10125	.26027	.25541	2.0149	.50445	.89543
#3	.02546	.10192	.25889	.25581	2.0015	.50019	.77095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43462**	**.87051**	**25.216**	**.50113**	**4.9066**	**.24821**	**.50069**
Stddev	.32070	1.6356	.080	.00081	.0132	.00235	.00303
%RSD	73.788	187.89	.31664	.16235	.26982	.94515	.60573
#1	.69112	1.9339	25.286	.50164	4.8916	.24983	.50403
#2	.53768	-1.0129	25.234	.50155	4.9167	.24928	.49811
#3	.07506	1.6905	25.129	.50019	4.9115	.24552	.49993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: LCSW 86 Acquired: 6/3/2013 12:08:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.103**	**.26020**	**14.637**	**.25997**	F **-17.978**	**5.1719**	**5.4762**
Stddev	.055	.00184	4.078	.00108	30.921	.0086	.4696
%RSD	.22014	.70790	27.860	.41444	172.00	.16678	8.5755
#1	25.128	.26232	12.741	.26121	-53.540	5.1818	5.4379
#2	25.142	.25923	19.318	.25939	2.5596	5.1663	5.0269
#3	25.040	.25904	11.852	.25930	-2.9518	5.1676	5.9638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60687**	**.19946**	**2.3555**	**.51512**	**.49732**	**.49412**	**.26332**
Stddev	.00466	.00206	.0139	.00172	.00118	.00276	.00103
%RSD	.76749	1.0322	.59057	.33312	.23712	.55800	.39068
#1	.60344	.20100	2.3691	.51693	.49682	.49140	.26231
#2	.60500	.20027	2.3413	.51352	.49866	.49692	.26437
#3	.61217	.19712	2.3561	.51489	.49647	.49402	.26328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50428**	**.51763**	**.46597**
Stddev	.00176	.00216	.38434
%RSD	.34939	.41707	82.482
#1	.50508	.51944	.89130
#2	.50549	.51821	.14360
#3	.50226	.51524	.36300
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: LCSW 86 Acquired: 6/3/2013 12:08:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15038.**	**20759.**
Stddev	40.	153.
%RSD	.26378	.73670
#1	15006.	20645.
#2	15024.	20699.
#3	15082.	20933.

Approved: June 04, 2013

Sample Name: L1305126201 Acquired: 6/3/2013 12:11:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.21836**	**.00046**	**5.2949**	**.03285**	**.00002**
Stddev	.00025	.01440	.00107	.0154	.00038	.00001
%RSD	158.80	6.5944	232.72	.28995	1.1450	37.422
#1	-.00009	.20199	-.00078	5.3100	.03249	.00002
#2	.00005	.22405	.00105	5.2793	.03324	.00002
#3	-.00043	.22905	.00111	5.2956	.03281	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **354.50**	**.00109**	**.00254**	**.00157**	**.00122**	**.51953**
Stddev	1.16	.00002	.00020	.00051	.00053	.00788
%RSD	.32718	1.9702	7.9809	32.403	42.987	1.5167
#1	353.40	.00112	.00277	.00099	.00072	.51244
#2	355.71	.00108	.00241	.00195	.00119	.52801
#3	354.39	.00108	.00244	.00177	.00177	.51812
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.36010**	**19.810**	F **-.99788**	**.04953**	**2.5856**	**.23680**
Stddev	.00447	.797	1.1560	.35139	.0251	.00153
%RSD	1.2422	4.0252	115.84	709.41	.97035	.64461
#1	.35944	19.034	-.11341	.45263	2.5918	.23504
#2	.35599	19.768	-2.3059	-.11193	2.6071	.23771
#3	.36486	20.627	-.57434	-.19210	2.5580	.23766
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

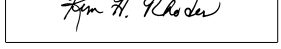
Sample Name: L1305126201 Acquired: 6/3/2013 12:11:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**79.993**	**1.2694**	**.00107**	**153.59**	**.00191**	**105.01**
Stddev	.387	.0049	.00055	3.35	.00065	6.95
%RSD	.48343	.38323	51.428	2.1800	34.088	6.6182
#1	80.122	1.2651	.00069	154.61	.00260	110.97
#2	80.298	1.2747	.00081	149.85	.00181	106.69
#3	79.558	1.2683	.00170	156.31	.00131	97.375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00306**	F **91.192**	F **7616.8**	F **-273760.**	**.00154**	**-.00035**
Stddev	.00013	18.203	25.6	1333.	.00192	.00058
%RSD	4.3871	19.962	.33547	.48698	124.20	164.59
#1	.00309	72.805	7644.0	-275060.	.00205	.00016
#2	.00318	91.565	7593.2	-272390.	-.00058	-.00097
#3	.00291	109.21	7613.2	-273820.	.00316	-.00024
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.9889**	**-.00110**	**.36343**	**.00458**	**.00219**	**.00043**
Stddev	.0425	.00035	.00218	.00162	.00070	.00021
%RSD	.60753	31.473	.59913	35.300	32.190	48.697
#1	7.0359	-.00131	.36299	.00420	.00258	.00060
#2	6.9532	-.00128	.36580	.00319	.00137	.00049
#3	6.9777	-.00070	.36151	.00636	.00261	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305126201 Acquired: 6/3/2013 12:11:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00719**	**.22996**
Stddev	.00022	.45966
%RSD	3.0010	199.88
#1	.00719	.65436
#2	.00697	-.25829
#3	.00741	.29382
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13973.**	**20367.**
Stddev	55.	12.
%RSD	.39226	.05749
#1	13924.	20374.
#2	14033.	20354.
#3	13963.	20374.

Approved: June 04, 2013

Sample Name: L1305126203MS Acquired: 6/3/2013 12:15:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21638**	**5.1465**	**.21157**	**6.2215**	**.53367**	**.02562**
Stddev	.00040	.0527	.00251	.0155	.00396	.00014
%RSD	.18309	1.0233	1.1852	.24908	.74177	.54671
#1	.21652	5.1007	.21206	6.2363	.53001	.02571
#2	.21593	5.2040	.20885	6.2054	.53314	.02546
#3	.21668	5.1349	.21379	6.2229	.53787	.02570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **340.00**	**.02719**	**.10101**	**.26203**	**.25113**	**2.3730**
Stddev	5.06	.00006	.00024	.00184	.00033	.0274
%RSD	1.4872	.21479	.24005	.70319	.13185	1.1549
#1	337.01	.02713	.10090	.26385	.25080	2.3483
#2	337.15	.02725	.10083	.26016	.25112	2.3683
#3	345.84	.02719	.10128	.26207	.25146	2.4025
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.82229**	**19.073**	F **-1.2776**	**.47744**	**28.019**	**.74328**
Stddev	.00826	1.313	1.3606	.36687	.285	.00597
%RSD	1.0039	6.8855	106.50	76.842	1.0162	.80329
#1	.81917	18.347	-2.1437	.06461	27.825	.73817
#2	.81604	20.589	-1.9798	.76615	27.886	.74183
#3	.83164	18.282	.29063	.60156	28.346	.74984
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

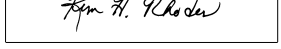
Sample Name: L1305126203MS Acquired: 6/3/2013 12:15:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-05

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.213**	**1.3365**	**.50506**	**172.05**	**.25416**	**98.379**
Stddev	.811	.0108	.00240	3.71	.00094	7.093
%RSD	.99806	.81082	.47445	2.1584	.36864	7.2100
#1	80.420	1.3321	.50325	174.84	.25398	105.69
#2	81.179	1.3286	.50415	173.48	.25332	97.926
#3	82.040	1.3489	.50778	167.84	.25517	91.523
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25301**	F **82.689**	F **7338.9**	F **-266150.**	**.63353**	**.20673**
Stddev	.00138	6.666	37.5	997.	.00118	.00173
%RSD	.54695	8.0618	.51132	.37449	.18553	.83717
#1	.25328	89.845	7297.7	-265670.	.63252	.20781
#2	.25152	81.568	7348.0	-265490.	.63325	.20473
#3	.25425	76.655	7371.0	-267300.	.63482	.20763
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.0648**	**.51862**	**.86208**	**.49605**	**.24709**	**.51437**
Stddev	.0433	.00234	.00440	.00415	.00183	.00218
%RSD	.47792	.45066	.51038	.83664	.73868	.42379
#1	9.0259	.51841	.85712	.49160	.24795	.51625
#2	9.0569	.51639	.86358	.49674	.24499	.51198
#3	9.1115	.52105	.86553	.49982	.24832	.51490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305126203MS Acquired: 6/3/2013 12:15:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-05

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.50261**	**.35456**
Stddev	.00203	.44215
%RSD	.40465	124.71
#1	.50289	.05254
#2	.50045	.86206
#3	.50449	.14907
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13776.**	**20593.**
Stddev	41.	186.
%RSD	.29686	.90416
#1	13772.	20717.
#2	13819.	20684.
#3	13738.	20379.

Approved: June 04, 2013

Sample Name: L1305126205MSD Acquired: 6/3/2013 12:18:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21285**	**5.1277**	**.21020**	**6.2113**	**.53664**	**.02513**
Stddev	.00098	.0436	.00084	.0018	.00546	.00003
%RSD	.46162	.85078	.39908	.02873	1.0176	.13516
#1	.21248	5.1732	.21097	6.2122	.54291	.02517
#2	.21397	5.1234	.20930	6.2124	.53296	.02511
#3	.21211	5.0863	.21032	6.2092	.53405	.02512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **356.57**	**.02671**	**.09906**	**.25685**	**.24589**	**2.4515**
Stddev	4.83	.00011	.00049	.00161	.00047	.0290
%RSD	1.3553	.40690	.48964	.62577	.19053	1.1813
#1	361.79	.02683	.09863	.25788	.24538	2.4821
#2	352.26	.02668	.09958	.25500	.24597	2.4245
#3	355.66	.02662	.09896	.25768	.24631	2.4478
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.81670**	**19.229**	F **-1.3509**	**.03053**	**28.266**	**.74922**
Stddev	.00218	.253	1.9958	1.1710	.270	.00775
%RSD	.26639	1.3173	147.74	3835.7	.95512	1.0340
#1	.81511	19.184	-2.1669	-.09946	28.545	.75784
#2	.81582	19.002	.92361	-1.0701	28.006	.74284
#3	.81918	19.502	-2.8095	1.2611	28.246	.74699
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kym H. Rhoden

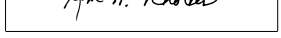
Sample Name: L1305126205MSD Acquired: 6/3/2013 12:18:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-06

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**83.175**	**1.4478**	**.49661**	**176.53**	**.24751**	**104.09**
Stddev	.689	.0145	.00129	3.59	.00099	1.84
%RSD	.82841	1.0013	.25882	2.0359	.40000	1.7700
#1	83.807	1.4572	.49530	175.15	.24711	102.64
#2	82.441	1.4311	.49786	173.83	.24863	106.16
#3	83.278	1.4550	.49666	180.61	.24677	103.47
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24678**	F **42.178**	F **7398.5**	F **-264970.**	**.61776**	**.20409**
Stddev	.00032	35.679	28.1	395.	.00148	.00392
%RSD	.12985	84.591	.37960	.14893	.23929	1.9184
#1	.24706	19.223	7368.4	-264940.	.61736	.19965
#2	.24643	83.283	7403.3	-265370.	.61939	.20556
#3	.24684	24.028	7424.0	-264580.	.61652	.20706
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.1295**	**.49619**	**.86691**	**.49785**	**.24175**	**.50457**
Stddev	.0347	.00047	.00864	.00205	.00154	.00133
%RSD	.37969	.09423	.99625	.41148	.63880	.26303
#1	9.0935	.49572	.87683	.50005	.24014	.50305
#2	9.1323	.49666	.86112	.49750	.24189	.50547
#3	9.1627	.49619	.86276	.49600	.24322	.50520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305126205MSD Acquired: 6/3/2013 12:18:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-06

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.49117**	F **-.01577**
Stddev	.00117	.25817
%RSD	.23764	1637.4
#1	.49237	-.27632
#2	.49110	-.01094
#3	.49004	.23996
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13938.**	**20166.**
Stddev	22.	212.
%RSD	.15553	1.0501
#1	13939.	19993.
#2	13915.	20402.
#3	13959.	20102.

Approved: June 04, 2013

Sample Name: L1305129501 0.02 Acquired: 6/3/2013 12:22:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 50 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**.03640**	**-.00071**	**.32092**	**4.3578**	**.00001**	F **1306.9**
Stddev	.00057	.01913	.00131	.00162	.0321	.00002	15.5
%RSD	103.56	52.559	184.51	.50355	.73648	120.33	1.1854
#1	.00010	.05769	.00079	.32110	4.3814	-.00001	1322.0
#2	-.00082	.03084	-.00129	.32244	4.3707	.00002	1307.5
#3	-.00093	.02066	-.00163	.31922	4.3212	.00002	1291.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00039**	**.00124**	**.00188**	**.15992**	F **118.43**	**5.2389**
Stddev	.00002	.00008	.00056	.00062	.00389	.35	.4626
%RSD	5.6981	20.923	45.650	32.684	2.4337	.29443	8.8290
#1	.00038	.00043	.00113	.00133	.16433	118.11	5.5440
#2	.00034	.00043	.00185	.00178	.15847	118.38	4.7067
#3	.00037	.00029	.00073	.00255	.15695	118.81	5.4661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						45.000	
Low Limit						-.10000	

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98230**	**.69556**	**18.642**	**13.971**	**12.581**	**.00006**	**.00073**
Stddev	.67400	.45078	.110	.108	.082	.00004	.00076
%RSD	68.615	64.809	.58964	.77241	.65323	73.225	105.02
#1	.37404	1.0820	18.742	14.038	12.652	.00008	.00016
#2	1.7069	.80436	18.660	14.029	12.600	.00001	.00042
#3	.86596	.20033	18.525	13.847	12.491	.00009	.00160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305129501 0.02 Acquired: 6/3/2013 12:22:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 50 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.082**	**.00287**	**114.69**	**.00079**	F **67.265**	F **1300.8**	F **-517.39**
Stddev	.305	.00039	4.41	.00087	17.208	7.1	100.65
%RSD	.60969	13.560	3.8477	109.38	25.583	.54387	19.454
#1	50.347	.00280	117.60	-.00017	68.166	1294.0	-450.09
#2	50.151	.00252	109.61	.00105	84.005	1300.1	-468.98
#3	49.748	.00329	116.85	.00150	49.623	1308.1	-633.10
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00235**	**-.00050**	**.03677**	**.00025**	^ *****	**-.01232**	**-.00071**
Stddev	.00070	.00267	.00566	.00037	-----	.00062	.00111
%RSD	29.599	536.94	15.395	149.58	-----	5.0065	155.56
#1	.00171	-.00301	.03429	.00002	^ -----	-.01294	-.00182
#2	.00226	-.00079	.03277	.00005	^ -----	-.01171	-.00073
#3	.00309	.00231	.04325	.00068	^ -----	-.01232	.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00021**	**.00205**	F **-3.1431**
Stddev	.00035	.00033	.5222
%RSD	165.44	16.100	16.615
#1	-.00014	.00205	-3.7460
#2	.00056	.00172	-2.8499
#3	.00022	.00238	-2.8333
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kyra H. Rhoden

Sample Name: L1305129501 0.02 Acquired: 6/3/2013 12:22:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 50 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13082.**	**19525.**
Stddev	40.	49.
%RSD	.30259	.25157
#1	13075.	19534.
#2	13046.	19471.
#3	13124.	19568.

Approved: June 04, 2013

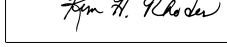
Sample Name: L1305126207 Acquired: 6/3/2013 12:25:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**4.6860**	**.00583**	**.25484**	**.13550**	**.00043**	**91.788**
Stddev	.00049	.0800	.00061	.00127	.00167	.00000	1.115
%RSD	159.49	1.7067	10.445	.50022	1.2341	1.1326	1.2151
#1	.00012	4.6013	.00650	.25350	.13366	.00044	90.504
#2	-.00006	4.6967	.00531	.25603	.13591	.00044	92.343
#3	.00087	4.7602	.00567	.25499	.13693	.00043	92.516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00074**	**.00529**	**.89387**	**.01998**	**12.494**	**.28330**	**4.2808**
Stddev	.00003	.00013	.00238	.00051	.145	.01040	.1819
%RSD	4.0597	2.3955	.26583	2.5385	1.1587	3.6723	4.2484
#1	.00075	.00519	.89250	.02015	12.335	.27618	4.1942
#2	.00077	.00525	.89661	.02037	12.527	.27847	4.1585
#3	.00071	.00544	.89250	.01941	12.619	.29524	4.4898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.88209**	**1.4245**	**3.4645**	**.00935**	**23.255**	**1.4999**	**.00084**
Stddev	1.3759	.8451	.0315	.00079	.298	.0031	.00038
%RSD	155.98	59.325	.91010	8.4588	1.2810	.20820	44.864
#1	-.03018	.46727	3.4336	.00987	22.990	1.4972	.00100
#2	2.4647	1.7390	3.4633	.00844	23.198	1.5033	.00112
#3	.21173	2.0673	3.4966	.00973	23.577	1.4993	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305126207 Acquired: 6/3/2013 12:25:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.263**	**.01927**	F **965.29**	**.01498**	F **43.380**	F **1001.0**	F **-32520.**
Stddev	.306	.00048	5.62	.00201	13.277	5.0	106.
%RSD	1.1642	2.5166	.58202	13.429	30.607	.50165	.32699
#1	25.935	.01974	968.15	.01695	43.464	1006.5	-32571.
#2	26.314	.01877	968.90	.01293	56.615	1000.0	-32591.
#3	26.541	.01929	958.82	.01506	30.061	996.62	-32398.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00476**	**.00235**	**8.9238**	**-.00035**	**.24682**	**.06183**	**.00211**
Stddev	.00034	.00194	.0252	.00039	.00147	.00114	.00233
%RSD	7.2409	82.760	.28229	110.28	.59481	1.8459	110.36
#1	.00513	.00023	8.9416	-.00058	.24541	.06146	.00184
#2	.00469	.00277	8.9348	-.00058	.24670	.06092	-.00007
#3	.00445	.00405	8.8950	.00010	.24834	.06311	.00456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00944**	**.12572**	F **-.34715**
Stddev	.00042	.00059	.07477
%RSD	4.4775	.47133	21.539
#1	.00916	.12582	-.41538
#2	.00923	.12626	-.26721
#3	.00992	.12509	-.35886
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126207 Acquired: 6/3/2013 12:25:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14791.**	**20555.**
Stddev	12.	64.
%RSD	.08145	.31089
#1	14780.	20616.
#2	14790.	20560.
#3	14804.	20489.

Approved: June 04, 2013

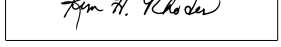
Sample Name: L1305126208 Acquired: 6/3/2013 12:29:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.01049**	**-.00130**	**.26244**	**.05701**	**.00001**	**96.214**
Stddev	.00010	.01143	.00163	.00069	.00079	.00001	1.053
%RSD	21.608	108.96	125.61	.26439	1.3904	119.57	1.0943
#1	-.00034	-.00081	.00049	.26195	.05620	.00000	95.523
#2	-.00050	.02204	-.00169	.26214	.05705	.00002	95.694
#3	-.00051	.01024	-.00270	.26324	.05779	.00000	97.426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.00234**	**.90860**	**.00061**	**.01859**	**.25233**	**6.3242**
Stddev	.00018	.00023	.00081	.00010	.00199	.00115	.1339
%RSD	49.624	10.015	.08898	15.877	10.684	.45738	2.1174
#1	.00057	.00254	.90819	.00057	.02054	.25100	6.2327
#2	.00025	.00241	.90954	.00072	.01657	.25291	6.2620
#3	.00026	.00208	.90809	.00054	.01867	.25308	6.4779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04174**	**.50489**	**2.9169**	**.00212**	**23.144**	**.00355**	**.00019**
Stddev	.90598	.09222	.0547	.00111	.282	.00005	.00013
%RSD	2170.6	18.265	1.8750	52.467	1.2188	1.4148	68.271
#1	.79621	.57622	2.8623	.00307	22.881	.00350	.00010
#2	.29211	.53770	2.9167	.00240	23.109	.00356	.00013
#3	-.96310	.40075	2.9717	.00090	23.442	.00360	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305126208 Acquired: 6/3/2013 12:29:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.311**	**.00068**	**38.324**	**.00074**	F **117.08**	F **1052.4**	F **-34727.**
Stddev	.159	.00031	9.889	.00137	15.66	5.0	90.
%RSD	.56141	45.006	25.805	183.68	13.378	.47039	.25968
#1	28.160	.00083	29.529	.00011	99.010	1048.8	-34642.
#2	28.297	.00033	49.029	-.00019	126.71	1058.0	-34717.
#3	28.477	.00090	36.414	.00231	125.54	1050.3	-34822.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00902**	**.00211**	**3.9908**	**-.00158**	**.25133**	**-.00114**	**-.00014**
Stddev	.00271	.00211	.0163	.00009	.00172	.00068	.00033
%RSD	30.047	99.878	.40915	5.8294	.68601	59.960	240.32
#1	.00601	.00256	3.9758	-.00156	.24977	-.00142	-.00019
#2	.00980	-.00018	4.0082	-.00149	.25105	-.00036	-.00044
#3	.01126	.00397	3.9883	-.00168	.25318	-.00164	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00169**	**.00280**	F **-.88216**
Stddev	.00013	.00001	.21568
%RSD	7.4442	.26085	24.450
#1	-.00154	.00281	-.92162
#2	-.00178	.00279	-1.0754
#3	-.00173	.00280	-.64947
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305126208 Acquired: 6/3/2013 12:29:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14452.**	**20082.**
Stddev	40.	152.
%RSD	.27754	.75853
#1	14482.	20213.
#2	14468.	20118.
#3	14407.	19915.

Approved: June 04, 2013

Sample Name: L1305126208PS Acquired: 6/3/2013 12:32:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21420**	**4.9970**	**.20956**	**1.2906**	**.56516**	**.02597**	**90.900**
Stddev	.00175	.0179	.00205	.0072	.00283	.00005	1.316
%RSD	.81914	.35803	.97983	.55889	.50128	.17742	1.4473
#1	.21478	4.9972	.21062	1.2962	.56820	.02597	92.335
#2	.21559	5.0148	.21087	1.2932	.56260	.02601	89.752
#3	.21223	4.9790	.20719	1.2825	.56467	.02592	90.612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02663**	**.10498**	**1.0791**	**.25904**	**2.0697**	**.73591**	**6.3393**
Stddev	.00005	.00036	.0043	.00166	.0122	.00444	.1666
%RSD	.17506	.34541	.39878	.64117	.58803	.60308	2.6286
#1	.02658	.10484	1.0835	.25978	2.0815	.73410	6.5298
#2	.02668	.10539	1.0791	.26021	2.0572	.73266	6.2675
#3	.02663	.10471	1.0749	.25714	2.0703	.74097	6.2205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43768**	**.16804**	**28.545**	**.52125**	**25.462**	**.25117**	**.51348**
Stddev	.88542	.16540	.208	.00318	.127	.00276	.00120
%RSD	202.30	98.429	.73023	.61027	.49923	1.1008	.23430
#1	-.04188	.28523	28.786	.52426	25.532	.25418	.51385
#2	1.4594	.24006	28.438	.51793	25.315	.25059	.51445
#3	-.10453	-.02116	28.413	.52158	25.538	.24874	.51213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126208PS Acquired: 6/3/2013 12:32:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.130**	**.26378**	**37.187**	**.26489**	F **-34.686**	F **952.35**	F **-31285.**
Stddev	.209	.00070	6.739	.00163	4.747	2.88	83.
%RSD	.40917	.26641	18.122	.61495	13.686	.30263	.26604
#1	51.362	.26389	41.662	.26454	-33.484	953.29	-31345.
#2	50.957	.26442	40.461	.26666	-30.656	954.64	-31319.
#3	51.070	.26303	29.436	.26346	-39.919	949.11	-31190.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.63585**	**.20598**	**5.9741**	**.53772**	**.73759**	**.50138**	**.26379**
Stddev	.00061	.00090	.0271	.00098	.00223	.00363	.00131
%RSD	.09602	.43911	.45309	.18314	.30269	.72312	.49774
#1	.63604	.20627	5.9993	.53873	.74000	.50344	.26504
#2	.63517	.20496	5.9775	.53765	.73715	.49720	.26242
#3	.63635	.20670	5.9455	.53677	.73560	.50351	.26392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.51662**	**.52936**	F **-.44357**
Stddev	.00178	.00157	.15519
%RSD	.34365	.29747	34.986
#1	.51823	.53069	-.35869
#2	.51692	.52977	-.62269
#3	.51472	.52762	-.34934
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126208PS Acquired: 6/3/2013 12:32:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14347.**	**20130.**
Stddev	45.	214.
%RSD	.31539	1.0612
#1	14325.	19897.
#2	14317.	20178.
#3	14399.	20316.

Approved: June 04, 2013

Sample Name: L1305126208SDL Acquired: 6/3/2013 12:35:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.01161**	**-.00007**	**.06026**	**.01200**	**.00000**	**19.900**
Stddev	.00004	.00419	.00071	.00084	.00015	.00003	.210
%RSD	16.956	36.060	953.10	1.3921	1.2571	947.50	1.0536
#1	-.00027	.00907	-.00081	.06005	.01190	.00001	19.743
#2	-.00027	.00933	.00062	.06118	.01194	.00003	20.138
#3	-.00020	.01645	-.00004	.05954	.01218	-.00003	19.819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**.00050**	**.18865**	**.00034**	**.00478**	**.05127**	**.75051**
Stddev	.00004	.00028	.00058	.00009	.00253	.00173	.52904
%RSD	20.501	56.709	.30949	25.852	52.800	3.3720	70.491
#1	.00024	.00053	.18810	.00030	.00658	.05325	.92031
#2	.00016	.00077	.18858	.00029	.00588	.05052	1.1738
#3	.00022	.00021	.18926	.00045	.00189	.05005	.15742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.96940**	F **-.11368**	**.61221**	**.00311**	**4.7895**	**.00088**	**.00061**
Stddev	1.1448	1.7227	.01910	.00083	.0087	.00002	.00036
%RSD	118.09	1515.4	3.1195	26.683	.18230	1.9959	58.180
#1	2.2866	-.64752	.59159	.00348	4.7950	.00088	.00043
#2	.21399	-1.5063	.62929	.00369	4.7794	.00087	.00038
#3	.40766	1.8128	.61576	.00216	4.7940	.00090	.00102
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013

Sample Name: L1305126208SDL Acquired: 6/3/2013 12:35:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.7368**	**.00021**	**10.828**	**.00002**	F **-71.529**	F **213.02**	F **-6974.2**
Stddev	.0087	.00044	4.866	.00120	51.819	.92	34.9
%RSD	.15136	206.50	44.939	5627.6	72.444	.43399	.49973
#1	5.7325	-.00003	11.793	-.00032	-18.154	213.40	-6934.0
#2	5.7468	-.00005	5.5513	.00136	-74.797	213.69	-6994.7
#3	5.7312	.00073	15.138	-.00097	-121.64	211.96	-6994.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00175**	**.00151**	**.78870**	**-.00039**	**.05308**	**-.00064**	**-.00003**
Stddev	.00090	.00304	.00196	.00029	.00011	.00077	.00146
%RSD	51.495	201.59	.24814	73.973	.19919	120.89	4226.4
#1	.00089	-.00042	.78729	-.00070	.05303	-.00083	.00056
#2	.00167	.00501	.79093	-.00037	.05320	.00021	-.00170
#3	.00269	-.00007	.78787	-.00012	.05300	-.00129	.00103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00026**	**.00941**	F **-.56174**
Stddev	.00036	.00024	.32458
%RSD	137.02	2.5413	57.781
#1	-.00065	.00922	-.73975
#2	-.00019	.00932	-.18710
#3	.00006	.00968	-.75838
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kim H. Rhoden

Sample Name: L1305126208SDL Acquired: 6/3/2013 12:35:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14671.**	**19612.**
Stddev	74.	92.
%RSD	.50373	.46875
#1	14755.	19711.
#2	14620.	19528.
#3	14637.	19598.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 12:39:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41376**	**9.9867**	**.40405**	**.52068**	**1.0240**	**.05083**	F **11.279**
Stddev	.00213	.0667	.00130	.00269	.0021	.00007	.102
%RSD	.51531	.66787	.32186	.51602	.20041	.13852	.90451
#1	.41547	9.9734	.40449	.52207	1.0223	.05085	11.167
#2	.41137	9.9277	.40506	.51758	1.0235	.05075	11.366
#3	.41445	10.059	.40258	.52238	1.0263	.05088	11.305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05111**	**.20364**	**.53029**	**.51044**	**4.1191**	**1.0215**	F **2.3364**
Stddev	.00025	.00057	.00046	.00219	.0084	.0034	.1726
%RSD	.48633	.27904	.08765	.42922	.20388	.33451	7.3857
#1	.05133	.20410	.53035	.51297	4.1147	1.0254	2.1747
#2	.05115	.20381	.52979	.50920	4.1139	1.0198	2.5181
#3	.05084	.20300	.53072	.50915	4.1288	1.0192	2.3165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.60459**	**1.0424**	**51.181**	**1.0073**	**10.151**	**.50559**	**.99529**
Stddev	1.1473	.9152	.021	.0023	.039	.00147	.00500
%RSD	189.76	87.797	.04160	.23236	.38647	.28999	.50190
#1	.31505	.56083	51.163	1.0090	10.121	.50533	1.0002
#2	-.37020	2.0978	51.174	1.0046	10.136	.50428	.99538
#3	1.8689	.46852	51.204	1.0083	10.195	.50717	.99025
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000						
Range	-10.000%						

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 12:39:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.983**	**.52407**	F **6.2185**	**.52699**	F **37.408**	**10.645**	F **8.7095**
Stddev	.106	.00150	7.3117	.00192	18.210	.082	1.4867
%RSD	.20819	.28573	117.58	.36476	48.680	.77127	17.070
#1	50.968	.52560	11.876	.52912	20.532	10.703	8.0033
#2	50.884	.52401	-2.0375	.52644	34.983	10.682	10.418
#3	51.095	.52261	8.8168	.52540	56.709	10.551	7.7075
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2272**	**.40421**	**4.7107**	**.95851**	**1.0131**	**1.0000**	**.52239**
Stddev	.0056	.00561	.0342	.00278	.0036	.0058	.00255
%RSD	.45494	1.3867	.72675	.29013	.35961	.57886	.48899
#1	1.2325	.40643	4.7454	.96060	1.0138	.99345	.52534
#2	1.2277	.40837	4.7096	.95956	1.0092	1.0023	.52099
#3	1.2214	.39783	4.6770	.95535	1.0163	1.0044	.52085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0072**	**1.0645**	F **-.62843**
Stddev	.0047	.0009	.12329
%RSD	.46568	.08317	19.619
#1	1.0107	1.0655	-.51593
#2	1.0019	1.0641	-.60913
#3	1.0092	1.0639	-.76024
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 12:39:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14601.**	**19710.**
Stddev	38.	90.
%RSD	.26345	.45423
#1	14606.	19778.
#2	14636.	19744.
#3	14560.	19609.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 12:42:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.01916**	**.00045**	**.00685**	**.00011**	**-.00002**	**.03411**
Stddev	.00002	.02555	.00108	.00046	.00006	.00001	.01318
%RSD	5.3494	133.34	237.51	6.7646	53.546	37.438	38.633
#1	-.00034	.00166	.00091	.00730	.00015	-.00003	.04890
#2	-.00037	.04847	.00123	.00687	.00004	-.00002	.02362
#3	-.00036	.00735	-.00078	.00638	.00012	-.00001	.02981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.00012**	**.00002**	**.00075**	**.00249**	**.00166**	**-.07993**
Stddev	.00009	.00002	.00007	.00045	.00151	.00201	.09298
%RSD	125.59	15.994	383.38	59.551	60.555	121.06	116.32
#1	.00007	.00010	-.00003	.00101	.00303	.00008	-.18405
#2	.00017	.00012	.00009	.00023	.00079	.00098	-.00517
#3	-.00002	.00014	-.00001	.00101	.00366	.00393	-.05058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.40227**	**.06624**	**.03524**	**.00118**	**-.01940**	**.00009**	**.00124**
Stddev	1.3288	.87061	.02165	.00074	.00676	.00008	.00043
%RSD	330.34	1314.4	61.435	62.569	34.849	96.253	34.231
#1	1.5877	.50066	.04880	.00180	-.01164	.00007	.00100
#2	-1.0342	.63415	.04666	.00139	-.02401	.00017	.00100
#3	.65326	-.93609	.01027	.00036	-.02256	.00001	.00173
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 12:42:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02296**	**.00028**	**-.85970**	**-.00096**	F **3.9224**	**-.04342**	F **1.9883**
Stddev	.00693	.00076	3.1084	.00037	53.386	.03015	1.1294
%RSD	30.168	266.95	361.57	38.740	1361.0	69.437	56.803
#1	.02800	.00045	2.3848	-.00056	-51.791	-.07440	2.0334
#2	.01506	.00095	-3.8111	-.00130	54.629	-.04168	3.0946
#3	.02581	-.00054	-1.1528	-.00101	8.9299	-.01418	.83708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					1.0000		1.0000
Low Limit					-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	**.00031**	**.00058**	**.00011**	**.00126**	**-.00044**	**.00010**
Stddev	.00025	.00072	.00160	.00035	.00006	.00082	.00193
%RSD	19.128	236.24	274.04	306.61	4.7566	188.32	1927.0
#1	.00126	-.00039	-.00109	-.00010	.00133	.00050	.00216
#2	.00157	.00025	.00210	-.00007	.00125	-.00079	-.00167
#3	.00108	.00105	.00074	.00052	.00121	-.00102	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00018**	**-.00047**	F **-.48183**
Stddev	.00020	.00026	.22022
%RSD	109.57	55.558	45.705
#1	-.00001	-.00071	-.53508
#2	.00038	-.00052	-.67055
#3	.00016	-.00019	-.23987
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 12:42:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2453) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14635.**	**19148.**
Stddev	56.	59.
%RSD	.38174	.30698
#1	14626.	19093.
#2	14585.	19210.
#3	14695.	19140.

Approved: June 04, 2013

Sample Name: S0 Acquired: 6/3/2013 13:20:06 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

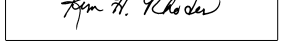
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00188**	**.00071**	**-.00015**	**.00167**	**.00454**	**-.00101**	**-.00064**
Stddev	.00031	.00008	.00004	.00012	.00006	.00019	.00037
%RSD	16.673	11.022	26.916	7.1879	1.2915	18.951	58.020
#1	-.00160	.00080	-.00011	.00157	.00461	-.00079	-.00023
#2	-.00182	.00069	-.00015	.00180	.00450	-.00116	-.00096
#3	-.00222	.00065	-.00019	.00164	.00453	-.00106	-.00073

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00009**	**-.00019**	**.00142**	**.00000**	**.00006**	**.00019**	**.00002**
Stddev	.00014	.00008	.00015	.00001	.00009	.00002	.00013
%RSD	147.56	43.849	10.281	277.94	140.13	11.490	580.41
#1	.00025	-.00028	.00149	.00000	.00007	.00017	-.00001
#2	-.00001	-.00011	.00125	.00000	.00014	.00021	.00016
#3	.00004	-.00019	.00151	.00001	-.00003	.00018	-.00009

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00007**	**-.00038**	**-.00029**	**.00280**	**.00006**	**.00086**	**.00004**
Stddev	.00009	.00025	.00021	.00081	.00009	.00009	.00005
%RSD	130.25	65.847	72.853	28.766	148.33	10.793	122.22
#1	.00004	-.00033	-.00048	.00237	-.00003	.00081	.00000
#2	-.00001	-.00016	-.00031	.00231	.00007	.00097	.00002
#3	.00017	-.00065	-.00007	.00373	.00015	.00080	.00010

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00080**	**-.00047**	**.00016**	**-.00039**	**-.00278**	**-.00032**	**-.00019**
Stddev	.00010	.00005	.00007	.00010	.00015	.00004	.00001
%RSD	12.191	11.042	40.296	26.836	5.3438	11.040	7.3238
#1	.00069	-.00050	.00022	-.00051	-.00262	-.00036	-.00020
#2	.00084	-.00051	.00009	-.00032	-.00280	-.00029	-.00018
#3	.00087	-.00041	.00017	-.00034	-.00292	-.00032	-.00020

Approved: June 04, 2013



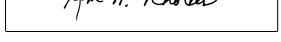
Sample Name: S0 Acquired: 6/3/2013 13:20:06 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**-.00019**	**.00030**	**.00021**	**.00379**	**-.00062**	**-.00016**
Stddev	.00007	.00006	.00004	.00003	.00009	.00010	.00001
%RSD	378.57	29.510	12.937	12.777	2.4087	16.769	7.9127
#1	.00007	-.00016	.00031	.00019	.00388	-.00072	-.00016
#2	-.00006	-.00025	.00033	.00021	.00380	-.00063	-.00016
#3	.00005	-.00015	.00025	.00024	.00370	-.00052	-.00014

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00022**	**-.00013**	**-.00473**
Stddev	.00045	.00003	.00030
%RSD	204.06	19.650	6.2422
#1	.00016	-.00010	-.00439
#2	.00070	-.00016	-.00492
#3	-.00020	-.00014	-.00489

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14058.**	**18287.**
Stddev	54.	71.
%RSD	.38447	.38648
#1	13999.	18365.
#2	14070.	18228.
#3	14105.	18267.

Approved: June 04, 2013



Sample Name: S1 Acquired: 6/3/2013 13:23:43 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00220**	**.00136**	**.02351**	**.00447**	**.00113**	**.00042**	**.00076**
Stddev	.00026	.00023	.00020	.00014	.00017	.00009	.00007
%RSD	11.761	16.980	.86337	3.1575	14.907	20.641	9.4697
#1	.00250	.00124	.02329	.00436	.00130	.00034	.00076
#2	.00212	.00122	.02368	.00442	.00111	.00051	.00083
#3	.00200	.00163	.02357	.00463	.00097	.00041	.00069

Elem	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641	Hf2773	Hf3399
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00474**	**.00079**	**.00126**	**.00028**	**.00004**	**.00003**	**-.00033**
Stddev	.00022	.00006	.00003	.00002	.00004	.00012	.00013
%RSD	4.7232	7.6589	2.7493	7.2028	94.809	437.13	38.359
#1	.00471	.00072	.00130	.00027	.00000	-.00010	-.00039
#2	.00498	.00084	.00125	.00028	.00007	.00013	-.00041
#3	.00453	.00079	.00124	.00030	.00007	.00004	-.00018

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00899**	**.00731**	**.00064**	**.01460**	**.00156**	**.03260**	**.00014**
Stddev	.00015	.00112	.00012	.00007	.00004	.00023	.00006
%RSD	1.6243	15.288	18.509	.50187	2.2885	.71859	42.010
#1	.00916	.00844	.00061	.01452	.00155	.03267	.00008
#2	.00894	.00730	.00077	.01464	.00160	.03233	.00017
#3	.00888	.00620	.00054	.01464	.00153	.03279	.00019

Elem	P_2149	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00021**	**.00011**	**-.00242**	**-.00024**	**-.00020**	**.00043**	**.00111**
Stddev	.00007	.00014	.00046	.00002	.00002	.00007	.00005
%RSD	33.293	131.31	19.078	7.6605	9.4522	16.485	4.5539
#1	.00013	.00021	-.00197	-.00026	-.00022	.00039	.00117
#2	.00027	.00016	-.00289	-.00023	-.00021	.00051	.00107
#3	.00023	-.00005	-.00239	-.00023	-.00018	.00039	.00110

Approved: June 04, 2013
Kyra H. Rhoden

Sample Name: S1 Acquired: 6/3/2013 13:23:43 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00143**	**.02474**	**.00106**	**.01231**	**.00547**	**-.00442**
Stddev	.00003	.00044	.00021	.00050	.00004	.00031
%RSD	1.8017	1.7902	20.186	4.0760	.69858	6.9229
#1	.00143	.02423	.00084	.01198	.00550	-.00461
#2	.00146	.02498	.00126	.01206	.00548	-.00458
#3	.00141	.02502	.00107	.01289	.00543	-.00407

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14501.**	**18776.**
Stddev	43.	46.
%RSD	.29840	.24649
#1	14453.	18817.
#2	14513.	18726.
#3	14536.	18786.

Approved: June 04, 2013

Sample Name: S2 Acquired: 6/3/2013 13:27:18 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00555**	**.00197**	**.00009**	**.00456**	**.04064**	**.00956**	**.00346**
Stddev	.00020	.00017	.00006	.00021	.00020	.00021	.00025
%RSD	3.5865	8.7102	63.362	4.6541	.48103	2.1784	7.0928
#1	.00558	.00212	.00015	.00441	.04073	.00975	.00352
#2	.00534	.00201	.00008	.00447	.04042	.00958	.00366
#3	.00573	.00178	.00004	.00480	.04077	.00934	.00319

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00077**	**.00154**	**.00846**	**.00150**	**.00231**	**.00047**	**.00005**
Stddev	.00009	.00011	.00006	.00003	.00007	.00005	.00006
%RSD	11.876	6.9054	.67928	1.7103	2.9917	9.7192	119.74
#1	.00087	.00166	.00839	.00147	.00233	.00042	-.00001
#2	.00075	.00149	.00849	.00150	.00236	.00051	.00006
#3	.00069	.00147	.00849	.00152	.00223	.00049	.00011

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**-.00041**	**.01834**	**.01096**	**.00135**	**.02760**	**.00308**
Stddev	.00007	.00016	.00103	.00031	.00002	.00019	.00005
%RSD	109.99	40.412	5.6080	2.8489	1.8338	.67950	1.7669
#1	-.00002	-.00022	.01802	.01126	.00136	.02758	.00312
#2	.00009	-.00052	.01751	.01064	.00132	.02780	.00311
#3	.00011	-.00048	.01949	.01097	.00136	.02743	.00302

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06258**	**.00075**	**.00018**	**.00042**	**-.00215**	**-.00019**	**-.00018**
Stddev	.00015	.00005	.00005	.00021	.00013	.00002	.00002
%RSD	.23881	6.5725	27.962	49.376	5.8695	8.0332	12.202
#1	.06275	.00069	.00015	.00036	-.00214	-.00018	-.00019
#2	.06249	.00077	.00024	.00025	-.00229	-.00018	-.00019
#3	.06249	.00078	.00015	.00066	-.00203	-.00020	-.00015

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: S2 Acquired: 6/3/2013 13:27:18 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00084**	**-.00008**	**.00187**	**.00269**	**.04519**	**.00285**	**.00011**
Stddev	.00006	.00004	.00002	.00003	.00031	.00023	.00003
%RSD	7.3551	45.662	1.2404	1.0384	.69494	8.2171	28.051
#1	.00080	-.00012	.00185	.00272	.04532	.00282	.00008
#2	.00091	-.00005	.00186	.00266	.04483	.00263	.00014
#3	.00081	-.00008	.00189	.00269	.04541	.00310	.00010

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.02489**	**.01096**	**-.00428**
Stddev	.00018	.00011	.00011
%RSD	.72441	1.0443	2.5868
#1	.02477	.01108	-.00416
#2	.02509	.01096	-.00438
#3	.02479	.01085	-.00430

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14612.**	**19411.**
Stddev	42.	84.
%RSD	.29033	.43469
#1	14570.	19406.
#2	14610.	19329.
#3	14655.	19498.

Approved: June 04, 2013

Sample Name: S3 Acquired: 6/3/2013 13:30:54 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

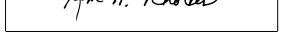
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.46233**	**.07942**	**.01642**	**.18531**	**2.2468**	**.63104**	**.24026**
Stddev	.00218	.00105	.00011	.00154	.0222	.00558	.00297
%RSD	.47219	1.3251	.68105	.83069	.98678	.88382	1.2375
#1	.45986	.08020	.01635	.18354	2.2699	.62467	.24366
#2	.46313	.07984	.01637	.18612	2.2449	.63507	.23893
#3	.46401	.07823	.01655	.18628	2.2256	.63337	.23818

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04468**	**.10317**	**.42173**	**.09256**	**.13993**	**.01900**	**.00029**
Stddev	.00031	.00059	.00313	.00056	.00131	.00014	.00005
%RSD	.69098	.57580	.74305	.60740	.93300	.73897	15.607
#1	.04438	.10273	.41816	.09215	.14131	.01884	.00032
#2	.04467	.10295	.42402	.09233	.13976	.01907	.00032
#3	.04500	.10385	.42302	.09320	.13872	.01909	.00024

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00004**	**-.00051**	**1.1744**	**.51700**	**.07894**	**1.5537**	**.18570**
Stddev	.00006	.00020	.0107	.00537	.00062	.0066	.00057
%RSD	154.08	38.505	.91142	1.0394	.78332	.42206	.30616
#1	-.00002	-.00058	1.1861	.52263	.07965	1.5612	.18522
#2	.00011	-.00066	1.1718	.51643	.07850	1.5505	.18555
#3	.00004	-.00029	1.1652	.51193	.07868	1.5493	.18633

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.9199**	**.07228**	**.00023**	**.04434**	**-.00262**	**.00565**	**-.00035**
Stddev	.0358	.00050	.00005	.00019	.00096	.00002	.00003
%RSD	.91323	.68854	19.895	.42476	36.693	.40501	8.5632
#1	3.9577	.07191	.00027	.04432	-.00178	.00567	-.00034
#2	3.9156	.07210	.00018	.04417	-.00367	.00565	-.00038
#3	3.8865	.07285	.00024	.04454	-.00242	.00562	-.00032

Approved: June 04, 2013



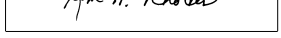
Sample Name: S3 Acquired: 6/3/2013 13:30:54 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.05593**	**.00853**	**.09658**	**.14893**	**2.6513**	**.22273**	**.01556**
Stddev	.00020	.00007	.00034	.00063	.0260	.00164	.00008
%RSD	.35188	.77051	.35072	.42258	.98134	.73568	.50628
#1	.05572	.00847	.09677	.14820	2.6777	.22451	.01547
#2	.05595	.00852	.09619	.14923	2.6506	.22241	.01557
#3	.05611	.00860	.09678	.14935	2.6256	.22128	.01562

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**1.4967**	**.65503**	**-.00356**
Stddev	.0105	.00489	.00059
%RSD	.70411	.74685	16.599
#1	1.4845	.64948	-.00297
#2	1.5024	.65693	-.00356
#3	1.5032	.65869	-.00415

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14488.**	**19471.**
Stddev	84.	138.
%RSD	.57918	.70920
#1	14584.	19313.
#2	14450.	19566.
#3	14429.	19535.

Approved: June 04, 2013



Sample Name: S4 Acquired: 6/3/2013 13:34:11 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.93072**	**.15827**	**.03335**	**.37276**	**4.4934**	**1.2695**	**.48536**
Stddev	.00165	.00011	.00008	.00101	.0221	.0033	.00564
%RSD	.17685	.07218	.23877	.27101	.49225	.26000	1.1614
#1	.93077	.15836	.03340	.37333	4.5104	1.2713	.48899
#2	.92905	.15830	.03325	.37159	4.4684	1.2657	.47887
#3	.93234	.15814	.03338	.37335	4.5013	1.2715	.48823

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.09034**	**.20587**	**.84666**	**.18419**	**.27974**	**.03787**	**.00047**
Stddev	.00032	.00023	.00220	.00041	.00180	.00012	.00005
%RSD	.35056	.11257	.25957	.22234	.64388	.30993	10.323
#1	.09058	.20587	.84915	.18454	.28122	.03794	.00051
#2	.08998	.20563	.84586	.18374	.27773	.03794	.00042
#3	.09047	.20609	.84498	.18429	.28027	.03774	.00047

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00017**	**-.00060**	**2.3467**	**1.0253**	**.15782**	**3.0701**	**.37307**
Stddev	.00006	.00003	.0198	.0057	.00138	.0332	.00055
%RSD	35.829	4.1472	.84458	.55165	.87712	1.0803	.14815
#1	.00011	-.00061	2.3667	1.0312	.15871	3.0981	.37360
#2	.00023	-.00058	2.3271	1.0199	.15622	3.0335	.37312
#3	.00017	-.00063	2.3463	1.0247	.15852	3.0786	.37250

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.8161**	**.14510**	**.00033**	**.08917**	**-.00161**	**.01151**	**-.00055**
Stddev	.0319	.00028	.00005	.00058	.00031	.00011	.00003
%RSD	.40825	.19358	14.669	.64736	19.550	.96899	5.4252
#1	7.8484	.14521	.00028	.08928	-.00127	.01144	-.00052
#2	7.7846	.14478	.00034	.08854	-.00167	.01145	-.00055
#3	7.8151	.14531	.00037	.08968	-.00189	.01163	-.00058

Approved: June 04, 2013

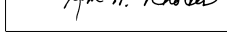
Sample Name: S4 Acquired: 6/3/2013 13:34:11 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2454) Mode: IR Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.11313**	**.01760**	**.19207**	**.29715**	**5.3066**	**.44296**	**.03094**
Stddev	.00015	.00003	.00090	.00095	.0136	.00361	.00018
%RSD	.13316	.17079	.46618	.31903	.25630	.81426	.57869
#1	.11321	.01763	.19305	.29729	5.3139	.44685	.03112
#2	.11296	.01757	.19186	.29614	5.2909	.43972	.03076
#3	.11323	.01760	.19130	.29802	5.3149	.44232	.03093

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**2.9989**	**1.3251**	**-.00413**
Stddev	.0126	.0043	.00063
%RSD	.41915	.32819	15.269
#1	3.0030	1.3228	-.00443
#2	2.9848	1.3224	-.00455
#3	3.0090	1.3301	-.00340

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14226.**	**19283.**
Stddev	40.	168.
%RSD	.28302	.87265
#1	14234.	19147.
#2	14262.	19471.
#3	14183.	19230.

Approved: June 04, 2013



Sample Name: ICV Acquired: 6/3/2013 13:37:28 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41056**	**10.237**	**.41101**	**.50390**	**1.0215**	**.05049**	**10.363**
Stddev	.00175	.078	.00399	.00340	.0100	.00039	.200
%RSD	.42523	.76632	.97085	.67462	.97516	.76483	1.9316
#1	.40897	10.153	.41000	.50035	1.0110	.05004	10.170
#2	.41243	10.248	.40763	.50712	1.0309	.05068	10.570
#3	.41028	10.308	.41541	.50424	1.0225	.05073	10.349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05080**	**.20529**	**.50977**	**.51301**	**4.1142**	**1.0218**	F **.94085**
Stddev	.00035	.00165	.00391	.00380	.0412	.0102	.45045
%RSD	.68633	.80436	.76775	.74147	1.0021	.99670	47.876
#1	.05053	.20388	.50536	.51005	4.0681	1.0102	1.1962
#2	.05068	.20487	.51283	.51169	4.1474	1.0261	1.2056
#3	.05119	.20710	.51111	.51730	4.1272	1.0292	.42075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-5.0000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-4.1950**	F **1.2055**	**51.508**	**1.0245**	**10.446**	**.52088**	**.99849**
Stddev	17.603	1.3582	.647	.0112	.198	.00782	.00545
%RSD	419.61	112.67	1.2563	1.0926	1.8909	1.5011	.54543
#1	-23.522	2.4609	50.834	1.0129	10.223	.51272	.99343
#2	.0162	1.3918	52.125	1.0352	10.600	.52831	.99778
#3	10.920	-.23631	51.565	1.0256	10.515	.52160	1.0043
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-5.0000%	5.0000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICV Acquired: 6/3/2013 13:37:28 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.054**	**.51288**	F **6.2398**	**.51163**	F **10.903**	**10.313**	F **6.7940**
Stddev	.460	.00322	3.0947	.00213	3.227	.054	1.5135
%RSD	.90073	.62690	49.596	.41705	29.597	.52839	22.277
#1	50.563	.50986	7.7293	.50918	7.1807	10.347	7.9716
#2	51.474	.51253	8.3081	.51307	12.907	10.341	7.3236
#3	51.126	.51626	2.6820	.51263	12.622	10.250	5.0869
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-5.0000%		5.0000%		-5.0000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2190**	**.41243**	**4.9687**	**.96192**	**1.0155**	**1.0323**	**.52268**
Stddev	.0066	.00257	.0395	.00248	.0084	.0148	.00170
%RSD	.53930	.62282	.79418	.25764	.82417	1.4341	.32491
#1	1.2135	.41185	4.9560	.95940	1.0065	1.0163	.52088
#2	1.2172	.41019	4.9372	.96200	1.0229	1.0455	.52291
#3	1.2263	.41523	5.0130	.96435	1.0172	1.0351	.52425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0035**	**1.0296**	F **-.22915**
Stddev	.0058	.0029	.54914
%RSD	.58013	.27906	239.64
#1	.99686	1.0264	-.79918
#2	1.0076	1.0318	.29639
#3	1.0060	1.0308	-.18465
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-5.0000%

Approved: June 04, 2013

Sample Name: ICV Acquired: 6/3/2013 13:37:28 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14430.**	**18955.**
Stddev	75.	255.
%RSD	.52167	1.3466
#1	14516.	19225.
#2	14390.	18717.
#3	14382.	18923.

Approved: June 04, 2013

Sample Name: ICB Acquired: 6/3/2013 13:40:48 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00957**	**.00097**	**.00198**	**.00001**	**.00000**	**.00377**
Stddev	.00043	.01256	.00132	.00026	.00013	.00001	.00507
%RSD	154.53	131.25	135.79	12.909	1311.1	292.97	134.41
#1	.00077	-.00341	.00161	.00212	.00004	-.00001	.00566
#2	.00015	.02167	.00186	.00168	.00012	.00001	.00763
#3	-.00007	.01046	-.00055	.00214	-.00013	.00001	-.00197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00019**	**-.00023**	**.00057**	**-.00055**	**-.00210**	**-.08389**
Stddev	.00002	.00012	.00052	.00030	.00080	.00668	.25751
%RSD	155.90	60.460	223.90	53.108	145.37	318.75	306.97
#1	.00004	.00006	.00024	.00039	-.00002	-.00593	-.21343
#2	.00001	.00027	-.00014	.00091	-.00016	.00562	.21267
#3	.00000	.00025	-.00080	.00039	-.00148	-.00597	-.25090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **3.9188**	F **.32214**	**.04685**	**-.00145**	**-.00284**	**.00010**	**.00185**
Stddev	24.839	.88185	.03047	.00220	.00650	.00005	.00066
%RSD	633.85	273.75	65.022	152.10	228.67	52.529	35.488
#1	-6.0447	.78311	.08177	-.00027	-.00565	.00015	.00130
#2	-14.392	-.69466	.03311	-.00399	-.00746	.00007	.00168
#3	32.193	.87797	.02568	-.00008	.00459	.00007	.00258
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: ICB Acquired: 6/3/2013 13:40:48 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00374**	**-.00011**	F **4.0031**	**.00132**	F **11.929**	F **.04342**	F **1.9873**
Stddev	.01321	.00043	2.5639	.00149	4.764	.00325	5.0430
%RSD	352.77	403.61	64.048	112.22	39.934	7.4949	253.76
#1	.01745	-.00057	5.9562	.00278	7.8771	.04576	3.8315
#2	-.00891	.00028	1.0997	-.00019	17.177	.04480	5.8488
#3	.00269	-.00004	4.9532	.00138	10.733	.03970	-3.7182
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00063**	**-.00054**	**.00121**	**.00026**	**-.00019**	**.00012**	**.00010**
Stddev	.00235	.00387	.00093	.00047	.00005	.00093	.00101
%RSD	372.33	714.35	76.416	179.82	25.156	758.26	1053.6
#1	-.00312	-.00434	.00073	.00001	-.00020	.00045	.00124
#2	-.00032	.00340	.00063	-.00003	-.00014	-.00092	-.00066
#3	.00155	-.00069	.00228	.00081	-.00024	.00084	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00017**	**.00064**	F **.11255**
Stddev	.00011	.00028	.59716
%RSD	63.729	43.819	530.58
#1	.00006	.00052	.76837
#2	.00019	.00045	-.03089
#3	.00027	.00097	-.39983
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyra H. Rhoden

Sample Name: ICB Acquired: 6/3/2013 13:40:48 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14595.**	**19380.**
Stddev	62.	99.
%RSD	.42460	.50849
#1	14553.	19363.
#2	14666.	19291.
#3	14565.	19486.

Approved: June 04, 2013

Sample Name: ICSA Acquired: 6/3/2013 13:44:25 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**258.16**	**-.00467**	**.00828**	**.00025**	**.00000**	**253.93**
Stddev	.00049	3.41	.00150	.00049	.00008	.00002	1.85
%RSD	157.59	1.3199	32.203	5.9227	32.773	550.77	.72777
#1	.00087	254.51	-.00594	.00867	.00023	.00001	252.38
#2	-.00003	258.73	-.00505	.00773	.00035	.00002	253.43
#3	.00008	261.25	-.00301	.00844	.00019	-.00002	255.97
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00017**	**-.00043**	**-.00220**	**97.926**	F **.24540**	F **18.560**
Stddev	.00012	.00016	.00019	.00018	.998	.00336	.491
%RSD	88.760	91.892	45.039	8.4056	1.0195	1.3706	2.6475
#1	.00019	.00004	-.00043	-.00200	96.968	.24203	19.063
#2	.00000	.00035	-.00024	-.00237	97.849	.24542	18.538
#3	.00021	.00013	-.00063	-.00222	98.960	.24875	18.081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						.10000	.10000
Low Limit						-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-35.637**	F **10.583**	**.02260**	**.00493**	**254.30**	**.00006**	**-.00112**
Stddev	9.589	2.348	.01883	.00079	2.20	.00004	.00029
%RSD	26.907	22.185	83.327	16.060	.86450	66.465	26.060
#1	-42.476	9.9786	.02537	.00471	252.27	.00004	-.00088
#2	-39.759	8.5966	.03989	.00426	254.01	.00011	-.00144
#3	-24.677	13.174	.00253	.00580	256.64	.00003	-.00103
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICSA Acquired: 6/3/2013 13:44:25 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00233**	**-.00130**	F **-100.41**	**.00112**	F **11.236**	F **238.15**	F **78.412**
Stddev	.00282	.00046	5.89	.00120	6.265	1.37	.652
%RSD	120.71	35.006	5.8689	106.79	55.757	.57673	.83120
#1	-.00238	-.00171	-97.730	.00152	17.941	236.69	78.572
#2	-.00513	-.00081	-107.17	-.00022	10.236	239.42	78.969
#3	.00050	-.00139	-96.336	.00208	5.5314	238.33	77.695
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000		.04000	.04000	.04000
Low Limit			-.50000		-.04000	-.04000	-.04000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00814**	**-.00136**	**.05671**	**.01447**	**-.00042**	**-.00349**	**.00059**
Stddev	.00297	.00050	.00316	.00021	.00006	.00036	.00168
%RSD	36.522	37.083	5.5653	1.4504	15.517	10.376	282.74
#1	-.00820	-.00163	.05770	.01462	-.00046	-.00333	.00182
#2	-.00513	-.00078	.05317	.01457	-.00034	-.00323	.00128
#3	-.01107	-.00166	.05925	.01423	-.00045	-.00390	-.00132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00099**	**.00397**	F **-16.950**
Stddev	.00010	.00007	.137
%RSD	10.091	1.7172	.80819
#1	.00110	.00396	-16.792
#2	.00090	.00404	-17.035
#3	.00097	.00391	-17.023
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICSA Acquired: 6/3/2013 13:44:25 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13992.**	**19348.**
Stddev	113.	107.
%RSD	.80650	.55139
#1	14085.	19409.
#2	13866.	19411.
#3	14023.	19225.

Approved: June 04, 2013

Sample Name: ICSAB Acquired: 6/3/2013 13:47:50 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50932**	**255.46**	**.24852**	**.00110**	**.24996**	**.24187**	**254.08**
Stddev	.00175	2.64	.00073	.00064	.00278	.00116	3.07
%RSD	.34293	1.0349	.29258	58.023	1.1118	.47866	1.2080
#1	.50944	253.54	.24857	.00049	.24737	.24288	251.04
#2	.51100	254.35	.24922	.00105	.24960	.24213	254.02
#3	.50751	258.47	.24777	.00176	.25289	.24061	257.17
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.45210**	**.24271**	**.24688**	**.24093**	**97.280**	F **.21366**	F **18.934**
Stddev	.00282	.00079	.00106	.00135	1.109	.00548	.449
%RSD	.62355	.32572	.42844	.56077	1.1397	2.5650	2.3726
#1	.45519	.24360	.24776	.24249	96.289	.21449	18.529
#2	.45145	.24246	.24716	.24007	97.073	.20781	18.856
#3	.44967	.24208	.24570	.24024	98.478	.21868	19.417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						.10000	.10000
Low Limit						-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-54.051**	F **11.354**	**5.1853**	**.00407**	**251.98**	**.24072**	**-.00117**
Stddev	20.693	.818	.0688	.00141	2.25	.00133	.00044
%RSD	38.285	7.2004	1.3261	34.617	.89418	.55265	37.797
#1	-30.169	12.054	5.1309	.00568	250.17	.24067	-.00109
#2	-65.324	11.552	5.1623	.00306	251.27	.23941	-.00077
#3	-66.661	10.456	5.2626	.00347	254.51	.24207	-.00164
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICSAB Acquired: 6/3/2013 13:47:50 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0909**	**.47687**	F **-112.57**	**.48011**	F **13.101**	F **237.54**	F **79.490**
Stddev	.0586	.00246	7.75	.00413	1.149	.95	1.928
%RSD	1.1513	.51690	6.8829	.86105	8.7724	.39899	2.4249
#1	5.0414	.47896	-111.27	.48384	12.717	238.05	79.203
#2	5.0757	.47749	-105.55	.48083	12.193	238.14	77.722
#3	5.1556	.47415	-120.89	.47566	14.393	236.45	81.545
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000		.60000	.60000	.60000
Low Limit			-.50000		.40000	.40000	.40000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48951**	**.24384**	**-.00706**	**.00111**	**-.00041**	**-.00349**	**.47085**
Stddev	.00519	.00112	.00204	.00012	.00000	.00089	.00472
%RSD	1.0604	.45990	28.958	10.930	.22937	25.406	1.0022
#1	.49511	.24282	-.00603	.00098	-.00041	-.00448	.47630
#2	.48486	.24366	-.00941	.00114	-.00041	-.00277	.46815
#3	.48855	.24504	-.00573	.00121	-.00041	-.00321	.46811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.24860**	**.47685**	F **-16.935**
Stddev	.00112	.00212	.315
%RSD	.45047	.44499	1.8586
#1	.24974	.47779	-16.940
#2	.24857	.47834	-17.247
#3	.24750	.47442	-16.617
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: ICSAB Acquired: 6/3/2013 13:47:50 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13858.**	**19045.**
Stddev	54.	114.
%RSD	.38657	.59895
#1	13826.	19099.
#2	13829.	19122.
#3	13920.	18914.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 13:51:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40422**	**10.114**	**.40436**	**.50581**	**1.0073**	**.05041**	**10.220**
Stddev	.00120	.065	.00329	.00171	.0037	.00029	.061
%RSD	.29721	.64653	.81283	.33775	.36532	.57016	.59271
#1	.40516	10.088	.40769	.50747	1.0056	.05074	10.153
#2	.40286	10.065	.40428	.50406	1.0049	.05021	10.235
#3	.40464	10.188	.40111	.50588	1.0116	.05027	10.271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05084**	**.20465**	**.50901**	**.51173**	**4.0866**	**1.0184**	F **.70533**
Stddev	.00045	.00158	.00121	.00358	.0177	.0079	.12972
%RSD	.87798	.77059	.23722	.69973	.43330	.77280	18.392
#1	.05135	.20646	.50986	.51584	4.0790	1.0274	.80082
#2	.05064	.20361	.50956	.50923	4.0741	1.0127	.75754
#3	.05053	.20388	.50763	.51014	4.1069	1.0152	.55764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-13.161**	F **1.3607**	**50.955**	**1.0077**	**10.199**	**.51652**	**1.0070**
Stddev	9.389	1.8061	.193	.0034	.007	.00230	.0047
%RSD	71.344	132.74	.37781	.34024	.06929	.44589	.46312
#1	-10.705	3.1556	51.043	1.0072	10.202	.51848	1.0123
#2	-23.534	1.3829	50.734	1.0045	10.191	.51710	1.0052
#3	-5.2436	-.45643	51.088	1.0113	10.204	.51398	1.0035
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 13:51:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.600**	**.51245**	**9.2572**	**.51434**	F **16.964**	**10.197**	F **15.698**
Stddev	.200	.00232	1.1780	.00301	5.626	.090	1.463
%RSD	.39606	.45340	12.726	.58440	33.165	.88022	9.3211
#1	50.569	.51509	9.5036	.51707	15.497	10.278	16.158
#2	50.416	.51073	10.293	.51112	23.177	10.100	14.060
#3	50.813	.51153	7.9755	.51483	12.216	10.212	16.876
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value					10.000		10.000
Range					10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2120**	**.41147**	**5.0114**	**.93275**	**1.0054**	**1.0154**	**.51898**
Stddev	.0010	.00125	.0401	.00368	.0050	.0034	.00177
%RSD	.08533	.30416	.79940	.39494	.49266	.33297	.34114
#1	1.2125	.41050	5.0529	.93659	1.0025	1.0175	.52100
#2	1.2126	.41103	5.0082	.92924	1.0025	1.0115	.51770
#3	1.2108	.41289	4.9730	.93242	1.0111	1.0171	.51823
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0081**	**1.0276**	F **.10643**
Stddev	.0045	.0053	.38193
%RSD	.44850	.51105	358.86
#1	1.0133	1.0323	.50954
#2	1.0051	1.0219	-.25003
#3	1.0059	1.0286	.05977
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 13:51:19 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14325.**	**18970.**
Stddev	53.	16.
%RSD	.37014	.08523
#1	14279.	18976.
#2	14383.	18982.
#3	14312.	18951.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 13:54:45 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**-.00524**	**.00068**	**.00101**	**-.00001**	**.00001**	**-.00817**
Stddev	.00013	.01512	.00182	.00073	.00020	.00003	.00669
%RSD	123.51	288.47	265.89	72.415	2066.7	214.77	81.810
#1	.00023	-.02073	-.00015	.00067	.00021	.00000	-.00418
#2	.00011	-.00448	.00277	.00050	-.00018	.00004	-.00445
#3	-.00003	.00948	-.00057	.00184	-.00006	.00000	-.01589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00010**	**-.00017**	**-.00001**	**.00392**	**-.00122**	F **.29461**
Stddev	.00009	.00014	.00018	.00059	.00025	.00209	.37422
%RSD	2047.4	137.22	105.29	4025.7	6.3190	171.46	127.02
#1	-.00008	-.00005	.00003	-.00070	.00383	.00119	.65481
#2	.00000	.00015	-.00024	.00031	.00420	-.00229	-.09220
#3	.00009	.00022	-.00031	.00034	.00373	-.00256	.32124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-9.2079**	F **-.48201**	**.04101**	**-.00167**	**.01525**	**.00002**	**.00182**
Stddev	5.5061	1.7331	.02251	.00202	.01800	.00003	.00080
%RSD	59.798	359.55	54.890	120.75	118.01	109.61	44.276
#1	-8.5118	-1.3925	.02140	.00010	.03569	.00003	.00111
#2	-4.0829	1.5165	.06559	-.00125	.00173	.00005	.00165
#3	-15.029	-1.5701	.03604	-.00386	.00834	.00000	.00269
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 13:54:45 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01295**	**.00013**	F **3.2648**	**.00092**	F **16.402**	F **-.05453**	F **4.0184**
Stddev	.00942	.00045	3.9859	.00219	6.289	.03735	1.6024
%RSD	72.711	343.14	122.09	237.31	38.345	68.498	39.876
#1	-.01090	.00022	7.8637	.00336	23.649	-.09252	5.4725
#2	-.02322	.00052	1.1221	.00030	13.194	-.01786	2.3004
#3	-.00473	-.00035	.80849	-.00089	12.363	-.05321	4.2822
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00068**	**.00043**	**.00129**	**.00051**	**-.00019**	**-.00085**	**-.00091**
Stddev	.00167	.00189	.00095	.00043	.00005	.00029	.00048
%RSD	245.24	434.80	73.683	84.665	27.220	33.647	52.206
#1	-.00075	-.00052	.00045	.00010	-.00017	-.00118	-.00063
#2	.00027	.00261	.00109	.00047	-.00015	-.00066	-.00146
#3	.00252	-.00079	.00233	.00096	-.00025	-.00072	-.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00006**	**.00024**	**.06645**
Stddev	.00009	.00038	.30184
%RSD	151.87	159.29	454.23
#1	.00014	-.00002	-.27987
#2	.00007	.00006	.27359
#3	-.00003	.00068	.20563
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 13:54:45 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14339.**	**18558.**
Stddev	47.	120.
%RSD	.32847	.64849
#1	14318.	18537.
#2	14393.	18449.
#3	14307.	18687.

Approved: June 04, 2013

Sample Name: PBW 86 Acquired: 6/3/2013 13:58:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.02603**	**.00091**	**.00001**	**.00026**	**.00002**	**.04057**
Stddev	.00028	.00958	.00055	.00087	.00009	.00001	.00546
%RSD	95.539	36.827	60.193	12792.	35.510	64.824	13.460
#1	.00021	.01892	.00065	.00015	.00036	.00004	.04222
#2	.00061	.02223	.00155	-.00093	.00018	.00002	.03448
#3	.00007	.03693	.00055	.00080	.00024	.00001	.04502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00016**	**-.00024**	**-.00017**	**.00639**	**-.00438**	**-.08999**
Stddev	.00003	.00013	.00029	.00025	.00369	.00044	.13829
%RSD	50.730	77.079	121.88	145.80	57.729	9.9779	153.66
#1	.00002	.00011	-.00019	-.00036	.00788	-.00391	.06601
#2	.00007	.00007	-.00055	-.00027	.00219	-.00477	-.13849
#3	.00008	.00031	.00003	.00011	.00910	-.00447	-.19750
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.941**	**-.08179**	**.02941**	**-.00190**	**.00242**	**.00023**	**-.00001**
Stddev	22.698	.39025	.01534	.00201	.00565	.00003	.00015
%RSD	142.39	477.14	52.159	105.94	233.47	14.530	1443.3
#1	-8.4417	-.24636	.02547	-.00422	.00104	.00024	.00015
#2	36.457	.36379	.01642	-.00060	.00864	.00019	-.00003
#3	19.806	-.36279	.04633	-.00088	-.00241	.00025	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013

Sample Name: PBW 86 Acquired: 6/3/2013 13:58:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00203**	**.00017**	**9.7191**	**.00041**	F **14.304**	**.09350**	**.52830**
Stddev	.00732	.00056	3.7045	.00093	3.359	.02187	.81888
%RSD	359.71	326.25	38.116	228.99	23.484	23.388	155.00
#1	.00481	-.00039	11.479	.00138	15.928	.10049	.76361
#2	-.00627	.00072	12.216	-.00048	16.543	.06899	1.2038
#3	.00755	.00018	5.4627	.00031	10.441	.11102	-.38247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00097**	**-.00194**	**-.00304**	**-.00114**	**-.00012**	**-.00064**	**-.00037**
Stddev	.00066	.00171	.00148	.00032	.00010	.00003	.00168
%RSD	68.002	87.761	48.596	28.265	82.134	5.0832	455.30
#1	-.00151	-.00305	-.00152	-.00077	-.00001	-.00067	-.00214
#2	-.00117	-.00281	-.00313	-.00129	-.00018	-.00063	-.00017
#3	-.00024	.00002	-.00447	-.00136	-.00016	-.00061	.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00008**	**.00349**	**.62934**
Stddev	.00020	.00003	.33598
%RSD	260.15	.97015	53.386
#1	.00027	.00353	.89557
#2	-.00013	.00349	.25184
#3	.00010	.00346	.74061
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: PBW 86 Acquired: 6/3/2013 13:58:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14582.**	**18759.**
Stddev	20.	54.
%RSD	.13772	.28723
#1	14605.	18797.
#2	14567.	18697.
#3	14574.	18783.

Approved: June 04, 2013

Sample Name: LCSW 86 Acquired: 6/3/2013 14:02:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20561**	**5.0855**	**.20455**	**1.0172**	**.50678**	**.02547**	**5.1863**	**.02567**
Stddev	.00140	.0430	.00103	.0090	.00317	.00011	.0062	.00022
%RSD	.68124	.84583	.50465	.88524	.62466	.43322	.11984	.84545
#1	.20421	5.1287	.20361	1.0110	.50988	.02540	5.1931	.02546
#2	.20561	5.0851	.20440	1.0131	.50692	.02541	5.1810	.02565
#3	.20701	5.0427	.20566	1.0275	.50355	.02560	5.1847	.02590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641	Hf2773	Hf3399
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10373**	**.25699**	**.26105**	**2.0638**	**.52449**	**.28893**	**9.0301**	**.53096**
Stddev	.00073	.00160	.00186	.0142	.00415	.55729	36.913	2.4656
%RSD	.69977	.62149	.71139	.68853	.79154	192.88	408.78	464.38
#1	.10339	.25554	.25914	2.0796	.52299	-.30504	37.153	1.0585
#2	.10323	.25673	.26114	2.0597	.52129	.80033	-32.769	-2.1558
#3	.10456	.25870	.26285	2.0521	.52918	.37149	22.706	2.6901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.939**	**.51221**	**5.2018**	**.26610**	**.51431**	**25.613**	**.26063**	**13.555**
Stddev	.192	.00316	.0227	.00118	.00250	.171	.00197	4.660
%RSD	.74099	.61769	.43566	.44309	.48645	.66883	.75465	34.378
#1	26.148	.51579	5.2158	.26684	.51253	25.789	.25885	8.1748
#2	25.900	.50978	5.1757	.26474	.51323	25.604	.26030	16.328
#3	25.770	.51106	5.2139	.26671	.51717	25.447	.26274	16.161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: LCSW 86 Acquired: 6/3/2013 14:02:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-04

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.26041**	**8.1144**	**5.2482**	**5.2554**	**.60605**	**.20117**	**2.5154**	**.51514**
Stddev	.00254	3.0409	.1031	2.1482	.00553	.00064	.0119	.00402
%RSD	.97528	37.475	1.9642	40.876	.91214	.31588	.47271	.78043
#1	.25748	11.585	5.2071	6.4579	.60121	.20061	2.5077	.51153
#2	.26170	6.8414	5.1720	6.5331	.60486	.20186	2.5094	.51443
#3	.26205	5.9169	5.3655	2.7752	.61208	.20105	2.5291	.51947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50232**	**.51508**	**.26369**	**.51024**	**.51947**	**1.1723**
Stddev	.00297	.00236	.00245	.00353	.00274	.3742
%RSD	.59214	.45742	.92977	.69190	.52777	31.919
#1	.50544	.51734	.26103	.50746	.51678	1.0691
#2	.50201	.51264	.26419	.50905	.51937	.86063
#3	.49952	.51525	.26585	.51421	.52226	1.5873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14337.**	**18691.**
Stddev	71.	77.
%RSD	.49662	.41438
#1	14406.	18616.
#2	14341.	18771.
#3	14264.	18686.

Approved: June 04, 2013

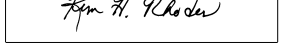
Sample Name: L13051295010.001 Acquired: 6/3/2013 14:05:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 1000 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**.02349**	**.00011**	**.01566**	**.23486**	**.00003**	**71.583**
Stddev	.00038	.00619	.00135	.00073	.00212	.00002	.234
%RSD	278.86	26.332	1285.6	4.6644	.90347	60.006	.32708
#1	-.00052	.02938	-.00116	.01587	.23688	.00002	71.771
#2	-.00012	.01704	-.00006	.01626	.23265	.00002	71.321
#3	.00023	.02406	.00153	.01485	.23504	.00005	71.659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00038**	**.00039**	**.00005**	**.00851**	**7.0200**	**.17755**
Stddev	.00002	.00007	.00021	.00056	.00170	.1067	.22385
%RSD	34.946	19.258	52.690	1139.6	19.932	1.5205	126.08
#1	-.00004	.00037	.00061	-.00058	.00864	6.9284	.01528
#2	-.00008	.00045	.00021	.00023	.01014	6.9943	.08444
#3	-.00007	.00031	.00035	.00050	.00675	7.1372	.43292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.9744**	F **-.77435**	**1.0525**	**.74215**	**.77392**	**.00008**	**.00024**
Stddev	12.184	.92335	.0211	.00696	.00380	.00010	.00023
%RSD	135.77	119.24	2.0027	.93828	.49071	133.04	95.948
#1	11.164	-.21893	1.0702	.74881	.77666	.00009	-.00002
#2	-4.1559	-.26388	1.0580	.73491	.76959	.00017	.00034
#3	19.916	-1.8402	1.0292	.74273	.77553	-.00003	.00040
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013



Sample Name: L13051295010.001 Acquired: 6/3/2013 14:05:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 1000 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6693**	**-.00011**	**15.877**	**.00072**	F **19.498**	F **76.881**	F **-25.292**
Stddev	.0226	.00046	6.344	.00016	1.903	1.428	2.097
%RSD	.84566	406.28	39.958	22.728	9.7604	1.8573	8.2927
#1	2.6915	-.00030	20.976	.00072	21.680	75.659	-24.761
#2	2.6463	.00041	17.883	.00055	18.178	76.533	-27.603
#3	2.6702	-.00045	8.7725	.00088	18.638	78.450	-23.511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00301**	**-.00203**	**-.00340**	**-.00140**	F **6.7493**	**-.00216**	**.00090**
Stddev	.00060	.00317	.00073	.00029	.1516	.00056	.00163
%RSD	19.923	156.08	21.554	21.027	2.2464	25.778	182.36
#1	-.00370	.00107	-.00418	-.00160	6.8899	-.00152	-.00045
#2	-.00264	-.00190	-.00272	-.00154	6.5887	-.00249	.00271
#3	-.00269	-.00527	-.00331	-.00106	6.7694	-.00248	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					4.5000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00002**	**.00114**	F **-.46755**
Stddev	.00019	.00024	.28116
%RSD	1253.5	21.014	60.136
#1	-.00017	.00095	-.28987
#2	.00000	.00106	-.79171
#3	.00021	.00140	-.32107
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L13051295010.001 Acquired: 6/3/2013 14:05:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 1000 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14417.**	**19127.**
Stddev	126.	127.
%RSD	.87523	.66487
#1	14540.	19028.
#2	14422.	19270.
#3	14288.	19081.

Approved: June 04, 2013

Sample Name: L1305126201 Acquired: 6/3/2013 14:09:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00009**	**.00065**	**.05255**	**.00032**	**.00001**	**3.4837**
Stddev	.00025	.01342	.00079	.00016	.00017	.00001	.0361
%RSD	931.01	14795.	121.40	.31307	51.899	129.21	1.0363
#1	.00031	-.01357	.00145	.05263	.00015	.00000	3.5237
#2	-.00006	.01326	.00065	.05236	.00048	.00002	3.4536
#3	-.00017	.00058	-.00014	.05265	.00032	.00000	3.4737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.00035**	**.00015**	**.00027**	**.00484**	**-.00174**	F **-.37786**
Stddev	.00009	.00008	.00001	.00029	.00189	.00715	.15283
%RSD	108.32	22.030	8.6792	107.78	38.913	409.89	40.446
#1	.00000	.00038	.00017	-.00007	.00281	-.00496	-.28463
#2	-.00018	.00040	.00014	.00043	.00519	-.00672	-.55424
#3	-.00008	.00026	.00015	.00044	.00654	.00645	-.29472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-15.343**	F **-.36653**	**.00284**	**-.00023**	**.89653**	**.01553**	**-.00006**
Stddev	11.964	.60289	.00816	.00141	.01514	.00011	.00043
%RSD	77.977	164.49	287.68	609.47	1.6887	.70158	735.56
#1	-19.331	.01612	-.00643	.00067	.87929	.01565	-.00036
#2	-1.8945	-1.0615	.00896	.00049	.90265	.01543	-.00024
#3	-24.804	-.05421	.00598	-.00185	.90765	.01551	.00043
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305126201 Acquired: 6/3/2013 14:09:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5789**	**-.00011**	**9.3350**	**.00087**	F **15.880**	F **78.859**	F **-4172.7**
Stddev	.0139	.00056	1.3473	.00041	8.201	.473	11.9
%RSD	.88092	491.31	14.433	47.405	51.646	.60003	.28478
#1	1.5946	.00053	10.463	.00048	6.4900	78.503	-4171.3
#2	1.5682	-.00047	7.8431	.00130	21.640	79.396	-4185.2
#3	1.5740	-.00040	9.6989	.00082	19.509	78.678	-4161.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00091**	**-.00325**	**.06918**	**-.00123**	**.00405**	**-.00079**	**.00095**
Stddev	.00103	.00054	.00118	.00005	.00022	.00109	.00062
%RSD	112.62	16.736	1.7129	4.3386	5.4518	138.31	65.220
#1	-.00210	-.00388	.06785	-.00129	.00431	-.00006	.00060
#2	-.00043	-.00297	.06955	-.00122	.00392	-.00204	.00167
#3	-.00022	-.00290	.07014	-.00118	.00393	-.00027	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**.00137**	F **-.35026**
Stddev	.00013	.00004	.25187
%RSD	240.89	2.5660	71.911
#1	.00015	.00133	-.12476
#2	.00010	.00137	-.30393
#3	-.00009	.00140	-.62208
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kyra H. Rhoden

Sample Name: L1305126201 Acquired: 6/3/2013 14:09:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14584.**	**19002.**
Stddev	26.	112.
%RSD	.17537	.58999
#1	14597.	18956.
#2	14601.	19129.
#3	14555.	18919.

Approved: June 04, 2013

Sample Name: L1305126203MS Acquired: 6/3/2013 14:12:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00215**	**.05039**	**.00291**	**.05970**	**.00560**	**.00027**	**3.3743**
Stddev	.00049	.01012	.00174	.00044	.00003	.00001	.0096
%RSD	22.717	20.078	59.668	.74232	.44721	3.1291	.28326
#1	.00172	.04087	.00141	.05932	.00561	.00028	3.3817
#2	.00206	.06101	.00251	.05960	.00562	.00027	3.3777
#3	.00268	.04928	.00482	.06019	.00557	.00027	3.3635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00142**	**.00261**	**.00280**	**.02256**	**.00524**	**-.01423**
Stddev	.00005	.00025	.00042	.00070	.00131	.00557	.33563
%RSD	22.326	17.598	16.246	25.039	5.7958	106.38	2359.4
#1	.00021	.00167	.00225	.00308	.02185	.00730	-.40036
#2	.00027	.00143	.00249	.00332	.02176	.00949	.15009
#3	.00017	.00117	.00307	.00200	.02407	-.00107	.20759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-7.1125**	F **-.48583**	**.30717**	**.00566**	**.91820**	**.01672**	**.00398**
Stddev	1.7004	.51646	.03006	.00086	.01085	.00011	.00034
%RSD	23.907	106.30	9.7859	15.215	1.1819	.65243	8.5728
#1	-8.7945	-.97327	.31243	.00664	.93047	.01672	.00432
#2	-5.3944	-.53963	.33426	.00503	.91426	.01682	.00399
#3	-7.1486	.05542	.27483	.00530	.90987	.01660	.00364
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126203MS Acquired: 6/3/2013 14:12:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.7768**	**.00283**	**8.5159**	**.00338**	F **12.036**	F **76.527**	F **-4002.8**
Stddev	.0116	.00005	7.9421	.00162	9.233	.311	13.2
%RSD	.65229	1.6182	93.263	47.831	76.713	.40619	.33067
#1	1.7850	.00287	15.084	.00325	2.7132	76.393	-4009.5
#2	1.7635	.00282	-.31077	.00506	21.176	76.882	-4011.4
#3	1.7818	.00278	10.774	.00183	12.218	76.305	-3987.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00588**	**.00022**	**.09245**	**.00211**	**.00871**	**.00530**	**.00422**
Stddev	.00162	.00186	.00137	.00023	.00001	.00048	.00131
%RSD	27.528	862.65	1.4804	10.717	.13089	9.1118	31.050
#1	.00709	.00026	.09108	.00187	.00871	.00585	.00405
#2	.00650	-.00167	.09382	.00231	.00870	.00493	.00560
#3	.00404	.00205	.09246	.00216	.00872	.00513	.00300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00530**	**.00640**	F **-.19959**
Stddev	.00008	.00013	.12846
%RSD	1.5969	2.0637	64.363
#1	.00523	.00635	-.21471
#2	.00528	.00629	-.06424
#3	.00539	.00655	-.31982
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126203MS Acquired: 6/3/2013 14:12:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14647.**	**18918.**
Stddev	3.	74.
%RSD	.02253	.39027
#1	14644.	18864.
#2	14651.	18888.
#3	14647.	19002.

Approved: June 04, 2013

Sample Name: L1305126205MSD Acquired: 6/3/2013 14:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00239**	**.05825**	**.00280**	**.06025**	**.00555**	**.00028**	**3.3501**
Stddev	.00019	.02993	.00134	.00028	.00013	.00001	.0145
%RSD	7.8844	51.376	47.710	.47263	2.3721	3.7367	.43246
#1	.00259	.06175	.00130	.06002	.00569	.00027	3.3402
#2	.00222	.08628	.00323	.06017	.00543	.00029	3.3667
#3	.00237	.02673	.00387	.06057	.00553	.00027	3.3433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00142**	**.00272**	**.00261**	**.02451**	**.00906**	**-.00941**
Stddev	.00006	.00020	.00015	.00014	.00177	.00429	.29179
%RSD	66.972	14.117	5.4593	5.4320	7.2183	47.277	3100.8
#1	.00016	.00126	.00289	.00274	.02491	.00485	-.17006
#2	.00006	.00136	.00262	.00246	.02604	.01342	.32740
#3	.00006	.00164	.00264	.00264	.02257	.00893	-.18557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.6540**	**1.0016**	**.27698**	**.00669**	**.91079**	**.01760**	**.00411**
Stddev	12.672	.4479	.02863	.00090	.01162	.00007	.00032
%RSD	165.56	44.722	10.336	13.459	1.2755	.39029	7.6774
#1	-6.8301	1.4248	.28539	.00682	.91260	.01764	.00427
#2	16.697	1.0475	.24509	.00573	.92140	.01752	.00432
#3	13.096	.53245	.30046	.00752	.89838	.01763	.00375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126205MSD Acquired: 6/3/2013 14:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-06

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.7817**	**.00221**	**9.5312**	**.00303**	**4.4849**	F **77.515**	F **-4034.9**
Stddev	.0118	.00048	2.9755	.00099	7.2378	.337	5.1
%RSD	.66022	21.764	31.219	32.693	161.38	.43423	.12680
#1	1.7939	.00256	11.793	.00410	4.1760	77.678	-4040.8
#2	1.7809	.00242	10.640	.00215	-2.5936	77.739	-4031.9
#3	1.7704	.00166	6.1605	.00283	11.872	77.128	-4032.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00349**	**-.00112**	**.09556**	**.00230**	**.00848**	**.00489**	**.00378**
Stddev	.00154	.00113	.00206	.00029	.00006	.00138	.00034
%RSD	44.266	100.80	2.1584	12.467	.75823	28.324	9.0587
#1	.00172	.00013	.09318	.00257	.00846	.00535	.00342
#2	.00457	-.00206	.09678	.00233	.00855	.00598	.00382
#3	.00416	-.00144	.09672	.00200	.00843	.00333	.00410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00525**	**.00640**	F **-.21774**
Stddev	.00006	.00012	.67987
%RSD	1.1223	1.8982	312.24
#1	.00527	.00638	-.84009
#2	.00518	.00628	-.32098
#3	.00529	.00652	.50784
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305126205MSD Acquired: 6/3/2013 14:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-06

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14725.**	**19092.**
Stddev	31.	74.
%RSD	.21361	.38711
#1	14744.	19066.
#2	14741.	19035.
#3	14688.	19176.

Approved: June 04, 2013

Sample Name: L1305126207 Acquired: 6/3/2013 14:19:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**4.8414**	**.00542**	**.23944**	**.13485**	**.00045**	**84.571**
Stddev	.00010	.0263	.00260	.00127	.00092	.00002	.584
%RSD	15.842	.54315	48.049	.53097	.68378	4.5644	.69112
#1	.00051	4.8654	.00397	.24089	.13588	.00047	85.094
#2	.00063	4.8455	.00842	.23852	.13457	.00044	83.940
#3	.00070	4.8133	.00386	.23890	.13410	.00043	84.678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.00556**	**.87161**	**.01997**	**12.513**	**.27469**	**2.3303**
Stddev	.00007	.00007	.00160	.00020	.070	.00463	.0940
%RSD	10.906	1.2238	.18316	.98453	.55749	1.6867	4.0319
#1	.00073	.00563	.87066	.01980	12.592	.27999	2.2843
#2	.00061	.00555	.87071	.01993	12.489	.27271	2.4384
#3	.00061	.00550	.87345	.02018	12.459	.27138	2.2682
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.576**	**1.7601**	**3.3880**	**.00788**	**23.836**	**1.5614**	**.00124**
Stddev	12.702	1.7771	.0330	.00063	.145	.0156	.00017
%RSD	87.143	100.96	.97533	7.9786	.60758	.99996	13.636
#1	2.2464	2.4766	3.3988	.00858	23.883	1.5758	.00110
#2	13.861	3.0672	3.3509	.00736	23.674	1.5448	.00143
#3	27.620	-.26338	3.4143	.00770	23.952	1.5637	.00120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126207 Acquired: 6/3/2013 14:19:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.425**	**.01879**	F **749.70**	**.01444**	**4.9511**	F **936.80**	F **-47183.**
Stddev	.147	.00015	2.97	.00147	4.6202	4.07	110.
%RSD	.55753	.78669	.39561	10.150	93.318	.43490	.23218
#1	26.586	.01868	753.02	.01361	10.256	932.10	-47299.
#2	26.392	.01873	748.77	.01613	2.7849	938.90	-47081.
#3	26.297	.01896	747.32	.01357	1.8119	939.39	-47170.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit			450.00			9.0000	9.0000
Low Limit			-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00513**	**-.00037**	**9.5065**	**.00092**	**.24210**	**.06230**	**.00171**
Stddev	.00134	.00098	.0376	.00005	.00156	.00088	.00203
%RSD	26.117	268.20	.39522	5.3902	.64371	1.4202	118.76
#1	.00647	.00039	9.4639	.00098	.24351	.06139	.00306
#2	.00379	-.00147	9.5349	.00091	.24235	.06236	.00270
#3	.00513	-.00001	9.5207	.00088	.24043	.06315	-.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00938**	**.12397**	**.05252**
Stddev	.00008	.00051	.57702
%RSD	.85905	.40989	1098.6
#1	.00945	.12378	-.60919
#2	.00939	.12359	.31591
#3	.00929	.12455	.45086
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126207 Acquired: 6/3/2013 14:19:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14276.**	**19267.**
Stddev	38.	163.
%RSD	.26809	.84852
#1	14241.	19145.
#2	14317.	19453.
#3	14270.	19202.

Approved: June 04, 2013

Sample Name: L1305126208 Acquired: 6/3/2013 14:23:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00616**	**.00017**	**.25542**	**.05600**	**.00001**	**87.152**
Stddev	.00040	.01297	.00215	.00544	.00007	.00002	.580
%RSD	925.61	210.56	1255.3	2.1286	.12772	309.65	.66521
#1	.00039	.02088	-.00222	.25349	.05603	-.00002	87.821
#2	.00014	.00117	.00193	.25121	.05604	.00002	86.806
#3	-.00040	-.00357	.00081	.26156	.05591	.00002	86.828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00234**	**.89523**	**.00010**	**.01968**	**.24724**	**3.2254**
Stddev	.00012	.00007	.01439	.00023	.00185	.00195	.3076
%RSD	36.419	3.0168	1.6074	237.37	9.4098	.78960	9.5365
#1	.00047	.00228	.89254	-.00002	.02068	.24948	3.0567
#2	.00025	.00231	.88238	.00036	.01754	.24593	3.0391
#3	.00027	.00242	.91078	-.00005	.02081	.24630	3.5804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.465**	**.05578**	**2.8717**	**.00281**	**23.295**	**.00357**	**.00029**
Stddev	11.407	1.4774	.0301	.00102	.151	.00008	.00015
%RSD	55.741	2648.8	1.0485	36.494	.64796	2.1251	52.417
#1	32.276	-1.6301	2.8963	.00372	23.330	.00361	.00033
#2	9.5100	1.1251	2.8806	.00170	23.425	.00349	.00042
#3	19.608	.67230	2.8381	.00300	23.129	.00363	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126208 Acquired: 6/3/2013 14:23:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.050**	**.04786**	**35.282**	**.00239**	F **12.956**	F **988.88**	F **-50063.**
Stddev	.082	.08102	5.071	.00045	4.034	3.21	174.
%RSD	.29270	169.31	14.373	18.983	31.140	.32501	.34674
#1	28.134	.00082	29.471	.00191	9.1115	990.83	-50182.
#2	27.970	.00133	37.566	.00243	12.600	985.17	-49864.
#3	28.045	.14141	38.809	.00281	17.157	990.63	-50143.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00536**	**-.00230**	**4.3249**	**-.00135**	**.24734**	**-.00155**	**-.00083**
Stddev	.00037	.00270	.1376	.00033	.00104	.00037	.00114
%RSD	6.8143	117.37	3.1816	24.233	.42014	24.034	136.71
#1	.00529	.00012	4.2695	-.00148	.24824	-.00115	.00022
#2	.00575	-.00180	4.2236	-.00097	.24620	-.00189	-.00204
#3	.00503	-.00521	4.4815	-.00158	.24758	-.00160	-.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00179**	**.00441**	F **-.28835**
Stddev	.00026	.00220	.34388
%RSD	14.327	49.937	119.26
#1	-.00153	.00314	-.11844
#2	-.00178	.00314	-.06250
#3	-.00204	.00696	-.68412
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126208 Acquired: 6/3/2013 14:23:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13951.**	**19493.**
Stddev	243.	165.
%RSD	1.7388	.84867
#1	14048.	19306.
#2	14131.	19552.
#3	13675.	19620.

Approved: June 04, 2013

Sample Name: L1305126208PS Acquired: 6/3/2013 14:26:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20791**	**5.1660**	**.20956**	**1.2476**	**.56216**	**.02563**	**85.493**
Stddev	.00084	.0550	.00131	.0046	.00542	.00011	1.358
%RSD	.40311	1.0653	.62377	.36898	.96405	.42841	1.5884
#1	.20726	5.1029	.20810	1.2441	.55615	.02553	84.073
#2	.20761	5.1911	.20998	1.2460	.56366	.02563	86.778
#3	.20885	5.2041	.21061	1.2529	.56667	.02575	85.628
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02629**	**.10504**	**1.0406**	**.25699**	**2.0905**	**.73719**	**2.9654**
Stddev	.00006	.00032	.0021	.00044	.0140	.00217	.6452
%RSD	.21135	.30730	.20117	.17157	.67103	.29400	21.757
#1	.02624	.10487	1.0383	.25680	2.0744	.73661	2.3517
#2	.02627	.10485	1.0412	.25750	2.0996	.73537	2.9065
#3	.02635	.10542	1.0424	.25668	2.0976	.73959	3.6380
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-19.237**	**.17466**	**28.865**	**.52351**	**26.587**	**.26534**	**.51776**
Stddev	18.509	1.3630	.235	.00287	.413	.00387	.00148
%RSD	96.219	780.39	.81285	.54799	1.5546	1.4582	.28535
#1	.9010	1.5379	28.608	.52067	26.119	.26087	.51606
#2	-23.104	.17431	29.067	.52346	26.741	.26758	.51874
#3	-35.507	-1.1882	28.919	.52641	26.902	.26756	.51848
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

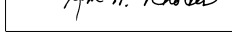
Sample Name: L1305126208PS Acquired: 6/3/2013 14:26:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.616**	**.25823**	**38.320**	**.25898**	**8.6487**	F **885.25**	F **-44527.**
Stddev	.536	.00092	7.964	.00185	13.232	1.88	111.
%RSD	1.0394	.35639	20.783	.71447	152.99	.21287	.24932
#1	51.053	.25722	36.023	.25726	17.551	883.09	-44402.
#2	51.676	.25845	47.181	.25874	14.951	886.11	-44567.
#3	52.121	.25902	31.757	.26094	-6.5563	886.54	-44613.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.61752**	**.20273**	**6.2788**	**.00074**	**.73809**	**.51551**	**.26099**
Stddev	.00178	.00073	.0132	.00015	.00797	.00674	.00310
%RSD	.28754	.35949	.21070	20.391	1.0793	1.3078	1.1861
#1	.61956	.20277	6.2636	.00087	.73050	.50912	.25794
#2	.61656	.20198	6.2877	.00058	.73739	.51486	.26090
#3	.61642	.20344	6.2852	.00078	.74638	.52256	.26413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.51210**	**.51801**	F **-.19730**
Stddev	.00276	.00163	.53278
%RSD	.53968	.31406	270.03
#1	.51002	.51643	-.54635
#2	.51104	.51793	.41595
#3	.51524	.51968	-.46151
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013



Sample Name: L1305126208PS Acquired: 6/3/2013 14:26:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432675-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13977.**	**18448.**
Stddev	26.	258.
%RSD	.18781	1.4009
#1	14001.	18734.
#2	13982.	18232.
#3	13949.	18378.

Approved: June 04, 2013

Sample Name: L1305126208SDL Acquired: 6/3/2013 14:29:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.01859**	**.00035**	**.05222**	**.01137**	**.00002**	**18.118**
Stddev	.00022	.01267	.00154	.00100	.00007	.00000	.069
%RSD	42.716	68.185	444.75	1.9124	.65070	24.108	.38307
#1	.00066	.02151	.00205	.05336	.01140	.00002	18.189
#2	.00027	.02955	-.00093	.05150	.01143	.00002	18.050
#3	.00065	.00471	-.00009	.05179	.01129	.00002	18.115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00079**	**.18000**	**.00039**	**.00548**	**.04634**	**.54915**
Stddev	.00004	.00011	.00171	.00015	.00137	.00296	.39281
%RSD	197.85	14.245	.94834	36.927	25.024	6.3919	71.530
#1	-.00002	.00066	.18198	.00023	.00396	.04315	.43546
#2	.00001	.00086	.17897	.00050	.00588	.04901	.98626
#3	.00007	.00084	.17907	.00046	.00661	.04684	.22572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.3229**	**.47205**	**.59023**	**-.00052**	**4.9321**	**.00084**	**.00057**
Stddev	5.3863	1.3717	.00550	.00071	.0162	.00005	.00030
%RSD	101.19	290.57	.93149	136.10	.32876	5.7562	51.986
#1	-8.4159	-.46835	.58454	-.00131	4.9502	.00084	.00067
#2	-8.4494	2.0460	.59551	.00006	4.9271	.00079	.00024
#3	.89669	-.16146	.59064	-.00032	4.9190	.00088	.00080
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305126208SDL Acquired: 6/3/2013 14:29:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.6386**	**.00013**	**12.409**	**.00163**	**5.5086**	F **206.15**	F **-10295.**
Stddev	.0210	.00009	3.781	.00044	4.5072	1.21	68.
%RSD	.37190	67.209	30.474	27.148	81.822	.58591	.66086
#1	5.6620	.00003	16.749	.00181	9.8796	204.86	-10317.
#2	5.6324	.00018	9.8250	.00195	5.7695	207.26	-10349.
#3	5.6215	.00017	10.652	.00113	.87656	206.33	-10219.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00119**	**-.00355**	**.84601**	**-.00131**	**.04996**	**-.00082**	**.00100**
Stddev	.00079	.00164	.00514	.00015	.00013	.00040	.00034
%RSD	66.093	46.226	.60761	11.675	.25762	48.500	34.181
#1	.00029	-.00168	.84011	-.00124	.04981	-.00054	.00098
#2	.00173	-.00475	.84948	-.00120	.05004	-.00063	.00067
#3	.00155	-.00421	.84845	-.00148	.05003	-.00127	.00135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00026**	**.00119**	F **-.06386**
Stddev	.00025	.00016	.15225
%RSD	95.278	13.176	238.40
#1	.00003	.00101	.07997
#2	-.00041	.00131	-.22333
#3	-.00040	.00126	-.04823
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126208SDL Acquired: 6/3/2013 14:29:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432675-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14527.**	**18706.**
Stddev	101.	84.
%RSD	.69450	.44766
#1	14430.	18645.
#2	14520.	18802.
#3	14632.	18673.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 14:33:31 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39959**	**10.148**	**.40457**	**.49988**	**1.0129**	**.04959**	**10.228**
Stddev	.00247	.041	.00258	.00364	.0018	.00043	.055
%RSD	.61702	.40153	.63727	.72854	.17897	.86603	.53942
#1	.39741	10.149	.40363	.49569	1.0109	.04919	10.192
#2	.39908	10.107	.40260	.50162	1.0136	.04955	10.292
#3	.40226	10.189	.40749	.50232	1.0143	.05004	10.201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05047**	**.20368**	**.49766**	**.51147**	**4.0822**	**1.0231**	**.96476**
Stddev	.00037	.00173	.00484	.00337	.0065	.0078	.41865
%RSD	.72848	.85177	.97316	.65824	.16009	.76077	43.394
#1	.05015	.20241	.49282	.50898	4.0795	1.0145	.48192
#2	.05039	.20297	.49767	.51013	4.0774	1.0251	1.2265
#3	.05087	.20566	.50251	.51530	4.0896	1.0297	1.1859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.3078**	F **2.2299**	**51.442**	**1.0190**	**10.365**	**.52552**	**1.0130**
Stddev	19.956	1.5574	.212	.0056	.126	.00420	.0026
%RSD	1526.0	69.843	.41227	.54871	1.2167	.79991	.26016
#1	-23.174	.47368	51.253	1.0156	10.262	.52246	1.0111
#2	3.3311	3.4432	51.403	1.0160	10.328	.52379	1.0118
#3	15.920	2.7728	51.672	1.0254	10.506	.53031	1.0160
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

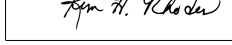
Sample Name: CCV Acquired: 6/3/2013 14:33:31 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.789**	**.50908**	**10.215**	**.50882**	F **17.310**	**10.265**	F **13.921**
Stddev	.063	.00406	2.350	.00237	5.452	.052	2.440
%RSD	.12431	.79698	23.005	.46643	31.499	.50693	17.525
#1	50.758	.50545	7.7507	.50949	20.166	10.208	12.697
#2	50.747	.50833	10.465	.50618	20.741	10.280	12.336
#3	50.862	.51346	12.431	.51078	11.023	10.309	16.731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value					10.000		10.000
Range					10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2048**	**.40989**	**5.1111**	**.92431**	**1.0062**	**1.0302**	**.51461**
Stddev	.0068	.00169	.0202	.00372	.0009	.0089	.00086
%RSD	.56657	.41162	.39508	.40228	.08963	.85885	.16696
#1	1.2053	.41128	5.1259	.92187	1.0052	1.0207	.51421
#2	1.1977	.40802	5.0881	.92247	1.0065	1.0315	.51403
#3	1.2113	.41039	5.1192	.92859	1.0069	1.0383	.51560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0011**	**1.0148**	F **-.57377**
Stddev	.0075	.0056	.40670
%RSD	.74587	.55113	70.883
#1	.99320	1.0084	-.10881
#2	1.0020	1.0172	-.86345
#3	1.0081	1.0188	-.74904
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013



Sample Name: CCV Acquired: 6/3/2013 14:33:31 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14503.**	**18781.**
Stddev	79.	97.
%RSD	.54289	.51817
#1	14592.	18852.
#2	14474.	18820.
#3	14443.	18670.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 14:36:46 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.00672**	**-.00198**	**.00252**	**-.00002**	**.00002**	**-.00513**
Stddev	.00048	.01970	.00071	.00029	.00013	.00000	.01330
%RSD	480.44	293.06	36.052	11.521	789.20	21.970	259.20
#1	.00052	.00105	-.00214	.00264	-.00003	.00002	.00787
#2	.00019	-.00952	-.00120	.00273	.00012	.00003	-.01871
#3	-.00042	.02864	-.00260	.00218	-.00014	.00002	-.00455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00007**	**.00017**	**-.00016**	**.00156**	**-.00494**	F **.19854**
Stddev	.00004	.00007	.00057	.00015	.00251	.00373	.33245
%RSD	167.05	101.92	327.25	89.224	161.08	75.604	167.45
#1	.00004	.00000	.00083	-.00009	.00446	-.00913	.00687
#2	-.00002	.00015	-.00011	-.00033	-.00003	-.00198	.00633
#3	.00006	.00007	-.00020	-.00007	.00025	-.00370	.58242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **8.7409**	F **.18551**	**-.00106**	**.00023**	**.00277**	**.00007**	**.00148**
Stddev	12.305	.68534	.02085	.00299	.00689	.00002	.00068
%RSD	140.78	369.43	1970.9	1288.6	249.08	35.344	45.896
#1	13.130	.25449	-.01452	-.00322	.00723	.00009	.00099
#2	18.250	-.53171	-.01161	.00197	.00624	.00007	.00119
#3	-5.1570	.83375	.02296	.00195	-.00517	.00004	.00225
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 14:36:46 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**-.00026**	F **3.1926**	**-.00052**	F **1.1282**	**-.06274**	F **6.8848**
Stddev	.01352	.00044	2.3399	.00127	2.8938	.01787	3.8409
%RSD	2520.6	171.08	73.292	243.63	256.48	28.479	55.787
#1	-.01571	-.00076	4.3085	-.00195	.58967	-.04550	11.102
#2	.00386	.00002	.50362	-.00009	4.2535	-.06152	5.9666
#3	.01024	-.00002	4.7657	.00048	-1.4584	-.08118	3.5863
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00132**	**-.00137**	**-.00184**	**.00016**	**-.00046**	**-.00059**	**-.00032**
Stddev	.00124	.00216	.00147	.00031	.00010	.00041	.00083
%RSD	93.811	158.27	79.827	191.57	22.670	68.581	259.17
#1	.00006	-.00282	-.00326	.00020	-.00041	-.00074	-.00006
#2	.00253	.00112	-.00032	-.00016	-.00058	-.00090	-.00124
#3	.00136	-.00240	-.00196	.00045	-.00038	-.00013	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00014**	**.00006**	F **-.11447**
Stddev	.00015	.00022	.59591
%RSD	104.06	340.95	520.60
#1	-.00002	-.00005	.44561
#2	.00028	-.00008	-.04832
#3	.00017	.00032	-.74069
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 14:36:46 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14426.**	**18763.**
Stddev	9.	69.
%RSD	.06583	.36751
#1	14418.	18752.
#2	14425.	18837.
#3	14436.	18701.

Approved: June 04, 2013

Sample Name: L1305129501 0.0005 Acquired: 6/3/2013 14:40:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 2000 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.02599**	**.00031**	**.00765**	**.11741**	**.00002**	**35.470**
Stddev	.00008	.01922	.00104	.00010	.00052	.00001	.357
%RSD	62.896	73.938	337.86	1.3180	.44548	27.367	1.0068
#1	.00004	.04444	-.00064	.00762	.11710	.00003	35.231
#2	.00017	.02746	.00015	.00756	.11801	.00002	35.297
#3	.00019	.00608	.00141	.00776	.11712	.00002	35.880
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00003**	**.00034**	**-.00015**	**.00446**	**3.5477**	F **-.52543**
Stddev	.00008	.00006	.00028	.00047	.00284	.0173	.15165
%RSD	159.12	220.94	80.579	325.74	63.766	.48692	28.862
#1	.00002	.00010	.00066	.00038	.00119	3.5325	-.69020
#2	-.00014	.00001	.00023	-.00053	.00632	3.5665	-.49439
#3	-.00003	-.00002	.00014	-.00029	.00586	3.5441	-.39171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.8809**	**.70584**	**.45842**	**.36950**	**.39388**	**.00013**	**-.00003**
Stddev	3.3509	1.8176	.03500	.00248	.00970	.00004	.00011
%RSD	116.32	257.51	7.6341	.67082	2.4637	31.647	330.17
#1	1.2139	1.6383	.47210	.36664	.39767	.00009	-.00013
#2	.69033	1.8680	.41865	.37103	.38285	.00014	-.00005
#3	6.7383	-1.3888	.48450	.37083	.40111	.00017	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305129501 0.0005 Acquired: 6/3/2013 14:40:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 2000 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3132**	**-.00042**	**12.956**	**.00133**	**.93110**	F **38.112**	F **-7.8632**
Stddev	.0131	.00018	2.211	.00055	3.2719	.112	1.7341
%RSD	.99553	43.218	17.064	41.707	351.40	.29265	22.053
#1	1.3223	-.00034	11.972	.00069	-2.8438	37.992	-5.9785
#2	1.3191	-.00030	15.488	.00157	2.6844	38.132	-9.3912
#3	1.2982	-.00063	11.408	.00172	2.9527	38.212	-8.2199
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00088**	**-.00234**	**-.00098**	**-.00074**	**3.3957**	**-.00078**	**.00013**
Stddev	.00057	.00312	.00111	.00039	.0224	.00024	.00180
%RSD	64.601	133.34	113.34	52.349	.65955	31.018	1360.9
#1	-.00151	.00120	-.00029	-.00113	3.3949	-.00083	-.00146
#2	-.00041	-.00471	-.00039	-.00036	3.4185	-.00099	.00209
#3	-.00072	-.00352	-.00227	-.00072	3.3738	-.00052	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00001**	**.00241**	F **-.27460**
Stddev	.00015	.00004	.55949
%RSD	2234.3	1.5569	203.75
#1	-.00015	.00241	.11671
#2	.00002	.00237	-.91544
#3	.00015	.00245	-.02506
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305129501 0.0005 Acquired: 6/3/2013 14:40:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 2000 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14376.**	**19039.**
Stddev	32.	35.
%RSD	.22005	.18496
#1	14408.	19046.
#2	14345.	19070.
#3	14375.	19001.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 14:44:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39891**	**10.068**	**.39661**	**.49836**	**.99829**	**.04986**	**10.077**
Stddev	.00044	.090	.00038	.00120	.00712	.00011	.134
%RSD	.11140	.88995	.09616	.24006	.71327	.21283	1.3324
#1	.39847	10.170	.39705	.49699	1.0022	.04990	10.096
#2	.39889	10.026	.39640	.49891	1.0026	.04973	10.201
#3	.39936	10.006	.39639	.49919	.99007	.04993	9.9348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05000**	**.20213**	**.50191**	**.50438**	**4.0319**	**1.0097**	F **1.1638**
Stddev	.00018	.00080	.00072	.00159	.0382	.0069	.5295
%RSD	.36798	.39740	.14409	.31519	.94856	.68731	45.497
#1	.05019	.20306	.50265	.50618	4.0563	1.0152	.78971
#2	.04998	.20176	.50186	.50379	4.0515	1.0019	.93203
#3	.04982	.20158	.50121	.50317	3.9878	1.0119	1.7697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.7047**	F **1.5930**	**50.572**	**1.0038**	**10.199**	**.51760**	**.99845**
Stddev	24.684	2.5925	.388	.0064	.071	.00490	.00411
%RSD	912.62	162.74	.76685	.63975	.69226	.94601	.41213
#1	-3.5145	2.4164	50.699	1.0059	10.250	.51605	1.0030
#2	-18.275	3.6739	50.880	1.0089	10.227	.52309	.99721
#3	29.903	-1.3112	50.137	.99657	10.118	.51368	.99510
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 14:44:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.189**	**.50562**	F **5.8398**	**.50722**	F **11.056**	**10.052**	F **17.639**
Stddev	.356	.00096	2.3577	.00323	4.331	.099	2.619
%RSD	.71018	.19016	40.373	.63646	39.177	.98261	14.850
#1	50.366	.50644	8.4863	.50832	6.0563	9.9517	20.256
#2	50.422	.50585	5.0699	.50358	13.672	10.149	15.018
#3	49.779	.50456	3.9633	.50974	13.439	10.056	17.644
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1961**	**.40183**	**4.9873**	**.92139**	**.99440**	**1.0083**	**.51098**
Stddev	.0086	.00375	.0263	.00471	.00617	.0059	.00085
%RSD	.71651	.93356	.52692	.51127	.62017	.58339	.16612
#1	1.2053	.40304	5.0135	.92682	.99968	1.0114	.51195
#2	1.1884	.39762	4.9609	.91839	.99592	1.0120	.51060
#3	1.1946	.40483	4.9875	.91896	.98762	1.0015	.51038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99863**	**1.0163**	F **-.87530**
Stddev	.00027	.0045	.48451
%RSD	.02671	.44089	55.353
#1	.99834	1.0214	-1.3486
#2	.99867	1.0143	-.38033
#3	.99887	1.0131	-.89696
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 14:44:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14480.**	**18974.**
Stddev	29.	214.
%RSD	.19696	1.1300
#1	14447.	18958.
#2	14497.	18769.
#3	14495.	19197.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 14:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00267**	**-.00045**	**.00093**	**.00021**	**.00001**	**-.01060**
Stddev	.00025	.01480	.00095	.00044	.00004	.00002	.00377
%RSD	114.57	553.84	210.06	47.363	18.978	154.30	35.530
#1	.00015	.00127	.00010	.00141	.00026	.00002	-.01417
#2	.00001	-.01137	.00010	.00082	.00019	.00003	-.01096
#3	.00050	.01812	-.00155	.00055	.00019	-.00001	-.00666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.00010**	**.00002**	**.00014**	**-.00004**	**-.00170**	F **.17733**
Stddev	.00004	.00021	.00016	.00038	.00391	.00452	.14159
%RSD	94.188	202.22	908.39	276.58	9504.9	265.39	79.844
#1	-.00008	-.00006	.00006	-.00029	-.00095	.00175	.23125
#2	-.00001	.00003	.00015	.00043	.00424	-.00683	.01671
#3	-.00002	.00034	-.00016	.00028	-.00342	-.00004	.28404
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.58767**	F **.19513**	**.02249**	**.00084**	**.00455**	**.00006**	**.00145**
Stddev	17.530	2.1252	.03287	.00079	.00976	.00006	.00075
%RSD	2983.0	1089.1	146.14	94.610	214.56	102.86	51.604
#1	16.727	1.2667	.04513	.00164	-.00596	-.00001	.00080
#2	3.0979	-2.2526	-.01521	.00083	.01333	.00010	.00128
#3	-18.062	1.5713	.03754	.00005	.00628	.00009	.00227
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 14:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00252**	**-.00008**	F **-2.0390**	**-.00084**	F **-2.7831**	**-.04055**	F **6.5556**
Stddev	.00868	.00023	2.3894	.00205	9.3693	.02154	.4989
%RSD	344.60	289.56	117.19	244.66	336.65	53.131	7.6109
#1	.00618	.00018	-4.7953	.00146	-4.6146	-.06542	6.5706
#2	-.00255	-.00019	-.55359	-.00247	7.3668	-.02795	7.0469
#3	-.01118	-.00024	-.76806	-.00151	-11.101	-.02827	6.0494
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**-.00108**	**-.00066**	**.00009**	**-.00047**	**.00046**	**-.00018**
Stddev	.00072	.00135	.00113	.00024	.00003	.00061	.00065
%RSD	50.451	124.95	171.03	254.48	6.2126	134.73	365.15
#1	.00060	-.00261	-.00197	-.00016	-.00048	.00089	-.00083
#2	.00176	-.00008	-.00001	.00013	-.00049	.00072	.00047
#3	.00192	-.00055	-.00001	.00032	-.00044	-.00025	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00000**	**.00005**	F **.34894**
Stddev	.0001	.00021	.38279
%RSD	21878.	465.16	109.70
#1	.00011	-.00014	.76363
#2	-.00003	.00000	.00910
#3	-.00008	.00027	.27408
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 14:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14556.**	**18749.**
Stddev	71.	14.
%RSD	.48643	.07371
#1	14531.	18756.
#2	14501.	18733.
#3	14636.	18758.

Approved: June 04, 2013

Sample Name: L1305124201 Acquired: 6/3/2013 14:51:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**-.00227**	**.00040**	**.02129**	**.06590**	**.00005**	**27.986**
Stddev	.00012	.01093	.00073	.00092	.00048	.00001	.188
%RSD	81.408	480.63	183.15	4.2971	.72468	13.186	.67336
#1	.00022	-.00382	.00124	.02224	.06605	.00005	27.911
#2	.00022	.00935	.00000	.02041	.06536	.00004	27.846
#3	.00001	-.01235	-.00004	.02123	.06628	.00005	28.200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00000**	**.00304**	**.00008**	**.02762**	**.25741**	**.34187**
Stddev	.00007	.00026	.00033	.00036	.00216	.00134	.53520
%RSD	37.159	9679.0	10.819	475.19	7.8203	.51901	156.55
#1	.00010	.00026	.00288	-.00007	.02980	.25889	.02077
#2	.00021	-.00027	.00282	-.00019	.02548	.25704	.95971
#3	.00022	.00002	.00342	.00049	.02758	.25630	.04514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.0341**	F **-.38329**	**1.6514**	**.00642**	**4.6222**	**.00115**	**.00292**
Stddev	8.4990	1.1591	.0061	.00037	.0265	.00006	.00023
%RSD	105.79	302.41	.36849	5.7964	.57413	5.1874	7.8942
#1	-11.654	-.49437	1.6466	.00606	4.6305	.00117	.00266
#2	-14.124	.82738	1.6582	.00640	4.5925	.00120	.00308
#3	1.6756	-1.4829	1.6494	.00680	4.6436	.00108	.00303
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305124201 Acquired: 6/3/2013 14:51:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.378**	**.00054**	**9.2609**	**.00139**	F **16.655**	F **330.24**	F **-16483.**
Stddev	.036	.00033	2.4216	.00185	8.660	1.62	86.
%RSD	.21847	60.635	26.149	132.36	51.995	.49168	.52233
#1	16.360	.00090	11.159	.00191	16.150	331.71	-16566.
#2	16.356	.00029	6.5336	.00293	25.556	330.52	-16487.
#3	16.420	.00042	10.090	-.00065	8.2586	328.50	-16394.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.00209**	**11.767**	**-.00116**	**.25008**	**-.00028**	**.00083**
Stddev	.00228	.00162	.062	.00010	.00043	.00037	.00083
%RSD	567.47	77.232	.52986	8.4515	.17364	131.27	99.417
#1	-.00193	.00139	11.828	-.00127	.24972	-.00064	-.00009
#2	-.00150	.00394	11.770	-.00109	.24996	-.00030	.00108
#3	.00222	.00094	11.703	-.00112	.25056	.00010	.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00590**	**.00755**	F **-.15403**
Stddev	.00003	.00006	.12321
%RSD	.54602	.85805	79.988
#1	.00591	.00762	-.17694
#2	.00593	.00754	-.26418
#3	.00587	.00749	-.02098
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305124201 Acquired: 6/3/2013 14:51:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14490.**	**19290.**
Stddev	46.	105.
%RSD	.31642	.54481
#1	14462.	19207.
#2	14466.	19255.
#3	14543.	19408.

Approved: June 04, 2013

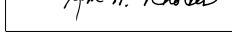
Sample Name: L1305124202 Acquired: 6/3/2013 14:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.02669**	**-.00125**	**.01291**	**.05665**	**.00002**	**56.763**
Stddev	.00009	.00906	.00080	.00041	.00022	.00002	.512
%RSD	220.50	33.949	64.308	3.1757	.39243	87.405	.90185
#1	-.00008	.01623	-.00077	.01252	.05639	.00000	56.374
#2	-.00011	.03156	-.00217	.01287	.05680	.00002	57.343
#3	.00006	.03227	-.00080	.01334	.05676	.00003	56.572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.00010**	**.00158**	**.00234**	**.15699**	**.44891**	**1.0023**
Stddev	.00003	.00018	.00021	.00057	.00065	.00246	.2413
%RSD	8.1979	172.43	13.211	24.404	.41463	.54728	24.077
#1	.00029	.00009	.00136	.00216	.15647	.45071	1.0648
#2	.00030	.00028	.00159	.00298	.15677	.44611	.73592
#3	.00033	-.00007	.00178	.00188	.15772	.44990	1.2063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-24.216**	**.09351**	**2.1868**	**.00630**	**9.9751**	**.00100**	**.00097**
Stddev	11.385	.80829	.0092	.00048	.0529	.00002	.00013
%RSD	47.015	864.43	.41898	7.6082	.53047	1.5590	12.945
#1	-36.110	-.82326	2.1776	.00585	9.9160	.00101	.00083
#2	-23.117	.70354	2.1870	.00625	9.9913	.00099	.00101
#3	-13.420	.40024	2.1959	.00681	10.018	.00101	.00106
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013



Sample Name: L1305124202 Acquired: 6/3/2013 14:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.268**	**.00352**	**14.725**	**.00077**	F **25.552**	F **674.53**	F **-34196.**
Stddev	.110	.00578	2.318	.00126	6.833	4.88	322.
%RSD	.41900	164.12	15.742	164.35	26.740	.72318	.94218
#1	26.285	.00021	17.352	.00130	32.891	674.41	-34211.
#2	26.368	.00016	13.854	-.00067	24.391	669.71	-33866.
#3	26.150	.01020	12.969	.00168	19.375	679.47	-34510.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**-.00126**	**13.766**	**-.00136**	**.43420**	**-.00125**	**.00064**
Stddev	.00194	.00217	.054	.00009	.00150	.00054	.00089
%RSD	321.26	171.37	.39282	6.2602	.34581	42.889	138.46
#1	-.00017	.00060	13.761	-.00142	.43417	-.00078	.00012
#2	-.00083	-.00075	13.714	-.00140	.43572	-.00183	.00167
#3	.00281	-.00365	13.822	-.00126	.43272	-.00114	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00300**	**.00811**	F **-.17740**
Stddev	.00025	.00012	.04024
%RSD	8.4900	1.4832	22.685
#1	.00289	.00809	-.22216
#2	.00329	.00801	-.14421
#3	.00281	.00825	-.16583
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305124202 Acquired: 6/3/2013 14:54:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14131.**	**19060.**
Stddev	86.	51.
%RSD	.60680	.26576
#1	14125.	19004.
#2	14220.	19073.
#3	14049.	19103.

Approved: June 04, 2013

Sample Name: L1305124203 Acquired: 6/3/2013 14:58:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**.01967**	**-.00226**	**.01232**	**.05903**	**.00001**	**59.655**
Stddev	.00030	.02348	.00169	.00026	.00044	.00001	.107
%RSD	129.11	119.40	74.869	2.0876	.74489	109.36	.17990
#1	-.00011	.01070	-.00185	.01203	.05858	.00000	59.707
#2	.00047	.04631	-.00080	.01244	.05946	.00001	59.727
#3	.00034	.00199	-.00411	.01250	.05905	.00002	59.532
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**.00014**	**.00163**	**.00044**	**.15501**	**.44900**	**1.2843**
Stddev	.00006	.00015	.00023	.00043	.00554	.00630	.2634
%RSD	27.083	108.56	13.928	96.893	3.5759	1.4027	20.507
#1	.00020	.00012	.00183	.00045	.15611	.44635	1.4064
#2	.00015	.00000	.00168	.00086	.14900	.45619	.98206
#3	.00027	.00030	.00138	.00001	.15992	.44446	1.4645
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.2929**	F **-1.9008**	**2.2487**	**.00733**	**10.390**	**.00100**	**.00088**
Stddev	11.703	1.1615	.0478	.00046	.038	.00004	.00010
%RSD	355.41	61.105	2.1279	6.3217	.36413	4.1820	11.422
#1	-9.0807	-2.6023	2.2822	.00703	10.366	.00096	.00096
#2	10.177	-2.5400	2.2700	.00711	10.434	.00100	.00077
#3	-10.974	-.56012	2.1939	.00787	10.370	.00104	.00092
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305124203 Acquired: 6/3/2013 14:58:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.437**	**.00036**	**11.385**	**.00116**	F **20.605**	F **683.89**	F **-34419.**
Stddev	.059	.00021	10.514	.00176	4.532	1.23	229.
%RSD	.21634	59.014	92.352	151.01	21.992	.17923	.66498
#1	27.396	.00030	3.1517	-.00086	16.959	683.00	-34232.
#2	27.505	.00060	23.228	.00227	19.178	685.29	-34674.
#3	27.410	.00018	7.7742	.00208	25.678	683.39	-34351.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**-.00219**	**13.984**	**-.00133**	**.45055**	**-.00090**	**.00026**
Stddev	.00045	.00189	.025	.00019	.00194	.00047	.00117
%RSD	310.80	86.262	.17892	13.994	.43019	51.703	451.11
#1	.00057	-.00256	13.979	-.00125	.44832	-.00144	.00095
#2	.00019	-.00388	14.011	-.00154	.45146	-.00066	.00092
#3	-.00032	-.00014	13.962	-.00119	.45187	-.00061	-.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00322**	**.01070**	**.15344**
Stddev	.00011	.00004	.15079
%RSD	3.4338	.37076	98.275
#1	.00309	.01069	-.01794
#2	.00329	.01074	.26578
#3	.00328	.01066	.21248
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305124203 Acquired: 6/3/2013 14:58:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14332.**	**18815.**
Stddev	107.	103.
%RSD	.74955	.54555
#1	14439.	18889.
#2	14224.	18698.
#3	14333.	18858.

Approved: June 04, 2013

Sample Name: L1305124204 Acquired: 6/3/2013 15:01:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.03133**	**-.00122**	**.02133**	**.09686**	**.00002**	**28.751**
Stddev	.00038	.03497	.00100	.00017	.00006	.00000	.275
%RSD	93.336	111.61	81.688	.79988	.06015	10.405	.95658
#1	.00072	.07167	-.00100	.02113	.09693	.00002	28.996
#2	-.00001	.00963	-.00036	.02140	.09685	.00003	28.802
#3	.00050	.01269	-.00232	.02145	.09681	.00002	28.453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00005**	**.00312**	**.00032**	**.05429**	**.24608**	**.43106**
Stddev	.00003	.00016	.00030	.00005	.00274	.00445	.27210
%RSD	13.212	306.95	9.7177	14.967	5.0445	1.8093	63.122
#1	.00022	-.00006	.00334	.00026	.05168	.24362	.65208
#2	.00027	-.00002	.00324	.00036	.05714	.24341	.51394
#3	.00029	.00024	.00277	.00033	.05407	.25122	.12716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-13.905**	F **-.97428**	**1.5066**	**.00604**	**5.3037**	**.00274**	**.00290**
Stddev	18.796	1.4360	.0073	.00040	.0137	.00010	.00009
%RSD	135.18	147.39	.48738	6.5530	.25756	3.6364	3.2637
#1	-34.311	-.40469	1.5130	.00637	5.3019	.00277	.00280
#2	-10.104	.08954	1.4986	.00615	5.2911	.00282	.00292
#3	2.7009	-2.6077	1.5084	.00560	5.3182	.00263	.00298
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305124204 Acquired: 6/3/2013 15:01:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.176**	**-.00002**	**18.628**	**.00159**	F **9.0523**	F **269.22**	F **-13085.**
Stddev	.118	.00032	3.526	.00024	3.3232	.18	77.
%RSD	.73193	1459.3	18.931	15.321	36.711	.06559	.58791
#1	16.254	-.00006	21.180	.00183	12.769	269.31	-13172.
#2	16.235	-.00032	14.604	.00135	8.0193	269.33	-13056.
#3	16.040	.00032	20.098	.00159	6.3683	269.02	-13027.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**-.00146**	**14.236**	**-.00124**	**.24609**	**.00009**	**-.00015**
Stddev	.00111	.00160	.087	.00007	.00224	.00111	.00113
%RSD	1198.8	110.00	.61293	5.8304	.90977	1259.2	737.26
#1	.00119	.00005	14.335	-.00116	.24689	-.00081	.00078
#2	-.00067	-.00314	14.170	-.00130	.24781	-.00025	.00016
#3	-.00080	-.00128	14.202	-.00126	.24356	.00132	-.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00550**	**.02856**	**.58643**
Stddev	.00009	.00036	.31191
%RSD	1.7253	1.2492	53.187
#1	.00547	.02896	.55866
#2	.00560	.02846	.91128
#3	.00542	.02826	.28933
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305124204 Acquired: 6/3/2013 15:01:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14594.**	**19079.**
Stddev	86.	122.
%RSD	.59092	.64073
#1	14512.	18958.
#2	14587.	19077.
#3	14684.	19202.

Approved: June 04, 2013

Sample Name: L1305124401 Acquired: 6/3/2013 15:05:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**-.00548**	**-.00046**	**.01927**	**.03385**	**.00003**	**143.40**
Stddev	.00019	.01810	.00097	.00038	.00018	.00001	1.09
%RSD	67.859	330.39	209.60	1.9675	.53861	31.692	.76234
#1	.00008	-.00787	.00040	.01889	.03406	.00003	144.57
#2	.00031	-.02226	-.00151	.01965	.03376	.00002	142.40
#3	.00046	.01370	-.00027	.01927	.03372	.00004	143.23
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00008**	**.00072**	**.03307**	**.02545**	**.51437**	**3.4484**
Stddev	.00010	.00016	.00010	.00020	.00097	.00418	.4879
%RSD	30.643	190.82	13.366	.61094	3.8091	.81293	14.147
#1	.00031	.00027	.00083	.03328	.02627	.51188	3.9808
#2	.00045	.00003	.00065	.03306	.02569	.51204	3.3418
#3	.00025	-.00004	.00067	.03288	.02438	.51920	3.0227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-25.199**	F **-.14519**	**1.2664**	**.01012**	**26.736**	**.00359**	**-.00001**
Stddev	27.561	1.0525	.0156	.00108	.223	.00007	.00025
%RSD	109.37	724.94	1.2316	10.660	.83332	2.0564	2115.6
#1	-42.104	-1.3574	1.2843	.01109	26.867	.00361	.00027
#2	6.6047	.53666	1.2556	.00896	26.478	.00366	-.00015
#3	-40.097	.38516	1.2593	.01032	26.862	.00351	-.00015
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305124401 Acquired: 6/3/2013 15:05:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.581**	**.00133**	**16.365**	**.00441**	F **16.096**	F **1813.1**	F **-90997.**
Stddev	.248	.00053	2.248	.00088	6.246	10.1	262.
%RSD	.81193	39.849	13.738	19.856	38.804	.55962	.28847
#1	30.842	.00189	17.445	.00356	23.308	1820.3	-91162.
#2	30.347	.00128	13.781	.00531	12.522	1801.5	-90694.
#3	30.555	.00083	17.870	.00436	12.458	1817.5	-91135.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**-.00288**	**3.9334**	**-.00132**	**.49925**	**-.00289**	**-.00119**
Stddev	.00109	.00354	.0252	.00012	.00344	.00066	.00190
%RSD	1087.1	122.92	.64049	8.7769	.68856	22.895	158.94
#1	.00080	-.00651	3.9523	-.00125	.50281	-.00226	-.00266
#2	-.00132	-.00268	3.9048	-.00145	.49595	-.00284	-.00187
#3	.00022	.00056	3.9430	-.00125	.49900	-.00358	.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00020**	**.28306**	F **-.37533**
Stddev	.00031	.00093	.46616
%RSD	156.32	.32986	124.20
#1	.00044	.28298	-.16917
#2	.00029	.28403	-.90902
#3	-.00015	.28217	-.04779
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305124401 Acquired: 6/3/2013 15:05:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14172.**	**19043.**
Stddev	38.	154.
%RSD	.26764	.80746
#1	14128.	18866.
#2	14190.	19144.
#3	14197.	19118.

Approved: June 04, 2013

Sample Name: L1305135106 Acquired: 6/3/2013 15:08:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.56466**	**-.00172**	**-.00192**	**.76696**	**.00001**	**114.88**
Stddev	.00022	.00926	.00124	.00052	.01394	.00003	2.97
%RSD	19719.	1.6396	72.119	27.203	1.8182	311.08	2.5896
#1	.00016	.55998	-.00103	-.00206	.76389	.00003	113.63
#2	-.00025	.55868	-.00315	-.00135	.78218	-.00003	118.28
#3	.00009	.57532	-.00098	-.00237	.75480	.00003	112.74
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00794**	**.06679**	**.04430**	**.05376**	**23.540**	**.10788**
Stddev	.00004	.00004	.00011	.00020	.00482	.093	.03568
%RSD	339.59	.48092	.17162	.45048	8.9568	.39511	33.071
#1	.00005	.00798	.06676	.04407	.04853	23.513	.12190
#2	.00002	.00791	.06668	.04439	.05800	23.463	.06733
#3	-.00003	.00791	.06691	.04443	.05476	23.643	.13443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.9949**	F **-1.6036**	F **831.97**	**.79132**	**.00858**	**.00057**	**.02290**
Stddev	20.439	2.1965	21.79	.01263	.01123	.00003	.00045
%RSD	227.23	136.97	2.6185	1.5963	130.91	5.2195	1.9564
#1	-6.6186	-3.4708	850.22	.78811	.01848	.00054	.02312
#2	-30.518	.81648	837.85	.80525	-.00362	.00059	.02239
#3	10.152	-2.1564	807.86	.78061	.01086	.00059	.02320
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000	360.00				
Low Limit	-.10000	-.10000	-.50000				

Approved: June 04, 2013

Sample Name: L1305135106 Acquired: 6/3/2013 15:08:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**340.16**	**.00347**	**42.182**	**.00297**	F **155.43**	F **221.63**	F **-6052.8**
Stddev	6.18	.00050	5.500	.00038	12.38	2.10	94.5
%RSD	1.8155	14.272	13.037	12.834	7.9663	.94852	1.5616
#1	335.71	.00404	48.396	.00337	153.67	220.36	-6015.8
#2	347.21	.00315	37.942	.00292	168.59	220.48	-5982.3
#3	337.55	.00322	40.209	.00262	144.02	224.06	-6160.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**-.00067**	**.61896**	**-.00143**	F **23.162**	**-.00251**	**-.00062**
Stddev	.00173	.00355	.00369	.00010	.358	.00103	.00083
%RSD	357.88	532.39	.59594	6.9929	1.5465	41.210	134.20
#1	-.00120	.00158	.62009	-.00144	23.224	-.00162	-.00097
#2	.00149	-.00476	.61484	-.00151	23.484	-.00364	-.00122
#3	-.00174	.00118	.62195	-.00132	22.776	-.00226	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					4.5000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00623**	**.00541**	F **-.66549**
Stddev	.00010	.00037	.58831
%RSD	1.6456	6.9043	88.403
#1	.00622	.00521	-1.2845
#2	.00634	.00518	-.11362
#3	.00614	.00584	-.59836
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305135106 Acquired: 6/3/2013 15:08:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13459.**	**18939.**
Stddev	81.	266.
%RSD	.60260	1.4062
#1	13510.	19061.
#2	13502.	18633.
#3	13366.	19122.

Approved: June 04, 2013

Sample Name: L1305135107 Acquired: 6/3/2013 15:12:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.02437**	**.00035**	**.00722**	**.01670**	**.00004**	**28.143**
Stddev	.00029	.02286	.00075	.00009	.00008	.00002	.289
%RSD	285.05	93.792	217.07	1.2327	.47008	57.936	1.0284
#1	.00013	.01390	.00088	.00725	.01677	.00002	27.812
#2	-.00020	.05059	-.00051	.00712	.01662	.00006	28.269
#3	.00038	.00863	.00067	.00730	.01672	.00003	28.348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00286**	**.09485**	**.00651**	**.35492**	**.13797**	**.48179**
Stddev	.00008	.00022	.00062	.00022	.00615	.00315	.08566
%RSD	91.359	7.7401	.65518	3.3633	1.7321	2.2798	17.779
#1	.00016	.00290	.09415	.00668	.34822	.14136	.54710
#2	.00009	.00305	.09511	.00657	.36030	.13514	.38481
#3	.00000	.00262	.09531	.00626	.35626	.13740	.51346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.2864**	**.16810**	**6.9010**	**.00822**	**4.6825**	**.04517**	**.00576**
Stddev	21.496	.99909	.0104	.00102	.0441	.00029	.00059
%RSD	259.42	594.33	.15081	12.442	.94249	.65095	10.267
#1	-32.755	-.35098	6.9002	.00926	4.6325	.04501	.00508
#2	7.5608	-.46460	6.9118	.00722	4.6989	.04498	.00617
#3	.3350	1.3199	6.8911	.00818	4.7160	.04551	.00602
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305135107 Acquired: 6/3/2013 15:12:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.246**	**.13226**	**18.230**	**.00119**	F **19.686**	F **143.01**	F **-6253.8**
Stddev	.051	.00028	1.819	.00115	4.795	.79	22.9
%RSD	.45249	.21335	9.9803	96.742	24.359	.55302	.36558
#1	11.205	.13251	17.052	.00245	19.655	143.69	-6255.7
#2	11.231	.13231	20.326	.00090	24.497	143.20	-6275.7
#3	11.303	.13195	17.313	.00021	14.906	142.14	-6230.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00119**	**-.00229**	**7.0804**	**-.00102**	**.14325**	**-.00031**	**-.00155**
Stddev	.00135	.00064	.0445	.00036	.00040	.00077	.00181
%RSD	113.85	27.818	.62836	35.134	.27923	250.59	116.77
#1	-.00034	-.00160	7.1133	-.00062	.14324	-.00031	-.00359
#2	.00165	-.00244	7.0981	-.00131	.14285	.00046	-.00012
#3	.00225	-.00285	7.0298	-.00113	.14365	-.00108	-.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00038**	**.00628**	**.59676**
Stddev	.00004	.00005	.04615
%RSD	10.734	.73714	7.7337
#1	.00041	.00624	.65004
#2	.00040	.00633	.56935
#3	.00033	.00626	.57088
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305135107 Acquired: 6/3/2013 15:12:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14494.**	**19265.**
Stddev	46.	127.
%RSD	.31658	.65711
#1	14546.	19355.
#2	14459.	19320.
#3	14477.	19121.

Approved: June 04, 2013

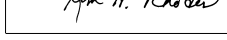
Sample Name: L1305135108 Acquired: 6/3/2013 15:15:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00012**	**.02914**	**-.00098**	**.01623**	**.01187**	**.00003**	**27.984**
Stddev	.00018	.00712	.00109	.00036	.00020	.00001	.380
%RSD	143.62	24.428	110.29	2.1965	1.6837	56.840	1.3593
#1	.00030	.03636	-.00060	.01631	.01207	.00003	28.338
#2	.00012	.02213	-.00014	.01584	.01187	.00004	28.033
#3	-.00005	.02893	-.00221	.01654	.01167	.00001	27.582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.05705**	**.00141**	**.00054**	**.63919**	**.09756**	**.63154**
Stddev	.00011	.00035	.00020	.00008	.00429	.00232	.34117
%RSD	60.614	.61433	14.152	14.511	.67126	2.3816	54.022
#1	.00021	.05729	.00142	.00049	.63542	.09730	1.0251
#2	.00028	.05665	.00121	.00051	.63828	.10000	.41988
#3	.00006	.05722	.00161	.00063	.64386	.09538	.44964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-13.133**	**1.2497**	**1.5226**	**-.00028**	**7.6785**	**1.2208**	**.00088**
Stddev	18.326	1.9085	.0388	.00086	.0304	.0070	.00022
%RSD	139.54	152.71	2.5461	303.61	.39591	.57030	25.054
#1	-25.203	.41926	1.4907	.00053	7.6435	1.2236	.00063
#2	7.9542	3.4328	1.5658	-.00119	7.6971	1.2259	.00105
#3	-22.149	-.10281	1.5114	-.00020	7.6950	1.2129	.00097
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013



Sample Name: L1305135108 Acquired: 6/3/2013 15:15:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.881**	**.02445**	**30.244**	**.00181**	F **20.652**	F **137.01**	F **-5918.2**
Stddev	.058	.00022	2.790	.00070	5.495	.50	33.8
%RSD	.22314	.91502	9.2252	38.754	26.607	.36397	.57045
#1	25.911	.02447	27.030	.00212	26.700	136.94	-5921.0
#2	25.918	.02466	31.665	.00101	19.289	136.55	-5883.2
#3	25.814	.02421	32.038	.00231	15.967	137.54	-5950.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00169**	**-.00086**	**4.8761**	**-.00121**	**.09623**	**.00008**	**-.00041**
Stddev	.00183	.00263	.0221	.00038	.00025	.00165	.00162
%RSD	107.89	305.26	.45361	31.386	.26305	1959.0	399.40
#1	-.00014	.00192	4.8815	-.00144	.09594	.00197	-.00087
#2	-.00124	-.00331	4.8517	-.00141	.09640	-.00066	-.00174
#3	-.00371	-.00119	4.8950	-.00077	.09636	-.00106	.00139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00022**	**.00665**	F **-.14540**
Stddev	.00021	.00003	.22615
%RSD	95.437	.39459	155.54
#1	-.00001	.00662	-.26459
#2	.00027	.00667	.11541
#3	.00039	.00665	-.28702
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305135108 Acquired: 6/3/2013 15:15:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14597.**	**19264.**
Stddev	73.	130.
%RSD	.50296	.67723
#1	14583.	19169.
#2	14676.	19211.
#3	14531.	19413.

Approved: June 04, 2013

Sample Name: L1305135109 Acquired: 6/3/2013 15:19:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00706**	**.00002**	**.02272**	**.04466**	**.00002**	**35.117**
Stddev	.00032	.02267	.00114	.00019	.00045	.00002	.405
%RSD	115.80	321.31	4583.4	.83521	.99802	86.213	1.1532
#1	-.00003	.00833	.00077	.02251	.04513	.00000	35.569
#2	.00060	.02906	.00059	.02276	.04424	.00004	34.993
#3	.00024	-.01623	-.00129	.02288	.04460	.00002	34.789
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00037**	**.00026**	**-.00010**	**1.5700**	**.16489**	**.25465**
Stddev	.00011	.00009	.00023	.00011	.0110	.00597	.46554
%RSD	117.19	23.820	88.962	107.75	.70156	3.6210	182.82
#1	.00009	.00036	.00045	-.00023	1.5807	.16450	.13017
#2	.00021	.00028	.00000	-.00001	1.5587	.17105	.76978
#3	-.00002	.00046	.00034	-.00008	1.5706	.15912	-.13599
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01513**	F **-.50813**	**15.913**	**.00246**	**4.5660**	**.31174**	**.01503**
Stddev	18.304	2.1133	.116	.00205	.0631	.00295	.00011
%RSD	120990.	415.90	.73023	83.043	1.3818	.94763	.76232
#1	-20.486	.93194	16.047	.00263	4.6381	.31510	.01491
#2	5.8159	.47791	15.854	.00442	4.5208	.30954	.01514
#3	14.715	-2.9342	15.839	.00034	4.5392	.31058	.01504
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305135109 Acquired: 6/3/2013 15:19:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.523**	**.00324**	**35.808**	**.00229**	F **12.776**	F **52.386**	F **-872.51**
Stddev	.128	.00040	3.191	.00065	3.633	.237	2.69
%RSD	.54433	12.497	8.9119	28.465	28.433	.45255	.30858
#1	23.670	.00336	35.711	.00164	15.076	52.660	-874.27
#2	23.448	.00356	32.667	.00295	8.5884	52.249	-869.41
#3	23.449	.00278	39.047	.00229	14.665	52.250	-873.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**-.00316**	**4.8184**	**-.00094**	**.15894**	**-.00114**	**-.00041**
Stddev	.00105	.00141	.0281	.00009	.00059	.00035	.00117
%RSD	818.68	44.516	.58289	10.058	.37393	30.367	283.24
#1	-.00065	-.00161	4.8376	-.00104	.15962	-.00151	-.00082
#2	.00133	-.00436	4.8316	-.00092	.15858	-.00082	.00091
#3	-.00029	-.00350	4.7862	-.00085	.15861	-.00110	-.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00500**	**.08731**
Stddev	.00027	.00006	.23290
%RSD	144.04	1.1418	266.74
#1	.00037	.00497	.27391
#2	-.00012	.00497	.16172
#3	.00032	.00507	-.17369
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305135109 Acquired: 6/3/2013 15:19:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14602.**	**19634.**
Stddev	11.	127.
%RSD	.07277	.64924
#1	14613.	19492.
#2	14593.	19739.
#3	14599.	19670.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 15:22:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40218**	**10.017**	**.40517**	**.50101**	**1.0060**	**.04967**	**10.080**
Stddev	.00128	.163	.00154	.00187	.0171	.00016	.195
%RSD	.31739	1.6281	.38127	.37334	1.6994	.32389	1.9339
#1	.40295	9.8363	.40377	.49947	.98769	.04975	9.8696
#2	.40288	10.062	.40492	.50309	1.0087	.04978	10.114
#3	.40070	10.153	.40683	.50045	1.0216	.04949	10.255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05040**	**.20368**	**.49699**	**.50945**	**4.0377**	**1.0145**	F **.68082**
Stddev	.00005	.00049	.00303	.00021	.0600	.0038	.42628
%RSD	.10640	.24092	.61031	.04177	1.4859	.37297	62.613
#1	.05038	.20412	.49944	.50930	3.9755	1.0111	.45695
#2	.05037	.20376	.49794	.50935	4.0422	1.0138	.41312
#3	.05047	.20315	.49360	.50969	4.0953	1.0186	1.1724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **15.364**	F **1.1537**	**50.928**	**1.0172**	**10.152**	**.51443**	**1.0148**
Stddev	10.183	1.2276	.705	.0132	.156	.00779	.0017
%RSD	66.281	106.40	1.3846	1.2964	1.5415	1.5150	.16621
#1	4.4422	-.24216	50.156	1.0032	9.9947	.50607	1.0128
#2	24.598	2.0651	51.090	1.0191	10.153	.51573	1.0157
#3	17.051	1.6382	51.538	1.0294	10.308	.52150	1.0158
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 15:22:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.368**	**.50742**	F **8.0301**	**.50753**	**10.110**	**10.162**	F **15.056**
Stddev	.784	.00009	3.2172	.00109	9.187	.099	2.420
%RSD	1.5566	.01846	40.065	.21426	90.877	.97052	16.077
#1	49.530	.50742	9.3707	.50690	9.7740	10.049	15.815
#2	50.490	.50751	4.3593	.50879	19.460	10.228	17.005
#3	51.084	.50733	10.360	.50691	1.0948	10.209	12.346
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value			10.000				10.000
Range			-10.000%				10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2129**	**.41187**	**5.1660**	**.92410**	**.99882**	**1.0210**	**.51538**
Stddev	.0012	.00179	.0427	.00251	.01714	.0198	.00085
%RSD	.10101	.43561	.82597	.27204	1.7163	1.9434	.16436
#1	1.2142	.41231	5.1197	.92681	.98140	1.0002	.51578
#2	1.2118	.40990	5.1747	.92364	.99938	1.0231	.51595
#3	1.2127	.41341	5.2037	.92184	1.0157	1.0397	.51440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0061**	**1.0047**	F **.03282**
Stddev	.0009	.0025	.10680
%RSD	.08700	.25217	325.45
#1	1.0069	1.0073	.00746
#2	1.0062	1.0045	.15001
#3	1.0052	1.0023	-.05902
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 15:22:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14676.**	**19466.**
Stddev	53.	237.
%RSD	.36342	1.2160
#1	14616.	19709.
#2	14693.	19452.
#3	14718.	19237.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 15:26:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**-.00450**	**.00045**	**.00037**	**-.00011**	**.00003**	**-.01021**
Stddev	.00006	.02702	.00138	.00098	.00032	.00004	.00398
%RSD	50.200	600.58	306.84	267.91	281.02	155.41	39.007
#1	-.00007	-.03159	.00156	-.00031	.00014	-.00001	-.00870
#2	-.00020	.02244	.00087	-.00009	-.00048	.00003	-.01473
#3	-.00012	-.00435	-.00109	.00149	-.00001	.00007	-.00720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00002**	**-.00014**	**.00001**	**.00284**	**-.00278**	F **.11801**
Stddev	.00007	.00004	.00022	.00016	.00380	.00378	.31015
%RSD	1914.4	180.23	157.01	1343.5	133.94	136.02	262.82
#1	.00002	.00003	-.00036	-.00017	-.00104	.00100	.27472
#2	-.00007	-.00002	.00008	.00011	.00655	-.00277	.31853
#3	.00007	.00006	-.00014	.00009	.00300	-.00656	-.23923
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.6049**	F **.39731**	**.10064**	**-.00346**	**.00017**	**-.00001**	**.00129**
Stddev	10.170	1.3688	.02058	.00188	.00486	.00006	.00055
%RSD	390.42	344.51	20.445	54.283	2860.5	802.16	42.370
#1	-8.3394	-.08500	.12305	-.00555	.00295	-.00007	.00104
#2	11.764	-.66503	.08261	-.00190	.00300	.00006	.00092
#3	4.3899	1.9420	.09625	-.00294	-.00544	-.00001	.00192
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 15:26:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01373**	**.00047**	F **4.0888**	**.00086**	F **24.180**	**-.01843**	F **6.2888**
Stddev	.01094	.00016	4.8978	.00105	4.541	.02485	1.4579
%RSD	79.666	35.020	119.78	122.59	18.779	134.89	23.183
#1	-.00353	.00062	6.3487	.00150	28.205	-.04530	7.9675
#2	-.01238	.00029	7.4487	-.00036	19.258	-.01372	5.5588
#3	-.02529	.00049	-1.5309	.00144	25.077	.00374	5.3401
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00005**	**-.00076**	**.00033**	**-.00046**	**-.00097**	**-.00044**
Stddev	.00081	.00393	.00167	.00027	.00007	.00081	.00055
%RSD	216.88	7487.6	218.83	81.625	15.818	83.335	125.72
#1	.00118	-.00114	.00020	.00028	-.00044	-.00176	.00016
#2	-.00044	-.00314	.00020	.00009	-.00054	-.00014	-.00092
#3	.00038	.00444	-.00269	.00062	-.00040	-.00101	-.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00009**	**-.00004**	F **.32481**
Stddev	.00025	.00006	.17830
%RSD	287.90	145.89	54.894
#1	.00006	-.00011	.53058
#2	-.00037	-.00005	.22805
#3	.00005	.00002	.21581
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 15:26:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14671.**	**19340.**
Stddev	36.	59.
%RSD	.24411	.30325
#1	14678.	19407.
#2	14703.	19298.
#3	14633.	19315.

Approved: June 04, 2013

Sample Name: L1305135110 Acquired: 6/3/2013 15:29:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**-.00238**	**-.00083**	**.00886**	**.00765**	**.00002**	**14.578**
Stddev	.00008	.00982	.00133	.00024	.00009	.00001	.046
%RSD	20.372	412.74	160.75	2.7097	1.2286	22.276	.31551
#1	.00034	.00790	-.00186	.00901	.00762	.00003	14.555
#2	.00049	-.00339	.00067	.00898	.00758	.00002	14.547
#3	.00036	-.01165	-.00129	.00858	.00776	.00002	14.631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.00034**	**.00346**	**.00156**	**.01391**	**.07347**	**.22947**
Stddev	.00006	.00006	.00014	.00027	.00443	.00121	.18527
%RSD	86.246	17.255	4.0261	17.262	31.828	1.6404	80.737
#1	.00012	.00039	.00343	.00161	.01410	.07318	.29964
#2	.00008	.00035	.00362	.00127	.01824	.07479	.36941
#3	.00000	.00028	.00334	.00180	.00939	.07243	.01937
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.066**	**.36305**	**1.3267**	**-.00200**	**3.4220**	**.03250**	**.00106**
Stddev	21.193	.33643	.0274	.00077	.0377	.00026	.00036
%RSD	175.64	92.670	2.0684	38.377	1.1024	.81008	34.176
#1	-1.0120	.61310	1.3291	-.00174	3.3791	.03259	.00088
#2	.69232	.49549	1.2981	-.00140	3.4502	.03220	.00082
#3	36.518	-.01945	1.3528	-.00287	3.4366	.03270	.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305135110 Acquired: 6/3/2013 15:29:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.421**	**.00185**	**32.445**	**.00042**	F **21.435**	F **127.58**	F **-6161.0**
Stddev	.048	.00023	2.075	.00112	8.780	.78	25.7
%RSD	.29239	12.207	6.3969	265.21	40.960	.61257	.41705
#1	16.383	.00211	33.020	.00091	12.358	126.78	-6164.9
#2	16.406	.00175	30.143	-.00086	29.884	127.61	-6133.5
#3	16.475	.00169	34.172	.00122	22.062	128.35	-6184.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**-.00185**	**4.9672**	**-.00101**	**.07452**	**-.00029**	**.00024**
Stddev	.00048	.00181	.0360	.00009	.00076	.00046	.00051
%RSD	527.23	97.479	.72425	8.6067	1.0140	158.47	213.50
#1	.00052	-.00394	4.9466	-.00102	.07395	-.00045	.00082
#2	.00018	-.00071	4.9462	-.00091	.07423	-.00065	.00002
#3	-.00043	-.00092	5.0087	-.00108	.07538	.00023	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00026**	**.00431**	F **-.23936**
Stddev	.00007	.00008	.09633
%RSD	27.553	1.9436	40.244
#1	.00034	.00436	-.16700
#2	.00025	.00421	-.34870
#3	.00020	.00434	-.20237
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305135110 Acquired: 6/3/2013 15:29:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14570.**	**18901.**
Stddev	30.	44.
%RSD	.20678	.23370
#1	14561.	18949.
#2	14604.	18892.
#3	14546.	18862.

Approved: June 04, 2013

Sample Name: L1305135111 Acquired: 6/3/2013 15:33:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.02061**	**-.00081**	**.00581**	**.01058**	**.00002**	**29.409**
Stddev	.00012	.02243	.00109	.00030	.00004	.00002	.084
%RSD	233.15	108.82	134.27	5.2376	.37207	80.670	.28638
#1	-.00009	.00891	-.00147	.00565	.01062	.00003	29.506
#2	.00011	.04647	.00045	.00563	.01054	.00000	29.363
#3	.00013	.00646	-.00142	.00616	.01057	.00004	29.358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.00661**	**.00034**	**.00044**	**.37358**	**.17538**	**.57536**
Stddev	.00017	.00012	.00016	.00017	.00183	.00186	.60623
%RSD	43.672	1.7765	45.140	38.108	.48871	1.0626	105.37
#1	.00057	.00652	.00018	.00024	.37422	.17704	.00116
#2	.00032	.00674	.00036	.00052	.37152	.17336	.51572
#3	.00025	.00655	.00049	.00055	.37500	.17573	1.2092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.6501**	**.58530**	**4.4834**	**.00250**	**5.7160**	**.65520**	**.00366**
Stddev	11.610	.90530	.0213	.00094	.0201	.00398	.00024
%RSD	438.10	154.67	.47440	37.495	.35090	.60802	6.5575
#1	7.2636	1.0622	4.4953	.00336	5.7247	.65960	.00372
#2	-15.422	-.45876	4.4588	.00264	5.7302	.65183	.00386
#3	.2083	1.1524	4.4961	.00150	5.6930	.65417	.00339
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305135111 Acquired: 6/3/2013 15:33:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.9530**	**.00842**	**34.481**	**.00173**	F **17.335**	F **148.17**	F **-6461.9**
Stddev	.0327	.00011	2.793	.00135	7.191	.71	35.3
%RSD	.32840	1.3010	8.1003	77.816	41.481	.48093	.54692
#1	9.9677	.00847	36.954	.00107	9.5423	148.25	-6479.9
#2	9.9758	.00830	35.038	.00328	18.749	148.84	-6484.5
#3	9.9156	.00851	31.451	.00084	23.713	147.42	-6421.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**-.00353**	**6.7968**	**-.00110**	**.17789**	**-.00112**	**-.00162**
Stddev	.00081	.00145	.0179	.00035	.00072	.00055	.00115
%RSD	214.25	40.969	.26256	31.938	.40430	48.738	71.077
#1	.00065	-.00225	6.8005	-.00121	.17807	-.00082	-.00202
#2	-.00053	-.00324	6.8125	-.00138	.17851	-.00175	-.00251
#3	.00101	-.00510	6.7774	-.00071	.17710	-.00079	-.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00049**	**.00490**	**.10673**
Stddev	.00016	.00009	.32505
%RSD	32.490	1.7368	304.55
#1	.00036	.00481	-.26831
#2	.00045	.00490	.28144
#3	.00067	.00498	.30706
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305135111 Acquired: 6/3/2013 15:33:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14627.**	**19289.**
Stddev	47.	54.
%RSD	.32001	.28101
#1	14606.	19230.
#2	14595.	19337.
#3	14681.	19299.

Approved: June 04, 2013

Sample Name: L1305135117 Acquired: 6/3/2013 15:36:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.04839**	**.00015**	**-.00192**	**.00027**	**.00004**	**.02946**
Stddev	.00031	.01897	.00062	.00027	.00010	.00003	.00178
%RSD	230.50	39.203	401.39	14.056	35.468	66.523	6.0342
#1	-.00012	.03823	.00075	-.00205	.00017	.00007	.02920
#2	.00004	.07028	.00019	-.00161	.00029	.00002	.03136
#3	.00048	.03666	-.00048	-.00210	.00035	.00002	.02783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00015**	**.00012**	**.00023**	**.05584**	**-.00429**	F **-.29105**
Stddev	.00006	.00018	.00038	.00028	.00641	.00267	.62215
%RSD	108.34	120.36	314.08	121.01	11.476	62.212	213.76
#1	.00000	.00029	-.00009	.00030	.05277	-.00440	.02742
#2	-.00012	.00020	.00055	-.00008	.05155	-.00691	-1.0080
#3	-.00004	-.00005	-.00011	.00048	.06321	-.00157	.10739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-4.6180**	F **-.62796**	**.04111**	**-.00311**	**.01441**	**.00163**	**.00009**
Stddev	23.832	.87745	.01702	.00043	.00681	.00005	.00040
%RSD	516.06	139.73	41.397	13.849	47.251	3.0153	436.54
#1	20.017	-1.3098	.02344	-.00272	.00942	.00158	.00022
#2	-27.556	.36199	.05738	-.00357	.02217	.00167	.00040
#3	-6.3155	-.93610	.04250	-.00304	.01165	.00165	-.00036
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305135117 Acquired: 6/3/2013 15:36:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02187**	**.00039**	**9.3682**	**.00020**	F **20.243**	**.32163**	F **-14.085**
Stddev	.00449	.00012	4.5471	.00065	4.372	.06365	1.391
%RSD	20.516	29.812	48.538	328.22	21.599	19.791	9.8766
#1	.02521	.00044	6.8769	.00077	15.730	.33530	-12.501
#2	.02362	.00026	14.617	.00031	20.539	.37734	-14.644
#3	.01677	.00047	6.6112	-.00050	24.459	.25225	-15.109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.00182**	**.00439**	**-.00135**	**-.00035**	**.00034**	**-.00121**
Stddev	.00140	.00202	.00083	.00023	.00003	.00099	.00204
%RSD	231.31	111.23	18.888	17.060	9.5178	288.68	169.13
#1	-.00181	-.00396	.00500	-.00122	-.00039	-.00013	-.00127
#2	-.00094	.00006	.00345	-.00161	-.00032	-.00032	.00086
#3	.00093	-.00156	.00474	-.00120	-.00034	.00149	-.00321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00011**	**.00444**	**24.825**
Stddev	.00004	.00006	.842
%RSD	35.863	1.3557	3.3925
#1	.00010	.00441	25.318
#2	.00008	.00440	25.303
#3	.00016	.00451	23.852
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305135117 Acquired: 6/3/2013 15:36:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14768.**	**19580.**
Stddev	28.	102.
%RSD	.19181	.51955
#1	14735.	19696.
#2	14782.	19507.
#3	14786.	19538.

Approved: June 04, 2013

Sample Name: L1305137835 Acquired: 6/3/2013 15:40:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**-.00030**	**-.00091**	**-.00064**	**.00047**	**.00001**	**.01819**
Stddev	.00013	.01397	.00111	.00022	.00007	.00001	.00746
%RSD	54.046	4683.7	122.59	35.067	13.969	71.754	41.021
#1	.00011	.00439	-.00060	-.00053	.00054	.00000	.00959
#2	.00037	-.01601	.00002	-.00048	.00047	.00002	.02207
#3	.00023	.01072	-.00214	-.00089	.00041	.00002	.02291
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00015**	**.00005**	**.00013**	**.00204**	**-.00487**	**-.02934**
Stddev	.00006	.00007	.00015	.00024	.00294	.00087	.16915
%RSD	228.54	45.863	283.95	185.41	144.43	17.878	576.53
#1	.00004	.00015	.00017	-.00010	-.00066	-.00456	.15750
#2	-.00004	.00008	-.00011	.00039	.00517	-.00419	-.07346
#3	.00007	.00021	.00010	.00011	.00160	-.00585	-.17205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.1405**	F **-1.0529**	**.04123**	**-.00362**	**.02370**	**.00029**	**-.00015**
Stddev	5.3156	1.0255	.01361	.00091	.01344	.00006	.00009
%RSD	169.26	97.398	33.006	25.248	56.706	20.712	62.915
#1	-1.2176	-1.0832	.03936	-.00435	.02439	.00035	-.00023
#2	9.0626	-.01259	.05567	-.00259	.00993	.00023	-.00005
#3	1.5766	-2.0629	.02865	-.00392	.03677	.00031	-.00015
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013

Sample Name: L1305137835 Acquired: 6/3/2013 15:40:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.75363**	**.00006**	**8.0977**	**.00104**	F **24.068**	**.59145**	F **-26.619**
Stddev	.00866	.00010	2.5863	.00057	.847	.01813	.761
%RSD	1.1485	164.88	31.939	54.702	3.5189	3.0662	2.8578
#1	.75231	.00018	5.1170	.00152	23.806	.57313	-26.145
#2	.74572	-.00001	9.7485	.00041	25.015	.60939	-27.497
#3	.76287	.00001	9.4275	.00117	23.383	.59182	-26.216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00110**	**-.00115**	**.22041**	**-.00097**	**-.00024**	**-.00008**	**-.00104**
Stddev	.00081	.00145	.00061	.00024	.00013	.00087	.00086
%RSD	73.568	125.64	.27665	24.414	53.253	1142.7	82.774
#1	-.00075	-.00282	.22073	-.00079	-.00033	-.00048	-.00051
#2	-.00053	-.00032	.22080	-.00089	-.00009	-.00066	-.00204
#3	-.00203	-.00031	.21971	-.00124	-.00029	.00092	-.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00007**	**.00272**	**2.1100**
Stddev	.00017	.00008	.1954
%RSD	265.31	2.9415	9.2614
#1	.00009	.00271	1.9488
#2	-.00012	.00265	2.0539
#3	.00023	.00281	2.3273
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305137835 Acquired: 6/3/2013 15:40:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14782.**	**20090.**
Stddev	37.	6.
%RSD	.25169	.02838
#1	14816.	20087.
#2	14787.	20097.
#3	14742.	20087.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 15:44:07 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40798**	**10.109**	**.40488**	**.50854**	**1.0089**	**.05085**	**10.109**
Stddev	.00218	.097	.00322	.00150	.0115	.00023	.186
%RSD	.53537	.96108	.79429	.29403	1.1380	.44990	1.8440
#1	.40658	10.179	.40249	.50735	1.0194	.05096	10.287
#2	.40686	10.149	.40362	.50805	1.0107	.05059	10.124
#3	.41049	9.9978	.40854	.51022	.99666	.05101	9.9153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05065**	**.20380**	**.51018**	**.50927**	**4.0743**	**1.0108**	**.90755**
Stddev	.00024	.00168	.00191	.00206	.0458	.0035	.31590
%RSD	.46415	.82499	.37353	.40521	1.1243	.34987	34.807
#1	.05058	.20313	.51044	.50861	4.1201	1.0091	1.1854
#2	.05046	.20255	.50815	.50762	4.0743	1.0084	.97327
#3	.05092	.20571	.51194	.51159	4.0285	1.0149	.56397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **6.9028**	F **.78661**	**51.235**	**1.0117**	**10.243**	**.51818**	**1.0104**
Stddev	15.411	.82225	.700	.0122	.107	.00478	.0011
%RSD	223.25	104.53	1.3654	1.2043	1.0422	.92318	.11100
#1	24.355	1.7131	51.914	1.0228	10.357	.52310	1.0112
#2	1.1828	.14355	51.275	1.0137	10.227	.51790	1.0091
#3	-4.8298	.50320	50.517	.99868	10.145	.51354	1.0108
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	-10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 15:44:07 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.635**	**.51036**	F **4.9643**	**.50988**	F **23.370**	**10.128**	F **17.692**
Stddev	.604	.00297	4.3476	.00130	4.225	.044	4.237
%RSD	1.1921	.58283	87.577	.25523	18.078	.43248	23.949
#1	51.176	.50861	.53287	.51125	27.997	10.151	16.334
#2	50.746	.50867	5.1371	.50867	19.719	10.156	22.441
#3	49.984	.51379	9.2229	.50971	22.393	10.078	14.300
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2160**	**.40561**	**5.0584**	**.92698**	**1.0055**	**1.0280**	**.51459**
Stddev	.0029	.00252	.0120	.00391	.0087	.0098	.00148
%RSD	.23485	.62162	.23789	.42204	.86703	.95303	.28744
#1	1.2190	.40416	5.0550	.92960	1.0128	1.0386	.51518
#2	1.2134	.40415	5.0717	.92248	1.0079	1.0261	.51291
#3	1.2157	.40852	5.0484	.92886	.99584	1.0193	.51569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0174**	**1.0114**	F **.29043**
Stddev	.0050	.0032	.22864
%RSD	.48859	.31775	78.727
#1	1.0160	1.0128	.25829
#2	1.0133	1.0077	.53344
#3	1.0230	1.0137	.07955
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 15:44:07 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14563.**	**19399.**
Stddev	50.	193.
%RSD	.34117	.99292
#1	14570.	19217.
#2	14609.	19378.
#3	14511.	19601.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 15:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00120**	**-.00069**	**-.00012**	**-.00013**	**.00002**	**-.00340**
Stddev	.00023	.02104	.00081	.00116	.00007	.00001	.01632
%RSD	627.43	1756.8	116.30	1006.6	54.061	79.559	479.55
#1	-.00021	-.02299	.00001	-.00063	-.00020	.00003	-.00467
#2	.00007	.01123	-.00051	.00122	-.00006	.00001	.01351
#3	.00025	.01535	-.00158	-.00094	-.00014	.00001	-.01905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00006**	**-.00018**	**-.00019**	**.00076**	**-.00252**	F **-.26747**
Stddev	.00010	.00005	.00024	.00057	.00121	.00471	.52933
%RSD	367.04	85.521	135.92	294.03	158.52	186.41	197.90
#1	-.00014	.00007	-.00036	.00019	.00081	-.00739	-.77153
#2	.00003	.00000	.00010	-.00085	.00195	.00200	.28396
#3	.00003	.00010	-.00027	.00007	-.00047	-.00218	-.31484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **5.7087**	F **.87527**	**.08148**	**-.00248**	**-.01298**	**.00004**	**.00131**
Stddev	16.183	.43313	.01591	.00077	.00345	.00001	.00028
%RSD	283.47	49.485	19.527	31.021	26.576	34.022	21.741
#1	-12.312	1.1154	.09123	-.00279	-.00953	.00005	.00102
#2	18.998	.37527	.09009	-.00160	-.01298	.00003	.00132
#3	10.440	1.1351	.06312	-.00304	-.01643	.00003	.00159
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 15:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01348**	**.00063**	F **4.6507**	**.00052**	F **23.178**	**-.10879**	F **7.1445**
Stddev	.00623	.00072	4.7575	.00046	3.807	.03938	3.8443
%RSD	46.245	114.12	102.30	88.266	16.423	36.194	53.807
#1	-.02057	-.00018	5.3457	.00054	19.093	-.07202	3.2806
#2	-.01099	.00088	-.41606	.00005	23.817	-.15033	10.969
#3	-.00887	.00120	9.0224	.00097	26.625	-.10402	7.1842
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**-.00249**	**.00032**	**.00037**	**-.00058**	**.00019**	**.00087**
Stddev	.00275	.00146	.00163	.00058	.00006	.00081	.00080
%RSD	661.92	58.656	515.67	154.46	10.483	418.52	92.582
#1	-.00047	-.00311	.00051	-.00001	-.00052	.00113	.00093
#2	-.00178	-.00082	-.00140	.00010	-.00059	-.00026	.00164
#3	.00350	-.00353	.00185	.00104	-.00065	-.00029	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00026**	**.00005**	F **-.19351**
Stddev	.00013	.00013	.46806
%RSD	49.829	254.71	241.87
#1	.00020	-.00001	-.58508
#2	.00041	-.00004	-.32035
#3	.00018	.00021	.32489
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 15:47:23 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14599.**	**19385.**
Stddev	28.	77.
%RSD	.19149	.39738
#1	14567.	19299.
#2	14619.	19407.
#3	14611.	19448.

Approved: June 04, 2013

Sample Name: L1305131502 Acquired: 6/3/2013 15:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00048**	**1.3558**	**.00199**	**.02105**	**.04333**	**.00013**	**30.710**
Stddev	.00035	.0191	.00217	.00028	.00026	.00002	.163
%RSD	74.059	1.4075	108.79	1.3238	.59852	15.250	.53168
#1	.00059	1.3488	.00078	.02108	.04309	.00014	30.734
#2	.00076	1.3412	.00450	.02132	.04360	.00015	30.860
#3	.00008	1.3774	.00070	.02076	.04330	.00011	30.536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.00126**	**.00394**	**.02130**	**1.9402**	**.14398**	**.10053**
Stddev	.00009	.00019	.00009	.00034	.0129	.00813	.33481
%RSD	29.456	15.312	2.4107	1.5889	.66499	5.6434	333.04
#1	.00036	.00124	.00390	.02131	1.9301	.14918	.21534
#2	.00020	.00146	.00405	.02163	1.9547	.13462	.36284
#3	.00033	.00107	.00387	.02096	1.9357	.14814	-.27658
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.39086**	F **-1.7467**	**11.334**	**.00321**	**3.6109**	**.08245**	**.00198**
Stddev	26.960	.6169	.030	.00171	.0245	.00018	.00015
%RSD	6897.7	35.321	.26489	53.203	.67995	.22177	7.4605
#1	-7.7591	-1.2780	11.306	.00126	3.5968	.08246	.00192
#2	-22.901	-1.5164	11.366	.00444	3.6393	.08226	.00186
#3	29.488	-2.4456	11.330	.00394	3.5967	.08262	.00214
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305131502 Acquired: 6/3/2013 15:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.4219**	**.00364**	**402.44**	**.00382**	F **23.988**	F **166.11**	F **-7257.7**
Stddev	.0091	.00048	.73	.00164	6.228	.38	28.0
%RSD	.20627	13.265	.18230	42.932	25.961	.22977	.38647
#1	4.4292	.00327	401.77	.00537	28.502	165.75	-7265.9
#2	4.4249	.00419	402.33	.00400	26.578	166.09	-7226.5
#3	4.4117	.00346	403.23	.00210	16.883	166.51	-7280.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**-.00194**	**5.5939**	**.00003**	**.13774**	**.03443**	**-.00002**
Stddev	.00048	.00057	.0454	.00024	.00037	.00181	.00186
%RSD	61.447	29.628	.81175	697.78	.26903	5.2679	12393.
#1	-.00042	-.00259	5.5417	.00031	.13790	.03534	.00213
#2	-.00059	-.00170	5.6239	-.00006	.13801	.03561	-.00092
#3	-.00132	-.00152	5.6162	-.00015	.13732	.03234	-.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00402**	**.07029**	**6.0290**
Stddev	.00012	.00032	.0439
%RSD	2.9388	.45135	.72794
#1	.00403	.07038	6.0317
#2	.00389	.06993	5.9838
#3	.00413	.07054	6.0714
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131502 Acquired: 6/3/2013 15:51:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14658.**	**19722.**
Stddev	56.	36.
%RSD	.38364	.18478
#1	14668.	19704.
#2	14709.	19698.
#3	14598.	19764.

Approved: June 04, 2013

Sample Name: L1305131503 Acquired: 6/3/2013 15:54:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00158**	**11.886**	**.00703**	**.04042**	**.13975**	**.00092**	**162.42**
Stddev	.00005	.113	.00156	.00047	.00102	.00003	1.51
%RSD	3.3011	.94840	22.166	1.1637	.72903	3.1516	.92959
#1	.00160	12.009	.00883	.04008	.14080	.00094	164.00
#2	.00152	11.863	.00618	.04022	.13969	.00094	162.28
#3	.00161	11.787	.00609	.04096	.13876	.00089	160.99
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.00901**	**.02597**	**.03851**	**19.992**	**.47810**	**.93108**
Stddev	.00011	.00011	.00036	.00006	.150	.00410	.56417
%RSD	14.010	1.2573	1.3850	.14362	.75025	.85783	60.594
#1	.00064	.00899	.02578	.03847	20.152	.48246	1.3191
#2	.00079	.00890	.02575	.03849	19.969	.47751	.28388
#3	.00085	.00912	.02639	.03857	19.855	.47432	1.1903
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-18.340**	**1.3412**	**9.4310**	**.03416**	**14.332**	**.74114**	**.00271**
Stddev	17.764	1.6155	.0624	.00072	.104	.00724	.00011
%RSD	96.862	120.46	.66132	2.1222	.72340	.97643	4.2026
#1	-36.980	2.3957	9.4973	.03452	14.400	.74407	.00263
#2	-1.6046	2.1465	9.4222	.03463	14.383	.74645	.00284
#3	-16.435	-.51876	9.3735	.03332	14.212	.73290	.00267
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305131503 Acquired: 6/3/2013 15:54:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0601**	**.02115**	F **1021.8**	**.01807**	F **27.510**	F **327.37**	F **-9160.1**
Stddev	.0480	.00026	7.2	.00053	3.191	.91	18.7
%RSD	.94793	1.2194	.70305	2.9172	11.599	.27849	.20459
#1	5.1054	.02095	1028.0	.01799	23.842	326.32	-9177.3
#2	5.0651	.02107	1023.5	.01863	29.039	327.78	-9140.1
#3	5.0098	.02144	1013.9	.01758	29.649	328.00	-9162.9
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00104**	**.00066**	**24.674**	**.00064**	**.43651**	**.24534**	**-.00010**
Stddev	.00115	.00096	.102	.00020	.00300	.00203	.00070
%RSD	110.58	145.04	.41448	31.891	.68835	.82707	710.21
#1	.00214	.00150	24.566	.00043	.43963	.24626	-.00086
#2	.00114	.00089	24.688	.00065	.43624	.24675	.00006
#3	-.00016	-.00039	24.769	.00084	.43364	.24302	.00051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.02743**	**.16091**	**13.901**
Stddev	.00012	.00043	.343
%RSD	.42544	.26719	2.4706
#1	.02732	.16140	14.155
#2	.02755	.16071	13.510
#3	.02742	.16061	14.037
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305131503 Acquired: 6/3/2013 15:54:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14652.**	**19520.**
Stddev	7.	164.
%RSD	.04501	.83874
#1	14653.	19409.
#2	14658.	19443.
#3	14644.	19708.

Approved: June 04, 2013

Sample Name: L1305131504 Acquired: 6/3/2013 15:57:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.07332**	**-.00102**	**.00755**	**.01569**	**.00003**	**12.294**
Stddev	.00035	.01479	.00020	.00032	.00037	.00001	.027
%RSD	123.50	20.168	19.832	4.2457	2.3435	35.550	.21850
#1	.00055	.06877	-.00113	.00787	.01545	.00003	12.321
#2	.00040	.06134	-.00079	.00756	.01611	.00002	12.267
#3	-.00011	.08985	-.00114	.00723	.01550	.00004	12.293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.00023**	**.00142**	**.01063**	**.13599**	**.02114**	F **-.17937**
Stddev	.00005	.00010	.00055	.00026	.00150	.00205	.16804
%RSD	24.201	44.569	38.911	2.4101	1.1012	9.6994	93.687
#1	.00018	.00016	.00206	.01043	.13664	.02319	-.36661
#2	.00026	.00035	.00109	.01092	.13427	.02113	-.12981
#3	.00017	.00018	.00112	.01055	.13705	.01909	-.04168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-11.975**	F **-2.4493**	**.78032**	**-.00213**	**1.4993**	**.00791**	**-.00006**
Stddev	10.064	1.1730	.01163	.00021	.0201	.00010	.00017
%RSD	84.042	47.890	1.4898	10.041	1.3432	1.3233	294.10
#1	-14.193	-3.7988	.78914	-.00237	1.5107	.00792	.00003
#2	-20.746	-1.6749	.76715	-.00200	1.5111	.00801	.00005
#3	-.9872	-1.8742	.78469	-.00200	1.4760	.00780	-.00026
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305131504 Acquired: 6/3/2013 15:57:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2410**	**.00064**	**39.495**	**.00092**	F **23.477**	F **63.842**	F **-2781.7**
Stddev	.0060	.00029	1.426	.00059	2.449	.266	5.2
%RSD	.48710	45.696	3.6101	63.551	10.432	.41708	.18731
#1	1.2405	.00045	40.527	.00130	25.412	64.033	-2786.3
#2	1.2473	.00097	37.868	.00123	20.724	63.954	-2782.7
#3	1.2352	.00049	40.091	.00025	24.296	63.538	-2776.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00085**	**.00007**	**3.4504**	**.00115**	**.02427**	**.00141**	**-.00053**
Stddev	.00121	.00343	.0131	.00030	.00008	.00092	.00130
%RSD	143.36	5253.5	.37910	26.067	.32936	64.898	246.49
#1	-.00219	-.00385	3.4654	.00142	.02431	.00240	.00096
#2	.00017	.00254	3.4442	.00118	.02433	.00059	-.00145
#3	-.00052	.00151	3.4415	.00083	.02418	.00124	-.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00110**	**.05184**	**3.7219**
Stddev	.00014	.00020	.3272
%RSD	12.618	.37621	8.7920
#1	.00114	.05181	3.3936
#2	.00095	.05204	4.0481
#3	.00122	.05165	3.7242
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131504 Acquired: 6/3/2013 15:57:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14750.**	**19626.**
Stddev	33.	49.
%RSD	.22157	.24740
#1	14752.	19582.
#2	14717.	19617.
#3	14782.	19678.

Approved: June 04, 2013

Sample Name: L1305131505 Acquired: 6/3/2013 16:01:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.34349**	**.00002**	**.00635**	**.00987**	**.00004**	**14.508**
Stddev	.00009	.02408	.00172	.00045	.00023	.00001	.050
%RSD	122.82	7.0103	7636.2	7.0178	2.2890	29.434	.34569
#1	-.00017	.35220	.00165	.00611	.00997	.00004	14.565
#2	-.00004	.31627	.00018	.00686	.01002	.00005	14.488
#3	-.00001	.36200	-.00177	.00607	.00961	.00003	14.470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00038**	**.00158**	**.00427**	**.33540**	**.06198**	F **-.38253**
Stddev	.00014	.00016	.00009	.00019	.00177	.00691	.22469
%RSD	437.90	42.732	5.4757	4.4062	.52902	11.143	58.739
#1	-.00013	.00048	.00167	.00414	.33567	.06925	-.60032
#2	-.00010	.00046	.00156	.00419	.33702	.06118	-.39574
#3	.00013	.00019	.00150	.00448	.33351	.05551	-.15152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.120**	**1.3406**	**2.1914**	**-.00186**	**.89413**	**.02996**	**.00055**
Stddev	17.376	.9065	.0078	.00128	.02654	.00013	.00032
%RSD	171.71	67.615	.35571	68.784	2.9683	.43026	58.197
#1	-24.373	.29635	2.1858	-.00302	.86348	.02990	.00089
#2	-15.223	1.8012	2.1881	-.00049	.90970	.03011	.00025
#3	9.2367	1.9243	2.2003	-.00208	.90920	.02987	.00052
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305131505 Acquired: 6/3/2013 16:01:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0965**	**.00117**	**77.139**	**.00190**	F **19.410**	F **53.679**	F **-2118.6**
Stddev	.0044	.00069	1.931	.00074	3.157	.142	3.7
%RSD	.39907	58.925	2.5040	38.752	16.263	.26398	.17248
#1	1.0982	.00112	79.144	.00126	16.274	53.753	-2115.7
#2	1.0998	.00189	76.982	.00174	22.587	53.769	-2122.7
#3	1.0916	.00051	75.291	.00271	19.370	53.516	-2117.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00135**	**2.3324**	**-.00112**	**.06249**	**.01138**	**.00050**
Stddev	.00104	.00366	.0200	.00028	.00021	.00165	.00092
%RSD	278.63	271.24	.85903	24.585	.33594	14.529	182.28
#1	.00084	-.00194	2.3555	-.00115	.06272	.01270	.00081
#2	.00109	.00530	2.3209	-.00138	.06244	.01192	-.00053
#3	-.00081	.00069	2.3208	-.00083	.06231	.00953	.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00164**	**.01567**	**2.3705**
Stddev	.00018	.00005	.1564
%RSD	11.177	.32635	6.5964
#1	.00160	.01564	2.3293
#2	.00148	.01573	2.2389
#3	.00184	.01564	2.5434
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131505 Acquired: 6/3/2013 16:01:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14741.**	**19615.**
Stddev	33.	112.
%RSD	.22065	.56951
#1	14775.	19572.
#2	14710.	19531.
#3	14738.	19741.

Approved: June 04, 2013

Sample Name: L1305131506 Acquired: 6/3/2013 16:04:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.56955**	**.00010**	**.01969**	**.02092**	**.00007**	**21.549**
Stddev	.00016	.00402	.00094	.00041	.00025	.00003	.149
%RSD	39.151	.70507	991.19	2.0780	1.1722	36.826	.69368
#1	.00051	.57417	.00098	.01957	.02076	.00004	21.379
#2	.00047	.56756	-.00090	.01935	.02120	.00008	21.604
#3	.00022	.56691	.00021	.02014	.02079	.00009	21.663
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**.00071**	**.00371**	**.00612**	**.68138**	**.06930**	**.07454**
Stddev	.00002	.00012	.00005	.00031	.00358	.00388	.34174
%RSD	13.479	17.472	1.2216	5.1453	.52603	5.5977	458.48
#1	.00013	.00074	.00366	.00576	.67770	.07258	.34918
#2	.00018	.00057	.00370	.00637	.68159	.07029	.18261
#3	.00017	.00081	.00375	.00621	.68486	.06502	-.30817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-15.954**	F **-.14086**	**2.6286**	**.00083**	**1.5023**	**.03667**	**.00059**
Stddev	15.085	1.4872	.0095	.00052	.0138	.00004	.00011
%RSD	94.556	1055.7	.36039	63.236	.91968	.09602	17.771
#1	-13.587	-.31541	2.6180	.00134	1.5024	.03663	.00066
#2	-2.1919	1.4259	2.6316	.00029	1.5161	.03670	.00064
#3	-32.082	-1.5330	2.6362	.00085	1.4884	.03668	.00047
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305131506 Acquired: 6/3/2013 16:04:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5934**	**.00136**	**129.05**	**.00245**	F **23.714**	F **98.223**	F **-4105.3**
Stddev	.0132	.00018	8.37	.00025	4.936	.577	22.0
%RSD	.82583	12.922	6.4887	10.031	20.815	.58709	.53685
#1	1.5800	.00150	132.66	.00230	28.478	98.628	-4118.0
#2	1.6063	.00142	119.48	.00232	24.042	97.563	-4079.9
#3	1.5939	.00116	135.02	.00273	18.622	98.478	-4118.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00080**	**-.00169**	**5.7026**	**-.00103**	**.07174**	**.04590**	**-.00073**
Stddev	.00064	.00180	.0329	.00030	.00038	.00196	.00066
%RSD	80.854	106.61	.57685	28.781	.53338	4.2668	90.569
#1	-.00008	-.00367	5.6798	-.00075	.07134	.04726	-.00042
#2	-.00132	-.00123	5.6878	-.00099	.07211	.04679	-.00149
#3	-.00099	-.00016	5.7403	-.00134	.07177	.04366	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00443**	**.04863**	**3.2283**
Stddev	.00023	.00039	.5998
%RSD	5.2694	.79700	18.579
#1	.00469	.04895	2.7045
#2	.00433	.04820	3.0979
#3	.00426	.04873	3.8826
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131506 Acquired: 6/3/2013 16:04:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14789.**	**19794.**
Stddev	48.	47.
%RSD	.32315	.23936
#1	14771.	19770.
#2	14844.	19849.
#3	14754.	19764.

Approved: June 04, 2013

Sample Name: L1305131507 Acquired: 6/3/2013 16:08:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00064**	**.40623**	**.00008**	**.01821**	**.01826**	**.00009**	**19.794**
Stddev	.00030	.02570	.00080	.00092	.00036	.00003	.103
%RSD	46.211	6.3273	990.84	5.0600	1.9529	30.420	.51866
#1	.00044	.38204	.00095	.01899	.01795	.00009	19.907
#2	.00098	.43322	-.00062	.01719	.01817	.00011	19.769
#3	.00051	.40342	-.00010	.01844	.01865	.00006	19.706
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.00049**	**.00295**	**.00804**	**.49435**	**.06245**	F **-.36956**
Stddev	.00007	.00010	.00025	.00041	.00394	.00366	.41507
%RSD	67.421	19.834	8.3989	5.1169	.79736	5.8620	112.31
#1	.00002	.00039	.00270	.00779	.49201	.06052	-.17000
#2	.00016	.00048	.00295	.00851	.49214	.06016	-.84672
#3	.00013	.00059	.00320	.00781	.49890	.06667	-.09197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-11.018**	F **-.47501**	**2.5187**	**-.00055**	**1.2291**	**.02460**	**.00080**
Stddev	17.594	.41385	.0367	.00104	.0144	.00024	.00007
%RSD	159.68	87.123	1.4568	190.12	1.1744	.96402	8.2134
#1	-22.475	-.02761	2.4776	-.00119	1.2127	.02452	.00075
#2	-19.817	-.55332	2.5482	-.00111	1.2347	.02486	.00087
#3	9.2396	-.84412	2.5304	.00065	1.2398	.02441	.00078
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305131507 Acquired: 6/3/2013 16:08:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2100**	**.00160**	**113.93**	**.00355**	F **19.828**	F **91.131**	F **-3842.4**
Stddev	.0034	.00029	4.34	.00110	1.371	.285	19.9
%RSD	.28139	18.320	3.8085	30.864	6.9159	.31329	.51841
#1	1.2123	.00171	116.08	.00311	21.409	90.803	-3820.1
#2	1.2116	.00182	116.77	.00275	18.970	91.269	-3858.4
#3	1.2061	.00127	108.93	.00480	19.104	91.322	-3848.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00095**	**-.00098**	**5.2251**	**-.00118**	**.06781**	**.03693**	**.00062**
Stddev	.00096	.00277	.0247	.00018	.00059	.00031	.00037
%RSD	100.41	281.98	.47270	15.159	.87189	.82601	59.236
#1	-.00191	-.00321	5.1968	-.00134	.06713	.03665	.00020
#2	.00000	-.00186	5.2425	-.00099	.06806	.03725	.00086
#3	-.00095	.00212	5.2360	-.00122	.06823	.03689	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00404**	**.03359**	**2.3109**
Stddev	.00019	.00013	.5083
%RSD	4.6114	.37355	21.995
#1	.00384	.03349	2.1088
#2	.00420	.03355	1.9347
#3	.00408	.03373	2.8891
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131507 Acquired: 6/3/2013 16:08:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14795.**	**19762.**
Stddev	64.	99.
%RSD	.43474	.50116
#1	14866.	19797.
#2	14777.	19650.
#3	14741.	19838.

Approved: June 04, 2013

Sample Name: L1305131508 Acquired: 6/3/2013 16:11:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	**4.6803**	**.00152**	**.03992**	**.06329**	**.00041**	**54.652**
Stddev	.00041	.0373	.00114	.00117	.00021	.00001	.219
%RSD	43.574	.79789	75.011	2.9387	.32783	3.6577	.40144
#1	.00055	4.7232	.00022	.04059	.06338	.00039	54.550
#2	.00137	4.6551	.00236	.03857	.06343	.00042	54.904
#3	.00089	4.6625	.00199	.04061	.06305	.00041	54.502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00280**	**.01298**	**.00937**	**5.6523**	**.41482**	**-.05419**
Stddev	.00003	.00011	.00040	.00042	.0086	.00419	.27244
%RSD	12.136	4.0259	3.0611	4.4692	.15255	1.0091	502.78
#1	.00026	.00281	.01271	.00964	5.6619	.41468	-.00759
#2	.00025	.00269	.01280	.00888	5.6499	.41070	.19195
#3	.00031	.00291	.01344	.00957	5.6452	.41907	-.34692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.2690**	F **-.83523**	**9.8358**	**.01166**	**4.2415**	**.20470**	**.00244**
Stddev	15.277	1.0165	.0660	.00095	.0154	.00116	.00010
%RSD	243.69	121.71	.67066	8.1397	.36205	.56690	4.1729
#1	-7.4538	-1.9924	9.8350	.01141	4.2573	.20343	.00250
#2	22.730	-.42719	9.9022	.01272	4.2267	.20570	.00249
#3	3.5307	-.08611	9.7703	.01087	4.2405	.20496	.00232
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013

Sample Name: L1305131508 Acquired: 6/3/2013 16:11:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.9288**	**.00734**	**299.20**	**.00632**	F **22.603**	F **239.70**	F **-10110.**
Stddev	.0230	.00016	6.32	.00172	5.295	1.11	41.
%RSD	.58512	2.2275	2.1140	27.257	23.427	.46183	.40509
#1	3.9531	.00727	306.34	.00828	16.987	238.77	-10133.
#2	3.9257	.00723	294.30	.00563	23.318	239.40	-10063.
#3	3.9075	.00753	296.96	.00505	27.505	240.92	-10135.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00028**	**15.222**	**-.00071**	**.39492**	**.12873**	**-.00075**
Stddev	.00073	.00228	.082	.00031	.00208	.00387	.00057
%RSD	887.59	816.95	.53563	43.397	.52650	3.0057	75.785
#1	.00060	.00044	15.183	-.00088	.39668	.12601	-.00014
#2	-.00075	.00248	15.167	-.00035	.39546	.12702	-.00085
#3	.00040	-.00208	15.316	-.00090	.39263	.13316	-.00127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01220**	**.04918**	**14.265**
Stddev	.00017	.00007	.463
%RSD	1.3935	.15078	3.2425
#1	.01212	.04926	14.067
#2	.01209	.04911	14.793
#3	.01239	.04919	13.933
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131508 Acquired: 6/3/2013 16:11:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14729.**	**19677.**
Stddev	50.	86.
%RSD	.34070	.43575
#1	14698.	19772.
#2	14787.	19605.
#3	14702.	19654.

Approved: June 04, 2013

Sample Name: L1305131509 Acquired: 6/3/2013 16:15:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.98688**	**-.00009**	**.02284**	**.02418**	**.00012**	**26.761**
Stddev	.00053	.02194	.00013	.00094	.00031	.00002	.436
%RSD	121.94	2.2227	134.75	4.1355	1.2645	16.445	1.6291
#1	.00066	.97307	.00000	.02311	.02393	.00012	26.514
#2	-.00017	.97540	-.00004	.02362	.02410	.00010	26.506
#3	.00081	1.0122	-.00024	.02179	.02452	.00014	27.265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.00078**	**.00362**	**.00404**	**1.0750**	**.91818**	**.10690**
Stddev	.00019	.00017	.00024	.00018	.0138	.00577	.28439
%RSD	165.07	21.594	6.6465	4.3769	1.2878	.62883	266.03
#1	-.00010	.00060	.00341	.00422	1.0713	.92118	-.04107
#2	.00026	.00093	.00389	.00405	1.0634	.92183	-.07300
#3	.00018	.00080	.00358	.00386	1.0903	.91152	.43477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.0318**	**1.4764**	**5.5282**	**.00913**	**3.1360**	**.04882**	**.00437**
Stddev	4.6310	1.1826	.0769	.00063	.0368	.00049	.00026
%RSD	51.274	80.104	1.3907	6.9105	1.1744	1.0075	6.0373
#1	12.740	2.7781	5.5623	.00965	3.1249	.04843	.00466
#2	10.515	1.1830	5.4401	.00843	3.1060	.04865	.00416
#3	3.8409	.46803	5.5821	.00931	3.1771	.04937	.00427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131509 Acquired: 6/3/2013 16:15:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.4359**	**.00221**	**108.08**	**.00212**	F **16.886**	F **211.93**	F **-10048.**
Stddev	.0432	.00045	1.66	.00049	2.313	1.21	67.
%RSD	.79462	20.489	1.5316	22.916	13.701	.57052	.67108
#1	5.4288	.00239	106.24	.00160	14.658	212.87	-10113.
#2	5.3968	.00169	109.44	.00218	19.276	212.35	-10053.
#3	5.4823	.00254	108.56	.00257	16.725	210.57	-9978.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00028**	**5.6076**	**-.00116**	**.89678**	**.03514**	**-.00030**
Stddev	.00065	.00309	.0201	.00020	.00866	.00282	.00204
%RSD	152.20	1096.7	.35773	17.017	.96555	8.0179	682.66
#1	-.00106	-.00186	5.6152	-.00098	.89647	.03303	.00063
#2	-.00045	.00382	5.5848	-.00113	.88829	.03406	-.00263
#3	.00024	-.00111	5.6227	-.00137	.90560	.03834	.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00323**	**.02156**	**5.8469**
Stddev	.00018	.00024	.4727
%RSD	5.7002	1.1147	8.0849
#1	.00318	.02173	6.2945
#2	.00308	.02167	5.8937
#3	.00344	.02129	5.3525
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305131509 Acquired: 6/3/2013 16:15:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14790.**	**19364.**
Stddev	75.	207.
%RSD	.50621	1.0701
#1	14714.	19438.
#2	14792.	19524.
#3	14864.	19130.

Approved: June 04, 2013

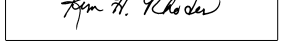
Sample Name: L1305131510 Acquired: 6/3/2013 16:18:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00081**	**4.6924**	**.00444**	**.07688**	**.09084**	**.00047**	**30.759**
Stddev	.00015	.0693	.00124	.00063	.00114	.00001	.065
%RSD	19.005	1.4779	27.865	.81561	1.2514	2.1851	.21248
#1	.00093	4.6148	.00305	.07648	.08965	.00048	30.699
#2	.00064	4.7142	.00484	.07760	.09095	.00046	30.751
#3	.00085	4.7482	.00543	.07655	.09192	.00047	30.828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00414**	**.02000**	**.01024**	**8.9109**	**.27385**	F **-.23783**
Stddev	.00008	.00018	.00028	.00039	.0589	.00533	.22824
%RSD	30.294	4.3517	1.3998	3.7678	.66115	1.9453	95.971
#1	.00035	.00428	.02012	.01062	8.8548	.27968	.02367
#2	.00022	.00420	.02020	.01023	8.9057	.27265	-.34012
#3	.00021	.00394	.01968	.00985	8.9723	.26923	-.39703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-14.506**	**2.0777**	**20.626**	**.02526**	**2.7795**	**.32015**	**.00459**
Stddev	20.216	.6070	.183	.00277	.0375	.00234	.00022
%RSD	139.37	29.216	.88721	10.952	1.3491	.72994	4.8627
#1	8.5423	1.3911	20.460	.02239	2.7792	.32035	.00469
#2	-29.237	2.5430	20.597	.02547	2.7421	.31772	.00474
#3	-22.822	2.2990	20.822	.02791	2.8171	.32238	.00433
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013



Sample Name: L1305131510 Acquired: 6/3/2013 16:18:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.891**	**.00812**	**438.91**	**.00768**	F **27.832**	F **381.69**	F **-18805.**
Stddev	.154	.00033	11.03	.00118	4.042	.51	131.
%RSD	1.1055	4.1072	2.5127	15.300	14.522	.13376	.69895
#1	13.738	.00780	439.61	.00690	23.673	381.22	-18907.
#2	13.891	.00846	449.57	.00711	31.745	382.23	-18851.
#3	14.045	.00811	427.55	.00903	28.079	381.62	-18657.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**-.00220**	**13.447**	**-.00078**	**.25220**	**.10156**	**-.00156**
Stddev	.00076	.00144	.031	.00014	.00316	.00235	.00074
%RSD	125.54	65.614	.23138	17.412	1.2550	2.3090	47.572
#1	-.00021	-.00054	13.459	-.00063	.24900	.10011	-.00090
#2	-.00147	-.00285	13.471	-.00090	.25226	.10030	-.00236
#3	-.00012	-.00319	13.412	-.00081	.25533	.10427	-.00142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01162**	**.05063**	**5.4047**
Stddev	.00011	.00041	.0696
%RSD	.95980	.81861	1.2880
#1	.01172	.05087	5.3462
#2	.01163	.05087	5.4817
#3	.01150	.05015	5.3863
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305131510 Acquired: 6/3/2013 16:18:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14992.**	**19814.**
Stddev	109.	127.
%RSD	.72965	.63934
#1	14921.	19805.
#2	14936.	19945.
#3	15118.	19692.

Approved: June 04, 2013

Sample Name: L1305142102 Acquired: 6/3/2013 16:22:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.03742**	**-.00008**	**.00795**	**.02795**	**.00072**
Stddev	.00059	.02254	.00105	.00060	.00006	.00000
%RSD	340.82	60.227	1349.4	7.6008	.20051	.35687
#1	.00042	.02501	-.00129	.00745	.02802	.00072
#2	-.00050	.02381	.00051	.00862	.02792	.00071
#3	.00061	.06343	.00055	.00778	.02793	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.434**	**.00085**	**.05166**	**.00043**	**.01293**	**.20249**
Stddev	.273	.00003	.00027	.00034	.00065	.00207
%RSD	.69147	3.6250	.51715	77.462	4.9980	1.0213
#1	39.747	.00082	.05145	.00006	.01324	.20349
#2	39.249	.00087	.05196	.00052	.01219	.20011
#3	39.306	.00088	.05156	.00072	.01336	.20386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.22234**	**2.4033**	**1.4209**	**-.04640**	**2.3128**	**.03759**
Stddev	.00276	.2841	8.0503	1.6073	.0400	.00030
%RSD	1.2402	11.819	566.56	3463.9	1.7298	.79018
#1	.22042	2.2393	2.0626	.98055	2.3567	.03761
#2	.22550	2.2392	9.1312	.77895	2.2784	.03787
#3	.22110	2.7312	-6.9310	-1.8987	2.3033	.03727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kyn H. Rhoden

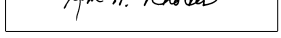
Sample Name: L1305142102 Acquired: 6/3/2013 16:22:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.318**	**.95423**	**-.00001**	**96.975**	**.06878**	**11.027**
Stddev	.089	.00641	.00008	.146	.00050	1.579
%RSD	.48395	.67211	851.87	.15084	.72898	14.317
#1	18.401	.95796	.00008	96.975	.06826	9.2224
#2	18.224	.95791	-.00005	97.122	.06926	11.707
#3	18.328	.94683	-.00006	96.829	.06881	12.152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00126**	F **14.343**	F **2727.8**	F **-147230.**	**-.00017**	**.00387**
Stddev	.00037	3.287	20.7	955.	.00080	.00122
%RSD	29.568	22.914	.75982	.64850	459.78	31.517
#1	.00169	18.039	2716.1	-146850.	-.00069	.00297
#2	.00106	11.749	2751.8	-148320.	.00075	.00338
#3	.00103	13.241	2715.7	-146530.	-.00058	.00526
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3520**	**-.00126**	**.21740**	**-.00076**	**.00035**	**-.00003**
Stddev	.0159	.00008	.00036	.00015	.00078	.00002
%RSD	.67597	6.4956	.16430	19.457	221.49	76.635
#1	2.3407	-.00135	.21719	-.00080	.00054	-.00004
#2	2.3702	-.00120	.21781	-.00060	.00102	.00000
#3	2.3451	-.00123	.21720	-.00089	-.00050	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142102 Acquired: 6/3/2013 16:22:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.17719**	**.63096**
Stddev	.00082	.51528
%RSD	.46159	81.667
#1	.17657	.65364
#2	.17811	.10470
#3	.17687	1.1345
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14656.**	**20101.**
Stddev	62.	151.
%RSD	.42456	.75202
#1	14707.	19959.
#2	14587.	20084.
#3	14675.	20260.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 16:25:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40123**	**9.9423**	**.40438**	**.49900**	**.99393**	**.05005**	**9.8614**
Stddev	.00086	.1126	.00244	.00154	.01119	.00016	.1123
%RSD	.21545	1.1327	.60443	.30810	1.1258	.32761	1.1386
#1	.40219	9.8699	.40657	.49761	.98420	.05007	9.7355
#2	.40051	9.8850	.40174	.50065	.99142	.05021	9.9512
#3	.40099	10.072	.40481	.49874	1.0062	.04989	9.8976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05042**	**.20446**	**.50059**	**.51007**	**3.9733**	**1.0139**	**1.0012**
Stddev	.00041	.00138	.00191	.00313	.0391	.0069	.3564
%RSD	.81916	.67291	.38140	.61336	.98528	.68416	35.596
#1	.05086	.20588	.49987	.51351	3.9419	1.0197	.76587
#2	.05034	.20436	.50276	.50930	3.9607	1.0158	1.4112
#3	.05005	.20314	.49915	.50740	4.0171	1.0062	.82643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **8.8755**	F **-.16241**	**50.293**	**1.0051**	**10.048**	**.50903**	**1.0124**
Stddev	16.416	1.0900	.287	.0097	.034	.00104	.0050
%RSD	184.95	671.13	.57071	.96640	.33489	.20464	.49464
#1	27.712	-1.2536	50.084	.99610	10.037	.50953	1.0157
#2	-2.3768	-.15990	50.174	1.0039	10.021	.50783	1.0150
#3	1.2912	.92629	50.620	1.0154	10.086	.50972	1.0067
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	-10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 16:25:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.901**	**.50624**	F **11.827**	**.50638**	F **11.860**	**10.100**	F **14.770**
Stddev	.537	.00288	4.463	.00248	3.274	.032	4.812
%RSD	1.0759	.56891	37.733	.48878	27.602	.31660	32.580
#1	49.477	.50904	16.980	.50923	8.2436	10.129	19.040
#2	49.721	.50639	9.2397	.50519	14.621	10.066	15.715
#3	50.504	.50328	9.2611	.50473	12.716	10.106	9.5559
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2073**	**.40943**	**5.1551**	**.91888**	**.98945**	**1.0067**	**.51182**
Stddev	.0067	.00368	.0579	.00277	.01409	.0059	.00331
%RSD	.55810	.89864	1.1235	.30139	1.4236	.59026	.64667
#1	1.2134	.40545	5.2031	.92083	.97853	1.0050	.51564
#2	1.2085	.41270	5.1714	.92009	.98448	1.0019	.51005
#3	1.2001	.41015	5.0908	.91571	1.0054	1.0134	.50977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0074**	**1.0057**	F **-.59085**
Stddev	.0010	.0003	.18268
%RSD	.09937	.03395	30.917
#1	1.0085	1.0056	-.71714
#2	1.0071	1.0061	-.38139
#3	1.0065	1.0054	-.67404
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 16:25:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14779.**	**19863.**
Stddev	19.	20.
%RSD	.13109	.09844
#1	14796.	19856.
#2	14758.	19886.
#3	14783.	19849.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 16:29:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**-.01061**	**-.00018**	**-.00046**	**.00003**	**.00002**	**-.01246**
Stddev	.00023	.00339	.00137	.00095	.00023	.00002	.00903
%RSD	84.515	31.922	745.09	205.96	760.21	126.12	72.451
#1	.00002	-.00675	-.00062	-.00156	.00017	.00001	-.02198
#2	.00047	-.01200	-.00128	.00002	-.00023	.00000	-.01141
#3	.00034	-.01309	.00135	.00015	.00016	.00004	-.00401
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**-.00004**	**-.00021**	**-.00005**	**-.00149**	**.00001**	F **.22822**
Stddev	.00009	.00025	.00024	.00047	.00130	.00678	.28169
%RSD	1665.2	676.41	111.37	1023.6	87.405	124620.	123.43
#1	-.00008	-.00015	-.00017	-.00032	-.00071	-.00372	-.02454
#2	-.00003	-.00021	.00000	-.00032	-.00298	-.00409	.53188
#3	.00009	.00024	-.00046	.00050	-.00076	.00783	.17731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **3.3199**	F **-.50345**	**-.00137**	**-.00039**	**.01091**	**.00004**	**.00137**
Stddev	12.278	1.4362	.02112	.00033	.01946	.00012	.00072
%RSD	369.82	285.28	1547.1	85.387	178.39	321.57	52.640
#1	8.0355	-2.0980	.01188	-.00055	.00913	.00015	.00061
#2	12.541	-.10079	-.02572	-.00061	-.00760	-.00010	.00146
#3	-10.617	.68849	.00975	-.00001	.03119	.00006	.00205
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 16:29:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00102**	**.00000**	F **-2.7526**	**.00135**	F **9.6143**	F **-.11931**	F **7.4829**
Stddev	.00372	.00039	8.3790	.00082	2.1981	.00650	2.2448
%RSD	363.83	28742.	304.41	60.700	22.863	5.4449	29.999
#1	-.00401	.00030	-6.6530	.00041	7.7458	-.11414	9.3173
#2	-.00220	-.00044	-8.4703	.00190	12.036	-.11720	8.1516
#3	.00315	.00014	6.8656	.00174	9.0609	-.12660	4.9797
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00100**	**-.00003**	**.00030**	**.00035**	**-.00060**	**.00013**	**.00005**
Stddev	.00053	.00225	.00294	.00054	.00005	.00079	.00098
%RSD	52.636	6990.3	993.13	154.06	8.6155	626.96	2108.3
#1	.00100	-.00054	-.00255	-.00021	-.00054	.00044	.00100
#2	.00153	.00242	.00011	.00039	-.00062	-.00077	-.00096
#3	.00047	-.00198	.00332	.00087	-.00064	.00071	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**.00007**	**.02347**
Stddev	.00027	.00029	.26889
%RSD	592.75	408.62	1145.5
#1	.00014	-.00013	-.26294
#2	-.00026	-.00006	.27048
#3	.00025	.00040	.06288
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 16:29:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14648.**	**19258.**
Stddev	37.	33.
%RSD	.24988	.17347
#1	14653.	19238.
#2	14609.	19239.
#3	14682.	19297.

Approved: June 04, 2013

Sample Name: L1305142202 Acquired: 6/3/2013 16:32:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.12564**	**-.00094**	**.00886**	**.03018**	**.00004**
Stddev	.00041	.00557	.00150	.00109	.00004	.00002
%RSD	185.14	4.4371	159.80	12.274	.14906	57.369
#1	.00015	.12681	-.00204	.01010	.03016	.00005
#2	-.00015	.13053	.00077	.00836	.03015	.00001
#3	.00066	.11957	-.00153	.00811	.03023	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.421**	**.00033**	**.00110**	**.00047**	**.00212**	**.01770**
Stddev	.076	.00005	.00005	.00021	.00035	.00256
%RSD	.13468	14.829	4.1492	44.370	16.597	14.436
#1	56.341	.00028	.00114	.00057	.00173	.01626
#2	56.493	.00033	.00111	.00023	.00240	.01620
#3	56.428	.00038	.00105	.00062	.00222	.02065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.42763**	**2.5739**	F **-14.799**	F **-1.3662**	**4.9981**	**.00689**
Stddev	.00350	.5047	16.474	.5221	.0302	.00152
%RSD	.81964	19.610	111.32	38.216	.60404	22.101
#1	.43155	2.8175	-.7734	-1.8510	5.0002	.00864
#2	.42482	2.9106	-10.682	-.81345	5.0272	.00607
#3	.42650	1.9935	-32.941	-1.4342	4.9669	.00594
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142202 Acquired: 6/3/2013 16:32:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.272**	**.10050**	**.00003**	**46.141**	**.00354**	**30.424**
Stddev	.075	.00010	.00024	.181	.00021	3.022
%RSD	.36842	.10412	709.18	.39260	6.0250	9.9338
#1	20.201	.10055	.00004	45.932	.00330	32.444
#2	20.350	.10038	-.00021	46.246	.00368	31.878
#3	20.266	.10057	.00027	46.245	.00365	26.949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00153**	F **11.502**	F **1914.4**	F **-102060.**	**.00024**	**.00421**
Stddev	.00167	8.323	8.9	315.	.00071	.00221
%RSD	109.42	72.359	.46408	.30894	299.75	52.556
#1	.00043	4.0669	1922.9	-102250.	-.00010	.00349
#2	.00346	9.9467	1905.2	-101700.	-.00025	.00669
#3	.00071	20.494	1914.9	-102240.	.00106	.00245
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2341**	**-.00150**	**.41493**	**-.00102**	**.00077**	**.00021**
Stddev	.0070	.00003	.00215	.00011	.00249	.00014
%RSD	.56434	2.1040	.51878	10.912	323.55	67.729
#1	1.2394	-.00147	.41256	-.00098	.00082	.00033
#2	1.2262	-.00153	.41676	-.00094	-.00175	.00024
#3	1.2367	-.00152	.41548	-.00115	.00324	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142202 Acquired: 6/3/2013 16:32:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01788**	**.72972**
Stddev	.00013	.49351
%RSD	.73404	67.630
#1	.01800	.54011
#2	.01774	1.2899
#3	.01791	.35913
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14457.**	**19435.**
Stddev	44.	43.
%RSD	.30114	.22099
#1	14433.	19389.
#2	14507.	19442.
#3	14431.	19474.

Approved: June 04, 2013

Sample Name: L1305142203 Acquired: 6/3/2013 16:36:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.21022**	**-.00084**	**.00735**	**.03211**	**.00010**
Stddev	.00045	.02795	.00084	.00039	.00012	.00001
%RSD	409.95	13.296	99.538	5.2505	.36935	12.928
#1	.00009	.21794	.00009	.00729	.03200	.00010
#2	.00057	.17922	-.00108	.00776	.03210	.00009
#3	-.00033	.23350	-.00154	.00700	.03223	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.495**	**.00028**	**.00311**	**.00045**	**.00016**	**.02953**
Stddev	.527	.00005	.00013	.00018	.00035	.00304
%RSD	.88630	19.498	4.3206	41.236	214.59	10.305
#1	59.714	.00034	.00298	.00025	-.00022	.03168
#2	59.878	.00023	.00309	.00061	.00048	.03086
#3	58.894	.00027	.00325	.00048	.00023	.02605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.34632**	**2.3705**	F **-5.9314**	**.11905**	**5.4074**	**.02046**
Stddev	.00254	.2249	5.7643	.56849	.0371	.00107
%RSD	.73262	9.4883	97.183	477.54	.68532	5.2152
#1	.34346	2.2989	-10.670	.77346	5.3957	.02041
#2	.34829	2.6226	.4859	-.16353	5.4489	.02155
#3	.34722	2.1901	-7.6098	-.25279	5.3776	.01942
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

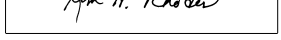
Sample Name: L1305142203 Acquired: 6/3/2013 16:36:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.923**	**.76607**	**-.00014**	**73.682**	**.00341**	**8.2198**
Stddev	.042	.00289	.00009	.244	.00042	5.3084
%RSD	.24819	.37687	65.065	.33177	12.294	64.581
#1	16.877	.76837	-.00016	73.404	.00334	14.240
#2	16.934	.76283	-.00004	73.778	.00302	6.2082
#3	16.959	.76703	-.00023	73.864	.00385	4.2111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00068**	F **20.292**	F **2550.7**	F **-136200.**	**.00008**	**.00279**
Stddev	.00100	5.432	14.9	653.	.00075	.00140
%RSD	146.06	26.770	.58425	.47963	992.30	50.191
#1	-.00021	15.274	2538.2	-135460.	-.00012	.00427
#2	.00176	26.060	2567.2	-136680.	-.00056	.00259
#3	.00050	19.543	2546.8	-136470.	.00091	.00149
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6761**	**-.00129**	**.33962**	**-.00064**	**.00063**	**.00026**
Stddev	.0094	.00013	.00202	.00083	.00037	.00017
%RSD	.55831	9.7550	.59438	128.67	58.749	66.273
#1	1.6665	-.00142	.33761	-.00138	.00091	.00045
#2	1.6852	-.00127	.33962	.00025	.00021	.00022
#3	1.6766	-.00117	.34164	-.00080	.00077	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142203 Acquired: 6/3/2013 16:36:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00680**	F **-.01998**
Stddev	.00018	.44950
%RSD	2.6731	2249.3
#1	.00666	-.51681
#2	.00674	.35854
#3	.00701	.09831
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14545.**	**19264.**
Stddev	70.	52.
%RSD	.48141	.27017
#1	14626.	19295.
#2	14501.	19204.
#3	14508.	19293.

Approved: June 04, 2013

Sample Name: L1305142204 Acquired: 6/3/2013 16:39:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.16686**	**-.00034**	**.00821**	**.03153**	**.00006**
Stddev	.00009	.00812	.00011	.00028	.00029	.00002
%RSD	79.360	4.8634	33.048	3.4413	.93158	33.400
#1	.00002	.16468	-.00039	.00842	.03184	.00005
#2	.00012	.17584	-.00021	.00833	.03151	.00009
#3	.00019	.16006	-.00042	.00789	.03126	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.085**	**.00026**	**.00238**	**.00019**	**.00157**	**.01855**
Stddev	.612	.00007	.00022	.00042	.00032	.00175
%RSD	1.0357	28.967	9.3064	223.23	20.072	9.4111
#1	59.776	.00018	.00226	.00006	.00169	.01785
#2	58.866	.00027	.00263	-.00015	.00181	.02054
#3	58.612	.00032	.00223	.00065	.00121	.01727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33873**	**2.1012**	F **-30.814**	F **-.60740**	**5.4175**	**.02276**
Stddev	.00384	.2478	10.880	.72870	.0594	.00068
%RSD	1.1323	11.791	35.309	119.97	1.0958	2.9934
#1	.34249	1.8155	-42.646	.00493	5.4828	.02287
#2	.33483	2.2565	-28.555	-1.4134	5.4032	.02202
#3	.33886	2.2316	-21.241	-.41378	5.3667	.02337
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

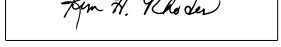
Sample Name: L1305142204 Acquired: 6/3/2013 16:39:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.701**	**.72018**	**-.00018**	**72.938**	**.00418**	**11.134**
Stddev	.092	.00849	.00013	.811	.00032	3.234
%RSD	.55173	1.1782	73.253	1.1125	7.6492	29.050
#1	16.763	.72953	-.00010	73.747	.00397	14.464
#2	16.744	.71807	-.00033	72.942	.00403	10.933
#3	16.595	.71296	-.00011	72.124	.00455	8.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00097**	F **14.869**	F **2524.8**	F **-135990.**	**.00029**	**.00266**
Stddev	.00068	6.664	6.8	846.	.00104	.00106
%RSD	70.240	44.819	.26825	.62238	363.10	39.772
#1	.00037	13.354	2532.4	-136930.	.00001	.00350
#2	.00171	22.160	2522.7	-135750.	.00143	.00147
#3	.00082	9.0925	2519.4	-135290.	-.00059	.00300
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6400**	**-.00129**	**.33502**	**-.00157**	**.00091**	**.00004**
Stddev	.0065	.00027	.00420	.00041	.00142	.00008
%RSD	.39544	21.287	1.2537	26.361	155.92	199.01
#1	1.6470	-.00154	.33891	-.00197	.00007	.00001
#2	1.6388	-.00133	.33557	-.00114	.00256	-.00002
#3	1.6342	-.00100	.33057	-.00160	.00011	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142204 Acquired: 6/3/2013 16:39:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01699**	**.12515**
Stddev	.00017	.29184
%RSD	.98574	233.19
#1	.01718	.07011
#2	.01687	.44059
#3	.01692	-.13525
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14431.**	**19301.**
Stddev	37.	154.
%RSD	.25597	.79818
#1	14388.	19123.
#2	14449.	19380.
#3	14454.	19399.

Approved: June 04, 2013

Sample Name: L1305142503 Acquired: 6/3/2013 16:43:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.19503**	**-.00022**	**.00772**	**.06720**	**.00004**	**40.323**
Stddev	.00024	.02212	.00171	.00064	.00063	.00002	.250
%RSD	301.85	11.341	764.98	8.2579	.93486	42.635	.61896
#1	.00019	.17914	-.00144	.00720	.06678	.00003	40.304
#2	-.00022	.18566	.00174	.00843	.06691	.00004	40.083
#3	-.00021	.22029	-.00097	.00752	.06792	.00006	40.582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00052**	**.00058**	**.00036**	**.41020**	**.66133**	**3.4283**
Stddev	.00016	.00025	.00015	.00057	.00770	.00080	.3623
%RSD	35.401	48.802	25.970	160.52	1.8779	.12056	10.567
#1	.00053	.00072	.00046	-.00005	.40294	.66071	3.4979
#2	.00028	.00023	.00052	.00101	.40939	.66104	3.0362
#3	.00059	.00060	.00075	.00010	.41828	.66223	3.7506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-13.761**	F **-.13346**	**3.0608**	**.00189**	**27.473**	**.37565**	**-.00030**
Stddev	6.497	1.0472	.0354	.00063	.339	.00317	.00001
%RSD	47.211	784.64	1.1555	33.277	1.2347	.84361	3.1632
#1	-10.034	.67916	3.0395	.00160	27.226	.37396	-.00031
#2	-9.9864	-1.3152	3.0413	.00146	27.334	.37368	-.00029
#3	-21.262	.23569	3.1017	.00261	27.860	.37931	-.00030
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142503 Acquired: 6/3/2013 16:43:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.4966**	**.00025**	**43.309**	**.00154**	F **13.876**	F **1241.5**	F **-64970.**
Stddev	.0107	.00033	1.841	.00163	6.888	9.6	371.
%RSD	.19503	129.45	4.2510	106.01	49.640	.77662	.57065
#1	5.4877	-.00006	43.487	-.00026	16.931	1232.7	-64828.
#2	5.4936	.00059	45.054	.00293	18.708	1240.1	-64692.
#3	5.5085	.00023	41.385	.00194	5.9887	1251.8	-65391.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**-.00221**	**1.9361**	**-.00122**	**.63555**	**.00461**	**-.00080**
Stddev	.00137	.00085	.0143	.00014	.00245	.00052	.00018
%RSD	231.75	38.270	.73796	11.516	.38559	11.199	22.918
#1	-.00041	-.00266	1.9203	-.00106	.63347	.00503	-.00059
#2	.00068	-.00124	1.9396	-.00133	.63494	.00477	-.00089
#3	-.00204	-.00275	1.9482	-.00128	.63825	.00403	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00035**	**.01348**	**.27566**
Stddev	.00025	.00011	.11723
%RSD	69.874	.79662	42.525
#1	.00062	.01342	.23878
#2	.00013	.01341	.40689
#3	.00032	.01360	.18131
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305142503 Acquired: 6/3/2013 16:43:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14600.**	**19400.**
Stddev	69.	168.
%RSD	.47567	.86495
#1	14595.	19465.
#2	14672.	19526.
#3	14534.	19210.

Approved: June 04, 2013

Sample Name: L1305142504 Acquired: 6/3/2013 16:46:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.01448**	**-.00001**	**.00877**	**.06367**	**.00003**	**41.151**
Stddev	.00022	.00398	.00161	.00024	.00018	.00001	.243
%RSD	69.808	27.489	11882.	2.7705	.28771	51.915	.59031
#1	.00037	.01027	-.00091	.00905	.06376	.00001	41.353
#2	.00007	.01499	.00185	.00866	.06379	.00004	41.219
#3	.00050	.01818	-.00097	.00860	.06346	.00003	40.881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.00048**	**.00009**	**.00037**	**.01462**	**.65741**	**3.3829**
Stddev	.00004	.00028	.00043	.00051	.00325	.00615	.1368
%RSD	10.571	59.663	480.34	135.73	22.227	.93547	4.0446
#1	.00040	.00017	-.00018	.00096	.01453	.65842	3.5398
#2	.00032	.00052	.00059	.00011	.01791	.66299	3.2886
#3	.00037	.00073	-.00013	.00005	.01141	.65082	3.3202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.5925**	**.01839**	**3.4035**	**.00135**	**27.581**	**.27391**	**-.00024**
Stddev	11.525	1.5749	.0663	.00130	.112	.00124	.00020
%RSD	320.81	8562.6	1.9490	96.905	.40441	.45277	83.555
#1	-14.740	-.24912	3.3982	.00084	27.660	.27442	-.00001
#2	8.2766	-1.4056	3.4723	.00037	27.630	.27482	-.00035
#3	-4.3143	1.7099	3.3400	.00283	27.453	.27250	-.00037
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142504 Acquired: 6/3/2013 16:46:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.8858**	**.00055**	**189.61**	**.00132**	F **22.150**	F **1238.7**	F **-64865.**
Stddev	.0204	.00012	1.82	.00086	6.338	5.2	407.
%RSD	.34733	21.144	.96246	65.555	28.614	.41608	.62674
#1	5.9044	.00044	189.01	.00034	14.878	1243.9	-65060.
#2	5.8639	.00067	191.66	.00198	26.499	1238.5	-65137.
#3	5.8892	.00054	188.16	.00163	25.073	1233.6	-64397.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**-.00012**	**1.9445**	**-.00148**	**.64554**	**-.00100**	**.00054**
Stddev	.00071	.00208	.0156	.00016	.00160	.00137	.00050
%RSD	338.21	1665.9	.79958	10.906	.24774	136.75	91.748
#1	.00004	.00212	1.9598	-.00141	.64592	-.00252	.00111
#2	-.00040	-.00198	1.9450	-.00166	.64379	.00015	.00033
#3	.00100	-.00051	1.9287	-.00136	.64692	-.00064	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00025**	**.00269**	**.00338**
Stddev	.00012	.00004	.37561
%RSD	48.671	1.5215	11115.
#1	.00012	.00266	-.42505
#2	.00025	.00266	.27604
#3	.00036	.00273	.15915
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142504 Acquired: 6/3/2013 16:46:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14603.**	**19100.**
Stddev	58.	66.
%RSD	.39730	.34475
#1	14583.	19138.
#2	14557.	19024.
#3	14668.	19138.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 16:50:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39493**	**10.053**	**.39931**	**.49269**	**.98717**	**.04938**	**9.7664**
Stddev	.00055	.050	.00136	.00260	.00822	.00008	.0919
%RSD	.14031	.49951	.34171	.52854	.83233	.15721	.94139
#1	.39442	10.111	.40088	.49065	.99656	.04940	9.8404
#2	.39486	10.029	.39863	.49562	.98133	.04944	9.6635
#3	.39552	10.020	.39841	.49179	.98361	.04929	9.7953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04993**	**.20214**	**.49081**	**.50625**	**3.9933**	**1.0119**	F **.82392**
Stddev	.00011	.00032	.00118	.00067	.0311	.0033	.34221
%RSD	.22157	.16061	.24017	.13231	.77893	.32597	41.534
#1	.05006	.20251	.49204	.50693	4.0285	1.0148	.52055
#2	.04987	.20189	.48969	.50624	3.9695	1.0083	.75633
#3	.04987	.20202	.49071	.50559	3.9819	1.0125	1.1949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.2890**	F **1.2244**	**50.708**	**.99672**	**10.131**	**.51959**	**1.0087**
Stddev	17.913	1.4223	.399	.00982	.051	.00173	.0029
%RSD	284.83	116.17	.78680	.98550	.49878	.33313	.28702
#1	-11.549	-.37810	51.167	1.0081	10.167	.51983	1.0121
#2	13.665	2.3372	50.437	.99057	10.073	.51775	1.0074
#3	-20.983	1.7140	50.522	.99155	10.153	.52119	1.0067
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 16:50:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.842**	**.50250**	F **2.7891**	**.50141**	F **26.574**	**10.202**	**10.866**
Stddev	.445	.00144	5.8509	.00076	3.394	.024	2.848
%RSD	.89350	.28755	209.78	.15178	12.772	.23838	26.211
#1	50.354	.50410	-3.6358	.50101	22.714	10.175	11.663
#2	49.544	.50212	4.1923	.50093	27.922	10.222	13.232
#3	49.627	.50128	7.8108	.50229	29.088	10.209	7.7048
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			-10.000%		10.000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1875**	**.40415**	**5.1351**	**.91167**	**.98534**	**1.0157**	**.50915**
Stddev	.0031	.00063	.0106	.00047	.00895	.0048	.00174
%RSD	.26425	.15668	.20708	.05179	.90847	.47419	.34162
#1	1.1903	.40460	5.1471	.91219	.99565	1.0203	.50715
#2	1.1881	.40342	5.1269	.91128	.97959	1.0107	.51001
#3	1.1841	.40442	5.1312	.91153	.98077	1.0161	.51029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99822**	**.99840**	F **-.52323**
Stddev	.00102	.00231	.06619
%RSD	.10184	.23168	12.651
#1	.99725	1.0011	-.59190
#2	.99812	.99720	-.51795
#3	.99928	.99693	-.45984
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 16:50:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14880.**	**19472.**
Stddev	9.	71.
%RSD	.05759	.36625
#1	14870.	19406.
#2	14884.	19548.
#3	14886.	19464.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 16:53:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00083**	**-.00107**	**.00034**	**-.00005**	**.00002**	**-.01157**
Stddev	.00028	.02279	.00240	.00027	.00017	.00001	.01056
%RSD	86.327	2759.6	224.30	79.206	372.40	56.907	91.227
#1	.00015	-.00443	.00086	.00043	.00015	.00001	-.01785
#2	.00017	.02578	-.00375	.00004	-.00017	.00003	.00062
#3	.00064	-.01887	-.00032	.00055	-.00012	.00002	-.01748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.00030**	**-.00005**	**-.00005**	**.00215**	**-.00234**	**-.07922**
Stddev	.00006	.00008	.00039	.00042	.00436	.00658	.09568
%RSD	68.859	26.314	732.50	909.19	203.19	280.79	120.78
#1	-.00004	.00021	.00039	.00031	-.00280	-.00958	-.15954
#2	-.00006	.00034	-.00028	-.00050	.00544	.00328	.02664
#3	-.00015	.00034	-.00027	.00006	.00379	-.00074	-.10475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-7.4399**	F **.82227**	**.05291**	**-.00341**	**-.01583**	**.00004**	**.00155**
Stddev	11.539	.68315	.02816	.00162	.01090	.00002	.00073
%RSD	155.10	83.081	53.229	47.331	68.893	47.726	46.904
#1	5.7768	.09650	.05200	-.00248	-.02245	.00006	.00106
#2	-12.586	1.4528	.08151	-.00248	-.02179	.00002	.00121
#3	-15.510	.91751	.02521	-.00528	-.00324	.00004	.00239
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 16:53:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00722**	**.00030**	F **-.05067**	**.00096**	F **20.149**	F **.02513**	F **3.9885**
Stddev	.00688	.00051	2.7800	.00170	.918	.05045	1.2749
%RSD	95.248	173.21	5486.0	177.45	4.5546	200.71	31.965
#1	-.00069	.00083	-2.7525	.00007	20.975	-.00881	5.0079
#2	-.00658	.00025	2.8014	-.00012	19.161	.08310	2.5590
#3	-.01439	-.00019	-.20085	.00292	20.311	.00111	4.3985
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00147**	**.00117**	**.00050**	**.00037**	**-.00073**	**-.00054**	**-.00037**
Stddev	.00155	.00103	.00177	.00037	.00005	.00047	.00070
%RSD	105.77	88.421	350.79	99.015	6.1904	86.748	187.60
#1	.00273	.00014	.00002	.00009	-.00070	-.00030	-.00115
#2	-.00027	.00221	-.00098	.00023	-.00071	-.00109	-.00018
#3	.00195	.00117	.00247	.00079	-.00078	-.00024	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00010**	**.00018**	F **.32802**
Stddev	.00016	.00024	.06280
%RSD	166.01	138.31	19.145
#1	.00022	.00001	.34976
#2	-.00009	.00006	.37705
#3	.00016	.00045	.25724
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 16:53:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14931.**	**19330.**
Stddev	20.	99.
%RSD	.13714	.51257
#1	14909.	19261.
#2	14934.	19286.
#3	14949.	19444.

Approved: June 04, 2013

Sample Name: L1305126202 Acquired: 6/3/2013 16:57:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.02971**	**-.00094**	**5.0433**	**.01675**	**.00005**
Stddev	.00017	.02699	.00071	.0352	.00026	.00001
%RSD	82.674	90.848	75.527	.69903	1.5744	18.065
#1	-.00035	.05532	-.00177	5.0822	.01672	.00004
#2	-.00002	.03229	-.00047	5.0342	.01651	.00006
#3	-.00025	.00152	-.00059	5.0135	.01703	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **306.89**	**.00086**	**.00246**	**.00056**	**-.00023**	**.04506**
Stddev	6.12	.00014	.00042	.00011	.00025	.00401
%RSD	1.9947	16.221	16.998	19.030	107.57	8.9071
#1	310.26	.00099	.00281	.00050	.00005	.04092
#2	299.83	.00071	.00259	.00068	-.00041	.04533
#3	310.59	.00088	.00200	.00049	-.00033	.04893
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35331**	**9.3346**	F **-39.701**	F **-.33346**	**2.5113**	**.23241**
Stddev	.00235	.3618	4.122	.78088	.0560	.00508
%RSD	.66419	3.8756	10.382	234.17	2.2313	2.1839
#1	.35282	8.9234	-35.944	-.92256	2.5455	.23635
#2	.35587	9.6036	-44.110	-.63009	2.4467	.22668
#3	.35125	9.4769	-39.051	.55227	2.5418	.23420
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

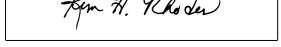
Sample Name: L1305126202 Acquired: 6/3/2013 16:57:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-02

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.399**	**.90338**	**.00067**	**149.71**	**.00157**	**61.460**
Stddev	1.171	.01097	.00011	3.37	.00034	4.756
%RSD	1.4386	1.2144	16.512	2.2503	21.653	7.7381
#1	82.317	.91325	.00058	149.37	.00122	62.218
#2	80.080	.89157	.00065	146.52	.00189	56.370
#3	81.799	.90530	.00079	153.23	.00159	65.791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00142**	F **24.451**	F **7097.2**	F **-379140.**	**.00098**	**-.00034**
Stddev	.00031	4.721	44.2	2224.	.00191	.00158
%RSD	22.033	19.308	.62268	.58669	196.13	468.10
#1	.00169	19.023	7148.2	-381680.	-.00068	-.00148
#2	.00108	27.608	7073.5	-378200.	.00054	-.00099
#3	.00149	26.721	7069.9	-377550.	.00307	.00146
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.9029**	**-.00129**	**.35115**	**-.00454**	**-.00061**	**-.00013**
Stddev	.0485	.00024	.00506	.00045	.00110	.00012
%RSD	.70218	18.898	1.4423	9.9444	180.60	90.705
#1	6.9584	-.00112	.35489	-.00408	-.00182	.00000
#2	6.8811	-.00119	.34538	-.00454	-.00034	-.00015
#3	6.8691	-.00157	.35317	-.00499	.00033	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305126202 Acquired: 6/3/2013 16:57:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-02

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00604**	F **-.49520**
Stddev	.00011	.47192
%RSD	1.8297	95.298
#1	.00616	-.81601
#2	.00595	.04667
#3	.00599	-.71627
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13840.**	**19076.**
Stddev	35.	167.
%RSD	.25519	.87358
#1	13807.	18958.
#2	13836.	19267.
#3	13877.	19004.

Approved: June 04, 2013

Sample Name: L1305126204MS Acquired: 6/3/2013 17:00:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20169**	**5.0037**	**.20893**	**5.9283**	**.50200**	**.02438**
Stddev	.00044	.0640	.00224	.0054	.00499	.00007
%RSD	.21985	1.2790	1.0712	.09035	.99355	.29802
#1	.20169	4.9481	.21074	5.9273	.50073	.02446
#2	.20213	5.0737	.20643	5.9235	.50749	.02431
#3	.20124	4.9895	.20962	5.9340	.49776	.02438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **314.43**	**.02610**	**.09915**	**.23961**	**.24361**	**2.0312**
Stddev	3.97	.00011	.00047	.00115	.00116	.0223
%RSD	1.2638	.41965	.47724	.48080	.47440	1.0957
#1	314.99	.02614	.09970	.24081	.24494	2.0199
#2	318.10	.02597	.09892	.23852	.24285	2.0568
#3	310.21	.02618	.09884	.23949	.24303	2.0168
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.82792**	**9.9996**	F **-25.890**	**.59357**	**27.998**	**.73828**
Stddev	.00438	.2930	5.658	1.8390	.302	.00802
%RSD	.52871	2.9299	21.852	309.82	1.0794	1.0859
#1	.83274	10.331	-27.988	-1.4572	27.911	.73551
#2	.82418	9.8951	-19.483	2.0960	28.334	.74732
#3	.82683	9.7733	-30.200	1.1419	27.749	.73202
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305126204MS Acquired: 6/3/2013 17:00:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-07

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**85.274**	**1.2341**	**.50565**	**173.05**	**.24064**	**69.760**
Stddev	.941	.0110	.00112	3.56	.00099	3.297
%RSD	1.1032	.89366	.22228	2.0578	.41232	4.7260
#1	85.017	1.2315	.50693	176.96	.24163	66.144
#2	86.317	1.2462	.50482	172.21	.23965	70.539
#3	84.489	1.2246	.50520	169.98	.24063	72.598
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.23973**	F **25.010**	F **7037.3**	F **-374700.**	**.60319**	**.20317**
Stddev	.00132	4.336	8.7	1669.	.00388	.00213
%RSD	.55203	17.338	.12350	.44540	.64404	1.0505
#1	.24073	20.313	7046.6	-376620.	.60767	.20135
#2	.24022	25.855	7035.8	-373570.	.60084	.20552
#3	.23823	28.861	7029.4	-373910.	.60105	.20264
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.4445**	**.48966**	**.83752**	**.49562**	**.23696**	**.49765**
Stddev	.0157	.00192	.00771	.00639	.00075	.00094
%RSD	.16638	.39256	.91998	1.2895	.31561	.18930
#1	9.4408	.49166	.83476	.49328	.23733	.49874
#2	9.4617	.48951	.84623	.50285	.23610	.49707
#3	9.4309	.48782	.83158	.49073	.23746	.49716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305126204MS Acquired: 6/3/2013 17:00:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-07

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.47251**	F **-.45066**
Stddev	.00205	.31586
%RSD	.43295	70.087
#1	.47483	-.35326
#2	.47170	-.19498
#3	.47099	-.80375
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13900.**	**18753.**
Stddev	39.	199.
%RSD	.27975	1.0605
#1	13856.	18768.
#2	13914.	18547.
#3	13930.	18944.

Approved: June 04, 2013

Sample Name: L1305126206MSD Acquired: 6/3/2013 17:04:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-08

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20521**	**4.9814**	**.21037**	**6.0852**	**.50082**	**.02464**
Stddev	.00026	.0629	.00054	.0195	.00359	.00014
%RSD	.12856	1.2625	.25581	.32058	.71676	.57361
#1	.20551	4.9301	.21025	6.0843	.49906	.02461
#2	.20503	4.9626	.20990	6.0662	.49844	.02452
#3	.20508	5.0516	.21095	6.1052	.50495	.02480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **311.59**	**.02638**	**.09944**	**.24043**	**.24643**	**1.9703**
Stddev	1.49	.00014	.00019	.00076	.00021	.0158
%RSD	.47728	.52224	.18732	.31511	.08334	.79945
#1	312.00	.02622	.09949	.24095	.24632	1.9623
#2	309.95	.02648	.09960	.24079	.24631	1.9601
#3	312.84	.02644	.09924	.23956	.24667	1.9884
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.84059**	**10.050**	F **-11.710**	F **-.62119**	**27.844**	**.74370**
Stddev	.00764	.376	24.331	2.0057	.288	.00667
%RSD	.90917	3.7426	207.78	322.88	1.0336	.89748
#1	.83180	10.400	-4.1134	1.6554	27.781	.73948
#2	.84570	10.098	7.9162	-1.3914	27.593	.74024
#3	.84425	9.6519	-38.933	-2.1276	28.158	.75140
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

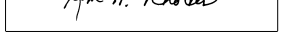
Sample Name: L1305126206MSD Acquired: 6/3/2013 17:04:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-08

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**85.414**	**1.1356**	**.51040**	**172.27**	**.24129**	**73.261**
Stddev	.714	.0096	.00156	2.27	.00029	3.635
%RSD	.83639	.84397	.30628	1.3197	.11949	4.9619
#1	85.028	1.1356	.50860	169.92	.24097	70.483
#2	84.975	1.1260	.51137	174.46	.24154	77.375
#3	86.238	1.1452	.51123	172.44	.24136	71.926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24120**	F **20.246**	F **7214.3**	F **-380810.**	**.60928**	**.20310**
Stddev	.00203	2.309	22.6	716.	.00086	.00409
%RSD	.84045	11.403	.31368	.18808	.14114	2.0137
#1	.24022	19.652	7188.3	-380980.	.60877	.20578
#2	.24353	22.794	7224.5	-380020.	.61027	.19839
#3	.23985	18.293	7230.0	-381420.	.60879	.20513
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.6713**	**.48788**	**.83857**	**.49752**	**.23933**	**.50442**
Stddev	.0344	.00059	.00670	.00398	.00083	.00129
%RSD	.35575	.12028	.79854	.80089	.34778	.25536
#1	9.6317	.48721	.83378	.49355	.23838	.50450
#2	9.6884	.48829	.83571	.49748	.23995	.50310
#3	9.6938	.48814	.84623	.50152	.23966	.50567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305126206MSD Acquired: 6/3/2013 17:04:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432604-08

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.47472**	F **46.326**
Stddev	.00096	.422
%RSD	.20237	.91176
#1	.47443	46.118
#2	.47394	46.047
#3	.47579	46.812
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13950.**	**19457.**
Stddev	25.	117.
%RSD	.18118	.60042
#1	13934.	19416.
#2	13979.	19589.
#3	13936.	19367.

Approved: June 04, 2013

Sample Name: L1305126209 Acquired: 6/3/2013 17:07:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.16948**	**.00014**	**4.7942**	**.01791**	**.00004**
Stddev	.00011	.00763	.00125	.0318	.00008	.00001
%RSD	83.403	4.5006	926.65	.66348	.46897	21.006
#1	.00005	.17791	-.00086	4.7575	.01781	.00004
#2	.00026	.16305	-.00027	4.8120	.01798	.00003
#3	.00009	.16747	.00154	4.8131	.01793	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**230.69**	**.00093**	**.00196**	**.00104**	**.00040**	**.75306**
Stddev	2.04	.00018	.00004	.00014	.00039	.01251
%RSD	.88359	18.920	1.9912	13.111	95.938	1.6617
#1	230.02	.00109	.00199	.00094	.00076	.74326
#2	232.98	.00074	.00192	.00119	-.00001	.76715
#3	229.07	.00098	.00198	.00098	.00045	.74876
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.30597**	**10.303**	F **-15.786**	F **-1.0105**	**2.3903**	**.38152**
Stddev	.00283	.262	7.300	1.0674	.0486	.00334
%RSD	.92624	2.5381	46.245	105.63	2.0329	.87591
#1	.30702	10.113	-23.830	-.76482	2.3510	.37938
#2	.30276	10.196	-9.5807	-.08739	2.4446	.38537
#3	.30812	10.601	-13.948	-2.1793	2.3752	.37980
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013

Sample Name: L1305126209 Acquired: 6/3/2013 17:07:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.303**	**.85198**	**.00102**	**126.99**	**.00133**	**62.810**
Stddev	.360	.01076	.00026	.59	.00087	4.026
%RSD	.39055	1.2632	25.845	.46696	65.349	6.4089
#1	92.028	.84053	.00101	126.48	.00120	58.341
#2	92.711	.86188	.00077	127.64	.00225	63.938
#3	92.169	.85353	.00129	126.85	.00053	66.152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00118**	F **26.977**	F **6230.7**	F **-331020.**	**.00016**	**-.00047**
Stddev	.00091	4.392	25.4	1520.	.00031	.00035
%RSD	76.849	16.281	.40692	.45928	189.45	74.720
#1	.00083	21.910	6211.3	-329600.	.00031	-.00082
#2	.00222	29.700	6221.4	-330840.	-.00019	-.00012
#3	.00050	29.320	6259.4	-332630.	.00036	-.00047
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.7106**	**-.00103**	**.30264**	**.00067**	**.00030**	**.00018**
Stddev	.0390	.00022	.00221	.00118	.00113	.00009
%RSD	.50602	21.612	.73088	176.53	382.77	52.965
#1	7.6839	-.00127	.30063	.00167	.00033	.00019
#2	7.6925	-.00083	.30501	.00097	.00141	.00008
#3	7.7554	-.00099	.30227	-.00063	-.00085	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305126209 Acquired: 6/3/2013 17:07:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00293**	F **-.01875**
Stddev	.00011	.20629
%RSD	3.8815	1100.3
#1	.00284	.20509
#2	.00288	-.06012
#3	.00306	-.20121
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14100.**	**19896.**
Stddev	47.	139.
%RSD	.33171	.69864
#1	14139.	20040.
#2	14113.	19763.
#3	14048.	19885.

Approved: June 04, 2013

Sample Name: L1305126210 Acquired: 6/3/2013 17:10:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.01227**	**.00177**	**4.9802**	**.01480**	**.00005**
Stddev	.00008	.00084	.00171	.0284	.00014	.00002
%RSD	34.199	6.8435	96.400	.56945	.93469	53.779
#1	-.00030	.01221	-.00018	5.0098	.01473	.00004
#2	-.00021	.01314	.00250	4.9777	.01471	.00007
#3	-.00015	.01147	.00299	4.9532	.01496	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**245.37**	**.00083**	**.00269**	**.00072**	**-.00027**	**.55026**
Stddev	2.54	.00006	.00017	.00024	.00025	.00375
%RSD	1.0353	6.9428	6.3002	32.955	90.294	.68150
#1	248.03	.00090	.00289	.00067	.00000	.55055
#2	245.10	.00081	.00261	.00099	-.00035	.55386
#3	242.97	.00079	.00258	.00052	-.00048	.54638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31868**	**11.241**	F **-19.618**	**.01848**	**2.4225**	**.40693**
Stddev	.00782	.278	30.588	.71569	.0109	.00315
%RSD	2.4541	2.4730	155.92	3872.1	.45046	.77389
#1	.32726	11.458	10.159	-.11825	2.4185	.41055
#2	.31683	11.337	-50.958	.79267	2.4142	.40548
#3	.31194	10.928	-18.054	-.61897	2.4349	.40478
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305126210 Acquired: 6/3/2013 17:10:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**98.324**	**.86084**	**.00041**	**134.91**	**.00062**	**59.802**
Stddev	.747	.00811	.00014	1.00	.00061	4.360
%RSD	.75977	.94202	35.159	.74095	98.205	7.2909
#1	99.186	.87021	.00025	136.00	.00101	64.562
#2	97.863	.85605	.00052	134.71	-.00008	56.002
#3	97.924	.85627	.00046	134.03	.00094	58.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00233**	F **15.831**	F **6484.4**	F **-342800.**	**.00171**	**-.00423**
Stddev	.00092	3.295	26.9	1586.	.00037	.00364
%RSD	39.515	20.811	.41510	.46277	21.637	85.907
#1	.00236	15.843	6515.0	-344540.	.00141	-.00824
#2	.00139	19.120	6464.3	-342420.	.00212	-.00334
#3	.00323	12.531	6473.9	-341430.	.00158	-.00113
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.7717**	**-.00161**	**.32072**	**-.00415**	**-.00158**	**-.00001**
Stddev	.0460	.00013	.00239	.00067	.00035	.00020
%RSD	.59228	7.9390	.74466	16.096	22.351	2956.9
#1	7.8244	-.00172	.32300	-.00484	-.00164	.00006
#2	7.7395	-.00162	.32093	-.00351	-.00189	-.00023
#3	7.7511	-.00147	.31824	-.00410	-.00120	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305126210 Acquired: 6/3/2013 17:10:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00412**	**.18523**
Stddev	.00003	1.0167
%RSD	.83077	548.86
#1	.00414	1.3566
#2	.00408	-.46735
#3	.00413	-.33359
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14127.**	**19420.**
Stddev	33.	171.
%RSD	.23598	.88158
#1	14090.	19224.
#2	14136.	19538.
#3	14155.	19499.

Approved: June 04, 2013

Sample Name: L1305126211 Acquired: 6/3/2013 17:14:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00111**	**8.8271**	**.01252**	**.68351**	**.34808**	**.00073**	**107.61**
Stddev	.00022	.0707	.00103	.00126	.00189	.00001	1.19
%RSD	19.462	.80153	8.2346	.18457	.54346	1.5178	1.1040
#1	.00131	8.7806	.01214	.68454	.34618	.00075	106.55
#2	.00115	8.9085	.01174	.68388	.34809	.00073	107.38
#3	.00088	8.7922	.01369	.68210	.34996	.00073	108.90
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00066**	**.01074**	**.16925**	**.03146**	**22.862**	**.34597**	**2.5908**
Stddev	.00010	.00023	.00082	.00027	.149	.00490	.8296
%RSD	15.630	2.1766	.48688	.84251	.64964	1.4157	32.021
#1	.00062	.01064	.16831	.03170	22.693	.34044	2.1264
#2	.00077	.01057	.16986	.03118	22.924	.34773	2.0974
#3	.00058	.01101	.16958	.03150	22.971	.34975	3.5485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.434**	**2.8492**	**3.8395**	**.01493**	**30.469**	**2.3785**	**.00054**
Stddev	7.943	.4338	.0184	.00047	.365	.0154	.00008
%RSD	76.129	15.224	.47988	3.1635	1.1970	.64655	15.422
#1	-16.463	3.2401	3.8221	.01534	30.048	2.3639	.00059
#2	-13.405	2.9249	3.8375	.01442	30.680	2.3946	.00058
#3	-1.4334	2.3826	3.8588	.01503	30.680	2.3771	.00044
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305126211 Acquired: 6/3/2013 17:14:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.566**	**.02258**	F **1184.8**	**.01914**	F **16.650**	F **1429.6**	F **-70251.**
Stddev	.350	.00043	10.1	.00159	4.175	6.2	239.
%RSD	.59790	1.9140	.85042	8.2950	25.074	.43323	.33993
#1	58.162	.02209	1180.1	.01938	15.701	1435.9	-70175.
#2	58.764	.02277	1177.9	.01745	13.032	1423.5	-70059.
#3	58.773	.02289	1196.4	.02060	21.218	1429.2	-70519.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**-.00078**	**14.956**	**-.00047**	**.29101**	**.09711**	**.00056**
Stddev	.00194	.00175	.081	.00004	.00193	.00136	.00092
%RSD	1011.3	226.02	.53935	8.7701	.66383	1.3999	164.09
#1	.00167	.00118	15.043	-.00044	.28881	.09560	.00137
#2	-.00220	-.00220	14.885	-.00051	.29243	.09750	-.00045
#3	-.00004	-.00131	14.940	-.00044	.29178	.09823	.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01942**	**.17144**	**1.5646**
Stddev	.00011	.00086	.2404
%RSD	.56265	.50182	15.363
#1	.01954	.17157	1.7162
#2	.01933	.17052	1.2875
#3	.01940	.17223	1.6902
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126211 Acquired: 6/3/2013 17:14:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14756.**	**20118.**
Stddev	51.	126.
%RSD	.34756	.62742
#1	14780.	20262.
#2	14790.	20070.
#3	14697.	20023.

Approved: June 04, 2013

Sample Name: L1305126212 Acquired: 6/3/2013 17:17:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.03120**	**.00040**	**.71589**	**.06956**	**.00004**	**111.35**
Stddev	.00010	.01391	.00060	.00349	.00032	.00001	1.22
%RSD	31.073	44.580	149.22	.48689	.45687	31.246	1.0967
#1	.00039	.03890	.00044	.71648	.06992	.00003	112.75
#2	.00039	.03955	.00099	.71904	.06945	.00005	110.78
#3	.00021	.01514	-.00022	.71214	.06932	.00003	110.52
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	**.00250**	**.15963**	**.00004**	**.02610**	**.29219**	**3.3709**
Stddev	.00003	.00015	.00064	.00059	.00188	.00284	.1374
%RSD	7.1320	5.9285	.40107	1586.1	7.1941	.97064	4.0760
#1	.00048	.00235	.15970	.00058	.02701	.29544	3.3483
#2	.00042	.00264	.16023	.00012	.02394	.29022	3.5182
#3	.00045	.00250	.15896	-.00059	.02735	.29092	3.2462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.456**	F **-1.0412**	**2.7399**	**.00531**	**29.191**	**.00377**	**-.00009**
Stddev	6.983	.6352	.0198	.00069	.165	.00003	.00002
%RSD	66.786	61.008	.72241	13.027	.56454	.74099	23.249
#1	-12.363	-1.2243	2.7302	.00527	29.296	.00380	-.00008
#2	-16.288	-.33457	2.7627	.00601	29.276	.00374	-.00007
#3	-2.7176	-1.5649	2.7268	.00463	29.001	.00377	-.00011
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126212 Acquired: 6/3/2013 17:17:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.695**	**.00062**	**35.440**	**.00187**	F **10.816**	F **1536.9**	F **-75507.**
Stddev	.312	.00043	.519	.00090	.108	5.2	409.
%RSD	.49779	69.387	1.4649	48.382	1.0004	.33828	.54114
#1	62.860	.00110	35.760	.00209	10.828	1542.6	-75925.
#2	62.890	.00049	34.841	.00087	10.702	1532.4	-75487.
#3	62.335	.00027	35.720	.00264	10.917	1535.6	-75108.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	**-.00303**	**5.1431**	**-.00154**	**.28937**	**-.00213**	**-.00043**
Stddev	.00083	.00090	.0130	.00020	.00169	.00031	.00154
%RSD	77.357	29.793	.25310	13.337	.58291	14.760	358.45
#1	.00015	-.00401	5.1578	-.00163	.28938	-.00177	-.00150
#2	.00131	-.00222	5.1382	-.00130	.29105	-.00237	-.00112
#3	.00177	-.00288	5.1332	-.00168	.28768	-.00224	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00033**	**.00340**	**.04197**
Stddev	.00020	.00001	.40637
%RSD	59.177	.24023	968.30
#1	-.00049	.00339	-.39701
#2	-.00040	.00341	.11788
#3	-.00011	.00339	.40503
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305126212 Acquired: 6/3/2013 17:17:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14536.**	**19616.**
Stddev	56.	105.
%RSD	.38204	.53779
#1	14496.	19503.
#2	14512.	19632.
#3	14599.	19712.

Approved: June 04, 2013

Sample Name: L1305126213 0.2 Acquired: 6/3/2013 17:21:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**1.0154**	**.00459**	**2.7459**	**.10286**	**.00037**
Stddev	.00031	.0233	.00041	.0030	.00156	.00002
%RSD	60.917	2.2996	8.9156	.10806	1.5121	4.2582
#1	.00077	.99156	.00479	2.7452	.10133	.00038
#2	.00017	1.0382	.00412	2.7492	.10282	.00038
#3	.00057	1.0165	.00487	2.7434	.10444	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**68.110**	**.00701**	**.00211**	**.59193**	**.00358**	**21.532**
Stddev	.658	.00008	.00025	.00084	.00002	.228
%RSD	.96583	1.1151	11.734	.14108	.54503	1.0607
#1	67.450	.00706	.00230	.59178	.00355	21.276
#2	68.114	.00692	.00221	.59283	.00359	21.605
#3	68.765	.00705	.00183	.59118	.00359	21.715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.53550**	**3.6732**	**1.7464**	**3.5090**	**6.5350**	**.19078**
Stddev	.00619	.3830	13.544	.7866	.0635	.00301
%RSD	1.1568	10.426	775.51	22.418	.97175	1.5779
#1	.53786	4.0748	-13.616	4.3318	6.4668	.18758
#2	.54017	3.3120	6.8927	3.4309	6.5458	.19121
#3	.52848	3.6329	11.963	2.7643	6.5925	.19355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305126213 0.2 Acquired: 6/3/2013 17:21:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.234**	**2.8606**	**-.00039**	**10.775**	**.01687**	F **2134.7**
Stddev	.342	.0189	.00016	.107	.00014	6.7
%RSD	.97125	.65928	41.873	.99751	.84132	.31172
#1	34.881	2.8389	-.00023	10.655	.01699	2135.8
#2	35.256	2.8732	-.00055	10.805	.01692	2127.6
#3	35.565	2.8696	-.00039	10.863	.01672	2140.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						450.00
Low Limit						-.00400

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00464**	F **10.447**	F **2636.0**	F **-137680.**	**.00331**	**.00007**
Stddev	.00059	4.102	14.2	487.	.00107	.00312
%RSD	12.817	39.259	.53854	.35374	32.293	4385.9
#1	.00414	11.225	2638.0	-138230.	.00446	-.00005
#2	.00448	14.105	2620.9	-137300.	.00315	-.00299
#3	.00529	6.0129	2649.0	-137510.	.00234	.00326
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.6812**	**-.00036**	**.46501**	**.01538**	**.00112**	**.00135**
Stddev	.0199	.00024	.00530	.00090	.00188	.00006
%RSD	.54036	66.833	1.1387	5.8766	168.45	4.3063
#1	3.6948	-.00060	.45898	.01518	-.00105	.00141
#2	3.6583	-.00039	.46716	.01637	.00231	.00129
#3	3.6903	-.00011	.46890	.01459	.00209	.00136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305126213 0.2 Acquired: 6/3/2013 17:21:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03428**	**1.1368**
Stddev	.00016	.0996
%RSD	.47818	8.7620
#1	.03447	1.2446
#2	.03418	1.1175
#3	.03418	1.0482
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14888.**	**19943.**
Stddev	45.	103.
%RSD	.30440	.51776
#1	14836.	20055.
#2	14913.	19923.
#3	14915.	19852.

Approved: June 04, 2013

Sample Name: L1305126214 Acquired: 6/3/2013 17:24:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00110**	**.00570**	**.00015**	**14.544**	**.02224**	**.00007**
Stddev	.00019	.01416	.00068	.087	.00015	.00001
%RSD	16.934	248.44	457.97	.59619	.65870	10.946
#1	.00094	.01023	.00000	14.481	.02218	.00006
#2	.00131	-.01017	-.00044	14.643	.02241	.00007
#3	.00106	.01704	.00089	14.509	.02213	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **353.71**	**.00242**	**.00393**	**.00007**	**-.00012**	**8.8490**
Stddev	1.69	.00006	.00024	.00014	.00065	.0615
%RSD	.47832	2.2905	6.1036	206.19	563.98	.69520
#1	352.66	.00242	.00418	.00019	.00043	8.8573
#2	355.66	.00237	.00393	-.00008	-.00084	8.9060
#3	352.81	.00248	.00370	.00008	.00007	8.7838
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3487**	**17.212**	F **-25.192**	**1.8971**	**33.793**	**1.0079**
Stddev	.0140	.455	35.501	2.2848	.088	.0026
%RSD	.59553	2.6414	140.93	120.44	.25931	.25823
#1	2.3395	17.311	14.867	2.1422	33.701	1.0052
#2	2.3648	17.609	-37.681	4.0495	33.876	1.0104
#3	2.3419	16.716	-52.760	-.50043	33.803	1.0082
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305126214 Acquired: 6/3/2013 17:24:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**182.28**	**13.011**	**-.00090**	**57.975**	**.05479**	**154.50**
Stddev	.11	.154	.00008	.071	.00013	7.84
%RSD	.06185	1.1860	9.1712	.12177	.23665	5.0741
#1	182.21	12.918	-.00098	57.894	.05468	145.80
#2	182.21	12.927	-.00090	58.010	.05493	156.68
#3	182.41	13.190	-.00081	58.021	.05474	161.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00284**	F **15.394**	F **12630.**	F **-709910.**	**.00140**	**-.00134**
Stddev	.00141	7.722	65.	2766.	.00006	.00178
%RSD	49.480	50.160	.51320	.38966	3.9595	132.81
#1	.00158	16.985	12615.	-707860.	.00136	-.00329
#2	.00435	22.197	12701.	-713050.	.00146	-.00091
#3	.00259	7.0012	12574.	-708810.	.00138	.00018
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.8542**	**-.00133**	**2.3824**	**-.00448**	**.00917**	**-.00193**
Stddev	.0518	.00029	.0041	.00050	.00060	.00020
%RSD	.65924	21.866	.17207	11.137	6.5389	10.113
#1	7.8431	-.00165	2.3791	-.00390	.00986	-.00175
#2	7.9107	-.00109	2.3810	-.00477	.00881	-.00191
#3	7.8089	-.00124	2.3870	-.00476	.00884	-.00214
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305126214 Acquired: 6/3/2013 17:24:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02536**	F **-1.9720**
Stddev	.00014	.7857
%RSD	.55786	39.843
#1	.02532	-2.5014
#2	.02551	-1.0693
#3	.02524	-2.3455
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13981.**	**19589.**
Stddev	53.	60.
%RSD	.38137	.30717
#1	14036.	19599.
#2	13930.	19643.
#3	13976.	19524.

Approved: June 04, 2013

Sample Name: L1305126215 Acquired: 6/3/2013 17:28:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.19488**	**-.00151**	**.17112**	**.20801**	**.00007**	**68.993**
Stddev	.00035	.01148	.00071	.00278	.00155	.00002	.867
%RSD	156.89	5.8924	47.225	1.6264	.74500	31.990	1.2570
#1	.00047	.19942	-.00131	.17379	.20980	.00006	69.984
#2	-.00018	.20340	-.00230	.17132	.20699	.00005	68.371
#3	.00037	.18182	-.00092	.16824	.20726	.00009	68.625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00316**	**.00168**	**.00191**	**.49213**	**.22180**	**2.3618**
Stddev	.00002	.00017	.00023	.00035	.00427	.00476	.2872
%RSD	2.8671	5.5206	13.456	18.272	.86761	2.1447	12.161
#1	.00056	.00302	.00184	.00166	.49704	.22540	2.0427
#2	.00053	.00312	.00178	.00231	.48931	.21641	2.4432
#3	.00054	.00336	.00142	.00176	.49004	.22360	2.5996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.1085**	**.95926**	**2.2465**	**.00576**	**21.477**	**1.6015**	**.00080**
Stddev	10.661	1.0031	.0171	.00047	.174	.0210	.00022
%RSD	342.95	104.57	.76222	8.0903	.81126	1.3107	27.893
#1	9.1991	2.1089	2.2449	.00549	21.675	1.6255	.00080
#2	-9.4734	.26186	2.2643	.00629	21.346	1.5866	.00102
#3	-9.0513	.50701	2.2301	.00548	21.410	1.5924	.00058
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305126215 Acquired: 6/3/2013 17:28:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**180.12**	**.00261**	**51.061**	**.00359**	F **15.782**	F **212.69**	F **-7307.3**
Stddev	3.73	.00037	4.228	.00098	2.991	1.51	94.9
%RSD	2.0697	14.005	8.2806	27.261	18.951	.70920	1.2993
#1	182.16	.00282	47.903	.00259	18.594	212.33	-7267.0
#2	175.82	.00282	55.865	.00454	16.114	211.39	-7239.1
#3	182.38	.00219	49.416	.00365	12.639	214.34	-7415.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**-.00094**	**7.2012**	**-.00105**	**.21756**	**.00637**	**.00065**
Stddev	.00171	.00220	.0340	.00012	.00171	.00216	.00070
%RSD	333.33	234.08	.47284	11.052	.78647	33.844	106.26
#1	.00210	-.00166	7.2362	-.00115	.21949	.00704	.00144
#2	-.00130	-.00269	7.1992	-.00108	.21625	.00396	.00040
#3	.00074	.00153	7.1682	-.00093	.21693	.00811	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00060**	**.00562**	**.92566**
Stddev	.00014	.00001	.47948
%RSD	22.989	.19663	51.798
#1	.00046	.00563	.44350
#2	.00073	.00562	.93106
#3	.00061	.00561	1.4024
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126215 Acquired: 6/3/2013 17:28:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14574.**	**19989.**
Stddev	27.	279.
%RSD	.18290	1.3952
#1	14549.	19667.
#2	14602.	20149.
#3	14570.	20152.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 17:31:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39718**	**9.9696**	**.40150**	**.51633**	**.98423**	**.04954**	**9.5661**
Stddev	.00041	.1345	.00089	.00116	.00951	.00027	.0705
%RSD	.10261	1.3493	.22158	.22453	.96621	.55313	.73737
#1	.39690	9.8631	.40190	.51641	.97769	.04973	9.5468
#2	.39765	9.9248	.40212	.51745	.97986	.04966	9.5072
#3	.39699	10.121	.40048	.51513	.99514	.04923	9.6442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05012**	**.20338**	**.49182**	**.50902**	**3.9629**	**1.0129**	**.91108**
Stddev	.00017	.00071	.00235	.00181	.0284	.0085	.33443
%RSD	.34132	.35023	.47771	.35478	.71761	.83751	36.707
#1	.05027	.20391	.49289	.51051	3.9421	1.0217	.78929
#2	.05015	.20366	.49344	.50954	3.9513	1.0121	1.2893
#3	.04993	.20257	.48913	.50702	3.9953	1.0048	.65461
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **9.7486**	F **1.3794**	**50.011**	**1.0002**	**10.050**	**.51216**	**1.0153**
Stddev	7.7023	1.1900	.401	.0096	.110	.00050	.0040
%RSD	79.009	86.267	.80160	.96137	1.0912	.09774	.38994
#1	15.284	1.2532	49.787	.99787	9.9436	.51244	1.0191
#2	.95225	.25759	49.773	.99189	10.042	.51247	1.0157
#3	13.009	2.6275	50.474	1.0107	10.163	.51159	1.0112
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 17:31:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.596**	**.50320**	F **4.8855**	**.50378**	F **13.799**	**10.632**	F **-10.372**
Stddev	.458	.00210	3.1908	.00053	4.314	.070	1.935
%RSD	.92285	.41768	65.312	.10581	31.267	.65949	18.655
#1	49.345	.50514	2.9810	.50324	16.492	10.594	-8.1544
#2	49.320	.50349	8.5692	.50378	16.083	10.713	-11.247
#3	50.125	.50097	3.1063	.50430	8.8228	10.589	-11.715
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2022**	**.40927**	**5.2016**	**.91666**	**.98308**	**1.0120**	**.51208**
Stddev	.0055	.00201	.0144	.00084	.01080	.0097	.00195
%RSD	.45480	.49151	.27614	.09112	1.0986	.95634	.38118
#1	1.2058	.41012	5.2179	.91712	.97464	1.0038	.51419
#2	1.2050	.41071	5.1965	.91716	.97935	1.0095	.51172
#3	1.1959	.40697	5.1905	.91569	.99525	1.0227	.51033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0029**	**.99863**	F **-.02335**
Stddev	.0029	.00249	.37584
%RSD	.29432	.24983	1609.5
#1	1.0033	1.0012	-.16932
#2	1.0056	.99851	.40358
#3	.99977	.99620	-.30431
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 17:31:45 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15002.**	**20024.**
Stddev	22.	34.
%RSD	.14796	.16831
#1	14997.	20019.
#2	14983.	20059.
#3	15026.	19993.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 17:35:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.01611**	**.00005**	**.01601**	**-.00004**	**.00002**	**-.00278**
Stddev	.00024	.01530	.00143	.00026	.00015	.00001	.00971
%RSD	66.982	95.008	2899.8	1.5949	361.13	49.072	349.31
#1	.00061	.03180	.00067	.01622	-.00011	.00003	-.00077
#2	.00028	.00123	.00107	.01608	-.00015	.00003	.00577
#3	.00016	.01529	-.00159	.01573	.00013	.00001	-.01334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00011**	**-.00007**	**.00037**	**.00065**	**-.00569**	**.01018**
Stddev	.00014	.00020	.00033	.00070	.00329	.00119	.15726
%RSD	143.10	180.79	453.68	190.41	509.08	20.954	1544.5
#1	-.00025	.00006	.00022	.00028	.00384	-.00705	-.15740
#2	-.00003	-.00006	.00000	-.00029	-.00273	-.00485	.03341
#3	.00000	.00034	-.00043	.00111	.00082	-.00517	.15453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **4.0899**	F **.42232**	**.03478**	**-.00082**	**.00562**	**.00035**	**.00152**
Stddev	4.5208	.72517	.03068	.00090	.01220	.00005	.00090
%RSD	110.53	171.71	88.202	109.64	216.88	14.610	59.274
#1	.87751	.12465	.05234	.00022	-.00413	.00032	.00062
#2	2.1327	-.10664	-.00064	-.00127	.01930	.00041	.00152
#3	9.2595	1.2490	.05264	-.00142	.00170	.00032	.00242
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 17:35:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00940**	**.00005**	F **5.1186**	**.00076**	F **15.494**	F **.45471**	F **-14.952**
Stddev	.00636	.00024	6.5447	.00061	5.892	.05671	.651
%RSD	67.642	451.38	127.86	79.803	38.028	12.472	4.3546
#1	.00217	-.00002	-1.6514	.00098	16.544	.50010	-14.599
#2	.01411	-.00014	5.5950	.00008	20.791	.47290	-15.704
#3	.01193	.00032	11.412	.00124	9.1476	.39114	-14.554
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00062**	**.00047**	**.00089**	**.00028**	**-.00082**	**.00003**	**-.00005**
Stddev	.00157	.00113	.00077	.00066	.00008	.00052	.00105
%RSD	251.56	242.98	87.039	237.09	9.5508	1565.7	2279.9
#1	.00190	.00164	.00005	-.00019	-.00080	.00054	-.00122
#2	-.00113	-.00063	.00158	.00000	-.00075	-.00050	.00027
#3	.00110	.00039	.00103	.00103	-.00090	.00006	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00001**	**.00020**	F **.50578**
Stddev	.00007	.00046	.15821
%RSD	617.48	227.75	31.280
#1	.00009	-.00009	.59483
#2	-.00004	-.00003	.32311
#3	-.00002	.00073	.59939
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 17:35:00 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15106.**	**19714.**
Stddev	23.	137.
%RSD	.15173	.69670
#1	15102.	19851.
#2	15086.	19714.
#3	15131.	19577.

Approved: June 04, 2013

Sample Name: L1305126216 Acquired: 6/3/2013 17:38:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.00460**	**-.00069**	**.13980**	**.19543**	**.00002**	**67.878**
Stddev	.00043	.01969	.00122	.00175	.00051	.00002	.606
%RSD	137.39	428.16	177.10	1.2487	.26202	97.576	.89288
#1	.00081	.02161	.00070	.13858	.19490	.00001	67.320
#2	.00008	.00915	-.00117	.14180	.19592	.00000	68.523
#3	.00005	-.01697	-.00160	.13902	.19548	.00004	67.791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00236**	**.00028**	**.00050**	**.01782**	**.20997**	**2.8613**
Stddev	.00010	.00004	.00011	.00009	.00034	.00336	.2896
%RSD	22.256	1.4862	40.032	16.937	1.9186	1.5995	10.122
#1	.00046	.00233	.00015	.00053	.01813	.20729	2.8639
#2	.00053	.00240	.00035	.00041	.01787	.21374	2.5704
#3	.00034	.00235	.00033	.00057	.01745	.20888	3.1496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.4243**	F **-.95609**	**2.1641**	**.00440**	**21.081**	**1.5358**	**.00122**
Stddev	13.565	2.5211	.0437	.00063	.139	.0061	.00008
%RSD	211.15	263.69	2.0195	14.349	.66088	.39623	6.7622
#1	8.1198	-.59979	2.1240	.00471	20.920	1.5335	.00114
#2	-8.6607	1.3679	2.1576	.00481	21.164	1.5427	.00130
#3	-18.732	-3.6364	2.2107	.00367	21.158	1.5312	.00121
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126216 Acquired: 6/3/2013 17:38:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**176.12**	**.00145**	**16.096**	**.00080**	**6.5609**	F **206.82**	F **-7092.3**
Stddev	3.09	.00011	3.757	.00089	11.531	1.29	56.0
%RSD	1.7546	7.8055	23.338	111.21	175.76	.62616	.78895
#1	177.39	.00158	18.030	.00156	-6.7200	205.52	-7036.8
#2	178.37	.00137	11.767	-.00018	12.376	208.11	-7148.7
#3	172.60	.00141	18.492	.00101	14.027	206.83	-7091.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**-.00203**	**6.7024**	**-.00136**	**.20728**	**-.00117**	**.00048**
Stddev	.00152	.00314	.0328	.00034	.00027	.00094	.00107
%RSD	278.33	154.77	.48958	25.114	.13258	80.392	221.58
#1	.00012	-.00555	6.6795	-.00105	.20697	-.00219	-.00043
#2	-.00229	-.00100	6.7400	-.00172	.20740	-.00100	.00167
#3	.00053	.00047	6.6878	-.00129	.20748	-.00033	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00322**	F **-.27836**
Stddev	.00007	.00006	.24521
%RSD	38.093	1.9763	88.092
#1	.00011	.00321	-.56103
#2	.00021	.00316	-.15113
#3	.00024	.00329	-.12291
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126216 Acquired: 6/3/2013 17:38:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14676.**	**19805.**
Stddev	106.	93.
%RSD	.72250	.46864
#1	14784.	19858.
#2	14572.	19698.
#3	14671.	19859.

Approved: June 04, 2013

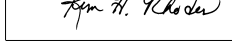
Sample Name: L1305126218 Acquired: 6/3/2013 17:42:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.19032**	**-.00076**	**.14102**	**.21200**	**.00005**	**70.319**
Stddev	.00042	.01432	.00041	.00108	.00238	.00000	1.196
%RSD	240.48	7.5254	53.555	.76619	1.1242	5.0400	1.7003
#1	.00042	.17821	-.00076	.13983	.21216	.00006	70.204
#2	-.00031	.20613	-.00117	.14128	.20954	.00005	69.184
#3	.00041	.18661	-.00035	.14195	.21430	.00005	71.567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00324**	**.00100**	**.00151**	**.49167**	**.22226**	**2.2501**
Stddev	.00010	.00005	.00013	.00030	.00936	.00144	.1653
%RSD	19.993	1.6567	12.681	20.127	1.9046	.64649	7.3456
#1	.00061	.00330	.00113	.00117	.49136	.22165	2.0684
#2	.00047	.00320	.00088	.00176	.48246	.22390	2.2905
#3	.00042	.00321	.00101	.00159	.50118	.22123	2.3915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.7306**	**1.0854**	**2.3130**	**.00446**	**21.913**	**1.6224**	**.00095**
Stddev	20.068	1.0635	.0453	.00086	.425	.0200	.00013
%RSD	298.16	97.986	1.9595	19.248	1.9391	1.2323	13.785
#1	3.9887	1.6147	2.3364	.00482	21.917	1.6281	.00080
#2	28.028	1.7803	2.2608	.00348	21.487	1.6001	.00098
#3	-11.825	-.13894	2.3418	.00509	22.336	1.6388	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 04, 2013



Sample Name: L1305126218 Acquired: 6/3/2013 17:42:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**179.99**	**.00235**	**44.099**	**.00203**	F **10.381**	F **214.88**	F **-7378.2**
Stddev	2.05	.00064	6.498	.00031	3.857	1.47	38.5
%RSD	1.1405	27.007	14.736	15.374	37.157	.68215	.52198
#1	177.67	.00210	51.566	.00190	13.048	213.34	-7338.1
#2	181.57	.00188	41.014	.00180	12.137	216.26	-7414.9
#3	180.72	.00307	39.718	.00239	5.9582	215.06	-7381.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**-.00131**	**7.3171**	**-.00121**	**.22220**	**.00473**	**.00086**
Stddev	.00169	.00032	.0428	.00029	.00203	.00103	.00229
%RSD	181.67	24.819	.58520	24.213	.91381	21.779	266.38
#1	-.00059	-.00099	7.3066	-.00100	.22262	.00501	.00196
#2	.00274	-.00164	7.3643	-.00155	.21999	.00558	-.00178
#3	.00064	-.00129	7.2806	-.00109	.22398	.00358	.00240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00050**	**.00646**	**.78829**
Stddev	.00003	.00006	.55968
%RSD	5.3783	.90364	70.999
#1	.00047	.00642	1.0235
#2	.00051	.00653	.14939
#3	.00053	.00643	1.1919
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305126218 Acquired: 6/3/2013 17:42:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14643.**	**20008.**
Stddev	72.	237.
%RSD	.49183	1.1870
#1	14723.	20006.
#2	14583.	20246.
#3	14624.	19771.

Approved: June 04, 2013

Sample Name: L1305126219 Acquired: 6/3/2013 17:45:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**.00357**	**-.00027**	**.14262**	**.20677**	**.00003**	**70.707**
Stddev	.00013	.01086	.00060	.00152	.00252	.00000	.739
%RSD	80.298	304.49	220.37	1.0638	1.2207	12.908	1.0455
#1	.00001	.00733	-.00082	.14091	.20482	.00003	69.976
#2	.00024	-.00868	.00036	.14381	.20586	.00002	70.689
#3	.00022	.01205	-.00034	.14314	.20962	.00003	71.455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00355**	**.00016**	**.00020**	**.02254**	**.22054**	**2.7187**
Stddev	.00008	.00013	.00005	.00010	.00286	.00233	.1303
%RSD	20.218	3.5243	31.768	48.651	12.690	1.0566	4.7946
#1	.00040	.00369	.00022	.00009	.02109	.21799	2.7783
#2	.00043	.00346	.00015	.00023	.02583	.22109	2.8085
#3	.00029	.00351	.00012	.00028	.02069	.22255	2.5692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-9.7525**	**.88045**	**2.2505**	**.00562**	**21.890**	**1.5859**	**.00092**
Stddev	10.120	2.1277	.0506	.00065	.369	.0147	.00020
%RSD	103.77	241.67	2.2473	11.599	1.6844	.92995	22.157
#1	-18.087	1.9934	2.1998	.00589	21.586	1.5707	.00079
#2	1.5084	2.2208	2.2507	.00488	21.784	1.5870	.00081
#3	-12.679	-1.5729	2.3009	.00610	22.300	1.6001	.00115
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305126219 Acquired: 6/3/2013 17:45:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**183.27**	**.00153**	**16.494**	**.00242**	F **11.154**	F **216.09**	F **-7521.5**
Stddev	3.63	.00043	2.400	.00013	9.079	.90	42.0
%RSD	1.9808	27.889	14.551	5.1732	81.393	.41584	.55822
#1	180.64	.00106	19.231	.00229	6.8828	215.08	-7478.0
#2	187.42	.00188	15.504	.00253	21.581	216.39	-7524.5
#3	181.76	.00164	14.748	.00245	4.9990	216.81	-7561.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00177**	**6.9832**	**-.00134**	**.22101**	**-.00174**	**.00169**
Stddev	.00067	.00240	.0286	.00008	.00319	.00052	.00019
%RSD	200.84	136.20	.40919	5.5968	1.4445	29.929	11.474
#1	.00025	-.00091	6.9581	-.00143	.21886	-.00233	.00156
#2	-.00029	.00376	7.0143	-.00130	.21949	-.00152	.00191
#3	.00105	.00245	6.9772	-.00129	.22467	-.00136	.00159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00012**	**.00341**	**.24925**
Stddev	.00014	.00006	.39933
%RSD	120.12	1.8006	160.21
#1	.00000	.00340	.37858
#2	-.00008	.00348	-.19871
#3	-.00027	.00336	.56789
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305126219 Acquired: 6/3/2013 17:45:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14531.**	**19931.**
Stddev	67.	154.
%RSD	.45812	.77339
#1	14604.	20084.
#2	14517.	19934.
#3	14473.	19775.

Approved: June 04, 2013

Sample Name: L1305132109 Acquired: 6/3/2013 17:49:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00062**	**.82863**	**.00069**	**.04029**	**.07003**	**.00009**	**28.879**
Stddev	.00028	.01184	.00061	.00048	.00035	.00002	.423
%RSD	44.424	1.4283	88.631	1.1992	.50292	20.125	1.4644
#1	.00093	.83529	.00037	.04075	.07025	.00012	29.181
#2	.00039	.83562	.00030	.03978	.07023	.00008	29.059
#3	.00055	.81496	.00139	.04034	.06963	.00008	28.396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.00595**	**.00103**	**.00149**	**1.2047**	**.52463**	**.65711**
Stddev	.00007	.00022	.00018	.00014	.0066	.00417	.49629
%RSD	37.590	3.7087	17.443	9.6673	.54748	.79563	75.527
#1	.00013	.00620	.00098	.00141	1.2106	.52590	.13436
#2	.00028	.00578	.00088	.00166	1.2059	.52803	1.1219
#3	.00018	.00587	.00122	.00141	1.1976	.51997	.71511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-11.196**	**.02207**	**.69492**	**.00107**	**7.2294**	**1.1243**	**-.00017**
Stddev	23.721	1.9454	.02095	.00035	.0535	.0091	.00028
%RSD	211.87	8813.7	3.0154	32.324	.74040	.80589	162.24
#1	-34.991	-2.1045	.68328	.00131	7.2447	1.1329	-.00045
#2	12.451	1.7121	.68237	.00067	7.2735	1.1252	.00011
#3	-11.048	.45857	.71911	.00123	7.1698	1.1148	-.00017
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305132109 Acquired: 6/3/2013 17:49:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.269**	**.00175**	**89.317**	**.00287**	F **11.381**	F **75.616**	F **-2346.5**
Stddev	.243	.00027	2.909	.00069	5.295	.354	10.0
%RSD	.96294	15.386	3.2570	23.894	46.528	.46828	.42461
#1	25.432	.00203	86.015	.00344	16.897	76.025	-2357.9
#2	25.387	.00173	91.501	.00307	6.3389	75.418	-2342.0
#3	24.990	.00150	90.435	.00211	10.906	75.405	-2339.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00199**	**-.00192**	**17.482**	**-.00104**	**.51731**	**.04778**	**.00088**
Stddev	.00088	.00117	.109	.00011	.00498	.00068	.00108
%RSD	44.276	61.121	.62498	10.614	.96200	1.4332	122.43
#1	-.00298	-.00077	17.607	-.00093	.52022	.04802	.00110
#2	-.00128	-.00311	17.409	-.00115	.52014	.04832	-.00029
#3	-.00172	-.00187	17.429	-.00105	.51156	.04701	.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00428**	**.01027**	**.59081**
Stddev	.00026	.00009	.70058
%RSD	6.0525	.84662	118.58
#1	.00418	.01034	1.3101
#2	.00457	.01017	-.08939
#3	.00408	.01031	.55167
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305132109 Acquired: 6/3/2013 17:49:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15069.**	**20086.**
Stddev	36.	154.
%RSD	.23789	.76575
#1	15037.	19935.
#2	15063.	20081.
#3	15108.	20242.

Approved: June 04, 2013

Sample Name: L1305132110 Acquired: 6/3/2013 17:52:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.51655**	**-.00121**	**.00664**	**.39868**	**.00005**	**50.456**
Stddev	.00021	.03493	.00162	.00080	.00316	.00001	.252
%RSD	1397.2	6.7627	133.77	12.075	.79345	30.968	.50011
#1	-.00020	.51661	.00065	.00710	.39864	.00005	50.705
#2	.00022	.48158	-.00231	.00572	.39554	.00005	50.200
#3	.00003	.55145	-.00196	.00712	.40187	.00003	50.464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00026**	**.00085**	**.00061**	**.19065**	**3.7147**	**.67887**
Stddev	.00013	.00013	.00046	.00040	.00319	.0244	.21117
%RSD	58.018	48.930	54.807	65.102	1.6745	.65778	31.107
#1	.00007	.00040	.00126	.00092	.19297	3.6935	.53891
#2	.00030	.00022	.00093	.00075	.18701	3.7414	.92178
#3	.00029	.00016	.00035	.00016	.19196	3.7091	.57592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-16.981**	**.50111**	**2.4570**	**.00837**	**6.1850**	**.01772**	**-.00024**
Stddev	11.166	.78682	.0497	.00144	.0644	.00007	.00017
%RSD	65.758	157.02	2.0242	17.172	1.0410	.37002	73.708
#1	-29.606	1.3537	2.4366	.01000	6.1449	.01776	-.00016
#2	-8.4011	-.19707	2.4206	.00783	6.1508	.01775	-.00011
#3	-12.936	.34671	2.5136	.00728	6.2592	.01765	-.00044
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305132110 Acquired: 6/3/2013 17:52:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.052**	**.00045**	**203.04**	**.00156**	F **10.413**	F **83.687**	F **-1541.3**
Stddev	.094	.00032	5.59	.00078	1.541	.331	12.8
%RSD	.72143	72.763	2.7517	50.132	14.803	.39551	.83310
#1	13.040	.00077	208.19	.00067	8.6468	83.341	-1527.6
#2	12.964	.00012	197.10	.00186	11.488	84.000	-1553.2
#3	13.151	.00045	203.82	.00214	11.103	83.722	-1543.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**.00000**	**20.469**	**-.00120**	**3.6016**	**.00651**	**-.00079**
Stddev	.00052	.0007	.085	.00018	.0445	.00046	.00091
%RSD	124.14	21333.	.41300	14.782	1.2368	7.1178	115.06
#1	-.00020	.00073	20.378	-.00128	3.6189	.00682	-.00129
#2	-.00005	-.00016	20.483	-.00099	3.6349	.00674	-.00134
#3	-.00101	-.00057	20.545	-.00131	3.5510	.00598	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00117**	**.00116**	**.74337**
Stddev	.00040	.00006	.24502
%RSD	33.839	5.2572	32.960
#1	.00135	.00116	1.0263
#2	.00145	.00110	.60363
#3	.00072	.00122	.60019
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305132110 Acquired: 6/3/2013 17:52:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15156.**	**19997.**
Stddev	69.	10.
%RSD	.45357	.04832
#1	15223.	20007.
#2	15086.	19996.
#3	15158.	19988.

Approved: June 04, 2013

Sample Name: L1305132111 Acquired: 6/3/2013 17:56:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**1.8769**	**-.00159**	**.01190**	**.05703**	**.00020**	**7.6452**
Stddev	.00050	.0115	.00117	.00054	.00024	.00000	.0942
%RSD	38.986	.61048	73.648	4.5577	.41670	1.4954	1.2319
#1	.00098	1.8750	-.00060	.01129	.05716	.00020	7.6938
#2	.00102	1.8665	-.00288	.01232	.05675	.00020	7.5367
#3	.00188	1.8892	-.00129	.01209	.05717	.00021	7.7052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00196**	**.00036**	**.00167**	**2.2792**	**.14002**	**.53964**
Stddev	.00009	.00011	.00008	.00037	.0202	.00364	.44358
%RSD	69.409	5.7020	21.767	22.101	.88710	2.5981	82.200
#1	.00013	.00195	.00033	.00174	2.2899	.14397	.63927
#2	.00005	.00208	.00044	.00200	2.2558	.13930	.05471
#3	.00024	.00185	.00030	.00127	2.2918	.13680	.92493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.357**	**1.7442**	**.99838**	**.00317**	**2.9990**	**.08726**	**-.00029**
Stddev	11.063	1.0938	.02104	.00135	.0308	.00035	.00003
%RSD	106.82	62.713	2.1073	42.601	1.0253	.40331	9.6492
#1	1.9282	.48238	.97513	.00473	3.0009	.08742	-.00027
#2	-13.467	2.3270	1.0039	.00237	2.9674	.08686	-.00029
#3	-19.531	2.4233	1.0161	.00242	3.0288	.08750	-.00033
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: L1305132111 Acquired: 6/3/2013 17:56:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.186**	**.00299**	**194.94**	**.00190**	F **11.688**	F **132.75**	F **-6513.8**
Stddev	.023	.00025	1.32	.00020	5.370	.49	18.3
%RSD	.17482	8.4571	.67772	10.752	45.945	.36563	.28070
#1	13.159	.00301	193.95	.00210	17.594	132.97	-6533.1
#2	13.202	.00323	196.44	.00190	7.0995	132.19	-6511.5
#3	13.195	.00272	194.42	.00170	10.370	133.08	-6496.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**-.00069**	**22.704**	**-.00096**	**.13863**	**.13041**	**-.00013**
Stddev	.00038	.00226	.046	.00015	.00028	.00139	.00079
%RSD	95.936	326.73	.20287	15.261	.20166	1.0629	612.13
#1	-.00051	.00188	22.734	-.00081	.13835	.13105	-.00103
#2	-.00070	-.00160	22.651	-.00110	.13891	.12882	.00019
#3	.00003	-.00235	22.728	-.00097	.13863	.13137	.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01028**	**.01528**	**.80631**
Stddev	.00030	.00005	.22444
%RSD	2.8814	.33493	27.836
#1	.01042	.01532	.77270
#2	.01048	.01529	1.0457
#3	.00994	.01522	.60056
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305132111 Acquired: 6/3/2013 17:56:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15367.**	**20582.**
Stddev	18.	109.
%RSD	.11790	.52723
#1	15348.	20486.
#2	15369.	20700.
#3	15384.	20559.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 18:00:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39770**	**9.9812**	**.39975**	**.50021**	**.98270**	**.04977**	**9.4285**
Stddev	.00013	.0407	.00198	.00107	.00917	.00012	.1226
%RSD	.03151	.40808	.49522	.21356	.93340	.24476	1.3007
#1	.39767	9.9890	.40179	.49899	.98635	.04973	9.4819
#2	.39784	10.017	.39962	.50093	.98949	.04967	9.5153
#3	.39759	9.9371	.39783	.50072	.97227	.04991	9.2882
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04994**	**.20259**	**.49222**	**.50582**	**3.9298**	**1.0094**	F **.68473**
Stddev	.00013	.00028	.00138	.00047	.0378	.0055	.16862
%RSD	.26343	.13708	.27953	.09236	.96112	.54732	24.626
#1	.05009	.20275	.49194	.50636	3.9448	1.0067	.53343
#2	.04987	.20275	.49102	.50553	3.9579	1.0158	.65425
#3	.04986	.20227	.49372	.50556	3.8869	1.0057	.86651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **9.1058**	F **1.8108**	**49.548**	**.99732**	**9.9315**	**.50427**	**1.0086**
Stddev	24.199	.3043	.474	.00909	.0591	.00579	.0041
%RSD	265.75	16.805	.95698	.91171	.59551	1.1489	.40707
#1	36.194	1.7995	49.782	.99955	9.9987	.50400	1.0133
#2	-10.376	1.5123	49.860	1.0051	9.9089	.51020	1.0069
#3	1.4997	2.1205	49.003	.98732	9.8871	.49862	1.0055
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 18:00:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.437**	**.50004**	F **6.8160**	**.49849**	F **8.2149**	**10.410**	F **-4.0526**
Stddev	.494	.00101	4.0069	.00296	5.2868	.065	1.6026
%RSD	.99989	.20288	58.787	.59281	64.356	.62061	39.544
#1	49.590	.50052	11.219	.50076	14.311	10.448	-5.6724
#2	49.837	.50071	3.3829	.49515	5.4417	10.335	-4.0175
#3	48.884	.49887	5.8463	.49957	4.8917	10.445	-2.4678
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1959**	**.40691**	**5.2078**	**.90704**	**.98361**	**1.0031**	**.51100**
Stddev	.0042	.00161	.0331	.00423	.00730	.0049	.00133
%RSD	.35160	.39650	.63615	.46600	.74211	.48740	.26024
#1	1.1989	.40562	5.2443	.91060	.98565	1.0083	.51238
#2	1.1911	.40639	5.1797	.90237	.98968	1.0025	.51090
#3	1.1976	.40872	5.1994	.90815	.97551	.99857	.50973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0044**	**.98879**	F **.38487**
Stddev	.0016	.00103	.30019
%RSD	.15520	.10433	77.999
#1	1.0042	.98937	.31701
#2	1.0061	.98760	.12441
#3	1.0030	.98941	.71318
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 18:00:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15119.**	**20501.**
Stddev	16.	180.
%RSD	.10788	.87557
#1	15120.	20497.
#2	15134.	20323.
#3	15102.	20682.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 18:03:19 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**-.02013**	**.00012**	**.00432**	**.00011**	**.00001**	**-.01073**
Stddev	.00039	.02050	.00049	.00025	.00008	.00002	.00294
%RSD	69.179	101.82	409.50	5.7863	68.000	160.60	27.360
#1	.00015	.00352	-.00005	.00411	.00003	.00002	-.01356
#2	.00093	-.03117	.00068	.00460	.00017	.00004	-.00769
#3	.00063	-.03275	-.00026	.00424	.00014	-.00001	-.01095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00002**	**-.00020**	**.00030**	**.00176**	**-.00059**	**-.03963**
Stddev	.00008	.00019	.00019	.00065	.00362	.00226	.21530
%RSD	260.70	990.92	96.229	214.80	205.81	387.01	543.33
#1	.00011	-.00002	-.00036	-.00002	.00151	-.00005	-.18203
#2	.00003	-.00015	-.00026	-.00012	.00549	.00137	.20806
#3	-.00005	.00023	.00002	.00105	-.00173	-.00307	-.14491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.2931**	F **-.34801**	**.00343**	**.00176**	**.00569**	**.00027**	**.00186**
Stddev	4.0623	2.0524	.02631	.00135	.00366	.00005	.00107
%RSD	314.16	589.74	766.24	76.785	64.237	18.308	57.568
#1	2.5318	1.2171	-.01608	.00212	.00459	.00028	.00088
#2	-.85389	-2.6717	.03336	.00289	.00978	.00022	.00171
#3	-5.5571	.41054	-.00698	.00026	.00272	.00031	.00301
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

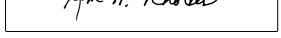
Sample Name: CCB Acquired: 6/3/2013 18:03:19 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01544**	**.00003**	F **4.0746**	**-.00010**	F **-1.0553**	F **.31640**	F **-10.511**
Stddev	.00480	.00095	3.6881	.00057	2.7331	.04198	1.094
%RSD	31.103	3308.3	90.514	566.19	259.00	13.267	10.407
#1	.01204	.00011	-.15596	-.00074	-1.9451	.31412	-10.321
#2	.02094	-.00096	6.6126	.00008	-3.2326	.35947	-11.687
#3	.01335	.00093	5.7672	.00036	2.0119	.27561	-9.5246
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00145**	**.00135**	**.00262**	**.00066**	**-.00075**	**.00069**	**.00020**
Stddev	.00086	.00156	.00273	.00080	.00007	.00009	.00175
%RSD	59.216	115.71	104.20	121.68	9.2648	13.346	871.92
#1	.00135	.00074	.00134	-.00012	-.00073	.00073	.00156
#2	.00064	.00019	.00076	.00061	-.00083	.00075	-.00177
#3	.00235	.00312	.00575	.00149	-.00070	.00058	.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00024**	**.00036**	**-.05109**
Stddev	.00027	.00057	.12952
%RSD	112.22	155.22	253.49
#1	-.00035	.00004	.09823
#2	.00007	.00004	-.13299
#3	-.00043	.00102	-.11852
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013



Sample Name: CCB Acquired: 6/3/2013 18:03:19 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14962.**	**19924.**
Stddev	80.	57.
%RSD	.53402	.28765
#1	14870.	19927.
#2	15012.	19980.
#3	15005.	19865.

Approved: June 04, 2013

Sample Name: PBW C6 Acquired: 6/3/2013 18:06:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.01069**	**-.00070**	**.00239**	**.00009**	**.00001**	**.05786**
Stddev	.00013	.01639	.00067	.00005	.00007	.00002	.00407
%RSD	76.537	153.28	94.629	2.0450	76.537	280.38	7.0362
#1	.00028	.02392	-.00101	.00243	.00015	.00002	.05324
#2	.00020	-.00764	-.00116	.00239	.00002	.00002	.05942
#3	.00003	.01580	.00006	.00233	.00011	-.00002	.06091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00026**	**-.00017**	**-.00009**	**.00721**	**-.00194**	**-.06393**
Stddev	.00004	.00005	.00018	.00027	.00371	.00422	.34954
%RSD	137.58	20.459	107.57	293.20	51.417	216.96	546.79
#1	-.00005	.00026	-.00023	.00002	.00968	-.00431	-.28660
#2	-.00004	.00021	.00004	-.00040	.00900	-.00445	-.24412
#3	.00001	.00032	-.00031	.00011	.00295	.00293	.33894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-18.412**	F **-.20513**	**.01633**	**.00088**	**.00457**	**.00062**	**.00006**
Stddev	3.001	1.2611	.02564	.00107	.00794	.00004	.00017
%RSD	16.297	614.77	156.99	122.27	173.55	7.0261	272.58
#1	-21.316	-.91807	.03925	.00029	.00330	.00057	.00020
#2	-15.323	-.94829	.02110	.00211	.01307	.00064	-.00013
#3	-18.596	1.2510	-.01136	.00023	-.00265	.00065	.00013
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: PBW C6 Acquired: 6/3/2013 18:06:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01532**	**-.00005**	**7.2430**	**.00122**	**1.2492**	**.42999**	F **-10.453**
Stddev	.00458	.00023	1.8028	.00091	3.1034	.03416	1.291
%RSD	29.874	504.95	24.891	74.492	248.42	7.9438	12.354
#1	.01008	-.00010	7.8413	.00203	-1.1614	.44321	-11.942
#2	.01856	.00021	8.6706	.00023	.15829	.39120	-9.7803
#3	.01732	-.00025	5.2171	.00140	4.7509	.45556	-9.6373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							9.0000
Low Limit							-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00135**	**-.00176**	**-.00180**	**-.00123**	**-.00021**	**.00049**	**.00044**
Stddev	.00018	.00197	.00041	.00011	.00007	.00066	.00090
%RSD	13.223	111.95	22.686	8.7963	36.321	133.74	203.22
#1	-.00151	-.00088	-.00160	-.00111	-.00028	.00047	.00111
#2	-.00139	-.00402	-.00154	-.00133	-.00021	.00116	.00079
#3	-.00116	-.00038	-.00228	-.00125	-.00013	-.00015	-.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00013**	**.00220**	**.44494**
Stddev	.00012	.00001	.36489
%RSD	93.761	.38005	82.009
#1	.00000	.00219	.46137
#2	-.00016	.00221	.07211
#3	-.00024	.00220	.80134
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: PBW C6 Acquired: 6/3/2013 18:06:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15194.**	**19963.**
Stddev	61.	47.
%RSD	.40035	.23782
#1	15191.	20018.
#2	15135.	19939.
#3	15257.	19934.

Approved: June 04, 2013

Sample Name: LCSW C6 Acquired: 6/3/2013 18:10:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19729**	**4.8770**	**.20116**	**.96553**	**.48469**	**.02459**	**4.7669**
Stddev	.00095	.0191	.00098	.00457	.00466	.00005	.0712
%RSD	.47912	.39249	.48650	.47346	.96144	.19450	1.4948
#1	.19814	4.8594	.20015	.97078	.48046	.02454	4.7177
#2	.19627	4.8741	.20122	.96246	.48392	.02462	4.7345
#3	.19746	4.8974	.20210	.96334	.48969	.02462	4.8486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02490**	**.10160**	**.24331**	**.25488**	**1.9573**	**.50676**	**.25078**
Stddev	.00015	.00045	.00038	.00142	.0152	.00507	.23660
%RSD	.59278	.44741	.15747	.55815	.77662	1.0006	94.347
#1	.02503	.10199	.24290	.25566	1.9507	.50500	.44735
#2	.02474	.10110	.24335	.25324	1.9465	.51247	-.01183
#3	.02493	.10172	.24367	.25575	1.9747	.50279	.31681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.7562**	F **-.37310**	**24.840**	**.49752**	**4.9755**	**.25667**	**.50864**
Stddev	5.2806	.32196	.297	.00474	.0388	.00113	.00250
%RSD	140.58	86.294	1.1967	.95193	.78016	.43948	.49182
#1	1.8919	-.14259	24.580	.49389	4.9408	.25546	.51123
#2	-8.5701	-.23574	24.775	.49580	4.9682	.25686	.50624
#3	-4.5904	-.74095	25.164	.50288	5.0174	.25770	.50844
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: LCSW C6 Acquired: 6/3/2013 18:10:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.541**	**.25096**	**8.2252**	**.24943**	F **10.509**	**5.4778**	F **-10.682**
Stddev	.199	.00095	2.9445	.00064	3.938	.0525	.877
%RSD	.80959	.37802	35.799	.25599	37.472	.95793	8.2109
#1	24.344	.25183	9.3668	.24934	8.6924	5.4544	-9.8244
#2	24.537	.24995	4.8808	.25011	15.028	5.4411	-11.577
#3	24.742	.25111	10.428	.24884	7.8076	5.5379	-10.643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58648**	**.19775**	**2.5673**	**.00295**	**.48205**	**.49776**	**.25647**
Stddev	.00249	.00180	.0155	.00015	.00459	.00509	.00147
%RSD	.42433	.90778	.60431	5.2482	.95214	1.0228	.57357
#1	.58804	.19856	2.5823	.00286	.47746	.49362	.25646
#2	.58361	.19569	2.5513	.00285	.48205	.49622	.25499
#3	.58780	.19900	2.5682	.00313	.48664	.50344	.25794
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49601**	**.49448**	**.38488**
Stddev	.00053	.00109	.17583
%RSD	.10773	.21978	45.684
#1	.49636	.49541	.48665
#2	.49627	.49329	.48615
#3	.49539	.49475	.18185
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: LCSW C6 Acquired: 6/3/2013 18:10:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15200.**	**20042.**
Stddev	14.	65.
%RSD	.09261	.32322
#1	15185.	20080.
#2	15203.	20079.
#3	15213.	19967.

Approved: June 04, 2013

Sample Name: L1305142301 Acquired: 6/3/2013 18:13:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.05460**	**-.00038**	**.02167**	**.01826**	**.00006**
Stddev	.00039	.01590	.00129	.00007	.00021	.00002
%RSD	315.43	29.120	336.21	.30981	1.1372	26.801
#1	.00006	.07226	-.00183	.02170	.01811	.00005
#2	.00014	.05011	.00065	.02172	.01816	.00008
#3	-.00057	.04142	.00003	.02159	.01850	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**75.164**	**.00060**	**.00140**	**.00020**	**.00016**	**.21398**
Stddev	.597	.00007	.00018	.00029	.00033	.00191
%RSD	.79464	11.093	12.834	148.86	210.98	.89405
#1	74.479	.00066	.00156	-.00001	.00036	.21586
#2	75.441	.00053	.00144	.00007	.00034	.21204
#3	75.573	.00062	.00120	.00053	-.00023	.21403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50722**	**6.9542**	F **-11.069**	F **-1.2692**	**5.7323**	**.00706**
Stddev	.00358	.4093	32.613	1.6577	.0285	.00026
%RSD	.70615	5.8852	294.64	130.61	.49656	3.6547
#1	.50343	7.1191	-37.677	-3.1661	5.7059	.00697
#2	.50769	6.4882	-20.843	-.09883	5.7285	.00685
#3	.51055	7.2553	25.314	-.54256	5.7625	.00735
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kym H. Rhoden

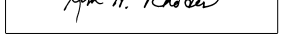
Sample Name: L1305142301 Acquired: 6/3/2013 18:13:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.758**	**.29867**	**.00050**	**3.9338**	**.01085**	**8.6459**
Stddev	.324	.00259	.00007	.0196	.00011	3.6241
%RSD	.54254	.86766	13.580	.49729	.99229	41.917
#1	59.590	.29747	.00052	3.9196	.01097	11.984
#2	59.553	.29689	.00056	3.9257	.01080	9.1630
#3	60.132	.30164	.00043	3.9561	.01077	4.7910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	F **19.945**	F **3084.3**	F **-160520.**	**.00055**	**-.00026**
Stddev	.00114	2.555	17.6	1324.	.00209	.00292
%RSD	87.684	12.813	.56917	.82508	379.32	1104.4
#1	.00258	21.461	3075.9	-160510.	.00203	-.00222
#2	.00096	21.379	3072.6	-159200.	-.00184	-.00165
#3	.00037	16.994	3104.5	-161850.	.00146	.00309
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1198**	**-.00128**	**.48914**	**-.00029**	**.00067**	**.00002**
Stddev	.0104	.00032	.00273	.00072	.00031	.00029
%RSD	.48844	25.269	.55725	250.99	46.595	1244.0
#1	2.1099	-.00101	.48767	.00053	.00080	.00031
#2	2.1188	-.00164	.48746	-.00054	.00090	-.00027
#3	2.1306	-.00119	.49228	-.00085	.00031	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142301 Acquired: 6/3/2013 18:13:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01045**	**.15201**
Stddev	.00009	.10105
%RSD	.87017	66.476
#1	.01040	.24227
#2	.01040	.17091
#3	.01056	.04284
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14805.**	**20549.**
Stddev	81.	116.
%RSD	.54513	.56654
#1	14836.	20599.
#2	14866.	20633.
#3	14714.	20416.

Approved: June 04, 2013

Sample Name: L1305142302 Acquired: 6/3/2013 18:17:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**-.00949**	**-.00044**	**.02026**	**.01884**	**.00004**
Stddev	.00049	.00957	.00146	.00112	.00006	.00001
%RSD	90.216	100.88	333.54	5.5206	.30449	35.009
#1	.00080	-.02045	-.00049	.02123	.01890	.00002
#2	-.00002	-.00274	-.00188	.01904	.01879	.00004
#3	.00086	-.00529	.00105	.02052	.01882	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.368**	**.00067**	**.00048**	**.00046**	**.00057**	**.02625**
Stddev	.211	.00007	.00011	.00007	.00033	.00281
%RSD	.25992	11.041	22.271	15.773	58.082	10.720
#1	81.192	.00074	.00061	.00041	.00084	.02564
#2	81.603	.00067	.00044	.00043	.00020	.02933
#3	81.311	.00059	.00041	.00055	.00066	.02380
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52250**	**7.7244**	F **-12.499**	F **-.57489**	**6.1138**	**.00829**
Stddev	.01017	.1467	30.458	1.0506	.0142	.00016
%RSD	1.9471	1.8995	243.69	182.75	.23248	1.8965
#1	.53207	7.6143	12.072	-.59954	6.1227	.00845
#2	.52363	7.6679	-2.9913	-1.6130	6.1213	.00830
#3	.51181	7.8909	-46.577	.48786	6.0974	.00813
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142302 Acquired: 6/3/2013 18:17:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**63.829**	**.21206**	**-.00019**	**4.2356**	**.00979**	**8.2121**
Stddev	.332	.00159	.00023	.0214	.00023	3.7342
%RSD	.51968	.74870	122.45	.50608	2.3058	45.472
#1	63.949	.21249	-.00045	4.2584	.00981	12.490
#2	64.085	.21339	-.00006	4.2325	.01001	5.6022
#3	63.455	.21030	-.00005	4.2158	.00956	6.5447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00156**	F **13.037**	F **3149.0**	F **-165900.**	**-.00105**	**-.00077**
Stddev	.00031	4.863	19.8	896.	.00110	.00282
%RSD	19.769	37.297	.62731	.53986	104.88	366.86
#1	.00147	7.5083	3163.6	-166690.	-.00222	.00215
#2	.00190	16.648	3156.8	-166090.	-.00003	-.00099
#3	.00131	14.955	3126.5	-164930.	-.00090	-.00346
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0953**	**-.00126**	**.52401**	**-.00195**	**-.00070**	**.00006**
Stddev	.0162	.00017	.00330	.00030	.00243	.00039
%RSD	.77473	13.556	.62894	15.450	345.55	700.72
#1	2.1067	-.00125	.52745	-.00165	.00004	-.00034
#2	2.1025	-.00143	.52368	-.00196	-.00341	.00044
#3	2.0767	-.00109	.52089	-.00225	.00127	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142302 Acquired: 6/3/2013 18:17:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01121**	**.10497**
Stddev	.00016	.29055
%RSD	1.3877	276.78
#1	.01115	-.17832
#2	.01139	.40227
#3	.01109	.09098
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14646.**	**19719.**
Stddev	51.	103.
%RSD	.34558	.52145
#1	14598.	19732.
#2	14640.	19610.
#3	14699.	19814.

Approved: June 04, 2013

Sample Name: L1305142303 Acquired: 6/3/2013 18:20:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**.04436**	**-.00008**	**.01637**	**.01490**	**.00023**
Stddev	.00025	.01536	.00115	.00077	.00003	.00002
%RSD	119.81	34.612	1352.8	4.7257	.23295	8.4570
#1	.00045	.03349	-.00141	.01572	.01486	.00024
#2	-.00006	.06193	.00065	.01723	.01493	.00021
#3	.00025	.03767	.00050	.01618	.01491	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**106.84**	**.00093**	**.00048**	**.00071**	**.00049**	**.06205**
Stddev	.41	.00011	.00011	.00010	.00019	.00327
%RSD	.38319	11.778	22.044	14.332	39.820	5.2697
#1	107.29	.00106	.00043	.00062	.00063	.06057
#2	106.73	.00087	.00041	.00082	.00056	.05978
#3	106.49	.00088	.00061	.00069	.00027	.06580
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.66867**	**10.587**	F **-35.001**	**.00920**	**8.7906**	**.02772**
Stddev	.00163	.114	4.814	.58284	.0204	.00067
%RSD	.24409	1.0750	13.754	6332.6	.23244	2.4183
#1	.66915	10.514	-40.559	.67780	8.8101	.02723
#2	.66685	10.718	-32.262	-.25849	8.7924	.02848
#3	.67000	10.528	-32.181	-.39170	8.7693	.02745
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142303 Acquired: 6/3/2013 18:20:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.943**	**.07725**	**-.00004**	**3.5069**	**.02971**	**8.8878**
Stddev	.278	.00026	.00024	.0076	.00044	2.9842
%RSD	.30232	.33600	645.07	.21718	1.4792	33.577
#1	91.808	.07724	-.00015	3.5100	.02920	9.2627
#2	91.758	.07699	.00023	3.4982	.03002	11.667
#3	92.262	.07751	-.00020	3.5125	.02990	5.7338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00137**	F **-2.0279**	F **4705.7**	F **-250700.**	**-.00044**	**.00144**
Stddev	.00210	8.8872	12.1	951.	.00242	.00203
%RSD	153.00	438.25	.25640	.37928	544.33	141.20
#1	.00362	-4.9070	4695.6	-250590.	-.00025	-.00089
#2	.00102	7.9419	4702.5	-249810.	-.00295	.00238
#3	-.00053	-9.1185	4719.1	-251700.	.00187	.00282
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5394**	**-.00155**	**.65668**	**-.00121**	**.00041**	**-.00013**
Stddev	.0049	.00011	.00296	.00085	.00140	.00024
%RSD	.19154	6.9982	.45135	70.673	341.44	181.69
#1	2.5428	-.00156	.65610	-.00218	.00190	-.00037
#2	2.5338	-.00164	.65404	-.00086	-.00088	-.00015
#3	2.5416	-.00143	.65988	-.00059	.00021	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142303 Acquired: 6/3/2013 18:20:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03180**	**.41101**
Stddev	.00012	.37282
%RSD	.37303	90.708
#1	.03175	-.01658
#2	.03171	.66801
#3	.03193	.58161
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14534.**	**19729.**
Stddev	47.	46.
%RSD	.32585	.23521
#1	14535.	19677.
#2	14581.	19767.
#3	14487.	19742.

Approved: June 04, 2013

Sample Name: L1305142304 Acquired: 6/3/2013 18:24:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.00275**	**-.00047**	**.01529**	**.01476**	**.00019**
Stddev	.00002	.00973	.00220	.00032	.00019	.00002
%RSD	7.6686	353.54	472.19	2.0619	1.3131	10.446
#1	.00030	-.00696	-.00235	.01564	.01465	.00021
#2	.00029	.00271	.00195	.01519	.01465	.00017
#3	.00034	.01250	-.00100	.01503	.01498	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.89**	**.00077**	**.00026**	**.00059**	**.00000**	**.01989**
Stddev	.22	.00003	.00002	.00016	.0002	.00222
%RSD	.20808	3.7643	7.4839	27.740	74639.	11.181
#1	105.68	.00077	.00027	.00040	.00006	.02214
#2	106.12	.00080	.00028	.00066	.00015	.01770
#3	105.86	.00074	.00024	.00070	-.00021	.01983
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.65409**	**10.679**	F **-32.652**	F **-1.3745**	**8.7668**	**.02668**
Stddev	.00360	.289	13.874	.3172	.0136	.00118
%RSD	.55042	2.7067	42.489	23.075	.15473	4.4065
#1	.65314	10.703	-48.398	-1.0707	8.7810	.02684
#2	.65106	10.378	-22.223	-1.7035	8.7652	.02776
#3	.65807	10.955	-27.336	-1.3493	8.7541	.02543
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142304 Acquired: 6/3/2013 18:24:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.167**	**.02665**	**-.00024**	**3.5174**	**.02662**	**20.288**
Stddev	.225	.00018	.00017	.0101	.00073	8.092
%RSD	.24444	.69344	68.954	.28775	2.7576	39.884
#1	92.129	.02664	-.00006	3.5233	.02734	16.532
#2	92.408	.02684	-.00028	3.5231	.02667	29.576
#3	91.962	.02648	-.00039	3.5057	.02587	14.758
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**7.7189**	F **4629.8**	F **-244090.**	**-.00020**	**.00219**
Stddev	.00060	4.1440	23.5	1301.	.00042	.00144
%RSD	77.846	53.686	.50758	.53306	215.01	65.860
#1	.00109	11.041	4656.3	-245470.	.00006	.00307
#2	.00008	3.0752	4611.3	-242890.	.00003	.00298
#3	.00114	9.0410	4621.9	-243910.	-.00068	.00053
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4425**	**-.00117**	**.64739**	**-.00140**	**-.00145**	**-.00005**
Stddev	.0022	.00021	.00125	.00058	.00169	.00019
%RSD	.09218	18.055	.19317	41.706	116.67	377.61
#1	2.4450	-.00119	.64883	-.00083	-.00082	-.00016
#2	2.4418	-.00094	.64674	-.00200	-.00017	.00017
#3	2.4407	-.00136	.64659	-.00136	-.00337	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142304 Acquired: 6/3/2013 18:24:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02971**	**.06142**
Stddev	.00004	.37800
%RSD	.14795	615.43
#1	.02971	-.04419
#2	.02976	.48099
#3	.02967	-.25254
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14520.**	**19183.**
Stddev	44.	89.
%RSD	.30285	.46285
#1	14487.	19231.
#2	14570.	19081.
#3	14504.	19238.

Approved: June 04, 2013

Sample Name: L1305142305 Acquired: 6/3/2013 18:27:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.04805**	**-.00112**	**.01133**	**.02168**	**.00007**
Stddev	.00036	.01666	.00233	.00027	.00035	.00001
%RSD	99.699	34.677	209.10	2.3899	1.5959	12.055
#1	.00006	.04465	-.00122	.01161	.02129	.00008
#2	.00026	.06615	.00127	.01107	.02180	.00007
#3	.00076	.03335	-.00340	.01132	.02196	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.211**	**.00056**	**.00185**	**.00030**	**.00017**	**.03463**
Stddev	.244	.00002	.00013	.00014	.00020	.00145
%RSD	.56495	3.2162	7.0110	45.316	117.43	4.1839
#1	42.929	.00055	.00194	.00022	.00014	.03332
#2	43.361	.00055	.00190	.00022	.00038	.03439
#3	43.342	.00058	.00170	.00046	-.00002	.03619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.22606**	**5.3915**	F **-8.8471**	**.48508**	**4.6171**	**.00368**
Stddev	.00632	.3181	4.1363	2.1795	.0130	.00120
%RSD	2.7954	5.9010	46.753	449.31	.28061	32.672
#1	.21990	5.7286	-13.620	-1.7963	4.6300	.00239
#2	.22576	5.0965	-6.6088	2.5460	4.6041	.00477
#3	.23252	5.3493	-6.3124	.70547	4.6173	.00388
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305142305 Acquired: 6/3/2013 18:27:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**44.365**	**.44836**	**-.00008**	**13.752**	**.00700**	**9.5140**
Stddev	.050	.00037	.00008	.038	.00044	3.9170
%RSD	.11283	.08345	99.801	.27620	6.3482	41.171
#1	44.356	.44855	-.00003	13.715	.00650	7.5639
#2	44.320	.44793	-.00004	13.749	.00714	6.9548
#3	44.419	.44860	-.00017	13.791	.00736	14.023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00240**	F **11.520**	F **2246.9**	F **-117220.**	**-.00086**	**.00065**
Stddev	.00121	4.443	4.6	654.	.00201	.00109
%RSD	50.405	38.569	.20315	.55774	233.07	168.37
#1	.00355	7.1682	2243.3	-116470.	-.00299	.00009
#2	.00252	16.049	2252.0	-117630.	.00099	-.00005
#3	.00114	11.342	2245.3	-117560.	-.00058	.00191
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5280**	**-.00144**	**.21685**	**.00040**	**-.00069**	**-.00004**
Stddev	.0060	.00018	.00054	.00078	.00080	.00001
%RSD	.23575	12.864	.24910	196.74	115.83	13.876
#1	2.5224	-.00162	.21651	-.00025	-.00131	-.00004
#2	2.5343	-.00143	.21658	.00017	.00021	-.00005
#3	2.5272	-.00125	.21748	.00126	-.00097	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142305 Acquired: 6/3/2013 18:27:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00271**	**.25191**
Stddev	.00003	.29523
%RSD	.95336	117.19
#1	.00269	.19627
#2	.00270	.57100
#3	.00274	-.01153
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14779.**	**19373.**
Stddev	69.	47.
%RSD	.46954	.24262
#1	14860.	19349.
#2	14742.	19427.
#3	14737.	19343.

Approved: June 04, 2013

Sample Name: L1305142306 Acquired: 6/3/2013 18:31:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**.04131**	**-.00039**	**.01121**	**.02080**	**.00006**
Stddev	.00015	.01418	.00037	.00031	.00006	.00001
%RSD	63.565	34.321	93.996	2.8101	.26679	19.737
#1	.00018	.05293	-.00081	.01136	.02074	.00006
#2	.00011	.02551	-.00020	.01142	.02080	.00008
#3	.00039	.04548	-.00015	.01084	.02085	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**42.058**	**.00057**	**.00110**	**.00024**	**.00026**	**.00811**
Stddev	.230	.00006	.00013	.00028	.00014	.00252
%RSD	.54696	10.408	11.736	113.84	54.263	31.033
#1	42.313	.00057	.00098	-.00002	.00011	.00914
#2	41.866	.00051	.00123	.00053	.00028	.00994
#3	41.995	.00063	.00108	.00022	.00038	.00524
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.22064**	**5.4802**	F **-9.6942**	F **-1.4970**	**4.5413**	**.00500**
Stddev	.00215	.0703	6.8300	1.7715	.0335	.00122
%RSD	.97519	1.2825	70.455	118.34	.73818	24.439
#1	.21838	5.5578	-16.785	-2.5735	4.5330	.00506
#2	.22087	5.4207	-3.1590	-2.4651	4.5128	.00374
#3	.22267	5.4621	-9.1385	.54760	4.5782	.00618
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142306 Acquired: 6/3/2013 18:31:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.264**	**.36104**	**-.00014**	**13.509**	**.00601**	**7.6273**
Stddev	.151	.00126	.00038	.049	.00031	2.9285
%RSD	.34809	.34845	275.42	.36621	5.0917	38.395
#1	43.434	.36193	-.00052	13.565	.00568	6.9376
#2	43.148	.35960	-.00013	13.490	.00607	10.839
#3	43.209	.36158	.00024	13.472	.00629	5.1052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00200**	**7.8084**	F **2213.0**	F **-116530.**	**-.00168**	**-.00052**
Stddev	.00069	7.9210	12.5	874.	.00089	.00090
%RSD	34.396	101.44	.56536	.74991	52.848	173.24
#1	.00253	12.166	2225.3	-117540.	-.00066	.00032
#2	.00224	-1.3346	2213.4	-115990.	-.00212	-.00148
#3	.00122	12.594	2200.3	-116070.	-.00226	-.00041
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4343**	**-.00132**	**.21269**	**-.00125**	**.00025**	**-.00013**
Stddev	.0191	.00013	.00094	.00089	.00085	.00027
%RSD	.78370	9.7096	.44386	71.049	338.11	200.71
#1	2.4351	-.00133	.21354	-.00201	-.00060	.00006
#2	2.4529	-.00118	.21286	-.00145	.00025	-.00044
#3	2.4148	-.00144	.21167	-.00028	.00111	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142306 Acquired: 6/3/2013 18:31:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00407**	**.21905**
Stddev	.00006	.32078
%RSD	1.5209	146.44
#1	.00413	.15264
#2	.00400	.56784
#3	.00408	-.06333
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14720.**	**19657.**
Stddev	64.	92.
%RSD	.43238	.46713
#1	14660.	19562.
#2	14786.	19745.
#3	14713.	19665.

Approved: June 04, 2013

Sample Name: L1305142306PS Acquired: 6/3/2013 18:34:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432732-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20641**	**5.1318**	**.20705**	**1.0270**	**.52380**	**.02514**
Stddev	.00238	.1711	.00135	.0107	.00741	.00029
%RSD	1.1512	3.3342	.65294	1.0366	1.4148	1.1714
#1	.20550	5.1714	.20787	1.0221	.52071	.02498
#2	.20462	5.2796	.20780	1.0197	.53225	.02496
#3	.20910	4.9443	.20549	1.0393	.51843	.02548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.776**	**.02595**	**.10231**	**.24783**	**.25493**	**2.0268**
Stddev	.633	.00016	.00090	.00298	.00192	.0605
%RSD	1.4463	.62509	.88030	1.2034	.75459	2.9829
#1	43.622	.02584	.10152	.24654	.25361	2.0352
#2	44.472	.02587	.10213	.24571	.25404	2.0825
#3	43.234	.02614	.10329	.25124	.25713	1.9625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.68851**	**5.1979**	**.40566**	F **-.57824**	**29.851**	**.52279**
Stddev	.00990	.1491	7.5421	1.6740	.565	.00695
%RSD	1.4386	2.8679	1859.2	289.50	1.8933	1.3292
#1	.67898	5.2394	7.3141	-2.2427	29.841	.51969
#2	.68778	5.3219	-7.6407	1.1052	30.421	.53074
#3	.69875	5.0325	1.5436	-.59729	29.290	.51793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				45.000		
Low Limit				-.10000		

Approved: June 04, 2013

Sample Name: L1305142306PS Acquired: 6/3/2013 18:34:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432732-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.684**	**.59482**	**.51396**	**38.160**	**.25888**	**5.0090**
Stddev	1.629	.05276	.00329	.727	.00480	3.9564
%RSD	3.7283	8.8691	.64048	1.9049	1.8544	78.986
#1	44.349	.59320	.51099	38.176	.25594	.72380
#2	44.874	.64837	.51339	38.879	.25629	8.5230
#3	41.828	.54290	.51750	37.425	.26442	5.7802
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24987**	**7.7984**	F **2010.8**	F **-105610.**	**.60936**	**.20568**
Stddev	.00168	7.8050	9.2	435.	.00315	.00101
%RSD	.67206	100.08	.45990	.41164	.51613	.48988
#1	.24899	5.3449	2000.1	-105410.	.60793	.20587
#2	.24882	1.5150	2016.7	-105300.	.60719	.20458
#3	.25181	16.535	2015.5	-106100.	.61297	.20657
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.8646**	**.00066**	**.70487**	**.51317**	**.25717**	**.51261**
Stddev	.0263	.00039	.01075	.00907	.00305	.00624
%RSD	.54112	58.799	1.5256	1.7669	1.1872	1.2178
#1	4.8345	.00066	.70270	.50763	.25490	.50858
#2	4.8833	.00027	.71654	.52364	.25597	.50946
#3	4.8760	.00104	.69536	.50825	.26064	.51980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142306PS Acquired: 6/3/2013 18:34:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432732-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.48865**	**.12459**
Stddev	.00551	.14690
%RSD	1.1273	117.91
#1	.48575	.18098
#2	.48520	-.04215
#3	.49501	.23495
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14964.**	**19458.**
Stddev	155.	1726.
%RSD	1.0378	8.8710
#1	15030.	19403.
#2	15075.	17760.
#3	14786.	21211.

Approved: June 04, 2013

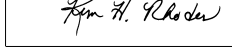
Sample Name: L1305142306SDL Acquired: 6/3/2013 18:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432732-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00151**	**-.00006**	**.00565**	**.00436**	**.00002**	**8.8614**
Stddev	.00052	.00740	.00138	.00046	.00023	.00001	.0623
%RSD	154.92	489.58	2385.3	8.0940	5.3035	33.889	.70344
#1	-.00022	.01004	.00098	.00602	.00449	.00001	8.8268
#2	.00080	-.00223	-.00162	.00578	.00449	.00002	8.9333
#3	.00043	-.00327	.00047	.00514	.00409	.00003	8.8241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00036**	**-.00002**	**-.00013**	**.00151**	**.04585**	**1.0069**
Stddev	.00006	.00033	.00018	.00022	.00325	.00228	.2313
%RSD	37.593	91.522	783.04	166.90	215.52	4.9682	22.972
#1	.00021	.00003	.00017	.00000	.00006	.04678	.79260
#2	.00011	.00069	-.00005	-.00001	.00523	.04325	.97609
#3	.00012	.00037	-.00019	-.00039	-.00076	.04751	1.2521
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-7.5861**	F **-.93135**	**.92741**	**.00192**	**8.8940**	**.07683**	**.00047**
Stddev	.9086	1.6609	.01649	.00078	.0592	.00061	.00040
%RSD	11.977	178.34	1.7783	40.462	.66547	.79768	85.083
#1	-6.6568	-.82834	.91123	.00187	8.8985	.07683	.00009
#2	-8.4724	-2.6414	.94420	.00117	8.9508	.07744	.00044
#3	-7.6291	.67569	.92680	.00272	8.8326	.07622	.00089
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013



Sample Name: L1305142306SDL Acquired: 6/3/2013 18:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432732-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.7586**	**.00163**	**1.3707**	**-.00051**	F **-7.6340**	F **449.00**	F **-23184.**
Stddev	.0222	.00050	3.8372	.00060	7.6824	1.26	66.
%RSD	.80402	30.670	279.95	118.86	100.63	.28135	.28608
#1	2.7737	.00118	4.1161	-.00058	1.1711	447.99	-23242.
#2	2.7689	.00154	3.0097	-.00107	-12.970	450.42	-23198.
#3	2.7331	.00217	-3.0138	.00013	-11.104	448.59	-23111.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00130**	**.48698**	**-.00042**	**.04372**	**-.00073**	**.00026**
Stddev	.00235	.00154	.00234	.00023	.00021	.00037	.00101
%RSD	645.12	117.95	.48002	54.499	.47338	50.579	387.05
#1	-.00304	.00260	.48669	-.00042	.04377	-.00114	.00057
#2	.00062	.00170	.48944	-.00019	.04390	-.00059	-.00086
#3	.00133	-.00039	.48479	-.00066	.04350	-.00045	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00003**	**.00170**	F **-.06324**
Stddev	.00017	.00015	.41830
%RSD	595.60	8.9340	661.45
#1	-.00007	.00160	-.23321
#2	-.00018	.00163	-.36980
#3	.00016	.00188	.41329
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142306SDL Acquired: 6/3/2013 18:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432732-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14903.**	**19036.**
Stddev	82.	96.
%RSD	.55217	.50355
#1	14822.	19010.
#2	14899.	18956.
#3	14986.	19142.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 18:41:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39454**	**10.067**	**.40051**	**.49348**	**.98863**	**.04952**	**9.5699**
Stddev	.00081	.056	.00141	.00130	.01344	.00002	.1820
%RSD	.20626	.55585	.35234	.26255	1.3599	.04658	1.9021
#1	.39385	10.122	.40162	.49198	1.0024	.04949	9.7378
#2	.39433	10.068	.39892	.49418	.98798	.04953	9.5955
#3	.39544	10.010	.40099	.49427	.97552	.04953	9.3764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04989**	**.20273**	**.49058**	**.50748**	**3.9956**	**1.0200**	F **.76583**
Stddev	.00016	.00048	.00045	.00126	.0604	.0066	.09953
%RSD	.32169	.23445	.09247	.24862	1.5116	.64841	12.996
#1	.05000	.20328	.49006	.50859	4.0602	1.0138	.74682
#2	.04971	.20248	.49077	.50611	3.9861	1.0270	.87349
#3	.04998	.20243	.49090	.50774	3.9405	1.0192	.67717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.0730**	F **2.2416**	**50.461**	**1.0063**	**10.231**	**.52997**	**1.0105**
Stddev	16.451	.5523	.719	.0132	.129	.00423	.0027
%RSD	270.88	24.640	1.4255	1.3122	1.2568	.79752	.27194
#1	-.45963	2.0418	51.125	1.0189	10.287	.53373	1.0079
#2	-24.596	1.8170	50.563	1.0073	10.323	.53080	1.0102
#3	6.8364	2.8661	49.697	.99256	10.084	.52540	1.0134
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 18:41:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.035**	**.50068**	**9.0511**	**.49878**	**9.7271**	**10.431**	F **-5.6769**
Stddev	.622	.00129	4.6721	.00338	6.7685	.135	1.2941
%RSD	1.2422	.25788	51.619	.67752	69.584	1.2919	22.796
#1	50.664	.50037	5.8873	.49584	11.809	10.353	-6.0169
#2	50.021	.49956	14.417	.49803	2.1623	10.353	-4.2467
#3	49.421	.50209	6.8486	.50248	15.210	10.587	-6.7670
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1866**	**.40391**	**5.1920**	**.90806**	**.98707**	**1.0163**	**.50814**
Stddev	.0042	.00309	.0326	.00399	.01164	.0115	.00165
%RSD	.35514	.76538	.62734	.43923	1.1792	1.1345	.32552
#1	1.1854	.40274	5.1869	.90600	.99933	1.0219	.50753
#2	1.1831	.40157	5.1624	.90553	.98568	1.0239	.50688
#3	1.1912	.40741	5.2269	.91266	.97618	1.0030	.51002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0015**	**.99846**	F **.19010**
Stddev	.0031	.00339	.09493
%RSD	.30540	.33965	49.938
#1	.99792	.99457	.09199
#2	1.0032	1.0000	.19681
#3	1.0032	1.0008	.28151
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 18:41:32 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**15073.**	**19448.**
Stddev	62.	146.
%RSD	.41357	.74923
#1	15143.	19316.
#2	15054.	19423.
#3	15023.	19605.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 18:44:47 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.00485**	**.00151**	**.00242**	**.00023**	**.00003**	**-.00305**
Stddev	.00018	.02158	.00083	.00023	.00007	.00002	.00342
%RSD	89.731	445.08	54.964	9.4248	31.010	60.316	112.11
#1	.00003	-.02004	.00237	.00221	.00031	.00005	-.00583
#2	.00020	.01615	.00072	.00240	.00018	.00003	.00077
#3	.00039	.01844	.00144	.00266	.00021	.00001	-.00409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00010**	**-.00002**	**.00008**	**.00275**	**-.00233**	F **.36965**
Stddev	.00005	.00028	.00021	.00025	.00232	.00359	.26486
%RSD	139.24	266.39	858.98	331.79	84.548	154.24	71.651
#1	-.00008	-.00018	.00021	.00025	.00378	-.00364	.33132
#2	.00001	.00013	-.00020	-.00022	.00438	-.00507	.12604
#3	-.00003	.00037	-.00009	.00020	.00009	.00173	.65158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1.6538**	F **-.35200**	**.02349**	**-.00112**	**-.00697**	**.00029**	**.00128**
Stddev	13.771	1.8538	.02693	.00091	.00322	.00004	.00049
%RSD	832.65	526.63	114.62	81.314	46.192	12.854	38.619
#1	-9.4325	1.5247	.05320	-.00211	-.01067	.00033	.00076
#2	17.069	-.39886	.01657	-.00031	-.00542	.00026	.00132
#3	-2.6746	-2.1819	.00070	-.00094	-.00482	.00029	.00175
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 18:44:47 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00266**	**.00010**	F **-2.0371**	**.00057**	F **.17545**	F **.38078**	F **-13.897**
Stddev	.00435	.00029	4.7865	.00081	9.2472	.04769	.210
%RSD	163.74	293.87	234.97	142.17	5270.4	12.525	1.5107
#1	.00419	-.00023	1.3287	.00134	4.3059	.36365	-13.658
#2	-.00225	.00020	.07664	.00066	-10.417	.34402	-14.051
#3	.00603	.00032	-7.5166	-.00028	6.6375	.43467	-13.981
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00132**	**.00222**	**.00321**	**.00009**	**-.00078**	**-.00088**	**-.00023**
Stddev	.00069	.00107	.00099	.00043	.00001	.00080	.00202
%RSD	52.306	48.028	30.691	490.58	1.6316	90.132	894.27
#1	.00147	.00105	.00224	-.00003	-.00077	.00003	.00135
#2	.00193	.00248	.00421	-.00027	-.00079	-.00145	-.00250
#3	.00057	.00314	.00319	.00056	-.00079	-.00122	.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00004**	**.00175**	F **.41028**
Stddev	.00009	.00016	.37374
%RSD	235.43	8.9568	91.094
#1	.00011	.00172	-.01543
#2	-.00006	.00161	.68444
#3	.00007	.00192	.56185
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 18:44:47 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14984.**	**19361.**
Stddev	23.	84.
%RSD	.15576	.43516
#1	14958.	19444.
#2	14989.	19276.
#3	15004.	19364.

Approved: June 04, 2013

Sample Name: L1305142307 Acquired: 6/3/2013 18:48:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.13636**	**-.00070**	**.01482**	**.02606**	**.00004**
Stddev	.00036	.02456	.00166	.00048	.00005	.00002
%RSD	197.06	18.015	236.40	3.2564	.20297	37.044
#1	.00037	.10896	-.00051	.01529	.02602	.00006
#2	.00040	.15643	-.00245	.01483	.02603	.00004
#3	-.00023	.14367	.00085	.01433	.02612	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.802**	**.00052**	**.00049**	**.00031**	**.00001**	**.13082**
Stddev	.204	.00016	.00010	.00027	.00025	.00250
%RSD	.42713	31.292	21.342	87.921	2297.5	1.9090
#1	47.908	.00059	.00037	.00019	.00026	.12805
#2	47.567	.00063	.00053	.00012	-.00025	.13289
#3	47.931	.00033	.00057	.00063	.00002	.13153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37429**	**5.6807**	F **-14.366**	F **-.58862**	**4.8762**	**.00455**
Stddev	.00329	.3302	16.964	2.4813	.0303	.00091
%RSD	.87773	5.8135	118.09	421.54	.62094	20.070
#1	.37698	6.0401	-30.860	-3.3845	4.8419	.00450
#2	.37063	5.3906	3.0323	.26723	4.8992	.00366
#3	.37527	5.6114	-15.269	1.3514	4.8876	.00549
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013

Sample Name: L1305142307 Acquired: 6/3/2013 18:48:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.706**	**.02774**	**-.00003**	**1.9696**	**.00156**	**15.585**
Stddev	.399	.00017	.00007	.0175	.00047	7.432
%RSD	.85491	.59530	275.50	.88972	30.295	47.684
#1	46.588	.02780	.00001	1.9573	.00209	21.893
#2	46.379	.02755	.00002	1.9618	.00121	17.470
#3	47.151	.02786	-.00011	1.9897	.00137	7.3926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**8.1861**	F **2211.5**	F **-115570.**	**-.00092**	**-.00176**
Stddev	.00036	5.4350	12.1	754.	.00153	.00105
%RSD	434.49	66.393	.54511	.65240	165.97	59.409
#1	-.00047	13.966	2210.8	-115080.	.00050	-.00274
#2	-.00001	7.4148	2199.8	-115180.	-.00072	-.00066
#3	.00024	3.1780	2223.9	-116430.	-.00254	-.00189
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9964**	**-.00129**	**.35474**	**.00253**	**-.00068**	**.00033**
Stddev	.0083	.00021	.00247	.00076	.00034	.00022
%RSD	.41478	16.488	.69679	30.128	50.694	66.481
#1	1.9970	-.00109	.35345	.00173	-.00028	.00022
#2	1.9878	-.00127	.35318	.00259	-.00085	.00019
#3	2.0044	-.00151	.35759	.00325	-.00090	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142307 Acquired: 6/3/2013 18:48:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00503**	**1.0310**
Stddev	.00006	.9317
%RSD	1.2040	90.372
#1	.00509	.50607
#2	.00497	2.1067
#3	.00504	.48014
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14668.**	**19718.**
Stddev	117.	97.
%RSD	.79860	.49247
#1	14774.	19788.
#2	14688.	19758.
#3	14542.	19607.

Approved: June 04, 2013

Sample Name: L1305142308 Acquired: 6/3/2013 18:51:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.01830**	**-.00131**	**.01559**	**.02529**	**.00003**
Stddev	.00015	.01729	.00088	.00134	.00024	.00002
%RSD	80.715	94.455	67.128	8.6136	.93599	62.245
#1	.00037	.00890	-.00196	.01478	.02545	.00002
#2	.00010	.03825	-.00166	.01714	.02541	.00003
#3	.00010	.00775	-.00031	.01486	.02502	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.459**	**.00044**	**.00003**	**.00050**	**-.00012**	**.00857**
Stddev	.701	.00005	.00019	.00039	.00058	.00327
%RSD	1.3892	12.452	577.35	77.988	499.15	38.175
#1	50.985	.00045	.00003	.00022	-.00056	.00499
#2	50.728	.00038	.00023	.00095	.00053	.01140
#3	49.663	.00049	-.00016	.00034	-.00032	.00932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37992**	**5.6876**	**4.6695**	F **-.28529**	**5.0441**	**.00485**
Stddev	.00467	.3110	13.736	.53014	.0285	.00041
%RSD	1.2284	5.4690	294.18	185.83	.56507	8.3575
#1	.38512	5.6666	-10.966	-.06385	5.0706	.00502
#2	.37854	5.3876	10.178	.09824	5.0479	.00515
#3	.37610	6.0086	14.797	-.89025	5.0139	.00439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				45.000		
Low Limit				-.10000		

Approved: June 04, 2013

Sample Name: L1305142308 Acquired: 6/3/2013 18:51:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.026**	**.00636**	**-.00009**	**2.0901**	**.00109**	**14.655**
Stddev	.401	.00009	.00007	.0234	.00004	1.161
%RSD	.81796	1.3735	73.044	1.1184	3.8325	7.9207
#1	49.333	.00643	-.00005	2.0963	.00104	15.959
#2	49.172	.00638	-.00017	2.1098	.00113	13.734
#3	48.572	.00626	-.00006	2.0643	.00109	14.272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00128**	**1.2951**	F **2222.6**	F **-117460.**	**-.00012**	**-.00104**
Stddev	.00179	5.8072	6.7	852.	.00076	.00366
%RSD	139.92	448.41	.29926	.72549	623.96	350.24
#1	.00131	-3.7575	2220.4	-117310.	.00056	-.00521
#2	-.00052	7.6393	2230.1	-118380.	.00003	.00164
#3	.00306	.00337	2217.4	-116700.	-.00095	.00044
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8563**	**-.00141**	**.36972**	**-.00140**	**-.00080**	**.00009**
Stddev	.0103	.00016	.00457	.00072	.00028	.00021
%RSD	.55214	11.507	1.2369	51.649	34.741	237.63
#1	1.8623	-.00148	.37267	-.00218	-.00101	-.00013
#2	1.8621	-.00153	.37204	-.00127	-.00090	.00011
#3	1.8445	-.00123	.36445	-.00075	-.00048	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142308 Acquired: 6/3/2013 18:51:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00584**	**.26057**
Stddev	.00006	.26028
%RSD	1.0143	99.888
#1	.00590	.36579
#2	.00580	-.03584
#3	.00580	.45177
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14520.**	**18820.**
Stddev	88.	177.
%RSD	.60481	.94237
#1	14557.	18687.
#2	14420.	18751.
#3	14584.	19021.

Approved: June 04, 2013

Sample Name: L1305142401 Acquired: 6/3/2013 18:55:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.07259**	**-.00025**	**.02538**	**.01008**	**.00005**
Stddev	.00027	.02267	.00170	.00102	.00011	.00002
%RSD	100.46	31.231	688.69	4.0306	1.1017	42.993
#1	.00055	.09400	.00096	.02640	.00997	.00003
#2	.00027	.07492	-.00219	.02540	.01007	.00007
#3	.00000	.04884	.00049	.02435	.01019	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**260.39**	**.00113**	**.00078**	**.00079**	**.00077**	**.10130**
Stddev	1.36	.00011	.00019	.00005	.00026	.00193
%RSD	.52127	9.9477	24.343	6.3836	34.391	1.9012
#1	259.47	.00123	.00098	.00084	.00107	.09958
#2	261.95	.00101	.00073	.00074	.00060	.10338
#3	259.75	.00116	.00062	.00078	.00063	.10095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0197**	**24.827**	F **-52.959**	**.13288**	**14.080**	**.03713**
Stddev	.0057	.403	9.014	.36731	.013	.00221
%RSD	.55654	1.6242	17.021	276.42	.08881	5.9578
#1	1.0192	24.424	-60.984	.52876	14.088	.03668
#2	1.0143	24.826	-54.688	.06675	14.066	.03953
#3	1.0256	25.230	-43.206	-.19687	14.086	.03518
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

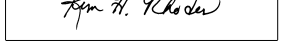
Sample Name: L1305142401 Acquired: 6/3/2013 18:55:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**300.56**	**.25519**	**-.00026**	**7.1256**	**.01304**	**25.627**
Stddev	.94	.00091	.00010	.0221	.00070	6.804
%RSD	.31396	.35611	39.826	.31030	5.3771	26.551
#1	301.59	.25448	-.00015	7.1271	.01274	18.146
#2	300.35	.25621	-.00036	7.1470	.01384	27.288
#3	299.74	.25488	-.00028	7.1028	.01254	31.447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	F **-1.8269**	F **11992.**	F **-681500.**	**-.00130**	**-.00018**
Stddev	.00053	1.4924	43.	3477.	.00073	.00466
%RSD	106.35	81.691	.35490	.51023	56.303	2621.8
#1	.00099	-2.4920	11965.	-684510.	-.00148	-.00222
#2	.00056	-2.8710	11971.	-677700.	-.00192	.00516
#3	-.00006	-.11756	12041.	-682300.	-.00049	-.00347
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2978**	**-.00147**	**1.0183**	**-.00395**	**-.00169**	**-.00006**
Stddev	.0122	.00039	.0039	.00063	.00152	.00006
%RSD	.53222	26.525	.38710	16.006	89.928	96.631
#1	2.2851	-.00102	1.0215	-.00418	-.00315	-.00013
#2	2.2990	-.00163	1.0196	-.00323	-.00011	-.00002
#3	2.3095	-.00174	1.0139	-.00443	-.00183	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142401 Acquired: 6/3/2013 18:55:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00660**	F **-.26528**
Stddev	.00005	.48040
%RSD	.77855	181.09
#1	.00664	-.68381
#2	.00663	.25927
#3	.00654	-.37130
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13759.**	**18597.**
Stddev	56.	17.
%RSD	.40676	.08897
#1	13721.	18580.
#2	13823.	18598.
#3	13732.	18613.

Approved: June 04, 2013

Sample Name: L1305142402 Acquired: 6/3/2013 18:58:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.03623**	**-.00122**	**.02586**	**.00992**	**.00006**
Stddev	.00029	.02870	.00083	.00045	.00011	.00001
%RSD	77.194	79.201	68.081	1.7506	1.0953	12.895
#1	.00069	.06333	-.00217	.02538	.00998	.00005
#2	.00012	.03919	-.00069	.02592	.00980	.00007
#3	.00032	.00617	-.00079	.02628	.00999	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**262.75**	**.00117**	**.00040**	**.00110**	**.00164**	**.03854**
Stddev	1.74	.00006	.00013	.00010	.00001	.00368
%RSD	.66246	5.2273	31.490	8.6834	.77384	9.5472
#1	263.98	.00121	.00030	.00100	.00163	.04248
#2	260.76	.00110	.00055	.00119	.00165	.03794
#3	263.51	.00120	.00037	.00112	.00165	.03519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0313**	**24.703**	F **-18.091**	**1.6075**	**14.281**	**.03524**
Stddev	.0121	.548	40.661	1.5891	.052	.00061
%RSD	1.1706	2.2180	224.76	98.855	.36349	1.7409
#1	1.0440	25.103	-64.637	-.19985	14.294	.03460
#2	1.0300	24.078	-.1482	2.2367	14.224	.03582
#3	1.0200	24.928	10.512	2.7857	14.325	.03531
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142402 Acquired: 6/3/2013 18:58:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**306.29**	**.20553**	**-.00040**	**7.1734**	**.01288**	**19.396**
Stddev	1.00	.00192	.00011	.0669	.00075	5.789
%RSD	.32564	.93449	28.096	.93200	5.7973	29.849
#1	307.43	.20774	-.00027	7.2501	.01303	22.590
#2	305.55	.20427	-.00048	7.1420	.01354	22.885
#3	305.90	.20458	-.00044	7.1280	.01207	12.713
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**4.7629**	F **12156.**	F **-687780.**	**-.00004**	**.00191**
Stddev	.00084	1.5381	54.	5118.	.00045	.00026
%RSD	351.28	32.293	.44377	.74406	1195.1	13.804
#1	-.00066	4.4408	12211.	-693560.	.00035	.00182
#2	.00099	6.4365	12103.	-685920.	-.00054	.00220
#3	.00039	3.4114	12153.	-683840.	.00007	.00170
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2991**	**-.00013**	**1.0330**	**-.00410**	**-.00094**	**-.00020**
Stddev	.0138	.00020	.0051	.00125	.00134	.00022
%RSD	.59900	152.34	.49629	30.460	142.86	112.46
#1	2.3149	-.00035	1.0386	-.00436	.00061	.00005
#2	2.2896	.00002	1.0317	-.00519	-.00172	-.00025
#3	2.2927	-.00006	1.0286	-.00274	-.00170	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142402 Acquired: 6/3/2013 18:58:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00716**	F **-.33937**
Stddev	.00017	.30283
%RSD	2.3569	89.234
#1	.00734	.00750
#2	.00714	-.55110
#3	.00701	-.47450
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13823.**	**18515.**
Stddev	116.	117.
%RSD	.84137	.63228
#1	13698.	18394.
#2	13844.	18628.
#3	13928.	18522.

Approved: June 04, 2013

Sample Name: L1305142403 Acquired: 6/3/2013 19:02:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.01163**	**-.00058**	**.01133**	**.04592**	**.00002**
Stddev	.00028	.02351	.00086	.00032	.00057	.00002
%RSD	140.32	202.20	149.90	2.7826	1.2511	100.75
#1	.00019	-.01217	-.00150	.01097	.04525	.00004
#2	.00049	.01222	.00022	.01152	.04622	.00000
#3	-.00007	.03483	-.00045	.01151	.04628	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.886**	**.00058**	**.00031**	**.00016**	**.00018**	**.02269**
Stddev	.353	.00004	.00006	.00020	.00023	.00185
%RSD	.95737	7.7702	20.186	122.68	124.70	8.1659
#1	36.687	.00058	.00038	-.00002	-.00002	.02292
#2	36.678	.00053	.00027	.00014	.00043	.02442
#3	37.294	.00062	.00027	.00038	.00014	.02074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18880**	**5.4339**	**10.738**	**.85360**	**3.7974**	**.00081**
Stddev	.00318	.4691	30.204	2.1092	.0503	.00130
%RSD	1.6863	8.6324	281.27	247.09	1.3236	161.12
#1	.18548	5.8010	-20.042	2.6252	3.7433	-.00024
#2	.19183	4.9055	11.926	1.4151	3.8064	.00227
#3	.18909	5.5953	40.331	-1.4795	3.8426	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

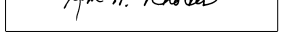
Sample Name: L1305142403 Acquired: 6/3/2013 19:02:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.971**	**.00137**	**-.00021**	**3.7423**	**.00210**	**9.3799**
Stddev	.251	.00004	.00007	.0366	.00056	6.0994
%RSD	.57080	2.8034	30.260	.97849	26.460	65.026
#1	43.685	.00133	-.00028	3.7004	.00150	11.142
#2	44.078	.00137	-.00021	3.7586	.00222	14.405
#3	44.152	.00141	-.00015	3.7680	.00260	2.5936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00089**	**6.7495**	F **1992.1**	F **-104600.**	**-.00102**	**.00045**
Stddev	.00026	2.7116	14.6	295.	.00166	.00157
%RSD	28.536	40.174	.73399	.28205	162.30	350.11
#1	.00114	5.9734	1976.5	-104260.	-.00065	-.00124
#2	.00092	9.7644	1994.3	-104800.	.00042	.00186
#3	.00063	4.5106	2005.5	-104750.	-.00284	.00072
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.1377**	**-.00121**	**.18787**	**-.00153**	**.00115**	**.00009**
Stddev	.0207	.00017	.00189	.00046	.00101	.00022
%RSD	.65809	14.235	1.0065	30.320	88.398	243.87
#1	3.1170	-.00120	.18569	-.00138	.00010	.00022
#2	3.1377	-.00138	.18900	-.00204	.00121	.00021
#3	3.1583	-.00104	.18892	-.00116	.00213	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013



Sample Name: L1305142403 Acquired: 6/3/2013 19:02:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00665**	**.32956**
Stddev	.00006	.34446
%RSD	.90614	104.52
#1	.00659	.25864
#2	.00665	.70396
#3	.00671	.02608
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14768.**	**19194.**
Stddev	18.	69.
%RSD	.11907	.36035
#1	14788.	19267.
#2	14758.	19185.
#3	14758.	19129.

Approved: June 04, 2013

Sample Name: L1305142404 Acquired: 6/3/2013 19:05:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.02819**	**-.00083**	**.01187**	**.04557**	**.00002**
Stddev	.00031	.02518	.00023	.00054	.00039	.00001
%RSD	448.13	89.311	27.624	4.5293	.86668	61.663
#1	-.00029	.00537	-.00057	.01248	.04512	.00003
#2	.00030	.02401	-.00099	.01145	.04574	.00001
#3	.00020	.05520	-.00093	.01169	.04586	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.937**	**.00054**	**.00018**	**-.00001**	**.00039**	**.01450**
Stddev	.059	.00005	.00010	.00020	.00012	.00206
%RSD	.16097	9.6474	56.693	3826.3	30.332	14.199
#1	36.881	.00053	.00008	.00017	.00038	.01317
#2	36.999	.00050	.00029	-.00023	.00051	.01345
#3	36.931	.00060	.00018	.00004	.00027	.01687
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19104**	**5.4640**	F **-2.9400**	F **-.70349**	**3.7523**	**.00107**
Stddev	.00217	.4145	7.7915	1.0673	.0353	.00094
%RSD	1.1376	7.5855	265.02	151.71	.93959	88.072
#1	.19144	5.0378	-11.875	-1.3324	3.7334	.00154
#2	.18869	5.4885	.6140	-1.3069	3.7930	-.00001
#3	.19298	5.8656	2.4408	.52883	3.7306	.00169
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013

Sample Name: L1305142404 Acquired: 6/3/2013 19:05:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.840**	**.00134**	**-.00009**	**3.7466**	**.00193**	**7.0644**
Stddev	.069	.00005	.00013	.0142	.00022	5.1426
%RSD	.15690	3.7329	146.56	.37808	11.394	72.796
#1	43.778	.00139	-.00001	3.7405	.00203	2.2422
#2	43.914	.00130	-.00002	3.7628	.00208	12.476
#3	43.827	.00132	-.00024	3.7365	.00168	6.4744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00191**	**4.6530**	F **1984.5**	F **-104970.**	**-.00070**	**-.00085**
Stddev	.00144	11.988	8.8	76.	.00127	.00123
%RSD	75.486	257.65	.44459	.07285	182.04	146.13
#1	.00357	8.6556	1978.9	-104910.	-.00207	.00025
#2	.00106	14.128	1994.7	-105060.	-.00046	-.00061
#3	.00109	-8.8244	1979.9	-104960.	.00044	-.00218
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.1671**	**-.00138**	**.18699**	**-.00097**	**.00011**	**.00004**
Stddev	.0177	.00015	.00062	.00013	.00135	.00010
%RSD	.55839	11.072	.33301	13.796	1250.7	220.30
#1	3.1681	-.00130	.18667	-.00081	-.00144	.00016
#2	3.1843	-.00128	.18771	-.00103	.00073	-.00001
#3	3.1489	-.00156	.18659	-.00106	.00103	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142404 Acquired: 6/3/2013 19:05:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00753**	**.46216**
Stddev	.00010	.35856
%RSD	1.3027	77.584
#1	.00749	.78211
#2	.00746	.07461
#3	.00764	.52974
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14648.**	**19279.**
Stddev	32.	30.
%RSD	.21984	.15330
#1	14679.	19309.
#2	14649.	19276.
#3	14615.	19250.

Approved: June 04, 2013

Sample Name: L1305142405 Acquired: 6/3/2013 19:09:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**.04506**	**-.00055**	**.02557**	**.00438**	**.00002**
Stddev	.00043	.03379	.00169	.00088	.00011	.00002
%RSD	183.36	74.982	306.01	3.4487	2.4901	113.57
#1	.00028	.05198	-.00073	.02659	.00450	.00001
#2	.00063	.00835	.00122	.02505	.00434	.00000
#3	-.00022	.07486	-.00215	.02507	.00429	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **274.59**	**.00103**	**.00025**	**.00097**	**.00016**	**.05068**
Stddev	2.18	.00005	.00011	.00005	.00033	.00170
%RSD	.79411	5.1650	45.197	5.2211	199.39	3.3551
#1	272.92	.00102	.00012	.00092	.00034	.05224
#2	277.06	.00098	.00030	.00100	.00036	.05092
#3	273.79	.00109	.00033	.00101	-.00021	.04887
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99163**	**21.258**	F **-28.527**	**1.0805**	**14.243**	**.03456**
Stddev	.00988	.649	24.071	1.2928	.043	.00195
%RSD	.99663	3.0552	84.378	119.65	.30306	5.6415
#1	.98549	21.076	-3.7014	.96521	14.228	.03681
#2	.98637	21.979	-30.116	-.15081	14.292	.03332
#3	1.0030	20.719	-51.764	2.4271	14.210	.03356
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142405 Acquired: 6/3/2013 19:09:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**238.85**	**.06723**	**-.00006**	**7.8567**	**.00336**	**20.392**
Stddev	.59	.00032	.00011	.0388	.00029	5.602
%RSD	.24501	.48129	180.00	.49346	8.7199	27.472
#1	239.18	.06699	-.00011	7.8914	.00356	24.482
#2	239.20	.06760	.00006	7.8638	.00349	22.687
#3	238.18	.06711	-.00013	7.8148	.00302	14.007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**2.6823**	F **11414.**	F **-648700.**	**.00064**	**.00139**
Stddev	.00151	1.9537	73.	2908.	.00104	.00234
%RSD	173.89	72.836	.63648	.44827	161.67	168.12
#1	-.00076	3.9150	11371.	-649570.	.00093	-.00026
#2	.00114	3.7022	11372.	-645460.	-.00051	.00408
#3	.00223	.42974	11498.	-651070.	.00151	.00037
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.4260**	**-.00128**	**.99498**	**-.00399**	**-.00066**	**-.00009**
Stddev	.0057	.00028	.00374	.00090	.00149	.00032
%RSD	.40013	22.241	.37614	22.460	226.31	351.01
#1	1.4222	-.00155	.99602	-.00489	-.00101	-.00006
#2	1.4232	-.00132	.99809	-.00310	-.00193	.00021
#3	1.4325	-.00098	.99082	-.00398	.00097	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142405 Acquired: 6/3/2013 19:09:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00542**	F **-.34188**
Stddev	.00009	.58948
%RSD	1.6371	172.42
#1	.00539	-.30154
#2	.00535	.22639
#3	.00552	-.95049
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13740.**	**18745.**
Stddev	50.	106.
%RSD	.36684	.56653
#1	13729.	18749.
#2	13795.	18636.
#3	13696.	18849.

Approved: June 04, 2013

Sample Name: L1305142406 Acquired: 6/3/2013 19:12:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**-.00742**	**-.00045**	**.02489**	**.00419**	**.00004**
Stddev	.00015	.01486	.00081	.00121	.00016	.00002
%RSD	499.22	200.13	181.38	4.8765	3.8848	54.139
#1	-.00014	-.01099	.00035	.02622	.00438	.00002
#2	.00014	.00889	-.00042	.02459	.00410	.00004
#3	.00008	-.02017	-.00127	.02385	.00409	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **270.97**	**.00112**	**.00038**	**.00103**	**-.00017**	**.03314**
Stddev	1.98	.00006	.00021	.00022	.00030	.00041
%RSD	.73252	5.7146	55.425	21.353	178.68	1.2326
#1	273.26	.00116	.00016	.00113	.00009	.03272
#2	269.78	.00114	.00041	.00118	-.00010	.03354
#3	269.86	.00104	.00058	.00078	-.00050	.03316
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98081**	**21.866**	F **-32.123**	**.51350**	**14.222**	**.03524**
Stddev	.01256	.289	21.125	1.1872	.079	.00091
%RSD	1.2806	1.3218	65.763	231.20	.55823	2.5854
#1	.98612	21.844	-56.517	-.47333	14.313	.03627
#2	.98984	21.589	-19.955	.18283	14.170	.03456
#3	.96646	22.166	-19.899	1.8310	14.182	.03489
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013

Sample Name: L1305142406 Acquired: 6/3/2013 19:12:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**239.60**	**.05704**	**-.00029**	**7.8085**	**.00274**	**17.317**
Stddev	1.31	.00089	.00005	.0526	.00029	2.886
%RSD	.54816	1.5532	16.471	.67340	10.752	16.665
#1	241.11	.05787	-.00030	7.8692	.00257	14.252
#2	238.96	.05611	-.00033	7.7797	.00257	19.982
#3	238.73	.05712	-.00024	7.7766	.00308	17.718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**2.3534**	F **11328.**	F **-640240.**	**-.00030**	**-.00168**
Stddev	.00022	3.5283	73.	4598.	.00135	.00286
%RSD	37.144	149.92	.64294	.71815	451.60	170.69
#1	.00045	5.9260	11336.	-642370.	-.00144	.00161
#2	.00084	-1.1290	11396.	-643380.	-.00065	-.00362
#3	.00048	2.2633	11251.	-634960.	.00119	-.00301
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3929**	**-.00126**	**.98660**	**-.00378**	**-.00049**	**.00009**
Stddev	.0040	.00033	.00711	.00074	.00079	.00021
%RSD	.29098	26.431	.72018	19.597	161.52	227.94
#1	1.3895	-.00165	.99472	-.00293	-.00139	.00012
#2	1.3974	-.00108	.98354	-.00426	-.00019	-.00013
#3	1.3918	-.00107	.98154	-.00415	.00011	.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013

Sample Name: L1305142406 Acquired: 6/3/2013 19:12:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00304**	F **-.73763**
Stddev	.00004	.47431
%RSD	1.3527	64.302
#1	.00302	-.79096
#2	.00302	-.23891
#3	.00309	-1.1830
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13771.**	**18662.**
Stddev	54.	150.
%RSD	.39447	.80164
#1	13751.	18524.
#2	13730.	18821.
#3	13833.	18642.

Approved: June 04, 2013

Sample Name: L1305142407 Acquired: 6/3/2013 19:16:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.04224**	**-.00154**	**.02631**	**.01502**	**.00010**
Stddev	.00028	.01179	.00144	.00047	.00008	.00002
%RSD	114.06	27.910	93.314	1.7720	.55798	18.618
#1	.00041	.04902	-.00039	.02685	.01492	.00012
#2	-.00008	.02863	-.00109	.02603	.01507	.00010
#3	.00039	.04907	-.00316	.02605	.01506	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**217.48**	**.00114**	**.00037**	**.00105**	**.00009**	**.07389**
Stddev	1.31	.00007	.00013	.00021	.00008	.00127
%RSD	.60143	6.2002	36.038	19.560	93.634	1.7246
#1	217.26	.00119	.00035	.00118	.00003	.07536
#2	216.30	.00117	.00051	.00116	.00018	.07306
#3	218.88	.00106	.00025	.00081	.00005	.07326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1140**	**19.572**	F **-27.621**	**.66046**	**11.447**	**.02078**
Stddev	.0032	.270	23.045	1.4911	.107	.00084
%RSD	.29003	1.3770	83.433	225.77	.93904	4.0504
#1	1.1110	19.462	-25.124	2.0454	11.419	.02046
#2	1.1175	19.375	-5.9265	.85390	11.356	.02015
#3	1.1136	19.879	-51.814	-.91793	11.566	.02174
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142407 Acquired: 6/3/2013 19:16:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**203.63**	**.04762**	**-.00035**	**5.5590**	**.00799**	**13.347**
Stddev	1.47	.00052	.00016	.0315	.00094	5.072
%RSD	.72306	1.0939	45.148	.56591	11.707	38.004
#1	203.04	.04739	-.00053	5.5568	.00704	14.468
#2	202.54	.04726	-.00023	5.5286	.00891	17.764
#3	205.30	.04822	-.00030	5.5914	.00802	7.8073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**2.3569**	F **8987.0**	F **-500570.**	**-.00039**	**-.00295**
Stddev	.00108	11.103	33.7	523.	.00180	.00221
%RSD	135.12	471.10	.37532	.10453	467.89	75.104
#1	-.00003	14.662	8961.3	-501160.	-.00096	-.00450
#2	.00041	-.67723	8974.4	-500380.	-.00183	-.00393
#3	.00202	-6.9139	9025.2	-500170.	.00164	-.00041
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9976**	**-.00142**	**1.0950**	**-.00322**	**.00000**	**-.00005**
Stddev	.0088	.00045	.0085	.00049	.0011	.00012
%RSD	.44059	31.675	.77800	15.354	248320.	243.35
#1	1.9966	-.00095	1.0921	-.00279	-.00126	-.00002
#2	1.9893	-.00184	1.0883	-.00376	.00057	-.00019
#3	2.0068	-.00148	1.1045	-.00310	.00069	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142407 Acquired: 6/3/2013 19:16:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00555**	**.24371**
Stddev	.00014	.57432
%RSD	2.5288	235.66
#1	.00564	-.30836
#2	.00562	.83795
#3	.00539	.20152
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13855.**	**18760.**
Stddev	40.	105.
%RSD	.28851	.56129
#1	13813.	18808.
#2	13859.	18833.
#3	13893.	18639.

Approved: June 04, 2013

Sample Name: L1305142408 Acquired: 6/3/2013 19:19:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.06427**	**.00053**	**.02620**	**.01513**	**.00008**
Stddev	.00014	.02099	.00028	.00020	.00026	.00001
%RSD	39.533	32.655	52.641	.76642	1.7231	15.124
#1	-.00021	.04316	.00033	.02637	.01491	.00009
#2	-.00048	.08514	.00085	.02624	.01542	.00007
#3	-.00035	.06452	.00042	.02598	.01507	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**217.37**	**.00110**	**.00030**	**.00062**	**.00066**	**.02948**
Stddev	2.15	.00009	.00021	.00012	.00050	.00233
%RSD	.99051	7.8389	70.795	19.646	76.557	7.8879
#1	214.96	.00110	.00053	.00075	.00041	.02736
#2	219.09	.00102	.00013	.00051	.00032	.03197
#3	218.07	.00119	.00022	.00061	.00124	.02912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1025**	**19.636**	F **-25.772**	F **-.60753**	**11.511**	**.02152**
Stddev	.0011	.379	29.528	1.0022	.088	.00024
%RSD	.09851	1.9287	114.57	164.97	.76886	1.1310
#1	1.1031	19.237	-1.9467	.54974	11.437	.02174
#2	1.1013	19.990	-16.562	-1.1852	11.609	.02126
#3	1.1032	19.682	-58.807	-1.1872	11.487	.02157
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			45.000	45.000		
Low Limit			-.10000	-.10000		

Approved: June 04, 2013
Kyra H. Rhoden

Sample Name: L1305142408 Acquired: 6/3/2013 19:19:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**204.30**	**.04017**	**-.00043**	**5.5845**	**.00791**	**16.500**
Stddev	.84	.00039	.00014	.0343	.00056	5.975
%RSD	.41243	.95918	32.194	.61386	7.0262	36.210
#1	203.54	.03976	-.00032	5.5802	.00755	18.406
#2	205.20	.04053	-.00058	5.6207	.00855	9.8048
#3	204.15	.04022	-.00039	5.5526	.00763	21.289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00178**	**4.7904**	F **8976.5**	F **-499000.**	**-.00061**	**-.00123**
Stddev	.00042	4.9335	22.7	2007.	.00077	.00109
%RSD	23.869	102.99	.25337	.40218	125.97	88.722
#1	.00196	9.2148	8981.1	-501230.	-.00149	-.00242
#2	.00207	-.52957	8996.6	-498410.	-.00030	-.00028
#3	.00129	5.6859	8951.8	-497340.	-.00004	-.00099
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9457**	**-.00130**	**1.1052**	**-.00376**	**.00054**	**.00018**
Stddev	.0041	.00014	.0063	.00085	.00106	.00012
%RSD	.20859	10.546	.56614	22.503	196.01	66.537
#1	1.9503	-.00145	1.1035	-.00466	.00095	.00005
#2	1.9442	-.00126	1.1121	-.00364	.00133	.00019
#3	1.9426	-.00119	1.0999	-.00298	-.00066	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: L1305142408 Acquired: 6/3/2013 19:19:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00568**	F **-.56446**
Stddev	.00006	.16934
%RSD	1.0819	30.000
#1	.00575	-.71849
#2	.00563	-.59177
#3	.00565	-.38313
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**13817.**	**18622.**
Stddev	43.	200.
%RSD	.30859	1.0738
#1	13768.	18838.
#2	13843.	18444.
#3	13840.	18585.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 19:23:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39509**	**10.071**	**.40379**	**.49278**	**.98497**	**.04936**	**9.6356**
Stddev	.00254	.090	.00434	.00468	.00562	.00034	.0479
%RSD	.64221	.89566	1.0745	.95012	.57103	.69814	.49728
#1	.39710	10.102	.40876	.49481	.98335	.04963	9.5868
#2	.39595	9.9696	.40183	.49610	.98034	.04947	9.6375
#3	.39224	10.142	.40077	.48742	.99123	.04897	9.6825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05045**	**.20599**	**.49119**	**.51267**	**4.0050**	**1.0367**	F **.43467**
Stddev	.00051	.00236	.00439	.00515	.0329	.0112	.22281
%RSD	1.0023	1.1476	.89277	1.0055	.82128	1.0810	51.259
#1	.05100	.20860	.49519	.51806	4.0032	1.0482	.17741
#2	.05034	.20538	.49189	.51215	3.9731	1.0363	.56510
#3	.05000	.20399	.48650	.50779	4.0388	1.0258	.56151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-12.732**	F **-.13467**	**50.516**	**1.0042**	**10.292**	**.53274**	**1.0190**
Stddev	8.509	.49620	.206	.0044	.061	.00085	.0065
%RSD	66.834	368.46	.40832	.44201	.58920	.15944	.63708
#1	-11.485	.43362	50.386	1.0034	10.224	.53181	1.0258
#2	-4.9147	-.48207	50.409	1.0002	10.311	.53348	1.0181
#3	-21.795	-.35556	50.754	1.0090	10.341	.53295	1.0129
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	-10.000%					

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: CCV Acquired: 6/3/2013 19:23:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.954**	**.50780**	F **8.9438**	**.50908**	F **8.0751**	F **11.730**	F **-56.268**
Stddev	.285	.00533	5.6297	.00236	5.3530	.206	8.922
%RSD	.57121	1.0503	62.945	.46372	66.290	1.7520	15.855
#1	49.991	.51381	3.1165	.51089	9.5505	11.603	-53.058
#2	49.652	.50596	9.3623	.50995	12.536	11.621	-49.396
#3	50.219	.50363	14.353	.50641	2.1391	11.967	-66.351
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			-10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1979**	**.40724**	**5.1893**	**.92570**	**.98221**	**1.0126**	**.51399**
Stddev	.0082	.00258	.0440	.00634	.00732	.0046	.00353
%RSD	.68185	.63391	.84835	.68448	.74483	.44991	.68629
#1	1.2068	.40784	5.2399	.93217	.98199	1.0075	.51785
#2	1.1963	.40946	5.1686	.92544	.97500	1.0140	.51318
#3	1.1906	.40440	5.1595	.91950	.98963	1.0162	.51094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0024**	**1.0219**	F **-.28865**
Stddev	.0082	.0060	.52124
%RSD	.81859	.58280	180.58
#1	1.0081	1.0278	-.88654
#2	1.0061	1.0221	.07021
#3	.99301	1.0159	-.04961
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 19:23:08 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14825.**	**19033.**
Stddev	62.	83.
%RSD	.41862	.43496
#1	14758.	19069.
#2	14837.	19092.
#3	14881.	18938.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 19:26:24 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00678**	**.00019**	**.00152**	**.00010**	**.00002**	**.01066**
Stddev	.00026	.01578	.00101	.00046	.00008	.00000	.00469
%RSD	1688.5	232.59	531.45	30.483	82.048	12.836	43.990
#1	.00012	-.01079	.00092	.00184	.00005	.00003	.01510
#2	.00021	.01973	-.00096	.00099	.00020	.00002	.01112
#3	-.00028	.01142	.00061	.00172	.00005	.00002	.00575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00012**	**.00012**	**.00007**	**.00334**	**-.00186**	F **-.12310**
Stddev	.0001	.00012	.00012	.00019	.00191	.00361	.10338
%RSD	4285.4	97.313	97.967	287.84	57.003	194.27	83.985
#1	-.00009	.00023	.00003	.00026	.00454	-.00449	-.04917
#2	.00003	.00000	.00025	-.00012	.00434	-.00335	-.24123
#3	.00005	.00013	.00007	.00006	.00115	.00226	-.07889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.6198**	**.08901**	**.00799**	**.00024**	**.02926**	**.00029**	**.00137**
Stddev	13.311	1.0767	.00993	.00216	.01421	.00003	.00060
%RSD	154.42	1209.6	124.26	904.08	48.567	10.712	43.985
#1	-9.4442	1.3220	.00285	-.00197	.03512	.00029	.00093
#2	5.0838	-.38946	.00169	.00236	.03960	.00025	.00112
#3	-21.499	-.66552	.01943	.00033	.01306	.00032	.00206
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000						
Low Limit	-.10000						

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 19:26:24 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00544**	**-.00026**	F **2.2184**	**.00062**	**.69725**	**.96412**	F **-48.269**
Stddev	.00545	.00026	3.6445	.00063	1.7275	.04047	2.041
%RSD	100.11	102.46	164.29	102.10	247.76	4.1973	4.2290
#1	.00393	-.00051	3.1445	-.00009	2.6709	1.0089	-48.433
#2	.00091	.00001	-1.7999	.00111	-.03882	.93006	-46.151
#3	.01149	-.00028	5.3105	.00083	-.54029	.95344	-50.224
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit			1.0000				1.0000
Low Limit			-1.1000				-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00131**	**-.00170**	**-.00033**	**.00019**	**-.00081**	**-.00009**	**-.00045**
Stddev	.00076	.00069	.00421	.00051	.00005	.00096	.00101
%RSD	57.938	40.643	1271.0	267.82	5.9073	1069.4	227.98
#1	.00118	-.00213	.00189	.00016	-.00081	.00029	-.00147
#2	.00062	-.00208	-.00519	-.00030	-.00086	-.00118	.00056
#3	.00212	-.00091	.00230	.00071	-.00077	.00062	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00004**	**.00176**	**.06025**
Stddev	.00009	.00028	.56405
%RSD	264.74	15.816	936.20
#1	.00002	.00160	.31598
#2	-.00005	.00159	.45114
#3	.00014	.00208	-.58637
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 19:26:24 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14747.**	**18672.**
Stddev	47.	55.
%RSD	.31821	.29576
#1	14729.	18718.
#2	14801.	18686.
#3	14712.	18611.

Approved: June 04, 2013

Sample Name: L1305142601 Acquired: 6/3/2013 19:30:01 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	F **.19352**	**.00034**	**.00963**	F **.05633**	**.00005**	F **33.024**
Stddev	.00019	.04908	.00096	.00077	.00028	.00001	.173
%RSD	115.06	25.360	279.18	7.9782	.49244	23.435	.52316
#1	.00021	.15698	-.00058	.01003	.05616	.00006	33.061
#2	-.00004	.17428	.00134	.00875	.05665	.00004	33.175
#3	.00033	.24930	.00028	.01012	.05618	.00005	32.836
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit		.10000			.01000		.20000
Low Limit		-.10000			-.01000		-.20000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00027**	**.00054**	**.00047**	F **.17990**	F **.58560**	F **3.1705**
Stddev	.00005	.00009	.00022	.00033	.00491	.00574	.4481
%RSD	19.106	33.739	41.151	70.001	2.7299	.98005	14.133
#1	.00019	.00017	.00079	.00028	.17607	.57960	2.6851
#2	.00027	.00036	.00048	.00086	.18543	.59104	3.5683
#3	.00027	.00028	.00036	.00028	.17818	.58616	3.2581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					.06000	.10000	.10000
Low Limit					-.06000	-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-9.8459**	**-.07729**	F **2.9755**	**.00866**	F **22.240**	F **.01677**	**.00008**
Stddev	16.202	.13301	.0374	.00046	.067	.00003	.00013
%RSD	164.55	172.10	1.2557	5.3562	.30209	.18996	175.40
#1	-24.167	-.21196	2.9612	.00908	22.182	.01679	-.00008
#2	7.7398	.05398	3.0178	.00816	22.314	.01679	.00014
#3	-13.111	-.07388	2.9473	.00874	22.224	.01674	.00016
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit	.10000		1.0000		.50000	.01000	
Low Limit	-.10000		-1.0000		-.50000	-.01000	

Approved: June 04, 2013

Sample Name: L1305142601 Acquired: 6/3/2013 19:30:01 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **5.9909**	**.00063**	F **25.446**	**.00121**	F **6.6177**	F **1019.8**	F **-52493.**
Stddev	.0319	.00061	3.926	.00099	.7950	4.8	310.
%RSD	.53253	96.649	15.428	82.309	12.013	.46726	.59047
#1	6.0122	.00132	26.294	.00025	6.7264	1015.8	-52190.
#2	6.0062	.00014	28.879	.00114	7.3527	1025.1	-52809.
#3	5.9542	.00044	21.165	.00224	5.7739	1018.6	-52480.
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit	.50000		.01000		.01000	.01000	.01000
Low Limit	-.50000		-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**-.00067**	F **2.5287**	**-.00116**	F **.55598**	**.00609**	**.00002**
Stddev	.00168	.00083	.0032	.00018	.00312	.00506	.00050
%RSD	1021.8	123.74	.12673	15.564	.56034	83.052	3328.6
#1	.00211	-.00161	2.5250	-.00132	.55902	.01192	-.00048
#2	-.00070	-.00035	2.5307	-.00119	.55612	.00281	.00000
#3	-.00091	-.00004	2.5303	-.00096	.55280	.00355	.00052
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit			1.0000		.01000		
Low Limit			-1.0000		-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00042**	**.00337**	F **.52241**
Stddev	.00014	.00009	.28731
%RSD	33.334	2.6244	54.997
#1	.00042	.00327	.50165
#2	.00056	.00338	.24604
#3	.00028	.00345	.81954
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142601 Acquired: 6/3/2013 19:30:01 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14653.**	**18680.**
Stddev	65.	40.
%RSD	.44552	.21303
#1	14727.	18638.
#2	14606.	18686.
#3	14626.	18717.

Approved: June 04, 2013

Sample Name: L1305142601MS Acquired: 6/3/2013 19:33:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20237**	**5.2147**	**.20617**	**1.0036**	**.55345**	**.02540**	**38.045**
Stddev	.00117	.0877	.00157	.0050	.00845	.00014	.983
%RSD	.57690	1.6822	.76208	.50262	1.5265	.53372	2.5832
#1	.20260	5.1636	.20689	1.0059	.54912	.02541	37.489
#2	.20340	5.1646	.20726	1.0071	.54804	.02553	37.466
#3	.20110	5.3160	.20437	.99783	.56319	.02526	39.179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02586**	**.10355**	**.25323**	**.25668**	**2.1941**	**1.0957**	**3.3753**
Stddev	.00020	.00047	.00152	.00102	.0287	.0052	.4299
%RSD	.78734	.44922	.59835	.39750	1.3096	.47340	12.737
#1	.02600	.10393	.25320	.25765	2.1802	1.1017	3.8073
#2	.02594	.10368	.25477	.25677	2.1750	1.0926	2.9475
#3	.02562	.10303	.25174	.25561	2.2271	1.0928	3.3711
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.189**	F **-.16527**	**28.661**	**.52106**	**26.895**	**.28371**	**.51601**
Stddev	15.527	1.0269	.457	.00728	.413	.00347	.00110
%RSD	152.39	621.35	1.5957	1.3964	1.5350	1.2237	.21275
#1	-2.4468	-.82899	28.444	.51799	26.549	.28126	.51699
#2	5.4916	-.68433	28.352	.51582	26.783	.28218	.51621
#3	27.523	1.0175	29.186	.52937	27.352	.28768	.51482
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013
Kym H. Rhoden

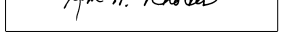
Sample Name: L1305142601MS Acquired: 6/3/2013 19:33:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.523**	**.25636**	**30.766**	**.25614**	F **-.30971**	F **1018.6**	F **-52867.**
Stddev	.446	.00102	7.430	.00186	3.8537	3.7	360.
%RSD	1.4161	.39967	24.151	.72705	1244.3	.36098	.68155
#1	31.289	.25715	36.038	.25760	.44594	1022.5	-53097.
#2	31.242	.25674	22.268	.25678	-4.4853	1017.9	-53053.
#3	32.037	.25521	33.991	.25404	3.1102	1015.3	-52452.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60281**	**.20021**	**4.9729**	**.00357**	**1.0566**	**.51651**	**.26046**
Stddev	.00253	.00271	.0149	.00018	.0141	.00785	.00148
%RSD	.42025	1.3557	.29872	5.1011	1.3377	1.5198	.56785
#1	.60520	.20002	4.9891	.00336	1.0487	.50888	.26022
#2	.60307	.20302	4.9696	.00370	1.0481	.51607	.26204
#3	.60015	.19760	4.9600	.00365	1.0729	.52457	.25911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50764**	**.51839**	**.25341**
Stddev	.00202	.00316	.63135
%RSD	.39737	.60984	249.15
#1	.50871	.52086	.67702
#2	.50889	.51949	.55542
#3	.50531	.51483	-.47222
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013



Sample Name: L1305142601MS Acquired: 6/3/2013 19:33:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14331.**	**18446.**
Stddev	62.	236.
%RSD	.43128	1.2770
#1	14302.	18570.
#2	14290.	18594.
#3	14402.	18175.

Approved: June 04, 2013

Sample Name: L1305142602 Acquired: 6/3/2013 19:36:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.01013**	**-.00117**	**.01150**	**.05261**	**.00004**	**35.603**
Stddev	.00051	.00864	.00132	.00053	.00043	.00000	.152
%RSD	99.344	85.305	112.35	4.5870	.82516	8.8109	.42805
#1	.00001	.01212	-.00239	.01211	.05283	.00004	35.477
#2	-.00101	.00067	-.00136	.01114	.05288	.00004	35.773
#3	-.00054	.01760	.00023	.01125	.05211	.00003	35.559
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.00024**	**.00049**	**.00033**	**.01299**	**.58176**	**2.8587**
Stddev	.00006	.00013	.00013	.00020	.00219	.00379	.2596
%RSD	18.566	53.672	26.343	59.334	16.875	.65088	9.0808
#1	.00030	.00033	.00053	.00055	.01400	.58078	2.5885
#2	.00026	.00009	.00059	.00024	.01450	.58594	3.1062
#3	.00037	.00029	.00034	.00019	.01048	.57856	2.8814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-12.990**	F **-.87633**	**3.0077**	**.00993**	**24.014**	**.00737**	**.00043**
Stddev	2.116	2.1933	.0038	.00103	.218	.00008	.00011
%RSD	16.289	250.28	.12549	10.416	.90655	1.0328	25.283
#1	-14.099	-2.3168	3.0087	.00954	23.980	.00739	.00033
#2	-10.550	-1.9601	3.0035	.01110	24.246	.00744	.00041
#3	-14.321	1.6479	3.0109	.00914	23.815	.00729	.00054
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000	45.000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013

Sample Name: L1305142602 Acquired: 6/3/2013 19:36:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.9958**	**.00067**	**18.690**	**.00068**	F **-.45995**	F **1078.2**	F **-56107.**
Stddev	.0374	.00085	2.095	.00041	5.2037	6.0	243.
%RSD	.62291	126.60	11.208	60.095	1131.4	.55318	.43390
#1	6.0134	-.00026	16.747	.00022	4.9728	1079.8	-56231.
#2	6.0211	.00142	18.414	.00099	-.95307	1083.1	-56264.
#3	5.9529	.00086	20.910	.00083	-5.3996	1071.5	-55827.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00072**	**-.00083**	**2.2771**	**-.00107**	**.55971**	**-.00051**	**-.00003**
Stddev	.00128	.00157	.0150	.00006	.00399	.00032	.00039
%RSD	176.47	189.85	.65654	5.3757	.71203	63.180	1142.5
#1	-.00052	-.00080	2.2791	-.00101	.56201	-.00034	.00020
#2	.00044	.00073	2.2909	-.00110	.56201	-.00087	-.00049
#3	-.00209	-.00241	2.2612	-.00111	.55511	-.00030	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**.00328**	**.52941**
Stddev	.00002	.00010	.40348
%RSD	48.301	3.1740	76.213
#1	.00007	.00327	.57270
#2	.00003	.00319	.10603
#3	.00005	.00339	.90951
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305142602 Acquired: 6/3/2013 19:36:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14551.**	**18461.**
Stddev	12.	43.
%RSD	.08553	.23125
#1	14549.	18455.
#2	14540.	18421.
#3	14565.	18506.

Approved: June 04, 2013

Sample Name: L1305142602DUP Acquired: 6/3/2013 19:40:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.00451**	**.00015**	**.00987**	**.04982**	**.00004**	**33.595**
Stddev	.00018	.01844	.00123	.00017	.00061	.00002	.206
%RSD	177.04	408.84	805.38	1.7619	1.2335	33.719	.61434
#1	-.00007	.00574	-.00126	.00968	.04930	.00004	33.380
#2	.00008	.02230	.00071	.00988	.04967	.00006	33.614
#3	.00029	-.01451	.00100	.01003	.05050	.00003	33.792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00008**	**.00013**	**.00009**	**.00861**	**.56302**	**2.7564**
Stddev	.00009	.00012	.00039	.00069	.00239	.00528	.2256
%RSD	32.221	146.84	287.02	784.26	27.754	.93849	8.1843
#1	.00037	.00008	-.00022	.00003	.01124	.56660	2.8166
#2	.00024	-.00004	.00054	.00081	.00802	.56551	2.5068
#3	.00020	.00020	.00008	-.00057	.00657	.55695	2.9458
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.7583**	F **-.45290**	**2.8644**	**.00853**	**22.766**	**.00635**	**-.00005**
Stddev	8.8662	1.9605	.0678	.00187	.305	.00009	.00031
%RSD	235.91	432.88	2.3684	21.896	1.3410	1.4151	566.74
#1	7.2483	.09456	2.7860	.00647	22.476	.00633	-.00030
#2	-6.3219	-2.6290	2.9036	.01011	22.737	.00645	.00029
#3	10.348	1.1757	2.9035	.00901	23.085	.00628	-.00015
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 04, 2013

Sample Name: L1305142602DUP Acquired: 6/3/2013 19:40:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-07

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.6182**	**.00033**	**16.919**	**.00108**	F **-5.5057**	F **1051.0**	F **-53996.**
Stddev	.0257	.00040	3.376	.00221	3.6191	5.5	172.
%RSD	.45791	121.35	19.954	205.12	65.734	.52725	.31906
#1	5.5949	.00078	20.297	.00123	-8.0257	1054.9	-54052.
#2	5.6138	.00021	13.545	-.00120	-1.3586	1044.7	-53802.
#3	5.6458	.00000	16.914	.00321	-7.1327	1053.6	-54133.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**-.00002**	**2.2375**	**-.00131**	**.52850**	**-.00115**	**-.00119**
Stddev	.00037	.00091	.0126	.00009	.00242	.00039	.00127
%RSD	40.621	5274.6	.56286	6.5884	.45761	33.833	106.25
#1	-.00135	-.00001	2.2492	-.00135	.52754	-.00157	.00010
#2	-.00079	-.00094	2.2242	-.00136	.52672	-.00080	-.00125
#3	-.00063	.00089	2.2391	-.00121	.53126	-.00107	-.00243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00008**	**.00198**	**.14946**
Stddev	.00034	.00007	.82191
%RSD	441.76	3.4444	549.94
#1	-.00019	.00205	.75239
#2	-.00004	.00193	.48272
#3	.00046	.00195	-.78675
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: L1305142602DUP Acquired: 6/3/2013 19:40:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-07

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14718.**	**18794.**
Stddev	7.	79.
%RSD	.04923	.42074
#1	14723.	18839.
#2	14722.	18840.
#3	14710.	18702.

Approved: June 04, 2013

Sample Name: L1305142602MS Acquired: 6/3/2013 19:43:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19889**	**5.0577**	**.20443**	**.98740**	**.54436**	**.02485**	**39.675**
Stddev	.00023	.0451	.00082	.00116	.00214	.00005	.063
%RSD	.11630	.89208	.40271	.11773	.39338	.19950	.15879
#1	.19863	5.0061	.20348	.98673	.54648	.02481	39.725
#2	.19899	5.0777	.20492	.98874	.54441	.02491	39.697
#3	.19906	5.0894	.20489	.98672	.54220	.02485	39.605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02538**	**.10162**	**.24552**	**.25284**	**2.0310**	**1.0864**	**2.9810**
Stddev	.00018	.00052	.00069	.00089	.0102	.0061	.3373
%RSD	.70132	.51284	.28278	.35319	.50207	.56171	11.314
#1	.02518	.10103	.24503	.25185	2.0284	1.0820	2.7563
#2	.02551	.10187	.24522	.25358	2.0423	1.0838	3.3688
#3	.02546	.10197	.24632	.25310	2.0224	1.0934	2.8179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-4.8154**	**.93481**	**28.641**	**.51854**	**28.934**	**.27877**	**.50925**
Stddev	3.5365	.54808	.103	.00215	.295	.00099	.00271
%RSD	73.442	58.630	.35958	.41394	1.0192	.35509	.53173
#1	-8.6700	.85566	28.690	.52073	28.650	.27817	.50647
#2	-4.0556	1.5182	28.711	.51644	29.239	.27991	.50940
#3	-1.7205	.43061	28.523	.51846	28.912	.27823	.51188
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 04, 2013
Kyn H. Rhoden

Sample Name: L1305142602MS Acquired: 6/3/2013 19:43:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-06

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.245**	**.25096**	**19.532**	**.25161**	F **-1.7340**	F **1099.7**	F **-55847.**
Stddev	.075	.00174	6.373	.00375	6.9124	1.1	178.
%RSD	.24090	.69479	32.628	1.4894	398.64	.10040	.31953
#1	31.318	.24895	23.858	.24910	4.3985	1099.0	-55642.
#2	31.250	.25180	12.214	.24980	-.37576	1099.0	-55929.
#3	31.168	.25212	22.526	.25591	-9.2246	1100.9	-55969.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58986**	**.19561**	**4.8426**	**.00304**	**1.0516**	**.51105**	**.25420**
Stddev	.00444	.00129	.0039	.00009	.0025	.00391	.00131
%RSD	.75350	.65913	.08122	2.8754	.23747	.76429	.51465
#1	.58538	.19565	4.8414	.00314	1.0541	.50656	.25305
#2	.58994	.19688	4.8394	.00301	1.0515	.51299	.25392
#3	.59427	.19430	4.8470	.00297	1.0491	.51361	.25562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50410**	**.50548**	F **-.21403**
Stddev	.00124	.00279	.47757
%RSD	.24550	.55193	223.13
#1	.50303	.50245	-.46556
#2	.50546	.50604	-.51327
#3	.50383	.50795	.33673
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 04, 2013

Sample Name: L1305142602MS Acquired: 6/3/2013 19:43:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment: WG432659-06

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14646.**	**18416.**
Stddev	55.	60.
%RSD	.37833	.32352
#1	14710.	18484.
#2	14615.	18374.
#3	14613.	18389.

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 19:47:01 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39549**	**10.056**	**.40126**	**.49513**	**.99074**	**.04945**	**9.9003**
Stddev	.00183	.069	.00068	.00161	.01009	.00013	.1558
%RSD	.46295	.68540	.16986	.32477	1.0188	.26976	1.5736
#1	.39491	10.099	.40069	.49454	1.0021	.04960	9.9870
#2	.39401	10.092	.40109	.49390	.98291	.04934	9.7205
#3	.39753	9.9765	.40201	.49695	.98718	.04941	9.9935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05003**	**.20409**	**.49281**	**.50663**	**4.0314**	**1.0263**	F **.81366**
Stddev	.00015	.00012	.00190	.00007	.0428	.0027	.44807
%RSD	.29715	.05899	.38643	.01472	1.0630	.26767	55.068
#1	.04991	.20422	.49468	.50662	4.0808	1.0262	1.0871
#2	.05020	.20398	.49288	.50657	4.0046	1.0290	.29656
#3	.04999	.20406	.49088	.50671	4.0087	1.0235	1.0573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **19.567**	F **1.3204**	**51.067**	**1.0089**	**10.429**	**.54304**	**1.0070**
Stddev	10.832	1.6833	.506	.0081	.068	.00486	.0018
%RSD	55.357	127.48	.99084	.80660	.65193	.89555	.17588
#1	17.652	3.1371	51.599	1.0182	10.505	.54618	1.0080
#2	9.8204	-.18630	50.592	1.0033	10.374	.53744	1.0049
#3	31.228	1.0104	51.010	1.0052	10.407	.54551	1.0079
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 19:47:01 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.172**	**.50478**	F **2.9981**	**.50608**	F **5.0115**	F **11.116**	F **-31.122**
Stddev	.500	.00111	5.3848	.00252	3.7303	.011	.857
%RSD	.99701	.21912	179.61	.49868	74.435	.10179	2.7547
#1	50.749	.50351	8.0617	.50562	1.8665	11.129	-32.073
#2	49.890	.50548	-2.6588	.50382	9.1329	11.107	-30.886
#3	49.877	.50536	3.5913	.50881	4.0352	11.113	-30.407
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			-10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1911**	**.40051**	**5.0505**	**.92281**	**.98300**	**1.0185**	**.51035**
Stddev	.0046	.00177	.0216	.00387	.01094	.0048	.00178
%RSD	.38808	.44278	.42847	.41934	1.1129	.46776	.34828
#1	1.1957	.40251	5.0626	.92616	.99558	1.0236	.51161
#2	1.1864	.39987	5.0256	.91857	.97768	1.0141	.50831
#3	1.1913	.39913	5.0634	.92371	.97574	1.0178	.51111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99937**	**1.0230**	F **-.54601**
Stddev	.00368	.0026	.18467
%RSD	.36781	.25472	33.822
#1	1.0001	1.0247	-.33548
#2	.99539	1.0200	-.62197
#3	1.0026	1.0243	-.68060
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 04, 2013

Sample Name: CCV Acquired: 6/3/2013 19:47:01 Type: QC
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14783.**	**18597.**
Stddev	30.	142.
%RSD	.20564	.76354
#1	14795.	18513.
#2	14806.	18761.
#3	14749.	18517.

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 19:50:17 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.01112**	**.00034**	**.00140**	**.00014**	**.00002**	**.00489**
Stddev	.00032	.01780	.00119	.00100	.00007	.00001	.01014
%RSD	718.90	160.05	344.73	71.216	47.878	53.723	207.32
#1	.00033	.00037	.00039	.00184	.00007	.00003	.00719
#2	-.00030	.00132	-.00086	.00026	.00016	.00003	.01368
#3	.00010	.03167	.00151	.00210	.00020	.00001	-.00620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00026**	**-.00011**	**-.00019**	**.00265**	**-.00379**	F **.20559**
Stddev	.00006	.00018	.00010	.00046	.00528	.00082	.10156
%RSD	144.66	68.492	92.164	237.89	199.68	21.537	49.401
#1	.00010	.00011	-.00003	-.00035	.00509	-.00457	.31873
#2	.00000	.00046	-.00008	-.00056	-.00342	-.00295	.12230
#3	.00001	.00022	-.00022	.00033	.00626	-.00386	.17573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.1062**	F **-.21478**	**.01567**	**.00201**	**.00981**	**.00027**	**.00149**
Stddev	11.414	2.0338	.02113	.00031	.00425	.00007	.00088
%RSD	1031.8	946.92	134.83	15.522	43.367	26.668	59.367
#1	-9.9872	1.8652	-.00551	.00227	.01438	.00032	.00073
#2	11.768	-2.1991	.01577	.00210	.00597	.00019	.00127
#3	-5.0994	-.31050	.03675	.00166	.00907	.00030	.00246
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 04, 2013
Kym H. Rhoden

Sample Name: CCB Acquired: 6/3/2013 19:50:17 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00555**	**-.00003**	F **1.7886**	**.00020**	F **-1.9073**	F **.78494**	F **-39.187**
Stddev	.00720	.00037	1.3650	.00195	5.8769	.04414	.453
%RSD	129.65	1256.2	76.320	971.79	308.12	5.6233	1.1552
#1	.00382	.00027	3.2723	-.00084	-7.9541	.73427	-38.803
#2	-.00062	.00007	1.5073	.00245	3.7836	.80549	-39.072
#3	.01346	-.00044	.58607	-.00100	-1.5515	.81506	-39.686
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**-.00064**	**.00177**	**.00025**	**-.00077**	**-.00045**	**-.00076**
Stddev	.00040	.00131	.00273	.00011	.00010	.00075	.00022
%RSD	57.145	206.63	154.43	43.661	12.502	166.24	29.119
#1	.00106	-.00029	.00289	.00013	-.00066	-.00099	-.00101
#2	.00077	-.00209	-.00134	.00027	-.00085	-.00076	-.00068
#3	.00027	.00047	.00375	.00035	-.00080	.00040	-.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00001**	**.00194**	**-.00403**
Stddev	.00019	.00021	.61846
%RSD	2092.9	10.701	15346.
#1	-.00018	.00185	.10869
#2	.00019	.00179	-.67110
#3	.00002	.00217	.55031
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 04, 2013

Sample Name: CCB Acquired: 6/3/2013 19:50:17 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2454) Mode: CONC Corr. Factor: 1.000000
User: KHR Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**14742.**	**18658.**
Stddev	3.	115.
%RSD	.02002	.61800
#1	14740.	18526.
#2	14745.	18739.
#3	14740.	18709.

Approved: June 04, 2013

Sample Name: S0 Acquired: 6/4/2013 9:06:07 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

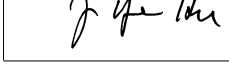
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00097**	**.00058**	**-.00013**	**.00082**	**.00279**	**-.00041**	**-.00072**
Stddev	.00014	.00028	.00001	.00012	.00009	.00014	.00024
%RSD	14.694	48.047	7.2638	14.320	3.1530	34.441	32.591
#1	-.00090	.00026	-.00014	.00079	.00281	-.00057	-.00049
#2	-.00087	.00078	-.00012	.00095	.00269	-.00031	-.00073
#3	-.00113	.00068	-.00012	.00072	.00286	-.00034	-.00096

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00007**	**-.00005**	**.00079**	**.00000**	**.00005**	**-.00004**	**.00001**
Stddev	.00002	.00008	.00011	.0000	.00008	.00005	.00001
%RSD	32.097	156.57	14.101	130060.	146.23	142.55	70.515
#1	.00005	.00004	.00083	-.00002	-.00004	-.00009	.00000
#2	.00009	-.00012	.00088	-.00001	.00011	-.00003	.00002
#3	.00007	-.00007	.00067	.00003	.00009	.00001	.00002

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00004**	**-.00036**	**.00022**	**.00088**	**.00001**	**.00058**	**.00006**
Stddev	.00008	.00005	.00045	.00019	.00005	.00007	.00004
%RSD	185.42	13.928	210.77	21.028	351.88	12.379	68.072
#1	.00003	-.00042	.00060	.00068	.00007	.00059	.00006
#2	-.00003	-.00032	.00033	.00104	-.00001	.00050	.00002
#3	.00013	-.00035	-.00028	.00093	-.00002	.00064	.00011

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00023**	**-.00039**	**.00012**	**-.00052**	**-.00137**	**-.00031**	**-.00029**
Stddev	.00020	.00001	.00001	.00004	.00012	.00002	.00001
%RSD	86.208	2.2157	11.695	7.9827	8.6793	6.5464	4.2860
#1	-.00031	-.00039	.00010	-.00047	-.00124	-.00032	-.00031
#2	-.00038	-.00038	.00013	-.00053	-.00148	-.00032	-.00028
#3	.00000	-.00039	.00012	-.00056	-.00138	-.00028	-.00029

Approved: June 05, 2013



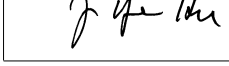
Sample Name: S0 Acquired: 6/4/2013 9:06:07 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**-.00016**	**.00017**	**.00019**	**.00082**	**-.00061**	**-.00012**
Stddev	.00003	.00001	.00004	.00003	.00011	.00017	.00004
%RSD	114.14	7.1214	21.865	13.778	13.058	28.261	35.337
#1	.00000	-.00015	.00022	.00016	.00093	-.00055	-.00008
#2	.00005	-.00017	.00015	.00019	.00080	-.00048	-.00016
#3	.00002	-.00016	.00016	.00022	.00072	-.00081	-.00012

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00015**	**-.00015**	**-.00253**
Stddev	.00010	.00002	.00025
%RSD	66.402	10.730	9.7293
#1	-.00014	-.00017	-.00268
#2	-.00025	-.00014	-.00266
#3	-.00005	-.00015	-.00224

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22033.**	**29028.**
Stddev	35.	127.
%RSD	.16038	.43795
#1	21993.	28998.
#2	22046.	28919.
#3	22059.	29168.

Approved: June 05, 2013



Sample Name: S1 Acquired: 6/4/2013 9:09:44 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

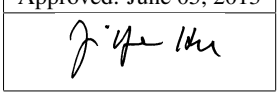
Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00121**	**.00147**	**.01418**	**.00273**	**.00058**	**.00031**	**.00063**
Stddev	.00017	.00021	.00004	.00018	.00001	.00002	.00004
%RSD	14.361	14.555	.31366	6.5013	2.4484	7.5931	6.7377
#1	.00136	.00134	.01422	.00268	.00058	.00029	.00067
#2	.00126	.00135	.01413	.00258	.00060	.00034	.00064
#3	.00102	.00172	.01420	.00292	.00057	.00031	.00059

Elem	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641	Hf2773	Hf3399
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00329**	**.00062**	**.00078**	**.00010**	**.00005**	**.00001**	**-.00019**
Stddev	.00013	.00004	.00006	.00004	.00003	.00015	.00022
%RSD	3.8130	5.7293	7.1500	36.910	60.620	1045.0	114.63
#1	.00315	.00065	.00076	.00006	.00003	.00014	-.00018
#2	.00337	.00062	.00084	.00013	.00008	.00006	-.00041
#3	.00336	.00058	.00074	.00010	.00003	-.00016	.00002

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00686**	**.00312**	**.00048**	**.01166**	**.00143**	**.01911**	**.00004**
Stddev	.00030	.00059	.00005	.00009	.00001	.00038	.00004
%RSD	4.3776	19.048	9.9017	.80068	.83571	1.9785	121.38
#1	.00707	.00283	.00043	.01157	.00142	.01870	-.00001
#2	.00651	.00380	.00048	.01168	.00144	.01945	.00006
#3	.00699	.00272	.00053	.01175	.00144	.01916	.00006

Elem	P_2149	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00011**	**-.00025**	**-.00115**	**-.00028**	**-.00030**	**.00029**	**.00069**
Stddev	.00001	.00004	.00017	.00002	.00001	.00005	.00004
%RSD	8.9306	15.287	14.878	8.4952	3.7049	15.928	5.8596
#1	.00010	-.00020	-.00134	-.00030	-.00031	.00024	.00069
#2	.00010	-.00026	-.00100	-.00028	-.00029	.00032	.00065
#3	.00012	-.00028	-.00112	-.00025	-.00031	.00031	.00073

Approved: June 05, 2013

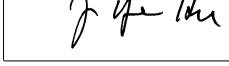


Sample Name: S1 Acquired: 6/4/2013 9:09:44 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00098**	**.01780**	**.00059**	**.00819**	**.00361**	**-.00252**
Stddev	.00002	.00009	.00015	.00010	.00003	.00016
%RSD	2.1537	.49489	26.230	1.1934	.84544	6.3816
#1	.00099	.01772	.00073	.00829	.00361	-.00233
#2	.00095	.01779	.00062	.00810	.00364	-.00258
#3	.00098	.01789	.00042	.00817	.00358	-.00263

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22036.**	**28996.**
Stddev	47.	26.
%RSD	.21511	.08820
#1	21996.	29021.
#2	22088.	28997.
#3	22023.	28969.

Approved: June 05, 2013



Sample Name: S2 Acquired: 6/4/2013 9:13:20 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00389**	**.00214**	**.00009**	**.00254**	**.02662**	**.00617**	**.00192**
Stddev	.00007	.00001	.00002	.00012	.00027	.00007	.00023
%RSD	1.6911	.51478	22.288	4.9067	1.0111	1.1209	11.849
#1	.00396	.00214	.00011	.00242	.02639	.00612	.00199
#2	.00387	.00213	.00009	.00267	.02656	.00625	.00167
#3	.00384	.00215	.00007	.00254	.02692	.00615	.00210

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00054**	**.00134**	**.00555**	**.00122**	**.00156**	**.00021**	**.00002**
Stddev	.00002	.00002	.00014	.00007	.00003	.00001	.00005
%RSD	2.8479	1.7129	2.4734	5.3743	1.8814	6.8155	249.53
#1	.00052	.00135	.00569	.00118	.00155	.00022	.00002
#2	.00055	.00135	.00541	.00129	.00154	.00021	.00007
#3	.00054	.00131	.00554	.00118	.00159	.00019	-.00003

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00009**	**-.00026**	**.01285**	**.00658**	**.00089**	**.02297**	**.00282**
Stddev	.00006	.00015	.00026	.00008	.00009	.00003	.00004
%RSD	69.487	57.308	2.0471	1.2899	9.6243	.12637	1.4364
#1	.00006	-.00018	.01261	.00666	.00094	.02300	.00278
#2	.00005	-.00044	.01313	.00659	.00079	.02294	.00286
#3	.00017	-.00018	.01279	.00649	.00095	.02297	.00282

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04042**	**.00045**	**.00012**	**.00004**	**-.00141**	**-.00023**	**-.00030**
Stddev	.00015	.00002	.00004	.00003	.00033	.00001	.00001
%RSD	.36767	5.1225	33.223	70.246	23.668	4.8483	3.0263
#1	.04057	.00046	.00016	.00002	-.00143	-.00023	-.00031
#2	.04027	.00047	.00008	.00008	-.00107	-.00024	-.00030
#3	.04043	.00042	.00013	.00003	-.00174	-.00022	-.00029

Approved: June 05, 2013

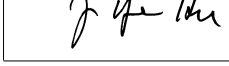
Sample Name: S2 Acquired: 6/4/2013 9:13:20 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00055**	**-.00002**	**.00113**	**.00176**	**.03550**	**.00175**	**.00008**
Stddev	.00003	.00002	.00002	.00003	.00017	.00009	.00001
%RSD	6.0260	95.640	1.9144	1.9632	.47851	5.4045	13.212
#1	.00059	-.00002	.00115	.00180	.03559	.00168	.00007
#2	.00052	.00000	.00111	.00176	.03531	.00172	.00009
#3	.00055	-.00004	.00114	.00173	.03561	.00186	.00007

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.01592**	**.00719**	**-.00206**
Stddev	.00028	.00001	.00012
%RSD	1.7854	.08340	5.9454
#1	.01624	.00719	-.00217
#2	.01572	.00718	-.00210
#3	.01579	.00718	-.00193

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22251.**	**28821.**
Stddev	5.	57.
%RSD	.02225	.19667
#1	22246.	28883.
#2	22255.	28772.
#3	22252.	28808.

Approved: June 05, 2013



Sample Name: S3 Acquired: 6/4/2013 9:16:54 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

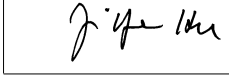
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.36529**	**.09525**	**.01092**	**.12321**	**1.4443**	**.41325**	**.16781**
Stddev	.00236	.00166	.00011	.00065	.0244	.00256	.00257
%RSD	.64568	1.7465	1.0173	.52669	1.6869	.61929	1.5320
#1	.36643	.09387	.01102	.12332	1.4227	.41292	.16518
#2	.36687	.09478	.01095	.12380	1.4394	.41595	.16794
#3	.36258	.09710	.01080	.12251	1.4707	.41086	.17032

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02985**	**.08512**	**.28369**	**.07632**	**.09167**	**.01677**	**.00017**
Stddev	.00020	.00037	.00148	.00039	.00158	.00013	.00004
%RSD	.66162	.43340	.52208	.50903	1.7244	.80423	25.439
#1	.02996	.08506	.28423	.07615	.09017	.01673	.00023
#2	.02996	.08551	.28482	.07676	.09153	.01692	.00015
#3	.02962	.08478	.28201	.07604	.09332	.01666	.00015

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**-.00038**	**.77837**	**.33355**	**.05260**	**1.3329**	**.17457**
Stddev	.00005	.00008	.01266	.00534	.00103	.0098	.00086
%RSD	225.79	20.383	1.6261	1.6000	1.9611	.73453	.49149
#1	.00000	-.00046	.76845	.32849	.05179	1.3278	.17452
#2	.00008	-.00031	.77403	.33304	.05225	1.3267	.17545
#3	-.00001	-.00035	.79263	.33912	.05376	1.3442	.17373

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.5195**	**.04908**	**.00016**	**.03034**	**-.00113**	**.00374**	**-.00044**
Stddev	.0423	.00039	.00003	.00032	.00021	.00004	.00003
%RSD	1.6796	.79934	17.833	1.0598	18.329	.99869	6.8804
#1	2.4820	.04927	.00017	.03053	-.00124	.00374	-.00042
#2	2.5112	.04935	.00012	.03053	-.00089	.00377	-.00047
#3	2.5654	.04863	.00017	.02997	-.00125	.00370	-.00042

Approved: June 05, 2013



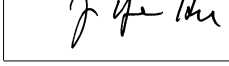
Sample Name: S3 Acquired: 6/4/2013 9:16:54 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03727**	**.00746**	**.06196**	**.09122**	**2.1345**	**.14331**	**.01041**
Stddev	.00034	.00004	.00080	.00078	.0323	.00268	.00010
%RSD	.91496	.60176	1.2966	.85061	1.5136	1.8682	.95080
#1	.03745	.00749	.06260	.09177	2.1106	.14120	.01048
#2	.03748	.00748	.06222	.09155	2.1217	.14240	.01046
#3	.03688	.00741	.06106	.09033	2.1713	.14632	.01030

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.99375**	**.45468**	**-.00170**
Stddev	.00426	.00282	.00010
%RSD	.42876	.62058	5.6554
#1	.99579	.45569	-.00178
#2	.99662	.45686	-.00159
#3	.98886	.45149	-.00173

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22102.**	**29257.**
Stddev	65.	289.
%RSD	.29565	.98833
#1	22083.	29456.
#2	22048.	29389.
#3	22175.	28925.

Approved: June 05, 2013



Sample Name: S4 Acquired: 6/4/2013 9:20:10 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

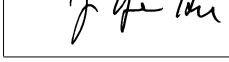
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.61926**	**.19031**	**.02185**	**.24457**	**2.8868**	**.82161**	**.33863**
Stddev	.00059	.00081	.00003	.00036	.0181	.00165	.00169
%RSD	.09514	.42431	.13505	.14770	.62664	.20095	.49861
#1	.61861	.19120	.02187	.24446	2.9072	.82239	.34054
#2	.61943	.18963	.02186	.24428	2.8807	.82273	.33733
#3	.61975	.19011	.02181	.24497	2.8726	.81971	.33801

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.05934**	**.16661**	**.55520**	**.14890**	**.18163**	**.03286**	**.00044**
Stddev	.00011	.00022	.00063	.00033	.00136	.00012	.00006
%RSD	.17974	.13344	.11428	.22223	.75004	.35832	14.381
#1	.05926	.16682	.55534	.14924	.18298	.03299	.00037
#2	.05946	.16638	.55575	.14888	.18167	.03280	.00044
#3	.05930	.16663	.55451	.14857	.18026	.03278	.00050

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**-.00036**	**1.5558**	**.66600**	**.10466**	**2.6315**	**.34780**
Stddev	.00005	.00015	.0121	.00346	.00092	.0197	.00078
%RSD	295.57	40.979	.78116	.51936	.87613	.74715	.22317
#1	.00007	-.00049	1.5698	.66969	.10569	2.6523	.34850
#2	.00000	-.00039	1.5495	.66550	.10432	2.6132	.34794
#3	-.00002	-.00020	1.5480	.66282	.10396	2.6291	.34697

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.0150**	**.09646**	**.00017**	**.05934**	**-.00147**	**.00760**	**-.00051**
Stddev	.0383	.00012	.00002	.00002	.00047	.00002	.00001
%RSD	.76347	.12836	11.435	.03079	31.682	.24732	2.8631
#1	5.0569	.09660	.00015	.05934	-.00190	.00760	-.00051
#2	5.0062	.09636	.00018	.05936	-.00155	.00758	-.00049
#3	4.9819	.09643	.00019	.05932	-.00097	.00761	-.00052

Approved: June 05, 2013



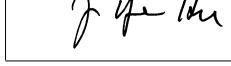
Sample Name: S4 Acquired: 6/4/2013 9:20:10 Type: Cal
Method: ICP-THERMO2_6010_200.7(v2455) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.07452**	**.01480**	**.12380**	**.19754**	**4.2841**	**.28807**	**.02020**
Stddev	.00020	.00013	.00016	.00021	.0197	.00189	.00001
%RSD	.26628	.86605	.13074	.10873	.46014	.65550	.04475
#1	.07473	.01494	.12366	.19777	4.3067	.29023	.02021
#2	.07449	.01477	.12398	.19735	4.2757	.28722	.02020
#3	.07434	.01468	.12376	.19751	4.2700	.28675	.02019

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**1.9781**	**.89189**	**-.00064**
Stddev	.0026	.00154	.00027
%RSD	.13320	.17243	41.546
#1	1.9810	.89345	-.00062
#2	1.9759	.89185	-.00038
#3	1.9773	.89038	-.00091

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21898.**	**28920.**
Stddev	5.	214.
%RSD	.02229	.73952
#1	21896.	28673.
#2	21895.	29054.
#3	21904.	29033.

Approved: June 05, 2013



Sample Name: ICV Acquired: 6/4/2013 9:23:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44643	10.088	.39963	.50181	1.0063	.05007	10.138
Stddev	.00221	.085	.00128	.00228	.0149	.00005	.060
%RSD	.49580	.84356	.32075	.45388	1.4813	.10646	.59641
#1	.44501	9.9899	.40007	.50123	.98946	.05003	10.074
#2	.44898	10.130	.40063	.50432	1.0114	.05004	10.145
#3	.44531	10.144	.39818	.49987	1.0179	.05013	10.194
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000						
Range	5.0000%						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05025	.20427	.50588	.51110	4.0319	1.0183	1.0090
Stddev	.00034	.00069	.00117	.00133	.0654	.0021	.1040
%RSD	.67623	.33793	.23040	.25971	1.6214	.20599	10.302
#1	.04999	.20384	.50574	.50979	3.9590	1.0165	.89401
#2	.05013	.20391	.50711	.51106	4.0514	1.0206	1.0963
#3	.05063	.20507	.50479	.51245	4.0853	1.0178	1.0368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.6159	F .73704	50.259	1.0101	9.9990	.50576	1.0101
Stddev	5.6453	1.3043	.509	.0139	.1322	.00394	.0027
%RSD	122.30	176.97	1.0126	1.3721	1.3219	.77862	.26353
#1	9.9107	1.1870	49.692	.99425	9.8537	.50348	1.0071
#2	5.2613	-.73269	50.411	1.0157	10.112	.51031	1.0112
#3	-1.3244	1.7568	50.675	1.0202	10.031	.50350	1.0121
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	5.0000%	-5.0000%					

Approved: June 05, 2013

Sample Name: ICV Acquired: 6/4/2013 9:23:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.301**	**.50746**	F **21.653**	**.50892**	F **-5.0348**	**10.161**	**10.359**
Stddev	.804	.00154	10.080	.00169	37.637	.051	1.623
%RSD	1.5992	.30404	46.551	.33115	747.54	.50520	15.669
#1	49.380	.50568	32.626	.50762	-7.5094	10.130	9.0261
#2	50.657	.50840	12.805	.50831	-41.373	10.132	12.166
#3	50.866	.50829	19.529	.51082	33.778	10.220	9.8835
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			5.0000%		-5.0000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2082**	**.40655**	**4.9875**	F **.94837**	**1.0066**	**1.0007**	**.50860**
Stddev	.0037	.00188	.0345	.00299	.0105	.0177	.00313
%RSD	.30823	.46357	.69159	.31492	1.0449	1.7726	.61542
#1	1.2054	.40445	4.9488	.94543	.99502	.98034	.50518
#2	1.2068	.40711	4.9989	.94828	1.0094	1.0093	.50928
#3	1.2124	.40809	5.0149	.95140	1.0155	1.0126	.51133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				1.0000			
Range				-5.0000%			

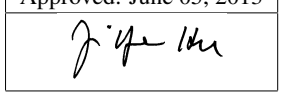
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0032**	**1.0138**	F **.76840**
Stddev	.0042	.0041	.11476
%RSD	.41513	.40808	14.934
#1	1.0048	1.0091	.68737
#2	1.0064	1.0153	.71811
#3	.99852	1.0170	.89971
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-5.0000%

Approved: June 05, 2013

Sample Name: ICV Acquired: 6/4/2013 9:23:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22031.**	**29170.**
Stddev	73.	177.
%RSD	.33038	.60673
#1	22115.	29355.
#2	21997.	29003.
#3	21981.	29153.

Approved: June 05, 2013



Sample Name: ICB Acquired: 6/4/2013 9:26:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00028**	**.00584**	**.00037**	**.00196**	**.00003**	**.00002**	**-.00688**
Stddev	.00024	.00620	.00063	.00080	.00028	.00002	.00605
%RSD	88.539	106.26	170.88	40.972	1022.5	96.286	87.919
#1	-.00052	.00166	.00108	.00272	-.00007	.00004	-.01386
#2	-.00028	.01297	-.00006	.00202	-.00019	.00002	-.00323
#3	-.00003	.00289	.00008	.00112	.00034	.00000	-.00355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**-.00005**	**.00031**	**.00003**	**.00076**	**.00184**	F **.11238**
Stddev	.00020	.00014	.00017	.00029	.00163	.00236	.27206
%RSD	267.04	295.28	55.425	1134.1	212.94	128.52	242.09
#1	-.00017	-.00013	.00051	.00019	-.00097	.00127	.41164
#2	-.00022	-.00012	.00020	-.00031	.00226	-.00019	.04550
#3	.00016	.00011	.00023	.00020	.00100	.00444	-.12001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **4.7353**	F **1.0115**	**.00267**	**.00626**	**.00344**	**.00004**	**.00168**
Stddev	7.8769	2.0207	.00746	.00106	.00070	.00005	.00073
%RSD	166.35	199.77	279.05	17.003	20.427	126.60	43.374
#1	13.788	.17512	-.00017	.00503	.00374	-.00001	.00112
#2	-.55288	3.3161	-.00295	.00680	.00264	.00004	.00142
#3	.97060	-.45666	.01114	.00694	.00394	.00008	.00251
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: ICB Acquired: 6/4/2013 9:26:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01245**	**.00018**	F **6.0957**	**.00126**	F **-71.457**	**-.04402**	F **2.0659**
Stddev	.01079	.00048	7.5227	.00070	31.517	.03893	1.6196
%RSD	86.686	266.49	123.41	55.512	44.106	88.443	78.395
#1	.01706	.00002	13.776	.00194	-36.748	-.00542	1.5122
#2	.00012	.00072	5.7698	.00054	-79.334	-.08327	.79576
#3	.02017	-.00020	-1.2587	.00129	-98.288	-.04336	3.8897
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.1000		1.0400		1.0400
Low Limit			-1.0000		-1.2000		-1.0400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**.00137**	**.00001**	**.00002**	**-.00002**	**.00075**	**.00060**
Stddev	.00236	.00131	.00388	.00039	.00004	.00055	.00153
%RSD	345.40	96.024	48507.	1849.6	157.29	73.974	252.75
#1	-.00337	.00278	.00434	-.00043	-.00004	.00138	-.00114
#2	.00103	.00018	-.00315	.00017	-.00005	.00041	.00172
#3	.00030	.00115	-.00116	.00032	.00002	.00044	.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00043**	**.00070**	F **.10510**
Stddev	.00022	.00026	.06245
%RSD	51.676	36.802	59.415
#1	.00042	.00052	.04529
#2	.00066	.00059	.10013
#3	.00021	.00100	.16989
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: ICB Acquired: 6/4/2013 9:26:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22090.**	**28657.**
Stddev	9.	142.
%RSD	.04221	.49476
#1	22086.	28820.
#2	22101.	28575.
#3	22085.	28575.

Approved: June 05, 2013

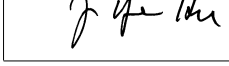
Sample Name: ICSA Acquired: 6/4/2013 9:30:17 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**252.27**	**.00013**	**-.03967**	**.00051**	**.00000**	**253.81**
Stddev	.00033	3.33	.00202	.00084	.00021	.0000	3.44
%RSD	163.57	1.3198	1530.2	2.1237	42.036	232.08	1.3539
#1	.00018	250.55	-.00197	-.03907	.00075	.00000	252.43
#2	-.00035	250.15	.00207	-.03931	.00036	.00000	251.28
#3	-.00042	256.11	.00030	-.04063	.00041	.00000	257.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00004**	**.00013**	F **.04269**	**96.804**	F **.50286**	F **15.858**
Stddev	.00009	.00021	.00037	.00073	1.158	.00192	.581
%RSD	350.55	530.69	274.68	1.7099	1.1959	.38241	3.6624
#1	.00003	-.00016	.00010	.04351	95.716	.50064	15.361
#2	-.00013	.00025	.00052	.04246	96.675	.50384	15.716
#3	.00002	.00003	-.00021	.04211	98.020	.50409	16.496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail
High Limit				.00500		.10000	.10000
Low Limit				-.00500		-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **11.529**	F **-5.9848**	**-.00240**	**.01224**	**248.56**	**.00011**	**-.00072**
Stddev	14.257	.7051	.01657	.00086	2.78	.00003	.00017
%RSD	123.66	11.781	690.89	6.9868	1.1193	26.855	23.489
#1	22.419	-5.2242	-.02078	.01255	246.11	.00009	-.00089
#2	-4.6079	-6.6167	.00217	.01128	247.97	.00014	-.00055
#3	16.776	-6.1136	.01141	.01290	251.58	.00010	-.00073
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



Sample Name: ICSA Acquired: 6/4/2013 9:30:17 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01126**	**-.00203**	F **-271.15**	F **.00796**	F **-42.796**	F **239.62**	F **77.527**
Stddev	.00664	.00040	2.14	.00134	17.699	.79	1.791
%RSD	58.968	19.780	.78779	16.793	41.357	.33119	2.3097
#1	.00587	-.00243	-268.91	.00683	-54.426	239.36	75.597
#2	.01868	-.00204	-273.16	.00944	-51.533	240.51	79.134
#3	.00922	-.00162	-271.39	.00762	-22.427	238.99	77.850
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000	.00500	.04000	.04000	.04000
Low Limit			-.50000	-.00500	-.04000	-.04000	-.04000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00785**	**.00340**	**.06920**	**.01451**	**-.00003**	**-.00273**	**.00077**
Stddev	.00212	.00257	.00088	.00057	.00009	.00069	.00109
%RSD	27.008	75.585	1.2697	3.9463	299.00	25.386	141.48
#1	-.00671	.00201	.06828	.01459	.00000	-.00221	.00117
#2	-.00654	.00636	.06928	.01504	.00004	-.00247	.00160
#3	-.01029	.00182	.07003	.01390	-.00013	-.00352	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

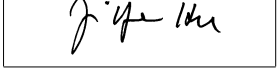
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00074**	**.00357**	F **-7.6582**
Stddev	.00031	.00009	.1069
%RSD	41.969	2.5893	1.3961
#1	.00078	.00367	-7.6319
#2	.00041	.00349	-7.7758
#3	.00103	.00356	-7.5669
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: ICSA Acquired: 6/4/2013 9:30:17 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21231.**	**28891.**
Stddev	66.	209.
%RSD	.30893	.72259
#1	21283.	29063.
#2	21157.	28951.
#3	21252.	28658.

Approved: June 05, 2013



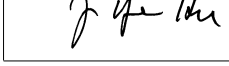
Sample Name: ICSAB Acquired: 6/4/2013 9:33:42 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47739**	**251.48**	**.24658**	**-.04651**	**.25019**	**.23863**	**255.12**
Stddev	.00587	4.02	.00070	.00035	.00360	.00231	3.42
%RSD	1.2299	1.5985	.28509	.75364	1.4381	.96628	1.3408
#1	.48396	246.87	.24694	-.04686	.24606	.24101	251.22
#2	.47553	253.29	.24704	-.04615	.25182	.23846	256.57
#3	.47267	254.27	.24578	-.04651	.25268	.23641	257.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.44096**	**.24278**	**.24460**	**.28289**	**96.459**	F **.47753**	F **15.455**
Stddev	.00558	.00285	.00213	.00379	1.297	.00311	.253
%RSD	1.2658	1.1725	.87138	1.3413	1.3447	.65165	1.6354
#1	.44730	.24605	.24642	.28709	94.966	.48096	15.564
#2	.43879	.24140	.24514	.28188	97.109	.47671	15.634
#3	.43679	.24088	.24226	.27971	97.303	.47490	15.166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						.10000	.10000
Low Limit						-.10000	-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.018**	F **-7.6573**	**5.0847**	**.01179**	**246.10**	**.23699**	**-.00090**
Stddev	8.830	.7742	.0932	.00169	3.68	.00343	.00012
%RSD	88.148	10.111	1.8338	14.306	1.4969	1.4493	13.316
#1	12.248	-6.9591	4.9858	.00989	241.85	.23304	-.00102
#2	.28586	-7.5230	5.1710	.01311	248.07	.23861	-.00089
#3	17.519	-8.4899	5.0975	.01236	248.39	.23931	-.00078
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



Sample Name: ICSAB Acquired: 6/4/2013 9:33:42 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0967**	**.46979**	F **-268.60**	**.48236**	F **-31.766**	F **236.66**	F **80.207**
Stddev	.0714	.00449	15.63	.00405	28.379	1.94	1.382
%RSD	1.4016	.95551	5.8201	.84064	89.340	.81781	1.7233
#1	5.0153	.47497	-285.14	.48660	-22.368	238.84	80.771
#2	5.1488	.46734	-266.57	.48198	-9.2767	236.01	81.219
#3	5.1260	.46706	-254.07	.47852	-63.651	235.14	78.632
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.50000		.60000	.60000	.60000
Low Limit			-.50000		.40000	.40000	.40000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48907**	**.24786**	**-.00198**	**-.00131**	**-.00021**	**-.00282**	**.46177**
Stddev	.00439	.00239	.00325	.00033	.00008	.00053	.00325
%RSD	.89780	.96247	164.48	25.540	35.798	18.806	.70483
#1	.49399	.24903	-.00163	-.00113	-.00029	-.00225	.46547
#2	.48768	.24511	.00109	-.00170	-.00019	-.00329	.46053
#3	.48554	.24943	-.00539	-.00110	-.00014	-.00293	.45932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.24397**	**.47207**	F **-7.7710**
Stddev	.00201	.00318	.1117
%RSD	.82541	.67360	1.4378
#1	.24602	.47523	-7.8100
#2	.24390	.47212	-7.8581
#3	.24199	.46887	-7.6451
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: ICSAB Acquired: 6/4/2013 9:33:42 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21325.**	**28883.**
Stddev	238.	441.
%RSD	1.1166	1.5256
#1	21058.	29386.
#2	21401.	28699.
#3	21515.	28564.

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 9:37:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43716**	**9.9656**	**.39334**	**.49101**	**.98679**	**.04892**	**10.078**
Stddev	.00110	.0966	.00277	.00205	.00634	.00007	.064
%RSD	.25165	.96893	.70534	.41843	.64201	.13390	.63414
#1	.43827	9.9429	.39317	.48915	.98823	.04899	10.018
#2	.43713	9.8823	.39620	.49322	.97985	.04887	10.071
#3	.43607	10.071	.39066	.49066	.99227	.04890	10.145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04940**	**.20123**	**.49686**	**.50228**	**3.9589**	**1.0047**	F **1.1849**
Stddev	.00021	.00105	.00025	.00270	.0285	.0021	.3136
%RSD	.41944	.52203	.05045	.53676	.71932	.20575	26.467
#1	.04944	.20150	.49670	.50243	3.9766	1.0041	1.3227
#2	.04958	.20212	.49715	.50491	3.9260	1.0070	.82601
#3	.04918	.20007	.49673	.49952	3.9741	1.0030	1.4061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.6877**	F **.19698**	**49.445**	**.99168**	**9.8560**	**.49680**	**.98944**
Stddev	6.7810	2.3536	.412	.00580	.1083	.00462	.00479
%RSD	183.88	1194.8	.83373	.58487	1.0987	.92929	.48392
#1	-11.173	.42228	49.437	.99000	9.8558	.49910	.99266
#2	2.0453	2.4298	49.037	.98690	9.7477	.49149	.99172
#3	-1.9357	-2.2611	49.861	.99813	9.9643	.49982	.98394
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	-10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 9:37:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.239**	**.49866**	F **8.4689**	**.49941**	F **-37.633**	**9.9687**	F **12.615**
Stddev	.358	.00225	14.540	.00420	40.781	.0808	.276
%RSD	.72718	.45188	171.69	.84175	108.37	.81079	2.1905
#1	49.357	.49840	-6.4691	.49989	-67.477	10.062	12.934
#2	48.837	.50103	9.3001	.50336	8.8349	9.9155	12.450
#3	49.523	.49655	22.576	.49499	-54.255	9.9290	12.460
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		-10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1844**	**.39722**	**4.8777**	**.93011**	**.99095**	**.98079**	**.49952**
Stddev	.0044	.00212	.0038	.00326	.00834	.00778	.00364
%RSD	.36809	.53294	.07820	.35041	.84143	.79326	.72780
#1	1.1826	.39550	4.8733	.93116	.98948	.97672	.49923
#2	1.1894	.39657	4.8795	.93272	.98345	.97589	.50329
#3	1.1812	.39958	4.8803	.92646	.99993	.98977	.49604
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98057**	**.99282**	F **.67946**
Stddev	.00374	.00395	.11555
%RSD	.38124	.39827	17.006
#1	.98380	.99441	.76725
#2	.98143	.99573	.72257
#3	.97647	.98832	.54855
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 9:37:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22132.**	**29292.**
Stddev	17.	246.
%RSD	.07803	.83917
#1	22137.	29199.
#2	22114.	29571.
#3	22147.	29106.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 9:40:18 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.01125**	**.00109**	**.00173**	**.00016**	**.00003**	**.00114**
Stddev	.00066	.01109	.00093	.00019	.00025	.00001	.00341
%RSD	426.48	98.584	84.728	10.811	152.97	27.553	298.44
#1	.00009	.00082	.00072	.00168	.00032	.00002	.00456
#2	-.00091	.02290	.00041	.00194	.00029	.00003	.00112
#3	.00035	.01003	.00215	.00158	-.00012	.00002	-.00226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**-.00010**	**.00020**	**-.00007**	**.00127**	**-.00015**	F **.23124**
Stddev	.00014	.00012	.00047	.00030	.00190	.00410	.17321
%RSD	424.67	123.78	230.84	407.20	150.11	2651.7	74.907
#1	.00010	-.00017	.00034	.00017	.00289	-.00010	.11681
#2	-.00003	.00004	-.00032	-.00041	.00173	-.00428	.14639
#3	-.00017	-.00016	.00058	.00002	-.00082	.00392	.43052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.58802**	F **.83558**	**-.01723**	**.00436**	**-.00339**	**.00003**	**.00127**
Stddev	6.5558	.97993	.01029	.00023	.00984	.00002	.00043
%RSD	1114.9	117.28	59.702	5.3601	290.07	53.585	33.604
#1	-6.2868	.20014	-.01037	.00437	.00524	.00001	.00082
#2	6.7697	1.9641	-.02906	.00413	-.01411	.00004	.00132
#3	1.2811	.34248	-.01227	.00459	-.00131	.00004	.00167
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 9:40:18 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01229**	**-.00008**	F **5.6567**	**.00088**	F **-60.915**	**-.02312**	F **2.1691**
Stddev	.00580	.00024	6.7529	.00142	26.248	.08483	3.3943
%RSD	47.150	311.80	119.38	160.72	43.090	366.90	156.48
#1	.01896	-.00035	11.595	.00231	-82.674	-.11930	.29609
#2	.00943	.00001	7.0642	.00086	-31.763	.00886	6.0873
#3	.00849	.00011	-1.6891	-.00053	-68.308	.04107	.12405
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00105**	**.00246**	**-.00067**	**-.00024**	**.00004**	**.00159**	**.00126**
Stddev	.00226	.00044	.00080	.00022	.00002	.00068	.00187
%RSD	214.40	17.926	120.23	92.079	40.355	42.837	148.37
#1	-.00276	.00216	-.00039	-.00047	.00005	.00089	.00025
#2	.00151	.00297	-.00157	-.00020	.00005	.00164	.00011
#3	-.00191	.00226	-.00004	-.00004	.00002	.00226	.00342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00026**	**.00007**	F **.39335**
Stddev	.00009	.00002	.13219
%RSD	33.156	24.043	33.605
#1	.00021	.00008	.25866
#2	.00036	.00005	.39852
#3	.00021	.00007	.52288
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 9:40:18 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22139.**	**28860.**
Stddev	20.	30.
%RSD	.09232	.10539
#1	22163.	28831.
#2	22128.	28892.
#3	22127.	28858.

Approved: June 05, 2013

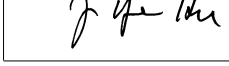
Sample Name: PBW 6A Acquired: 6/4/2013 9:43:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**-.00323**	**.00225**	**-.00026**	**.00019**	**.00001**	**-.01179**
Stddev	.00013	.00789	.00181	.00039	.00007	.00002	.00423
%RSD	130.01	244.54	80.345	149.95	37.987	112.89	35.836
#1	.00001	-.01232	.00016	.00013	.00019	.00003	-.01070
#2	-.00024	.00082	.00324	-.00025	.00011	.00000	-.01646
#3	-.00006	.00182	.00334	-.00065	.00026	.00001	-.00822
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00010**	**-.00005**	**-.00005**	**.00061**	**.00227**	**.03338**
Stddev	.00002	.00009	.00005	.00031	.00209	.00060	.30641
%RSD	49.912	93.420	111.02	636.05	341.30	26.223	917.98
#1	-.00002	.00012	-.00011	.00014	.00115	.00250	-.14474
#2	-.00005	.00000	-.00001	.00012	-.00170	.00160	-.14232
#3	-.00007	.00017	-.00002	-.00041	.00238	.00272	.38719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.424**	**.58852**	**-.02482**	**.00309**	**.01817**	**.00015**	**.00002**
Stddev	5.261	.84305	.01164	.00076	.01212	.00001	.00004
%RSD	36.477	143.25	46.902	24.673	66.680	3.6490	231.91
#1	10.261	-.33340	-.01815	.00294	.01784	.00015	.00004
#2	12.673	.77880	-.01804	.00242	.00622	.00015	-.00003
#3	20.337	1.3202	-.03825	.00392	.03045	.00014	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



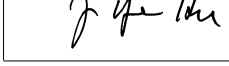
Sample Name: PBW 6A Acquired: 6/4/2013 9:43:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00612**	**.00005**	**18.410**	**.00172**	F **-40.305**	**.11842**	F **-3.6550**
Stddev	.00994	.00011	10.683	.00125	44.464	.06033	2.1957
%RSD	162.52	232.29	58.029	72.646	110.32	50.943	60.075
#1	.00225	.00017	23.237	.00120	-49.109	.07160	-3.8348
#2	.01742	.00003	25.829	.00314	-79.709	.09716	-1.3749
#3	-.00131	-.00005	6.1653	.00081	7.9016	.18650	-5.7553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00190**	**.00180**	**-.00412**	**-.00186**	**.00000**	**.00015**	**.00079**
Stddev	.00148	.00145	.00129	.00004	.0000	.00141	.00108
%RSD	77.856	80.616	31.324	2.2897	1419.8	921.47	137.59
#1	-.00183	.00014	-.00359	-.00181	-.00002	.00177	-.00046
#2	-.00046	.00280	-.00318	-.00188	.00004	-.00079	.00149
#3	-.00341	.00247	-.00559	-.00188	-.00003	-.00053	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.00089**	**.14065**
Stddev	.00017	.00004	.35402
%RSD	62.759	4.7639	251.71
#1	.00026	.00085	-.26725
#2	.00044	.00094	.36789
#3	.00010	.00088	.32129
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: PBW 6A Acquired: 6/4/2013 9:43:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22425.**	**29699.**
Stddev	57.	117.
%RSD	.25255	.39349
#1	22489.	29701.
#2	22379.	29814.
#3	22409.	29581.

Approved: June 05, 2013

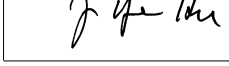
Sample Name: LCSW 6A Acquired: 6/4/2013 9:47:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18603**	**4.9205**	**.19218**	**.95221**	**.49742**	**.02435**	**4.9552**
Stddev	.00045	.0365	.00169	.00335	.00230	.00016	.0370
%RSD	.24282	.74133	.87876	.35214	.46157	.67109	.74610
#1	.18643	4.8826	.19170	.95596	.49494	.02446	4.9280
#2	.18611	4.9234	.19406	.95120	.49786	.02442	4.9973
#3	.18554	4.9554	.19079	.94948	.49947	.02416	4.9403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02415**	**.09951**	**.24574**	**.24861**	**1.9017**	**.49397**	**.53919**
Stddev	.00009	.00041	.00184	.00174	.0155	.00047	.25129
%RSD	.38428	.41052	.74783	.70076	.81688	.09452	46.605
#1	.02406	.09981	.24689	.24900	1.8949	.49358	.61886
#2	.02424	.09968	.24670	.25013	1.8908	.49449	.25772
#3	.02415	.09904	.24362	.24671	1.9195	.49385	.74098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.6624**	**1.8339**	**24.453**	**.49548**	**4.8947**	**.24983**	**.49316**
Stddev	3.1605	.9662	.107	.00071	.0732	.00147	.00255
%RSD	67.786	52.684	.43789	.14290	1.4947	.58921	.51643
#1	3.3940	2.8601	24.331	.49476	4.8185	.24943	.49374
#2	8.2600	1.6997	24.497	.49550	4.9013	.24860	.49537
#3	2.3332	.94182	24.532	.49618	4.9644	.25146	.49038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



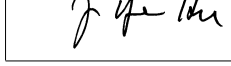
Sample Name: LCSW 6A Acquired: 6/4/2013 9:47:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.436**	**.24787**	**13.775**	**.24699**	F **-42.015**	**5.0517**	**2.8091**
Stddev	.133	.00104	9.784	.00238	22.644	.0539	.6207
%RSD	.54344	.42106	71.027	.96517	53.894	1.0662	22.097
#1	24.324	.24716	6.0919	.24953	-16.008	5.0437	2.7491
#2	24.403	.24907	24.790	.24664	-52.686	5.1092	3.4577
#3	24.583	.24739	10.444	.24480	-57.353	5.0023	2.2206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.57735**	**.19140**	**2.4266**	**-.00167**	**.49038**	**.49154**	**.24971**
Stddev	.00161	.00255	.0208	.00022	.00270	.00434	.00077
%RSD	.27941	1.3311	.85854	13.082	.54996	.88246	.30708
#1	.57775	.19226	2.4039	-.00181	.48729	.48662	.24885
#2	.57873	.19341	2.4448	-.00177	.49163	.49317	.25034
#3	.57558	.18853	2.4312	-.00142	.49223	.49482	.24993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.48503**	**.49265**	**.45216**
Stddev	.00072	.00220	.16732
%RSD	.14847	.44755	37.005
#1	.48564	.49197	.25896
#2	.48520	.49512	.54996
#3	.48423	.49087	.54756
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: LCSW 6A Acquired: 6/4/2013 9:47:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22039.**	**28622.**
Stddev	69.	163.
%RSD	.31217	.56967
#1	22063.	28718.
#2	21962.	28714.
#3	22094.	28434.

Approved: June 05, 2013

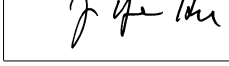
Sample Name: L1305144701 Acquired: 6/4/2013 9:50:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.24904**	**.00130**	**.01477**	**.03647**	**.00018**
Stddev	.00009	.01033	.00109	.00009	.00021	.00002
%RSD	183.19	4.1474	84.323	.63792	.57518	14.212
#1	-.00011	.25201	.00030	.01484	.03634	.00020
#2	-.00009	.25756	.00247	.01467	.03671	.00015
#3	.00005	.23755	.00112	.01482	.03635	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.005**	**.00041**	**.00434**	**.00114**	**.00264**	**.37790**
Stddev	.220	.00006	.00006	.00027	.00022	.00238
%RSD	.39334	15.588	1.3863	23.456	8.2054	.62860
#1	55.765	.00034	.00430	.00090	.00248	.37515
#2	56.049	.00041	.00441	.00109	.00255	.37929
#3	56.199	.00047	.00431	.00143	.00288	.37925
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33134**	**4.7403**	**2.3821**	**1.2316**	**4.6072**	**.01212**
Stddev	.00239	.4825	8.4053	.3708	.0046	.00055
%RSD	.72163	10.180	352.86	30.105	.10026	4.5182
#1	.33085	4.8070	12.064	1.0082	4.6068	.01274
#2	.33393	4.2279	-3.0483	1.0271	4.6120	.01171
#3	.32923	5.1860	-1.8693	1.6596	4.6028	.01191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



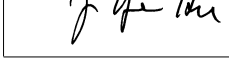
Sample Name: L1305144701 Acquired: 6/4/2013 9:50:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.561**	**.15798**	**.00025**	**15.492**	**.02822**	**63.221**
Stddev	.099	.00009	.00014	.035	.03536	11.211
%RSD	.23870	.05432	54.158	.22632	125.27	17.732
#1	41.491	.15807	.00010	15.469	.00789	51.525
#2	41.675	.15798	.00030	15.533	.00773	64.264
#3	41.517	.15790	.00036	15.475	.06905	73.874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00075**	F **-64.731**	F **2108.9**	F **-110890.**	**-.00034**	**.00065**
Stddev	.00146	46.726	7.0	507.	.00197	.00082
%RSD	194.51	72.186	.33371	.45763	588.29	125.64
#1	-.00068	-116.89	2100.8	-110300.	.00180	-.00025
#2	.00224	-26.690	2113.8	-111230.	-.00071	.00084
#3	.00069	-50.614	2112.0	-111120.	-.00210	.00136
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3120**	**-.00188**	**.33275**	**.00123**	**.00029**	**.00054**
Stddev	.0755	.00017	.00165	.00101	.00165	.00028
%RSD	3.2655	8.9089	.49556	82.703	567.70	51.973
#1	2.2612	-.00190	.33092	.00007	-.00157	.00033
#2	2.2760	-.00203	.33413	.00199	.00155	.00043
#3	2.3988	-.00170	.33321	.00162	.00090	.00086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144701 Acquired: 6/4/2013 9:50:53 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01919**	**.23589**
Stddev	.00133	.48463
%RSD	6.9109	205.45
#1	.01836	-.18766
#2	.01850	.13093
#3	.02072	.76440
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21531.**	**28677.**
Stddev	291.	26.
%RSD	1.3538	.09022
#1	21761.	28707.
#2	21630.	28662.
#3	21203.	28662.

Approved: June 05, 2013

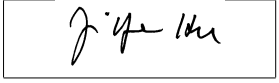
Sample Name: L1305144701DP Acquired: 6/4/2013 9:54:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.26171**	**-.00063**	**.01343**	**.03670**	**.00015**
Stddev	.00039	.01122	.00207	.00079	.00020	.00001
%RSD	500.31	4.2878	325.68	5.8496	.53683	7.5988
#1	.00027	.26252	-.00232	.01285	.03692	.00014
#2	.00000	.27250	.00167	.01313	.03657	.00015
#3	-.00050	.25010	-.00125	.01433	.03659	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.170**	**.00051**	**.00452**	**.00118**	**.00250**	**.38742**
Stddev	.281	.00010	.00021	.00016	.00017	.00176
%RSD	.49992	19.254	4.7437	13.610	6.8671	.45417
#1	56.148	.00058	.00475	.00100	.00255	.38906
#2	55.900	.00056	.00432	.00126	.00231	.38556
#3	56.461	.00040	.00449	.00129	.00265	.38764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33995**	**4.6308**	**8.5269**	**2.3901**	**4.5925**	**.01272**
Stddev	.00230	.1749	7.9915	.9205	.0180	.00106
%RSD	.67572	3.7773	93.721	38.514	.39123	8.3163
#1	.33733	4.4289	10.715	3.3962	4.5924	.01284
#2	.34163	4.7253	-.33079	1.5900	4.5746	.01371
#3	.34088	4.7382	15.196	2.1843	4.6106	.01161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



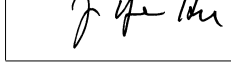
Sample Name: L1305144701DP Acquired: 6/4/2013 9:54:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-05

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.447**	**.16300**	**-.00031**	**15.441**	**.00814**	**60.810**
Stddev	.330	.00080	.00014	.082	.00057	14.853
%RSD	.79633	.49041	45.830	.53043	7.0064	24.425
#1	41.807	.16372	-.00048	15.531	.00749	53.010
#2	41.376	.16314	-.00020	15.421	.00839	77.939
#3	41.159	.16214	-.00026	15.371	.00855	51.482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00160**	F **-10.902**	F **2088.6**	F **-111680.**	**-.00080**	**.00285**
Stddev	.00076	19.357	11.4	553.	.00118	.00202
%RSD	47.301	177.55	.54557	.49476	147.81	70.839
#1	.00243	2.6111	2092.7	-111600.	-.00210	.00220
#2	.00143	-33.078	2075.8	-111170.	-.00048	.00512
#3	.00094	-2.2398	2097.4	-112260.	.00019	.00124
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2646**	**-.00175**	**.32853**	**.00149**	**.00053**	**.00031**
Stddev	.0123	.00049	.00218	.00127	.00185	.00028
%RSD	.54333	28.097	.66327	84.962	348.33	90.106
#1	2.2651	-.00158	.33096	.00293	-.00028	.00003
#2	2.2521	-.00230	.32675	.00053	-.00077	.00031
#3	2.2767	-.00136	.32788	.00102	.00265	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144701DP Acquired: 6/4/2013 9:54:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-05

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01899**	F **-.13368**
Stddev	.00016	.28548
%RSD	.83757	213.55
#1	.01892	.11914
#2	.01888	-.44329
#3	.01917	-.07690
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21393.**	**28157.**
Stddev	91.	120.
%RSD	.42722	.42737
#1	21411.	28034.
#2	21475.	28162.
#3	21295.	28274.

Approved: June 05, 2013

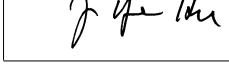
Sample Name: L1305144701S Acquired: 6/4/2013 9:57:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18920**	**5.4656**	**.19784**	**.99078**	**.54093**	**.02493**
Stddev	.00013	.0754	.00123	.00348	.00704	.00002
%RSD	.07081	1.3800	.62174	.35138	1.3018	.09685
#1	.18935	5.5438	.19653	.98684	.54846	.02494
#2	.18909	5.4597	.19802	.99205	.53983	.02495
#3	.18917	5.3933	.19897	.99344	.53451	.02491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**65.441**	**.02538**	**.10443**	**.25111**	**.25176**	**2.4122**
Stddev	.371	.00004	.00018	.00083	.00056	.0270
%RSD	.56748	.16545	.17640	.33180	.22067	1.1211
#1	65.842	.02543	.10444	.25197	.25225	2.4403
#2	65.373	.02535	.10424	.25105	.25116	2.4099
#3	65.108	.02537	.10460	.25031	.25188	2.3863
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.84984**	**5.3461**	**8.5389**	**.41967**	**29.905**	**.51551**
Stddev	.00010	.1505	14.662	.39840	.337	.00480
%RSD	.01202	2.8142	171.71	94.932	1.1272	.93068
#1	.84973	5.2043	-4.1137	.05902	30.273	.52087
#2	.84993	5.5039	24.608	.84733	29.832	.51401
#3	.84987	5.3302	5.1227	.35266	29.610	.51163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



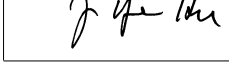
Sample Name: L1305144701S Acquired: 6/4/2013 9:57:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-06

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.799**	**.42525**	**.50260**	**41.547**	**.25570**	**60.147**
Stddev	.656	.00576	.00052	.635	.00135	13.943
%RSD	1.3435	1.3539	.10290	1.5276	.52840	23.181
#1	49.463	.43178	.50229	42.213	.25724	49.776
#2	48.783	.42304	.50232	41.479	.25515	54.669
#3	48.152	.42092	.50320	40.950	.25471	75.998
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24964**	F **-79.284**	F **2213.4**	F **-116940.**	**.59108**	**.19646**
Stddev	.00281	48.489	9.7	295.	.00146	.00315
%RSD	1.1246	61.159	.44034	.25230	.24743	1.6040
#1	.24994	-42.532	2202.2	-116770.	.58960	.19730
#2	.25228	-61.080	2218.2	-116780.	.59111	.19911
#3	.24669	-134.24	2219.8	-117280.	.59253	.19297
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.1605**	**-.00169**	**.84410**	**.50242**	**.24659**	**.49260**
Stddev	.0127	.00010	.00814	.00432	.00136	.00151
%RSD	.24634	5.6642	.96462	.86014	.55349	.30712
#1	5.1536	-.00162	.85310	.50698	.24730	.49088
#2	5.1528	-.00180	.84195	.50189	.24502	.49371
#3	5.1752	-.00166	.83724	.49838	.24746	.49322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144701S Acquired: 6/4/2013 9:57:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-06

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.51181**	**1.3401**
Stddev	.00117	.4436
%RSD	.22877	33.100
#1	.51068	1.7517
#2	.51174	.87028
#3	.51302	1.3983
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21224.**	**27459.**
Stddev	25.	332.
%RSD	.11584	1.2092
#1	21234.	27076.
#2	21243.	27641.
#3	21196.	27660.

Approved: June 05, 2013

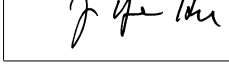
Sample Name: L1305144702 Acquired: 6/4/2013 10:01:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.05769**	**.00061**	**.01531**	**.03481**	**.00007**
Stddev	.00016	.01254	.00117	.00065	.00016	.00002
%RSD	73.547	21.729	193.06	4.2602	.45153	22.688
#1	-.00003	.07190	.00086	.01460	.03497	.00006
#2	-.00028	.05296	.00163	.01588	.03466	.00009
#3	-.00032	.04820	-.00067	.01545	.03478	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**55.628**	**.00045**	**.00281**	**.00061**	**.00067**	**.01294**
Stddev	.180	.00015	.00017	.00015	.00035	.00196
%RSD	.32413	32.507	5.9015	24.863	52.303	15.152
#1	55.507	.00033	.00268	.00044	.00096	.01070
#2	55.542	.00041	.00276	.00064	.00028	.01435
#3	55.835	.00061	.00300	.00074	.00075	.01378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33866**	**5.0322**	**6.3948**	**1.4561**	**4.6197**	**.01389**
Stddev	.00459	.2841	8.1580	.7417	.0073	.00136
%RSD	1.3544	5.6461	127.57	50.935	.15761	9.7975
#1	.33909	4.9914	8.7192	.77485	4.6281	.01476
#2	.33387	4.7707	-2.6731	1.3473	4.6153	.01458
#3	.34301	5.3345	13.138	2.2462	4.6157	.01232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



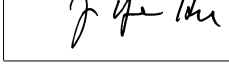
Sample Name: L1305144702 Acquired: 6/4/2013 10:01:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**42.143**	**.06558**	**.00022**	**15.991**	**.00556**	**32.708**
Stddev	.104	.00043	.00042	.050	.00080	11.592
%RSD	.24709	.66150	192.79	.31018	14.417	35.442
#1	42.080	.06579	-.00011	15.937	.00466	44.663
#2	42.085	.06508	.00007	16.003	.00582	31.944
#3	42.263	.06587	.00070	16.033	.00619	21.516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00097**	F **-55.194**	F **2142.4**	F **-112950.**	**-.00066**	**.00216**
Stddev	.00102	31.537	15.5	542.	.00079	.00142
%RSD	105.91	57.139	.72554	.47953	120.14	65.495
#1	.00210	-35.767	2127.8	-112870.	.00024	.00184
#2	.00010	-38.232	2140.7	-112460.	-.00098	.00093
#3	.00070	-91.582	2158.8	-113530.	-.00123	.00371
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1993**	**-.00160**	**.33261**	**-.00003**	**.00098**	**-.00003**
Stddev	.0218	.00018	.00137	.00154	.00041	.00008
%RSD	.99218	11.500	.41100	5852.7	42.100	279.14
#1	2.1859	-.00161	.33115	-.00010	.00143	-.00012
#2	2.1876	-.00141	.33281	.00155	.00061	.00001
#3	2.2245	-.00177	.33386	-.00153	.00092	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

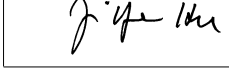
Approved: June 05, 2013



Sample Name: L1305144702 Acquired: 6/4/2013 10:01:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01023**	F **-.14142**
Stddev	.00011	.25757
%RSD	1.0814	182.13
#1	.01016	.08304
#2	.01017	-.08466
#3	.01035	-.42264
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21496.**	**28212.**
Stddev	97.	45.
%RSD	.45057	.16003
#1	21543.	28256.
#2	21559.	28215.
#3	21384.	28166.

Approved: June 05, 2013



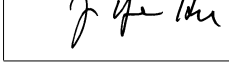
Sample Name: L1305144703 Acquired: 6/4/2013 10:04:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.08270**	**.00001**	**.01613**	**.03108**	**.00004**
Stddev	.00018	.00319	.00139	.00080	.00043	.00001
%RSD	76.941	3.8567	11909.	4.9485	1.3959	19.836
#1	-.00004	.07923	-.00111	.01625	.03151	.00003
#2	-.00039	.08550	.00156	.01528	.03109	.00004
#3	-.00027	.08336	-.00042	.01686	.03065	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**96.299**	**.00077**	**.00051**	**.00072**	**.00020**	**.14493**
Stddev	.685	.00008	.00012	.00038	.00041	.00389
%RSD	.71182	10.741	24.159	53.205	200.07	2.6847
#1	96.791	.00085	.00039	.00114	.00044	.14127
#2	96.591	.00076	.00050	.00064	.00044	.14902
#3	95.516	.00069	.00063	.00039	-.00027	.14449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55826**	**9.8333**	**14.606**	**2.0982**	**6.6153**	**.01985**
Stddev	.00410	.1955	14.211	3.0438	.0599	.00030
%RSD	.73525	1.9883	97.299	145.07	.90582	1.4990
#1	.55468	10.056	24.009	.11649	6.6573	.02019
#2	.56274	9.7548	21.552	.57514	6.6420	.01966
#3	.55736	9.6891	-1.7425	5.6029	6.5467	.01970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144703 Acquired: 6/4/2013 10:04:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.864**	**.11523**	**.00012**	**17.023**	**.00545**	**41.558**
Stddev	.234	.00013	.00021	.048	.00075	11.469
%RSD	.25493	.11541	170.63	.27999	13.835	27.598
#1	92.095	.11524	.00020	17.070	.00576	46.220
#2	91.871	.11510	.00029	17.023	.00600	49.962
#3	91.626	.11537	-.00011	16.975	.00459	28.492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00214**	F **-39.448**	F **3999.5**	F **-215510.**	**-.00093**	**.00273**
Stddev	.00106	36.504	32.1	996.	.00160	.00056
%RSD	49.411	92.538	.80313	.46222	171.12	20.475
#1	.00327	-11.869	4036.2	-216630.	.00018	.00215
#2	.00117	-25.631	3985.4	-215160.	-.00022	.00276
#3	.00199	-80.843	3976.8	-214730.	-.00277	.00327
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

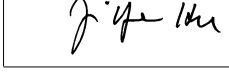
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0831**	**-.00175**	**.56245**	**.00123**	**.00048**	**.00017**
Stddev	.0199	.00010	.00329	.00138	.00163	.00026
%RSD	.95724	5.9002	.58467	111.53	338.79	154.00
#1	2.1051	-.00163	.56563	.00240	.00118	.00019
#2	2.0782	-.00180	.56266	.00159	.00165	-.00010
#3	2.0661	-.00182	.55906	-.00028	-.00138	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144703 Acquired: 6/4/2013 10:04:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00739**	F **-.02043**
Stddev	.00008	.23127
%RSD	1.1481	1132.1
#1	.00748	.24620
#2	.00734	-.16666
#3	.00733	-.14082
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21200.**	**27942.**
Stddev	58.	48.
%RSD	.27515	.17193
#1	21133.	27954.
#2	21225.	27983.
#3	21241.	27889.

Approved: June 05, 2013



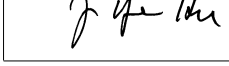
Sample Name: L1305144704 Acquired: 6/4/2013 10:08:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.01879**	**.00087**	**.01596**	**.03198**	**.00004**
Stddev	.00025	.00673	.00131	.00042	.00018	.00001
%RSD	61.276	35.787	150.70	2.6528	.56210	30.205
#1	-.00040	.02345	.00084	.01603	.03183	.00004
#2	-.00066	.01108	.00220	.01550	.03218	.00002
#3	-.00016	.02185	-.00043	.01634	.03192	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**99.147**	**.00082**	**.00023**	**.00119**	**-.00007**	**.01673**
Stddev	.747	.00010	.00014	.00033	.00035	.00107
%RSD	.75387	11.674	59.788	28.083	472.14	6.4243
#1	99.015	.00091	.00013	.00148	.00005	.01763
#2	98.475	.00072	.00039	.00083	.00020	.01702
#3	99.952	.00083	.00018	.00126	-.00047	.01554
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58077**	**9.8902**	**18.791**	**.70101**	**6.7611**	**.02046**
Stddev	.00402	.1429	4.539	.19433	.0037	.00118
%RSD	.69184	1.4453	24.153	27.722	.05517	5.7735
#1	.57648	10.030	13.615	.90841	6.7606	.02008
#2	.58444	9.8960	22.090	.67150	6.7576	.02178
#3	.58138	9.7445	20.669	.52312	6.7651	.01951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



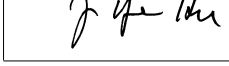
Sample Name: L1305144704 Acquired: 6/4/2013 10:08:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**93.629**	**.08204**	**.00022**	**17.210**	**.00433**	**33.890**
Stddev	.292	.00024	.00013	.055	.00028	10.773
%RSD	.31147	.28826	58.779	.32004	6.3734	31.789
#1	93.296	.08217	.00011	17.188	.00437	25.935
#2	93.753	.08177	.00019	17.169	.00459	46.150
#3	93.838	.08219	.00036	17.272	.00404	29.586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00138**	F **-50.621**	F **4082.5**	F **-221830.**	**-.00015**	**.00505**
Stddev	.00086	16.719	30.6	1337.	.00184	.00173
%RSD	62.502	33.028	.74925	.60252	1194.3	34.244
#1	.00093	-67.808	4068.3	-220510.	-.00213	.00320
#2	.00083	-49.640	4117.6	-223180.	.00016	.00662
#3	.00237	-34.414	4061.5	-221790.	.00151	.00535
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0702**	**-.00166**	**.57879**	**-.00200**	**.00040**	**.00019**
Stddev	.0196	.00043	.00086	.00056	.00164	.00017
%RSD	.94556	25.660	.14903	28.163	413.26	91.235
#1	2.0611	-.00168	.57854	-.00262	-.00067	.00011
#2	2.0926	-.00208	.57808	-.00182	.00229	.00007
#3	2.0568	-.00123	.57975	-.00154	-.00042	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144704 Acquired: 6/4/2013 10:08:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00325**	**.19594**
Stddev	.00011	.33199
%RSD	3.3261	169.43
#1	.00334	.40568
#2	.00327	-.18683
#3	.00313	.36897
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21186.**	**28101.**
Stddev	108.	36.
%RSD	.50925	.12762
#1	21308.	28117.
#2	21102.	28126.
#3	21148.	28060.

Approved: June 05, 2013

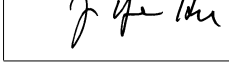
Sample Name: L1305144704PS Acquired: 6/4/2013 10:11:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432807-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19611**	**5.0669**	**.20798**	**1.0327**	**.52721**	**.02524**
Stddev	.00057	.0342	.00270	.0023	.00106	.00008
%RSD	.29315	.67583	1.3004	.22227	.20014	.31002
#1	.19569	5.1030	.21106	1.0306	.52775	.02518
#2	.19587	5.0350	.20693	1.0324	.52600	.02521
#3	.19676	5.0625	.20597	1.0351	.52789	.02533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**93.440**	**.02666**	**.10219**	**.25643**	**.25488**	**2.0233**
Stddev	.842	.00006	.00030	.00067	.00050	.0048
%RSD	.90158	.21560	.29113	.26300	.19811	.23549
#1	94.195	.02669	.10232	.25567	.25524	2.0288
#2	92.531	.02659	.10240	.25664	.25430	2.0203
#3	93.594	.02670	.10185	.25697	.25509	2.0208
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0325**	**9.6336**	**4.9199**	**.75461**	**31.676**	**.52991**
Stddev	.0062	.5618	10.303	1.3841	.160	.00212
%RSD	.59813	5.8314	209.41	183.41	.50505	.40090
#1	1.0394	9.6306	-6.4997	1.4287	31.822	.53148
#2	1.0305	10.197	7.7416	1.6725	31.505	.52749
#3	1.0275	9.0733	13.518	-.83735	31.700	.53074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



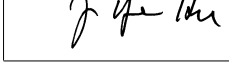
Sample Name: L1305144704PS Acquired: 6/4/2013 10:11:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432807-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.225**	**.32508**	**.51569**	**41.118**	**.25748**	**30.007**
Stddev	.186	.00196	.00167	.141	.00102	10.743
%RSD	.20862	.60194	.32417	.34319	.39499	35.803
#1	89.433	.32708	.51715	41.259	.25853	23.803
#2	89.167	.32500	.51607	40.977	.25741	23.806
#3	89.074	.32317	.51387	41.119	.25649	42.413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25470**	F **-40.925**	F **3769.3**	F **-201990.**	**.61431**	**.20274**
Stddev	.00133	12.568	14.8	576.	.00192	.00118
%RSD	.52359	30.710	.39359	.28523	.31287	.58214
#1	.25328	-39.659	3782.5	-202630.	.61519	.20409
#2	.25592	-54.079	3772.2	-201830.	.61563	.20190
#3	.25491	-29.038	3753.3	-201510.	.61211	.20224
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.4713**	**-.00167**	**1.0267**	**.50303**	**.25422**	**.51149**
Stddev	.0154	.00004	.0034	.00134	.00105	.00018
%RSD	.34374	2.6212	.32829	.26632	.41154	.03603
#1	4.4856	-.00171	1.0301	.50157	.25465	.51131
#2	4.4733	-.00167	1.0233	.50331	.25498	.51148
#3	4.4550	-.00162	1.0269	.50420	.25302	.51168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

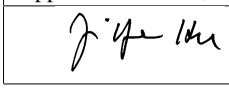
Approved: June 05, 2013



Sample Name: L1305144704PS Acquired: 6/4/2013 10:11:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432807-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.50612**	**.16909**
Stddev	.00169	.23756
%RSD	.33349	140.49
#1	.50741	.18019
#2	.50674	-.07382
#3	.50421	.40091
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21058.**	**28069.**
Stddev	28.	135.
%RSD	.13470	.47926
#1	21082.	27917.
#2	21026.	28118.
#3	21065.	28172.

Approved: June 05, 2013



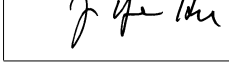
Sample Name: L1305144704SDL Acquired: 6/4/2013 10:14:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432807-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.01284**	**.00016**	**.00577**	**.00663**	**.00001**	**20.127**
Stddev	.00037	.01273	.00068	.00055	.00007	.00002	.017
%RSD	242.17	99.143	415.68	9.5329	1.0457	350.91	.08234
#1	-.00053	.02633	.00080	.00640	.00659	.00001	20.110
#2	-.00013	.01113	-.00055	.00537	.00659	-.00002	20.143
#3	.00021	.00105	.00024	.00555	.00671	.00003	20.128
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.00020**	**.00046**	**.00016**	**.00331**	**.11923**	**2.4422**
Stddev	.00012	.00037	.00045	.00073	.00206	.00086	.5087
%RSD	42.669	188.15	97.869	450.59	62.304	.72415	20.831
#1	.00025	-.00017	.00041	-.00062	.00560	.12020	2.1011
#2	.00019	.00018	.00093	.00028	.00160	.11895	2.1985
#3	.00043	.00057	.00003	.00083	.00273	.11855	3.0269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.7069**	**1.7004**	**1.3666**	**.00943**	**19.069**	**.01734**	**.00128**
Stddev	3.8076	.2412	.0209	.00095	.102	.00011	.00130
%RSD	49.405	14.188	1.5256	10.031	.53233	.61554	101.62
#1	3.9158	1.9589	1.3480	.00967	18.957	.01743	.00021
#2	11.531	1.4812	1.3891	.01023	19.153	.01723	.00090
#3	7.6741	1.6610	1.3625	.00839	19.098	.01737	.00273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



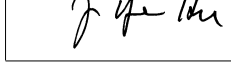
Sample Name: L1305144704SDL Acquired: 6/4/2013 10:14:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432807-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.4639**	**.00118**	**13.301**	**.00146**	F **-65.288**	F **843.69**	F **-44231.**
Stddev	.0232	.00069	11.366	.00054	18.731	9.84	279.
%RSD	.66968	58.480	85.449	37.284	28.689	1.1665	.62992
#1	3.4393	.00108	21.409	.00090	-44.842	832.57	-43929.
#2	3.4854	.00054	18.185	.00198	-81.618	847.23	-44286.
#3	3.4670	.00191	.30982	.00150	-69.405	851.28	-44478.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**.00146**	**.41438**	**-.00062**	**.11871**	**.00049**	**.00020**
Stddev	.00183	.00109	.01008	.00016	.00053	.00034	.00027
%RSD	272.55	74.119	2.4326	25.248	.44858	68.175	131.09
#1	.00043	.00095	.40540	-.00047	.11824	.00083	.00013
#2	-.00102	.00271	.41246	-.00078	.11860	.00050	.00050
#3	.00261	.00074	.42529	-.00062	.11929	.00015	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00016**	**.00207**	F **-.07607**
Stddev	.00021	.00097	.14664
%RSD	128.84	46.860	192.78
#1	.00041	.00131	-.22237
#2	.00005	.00173	.07091
#3	.00003	.00316	-.07675
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

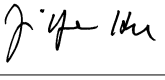
Approved: June 05, 2013



Sample Name: L1305144704SDL Acquired: 6/4/2013 10:14:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432807-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21756.**	**27872.**
Stddev	47.	101.
%RSD	.21652	.36323
#1	21809.	27789.
#2	21737.	27843.
#3	21721.	27985.

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 10:18:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44593	10.151	.40051	.50287	1.0114	.05019	10.034
Stddev	.00173	.156	.00220	.00117	.0190	.00023	.149
%RSD	.38753	1.5332	.55026	.23246	1.8763	.45699	1.4852
#1	.44492	9.9712	.39798	.50250	.99100	.05009	9.8627
#2	.44793	10.247	.40153	.50418	1.0146	.05046	10.109
#3	.44495	10.235	.40203	.50193	1.0285	.05004	10.131
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000						
Range	10.000%						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05069	.20467	.50711	.51025	4.0618	1.0264	F 1.1895
Stddev	.00022	.00064	.00208	.00276	.0760	.0053	.1845
%RSD	.42953	.31323	.41088	.54189	1.8699	.51552	15.512
#1	.05047	.20394	.50563	.50754	3.9786	1.0213	1.1510
#2	.05090	.20515	.50949	.51307	4.0794	1.0260	1.3903
#3	.05072	.20492	.50621	.51013	4.1274	1.0319	1.0273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.3835	F 1.1654	50.843	1.0227	10.238	.51637	1.0055
Stddev	3.3118	1.6591	.741	.0176	.201	.00737	.0043
%RSD	39.504	142.37	1.4578	1.7225	1.9584	1.4272	.42723
#1	4.5603	3.0404	50.012	1.0032	10.012	.50905	1.0022
#2	10.221	.56879	51.083	1.0271	10.304	.51626	1.0103
#3	10.369	-.11295	51.434	1.0376	10.397	.52379	1.0038
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 10:18:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.849**	**.51059**	F **13.108**	**.51219**	F **-72.763**	**10.701**	F **-8.1151**
Stddev	.938	.00339	11.004	.00362	10.602	.153	9.4817
%RSD	1.8449	.66458	83.944	.70681	14.571	1.4271	116.84
#1	49.866	.50748	.88382	.51201	-84.648	10.575	-2.5592
#2	50.948	.51421	22.221	.51590	-64.276	10.659	-2.7229
#3	51.734	.51008	16.220	.50867	-69.367	10.871	-19.063
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2128**	**.40389**	**5.0608**	**.95756**	**1.0196**	**1.0169**	**.51671**
Stddev	.0051	.00225	.0346	.00507	.0141	.0202	.00230
%RSD	.42414	.55655	.68284	.52904	1.3837	1.9857	.44446
#1	1.2120	.40444	5.0640	.95599	1.0035	.99382	.51534
#2	1.2184	.40582	5.0936	.96323	1.0259	1.0257	.51936
#3	1.2082	.40142	5.0247	.95346	1.0295	1.0313	.51542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0077**	**1.0259**	F **.59342**
Stddev	.0042	.0049	.25316
%RSD	.42118	.47354	42.662
#1	1.0067	1.0227	.74911
#2	1.0123	1.0315	.72984
#3	1.0040	1.0235	.30130
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 10:18:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21771.**	**28123.**
Stddev	62.	421.
%RSD	.28668	1.4962
#1	21828.	28545.
#2	21704.	28121.
#3	21779.	27703.

Approved: June 05, 2013

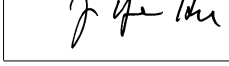
Sample Name: CCB Acquired: 6/4/2013 10:21:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00992**	**.00223**	**.00151**	**.00036**	**.00003**	**-.00297**
Stddev	.00040	.00894	.00213	.00019	.00016	.00003	.00609
%RSD	368.52	90.067	95.310	12.243	45.917	100.20	205.16
#1	-.00036	.01327	-.00022	.00165	.00017	.00005	.00346
#2	.00035	-.00021	.00352	.00159	.00047	.00000	-.00372
#3	-.00032	.01669	.00340	.00130	.00043	.00005	-.00864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00022**	**.00053**	**.00059**	**-.00288**	**.00006**	**.08074**
Stddev	.00008	.00041	.00019	.00087	.00432	.00163	.41370
%RSD	130.17	186.90	35.702	148.89	150.04	2834.1	512.39
#1	.00008	-.00002	.00041	-.00007	-.00550	.00134	-.25729
#2	-.00002	-.00001	.00044	.00025	.00211	.00061	-.04256
#3	.00013	.00069	.00075	.00157	-.00524	-.00178	.54207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.42613**	F **2.1769**	**-.00284**	**.00628**	**.01635**	**.00008**	**.00265**
Stddev	5.4392	.1818	.02655	.00057	.00599	.00002	.00190
%RSD	1276.4	8.3532	933.84	9.1558	36.668	29.435	71.590
#1	5.9964	2.3729	.00387	.00673	.01120	.00009	.00125
#2	.15383	2.0137	.01971	.00563	.02293	.00005	.00189
#3	-4.8718	2.1441	-.03211	.00647	.01491	.00008	.00481
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



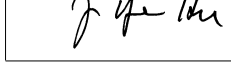
Sample Name: CCB Acquired: 6/4/2013 10:21:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01366**	**-.00021**	F **10.176**	**.00035**	F **-61.456**	**.21535**	F **-10.175**
Stddev	.00268	.00146	8.871	.00079	45.255	.05905	.749
%RSD	19.602	694.51	87.179	225.15	73.639	27.419	7.3569
#1	.01473	-.00151	.19971	.00003	-28.901	.17756	-10.548
#2	.01061	-.00049	13.151	-.00023	-113.13	.18509	-9.3130
#3	.01563	.00137	17.178	.00126	-42.334	.28339	-10.663
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00215**	**.00281**	**.00104**	**.00008**	**.00103**	**.00084**
Stddev	.00077	.00152	.00845	.00208	.00002	.00035	.00234
%RSD	230.82	70.832	301.03	200.43	25.716	34.540	279.60
#1	.00056	.00070	-.00240	-.00049	.00006	.00074	-.00166
#2	-.00053	.00374	-.00173	.00019	.00010	.00092	.00120
#3	.00097	.00201	.01255	.00340	.00009	.00142	.00297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00003**	**.00102**	F **-.14973**
Stddev	.00015	.00158	.02788
%RSD	562.34	154.71	18.619
#1	.00012	-.00003	-.18108
#2	.00010	.00025	-.14040
#3	-.00014	.00283	-.12771
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

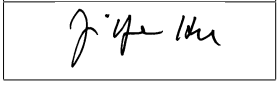
Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 10:21:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21898.**	**27380.**
Stddev	6.	70.
%RSD	.02745	.25630
#1	21901.	27317.
#2	21892.	27456.
#3	21903.	27368.

Approved: June 05, 2013



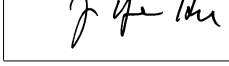
Sample Name: L1305144705 Acquired: 6/4/2013 10:25:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.04692**	**.00048**	**.01351**	**.02974**	**.00002**	**42.780**
Stddev	.00012	.00768	.00187	.00080	.00041	.00001	.299
%RSD	132.29	16.360	394.09	5.9235	1.3635	56.867	.69920
#1	-.00019	.04690	-.00110	.01260	.02931	.00003	43.082
#2	.00004	.05461	-.00002	.01412	.02980	.00003	42.776
#3	-.00013	.03925	.00255	.01380	.03011	.00001	42.484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**.00027**	**.00102**	**.00023**	**.06375**	**.24942**	**3.0813**
Stddev	.00007	.00009	.00017	.00027	.00218	.00291	.2211
%RSD	18.617	33.157	16.580	120.32	3.4178	1.1672	7.1747
#1	.00045	.00028	.00112	-.00008	.06140	.25010	3.1568
#2	.00031	.00018	.00083	.00044	.06416	.25193	2.8324
#3	.00041	.00035	.00112	.00033	.06570	.24622	3.2548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07831**	**1.8633**	**3.8631**	**.01279**	**25.562**	**.02055**	**-.00006**
Stddev	5.7692	1.0882	.0295	.00062	.271	.00006	.00013
%RSD	7367.3	58.402	.76439	4.8400	1.0612	.28907	198.14
#1	-6.1462	3.1197	3.8323	.01209	25.253	.02062	-.00021
#2	.57461	1.2255	3.8911	.01302	25.674	.02055	.00001
#3	5.3366	1.2446	3.8658	.01326	25.760	.02050	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



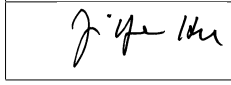
Sample Name: L1305144705 Acquired: 6/4/2013 10:25:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.166**	**.00126**	**35.199**	**-.00025**	F **-64.455**	F **1663.0**	F **-86572.**
Stddev	.142	.00050	2.867	.00095	3.218	12.1	587.
%RSD	.48553	39.749	8.1437	381.04	4.9926	.73015	.67806
#1	29.005	.00099	32.775	.00076	-67.480	1654.2	-86200.
#2	29.220	.00095	34.460	-.00113	-64.812	1676.8	-87249.
#3	29.273	.00184	38.363	-.00037	-61.074	1657.9	-86268.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00210**	**.00126**	**1.8866**	**-.00155**	**.25268**	**.00104**	**-.00010**
Stddev	.00084	.00275	.0125	.00003	.00115	.00099	.00100
%RSD	39.966	218.09	.66293	2.1649	.45378	94.756	950.08
#1	-.00207	.00441	1.8823	-.00158	.25150	.00200	-.00044
#2	-.00127	.00007	1.9007	-.00155	.25276	.00110	-.00089
#3	-.00295	-.00069	1.8768	-.00151	.25379	.00003	.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00014**	**.00317**	F **-.05159**
Stddev	.00015	.00002	.22666
%RSD	105.13	.67823	439.37
#1	.00031	.00317	.05748
#2	.00010	.00315	-.31216
#3	.00002	.00319	.09992
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013



Sample Name: L1305144705 Acquired: 6/4/2013 10:25:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21575.**	**27626.**
Stddev	72.	29.
%RSD	.33188	.10548
#1	21653.	27627.
#2	21512.	27597.
#3	21562.	27655.

Approved: June 05, 2013

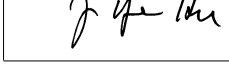
Sample Name: L1305144706 Acquired: 6/4/2013 10:28:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.02923**	**.00017**	**.01293**	**.02934**	**.00005**	**42.492**
Stddev	.00016	.00798	.00075	.00032	.00027	.00002	.175
%RSD	45.031	27.307	438.47	2.4576	.91755	46.971	.41163
#1	-.00053	.02173	.00067	.01293	.02911	.00007	42.694
#2	-.00028	.02833	-.00069	.01325	.02964	.00006	42.390
#3	-.00024	.03762	.00054	.01262	.02928	.00002	42.393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00009**	**.00068**	**.00032**	**.01507**	**.25839**	**3.0060**
Stddev	.00014	.00009	.00020	.00029	.00195	.00361	.3309
%RSD	33.723	103.63	28.834	88.089	12.956	1.3952	11.008
#1	.00033	-.00001	.00089	.00060	.01716	.26147	3.3638
#2	.00032	.00010	.00065	.00034	.01475	.25443	2.7110
#3	.00056	.00018	.00050	.00003	.01329	.25928	2.9431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5946**	**.71309**	**3.8195**	**.01190**	**25.641**	**.00946**	**-.00012**
Stddev	10.311	.64868	.0060	.00288	.132	.00005	.00006
%RSD	646.60	90.967	.15664	24.182	.51399	.53387	51.225
#1	-10.081	1.0588	3.8255	.00890	25.654	.00951	-.00018
#2	9.4490	1.1157	3.8194	.01217	25.766	.00946	-.00006
#3	5.4161	-.03522	3.8136	.01463	25.504	.00941	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



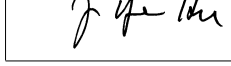
Sample Name: L1305144706 Acquired: 6/4/2013 10:28:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.143**	**.00146**	**33.849**	**.00116**	F **-74.183**	F **1695.2**	F **-88326.**
Stddev	.271	.00068	17.763	.00123	40.211	11.6	299.
%RSD	.92836	46.418	52.479	105.46	54.205	.68352	.33869
#1	29.360	.00069	49.165	.00062	-48.909	1689.7	-88372.
#2	29.229	.00170	14.375	.00256	-120.55	1687.3	-88007.
#3	28.840	.00197	38.006	.00030	-53.088	1708.5	-88600.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00104**	**.00102**	**1.8851**	**-.00149**	**.25239**	**.00030**	**.00029**
Stddev	.00040	.00124	.0175	.00040	.00156	.00056	.00036
%RSD	38.737	120.96	.92620	27.004	.61920	187.63	125.44
#1	-.00120	.00242	1.8787	-.00145	.25341	-.00033	-.00012
#2	-.00058	.00008	1.8717	-.00191	.25317	.00049	.00040
#3	-.00133	.00056	1.9049	-.00111	.25059	.00074	.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00035**	**.00339**	**.13034**
Stddev	.00028	.00004	.06671
%RSD	81.140	1.1676	51.184
#1	.00065	.00343	.10701
#2	.00010	.00339	.07842
#3	.00028	.00335	.20559
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305144706 Acquired: 6/4/2013 10:28:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21518.**	**28078.**
Stddev	85.	206.
%RSD	.39732	.73233
#1	21520.	27851.
#2	21603.	28130.
#3	21432.	28253.

Approved: June 05, 2013

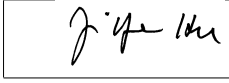
Sample Name: L1305144707 Acquired: 6/4/2013 10:32:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00031**	**.06573**	**.00035**	**.01623**	**.03399**	**.00006**
Stddev	.00027	.00371	.00054	.00072	.00020	.00002
%RSD	87.927	5.6474	153.30	4.4596	.59253	37.766
#1	-.00062	.07001	.00027	.01574	.03376	.00009
#2	-.00011	.06388	.00093	.01706	.03413	.00004
#3	-.00020	.06331	-.00014	.01588	.03408	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.054**	**.00078**	**.00042**	**.00092**	**-.00001**	**.09985**
Stddev	.218	.00007	.00032	.00019	.00029	.00239
%RSD	.23132	8.4708	76.798	20.727	4196.8	2.3952
#1	94.196	.00071	.00036	.00095	.00018	.09972
#2	94.162	.00084	.00013	.00108	.00013	.10231
#3	93.803	.00078	.00077	.00071	-.00034	.09753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59119**	**9.4814**	**16.752**	**1.5770**	**6.7925**	**.02285**
Stddev	.00631	.0834	11.874	.2334	.0303	.00149
%RSD	1.0667	.87976	70.881	14.799	.44678	6.5009
#1	.59161	9.3852	30.405	1.8465	6.7972	.02415
#2	.59728	9.5247	11.002	1.4441	6.8203	.02316
#3	.58469	9.5342	8.8467	1.4404	6.7601	.02123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



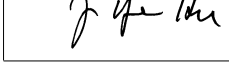
Sample Name: L1305144707 Acquired: 6/4/2013 10:32:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.245**	**.14839**	**.00012**	**19.788**	**.00539**	**49.032**
Stddev	.486	.00069	.00018	.165	.00044	2.889
%RSD	.53307	.46162	152.56	.83419	8.2389	5.8926
#1	91.294	.14823	-.00005	19.721	.00508	52.008
#2	91.705	.14915	.00010	19.976	.00590	48.850
#3	90.736	.14780	.00030	19.667	.00519	46.238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00136**	F **-48.671**	F **3966.0**	F **-211640.**	**-.00096**	**.00336**
Stddev	.00147	27.929	33.2	1110.	.00066	.00193
%RSD	108.63	57.382	.83725	.52443	68.896	57.410
#1	.00119	-63.831	3960.7	-211680.	-.00034	.00250
#2	.00290	-65.742	4001.5	-212730.	-.00166	.00557
#3	-.00003	-16.441	3935.7	-210510.	-.00088	.00201
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1364**	**-.00141**	**.60277**	**.00106**	**-.00045**	**.00037**
Stddev	.0184	.00013	.00278	.00114	.00199	.00022
%RSD	.85940	8.9305	.46192	107.59	444.02	58.351
#1	2.1338	-.00150	.60576	.00217	.00006	.00022
#2	2.1559	-.00146	.60232	-.00011	.00124	.00062
#3	2.1194	-.00126	.60024	.00112	-.00264	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144707 Acquired: 6/4/2013 10:32:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00433**	**.19838**
Stddev	.00010	.12900
%RSD	2.3070	65.030
#1	.00438	.29636
#2	.00440	.05222
#3	.00422	.24655
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21095.**	**27421.**
Stddev	88.	146.
%RSD	.41787	.53336
#1	21130.	27429.
#2	20995.	27271.
#3	21161.	27564.

Approved: June 05, 2013

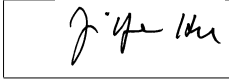
Sample Name: L1305144708 Acquired: 6/4/2013 10:35:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.01508**	**.00130**	**.01635**	**.03276**	**.00005**
Stddev	.00030	.00482	.00096	.00043	.00037	.00002
%RSD	240.29	31.976	73.960	2.6116	1.1164	42.182
#1	.00017	.01829	.00020	.01604	.03296	.00007
#2	-.00044	.00953	.00197	.01684	.03299	.00006
#3	-.00010	.01740	.00172	.01618	.03234	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.858**	**.00078**	**.00048**	**.00097**	**.00002**	**.01744**
Stddev	.410	.00006	.00016	.00034	.00033	.00096
%RSD	.44185	7.0801	33.705	35.083	1841.6	5.4833
#1	93.307	.00084	.00056	.00128	.00001	.01637
#2	92.766	.00073	.00029	.00102	-.00031	.01821
#3	92.502	.00077	.00058	.00060	.00036	.01773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58748**	**9.3682**	**22.981**	**1.8533**	**6.5801**	**.02163**
Stddev	.00169	.2466	16.367	.3434	.0299	.00051
%RSD	.28710	2.6323	71.220	18.531	.45394	2.3498
#1	.58561	9.5852	22.582	1.6327	6.6129	.02105
#2	.58791	9.4194	39.544	1.6783	6.5728	.02184
#3	.58890	9.1000	6.8172	2.2491	6.5545	.02201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



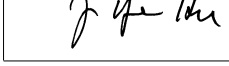
Sample Name: L1305144708 Acquired: 6/4/2013 10:35:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**88.516**	**.13810**	**.00008**	**18.990**	**.00577**	**35.061**
Stddev	.579	.00098	.00017	.154	.00026	7.587
%RSD	.65386	.70890	204.14	.81184	4.4827	21.639
#1	89.050	.13894	.00001	19.132	.00571	42.939
#2	88.597	.13832	-.00004	19.010	.00605	34.439
#3	87.901	.13702	.00028	18.826	.00555	27.804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	F **-56.418**	F **4032.1**	F **-212490.**	**-.00160**	**.00077**
Stddev	.00121	48.758	4.7	478.	.00157	.00267
%RSD	260.67	86.423	.11773	.22512	98.113	348.42
#1	.00186	-91.969	4036.2	-212840.	-.00332	.00384
#2	-.00023	-76.451	4026.9	-211940.	-.00027	-.00100
#3	-.00023	-.8345	4033.2	-212680.	-.00120	-.00054
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0905**	**-.00180**	**.58125**	**-.00024**	**-.00195**	**.00004**
Stddev	.0074	.00007	.00307	.00063	.00222	.00040
%RSD	.35259	3.8017	.52817	260.44	113.82	993.48
#1	2.0879	-.00178	.58479	.00011	-.00129	.00018
#2	2.0848	-.00188	.57951	.00013	-.00443	-.00041
#3	2.0988	-.00174	.57945	-.00097	-.00014	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144708 Acquired: 6/4/2013 10:35:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00466**	F **-.03476**
Stddev	.00007	.07536
%RSD	1.4937	216.79
#1	.00466	-.00674
#2	.00459	.02257
#3	.00473	-.12012
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21113.**	**27937.**
Stddev	35.	184.
%RSD	.16780	.65912
#1	21123.	27799.
#2	21142.	27866.
#3	21073.	28146.

Approved: June 05, 2013

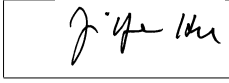
Sample Name: L1305144801 Acquired: 6/4/2013 10:39:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.14556**	**.00037**	**.01323**	**.03622**	**.00007**
Stddev	.00021	.01426	.00117	.00066	.00033	.00001
%RSD	199.71	9.7976	320.48	4.9805	.91255	11.642
#1	-.00020	.15501	-.00082	.01283	.03586	.00008
#2	-.00025	.15252	.00038	.01399	.03630	.00006
#3	.00013	.12916	.00153	.01286	.03650	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.681**	**.00053**	**.00088**	**.00108**	**.00039**	**.24318**
Stddev	.084	.00006	.00018	.00011	.00025	.00360
%RSD	.13381	11.989	20.474	10.078	63.196	1.4785
#1	62.710	.00057	.00075	.00098	.00068	.23903
#2	62.587	.00046	.00081	.00107	.00021	.24510
#3	62.747	.00057	.00109	.00119	.00030	.24540
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38092**	**5.9274**	**10.003**	**.43359**	**5.3900**	**.01274**
Stddev	.00137	.2845	10.259	.37103	.0253	.00234
%RSD	.35952	4.7991	102.56	85.571	.46982	18.396
#1	.37936	5.6519	19.715	.85581	5.3878	.01507
#2	.38192	5.9103	-.72624	.28538	5.3659	.01276
#3	.38149	6.2200	11.020	.15957	5.4164	.01038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



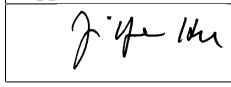
Sample Name: L1305144801 Acquired: 6/4/2013 10:39:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-02

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.762**	**.11422**	**-.00038**	**7.7576**	**.00411**	**50.565**
Stddev	.055	.00051	.00014	.0170	.00015	7.516
%RSD	.10682	.44690	36.726	.21862	3.7699	14.863
#1	51.777	.11475	-.00054	7.7389	.00403	57.590
#2	51.701	.11373	-.00035	7.7619	.00429	42.639
#3	51.809	.11419	-.00027	7.7720	.00401	51.467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00141**	F **-47.190**	F **2397.1**	F **-124290.**	**-.00042**	**.00192**
Stddev	.00108	37.653	9.0	576.	.00121	.00131
%RSD	76.826	79.790	.37676	.46335	287.76	67.968
#1	.00183	-90.534	2401.7	-123920.	-.00013	.00091
#2	.00018	-28.466	2403.0	-124950.	.00062	.00339
#3	.00222	-22.569	2386.7	-123980.	-.00174	.00146
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4838**	**-.00158**	**.38433**	**.00359**	**.00011**	**.00048**
Stddev	.0137	.00008	.00092	.00049	.00164	.00014
%RSD	.55081	4.9019	.23995	13.746	1522.5	29.248
#1	2.4903	-.00161	.38384	.00306	-.00153	.00063
#2	2.4930	-.00149	.38375	.00404	.00010	.00044
#3	2.4681	-.00164	.38539	.00368	.00175	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

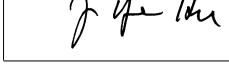
Approved: June 05, 2013



Sample Name: L1305144801 Acquired: 6/4/2013 10:39:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-02

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00633**	**.09868**
Stddev	.00008	.18993
%RSD	1.1937	192.48
#1	.00625	-.08559
#2	.00637	.29382
#3	.00639	.08781
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21483.**	**27933.**
Stddev	73.	88.
%RSD	.33782	.31632
#1	21564.	27876.
#2	21423.	28034.
#3	21463.	27888.

Approved: June 05, 2013



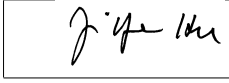
Sample Name: L1305144801S Acquired: 6/4/2013 10:42:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18970**	**5.0303**	**.19834**	**.99166**	**.52738**	**.02475**
Stddev	.00076	.0529	.00085	.00144	.00639	.00005
%RSD	.40013	1.0517	.42910	.14553	1.2126	.21571
#1	.19058	4.9693	.19931	.99184	.52491	.02478
#2	.18924	5.0633	.19769	.99300	.52258	.02478
#3	.18929	5.0583	.19803	.99014	.53464	.02469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**65.091**	**.02545**	**.09997**	**.24753**	**.24648**	**2.1051**
Stddev	.745	.00033	.00078	.00070	.00154	.0226
%RSD	1.1439	1.2946	.77853	.28464	.62500	1.0747
#1	64.290	.02571	.10052	.24815	.24774	2.0917
#2	65.223	.02554	.10031	.24768	.24693	2.0924
#3	65.761	.02508	.09908	.24676	.24476	2.1313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.85961**	**5.9198**	**5.0227**	F **-.18144**	**29.884**	**.50577**
Stddev	.00820	.4376	6.8751	1.6314	.266	.00511
%RSD	.95337	7.3918	136.88	899.14	.88905	1.0107
#1	.86341	5.4521	12.233	-2.0650	29.672	.50289
#2	.86522	5.9879	-1.4597	.73078	29.798	.50276
#3	.85021	6.3193	4.2951	.78984	30.182	.51167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				45.000		
Low Limit				-.10000		

Approved: June 05, 2013



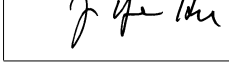
Sample Name: L1305144801S Acquired: 6/4/2013 10:42:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-07

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.054**	**.35498**	**.49803**	**32.075**	**.25073**	**29.354**
Stddev	.582	.00236	.00384	.363	.00222	20.903
%RSD	1.0768	.66349	.77143	1.1315	.88373	71.212
#1	53.680	.35238	.50064	31.976	.25286	16.565
#2	53.756	.35559	.49983	31.772	.25089	53.476
#3	54.724	.35698	.49362	32.477	.24844	18.020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24641**	F **-65.413**	F **2350.6**	F **-122390.**	**.59295**	**.19411**
Stddev	.00200	46.611	22.4	671.	.00511	.00132
%RSD	.81092	71.257	.95107	.54811	.86236	.67786
#1	.24868	-88.597	2371.8	-122840.	.59715	.19393
#2	.24559	-95.886	2352.7	-122710.	.59443	.19551
#3	.24494	-11.756	2327.3	-121620.	.58725	.19290
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.9004**	**-.00187**	**.86207**	**.49139**	**.24721**	**.49799**
Stddev	.0535	.00067	.00930	.00598	.00121	.00254
%RSD	1.0914	35.761	1.0787	1.2171	.49145	.50936
#1	4.9557	-.00239	.85537	.48774	.24832	.49946
#2	4.8967	-.00210	.85815	.48813	.24740	.49946
#3	4.8490	-.00111	.87268	.49829	.24592	.49506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144801S Acquired: 6/4/2013 10:42:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432720-07

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.49466**	**.65344**
Stddev	.00393	.17905
%RSD	.79434	27.400
#1	.49679	.83172
#2	.49707	.65497
#3	.49013	.47364
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21271.**	**28210.**
Stddev	92.	199.
%RSD	.43184	.70529
#1	21226.	28433.
#2	21211.	28143.
#3	21377.	28053.

Approved: June 05, 2013

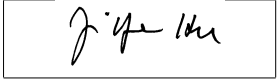
Sample Name: L1305144802 Acquired: 6/4/2013 10:45:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.45477**	**-.00007**	**.01515**	**.03773**	**.00015**
Stddev	.00009	.01539	.00150	.00011	.00031	.00001
%RSD	576.38	3.3844	2018.3	.75705	.81146	4.2244
#1	.00008	.43777	-.00132	.01523	.03739	.00016
#2	-.00008	.45878	.00159	.01519	.03796	.00015
#3	-.00005	.46776	-.00050	.01502	.03785	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.453**	**.00068**	**.00402**	**.00114**	**.00300**	**.43696**
Stddev	.146	.00004	.00029	.00026	.00022	.00708
%RSD	.25900	6.3625	7.2951	23.021	7.3863	1.6212
#1	56.569	.00066	.00392	.00119	.00275	.42903
#2	56.502	.00065	.00378	.00086	.00307	.43920
#3	56.289	.00073	.00435	.00137	.00318	.44266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33626**	**5.1112**	**9.7414**	**.93416**	**4.7488**	**.01242**
Stddev	.00238	.2758	5.7651	.34552	.0334	.00103
%RSD	.70638	5.3970	59.182	36.988	.70397	8.3166
#1	.33352	5.3548	16.013	.60396	4.7374	.01318
#2	.33744	5.1672	4.6716	1.2932	4.7865	.01125
#3	.33781	4.8117	8.5401	.90531	4.7226	.01284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



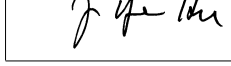
Sample Name: L1305144802 Acquired: 6/4/2013 10:45:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**42.584**	**.14203**	**.00109**	**15.802**	**.00822**	**69.089**
Stddev	.070	.00088	.00104	.013	.00057	9.165
%RSD	.16392	.61891	95.527	.08504	6.8935	13.266
#1	42.641	.14304	.00035	15.786	.00783	69.652
#2	42.506	.14163	.00064	15.808	.00795	77.959
#3	42.605	.14143	.00228	15.811	.00887	59.655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00285**	F **-49.708**	F **2152.4**	F **-111630.**	**-.00073**	**.00204**
Stddev	.00102	23.898	4.0	557.	.00219	.00086
%RSD	35.756	48.077	.18545	.49901	299.38	42.338
#1	.00191	-52.076	2151.2	-111920.	-.00180	.00302
#2	.00393	-24.714	2156.9	-111970.	-.00218	.00140
#3	.00271	-72.334	2149.2	-110980.	.00179	.00169
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6233**	**-.00177**	**.33924**	**.00671**	**.00051**	**.00045**
Stddev	.0182	.00024	.00015	.00148	.00104	.00018
%RSD	.69455	13.607	.04500	22.091	205.33	41.437
#1	2.6117	-.00194	.33930	.00837	.00035	.00051
#2	2.6443	-.00187	.33907	.00552	.00162	.00024
#3	2.6139	-.00149	.33935	.00624	-.00045	.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

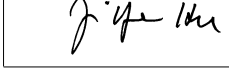
Approved: June 05, 2013



Sample Name: L1305144802 Acquired: 6/4/2013 10:45:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01903**	**.56837**
Stddev	.00094	.23820
%RSD	4.9649	41.908
#1	.01841	.69030
#2	.01856	.29390
#3	.02012	.72092
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21634.**	**28001.**
Stddev	74.	71.
%RSD	.34127	.25200
#1	21619.	27922.
#2	21569.	28021.
#3	21714.	28059.

Approved: June 05, 2013



Sample Name: L1305144803 Acquired: 6/4/2013 10:49:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.06174**	**.00098**	**.01334**	**.03454**	**.00009**
Stddev	.00024	.01373	.00152	.00058	.00050	.00001
%RSD	89.927	22.242	155.10	4.3449	1.4423	12.353
#1	-.00005	.04655	.00244	.01361	.03422	.00008
#2	-.00022	.06539	-.00059	.01268	.03430	.00008
#3	-.00053	.07327	.00108	.01374	.03512	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.568**	**.00058**	**.00266**	**.00100**	**.00116**	**.01549**
Stddev	.362	.00009	.00011	.00033	.00036	.00513
%RSD	.66316	14.936	4.1501	33.005	31.106	33.138
#1	54.316	.00053	.00277	.00110	.00075	.01464
#2	54.405	.00068	.00266	.00063	.00131	.01083
#3	54.983	.00053	.00255	.00126	.00141	.02099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33664**	**4.5565**	F **-4.1622**	**1.2513**	**4.5888**	**.01179**
Stddev	.00297	.2704	10.467	.3337	.0223	.00160
%RSD	.88116	5.9340	251.47	26.663	.48637	13.549
#1	.33687	4.2501	7.5547	1.3563	4.6068	.01298
#2	.33356	4.7616	-7.4539	.87784	4.5638	.00997
#3	.33948	4.6578	-12.587	1.5199	4.5957	.01242
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

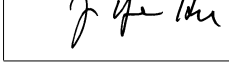
Sample Name: L1305144803 Acquired: 6/4/2013 10:49:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.664**	**.06370**	**-.00023**	**15.870**	**.00575**	**28.872**
Stddev	.180	.00028	.00027	.090	.00036	11.878
%RSD	.43107	.44019	118.70	.56775	6.3066	41.138
#1	41.530	.06395	-.00054	15.783	.00598	40.628
#2	41.593	.06340	-.00008	15.865	.00533	29.111
#3	41.868	.06375	-.00007	15.963	.00593	16.877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00162**	F **-19.821**	F **2144.3**	F **-111170.**	**-.00163**	**.00017**
Stddev	.00071	5.991	20.1	519.	.00118	.00143
%RSD	43.793	30.227	.93721	.46686	72.312	829.60
#1	.00125	-26.736	2161.0	-111010.	-.00300	.00181
#2	.00118	-16.565	2149.9	-111740.	-.00099	-.00043
#3	.00244	-16.163	2122.0	-110740.	-.00092	-.00086
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2194**	**-.00158**	**.33182**	**.00007**	**-.00035**	**.00021**
Stddev	.0227	.00012	.00245	.00113	.00028	.00029
%RSD	1.0252	7.8676	.73868	1550.7	78.643	134.78
#1	2.2396	-.00171	.32990	-.00091	-.00030	.00012
#2	2.2239	-.00147	.33099	.00131	-.00011	.00054
#3	2.1948	-.00155	.33458	-.00019	-.00065	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

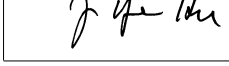
Approved: June 05, 2013



Sample Name: L1305144803 Acquired: 6/4/2013 10:49:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01117**	**.07997**
Stddev	.00009	.26651
%RSD	.79432	333.24
#1	.01108	-.04033
#2	.01125	.38543
#3	.01117	-.10518
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21512.**	**28369.**
Stddev	87.	40.
%RSD	.40537	.14187
#1	21595.	28408.
#2	21421.	28373.
#3	21521.	28327.

Approved: June 05, 2013



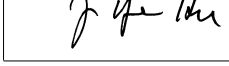
Sample Name: L1305144804 Acquired: 6/4/2013 10:52:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00037**	**.10034**	**.00136**	**.01549**	**.03162**	**.00005**
Stddev	.00030	.00678	.00139	.00020	.00030	.00003
%RSD	82.408	6.7561	101.99	1.2720	.94819	54.694
#1	-.00043	.10265	.00296	.01546	.03191	.00005
#2	-.00063	.10566	.00057	.01531	.03131	.00002
#3	-.00004	.09271	.00055	.01570	.03163	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.135**	**.00077**	**.00084**	**.00116**	**.00091**	**.23248**
Stddev	.433	.00012	.00011	.00016	.00045	.00189
%RSD	.45510	15.381	12.708	13.995	49.715	.81480
#1	95.459	.00087	.00074	.00121	.00138	.23055
#2	95.303	.00080	.00082	.00129	.00085	.23254
#3	94.643	.00064	.00095	.00098	.00049	.23434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.57048**	**8.9961**	**5.4137**	**.90050**	**6.6530**	**.01961**
Stddev	.00876	.3916	.8135	.57465	.0642	.00089
%RSD	1.5355	4.3534	15.026	63.815	.96527	4.5278
#1	.57829	8.7660	5.7892	.71932	6.7177	.02039
#2	.56101	8.7740	4.4803	1.5439	6.6519	.01864
#3	.57214	9.4483	5.9715	.43828	6.5893	.01980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



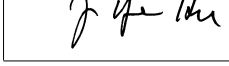
Sample Name: L1305144804 Acquired: 6/4/2013 10:52:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.520**	**.16036**	**.00010**	**17.131**	**.00587**	**44.397**
Stddev	.803	.00221	.00019	.122	.00042	12.062
%RSD	.86739	1.3755	196.25	.71103	7.2061	27.170
#1	93.421	.16289	-.00008	17.265	.00635	49.832
#2	92.255	.15933	.00030	17.028	.00569	52.786
#3	91.883	.15885	.00007	17.099	.00556	30.573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	F **-22.158**	F **4128.9**	F **-218570.**	**-.00172**	**.00151**
Stddev	.00042	15.257	13.3	820.	.00183	.00050
%RSD	43.336	68.855	.32278	.37498	106.57	33.422
#1	.00081	-8.4252	4144.2	-219450.	-.00380	.00094
#2	.00067	-19.467	4122.5	-217820.	-.00038	.00189
#3	.00146	-38.580	4119.9	-218430.	-.00096	.00170
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1277**	**-.00175**	**.56708**	**.00082**	**.00023**	**.00063**
Stddev	.0038	.00018	.00396	.00038	.00152	.00011
%RSD	.17896	10.174	.69798	46.315	670.11	17.095
#1	2.1321	-.00156	.57119	.00106	-.00103	.00069
#2	2.1254	-.00177	.56676	.00038	.00192	.00050
#3	2.1256	-.00192	.56329	.00103	-.00021	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144804 Acquired: 6/4/2013 10:52:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00694**	**.08185**
Stddev	.00006	.15679
%RSD	.91014	191.55
#1	.00701	-.07963
#2	.00688	.23347
#3	.00694	.09172
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21224.**	**28184.**
Stddev	59.	273.
%RSD	.27928	.96865
#1	21200.	27869.
#2	21291.	28350.
#3	21180.	28333.

Approved: June 05, 2013

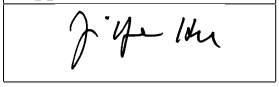
Sample Name: L1305144805 Acquired: 6/4/2013 10:56:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.04064**	**-.00010**	**.01616**	**.03169**	**.00001**
Stddev	.00033	.00621	.00087	.00020	.00018	.00003
%RSD	332.87	15.279	863.96	1.2248	.57009	362.84
#1	.00046	.04755	-.00020	.01595	.03151	-.00002
#2	-.00019	.03553	.00081	.01635	.03170	.00000
#3	.00003	.03884	-.00092	.01619	.03187	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**97.935**	**.00071**	**.00034**	**.00081**	**.00011**	**.02401**
Stddev	.469	.00007	.00009	.00030	.00027	.00231
%RSD	.47867	9.5884	25.268	36.736	252.66	9.6265
#1	97.745	.00065	.00044	.00053	-.00020	.02629
#2	98.469	.00078	.00028	.00112	.00031	.02167
#3	97.591	.00070	.00030	.00077	.00021	.02409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.57432**	**9.5772**	**6.3279**	**1.7758**	**6.8287**	**.01758**
Stddev	.00162	.0555	5.9313	1.9561	.0356	.00136
%RSD	.28126	.57915	93.732	110.15	.52148	7.7570
#1	.57400	9.5214	13.152	1.3226	6.8676	.01805
#2	.57288	9.6323	3.4173	.08614	6.7976	.01605
#3	.57607	9.5781	2.4142	3.9188	6.8209	.01865
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



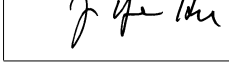
Sample Name: L1305144805 Acquired: 6/4/2013 10:56:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.388**	**.08121**	**.00005**	**17.295**	**.00428**	**32.037**
Stddev	.196	.00015	.00023	.092	.00038	10.845
%RSD	.20774	.18776	502.24	.53153	8.7817	33.851
#1	94.401	.08128	-.00015	17.400	.00472	25.542
#2	94.186	.08132	-.00001	17.235	.00404	26.013
#3	94.578	.08104	.00030	17.248	.00409	44.557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	F **27.021**	F **4125.0**	F **-219680.**	**-.00073**	**.00281**
Stddev	.00047	23.630	19.5	693.	.00169	.00074
%RSD	33.566	87.451	.47269	.31557	230.28	26.464
#1	.00190	38.152	4112.2	-219470.	.00106	.00366
#2	.00100	-.11879	4147.4	-220460.	-.00230	.00226
#3	.00126	43.031	4115.3	-219120.	-.00096	.00252
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0988**	**-.00176**	**.57906**	**-.00152**	**-.00053**	**.00034**
Stddev	.0148	.00017	.00035	.00064	.00125	.00016
%RSD	.70319	9.5227	.06036	42.347	234.94	46.905
#1	2.0828	-.00195	.57945	-.00096	-.00070	.00053
#2	2.1119	-.00165	.57896	-.00223	.00080	.00023
#3	2.1016	-.00168	.57877	-.00138	-.00169	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

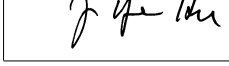
Approved: June 05, 2013



Sample Name: L1305144805 Acquired: 6/4/2013 10:56:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00345**	F **-.06049**
Stddev	.00008	.13580
%RSD	2.1999	224.50
#1	.00337	.02839
#2	.00351	-.21680
#3	.00349	.00695
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21245.**	**28072.**
Stddev	55.	50.
%RSD	.26059	.17854
#1	21267.	28129.
#2	21182.	28042.
#3	21286.	28043.

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 10:59:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44450	10.004	.39887	.49977	1.0053	.05006	9.9724
Stddev	.00102	.087	.00193	.00139	.0123	.00018	.1041
%RSD	.22854	.87427	.48351	.27854	1.2224	.36520	1.0437
#1	.44541	10.081	.39845	.50105	1.0195	.04994	10.032
#2	.44340	10.022	.39719	.49829	.99904	.04997	10.033
#3	.44469	9.9086	.40098	.49997	.99744	.05027	9.8522
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000						
Range	10.000%						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05004	.20173	.50484	.50565	4.0145	1.0075	F 1.4653
Stddev	.00025	.00042	.00148	.00130	.0392	.0035	.1074
%RSD	.50950	.21067	.29292	.25651	.97694	.34930	7.3278
#1	.05025	.20203	.50449	.50572	4.0578	1.0113	1.5395
#2	.04975	.20125	.50356	.50431	4.0043	1.0043	1.3421
#3	.05010	.20192	.50646	.50690	3.9814	1.0069	1.5141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.1411	F .19101	50.107	1.0108	10.007	.50605	.99467
Stddev	3.9929	1.4485	.584	.0101	.121	.00249	.00189
%RSD	96.421	758.32	1.1654	1.0004	1.2076	.49223	.19002
#1	5.5525	.92780	50.766	1.0220	10.132	.50883	.99399
#2	7.2365	1.1230	49.900	1.0080	9.9985	.50533	.99322
#3	-.36580	-1.4777	49.655	1.0024	9.8908	.50401	.99681
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	-10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 10:59:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.328**	**.50460**	**10.730**	**.50688**	F **-49.715**	F **11.503**	F **-58.887**
Stddev	.636	.00106	17.183	.00272	13.872	1.261	64.247
%RSD	1.2642	.21066	160.14	.53631	27.902	10.959	109.10
#1	51.063	.50573	28.198	.50384	-60.819	10.696	-16.286
#2	49.981	.50362	10.146	.50909	-54.160	10.858	-27.589
#3	49.942	.50445	-6.1540	.50771	-34.165	12.956	-132.79
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value					10.000	10.000	10.000
Range					-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2004**	**.40118**	**4.9982**	**.94368**	**1.0053**	**1.0006**	**.50681**
Stddev	.0025	.00335	.0265	.00202	.0120	.0155	.00376
%RSD	.20540	.83517	.52958	.21356	1.1969	1.5481	.74225
#1	1.1985	.40147	5.0103	.94224	1.0183	1.0167	.50802
#2	1.1994	.39769	4.9678	.94281	1.0030	.99907	.50259
#3	1.2032	.40438	5.0164	.94598	.99456	.98586	.50981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

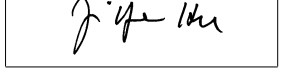
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0017**	**1.0073**	F **.83524**
Stddev	.0006	.0024	.15625
%RSD	.06429	.23583	18.707
#1	1.0016	1.0064	.66735
#2	1.0012	1.0056	.86195
#3	1.0024	1.0100	.97641
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 10:59:41 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22056.**	**28952.**
Stddev	42.	141.
%RSD	.18832	.48591
#1	22080.	28846.
#2	22081.	28898.
#3	22008.	29112.

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 11:02:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.00188**	**.00261**	**.00152**	**.00016**	**.00001**	**.00419**
Stddev	.00042	.00319	.00072	.00074	.00006	.00002	.01273
%RSD	67.595	169.30	27.547	48.976	36.076	151.67	303.59
#1	-.00041	.00537	.00185	.00197	.00022	.00004	-.00922
#2	-.00035	.00118	.00269	.00066	.00012	.00000	.00570
#3	-.00110	-.00089	.00328	.00192	.00013	.00000	.01610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00030**	**.00040**	**.00070**	**.00025**	**.00093**	F **.25275**
Stddev	.00013	.00055	.00024	.00076	.00185	.00380	.16653
%RSD	430.89	184.50	59.707	107.92	743.07	408.57	65.885
#1	.00001	-.00005	.00054	.00001	-.00171	-.00322	.40065
#2	-.00017	.00001	.00054	.00058	.00198	.00425	.28522
#3	.00008	.00094	.00012	.00151	.00048	.00176	.07238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.88367**	F **1.2523**	**.02215**	**.00323**	**-.00098**	**.00012**	**.00281**
Stddev	6.1474	.2262	.00961	.00032	.01039	.00002	.00249
%RSD	695.67	18.063	43.387	9.7799	1060.1	20.597	88.716
#1	-.54098	1.4889	.02057	.00339	-.00012	.00014	.00083
#2	-7.1953	1.2298	.03245	.00286	.00895	.00009	.00199
#3	5.0852	1.0382	.01343	.00343	-.01177	.00013	.00561
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

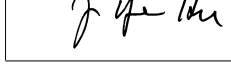
Sample Name: CCB Acquired: 6/4/2013 11:02:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00345**	**.00123**	F **10.386**	**.00006**	F **-32.094**	**.40199**	F **-18.657**
Stddev	.00195	.00072	10.934	.00194	39.005	.11747	.290
%RSD	56.493	58.528	105.28	3080.6	121.53	29.222	1.5531
#1	.00394	.00069	17.108	-.00206	10.127	.30350	-18.410
#2	.00131	.00095	-2.2307	.00053	-66.786	.37046	-18.585
#3	.00512	.00205	16.281	.00173	-39.624	.53201	-18.976
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**.00341**	**.00669**	**.00169**	**.00009**	**.00036**	**.00115**
Stddev	.00161	.00159	.00929	.00244	.00001	.00031	.00076
%RSD	125.10	46.513	138.85	144.36	8.3331	87.316	65.787
#1	-.00016	.00160	-.00073	-.00026	.00010	.00012	.00028
#2	.00100	.00456	.00369	.00090	.00008	.00024	.00152
#3	.00302	.00407	.01711	.00443	.00008	.00071	.00166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00017**	**.00145**	**.07452**
Stddev	.00019	.00203	.29537
%RSD	117.38	140.17	396.35
#1	.00028	.00000	-.24575
#2	-.00006	.00058	.33621
#3	.00028	.00377	.13311
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 11:02:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21836.**	**28827.**
Stddev	44.	54.
%RSD	.20212	.18866
#1	21796.	28778.
#2	21828.	28886.
#3	21883.	28818.

Approved: June 05, 2013

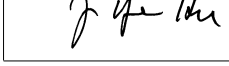
Sample Name: L1305144806 Acquired: 6/4/2013 11:06:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.06347**	**.00023**	**.01653**	**.03323**	**.00004**
Stddev	.00030	.00542	.00038	.00120	.00038	.00001
%RSD	125.26	8.5381	164.52	7.2834	1.1448	27.119
#1	-.00024	.06541	.00000	.01757	.03317	.00004
#2	-.00053	.06765	.00067	.01521	.03287	.00003
#3	.00006	.05735	.00003	.01681	.03363	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.888**	**.00072**	**.00042**	**.00123**	**.00016**	**.11543**
Stddev	.361	.00012	.00009	.00036	.00007	.00264
%RSD	.38878	16.296	20.455	29.296	46.438	2.2852
#1	93.168	.00085	.00048	.00137	.00018	.11256
#2	92.480	.00061	.00046	.00150	.00008	.11775
#3	93.016	.00071	.00032	.00082	.00021	.11597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58767**	**9.1314**	**10.236**	**1.6123**	**6.6806**	**.01751**
Stddev	.00299	.0679	7.180	1.3609	.0157	.00184
%RSD	.50829	.74403	70.137	84.406	.23426	10.504
#1	.58892	9.2079	13.001	2.7715	6.6721	.01898
#2	.58982	9.0780	2.0856	.11388	6.6987	.01811
#3	.58426	9.1083	15.623	1.9516	6.6710	.01545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



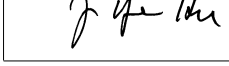
Sample Name: L1305144806 Acquired: 6/4/2013 11:06:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.047**	**.15644**	**.00052**	**19.301**	**.00586**	**32.841**
Stddev	.700	.00090	.00008	.112	.00016	10.993
%RSD	.78642	.57402	14.598	.58234	2.7625	33.473
#1	89.805	.15681	.00043	19.413	.00602	22.781
#2	88.424	.15541	.00057	19.188	.00586	31.168
#3	88.913	.15709	.00055	19.303	.00569	44.575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**8.2466**	F **4022.1**	F **-214240.**	**-.00019**	**.00177**
Stddev	.00226	5.7957	11.0	783.	.00075	.00093
%RSD	158.13	70.280	.27456	.36542	399.51	52.420
#1	-.00092	8.7649	4034.8	-215110.	-.00106	.00198
#2	.00358	13.766	4017.0	-213590.	.00025	.00257
#3	.00162	2.2092	4014.5	-214020.	.00024	.00075
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1392**	**-.00172**	**.58316**	**.00002**	**.00011**	**.00040**
Stddev	.0068	.00011	.00289	.00069	.00113	.00009
%RSD	.31903	6.6370	.49495	2910.1	1064.2	22.243
#1	2.1459	-.00183	.58648	-.00034	.00000	.00049
#2	2.1393	-.00160	.58122	-.00041	-.00097	.00032
#3	2.1323	-.00173	.58179	.00082	.00129	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

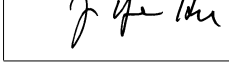
Approved: June 05, 2013



Sample Name: L1305144806 Acquired: 6/4/2013 11:06:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00582**	**.04063**
Stddev	.00002	.27467
%RSD	.26262	675.98
#1	.00581	.35558
#2	.00581	-.14921
#3	.00583	-.08448
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21221.**	**28537.**
Stddev	33.	156.
%RSD	.15343	.54716
#1	21203.	28414.
#2	21258.	28713.
#3	21201.	28485.

Approved: June 05, 2013



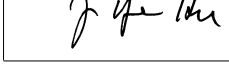
Sample Name: L1305144807 Acquired: 6/4/2013 11:10:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**.08733**	**.00108**	**.01278**	**.03048**	**.00003**	**42.863**
Stddev	.00019	.01560	.00065	.00033	.00048	.00002	.204
%RSD	133.18	17.864	59.997	2.6019	1.5842	74.443	.47617
#1	-.00011	.10534	.00128	.01308	.03012	.00002	43.048
#2	.00003	.07808	.00160	.01242	.03028	.00005	42.896
#3	-.00035	.07856	.00035	.01285	.03103	.00001	42.644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.00023**	**.00075**	**.00071**	**.09277**	**.25219**	**3.3137**
Stddev	.00011	.00009	.00009	.00063	.00231	.00412	.3105
%RSD	37.691	37.069	12.364	88.272	2.4914	1.6330	9.3716
#1	.00043	.00029	.00077	.00112	.09341	.24799	3.2294
#2	.00027	.00026	.00065	-.00001	.09470	.25622	3.6577
#3	.00021	.00013	.00083	.00103	.09021	.25235	3.0540
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3786**	**1.3566**	**3.8350**	**.01218**	**25.514**	**.02093**	**-.00019**
Stddev	6.8140	.8426	.0323	.00116	.086	.00015	.00016
%RSD	286.47	62.113	.84103	9.5103	.33719	.70342	81.277
#1	-5.4552	.45912	3.8141	.01186	25.423	.02109	-.00037
#2	5.6597	2.1308	3.8187	.01121	25.524	.02081	-.00007
#3	6.9314	1.4798	3.8721	.01346	25.595	.02088	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305144807 Acquired: 6/4/2013 11:10:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.512**	**.00137**	**42.519**	**.00029**	F **-67.588**	F **1684.1**	F **-87629.**
Stddev	.120	.00036	24.140	.00083	22.670	14.6	477.
%RSD	.40792	26.300	56.775	288.98	33.542	.86684	.54480
#1	29.634	.00157	64.676	-.00011	-91.747	1681.9	-87538.
#2	29.509	.00096	16.793	.00125	-64.238	1699.7	-88146.
#3	29.394	.00160	46.090	-.00027	-46.779	1670.8	-87204.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00110**	**.00197**	**1.9481**	**-.00179**	**.25502**	**.00287**	**-.00090**
Stddev	.00117	.00045	.0240	.00013	.00091	.00073	.00161
%RSD	106.19	22.787	1.2334	7.5079	.35818	25.498	178.79
#1	.00002	.00170	1.9499	-.00176	.25578	.00205	-.00075
#2	-.00101	.00248	1.9711	-.00167	.25527	.00346	-.00257
#3	-.00231	.00171	1.9232	-.00193	.25401	.00311	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00050**	**.00525**	**.18525**
Stddev	.00020	.00002	.16592
%RSD	40.947	.42424	89.565
#1	.00058	.00524	.02985
#2	.00027	.00524	.35999
#3	.00065	.00528	.16592
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144807 Acquired: 6/4/2013 11:10:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21711.**	**28393.**
Stddev	53.	47.
%RSD	.24227	.16640
#1	21751.	28365.
#2	21652.	28366.
#3	21732.	28448.

Approved: June 05, 2013

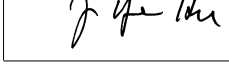
Sample Name: L1305144808 Acquired: 6/4/2013 11:13:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00977**	**.00047**	**.01276**	**.02942**	**.00001**	**42.767**
Stddev	.00028	.00784	.00158	.00056	.00036	.00001	.235
%RSD	1083.8	80.301	337.21	4.4163	1.2087	73.635	.55033
#1	-.00025	.01775	.00228	.01310	.02979	.00001	42.503
#2	-.00012	.00207	-.00025	.01211	.02909	.00000	42.956
#3	.00029	.00948	-.00062	.01307	.02938	.00002	42.842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00004**	**.00070**	**.00015**	**.01423**	**.25687**	**3.0443**
Stddev	.00004	.00006	.00019	.00025	.00199	.00343	.3566
%RSD	15.461	171.51	27.452	169.74	14.016	1.3363	11.713
#1	.00030	-.00003	.00049	.00041	.01438	.26001	3.3890
#2	.00026	.00005	.00075	.00011	.01613	.25739	3.0669
#3	.00022	.00009	.00087	-.00008	.01216	.25321	2.6769
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.4954**	**1.7169**	**3.9369**	**.00568**	**25.543**	**.00934**	**-.00039**
Stddev	4.1871	1.2987	.0484	.00089	.261	.00007	.00017
%RSD	55.863	75.641	1.2289	15.714	1.0225	.75843	42.637
#1	11.441	1.0136	3.9859	.00591	25.796	.00931	-.00044
#2	7.9416	.92158	3.8892	.00644	25.274	.00929	-.00052
#3	3.1030	3.2156	3.9357	.00470	25.559	.00942	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



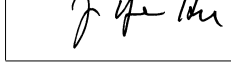
Sample Name: L1305144808 Acquired: 6/4/2013 11:13:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.351**	**.00146**	**26.739**	**.00210**	F **51.650**	F **1709.4**	F **-89487.**
Stddev	.245	.00032	14.861	.00104	4.859	1.1	270.
%RSD	.83350	22.005	55.579	49.477	9.4074	.06247	.30160
#1	29.490	.00110	28.949	.00102	52.864	1708.2	-89491.
#2	29.069	.00158	10.897	.00219	55.787	1710.3	-89216.
#3	29.494	.00171	40.372	.00308	46.299	1709.6	-89756.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00153**	**.00041**	**1.8755**	**-.00186**	**.25206**	**.00012**	**.00012**
Stddev	.00033	.00199	.0009	.00004	.00098	.00074	.00106
%RSD	21.474	488.25	.04648	2.1759	.38990	621.70	870.84
#1	-.00163	-.00127	1.8755	-.00189	.25295	.00024	-.00002
#2	-.00180	-.00011	1.8764	-.00186	.25100	.00079	-.00086
#3	-.00117	.00261	1.8746	-.00181	.25223	-.00068	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00039**	**.00569**	**.12973**
Stddev	.00005	.00009	.08429
%RSD	13.135	1.5027	64.977
#1	.00038	.00574	.04335
#2	.00035	.00559	.13407
#3	.00045	.00574	.21176
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305144808 Acquired: 6/4/2013 11:13:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21794.**	**29108.**
Stddev	46.	155.
%RSD	.21241	.53274
#1	21795.	28952.
#2	21840.	29262.
#3	21747.	29110.

Approved: June 05, 2013

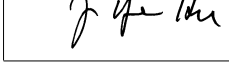
Sample Name: L1305144809 Acquired: 6/4/2013 11:17:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.05824**	**.00054**	**.01645**	**.03270**	**.00004**
Stddev	.00018	.00194	.00043	.00048	.00030	.00002
%RSD	66.334	3.3388	79.973	2.9038	.92952	37.436
#1	-.00008	.05648	.00077	.01699	.03280	.00005
#2	-.00043	.06033	.00004	.01629	.03236	.00003
#3	-.00031	.05791	.00081	.01608	.03294	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.26**	**.00084**	**.00045**	**.00107**	**.00049**	**.11255**
Stddev	.95	.00012	.00013	.00027	.00018	.00206
%RSD	.91249	13.979	27.864	25.414	36.952	1.8279
#1	103.48	.00072	.00039	.00086	.00035	.11467
#2	105.32	.00086	.00060	.00098	.00043	.11056
#3	103.99	.00095	.00036	.00138	.00070	.11242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60296**	**10.269**	**8.9810**	**1.0203**	**7.2236**	**.01719**
Stddev	.00421	.203	2.6879	1.8288	.0452	.00109
%RSD	.69892	1.9761	29.929	179.24	.62537	6.3250
#1	.60567	10.056	10.997	.63007	7.2232	.01665
#2	.59810	10.460	10.017	3.0128	7.2690	.01845
#3	.60510	10.290	5.9292	-.58185	7.1787	.01648
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



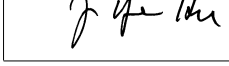
Sample Name: L1305144809 Acquired: 6/4/2013 11:17:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**99.267**	**.10372**	**.00015**	**19.027**	**.00513**	**51.125**
Stddev	.322	.00070	.00010	.033	.00037	8.987
%RSD	.32445	.67251	70.418	.17485	7.1475	17.578
#1	99.007	.10303	.00026	19.023	.00499	40.798
#2	99.627	.10442	.00013	19.062	.00486	57.174
#3	99.168	.10370	.00005	18.996	.00555	55.402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00159**	F **95.830**	F **4375.8**	F **-234010.**	**.00055**	**.00293**
Stddev	.00061	17.101	24.9	1128.	.00163	.00084
%RSD	38.574	17.845	.56982	.48187	297.60	28.677
#1	.00163	111.24	4365.9	-233700.	-.00002	.00258
#2	.00096	77.432	4404.2	-235260.	.00238	.00389
#3	.00218	98.819	4357.3	-233070.	-.00073	.00232
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1795**	**-.00185**	**.61448**	**.00008**	**.00040**	**.00021**
Stddev	.0117	.00029	.00130	.00113	.00180	.00013
%RSD	.53572	15.923	.21224	1349.5	450.93	60.495
#1	2.1738	-.00151	.61388	-.00121	-.00168	.00012
#2	2.1929	-.00205	.61598	.00056	.00141	.00016
#3	2.1718	-.00198	.61359	.00090	.00147	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144809 Acquired: 6/4/2013 11:17:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00525**	**.06576**
Stddev	.00003	.25419
%RSD	.66256	386.54
#1	.00525	-.01342
#2	.00529	.35011
#3	.00522	-.13942
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21352.**	**28622.**
Stddev	65.	112.
%RSD	.30377	.39237
#1	21421.	28719.
#2	21291.	28499.
#3	21345.	28648.

Approved: June 05, 2013

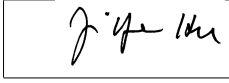
Sample Name: L1305145805 Acquired: 6/4/2013 11:20:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.08076**	**.00148**	**.03105**	**.01934**	**.00006**
Stddev	.00051	.00748	.00172	.00015	.00009	.00003
%RSD	439.59	9.2606	116.29	.47978	.48813	47.251
#1	.00016	.07350	.00117	.03107	.01931	.00008
#2	-.00071	.08035	-.00006	.03089	.01944	.00003
#3	.00020	.08844	.00334	.03119	.01926	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**183.03**	**.00075**	**.00070**	**.00149**	**.00087**	**.21235**
Stddev	.68	.00016	.00013	.00012	.00037	.00354
%RSD	.37075	21.614	18.647	8.3171	43.107	1.6673
#1	183.80	.00062	.00065	.00135	.00046	.20925
#2	182.51	.00093	.00085	.00158	.00097	.21158
#3	182.79	.00070	.00060	.00153	.00119	.21621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43971**	**10.195**	**9.6854**	**1.6354**	**8.0430**	**.02923**
Stddev	.00413	.118	2.7611	1.2636	.0449	.00118
%RSD	.94002	1.1615	28.507	77.270	.55768	4.0530
#1	.43810	10.232	9.6145	.45960	8.0631	.02829
#2	.44440	10.063	12.481	2.9715	8.0744	.03056
#3	.43662	10.292	6.9605	1.4749	7.9916	.02884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



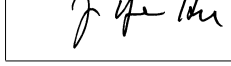
Sample Name: L1305145805 Acquired: 6/4/2013 11:20:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**100.38**	**.22784**	**.01625**	**43.455**	**.00522**	F **604.05**
Stddev	.55	.00038	.00008	.233	.00030	26.48
%RSD	.54908	.16585	.50769	.53508	5.6732	4.3838
#1	100.87	.22781	.01630	43.650	.00535	588.12
#2	100.48	.22748	.01615	43.517	.00488	589.42
#3	99.782	.22823	.01628	43.198	.00543	634.62
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						450.00
Low Limit						-.00400

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00214**	F **77.889**	F **6002.5**	F **-322950.**	**-.00101**	**-.00003**
Stddev	.00082	13.731	24.2	1155.	.00358	.00052
%RSD	38.269	17.629	.40350	.35769	354.09	1511.6
#1	.00250	76.921	6001.4	-323310.	-.00405	.00022
#2	.00272	64.668	5978.9	-321660.	.00293	-.00063
#3	.00120	92.079	6027.3	-323890.	-.00190	.00031
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2629**	**-.00164**	**.44084**	**-.00112**	**.00059**	**.00090**
Stddev	.0061	.00027	.00353	.00006	.00113	.00025
%RSD	.48008	16.360	.80106	5.1634	192.04	27.466
#1	1.2655	-.00133	.44402	-.00112	.00189	.00117
#2	1.2559	-.00182	.44146	-.00106	-.00016	.00071
#3	1.2672	-.00177	.43704	-.00118	.00004	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

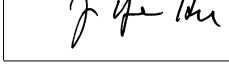
Approved: June 05, 2013



Sample Name: L1305145805 Acquired: 6/4/2013 11:20:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00419**	**.19807**
Stddev	.00004	.24258
%RSD	1.0544	122.47
#1	.00423	.36547
#2	.00414	-.08013
#3	.00420	.30887
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21056.**	**28977.**
Stddev	55.	69.
%RSD	.25899	.23675
#1	21053.	28902.
#2	21112.	28995.
#3	21003.	29035.

Approved: June 05, 2013



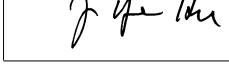
Sample Name: L1305145806 Acquired: 6/4/2013 11:23:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00404**	**.00009**	**.03209**	**.02286**	**.00003**
Stddev	.00039	.01700	.00086	.00077	.00041	.00002
%RSD	309.96	421.17	1004.6	2.3882	1.7900	81.948
#1	.00025	.02086	-.00027	.03161	.02308	.00002
#2	-.00010	.00439	.00107	.03168	.02239	.00005
#3	-.00053	-.01314	-.00054	.03297	.02311	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**190.71**	**.00086**	**.00066**	**.00174**	**.00065**	**.02979**
Stddev	.67	.00003	.00002	.00026	.00006	.00018
%RSD	.35162	4.0382	3.2964	14.814	8.9814	.60616
#1	191.46	.00087	.00065	.00153	.00070	.02964
#2	190.48	.00082	.00069	.00167	.00066	.02999
#3	190.18	.00089	.00065	.00203	.00058	.02975
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46924**	**10.780**	**10.863**	**1.1429**	**8.3541**	**.03141**
Stddev	.00402	.070	6.224	.7070	.1065	.00080
%RSD	.85704	.65069	57.296	61.856	1.2753	2.5430
#1	.47106	10.725	4.8265	.32935	8.4703	.03233
#2	.47202	10.754	10.503	1.4916	8.2609	.03099
#3	.46463	10.859	17.259	1.6078	8.3312	.03090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



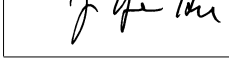
Sample Name: L1305145806 Acquired: 6/4/2013 11:23:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.10**	**.19495**	**.01649**	**45.547**	**.00518**	**449.31**
Stddev	.71	.00132	.00013	.193	.00048	8.05
%RSD	.67866	.67633	.77573	.42431	9.2432	1.7909
#1	105.77	.19641	.01663	45.745	.00572	454.12
#2	104.35	.19385	.01642	45.359	.00480	453.80
#3	105.19	.19460	.01641	45.538	.00504	440.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	F **47.742**	F **6178.1**	F **-331340.**	**-.00061**	**.00158**
Stddev	.00096	50.778	11.4	1621.	.00114	.00165
%RSD	187.37	106.36	.18449	.48921	185.90	104.74
#1	.00162	33.762	6173.5	-331910.	.00011	.00146
#2	.00000	104.05	6191.1	-332600.	-.00193	-.00001
#3	-.00008	5.4197	6169.7	-329510.	-.00002	.00328
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2413**	**-.00184**	**.47617**	**-.00242**	**.00007**	**.00079**
Stddev	.0027	.00017	.00318	.00063	.00202	.00004
%RSD	.22071	9.2286	.66813	25.942	3021.3	5.2298
#1	1.2427	-.00173	.47951	-.00306	.00143	.00076
#2	1.2431	-.00204	.47317	-.00237	.00102	.00084
#3	1.2382	-.00176	.47583	-.00181	-.00225	.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

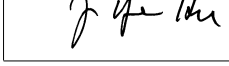
Approved: June 05, 2013



Sample Name: L1305145806 Acquired: 6/4/2013 11:23:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00440**	F **-.32140**
Stddev	.00009	.44785
%RSD	2.0818	139.34
#1	.00430	-.08342
#2	.00446	-.83801
#3	.00445	-.04278
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20895.**	**28795.**
Stddev	71.	180.
%RSD	.33876	.62614
#1	20948.	28619.
#2	20814.	28979.
#3	20922.	28788.

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 11:27:29 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44296	10.036	.39448	.49866	1.0088	.05033	9.9819
Stddev	.00196	.068	.00249	.00218	.0081	.00035	.0568
%RSD	.44298	.67580	.63183	.43656	.80065	.70293	.56899
#1	.44225	10.101	.39348	.49816	1.0121	.05003	10.031
#2	.44144	10.042	.39264	.49677	1.0146	.05024	9.9950
#3	.44517	9.9653	.39732	.50104	.99956	.05072	9.9196
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000						
Range	10.000%						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04971	.20045	.50649	.50400	4.0534	1.0036	.95830
Stddev	.00009	.00034	.00313	.00129	.0279	.0013	.17351
%RSD	.18930	.16781	.61880	.25558	.68923	.12745	18.106
#1	.04972	.20008	.50454	.50252	4.0693	1.0029	.81450
#2	.04960	.20053	.50483	.50477	4.0698	1.0028	1.1510
#3	.04979	.20074	.51010	.50472	4.0212	1.0051	.90937
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1.7748	F 1.5082	50.388	1.0121	10.073	.50711	.99320
Stddev	2.4855	.2238	.439	.0097	.126	.00427	.00177
%RSD	140.04	14.840	.87130	.96032	1.2551	.84231	.17840
#1	1.3282	1.7252	50.673	1.0166	10.146	.51134	.99178
#2	-.45707	1.5213	50.609	1.0187	10.147	.50720	.99264
#3	4.4533	1.2781	49.882	1.0009	9.9275	.50280	.99519
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	10.000%	10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 11:27:29 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.667**	**.50151**	F **25.458**	**.50268**	F **-10.803**	F **12.371**	F **-102.22**
Stddev	.465	.00192	3.121	.00186	21.730	2.374	117.34
%RSD	.91871	.38379	12.259	.37031	201.16	19.192	114.78
#1	50.962	.50111	24.603	.50362	-35.377	10.876	-25.483
#2	50.908	.49982	22.854	.50054	5.8732	11.128	-43.894
#3	50.130	.50360	28.917	.50389	-2.9037	15.108	-237.30
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1906**	**.40260**	**4.9295**	**.93908**	**1.0030**	**1.0059**	**.50579**
Stddev	.0083	.00098	.0376	.00198	.0089	.0085	.00233
%RSD	.69718	.24409	.76282	.21129	.88601	.84491	.46119
#1	1.1923	.40305	4.9529	.93969	1.0070	1.0098	.50621
#2	1.1816	.40147	4.8861	.93686	1.0092	1.0118	.50327
#3	1.1979	.40327	4.9494	.94068	.99282	.99618	.50788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0014**	**1.0041**	F **.70432**
Stddev	.0019	.0003	.23270
%RSD	.19185	.03180	33.039
#1	.99941	1.0043	.88360
#2	1.0016	1.0038	.78801
#3	1.0032	1.0044	.44135
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 11:27:29 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22015.**	**28842.**
Stddev	123.	161.
%RSD	.56089	.55829
#1	22114.	28717.
#2	22054.	28785.
#3	21877.	29024.

Approved: June 05, 2013

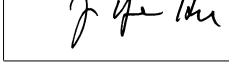
Sample Name: CCB Acquired: 6/4/2013 11:30:43 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.01292**	**.00244**	**.00120**	**.00011**	**-.00002**	**.00538**
Stddev	.00037	.01032	.00030	.00039	.00007	.00001	.00192
%RSD	1752.5	79.906	12.186	32.489	59.302	68.680	35.787
#1	.00044	.01986	.00266	.00160	.00016	-.00003	.00346
#2	-.00027	.00106	.00210	.00083	.00004	-.00002	.00536
#3	-.00011	.01783	.00255	.00115	.00014	-.00001	.00731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.00043**	**.00044**	**.00104**	**.00161**	**.00122**	**.00843**
Stddev	.00020	.00047	.00009	.00134	.00020	.00303	.10534
%RSD	497.28	109.53	19.987	129.03	12.638	249.08	1249.0
#1	-.00027	.00006	.00034	.00000	.00138	.00187	.11317
#2	.00007	.00027	.00048	.00056	.00169	-.00209	-.09749
#3	.00007	.00096	.00050	.00256	.00177	.00387	.00962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **3.5906**	F **1.4979**	**.03418**	**.00262**	**.01445**	**.00004**	**.00353**
Stddev	1.2879	1.2792	.03436	.00130	.00611	.00001	.00309
%RSD	35.868	85.397	100.51	49.781	42.303	35.269	87.607
#1	4.6339	2.3491	.04562	.00292	.01071	.00004	.00116
#2	2.1512	.02691	-.00443	.00375	.01113	.00005	.00240
#3	3.9867	2.1177	.06136	.00119	.02150	.00002	.00703
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



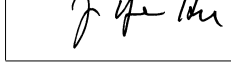
Sample Name: CCB Acquired: 6/4/2013 11:30:43 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00685**	**.00141**	F **2.9308**	**.00170**	F **29.618**	**.54383**	F **-28.200**
Stddev	.00692	.00197	9.3652	.00245	12.530	.08986	1.298
%RSD	101.00	139.88	319.54	144.30	42.307	16.523	4.6016
#1	-.00113	.00052	12.253	-.00017	23.448	.47429	-27.339
#2	.01121	.00004	3.0170	.00079	44.037	.51192	-27.568
#3	.01047	.00367	-6.4772	.00448	21.369	.64529	-29.692
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00185**	**.00286**	**.01072**	**.00226**	**.00007**	**.00068**	**.00123**
Stddev	.00255	.00214	.01078	.00311	.00009	.00104	.00077
%RSD	138.05	74.851	100.50	137.80	139.00	153.27	62.447
#1	-.00073	.00152	.00467	-.00020	.00003	-.00051	.00109
#2	.00191	.00173	.00433	.00122	.00000	.00140	.00054
#3	.00437	.00534	.02317	.00576	.00017	.00114	.00206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**.00198**	**.03923**
Stddev	.00026	.00273	.29769
%RSD	559.69	137.58	758.81
#1	.00034	.00002	.37850
#2	-.00012	.00083	-.17824
#3	-.00009	.00510	-.08257
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

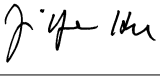
Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 11:30:43 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21989.**	**28969.**
Stddev	16.	158.
%RSD	.07064	.54711
#1	21974.	29083.
#2	21989.	29035.
#3	22005.	28788.

Approved: June 05, 2013



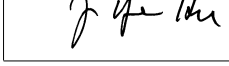
Sample Name: PBW 44 Acquired: 6/4/2013 11:34:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**-.00451**	**.00043**	**-.00041**	**-.00006**	**.00000**	**.03046**
Stddev	.00016	.01411	.00064	.00002	.00016	.00001	.00344
%RSD	26.740	313.02	148.98	4.6334	280.54	583.30	11.282
#1	-.00076	.01178	.00107	-.00039	-.00010	.00001	.03269
#2	-.00056	-.01236	.00041	-.00042	-.00019	.00000	.02650
#3	-.00045	-.01295	-.00020	-.00042	.00012	-.00001	.03218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.00001**	**.00032**	**-.00012**	**.00443**	**-.00091**	**.02877**
Stddev	.00013	.00012	.00029	.00034	.00418	.00056	.24136
%RSD	135.72	2312.5	89.651	274.88	94.501	61.502	838.86
#1	.00005	-.00013	.00000	-.00015	-.00031	-.00093	.14254
#2	-.00017	.00007	.00054	.00023	.00597	-.00146	.19222
#3	-.00016	.00008	.00042	-.00045	.00762	-.00034	-.24845
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.6479**	**.91145**	**.02266**	**-.00087**	**.01791**	**.00029**	**-.00014**
Stddev	3.7155	.94009	.01281	.00077	.00385	.00006	.00029
%RSD	55.890	103.14	56.533	87.669	21.489	19.798	203.60
#1	4.6558	.60417	.03741	-.00004	.02195	.00023	-.00045
#2	10.935	.16344	.01429	-.00102	.01749	.00035	-.00009
#3	4.3532	1.9667	.01629	-.00155	.01429	.00028	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



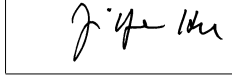
Sample Name: PBW 44 Acquired: 6/4/2013 11:34:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00019**	**9.5715**	**.00030**	F **41.523**	**.60839**	F **-29.776**
Stddev	.00576	.00064	10.457	.00104	30.070	.03484	1.302
%RSD	2208.6	333.39	109.26	343.04	72.419	5.7270	4.3723
#1	-.00535	.00037	21.279	.00069	63.560	.63834	-31.276
#2	-.00004	.00073	6.2782	.00110	7.2666	.61667	-29.122
#3	.00617	-.00052	1.1572	-.00088	53.741	.57015	-28.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00261**	**.00270**	**-.00343**	**-.00157**	**.00033**	**.00036**	**.00029**
Stddev	.00095	.00053	.00198	.00011	.00008	.00101	.00118
%RSD	36.465	19.611	57.789	7.0140	24.346	282.01	410.37
#1	-.00213	.00275	-.00136	-.00154	.00029	.00128	-.00089
#2	-.00371	.00215	-.00531	-.00147	.00028	-.00073	.00146
#3	-.00200	.00320	-.00361	-.00169	.00042	.00053	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00033**	**.00185**	**.23977**
Stddev	.00015	.00010	.28257
%RSD	44.825	5.4570	117.85
#1	.00038	.00176	.10569
#2	.00017	.00183	.56442
#3	.00045	.00196	.04919
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: PBW 44 Acquired: 6/4/2013 11:34:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22385.**	**28835.**
Stddev	52.	144.
%RSD	.23301	.49961
#1	22445.	28973.
#2	22350.	28686.
#3	22360.	28845.

Approved: June 05, 2013

Sample Name: LCSW 44 Acquired: 6/4/2013 11:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18714**	**4.8619**	**.19492**	**.96532**	**.49258**	**.02465**	**4.9953**
Stddev	.00043	.0470	.00132	.00328	.00155	.00008	.0549
%RSD	.23188	.96618	.67783	.34019	.31376	.32624	1.0987
#1	.18762	4.8369	.19636	.96438	.49143	.02474	4.9629
#2	.18704	4.8328	.19375	.96262	.49197	.02460	4.9643
#3	.18677	4.9161	.19466	.96898	.49433	.02460	5.0587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02450**	**.10034**	**.24863**	**.25196**	**1.8935**	**.50320**	**.55169**
Stddev	.00005	.00074	.00033	.00158	.0160	.00503	.52587
%RSD	.19896	.74097	.13322	.62698	.84747	.99988	95.320
#1	.02452	.10109	.24882	.25371	1.8899	.50864	1.1370
#2	.02445	.10032	.24825	.25156	1.8795	.49871	.11904
#3	.02454	.09960	.24883	.25062	1.9110	.50227	.39903
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.48968**	**.38793**	**24.294**	**.48778**	**4.8149**	**.24847**	**.49949**
Stddev	5.0029	.23882	.184	.00191	.0261	.00156	.00407
%RSD	1021.7	61.563	.75847	.39105	.54267	.62850	.81397
#1	5.2519	.40214	24.227	.48630	4.7984	.24743	.50417
#2	-3.9120	.61933	24.152	.48712	4.8013	.24771	.49743
#3	-2.8089	.14232	24.502	.48993	4.8450	.25026	.49686
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

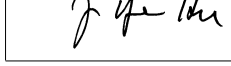
Sample Name: LCSW 44 Acquired: 6/4/2013 11:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.190**	**.24953**	F **-8.3823**	**.24997**	F **34.929**	**5.9106**	F **-39.083**
Stddev	.113	.00088	16.942	.00258	31.283	.1321	1.385
%RSD	.46764	.35318	202.12	1.0333	89.561	2.2350	3.5432
#1	24.124	.25053	-27.749	.25290	36.515	6.0521	-40.413
#2	24.125	.24923	-1.0923	.24800	2.8836	5.7906	-39.187
#3	24.321	.24884	3.6946	.24902	65.389	5.8891	-37.649
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58440**	**.19740**	**2.4405**	**-.00183**	**.48401**	**.48326**	**.25335**
Stddev	.00224	.00054	.0128	.00030	.00435	.00474	.00228
%RSD	.38304	.27221	.52610	16.309	.89935	.98142	.90158
#1	.58686	.19798	2.4435	-.00215	.48287	.48202	.25550
#2	.58387	.19730	2.4264	-.00178	.48034	.47925	.25095
#3	.58248	.19692	2.4516	-.00156	.48882	.48850	.25359
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.48769**	**.49262**	**.38931**
Stddev	.00207	.00346	.20232
%RSD	.42386	.70189	51.971
#1	.48872	.49654	.58002
#2	.48531	.49134	.17709
#3	.48905	.48999	.41080
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: LCSW 44 Acquired: 6/4/2013 11:37:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22138.**	**29209.**
Stddev	82.	185.
%RSD	.37257	.63494
#1	22051.	29313.
#2	22215.	29318.
#3	22148.	28994.

Approved: June 05, 2013

Sample Name: L1305144306 Acquired: 6/4/2013 11:41:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00058**	**.01209**	**.00031**	**.01496**	**.02823**	**.00001**	**41.339**
Stddev	.00026	.01257	.00068	.00049	.00014	.00002	.206
%RSD	44.333	103.99	219.85	3.3060	.48353	215.99	.49867
#1	-.00042	.01867	.00040	.01507	.02811	.00002	41.370
#2	-.00044	-.00241	.00094	.01443	.02821	.00003	41.119
#3	-.00088	.02000	-.00041	.01540	.02838	-.00001	41.528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00030**	**.00065**	**.00090**	**.01071**	**.24736**	**2.8770**
Stddev	.00006	.00027	.00032	.00058	.00085	.00247	.0839
%RSD	18.931	87.276	48.988	64.390	7.9043	.99835	2.9170
#1	.00028	.00023	.00043	.00111	.01045	.24451	2.9028
#2	.00033	.00008	.00050	.00025	.01166	.24885	2.9450
#3	.00041	.00060	.00102	.00135	.01003	.24872	2.7832
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.400**	**1.0726**	**3.7586**	**.00618**	**24.425**	**.00882**	**.00160**
Stddev	2.888	.4666	.0522	.00042	.115	.00008	.00161
%RSD	25.333	43.499	1.3886	6.7791	.47161	.87359	100.55
#1	14.612	1.0036	3.7807	.00597	24.424	.00889	.00028
#2	10.570	.64435	3.7962	.00591	24.310	.00874	.00113
#3	9.0185	1.5698	3.6990	.00666	24.540	.00884	.00340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: L1305144306 Acquired: 6/4/2013 11:41:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.233**	**.00181**	**13.652**	**.00225**	F **33.311**	F **1641.3**	F **-86324.**
Stddev	.089	.00085	8.177	.00059	20.700	8.6	157.
%RSD	.31612	47.198	59.898	26.135	62.141	.52289	.18179
#1	28.179	.00191	15.629	.00289	43.340	1649.8	-86499.
#2	28.185	.00091	20.660	.00214	9.5069	1641.4	-86275.
#3	28.336	.00260	4.6676	.00173	47.086	1632.7	-86197.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00299**	**1.8020**	**-.00181**	**.24238**	**.00027**	**.00168**
Stddev	.00302	.00104	.0035	.00013	.00121	.00053	.00174
%RSD	16705.	34.800	.19377	7.4015	.49809	193.29	103.67
#1	-.00007	.00396	1.8041	-.00168	.24245	.00083	.00141
#2	-.00301	.00189	1.8040	-.00195	.24113	.00020	.00009
#3	.00303	.00314	1.7980	-.00182	.24355	-.00021	.00354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00020**	**.00591**	F **-.23255**
Stddev	.00024	.00139	.32709
%RSD	122.59	23.523	140.65
#1	.00024	.00484	-.24792
#2	.00041	.00540	-.55168
#3	-.00006	.00748	.10195
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013

Sample Name: L1305144306 Acquired: 6/4/2013 11:41:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21892.**	**29624.**
Stddev	29.	245.
%RSD	.13420	.82547
#1	21899.	29464.
#2	21918.	29906.
#3	21860.	29503.

Approved: June 05, 2013

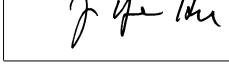
Sample Name: L1305144306S Acquired: 6/4/2013 11:44:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19078**	**4.9684**	**.19777**	**1.0032**	**.53010**	**.02499**	**46.680**
Stddev	.00085	.0382	.00243	.0045	.00614	.00006	.118
%RSD	.44439	.76880	1.2284	.44510	1.1587	.23870	.25292
#1	.19025	5.0081	.20057	1.0001	.53718	.02497	46.815
#2	.19034	4.9320	.19658	1.0012	.52692	.02494	46.630
#3	.19176	4.9651	.19617	1.0084	.52620	.02506	46.595
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02508**	**.10002**	**.25032**	**.25023**	**1.9352**	**.73535**	**3.3108**
Stddev	.00008	.00010	.00143	.00067	.0179	.00020	.1173
%RSD	.29979	.10053	.57083	.26714	.92697	.02732	3.5437
#1	.02506	.10011	.24884	.25090	1.9559	.73517	3.2393
#2	.02516	.09991	.25043	.24956	1.9253	.73531	3.4462
#3	.02501	.10004	.25169	.25023	1.9244	.73556	3.2469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9200**	**2.0251**	**28.710**	**.50498**	**29.066**	**.25694**	**.50339**
Stddev	3.3914	1.3892	.308	.00830	.187	.00110	.00102
%RSD	116.14	68.597	1.0743	1.6445	.64367	.42800	.20291
#1	.20197	1.9609	29.058	.51434	29.282	.25795	.50457
#2	6.7206	3.4452	28.470	.49851	28.948	.25577	.50282
#3	1.8376	.66914	28.602	.50208	28.968	.25710	.50279
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



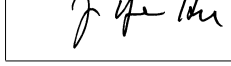
Sample Name: L1305144306S Acquired: 6/4/2013 11:44:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.010**	**.24883**	**19.076**	**.24616**	F **54.906**	F **1621.2**	F **-85416.**
Stddev	.688	.00128	6.521	.00103	36.658	10.0	156.
%RSD	1.2987	.51348	34.183	.41969	66.764	.61580	.18221
#1	53.804	.24956	18.457	.24708	37.371	1631.9	-85595.
#2	52.649	.24957	25.884	.24636	30.309	1619.8	-85326.
#3	52.577	.24736	12.887	.24504	97.038	1612.1	-85326.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59125**	**.19747**	**4.2399**	**-.00176**	**.73638**	**.49888**	**.24790**
Stddev	.00145	.00093	.0199	.00042	.00820	.00375	.00281
%RSD	.24459	.47125	.46936	24.026	1.1140	.75083	1.1347
#1	.59265	.19799	4.2618	-.00205	.74581	.50305	.25115
#2	.58977	.19802	4.2349	-.00196	.73093	.49778	.24627
#3	.59134	.19640	4.2229	-.00128	.73239	.49580	.24628
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49750**	**.49157**	**.52485**
Stddev	.00207	.00183	.05741
%RSD	.41587	.37297	10.939
#1	.49642	.49292	.56978
#2	.49620	.49231	.46017
#3	.49989	.48949	.54459
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305144306S Acquired: 6/4/2013 11:44:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21710.**	**28855.**
Stddev	24.	157.
%RSD	.10900	.54276
#1	21720.	28680.
#2	21727.	28982.
#3	21683.	28902.

Approved: June 05, 2013

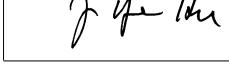
Sample Name: L1305144306DP Acquired: 6/4/2013 11:48:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00032**	**.00216**	**.00090**	**.01469**	**.02767**	**.00002**	**40.142**
Stddev	.00016	.00919	.00084	.00069	.00008	.00001	.137
%RSD	48.993	426.00	93.168	4.7283	.27111	67.084	.34077
#1	-.00041	.01174	.00028	.01407	.02760	.00003	40.300
#2	-.00014	.00130	.00185	.01455	.02766	.00002	40.063
#3	-.00040	-.00657	.00056	.01544	.02775	.00000	40.063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.00034**	**.00065**	**.00052**	**.01821**	**.24200**	**3.0361**
Stddev	.00011	.00025	.00011	.00088	.00152	.00381	.1465
%RSD	28.265	73.470	16.793	167.99	8.3419	1.5756	4.8252
#1	.00027	.00010	.00073	-.00016	.01716	.23760	3.0017
#2	.00038	.00032	.00069	.00022	.01752	.24396	3.1968
#3	.00049	.00059	.00052	.00151	.01996	.24443	2.9099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0162**	**2.3767**	**3.5784**	**.00790**	**23.631**	**.00869**	**.00162**
Stddev	7.8737	.6804	.0106	.00209	.094	.00005	.00163
%RSD	774.85	28.629	.29632	26.490	.39814	.55171	100.74
#1	-6.7269	1.6339	3.5668	.00893	23.691	.00872	.00053
#2	.76107	2.9699	3.5876	.00927	23.522	.00864	.00083
#3	9.0143	2.5262	3.5807	.00549	23.678	.00872	.00350
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



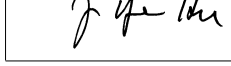
Sample Name: L1305144306DP Acquired: 6/4/2013 11:48:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-06

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.313**	**.00212**	**10.248**	**.00097**	F **-71.763**	F **1576.0**	F **-83628.**
Stddev	.146	.00045	13.298	.00019	11.103	9.7	517.
%RSD	.53508	21.108	129.77	19.110	15.472	.61743	.61808
#1	27.422	.00197	11.802	.00084	-82.446	1564.8	-83099.
#2	27.147	.00176	-3.7593	.00089	-72.560	1581.9	-83655.
#3	27.369	.00262	22.700	.00118	-60.283	1581.3	-84132.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00318**	**1.7517**	**-.00160**	**.23417**	**-.00005**	**.00145**
Stddev	.00254	.00185	.0170	.00025	.00107	.00087	.00077
%RSD	779.97	58.405	.97088	15.881	.45572	1781.1	52.930
#1	-.00161	.00211	1.7353	-.00139	.23519	-.00018	.00104
#2	-.00062	.00532	1.7506	-.00153	.23426	-.00085	.00234
#3	.00321	.00210	1.7693	-.00188	.23306	.00088	.00098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00018**	**.00565**	F **-.20259**
Stddev	.00026	.00137	.11714
%RSD	139.76	24.190	57.821
#1	-.00010	.00465	-.06861
#2	.00027	.00509	-.25349
#3	.00039	.00721	-.28566
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013



Sample Name: L1305144306DP Acquired: 6/4/2013 11:48:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-06

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21874.**	**29333.**
Stddev	97.	66.
%RSD	.44305	.22359
#1	21966.	29273.
#2	21885.	29403.
#3	21773.	29322.

Approved: June 05, 2013

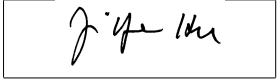
Sample Name: L1305144301 Acquired: 6/4/2013 11:51:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.30372**	**.00102**	**.01388**	**.03621**	**.00013**
Stddev	.00036	.00362	.00024	.00015	.00066	.00002
%RSD	499.67	1.1920	23.752	1.0995	1.8342	17.620
#1	-.00015	.30500	.00079	.01372	.03545	.00015
#2	-.00039	.30653	.00127	.01403	.03666	.00011
#3	.00032	.29963	.00101	.01390	.03652	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**55.519**	**.00059**	**.00369**	**.00101**	**.00237**	**.38202**
Stddev	.230	.00011	.00006	.00019	.00045	.00506
%RSD	.41396	18.517	1.7547	18.597	19.217	1.3247
#1	55.308	.00046	.00372	.00116	.00279	.37670
#2	55.484	.00063	.00373	.00080	.00242	.38677
#3	55.764	.00067	.00361	.00106	.00189	.38260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.32577**	**4.9188**	**4.3779**	**.48214**	**4.6530**	**.00920**
Stddev	.00214	.2051	9.1953	.68654	.0289	.00017
%RSD	.65670	4.1693	210.04	142.39	.62171	1.8942
#1	.32582	4.7792	-5.7958	.15102	4.6323	.00936
#2	.32360	4.8230	6.8330	.02393	4.6861	.00901
#3	.32788	5.1543	12.096	1.2715	4.6406	.00923
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



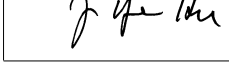
Sample Name: L1305144301 Acquired: 6/4/2013 11:51:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.928**	**.13008**	**-.00027**	**15.670**	**.00752**	**45.430**
Stddev	.277	.00057	.00029	.086	.00033	6.801
%RSD	.67742	.43941	106.86	.54776	4.3278	14.970
#1	40.617	.12962	.00006	15.573	.00717	52.915
#2	41.149	.13072	-.00038	15.699	.00758	43.745
#3	41.019	.12990	-.00049	15.737	.00781	39.630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00192**	F **34.451**	F **2096.8**	F **-110610.**	**-.00010**	**.00254**
Stddev	.00140	38.822	6.4	388.	.00236	.00136
%RSD	72.613	112.69	.30420	.35050	2340.7	53.747
#1	.00313	71.077	2093.2	-110330.	.00114	.00244
#2	.00039	38.522	2104.1	-111050.	.00138	.00395
#3	.00225	-6.2457	2092.9	-110450.	-.00283	.00122
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3617**	**-.00171**	**.32578**	**.00356**	**-.00044**	**.00052**
Stddev	.0081	.00033	.00184	.00085	.00060	.00008
%RSD	.34320	19.071	.56519	23.810	137.59	15.370
#1	2.3540	-.00176	.32367	.00431	-.00085	.00046
#2	2.3702	-.00201	.32706	.00372	.00025	.00061
#3	2.3609	-.00136	.32662	.00264	-.00070	.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

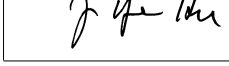
Approved: June 05, 2013



Sample Name: L1305144301 Acquired: 6/4/2013 11:51:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01572**	**.35625**
Stddev	.00007	.25304
%RSD	.46652	71.028
#1	.01570	.18962
#2	.01581	.64742
#3	.01566	.23172
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21739.**	**29011.**
Stddev	37.	173.
%RSD	.17214	.59755
#1	21777.	29180.
#2	21703.	28834.
#3	21739.	29019.

Approved: June 05, 2013



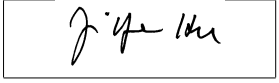
Sample Name: L1305144302 Acquired: 6/4/2013 11:55:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.04919**	**-.00049**	**.01357**	**.03364**	**.00002**
Stddev	.00029	.01326	.00061	.00083	.00042	.00002
%RSD	329.92	26.963	125.68	6.0846	1.2372	79.418
#1	-.00039	.05816	-.00032	.01348	.03319	.00000
#2	-.00007	.03396	.00002	.01279	.03371	.00004
#3	.00019	.05545	-.00117	.01443	.03402	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.483**	**.00046**	**.00260**	**.00071**	**.00082**	**.01100**
Stddev	.107	.00005	.00014	.00024	.00006	.00272
%RSD	.19648	10.141	5.2833	33.911	7.3013	24.720
#1	54.587	.00047	.00251	.00048	.00078	.00999
#2	54.373	.00040	.00276	.00096	.00089	.01408
#3	54.489	.00049	.00253	.00069	.00079	.00893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.32218**	**4.6952**	**10.591**	**1.1526**	**4.4911**	**.01073**
Stddev	.00470	.1561	4.278	.4552	.0398	.00129
%RSD	1.4576	3.3254	40.390	39.496	.88599	12.018
#1	.32547	4.7102	6.2781	1.6777	4.4974	.00975
#2	.32426	4.5322	10.663	.86804	4.4485	.01219
#3	.31680	4.8433	14.833	.91219	4.5274	.01025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



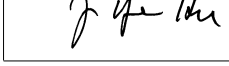
Sample Name: L1305144302 Acquired: 6/4/2013 11:55:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.923**	**.06223**	**-.00026**	**15.734**	**.00520**	**20.190**
Stddev	.158	.00042	.00006	.028	.00026	5.412
%RSD	.39694	.67766	23.382	.17793	5.0282	26.808
#1	39.898	.06226	-.00025	15.704	.00505	19.542
#2	40.093	.06264	-.00020	15.760	.00505	15.130
#3	39.779	.06180	-.00032	15.737	.00550	25.897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00149**	**1.8356**	F **2051.7**	F **-109040.**	**-.00230**	**.00206**
Stddev	.00150	27.664	1.6	711.	.00151	.00109
%RSD	100.70	1507.1	.08017	.65214	65.819	53.171
#1	.00302	-30.025	2052.1	-109320.	-.00394	.00092
#2	.00142	15.770	2053.1	-109570.	-.00199	.00311
#3	.00002	19.761	2049.8	-108230.	-.00096	.00215
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0862**	**-.00175**	**.31953**	**.00004**	**.00050**	**.00032**
Stddev	.0065	.00009	.00059	.00093	.00060	.00019
%RSD	.31273	5.0280	.18479	2142.6	120.50	60.521
#1	2.0849	-.00185	.32019	-.00026	.00022	.00052
#2	2.0804	-.00170	.31935	-.00070	.00119	.00030
#3	2.0933	-.00170	.31905	.00108	.00009	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

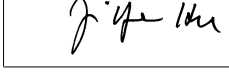
Approved: June 05, 2013



Sample Name: L1305144302 Acquired: 6/4/2013 11:55:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01223**	F **-.01237**
Stddev	.00007	.10052
%RSD	.59588	812.37
#1	.01232	-.08346
#2	.01220	-.05629
#3	.01218	.10263
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21779.**	**29155.**
Stddev	51.	79.
%RSD	.23455	.27071
#1	21762.	29246.
#2	21737.	29105.
#3	21836.	29115.

Approved: June 05, 2013



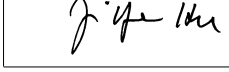
Sample Name: L1305144303 Acquired: 6/4/2013 11:58:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.10114**	**-.00004**	**.01563**	**.03123**	**.00002**
Stddev	.00011	.00885	.00071	.00096	.00034	.00002
%RSD	43.272	8.7542	1955.0	6.1373	1.0886	97.128
#1	-.00037	.10067	-.00077	.01633	.03088	.00000
#2	-.00028	.11022	.00002	.01454	.03156	.00002
#3	-.00014	.09253	.00065	.01604	.03124	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**96.394**	**.00076**	**.00063**	**.00094**	**.00029**	**.19307**
Stddev	1.063	.00006	.00012	.00044	.00019	.00437
%RSD	1.1025	7.9813	19.306	46.557	64.858	2.2641
#1	95.188	.00082	.00063	.00074	.00025	.18896
#2	96.797	.00070	.00075	.00065	.00049	.19766
#3	97.196	.00075	.00051	.00145	.00012	.19260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.56675**	**9.1358**	**18.003**	**1.6359**	**6.6191**	**.01548**
Stddev	.00296	.2485	5.493	.7233	.0758	.00012
%RSD	.52246	2.7196	30.510	44.211	1.1454	.78889
#1	.56749	9.0297	13.277	1.8716	6.5320	.01538
#2	.56348	8.9581	24.029	2.2120	6.6544	.01543
#3	.56926	9.4197	16.703	.82423	6.6707	.01561
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



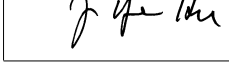
Sample Name: L1305144303 Acquired: 6/4/2013 11:58:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.514**	**.13122**	**.00008**	**16.999**	**.00486**	**34.681**
Stddev	.320	.00067	.00004	.103	.00046	11.247
%RSD	.35394	.51016	49.211	.60447	9.5174	32.431
#1	90.371	.13046	.00008	16.935	.00512	26.185
#2	90.881	.13144	.00013	17.118	.00432	30.422
#3	90.291	.13174	.00005	16.944	.00513	47.436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00177**	F **53.295**	F **4090.0**	F **-221240.**	**-.00236**	**.00290**
Stddev	.00036	6.015	16.5	255.	.00168	.00081
%RSD	20.287	11.287	.40357	.11526	71.292	27.961
#1	.00206	54.390	4072.3	-221400.	-.00426	.00329
#2	.00188	58.687	4105.0	-220950.	-.00176	.00344
#3	.00137	46.807	4092.8	-221380.	-.00106	.00197
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1201**	**-.00172**	**.56139**	**.00112**	**.00034**	**.00038**
Stddev	.0102	.00004	.00226	.00041	.00054	.00028
%RSD	.48233	2.2015	.40300	36.433	156.49	75.243
#1	2.1091	-.00173	.55890	.00069	.00073	.00029
#2	2.1293	-.00168	.56331	.00149	-.00027	.00015
#3	2.1219	-.00175	.56196	.00117	.00057	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144303 Acquired: 6/4/2013 11:58:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00566**	**.24408**
Stddev	.00010	.24601
%RSD	1.8303	100.79
#1	.00555	.48341
#2	.00567	.25693
#3	.00576	-.00811
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21466.**	**29752.**
Stddev	37.	84.
%RSD	.17102	.28317
#1	21481.	29846.
#2	21494.	29725.
#3	21425.	29684.

Approved: June 05, 2013

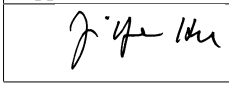
Sample Name: L1305144303PS Acquired: 6/4/2013 12:01:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432808-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19662**	**5.0986**	**.20867**	**1.0436**	**.52924**	**.02543**
Stddev	.00026	.0808	.00140	.0026	.00664	.00012
%RSD	.13306	1.5856	.66975	.24501	1.2554	.45492
#1	.19691	5.1907	.21025	1.0443	.53631	.02556
#2	.19651	5.0657	.20817	1.0408	.52828	.02533
#3	.19642	5.0394	.20759	1.0458	.52313	.02541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.228**	**.02623**	**.10121**	**.25686**	**.25370**	**2.1687**
Stddev	.932	.00017	.00044	.00052	.00060	.0241
%RSD	1.0106	.66105	.43396	.20383	.23837	1.1102
#1	93.299	.02626	.10169	.25685	.25432	2.1964
#2	91.604	.02639	.10084	.25635	.25367	2.1532
#3	91.780	.02605	.10109	.25739	.25312	2.1564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0029**	**8.8910**	**4.6377**	**1.7181**	**31.531**	**.52551**
Stddev	.0047	.1665	4.0822	1.4662	.443	.00570
%RSD	.47257	1.8723	88.022	85.340	1.4037	1.0854
#1	1.0082	9.0484	2.5547	3.4099	32.017	.53203
#2	1.0014	8.7168	9.3412	.81612	31.425	.52307
#3	.99908	8.9079	2.0173	.92825	31.151	.52143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



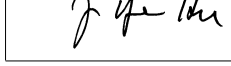
Sample Name: L1305144303PS Acquired: 6/4/2013 12:01:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432808-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.688**	**.36233**	**.51247**	**41.025**	**.25484**	**33.770**
Stddev	1.255	.00328	.00090	.545	.00049	17.093
%RSD	1.4478	.90460	.17468	1.3294	.19335	50.617
#1	88.090	.36604	.51330	41.595	.25489	53.365
#2	86.305	.36111	.51260	40.973	.25531	21.916
#3	85.669	.35983	.51152	40.508	.25433	26.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25199**	F **50.715**	F **3705.4**	F **-200030.**	**.60935**	**.20662**
Stddev	.00061	31.206	12.9	681.	.00057	.00141
%RSD	.24237	61.533	.34679	.34026	.09361	.68369
#1	.25269	55.030	3720.0	-200810.	.60943	.20601
#2	.25171	17.575	3696.1	-199570.	.60988	.20824
#3	.25157	79.538	3699.9	-199710.	.60874	.20562
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.4405**	**-.00181**	**1.0088**	**.50570**	**.25198**	**.51030**
Stddev	.0186	.00017	.0149	.00720	.00285	.00173
%RSD	.41929	9.3694	1.4814	1.4237	1.1314	.33987
#1	4.4605	-.00161	1.0258	.51398	.25506	.51216
#2	4.4236	-.00188	1.0025	.50220	.24943	.51002
#3	4.4376	-.00192	.99795	.50092	.25144	.50873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

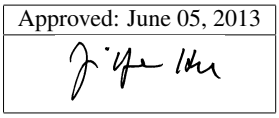
Approved: June 05, 2013



Sample Name: L1305144303PS Acquired: 6/4/2013 12:01:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432808-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.49582**	**.64428**
Stddev	.00143	.34916
%RSD	.28870	54.194
#1	.49726	.68832
#2	.49581	.96934
#3	.49439	.27519
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21448.**	**29428.**
Stddev	10.	327.
%RSD	.04497	1.1097
#1	21443.	29062.
#2	21459.	29535.
#3	21442.	29688.

Approved: June 05, 2013



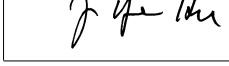
Sample Name: L1305144303SDL Acquired: 6/4/2013 12:05:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432808-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.02056**	**.00230**	**.00576**	**.00612**	**.00001**	**19.339**
Stddev	.00025	.01128	.00106	.00053	.00010	.00001	.136
%RSD	102.36	54.853	45.998	9.1406	1.6065	47.879	.70118
#1	-.00003	.01214	.00180	.00635	.00619	.00001	19.183
#2	-.00032	.01616	.00158	.00534	.00615	.00001	19.414
#3	-.00046	.03337	.00352	.00559	.00600	.00002	19.421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.00054**	**.00030**	**.00066**	**.03777**	**.11747**	**1.9894**
Stddev	.00012	.00040	.00012	.00100	.00309	.00276	.2826
%RSD	41.741	73.775	40.492	151.32	8.1783	2.3503	14.207
#1	.00022	.00014	.00028	.00023	.03457	.11600	1.7442
#2	.00023	.00055	.00018	-.00005	.03799	.11577	1.9255
#3	.00043	.00093	.00042	.00180	.04074	.12066	2.2985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.2444**	**.59746**	**1.3382**	**.00258**	**18.099**	**.02740**	**.00206**
Stddev	4.0055	1.2804	.0622	.00156	.215	.00011	.00245
%RSD	76.375	214.30	4.6463	60.288	1.1867	.40217	118.83
#1	1.5875	.09993	1.2954	.00228	18.156	.02753	.00016
#2	9.5252	-.35945	1.3098	.00119	17.862	.02736	.00120
#3	4.6206	2.0519	1.4096	.00426	18.280	.02732	.00483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305144303SDL Acquired: 6/4/2013 12:05:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432808-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.3619**	**.00241**	**20.249**	**.00339**	F **10.523**	F **811.79**	F **-43626.**
Stddev	.0199	.00132	12.727	.00192	14.336	4.33	413.
%RSD	.59189	54.709	62.851	56.573	136.23	.53307	.94731
#1	3.3754	.00169	32.288	.00427	22.770	808.25	-43348.
#2	3.3391	.00161	6.9309	.00119	-5.2450	810.51	-43430.
#3	3.3714	.00394	21.529	.00470	14.044	816.61	-44101.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00162**	**.00230**	**.41263**	**-.00058**	**.11224**	**.00211**	**.00056**
Stddev	.00289	.00253	.01115	.00022	.00017	.00093	.00144
%RSD	177.85	110.19	2.7028	37.535	.14762	44.155	258.62
#1	-.00113	.00238	.40188	-.00080	.11229	.00175	-.00060
#2	.00137	-.00028	.41185	-.00036	.11205	.00142	.00010
#3	.00463	.00478	.42415	-.00057	.11237	.00317	.00217
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00038**	**.00357**	F **-.01633**
Stddev	.00028	.00197	.24139
%RSD	74.914	55.304	1478.2
#1	.00050	.00207	.19167
#2	.00005	.00282	.04036
#3	.00058	.00580	-.28102
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013

Sample Name: L1305144303SDL Acquired: 6/4/2013 12:05:13 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432808-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22181.**	**30047.**
Stddev	86.	105.
%RSD	.38625	.34863
#1	22249.	29973.
#2	22210.	30167.
#3	22085.	30002.

Approved: June 05, 2013

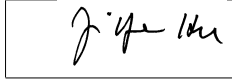
Sample Name: CCV Acquired: 6/4/2013 12:08:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43655**	**9.7795**	**.38949**	**.49481**	**.97930**	**.04915**	**10.047**
Stddev	.00063	.0667	.00326	.00302	.00514	.00017	.076
%RSD	.14494	.68216	.83771	.61050	.52529	.35137	.75791
#1	.43664	9.8249	.39191	.49562	.98462	.04933	10.113
#2	.43588	9.8107	.39078	.49146	.97894	.04915	10.065
#3	.43713	9.7029	.38578	.49734	.97435	.04898	9.9641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04903**	**.19879**	**.50121**	**.50084**	**3.9310**	**.99268**	**1.0958**
Stddev	.00030	.00129	.00218	.00322	.0233	.00321	.1418
%RSD	.61132	.64863	.43554	.64264	.59390	.32330	12.943
#1	.04931	.20005	.50257	.50410	3.9538	.99209	.98715
#2	.04907	.19884	.49869	.50075	3.9319	.99614	1.2563
#3	.04871	.19747	.50237	.49767	3.9071	.98981	1.0440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.4386**	**.96666**	**48.944**	**.97332**	**9.6663**	**.49420**	**.98659**
Stddev	4.8185	.33659	.362	.00491	.0848	.00185	.00698
%RSD	88.600	34.820	.73954	.50447	.87724	.37378	.70708
#1	-1.9627	.78496	49.228	.97734	9.7526	.49569	.99312
#2	-3.4139	1.3551	49.069	.97477	9.6632	.49478	.98739
#3	-10.939	.75998	48.537	.96784	9.5831	.49213	.97924
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000						
Range	-10.000%						

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 12:08:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.902**	**.49473**	F **-.57189**	**.49772**	F **75.656**	**10.988**	F **-46.356**
Stddev	.311	.00252	10.126	.00341	27.649	.668	37.942
%RSD	.63637	.51027	1770.6	.68432	36.545	6.0757	81.851
#1	49.210	.49754	7.3262	.50022	107.32	10.637	-19.539
#2	48.908	.49401	2.9455	.49910	63.365	10.569	-29.759
#3	48.588	.49265	-11.987	.49384	56.284	11.758	-89.768
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1829**	**.40321**	**4.8319**	**.92471**	**.96717**	**.97359**	**.49953**
Stddev	.0100	.00116	.0311	.00522	.00529	.00332	.00352
%RSD	.84521	.28784	.64304	.56499	.54705	.34128	.70536
#1	1.1944	.40454	4.8671	.92999	.97283	.97706	.50360
#2	1.1782	.40268	4.8082	.92460	.96633	.97328	.49740
#3	1.1761	.40242	4.8205	.91954	.96235	.97044	.49760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.97802**	**.98114**	F **.74534**
Stddev	.00276	.00499	.19989
%RSD	.28204	.50831	26.819
#1	.97996	.98546	.65043
#2	.97486	.98226	.61059
#3	.97924	.97568	.97501
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 12:08:48 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22288.**	**29770.**
Stddev	30.	211.
%RSD	.13459	.70885
#1	22260.	29638.
#2	22286.	29660.
#3	22320.	30014.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:12:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**-.00959**	**.00171**	**.00144**	**-.00022**	**-.00001**	**.00694**
Stddev	.00023	.00278	.00191	.00031	.00012	.00002	.00788
%RSD	276.28	28.964	111.82	21.565	55.430	143.94	113.50
#1	.00008	-.00638	-.00005	.00133	-.00030	-.00001	.01181
#2	.00002	-.01117	.00144	.00179	-.00008	-.00003	-.00215
#3	-.00035	-.01121	.00373	.00120	-.00027	.00000	.01117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00069**	**.00001**	**.00151**	**-.00150**	**.00230**	**-.05871**
Stddev	.00017	.00091	.00033	.00250	.00125	.00692	.22399
%RSD	185.94	131.26	3146.4	165.67	83.207	301.54	381.51
#1	.00000	.00009	.00014	-.00016	-.00145	-.00274	-.08796
#2	-.00001	.00024	.00026	.00030	-.00278	-.00056	-.26663
#3	.00030	.00174	-.00037	.00438	-.00028	.01019	.17847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **5.0518**	F **.66547**	**.04197**	**-.00075**	**.00628**	**.00005**	**.00498**
Stddev	3.2724	1.2549	.04219	.00056	.00917	.00002	.00483
%RSD	64.776	188.57	100.51	74.660	146.16	31.149	97.023
#1	1.3494	1.9844	-.00508	-.00094	-.00421	.00004	.00119
#2	7.5567	.52559	.05458	-.00012	.01024	.00005	.00332
#3	6.2493	-.51360	.07642	-.00119	.01281	.00007	.01042
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:12:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00230**	**.00172**	F **11.202**	**.00179**	F **51.219**	**.54285**	F **-27.468**
Stddev	.01066	.00213	6.378	.00163	13.237	.06176	.991
%RSD	463.83	123.68	56.933	91.111	25.844	11.377	3.6077
#1	.00985	-.00017	6.1071	.00107	66.480	.49133	-28.536
#2	-.00662	.00131	9.1438	.00064	44.329	.61131	-26.578
#3	-.01012	.00403	18.354	.00365	42.848	.52590	-27.290
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00150**	**.00318**	**.01319**	**.00385**	**.00002**	**.00115**	**.00209**
Stddev	.00493	.00109	.01466	.00512	.00009	.00074	.00050
%RSD	328.85	34.140	111.14	133.01	371.38	63.936	24.040
#1	-.00140	.00439	.00302	-.00022	-.00007	.00037	.00157
#2	-.00130	.00227	.00655	.00218	.00004	.00126	.00257
#3	.00720	.00288	.02999	.00960	.00011	.00183	.00213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00031**	**.00324**	F **.17316**
Stddev	.00006	.00416	.03290
%RSD	18.371	128.16	19.002
#1	.00027	.00016	.20715
#2	.00038	.00160	.14146
#3	.00028	.00797	.17088
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:12:03 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22183.**	**29469.**
Stddev	11.	171.
%RSD	.04736	.58094
#1	22195.	29297.
#2	22180.	29469.
#3	22174.	29640.

Approved: June 05, 2013

Sample Name: L1305144304 Acquired: 6/4/2013 12:15:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.01327**	**.00075**	**.01599**	**.03011**	**.00002**
Stddev	.0004	.01357	.00114	.00087	.00061	.00001
%RSD	174290.	102.24	152.74	5.4684	2.0245	56.946
#1	-.00034	.00818	.00206	.01567	.02942	.00001
#2	-.00017	.02865	-.00003	.01698	.03032	.00003
#3	.00051	.00298	.00022	.01532	.03058	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.433**	**.00074**	**.00029**	**.00068**	**.00042**	**.02091**
Stddev	.682	.00013	.00007	.00015	.00044	.00291
%RSD	.72213	18.030	22.675	22.334	105.98	13.911
#1	93.903	.00074	.00028	.00058	.00003	.01770
#2	95.202	.00060	.00023	.00085	.00033	.02336
#3	94.193	.00087	.00036	.00061	.00090	.02167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.54849**	**9.4862**	**3.0639**	**1.0544**	**6.3150**	**.01886**
Stddev	.00238	.2425	3.9176	1.0306	.0534	.00117
%RSD	.43307	2.5567	127.86	97.744	.84527	6.2196
#1	.55045	9.4187	7.0948	-.13204	6.2715	.01938
#2	.54918	9.2846	-.72975	1.5675	6.3746	.01752
#3	.54585	9.7554	2.8268	1.7278	6.2990	.01969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144304 Acquired: 6/4/2013 12:15:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**85.965**	**.07607**	**.00047**	**16.268**	**.00404**	**35.398**
Stddev	.786	.00066	.00030	.144	.00034	18.673
%RSD	.91428	.87109	64.172	.88316	8.3842	52.752
#1	85.115	.07545	.00018	16.104	.00366	56.960
#2	86.665	.07676	.00045	16.372	.00432	24.737
#3	86.115	.07600	.00079	16.328	.00413	24.498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00123**	F **-31.956**	F **3778.3**	F **-210300.**	**-.00020**	**.00228**
Stddev	.00135	20.728	15.0	245.	.00127	.00137
%RSD	109.33	64.866	.39703	.11673	633.92	59.801
#1	-.00026	-22.930	3775.5	-210460.	-.00116	.00291
#2	.00237	-55.667	3764.8	-210020.	-.00068	.00322
#3	.00159	-17.270	3794.5	-210430.	.00124	.00072
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

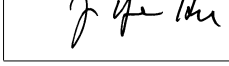
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9563**	**-.00138**	**.53688**	**-.00089**	**.00021**	**-.00004**
Stddev	.0063	.00020	.00445	.00039	.00061	.00011
%RSD	.31998	14.717	.82919	44.274	288.33	258.59
#1	1.9490	-.00157	.53177	-.00050	.00012	-.00011
#2	1.9600	-.00140	.53990	-.00129	.00086	.00009
#3	1.9597	-.00117	.53897	-.00088	-.00035	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144304 Acquired: 6/4/2013 12:15:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00754**	**.01773**
Stddev	.00015	.11116
%RSD	1.9273	627.14
#1	.00739	-.00636
#2	.00753	-.07942
#3	.00768	.13896
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21597.**	**29700.**
Stddev	81.	169.
%RSD	.37403	.56799
#1	21660.	29875.
#2	21624.	29538.
#3	21506.	29688.

Approved: June 05, 2013



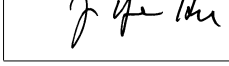
Sample Name: L1305144305 Acquired: 6/4/2013 12:19:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.16226**	**.00193**	**.01301**	**.02887**	**.00004**	**42.614**
Stddev	.00014	.00866	.00060	.00054	.00016	.00001	.122
%RSD	142.60	5.3375	31.067	4.1802	.54262	38.908	.28551
#1	.00017	.15976	.00130	.01350	.02869	.00003	42.749
#2	-.00006	.15513	.00201	.01311	.02891	.00003	42.579
#3	.00019	.17190	.00249	.01242	.02900	.00005	42.514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00042**	**.00093**	**.00038**	**.16420**	**.24422**	**3.1140**
Stddev	.00006	.00003	.00016	.00049	.00306	.00202	.2973
%RSD	18.388	8.1922	16.729	127.69	1.8666	.82628	9.5467
#1	.00039	.00045	.00110	-.00018	.16369	.24532	2.9768
#2	.00035	.00043	.00090	.00073	.16142	.24545	2.9102
#3	.00027	.00038	.00079	.00059	.16748	.24189	3.4551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.4727**	**3.3797**	**3.7280**	**.00629**	**23.775**	**.03669**	**-.00018**
Stddev	10.267	.7253	.0150	.00067	.156	.00014	.00011
%RSD	187.61	21.460	.40244	10.686	.65432	.37356	59.000
#1	-4.6857	2.5598	3.7453	.00627	23.820	.03681	-.00028
#2	15.845	3.6419	3.7201	.00697	23.602	.03672	-.00006
#3	5.2587	3.9374	3.7186	.00562	23.904	.03654	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



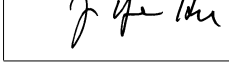
Sample Name: L1305144305 Acquired: 6/4/2013 12:19:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.707**	**.00178**	**22.076**	**.00127**	F **45.061**	F **1560.2**	F **-84899.**
Stddev	.084	.00045	8.953	.00057	36.669	5.9	390.
%RSD	.30493	25.412	40.556	45.215	81.378	.37718	.45972
#1	27.802	.00187	17.928	.00073	87.394	1565.5	-85290.
#2	27.678	.00129	32.351	.00120	24.611	1561.1	-84897.
#3	27.640	.00219	15.949	.00187	23.176	1553.9	-84509.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00106**	**.00158**	**1.9048**	**-.00153**	**.23883**	**.00334**	**.00032**
Stddev	.00168	.00017	.0149	.00021	.00175	.00032	.00080
%RSD	159.30	10.899	.78385	13.784	.73080	9.6795	247.57
#1	-.00094	.00138	1.9170	-.00174	.24077	.00297	.00111
#2	-.00279	.00171	1.9093	-.00152	.23832	.00350	.00036
#3	.00057	.00165	1.8881	-.00132	.23739	.00355	-.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00047**	**.00629**	**.27744**
Stddev	.00006	.00013	.12601
%RSD	12.042	2.1323	45.418
#1	.00040	.00628	.31871
#2	.00051	.00644	.13597
#3	.00049	.00617	.37764
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305144305 Acquired: 6/4/2013 12:19:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22085.**	**29586.**
Stddev	94.	108.
%RSD	.42411	.36345
#1	22004.	29465.
#2	22063.	29624.
#3	22187.	29669.

Approved: June 05, 2013

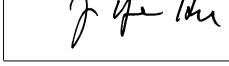
Sample Name: L1305144401 Acquired: 6/4/2013 12:22:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.27686**	**.00058**	**.01202**	**.03497**	**.00016**
Stddev	.00049	.02408	.00111	.00084	.00047	.00002
%RSD	649.28	8.6993	190.58	7.0100	1.3501	9.6625
#1	-.00046	.29861	.00108	.01299	.03456	.00015
#2	.00049	.28099	-.00069	.01164	.03487	.00015
#3	.00020	.25098	.00134	.01144	.03548	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.519**	**.00054**	**.00451**	**.00098**	**.00274**	**.49403**
Stddev	.140	.00008	.00000	.00011	.00024	.00213
%RSD	.26212	14.956	.08688	11.271	8.8352	.43108
#1	53.598	.00061	.00450	.00108	.00274	.49232
#2	53.357	.00045	.00451	.00086	.00249	.49334
#3	53.602	.00056	.00451	.00099	.00298	.49642
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31771**	**4.5579**	**7.8232**	**2.3942**	**4.2480**	**.01212**
Stddev	.00159	.1942	3.2082	.5933	.0337	.00054
%RSD	.50141	4.2617	41.009	24.780	.79239	4.4830
#1	.31945	4.7106	5.9831	2.5806	4.2543	.01260
#2	.31735	4.3393	5.9588	1.7301	4.2117	.01153
#3	.31632	4.6237	11.528	2.8720	4.2781	.01222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



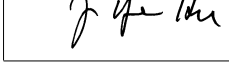
Sample Name: L1305144401 Acquired: 6/4/2013 12:22:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.923**	**.17354**	**-.00035**	**14.742**	**.00837**	**72.282**
Stddev	.092	.00111	.00003	.020	.00029	14.955
%RSD	.24327	.64024	8.7050	.13378	3.4448	20.689
#1	37.935	.17322	-.00033	14.754	.00848	82.413
#2	37.825	.17263	-.00033	14.720	.00858	55.106
#3	38.008	.17478	-.00038	14.753	.00804	79.327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00167**	F **-34.336**	F **1972.6**	F **-106370.**	**-.00077**	**.00460**
Stddev	.00117	20.800	6.8	267.	.00044	.00217
%RSD	69.845	60.579	.34685	.25072	57.467	47.155
#1	.00120	-55.678	1980.2	-106630.	-.00031	.00566
#2	.00300	-14.123	1966.8	-106100.	-.00080	.00210
#3	.00081	-33.207	1971.0	-106380.	-.00119	.00604
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1747**	**-.00162**	**.30661**	**.00386**	**.00070**	**.00066**
Stddev	.0035	.00003	.00100	.00080	.00083	.00027
%RSD	.16171	1.7634	.32582	20.842	117.33	41.314
#1	2.1772	-.00161	.30747	.00295	.00048	.00093
#2	2.1764	-.00159	.30551	.00416	.00001	.00039
#3	2.1707	-.00165	.30685	.00447	.00162	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144401 Acquired: 6/4/2013 12:22:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01929**	**.29706**
Stddev	.00004	.21353
%RSD	.22839	71.881
#1	.01929	.50722
#2	.01925	.30364
#3	.01934	.08031
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22106.**	**30460.**
Stddev	59.	62.
%RSD	.26639	.20470
#1	22076.	30471.
#2	22174.	30516.
#3	22069.	30393.

Approved: June 05, 2013

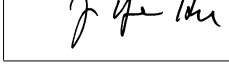
Sample Name: L1305144402 Acquired: 6/4/2013 12:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.05405**	**.00115**	**.01281**	**.03329**	**.00004**
Stddev	.00040	.00689	.00096	.00069	.00030	.00001
%RSD	202.24	12.746	82.940	5.3678	.89905	18.239
#1	-.00026	.04848	.00222	.01236	.03316	.00005
#2	.00037	.05192	.00037	.01360	.03308	.00005
#3	.00047	.06176	.00086	.01247	.03363	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.272**	**.00052**	**.00243**	**.00149**	**.00100**	**.01319**
Stddev	.137	.00004	.00008	.00015	.00044	.00064
%RSD	.25297	7.0433	3.4950	9.7776	43.934	4.8384
#1	54.360	.00055	.00251	.00165	.00141	.01321
#2	54.114	.00052	.00245	.00145	.00054	.01382
#3	54.342	.00048	.00234	.00137	.00106	.01255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31622**	**4.7243**	**13.506**	**1.0114**	**4.3867**	**.01129**
Stddev	.00482	.0797	3.309	1.2262	.0347	.00139
%RSD	1.5227	1.6867	24.501	121.23	.79079	12.350
#1	.31976	4.8088	16.506	-.40254	4.3804	.01036
#2	.31816	4.7136	14.055	1.7819	4.3555	.01062
#3	.31074	4.6505	9.9569	1.6549	4.4240	.01289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



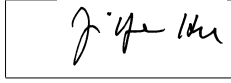
Sample Name: L1305144402 Acquired: 6/4/2013 12:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.677**	**.06035**	**-.00048**	**15.509**	**.00656**	**20.704**
Stddev	.062	.00047	.00006	.092	.00065	5.186
%RSD	.16137	.77893	11.696	.59249	9.8664	25.050
#1	38.743	.06088	-.00054	15.615	.00727	15.434
#2	38.668	.06022	-.00044	15.453	.00599	25.803
#3	38.619	.05997	-.00046	15.457	.00642	20.874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00168**	F **-20.784**	F **1947.9**	F **-106600.**	**-.00122**	**.00362**
Stddev	.00048	16.015	47.8	2004.	.00205	.00177
%RSD	28.405	77.055	2.4532	1.8798	168.41	49.060
#1	.00194	-23.746	1980.9	-107820.	-.00201	.00509
#2	.00196	-3.4943	1969.6	-107700.	-.00276	.00412
#3	.00113	-35.111	1893.1	-104290.	.00111	.00165
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9901**	**-.00171**	**.31651**	**.00074**	**.00074**	**.00003**
Stddev	.0500	.00002	.00134	.00077	.00129	.00029
%RSD	2.5115	1.4462	.42181	104.59	175.73	918.53
#1	2.0216	-.00174	.31802	.00111	-.00073	.00033
#2	2.0163	-.00169	.31599	.00125	.00171	.00000
#3	1.9325	-.00170	.31550	-.00015	.00123	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

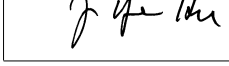
Approved: June 05, 2013



Sample Name: L1305144402 Acquired: 6/4/2013 12:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01226**	**.14767**
Stddev	.00023	.18127
%RSD	1.8690	122.75
#1	.01248	.30919
#2	.01228	-.04838
#3	.01202	.18219
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22058.**	**30345.**
Stddev	228.	133.
%RSD	1.0329	.43776
#1	21949.	30220.
#2	21905.	30485.
#3	22320.	30331.

Approved: June 05, 2013



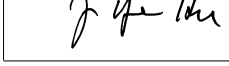
Sample Name: L1305144403 Acquired: 6/4/2013 12:29:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.09902**	**.00069**	**.01423**	**.02950**	**.00003**
Stddev	.00041	.00598	.00196	.00044	.00020	.00001
%RSD	560.05	6.0368	284.24	3.0957	.67421	32.505
#1	.00011	.09572	-.00091	.01397	.02938	.00003
#2	.00022	.10592	.00288	.01398	.02973	.00003
#3	-.00054	.09542	.00011	.01474	.02938	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.405**	**.00066**	**.00051**	**.00097**	**.00036**	**.12315**
Stddev	.560	.00006	.00013	.00035	.00039	.00178
%RSD	.59349	9.2264	25.513	35.801	108.82	1.4429
#1	93.872	.00060	.00054	.00135	.00012	.12447
#2	94.989	.00067	.00037	.00067	.00014	.12386
#3	94.355	.00072	.00063	.00089	.00081	.12113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.53978**	**9.1372**	**15.214**	**1.9014**	**6.2451**	**.01854**
Stddev	.00847	.0898	9.792	1.6301	.0126	.00068
%RSD	1.5694	.98266	64.361	85.732	.20181	3.6646
#1	.54421	9.1898	25.113	1.3045	6.2510	.01809
#2	.54513	9.0336	5.5333	.65388	6.2307	.01932
#3	.53002	9.1883	14.996	3.7458	6.2537	.01821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



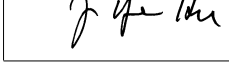
Sample Name: L1305144403 Acquired: 6/4/2013 12:29:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**84.474**	**.10425**	**.00003**	**16.168**	**.00533**	**33.051**
Stddev	.282	.00025	.00006	.045	.00018	17.868
%RSD	.33437	.24240	245.76	.27994	3.3791	54.062
#1	84.603	.10451	.00000	16.210	.00539	39.766
#2	84.150	.10425	-.00002	16.173	.00547	12.798
#3	84.669	.10400	.00010	16.120	.00513	46.588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00191**	F **-53.834**	F **3718.9**	F **-208650.**	**-.00020**	**.00115**
Stddev	.00091	24.943	50.5	1935.	.00160	.00240
%RSD	47.739	46.334	1.3578	.92750	803.33	208.59
#1	.00199	-30.796	3777.2	-210840.	.00076	.00280
#2	.00096	-50.382	3691.2	-207920.	-.00205	-.00160
#3	.00277	-80.323	3688.4	-207180.	.00069	.00225
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0125**	**-.00163**	**.53448**	**.00177**	**.00069**	**.00033**
Stddev	.0341	.00021	.00086	.00075	.00153	.00008
%RSD	1.6963	12.734	.16081	42.227	221.52	24.502
#1	2.0516	-.00187	.53378	.00171	-.00064	.00037
#2	1.9889	-.00158	.53421	.00106	.00035	.00024
#3	1.9969	-.00146	.53544	.00255	.00237	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144403 Acquired: 6/4/2013 12:29:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00688**	**.28349**
Stddev	.00010	.14027
%RSD	1.4432	49.479
#1	.00681	.22362
#2	.00682	.44376
#3	.00699	.18308
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21820.**	**30558.**
Stddev	71.	54.
%RSD	.32445	.17676
#1	21785.	30495.
#2	21901.	30589.
#3	21773.	30589.

Approved: June 05, 2013

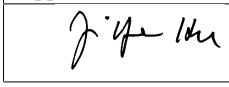
Sample Name: L1305144404 Acquired: 6/4/2013 12:33:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.01442**	**.00148**	**.01580**	**.03052**	**.00000**
Stddev	.00034	.01408	.00078	.00025	.00037	.00002
%RSD	1710.9	97.678	52.923	1.5752	1.2243	732.35
#1	.00005	.03055	.00198	.01592	.03013	-.00002
#2	-.00033	.00459	.00058	.01596	.03055	.00002
#3	.00034	.00811	.00188	.01551	.03087	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**99.693**	**.00073**	**.00043**	**.00084**	**-.00003**	**.01728**
Stddev	.475	.00010	.00008	.00012	.00019	.00293
%RSD	.47671	13.763	17.774	14.781	674.86	16.941
#1	99.983	.00062	.00051	.00095	-.00023	.01407
#2	99.145	.00074	.00035	.00071	-.00001	.01797
#3	99.952	.00082	.00043	.00085	.00015	.01980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55928**	**9.8348**	**7.7874**	**1.0320**	**6.5087**	**.01976**
Stddev	.00861	.1689	3.6349	1.7773	.0199	.00299
%RSD	1.5403	1.7174	46.676	172.22	.30506	15.137
#1	.56528	9.8677	5.4728	-.20379	6.5055	.01678
#2	.56315	9.6519	11.977	.23098	6.4907	.02276
#3	.54941	9.9848	5.9125	3.0689	6.5300	.01973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



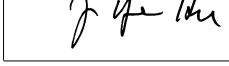
Sample Name: L1305144404 Acquired: 6/4/2013 12:33:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.251**	**.09224**	**.00005**	**16.944**	**.00488**	**20.991**
Stddev	.554	.00098	.00007	.113	.00022	11.345
%RSD	.62118	1.0671	137.18	.66830	4.4513	54.049
#1	89.886	.09334	.00011	17.074	.00506	16.885
#2	89.004	.09145	-.00002	16.887	.00464	12.270
#3	88.863	.09194	.00006	16.870	.00495	33.817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00111**	F **-48.213**	F **3892.8**	F **-216950.**	**-.00159**	**.00366**
Stddev	.00149	10.968	67.9	2450.	.00033	.00152
%RSD	134.60	22.748	1.7439	1.1294	20.517	41.595
#1	.00246	-60.478	3939.0	-218760.	-.00195	.00367
#2	.00136	-44.814	3924.4	-217940.	-.00149	.00213
#3	-.00049	-39.347	3814.8	-214160.	-.00132	.00518
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9178**	**-.00169**	**.55963**	**-.00098**	**.00169**	**.00013**
Stddev	.0353	.00031	.00145	.00056	.00085	.00010
%RSD	1.8424	18.510	.25906	57.170	50.300	76.304
#1	1.9398	-.00153	.56120	-.00051	.00255	.00008
#2	1.9365	-.00205	.55934	-.00083	.00168	.00007
#3	1.8770	-.00149	.55834	-.00160	.00085	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144404 Acquired: 6/4/2013 12:33:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00537**	F **-.14291**
Stddev	.00004	.32162
%RSD	.68165	225.06
#1	.00536	.20649
#2	.00541	-.20861
#3	.00534	-.42660
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21591.**	**29499.**
Stddev	52.	201.
%RSD	.24299	.67996
#1	21545.	29268.
#2	21580.	29623.
#3	21648.	29607.

Approved: June 05, 2013

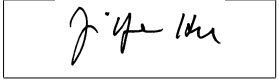
Sample Name: L1305144405 Acquired: 6/4/2013 12:36:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.06213**	**.00032**	**.01347**	**.02909**	**.00000**
Stddev	.00017	.01264	.00125	.00106	.00038	.00002
%RSD	55.836	20.348	390.50	7.8591	1.2947	531.86
#1	.00046	.06139	-.00002	.01283	.02871	.00001
#2	.00031	.04987	.00170	.01289	.02909	.00001
#3	.00013	.07512	-.00072	.01469	.02947	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.893**	**.00067**	**.00038**	**.00063**	**.00143**	**.11648**
Stddev	.963	.00006	.00008	.00018	.00016	.00348
%RSD	1.1078	9.5601	21.626	27.947	11.138	2.9900
#1	85.784	.00064	.00033	.00046	.00158	.11655
#2	87.393	.00062	.00048	.00063	.00144	.11296
#3	87.504	.00074	.00035	.00081	.00127	.11992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49307**	**8.6086**	**9.9847**	**1.8864**	**5.7756**	**.01692**
Stddev	.00190	.1634	4.2447	.6317	.0678	.00046
%RSD	.38512	1.8978	42.512	33.490	1.1733	2.7360
#1	.49525	8.6779	14.674	2.6010	5.7049	.01738
#2	.49217	8.4220	6.4055	1.4024	5.8400	.01645
#3	.49179	8.7259	8.8745	1.6557	5.7818	.01692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



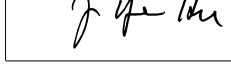
Sample Name: L1305144405 Acquired: 6/4/2013 12:36:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.090**	**.06243**	**.00013**	**14.450**	**.00400**	**42.933**
Stddev	1.158	.00060	.00008	.235	.00053	6.771
%RSD	1.5022	.95643	60.522	1.6243	13.134	15.771
#1	75.775	.06189	.00017	14.184	.00373	46.265
#2	77.955	.06234	.00004	14.628	.00366	35.142
#3	77.541	.06307	.00019	14.539	.00460	47.392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00296**	**.34420**	F **3395.2**	F **-189990.**	**-.00047**	**.00135**
Stddev	.00174	7.6582	37.7	2345.	.00042	.00323
%RSD	58.765	2225.0	1.1114	1.2344	89.824	240.15
#1	.00324	-8.4987	3431.3	-192210.	-.00081	-.00112
#2	.00453	4.7868	3398.3	-190230.	-.00059	.00016
#3	.00109	4.7445	3356.0	-187540.	.00000	.00501
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			9.0000	9.0000		
Low Limit			-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8636**	**-.00132**	**.49155**	**.00089**	**.00004**	**.00019**
Stddev	.0193	.00061	.00650	.00027	.00099	.00011
%RSD	1.0342	45.922	1.3224	30.849	2432.3	56.738
#1	1.8832	-.00201	.48405	.00058	-.00009	.00031
#2	1.8631	-.00106	.49512	.00101	.00110	.00017
#3	1.8446	-.00089	.49548	.00108	-.00088	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144405 Acquired: 6/4/2013 12:36:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00666**	**.02721**
Stddev	.00009	.16904
%RSD	1.3301	621.36
#1	.00674	-.12571
#2	.00656	-.00139
#3	.00669	.20872
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22009.**	**30606.**
Stddev	10.	125.
%RSD	.04548	.40737
#1	22008.	30700.
#2	22019.	30464.
#3	21999.	30653.

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 12:39:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00782**	**.00063**	**.00422**	**.00329**	**-.00001**	**1.4852**
Stddev	.00021	.03413	.00164	.00023	.00617	.00000	2.2139
%RSD	216.65	436.47	260.44	5.4570	187.53	28.404	149.06
#1	-.00027	-.01348	.00103	.00421	-.00055	-.00001	.09840
#2	-.00016	-.01025	.00203	.00399	.00001	-.00001	.31882
#3	.00014	.04719	-.00117	.00445	.01040	-.00001	4.0385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**-.00006**	**.00044**	**.00112**	**.04363**	**.06691**	**.04077**
Stddev	.00012	.00013	.00011	.00007	.05974	.00686	.12512
%RSD	194.96	201.37	25.358	6.4268	136.91	10.259	306.90
#1	-.00001	-.00018	.00050	.00105	.00653	.05999	.01182
#2	-.00001	.00008	.00052	.00114	.01183	.06702	-.06734
#3	.00020	-.00009	.00031	.00119	.11254	.07372	.17782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9591**	**2.1675**	**.20671**	**-.00028**	**.57987**	**.00332**	**-.00022**
Stddev	1.0457	.2232	.28576	.00027	.83046	.00108	.00020
%RSD	53.375	10.296	138.24	95.304	143.21	32.536	94.680
#1	1.6049	2.4249	.02795	-.00049	.05684	.00243	-.00045
#2	1.1366	2.0283	.05590	-.00037	.14534	.00301	-.00014
#3	3.1360	2.0494	.53629	.00002	1.5374	.00453	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 12:39:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20653**	**.00074**	**39.121**	**.00193**	F **48.576**	F **128.61**	F **-6651.2**
Stddev	.30716	.00013	10.249	.00103	16.976	59.60	3205.8
%RSD	148.72	18.067	26.198	53.333	34.947	46.340	48.198
#1	.01667	.00059	47.358	.00130	59.622	80.065	-4027.6
#2	.04202	.00084	27.644	.00137	57.077	110.64	-5701.6
#3	.56090	.00081	42.361	.00312	29.029	195.13	-10225.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00102**	**.00124**	**2.2333**	**-.00099**	**.01305**	**.00323**	**.00054**
Stddev	.00132	.00032	.0449	.00031	.01986	.00072	.00059
%RSD	129.06	25.600	2.0084	30.832	152.23	22.190	108.48
#1	-.00032	.00154	2.2792	-.00129	.00061	.00402	.00036
#2	-.00254	.00091	2.2310	-.00102	.00257	.00262	.00006
#3	-.00020	.00128	2.1896	-.00068	.03595	.00305	.00120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00033**	**.00490**	**.28093**
Stddev	.00019	.00009	.16326
%RSD	56.187	1.8053	58.115
#1	.00013	.00497	.10159
#2	.00037	.00493	.42093
#3	.00050	.00480	.32027
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 12:39:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23034.**	**50656.**
Stddev	89.	12318.
%RSD	.38488	24.317
#1	23123.	61515.
#2	23033.	53181.
#3	22946.	37271.

Approved: June 05, 2013

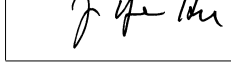
Sample Name: L1305144407 Acquired: 6/4/2013 12:43:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00005**	s **-.02520**	k **.00028**	k **.00776**	s **-.00029**	k **.00007**
Stddev	.00047	.01249	.00052	.00331	.00096	.00004
%RSD	934.04	49.588	189.48	42.658	327.50	59.308
#1	k -.00048	s -.03787	k .00074	k .00399	s -.00119	k .00004
#2	.00021	-.02482	-.00029	.00912	-.00041	.00006
#3	.00043	-.01289	.00038	.01019	.00072	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **1.0701**	k **.00049**	k **.00310**	k **.00104**	k **.00223**	s **.00540**
Stddev	1.3079	.00001	.00019	.00010	.00024	.00943
%RSD	122.22	2.0505	6.2510	10.132	10.860	174.77
#1	s .02731	k .00048	k .00318	k .00102	k .00202	s -.00218
#2	.64541	.00050	.00324	.00094	.00250	.00241
#3	2.5375	.00048	.00288	.00115	.00218	.01596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.28309**	s **.19168**	s **1.5601**	s **2.4268**	s **.07578**	s **-.00118**
Stddev	.00905	.24032	3.3874	.8999	.09932	.00041
%RSD	3.1956	125.38	217.13	37.081	131.06	34.990
#1	.28421	s -.06420	s 1.0137	s 3.4640	s -.00388	s -.00163
#2	.29152	.22662	-1.5209	1.8536	.04417	-.00109
#3	.27353	.41261	5.1875	1.9628	.18707	-.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



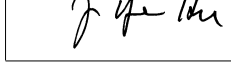
Sample Name: L1305144407 Acquired: 6/4/2013 12:43:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.84092**	s **.03956**	k **-.00041**	s **.26963**	k **.00607**	k **37.185**
Stddev	1.0340	.02191	.00015	.34041	.00014	16.970
%RSD	122.95	55.392	37.026	126.25	2.3374	45.637
#1	s .00932	s .01480	k -.00047	s .00335	k .00622	k 38.633
#2	.51484	.04740	-.00024	.15236	.00606	19.537
#3	1.9986	.05647	-.00053	.65317	.00594	53.384
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00294**	sF **44.331**	kF **1747.4**	kF **-96139.**	k **-.00213**	k **.00356**
Stddev	.00074	34.460	47.9	2547.	.00084	.00094
%RSD	25.308	77.733	2.7386	2.6497	39.569	26.296
#1	k .00306	s 82.303	k 1764.7	k -97163.	k -.00308	k .00391
#2	.00362	15.045	1784.1	-98015.	-.00149	.00250
#3	.00215	35.645	1693.3	-93239.	-.00182	.00428
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1157**	k **-.00107**	s **.00555**	s **.00411**	k **.00056**	k **.00049**
Stddev	.0258	.00024	.00715	.00192	.00088	.00023
%RSD	1.2207	22.968	128.78	46.644	158.47	46.220
#1	2.0959	k -.00134	s -.00024	s .00311	k .00102	k .00026
#2	2.1449	-.00088	.00336	.00291	.00112	.00050
#3	2.1063	-.00097	.01355	.00633	-.00046	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144407 Acquired: 6/4/2013 12:43:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	k **.01352**	k **.55351**
Stddev	.00024	.42781
%RSD	1.7598	77.290
#1	k .01356	k .13652
#2	.01374	.53263
#3	.01327	.99137
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22651.**	^ *****
Stddev	166.	-----
%RSD	.73107	-----
#1	22840.	^ -----
#2	22532.	58933.
#3	22581.	54786.

Approved: June 05, 2013

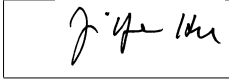
Sample Name: L1305144408 Acquired: 6/4/2013 12:47:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**-.03371**	**.00032**	**.00553**	**-.00057**	**.00000**	**.55656**
Stddev	.00012	.01164	.00094	.00441	.00067	.00000	.64945
%RSD	96.145	34.519	297.50	79.727	117.78	70.104	116.69
#1	-.00026	-.04406	-.00067	.00059	-.00115	.00000	.03595
#2	-.00005	-.03597	.00120	.00695	-.00072	.00000	.34942
#3	-.00006	-.02111	.00042	.00906	.00016	.00000	1.2843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.00030**	**.00081**	**.00149**	**.00121**	**.21883**	**-.09082**
Stddev	.00005	.00005	.00048	.00025	.00286	.00331	.09555
%RSD	14.230	15.888	59.500	17.014	236.83	1.5134	105.21
#1	.00039	.00026	.00135	.00177	-.00165	.21556	.01599
#2	.00030	.00035	.00045	.00141	.00119	.21876	-.16818
#3	.00039	.00029	.00062	.00129	.00408	.22218	-.12026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3197**	**2.4295**	**.04223**	**-.00141**	**.33992**	**.00876**	**-.00031**
Stddev	3.6823	.7816	.05835	.00119	.41419	.00719	.00013
%RSD	279.03	32.173	138.16	84.614	121.85	82.128	42.064
#1	5.0857	3.3078	-.00007	-.00174	.01123	.00110	-.00017
#2	1.1462	2.1702	.01798	-.00009	.20339	.00980	-.00043
#3	-2.2728	1.8104	.10880	-.00240	.80514	.01537	-.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



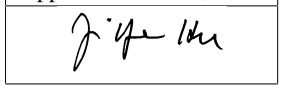
Sample Name: L1305144408 Acquired: 6/4/2013 12:47:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.30704**	**.00243**	**31.220**	**.00247**	F **54.646**	F **1389.3**	F **-76210.**
Stddev	.38727	.00034	5.047	.00050	35.917	25.5	1371.
%RSD	126.13	14.101	16.167	20.111	65.727	1.8338	1.7989
#1	.00827	.00235	26.263	.00266	94.484	1362.1	-74794.
#2	.16827	.00281	31.046	.00191	44.714	1412.6	-77531.
#3	.74458	.00214	36.353	.00285	24.740	1393.2	-76305.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00109**	**.00210**	**1.6177**	**-.00080**	**.00271**	**.00192**	**.00025**
Stddev	.00232	.00081	.0320	.00036	.00357	.00082	.00170
%RSD	213.51	38.853	1.9799	45.268	131.65	42.754	672.27
#1	-.00175	.00117	1.5815	-.00115	-.00017	.00266	-.00171
#2	.00149	.00243	1.6423	-.00084	.00160	.00206	.00112
#3	-.00301	.00269	1.6294	-.00042	.00670	.00104	.00136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00040**	**.00558**	F **-.07764**
Stddev	.00024	.00025	.62953
%RSD	60.547	4.3930	810.79
#1	.00059	.00538	-.78103
#2	.00013	.00552	.11519
#3	.00048	.00586	.43291
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013



Sample Name: L1305144408 Acquired: 6/4/2013 12:47:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22838.**	**66088.**
Stddev	196.	14652.
%RSD	.85860	22.171
#1	23055.	81849.
#2	22788.	63533.
#3	22672.	52881.

Approved: June 05, 2013

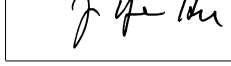
Sample Name: CCV Acquired: 6/4/2013 12:50:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF **.18274**	sF **.04761**	kF **.34383**	kF **.20755**	sF **.00712**	kF **.02027**
Stddev	.15132	.16569	.01115	.17012	.01401	.01618
%RSD	82.803	348.03	3.2442	81.969	196.65	79.794
#1	k .04010	s -.04424	k .33144	k .04694	s -.00118	k .00499
#2	k .16667	k -.05181	k .35308	k .18989	-.00075	k .01862
#3	.34145	.23888	.34696	.38581	.02330	.03722
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.40000	10.000	.40000	.50000	1.0000	.05000
Range	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF **.11561**	kF **.04475**	kF **.17792**	kF **.21638**	kF **.44491**	sF **.03488**
Stddev	.15642	.00176	.00569	.17179	.01392	.06076
%RSD	135.30	3.9428	3.1965	79.394	3.1288	174.18
#1	s .02382	k .04386	k .17164	k .05445	k .42936	s -.00218
#2	.02679	k .04679	k .18272	k .19812	k .45621	k .00182
#3	.29623	.04361	.17940	.39658	.44917	.10500
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	10.000	.05000	.20000	.50000	.50000	4.0000
Range	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.87698**	sF **.03359**	sF **4.3359**	sF **1.9786**	sF **.42322**	sF **.00473**
Stddev	.02603	.04200	2.3349	.1572	.66275	.01312
%RSD	2.9680	125.05	53.850	7.9437	156.60	277.58
#1	.84756	s -.00658	s 1.6664	s 2.1600	s .04291	s -.00363
#2	.89702	.03014	5.9979	1.8837	.03826	-.00204
#3	.88635	.07721	5.3433	1.8921	1.1885	.01985
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1.0000	1.0000	1.0000	1.0000	50.000	1.0000
Range	-10.000%	-10.000%	10.000%	10.000%	-10.000%	-10.000%

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 12:50:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF **.11855**	^F *****	F **.87014**	sF **.38529**	kF **.43583**	kF **4.6196**
Stddev	.16362	-----	.02338	.66942	.01283	20.825
%RSD	138.02	-----	2.6868	173.74	2.9442	450.81
#1	s .02300	s .02591	.84480	s -.00736	k .42210	k -19.401
#2	k .02518	^ -----	.89087	.00500	k .44751	k 15.654
#3	.30748	.21258	.87475	1.1582	.43787	17.606
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	10.000	.50000	1.0000	50.000	.50000	10.000
Range	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF **.44013**	sF **123.51**	kF **23.549**	kF **-774.14**	kF **1.0423**	k **.36042**
Stddev	.01277	7.52	15.930	849.53	.0322	.01156
%RSD	2.9023	6.0889	67.647	109.74	3.0933	3.2070
#1	k .42666	s 121.67	k 10.401	k -89.141	k 1.0069	k .34802
#2	k .45207	117.09	18.981	-508.53	k 1.0700	k .37090
#3	.44166	131.79	41.264	-1724.7	1.0501	.36234
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Pass
Value	.50000	10.000	10.000	10.000	1.2000	
Range	-10.000%	10.000%	10.000%	-10.000%	-10.000%	

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **4.2463**	kF **.80779**	sF **.00799**	sF **.01089**	kF **.43453**	kF **.41981**
Stddev	.1504	.02049	.01381	.01376	.01326	.33574
%RSD	3.5417	2.5371	172.75	126.34	3.0506	79.974
#1	4.0837	k .78619	s -.00015	s .00257	k .41971	k .10396
#2	4.3804	.82695	.00019	k .00333	k .44525	k .38305
#3	4.2748	.81023	.02393	.02677	.43862	.77241
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	5.0000	1.0000	1.0000	1.0000	.50000	1.0000
Range	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%	-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 12:50:33 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	kF **.85670**	kF **.31968**
Stddev	.02325	.64618
%RSD	2.7143	202.13
#1	k .83242	k -.20958
#2	.87877	k .12883
#3	.85892	1.0398
Check ?	Chk Fail	Chk Fail
Value	1.0000	1.0000
Range	-10.000%	-10.000%
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23239.**	^ *****
Stddev	435.	-----
%RSD	1.8737	-----
#1	23729.	^ -----
#2	23089.	75978.
#3	22898.	56540.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:53:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00002**	s **-.03152**	k **.00729**	k **.00082**	s **-.00099**	k **.00000**
Stddev	.00008	.00262	.00728	.00076	.00023	.00002
%RSD	493.83	8.3258	99.948	92.758	23.469	1587.9
#1	k -.00007	s -.02963	k .00096	k -.00005	s -.00091	k .00002
#2	.00003	-.03452	.00566	.00118	-.00126	.00000
#3	.00008	-.03042	.01525	.00134	-.00081	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.02491**	kF **.00087**	k **.00384**	k **.00069**	kF **.00958**	s **-.00117**
Stddev	.00198	.00093	.00384	.00029	.00969	.00151
%RSD	7.9519	106.16	100.16	42.233	101.15	128.94
#1	s .02499	k .00010	k .00058	k .00092	k .00144	s -.00288
#2	.02685	.00062	.00286	.00079	.00700	-.00063
#3	.02289	.00190	.00807	.00036	.02030	-.00001
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		.00050			.00500	
Low Limit		-.00050			-.00500	

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01909**	sF **.10254**	sF **-.18117**	sF **2.1905**	s **.04130**	s **-.00308**
Stddev	.02079	.11890	1.9395	.7429	.02054	.00014
%RSD	108.88	115.95	1070.5	33.913	49.726	4.6786
#1	.00186	s .07479	s 1.5743	s 2.5280	s .02879	s -.00324
#2	.01323	-.00002	.14535	2.7047	.03011	-.00300
#3	.04219	.23287	-2.2632	1.3388	.06500	-.00299
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		.10000	.10000	.10000		
Low Limit		-.10000	-.10000	-.10000		

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:53:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00724**	s **.00004**	F **.02009**	s **-.00115**	k **.00992**	k **.21727**
Stddev	.00682	.00004	.01929	.00199	.00977	16.750
%RSD	94.114	93.607	95.977	173.26	98.417	7709.3
#1	s .01330	s .00007	.00351	s -.00096	k .00160	k -1.5709
#2	-.00014	.00000	.01551	.00074	.00750	17.790
#3	.00856	.00005	.04126	-.00323	.02067	-15.567
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			.01000			
Low Limit			-.01000			

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF **.00927**	sF **107.89**	kF **2.3588**	kF **-115.65**	k **.01968**	k **.00970**
Stddev	.00903	11.04	2.1697	104.26	.02192	.00769
%RSD	97.347	10.229	91.982	90.151	111.36	79.246
#1	k .00154	s 114.35	k .67842	k -36.264	k .00166	k .00319
#2	.00709	114.18	1.5897	-76.958	.01331	.00773
#3	.01919	95.150	4.8083	-233.72	.04408	.01818
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit	.00500	1.0000	1.0000	1.0000		
Low Limit	-.00500	-1.0000	-1.0000	-1.0000		

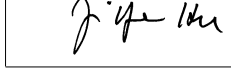
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07797**	k **.01918**	s **-.00014**	s **.00263**	k **.00931**	k **.00077**
Stddev	.08776	.01784	.00004	.00059	.00964	.00063
%RSD	112.56	93.009	32.255	22.354	103.51	82.158
#1	.00572	k .00398	s -.00015	s .00230	k .00053	k .00037
#2	.05255	.01474	-.00017	.00331	.00778	.00044
#3	.17564	.03882	-.00009	.00228	.01962	.00149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 12:53:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	kF **.01784**	kF **-.14853**
Stddev	.01812	.07682
%RSD	101.57	51.717
#1	k .00258	k -.19831
#2	.01307	-.06006
#3	.03787	-.18722
Check ?	Chk Fail	Chk Fail
High Limit	.01000	.10000
Low Limit	-.01000	-.10000
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23296.**	^ *****
Stddev	506.	-----
%RSD	2.1712	-----
#1	23876.	^ -----
#2	23061.	84606.
#3	22950.	59545.

Approved: June 05, 2013



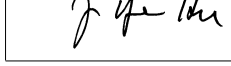
Sample Name: L1305144409 Acquired: 6/4/2013 12:57:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00028**	s **-.03041**	k **.00150**	k **.00402**	s **-.00079**	k **.00000**
Stddev	.00028	.00642	.00139	.00374	.00046	.00002
%RSD	100.76	21.095	92.945	93.147	58.311	663.38
#1	k -.00046	s -.02791	k .00100	k .00172	s -.00082	k -.00001
#2	-.00042	-.03770	.00307	.00199	-.00122	.00002
#3	.00004	-.02563	.00042	.00833	-.00031	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.28020**	k **.00032**	k **.00087**	k **.00098**	k **.00148**	s **.00012**
Stddev	.44331	.00009	.00044	.00043	.00095	.00279
%RSD	158.21	27.988	50.978	43.682	64.138	2422.4
#1	s .02261	k .00025	k .00051	k .00141	k .00086	s -.00088
#2	.02591	.00029	.00073	.00095	.00101	-.00204
#3	.79209	.00042	.00137	.00056	.00258	.00326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21216**	s **.11938**	s **4.2012**	s **2.4426**	s **.05468**	s **-.00320**
Stddev	.00821	.20887	2.3653	.7616	.04212	.00047
%RSD	3.8714	174.97	56.300	31.179	77.032	14.811
#1	.20388	s .32625	s 4.7021	s 1.6937	s .04100	s -.00297
#2	.22030	.12332	1.6256	3.2163	.02109	-.00375
#3	.21230	-.09145	6.2759	2.4180	.10193	-.00289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



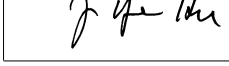
Sample Name: L1305144409 Acquired: 6/4/2013 12:57:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.16746**	s **.00703**	**.00210**	s **.14658**	k **.00351**	k **24.287**
Stddev	.28322	.00800	.00223	.26030	.00109	10.110
%RSD	169.12	113.80	106.13	177.58	31.051	41.627
#1	s .01199	s .00240	.00023	s -.00742	k .00343	k 12.987
#2	-.00397	.00242	.00150	.00004	.00246	32.475
#3	.49437	.01627	.00457	.44712	.00464	27.399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00321**	sF **122.66**	kF **1388.0**	kF **-74606.**	k **.00118**	k **.00255**
Stddev	.00004	22.74	45.5	2646.	.00202	.00039
%RSD	1.3639	18.538	3.2778	3.5464	171.77	15.122
#1	k .00322	s 138.28	k 1347.9	k -72384.	k -.00071	k .00211
#2	.00316	133.12	1437.5	-77533.	.00093	.00279
#3	.00324	96.573	1378.8	-73903.	.00331	.00276
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6558**	k **.00165**	s **.00124**	s **.00269**	k **.00164**	k **.00035**
Stddev	.0545	.00196	.00241	.00050	.00069	.00011
%RSD	3.2900	118.80	195.42	18.448	42.286	32.674
#1	1.6036	k -.00008	s -.00009	s .00242	k .00086	k .00034
#2	1.7123	.00125	-.00022	.00326	.00185	.00023
#3	1.6515	.00377	.00402	.00239	.00219	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144409 Acquired: 6/4/2013 12:57:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	k **.00680**	k **.04367**
Stddev	.00195	.34443
%RSD	28.625	788.68
#1	k .00510	k .21545
#2	.00638	-.35287
#3	.00892	.26844
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22988.**	^ *****
Stddev	430.	-----
%RSD	1.8717	-----
#1	23481.	^ -----
#2	22794.	86746.
#3	22688.	57946.

Approved: June 05, 2013

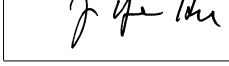
Sample Name: L1305144410 Acquired: 6/4/2013 13:00:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00021**	s **-.03145**	k **.00142**	k **.00314**	s **-.00087**	k **.00002**
Stddev	.00069	.00786	.00032	.00337	.00039	.00001
%RSD	323.36	25.004	22.613	107.13	44.411	64.045
#1	k -.00033	s -.02747	k .00142	k .00146	s -.00082	k .00003
#2	.00053	-.04051	.00110	.00095	-.00128	.00003
#3	k -.00084	s -.02637	k .00175	k .00702	s -.00051	k .00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.26212**	k **.00028**	k **.00022**	k **.00075**	k **.00104**	s **-.00213**
Stddev	.41227	.00009	.00010	.00031	.00007	.00095
%RSD	157.28	33.923	43.057	41.948	6.4012	44.613
#1	s .01996	k .00018	k .00017	k .00109	k .00109	s -.00184
#2	.02826	.00037	.00033	.00047	.00096	-.00319
#3	s .73814	k .00028	k .00016	k .00069	k .00107	s -.00136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21071**	s **.00627**	s **3.1230**	s **2.4269**	s **.05557**	s **-.00284**
Stddev	.01170	.12030	1.5538	.6027	.04308	.00050
%RSD	5.5508	1918.3	49.754	24.835	77.512	17.464
#1	.19756	s .06829	s 4.6574	s 1.7767	s .04669	s -.00278
#2	.21462	.08291	3.1612	2.5369	.01763	-.00337
#3	.21995	s -.13238	s 1.5505	s 2.9669	s .10240	s -.00238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



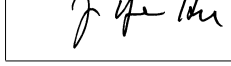
Sample Name: L1305144410 Acquired: 6/4/2013 13:00:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.16104**	s **.00123**	**.00013**	s **.13229**	k **.00164**	k **19.799**
Stddev	.26001	.00129	.00030	.23205	.00014	10.446
%RSD	161.46	104.81	219.58	175.41	8.4809	52.761
#1	s .01987	s .00058	-.00010	s -.00402	k .00178	k 14.120
#2	.00214	.00040	.00004	.00067	.00164	31.855
#3	s .46110	s .00272	.00047	s .40023	k .00150	k 13.422
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00199**	sF **120.53**	kF **1375.0**	kF **-74047.**	k **-.00178**	k **.00236**
Stddev	.00126	10.69	90.7	4461.	.00117	.00286
%RSD	63.440	8.8659	6.5946	6.0249	65.572	121.06
#1	k .00343	s 112.76	k 1270.3	k -68896.	k -.00299	k .00513
#2	.00108	132.72	1424.5	-76660.	-.00066	-.00058
#3	k .00146	s 116.12	k 1430.1	k -76585.	k -.00170	k .00253
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5024**	k **.00009**	s **.00114**	s **.00270**	k **.00119**	k **.00028**
Stddev	.0999	.00065	.00228	.00056	.00073	.00012
%RSD	6.6523	747.06	200.85	20.743	60.989	44.855
#1	1.3871	k .00020	s -.00012	s .00224	k .00201	k .00022
#2	1.5551	-.00061	-.00025	.00332	.00093	.00019
#3	1.5650	k .00067	s .00377	s .00253	k .00063	k .00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144410 Acquired: 6/4/2013 13:00:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	k **.00503**	kF **-.48532**
Stddev	.00054	.24967
%RSD	10.778	51.444
#1	k .00445	k -.67188
#2	.00511	-.58239
#3	k .00553	k -.20170
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23182.**	^ *****
Stddev	666.	-----
%RSD	2.8713	-----
#1	23932.	^ -----
#2	22950.	86584.
#3	22663.	^ -----

Approved: June 05, 2013

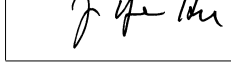
Sample Name: L1305144410S Acquired: 6/4/2013 13:04:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.03612**	s **-.03189**	k **.16297**	k **.19692**	s **.00012**	k **.00499**
Stddev	.03381	.01600	.01213	.18387	.00182	.00439
%RSD	93.603	50.182	7.4442	93.374	1533.5	87.965
#1	k .01147	s -.03564	k .14897	k .06419	s -.00053	k .00183
#2	.02223	-.04567	.16954	.11977	-.00129	.00314
#3	k .07467	k -.01434	k .17040	k .40679	.00217	k .00999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.11464**	k **.02118**	k **.08288**	k **.05324**	k **.20506**	s **.00271**
Stddev	.17373	.00125	.00566	.04559	.01410	.00743
%RSD	151.54	5.8946	6.8245	85.629	6.8754	274.59
#1	s .00466	k .01986	k .07635	k .01990	k .18878	s .00042
#2	.02435	.02134	.08602	.03463	.21292	-.00332
#3	.31492	k .02234	k .08627	k .10518	k .21347	k .01102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60127**	s **.09321**	s **2.1955**	s **2.3531**	s **.10081**	s **-.00202**
Stddev	.04789	.06774	3.1040	1.6342	.08479	.00261
%RSD	7.9650	72.672	141.38	69.447	84.108	129.25
#1	.54639	s .02198	s 4.2944	s .48064	s .09017	s -.00400
#2	.62282	.15681	3.6621	3.4916	.02184	-.00299
#3	.63460	.10086	-1.3701	3.0872	.19041	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



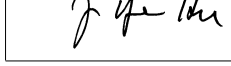
Sample Name: L1305144410S Acquired: 6/4/2013 13:04:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.07838**	^ *****	**.41350**	s **.08419**	k **.20409**	k **25.541**
Stddev	.11546	-----	.02876	.14810	.01352	5.833
%RSD	147.32	-----	6.9542	175.92	6.6224	22.838
#1	s .01691	s .01407	.38030	s -.00648	k .18851	k 19.761
#2	.00665	.01218	.42970	.00394	.21114	25.436
#3	k .21157	^ -----	.43050	.25509	k .21263	k 31.426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.20581**	sF **119.34**	kF **1340.1**	kF **-71555.**	k **.49080**	k **.16536**
Stddev	.01463	20.84	117.9	6381.	.03535	.01163
%RSD	7.1096	17.465	8.7966	8.9178	7.2018	7.0331
#1	k .18892	s 122.74	k 1204.2	k -64222.	k .44999	k .15240
#2	.21387	138.27	1401.3	-74594.	.51066	.16878
#3	k .21464	97.004	1414.8	-75848.	k .51175	k .17489
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.4863**	k **-.00118**	s **.00134**	s **.00350**	k **.20102**	k **.10273**
Stddev	.2865	.00014	.00251	.00183	.01301	.09010
%RSD	8.2188	11.512	188.17	52.331	6.4717	87.705
#1	3.1556	k -.00105	s -.00003	s .00259	k .18600	k .03770
#2	3.6432	-.00132	-.00020	.00230	.20872	.06492
#3	3.6601	k -.00117	.00424	k .00560	k .20835	k .20558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144410S Acquired: 6/4/2013 13:04:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	k **.39913**	kF **-.25822**
Stddev	.02830	.33035
%RSD	7.0908	127.93
#1	k .36645	k -.63911
#2	.41575	-.04990
#3	.41518	k -.08565
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23284.**	^ *****
Stddev	922.	-----
%RSD	3.9584	-----
#1	24339.	^ -----
#2	22875.	85392.
#3	22637.	61232.

Approved: June 05, 2013

Sample Name: L1305145001 Acquired: 6/4/2013 13:07:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00019**	sF **-.35661**	k **.00454**	k **.00453**	sF **-.01082**	k **.00004**
Stddev	.00019	.54493	.00491	.00176	.01660	.00003
%RSD	99.490	152.81	108.08	38.715	153.44	85.375
#1	k .00000	s -.98582	k .00065	k .00268	s -.02999	k .00006
#2	-.00020	-.04646	.00293	.00476	-.00116	.00004
#3	-.00037	-.03754	.01006	.00617	-.00131	.00000
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		810.00			81.000	
Low Limit		-.10000			-.00500	

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.19280**	k **.00125**	k **.00225**	k **.00118**	k **.00468**	s **.00218**
Stddev	.27696	.00057	.00221	.00011	.00511	.00630
%RSD	143.65	46.140	98.300	9.6175	109.24	288.90
#1	s .51194	k .00068	k .00038	k .00105	k .00024	s .00943
#2	.01544	.00123	.00168	.00122	.00353	-.00195
#3	.05102	.00183	.00469	.00126	.01027	-.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.96536**	sF **-.45832**	sF **-6.6848**	s **19.818**	sF **-.75922**	s **.00986**
Stddev	.21669	.84597	18.813	29.306	1.3909	.02260
%RSD	22.447	184.58	281.43	147.88	183.20	229.11
#1	.71596	s -1.4351	s -28.363	s 53.656	s -2.3653	s .03596
#2	1.0726	.02463	5.3658	2.6929	.05137	-.00280
#3	1.1075	.03555	2.9431	3.1041	.03623	-.00356
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass
High Limit		45.000	45.000		360.00	
Low Limit		-.10000	-.10000		-.50000	

Approved: June 05, 2013

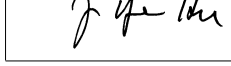
Sample Name: L1305145001 Acquired: 6/4/2013 13:07:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF **-.34825**	sF **-.01828**	**.01058**	s **.02588**	k **.01522**	k **32.684**
Stddev	.63989	.03694	.01098	.04836	.00652	14.832
%RSD	183.75	202.07	103.77	186.87	42.843	45.379
#1	s -1.0870	s -.06093	.00154	s .08171	k .00869	k 17.336
#2	.01099	.00285	.00740	-.00071	.01523	33.777
#3	.03131	.00324	.02279	-.00335	.02173	46.939
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00	27.000				
Low Limit	-.10000	-.00300				

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00613**	sF **418.99**	^ *****	^ *****	k **.01059**	k **.00712**
Stddev	.00432	517.68	-----	-----	.01307	.00513
%RSD	70.400	123.55	-----	-----	123.42	72.002
#1	k .00339	s 1016.3	^ -----	^ -----	k -.00023	k .00404
#2	.00389	140.52	8070.0	-467560.	.00689	.00429
#3	.01111	100.15	8217.1	-474870.	.02511	.01305
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000				
Low Limit		-.00400				

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3820**	k **-.00023**	s **-.00344**	s **.02374**	k **.00518**	k **.00036**
Stddev	.3536	.00011	.00569	.03578	.00288	.00005
%RSD	25.590	49.268	165.44	150.72	55.666	14.230
#1	.98306	k -.00036	s -.01000	s .06505	k .00281	k .00041
#2	1.5057	-.00014	-.00026	.00266	.00434	.00031
#3	1.6571	-.00020	-.00005	.00351	.00839	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145001 Acquired: 6/4/2013 13:07:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	k **.01685**	kF **-.51590**
Stddev	.01111	.47579
%RSD	65.922	92.226
#1	k .00704	k -.12293
#2	.01459	-1.0449
#3	.02891	-.37988
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**23886.**	^ *****
Stddev	3545.	-----
%RSD	14.843	-----
#1	27966.	^ -----
#2	22136.	79371.
#3	21556.	85678.

Approved: June 05, 2013

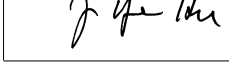
Sample Name: CCV Acquired: 6/4/2013 14:08:39 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43429**	**9.7323**	F **.47873**	**.49051**	**.98400**	**.04845**	**10.159**
Stddev	.00020	.0733	.00095	.00259	.00635	.00022	.055
%RSD	.04579	.75322	.19856	.52733	.64501	.45677	.53964
#1	.43406	9.6495	.47769	.48770	.97758	.04820	10.102
#2	.43440	9.7889	.47896	.49105	.99027	.04860	10.211
#3	.43440	9.7586	.47955	.49279	.98414	.04856	10.163
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05836**	**.20004**	**.49178**	**.50667**	**3.9632**	**1.0012**	**.92637**
Stddev	.00016	.00093	.00081	.00190	.0458	.0025	.33397
%RSD	.28141	.46329	.16440	.37495	1.1561	.24849	36.051
#1	.05831	.20007	.49125	.50634	3.9141	1.0017	1.0656
#2	.05823	.19909	.49138	.50496	4.0049	.99858	.54531
#3	.05855	.20095	.49271	.50872	3.9705	1.0035	1.1682
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	10.000%						

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.6728**	F **1.8350**	**48.895**	**1.0451**	**9.6803**	**.50050**	**.98734**
Stddev	2.6648	1.6362	.248	.0082	.1509	.00367	.00349
%RSD	46.975	89.166	.50753	.78444	1.5588	.73252	.35382
#1	-2.8864	1.8486	48.630	1.0370	9.5143	.49659	.98727
#2	-5.9356	.19204	49.123	1.0534	9.8092	.50386	.98388
#3	-8.1966	3.4643	48.931	1.0450	9.7172	.50105	.99086
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



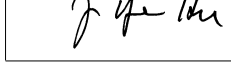
Sample Name: CCV Acquired: 6/4/2013 14:08:39 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.845**	**.49440**	F **11.514**	**.49661**	F **-183.99**	**9.8669**	**10.929**
Stddev	.289	.00268	14.014	.00313	11.85	.1010	2.434
%RSD	.59142	.54257	121.72	.63112	6.4391	1.0232	22.272
#1	48.512	.49313	-4.4829	.49686	-173.32	9.9755	11.320
#2	48.991	.49259	21.627	.49335	-181.92	9.7758	8.3227
#3	49.032	.49748	17.396	.49961	-196.74	9.8495	13.143
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			10.000%		-10.000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1737**	**.40872**	**4.7031**	**.92509**	**.95769**	**.96203**	**.49398**
Stddev	.0062	.00165	.0428	.00533	.00622	.01046	.00206
%RSD	.52949	.40292	.91080	.57567	.64928	1.0873	.41664
#1	1.1725	.40878	4.7055	.92636	.95052	.94995	.49470
#2	1.1681	.40705	4.6591	.91924	.96084	.96823	.49166
#3	1.1804	.41034	4.7447	.92965	.96169	.96790	.49559
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.95756**	**.99878**	F **.76495**
Stddev	.00441	.00552	.20809
%RSD	.46061	.55250	27.203
#1	.95256	.99587	.87673
#2	.95926	.99532	.89326
#3	.96087	1.0051	.52486
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 14:08:39 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22105.**	**29008.**
Stddev	44.	226.
%RSD	.19889	.77807
#1	22130.	29245.
#2	22130.	28796.
#3	22054.	28985.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 14:11:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00053**	**.00062**	**.00153**	**.00070**	**-.00024**	**-.05070**
Stddev	.00027	.01711	.00029	.00015	.00013	.00002	.00478
%RSD	88.884	3217.7	46.862	10.027	18.968	8.8238	9.4303
#1	-.00031	-.01704	.00061	.00157	.00084	-.00026	-.04633
#2	-.00003	.00151	.00091	.00166	.00068	-.00022	-.05581
#3	-.00056	.01713	.00033	.00136	.00058	-.00024	-.04996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**-.00002**	**-.00160**	**.00003**	**.00109**	**.00067**	F **-.12529**
Stddev	.00010	.00007	.00018	.00046	.00384	.00235	.12725
%RSD	119.08	305.47	11.467	1857.5	351.09	349.25	101.56
#1	-.00015	-.00007	-.00182	-.00003	.00547	-.00122	-.24857
#2	-.00013	.00006	-.00150	-.00041	-.00050	-.00007	-.13286
#3	.00003	-.00006	-.00149	.00051	-.00170	.00331	.00558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **7.1170**	F **2.8399**	**.01124**	**-.00080**	**.01549**	**.00013**	**.00134**
Stddev	2.8167	.9178	.02685	.00085	.01727	.00003	.00036
%RSD	39.577	32.318	238.86	106.51	111.49	22.126	26.562
#1	9.8093	2.1187	.01785	-.00177	.00245	.00016	.00114
#2	4.1905	3.8731	.03416	-.00023	.03507	.00012	.00112
#3	7.3514	2.5280	-.01829	-.00039	.00894	.00010	.00175
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 14:11:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04505**	**.00011**	F **-1.2063**	**.00136**	F **-224.73**	**-.02192**	F **3.5691**
Stddev	.01057	.00067	11.659	.00112	4.52	.07035	.1640
%RSD	23.453	612.85	966.57	82.517	2.0091	320.98	4.5939
#1	-.05620	-.00062	-14.650	.00101	-221.96	.00189	3.7412
#2	-.04379	.00027	4.8969	.00045	-229.94	-.10107	3.5512
#3	-.03518	.00068	6.1345	.00261	-222.30	.03344	3.4148
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00079**	**.00372**	**-.00212**	**-.00018**	**.00009**	**.00132**	**.00071**
Stddev	.00180	.00039	.00123	.00004	.00005	.00102	.00121
%RSD	227.22	10.611	58.027	24.387	61.559	77.093	169.28
#1	-.00277	.00356	-.00219	-.00021	.00012	.00015	.00047
#2	.00076	.00417	-.00331	-.00013	.00002	.00199	.00202
#3	-.00037	.00343	-.00086	-.00020	.00011	.00182	-.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

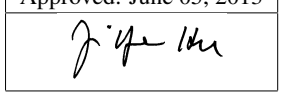
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00030**	**.00022**	F **.14097**
Stddev	.00025	.00007	.17597
%RSD	84.353	33.559	124.82
#1	.00005	.00016	.23580
#2	.00055	.00019	-.06207
#3	.00028	.00030	.24918
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 14:11:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22184.**	**29150.**
Stddev	46.	142.
%RSD	.20874	.48854
#1	22236.	28986.
#2	22150.	29244.
#3	22165.	29219.

Approved: June 05, 2013



Sample Name: L1305144304 Acquired: 6/4/2013 14:15:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.02279**	**.00022**	**.01532**	**.03018**	**-.00024**
Stddev	.00062	.00381	.00086	.00035	.00029	.00001
%RSD	87.676	16.717	397.87	2.2544	.97649	3.2215
#1	-.00136	.02716	.00084	.01496	.02989	-.00024
#2	-.00013	.02107	.00058	.01535	.03017	-.00025
#3	-.00063	.02015	-.00077	.01565	.03048	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.497**	**.00108**	**.00034**	**-.00121**	**.00021**	**.01819**
Stddev	.713	.00003	.00003	.00044	.00031	.00423
%RSD	.75447	2.4300	8.8129	36.830	148.28	23.274
#1	94.109	.00109	.00031	-.00169	.00051	.02113
#2	94.062	.00111	.00037	-.00082	.00023	.01334
#3	95.320	.00105	.00033	-.00111	-.00011	.02011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55391**	**10.275**	F **-17.447**	**3.1315**	**6.3057**	**.01220**
Stddev	.00367	.095	9.795	1.5282	.0300	.00077
%RSD	.66239	.92232	56.142	48.800	.47611	6.2959
#1	.55183	10.168	-10.962	1.9122	6.2784	.01257
#2	.55176	10.310	-12.664	2.6366	6.3009	.01131
#3	.55815	10.348	-28.714	4.8459	6.3379	.01270
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

Sample Name: L1305144304 Acquired: 6/4/2013 14:15:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**85.612**	**.07558**	**.00007**	**16.076**	**.00422**	**35.372**
Stddev	.623	.00075	.00008	.066	.00042	7.121
%RSD	.72828	.98773	113.45	.40900	9.8766	20.131
#1	84.923	.07494	-.00001	16.000	.00469	31.136
#2	85.773	.07540	.00015	16.109	.00405	43.593
#3	86.139	.07640	.00006	16.119	.00391	31.387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	F **-183.44**	F **3827.2**	F **-213870.**	**-.00203**	**.00175**
Stddev	.00119	16.62	19.5	901.	.00039	.00083
%RSD	523.10	9.0616	.50847	.42134	19.430	47.466
#1	.00108	-202.62	3811.1	-213140.	-.00208	.00217
#2	-.00053	-173.22	3821.6	-213580.	-.00161	.00228
#3	-.00124	-174.48	3848.8	-214880.	-.00239	.00079
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

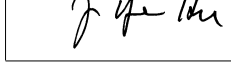
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9454**	**-.00178**	**.52836**	**-.00066**	**-.00004**	**.00039**
Stddev	.0100	.00037	.00289	.00048	.00042	.00021
%RSD	.51403	20.636	.54663	73.011	989.06	53.438
#1	1.9355	-.00197	.52503	-.00044	.00027	.00045
#2	1.9452	-.00136	.52983	-.00121	.00013	.00016
#3	1.9555	-.00202	.53022	-.00033	-.00052	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144304 Acquired: 6/4/2013 14:15:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00729**	F **-.15562**
Stddev	.00004	.19432
%RSD	.54158	124.87
#1	.00725	-.04153
#2	.00729	-.37999
#3	.00733	-.04533
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21425.**	**29651.**
Stddev	69.	184.
%RSD	.32347	.62062
#1	21465.	29836.
#2	21465.	29649.
#3	21345.	29468.

Approved: June 05, 2013



Sample Name: L1305144305 Acquired: 6/4/2013 14:19:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00050**	**.15249**	**.00005**	**.01176**	**.02899**	**-.00021**	**41.998**
Stddev	.00028	.01078	.00215	.00022	.00028	.00002	.244
%RSD	57.167	7.0689	4751.3	1.9065	.96139	9.5338	.58189
#1	-.00043	.14194	-.00171	.01163	.02888	-.00022	42.173
#2	-.00025	.15204	.00244	.01201	.02931	-.00018	42.102
#3	-.00081	.16349	-.00060	.01162	.02880	-.00022	41.719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00039**	**-.00134**	**.00027**	**.16547**	**.24403**	**2.9337**
Stddev	.00011	.00017	.00038	.00017	.00145	.00544	.3063
%RSD	23.404	42.372	28.316	63.201	.87690	2.2291	10.441
#1	.00058	.00058	-.00103	.00009	.16379	.24622	3.2865
#2	.00036	.00035	-.00121	.00043	.16636	.24803	2.7356
#3	.00049	.00025	-.00176	.00030	.16624	.23783	2.7791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.6449**	**2.6585**	**3.6500**	**.00272**	**23.394**	**.03608**	**-.00027**
Stddev	5.1843	.3551	.0496	.00202	.251	.00029	.00010
%RSD	315.17	13.356	1.3586	74.306	1.0730	.80229	37.812
#1	-6.6515	2.4285	3.6289	.00421	23.343	.03590	-.00039
#2	-1.9837	2.4797	3.7067	.00352	23.667	.03641	-.00023
#3	3.7004	3.0675	3.6145	.00042	23.173	.03592	-.00020
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: L1305144305 Acquired: 6/4/2013 14:19:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.521**	**.00156**	**45.503**	**.00260**	F **-177.16**	F **1578.7**	F **-85630.**
Stddev	.225	.00057	8.732	.00038	12.75	11.8	379.
%RSD	.81842	36.522	19.190	14.568	7.1967	.74429	.44211
#1	27.578	.00091	37.172	.00243	-173.26	1592.3	-86039.
#2	27.712	.00195	44.749	.00303	-166.81	1571.5	-85559.
#3	27.273	.00184	54.588	.00233	-191.40	1572.4	-85292.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**.00202**	**1.9046**	**-.00174**	**.23434**	**.00213**	**.00010**
Stddev	.00229	.00077	.0174	.00007	.00194	.00043	.00170
%RSD	1311.5	38.046	.91595	4.1675	.82718	20.138	1703.0
#1	-.00277	.00114	1.9234	-.00177	.23521	.00163	-.00172
#2	.00157	.00254	1.8890	-.00180	.23570	.00240	.00036
#3	.00067	.00238	1.9013	-.00166	.23212	.00235	.00166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00037**	**.00630**	**.09504**
Stddev	.00010	.00004	.10123
%RSD	26.254	.58170	106.52
#1	.00042	.00627	-.01085
#2	.00026	.00634	.10510
#3	.00043	.00629	.19086
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144305 Acquired: 6/4/2013 14:19:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21985.**	**29811.**
Stddev	62.	296.
%RSD	.28424	.99363
#1	21921.	30018.
#2	22046.	29472.
#3	21988.	29944.

Approved: June 05, 2013

Sample Name: L1305144401 Acquired: 6/4/2013 14:22:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.29072**	**.00033**	**.01149**	**.03567**	**-.00009**
Stddev	.00010	.00557	.00044	.00080	.00018	.00002
%RSD	16.077	1.9174	132.63	6.9920	.50527	22.969
#1	-.00059	.29636	.00048	.01181	.03547	-.00007
#2	-.00053	.28521	-.00016	.01058	.03570	-.00010
#3	-.00073	.29060	.00068	.01209	.03583	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.208**	**.00075**	**.00463**	**-.00131**	**.00259**	**.49396**
Stddev	.070	.00004	.00017	.00009	.00009	.00573
%RSD	.12881	5.7221	3.7026	7.0900	3.5312	1.1592
#1	54.177	.00073	.00448	-.00132	.00267	.48955
#2	54.158	.00072	.00482	-.00121	.00249	.49188
#3	54.288	.00080	.00460	-.00139	.00263	.50043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.32331**	**4.3515**	F **-4.6348**	**2.4855**	**4.3848**	**.00527**
Stddev	.00360	.5394	3.6481	.8113	.0480	.00163
%RSD	1.1139	12.397	78.711	32.640	1.0943	30.825
#1	.32045	4.8477	-4.1622	3.2395	4.3534	.00472
#2	.32735	4.4295	-8.4962	2.5901	4.3610	.00711
#3	.32211	3.7773	-1.2461	1.6271	4.4400	.00400
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

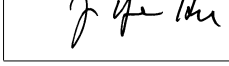
Sample Name: L1305144401 Acquired: 6/4/2013 14:22:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.652**	**.17622**	**-.00030**	**14.979**	**.00874**	**59.197**
Stddev	.224	.00092	.00011	.063	.00041	11.102
%RSD	.58048	.52440	37.090	.41978	4.7356	18.754
#1	38.441	.17570	-.00024	14.951	.00830	48.009
#2	38.627	.17566	-.00043	14.935	.00883	70.211
#3	38.888	.17728	-.00023	15.051	.00911	59.372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00132**	F **-189.11**	F **2007.8**	F **-108290.**	**.00039**	**.00197**
Stddev	.00164	29.13	5.2	325.	.00024	.00191
%RSD	124.24	15.403	.26146	.30057	60.617	96.773
#1	-.00057	-164.15	2006.2	-108000.	.00063	.00166
#2	.00229	-221.12	2013.6	-108650.	.00016	.00024
#3	.00224	-182.07	2003.4	-108230.	.00037	.00402
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1781**	**-.00159**	**.30763**	**.00323**	**-.00004**	**.00067**
Stddev	.0066	.00020	.00125	.00067	.00085	.00012
%RSD	.30110	12.608	.40744	20.773	2377.3	17.302
#1	2.1758	-.00180	.30655	.00368	.00082	.00058
#2	2.1855	-.00157	.30733	.00246	-.00088	.00080
#3	2.1731	-.00140	.30900	.00354	-.00005	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144401 Acquired: 6/4/2013 14:22:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01987**	**.12945**
Stddev	.00010	.07293
%RSD	.49205	56.338
#1	.01980	.07301
#2	.01983	.21179
#3	.01999	.10354
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21628.**	**29335.**
Stddev	38.	171.
%RSD	.17746	.58203
#1	21655.	29482.
#2	21584.	29376.
#3	21645.	29148.

Approved: June 05, 2013

Sample Name: L1305144402 Acquired: 6/4/2013 14:25:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**.05907**	**-.00009**	**.01252**	**.03281**	**-.00022**
Stddev	.00030	.01188	.00240	.00015	.00028	.00001
%RSD	44.529	20.104	2704.6	1.2219	.85264	3.7207
#1	-.00073	.07048	-.00245	.01236	.03287	-.00022
#2	-.00035	.05994	-.00017	.01267	.03305	-.00021
#3	-.00095	.04678	.00235	.01254	.03250	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.374**	**.00079**	**.00267**	**-.00073**	**.00140**	**.01271**
Stddev	.387	.00006	.00013	.00031	.00025	.00226
%RSD	.71147	8.0222	4.9144	42.287	18.064	17.772
#1	54.442	.00087	.00255	-.00046	.00112	.01519
#2	54.723	.00074	.00281	-.00065	.00160	.01217
#3	53.958	.00077	.00264	-.00107	.00149	.01077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31915**	**4.3632**	F **-13.740**	**3.6598**	**4.3383**	**.00280**
Stddev	.00682	.5552	8.616	1.0659	.0176	.00076
%RSD	2.1381	12.725	62.702	29.125	.40494	27.245
#1	.32359	4.9264	-13.248	4.2786	4.3193	.00361
#2	.31130	4.3469	-22.592	4.2718	4.3538	.00270
#3	.32257	3.8163	-5.3817	2.4290	4.3419	.00209
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

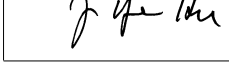
Sample Name: L1305144402 Acquired: 6/4/2013 14:25:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.867**	**.06151**	**-.00030**	**15.464**	**.00542**	**27.114**
Stddev	.343	.00068	.00013	.111	.00036	11.194
%RSD	.88356	1.1033	44.614	.71809	6.7112	41.285
#1	39.080	.06210	-.00028	15.512	.00579	37.069
#2	39.049	.06166	-.00018	15.543	.00539	29.277
#3	38.470	.06077	-.00045	15.337	.00507	14.997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	F **-222.55**	F **2032.8**	F **-109190.**	**-.00027**	**.00265**
Stddev	.00078	43.42	9.6	782.	.00148	.00165
%RSD	259.39	19.510	.47044	.71612	559.68	62.176
#1	.00052	-239.79	2043.3	-109970.	-.00179	.00375
#2	-.00056	-254.70	2030.3	-108410.	-.00018	.00076
#3	.00095	-173.16	2024.7	-109170.	.00117	.00345
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0387**	**-.00179**	**.30931**	**-.00070**	**-.00015**	**.00016**
Stddev	.0151	.00020	.00220	.00054	.00061	.00016
%RSD	.74033	11.279	.71214	77.097	416.52	101.48
#1	2.0561	-.00195	.31035	-.00066	-.00004	.00011
#2	2.0292	-.00157	.31080	-.00125	.00040	.00034
#3	2.0308	-.00186	.30678	-.00018	-.00080	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

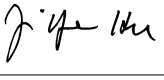
Approved: June 05, 2013



Sample Name: L1305144402 Acquired: 6/4/2013 14:25:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01205**	**.04151**
Stddev	.00007	.48051
%RSD	.58456	1157.5
#1	.01213	.38798
#2	.01201	.24359
#3	.01201	-.50703
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21717.**	**29034.**
Stddev	120.	345.
%RSD	.55087	1.1878
#1	21605.	28783.
#2	21843.	28891.
#3	21703.	29427.

Approved: June 05, 2013



Sample Name: L1305144403 Acquired: 6/4/2013 14:29:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00095**	**.10931**	**-.00041**	**.01446**	**.03092**	**-.00025**
Stddev	.00024	.00513	.00080	.00108	.00038	.00000
%RSD	25.014	4.6889	194.09	7.4702	1.2147	1.9312
#1	-.00119	.11205	-.00106	.01321	.03117	-.00025
#2	-.00071	.10340	.00048	.01504	.03049	-.00024
#3	-.00094	.11249	-.00065	.01511	.03110	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**96.336**	**.00115**	**.00047**	**-.00135**	**.00005**	**.13100**
Stddev	.810	.00016	.00007	.00010	.00038	.00512
%RSD	.84113	14.126	14.908	7.5821	760.14	3.9069
#1	97.161	.00131	.00039	-.00126	.00013	.13646
#2	95.542	.00116	.00052	-.00132	.00038	.13025
#3	96.305	.00098	.00051	-.00146	-.00036	.12631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55300**	**10.157**	F **-21.707**	**3.3286**	**6.5465**	**.01225**
Stddev	.00259	.360	5.493	1.2680	.0813	.00133
%RSD	.46780	3.5485	25.306	38.093	1.2422	10.884
#1	.55453	9.7866	-27.732	2.2093	6.6379	.01331
#2	.55445	10.507	-20.414	4.7057	6.4822	.01268
#3	.55001	10.178	-16.976	3.0709	6.5194	.01075
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

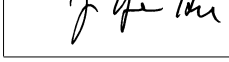
Sample Name: L1305144403 Acquired: 6/4/2013 14:29:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**88.663**	**.10905**	**-.00002**	**16.708**	**.00506**	**43.072**
Stddev	.769	.00066	.00012	.104	.00074	10.583
%RSD	.86744	.60544	721.69	.61996	14.684	24.569
#1	89.489	.10969	-.00016	16.825	.00436	30.853
#2	88.533	.10909	.00008	16.669	.00584	49.064
#3	87.968	.10837	.00003	16.630	.00497	49.300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00155**	F **-183.92**	F **3880.2**	F **-216430.**	**.00057**	**.00211**
Stddev	.00074	31.60	12.1	771.	.00225	.00080
%RSD	47.444	17.179	.31232	.35614	394.34	37.711
#1	.00130	-210.38	3887.6	-216750.	.00152	.00301
#2	.00097	-148.94	3886.8	-216990.	.00220	.00182
#3	.00238	-192.45	3866.2	-215550.	-.00200	.00150
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0560**	**-.00109**	**.54420**	**.00266**	**-.00091**	**.00046**
Stddev	.0072	.00029	.00311	.00108	.00190	.00006
%RSD	.35028	26.491	.57070	40.480	209.53	12.059
#1	2.0543	-.00139	.54776	.00215	.00090	.00045
#2	2.0639	-.00082	.54282	.00389	-.00072	.00041
#3	2.0498	-.00107	.54202	.00193	-.00290	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144403 Acquired: 6/4/2013 14:29:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00719**	**.02336**
Stddev	.00016	.36477
%RSD	2.1848	1561.2
#1	.00733	-.09694
#2	.00722	-.26605
#3	.00702	.43309
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21291.**	**28836.**
Stddev	37.	177.
%RSD	.17382	.61380
#1	21297.	28649.
#2	21252.	28856.
#3	21325.	29002.

Approved: June 05, 2013

Sample Name: L1305144404 Acquired: 6/4/2013 14:32:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.01481**	**.00122**	**.01453**	**.03069**	**-.00024**
Stddev	.00047	.00666	.00113	.00062	.00045	.00002
%RSD	130.40	44.993	92.409	4.2822	1.4535	6.5470
#1	.00008	.02019	.00240	.01385	.03017	-.00024
#2	-.00085	.00736	.00015	.01465	.03090	-.00022
#3	-.00030	.01688	.00112	.01507	.03098	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**98.816**	**.00110**	**.00042**	**-.00135**	**.00001**	**.01999**
Stddev	1.159	.00002	.00005	.00016	.00040	.00257
%RSD	1.1731	1.4557	12.233	11.941	5156.2	12.842
#1	97.478	.00109	.00048	-.00119	.00046	.02144
#2	99.440	.00109	.00042	-.00135	-.00012	.01702
#3	99.529	.00111	.00037	-.00151	-.00032	.02149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.57043**	**10.557**	F **-16.045**	**3.1690**	**6.5663**	**.01273**
Stddev	.00510	.328	7.635	.1938	.0198	.00059
%RSD	.89402	3.1089	47.586	6.1159	.30128	4.6582
#1	.56567	10.449	-7.2308	3.2163	6.5484	.01205
#2	.56981	10.297	-20.622	2.9560	6.5630	.01314
#3	.57582	10.926	-20.282	3.3348	6.5875	.01300
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

Sample Name: L1305144404 Acquired: 6/4/2013 14:32:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.523**	**.09238**	**.00010**	**17.001**	**.00461**	**32.215**
Stddev	.519	.00063	.00011	.168	.00020	18.085
%RSD	.57976	.68189	108.54	.98535	4.3022	56.139
#1	88.993	.09184	.00006	16.814	.00456	51.721
#2	89.548	.09223	.00022	17.048	.00483	28.919
#3	90.030	.09307	.00001	17.139	.00445	16.004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	F **-162.01**	F **3994.9**	F **-222270.**	**-.00114**	**.00162**
Stddev	.00090	25.11	18.6	708.	.00057	.00206
%RSD	244.35	15.499	.46489	.31867	50.321	126.81
#1	.00140	-190.97	3989.2	-221530.	-.00085	.00306
#2	-.00002	-146.46	4015.7	-222950.	-.00180	-.00074
#3	-.00027	-148.59	3980.0	-222320.	-.00077	.00255
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

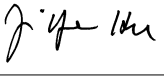
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9242**	**-.00174**	**.55239**	**-.00045**	**.00064**	**.00025**
Stddev	.0058	.00011	.00528	.00021	.00133	.00014
%RSD	.29989	6.3132	.95593	46.737	206.34	55.913
#1	1.9257	-.00177	.54685	-.00060	-.00085	.00035
#2	1.9291	-.00182	.55294	-.00055	.00169	.00033
#3	1.9178	-.00161	.55737	-.00021	.00110	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144404 Acquired: 6/4/2013 14:32:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00610**	**.06223**
Stddev	.00004	.13423
%RSD	.60558	215.70
#1	.00612	.21297
#2	.00613	.01807
#3	.00606	-.04436
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21359.**	**29088.**
Stddev	53.	77.
%RSD	.24991	.26600
#1	21419.	29166.
#2	21342.	29087.
#3	21316.	29011.

Approved: June 05, 2013



Sample Name: L1305144405 Acquired: 6/4/2013 14:36:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00084**	**.07084**	**.00044**	**.01454**	**.03022**	**-.00025**
Stddev	.00036	.01615	.00091	.00033	.00017	.00001
%RSD	43.024	22.801	203.87	2.2417	.57696	4.1485
#1	-.00080	.06141	-.00005	.01470	.03009	-.00024
#2	-.00122	.06161	-.00011	.01417	.03015	-.00025
#3	-.00050	.08949	.00149	.01476	.03042	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.110**	**.00111**	**.00042**	**-.00118**	**.00150**	**.12207**
Stddev	.723	.00011	.00009	.00046	.00049	.00654
%RSD	.81084	9.6049	22.223	38.664	32.648	5.3594
#1	89.564	.00123	.00044	-.00121	.00126	.12895
#2	89.489	.00109	.00032	-.00071	.00206	.12132
#3	88.277	.00102	.00050	-.00162	.00118	.11593
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51881**	**9.6510**	F **-16.469**	**3.1218**	**5.9751**	**.01119**
Stddev	.00245	.3700	6.778	1.3192	.0685	.00189
%RSD	.47311	3.8342	41.157	42.258	1.1470	16.890
#1	.52164	10.021	-13.192	1.9318	6.0273	.01087
#2	.51755	9.6507	-24.263	4.5403	6.0006	.01321
#3	.51724	9.2811	-11.952	2.8932	5.8975	.00947
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

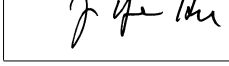
Sample Name: L1305144405 Acquired: 6/4/2013 14:36:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.609**	**.06451**	**-.00002**	**15.003**	**.00453**	**37.640**
Stddev	.578	.00060	.00016	.169	.00016	21.177
%RSD	.71733	.92518	723.10	1.1248	3.5443	56.262
#1	81.009	.06487	.00003	15.136	.00457	62.061
#2	80.873	.06485	-.00019	15.059	.00435	26.509
#3	79.946	.06382	.00010	14.813	.00466	24.349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00180**	F **-198.27**	F **3594.2**	F **-199900.**	**.00015**	**.00165**
Stddev	.00053	6.36	11.1	686.	.00048	.00198
%RSD	29.472	3.2089	.30779	.34310	313.20	119.88
#1	.00157	-199.80	3593.2	-200500.	.00009	.00376
#2	.00241	-191.28	3583.7	-199150.	-.00029	-.00018
#3	.00143	-203.72	3605.8	-200050.	.00065	.00138
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9349**	**-.00176**	**.50319**	**.00052**	**.00042**	**.00021**
Stddev	.0008	.00032	.00469	.00045	.00095	.00027
%RSD	.04136	18.321	.93274	85.412	227.45	127.75
#1	1.9340	-.00176	.50715	.00044	.00098	.00028
#2	1.9353	-.00144	.50442	.00012	.00095	.00043
#3	1.9355	-.00209	.49801	.00100	-.00068	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305144405 Acquired: 6/4/2013 14:36:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00680**	**.34116**
Stddev	.00006	.06124
%RSD	.90409	17.951
#1	.00687	.40498
#2	.00674	.33565
#3	.00680	.28286
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21458.**	**29286.**
Stddev	46.	262.
%RSD	.21572	.89379
#1	21405.	29125.
#2	21484.	29144.
#3	21486.	29588.

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 14:39:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00058**	**.11213**	**.00003**	**.00469**	**.01810**	**-.00024**	**6.4925**
Stddev	.00021	.00643	.00133	.00100	.00023	.00001	.0208
%RSD	35.214	5.7388	4264.8	21.308	1.2794	3.2015	.32082
#1	-.00065	.10831	-.00140	.00365	.01786	-.00024	6.4955
#2	-.00075	.11956	.00027	.00479	.01812	-.00023	6.5116
#3	-.00035	.10851	.00122	.00564	.01832	-.00023	6.4703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00004**	**-.00156**	**.00126**	**.19198**	**.05974**	**.29170**
Stddev	.00011	.00011	.00021	.00033	.00107	.00256	.22065
%RSD	630.29	245.09	13.551	26.288	.55481	4.2850	75.643
#1	.00011	-.00001	-.00180	.00164	.19114	.05892	.54272
#2	.00005	-.00002	-.00139	.00108	.19163	.05770	.20401
#3	-.00010	.00017	-.00150	.00106	.19318	.06261	.12838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.1555**	**2.4749**	**.96719**	**-.00507**	**2.6170**	**.00605**	**-.00026**
Stddev	1.9261	.5495	.01176	.00037	.0042	.00008	.00015
%RSD	166.68	22.202	1.2154	7.3385	.15851	1.2977	56.794
#1	-.35335	3.1071	.97156	-.00523	2.6217	.00610	-.00034
#2	.23980	2.2046	.95387	-.00464	2.6155	.00610	-.00035
#3	-3.3530	2.1129	.97612	-.00533	2.6139	.00596	-.00009
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 14:39:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.88671**	**.00058**	**51.347**	**.00133**	F **-207.14**	F **78.893**	F **-3981.7**
Stddev	.00520	.00015	9.209	.00118	23.78	.097	13.4
%RSD	.58626	25.424	17.936	88.709	11.479	.12313	.33634
#1	.88596	.00070	61.318	.00216	-233.23	78.997	-3997.2
#2	.88192	.00063	43.161	-.00002	-186.71	78.878	-3974.8
#3	.89224	.00041	49.560	.00185	-201.47	78.804	-3973.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.00251**	**2.3609**	**-.00179**	**.05878**	**.00297**	**-.00124**
Stddev	.00122	.00140	.0032	.00018	.00006	.00049	.00090
%RSD	150.62	55.826	.13592	9.9564	.10153	16.646	72.809
#1	.00012	.00098	2.3595	-.00185	.05885	.00332	-.00187
#2	-.00219	.00374	2.3585	-.00194	.05874	.00241	-.00163
#3	-.00036	.00281	2.3645	-.00159	.05876	.00320	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00055**	**.00558**	**.43880**
Stddev	.00013	.00011	.11404
%RSD	24.211	2.0551	25.988
#1	.00053	.00558	.45332
#2	.00042	.00547	.31820
#3	.00069	.00570	.54488
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144406 Acquired: 6/4/2013 14:39:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22258.**	**29757.**
Stddev	11.	130.
%RSD	.05079	.43794
#1	22245.	29701.
#2	22267.	29664.
#3	22262.	29906.

Approved: June 05, 2013

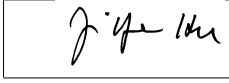
Sample Name: L1305144407 Acquired: 6/4/2013 14:43:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**.34114**	**-.00042**	**.01200**	**.03453**	**-.00012**
Stddev	.00025	.00821	.00087	.00065	.00033	.00003
%RSD	37.113	2.4073	206.19	5.4025	.95023	24.107
#1	-.00044	.33250	-.00086	.01265	.03416	-.00009
#2	-.00064	.34884	-.00098	.01135	.03469	-.00014
#3	-.00094	.34207	.00058	.01198	.03475	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.702**	**.00068**	**.00351**	**-.00103**	**.00242**	**.33157**
Stddev	.257	.00017	.00014	.00022	.00013	.00473
%RSD	.47916	24.487	3.9454	20.978	5.4289	1.4280
#1	53.681	.00063	.00351	-.00107	.00254	.32674
#2	53.456	.00056	.00364	-.00123	.00243	.33176
#3	53.969	.00087	.00337	-.00080	.00228	.33620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31550**	**4.9003**	F **-10.617**	**3.6572**	**4.3528**	**.00686**
Stddev	.00519	.1326	1.311	.9688	.0355	.00154
%RSD	1.6452	2.7066	12.350	26.490	.81563	22.411
#1	.30970	5.0532	-11.588	4.6153	4.3256	.00671
#2	.31711	4.8163	-9.1253	2.6781	4.3398	.00847
#3	.31970	4.8313	-11.137	3.6782	4.3929	.00540
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



Sample Name: L1305144407 Acquired: 6/4/2013 14:43:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.855**	**.11575**	**-.00034**	**14.867**	**.00676**	**46.115**
Stddev	.336	.00071	.00012	.092	.00052	12.435
%RSD	.88833	.61074	35.529	.61574	7.6259	26.966
#1	37.502	.11529	-.00048	14.764	.00695	59.481
#2	37.894	.11539	-.00032	14.901	.00617	43.977
#3	38.171	.11656	-.00024	14.937	.00715	34.887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00193**	F **-171.60**	F **1992.3**	F **-107120.**	**-.00026**	**.00289**
Stddev	.00138	8.36	15.6	564.	.00159	.00083
%RSD	71.842	4.8745	.78323	.52606	609.24	28.702
#1	.00251	-161.96	1975.8	-106520.	.00071	.00264
#2	.00292	-176.92	2006.9	-107640.	.00060	.00222
#3	.00035	-175.93	1994.2	-107200.	-.00210	.00382
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

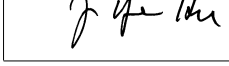
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3618**	**-.00188**	**.30599**	**.00643**	**-.00016**	**.00077**
Stddev	.0146	.00029	.00102	.00237	.00188	.00030
%RSD	.61856	15.171	.33355	36.797	1181.3	38.559
#1	2.3453	-.00215	.30482	.00904	.00194	.00099
#2	2.3728	-.00192	.30650	.00584	-.00073	.00089
#3	2.3675	-.00158	.30666	.00441	-.00169	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305144407 Acquired: 6/4/2013 14:43:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01508**	**.54851**
Stddev	.00021	.17313
%RSD	1.3826	31.563
#1	.01485	.56614
#2	.01525	.36724
#3	.01515	.71215
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21747.**	**29360.**
Stddev	54.	127.
%RSD	.24763	.43274
#1	21809.	29500.
#2	21712.	29325.
#3	21720.	29253.

Approved: June 05, 2013



Sample Name: L1305144408 Acquired: 6/4/2013 14:46:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	**.09602**	**-.00084**	**.01129**	**.02821**	**-.00024**	**40.925**
Stddev	.00030	.01557	.00064	.00070	.00014	.00001	.310
%RSD	34.251	16.216	76.606	6.1917	.49477	2.1358	.75829
#1	-.00054	.08119	-.00061	.01094	.02809	-.00024	40.967
#2	-.00103	.09464	-.00157	.01084	.02837	-.00023	41.212
#3	-.00109	.11224	-.00034	.01210	.02819	-.00023	40.596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00023**	**-.00190**	**.00179**	**.12830**	**.23747**	**2.7229**
Stddev	.00007	.00013	.00006	.00056	.00230	.00173	.0106
%RSD	13.863	53.679	3.3277	31.195	1.7903	.72653	.38996
#1	.00056	.00033	-.00197	.00238	.12977	.23824	2.7145
#2	.00050	.00009	-.00186	.00173	.12948	.23549	2.7349
#3	.00043	.00028	-.00187	.00127	.12565	.23867	2.7195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.6584**	**2.8401**	**3.6036**	**.00212**	**23.173**	**.03119**	**-.00015**
Stddev	5.5239	.3108	.0230	.00125	.045	.00014	.00004
%RSD	97.623	10.943	.63925	58.848	.19530	.43427	26.246
#1	-10.803	2.5813	3.5770	.00336	23.125	.03103	-.00020
#2	-6.3511	3.1848	3.6166	.00087	23.181	.03126	-.00013
#3	.1792	2.7543	3.6172	.00211	23.214	.03127	-.00013
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: L1305144408 Acquired: 6/4/2013 14:46:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.452**	**.00252**	**53.615**	**.00053**	F **-195.16**	F **1579.5**	F **-84560.**
Stddev	.112	.00004	14.918	.00134	30.23	14.7	384.
%RSD	.40777	1.6260	27.824	252.55	15.492	.93090	.45426
#1	27.379	.00257	56.582	.00108	-166.62	1596.3	-84994.
#2	27.581	.00249	37.437	-.00100	-226.84	1568.6	-84266.
#3	27.397	.00251	66.827	.00151	-192.02	1573.8	-84418.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00101**	**.00162**	**1.8067**	**-.00181**	**.23264**	**.00260**	**-.00044**
Stddev	.00151	.00122	.0169	.00027	.00117	.00019	.00079
%RSD	148.82	75.207	.93530	14.876	.50106	7.3617	181.34
#1	-.00235	.00209	1.8262	-.00183	.23223	.00242	-.00126
#2	.00062	.00024	1.7981	-.00153	.23395	.00280	.00033
#3	-.00132	.00253	1.7958	-.00206	.23173	.00257	-.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00048**	**.00592**	**.52647**
Stddev	.00009	.00005	.22223
%RSD	18.280	.92047	42.212
#1	.00041	.00598	.47261
#2	.00045	.00590	.33611
#3	.00058	.00587	.77068
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144408 Acquired: 6/4/2013 14:46:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21813.**	**29562.**
Stddev	36.	75.
%RSD	.16598	.25472
#1	21778.	29572.
#2	21850.	29482.
#3	21813.	29632.

Approved: June 05, 2013

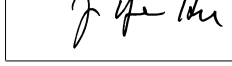
Sample Name: CCV Acquired: 6/4/2013 14:50:20 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43470**	**9.5596**	F **.47649**	**.48934**	**.96994**	**.04833**	**9.8337**
Stddev	.00109	.0789	.00236	.00201	.00737	.00012	.0561
%RSD	.25152	.82477	.49469	.41101	.75955	.25629	.57042
#1	.43542	9.6176	.47880	.48864	.97674	.04824	9.8768
#2	.43344	9.5915	.47660	.49161	.97097	.04829	9.8541
#3	.43524	9.4699	.47409	.48777	.96212	.04848	9.7703
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05776**	**.19872**	**.48770**	**.50270**	**3.8554**	**.98596**	F **1.1854**
Stddev	.00029	.00051	.00207	.00131	.0273	.00413	.3973
%RSD	.49640	.25619	.42484	.25963	.70927	.41927	33.514
#1	.05799	.19929	.48580	.50404	3.8770	.98698	.89274
#2	.05784	.19831	.48738	.50143	3.8645	.98141	1.6377
#3	.05744	.19856	.48991	.50263	3.8246	.98949	1.0258
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.021**	F **2.6726**	**47.858**	**1.0300**	**9.4547**	**.48000**	**.98086**
Stddev	6.080	1.4324	.380	.0065	.0272	.00265	.00307
%RSD	60.671	53.596	.79453	.63085	.28757	.55112	.31279
#1	-9.4130	3.1834	48.084	1.0368	9.4500	.48063	.98438
#2	-16.382	1.0548	48.072	1.0293	9.4839	.48228	.97942
#3	-4.2679	3.7795	47.419	1.0238	9.4302	.47710	.97877
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



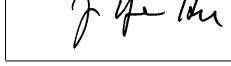
Sample Name: CCV Acquired: 6/4/2013 14:50:20 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.354**	**.48998**	F **14.688**	**.49104**	F **-209.88**	**10.419**	F **-18.604**
Stddev	.458	.00183	3.275	.00351	15.56	.095	1.767
%RSD	.94618	.37383	22.297	.71459	7.4140	.91533	9.4999
#1	48.554	.49209	11.230	.49501	-203.55	10.513	-18.244
#2	48.677	.48894	17.743	.48838	-198.49	10.422	-20.524
#3	47.830	.48890	15.091	.48972	-227.61	10.322	-17.044
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1729**	**.40779**	**4.6917**	**.91954**	**.95411**	**.95088**	**.49190**
Stddev	.0076	.00069	.0568	.00614	.00875	.00402	.00363
%RSD	.64801	.16860	1.2116	.66732	.91759	.42302	.73847
#1	1.1814	.40833	4.7573	.92660	.96005	.94987	.49587
#2	1.1706	.40702	4.6586	.91646	.95822	.95531	.48875
#3	1.1667	.40803	4.6592	.91555	.94405	.94745	.49109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.95772**	**.98313**	F **.71697**
Stddev	.00279	.00496	.28291
%RSD	.29129	.50420	39.459
#1	.96052	.98881	.52762
#2	.95771	.98083	1.0422
#3	.95494	.97973	.58111
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 14:50:20 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22276.**	**30305.**
Stddev	64.	190.
%RSD	.28528	.62642
#1	22210.	30220.
#2	22337.	30174.
#3	22279.	30523.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 14:53:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.01153**	**.00112**	**.00097**	**.00049**	**-.00025**	**-.03227**
Stddev	.00012	.01149	.00073	.00038	.00006	.00002	.00786
%RSD	28.206	99.728	64.879	38.861	11.474	8.9454	24.363
#1	-.00028	.00840	.00071	.00120	.00044	-.00025	-.03438
#2	-.00045	.00192	.00069	.00054	.00048	-.00027	-.02357
#3	-.00051	.02426	.00196	.00118	.00055	-.00022	-.03886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00004**	**-.00183**	**.00016**	**.00034**	**-.00049**	F **-.18464**
Stddev	.00002	.00008	.00014	.00013	.00354	.00196	.17796
%RSD	83.252	222.59	7.4606	82.619	1042.6	400.61	96.385
#1	.00000	-.00002	-.00174	.00001	.00115	.00010	-.37271
#2	-.00004	.00000	-.00198	.00025	.00340	-.00268	-.01889
#3	-.00004	.00013	-.00176	.00022	-.00353	.00110	-.16231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **5.8118**	F **4.9895**	**-.00429**	**-.00145**	**.00905**	**.00010**	**.00107**
Stddev	9.2567	1.6505	.03071	.00041	.00264	.00003	.00020
%RSD	159.27	33.079	715.31	28.041	29.131	28.185	19.034
#1	-3.5575	6.1238	-.02987	-.00098	.00608	.00008	.00083
#2	14.952	5.7487	-.01277	-.00163	.01111	.00013	.00118
#3	6.0414	3.0960	.02977	-.00173	.00996	.00008	.00119
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

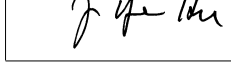
Sample Name: CCB Acquired: 6/4/2013 14:53:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03594**	**.00028**	F **-5.3214**	**.00087**	F **-192.82**	**.21505**	F **-11.788**
Stddev	.00819	.00016	10.563	.00110	21.64	.05533	3.545
%RSD	22.786	55.446	198.50	126.88	11.224	25.727	30.073
#1	-.04352	.00030	-17.160	.00120	-168.07	.22050	-15.880
#2	-.02725	.00043	3.1389	.00177	-208.21	.26746	-9.8163
#3	-.03705	.00012	-1.9426	-.00036	-202.16	.15720	-9.6669
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			1.0000		1.0000		1.0000
Low Limit			-1.1000		-1.0000		-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.00365**	**-.00040**	**-.00040**	**.00012**	**.00129**	**.00098**
Stddev	.00031	.00257	.00182	.00008	.00002	.00073	.00021
%RSD	60.593	70.349	455.18	20.649	12.867	56.020	21.318
#1	-.00076	.00073	.00165	-.00030	.00013	.00054	.00087
#2	-.00063	.00466	-.00106	-.00045	.00012	.00136	.00122
#3	-.00016	.00556	-.00180	-.00044	.00010	.00198	.00084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00011**	**.00019**	F **-.10310**
Stddev	.00026	.00002	.22225
%RSD	238.89	12.789	215.56
#1	-.00018	.00017	-.16092
#2	.00034	.00019	.14234
#3	.00017	.00022	-.29072
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 14:53:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22387.**	**30901.**
Stddev	50.	38.
%RSD	.22170	.12371
#1	22435.	30887.
#2	22336.	30944.
#3	22389.	30871.

Approved: June 05, 2013

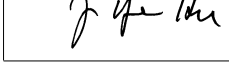
Sample Name: L1305144409 Acquired: 6/4/2013 14:57:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.12883**	**.00045**	**.01243**	**.02931**	**-.00023**	**41.559**
Stddev	.00033	.00730	.00079	.00047	.00048	.00001	.405
%RSD	134.99	5.6673	174.23	3.8062	1.6439	2.9900	.97347
#1	-.00001	.12731	.00076	.01294	.02881	-.00022	41.203
#2	-.00010	.12242	-.00045	.01234	.02935	-.00022	41.476
#3	-.00063	.13678	.00105	.01201	.02977	-.00023	41.999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	**.00044**	**-.00138**	**.00065**	**.16976**	**.24589**	**2.8069**
Stddev	.00015	.00005	.00019	.00003	.00371	.00290	.2951
%RSD	34.396	11.472	14.051	4.3315	2.1840	1.1787	10.514
#1	.00042	.00040	-.00135	.00062	.16585	.24275	2.5393
#2	.00061	.00050	-.00121	.00066	.17020	.24645	2.7581
#3	.00031	.00043	-.00159	.00067	.17322	.24847	3.1234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.6868**	**2.5810**	**3.6936**	**.00222**	**23.515**	**.04322**	**-.00014**
Stddev	11.201	1.2625	.0261	.00116	.223	.00043	.00005
%RSD	416.91	48.914	.70543	52.261	.94728	1.0043	34.070
#1	-10.466	1.7199	3.6650	.00238	23.288	.04322	-.00011
#2	-7.7458	1.9930	3.6997	.00329	23.522	.04278	-.00019
#3	10.152	4.0303	3.7161	.00099	23.733	.04365	-.00011
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



Sample Name: L1305144409 Acquired: 6/4/2013 14:57:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.907**	**.00486**	**43.214**	**.00164**	F **-163.50**	F **1612.2**	F **-86742.**
Stddev	.035	.00404	11.734	.00120	9.55	6.1	662.
%RSD	.12683	83.119	27.153	73.437	5.8438	.37619	.76326
#1	27.936	.00269	56.736	.00186	-173.08	1614.4	-86480.
#2	27.867	.00237	35.708	.00271	-163.45	1605.4	-86251.
#3	27.917	.00952	37.199	.00034	-153.97	1616.9	-87495.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**.00202**	**1.9031**	**-.00182**	**.23713**	**.00336**	**.00050**
Stddev	.00220	.00152	.0121	.00019	.00037	.00017	.00042
%RSD	361.43	74.978	.63324	10.208	.15796	5.1216	83.708
#1	.00021	.00375	1.9050	-.00200	.23749	.00318	.00072
#2	-.00310	.00089	1.8902	-.00183	.23716	.00351	.00076
#3	.00106	.00144	1.9141	-.00163	.23674	.00340	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00038**	**.00543**	**.47513**
Stddev	.00011	.00010	.34866
%RSD	28.096	1.9007	73.381
#1	.00030	.00538	.74453
#2	.00050	.00535	.59954
#3	.00034	.00555	.08133
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144409 Acquired: 6/4/2013 14:57:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21955.**	**30374.**
Stddev	407.	177.
%RSD	1.8516	.58153
#1	22121.	30306.
#2	22252.	30574.
#3	21492.	30240.

Approved: June 05, 2013

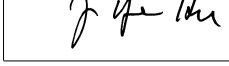
Sample Name: L1305144410 Acquired: 6/4/2013 15:00:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00046**	**.00758**	**.00027**	**.01285**	**.02878**	**-.00023**	**42.767**
Stddev	.00021	.01469	.00087	.00066	.00040	.00002	.320
%RSD	45.326	193.81	323.66	5.1265	1.4037	7.4315	.74907
#1	-.00027	-.00856	.00006	.01355	.02832	-.00025	42.858
#2	-.00069	.02016	-.00048	.01224	.02907	-.00023	43.033
#3	-.00044	.01113	.00123	.01275	.02895	-.00022	42.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**.00002**	**-.00184**	**.00042**	**.01012**	**.24651**	**3.0201**
Stddev	.00013	.00014	.00054	.00018	.00540	.00216	.2265
%RSD	30.095	905.75	29.070	42.717	53.364	.87513	7.5010
#1	.00056	-.00010	-.00134	.00060	.01416	.24678	2.7713
#2	.00042	-.00002	-.00177	.00043	.00399	.24853	3.2143
#3	.00030	.00017	-.00241	.00024	.01223	.24424	3.0748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.7049**	**3.2378**	**3.7342**	**.00300**	**24.230**	**.00959**	**-.00022**
Stddev	12.422	2.4875	.0274	.00083	.286	.00006	.00014
%RSD	185.26	76.827	.73489	27.572	1.1808	.66146	62.690
#1	-12.515	3.4118	3.7041	.00386	23.902	.00954	-.00008
#2	-15.156	.66784	3.7579	.00222	24.360	.00966	-.00022
#3	7.5569	5.6336	3.7406	.00291	24.428	.00956	-.00036
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



Sample Name: L1305144410 Acquired: 6/4/2013 15:00:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.696**	**.00111**	**38.720**	**.00171**	F **-199.38**	F **1620.9**	F **-86895.**
Stddev	.162	.00018	3.014	.00172	51.63	5.5	185.
%RSD	.56422	15.999	7.7836	100.61	25.897	.33970	.21325
#1	28.554	.00101	38.141	.00204	-240.60	1627.2	-86965.
#2	28.873	.00100	41.981	-.00015	-216.07	1618.0	-87035.
#3	28.663	.00131	36.037	.00325	-141.46	1617.5	-86685.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00032**	**.00116**	**1.7559**	**-.00153**	**.24318**	**-.00021**	**.00072**
Stddev	.00099	.00086	.0077	.00007	.00129	.00097	.00096
%RSD	310.77	74.273	.43786	4.5448	.53205	471.29	132.25
#1	.00032	.00044	1.7474	-.00156	.24199	.00091	-.00031
#2	-.00146	.00212	1.7578	-.00146	.24456	-.00073	.00159
#3	.00018	.00092	1.7624	-.00159	.24299	-.00080	.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00033**	**.00544**	**.02809**
Stddev	.00018	.00008	.05754
%RSD	54.875	1.4297	204.82
#1	.00051	.00535	.08165
#2	.00015	.00550	-.03273
#3	.00031	.00546	.03535
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144410 Acquired: 6/4/2013 15:00:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21719.**	**28786.**
Stddev	51.	124.
%RSD	.23629	.43136
#1	21699.	28918.
#2	21679.	28671.
#3	21777.	28770.

Approved: June 05, 2013

Sample Name: L1305144410S Acquired: 6/4/2013 15:04:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19050**	**4.9169**	**.24569**	**1.0058**	**.52047**	**.02521**	**46.923**
Stddev	.00006	.0782	.00227	.0016	.00519	.00004	.424
%RSD	.03293	1.5911	.92305	.15619	.99633	.17736	.90293
#1	.19044	4.8698	.24554	1.0058	.51932	.02518	46.835
#2	.19057	4.8736	.24350	1.0074	.51595	.02527	46.549
#3	.19048	5.0072	.24802	1.0042	.52613	.02519	47.383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02994**	**.10187**	**.25081**	**.25468**	**1.8917**	**.74779**	**3.5142**
Stddev	.00005	.00026	.00093	.00171	.0193	.00182	.2668
%RSD	.15779	.25090	.36956	.67193	1.0204	.24317	7.5926
#1	.02991	.10186	.25185	.25550	1.8845	.74614	3.8065
#2	.02999	.10212	.25051	.25582	1.8770	.74974	3.4523
#3	.02992	.10161	.25007	.25271	1.9136	.74749	3.2838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-10.323**	**3.7202**	**28.118**	**.53085**	**28.101**	**.25460**	**.50926**
Stddev	7.042	1.9560	.331	.00706	.387	.00185	.00165
%RSD	68.218	52.577	1.1770	1.3300	1.3780	.72636	.32467
#1	-6.6701	5.9312	28.002	.52666	27.841	.25404	.50987
#2	-18.441	3.0144	27.861	.52689	27.916	.25309	.51053
#3	-5.8577	2.2151	28.492	.53900	28.546	.25666	.50740
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: L1305144410S Acquired: 6/4/2013 15:04:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.888**	**.25175**	**39.209**	**.25079**	F **-174.56**	F **1612.9**	F **-86049.**
Stddev	.649	.00073	3.657	.00147	31.32	17.6	415.
%RSD	1.2273	.28807	9.3266	.58544	17.945	1.0916	.48282
#1	52.684	.25163	37.767	.25248	-176.60	1626.5	-86379.
#2	52.365	.25253	43.366	.24986	-142.26	1619.2	-86186.
#3	53.614	.25110	36.492	.25001	-204.81	1593.0	-85582.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60035**	**.20307**	**4.2014**	**-.00208**	**.72077**	**.48154**	**.25108**
Stddev	.00515	.00214	.0402	.00010	.00789	.00539	.00263
%RSD	.85809	1.0514	.95724	4.9332	1.0949	1.1197	1.0456
#1	.60456	.20291	4.2392	-.00207	.71918	.47802	.25288
#2	.60189	.20528	4.2059	-.00219	.71380	.47885	.25229
#3	.59461	.20102	4.1592	-.00199	.72934	.48775	.24807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49135**	**.50294**	**.59370**
Stddev	.00066	.00182	.11898
%RSD	.13479	.36092	20.041
#1	.49105	.50443	.56409
#2	.49090	.50347	.72469
#3	.49211	.50092	.49231
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305144410S Acquired: 6/4/2013 15:04:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432718-07

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21511.**	**29001.**
Stddev	57.	241.
%RSD	.26728	.82996
#1	21478.	29131.
#2	21478.	29150.
#3	21578.	28724.

Approved: June 05, 2013

Sample Name: L1305145001 Acquired: 6/4/2013 15:07:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**.01518**	**.00038**	**.03757**	**.01217**	**-.00021**
Stddev	.00032	.00122	.00218	.00136	.00014	.00002
%RSD	54.320	8.0552	576.05	3.6128	1.1719	9.8873
#1	-.00063	.01649	-.00061	.03759	.01209	-.00022
#2	-.00090	.01499	.00287	.03620	.01233	-.00019
#3	-.00025	.01406	-.00113	.03892	.01208	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**262.90**	**.00158**	**.00035**	**-.00116**	**.00037**	**.22602**
Stddev	2.49	.00006	.00029	.00028	.00039	.00140
%RSD	.94821	3.5773	83.251	23.863	106.49	.62039
#1	264.56	.00158	.00003	-.00138	-.00006	.22677
#2	260.03	.00164	.00043	-.00124	.00047	.22689
#3	264.11	.00152	.00059	-.00085	.00070	.22440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3428**	**21.663**	F **-28.305**	**3.0816**	**13.504**	**.03992**
Stddev	.0071	.383	5.863	.3475	.081	.00090
%RSD	.52653	1.7697	20.715	11.275	.60203	2.2457
#1	1.3417	21.394	-33.839	3.4438	13.571	.04091
#2	1.3503	21.493	-22.160	2.7511	13.413	.03967
#3	1.3363	22.102	-28.916	3.0500	13.528	.03917
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

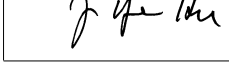
Sample Name: L1305145001 Acquired: 6/4/2013 15:07:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**252.15**	**.07125**	**.00013**	**11.474**	**.01339**	**44.854**
Stddev	1.07	.00051	.00011	.108	.00029	.835
%RSD	.42464	.71307	82.802	.94364	2.1602	1.8614
#1	253.24	.07171	.00007	11.588	.01306	44.377
#2	251.09	.07071	.00026	11.372	.01353	44.368
#3	252.13	.07133	.00007	11.462	.01358	45.818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	F **-244.82**	F **10072.**	F **-579730.**	**-.00048**	**.00325**
Stddev	.00130	39.49	50.	1048.	.00132	.00286
%RSD	100.18	16.129	.49392	.18072	275.41	87.996
#1	.00214	-290.39	10100.	-580650.	.00082	.00600
#2	.00196	-223.34	10101.	-579960.	-.00044	.00029
#3	-.00020	-220.73	10015.	-578590.	-.00181	.00348
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8383**	**-.00211**	**1.3594**	**-.00312**	**.00094**	**.00022**
Stddev	.0176	.00015	.0102	.00060	.00100	.00014
%RSD	.95487	7.1105	.75213	19.118	106.03	66.788
#1	1.8535	-.00208	1.3705	-.00355	.00157	.00012
#2	1.8423	-.00197	1.3503	-.00337	-.00021	.00038
#3	1.8191	-.00227	1.3574	-.00244	.00146	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

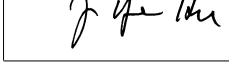
Approved: June 05, 2013



Sample Name: L1305145001 Acquired: 6/4/2013 15:07:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01035**	F **-.36413**
Stddev	.00007	.33875
%RSD	.69972	93.030
#1	.01037	-.72971
#2	.01041	-.30182
#3	.01027	-.06086
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20549.**	**28084.**
Stddev	63.	182.
%RSD	.30711	.64971
#1	20512.	27944.
#2	20514.	28290.
#3	20622.	28017.

Approved: June 05, 2013



Sample Name: L1305145201 Acquired: 6/4/2013 15:10:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**.01616**	**-.00086**	**.03576**	**.01184**	**-.00021**
Stddev	.00020	.00787	.00133	.00051	.00003	.00002
%RSD	20.347	48.711	154.02	1.4240	.22071	8.9787
#1	-.00078	.02126	.00011	.03518	.01183	-.00024
#2	-.00100	.00710	-.00032	.03613	.01187	-.00021
#3	-.00118	.02013	-.00238	.03597	.01183	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**257.49**	**.00153**	**.00057**	**-.00125**	**-.00026**	**.23303**
Stddev	1.76	.00015	.00010	.00020	.00019	.00304
%RSD	.68247	10.082	17.116	16.082	73.856	1.3055
#1	255.46	.00137	.00066	-.00111	-.00045	.22954
#2	258.58	.00168	.00059	-.00148	-.00007	.23506
#3	258.43	.00155	.00046	-.00115	-.00027	.23450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3387**	**21.427**	F **-37.999**	**3.0888**	**13.499**	**.03604**
Stddev	.0084	.526	3.638	.3673	.165	.00084
%RSD	.62790	2.4569	9.5743	11.891	1.2219	2.3199
#1	1.3290	20.874	-34.937	3.4980	13.310	.03530
#2	1.3442	21.923	-42.021	2.7875	13.571	.03695
#3	1.3430	21.484	-37.038	2.9810	13.616	.03587
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

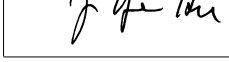
Sample Name: L1305145201 Acquired: 6/4/2013 15:10:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**249.30**	**.08303**	**-.00033**	**11.290**	**.01432**	**46.792**
Stddev	2.85	.00082	.00025	.072	.00058	2.837
%RSD	1.1444	.98536	74.108	.63744	4.0680	6.0630
#1	246.01	.08210	-.00006	11.208	.01384	44.658
#2	250.85	.08364	-.00055	11.320	.01416	45.706
#3	251.04	.08335	-.00040	11.342	.01497	50.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	F **-140.70**	F **10055.**	F **-579940.**	**-.00021**	**.00204**
Stddev	.00248	10.39	88.	3248.	.00197	.00140
%RSD	312.61	7.3815	.87794	.56003	918.08	68.477
#1	-.00071	-134.51	10012.	-577080.	-.00201	.00319
#2	-.00057	-134.90	10157.	-583470.	-.00053	.00244
#3	.00365	-152.69	9997.0	-579280.	.00190	.00048
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8412**	**-.00172**	**1.3496**	**-.00341**	**-.00025**	**.00023**
Stddev	.0187	.00024	.0122	.00019	.00109	.00021
%RSD	1.0142	13.808	.90264	5.4645	445.21	91.901
#1	1.8241	-.00155	1.3357	-.00353	-.00006	.00047
#2	1.8611	-.00199	1.3544	-.00350	-.00142	.00015
#3	1.8383	-.00162	1.3586	-.00320	.00075	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

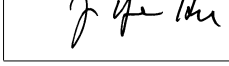
Approved: June 05, 2013



Sample Name: L1305145201 Acquired: 6/4/2013 15:10:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00782**	F **-.25858**
Stddev	.00004	.16311
%RSD	.51232	63.078
#1	.00778	-.32870
#2	.00785	-.07214
#3	.00783	-.37489
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20407.**	**28632.**
Stddev	108.	240.
%RSD	.52965	.83982
#1	20531.	28885.
#2	20332.	28407.
#3	20359.	28603.

Approved: June 05, 2013



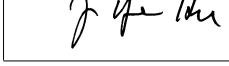
Sample Name: L1305145202 Acquired: 6/4/2013 15:14:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.01802**	**.00029**	**.03476**	**.01360**	**-.00022**
Stddev	.00041	.00180	.00229	.00027	.00016	.00001
%RSD	58.012	10.003	803.47	.76971	1.1437	6.1060
#1	-.00028	.01788	-.00167	.03463	.01376	-.00024
#2	-.00110	.01989	-.00029	.03459	.01345	-.00022
#3	-.00073	.01629	.00281	.03507	.01361	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**257.46**	**.00157**	**.00051**	**-.00131**	**.00021**	**.04609**
Stddev	1.63	.00013	.00014	.00038	.00017	.00204
%RSD	.63163	8.1624	27.908	29.302	81.132	4.4289
#1	259.27	.00159	.00042	-.00168	.00001	.04581
#2	256.97	.00169	.00044	-.00133	.00033	.04421
#3	256.13	.00144	.00067	-.00091	.00029	.04826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3320**	**21.351**	F **-45.808**	**2.9218**	**13.197**	**.03517**
Stddev	.0093	.744	1.753	.4768	.110	.00061
%RSD	.69892	3.4828	3.8270	16.318	.83660	1.7480
#1	1.3250	22.033	-46.307	2.7217	13.324	.03509
#2	1.3283	21.463	-47.257	3.4660	13.144	.03582
#3	1.3425	20.558	-43.859	2.5777	13.123	.03459
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



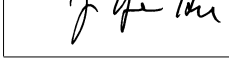
Sample Name: L1305145202 Acquired: 6/4/2013 15:14:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**244.19**	**.06137**	**-.00021**	**11.204**	**.01283**	**65.915**
Stddev	2.03	.00078	.00027	.057	.00078	24.804
%RSD	.82959	1.2760	129.44	.51264	6.0688	37.629
#1	246.45	.06225	-.00018	11.268	.01263	41.103
#2	243.58	.06077	-.00049	11.187	.01217	65.933
#3	242.54	.06108	.00005	11.157	.01369	90.710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00134**	F **-186.15**	F **9909.5**	F **-574230.**	**-.00086**	**.00236**
Stddev	.00244	16.76	74.1	2591.	.00189	.00164
%RSD	182.47	9.0051	.74776	.45129	221.00	69.644
#1	.00392	-172.29	9955.6	-574920.	.00043	.00099
#2	.00104	-204.78	9824.0	-571370.	-.00303	.00190
#3	-.00094	-181.38	9948.9	-576410.	.00003	.00418
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.7999**	**-.00190**	**1.3199**	**-.00327**	**-.00123**	**.00014**
Stddev	.0187	.00032	.0069	.00048	.00120	.00008
%RSD	1.0364	17.049	.52578	14.621	97.566	55.310
#1	1.8065	-.00153	1.3279	-.00382	-.00059	.00022
#2	1.7789	-.00215	1.3169	-.00305	-.00049	.00013
#3	1.8144	-.00202	1.3150	-.00294	-.00262	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145202 Acquired: 6/4/2013 15:14:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01065**	F **-.15665**
Stddev	.00006	.41948
%RSD	.56745	267.78
#1	.01063	-.31003
#2	.01060	.31793
#3	.01072	-.47785
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20449.**	**28690.**
Stddev	90.	304.
%RSD	.43813	1.0590
#1	20398.	28340.
#2	20552.	28841.
#3	20396.	28889.

Approved: June 05, 2013

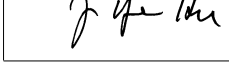
Sample Name: CCV Acquired: 6/4/2013 15:17:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43580**	**9.6969**	F **.47953**	**.49191**	**.97480**	**.04930**	**9.8963**
Stddev	.00150	.0749	.00151	.00101	.01016	.00013	.0913
%RSD	.34400	.77284	.31502	.20512	1.0426	.26122	.92287
#1	.43741	9.7816	.48114	.49277	.98638	.04939	9.9909
#2	.43555	9.6390	.47815	.49080	.97069	.04935	9.8086
#3	.43445	9.6701	.47930	.49215	.96734	.04915	9.8894
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05818**	**.20019**	**.49648**	**.50604**	**3.8977**	**1.0049**	F **.74623**
Stddev	.00042	.00124	.00249	.00296	.0468	.0052	.22493
%RSD	.72442	.62017	.50060	.58546	1.2004	.52168	30.142
#1	.05861	.20161	.49852	.50946	3.9515	1.0109	.63657
#2	.05814	.19929	.49721	.50429	3.8751	1.0017	.59716
#3	.05777	.19968	.49372	.50435	3.8664	1.0020	1.0050
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-11.904**	F **2.5584**	**48.565**	**1.0349**	**9.6380**	**.49192**	**.98565**
Stddev	9.267	1.9585	.542	.0112	.0902	.00423	.00341
%RSD	77.848	76.551	1.1169	1.0822	.93573	.85971	.34590
#1	-20.169	2.4423	49.190	1.0478	9.7416	.49647	.98945
#2	-13.659	4.5724	48.214	1.0280	9.5775	.48811	.98286
#3	-1.8851	.66056	48.292	1.0289	9.5948	.49119	.98464
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 15:17:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.176**	**.49856**	F **14.686**	**.49793**	F **-185.63**	**10.523**	F **-14.758**
Stddev	.608	.00300	18.106	.00365	14.24	.097	4.208
%RSD	1.2358	.60172	123.29	.73300	7.6718	.92576	28.513
#1	49.860	.50201	7.7491	.50210	-174.71	10.618	-18.100
#2	48.699	.49657	1.0740	.49534	-180.43	10.423	-10.032
#3	48.970	.49709	35.235	.49634	-201.74	10.529	-16.143
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1841**	**.40805**	**4.8384**	**.93423**	**.96490**	**.96321**	**.50218**
Stddev	.0087	.00502	.0493	.00589	.01160	.00580	.00418
%RSD	.73484	1.2292	1.0192	.63088	1.2024	.60237	.83174
#1	1.1934	.41361	4.8915	.93982	.97829	.96790	.50488
#2	1.1762	.40388	4.7941	.92808	.95776	.95672	.49737
#3	1.1828	.40666	4.8295	.93479	.95866	.96501	.50428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.96764**	**1.0010**	F **.73865**
Stddev	.00222	.0044	.21238
%RSD	.22952	.43588	28.753
#1	.97017	1.0060	.49521
#2	.96678	.99807	.88602
#3	.96599	.99888	.83472
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 15:17:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22007.**	**29256.**
Stddev	57.	213.
%RSD	.25930	.72894
#1	21944.	29051.
#2	22055.	29477.
#3	22022.	29240.

Approved: June 05, 2013

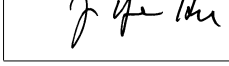
Sample Name: CCB Acquired: 6/4/2013 15:21:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00063**	**.00016**	**.00016**	**.00197**	**.00081**	**-.00022**	F **.10807**
Stddev	.00030	.00694	.00145	.00059	.00010	.00001	.00863
%RSD	48.271	4273.7	886.04	29.977	11.726	4.3952	7.9849
#1	-.00097	.00711	.00139	.00140	.00085	-.00022	.10149
#2	-.00040	.00015	-.00144	.00258	.00070	-.00023	.11784
#3	-.00052	-.00677	.00054	.00195	.00088	-.00022	.10488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**-.00004**	**-.00205**	**.00013**	**-.00092**	**.00050**	F **-.27501**
Stddev	.00013	.00014	.00027	.00027	.00161	.00197	.54870
%RSD	180.60	356.13	13.129	211.79	175.33	391.28	199.52
#1	-.00019	.00009	-.00213	.00044	-.00241	.00148	-.13350
#2	-.00009	-.00002	-.00175	-.00007	.00078	.00179	.18908
#3	.00007	-.00019	-.00227	.00001	-.00113	-.00176	-.88060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.81443**	F **3.2919**	**.03794**	**-.00257**	**.13662**	**.00019**	**.00123**
Stddev	9.5169	1.8265	.01811	.00087	.01198	.00005	.00038
%RSD	1168.5	55.485	47.720	33.805	8.7688	26.504	31.100
#1	11.532	2.8094	.03087	-.00163	.12894	.00024	.00086
#2	-2.4400	5.3112	.02444	-.00334	.15043	.00014	.00121
#3	-6.6483	1.7551	.05852	-.00274	.13050	.00019	.00162
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 15:21:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01596**	**-.00020**	**-.55335**	**-.00013**	F **-197.42**	F **3.1518**	F **-165.52**
Stddev	.00671	.00013	5.4859	.00067	11.04	.4987	25.19
%RSD	42.045	64.128	991.40	504.27	5.5917	15.823	15.220
#1	-.01612	-.00034	-5.2369	-.00081	-199.49	3.6765	-190.26
#2	-.00918	-.00009	-1.9053	-.00013	-185.49	3.0948	-166.41
#3	-.02260	-.00016	5.4821	.00054	-207.27	2.6840	-139.90
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					1.0000	1.0000	1.0000
Low Limit					-1.0000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00220**	**.00268**	**.00176**	**.00014**	**.00109**	**.00169**	**.00096**
Stddev	.00071	.00221	.00093	.00014	.00014	.00095	.00105
%RSD	32.157	82.384	52.935	101.65	12.442	55.880	110.03
#1	-.00160	.00018	.00085	.00002	.00119	.00271	.00139
#2	-.00298	.00438	.00172	.00010	.00115	.00153	-.00024
#3	-.00203	.00347	.00271	.00029	.00094	.00084	.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

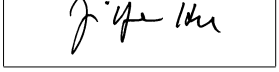
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00054**	**.00030**	F **.14492**
Stddev	.00016	.00006	.13030
%RSD	30.460	20.178	89.918
#1	.00073	.00027	.08820
#2	.00043	.00027	.29397
#3	.00046	.00037	.05258
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 15:21:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21944.**	**29338.**
Stddev	46.	161.
%RSD	.21166	.54749
#1	21982.	29362.
#2	21892.	29167.
#3	21957.	29485.

Approved: June 05, 2013



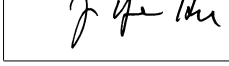
Sample Name: PBW D1 Acquired: 6/4/2013 15:24:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.00587**	**-.00004**	**.00012**	**.00058**	**-.00023**	**.00957**
Stddev	.00009	.01592	.00057	.00090	.00014	.00001	.00732
%RSD	35.693	271.20	1441.1	730.87	23.728	6.0233	76.448
#1	-.00021	-.00446	.00046	.00083	.00045	-.00023	.01474
#2	-.00034	.02420	.00008	-.00089	.00073	-.00022	.01278
#3	-.00017	-.00213	-.00065	.00043	.00057	-.00024	.00120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**-.00005**	**-.00182**	**.00022**	**-.00026**	**.00157**	**-.04608**
Stddev	.0001	.00010	.00023	.00027	.00170	.00366	.06149
%RSD	4079.5	214.99	12.513	122.23	649.56	233.69	133.44
#1	-.00014	-.00014	-.00204	.00026	-.00071	.00343	-.07793
#2	.00003	.00005	-.00183	.00048	.00162	.00392	-.08511
#3	.00010	-.00004	-.00159	-.00007	-.00169	-.00265	.02480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0892**	**2.9353**	**.00791**	**-.00439**	**.04882**	**.00042**	**-.00007**
Stddev	5.5403	.9035	.02034	.00087	.00656	.00003	.00018
%RSD	265.19	30.781	257.19	19.885	13.439	7.2954	249.32
#1	-1.6908	1.9798	.01266	-.00475	.05580	.00039	-.00008
#2	-.49070	3.0503	-.01438	-.00340	.04789	.00043	.00011
#3	8.4490	3.7758	.02545	-.00503	.04277	.00045	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



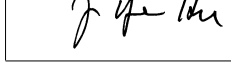
Sample Name: PBW D1 Acquired: 6/4/2013 15:24:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04834**	**-.00037**	F **-4.6806**	**.00146**	F **-218.90**	**1.5342**	F **-84.007**
Stddev	.00465	.00046	8.3275	.00047	30.34	.1347	6.905
%RSD	9.6222	122.83	177.92	32.259	13.859	8.7773	8.2201
#1	-.05366	-.00089	-4.6260	.00196	-253.90	1.6875	-91.457
#2	-.04501	-.00021	3.6194	.00139	-200.12	1.4804	-82.742
#3	-.04636	-.00002	-13.035	.00103	-202.68	1.4348	-77.821
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00125**	**.00199**	**-.00117**	**-.00155**	**.00041**	**.00047**	**-.00054**
Stddev	.00067	.00156	.00122	.00003	.00004	.00101	.00103
%RSD	53.723	78.595	104.31	2.2255	9.8491	216.76	189.85
#1	-.00082	.00037	-.00153	-.00159	.00044	.00145	.00008
#2	-.00203	.00348	.00019	-.00154	.00036	.00053	-.00174
#3	-.00091	.00211	-.00218	-.00152	.00043	-.00058	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00038**	**.00300**	**.31110**
Stddev	.00019	.00009	.07440
%RSD	49.945	3.0106	23.914
#1	.00041	.00307	.33550
#2	.00056	.00290	.37023
#3	.00018	.00303	.22756
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: PBW D1 Acquired: 6/4/2013 15:24:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22109.**	**29198.**
Stddev	47.	87.
%RSD	.21428	.29854
#1	22114.	29208.
#2	22153.	29106.
#3	22059.	29280.

Approved: June 05, 2013

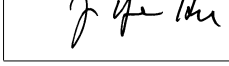
Sample Name: LCSW D1 Acquired: 6/4/2013 15:28:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18681**	**4.8527**	**.23544**	**.97161**	**.49163**	**.02477**	**4.9875**
Stddev	.00047	.0497	.00186	.00626	.00365	.00002	.0328
%RSD	.25243	1.0236	.78898	.64391	.74294	.06380	.65732
#1	.18677	4.8320	.23367	.97090	.49506	.02475	4.9725
#2	.18635	4.9094	.23738	.96573	.49203	.02478	5.0251
#3	.18730	4.8167	.23527	.97819	.48779	.02477	4.9650
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02880**	**.10069**	**.24850**	**.25307**	**1.8867**	**.50353**	**.39769**
Stddev	.00021	.00050	.00107	.00118	.0145	.00473	.26524
%RSD	.74523	.50048	.43017	.46793	.76966	.93842	66.695
#1	.02861	.10014	.24825	.25211	1.9021	.49879	.19680
#2	.02878	.10080	.24758	.25271	1.8846	.50355	.29792
#3	.02903	.10113	.24967	.25439	1.8733	.50824	.69835
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-7.6235**	**2.8137**	**24.270**	**.51772**	**4.8312**	**.24883**	**.49792**
Stddev	6.5001	2.7744	.168	.00342	.0558	.00112	.00279
%RSD	85.264	98.604	.69242	.66120	1.1540	.45024	.56106
#1	-11.457	-.36118	24.385	.51913	4.8834	.25012	.49474
#2	-11.295	4.0302	24.348	.52021	4.7725	.24814	.49900
#3	-.1184	4.7721	24.077	.51381	4.8377	.24822	.50001
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



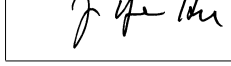
Sample Name: LCSW D1 Acquired: 6/4/2013 15:28:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.630**	**.24851**	**20.470**	**.24804**	F **-223.12**	**6.0977**	F **-52.406**
Stddev	.211	.00133	9.031	.00225	21.32	.0816	3.757
%RSD	.85489	.53461	44.117	.90633	9.5539	1.3378	7.1683
#1	24.701	.24701	21.536	.24549	-207.00	6.1219	-54.620
#2	24.797	.24900	28.920	.24892	-247.29	6.1645	-54.529
#3	24.394	.24952	10.953	.24972	-215.07	6.0068	-48.068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.58386**	**.19833**	**2.4030**	**.52671**	**.48249**	**.48501**	**.24785**
Stddev	.00112	.00142	.0146	.00193	.00415	.00297	.00178
%RSD	.19156	.71759	.60804	.36687	.86071	.61249	.71947
#1	.58296	.19673	2.3862	.52466	.48460	.48803	.24594
#2	.58511	.19947	2.4112	.52698	.48516	.48490	.24947
#3	.58349	.19879	2.4117	.52850	.47770	.48209	.24814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.48355**	**.49777**	**.90961**
Stddev	.00151	.00227	.40891
%RSD	.31176	.45531	44.955
#1	.48464	.49549	.44263
#2	.48183	.49779	1.2035
#3	.48418	.50002	1.0826
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: LCSW D1 Acquired: 6/4/2013 15:28:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21936.**	**28835.**
Stddev	78.	102.
%RSD	.35584	.35461
#1	21982.	28762.
#2	21981.	28791.
#3	21846.	28952.

Approved: June 05, 2013

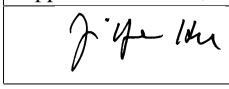
Sample Name: L1305145101 Acquired: 6/4/2013 15:31:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.25055**	**.00128**	**.02734**	**.01462**	**-.00004**
Stddev	.00051	.01523	.00122	.00014	.00029	.00003
%RSD	128.45	6.0791	95.918	.50251	2.0136	66.744
#1	-.00097	.24378	-.00012	.02745	.01486	-.00003
#2	-.00020	.26799	.00217	.02739	.01472	-.00003
#3	-.00001	.23988	.00178	.02719	.01429	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**191.29**	**.00148**	**.00887**	**-.00105**	**.00063**	**.33320**
Stddev	1.39	.00010	.00007	.00020	.00027	.00190
%RSD	.72719	6.5800	.81075	19.272	42.663	.57016
#1	192.12	.00158	.00892	-.00110	.00036	.33539
#2	192.07	.00138	.00879	-.00083	.00089	.33219
#3	189.68	.00149	.00890	-.00122	.00064	.33202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.88535**	**16.914**	F **-38.235**	**2.8193**	**10.448**	**.02634**
Stddev	.00200	.169	11.648	2.1529	.056	.00157
%RSD	.22590	.99816	30.464	76.365	.53710	5.9685
#1	.88635	16.727	-32.738	3.2556	10.507	.02776
#2	.88305	17.056	-51.614	.48159	10.442	.02659
#3	.88665	16.958	-30.352	4.7206	10.396	.02465
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



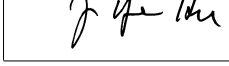
Sample Name: L1305145101 Acquired: 6/4/2013 15:31:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**170.88**	**.75111**	**.00012**	**15.379**	**.03710**	**41.728**
Stddev	.88	.00149	.00018	.083	.00023	24.787
%RSD	.51636	.19832	149.88	.53936	.62254	59.400
#1	171.89	.75042	-.00009	15.454	.03735	52.782
#2	170.48	.75009	.00026	15.393	.03689	59.065
#3	170.26	.75282	.00019	15.290	.03705	13.338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00126**	F **-152.23**	F **7475.5**	F **-422470.**	**.00100**	**.00481**
Stddev	.00100	14.33	47.1	1982.	.00207	.00213
%RSD	79.109	9.4151	.63013	.46923	207.97	44.198
#1	.00029	-135.72	7514.4	-423020.	.00111	.00308
#2	.00228	-161.54	7423.1	-420270.	.00301	.00718
#3	.00120	-159.42	7488.9	-424110.	-.00113	.00417
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4315**	**-.00137**	**.87637**	**.00052**	**-.00077**	**.00032**
Stddev	.0174	.00029	.00575	.00038	.00068	.00030
%RSD	.71419	21.047	.65601	73.185	88.509	94.967
#1	2.4456	-.00154	.88231	.00023	-.00155	.00007
#2	2.4121	-.00154	.87598	.00038	-.00046	.00023
#3	2.4368	-.00104	.87083	.00095	-.00030	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145101 Acquired: 6/4/2013 15:31:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03076**	**.03599**
Stddev	.00017	.29254
%RSD	.53786	812.92
#1	.03077	.01570
#2	.03058	-.24588
#3	.03091	.33814
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20838.**	**28449.**
Stddev	85.	76.
%RSD	.40736	.26858
#1	20829.	28424.
#2	20927.	28535.
#3	20758.	28389.

Approved: June 05, 2013

Sample Name: L1305145101DP Acquired: 6/4/2013 15:35:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**.18170**	**-.00017**	**.02479**	**.01441**	**-.00005**
Stddev	.00015	.02037	.00134	.00038	.00014	.00003
%RSD	106.76	11.213	775.31	1.5175	.94467	52.892
#1	-.00031	.19286	.00084	.02522	.01456	-.00007
#2	-.00007	.15819	-.00170	.02458	.01429	-.00002
#3	-.00004	.19406	.00034	.02456	.01437	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**186.98**	**.00164**	**.00858**	**-.00098**	**.00014**	**.29606**
Stddev	.72	.00012	.00018	.00010	.00042	.00408
%RSD	.38582	7.1480	2.1200	10.344	307.19	1.3785
#1	187.41	.00175	.00843	-.00110	.00036	.29610
#2	187.38	.00152	.00878	-.00093	.00040	.29196
#3	186.15	.00165	.00853	-.00091	-.00035	.30013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.87506**	**16.704**	F **-27.840**	**2.7561**	**10.432**	**.02803**
Stddev	.00189	.249	.263	1.0923	.076	.00073
%RSD	.21563	1.4886	.94307	39.633	.73109	2.5992
#1	.87685	16.423	-28.011	3.4253	10.512	.02887
#2	.87524	16.893	-27.538	3.3473	10.360	.02756
#3	.87309	16.797	-27.971	1.4956	10.423	.02766
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

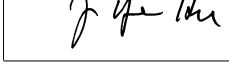
Sample Name: L1305145101DP Acquired: 6/4/2013 15:35:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-05

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**170.95**	**.71532**	**-.00021**	**15.386**	**.03658**	**47.688**
Stddev	1.45	.00617	.00002	.142	.00053	7.607
%RSD	.84815	.86213	7.4222	.92199	1.4434	15.951
#1	172.58	.72242	-.00019	15.538	.03597	47.075
#2	169.79	.71222	-.00022	15.257	.03691	55.582
#3	170.49	.71131	-.00021	15.364	.03686	40.406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00153**	F **-185.38**	F **7524.4**	F **-419260.**	**-.00171**	**.00336**
Stddev	.00081	37.01	64.4	961.	.00155	.00232
%RSD	53.157	19.966	.85543	.22911	90.828	68.914
#1	.00060	-218.05	7587.4	-420290.	-.00343	.00582
#2	.00187	-192.91	7458.7	-418400.	-.00126	.00122
#3	.00212	-145.18	7527.0	-419070.	-.00043	.00305
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3336**	**-.00165**	**.87888**	**-.00120**	**.00019**	**-.00006**
Stddev	.0295	.00018	.00908	.00035	.00168	.00041
%RSD	1.2642	10.967	1.0327	28.913	876.50	713.69
#1	2.3610	-.00164	.88873	-.00149	.00185	.00002
#2	2.3024	-.00184	.87085	-.00082	.00023	.00031
#3	2.3374	-.00148	.87705	-.00129	-.00150	-.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

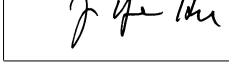
Approved: June 05, 2013



Sample Name: L1305145101DP Acquired: 6/4/2013 15:35:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-05

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03045**	F **-.13976**
Stddev	.00024	.04537
%RSD	.79055	32.465
#1	.03073	-.15610
#2	.03027	-.17470
#3	.03035	-.08848
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20766.**	**28417.**
Stddev	46.	178.
%RSD	.22125	.62556
#1	20715.	28215.
#2	20806.	28551.
#3	20776.	28485.

Approved: June 05, 2013



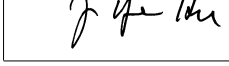
Sample Name: L1305145101S Acquired: 6/4/2013 15:38:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19001**	**5.0096**	**.23946**	**1.0078**	**.50310**	**.02444**
Stddev	.00093	.0324	.00055	.0040	.00366	.00020
%RSD	.49139	.64649	.22766	.39157	.72730	.82864
#1	.18902	5.0311	.23966	1.0038	.50728	.02422
#2	.19087	5.0253	.23987	1.0117	.50152	.02449
#3	.19015	4.9723	.23884	1.0079	.50049	.02462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**187.52**	**.03035**	**.10476**	**.24315**	**.24397**	**2.1450**
Stddev	1.62	.00015	.00009	.00222	.00091	.0060
%RSD	.86165	.48913	.08286	.91489	.37103	.28016
#1	188.96	.03025	.10479	.24066	.24484	2.1517
#2	187.84	.03028	.10466	.24383	.24402	2.1436
#3	185.77	.03052	.10482	.24495	.24303	2.1399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3174**	**16.683**	F **-30.317**	**2.1163**	**34.691**	**.55118**
Stddev	.0053	.161	10.193	1.1793	.284	.00394
%RSD	.40338	.96240	33.620	55.726	.81848	.71422
#1	1.3223	16.797	-40.181	2.6595	34.997	.55571
#2	1.3182	16.752	-30.944	.76325	34.642	.54929
#3	1.3118	16.499	-19.825	2.9261	34.435	.54855
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



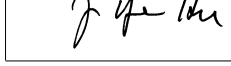
Sample Name: L1305145101S Acquired: 6/4/2013 15:38:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-06

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.92**	**.92766**	**.49217**	**39.883**	**.27410**	**61.983**
Stddev	.80	.00654	.00109	.318	.00059	18.254
%RSD	.46976	.70448	.22198	.79841	.21513	29.451
#1	170.84	.93372	.49211	40.201	.27349	44.841
#2	169.52	.92852	.49329	39.884	.27467	81.176
#3	169.41	.92073	.49111	39.565	.27413	59.930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.23915**	F **-196.47**	F **7263.8**	F **-405820.**	**.59346**	**.20142**
Stddev	.00010	27.25	10.5	160.	.00231	.00244
%RSD	.04028	13.867	.14446	.03941	.38944	1.2113
#1	.23924	-180.14	7258.8	-405640.	.59118	.20062
#2	.23905	-181.35	7275.8	-405860.	.59580	.20416
#3	.23915	-227.92	7256.6	-405950.	.59341	.19948
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.6915**	**.50800**	**1.3287**	**.47768**	**.23672**	**.48311**
Stddev	.0140	.00084	.0098	.00406	.00051	.00252
%RSD	.29726	.16533	.73833	.84929	.21448	.52209
#1	4.6874	.50776	1.3394	.47950	.23644	.48048
#2	4.7071	.50731	1.3266	.47303	.23641	.48551
#3	4.6801	.50894	1.3201	.48050	.23730	.48334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145101S Acquired: 6/4/2013 15:38:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-06

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.49949**	**.84332**
Stddev	.00050	.10905
%RSD	.10003	12.931
#1	.49898	.96495
#2	.49998	.81073
#3	.49952	.75429
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20788.**	**28328.**
Stddev	43.	198.
%RSD	.20499	.70000
#1	20836.	28129.
#2	20758.	28328.
#3	20768.	28526.

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 15:41:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**.01665**	**-.00003**	**.04087**	**.01512**	**-.00023**
Stddev	.00018	.01400	.00108	.00119	.00005	.00001
%RSD	28.603	84.106	4099.8	2.9039	.32146	4.0045
#1	-.00045	.01304	.00105	.04208	.01517	-.00023
#2	-.00080	.00480	-.00111	.04083	.01508	-.00022
#3	-.00059	.03210	-.00002	.03971	.01512	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **276.83**	**.00170**	**.00062**	**-.00126**	**.00015**	**.05424**
Stddev	2.63	.00009	.00002	.00027	.00036	.00087
%RSD	.94972	5.1149	3.6397	21.495	246.65	1.6048
#1	274.08	.00179	.00059	-.00095	-.00027	.05402
#2	277.11	.00163	.00063	-.00145	.00037	.05520
#3	279.31	.00167	.00063	-.00138	.00034	.05350
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.4508**	**22.184**	F **-40.055**	**3.1068**	**14.635**	**.04054**
Stddev	.0081	.299	12.511	1.0654	.096	.00031
%RSD	.55942	1.3490	31.234	34.291	.65646	.77243
#1	1.4416	21.942	-25.982	3.2430	14.602	.04034
#2	1.4568	22.092	-44.267	4.0975	14.561	.04090
#3	1.4540	22.519	-49.917	1.9799	14.744	.04037
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 15:41:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**271.44**	**.06437**	**.00037**	**12.399**	**.01460**	**197.65**
Stddev	1.64	.00030	.00010	.116	.00024	6.71
%RSD	.60288	.46824	26.637	.93684	1.6216	3.3968
#1	270.36	.06439	.00028	12.300	.01438	190.36
#2	270.64	.06406	.00035	12.370	.01458	199.03
#3	273.32	.06466	.00048	12.526	.01485	203.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00152**	F **-173.12**	F **10984.**	F **-626450.**	**-.00044**	**.00478**
Stddev	.00021	13.97	40.	2540.	.00044	.00025
%RSD	13.650	8.0705	.36621	.40539	100.31	5.2752
#1	.00174	-180.38	10991.	-623740.	.00007	.00480
#2	.00132	-157.01	11020.	-628780.	-.00071	.00502
#3	.00151	-181.96	10940.	-626830.	-.00066	.00452
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0235**	**-.00172**	**1.4653**	**-.00405**	**-.00120**	**.00016**
Stddev	.0095	.00057	.0117	.00052	.00122	.00016
%RSD	.46682	32.928	.80096	12.747	101.72	99.909
#1	2.0194	-.00127	1.4568	-.00373	-.00242	.00021
#2	2.0343	-.00236	1.4604	-.00377	.00002	-.00002
#3	2.0168	-.00154	1.4786	-.00464	-.00120	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 15:41:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00753**	F **-.17375**
Stddev	.00012	.15010
%RSD	1.5399	86.389
#1	.00741	-.20679
#2	.00764	-.00988
#3	.00754	-.30458
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20150.**	**28210.**
Stddev	70.	144.
%RSD	.34760	.51054
#1	20229.	28264.
#2	20095.	28319.
#3	20126.	28046.

Approved: June 05, 2013

Sample Name: L1305145103 Acquired: 6/4/2013 15:45:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.02497**	**-.00136**	**.03799**	**.01298**	**-.00022**
Stddev	.00023	.00496	.00092	.00040	.00027	.00003
%RSD	27.150	19.863	67.692	1.0651	2.0432	13.895
#1	-.00079	.02078	-.00221	.03831	.01318	-.00021
#2	-.00112	.02369	-.00039	.03753	.01308	-.00021
#3	-.00067	.03045	-.00148	.03812	.01268	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **273.78**	**.00172**	**.00038**	**-.00143**	**-.00040**	**.22951**
Stddev	.68	.00008	.00020	.00007	.00032	.00249
%RSD	.24867	4.6098	51.543	5.2141	80.970	1.0867
#1	274.41	.00165	.00016	-.00136	-.00012	.22945
#2	273.89	.00181	.00050	-.00151	-.00075	.23204
#3	273.06	.00171	.00050	-.00143	-.00033	.22706
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.4415**	**22.482**	F **-49.156**	**2.8899**	**14.283**	**.03993**
Stddev	.0026	.355	3.131	.6211	.122	.00116
%RSD	.18019	1.5811	6.3694	21.492	.85462	2.9124
#1	1.4408	22.872	-48.898	2.9950	14.408	.04021
#2	1.4393	22.400	-52.408	2.2229	14.275	.03865
#3	1.4443	22.175	-46.162	3.4517	14.164	.04093
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

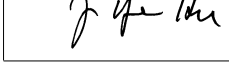
Sample Name: L1305145103 Acquired: 6/4/2013 15:45:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**266.48**	**.06500**	**-.00010**	**11.934**	**.01407**	**52.801**
Stddev	3.03	.00126	.00027	.074	.00047	17.751
%RSD	1.1352	1.9448	266.08	.62395	3.3079	33.618
#1	269.26	.06610	-.00023	12.020	.01433	59.618
#2	266.92	.06528	.00021	11.891	.01434	66.133
#3	263.26	.06362	-.00028	11.892	.01353	32.653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	F **-165.39**	F **10804.**	F **-617540.**	**-.00019**	**.00335**
Stddev	.00060	56.44	3.	1464.	.00212	.00205
%RSD	398.55	34.125	.02984	.23710	1133.6	61.167
#1	.00044	-202.69	10800.	-618680.	-.00003	.00167
#2	-.00077	-193.03	10805.	-615890.	-.00238	.00274
#3	-.00013	-100.46	10806.	-618040.	.00185	.00563
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9923**	**-.00176**	**1.4296**	**-.00382**	**-.00101**	**.00012**
Stddev	.0008	.00036	.0120	.00079	.00069	.00021
%RSD	.03984	20.721	.83786	20.748	68.076	175.79
#1	1.9920	-.00209	1.4425	-.00355	-.00097	-.00012
#2	1.9932	-.00182	1.4275	-.00472	-.00172	.00027
#3	1.9916	-.00137	1.4188	-.00320	-.00035	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145103 Acquired: 6/4/2013 15:45:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00634**	F **-.37040**
Stddev	.00004	.25299
%RSD	.64509	68.301
#1	.00635	-.09261
#2	.00630	-.58756
#3	.00637	-.43104
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20196.**	**28128.**
Stddev	62.	304.
%RSD	.30941	1.0812
#1	20124.	27890.
#2	20229.	28022.
#3	20236.	28470.

Approved: June 05, 2013

Sample Name: L1305145104 Acquired: 6/4/2013 15:48:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.08553**	**-.00033**	**.02202**	**.01594**	**-.00015**
Stddev	.00015	.00912	.00065	.00054	.00024	.00001
%RSD	21.119	10.665	197.16	2.4568	1.5229	7.4312
#1	-.00074	.09461	-.00040	.02190	.01612	-.00015
#2	-.00054	.07636	-.00094	.02261	.01566	-.00016
#3	-.00083	.08563	.00035	.02155	.01603	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**185.77**	**.00172**	**.01739**	**-.00118**	**.00004**	**.03257**
Stddev	1.17	.00014	.00010	.00043	.00012	.00349
%RSD	.63073	8.3524	.58539	36.784	315.01	10.716
#1	185.51	.00177	.01731	-.00106	.00014	.03513
#2	184.75	.00156	.01736	-.00166	.00007	.03399
#3	187.05	.00183	.01751	-.00082	-.00010	.02859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.80643**	**15.513**	F **-25.891**	**2.1595**	**10.645**	**.02158**
Stddev	.00308	.358	8.941	1.6875	.029	.00115
%RSD	.38193	2.3097	34.533	78.142	.27577	5.3384
#1	.80459	15.683	-31.782	.31479	10.648	.02083
#2	.80998	15.101	-15.603	3.6253	10.614	.02291
#3	.80471	15.754	-30.287	2.5384	10.672	.02101
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

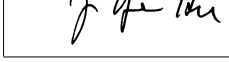
Sample Name: L1305145104 Acquired: 6/4/2013 15:48:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.24**	**1.4590**	**-.00033**	**17.403**	**.06366**	**35.188**
Stddev	.31	.0087	.00006	.101	.00052	10.494
%RSD	.19134	.59830	17.590	.58084	.81074	29.824
#1	160.35	1.4674	-.00027	17.443	.06412	34.604
#2	159.90	1.4499	-.00034	17.288	.06376	45.963
#3	160.49	1.4596	-.00038	17.478	.06311	24.998
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	F **-178.29**	F **7330.7**	F **-407690.**	**-.00068**	**.00300**
Stddev	.00109	12.62	29.1	295.	.00136	.00147
%RSD	241.27	7.0786	.39694	.07225	198.71	48.898
#1	.00154	-191.94	7363.3	-407990.	-.00169	.00168
#2	.00047	-175.88	7321.4	-407670.	-.00123	.00458
#3	-.00065	-167.04	7307.3	-407400.	.00086	.00275
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3230**	**-.00186**	**.81364**	**-.00303**	**.00177**	**-.00003**
Stddev	.0153	.00014	.00317	.00114	.00255	.00045
%RSD	.65804	7.4015	.38926	37.643	144.53	1690.2
#1	2.3406	-.00200	.81505	-.00392	-.00088	.00049
#2	2.3148	-.00185	.81002	-.00174	.00196	-.00022
#3	2.3136	-.00173	.81586	-.00343	.00422	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

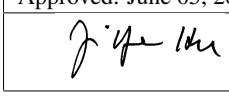
Approved: June 05, 2013



Sample Name: L1305145104 Acquired: 6/4/2013 15:48:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.04927**	**.05676**
Stddev	.00015	.22826
%RSD	.29655	402.12
#1	.04913	.31887
#2	.04927	-.09834
#3	.04942	-.05024
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20720.**	**28276.**
Stddev	26.	110.
%RSD	.12516	.38893
#1	20721.	28242.
#2	20694.	28399.
#3	20745.	28187.

Approved: June 05, 2013



Sample Name: L1305145104PS Acquired: 6/4/2013 15:52:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432825-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19828**	**5.1266**	**.25413**	**1.0557**	**.51737**	**.02545**
Stddev	.00056	.0343	.00120	.0052	.00752	.00006
%RSD	.27991	.66864	.47060	.49135	1.4532	.22501
#1	.19828	5.1318	.25348	1.0509	.52080	.02551
#2	.19884	5.1581	.25341	1.0612	.52257	.02545
#3	.19773	5.0901	.25551	1.0550	.50875	.02540
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**171.97**	**.03180**	**.11617**	**.25459**	**.25549**	**2.0333**
Stddev	1.22	.00006	.00050	.00035	.00080	.0125
%RSD	.71030	.19951	.42744	.13570	.31347	.61398
#1	171.54	.03173	.11585	.25493	.25460	2.0329
#2	173.35	.03186	.11593	.25424	.25574	2.0460
#3	171.02	.03182	.11674	.25460	.25614	2.0210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2200**	**14.846**	F **-30.197**	**4.0498**	**35.374**	**.56995**
Stddev	.0070	.300	5.644	.7465	.390	.00690
%RSD	.57672	2.0204	18.690	18.434	1.1025	1.2111
#1	1.2173	14.744	-28.635	4.6623	35.551	.57244
#2	1.2147	14.610	-36.458	4.2688	35.645	.57526
#3	1.2280	15.183	-25.500	3.2182	34.927	.56215
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

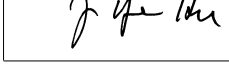
Sample Name: L1305145104PS Acquired: 6/4/2013 15:52:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432825-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**148.41**	**1.5614**	**.51258**	**41.806**	**.30716**	**31.510**
Stddev	1.65	.0070	.00140	.279	.00078	4.875
%RSD	1.1094	.44677	.27262	.66629	.25252	15.471
#1	148.97	1.5604	.51151	41.888	.30672	26.591
#2	149.70	1.5688	.51207	42.033	.30670	36.339
#3	146.55	1.5550	.51416	41.495	.30805	31.600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25251**	F **-189.94**	F **6669.1**	F **-368090.**	**.61545**	**.20995**
Stddev	.00240	22.04	60.0	1415.	.00358	.00158
%RSD	.95226	11.603	.89991	.38440	.58199	.75133
#1	.25035	-170.82	6600.0	-366520.	.61191	.20950
#2	.25208	-214.04	6699.1	-368490.	.61539	.20865
#3	.25510	-184.94	6708.2	-369270.	.61907	.21171
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.6400**	**-.00200**	**1.2318**	**.50004**	**.25206**	**.50615**
Stddev	.0440	.00023	.0112	.00336	.00071	.00241
%RSD	.94769	11.288	.91252	.67175	.28354	.47637
#1	4.5900	-.00213	1.2358	.50220	.25123	.50422
#2	4.6574	-.00174	1.2405	.50174	.25245	.50885
#3	4.6726	-.00212	1.2191	.49617	.25249	.50537
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145104PS Acquired: 6/4/2013 15:52:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432825-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.53829**	F **-.01225**
Stddev	.00225	.44210
%RSD	.41773	3608.3
#1	.53593	.32167
#2	.53854	-.51362
#3	.54041	.15520
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20734.**	**28172.**
Stddev	58.	70.
%RSD	.27926	.24699
#1	20801.	28182.
#2	20703.	28098.
#3	20697.	28236.

Approved: June 05, 2013

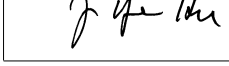
Sample Name: L1305145104SDL Acquired: 6/4/2013 15:55:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432825-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00093**	**.01859**	**.00058**	**.00673**	**.00356**	**-.00024**	**35.583**
Stddev	.00044	.01197	.00103	.00084	.00015	.00002	.183
%RSD	47.031	64.419	176.83	12.443	4.2275	7.6348	.51554
#1	-.00141	.03174	-.00044	.00743	.00372	-.00022	35.651
#2	-.00055	.00832	.00056	.00696	.00354	-.00025	35.723
#3	-.00083	.01570	.00162	.00580	.00343	-.00025	35.375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**.00347**	**-.00150**	**-.00001**	**.00737**	**.16525**	**3.7918**
Stddev	.00001	.00007	.00005	.00014	.00103	.00199	.0092
%RSD	1.9831	1.9158	3.4932	1186.6	14.013	1.2050	.24191
#1	.00062	.00354	-.00147	-.00007	.00850	.16376	3.7813
#2	.00063	.00342	-.00156	.00014	.00647	.16447	3.7980
#3	.00064	.00343	-.00147	-.00011	.00714	.16751	3.7962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.6565**	**3.6943**	**2.0758**	**.00254**	**31.147**	**.29490**	**.00021**
Stddev	13.659	.8927	.0304	.00106	.275	.00172	.00019
%RSD	157.79	24.164	1.4632	41.790	.88260	.58457	92.091
#1	-21.557	3.6622	2.1107	.00298	31.006	.29574	.00006
#2	5.6520	4.6026	2.0603	.00133	31.463	.29604	.00015
#3	-10.065	2.8181	2.0562	.00332	30.971	.29292	.00042
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



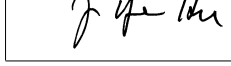
Sample Name: L1305145104SDL Acquired: 6/4/2013 15:55:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432825-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.2880**	**.01274**	**4.4129**	**.00123**	F **-224.01**	F **1508.6**	F **-80170.**
Stddev	.0301	.00009	15.870	.00110	12.23	3.6	215.
%RSD	.91455	.71635	359.63	89.665	5.4598	.23548	.26790
#1	3.2702	.01280	20.357	.00100	-228.70	1511.3	-80418.
#2	3.3227	.01278	4.2634	.00026	-210.12	1510.0	-80055.
#3	3.2711	.01263	-11.382	.00242	-233.19	1504.6	-80038.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00197**	**.44217**	**-.00072**	**.15916**	**.00091**	**.00075**
Stddev	.00190	.00045	.00286	.00033	.00101	.00036	.00155
%RSD	1078.3	22.620	.64744	46.495	.63542	40.143	206.59
#1	-.00224	.00188	.44494	-.00110	.15885	.00125	.00241
#2	.00020	.00246	.43923	-.00053	.16029	.00095	.00051
#3	.00151	.00158	.44233	-.00052	.15834	.00053	-.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00038**	**.01085**	**.10506**
Stddev	.00003	.00015	.27940
%RSD	7.4195	1.3617	265.94
#1	.00037	.01102	.35351
#2	.00036	.01080	-.19740
#3	.00041	.01073	.15908
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305145104SDL Acquired: 6/4/2013 15:55:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432825-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21670.**	**29200.**
Stddev	57.	224.
%RSD	.26331	.76642
#1	21604.	29045.
#2	21706.	29097.
#3	21701.	29456.

Approved: June 05, 2013

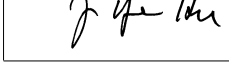
Sample Name: CCV Acquired: 6/4/2013 15:59:00 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44116	9.8657	F .48263	.49787	.98565	.05008	9.9541
Stddev	.00122	.1033	.00255	.00294	.01055	.00023	.0979
%RSD	.27750	1.0472	.52857	.59047	1.0701	.45382	.98388
#1	.44003	9.7562	.48012	.49552	.97356	.05018	9.8432
#2	.44099	9.8795	.48522	.49692	.99037	.04981	9.9903
#3	.44246	9.9615	.48255	.50116	.99300	.05023	10.029
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000		.40000				
Range	10.000%		10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .05871	.20220	.50325	.50974	3.9532	1.0116	.97785
Stddev	.00035	.00103	.00095	.00179	.0438	.0025	.32556
%RSD	.60373	.51013	.18941	.35119	1.1086	.25123	33.293
#1	.05832	.20119	.50423	.50788	3.9040	1.0087	1.3482
#2	.05902	.20215	.50319	.50991	3.9674	1.0135	.73667
#3	.05879	.20325	.50233	.51144	3.9881	1.0127	.84871
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	10.000%						

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -4.1702	F 3.0073	49.390	1.0479	9.8307	.50008	.99712
Stddev	8.5427	1.4642	.510	.0122	.1217	.00245	.00344
%RSD	204.85	48.690	1.0318	1.1620	1.2382	.49030	.34521
#1	-.01036	4.4257	48.825	1.0338	9.6901	.49767	.99409
#2	1.4958	3.0949	49.530	1.0541	9.9017	.50000	.99640
#3	-13.996	1.5012	49.814	1.0556	9.9002	.50257	1.0009
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 15:59:00 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.340**	**.50325**	F **4.2328**	**.50306**	F **-207.71**	**10.385**	F **-2.5689**
Stddev	.604	.00122	13.133	.00134	44.92	.123	.5439
%RSD	1.1994	.24247	310.28	.26576	21.628	1.1855	21.174
#1	49.663	.50185	-7.6476	.50291	-258.99	10.506	-1.9822
#2	50.536	.50409	2.0103	.50180	-175.30	10.260	-3.0564
#3	50.822	.50381	18.336	.50447	-188.84	10.391	-2.6681
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1939**	**.40999**	**4.8667**	**.94311**	**.98503**	**.97896**	**.50600**
Stddev	.0022	.00096	.0148	.00120	.01133	.01020	.00252
%RSD	.18600	.23407	.30407	.12683	1.1505	1.0416	.49723
#1	1.1915	.40951	4.8570	.94380	.97200	.96728	.50594
#2	1.1959	.41109	4.8837	.94172	.99049	.98604	.50352
#3	1.1943	.40936	4.8594	.94379	.99260	.98357	.50855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.97961**	**1.0115**	F **.80525**
Stddev	.00341	.0041	.27570
%RSD	.34861	.40224	34.237
#1	.97924	1.0069	.59953
#2	.97639	1.0129	.69771
#3	.98319	1.0147	1.1185
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 15:59:00 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21836.**	**28833.**
Stddev	40.	181.
%RSD	.18418	.62800
#1	21881.	29001.
#2	21825.	28855.
#3	21803.	28641.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 16:02:16 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00083**	**-.00049**	**.00011**	**.00242**	**.00042**	**-.00024**	**-.04582**
Stddev	.00018	.01449	.00221	.00005	.00004	.00004	.00952
%RSD	22.115	2962.8	2004.3	2.0331	10.340	14.932	20.783
#1	-.00082	-.01611	.00187	.00245	.00046	-.00028	-.05670
#2	-.00066	.01250	.00083	.00245	.00038	-.00021	-.03903
#3	-.00103	.00214	-.00237	.00236	.00042	-.00024	-.04172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00003**	**-.00164**	**-.00026**	**.00000**	**-.00176**	F **.14230**
Stddev	.00004	.00013	.00013	.00028	.00251	.00195	.31563
%RSD	31.938	413.96	8.1716	104.82	65633.	110.47	221.80
#1	-.00012	-.00011	-.00149	-.00005	.00290	-.00362	.50558
#2	-.00017	.00008	-.00176	-.00017	-.00160	.00026	-.06483
#3	-.00009	.00013	-.00168	-.00057	-.00129	-.00193	-.01383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **6.5080**	F **2.4523**	**.06012**	**-.00386**	**.00398**	**.00005**	**.00082**
Stddev	9.9867	.2898	.02748	.00221	.01969	.00000	.00030
%RSD	153.45	11.819	45.709	57.298	494.30	7.1322	36.668
#1	13.906	2.1184	.06820	-.00287	-.01819	.00005	.00049
#2	10.469	2.5992	.08265	-.00639	.01944	.00005	.00090
#3	-4.8516	2.6393	.02950	-.00231	.01070	.00005	.00107
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

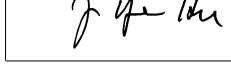
Sample Name: CCB Acquired: 6/4/2013 16:02:16 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05304**	**-.00012**	F **-3.3958**	**.00000**	F **-219.85**	F **.13127**	F **-8.2300**
Stddev	.00362	.00015	4.2468	.0011	71.00	.02767	1.9010
%RSD	6.8329	116.95	125.06	52918.	32.296	21.076	23.098
#1	-.04936	.00003	-.75400	-.00129	-162.37	.10626	-6.4257
#2	-.05315	-.00026	-1.1389	.00070	-197.95	.12657	-10.215
#3	-.05661	-.00015	-8.2945	.00059	-299.22	.16099	-8.0495
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.00400**	**.00147**	**-.00040**	**.00007**	**.00146**	**-.00016**
Stddev	.00119	.00050	.00239	.00016	.00017	.00032	.00151
%RSD	138.49	12.414	162.21	39.970	232.58	21.725	971.28
#1	-.00224	.00412	.00054	-.00022	.00015	.00142	.00015
#2	-.00030	.00346	-.00031	-.00050	.00018	.00116	-.00179
#3	-.00006	.00443	.00419	-.00048	-.00012	.00179	.00118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00042**	**.00010**	**-.02520**
Stddev	.00030	.00007	.08902
%RSD	71.614	66.829	353.25
#1	.00075	.00002	.00930
#2	.00015	.00014	-.12631
#3	.00037	.00013	.04140
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 16:02:16 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21884.**	**28615.**
Stddev	48.	122.
%RSD	.22106	.42744
#1	21832.	28525.
#2	21891.	28754.
#3	21928.	28567.

Approved: June 05, 2013

Sample Name: L1305145105 Acquired: 6/4/2013 16:05:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.35747**	**.00132**	**.02079**	**.01503**	**.00024**
Stddev	.00035	.01848	.00073	.00072	.00039	.00003
%RSD	65.101	5.1695	55.710	3.4530	2.5903	12.009
#1	-.00079	.35284	.00163	.02009	.01488	.00026
#2	-.00066	.34175	.00048	.02152	.01473	.00020
#3	-.00014	.37783	.00185	.02076	.01547	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**178.36**	**.00172**	**.02103**	**-.00122**	**.00033**	**.54254**
Stddev	2.40	.00009	.00016	.00036	.00013	.00708
%RSD	1.3459	5.3902	.74959	29.997	38.486	1.3044
#1	176.11	.00163	.02097	-.00089	.00042	.54067
#2	178.08	.00171	.02121	-.00114	.00040	.53659
#3	180.88	.00182	.02091	-.00161	.00019	.55037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.78294**	**15.518**	F **-34.821**	**2.7372**	**10.093**	**.02344**
Stddev	.00586	.526	10.647	.9404	.073	.00031
%RSD	.74790	3.3892	30.575	34.356	.72177	1.3217
#1	.77853	15.394	-26.040	3.7590	10.053	.02318
#2	.78959	15.065	-31.760	1.9080	10.049	.02335
#3	.78071	16.095	-46.663	2.5445	10.177	.02378
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

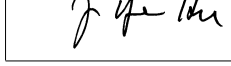
Sample Name: L1305145105 Acquired: 6/4/2013 16:05:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.26**	**1.6278**	**-.00008**	**16.666**	**.07266**	**59.090**
Stddev	1.15	.0083	.00001	.109	.00031	21.053
%RSD	.74768	.50794	11.241	.65356	.43043	35.629
#1	153.95	1.6334	-.00007	16.648	.07257	76.097
#2	151.94	1.6183	-.00008	16.567	.07301	35.543
#3	153.89	1.6317	-.00009	16.782	.07241	65.631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	F **-210.62**	F **7044.9**	F **-393440.**	**-.00029**	**.00356**
Stddev	.00078	26.47	38.8	1933.	.00023	.00197
%RSD	82.444	12.567	.55020	.49141	80.959	55.336
#1	.00042	-235.00	7001.6	-391970.	-.00032	.00393
#2	.00183	-182.47	7076.3	-395630.	-.00004	.00532
#3	.00057	-214.38	7056.9	-392710.	-.00051	.00143
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3422**	**-.00138**	**.77958**	**-.00113**	**.00009**	**.00016**
Stddev	.0057	.00043	.00558	.00109	.00038	.00020
%RSD	.24357	31.295	.71641	96.333	405.05	124.25
#1	2.3375	-.00101	.77957	.00007	.00053	.00029
#2	2.3486	-.00185	.77401	-.00207	-.00017	-.00007
#3	2.3407	-.00127	.78518	-.00140	-.00008	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

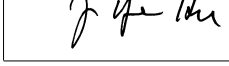
Approved: June 05, 2013



Sample Name: L1305145105 Acquired: 6/4/2013 16:05:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.07632**	F **-.07633**
Stddev	.00048	.27588
%RSD	.62679	361.41
#1	.07614	.03607
#2	.07686	.12560
#3	.07596	-.39066
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20848.**	**28687.**
Stddev	99.	166.
%RSD	.47496	.57907
#1	20904.	28501.
#2	20734.	28821.
#3	20907.	28738.

Approved: June 05, 2013



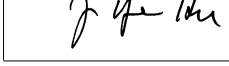
Sample Name: L1305145106 Acquired: 6/4/2013 16:09:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00075**	**.05037**	**.00117**	**.02488**	**.01555**	**-.00020**
Stddev	.00027	.01865	.00341	.00043	.00015	.00002
%RSD	35.991	37.027	289.92	1.7373	.94767	10.348
#1	-.00050	.07181	-.00262	.02534	.01558	-.00022
#2	-.00073	.03793	.00398	.02448	.01539	-.00019
#3	-.00104	.04137	.00216	.02483	.01568	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**193.16**	**.00156**	**.00528**	**-.00126**	**.00034**	**.03155**
Stddev	1.66	.00009	.00016	.00036	.00034	.00522
%RSD	.86177	5.9386	3.0325	28.644	102.33	16.536
#1	191.33	.00147	.00510	-.00097	.00072	.03640
#2	193.56	.00166	.00542	-.00166	.00022	.02603
#3	194.59	.00154	.00532	-.00114	.00007	.03222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.91467**	**17.199**	F **-32.589**	**3.1285**	**10.718**	**.02928**
Stddev	.00300	.123	9.368	1.4809	.051	.00148
%RSD	.32832	.71641	28.745	47.336	.47627	5.0526
#1	.91722	17.338	-22.516	2.2127	10.675	.03093
#2	.91545	17.104	-41.040	2.3358	10.774	.02887
#3	.91136	17.156	-34.211	4.8370	10.706	.02805
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



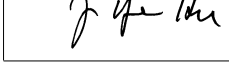
Sample Name: L1305145106 Acquired: 6/4/2013 16:09:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**176.10**	**.51507**	**-.00032**	**16.019**	**.03064**	**33.046**
Stddev	.87	.00297	.00003	.111	.00027	4.464
%RSD	.49279	.57672	10.722	.69388	.88482	13.507
#1	175.58	.51203	-.00036	15.896	.03041	31.084
#2	177.10	.51797	-.00029	16.050	.03094	29.899
#3	175.61	.51521	-.00032	16.112	.03058	38.155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	F **-222.08**	F **7861.3**	F **-437730.**	**-.00074**	**.00427**
Stddev	.00226	42.77	29.3	480.	.00056	.00090
%RSD	209.41	19.259	.37309	.10958	75.361	20.969
#1	-.00120	-269.24	7833.8	-437190.	-.00131	.00453
#2	.00112	-211.18	7857.9	-437900.	-.00071	.00327
#3	.00331	-185.81	7892.1	-438110.	-.00019	.00501
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3479**	**-.00151**	**.91414**	**-.00305**	**-.00144**	**.00001**
Stddev	.0118	.00020	.00434	.00072	.00128	.00028
%RSD	.50113	12.982	.47468	23.530	89.081	3814.6
#1	2.3379	-.00165	.90919	-.00386	-.00230	-.00019
#2	2.3450	-.00159	.91731	-.00277	.00003	-.00011
#3	2.3609	-.00129	.91591	-.00251	-.00205	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

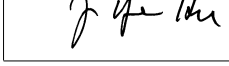
Approved: June 05, 2013



Sample Name: L1305145106 Acquired: 6/4/2013 16:09:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01453**	F **-.15563**
Stddev	.00011	.26054
%RSD	.77552	167.41
#1	.01454	-.02257
#2	.01464	-.45583
#3	.01441	.01151
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20663.**	**28838.**
Stddev	7.	135.
%RSD	.03364	.46684
#1	20666.	28983.
#2	20668.	28716.
#3	20655.	28816.

Approved: June 05, 2013



Sample Name: L1305145401 Acquired: 6/4/2013 16:12:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.77558**	**.00033**	**.03075**	**.02238**	**.00128**
Stddev	.00035	.00917	.00125	.00032	.00017	.00002
%RSD	97.205	1.1830	374.98	1.0448	.75344	1.5110
#1	-.00068	.77932	.00060	.03066	.02231	.00126
#2	.00002	.76513	.00143	.03049	.02257	.00127
#3	-.00043	.78230	-.00103	.03111	.02226	.00130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**170.13**	**.00142**	**.04071**	**-.00126**	**.00194**	**.14372**
Stddev	1.28	.00010	.00012	.00017	.00022	.00109
%RSD	.75247	6.9609	.30530	13.344	11.315	.75680
#1	170.37	.00154	.04085	-.00139	.00170	.14361
#2	168.75	.00135	.04070	-.00133	.00213	.14485
#3	171.28	.00139	.04060	-.00107	.00198	.14268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6410**	**10.992**	F **-27.774**	**2.6476**	**8.3013**	**.03759**
Stddev	.0079	.303	4.435	.5656	.0233	.00118
%RSD	.47949	2.7571	15.969	21.361	.28106	3.1296
#1	1.6425	11.179	-22.688	2.0139	8.2859	.03748
#2	1.6325	10.642	-29.794	2.8279	8.2897	.03647
#3	1.6480	11.154	-30.839	3.1011	8.3281	.03882
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

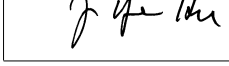
Sample Name: L1305145401 Acquired: 6/4/2013 16:12:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-02

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**96.141**	**2.0625**	**-.00039**	**25.792**	**.09542**	**83.364**
Stddev	.321	.0142	.00014	.069	.00062	15.235
%RSD	.33342	.68939	35.146	.26882	.64595	18.276
#1	96.242	2.0495	-.00052	25.723	.09603	93.570
#2	96.398	2.0777	-.00024	25.861	.09479	65.852
#3	95.782	2.0603	-.00041	25.793	.09544	90.669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00178**	F **-196.24**	F **5909.9**	F **-322390.**	**-.00062**	**.01021**
Stddev	.00105	24.75	61.4	1401.	.00237	.00161
%RSD	58.869	12.610	1.0390	.43457	385.79	15.763
#1	.00060	-205.87	5920.7	-322750.	-.00322	.01142
#2	.00214	-214.73	5843.9	-320850.	.00142	.01084
#3	.00261	-168.13	5965.2	-323580.	-.00004	.00838
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.2956**	**-.00178**	**1.6181**	**-.00211**	**.00122**	**.00004**
Stddev	.0353	.00008	.0036	.00124	.00187	.00029
%RSD	1.0702	4.7469	.22069	58.780	154.08	678.49
#1	3.3014	-.00168	1.6173	-.00076	.00077	.00017
#2	3.2578	-.00184	1.6220	-.00236	.00327	.00024
#3	3.3276	-.00181	1.6150	-.00319	-.00039	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145401 Acquired: 6/4/2013 16:12:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-02

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.16054**	**.20500**
Stddev	.00063	.25399
%RSD	.39244	123.90
#1	.16074	.38505
#2	.15984	.31547
#3	.16106	-.08553
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20989.**	**28866.**
Stddev	72.	141.
%RSD	.34478	.48677
#1	20993.	28998.
#2	21060.	28718.
#3	20915.	28882.

Approved: June 05, 2013

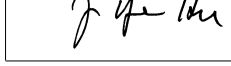
Sample Name: L1305145401S Acquired: 6/4/2013 16:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19009**	**5.6103**	**.23936**	**1.0156**	**.50710**	**.02620**
Stddev	.00041	.0145	.00129	.0053	.00176	.00002
%RSD	.21377	.25827	.53984	.51743	.34681	.06382
#1	.18986	5.6201	.24070	1.0150	.50907	.02621
#2	.18984	5.5936	.23927	1.0107	.50655	.02620
#3	.19055	5.6171	.23812	1.0212	.50568	.02618
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**173.16**	**.03046**	**.13793**	**.24491**	**.24952**	**1.9836**
Stddev	.42	.00011	.00015	.00100	.00097	.0023
%RSD	.24068	.36050	.10539	.40953	.38738	.11507
#1	173.27	.03041	.13793	.24552	.24960	1.9811
#2	173.51	.03058	.13808	.24376	.25045	1.9856
#3	172.70	.03038	.13779	.24546	.24852	1.9841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0990**	**10.860**	F **-22.805**	**3.2341**	**32.535**	**.56618**
Stddev	.0053	.268	15.074	.5229	.013	.00169
%RSD	.25059	2.4720	66.100	16.167	.03911	.29871
#1	2.0949	10.552	-33.738	3.0936	32.536	.56807
#2	2.1049	11.048	-5.6090	2.7959	32.521	.56481
#3	2.0970	10.978	-29.068	3.8129	32.547	.56565
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



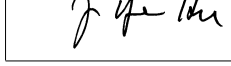
Sample Name: L1305145401S Acquired: 6/4/2013 16:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-07

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**99.057**	**2.2634**	**.49796**	**50.787**	**.33655**	**56.357**
Stddev	.282	.0099	.00282	.220	.00076	4.541
%RSD	.28515	.43784	.56620	.43376	.22552	8.0571
#1	99.179	2.2528	.49951	51.042	.33635	51.238
#2	98.734	2.2653	.49967	50.659	.33739	57.935
#3	99.258	2.2723	.49471	50.661	.33591	59.899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24488**	F **-229.59**	F **5936.8**	F **-320200.**	**.59980**	**.20817**
Stddev	.00191	24.31	45.3	1249.	.00491	.00120
%RSD	.77924	10.586	.76363	.39014	.81811	.57566
#1	.24684	-227.01	5940.8	-321060.	.60304	.20758
#2	.24477	-255.08	5980.1	-320780.	.60220	.20955
#3	.24303	-206.68	5889.6	-318770.	.59415	.20738
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.7842**	**.51717**	**2.0868**	**.47350**	**.24285**	**.48731**
Stddev	.0505	.00160	.0083	.00158	.00245	.00177
%RSD	.87311	.30980	.40035	.33436	1.0108	.36383
#1	5.7701	.51835	2.0965	.47204	.24530	.48563
#2	5.8403	.51782	2.0818	.47518	.24286	.48715
#3	5.7424	.51534	2.0822	.47327	.24040	.48916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

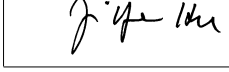
Approved: June 05, 2013



Sample Name: L1305145401S Acquired: 6/4/2013 16:16:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432767-07

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.63575**	**.68477**
Stddev	.00187	.17522
%RSD	.29351	25.588
#1	.63676	.64377
#2	.63690	.53368
#3	.63360	.87685
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20824.**	**28281.**
Stddev	48.	9.
%RSD	.22846	.03337
#1	20777.	28289.
#2	20823.	28271.
#3	20872.	28283.

Approved: June 05, 2013



Sample Name: L1305145402 Acquired: 6/4/2013 16:19:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**.04151**	**.00057**	**.03188**	**.03339**	**.00002**
Stddev	.00016	.00347	.00110	.00040	.00022	.00001
%RSD	15.833	8.3591	193.16	1.2474	.66476	45.700
#1	-.00098	.04537	.00184	.03226	.03352	.00004
#2	-.00115	.03864	.00001	.03191	.03351	.00002
#3	-.00083	.04052	-.00014	.03147	.03313	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.49**	**.00140**	**.03824**	**-.00099**	**.00046**	**.03344**
Stddev	.76	.00008	.00013	.00018	.00023	.00111
%RSD	.45069	5.6478	.34505	17.600	51.047	3.3255
#1	170.22	.00131	.03831	-.00097	.00063	.03472
#2	169.57	.00145	.03832	-.00118	.00056	.03290
#3	168.69	.00145	.03809	-.00083	.00019	.03270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6005**	**10.907**	F **-22.437**	**2.3963**	**8.3820**	**.03859**
Stddev	.0062	.211	2.974	.3311	.1251	.00019
%RSD	.38490	1.9384	13.257	13.816	1.4930	.49364
#1	1.6067	10.946	-24.526	2.6473	8.5156	.03874
#2	1.5944	11.096	-23.754	2.5206	8.3630	.03867
#3	1.6003	10.679	-19.032	2.0211	8.2675	.03838
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

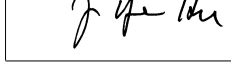
Sample Name: L1305145402 Acquired: 6/4/2013 16:19:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.889**	**1.9947**	**.00003**	**25.685**	**.09188**	**37.215**
Stddev	1.272	.0333	.00008	.209	.00057	14.649
%RSD	1.3270	1.6709	276.20	.81202	.62241	39.363
#1	97.317	2.0305	.00003	25.913	.09169	38.634
#2	95.475	1.9889	-.00005	25.637	.09142	51.103
#3	94.875	1.9646	.00010	25.505	.09252	21.908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	F **-171.02**	F **5847.0**	F **-316620.**	**-.00039**	**.00900**
Stddev	.00109	23.44	26.7	742.	.00080	.00151
%RSD	335.53	13.706	.45608	.23432	204.88	16.737
#1	.00065	-195.01	5873.9	-317300.	-.00110	.00999
#2	.00122	-148.17	5846.3	-315830.	.00047	.00726
#3	-.00089	-169.90	5820.6	-316740.	-.00054	.00974
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.1636**	**-.00183**	**1.6130**	**-.00155**	**.00049**	**.00019**
Stddev	.0073	.00009	.0142	.00118	.00176	.00015
%RSD	.23055	4.9999	.88059	76.156	359.33	76.332
#1	3.1637	-.00187	1.6291	-.00154	.00096	.00007
#2	3.1708	-.00173	1.6076	-.00275	-.00146	.00035
#3	3.1563	-.00189	1.6023	-.00038	.00197	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145402 Acquired: 6/4/2013 16:19:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.14132**	F **-.09643**
Stddev	.00046	.21972
%RSD	.32205	227.85
#1	.14165	-.35006
#2	.14080	.02482
#3	.14151	.03594
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21117.**	**28432.**
Stddev	37.	415.
%RSD	.17482	1.4607
#1	21076.	27968.
#2	21127.	28557.
#3	21147.	28770.

Approved: June 05, 2013

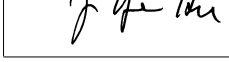
Sample Name: L1305145403 Acquired: 6/4/2013 16:22:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.31128**	**-.00040**	**.01268**	**.02473**	**.00005**
Stddev	.00060	.00736	.00103	.00097	.00016	.00003
%RSD	111.67	2.3636	253.75	7.6747	.64984	54.761
#1	.00006	.31439	.00009	.01236	.02477	.00002
#2	-.00113	.31657	.00028	.01377	.02486	.00008
#3	-.00052	.30288	-.00158	.01190	.02455	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**165.93**	**.00143**	**.00676**	**-.00094**	**.00101**	**.31691**
Stddev	.57	.00005	.00009	.00021	.00025	.00792
%RSD	.34132	3.4387	1.3854	22.750	24.460	2.4990
#1	166.36	.00139	.00677	-.00084	.00083	.32468
#2	165.29	.00140	.00666	-.00118	.00091	.31719
#3	166.15	.00148	.00685	-.00079	.00129	.30885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.82269**	**11.325**	F **-24.082**	**1.2144**	**8.4529**	**.03314**
Stddev	.00728	.427	9.972	.6274	.0495	.00220
%RSD	.88498	3.7672	41.407	51.666	.58608	6.6304
#1	.83040	11.498	-16.175	1.7599	8.5065	.03338
#2	.82174	11.638	-35.285	1.3544	8.4434	.03084
#3	.81593	10.839	-20.787	.52875	8.4088	.03521
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



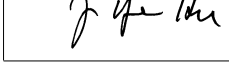
Sample Name: L1305145403 Acquired: 6/4/2013 16:22:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**102.81**	**.49889**	**-.00029**	**5.2919**	**.02999**	**74.842**
Stddev	.97	.00629	.00007	.0192	.00051	14.453
%RSD	.94715	1.2608	25.152	.36298	1.6937	19.311
#1	103.89	.50554	-.00024	5.3120	.03045	69.820
#2	102.56	.49808	-.00037	5.2738	.02945	63.571
#3	101.99	.49304	-.00025	5.2900	.03008	91.136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00158**	F **-196.18**	F **5567.9**	F **-303760.**	**-.00033**	**.00309**
Stddev	.00048	18.76	23.6	1222.	.00077	.00144
%RSD	30.529	9.5617	.42397	.40236	235.61	46.572
#1	.00184	-178.11	5591.2	-305170.	-.00014	.00401
#2	.00102	-194.87	5544.0	-303090.	.00034	.00382
#3	.00188	-215.56	5568.6	-303020.	-.00117	.00143
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5948**	**-.00188**	**.82859**	**.00458**	**-.00053**	**.00030**
Stddev	.0244	.00006	.00440	.00087	.00119	.00024
%RSD	.94090	3.2039	.53144	18.946	225.72	77.663
#1	2.6224	-.00191	.83351	.00426	-.00176	.00022
#2	2.5856	-.00193	.82725	.00392	.00061	.00057
#3	2.5763	-.00181	.82501	.00556	-.00043	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145403 Acquired: 6/4/2013 16:22:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02380**	**.19234**
Stddev	.00017	.08672
%RSD	.69833	45.088
#1	.02398	.27275
#2	.02365	.20382
#3	.02377	.10045
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21270.**	**28934.**
Stddev	22.	274.
%RSD	.10294	.94527
#1	21245.	28650.
#2	21278.	28956.
#3	21286.	29195.

Approved: June 05, 2013

Sample Name: L1305145404 Acquired: 6/4/2013 16:26:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.03810**	**.00022**	**.01283**	**.02705**	**-.00011**
Stddev	.00041	.01175	.00056	.00052	.00018	.00003
%RSD	92.057	30.840	251.59	4.0795	.68216	24.975
#1	-.00056	.03579	.00086	.01228	.02689	-.00011
#2	.00001	.02767	-.00003	.01332	.02725	-.00008
#3	-.00078	.05083	-.00017	.01288	.02702	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**168.45**	**.00133**	**.00553**	**-.00112**	**.00002**	**.10932**
Stddev	1.08	.00005	.00012	.00006	.00032	.00063
%RSD	.63887	3.3938	2.2025	5.0833	1267.0	.57472
#1	167.92	.00129	.00540	-.00111	.00008	.11004
#2	167.74	.00133	.00554	-.00118	.00031	.10901
#3	169.68	.00138	.00564	-.00106	-.00032	.10890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.85792**	**11.702**	F **-24.931**	**3.3499**	**8.6165**	**.03677**
Stddev	.00244	.125	4.005	.6986	.0752	.00203
%RSD	.28468	1.0642	16.064	20.853	.87302	5.5101
#1	.85857	11.582	-23.217	3.4327	8.5305	.03911
#2	.85997	11.830	-29.508	2.6137	8.6484	.03550
#3	.85522	11.693	-22.069	4.0034	8.6704	.03570
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

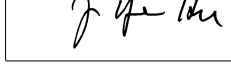
Sample Name: L1305145404 Acquired: 6/4/2013 16:26:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.08**	**.44432**	**-.00043**	**5.8593**	**.02773**	**37.249**
Stddev	1.05	.00211	.00005	.0535	.00047	14.938
%RSD	1.0012	.47529	10.539	.91311	1.6784	40.104
#1	104.05	.44279	-.00046	5.8252	.02720	43.878
#2	105.04	.44343	-.00046	5.8318	.02805	47.725
#3	106.15	.44673	-.00038	5.9210	.02795	20.143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	F **-193.50**	F **5963.9**	F **-317630.**	**-.00203**	**.00371**
Stddev	.00087	37.82	45.0	1439.	.00101	.00345
%RSD	255.27	19.548	.75437	.45293	49.604	92.942
#1	-.00051	-185.01	5926.6	-316270.	-.00087	.00373
#2	.00029	-234.85	6013.8	-319130.	-.00262	.00026
#3	.00124	-160.64	5951.3	-317490.	-.00259	.00716
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4366**	**-.00217**	**.87344**	**-.00184**	**.00013**	**.00022**
Stddev	.0246	.00040	.00647	.00014	.00247	.00011
%RSD	1.0095	18.562	.74021	7.6640	1940.1	49.147
#1	2.4117	-.00257	.86750	-.00196	-.00272	.00027
#2	2.4609	-.00176	.87250	-.00169	.00173	.00030
#3	2.4371	-.00219	.88033	-.00187	.00137	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

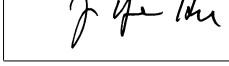
Approved: June 05, 2013



Sample Name: L1305145404 Acquired: 6/4/2013 16:26:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01676**	F **-.18420**
Stddev	.00011	.18267
%RSD	.67796	99.170
#1	.01675	-.20957
#2	.01687	-.35286
#3	.01664	.00983
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21427.**	**29803.**
Stddev	77.	189.
%RSD	.35796	.63254
#1	21514.	29983.
#2	21371.	29818.
#3	21396.	29607.

Approved: June 05, 2013



Sample Name: L1305145405 Acquired: 6/4/2013 16:29:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00090**	**.38246**	**.00076**	**.03936**	**.01832**	**.00034**
Stddev	.00019	.01072	.00035	.00045	.00009	.00004
%RSD	21.223	2.8021	46.697	1.1540	.49664	12.302
#1	-.00068	.39360	.00066	.03884	.01841	.00030
#2	-.00101	.37223	.00046	.03961	.01831	.00038
#3	-.00101	.38154	.00115	.03963	.01823	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**191.56**	**.00136**	**.01101**	**-.00135**	**.00126**	**.96497**
Stddev	.68	.00012	.00011	.00024	.00044	.00946
%RSD	.35612	8.7938	.99704	18.008	34.521	.98059
#1	192.28	.00126	.01093	-.00150	.00164	.96106
#2	190.92	.00149	.01113	-.00148	.00078	.97576
#3	191.47	.00134	.01095	-.00107	.00137	.95809
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8220**	**14.709**	F **-33.500**	**2.9414**	**11.498**	**.02870**
Stddev	.0043	.264	11.811	1.4230	.045	.00115
%RSD	.23565	1.7967	35.256	48.378	.38909	3.9929
#1	1.8211	14.990	-20.297	3.1276	11.461	.02949
#2	1.8267	14.672	-43.061	4.2621	11.547	.02922
#3	1.8183	14.466	-37.141	1.4345	11.485	.02739
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

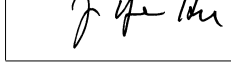
Sample Name: L1305145405 Acquired: 6/4/2013 16:29:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.48**	**.98459**	**-.00038**	**61.347**	**.02686**	**281.74**
Stddev	.34	.00066	.00005	.066	.00012	14.32
%RSD	.22116	.06712	12.755	.10820	.44337	5.0838
#1	153.48	.98527	-.00035	61.278	.02692	265.22
#2	153.82	.98455	-.00036	61.410	.02672	290.57
#3	153.14	.98395	-.00044	61.353	.02694	289.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00245**	F **-188.70**	F **7897.7**	F **-436490.**	**.00142**	**.00607**
Stddev	.00119	16.31	16.0	431.	.00229	.00179
%RSD	48.844	8.6425	.20279	.09871	161.35	29.428
#1	.00177	-198.91	7915.8	-436630.	.00153	.00813
#2	.00383	-169.89	7885.4	-436830.	.00364	.00519
#3	.00174	-197.30	7892.0	-436000.	-.00092	.00490
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1486**	**-.00199**	**1.8416**	**.00014**	**.00059**	**.00050**
Stddev	.0058	.00015	.0031	.00093	.00156	.00025
%RSD	.27161	7.4519	.16753	686.81	264.53	49.382
#1	2.1534	-.00185	1.8397	.00008	.00099	.00054
#2	2.1421	-.00197	1.8452	-.00077	.00190	.00024
#3	2.1503	-.00215	1.8399	.00109	-.00113	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305145405 Acquired: 6/4/2013 16:29:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.04723**	**.00400**
Stddev	.00006	.07731
%RSD	.12677	1932.8
#1	.04717	.05907
#2	.04723	-.08438
#3	.04729	.03731
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21019.**	**29801.**
Stddev	26.	82.
%RSD	.12174	.27384
#1	21038.	29791.
#2	20990.	29887.
#3	21029.	29725.

Approved: June 05, 2013

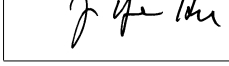
Sample Name: L1305145406 Acquired: 6/4/2013 16:33:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00096**	**.05867**	**.00069**	**.03971**	**.01661**	**-.00019**
Stddev	.00027	.01433	.00038	.00123	.00002	.00001
%RSD	28.174	24.421	55.713	3.0848	.13672	2.8908
#1	-.00123	.06738	.00079	.04026	.01658	-.00020
#2	-.00098	.06649	.00026	.03831	.01662	-.00020
#3	-.00069	.04213	.00100	.04057	.01662	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**195.06**	**.00136**	**.00237**	**-.00148**	**.00036**	**.03713**
Stddev	1.30	.00007	.00019	.00030	.00005	.00328
%RSD	.66464	4.8004	7.8307	20.437	12.923	8.8340
#1	193.87	.00142	.00251	-.00125	.00040	.04023
#2	194.87	.00129	.00216	-.00182	.00038	.03745
#3	196.44	.00136	.00245	-.00137	.00031	.03370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8468**	**15.105**	F **-25.594**	**3.0940**	**11.468**	**.02803**
Stddev	.0084	.282	12.396	.5836	.088	.00054
%RSD	.45508	1.8689	48.432	18.864	.76825	1.9147
#1	1.8456	15.113	-28.047	3.5627	11.383	.02751
#2	1.8390	14.818	-12.155	2.4403	11.464	.02800
#3	1.8557	15.382	-36.580	3.2790	11.559	.02858
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



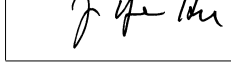
Sample Name: L1305145406 Acquired: 6/4/2013 16:33:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**154.16**	**.21176**	**-.00033**	**61.480**	**.01254**	**67.907**
Stddev	.61	.00038	.00007	.261	.00061	20.241
%RSD	.39516	.18041	22.051	.42411	4.9014	29.807
#1	153.72	.21147	-.00035	61.219	.01189	91.275
#2	153.92	.21162	-.00039	61.481	.01262	56.632
#3	154.86	.21220	-.00025	61.740	.01311	55.816
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00161**	F **-157.44**	F **8053.7**	F **-445390.**	**-.00060**	**.00508**
Stddev	.00161	16.50	34.1	1482.	.00058	.00124
%RSD	99.464	10.477	.42378	.33276	97.401	24.479
#1	.00326	-171.54	8014.8	-445760.	-.00122	.00652
#2	.00153	-139.30	8067.7	-443750.	-.00051	.00447
#3	.00005	-161.48	8078.6	-446640.	-.00006	.00426
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9892**	**-.00191**	**1.8463**	**-.00214**	**-.00002**	**.00002**
Stddev	.0072	.00016	.0111	.00080	.00121	.00021
%RSD	.36111	8.3083	.60220	37.446	5305.8	914.03
#1	1.9809	-.00175	1.8351	-.00299	.00108	-.00004
#2	1.9930	-.00191	1.8465	-.00140	-.00132	.00025
#3	1.9936	-.00206	1.8574	-.00203	.00017	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

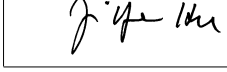
Approved: June 05, 2013



Sample Name: L1305145406 Acquired: 6/4/2013 16:33:14 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00999**	F **-.24514**
Stddev	.00005	.13958
%RSD	.52739	56.936
#1	.01005	-.38994
#2	.00998	-.23403
#3	.00995	-.11146
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21040.**	**30221.**
Stddev	40.	13.
%RSD	.18967	.04179
#1	21003.	30233.
#2	21082.	30221.
#3	21035.	30208.

Approved: June 05, 2013



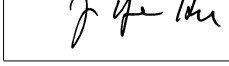
Sample Name: L1305145407 Acquired: 6/4/2013 16:36:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.15664**	**.00022**	**.04126**	**.01330**	**.00002**
Stddev	.00020	.00086	.00201	.00048	.00009	.00003
%RSD	41.972	.54810	929.42	1.1655	.68740	125.09
#1	-.00037	.15620	-.00210	.04076	.01324	.00005
#2	-.00070	.15763	.00119	.04171	.01340	-.00001
#3	-.00035	.15609	.00155	.04132	.01325	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**197.36**	**.00140**	**.00878**	**-.00134**	**.00070**	**.34884**
Stddev	.73	.00006	.00019	.00017	.00046	.00161
%RSD	.37163	4.2683	2.1999	12.873	65.673	.46187
#1	197.41	.00141	.00893	-.00130	.00110	.35042
#2	198.06	.00134	.00856	-.00119	.00020	.34720
#3	196.60	.00146	.00886	-.00153	.00080	.34889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8756**	**15.756**	F **-30.636**	**2.9706**	**11.719**	**.02992**
Stddev	.0141	.516	12.237	1.1805	.047	.00112
%RSD	.75238	3.2778	39.943	39.739	.40419	3.7413
#1	1.8758	15.306	-26.083	2.1443	11.742	.02976
#2	1.8614	15.643	-21.328	2.4449	11.750	.02889
#3	1.8897	16.320	-44.496	4.3226	11.664	.03111
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



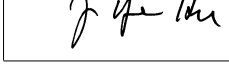
Sample Name: L1305145407 Acquired: 6/4/2013 16:36:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**157.44**	**.77052**	**-.00047**	**63.104**	**.02879**	**92.847**
Stddev	.64	.00420	.00027	.418	.00721	9.684
%RSD	.40625	.54493	57.553	.66242	25.029	10.430
#1	157.11	.76765	-.00053	62.785	.03711	82.208
#2	158.17	.77534	-.00018	63.577	.02467	101.15
#3	157.02	.76857	-.00071	62.951	.02459	95.186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00081**	F **-168.21**	F **8049.3**	F **-445890.**	**.00058**	**.00624**
Stddev	.00140	8.50	45.7	2084.	.00129	.00084
%RSD	171.81	5.0506	.56785	.46729	222.57	13.504
#1	-.00080	-169.83	8010.2	-446630.	.00197	.00664
#2	.00172	-175.79	8038.3	-443540.	.00035	.00527
#3	.00152	-159.03	8099.6	-447510.	-.00058	.00681
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9302**	**-.00206**	**1.8960**	**-.00179**	**.00046**	**.00013**
Stddev	.0228	.00021	.0101	.00055	.00037	.00031
%RSD	1.1810	10.003	.53145	30.421	79.992	234.26
#1	1.9512	-.00227	1.8904	-.00229	.00004	.00039
#2	1.9060	-.00206	1.9076	-.00187	.00072	-.00021
#3	1.9333	-.00185	1.8898	-.00121	.00063	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

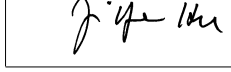
Approved: June 05, 2013



Sample Name: L1305145407 Acquired: 6/4/2013 16:36:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03009**	F **-.11508**
Stddev	.00023	.33152
%RSD	.75191	288.09
#1	.03033	.25528
#2	.02988	-.38414
#3	.03006	-.21637
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20531.**	**29633.**
Stddev	18.	100.
%RSD	.08583	.33601
#1	20548.	29685.
#2	20533.	29519.
#3	20513.	29697.

Approved: June 05, 2013



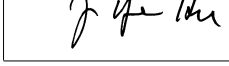
Sample Name: CCV Acquired: 6/4/2013 16:40:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43987**	**9.7781**	F **.47469**	**.49553**	**.98228**	**.05011**	**9.7699**
Stddev	.00224	.1166	.00397	.00145	.00599	.00028	.0799
%RSD	.50862	1.1924	.83662	.29347	.60937	.54913	.81807
#1	.43732	9.6963	.47240	.49395	.97655	.04980	9.6882
#2	.44077	9.7265	.47928	.49682	.98180	.05028	9.7736
#3	.44151	9.9116	.47240	.49583	.98850	.05027	9.8479
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05807**	**.19957**	**.49981**	**.50430**	**3.9314**	**1.0021**	**1.0691**
Stddev	.00014	.00034	.00163	.00123	.0348	.0049	.1684
%RSD	.24322	.17161	.32628	.24465	.88396	.48487	15.750
#1	.05820	.19933	.49823	.50314	3.9003	1.00000	1.2283
#2	.05809	.19996	.50149	.50559	3.9250	.99863	.89287
#3	.05792	.19941	.49972	.50418	3.9689	1.0076	1.0860
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	10.000%						

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.3234**	F **1.7577**	**49.190**	**1.0373**	**9.7903**	**.49482**	**.98586**
Stddev	4.7945	1.2819	.497	.0100	.2269	.00466	.00136
%RSD	57.603	72.929	1.0096	.96395	2.3176	.94152	.13813
#1	-3.3851	2.9112	48.809	1.0284	9.6223	.49123	.98465
#2	-12.960	1.9843	49.009	1.0354	9.7002	.49316	.98733
#3	-8.6251	.37765	49.752	1.0481	10.048	.50009	.98560
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 16:40:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.075**	**.50122**	F **8.6833**	**.50427**	F **-193.49**	F **11.226**	F **-46.892**
Stddev	.611	.00089	6.4440	.00179	17.05	.013	.598
%RSD	1.2201	.17706	74.211	.35525	8.8098	.11457	1.2761
#1	49.570	.50086	1.2503	.50239	-185.10	11.212	-46.591
#2	49.901	.50223	12.104	.50596	-182.28	11.228	-47.581
#3	50.754	.50057	12.695	.50445	-213.11	11.238	-46.505
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			-10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1938**	**.40591**	**4.9654**	**.94399**	**.98073**	**.97971**	**.50809**
Stddev	.0014	.00187	.0152	.00049	.01300	.01693	.00134
%RSD	.11694	.46112	.30552	.05140	1.3257	1.7281	.26282
#1	1.1940	.40802	4.9801	.94449	.97059	.96562	.50951
#2	1.1951	.40444	4.9498	.94395	.97621	.97503	.50686
#3	1.1923	.40527	4.9662	.94352	.99539	.99849	.50790
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

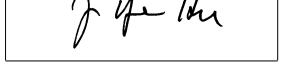
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98081**	**1.0080**	F **.50276**
Stddev	.00457	.0017	.14125
%RSD	.46616	.16841	28.096
#1	.97553	1.0068	.35511
#2	.98345	1.0099	.63660
#3	.98344	1.0072	.51655
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 16:40:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21890.**	**28909.**
Stddev	52.	187.
%RSD	.23860	.64642
#1	21949.	29063.
#2	21848.	28963.
#3	21874.	28701.

Approved: June 05, 2013



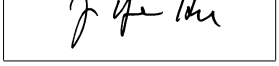
Sample Name: CCB Acquired: 6/4/2013 16:43:26 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.00654**	**.00068**	**.00226**	**.00048**	**-.00023**	**-.02904**
Stddev	.00014	.01640	.00050	.00032	.00015	.00000	.01013
%RSD	24.074	250.91	73.064	13.932	30.752	1.6533	34.887
#1	-.00044	-.01068	.00034	.00253	.00063	-.00023	-.02076
#2	-.00072	.00832	.00125	.00234	.00047	-.00023	-.04034
#3	-.00064	.02197	.00046	.00191	.00034	-.00024	-.02602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00003**	**-.00172**	**-.00010**	**.00056**	**-.00264**	**-.03064**
Stddev	.00007	.00013	.00041	.00023	.00185	.00278	.07340
%RSD	123.86	442.78	24.085	224.95	329.88	105.21	239.56
#1	.00001	-.00005	-.00125	-.00037	.00001	-.00282	-.05239
#2	-.00012	-.00005	-.00202	.00005	-.00095	.00022	.05118
#3	-.00006	.00019	-.00189	.00001	.00263	-.00533	-.09070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.79080**	F **2.8359**	**.06553**	**-.00507**	**.01240**	**.00020**	**.00103**
Stddev	6.2102	1.3633	.01884	.00091	.00310	.00003	.00018
%RSD	785.31	48.075	28.750	17.983	24.984	14.213	17.355
#1	4.0360	1.8004	.06646	-.00408	.01577	.00023	.00084
#2	4.7061	4.3805	.04624	-.00588	.01176	.00018	.00107
#3	-6.3697	2.3266	.08389	-.00524	.00967	.00019	.00119
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



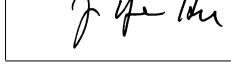
Sample Name: CCB Acquired: 6/4/2013 16:43:26 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05124**	**-.00006**	F **-6.5989**	**-.00029**	F **-200.45**	F **1.0668**	F **-55.696**
Stddev	.00655	.00017	3.0387	.00053	36.48	.0266	.641
%RSD	12.779	309.83	46.049	181.32	18.199	2.4929	1.1512
#1	-.04530	-.00019	-4.6896	-.00038	-241.24	1.0865	-55.026
#2	-.05016	.00014	-5.0040	-.00078	-189.14	1.0366	-55.758
#3	-.05827	-.00012	-10.103	.00028	-170.95	1.0773	-56.304
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00477**	**.00021**	**-.00002**	**.00014**	**.00088**	**.00031**
Stddev	.00109	.00180	.00102	.00025	.00004	.00062	.00121
%RSD	524.89	37.623	476.55	1027.1	29.098	70.402	385.46
#1	-.00047	.00270	.00136	.00023	.00018	.00020	-.00100
#2	.00099	.00579	-.00014	-.00028	.00010	.00105	.00058
#3	-.00115	.00582	-.00058	-.00002	.00015	.00140	.00136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00049**	**.00017**	F **.19310**
Stddev	.00037	.00009	.23917
%RSD	75.022	54.752	123.86
#1	.00087	.00026	.14600
#2	.00014	.00016	.45232
#3	.00046	.00008	-.01902
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 16:43:26 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22030.**	**28567.**
Stddev	27.	175.
%RSD	.12284	.61431
#1	22056.	28503.
#2	22002.	28432.
#3	22033.	28765.

Approved: June 05, 2013

Sample Name: L1305145408 Acquired: 6/4/2013 16:47:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.03621**	**.00051**	**.04048**	**.01831**	**-.00018**
Stddev	.00049	.00853	.00076	.00038	.00006	.00002
%RSD	102.68	23.548	150.17	.93281	.33750	8.1783
#1	.00002	.04147	.00055	.04091	.01824	-.00020
#2	-.00095	.04079	-.00028	.04021	.01835	-.00018
#3	-.00048	.02637	.00124	.04031	.01834	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**200.28**	**.00137**	**.00724**	**-.00160**	**.00008**	**.06027**
Stddev	1.59	.00008	.00003	.00040	.00016	.00154
%RSD	.79528	6.1335	.47550	25.176	197.74	2.5616
#1	198.66	.00128	.00725	-.00117	-.00003	.06189
#2	200.32	.00140	.00720	-.00197	.00000	.05881
#3	201.84	.00144	.00727	-.00165	.00027	.06012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8851**	**15.890**	F **-37.439**	**3.0229**	**11.820**	**.03087**
Stddev	.0170	.254	10.961	.9759	.108	.00103
%RSD	.90293	1.5970	29.278	32.282	.91623	3.3240
#1	1.8810	15.756	-27.100	2.1663	11.747	.02980
#2	1.9037	16.183	-48.931	4.0852	11.767	.03096
#3	1.8704	15.731	-36.287	2.8171	11.944	.03184
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

Sample Name: L1305145408 Acquired: 6/4/2013 16:47:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.51**	**.66067**	**-.00010**	**64.082**	**.02123**	**68.644**
Stddev	1.02	.00281	.00007	.385	.00055	13.323
%RSD	.63859	.42594	70.804	.60096	2.6116	19.409
#1	159.69	.65937	-.00010	63.646	.02186	83.418
#2	160.18	.65873	-.00003	64.224	.02100	57.542
#3	161.66	.66390	-.00017	64.375	.02082	64.972
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	F **-174.46**	F **8178.2**	F **-446860.**	**.00041**	**.00726**
Stddev	.00045	40.82	76.8	2106.	.00164	.00276
%RSD	48.265	23.398	.93912	.47130	403.22	37.982
#1	.00045	-147.06	8179.2	-445910.	.00139	.00686
#2	.00134	-154.93	8254.4	-449280.	.00132	.01019
#3	.00103	-221.37	8100.9	-445400.	-.00149	.00472
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9067**	**-.00180**	**1.9064**	**-.00181**	**.00002**	**.00013**
Stddev	.0299	.00007	.0103	.00087	.00138	.00045
%RSD	1.5688	3.6180	.53804	47.824	7282.0	352.23
#1	1.9083	-.00173	1.8959	-.00273	.00103	.00064
#2	1.9358	-.00186	1.9070	-.00170	.00058	-.00009
#3	1.8761	-.00180	1.9164	-.00101	-.00155	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305145408 Acquired: 6/4/2013 16:47:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02209**	**.43154**
Stddev	.00013	.06118
%RSD	.58960	14.176
#1	.02208	.40582
#2	.02222	.50138
#3	.02196	.38742
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20728.**	**28432.**
Stddev	85.	104.
%RSD	.40892	.36414
#1	20753.	28521.
#2	20633.	28457.
#3	20797.	28319.

Approved: June 05, 2013

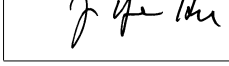
Sample Name: L1305152501 Acquired: 6/4/2013 16:50:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00065**	**.04340**	**.00099**	**.00839**	**.03164**	**-.00023**	**18.822**
Stddev	.00018	.00980	.00049	.00027	.00059	.00001	.080
%RSD	27.152	22.577	49.759	3.1619	1.8570	3.3056	.42448
#1	-.00064	.03239	.00042	.00837	.03119	-.00023	18.736
#2	-.00083	.05115	.00132	.00866	.03141	-.00023	18.836
#3	-.00048	.04667	.00123	.00813	.03230	-.00022	18.894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00027**	**-.00190**	**.00018**	**.15674**	**.20016**	**.73460**
Stddev	.00008	.00024	.00029	.00029	.00565	.00457	.21663
%RSD	129.52	89.009	15.155	158.62	3.6069	2.2851	29.489
#1	.00016	.00037	-.00200	.00012	.15403	.20355	.90258
#2	.00000	.00000	-.00158	.00050	.15296	.19496	.49009
#3	.00003	.00044	-.00212	-.00007	.16324	.20198	.81112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.6738**	**3.1586**	**1.6316**	**.00130**	**7.5853**	**.04262**	**-.00022**
Stddev	5.6729	.9942	.0319	.00040	.0557	.00030	.00028
%RSD	338.92	31.477	1.9556	30.687	.73415	.71536	128.08
#1	1.4362	3.8919	1.6431	.00142	7.5532	.04233	.00009
#2	-8.2216	2.0270	1.5955	.00162	7.5530	.04294	-.00045
#3	1.7640	3.5568	1.6560	.00085	7.6496	.04259	-.00029
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



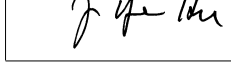
Sample Name: L1305152501 Acquired: 6/4/2013 16:50:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.646**	**.00095**	**39.204**	**.00074**	F **-186.56**	F **350.21**	F **-17693.**
Stddev	.066	.00008	3.146	.00098	38.00	3.43	80.
%RSD	.57007	8.0667	8.0247	131.96	20.368	.97811	.45372
#1	11.626	.00089	40.419	.00171	-188.65	349.17	-17628.
#2	11.592	.00093	41.561	.00075	-223.47	347.42	-17668.
#3	11.720	.00104	35.632	-.00024	-147.56	354.03	-17782.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00232**	**.00213**	**2.0222**	**-.00148**	**.19456**	**.00206**	**-.00063**
Stddev	.00061	.00290	.0237	.00018	.00152	.00142	.00124
%RSD	26.337	136.04	1.1705	12.112	.78091	69.026	198.32
#1	-.00229	.00231	2.0189	-.00163	.19444	.00318	-.00206
#2	-.00295	.00493	2.0003	-.00128	.19310	.00254	-.00002
#3	-.00173	-.00085	2.0473	-.00153	.19614	.00046	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00035**	**.00326**	**.17909**
Stddev	.00014	.00002	.14159
%RSD	39.943	.69619	79.061
#1	.00022	.00323	.16400
#2	.00035	.00326	.04565
#3	.00050	.00328	.32762
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

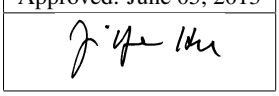
Approved: June 05, 2013



Sample Name: L1305152501 Acquired: 6/4/2013 16:50:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21985.**	**29112.**
Stddev	65.	158.
%RSD	.29616	.54297
#1	22021.	29292.
#2	22023.	29048.
#3	21909.	28996.

Approved: June 05, 2013



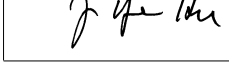
Sample Name: L1305152502 Acquired: 6/4/2013 16:54:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.05260**	**.00072**	**.01202**	**.03148**	**-.00025**	**25.386**
Stddev	.00047	.00515	.00085	.00038	.00031	.00000	.213
%RSD	77.103	9.7950	118.17	3.1771	.99595	.66313	.84023
#1	-.00009	.04700	.00034	.01225	.03136	-.00025	25.314
#2	-.00102	.05365	.00013	.01222	.03184	-.00025	25.218
#3	-.00074	.05714	.00170	.01158	.03126	-.00025	25.626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00019**	**-.00173**	**.00070**	**.09998**	**.31681**	**1.4121**
Stddev	.00011	.00001	.00021	.00027	.00525	.00153	.1648
%RSD	65.096	7.3769	12.094	38.064	5.2481	.48253	11.668
#1	.00005	.00020	-.00197	.00039	.09708	.31571	1.5638
#2	.00022	.00018	-.00160	.00081	.10603	.31855	1.2368
#3	.00027	.00020	-.00161	.00089	.09681	.31617	1.4356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.3811**	**1.9375**	**2.0366**	**.00283**	**9.8574**	**.04057**	**-.00012**
Stddev	7.0672	.8629	.0144	.00110	.0706	.00024	.00012
%RSD	84.323	44.537	.70739	39.037	.71577	.58774	98.298
#1	-.35323	2.8562	2.0433	.00396	9.7965	.04065	.00002
#2	-11.126	1.8120	2.0200	.00277	9.9347	.04075	-.00020
#3	-13.664	1.1442	2.0464	.00176	9.8410	.04030	-.00018
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



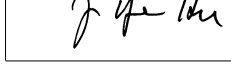
Sample Name: L1305152502 Acquired: 6/4/2013 16:54:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.252**	**.00096**	**26.285**	**.00144**	F **-170.10**	F **520.15**	F **-26660.**
Stddev	.017	.00027	10.512	.00163	33.00	4.73	132.
%RSD	.11197	27.865	39.991	113.25	19.401	.90842	.49469
#1	15.239	.00121	22.752	.00330	-184.29	524.94	-26798.
#2	15.271	.00099	38.108	.00070	-132.38	520.04	-26646.
#3	15.245	.00068	17.996	.00031	-193.63	515.49	-26536.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00146**	**2.1228**	**-.00158**	**.30825**	**.00111**	**-.00057**
Stddev	.00053	.00033	.0208	.00032	.00126	.00084	.00201
%RSD	195.83	22.736	.97930	20.367	.40783	75.947	350.73
#1	.00027	.00107	2.1460	-.00122	.30852	.00101	.00130
#2	-.00026	.00165	2.1167	-.00182	.30935	.00200	-.00032
#3	.00079	.00165	2.1058	-.00170	.30688	.00032	-.00270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00033**	**.00566**	**.10548**
Stddev	.00019	.00013	.13349
%RSD	57.154	2.2207	126.56
#1	.00014	.00558	.17882
#2	.00035	.00581	-.04860
#3	.00052	.00560	.18621
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305152502 Acquired: 6/4/2013 16:54:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22001.**	**28968.**
Stddev	85.	69.
%RSD	.38844	.23809
#1	21922.	29045.
#2	21990.	28912.
#3	22092.	28945.

Approved: June 05, 2013

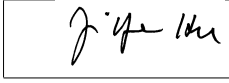
Sample Name: L1305152503 Acquired: 6/4/2013 16:57:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.03600**	**.00152**	**.00854**	**.03214**	**-.00025**	**17.355**
Stddev	.00053	.00486	.00111	.00044	.00012	.00001	.162
%RSD	85.502	13.508	73.186	5.1886	.35932	5.8665	.93442
#1	-.00003	.03947	.00088	.00804	.03209	-.00026	17.185
#2	-.00105	.03044	.00088	.00875	.03228	-.00026	17.373
#3	-.00079	.03809	.00281	.00885	.03207	-.00024	17.508
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00019**	**-.00182**	**.00111**	**.14152**	**.18248**	**.84277**
Stddev	.00008	.00018	.00046	.00030	.00166	.00460	.40166
%RSD	62.107	98.367	25.121	26.913	1.1712	2.5182	47.660
#1	.00004	.00003	-.00152	.00142	.14245	.17890	.72853
#2	.00018	.00039	-.00235	.00082	.14250	.18087	1.2892
#3	.00017	.00014	-.00160	.00110	.13960	.18766	.51060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.4646**	**3.3500**	**1.5237**	**-.00070**	**6.6670**	**.02749**	**-.00022**
Stddev	7.7089	1.4422	.0304	.00176	.0161	.00009	.00017
%RSD	119.25	43.053	1.9954	251.97	.24156	.31409	76.807
#1	.84958	2.3436	1.4888	-.00006	6.6538	.02749	-.00040
#2	15.254	5.0023	1.5379	-.00268	6.6624	.02758	-.00007
#3	3.2904	2.7041	1.5444	.00066	6.6850	.02740	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305152503 Acquired: 6/4/2013 16:57:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.625**	**.00004**	**36.738**	**.00038**	F **-208.26**	F **316.13**	F **-15647.**
Stddev	.069	.00028	13.146	.00082	21.25	.33	57.
%RSD	.59073	692.01	35.782	215.64	10.204	.10427	.36294
#1	11.551	.00005	33.435	.00110	-210.12	315.76	-15613.
#2	11.636	-.00024	51.220	.00056	-186.14	316.24	-15616.
#3	11.687	.00032	25.558	-.00052	-228.52	316.39	-15713.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.00223**	**2.0659**	**-.00149**	**.17732**	**.00264**	**.00154**
Stddev	.00060	.00148	.0097	.00029	.00057	.00068	.00162
%RSD	114.11	66.389	.46707	19.418	.32110	25.612	104.93
#1	-.00110	.00359	2.0547	-.00153	.17678	.00192	-.00020
#2	.00009	.00246	2.0707	-.00177	.17727	.00275	.00183
#3	-.00057	.00065	2.0721	-.00119	.17792	.00326	.00299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

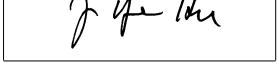
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00009**	**.00819**	**.17305**
Stddev	.00005	.00003	.35341
%RSD	55.974	.32813	204.23
#1	.00004	.00822	-.18987
#2	.00009	.00817	.19289
#3	.00014	.00818	.51612
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305152503 Acquired: 6/4/2013 16:57:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21889.**	**29348.**
Stddev	61.	60.
%RSD	.27801	.20574
#1	21936.	29418.
#2	21911.	29314.
#3	21821.	29313.

Approved: June 05, 2013



Sample Name: L1305152504 Acquired: 6/4/2013 17:00:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**.02224**	**-.00082**	**.00778**	**.03141**	**-.00026**	**17.231**
Stddev	.00020	.01117	.00081	.00048	.00029	.00003	.069
%RSD	22.168	50.224	99.437	6.1368	.90871	10.971	.40008
#1	-.00114	.01473	-.00001	.00832	.03108	-.00026	17.304
#2	-.00074	.01692	-.00163	.00745	.03154	-.00028	17.168
#3	-.00088	.03508	-.00080	.00756	.03160	-.00023	17.221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00010**	**-.00226**	**.00016**	**.05323**	**.17814**	**.53391**
Stddev	.00005	.00012	.00017	.00038	.00168	.00169	.27421
%RSD	120.65	120.32	7.4018	244.41	3.1604	.94827	51.359
#1	-.00001	.00018	-.00228	.00029	.05463	.17848	.35253
#2	.00005	.00015	-.00241	-.00028	.05370	.17630	.84937
#3	.00009	-.00004	-.00208	.00046	.05137	.17963	.39984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.9574**	**3.0201**	**1.5171**	**.00021**	**6.6194**	**.02313**	**-.00023**
Stddev	5.4901	1.0621	.0256	.00226	.0566	.00012	.00010
%RSD	78.910	35.167	1.6887	1051.2	.85561	.51660	45.434
#1	-13.122	3.9124	1.5317	-.00235	6.5858	.02321	-.00021
#2	-5.1566	1.8453	1.4875	.00109	6.5877	.02318	-.00034
#3	-2.5939	3.3027	1.5320	.00190	6.6848	.02299	-.00014
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

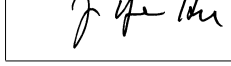
Sample Name: L1305152504 Acquired: 6/4/2013 17:00:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.383**	**.00039**	**23.055**	**.00101**	F **-215.88**	F **305.89**	F **-15328.**
Stddev	.021	.00047	16.234	.00191	34.83	2.79	67.
%RSD	.18021	121.30	70.416	189.73	16.135	.91319	.43779
#1	11.399	.00089	38.585	-.00082	-220.24	302.68	-15256.
#2	11.360	.00033	6.1978	.00299	-179.07	307.18	-15388.
#3	11.390	-.00005	24.382	.00085	-248.32	307.80	-15341.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00067**	**.00109**	**1.9483**	**-.00166**	**.17428**	**.00075**	**.00007**
Stddev	.00092	.00061	.0150	.00034	.00026	.00073	.00216
%RSD	138.12	55.789	.76798	20.263	.14749	97.692	3026.0
#1	.00039	.00110	1.9319	-.00201	.17411	.00158	-.00215
#2	-.00132	.00047	1.9519	-.00134	.17416	.00024	.00021
#3	-.00107	.00168	1.9612	-.00164	.17458	.00042	.00216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00327**	F **-.11113**
Stddev	.00024	.00001	.24714
%RSD	127.02	.28665	222.39
#1	.00046	.00328	.04962
#2	.00005	.00326	.01270
#3	.00005	.00327	-.39571
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013



Sample Name: L1305152504 Acquired: 6/4/2013 17:00:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21935.**	**28799.**
Stddev	50.	79.
%RSD	.22846	.27426
#1	21954.	28773.
#2	21878.	28887.
#3	21973.	28736.

Approved: June 05, 2013

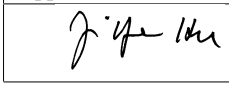
Sample Name: L1306003101 Acquired: 6/4/2013 17:04:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00080**	**.06301**	**.00005**	**.04207**	**.01626**	**-.00023**	**27.518**
Stddev	.00053	.00811	.00100	.00055	.00030	.00001	.131
%RSD	66.252	12.865	2056.6	1.3188	1.8565	3.2419	.47735
#1	-.00020	.06868	-.00068	.04271	.01613	-.00023	27.637
#2	-.00098	.05372	-.00037	.04180	.01605	-.00022	27.377
#3	-.00122	.06661	.00119	.04170	.01660	-.00023	27.538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00004**	**.07615**	**.00245**	**.33683**	**.12558**	**.99153**
Stddev	.00004	.00005	.00043	.00040	.00353	.00612	.09562
%RSD	25.109	116.75	.56164	16.442	1.0479	4.8694	9.6437
#1	.00017	.00004	.07574	.00225	.33291	.12033	1.0944
#2	.00011	.00009	.07612	.00218	.33781	.13230	.97473
#3	.00019	-.00001	.07660	.00291	.33976	.12412	.90542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.74391**	**3.2393**	**2.1079**	**.02730**	**9.1145**	**.03141**	**.00111**
Stddev	8.5287	1.2645	.0157	.00071	.0302	.00014	.00005
%RSD	1146.5	39.036	.74485	2.6188	.33154	.45360	4.3578
#1	3.2400	1.8987	2.0968	.02649	9.1154	.03145	.00105
#2	7.7461	4.4106	2.1011	.02784	9.0839	.03152	.00113
#3	-8.7544	3.4084	2.1259	.02757	9.1443	.03125	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



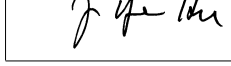
Sample Name: L1306003101 Acquired: 6/4/2013 17:04:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**66.115**	**.00133**	F **602.50**	**.00175**	F **-218.31**	F **921.34**	F **-47475.**
Stddev	.144	.00006	6.66	.00159	12.58	4.68	130.
%RSD	.21815	4.4154	1.1051	90.599	5.7615	.50775	.27351
#1	66.277	.00128	595.35	.00300	-223.43	919.06	-47483.
#2	65.999	.00131	608.52	.00229	-203.98	918.25	-47342.
#3	66.070	.00140	603.62	-.00003	-227.52	926.72	-47601.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00010**	**3.9890**	**.10720**	**.12294**	**.00079**	**-.00056**
Stddev	.00145	.00262	.0285	.00055	.00017	.00018	.00046
%RSD	2277.4	2728.5	.71513	.51635	.13770	23.394	82.677
#1	.00174	.00061	4.0029	.10694	.12312	.00097	-.00086
#2	-.00068	-.00275	3.9562	.10683	.12292	.00060	-.00003
#3	-.00087	.00243	4.0080	.10784	.12278	.00079	-.00079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.00343**	**.00094**
Stddev	.00023	.00007	.11777
%RSD	82.834	2.0090	12565.
#1	.00048	.00335	.10508
#2	.00031	.00346	-.12686
#3	.00003	.00348	.02460
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1306003101 Acquired: 6/4/2013 17:04:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21667.**	**29258.**
Stddev	86.	23.
%RSD	.39856	.07834
#1	21673.	29282.
#2	21750.	29255.
#3	21578.	29236.

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 17:07:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**-.03575**	**.00276**	**-.00166**	**-.00054**	**-.00004**	**.04912**
Stddev	.00018	.01054	.00078	.00022	.00037	.00000	.00328
%RSD	83.800	29.485	28.175	13.214	67.438	9.1144	6.6804
#1	.00039	-.02588	.00270	-.00163	-.00015	-.00004	.05284
#2	.00002	-.03452	.00201	-.00146	-.00062	-.00004	.04790
#3	.00025	-.04685	.00356	-.00189	-.00087	-.00004	.04663
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00009**	**-.00160**	**.00017**	**-.00173**	**.00839**	F **-.15171**
Stddev	.00002	.00002	.00021	.00016	.00129	.00375	.20130
%RSD	16.581	19.742	13.081	91.071	74.728	44.683	132.69
#1	-.00013	.00011	-.00140	.00005	-.00293	.00428	-.37828
#2	-.00015	.00011	-.00159	.00035	-.00190	.00928	.00653
#3	-.00011	.00007	-.00182	.00012	-.00036	.01162	-.08337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0213**	**2.9660**	**.02416**	**-.00509**	**.06142**	**.00063**	**-.00009**
Stddev	3.4718	.4362	.00338	.00025	.02491	.00020	.00004
%RSD	339.94	14.705	13.994	4.9798	40.558	31.323	38.399
#1	-1.9336	2.6717	.02237	-.00536	.08391	.00081	-.00013
#2	.15258	2.7593	.02806	-.00504	.06570	.00067	-.00006
#3	4.8449	3.4671	.02205	-.00486	.03465	.00042	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 17:07:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02048**	**.00160**	**23.743**	**.00464**	F **-101.92**	F **54.361**	F **-2717.4**
Stddev	.01349	.00016	19.981	.00076	73.86	23.539	1170.4
%RSD	65.890	10.017	84.156	16.384	72.469	43.301	43.070
#1	-.03220	.00178	1.3065	.00382	-179.68	28.550	-1439.9
#2	-.02351	.00148	30.302	.00532	-93.376	59.890	-2974.4
#3	-.00573	.00154	39.619	.00478	-32.702	74.642	-3738.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00143**	**.00438**	**.21536**	**.00489**	**.00032**	**.00264**	**.00284**
Stddev	.00061	.00026	.10140	.00313	.00025	.00041	.00047
%RSD	42.882	5.9320	47.085	64.038	77.108	15.497	16.656
#1	-.00173	.00468	.10514	.00158	.00059	.00278	.00328
#2	-.00072	.00420	.23624	.00528	.00029	.00297	.00290
#3	-.00183	.00426	.30469	.00780	.00010	.00218	.00234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00029**	**.00055**	**.89596**
Stddev	.00004	.00005	.20185
%RSD	12.248	9.5035	22.529
#1	.00027	.00050	1.1266
#2	.00027	.00055	.75128
#3	.00033	.00060	.81003
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305145102 Acquired: 6/4/2013 17:07:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**51523.**	**66179.**
Stddev	4707.	11182.
%RSD	9.1352	16.897
#1	56944.	54113.
#2	49152.	68229.
#3	48473.	76194.

Approved: June 05, 2013

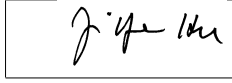
Sample Name: L1305145103 Acquired: 6/4/2013 17:11:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**-.03075**	**.00233**	**-.00194**	**-.00068**	**-.00004**	**.02220**
Stddev	.00012	.00320	.00076	.00043	.00028	.00001	.00399
%RSD	33.268	10.411	32.505	22.075	41.205	27.782	17.991
#1	.00048	-.02983	.00316	-.00229	-.00037	-.00003	.02042
#2	.00024	-.02811	.00217	-.00146	-.00076	-.00003	.01942
#3	.00036	-.03431	.00167	-.00207	-.00091	-.00005	.02678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**.00011**	**-.00163**	**.00000**	**-.00222**	**.00655**	**-.01695**
Stddev	.00004	.00009	.00026	.00009	.00112	.00299	.04110
%RSD	28.927	79.490	15.827	9879.5	50.418	45.642	242.42
#1	-.00011	.00003	-.00135	.00007	-.00330	.00374	-.06367
#2	-.00012	.00020	-.00168	.00004	-.00230	.00969	-.00084
#3	-.00019	.00010	-.00187	-.00010	-.00107	.00623	.01364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.5593**	**3.0396**	**.04724**	**-.00541**	**.03513**	**.00035**	**-.00008**
Stddev	2.5984	.7013	.02989	.00095	.01760	.00013	.00002
%RSD	73.004	23.073	63.263	17.555	50.085	35.819	31.542
#1	2.0313	2.7185	.08076	-.00642	.05501	.00048	-.00010
#2	6.5596	2.5562	.02337	-.00529	.02883	.00033	-.00005
#3	2.0871	3.8439	.03760	-.00453	.02155	.00024	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305145103 Acquired: 6/4/2013 17:11:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03427**	**.00163**	**19.104**	**.00463**	F **-82.678**	F **48.316**	F **-2433.0**
Stddev	.01652	.00015	9.674	.00043	71.029	20.355	1039.4
%RSD	48.197	8.9205	50.638	9.3714	85.910	42.128	42.721
#1	-.04976	.00165	7.9454	.00501	-159.98	25.571	-1271.0
#2	-.03616	.00147	25.127	.00416	-67.767	64.819	-3274.2
#3	-.01689	.00176	24.240	.00473	-20.288	54.559	-2753.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.00461**	**.18971**	**.00396**	**.00009**	**.00267**	**.00323**
Stddev	.00083	.00047	.08850	.00267	.00016	.00066	.00022
%RSD	170.90	10.142	46.652	67.342	179.59	24.701	6.8824
#1	-.00144	.00490	.09088	.00100	.00028	.00243	.00318
#2	-.00011	.00486	.26164	.00618	-.00001	.00341	.00347
#3	.00009	.00407	.21660	.00471	.00000	.00216	.00303
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00020**	**.00049**	**1.1553**
Stddev	.00008	.00005	.1642
%RSD	41.375	10.231	14.211
#1	.00012	.00044	1.3446
#2	.00019	.00054	1.0518
#3	.00028	.00049	1.0694
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305145103 Acquired: 6/4/2013 17:11:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**52472.**	**66814.**
Stddev	4509.	10692.
%RSD	8.5927	16.002
#1	57596.	55077.
#2	49111.	69367.
#3	50708.	75997.

Approved: June 05, 2013

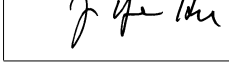
Sample Name: CCV Acquired: 6/4/2013 17:14:59 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43975**	**9.7435**	F **.47893**	**.49680**	**.98579**	**.04989**	**9.8596**
Stddev	.00051	.1825	.00005	.00140	.01346	.00008	.1704
%RSD	.11692	1.8726	.01090	.28109	1.3654	.15230	1.7280
#1	.44024	9.5477	.47888	.49522	.97028	.04981	9.6949
#2	.43979	9.7743	.47892	.49786	.99270	.04995	9.8487
#3	.43922	9.9086	.47899	.49731	.99440	.04991	10.035
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05832**	**.20075**	**.49966**	**.50639**	**3.9458**	**1.0053**	F **.80903**
Stddev	.00018	.00057	.00068	.00132	.0489	.0065	.12428
%RSD	.30806	.28419	.13647	.26061	1.2394	.64135	15.362
#1	.05815	.20057	.49896	.50584	3.8895	1.0036	.67012
#2	.05831	.20029	.50032	.50542	3.9701	.99987	.90969
#3	.05851	.20138	.49970	.50789	3.9777	1.0124	.84729
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-8.2968**	F **2.7511**	**49.062**	**1.0394**	**9.7227**	**.48781**	**.99280**
Stddev	9.5466	1.5603	.744	.0134	.1992	.00465	.00277
%RSD	115.06	56.716	1.5156	1.2928	2.0485	.95382	.27893
#1	-3.4276	2.7076	48.215	1.0255	9.4949	.48275	.99296
#2	-19.296	1.2129	49.360	1.0404	9.8095	.48876	.98996
#3	-2.1665	4.3326	49.610	1.0524	9.8638	.49191	.99549
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



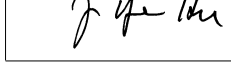
Sample Name: CCV Acquired: 6/4/2013 17:14:59 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.663**	**.50526**	F **6.9676**	**.50723**	F **-214.61**	F **12.374**	F **-96.046**
Stddev	.843	.00231	11.262	.00049	21.45	.081	6.539
%RSD	1.6975	.45634	161.64	.09674	9.9960	.65807	6.8078
#1	48.727	.50565	4.8134	.50776	-239.27	12.456	-101.31
#2	49.899	.50279	-3.0621	.50714	-204.29	12.373	-98.100
#3	50.363	.50735	19.151	.50679	-200.26	12.293	-88.727
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			-10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2075**	**.40928**	**5.0274**	**.95053**	**.97699**	**.97948**	**.51205**
Stddev	.0058	.00094	.0280	.00342	.01712	.01763	.00305
%RSD	.48055	.22867	.55758	.35970	1.7527	1.7997	.59548
#1	1.2090	.41030	5.0204	.94939	.95751	.95981	.51088
#2	1.2011	.40846	5.0035	.94782	.98375	.98481	.50976
#3	1.2125	.40907	5.0582	.95437	.98969	.99383	.51551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.97962**	**1.0129**	**.93859**
Stddev	.00198	.0033	.07976
%RSD	.20177	.32858	8.4978
#1	.98102	1.0120	.86511
#2	.98048	1.0101	.92725
#3	.97736	1.0165	1.0234
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 17:14:59 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21790.**	**29322.**
Stddev	32.	279.
%RSD	.14852	.95068
#1	21793.	29628.
#2	21821.	29256.
#3	21756.	29082.

Approved: June 05, 2013

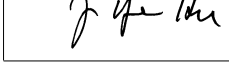
Sample Name: CCB Acquired: 6/4/2013 17:18:14 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**-.00059**	**.00168**	**.00178**	**.00075**	**-.00025**	**-.00755**
Stddev	.00030	.01381	.00174	.00042	.00030	.00003	.02173
%RSD	75.247	2323.3	103.79	23.634	39.856	12.227	287.68
#1	-.00047	.01519	.00018	.00194	.00109	-.00021	.00754
#2	-.00065	-.01049	.00126	.00210	.00061	-.00026	-.03245
#3	-.00007	-.00649	.00359	.00130	.00055	-.00027	.00226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**-.00002**	**-.00204**	**.00014**	**.00018**	**-.00159**	F **-.12366**
Stddev	.00007	.00008	.00027	.00044	.00385	.00264	.39388
%RSD	52.538	396.17	13.381	314.73	2157.2	166.65	318.53
#1	-.00021	-.00010	-.00224	.00012	.00134	-.00115	-.05136
#2	-.00011	.00005	-.00173	-.00029	-.00412	-.00442	-.54868
#3	-.00007	-.00001	-.00216	.00059	.00332	.00081	.22907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.09100**	F **3.1260**	**.03984**	**-.00280**	**.02897**	**.00025**	**.00107**
Stddev	3.6871	.7551	.00885	.00102	.00537	.00007	.00019
%RSD	4051.6	24.155	22.224	36.618	18.528	28.650	18.008
#1	2.4486	2.5748	.04791	-.00238	.02278	.00029	.00086
#2	-4.3201	3.9867	.04124	-.00205	.03174	.00029	.00123
#3	1.5985	2.8166	.03037	-.00397	.03238	.00017	.00112
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.10000					
Low Limit		-.10000					

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 17:18:14 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03903**	**.00019**	F **1.4514**	**.00105**	F **-200.03**	F **1.2255**	F **-61.320**
Stddev	.00954	.00039	16.934	.00071	7.98	.0674	3.963
%RSD	24.447	206.53	1166.8	67.889	3.9912	5.4999	6.4626
#1	-.03611	-.00013	-17.222	.00025	-208.94	1.2529	-65.160
#2	-.04969	.00008	5.7637	.00129	-197.61	1.2748	-61.554
#3	-.03128	.00063	15.812	.00161	-193.53	1.1487	-57.245
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.00402**	**.00277**	**-.00005**	**.00031**	**.00096**	**.00040**
Stddev	.00091	.00164	.00245	.00005	.00022	.00092	.00131
%RSD	158.58	40.817	88.400	101.33	68.914	95.833	324.84
#1	.00030	.00462	.00087	-.00010	.00056	.00135	-.00063
#2	-.00050	.00217	.00553	-.00001	.00019	.00162	.00188
#3	-.00151	.00528	.00191	-.00003	.00018	-.00009	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

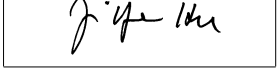
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00052**	**.00024**	F **.26137**
Stddev	.00017	.00013	.05172
%RSD	32.174	51.903	19.789
#1	.00043	.00010	.22091
#2	.00042	.00028	.31965
#3	.00071	.00035	.24356
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 17:18:14 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21904.**	**28753.**
Stddev	25.	118.
%RSD	.11441	.40907
#1	21931.	28639.
#2	21883.	28745.
#3	21898.	28874.

Approved: June 05, 2013



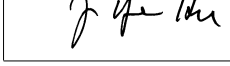
Sample Name: PBW R5 Acquired: 6/4/2013 17:21:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00074**	**.03139**	**.00012**	**-.00112**	**.00066**	**-.00024**	**.03010**
Stddev	.00057	.00980	.00115	.00114	.00011	.00001	.00499
%RSD	76.749	31.209	938.53	102.01	17.294	4.3027	16.566
#1	-.00087	.03866	.00144	-.00122	.00062	-.00024	.02468
#2	-.00012	.03527	-.00068	.00007	.00056	-.00022	.03112
#3	-.00122	.02025	-.00039	-.00220	.00078	-.00024	.03449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00006**	**-.00210**	**.00010**	**.02697**	**.00074**	**.24407**
Stddev	.0001	.00003	.00031	.00045	.00259	.00235	.29647
%RSD	1453.2	46.749	14.846	466.70	9.6050	315.86	121.47
#1	-.00007	.00004	-.00195	.00018	.02489	-.00181	.51929
#2	-.00002	.00006	-.00246	.00050	.02987	.00124	.28276
#3	.00007	.00010	-.00190	-.00039	.02614	.00280	-.06984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.6371**	**2.7694**	**.04069**	**-.00458**	**.06362**	**.00348**	**-.00014**
Stddev	5.1184	.8006	.05220	.00100	.01663	.00004	.00018
%RSD	312.65	28.909	128.30	21.856	26.142	1.2759	128.12
#1	1.4227	2.2717	-.01079	-.00343	.07412	.00348	-.00030
#2	-7.5460	2.3436	.09359	-.00512	.07228	.00344	-.00017
#3	1.2120	3.6930	.03926	-.00519	.04444	.00353	.00005
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



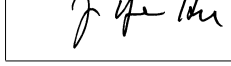
Sample Name: PBW R5 Acquired: 6/4/2013 17:21:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-03

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03346**	**.00034**	**2.8969**	**.00104**	F **-225.09**	**3.3451**	F **-170.36**
Stddev	.01325	.00060	4.1707	.00051	26.17	.0580	3.35
%RSD	39.599	174.30	143.97	48.877	11.625	1.7339	1.9654
#1	-.03821	.00079	5.2361	.00046	-214.32	3.4078	-173.34
#2	-.01849	.00058	5.3729	.00127	-254.92	3.3341	-171.00
#3	-.04369	-.00034	-1.9184	.00139	-206.03	3.2934	-166.73
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00281**	**.03514**	**-.00163**	**.00050**	**.00107**	**.00009**
Stddev	.00038	.00261	.00200	.00021	.00004	.00029	.00074
%RSD	98.966	92.768	5.6873	13.046	7.2803	26.657	790.58
#1	.00005	.00343	.03710	-.00138	.00053	.00089	.00004
#2	-.00065	-.00005	.03520	-.00177	.00046	.00140	.00086
#3	-.00056	.00506	.03311	-.00174	.00050	.00093	-.00062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00032**	**.00325**	**.26104**
Stddev	.00015	.00009	.12282
%RSD	45.894	2.6444	47.050
#1	.00026	.00334	.15534
#2	.00049	.00317	.23201
#3	.00021	.00323	.39578
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: PBW R5 Acquired: 6/4/2013 17:21:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-03

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22151.**	**29106.**
Stddev	31.	78.
%RSD	.14039	.26921
#1	22169.	29175.
#2	22115.	29122.
#3	22169.	29021.

Approved: June 05, 2013

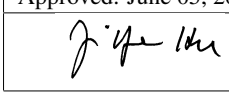
Sample Name: LCSW R5 Acquired: 6/4/2013 17:25:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19134**	**4.8942**	**.23950**	**.98522**	**.49974**	**.02529**	**4.9255**
Stddev	.00109	.0566	.00083	.00356	.00340	.00020	.0715
%RSD	.57148	1.1575	.34646	.36132	.67958	.77440	1.4523
#1	.19243	4.8689	.24009	.98864	.49798	.02551	4.8765
#2	.19133	4.8546	.23855	.98548	.49759	.02520	4.8924
#3	.19024	4.9591	.23986	.98154	.50366	.02515	5.0076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02916**	**.10187**	**.25155**	**.25735**	**1.9162**	**.50746**	**.58985**
Stddev	.00002	.00043	.00145	.00132	.0103	.00196	.28708
%RSD	.07908	.42456	.57555	.51356	.53701	.38712	48.671
#1	.02918	.10236	.25282	.25884	1.9078	.50809	.28724
#2	.02915	.10158	.25186	.25687	1.9133	.50903	.62394
#3	.02914	.10166	.24998	.25633	1.9277	.50525	.85837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8113**	**3.0022**	**24.627**	**.52290**	**4.8739**	**.24907**	**.50505**
Stddev	7.0440	.8471	.189	.00539	.0453	.00125	.00191
%RSD	388.90	28.216	.76629	1.0317	.92930	.50244	.37840
#1	-1.8933	2.0957	24.567	.52095	4.8340	.24928	.50724
#2	-2.6074	3.1371	24.475	.51875	4.8647	.24773	.50425
#3	9.9345	3.7737	24.838	.52899	4.9231	.25021	.50368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: LCSW R5 Acquired: 6/4/2013 17:25:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.986**	**.25451**	**10.310**	**.25426**	F **-221.27**	**5.9666**	F **-37.075**
Stddev	.214	.00111	11.810	.00208	33.41	.0835	3.056
%RSD	.85672	.43499	114.55	.81680	15.099	1.4003	8.2424
#1	24.888	.25477	14.201	.25204	-240.53	5.9919	-40.450
#2	24.838	.25545	19.684	.25460	-240.59	5.8734	-36.278
#3	25.231	.25329	-2.9548	.25615	-182.69	6.0347	-34.496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60068**	**.19990**	**2.4911**	**.51910**	**.49037**	**.49262**	**.25666**
Stddev	.00201	.00213	.0043	.00188	.00423	.00749	.00018
%RSD	.33462	1.0663	.17472	.36306	.86229	1.5206	.07009
#1	.60300	.20007	2.4860	.52128	.48846	.48772	.25648
#2	.59954	.20193	2.4937	.51808	.48743	.48890	.25665
#3	.59949	.19768	2.4934	.51796	.49522	.50124	.25684
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

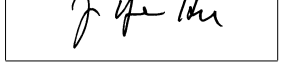
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49382**	**.50679**	**2.5222**
Stddev	.00302	.00261	.1261
%RSD	.61090	.51464	5.0008
#1	.49725	.50972	2.3767
#2	.49264	.50593	2.5891
#3	.49158	.50472	2.6008
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: LCSW R5 Acquired: 6/4/2013 17:25:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21921.**	**29200.**
Stddev	93.	114.
%RSD	.42594	.39066
#1	21817.	29157.
#2	21948.	29329.
#3	21997.	29113.

Approved: June 05, 2013



Sample Name: L1305143201 Acquired: 6/4/2013 17:28:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00067**	**1.4398**	**.00165**	**.01342**	**.05218**	**-.00013**	**22.638**
Stddev	.00032	.0097	.00047	.00053	.00025	.00001	.141
%RSD	47.722	.67132	28.465	3.9510	.48200	3.8830	.62238
#1	-.00091	1.4309	.00218	.01361	.05191	-.00013	22.475
#2	-.00031	1.4384	.00128	.01383	.05221	-.00012	22.714
#3	-.00078	1.4501	.00149	.01282	.05241	-.00013	22.724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.00101**	**-.00027**	**.00310**	**1.6564**	**.30138**	**1.2015**
Stddev	.00007	.00011	.00014	.00017	.0102	.00216	.2320
%RSD	37.179	10.371	52.971	5.4892	.61359	.71645	19.311
#1	.00019	.00105	-.00024	.00313	1.6458	.29930	1.0026
#2	.00013	.00090	-.00043	.00326	1.6661	.30361	1.1454
#3	.00027	.00110	-.00015	.00292	1.6573	.30124	1.4564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.1479**	**3.4465**	**2.7518**	**.00303**	**10.425**	**.05937**	**.00038**
Stddev	6.0072	1.3246	.0241	.00178	.054	.00037	.00007
%RSD	279.68	38.432	.87642	58.798	.51916	.63070	18.715
#1	4.5913	2.3410	2.7275	.00280	10.384	.05979	.00030
#2	-4.0946	3.0839	2.7757	.00138	10.404	.05907	.00042
#3	-6.9403	4.9146	2.7521	.00492	10.486	.05925	.00043
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

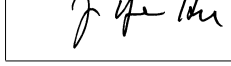
Sample Name: L1305143201 Acquired: 6/4/2013 17:28:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.6166**	**.00245**	**165.01**	**.00230**	F **-206.29**	F **463.25**	F **-23345.**
Stddev	.0483	.00012	18.91	.00098	17.77	2.16	97.
%RSD	.63403	5.0158	11.457	42.449	8.6125	.46649	.41763
#1	7.5810	.00235	143.71	.00129	-225.99	461.02	-23244.
#2	7.6716	.00259	179.78	.00238	-191.47	463.39	-23438.
#3	7.5973	.00243	171.55	.00323	-201.43	465.33	-23353.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.00224**	**4.6171**	**.04167**	**.28730**	**.04230**	**.00108**
Stddev	.00053	.00048	.0249	.00023	.00147	.00391	.00120
%RSD	244.51	21.587	.53845	.54926	.51010	9.2467	110.31
#1	-.00082	.00170	4.5888	.04184	.28592	.04197	-.00023
#2	.00006	.00240	4.6267	.04141	.28884	.03857	.00211
#3	.00012	.00263	4.6357	.04176	.28713	.04637	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00244**	**.01247**	**2.5062**
Stddev	.00010	.00014	.4030
%RSD	4.2511	1.1306	16.081
#1	.00252	.01232	2.4779
#2	.00247	.01251	2.9225
#3	.00232	.01259	2.1180
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143201 Acquired: 6/4/2013 17:28:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22042.**	**29362.**
Stddev	49.	55.
%RSD	.22428	.18766
#1	22099.	29300.
#2	22015.	29406.
#3	22012.	29381.

Approved: June 05, 2013

Sample Name: L1305143201DP Acquired: 6/4/2013 17:32:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**2.3788**	**.00052**	**.01256**	**.05769**	**-.00005**	**22.889**
Stddev	.00051	.0193	.00135	.00006	.00020	.00002	.009
%RSD	98.423	.81285	258.89	.45672	.34742	39.550	.04103
#1	-.00077	2.4011	-.00102	.01251	.05765	-.00005	22.881
#2	-.00084	2.3680	.00151	.01255	.05751	-.00007	22.899
#3	.00007	2.3672	.00108	.01263	.05791	-.00003	22.886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00101**	**.00073**	**.00339**	**1.9641**	**.31061**	**1.0636**
Stddev	.00009	.00012	.00015	.00019	.0051	.00126	.1613
%RSD	36.818	11.766	20.669	5.6802	.26152	.40584	15.160
#1	.00032	.00104	.00061	.00328	1.9685	.31095	1.0252
#2	.00025	.00111	.00090	.00362	1.9585	.30922	.92506
#3	.00014	.00088	.00067	.00329	1.9654	.31168	1.2406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.2383**	**2.9920**	**3.0606**	**.00481**	**10.746**	**.06155**	**-.00009**
Stddev	8.7528	.3370	.0151	.00053	.052	.00049	.00017
%RSD	270.29	11.263	.49468	10.942	.48228	.78947	187.12
#1	-9.5704	2.6037	3.0443	.00472	10.725	.06102	.00007
#2	6.7498	3.1647	3.0631	.00433	10.708	.06167	-.00027
#3	-6.8943	3.2076	3.0742	.00537	10.805	.06197	-.00008
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: L1305143201DP Acquired: 6/4/2013 17:32:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.7945**	**.00367**	**191.49**	**.00116**	F **-186.58**	F **486.01**	F **-24123.**
Stddev	.0321	.00025	16.07	.00093	36.55	2.31	94.
%RSD	.41188	6.6716	8.3909	80.598	19.591	.47549	.39014
#1	7.8287	.00382	209.99	.00068	-178.94	484.25	-24076.
#2	7.7650	.00339	181.04	.00056	-154.45	488.63	-24062.
#3	7.7898	.00381	183.44	.00223	-226.35	485.16	-24232.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.00106**	**6.4190**	**-.00169**	**.29504**	**.05955**	**.00049**
Stddev	.00236	.00142	.0318	.00036	.00087	.00569	.00102
%RSD	450.09	133.37	.49470	21.056	.29610	9.5483	206.22
#1	.00154	-.00010	6.4232	-.00128	.29595	.05929	.00127
#2	-.00309	.00065	6.4484	-.00189	.29421	.05399	-.00066
#3	-.00001	.00264	6.3853	-.00190	.29495	.06536	.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00414**	**.01094**	**4.4771**
Stddev	.00040	.00007	1.1105
%RSD	9.5940	.64381	24.804
#1	.00447	.01086	3.7270
#2	.00425	.01100	5.7528
#3	.00370	.01096	3.9516
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305143201DP Acquired: 6/4/2013 17:32:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22006.**	**29719.**
Stddev	88.	76.
%RSD	.39845	.25604
#1	22059.	29749.
#2	22054.	29775.
#3	21905.	29632.

Approved: June 05, 2013

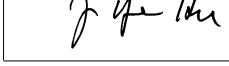
Sample Name: L1305143201S Acquired: 6/4/2013 17:35:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19074**	**6.0999**	**.23871**	**.99678**	**.54999**	**.02549**	**27.635**
Stddev	.00038	.0719	.00040	.00102	.00700	.00001	.262
%RSD	.19787	1.1782	.16945	.10282	1.2727	.03855	.94635
#1	.19070	6.1515	.23918	.99680	.55418	.02550	27.772
#2	.19114	6.1302	.23843	.99574	.55389	.02549	27.800
#3	.19039	6.0178	.23853	.99779	.54191	.02548	27.333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02920**	**.10159**	**.25260**	**.25467**	**3.6778**	**.80173**	**1.5115**
Stddev	.00027	.00036	.00064	.00104	.0288	.00206	.1174
%RSD	.91059	.35388	.25432	.40724	.78299	.25709	7.7643
#1	.02927	.10200	.25331	.25581	3.6836	.80068	1.3975
#2	.02943	.10145	.25205	.25440	3.7033	.80040	1.6320
#3	.02891	.10132	.25245	.25379	3.6465	.80410	1.5050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25425**	**2.7833**	**27.213**	**.53549**	**15.353**	**.30706**	**.50179**
Stddev	8.8015	1.0447	.235	.00699	.147	.00178	.00126
%RSD	3461.8	37.535	.86283	1.3056	.95492	.57963	.25059
#1	1.1406	3.6340	27.381	.54123	15.306	.30712	.50324
#2	8.5790	1.6173	27.313	.53752	15.518	.30882	.50115
#3	-8.9569	3.0985	26.944	.52770	15.236	.30526	.50099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305143201S Acquired: 6/4/2013 17:35:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-06

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.161**	**.25324**	**196.07**	**.25164**	F **-245.96**	F **477.74**	F **-23736.**
Stddev	.367	.00053	16.48	.00127	51.37	1.89	19.
%RSD	1.1066	.20914	8.4038	.50662	20.885	.39559	.07801
#1	33.462	.25284	212.59	.25029	-190.41	475.76	-23755.
#2	33.269	.25303	195.99	.25282	-291.74	477.96	-23737.
#3	32.752	.25384	179.63	.25183	-255.73	479.52	-23718.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59702**	**.19750**	**6.7585**	**.51651**	**.78802**	**.52364**	**.25302**
Stddev	.00328	.00037	.0333	.00107	.00898	.00696	.00148
%RSD	.54950	.18777	.49293	.20636	1.1399	1.3294	.58680
#1	.60050	.19779	6.7313	.51532	.79555	.52588	.25469
#2	.59657	.19708	6.7485	.51737	.79042	.52921	.25185
#3	.59399	.19764	6.7956	.51684	.77808	.51584	.25252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49641**	**.50456**	**4.3127**
Stddev	.00087	.00055	.4077
%RSD	.17613	.10910	9.4534
#1	.49605	.50393	4.0316
#2	.49741	.50476	4.7803
#3	.49578	.50498	4.1262
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305143201S Acquired: 6/4/2013 17:35:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-06

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21768.**	**28915.**
Stddev	26.	203.
%RSD	.11840	.70345
#1	21765.	28884.
#2	21743.	28729.
#3	21795.	29132.

Approved: June 05, 2013

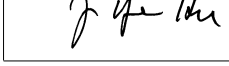
Sample Name: L1305143202 Acquired: 6/4/2013 17:38:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.01272**	**.00073**	**.01385**	**.03950**	**-.00026**	**22.940**
Stddev	.00024	.01383	.00183	.00045	.00071	.00001	.056
%RSD	92.158	108.69	252.52	3.2549	1.7964	3.9391	.24569
#1	-.00050	-.00170	.00226	.01367	.03868	-.00026	22.908
#2	-.00027	.02586	.00121	.01352	.03994	-.00027	23.005
#3	-.00002	.01400	-.00130	.01436	.03987	-.00026	22.906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.00003**	**-.00182**	**.00050**	**.02301**	**.30351**	**1.2902**
Stddev	.00011	.00016	.00052	.00020	.00034	.00234	.0790
%RSD	58.805	508.65	28.520	39.613	1.4750	.77111	6.1235
#1	.00008	-.00005	-.00156	.00072	.02296	.30384	1.2183
#2	.00030	.00022	-.00147	.00043	.02269	.30567	1.2776
#3	.00019	-.00007	-.00241	.00035	.02337	.30103	1.3748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49803**	**1.6296**	**2.8497**	**.00387**	**10.632**	**.01280**	**.00029**
Stddev	3.7329	1.1260	.0558	.00225	.152	.00021	.00016
%RSD	749.54	69.095	1.9581	58.168	1.4313	1.6468	54.444
#1	-1.0251	.61597	2.7854	.00360	10.458	.01256	.00012
#2	4.7517	1.4313	2.8788	.00624	10.740	.01288	.00033
#3	-2.2325	2.8416	2.8850	.00176	10.698	.01295	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



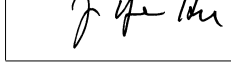
Sample Name: L1305143202 Acquired: 6/4/2013 17:38:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.0151**	**.00092**	F **1261.0**	**.00021**	F **-229.14**	F **484.46**	F **-24170.**
Stddev	.0536	.00059	7.5	.00090	21.65	1.21	47.
%RSD	.66851	64.265	.59447	437.95	9.4476	.25004	.19352
#1	7.9714	.00109	1269.7	.00124	-209.02	483.09	-24116.
#2	8.0749	.00141	1257.5	-.00021	-252.05	484.92	-24197.
#3	7.9990	.00026	1256.0	-.00042	-226.35	485.38	-24196.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00097**	**.00087**	**2.7380**	**-.00158**	**.29870**	**.00134**	**.00017**
Stddev	.00057	.00256	.0049	.00012	.00267	.00104	.00058
%RSD	58.431	292.22	.17842	7.3739	.89278	77.252	340.59
#1	-.00049	-.00103	2.7404	-.00153	.29588	.00051	.00042
#2	-.00160	.00378	2.7324	-.00171	.30117	.00102	.00058
#3	-.00083	-.00013	2.7413	-.00149	.29906	.00250	-.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00037**	**.00368**	**.07951**
Stddev	.00006	.00005	.07964
%RSD	16.293	1.3873	100.17
#1	.00037	.00374	.01171
#2	.00043	.00365	.16721
#3	.00031	.00365	.05960
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143202 Acquired: 6/4/2013 17:38:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21902.**	**29016.**
Stddev	64.	250.
%RSD	.29255	.86056
#1	21974.	29276.
#2	21882.	28778.
#3	21850.	28994.

Approved: June 05, 2013

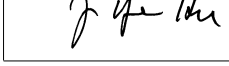
Sample Name: L1305143203 Acquired: 6/4/2013 17:42:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.10467**	**.00140**	**.01067**	**.04361**	**-.00022**	**27.943**
Stddev	.00021	.01502	.00121	.00019	.00025	.00001	.111
%RSD	35.874	14.353	86.326	1.7429	.57612	6.4278	.39685
#1	-.00037	.10459	.00146	.01047	.04383	-.00022	28.002
#2	-.00064	.08968	.00257	.01084	.04334	-.00024	28.012
#3	-.00079	.11973	.00016	.01070	.04368	-.00021	27.815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**.00008**	**-.00129**	**.00063**	**.12222**	**.41976**	**1.6981**
Stddev	.00004	.00004	.00013	.00019	.00275	.00248	.2918
%RSD	9.7245	48.916	10.334	30.298	2.2518	.59132	17.181
#1	.00035	.00004	-.00134	.00058	.12372	.41833	1.4022
#2	.00043	.00010	-.00140	.00084	.12390	.41833	1.9855
#3	.00039	.00011	-.00114	.00047	.11905	.42263	1.7067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.4253**	**3.8418**	**2.3014**	**.00647**	**15.318**	**.01207**	**-.00017**
Stddev	11.975	.2924	.0312	.00136	.082	.00006	.00006
%RSD	493.73	7.6123	1.3536	21.039	.53646	.49803	33.363
#1	11.355	4.1044	2.3039	.00555	15.409	.01214	-.00017
#2	-10.298	3.8942	2.2691	.00582	15.295	.01204	-.00023
#3	-8.3335	3.5266	2.3312	.00803	15.250	.01204	-.00012
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



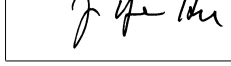
Sample Name: L1305143203 Acquired: 6/4/2013 17:42:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5492**	**.00075**	**37.774**	**.00119**	F **-213.20**	F **678.49**	F **-34398.**
Stddev	.0381	.00040	11.613	.00107	11.52	4.03	173.
%RSD	.83753	52.913	30.744	89.741	5.4048	.59411	.50316
#1	4.5925	.00071	35.349	.00051	-203.08	682.22	-34561.
#2	4.5339	.00116	50.408	.00241	-225.74	679.03	-34416.
#3	4.5211	.00037	27.564	.00063	-210.79	674.22	-34216.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00147**	**.00297**	**2.5976**	**-.00170**	**.41557**	**.00282**	**.00010**
Stddev	.00137	.00215	.0178	.00016	.00295	.00037	.00063
%RSD	92.869	72.426	.68669	9.4580	.71107	13.116	658.21
#1	-.00041	.00316	2.6055	-.00170	.41882	.00259	-.00033
#2	-.00301	.00073	2.6101	-.00154	.41484	.00263	.00082
#3	-.00099	.00503	2.5772	-.00186	.41304	.00325	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00035**	**.00330**	**.07870**
Stddev	.00034	.00004	.05598
%RSD	95.865	1.1289	71.132
#1	-.00004	.00327	.06630
#2	.00056	.00329	.13984
#3	.00054	.00335	.02996
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

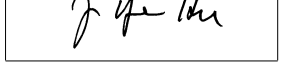
Approved: June 05, 2013



Sample Name: L1305143203 Acquired: 6/4/2013 17:42:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21751.**	**28845.**
Stddev	54.	192.
%RSD	.24626	.66525
#1	21730.	28653.
#2	21712.	28845.
#3	21812.	29037.

Approved: June 05, 2013



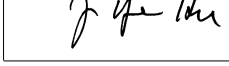
Sample Name: L1305143204 Acquired: 6/4/2013 17:45:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00064**	**.01752**	**.00179**	**.01066**	**.04377**	**-.00025**	**28.542**
Stddev	.00027	.01013	.00033	.00063	.00015	.00001	.080
%RSD	42.584	57.836	18.185	5.9439	.34847	5.2555	.28134
#1	-.00049	.00811	.00145	.01029	.04382	-.00026	28.618
#2	-.00095	.01620	.00183	.01029	.04360	-.00026	28.458
#3	-.00047	.02825	.00209	.01139	.04390	-.00024	28.550
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**-.00001**	**-.00152**	**.00064**	**.00920**	**.43086**	**1.9473**
Stddev	.00007	.00020	.00027	.00010	.00200	.00335	.2171
%RSD	25.482	1416.7	17.850	14.749	21.748	.77699	11.150
#1	.00035	-.00023	-.00158	.00059	.01133	.42718	2.1698
#2	.00021	.00002	-.00175	.00059	.00736	.43170	1.9360
#3	.00027	.00017	-.00122	.00075	.00891	.43371	1.7360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.7086**	**3.2556**	**2.3383**	**.00692**	**15.797**	**.00626**	**-.00015**
Stddev	9.7983	1.1384	.0363	.00114	.101	.00010	.00016
%RSD	171.64	34.968	1.5526	16.522	.63707	1.5509	106.82
#1	1.1085	4.3821	2.3626	.00646	15.792	.00636	-.00008
#2	-16.937	2.1057	2.2966	.00607	15.699	.00626	-.00033
#3	-1.2973	3.2789	2.3558	.00822	15.900	.00616	-.00003
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



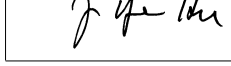
Sample Name: L1305143204 Acquired: 6/4/2013 17:45:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.6956**	**.00067**	**38.318**	**.00081**	F **-220.59**	F **709.63**	F **-35816.**
Stddev	.0147	.00048	4.100	.00150	10.80	5.03	210.
%RSD	.31239	72.194	10.700	185.98	4.8946	.70889	.58678
#1	4.7012	.00121	39.637	.00158	-228.71	703.99	-35677.
#2	4.6789	.00049	33.721	.00176	-224.72	711.23	-35713.
#3	4.7066	.00029	41.595	-.00092	-208.34	713.66	-36058.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00032**	**.00133**	**2.5750**	**-.00150**	**.42302**	**.00066**	**-.00101**
Stddev	.00179	.00040	.0174	.00013	.00143	.00031	.00144
%RSD	562.73	30.159	.67699	8.7876	.33784	47.427	142.04
#1	.00139	.00179	2.5563	-.00136	.42321	.00033	.00059
#2	-.00017	.00104	2.5778	-.00162	.42150	.00071	-.00220
#3	-.00217	.00117	2.5909	-.00153	.42434	.00095	-.00144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00021**	**.00331**	**.08449**
Stddev	.00018	.00005	.43284
%RSD	85.996	1.4235	512.30
#1	.00037	.00335	-.32197
#2	.00002	.00326	.53960
#3	.00024	.00332	.03584
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143204 Acquired: 6/4/2013 17:45:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21829.**	**29235.**
Stddev	56.	171.
%RSD	.25752	.58623
#1	21888.	29052.
#2	21822.	29260.
#3	21776.	29392.

Approved: June 05, 2013

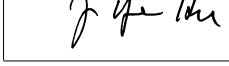
Sample Name: L1305143204PS Acquired: 6/4/2013 17:49:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432827-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19516**	**4.9711**	**.24769**	**1.0239**	**.53600**	**.02580**	**31.033**
Stddev	.00114	.0192	.00243	.0049	.00485	.00007	.216
%RSD	.58206	.38710	.97928	.47739	.90408	.27347	.69720
#1	.19433	4.9853	.24986	1.0207	.54121	.02575	31.280
#2	.19469	4.9492	.24507	1.0214	.53516	.02577	30.947
#3	.19645	4.9788	.24815	1.0295	.53163	.02588	30.873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03005**	**.10181**	**.25619**	**.25704**	**2.0022**	**.89728**	**1.9893**
Stddev	.00012	.00026	.00103	.00149	.0156	.00489	.2432
%RSD	.39708	.25328	.40149	.57830	.78084	.54450	12.225
#1	.02995	.10158	.25502	.25603	2.0201	.89367	1.9889
#2	.03002	.10177	.25661	.25635	1.9915	.89534	1.7463
#3	.03018	.10209	.25694	.25875	1.9949	.90284	2.2327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-14.565**	**3.6310**	**27.517**	**.53643**	**19.352**	**.25453**	**.50983**
Stddev	7.660	.9649	.203	.00523	.047	.00120	.00180
%RSD	52.595	26.575	.73833	.97463	.24327	.47144	.35208
#1	-19.057	4.6998	27.748	.54197	19.406	.25587	.50846
#2	-18.919	3.3690	27.436	.53574	19.319	.25357	.50918
#3	-5.7199	2.8241	27.367	.53158	19.332	.25415	.51186
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



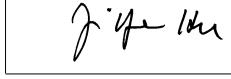
Sample Name: L1305143204PS Acquired: 6/4/2013 17:49:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432827-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.300**	**.25676**	**30.480**	**.25648**	F **-198.40**	F **654.19**	F **-32620.**
Stddev	.238	.00098	8.257	.00226	33.02	5.19	82.
%RSD	.78641	.38127	27.091	.88121	16.645	.79364	.25243
#1	30.574	.25728	25.752	.25726	-236.32	660.14	-32672.
#2	30.137	.25563	40.014	.25393	-176.00	651.82	-32525.
#3	30.191	.25737	25.673	.25825	-182.88	650.60	-32663.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.61209**	**.20237**	**4.9241**	**-.00180**	**.89395**	**.50603**	**.25923**
Stddev	.00114	.00090	.0329	.00020	.00817	.00101	.00053
%RSD	.18608	.44510	.66884	11.010	.91420	.19985	.20545
#1	.61081	.20205	4.9617	-.00192	.90338	.50705	.25935
#2	.61246	.20339	4.9105	-.00191	.88956	.50502	.25865
#3	.61299	.20168	4.9003	-.00157	.88891	.50602	.25969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50731**	**.51001**	**.35594**
Stddev	.00246	.00124	.07822
%RSD	.48520	.24345	21.977
#1	.50532	.50904	.31187
#2	.50655	.50957	.30971
#3	.51006	.51141	.44626
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143204PS Acquired: 6/4/2013 17:49:21 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432827-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21623.**	**29030.**
Stddev	67.	183.
%RSD	.30782	.62890
#1	21691.	28819.
#2	21621.	29140.
#3	21558.	29130.

Approved: June 05, 2013

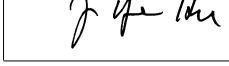
Sample Name: L1305143204SDL Acquired: 6/4/2013 17:52:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432827-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**.01716**	**-.00031**	**.00492**	**.00916**	**-.00023**	**5.7263**
Stddev	.00018	.01517	.00047	.00027	.00015	.00003	.0345
%RSD	27.275	88.438	153.66	5.4599	1.6124	11.767	.60176
#1	-.00075	.01791	-.00021	.00495	.00927	-.00026	5.7142
#2	-.00077	.00162	-.00082	.00517	.00899	-.00024	5.6995
#3	-.00045	.03194	.00011	.00463	.00920	-.00021	5.7651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00005**	**-.00189**	**.00022**	**.00217**	**.08697**	**.12835**
Stddev	.00015	.00015	.00041	.00006	.00282	.00137	.19348
%RSD	188.03	339.65	21.798	27.572	129.79	1.5717	150.74
#1	-.00004	-.00011	-.00236	.00016	.00070	.08576	-.09412
#2	.00024	.00005	-.00160	.00028	.00542	.08845	.25735
#3	.00003	.00019	-.00171	.00023	.00039	.08670	.22181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.2908**	**3.2742**	**.49317**	**-.00145**	**3.1809**	**.00128**	**.00039**
Stddev	8.5693	2.2264	.01674	.00010	.0238	.00003	.00037
%RSD	260.40	67.999	3.3939	7.0906	.74780	2.0001	95.821
#1	7.7475	4.3680	.51202	-.00134	3.1628	.00128	-.00002
#2	-6.5884	.71247	.48005	-.00154	3.1720	.00130	.00071
#3	8.7133	4.7422	.48743	-.00147	3.2078	.00125	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



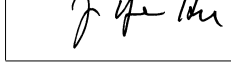
Sample Name: L1305143204SDL Acquired: 6/4/2013 17:52:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432827-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.88756**	**.00005**	**4.1914**	**.00239**	F **-199.15**	F **144.78**	F **-7225.3**
Stddev	.01070	.00011	9.7636	.00027	9.08	1.86	52.4
%RSD	1.2058	192.86	232.95	11.312	4.5592	1.2826	.72586
#1	.88968	.00015	-2.2489	.00247	-195.62	146.13	-7272.7
#2	.87595	.00007	15.425	.00262	-192.37	145.55	-7234.3
#3	.89704	-.00006	-.60225	.00209	-209.47	142.66	-7169.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00109**	**.00226**	**.51909**	**-.00065**	**.08506**	**.00157**	**.00043**
Stddev	.00034	.00186	.00762	.00019	.00005	.00049	.00114
%RSD	30.928	82.211	1.4677	29.157	.06365	31.053	267.04
#1	-.00075	.00063	.52575	-.00069	.08502	.00101	.00012
#2	-.00109	.00187	.52074	-.00045	.08504	.00185	.00169
#3	-.00143	.00428	.51078	-.00082	.08512	.00185	-.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00024**	**.00138**	**.29118**
Stddev	.00012	.00007	.21907
%RSD	48.668	5.3011	75.237
#1	.00026	.00135	.04745
#2	.00034	.00133	.47170
#3	.00011	.00147	.35438
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143204SDL Acquired: 6/4/2013 17:52:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG432827-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22028.**	**29261.**
Stddev	100.	122.
%RSD	.45260	.41715
#1	21944.	29240.
#2	22001.	29392.
#3	22138.	29150.

Approved: June 05, 2013

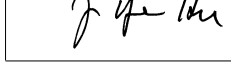
Sample Name: CCV Acquired: 6/4/2013 17:56:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44033	9.7412	F .47341	.49885	.98479	.05004	9.7711
Stddev	.00154	.0269	.00190	.00120	.00187	.00010	.0461
%RSD	.34976	.27630	.40225	.23993	.18994	.19895	.47223
#1	.44209	9.7721	.47494	.49893	.98580	.05006	9.8228
#2	.43924	9.7226	.47401	.50000	.98263	.05013	9.7342
#3	.43966	9.7290	.47128	.49761	.98594	.04994	9.7563
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000		.40000				
Range	10.000%		10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .05812	.19960	.49746	.50428	3.9544	1.0009	F .72881
Stddev	.00025	.00098	.00056	.00169	.0168	.0071	.19609
%RSD	.43658	.49145	.11289	.33611	.42539	.71146	26.906
#1	.05832	.20025	.49712	.50520	3.9510	1.0089	.91977
#2	.05820	.20008	.49811	.50532	3.9395	.99849	.52796
#3	.05783	.19847	.49714	.50233	3.9726	.99532	.73870
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -4.8759	F 1.6739	49.171	1.0369	9.7757	.49432	.98623
Stddev	8.3662	.6559	.206	.0016	.0417	.00305	.00509
%RSD	171.58	39.183	.41981	.15428	.42618	.61640	.51630
#1	-6.5203	.91915	49.305	1.0387	9.7569	.49735	.99167
#2	4.1905	2.1055	48.934	1.0359	9.8234	.49126	.98545
#3	-12.298	1.9972	49.275	1.0360	9.7467	.49435	.98158
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



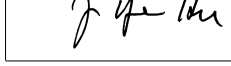
Sample Name: CCV Acquired: 6/4/2013 17:56:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.903**	**.50325**	F **18.362**	**.50659**	F **-225.09**	**10.455**	F **-1.6169**
Stddev	.150	.00254	15.076	.00180	19.51	.067	1.1485
%RSD	.30096	.50461	82.104	.35627	8.6685	.64239	71.029
#1	50.039	.50616	28.536	.50772	-224.36	10.523	-.75291
#2	49.742	.50211	25.509	.50754	-205.95	10.453	-2.9202
#3	49.927	.50149	1.0418	.50451	-244.95	10.388	-1.1777
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2054**	**.40714**	**5.0544**	**.94538**	**.97897**	**.98090**	**.51187**
Stddev	.0091	.00366	.0626	.00607	.00323	.00299	.00253
%RSD	.75596	.89847	1.2389	.64223	.32980	.30516	.49370
#1	1.2125	.40897	5.1267	.95167	.98201	.98284	.51473
#2	1.2086	.40953	5.0185	.94490	.97558	.98240	.50996
#3	1.1951	.40293	5.0179	.93956	.97931	.97745	.51090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98543**	**1.0105**	F **.55938**
Stddev	.00361	.0060	.22876
%RSD	.36618	.59051	40.896
#1	.98715	1.0171	.39955
#2	.98786	1.0089	.82143
#3	.98129	1.0055	.45715
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

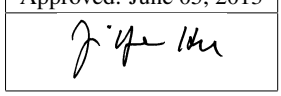
Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 17:56:10 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22022.**	**29040.**
Stddev	61.	142.
%RSD	.27602	.48797
#1	21968.	28916.
#2	22010.	29194.
#3	22088.	29010.

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 17:59:25 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**.00671**	**.00065**	**.00287**	**.00077**	**-.00024**	**-.04210**
Stddev	.00048	.01145	.00069	.00075	.00035	.00002	.00509
%RSD	80.410	170.64	106.70	26.179	45.028	6.7280	12.093
#1	-.00006	.00817	-.00002	.00283	.00073	-.00023	-.04610
#2	-.00097	.01736	.00060	.00214	.00113	-.00023	-.03637
#3	-.00075	-.00540	.00136	.00364	.00044	-.00026	-.04383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**-.00005**	**-.00174**	**.00017**	**.00030**	**.00194**	F **-.21907**
Stddev	.00009	.00006	.00011	.00027	.00337	.00501	.31878
%RSD	120.46	133.58	6.2391	156.86	1116.7	257.73	145.52
#1	-.00007	-.00012	-.00174	-.00012	-.00282	.00501	.13763
#2	-.00016	-.00001	-.00164	.00039	.00387	-.00384	-.31868
#3	.00002	-.00001	-.00186	.00024	-.00014	.00466	-.47615
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.4038**	F **2.0001**	**.04836**	**-.00235**	**.01380**	**.00012**	**.00104**
Stddev	2.4878	.5136	.03023	.00179	.01719	.00003	.00024
%RSD	103.49	25.680	62.509	76.089	124.54	23.687	23.075
#1	.05103	2.4393	.04949	-.00395	.00914	.00010	.00087
#2	5.0076	2.1256	.07802	-.00269	-.00058	.00010	.00094
#3	2.1528	1.4353	.01759	-.00042	.03284	.00015	.00132
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

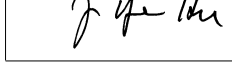
Sample Name: CCB Acquired: 6/4/2013 17:59:25 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04764**	**-.00020**	F **8.0317**	**.00118**	F **-245.18**	F **.02355**	F **-1.4326**
Stddev	.00707	.00027	12.112	.00113	22.26	.04061	.8222
%RSD	14.848	137.09	150.80	95.943	9.0800	172.47	57.391
#1	-.05008	-.00011	15.404	.00248	-270.23	-.00347	-2.0047
#2	-.05317	-.00050	-5.9473	.00048	-237.68	.00386	-.49041
#3	-.03967	.00002	14.639	.00058	-227.64	.07025	-1.8027
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00094**	**.00153**	**.00432**	**.00004**	**.00013**	**.00077**	**.00045**
Stddev	.00178	.00177	.00338	.00033	.00004	.00080	.00090
%RSD	189.82	116.18	78.103	781.38	31.174	103.61	201.05
#1	.00027	.00077	.00504	.00042	.00013	-.00011	-.00056
#2	-.00011	.00355	.00065	-.00014	.00017	.00145	.00074
#3	-.00297	.00026	.00729	-.00015	.00009	.00098	.00116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00012**	**.00026**	**.07644**
Stddev	.00020	.00009	.06592
%RSD	169.22	35.713	86.239
#1	.00027	.00020	.00626
#2	.00020	.00022	.13706
#3	-.00011	.00037	.08599
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 17:59:25 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21917.**	**28611.**
Stddev	22.	227.
%RSD	.09936	.79188
#1	21894.	28357.
#2	21937.	28685.
#3	21920.	28792.

Approved: June 05, 2013

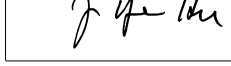
Sample Name: L1305143207 Acquired: 6/4/2013 18:03:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00037**	**.19363**	**.00074**	**.01172**	**.04860**	**-.00021**	**30.738**
Stddev	.00020	.00821	.00113	.00127	.00030	.00001	.159
%RSD	54.872	4.2399	153.65	10.855	.62288	5.5674	.51704
#1	-.00019	.19129	.00184	.01057	.04894	-.00022	30.610
#2	-.00059	.20275	-.00042	.01308	.04847	-.00020	30.916
#3	-.00034	.18684	.00079	.01150	.04838	-.00022	30.689
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00010**	**-.00149**	**.00041**	**.17274**	**.46646**	**1.7373**
Stddev	.00017	.00019	.00048	.00024	.00103	.00402	.1545
%RSD	45.994	192.35	31.788	59.039	.59518	.86147	8.8930
#1	.00036	.00015	-.00095	.00068	.17303	.46946	1.8840
#2	.00021	-.00011	-.00184	.00028	.17359	.46189	1.7518
#3	.00055	.00026	-.00170	.00026	.17160	.46801	1.5760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.6006**	**2.6360**	**2.4925**	**.00729**	**17.388**	**.01665**	**-.00012**
Stddev	10.253	1.3024	.0216	.00083	.051	.00010	.00011
%RSD	155.34	49.406	.86478	11.351	.29482	.62004	90.760
#1	-8.5769	3.9348	2.5061	.00790	17.380	.01663	-.00023
#2	4.4968	1.3301	2.5038	.00762	17.342	.01675	-.00010
#3	-15.722	2.6433	2.4677	.00635	17.443	.01655	-.00002
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



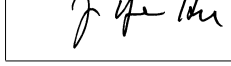
Sample Name: L1305143207 Acquired: 6/4/2013 18:03:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.8247**	**.00080**	**48.244**	**.00182**	F **-244.47**	F **749.12**	F **-37687.**
Stddev	.0113	.00069	2.774	.00074	14.05	5.30	151.
%RSD	.23325	86.450	5.7509	40.509	5.7485	.70757	.39993
#1	4.8117	.00049	48.823	.00264	-242.82	744.27	-37634.
#2	4.8301	.00032	50.683	.00164	-231.32	754.78	-37857.
#3	4.8322	.00160	45.225	.00120	-259.28	748.29	-37570.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00215**	**.00268**	**3.0300**	**-.00160**	**.46049**	**.00554**	**-.00078**
Stddev	.00058	.00185	.0315	.00032	.00033	.00147	.00079
%RSD	27.236	68.841	1.0390	19.891	.07063	26.610	101.20
#1	-.00236	.00055	2.9991	-.00138	.46087	.00722	-.00003
#2	-.00260	.00383	3.0620	-.00145	.46028	.00447	-.00160
#3	-.00149	.00366	3.0290	-.00196	.46033	.00492	-.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00048**	**.00627**	**.78351**
Stddev	.00016	.00002	.15429
%RSD	32.759	.33947	19.693
#1	.00065	.00625	.68889
#2	.00035	.00626	.96156
#3	.00043	.00629	.70008
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143207 Acquired: 6/4/2013 18:03:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21881.**	**28581.**
Stddev	12.	125.
%RSD	.05551	.43590
#1	21894.	28519.
#2	21877.	28724.
#3	21871.	28499.

Approved: June 05, 2013

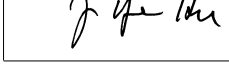
Sample Name: L1305143208 Acquired: 6/4/2013 18:06:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**.00077**	**.00086**	**.01017**	**.04429**	**-.00026**	**28.545**
Stddev	.00023	.01147	.00149	.00066	.00049	.00002	.165
%RSD	41.928	1496.0	173.68	6.4919	1.1023	7.4462	.57885
#1	-.00029	.01393	.00185	.01086	.04376	-.00028	28.388
#2	-.00072	-.00702	.00157	.00955	.04436	-.00024	28.718
#3	-.00062	-.00461	-.00085	.01011	.04473	-.00025	28.529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**.00003**	**-.00185**	**.00028**	**.01706**	**.44167**	**2.2316**
Stddev	.00003	.00016	.00020	.00023	.00179	.00702	.2726
%RSD	13.638	593.04	10.871	79.499	10.508	1.5901	12.217
#1	.00025	.00007	-.00206	.00055	.01499	.43885	1.9202
#2	.00020	-.00015	-.00183	.00014	.01808	.43650	2.4274
#3	.00025	.00016	-.00166	.00017	.01812	.44967	2.3471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.1493**	**4.2282**	**2.7496**	**.00638**	**16.217**	**.00844**	**-.00025**
Stddev	6.1217	.6153	.0562	.00227	.144	.00009	.00026
%RSD	194.38	14.553	2.0435	35.561	.88741	1.0683	102.26
#1	-10.218	3.9702	2.7146	.00834	16.106	.00837	-.00055
#2	.3786	4.9306	2.7197	.00390	16.165	.00841	-.00017
#3	.3915	3.7840	2.8144	.00690	16.379	.00854	-.00005
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



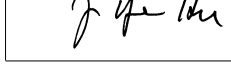
Sample Name: L1305143208 Acquired: 6/4/2013 18:06:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.6863**	**.00034**	F **1082.8**	**.00090**	F **-224.11**	F **713.31**	F **-35927.**
Stddev	.0146	.00038	16.0	.00170	7.89	11.70	303.
%RSD	.31068	111.48	1.4763	189.34	3.5206	1.6407	.84280
#1	4.6711	.00074	1092.0	.00282	-215.30	717.50	-36080.
#2	4.6877	-.00001	1064.4	-.00038	-226.54	700.09	-35578.
#3	4.7001	.00028	1092.1	.00025	-230.50	722.34	-36123.
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			450.00		9.0000	9.0000	9.0000
Low Limit			-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.00219**	**2.6002**	**-.00173**	**.43110**	**.00047**	**-.00039**
Stddev	.00082	.00190	.0352	.00012	.00072	.00055	.00120
%RSD	215.88	87.106	1.3519	6.7998	.16723	117.40	309.28
#1	-.00131	.00418	2.6160	-.00179	.43044	.00000	.00098
#2	-.00003	.00198	2.5599	-.00180	.43100	.00033	-.00087
#3	.00020	.00039	2.6246	-.00159	.43187	.00107	-.00128
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00030**	**.00388**	**.15875**
Stddev	.00018	.00004	.32044
%RSD	59.654	1.0966	201.86
#1	.00027	.00383	-.19775
#2	.00049	.00391	.25115
#3	.00013	.00389	.42283
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305143208 Acquired: 6/4/2013 18:06:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21961.**	**29087.**
Stddev	100.	140.
%RSD	.45422	.48094
#1	21888.	29099.
#2	22075.	29221.
#3	21920.	28942.

Approved: June 05, 2013

Sample Name: L1305143301 Acquired: 6/4/2013 18:09:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.21223**	**.00001**	**.02402**	**.01479**	**-.00006**
Stddev	.00046	.02150	.00036	.00072	.00004	.00002
%RSD	59.684	10.131	4828.0	3.0144	.26323	38.193
#1	-.00131	.18740	.00014	.02342	.01478	-.00006
#2	-.00049	.22428	-.00040	.02482	.01483	-.00004
#3	-.00053	.22499	.00029	.02382	.01476	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**185.90**	**.00157**	**.00808**	**-.00118**	**.00009**	**.30576**
Stddev	.65	.00006	.00013	.00020	.00027	.00825
%RSD	.35147	3.7208	1.5630	16.707	295.80	2.6967
#1	185.24	.00161	.00818	-.00095	-.00022	.29632
#2	185.92	.00160	.00812	-.00126	.00030	.30941
#3	186.54	.00151	.00794	-.00132	.00020	.31155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.87401**	**16.718**	F **-28.643**	**4.0518**	**10.583**	**.02569**
Stddev	.00451	.463	9.014	2.1843	.065	.00128
%RSD	.51637	2.7722	31.471	53.910	.61775	4.9888
#1	.87531	17.200	-24.042	2.9445	10.509	.02596
#2	.87773	16.276	-22.858	2.6428	10.631	.02683
#3	.86899	16.676	-39.029	6.5680	10.610	.02430
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

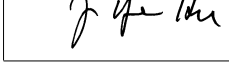
Sample Name: L1305143301 Acquired: 6/4/2013 18:09:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**173.60**	**.70206**	**-.00043**	**15.653**	**.03612**	**50.228**
Stddev	.93	.00303	.00009	.060	.00050	15.977
%RSD	.53602	.43152	21.252	.38295	1.3740	31.810
#1	172.53	.69900	-.00034	15.584	.03617	63.364
#2	174.21	.70212	-.00043	15.691	.03560	54.879
#3	174.07	.70505	-.00052	15.685	.03659	32.441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00149**	F **-209.00**	F **7763.6**	F **-421970.**	**.00014**	**.00388**
Stddev	.00150	11.20	23.4	478.	.00084	.00341
%RSD	100.17	5.3592	.30076	.11330	614.75	87.849
#1	.00305	-206.00	7777.6	-422110.	-.00081	.00743
#2	.00006	-199.60	7736.7	-422360.	.00047	.00357
#3	.00138	-221.39	7776.6	-421440.	.00076	.00064
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4914**	**-.00186**	**.89073**	**-.00004**	**-.00055**	**.00015**
Stddev	.0076	.00004	.00299	.00032	.00101	.00020
%RSD	.30395	1.9261	.33561	720.26	184.14	137.35
#1	2.4970	-.00186	.88770	.00017	-.00117	.00031
#2	2.4944	-.00190	.89367	-.00041	-.00109	.00020
#3	2.4828	-.00182	.89082	.00011	.00062	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305143301 Acquired: 6/4/2013 18:09:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02906**	**.31443**
Stddev	.00015	.20906
%RSD	.52685	66.489
#1	.02910	.50317
#2	.02919	.08972
#3	.02889	.35040
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20782.**	**28198.**
Stddev	22.	138.
%RSD	.10374	.48990
#1	20759.	28351.
#2	20802.	28161.
#3	20786.	28083.

Approved: June 05, 2013

Sample Name: L1305143302 Acquired: 6/4/2013 18:13:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**.08180**	**-.00060**	**.02364**	**.01557**	**-.00017**
Stddev	.00016	.00054	.00028	.00035	.00010	.00002
%RSD	33.053	.65632	46.337	1.4761	.66839	9.6320
#1	-.00042	.08233	-.00051	.02328	.01562	-.00017
#2	-.00036	.08126	-.00037	.02366	.01563	-.00015
#3	-.00065	.08182	-.00091	.02398	.01545	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**181.23**	**.00149**	**.00507**	**-.00133**	**-.00002**	**.07139**
Stddev	1.46	.00006	.00012	.00014	.00007	.00235
%RSD	.80743	4.0683	2.4042	10.740	390.39	3.2966
#1	179.55	.00154	.00516	-.00145	-.00009	.07370
#2	181.96	.00142	.00512	-.00117	.00005	.07150
#3	182.20	.00150	.00493	-.00137	-.00001	.06899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.86416**	**16.188**	F **-25.272**	**2.6000**	**10.379**	**.02577**
Stddev	.00510	.422	3.481	2.3695	.076	.00183
%RSD	.59048	2.6067	13.775	91.137	.72810	7.0908
#1	.86318	16.099	-21.956	.35455	10.294	.02450
#2	.86968	16.647	-24.962	2.3687	10.405	.02786
#3	.85962	15.818	-28.897	5.0767	10.438	.02494
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

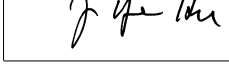
Sample Name: L1305143302 Acquired: 6/4/2013 18:13:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.80**	**.48367**	**-.00043**	**15.502**	**.02877**	**39.441**
Stddev	1.17	.00223	.00014	.127	.00061	5.494
%RSD	.68893	.46174	33.151	.81950	2.1164	13.929
#1	168.47	.48109	-.00050	15.368	.02947	39.710
#2	170.29	.48493	-.00052	15.518	.02833	44.795
#3	170.66	.48499	-.00027	15.620	.02853	33.817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00092**	F **-205.26**	F **7739.7**	F **-418420.**	**-.00076**	**.00194**
Stddev	.00236	8.40	22.0	1609.	.00188	.00227
%RSD	256.22	4.0945	.28472	.38444	247.93	117.25
#1	.00075	-195.60	7714.4	-416930.	-.00237	.00440
#2	.00336	-209.33	7750.5	-420120.	.00130	-.00009
#3	-.00135	-210.86	7754.3	-418190.	-.00120	.00150
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4390**	**-.00161**	**.88594**	**-.00101**	**-.00153**	**.00014**
Stddev	.0039	.00028	.00716	.00057	.00229	.00006
%RSD	.16080	17.593	.80772	56.319	149.09	46.837
#1	2.4349	-.00194	.87836	-.00150	-.00414	.00007
#2	2.4393	-.00145	.88687	-.00038	-.00059	.00019
#3	2.4428	-.00145	.89259	-.00114	.00013	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

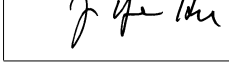
Approved: June 05, 2013



Sample Name: L1305143302 Acquired: 6/4/2013 18:13:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.01716**	**.03870**
Stddev	.00006	.29965
%RSD	.35524	774.37
#1	.01722	.11525
#2	.01716	.29264
#3	.01710	-.29181
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20734.**	**28728.**
Stddev	79.	124.
%RSD	.38110	.42995
#1	20819.	28863.
#2	20663.	28620.
#3	20719.	28702.

Approved: June 05, 2013



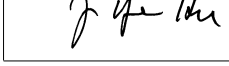
Sample Name: L1305143303 Acquired: 6/4/2013 18:16:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.25935**	**.00067**	**.01091**	**.01932**	**.00002**
Stddev	.00027	.01025	.00031	.00043	.00029	.00002
%RSD	66.733	3.9529	45.527	3.9456	1.4943	96.895
#1	-.00013	.26524	.00093	.01120	.01905	.00003
#2	-.00041	.24751	.00033	.01041	.01962	.00001
#3	-.00068	.26529	.00076	.01110	.01927	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.123**	**.00110**	**.01294**	**-.00132**	**.00053**	**.17165**
Stddev	.212	.00009	.00004	.00033	.00026	.00102
%RSD	.24591	8.3904	.33135	24.838	49.168	.59648
#1	86.117	.00115	.01292	-.00135	.00080	.17203
#2	85.914	.00099	.01292	-.00163	.00050	.17244
#3	86.337	.00114	.01299	-.00098	.00028	.17050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.27984**	**8.8590**	F **-15.185**	**4.0997**	**6.9930**	**.01293**
Stddev	.00065	.4308	3.123	1.3460	.0639	.00044
%RSD	.23344	4.8626	20.566	32.832	.91389	3.3939
#1	.28033	8.7347	-12.652	3.9215	6.9993	.01270
#2	.27910	8.5041	-18.674	5.5260	7.0536	.01265
#3	.28008	9.3383	-14.228	2.8517	6.9262	.01343
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



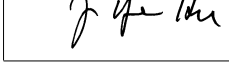
Sample Name: L1305143303 Acquired: 6/4/2013 18:16:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.897**	**.77581**	**-.00046**	**2.3362**	**.04712**	**39.695**
Stddev	.477	.00080	.00001	.0044	.00029	21.902
%RSD	.62051	.10299	1.7207	.18679	.61649	55.177
#1	77.117	.77581	-.00046	2.3408	.04707	14.545
#2	77.224	.77661	-.00045	2.3322	.04686	49.960
#3	76.349	.77501	-.00046	2.3357	.04743	54.579
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00196**	F **-229.54**	F **3489.4**	F **-183950.**	**-.00067**	**.00194**
Stddev	.00092	11.31	11.7	118.	.00182	.00246
%RSD	46.875	4.9262	.33630	.06393	270.49	126.37
#1	.00283	-242.09	3498.1	-184020.	-.00213	.00476
#2	.00100	-220.15	3476.0	-183820.	-.00125	.00082
#3	.00207	-226.39	3494.0	-184010.	.00136	.00025
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4821**	**-.00146**	**.27123**	**.00304**	**.00067**	**.00035**
Stddev	.0024	.00018	.00153	.00123	.00096	.00016
%RSD	.09779	12.195	.56557	40.367	143.95	44.905
#1	2.4820	-.00148	.27207	.00311	.00174	.00045
#2	2.4797	-.00163	.27217	.00423	-.00011	.00042
#3	2.4845	-.00128	.26946	.00178	.00037	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305143303 Acquired: 6/4/2013 18:16:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.05103**	**.07596**
Stddev	.00005	.22908
%RSD	.10537	301.59
#1	.05098	.16651
#2	.05104	.24592
#3	.05108	-.18456
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21390.**	**29203.**
Stddev	31.	42.
%RSD	.14666	.14449
#1	21414.	29159.
#2	21403.	29206.
#3	21355.	29243.

Approved: June 05, 2013

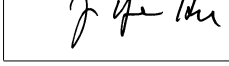
Sample Name: L1305143304 Acquired: 6/4/2013 18:20:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.08141**	**.00059**	**.01107**	**.01888**	**-.00016**
Stddev	.00055	.00567	.00069	.00048	.00026	.00002
%RSD	121.55	6.9658	117.02	4.3716	1.3686	9.7022
#1	-.00055	.07555	-.00001	.01078	.01905	-.00015
#2	.00014	.08687	.00134	.01079	.01859	-.00018
#3	-.00094	.08182	.00044	.01162	.01901	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**89.373**	**.00128**	**.00957**	**-.00150**	**.00042**	**.01863**
Stddev	.315	.00008	.00018	.00027	.00039	.00236
%RSD	.35252	6.2942	1.8798	18.177	93.114	12.684
#1	89.395	.00137	.00972	-.00132	.00080	.02127
#2	89.676	.00121	.00937	-.00181	.00002	.01789
#3	89.047	.00126	.00961	-.00136	.00043	.01672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.29049**	**9.1088**	F **-14.877**	**3.2202**	**7.1254**	**.01402**
Stddev	.00312	.3667	1.469	.2531	.0141	.00083
%RSD	1.0731	4.0259	9.8712	7.8614	.19826	5.9258
#1	.28757	9.5299	-15.376	3.3493	7.1091	.01336
#2	.29012	8.8597	-13.224	3.3827	7.1336	.01376
#3	.29377	8.9368	-16.030	2.9285	7.1335	.01496
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



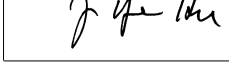
Sample Name: L1305143304 Acquired: 6/4/2013 18:20:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**79.975**	**.62576**	**-.00041**	**2.6728**	**.04178**	**40.245**
Stddev	.308	.00289	.00007	.0068	.00040	7.320
%RSD	.38462	.46177	17.883	.25437	.95968	18.190
#1	79.694	.62270	-.00049	2.6653	.04132	47.702
#2	79.926	.62613	-.00039	2.6745	.04206	39.963
#3	80.303	.62844	-.00035	2.6785	.04196	33.070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	F **-217.39**	F **3645.6**	F **-191170.**	**-.00019**	**.00403**
Stddev	.00042	12.74	13.4	181.	.00148	.00158
%RSD	110.67	5.8616	.36842	.09490	771.43	39.182
#1	.00083	-203.52	3652.4	-191310.	-.00120	.00264
#2	.00002	-228.59	3654.2	-190960.	.00151	.00371
#3	.00028	-220.05	3630.1	-191230.	-.00089	.00575
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4633**	**-.00182**	**.28912**	**-.00019**	**-.00007**	**.00016**
Stddev	.0132	.00044	.00017	.00025	.00050	.00010
%RSD	.53424	24.377	.05954	132.15	719.66	59.289
#1	2.4704	-.00159	.28899	-.00003	.00008	.00006
#2	2.4714	-.00153	.28904	-.00048	.00034	.00024
#3	2.4481	-.00233	.28931	-.00006	-.00062	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

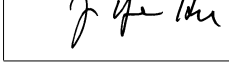
Approved: June 05, 2013



Sample Name: L1305143304 Acquired: 6/4/2013 18:20:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.03395**	**.18170**
Stddev	.00016	.25202
%RSD	.46001	138.70
#1	.03410	.24669
#2	.03378	-.09645
#3	.03396	.39486
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21346.**	**28899.**
Stddev	60.	188.
%RSD	.28100	.65207
#1	21341.	29107.
#2	21408.	28739.
#3	21289.	28851.

Approved: June 05, 2013



Sample Name: L1305143401 Acquired: 6/4/2013 18:23:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00032**	**.03333**	**.00034**	**-.00089**	**.04654**	**.00003**
Stddev	.00033	.00625	.00163	.00056	.00023	.00002
%RSD	101.82	18.760	475.87	62.060	.49984	53.066
#1	-.00052	.03972	.00189	-.00153	.04670	.00003
#2	-.00050	.03304	.00050	-.00052	.04627	.00005
#3	.00006	.02723	-.00136	-.00063	.04665	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.276**	**.00058**	**.00681**	**-.00176**	**.03751**	**19.980**
Stddev	.048	.00006	.00002	.00015	.00014	.119
%RSD	.05176	10.128	.34873	8.5834	.36541	.59422
#1	92.317	.00065	.00680	-.00159	.03765	20.063
#2	92.224	.00056	.00680	-.00185	.03749	20.033
#3	92.287	.00053	.00684	-.00186	.03738	19.844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49734**	**3.6056**	F **-8.8237**	**1.5294**	**2.2407**	**.00434**
Stddev	.00398	.4485	10.012	2.6633	.0216	.00173
%RSD	.79927	12.439	113.46	174.14	.96520	39.855
#1	.49736	3.1017	-2.4980	-1.4764	2.2452	.00451
#2	.50130	3.9612	-3.6067	3.5954	2.2172	.00598
#3	.49335	3.7537	-20.366	2.4691	2.2598	.00253
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

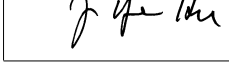
Sample Name: L1305143401 Acquired: 6/4/2013 18:23:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.799**	**3.9213**	**-.00061**	**8.3373**	**.00687**	**123.60**
Stddev	.025	.0275	.00013	.0444	.00074	3.64
%RSD	.07168	.70219	22.068	.53236	10.782	2.9441
#1	34.816	3.9238	-.00076	8.3770	.00730	120.69
#2	34.812	3.9475	-.00058	8.3456	.00729	127.68
#3	34.771	3.8926	-.00050	8.2894	.00602	122.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00453**	F **-242.75**	F **2983.7**	F **-155010.**	**-.00025**	**.00362**
Stddev	.00067	24.03	20.9	490.	.00141	.00310
%RSD	14.773	9.8991	.69999	.31597	570.56	85.647
#1	.00456	-218.67	2988.7	-155350.	-.00119	.00681
#2	.00518	-266.73	3001.5	-155220.	-.00092	.00060
#3	.00385	-242.86	2960.7	-154450.	.00137	.00346
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.6210**	**-.00124**	**.38114**	**-.00053**	**.00304**	**.00017**
Stddev	.0215	.00026	.00250	.00100	.00052	.00028
%RSD	.38277	21.158	.65486	188.39	16.959	163.76
#1	5.6281	-.00145	.38291	-.00092	.00339	.00028
#2	5.6380	-.00132	.38222	-.00128	.00329	-.00015
#3	5.5968	-.00095	.37828	.00060	.00245	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305143401 Acquired: 6/4/2013 18:23:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.31794**	F **-1.9079**
Stddev	.00168	.2939
%RSD	.52810	15.406
#1	.31905	-2.2266
#2	.31877	-1.8496
#3	.31601	-1.6475
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21491.**	**28788.**
Stddev	56.	59.
%RSD	.25910	.20514
#1	21495.	28748.
#2	21433.	28759.
#3	21544.	28856.

Approved: June 05, 2013

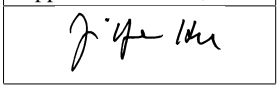
Sample Name: L1305143402 Acquired: 6/4/2013 18:27:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00122**	**.07734**	**-.00064**	**.02866**	**.01214**	**-.00016**
Stddev	.00023	.01108	.00020	.00096	.00012	.00001
%RSD	19.064	14.321	30.809	3.3372	1.0014	7.7978
#1	-.00099	.09013	-.00084	.02860	.01213	-.00016
#2	-.00121	.07105	-.00064	.02965	.01202	-.00016
#3	-.00146	.07084	-.00045	.02774	.01227	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**253.40**	**.00159**	**.00088**	**-.00136**	**-.00011**	**.09540**
Stddev	1.99	.00001	.00013	.00005	.00026	.00225
%RSD	.78576	.73432	14.168	3.8863	238.94	2.3540
#1	251.11	.00158	.00097	-.00131	-.00027	.09404
#2	254.36	.00159	.00094	-.00141	-.00025	.09416
#3	254.74	.00160	.00074	-.00136	.00019	.09799
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5221**	**20.030**	F **-35.247**	**3.7338**	**12.465**	**.02916**
Stddev	.0067	.016	14.936	.7541	.038	.00095
%RSD	.43910	.08174	42.375	20.195	.30526	3.2628
#1	1.5143	20.036	-36.556	4.4309	12.425	.02859
#2	1.5257	20.012	-49.486	2.9334	12.501	.03026
#3	1.5261	20.043	-19.700	3.8372	12.468	.02863
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



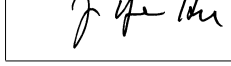
Sample Name: L1305143402 Acquired: 6/4/2013 18:27:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**231.79**	**.16036**	**-.00043**	**6.1384**	**.00801**	**48.931**
Stddev	1.22	.00079	.00017	.0222	.00086	15.024
%RSD	.52839	.49567	39.458	.36173	10.783	30.705
#1	230.63	.15946	-.00038	6.1132	.00710	57.543
#2	231.66	.16068	-.00028	6.1474	.00882	31.582
#3	233.07	.16094	-.00061	6.1547	.00812	57.668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00142**	F **-232.22**	F **9855.1**	F **-544660.**	**-.00022**	**.00257**
Stddev	.00054	34.72	83.2	2841.	.00087	.00233
%RSD	38.019	14.953	.84439	.52154	392.31	90.460
#1	.00081	-249.15	9760.2	-541730.	-.00113	.00209
#2	.00184	-255.22	9915.5	-547400.	.00061	.00053
#3	.00161	-192.27	9889.6	-544850.	-.00015	.00510
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8457**	**-.00169**	**1.5557**	**-.00264**	**-.00130**	**.00024**
Stddev	.0207	.00024	.0040	.00095	.00107	.00027
%RSD	1.1223	13.928	.25952	35.937	82.743	111.30
#1	1.8223	-.00164	1.5517	-.00167	-.00147	.00048
#2	1.8617	-.00195	1.5557	-.00269	-.00228	.00030
#3	1.8532	-.00149	1.5597	-.00356	-.00015	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

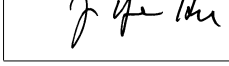
Approved: June 05, 2013



Sample Name: L1305143402 Acquired: 6/4/2013 18:27:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.00755**	F **-.15953**
Stddev	.00006	.32224
%RSD	.78548	201.99
#1	.00749	-.30947
#2	.00761	-.37950
#3	.00754	.21036
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20608.**	**28308.**
Stddev	61.	143.
%RSD	.29534	.50434
#1	20668.	28469.
#2	20546.	28258.
#3	20610.	28197.

Approved: June 05, 2013



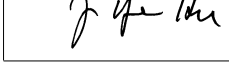
Sample Name: L1305143403 Acquired: 6/4/2013 18:30:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.47068**	**.00088**	**.01627**	**.02447**	**.00034**
Stddev	.00058	.00936	.00035	.00060	.00028	.00002
%RSD	155.42	1.9894	39.265	3.6880	1.1406	5.5324
#1	-.00105	.46461	.00107	.01591	.02441	.00032
#2	-.00007	.46597	.00048	.01594	.02422	.00036
#3	-.00001	.48146	.00110	.01696	.02477	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**131.64**	**.00154**	**.03318**	**-.00092**	**.00191**	**1.1318**
Stddev	.84	.00008	.00031	.00029	.00028	.0167
%RSD	.63482	5.3483	.92713	31.738	14.609	1.4735
#1	130.80	.00163	.03328	-.00077	.00173	1.1147
#2	131.64	.00152	.03342	-.00126	.00223	1.1327
#3	132.47	.00147	.03283	-.00074	.00177	1.1480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35196**	**12.745**	F **-19.557**	**3.3332**	**9.9883**	**.01649**
Stddev	.00216	.074	5.697	.2414	.0363	.00027
%RSD	.61406	.58133	29.129	7.2420	.36370	1.6575
#1	.35259	12.660	-13.044	3.3057	9.9623	.01643
#2	.35374	12.783	-23.612	3.1067	9.9729	.01626
#3	.34955	12.793	-22.017	3.5871	10.030	.01680
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



Sample Name: L1305143403 Acquired: 6/4/2013 18:30:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**124.63**	**1.9779**	**-.00048**	**3.0524**	**.07620**	**154.75**
Stddev	1.12	.0112	.00006	.0082	.00084	9.82
%RSD	.89738	.56758	12.964	.26792	1.1023	6.3468
#1	123.85	1.9693	-.00041	3.0435	.07546	162.26
#2	124.14	1.9739	-.00054	3.0542	.07711	158.36
#3	125.92	1.9906	-.00048	3.0596	.07603	143.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	F **-192.23**	F **5422.4**	F **-286760.**	**-.00055**	**.00600**
Stddev	.00052	28.31	33.6	1487.	.00143	.00103
%RSD	92.813	14.724	.61887	.51857	260.80	17.188
#1	-.00003	-209.64	5385.0	-285700.	.00040	.00698
#2	.00093	-207.49	5449.8	-288460.	-.00220	.00610
#3	.00078	-159.57	5432.4	-286120.	.00015	.00492
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5186**	**-.00146**	**.34492**	**.00595**	**.00132**	**.00074**
Stddev	.0163	.00023	.00209	.00099	.00076	.00024
%RSD	.64697	15.560	.60495	16.657	57.722	32.190
#1	2.5022	-.00168	.34370	.00581	.00047	.00091
#2	2.5348	-.00122	.34374	.00701	.00194	.00084
#3	2.5187	-.00147	.34733	.00504	.00154	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305143403 Acquired: 6/4/2013 18:30:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.12504**	**.22889**
Stddev	.00071	.37983
%RSD	.56686	165.94
#1	.12515	-.00266
#2	.12569	.02208
#3	.12428	.66725
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21048.**	**29142.**
Stddev	54.	171.
%RSD	.25465	.58841
#1	21104.	29298.
#2	20997.	29170.
#3	21041.	28958.

Approved: June 05, 2013

Sample Name: L1305143404 Acquired: 6/4/2013 18:34:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00084**	**.23028**	**.00091**	**.02913**	**.01131**	**.00014**
Stddev	.00070	.00650	.00071	.00052	.00021	.00002
%RSD	82.737	2.8239	78.165	1.7884	1.8616	12.625
#1	-.00067	.23451	.00044	.02858	.01108	.00012
#2	-.00161	.22280	.00056	.02962	.01134	.00014
#3	-.00025	.23354	.00173	.02918	.01150	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**249.47**	**.00178**	**.02487**	**-.00122**	**.00097**	**.63380**
Stddev	.65	.00005	.00019	.00024	.00016	.00501
%RSD	.25979	2.5340	.75904	19.618	16.551	.79054
#1	249.74	.00183	.02494	-.00107	.00092	.62834
#2	249.94	.00175	.02501	-.00149	.00085	.63486
#3	248.73	.00176	.02466	-.00108	.00116	.63819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1996**	**19.218**	F **-36.044**	**2.5216**	**13.205**	**.03624**
Stddev	.0042	.326	6.107	.3281	.100	.00120
%RSD	.34646	1.6943	16.943	13.011	.75970	3.3115
#1	1.2014	19.577	-36.419	2.1473	13.193	.03513
#2	1.2026	19.138	-41.955	2.7594	13.111	.03751
#3	1.1949	18.940	-29.758	2.6580	13.310	.03607
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

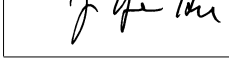
Sample Name: L1305143404 Acquired: 6/4/2013 18:34:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**222.81**	**1.8795**	**-.00032**	**30.714**	**.06322**	**40.251**
Stddev	1.97	.0071	.00016	.095	.00080	10.858
%RSD	.88354	.37952	48.441	.30911	1.2708	26.975
#1	222.39	1.8809	-.00032	30.697	.06401	51.306
#2	221.09	1.8717	-.00047	30.629	.06325	29.601
#3	224.96	1.8858	-.00016	30.816	.06240	39.847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	F **-217.70**	F **10373.**	F **-574440.**	**-.00061**	**.00235**
Stddev	.00142	21.57	82.	2987.	.00043	.00120
%RSD	145.94	9.9105	.79168	.51992	69.738	50.917
#1	.00065	-239.20	10396.	-574090.	-.00102	.00373
#2	.00254	-196.05	10442.	-577590.	-.00065	.00158
#3	-.00026	-217.87	10282.	-571650.	-.00017	.00174
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2554**	**-.00213**	**1.2293**	**-.00322**	**.00124**	**-.00014**
Stddev	.0162	.00012	.0070	.00034	.00124	.00010
%RSD	.71886	5.8522	.56931	10.399	99.500	74.371
#1	2.2593	-.00227	1.2291	-.00360	.00192	-.00018
#2	2.2693	-.00204	1.2224	-.00310	.00200	-.00002
#3	2.2376	-.00208	1.2364	-.00296	-.00018	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

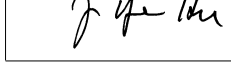
Approved: June 05, 2013



Sample Name: L1305143404 Acquired: 6/4/2013 18:34:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.06368**	F **-.14737**
Stddev	.00035	.28649
%RSD	.55186	194.40
#1	.06351	-.47731
#2	.06408	.03850
#3	.06344	-.00332
Check ?	Chk Pass	Chk Fail
High Limit		36.000
Low Limit		-.00400
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20542.**	**28526.**
Stddev	72.	142.
%RSD	.35169	.49616
#1	20567.	28483.
#2	20461.	28684.
#3	20599.	28410.

Approved: June 05, 2013



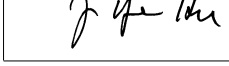
Sample Name: CCV Acquired: 6/4/2013 18:37:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44260	9.9220	F .47517	.49869	1.0009	.05068	9.8272
Stddev	.00149	.0188	.00073	.00203	.0038	.00015	.0256
%RSD	.33757	.18930	.15354	.40801	.37844	.29657	.26088
#1	.44227	9.9035	.47584	.49881	1.0049	.05076	9.8558
#2	.44131	9.9411	.47439	.49660	1.0003	.05051	9.8198
#3	.44424	9.9215	.47527	.50067	.99744	.05078	9.8061
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000		.40000				
Range	10.000%		10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .05820	.20002	.50366	.50512	3.9966	1.0036	F .69834
Stddev	.00012	.00065	.00054	.00133	.0134	.0030	.35891
%RSD	.21134	.32610	.10641	.26326	.33545	.29724	51.395
#1	.05820	.19942	.50314	.50490	4.0108	1.0057	.96150
#2	.05808	.19993	.50421	.50391	3.9950	1.0002	.28949
#3	.05832	.20072	.50364	.50654	3.9841	1.0050	.84403
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -12.918	F 2.1799	49.841	1.0547	9.9856	.49950	.98587
Stddev	7.269	1.1088	.236	.0040	.0170	.00230	.00226
%RSD	56.268	50.862	.47405	.37453	.17068	.46107	.22908
#1	-15.293	3.3753	50.113	1.0592	9.9858	.49756	.98444
#2	-18.703	1.1852	49.685	1.0517	9.9684	.49890	.98470
#3	-4.7591	1.9794	49.724	1.0533	10.002	.50204	.98848
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



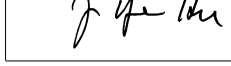
Sample Name: CCV Acquired: 6/4/2013 18:37:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.061**	**.50336**	F **21.308**	**.50809**	F **-246.30**	F **12.537**	F **-104.17**
Stddev	.160	.00041	2.460	.00124	18.26	.052	2.77
%RSD	.31268	.08226	11.543	.24334	7.4153	.41679	2.6547
#1	51.230	.50297	23.167	.50941	-266.14	12.495	-102.71
#2	50.914	.50331	18.519	.50696	-242.58	12.521	-102.44
#3	51.038	.50379	22.238	.50788	-230.19	12.596	-107.36
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2078**	**.40561**	**5.0609**	**.94753**	**1.0000**	**.99793**	**.51026**
Stddev	.0038	.00261	.0150	.00193	.0034	.00295	.00197
%RSD	.31799	.64252	.29661	.20327	.34266	.29597	.38574
#1	1.2057	.40274	5.0451	.94625	1.0038	.99691	.51230
#2	1.2055	.40784	5.0626	.94660	.99716	.99562	.51013
#3	1.2123	.40624	5.0750	.94975	.99910	1.0013	.50837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99370**	**1.0120**	F **.72493**
Stddev	.00278	.0012	.09783
%RSD	.27988	.12190	13.495
#1	.99584	1.0121	.83745
#2	.99055	1.0107	.65998
#3	.99469	1.0131	.67737
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

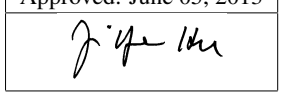
Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 18:37:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21984.**	**28841.**
Stddev	52.	130.
%RSD	.23569	.45226
#1	22007.	28930.
#2	22020.	28901.
#3	21925.	28691.

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 18:40:55 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.02085**	**-.00003**	**.00044**	**.00084**	**-.00025**	**-.01839**
Stddev	.00020	.00917	.00152	.00054	.00009	.00001	.00470
%RSD	35.603	44.002	4590.4	121.76	10.988	2.7990	25.568
#1	-.00068	.02666	.00053	.00105	.00076	-.00025	-.01368
#2	-.00068	.01027	.00113	.00006	.00094	-.00024	-.01841
#3	-.00033	.02562	-.00176	.00021	.00081	-.00024	-.02308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00002**	**-.00172**	**-.00005**	**.00195**	**.00187**	**-.06731**
Stddev	.00002	.00010	.00009	.00034	.00264	.00522	.38218
%RSD	14.745	688.63	5.0471	636.55	135.55	278.26	567.76
#1	-.00013	.00014	-.00176	.00018	.00335	-.00255	-.46424
#2	-.00012	-.00005	-.00162	-.00045	.00360	.00055	-.03588
#3	-.00009	-.00004	-.00179	.00011	-.00110	.00763	.29818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-2.4905**	F **3.7467**	**.02286**	**-.00310**	**.03869**	**.00041**	**.00113**
Stddev	4.2712	1.9345	.03172	.00159	.01137	.00002	.00043
%RSD	171.50	51.633	138.73	51.472	29.391	5.9756	38.020
#1	-.94787	5.0471	-.00182	-.00471	.03991	.00040	.00064
#2	-7.3186	4.6694	.05863	-.00152	.02675	.00044	.00129
#3	.79507	1.5236	.01177	-.00307	.04940	.00039	.00145
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 18:40:55 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04801**	**-.00016**	F **8.7035**	**.00200**	F **-250.91**	F **1.2853**	F **-64.698**
Stddev	.00422	.00017	3.1074	.00098	14.27	.0521	2.368
%RSD	8.7868	105.95	35.703	49.085	5.6858	4.0517	3.6595
#1	-.04449	-.00005	10.528	.00132	-266.37	1.3434	-66.875
#2	-.04685	-.00035	5.1156	.00155	-248.11	1.2430	-65.041
#3	-.05268	-.00008	10.466	.00313	-238.25	1.2695	-62.177
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00423**	**.00116**	**.00011**	**.00021**	**.00048**	**.00004**
Stddev	.00104	.00064	.00036	.00010	.00006	.00125	.00062
%RSD	300.21	15.207	30.847	88.300	27.021	259.75	1713.2
#1	.00153	.00404	.00086	.00019	.00027	.00114	.00048
#2	-.00046	.00495	.00106	.00000	.00020	-.00096	-.00067
#3	-.00002	.00370	.00156	.00015	.00016	.00126	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

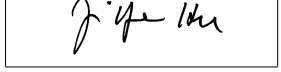
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00011**	**.00023**	F **.11804**
Stddev	.00033	.00004	.20497
%RSD	306.28	18.869	173.65
#1	-.00021	.00023	.30193
#2	.00045	.00019	-.10295
#3	.00008	.00027	.15514
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 18:40:55 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21980.**	**28867.**
Stddev	40.	39.
%RSD	.18167	.13361
#1	21947.	28859.
#2	21968.	28834.
#3	22024.	28910.

Approved: June 05, 2013



Sample Name: L1305143405 Acquired: 6/4/2013 18:44:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.45985**	**.00074**	**.02030**	**.01535**	**.00027**
Stddev	.00035	.01613	.00163	.00011	.00021	.00000
%RSD	67.829	3.5075	220.70	.52980	1.4006	1.7156
#1	-.00013	.46947	.00090	.02018	.01550	.00027
#2	-.00081	.46885	-.00096	.02038	.01545	.00027
#3	-.00062	.44123	.00228	.02035	.01510	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**174.58**	**.00162**	**.02145**	**-.00114**	**.00050**	**.60381**
Stddev	.56	.00009	.00018	.00023	.00008	.00752
%RSD	.31944	5.5009	.83505	20.419	15.856	1.2452
#1	174.61	.00154	.02126	-.00119	.00046	.60663
#2	174.01	.00160	.02147	-.00089	.00059	.60952
#3	175.12	.00172	.02162	-.00134	.00045	.59529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.78869**	**15.017**	F **-26.724**	**1.5229**	**10.205**	**.02261**
Stddev	.00561	.250	9.329	1.0612	.048	.00074
%RSD	.71189	1.6623	34.906	69.682	.47292	3.2691
#1	.79490	15.302	-27.460	.66415	10.258	.02346
#2	.78397	14.835	-35.663	2.7093	10.193	.02218
#3	.78721	14.915	-17.050	1.1954	10.164	.02217
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

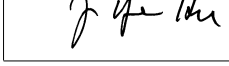
Sample Name: L1305143405 Acquired: 6/4/2013 18:44:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**156.15**	**1.6681**	**-.00039**	**16.910**	**.07368**	**47.310**
Stddev	1.06	.0135	.00015	.043	.00026	22.978
%RSD	.67969	.81075	38.937	.25335	.35310	48.569
#1	157.29	1.6836	-.00056	16.933	.07379	72.639
#2	155.97	1.6619	-.00033	16.937	.07387	27.805
#3	155.19	1.6588	-.00027	16.861	.07338	41.484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00190**	F **-251.00**	F **7349.4**	F **-397170.**	**.00073**	**.00328**
Stddev	.00075	24.28	12.5	1596.	.00148	.00111
%RSD	39.435	9.6746	.16961	.40172	202.38	33.827
#1	.00254	-271.40	7348.2	-397040.	-.00088	.00213
#2	.00207	-257.46	7337.6	-395640.	.00103	.00435
#3	.00108	-224.14	7362.5	-398820.	.00204	.00335
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5924**	**-.00204**	**.78983**	**.00034**	**.00098**	**.00010**
Stddev	.0159	.00019	.00302	.00089	.00008	.00013
%RSD	.61390	9.5497	.38214	265.68	8.2316	128.56
#1	2.5877	-.00222	.79259	.00065	.00093	.00010
#2	2.5793	-.00206	.79028	.00103	.00093	-.00003
#3	2.6101	-.00183	.78661	-.00067	.00107	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

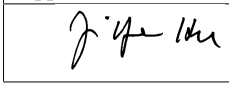
Approved: June 05, 2013



Sample Name: L1305143405 Acquired: 6/4/2013 18:44:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.08000**	**.21727**
Stddev	.00020	.17981
%RSD	.25359	82.761
#1	.08011	.21769
#2	.07977	.03724
#3	.08013	.39687
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20905.**	**28384.**
Stddev	76.	114.
%RSD	.36123	.40290
#1	20866.	28254.
#2	20992.	28431.
#3	20856.	28468.

Approved: June 05, 2013



Sample Name: L1305143501 Acquired: 6/4/2013 18:48:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.92203**	**.00125**	**.01793**	**.02939**	**.00039**
Stddev	.00042	.01850	.00090	.00049	.00030	.00001
%RSD	73.697	2.0064	71.691	2.7209	1.0301	2.1768
#1	-.00101	.92381	.00090	.01736	.02974	.00038
#2	-.00016	.93958	.00058	.01820	.02926	.00040
#3	-.00055	.90271	.00227	.01821	.02918	.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**142.01**	**.00164**	**.03576**	**-.00029**	**.00257**	**1.4748**
Stddev	.69	.00004	.00016	.00016	.00036	.0158
%RSD	.48670	2.6391	.45536	56.058	14.161	1.0678
#1	142.77	.00161	.03557	-.00045	.00259	1.4888
#2	141.43	.00162	.03584	-.00028	.00292	1.4778
#3	141.83	.00169	.03586	-.00013	.00220	1.4577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37620**	**13.743**	F **-29.558**	**1.6620**	**10.925**	**.02061**
Stddev	.00173	.361	6.516	1.5115	.066	.00070
%RSD	.45996	2.6291	22.045	90.945	.60607	3.3818
#1	.37626	13.870	-36.348	3.3602	11.001	.02079
#2	.37445	13.336	-28.972	1.1620	10.891	.01984
#3	.37791	14.025	-23.355	.46385	10.883	.02120
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

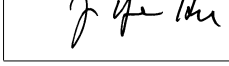
Sample Name: L1305143501 Acquired: 6/4/2013 18:48:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-02

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**136.06**	**2.1468**	**-.00039**	**3.3346**	**.08141**	**236.66**
Stddev	1.05	.0212	.00014	.0245	.00064	2.89
%RSD	.77191	.98778	35.945	.73473	.78689	1.2206
#1	137.14	2.1710	-.00024	3.3569	.08121	234.49
#2	136.01	2.1314	-.00052	3.3387	.08090	239.94
#3	135.04	2.1380	-.00040	3.3084	.08213	235.56
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00281**	F **-210.73**	F **5847.0**	F **-309570.**	**-.00093**	**.00816**
Stddev	.00238	31.31	78.4	1330.	.00042	.00053
%RSD	84.652	14.859	1.3407	.42966	45.426	6.5087
#1	.00100	-205.62	5783.4	-309260.	-.00120	.00762
#2	.00551	-244.28	5823.0	-308430.	-.00044	.00869
#3	.00193	-182.28	5934.6	-311030.	-.00114	.00818
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.4398**	**-.00168**	**.37663**	**.01454**	**.00130**	**.00143**
Stddev	.0524	.00024	.00256	.00051	.00207	.00008
%RSD	1.5233	14.454	.67919	3.4774	159.75	5.2746
#1	3.3871	-.00145	.37893	.01445	-.00109	.00151
#2	3.4403	-.00166	.37708	.01509	.00261	.00136
#3	3.4919	-.00193	.37387	.01409	.00237	.00142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305143501 Acquired: 6/4/2013 18:48:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-02

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.13477**	**1.4517**
Stddev	.00047	.4503
%RSD	.34622	31.017
#1	.13456	1.5555
#2	.13445	1.8410
#3	.13531	.95857
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20946.**	**28825.**
Stddev	81.	182.
%RSD	.38547	.63210
#1	20983.	28615.
#2	21001.	28940.
#3	20853.	28920.

Approved: June 05, 2013

Sample Name: L1305143501S Acquired: 6/4/2013 18:51:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19298**	**5.5773**	**.24091**	**1.0217**	**.52275**	**.02577**
Stddev	.00029	.0359	.00131	.0043	.00081	.00001
%RSD	.15010	.64301	.54505	.42520	.15498	.04948
#1	.19316	5.5845	.24209	1.0218	.52368	.02578
#2	.19314	5.5384	.24116	1.0259	.52237	.02576
#3	.19265	5.6091	.23950	1.0172	.52221	.02576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**137.84**	**.03088**	**.13014**	**.24909**	**.25183**	**3.0900**
Stddev	.53	.00017	.00070	.00014	.00126	.0107
%RSD	.38631	.54608	.54151	.05721	.50031	.34792
#1	138.13	.03094	.13069	.24893	.25299	3.0895
#2	137.23	.03101	.13037	.24919	.25200	3.1011
#3	138.17	.03069	.12934	.24917	.25049	3.0796
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.84632**	**13.507**	F **-31.124**	**2.8254**	**34.970**	**.54677**
Stddev	.00782	.203	5.995	1.1741	.074	.00251
%RSD	.92367	1.5004	19.263	41.554	.21127	.45914
#1	.84702	13.276	-31.203	1.7429	35.054	.54958
#2	.85377	13.654	-37.080	4.0734	34.914	.54475
#3	.83818	13.592	-25.090	2.6599	34.941	.54598
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013

Sample Name: L1305143501S Acquired: 6/4/2013 18:51:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-07

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**132.65**	**2.1551**	**.50211**	**28.620**	**.32401**	**199.53**
Stddev	.38	.0105	.00258	.066	.00167	29.69
%RSD	.28638	.48836	.51368	.22981	.51689	14.881
#1	133.09	2.1670	.50383	28.629	.32413	172.27
#2	132.45	2.1469	.50335	28.549	.32562	231.17
#3	132.42	2.1516	.49914	28.680	.32228	195.15
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24839**	F **-180.93**	F **5566.9**	F **-292270.**	**.61277**	**.20681**
Stddev	.00123	16.86	32.2	1198.	.00267	.00082
%RSD	.49377	9.3212	.57848	.40990	.43613	.39853
#1	.24881	-187.20	5587.1	-293170.	.61099	.20597
#2	.24936	-193.77	5583.8	-292730.	.61584	.20762
#3	.24701	-161.83	5529.8	-290910.	.61148	.20683
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

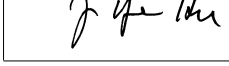
Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.5892**	**.52247**	**.84619**	**.50150**	**.24973**	**.50032**
Stddev	.0429	.00226	.00139	.00132	.00102	.00091
%RSD	.76788	.43328	.16373	.26233	.41041	.18209
#1	5.6087	.52370	.84598	.50001	.25087	.50137
#2	5.6188	.52385	.84492	.50250	.24944	.49991
#3	5.5399	.51986	.84766	.50198	.24889	.49969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305143501S Acquired: 6/4/2013 18:51:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG432768-07

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.61374**	**2.3698**
Stddev	.00152	.2229
%RSD	.24692	9.4075
#1	.61528	2.1204
#2	.61369	2.4394
#3	.61225	2.5496
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20892.**	**28595.**
Stddev	62.	166.
%RSD	.29772	.58036
#1	20853.	28405.
#2	20858.	28712.
#3	20963.	28667.

Approved: June 05, 2013



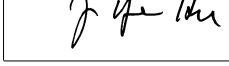
Sample Name: L1305143502 Acquired: 6/4/2013 18:54:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.02283**	**-.00032**	**.01989**	**.01865**	**-.00015**
Stddev	.00049	.00842	.00069	.00023	.00014	.00003
%RSD	59.952	36.879	214.50	1.1737	.75139	21.311
#1	-.00138	.01931	.00040	.02001	.01853	-.00012
#2	-.00062	.03243	-.00097	.02003	.01862	-.00014
#3	-.00046	.01674	-.00040	.01962	.01880	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**132.92**	**.00142**	**.00504**	**-.00124**	**.00011**	**.02730**
Stddev	.54	.00005	.00013	.00040	.00013	.00419
%RSD	.40999	3.2886	2.4820	32.569	114.20	15.363
#1	133.04	.00143	.00519	-.00143	.00024	.02417
#2	132.33	.00137	.00495	-.00078	-.00002	.02567
#3	133.40	.00147	.00499	-.00151	.00011	.03207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35391**	**13.222**	F **-30.046**	**1.9142**	**10.355**	**.01981**
Stddev	.00144	.494	8.076	3.2856	.053	.00075
%RSD	.40807	3.7400	26.878	171.65	.50909	3.7742
#1	.35447	13.582	-34.974	4.4867	10.337	.02067
#2	.35227	12.658	-34.437	3.0428	10.313	.01943
#3	.35499	13.425	-20.726	-1.7870	10.414	.01932
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000			
Low Limit			-.10000			

Approved: June 05, 2013



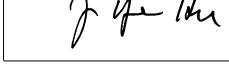
Sample Name: L1305143502 Acquired: 6/4/2013 18:54:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**130.46**	**.43779**	**.00024**	**3.2100**	**.03046**	**37.703**
Stddev	.21	.00283	.00016	.0198	.00016	11.996
%RSD	.15890	.64706	68.184	.61803	.53603	31.817
#1	130.67	.44033	.00007	3.2169	.03038	47.102
#2	130.26	.43474	.00026	3.1876	.03035	41.816
#3	130.46	.43832	.00040	3.2255	.03065	24.192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00188**	F **-226.09**	F **5491.8**	F **-292540.**	**-.00131**	**.00596**
Stddev	.00192	15.69	20.0	908.	.00035	.00170
%RSD	101.84	6.9403	.36375	.31039	27.093	28.525
#1	.00352	-238.29	5514.0	-293550.	-.00125	.00778
#2	.00236	-208.39	5475.3	-291790.	-.00168	.00570
#3	-.00023	-231.59	5486.2	-292270.	-.00098	.00441
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000	9.0000	9.0000		
Low Limit		-.00400	-.00400	-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1610**	**-.00167**	**.36277**	**-.00067**	**-.00062**	**.00029**
Stddev	.0034	.00026	.00107	.00063	.00056	.00008
%RSD	.15519	15.273	.29430	93.372	88.995	26.174
#1	2.1583	-.00147	.36299	.00002	-.00040	.00021
#2	2.1648	-.00159	.36162	-.00085	-.00126	.00031
#3	2.1600	-.00196	.36372	-.00120	-.00022	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305143502 Acquired: 6/4/2013 18:54:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	**.02501**	**.68584**
Stddev	.00007	.23489
%RSD	.26302	34.249
#1	.02501	.61609
#2	.02507	.49371
#3	.02494	.94770
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21127.**	**28614.**
Stddev	20.	141.
%RSD	.09531	.49235
#1	21104.	28485.
#2	21142.	28764.
#3	21134.	28591.

Approved: June 05, 2013

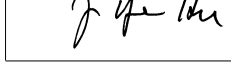
Sample Name: CCV Acquired: 6/4/2013 18:58:06 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43808**	**9.8627**	F **.47259**	**.49479**	**.99220**	**.05014**	**9.8118**
Stddev	.00072	.0406	.00302	.00043	.00507	.00027	.0383
%RSD	.16378	.41192	.63903	.08692	.51139	.52914	.39072
#1	.43819	9.8491	.46910	.49465	.98803	.05039	9.8300
#2	.43732	9.9084	.47451	.49445	.99785	.04986	9.8377
#3	.43874	9.8306	.47414	.49527	.99072	.05016	9.7678
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05756**	**.19880**	**.49816**	**.50063**	**3.9470**	**.99467**	**1.0528**
Stddev	.00016	.00028	.00134	.00112	.0222	.00129	.4420
%RSD	.27347	.14035	.26863	.22416	.56300	.12928	41.985
#1	.05766	.19855	.49950	.50033	3.9468	.99352	.54627
#2	.05738	.19875	.49682	.49969	3.9694	.99442	1.2518
#3	.05764	.19910	.49815	.50188	3.9249	.99606	1.3604
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	10.000%						

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-5.9111**	F **2.4567**	**49.550**	**1.0484**	**9.9063**	**.49370**	**.97921**
Stddev	3.5265	1.1845	.173	.0063	.1135	.00318	.00252
%RSD	59.659	48.213	.34953	.59720	1.1454	.64414	.25770
#1	-9.4877	3.6354	49.515	1.0446	9.7865	.49106	.97917
#2	-5.8088	2.4681	49.737	1.0556	10.012	.49723	.97670
#3	-2.4369	1.2665	49.396	1.0448	9.9202	.49282	.98175
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 18:58:06 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.747**	**.50083**	F **2.3014**	**.50348**	F **-247.39**	F **11.870**	F **-76.818**
Stddev	.234	.00231	5.1649	.00228	9.70	.130	3.163
%RSD	.46089	.46056	224.42	.45197	3.9192	1.0921	4.1180
#1	50.648	.50141	.57739	.50443	-258.57	12.017	-80.430
#2	51.015	.49828	8.1079	.50514	-241.28	11.775	-74.539
#3	50.579	.50278	-1.7810	.50089	-242.32	11.817	-75.486
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value			10.000		10.000	10.000	10.000
Range			-10.000%		-10.000%	10.000%	-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1948**	**.40269**	**5.0268**	**.94126**	**.99459**	**.99378**	**.50791**
Stddev	.0014	.00406	.0555	.00275	.00514	.00731	.00273
%RSD	.11805	1.0072	1.1038	.29199	.51687	.73575	.53712
#1	1.1948	.40142	5.0906	.94443	.99159	.98534	.51095
#2	1.1963	.40722	4.9897	.93986	1.0005	.99786	.50709
#3	1.1934	.39942	5.0001	.93949	.99165	.99814	.50568
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

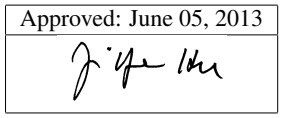
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98397**	**1.0085**	F **.74550**
Stddev	.00288	.0018	.26414
%RSD	.29314	.18160	35.431
#1	.98620	1.0096	1.0233
#2	.98071	1.0063	.71575
#3	.98499	1.0094	.49749
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 18:58:06 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22185.**	**29178.**
Stddev	79.	134.
%RSD	.35720	.45885
#1	22140.	29307.
#2	22277.	29040.
#3	22139.	29188.

Approved: June 05, 2013



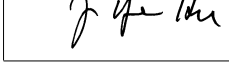
Sample Name: CCB Acquired: 6/4/2013 19:01:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**-.00279**	**.00032**	**.00185**	**.00064**	**-.00024**	**-.01638**
Stddev	.00020	.00718	.00188	.00065	.00006	.00001	.00725
%RSD	38.014	257.71	588.15	34.974	9.7080	4.1744	44.248
#1	-.00073	.00539	.00125	.00125	.00061	-.00025	-.02256
#2	-.00054	-.00806	-.00185	.00254	.00060	-.00025	-.01817
#3	-.00033	-.00568	.00156	.00177	.00071	-.00023	-.00840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**-.00007**	**-.00215**	**.00007**	**-.00102**	**-.00124**	F **.10732**
Stddev	.00007	.00010	.00030	.00040	.00106	.00279	.31893
%RSD	186.93	135.36	14.100	612.83	103.99	224.89	297.18
#1	-.00002	-.00011	-.00202	-.00021	-.00054	-.00429	-.25496
#2	.00002	.00004	-.00193	.00052	-.00029	.00119	.23121
#3	.00011	-.00014	-.00249	-.00011	-.00224	-.00063	.34571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **8.0082**	F **3.7285**	**.01451**	**-.00129**	**.03491**	**.00041**	**.00121**
Stddev	1.0829	.1864	.05554	.00083	.01926	.00002	.00041
%RSD	13.522	5.0002	382.82	64.260	55.166	3.7129	34.283
#1	7.1449	3.7074	.06758	-.00225	.02926	.00039	.00078
#2	9.2232	3.5534	.01915	-.00083	.05635	.00041	.00123
#3	7.6565	3.9245	-.04321	-.00079	.01910	.00042	.00161
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



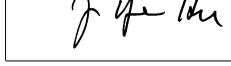
Sample Name: CCB Acquired: 6/4/2013 19:01:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05251**	**.00007**	F **13.592**	**.00050**	F **-239.98**	F **1.0895**	F **-52.638**
Stddev	.00834	.00011	12.939	.00095	21.58	.0400	3.912
%RSD	15.889	153.16	95.201	191.04	8.9931	3.6692	7.4310
#1	-.04994	.00014	15.584	.00004	-224.05	1.0972	-56.913
#2	-.06183	.00013	25.419	-.00014	-231.34	1.1251	-51.763
#3	-.04575	-.00006	-.22834	.00159	-264.54	1.0462	-49.239
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.00227**	**.00221**	**.00012**	**.00017**	**.00035**	**.00065**
Stddev	.00083	.00119	.00184	.00038	.00009	.00159	.00092
%RSD	69.947	52.359	83.214	310.63	52.053	456.14	142.63
#1	-.00091	.00274	.00034	-.00024	.00010	.00200	.00094
#2	-.00211	.00092	.00228	.00052	.00014	.00021	-.00039
#3	-.00052	.00316	.00402	.00009	.00027	-.00117	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.00025**	**-.05442**
Stddev	.00016	.00011	.31906
%RSD	60.180	42.073	586.28
#1	.00038	.00014	-.38162
#2	.00008	.00026	.25581
#3	.00035	.00036	-.03745
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 19:01:22 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22076.**	**28795.**
Stddev	21.	45.
%RSD	.09288	.15621
#1	22097.	28823.
#2	22056.	28820.
#3	22076.	28743.

Approved: June 05, 2013

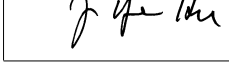
Sample Name: L1305124201 Acquired: 6/4/2013 19:04:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**-.00661**	**.00183**	**.00163**	**.00717**	**-.00024**	**2.6747**
Stddev	.00033	.00873	.00038	.00019	.00023	.00001	.0193
%RSD	52.875	132.08	20.519	11.721	3.1992	5.9552	.72287
#1	-.00068	-.01219	.00226	.00158	.00708	-.00023	2.6552
#2	-.00027	.00345	.00164	.00146	.00743	-.00025	2.6939
#3	-.00092	-.01110	.00159	.00184	.00700	-.00023	2.6751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00017**	**-.00165**	**-.00011**	**.00235**	**.02814**	**.24709**
Stddev	.00010	.00004	.00030	.00031	.00168	.00088	.21255
%RSD	40.216	25.528	18.401	282.52	71.538	3.1265	86.019
#1	-.00036	.00012	-.00161	-.00037	.00223	.02905	.17351
#2	-.00015	.00017	-.00137	-.00019	.00073	.02729	.08111
#3	-.00026	.00021	-.00198	.00024	.00409	.02808	.48665
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9208**	**3.1685**	**.14947**	**-.00116**	**.45989**	**.00036**	**.00023**
Stddev	2.2871	.2232	.02587	.00062	.00789	.00001	.00012
%RSD	78.303	7.0441	17.305	53.631	1.7164	3.4560	50.802
#1	4.1410	3.2494	.17799	-.00177	.46590	.00035	.00011
#2	4.3390	3.3399	.14291	-.00052	.46283	.00037	.00034
#3	.28241	2.9161	.12752	-.00120	.45095	.00037	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



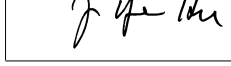
Sample Name: L1305124201 Acquired: 6/4/2013 19:04:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5913**	**-.00013**	**20.446**	**.00064**	F **-258.48**	F **33.787**	F **-1606.4**
Stddev	.0072	.00019	8.866	.00090	10.20	.519	8.4
%RSD	.45183	141.94	43.362	142.13	3.9478	1.5352	.52127
#1	1.5993	.00008	25.074	.00058	-270.06	33.720	-1602.9
#2	1.5853	-.00025	10.224	.00156	-254.54	34.336	-1616.0
#3	1.5895	-.00023	26.039	-.00024	-250.83	33.305	-1600.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00095**	**.00016**	**1.1878**	**-.00192**	**.02553**	**.00102**	**.00219**
Stddev	.00009	.00324	.0121	.00006	.00003	.00011	.00179
%RSD	9.9858	2066.7	1.0155	3.1433	.12124	11.214	81.556
#1	-.00098	-.00059	1.1814	-.00188	.02554	.00105	.00384
#2	-.00102	-.00264	1.2017	-.00199	.02550	.00111	.00244
#3	-.00084	.00370	1.1802	-.00191	.02556	.00089	.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00093**	**.00150**	**.20810**
Stddev	.00024	.00007	.30339
%RSD	26.225	4.8010	145.79
#1	.00111	.00144	-.14099
#2	.00103	.00158	.35719
#3	.00065	.00148	.40809
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305124201 Acquired: 6/4/2013 19:04:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22429.**	**29770.**
Stddev	12.	211.
%RSD	.05289	.70881
#1	22424.	29642.
#2	22442.	29654.
#3	22420.	30013.

Approved: June 05, 2013

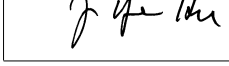
Sample Name: L1305124202 Acquired: 6/4/2013 19:08:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**.00592**	**.00177**	**.00055**	**.00631**	**-.00027**	**5.5031**
Stddev	.00025	.00861	.00052	.00094	.00012	.00002	.0432
%RSD	38.075	145.54	29.481	171.96	1.8261	6.8560	.78403
#1	-.00078	-.00088	.00236	.00015	.00642	-.00026	5.4602
#2	-.00083	.00302	.00157	.00162	.00619	-.00029	5.5465
#3	-.00037	.01560	.00138	-.00013	.00632	-.00026	5.5027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00004**	**-.00170**	**.00037**	**.01543**	**.04477**	**-.06794**
Stddev	.00004	.00010	.00043	.00048	.00179	.00170	.15607
%RSD	54.406	250.35	25.573	129.71	11.608	3.7941	229.72
#1	-.00008	.00015	-.00125	-.00005	.01745	.04582	.10401
#2	-.00003	.00001	-.00173	.00089	.01404	.04281	-.10719
#3	-.00009	-.00004	-.00211	.00027	.01479	.04568	-.20063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.1052**	**.83414**	**.18637**	**.00004**	**.99392**	**.00026**	**-.00023**
Stddev	4.0200	2.7018	.00944	.00047	.01381	.00009	.00009
%RSD	363.72	323.91	5.0642	1046.3	1.3898	32.580	38.151
#1	-.20988	-.43068	.19324	.00044	.97797	.00021	-.00023
#2	2.3916	-1.0033	.19026	.00016	1.0020	.00036	-.00033
#3	-5.4974	3.9364	.17561	-.00047	1.0018	.00022	-.00015
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



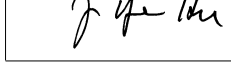
Sample Name: L1305124202 Acquired: 6/4/2013 19:08:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5745**	**-.00007**	**10.360**	**.00200**	F **-293.09**	F **67.481**	F **-3202.1**
Stddev	.0096	.00020	6.206	.00046	31.18	.186	13.7
%RSD	.37304	297.46	59.900	23.064	10.638	.27509	.42719
#1	2.5635	.00013	4.3692	.00169	-328.91	67.630	-3210.4
#2	2.5809	-.00006	16.760	.00177	-272.02	67.273	-3186.3
#3	2.5792	-.00026	9.9504	.00253	-278.34	67.541	-3209.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00201**	**.00187**	**1.3922**	**-.00190**	**.04394**	**.00094**	**.00234**
Stddev	.00110	.00082	.0110	.00017	.00025	.00046	.00146
%RSD	54.458	44.000	.78894	8.8570	.57392	49.222	62.328
#1	-.00075	.00187	1.3904	-.00192	.04378	.00041	.00392
#2	-.00267	.00270	1.4039	-.00173	.04423	.00118	.00105
#3	-.00262	.00105	1.3822	-.00206	.04381	.00125	.00203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00055**	**.00142**	**.13792**
Stddev	.00021	.00006	.06401
%RSD	38.959	4.2552	46.416
#1	.00051	.00149	.17582
#2	.00036	.00139	.17392
#3	.00078	.00138	.06401
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305124202 Acquired: 6/4/2013 19:08:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22309.**	**29476.**
Stddev	42.	157.
%RSD	.18687	.53148
#1	22261.	29628.
#2	22333.	29315.
#3	22334.	29486.

Approved: June 05, 2013

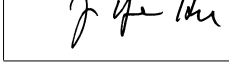
Sample Name: L1305124203 Acquired: 6/4/2013 19:12:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00065**	**.00653**	**.00207**	**.00054**	**.00640**	**-.00025**	**5.5971**
Stddev	.00014	.00495	.00030	.00074	.00012	.00003	.0291
%RSD	21.093	75.770	14.399	136.98	1.8370	13.396	.52072
#1	-.00065	.00565	.00188	.00138	.00638	-.00028	5.5694
#2	-.00078	.00208	.00192	-.00001	.00653	-.00025	5.6275
#3	-.00051	.01187	.00241	.00025	.00630	-.00021	5.5944
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**-.00001**	**-.00177**	**-.00008**	**.01259**	**.04753**	**.23677**
Stddev	.00009	.00002	.00028	.00020	.00202	.00286	.32204
%RSD	35.667	197.20	15.664	254.81	16.048	6.0111	136.01
#1	-.00019	-.00003	-.00174	.00008	.01138	.04939	.53253
#2	-.00036	-.00001	-.00151	-.00030	.01492	.04424	-.10631
#3	-.00022	.00001	-.00206	-.00002	.01145	.04896	.28408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-4.3350**	**2.0815**	**.18275**	**-.00039**	**.99614**	**.00022**	**-.00022**
Stddev	7.4642	1.1117	.01044	.00112	.01184	.00006	.00014
%RSD	172.18	53.411	5.7109	291.29	1.1889	26.018	62.905
#1	-12.918	2.1001	.17114	-.00150	.99861	.00027	-.00019
#2	.6339	3.1838	.19137	-.00041	1.0065	.00016	-.00009
#3	-.7206	.96051	.18572	.00075	.98325	.00024	-.00036
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



Sample Name: L1305124203 Acquired: 6/4/2013 19:12:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6095**	**-.00005**	**8.9330**	**.00094**	F **-270.62**	F **68.191**	F **-3244.1**
Stddev	.0056	.00039	2.9915	.00095	39.91	.323	13.2
%RSD	.21656	789.63	33.488	100.98	14.746	.47294	.40586
#1	2.6151	.00032	10.304	.00200	-280.85	68.205	-3252.4
#2	2.6038	-.00046	10.994	.00061	-304.42	68.506	-3251.0
#3	2.6096	-.00001	5.5018	.00020	-226.60	67.862	-3228.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**-.00090**	**1.3979**	**-.00201**	**.04444**	**.00062**	**.00268**
Stddev	.00125	.00166	.0104	.00027	.00032	.00079	.00104
%RSD	184.16	184.84	.74298	13.488	.72266	128.35	38.697
#1	.00059	.00041	1.3972	-.00203	.04446	.00144	.00168
#2	-.00071	-.00033	1.4087	-.00226	.04475	.00056	.00375
#3	-.00192	-.00277	1.3879	-.00172	.04411	-.00015	.00263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00036**	**.00179**	**.19169**
Stddev	.00011	.00008	.14830
%RSD	30.031	4.2215	77.365
#1	.00048	.00186	.36090
#2	.00035	.00171	.12989
#3	.00026	.00180	.08428
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305124203 Acquired: 6/4/2013 19:12:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22362.**	**29220.**
Stddev	52.	94.
%RSD	.23312	.32220
#1	22326.	29111.
#2	22339.	29280.
#3	22422.	29268.

Approved: June 05, 2013

Sample Name: L1305124204 Acquired: 6/4/2013 19:15:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.00504**	**.00066**	**.00100**	**.01006**	**-.00024**	**2.7495**
Stddev	.00014	.01014	.00150	.00046	.00018	.00001	.0268
%RSD	33.354	201.25	229.75	45.528	1.7608	4.0039	.97668
#1	-.00044	-.00286	.00127	.00050	.01005	-.00023	2.7533
#2	-.00052	.00150	.00175	.00139	.00988	-.00023	2.7209
#3	-.00026	.01648	-.00106	.00112	.01024	-.00025	2.7742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00004**	**-.00176**	**.00013**	**.00504**	**.02694**	F **-.19130**
Stddev	.00001	.00008	.00014	.00003	.00232	.00041	.24274
%RSD	5.5975	188.92	7.8252	25.987	45.950	1.5215	126.88
#1	-.00022	.00012	-.00177	.00015	.00567	.02690	-.10865
#2	-.00023	-.00003	-.00189	.00010	.00697	.02737	-.46458
#3	-.00024	.00004	-.00161	.00016	.00247	.02655	-.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3087**	**2.3953**	**.13089**	**-.00085**	**.52135**	**.00030**	**-.00012**
Stddev	8.1236	1.1196	.02041	.00112	.02425	.00001	.00007
%RSD	351.87	46.743	15.592	131.21	4.6519	2.8946	57.905
#1	10.273	3.6181	.13833	.00043	.49505	.00029	-.00019
#2	-5.9658	2.1477	.10781	-.00138	.52618	.00029	-.00012
#3	2.6194	1.4202	.14654	-.00160	.54283	.00031	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

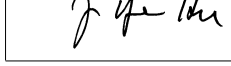
Sample Name: L1305124204 Acquired: 6/4/2013 19:15:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5679**	**-.00032**	**15.860**	**.00024**	F **-253.32**	F **27.957**	F **-1298.7**
Stddev	.0072	.00017	15.583	.00098	16.39	.115	8.8
%RSD	.45613	53.367	98.255	415.06	6.4684	.41044	.68105
#1	1.5729	-.00012	-2.0361	.00136	-252.46	27.872	-1290.5
#2	1.5597	-.00043	26.432	-.00047	-270.12	27.911	-1297.6
#3	1.5710	-.00041	23.185	-.00017	-237.38	28.087	-1308.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00224**	**.00149**	**1.4892**	**-.00206**	**.02526**	**.00175**	**.00115**
Stddev	.00042	.00288	.0090	.00022	.00023	.00013	.00055
%RSD	18.652	193.77	.60287	10.864	.91010	7.2590	47.329
#1	-.00177	-.00143	1.4817	-.00214	.02529	.00175	.00075
#2	-.00257	.00157	1.4866	-.00180	.02502	.00188	.00093
#3	-.00237	.00432	1.4991	-.00223	.02547	.00162	.00177
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00074**	**.00367**	**.25588**
Stddev	.00014	.00007	.31100
%RSD	18.616	1.8423	121.55
#1	.00064	.00362	-.10177
#2	.00089	.00364	.46287
#3	.00068	.00375	.40652
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305124204 Acquired: 6/4/2013 19:15:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22349.**	**29760.**
Stddev	5.	113.
%RSD	.02317	.37866
#1	22344.	29640.
#2	22349.	29775.
#3	22354.	29864.

Approved: June 05, 2013

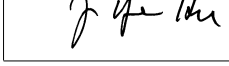
Sample Name: L1305126202 Acquired: 6/4/2013 19:19:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00348**	**.00141**	**.04813**	**.00059**	**-.00026**	**3.0312**
Stddev	.00004	.01456	.00106	.00041	.00011	.00000	.0222
%RSD	19.324	417.93	75.298	.85173	18.722	1.3615	.73310
#1	-.00025	-.00922	.00251	.04770	.00071	-.00027	3.0546
#2	-.00017	.01938	.00130	.04852	.00049	-.00026	3.0104
#3	-.00019	.00029	.00041	.04817	.00057	-.00026	3.0287
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00017**	**-.00196**	**-.00012**	**.00097**	**.00580**	F **-.18176**
Stddev	.00006	.00004	.00033	.00044	.00191	.00209	.11051
%RSD	50.814	25.139	16.718	367.61	197.25	36.017	60.800
#1	-.00011	.00018	-.00200	.00013	.00303	.00721	-.08927
#2	-.00018	.00012	-.00161	-.00063	.00062	.00340	-.30415
#3	-.00006	.00021	-.00226	.00015	-.00074	.00678	-.15188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.8065**	**1.7089**	**.01159**	**.00046**	**.81883**	**.00926**	**-.00045**
Stddev	4.6232	.9318	.00318	.00137	.00964	.00014	.00005
%RSD	121.45	54.523	27.418	297.05	1.1773	1.5521	12.069
#1	5.0235	1.5988	.00971	-.00103	.82996	.00910	-.00050
#2	7.6995	2.6908	.01525	.00074	.81291	.00929	-.00045
#3	-1.3034	.83709	.00979	.00167	.81364	.00938	-.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



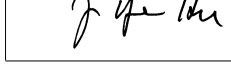
Sample Name: L1305126202 Acquired: 6/4/2013 19:19:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-02

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.4416**	**-.00035**	**18.807**	**.00209**	F **-241.37**	F **72.474**	F **-3598.1**
Stddev	.0053	.00032	5.951	.00099	23.76	.487	19.2
%RSD	.36695	91.917	31.640	47.555	9.8445	.67211	.53288
#1	1.4420	-.00061	23.400	.00094	-218.37	71.927	-3578.5
#2	1.4361	-.00043	12.085	.00264	-239.92	72.860	-3616.8
#3	1.4466	.00000	20.937	.00268	-265.83	72.636	-3598.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00274**	**-.00042**	**.06395**	**-.00209**	**.00361**	**.00097**	**.00163**
Stddev	.00070	.00036	.00253	.00023	.00005	.00050	.00134
%RSD	25.682	86.403	3.9527	11.063	1.3672	52.097	81.994
#1	-.00193	-.00069	.06255	-.00207	.00360	.00044	.00073
#2	-.00325	-.00056	.06244	-.00187	.00366	.00144	.00317
#3	-.00303	-.00001	.06687	-.00233	.00357	.00102	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00029**	**.00101**	**.07510**
Stddev	.00007	.00007	.18218
%RSD	22.298	7.2769	242.59
#1	.00024	.00102	-.13491
#2	.00027	.00093	.19071
#3	.00037	.00108	.16949
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305126202 Acquired: 6/4/2013 19:19:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22431.**	**29731.**
Stddev	32.	171.
%RSD	.14131	.57510
#1	22454.	29927.
#2	22443.	29655.
#3	22395.	29612.

Approved: June 05, 2013

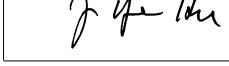
Sample Name: L1305126204S Acquired: 6/4/2013 19:22:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-07

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00127**	**.04932**	**.00402**	**.05860**	**.00570**	**-.00001**	**3.0873**
Stddev	.00031	.01147	.00138	.00095	.00025	.00001	.0184
%RSD	24.101	23.253	34.397	1.6270	4.3413	46.571	.59571
#1	.00093	.03844	.00561	.05817	.00550	-.00001	3.0953
#2	.00134	.06130	.00322	.05970	.00563	-.00002	3.1004
#3	.00152	.04822	.00322	.05795	.00598	-.00001	3.0663
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**.00112**	**.00060**	**.00201**	**.01584**	**.01029**	**.20323**
Stddev	.00009	.00008	.00029	.00036	.00108	.00041	.07677
%RSD	55.405	7.2612	47.134	17.720	6.8479	3.9903	37.774
#1	.00017	.00121	.00030	.00169	.01651	.01028	.11614
#2	.00024	.00105	.00064	.00194	.01459	.01071	.23245
#3	.00006	.00109	.00087	.00239	.01642	.00989	.26110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2275**	**3.6144**	**.25792**	**.00628**	**.85039**	**.01268**	**.00357**
Stddev	10.001	.0601	.00784	.00088	.00327	.00008	.00022
%RSD	448.96	1.6635	3.0392	13.965	.38419	.63736	6.2477
#1	-8.2289	3.5466	.26697	.00585	.84889	.01264	.00382
#2	3.2118	3.6355	.25351	.00570	.84815	.01263	.00351
#3	11.700	3.6612	.25328	.00729	.85414	.01278	.00339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



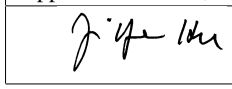
Sample Name: L1305126204S Acquired: 6/4/2013 19:22:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-07

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6835**	**.00245**	**15.261**	**.00336**	F **-264.50**	F **71.510**	F **-3600.5**
Stddev	.0107	.00031	10.958	.00095	9.84	.391	20.4
%RSD	.63849	12.636	71.807	28.170	3.7211	.54670	.56789
#1	1.6916	.00259	9.1170	.00416	-269.51	71.819	-3617.1
#2	1.6876	.00266	8.7531	.00361	-270.84	71.639	-3606.6
#3	1.6713	.00209	27.913	.00231	-253.16	71.070	-3577.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00337**	**.00103**	**.08708**	**.00143**	**.00847**	**.00586**	**.00424**
Stddev	.00088	.00165	.00170	.00038	.00008	.00168	.00182
%RSD	26.102	159.80	1.9471	26.916	1.0022	28.661	43.002
#1	.00323	.00118	.08871	.00146	.00846	.00392	.00449
#2	.00256	.00260	.08721	.00180	.00855	.00691	.00593
#3	.00430	-.00069	.08533	.00103	.00839	.00674	.00231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00493**	**.00593**	**.02761**
Stddev	.00006	.00012	.21491
%RSD	1.1434	1.9548	778.29
#1	.00495	.00593	.14964
#2	.00486	.00606	-.22053
#3	.00496	.00582	.15374
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305126204S Acquired: 6/4/2013 19:22:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-07

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22443.**	**30006.**
Stddev	30.	50.
%RSD	.13426	.16645
#1	22466.	30027.
#2	22409.	29949.
#3	22454.	30042.

Approved: June 05, 2013

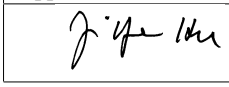
Sample Name: L1305126206SD Acquired: 6/4/2013 19:26:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-08

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00164**	**.04742**	**.00405**	**.06185**	**.00597**	**.00000**	**3.3194**
Stddev	.00018	.00793	.00126	.00078	.00018	.0000	.0182
%RSD	10.952	16.725	31.019	1.2533	2.9845	731.33	.54725
#1	.00167	.05511	.00512	.06253	.00590	-.00003	3.3337
#2	.00145	.04788	.00267	.06101	.00617	.00004	3.3255
#3	.00180	.03927	.00436	.06200	.00583	-.00002	3.2990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00117**	**.00104**	**.00261**	**.01588**	**.01107**	**-.07974**
Stddev	.00012	.00012	.00028	.00048	.00320	.00421	.28573
%RSD	138.19	10.604	26.948	18.461	20.120	37.997	358.35
#1	.00013	.00113	.00072	.00314	.01626	.00715	.05957
#2	-.00005	.00106	.00126	.00246	.01888	.01055	.10962
#3	.00019	.00130	.00114	.00222	.01252	.01551	-.40840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.6825**	**2.2894**	**.25035**	**.00634**	**.90553**	**.01247**	**.00411**
Stddev	5.0857	.5260	.02435	.00140	.01882	.00012	.00022
%RSD	302.27	22.977	9.7267	22.014	2.0780	.95637	5.2589
#1	2.1374	2.4567	.24853	.00659	.90177	.01256	.00428
#2	-7.4551	2.7115	.27556	.00484	.92595	.01234	.00420
#3	.27024	1.7001	.22696	.00760	.88888	.01252	.00387
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



Sample Name: L1305126206SD Acquired: 6/4/2013 19:26:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-08

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.7970**	**.00252**	**9.8280**	**.00296**	F **-222.08**	F **74.886**	F **-3789.1**
Stddev	.0120	.00049	3.6217	.00136	13.04	.633	8.7
%RSD	.66624	19.308	36.851	45.771	5.8736	.84469	.22867
#1	1.8015	.00210	7.0432	.00180	-234.51	75.530	-3794.6
#2	1.7834	.00306	8.5184	.00264	-223.22	74.266	-3779.1
#3	1.8061	.00241	13.922	.00445	-208.50	74.863	-3793.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00511**	**.00315**	**.09158**	**.00221**	**.00898**	**.00576**	**.00426**
Stddev	.00101	.00121	.00179	.00047	.00007	.00085	.00074
%RSD	19.680	38.426	1.9570	21.210	.78123	14.806	17.337
#1	.00627	.00189	.09184	.00275	.00900	.00674	.00349
#2	.00445	.00326	.08967	.00189	.00890	.00526	.00496
#3	.00461	.00431	.09323	.00199	.00904	.00526	.00433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00518**	**.00618**	**.39123**
Stddev	.00000	.00001	.11915
%RSD	.08641	.15031	30.454
#1	.00519	.00619	.52765
#2	.00518	.00618	.33851
#3	.00518	.00618	.30755
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305126206SD Acquired: 6/4/2013 19:26:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG432604-08

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22611.**	**30008.**
Stddev	57.	67.
%RSD	.25322	.22260
#1	22640.	29998.
#2	22648.	30079.
#3	22545.	29946.

Approved: June 05, 2013

Sample Name: L1305126214 Acquired: 6/4/2013 19:29:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**-.00368**	**.00012**	**.14814**	**.00074**	**-.00025**	**3.7277**
Stddev	.00022	.01465	.00136	.00125	.00020	.00001	.0263
%RSD	37.969	397.66	1180.4	.84047	27.267	4.3659	.70574
#1	-.00049	.01284	-.00007	.14799	.00095	-.00025	3.7569
#2	-.00081	-.01508	.00156	.14946	.00055	-.00026	3.7060
#3	-.00040	-.00880	-.00114	.14698	.00071	-.00024	3.7200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00007**	**-.00204**	**-.00019**	**.08673**	**.02705**	F **-.16391**
Stddev	.00004	.00014	.00026	.00014	.00114	.00264	.37674
%RSD	35.746	198.81	12.548	74.909	1.3143	9.7532	229.85
#1	-.00011	.00021	-.00218	-.00020	.08610	.02952	.18838
#2	-.00018	.00006	-.00175	-.00004	.08804	.02736	-.11901
#3	-.00009	-.00006	-.00220	-.00032	.08603	.02427	-.56109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.92389**	**2.3664**	**.29594**	**.00911**	**1.8685**	**.14662**	**-.00004**
Stddev	12.366	.1977	.04055	.00069	.0169	.00115	.00012
%RSD	1338.4	8.3528	13.703	7.5519	.90328	.78544	314.71
#1	-13.203	2.1419	.31449	.00935	1.8525	.14700	-.00014
#2	-1.0949	2.4428	.24943	.00965	1.8861	.14753	-.00007
#3	11.526	2.5145	.32390	.00833	1.8669	.14532	.00009
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

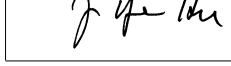
Sample Name: L1305126214 Acquired: 6/4/2013 19:29:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.54018**	**.00051**	**5.1305**	**.00042**	F **-224.48**	F **143.18**	F **-7286.6**
Stddev	.00576	.00080	11.092	.00040	11.77	.06	19.6
%RSD	1.0655	157.47	216.20	95.962	5.2430	.04478	.26852
#1	.54652	.00066	2.3879	.00026	-229.42	143.24	-7307.2
#2	.53529	-.00036	-4.3333	.00012	-232.97	143.18	-7284.2
#3	.53873	.00123	17.337	.00088	-211.04	143.11	-7268.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00190**	**-.00041**	**.07474**	**-.00197**	**.02508**	**.00101**	**.00151**
Stddev	.00074	.00121	.00079	.00018	.00017	.00109	.00094
%RSD	39.099	299.63	1.0535	9.1734	.68912	108.06	62.012
#1	-.00104	.00028	.07386	-.00193	.02528	.00091	.00047
#2	-.00235	-.00181	.07538	-.00181	.02495	-.00003	.00179
#3	-.00230	.00032	.07500	-.00217	.02502	.00214	.00229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00021**	**.00100**	**.21425**
Stddev	.00045	.00003	.12207
%RSD	213.65	3.4151	56.976
#1	-.00012	.00102	.35215
#2	.00072	.00096	.12000
#3	.00003	.00102	.17061
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305126214 Acquired: 6/4/2013 19:29:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22649.**	**30055.**
Stddev	11.	110.
%RSD	.04969	.36646
#1	22638.	30031.
#2	22648.	29959.
#3	22660.	30176.

Approved: June 05, 2013

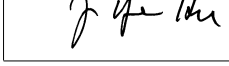
Sample Name: CCV Acquired: 6/4/2013 19:33:14 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44057	9.6855	F .47441	.49666	.97886	.05010	9.6430
Stddev	.00052	.0784	.00360	.00114	.01027	.00019	.0884
%RSD	.11822	.80928	.75914	.23041	1.0489	.38125	.91680
#1	.44116	9.6138	.47033	.49786	.97077	.04995	9.5681
#2	.44019	9.6735	.47712	.49558	.97541	.05032	9.6203
#3	.44035	9.7692	.47580	.49653	.99041	.05004	9.7405
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000		.40000				
Range	10.000%		10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .05805	.19992	.49895	.50349	3.8549	.99632	1.0946
Stddev	.00041	.00135	.00145	.00211	.0495	.00167	.2389
%RSD	.71307	.67621	.29040	.41852	1.2837	.16758	21.829
#1	.05768	.19907	.49949	.50169	3.8133	.99582	.92022
#2	.05850	.20148	.50005	.50581	3.8418	.99818	1.3669
#3	.05799	.19923	.49731	.50298	3.9097	.99496	.99655
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	10.000%						

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -5.9800	F 2.0802	48.513	1.0411	9.5007	.47468	.98276
Stddev	5.0006	1.4150	.522	.0098	.1753	.00367	.00215
%RSD	83.621	68.020	1.0756	.94124	1.8449	.77294	.21900
#1	-2.6242	.98686	48.158	1.0314	9.4141	.47466	.98193
#2	-3.5887	1.5754	48.269	1.0409	9.3855	.47102	.98520
#3	-11.727	3.6783	49.112	1.0510	9.7024	.47836	.98114
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013



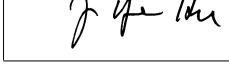
Sample Name: CCV Acquired: 6/4/2013 19:33:14 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.089**	**.50314**	F **7.0267**	**.50197**	F **-191.47**	**10.181**	F **8.6778**
Stddev	.361	.00231	6.0375	.00300	37.58	.057	2.0388
%RSD	.72130	.45871	85.923	.59780	19.627	.56416	23.494
#1	49.802	.50157	13.553	.50348	-180.74	10.180	6.9543
#2	49.970	.50579	5.8879	.50392	-233.25	10.124	10.928
#3	50.494	.50205	1.6397	.49852	-160.43	10.239	8.1507
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			-10.000%		-10.000%		-10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2105**	**.40483**	**5.0973**	**.94287**	**.98497**	**.97697**	**.51003**
Stddev	.0058	.00203	.0211	.00327	.00806	.01447	.00202
%RSD	.47695	.50152	.41363	.34715	.81808	1.4813	.39611
#1	1.2136	.40445	5.1072	.94483	.97868	.97002	.50826
#2	1.2141	.40703	5.1116	.94469	.98218	.96729	.51223
#3	1.2038	.40302	5.0731	.93909	.99405	.99361	.50960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98142**	**.99997**	F **.70052**
Stddev	.00177	.00137	.04468
%RSD	.18081	.13684	6.3781
#1	.98181	.99952	.75125
#2	.98296	1.0015	.66701
#3	.97948	.99888	.68330
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/4/2013 19:33:14 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22100.**	**30177.**
Stddev	41.	172.
%RSD	.18426	.56997
#1	22072.	30162.
#2	22081.	30356.
#3	22147.	30013.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 19:36:30 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00063**	**-.00391**	**.00156**	**.00132**	**.00064**	**-.00027**	**-.04348**
Stddev	.00032	.01322	.00201	.00105	.00013	.00001	.01276
%RSD	51.112	338.20	128.84	79.235	20.768	3.9510	29.344
#1	-.00095	-.00884	-.00054	.00054	.00064	-.00027	-.03294
#2	-.00062	-.01395	.00175	.00251	.00077	-.00026	-.03984
#3	-.00031	.01107	.00347	.00092	.00051	-.00028	-.05767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00007**	**-.00195**	**.00010**	**.00041**	**-.00019**	F **-.40761**
Stddev	.00014	.00014	.00021	.00040	.00080	.00319	.24311
%RSD	413.37	195.39	10.844	408.19	194.58	1712.7	59.643
#1	.00011	-.00006	-.00189	-.00023	.00048	-.00088	-.13462
#2	-.00005	.00005	-.00178	-.00002	.00118	-.00298	-.60077
#3	-.00016	.00023	-.00219	.00055	-.00042	.00329	-.48745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **4.4819**	F **1.5657**	**-.02467**	**-.00171**	**-.00388**	**.00011**	**.00150**
Stddev	6.2869	1.7698	.00927	.00093	.01363	.00000	.00057
%RSD	140.27	113.03	37.582	54.600	351.45	1.9931	38.001
#1	-2.7719	-.21416	-.02848	-.00277	-.01606	.00010	.00109
#2	8.3560	1.5861	-.01410	-.00102	-.00642	.00011	.00125
#3	7.8616	3.3252	-.03143	-.00134	.01084	.00011	.00215
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

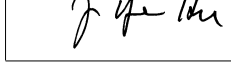
Sample Name: CCB Acquired: 6/4/2013 19:36:30 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04771**	**.00028**	F **9.4553**	**.00103**	F **-215.89**	F **1.4560**	F **-70.700**
Stddev	.00330	.00021	2.1406	.00151	41.98	2.5232	123.61
%RSD	6.9133	75.672	22.639	146.05	19.446	173.30	174.84
#1	-.04837	.00013	9.8877	.00039	-170.67	-.04246	-.5606
#2	-.05063	.00019	7.1315	.00276	-253.63	.04135	1.8913
#3	-.04413	.00053	11.347	-.00004	-223.35	4.3692	-213.43
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**.00226**	**.00229**	**.00037**	**.00002**	**.00116**	**.00055**
Stddev	.00009	.00236	.00274	.00076	.00004	.00024	.00137
%RSD	17.125	104.56	119.56	206.41	218.74	20.975	247.69
#1	-.00047	.00165	.00106	-.00012	.00005	.00089	.00034
#2	-.00052	.00027	.00038	-.00001	.00004	.00136	.00202
#3	-.00065	.00487	.00543	.00125	-.00003	.00122	-.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00021**	**.00048**	F **.42656**
Stddev	.00016	.00042	.05882
%RSD	78.178	85.905	13.791
#1	.00039	.00027	.36688
#2	.00014	.00022	.42831
#3	.00009	.00096	.48449
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 19:36:30 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22174.**	**29746.**
Stddev	26.	172.
%RSD	.11860	.57708
#1	22146.	29715.
#2	22198.	29592.
#3	22179.	29931.

Approved: June 05, 2013

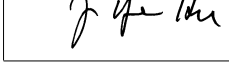
Sample Name: L1305088837 Acquired: 6/4/2013 19:40:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**-.03744**	**.00272**	**-.00172**	**-.00060**	**-.00003**	**-.00074**
Stddev	.00012	.00309	.00035	.00017	.00040	.00001	.00900
%RSD	26.851	8.2431	12.879	10.112	67.314	26.366	1215.0
#1	.00051	-.04039	.00305	-.00191	-.00015	-.00003	-.00907
#2	.00049	-.03423	.00235	-.00167	-.00070	-.00003	-.00196
#3	.00030	-.03768	.00275	-.00157	-.00094	-.00004	.00881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**.00008**	**-.00166**	**-.00006**	**-.00116**	**.00159**	**-.09300**
Stddev	.00005	.00005	.00016	.00010	.00115	.00099	.10922
%RSD	33.045	65.721	9.5925	182.04	98.433	62.410	117.44
#1	-.00019	.00007	-.00157	.00004	-.00214	.00215	-.19918
#2	-.00011	.00004	-.00156	-.00017	.00010	.00217	.01903
#3	-.00012	.00014	-.00184	-.00004	-.00145	.00044	-.09884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.29746**	**3.4780**	**-.00323**	**-.00303**	**.01015**	**.00024**	**.00026**
Stddev	3.4693	.6419	.00935	.00134	.00418	.00008	.00008
%RSD	1166.3	18.457	289.38	44.346	41.135	32.908	29.505
#1	-.60829	2.8538	-.01064	-.00410	.01378	.00029	.00017
#2	4.1298	3.4440	.00727	-.00152	.01109	.00029	.00029
#3	-2.6291	4.1363	-.00632	-.00347	.00559	.00015	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



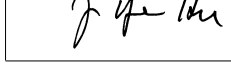
Sample Name: L1305088837 Acquired: 6/4/2013 19:40:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03396**	**.00174**	F **-11.272**	**.00470**	F **-102.16**	**.92298**	F **-40.277**
Stddev	.01303	.00003	3.109	.00051	84.05	.04968	1.033
%RSD	38.376	1.7615	27.580	10.773	82.275	5.3825	2.5657
#1	-.04894	.00176	-7.8822	.00519	-193.92	.96882	-41.344
#2	-.02523	.00171	-11.945	.00418	-83.690	.92992	-40.204
#3	-.02771	.00176	-13.990	.00474	-28.880	.87019	-39.281
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.00401**	**.01173**	**-.00133**	**-.00005**	**.00250**	**.00278**
Stddev	.00042	.00084	.00412	.00009	.00013	.00058	.00103
%RSD	92.364	20.928	35.163	6.6904	257.69	23.289	37.149
#1	-.00090	.00498	.01534	-.00143	.00010	.00183	.00234
#2	-.00009	.00352	.01262	-.00131	-.00010	.00277	.00396
#3	-.00036	.00352	.00723	-.00125	-.00016	.00290	.00204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00038**	**1.1526**
Stddev	.00013	.00004	.2282
%RSD	68.512	10.547	19.797
#1	.00020	.00037	1.4044
#2	.00030	.00034	1.0938
#3	.00005	.00042	.95952
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088837 Acquired: 6/4/2013 19:40:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**53124.**	**69189.**
Stddev	4654.	11960.
%RSD	8.7599	17.286
#1	58492.	55912.
#2	50645.	72538.
#3	50234.	79118.

Approved: June 05, 2013

Sample Name: L1305088838 Acquired: 6/4/2013 19:43:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**-.03053**	**.00251**	**-.00214**	**-.00051**	**-.00004**	**.01404**
Stddev	.00023	.01209	.00038	.00047	.00046	.00001	.00854
%RSD	67.974	39.601	15.016	21.906	89.397	33.652	60.812
#1	.00061	-.01698	.00283	-.00265	-.00004	-.00006	.02319
#2	.00018	-.03441	.00261	-.00172	-.00054	-.00003	.00627
#3	.00024	-.04020	.00209	-.00207	-.00095	-.00003	.01267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00006**	**-.00164**	**-.00004**	**-.00107**	**.00323**	F **-.20160**
Stddev	.00006	.00004	.00010	.00007	.00183	.00144	.05366
%RSD	36.262	65.002	6.0070	152.75	170.54	44.603	26.617
#1	-.00012	.00004	-.00161	-.00011	.00072	.00438	-.23896
#2	-.00024	.00003	-.00157	-.00004	-.00294	.00369	-.22573
#3	-.00017	.00011	-.00175	.00002	-.00100	.00162	-.14011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.72612**	**3.5451**	**.00102**	**-.00322**	**.03938**	**.00023**	**.00048**
Stddev	4.5575	1.0942	.01884	.00011	.02973	.00011	.00033
%RSD	627.66	30.866	1839.7	3.3768	75.478	48.443	68.915
#1	-5.8414	3.7218	.00379	-.00323	.07261	.00024	.00013
#2	2.9021	2.3732	.01833	-.00333	.03025	.00034	.00052
#3	.76096	4.5401	-.01905	-.00311	.01530	.00012	.00078
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

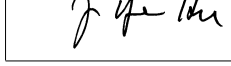
Sample Name: L1305088838 Acquired: 6/4/2013 19:43:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04065**	**.00171**	F **-5.5876**	**.00479**	F **-121.55**	**1.4673**	F **-69.176**
Stddev	.01675	.00024	6.4704	.00063	99.96	.0586	2.909
%RSD	41.201	14.031	115.80	13.201	82.244	3.9926	4.2052
#1	-.05957	.00152	-12.480	.00483	-227.68	1.4875	-69.317
#2	-.03471	.00198	.3559	.00539	-107.79	1.5132	-72.012
#3	-.02769	.00162	-4.6388	.00413	-29.175	1.4013	-66.200
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.00445**	**-.00111**	**-.00127**	**.00008**	**.00273**	**.00284**
Stddev	.00071	.00037	.00034	.00019	.00024	.00051	.00064
%RSD	136.84	8.2690	30.614	15.129	294.53	18.867	22.471
#1	-.00133	.00487	-.00085	-.00149	.00035	.00230	.00312
#2	-.00013	.00426	-.00149	-.00114	.00000	.00258	.00211
#3	-.00009	.00421	-.00098	-.00118	-.00011	.00330	.00329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00018**	**.00053**	**1.1961**
Stddev	.00003	.00014	.2733
%RSD	19.130	25.717	22.847
#1	.00015	.00041	1.4834
#2	.00016	.00051	.93949
#3	.00021	.00068	1.1654
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088838 Acquired: 6/4/2013 19:43:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**52407.**	**66505.**
Stddev	4846.	16721.
%RSD	9.2461	25.142
#1	57994.	50040.
#2	49365.	66005.
#3	49860.	83470.

Approved: June 05, 2013

Sample Name: L1305088845 Acquired: 6/4/2013 19:47:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00016**	k **-.02968**	s **.00248**	s **-.00204**	k **-.00059**	s **-.00006**
Stddev	.00028	.00632	.00093	.00050	.00038	.00002
%RSD	173.51	21.291	37.741	24.613	63.868	36.472
#1	.00027	-.02512	.00320	-.00257	-.00019	-.00006
#2	.00036	-.02703	.00281	-.00196	-.00063	-.00004
#3	s -.00015	k -.03689	s .00142	s -.00158	k -.00094	s -.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00374**	s **-.00010**	s **.00013**	s **-.00165**	s **.00015**	k **-.00061**
Stddev	.00841	.00006	.00001	.00015	.00017	.00106
%RSD	225.01	60.039	6.4775	8.9838	111.56	174.62
#1	-.01310	-.00016	.00013	-.00150	.00012	.00025
#2	-.00130	-.00011	.00013	-.00168	.00000	-.00180
#3	.00318	s -.00004	s .00014	s -.00179	s .00034	k -.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00061**	F **-.17782**	**.94168**	**3.5972**	**-.00752**	**-.00308**
Stddev	.00088	.13510	3.1796	.5928	.00714	.00045
%RSD	142.84	75.975	337.65	16.479	94.977	14.524
#1	.00048	-.30416	-1.2225	4.2659	-.01219	-.00319
#2	.00155	-.19388	4.5922	3.3892	-.01107	-.00258
#3	s -.00019	-.03541	-.54465	3.1365	.00070	-.00346
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000				
Low Limit		-.10000				

Approved: June 05, 2013

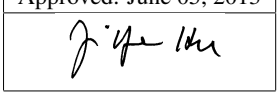
Sample Name: L1305088845 Acquired: 6/4/2013 19:47:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.01977**	k **.00017**	s **.00042**	**-.03570**	s **.00172**	sF **-16.290**
Stddev	.01203	.00008	.00018	.01392	.00048	7.133
%RSD	60.849	44.794	42.446	38.985	27.627	43.785
#1	.03188	.00021	.00025	-.05003	.00194	-20.901
#2	.01960	.00021	.00039	-.03485	.00204	-19.896
#3	k .00783	k .00008	s .00060	-.02223	s .00117	s -8.0747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						450.00
Low Limit						-.00400

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00485**	F **-95.016**	s **1.1489**	sF **-53.019**	s **-.00117**	s **.00418**
Stddev	.00039	69.153	.0703	5.767	.00109	.00062
%RSD	8.1285	72.780	6.1209	10.877	93.074	14.800
#1	.00530	-169.11	1.1142	-48.745	-.00040	.00469
#2	.00457	-83.743	1.1027	-50.734	-.00069	.00349
#3	s .00469	-32.192	s 1.2298	s -59.578	s -.00241	s .00437
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000		9.0000		
Low Limit		-.00400		-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **-.00486**	s **-.00084**	**-.00011**	k **.00232**	s **.00293**	s **.00016**
Stddev	.00238	.00054	.00015	.00062	.00052	.00008
%RSD	48.946	64.679	139.13	26.639	17.854	50.051
#1	-.00677	-.00139	.00006	.00163	.00335	.00022
#2	-.00562	-.00082	-.00018	.00282	.00309	.00018
#3	s -.00219	s -.00031	-.00020	k .00250	s .00235	s .00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305088845 Acquired: 6/4/2013 19:47:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	s **.00051**	s **1.0429**
Stddev	.00007	.2746
%RSD	14.098	26.329
#1	.00044	1.3592
#2	.00051	.90353
#3	s .00058	s .86589
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	^ *****	**68849.**
Stddev	-----	14102.
%RSD	-----	20.483
#1	58142.	54484.
#2	52593.	69391.
#3	^ -----	82673.

Approved: June 05, 2013

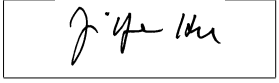
Sample Name: L1305088846 Acquired: 6/4/2013 19:50:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00034**	k **-.03437**	s **.00262**	s **-.00218**	k **-.00058**	s **-.00004**
Stddev	.00007	.00445	.00068	.00040	.00034	.00002
%RSD	19.759	12.956	26.095	18.215	57.996	35.525
#1	.00034	-.02923	.00197	-.00261	-.00020	-.00005
#2	s .00027	k -.03673	s .00333	s -.00182	k -.00074	s -.00006
#3	.00040	-.03714	.00254	-.00211	-.00082	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00755**	s **-.00017**	s **.00010**	s **-.00167**	s **-.00003**	k **-.00085**
Stddev	.01009	.00003	.00009	.00021	.00008	.00058
%RSD	133.61	16.178	85.470	12.331	236.39	68.290
#1	-.01865	-.00017	.00008	-.00148	-.00001	-.00115
#2	-.00507	s -.00019	s .00020	s -.00164	s -.00013	k -.00018
#3	.00107	-.00014	.00003	-.00189	.00003	-.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00083**	**-.08545**	**2.0402**	**3.4373**	**-.00856**	**-.00331**
Stddev	.00130	.19707	4.0185	.6119	.01742	.00077
%RSD	156.57	230.61	196.96	17.801	203.58	23.196
#1	.00123	-.30969	-.02822	3.7150	-.02585	-.00315
#2	s -.00062	-.00687	-.52267	3.8611	.00899	-.00263
#3	.00188	.06020	6.6716	2.7358	-.00881	-.00414
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



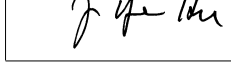
Sample Name: L1305088846 Acquired: 6/4/2013 19:50:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00946**	k **.00012**	s **.00008**	**-.03705**	s **.00174**	sF **-11.295**
Stddev	.01305	.00005	.00024	.01597	.00047	7.563
%RSD	137.98	42.154	317.91	43.101	26.772	66.961
#1	.02215	.00017	-.00011	-.05514	.00208	-16.521
#2	k .01014	k .00013	s .00035	-.03112	s .00121	s -2.6225
#3	-.00392	.00007	-.00001	-.02490	.00193	-14.740
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						450.00
Low Limit						-.00400

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00459**	F **-77.084**	s **.93755**	sF **-41.322**	s **-.00067**	s **.00430**
Stddev	.00092	55.048	.04785	3.971	.00014	.00021
%RSD	20.016	71.413	5.1036	9.6091	20.683	4.8991
#1	.00560	-140.25	.91370	-40.132	-.00080	.00453
#2	s .00381	-51.662	s .99264	s -45.751	s -.00053	s .00427
#3	.00434	-39.341	.90632	-38.082	-.00069	.00411
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000		9.0000		
Low Limit		-.00400		-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **-.00626**	s **-.00068**	**-.00014**	k **.00259**	s **.00285**	s **.00029**
Stddev	.00055	.00052	.00008	.00039	.00078	.00002
%RSD	8.8443	76.911	57.890	15.030	27.411	7.6705
#1	-.00649	-.00123	-.00005	.00215	.00293	.00027
#2	s -.00563	s -.00020	-.00017	k .00273	s .00203	s .00029
#3	-.00667	-.00060	-.00020	.00289	.00358	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013



Sample Name: L1305088846 Acquired: 6/4/2013 19:50:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	s .00032	s 1.0418
Stddev	.00002	.2768
%RSD	7.6167	26.565
#1	.00035	1.0497
#2	s .00032	s .76115
#3	.00030	1.3145
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	^ *****	69717.
Stddev	-----	11043.
%RSD	-----	15.839
#1	58487.	57351.
#2	^ -----	73205.
#3	51582.	78595.

Approved: June 05, 2013

Sample Name: L1305088847S Acquired: 6/4/2013 19:54:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00037**	k **-.03379**	s **.00265**	s **-.00177**	k **-.00073**	s **-.00004**
Stddev	.00009	.00841	.00041	.00015	.00033	.00001
%RSD	23.640	24.896	15.596	8.3899	44.939	24.715
#1	.00045	-.02410	.00312	-.00165	-.00035	-.00004
#2	.00028	-.03804	.00238	-.00173	-.00091	-.00004
#3	s .00037	k -.03923	s .00244	s -.00194	k -.00093	s -.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00869**	s **-.00016**	s **.00004**	s **-.00173**	s **-.00014**	k **-.00194**
Stddev	.00823	.00002	.00004	.00006	.00005	.00131
%RSD	94.646	13.501	92.521	3.2597	34.994	67.210
#1	-.01542	-.00013	.00006	-.00172	-.00009	-.00319
#2	-.01114	-.00017	.00007	-.00169	-.00018	-.00059
#3	.00048	s -.00017	s .00000	s -.00180	s -.00015	k -.00205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Hf2322	Hf2641	Hf2773	Hf3399	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00231**	F **-.10932**	**4.4627**	**3.0169**	**.00045**	**-.00383**
Stddev	.00133	.25498	1.2925	.6912	.01388	.00116
%RSD	57.447	233.24	28.962	22.911	3084.7	30.281
#1	.00165	-.39775	5.7995	2.8830	.00979	-.00516
#2	.00384	-.01626	4.3690	3.7653	.00706	-.00322
#3	s .00145	.08605	3.2196	2.4025	-.01550	-.00309
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000				
Low Limit		-.10000				

Approved: June 05, 2013

Sample Name: L1305088847S Acquired: 6/4/2013 19:54:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00774**	k **.00005**	s **-.00009**	**-.03808**	s **.00192**	sF **-15.257**
Stddev	.00782	.00006	.00007	.01663	.00054	7.354
%RSD	101.10	106.26	70.907	43.681	27.974	48.200
#1	.01663	.00012	-.00011	-.05705	.00252	-12.418
#2	.00191	.00003	-.00002	-.03116	.00151	-9.7462
#3	k .00467	k .00002	s -.00015	-.02602	s .00172	s -23.608
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						450.00
Low Limit						-.00400

Elem	Pb2203	Rb7800	S_1807	S_1820	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00475**	F **-83.793**	s **.63250**	sF **-25.684**	s **-.00066**	s **.00460**
Stddev	.00062	74.817	.03243	1.033	.00067	.00060
%RSD	12.980	89.288	5.1266	4.0215	101.65	13.150
#1	.00541	-166.57	.66028	-26.108	-.00008	.00530
#2	.00419	-63.827	.64035	-26.438	-.00138	.00431
#3	s .00466	-20.985	s .59687	s -24.507	s -.00050	s .00419
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit		9.0000		9.0000		
Low Limit		-.00400		-.00400		

Elem	Si2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **-.00848**	s **-.00087**	**-.00019**	k **.00249**	s **.00264**	s **.00012**
Stddev	.00069	.00047	.00008	.00038	.00062	.00006
%RSD	8.0925	54.623	41.320	15.459	23.328	51.481
#1	-.00863	-.00141	-.00010	.00210	.00289	.00005
#2	-.00773	-.00064	-.00021	.00287	.00310	.00015
#3	s -.00907	s -.00055	-.00025	k .00249	s .00194	s .00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: June 05, 2013

Sample Name: L1305088847S Acquired: 6/4/2013 19:54:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Elem	Zn2062	Zr3391
Units	ppm	ppm
Avg	s **.00027**	s **1.1421**
Stddev	.00002	.1033
%RSD	9.3412	9.0478
#1	.00029	1.2608
#2	.00027	1.0927
#3	s .00024	s 1.0727
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	^ *****	**69679.**
Stddev	-----	11594.
%RSD	-----	16.640
#1	59094.	56539.
#2	52138.	74029.
#3	^ -----	78470.

Approved: June 05, 2013

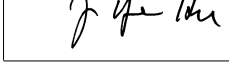
Sample Name: L1305088848SD Acquired: 6/4/2013 19:57:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**-.03756**	**.00322**	**-.00235**	**-.00074**	**-.00004**	**-.01243**
Stddev	.00013	.00431	.00039	.00022	.00033	.00001	.01024
%RSD	33.504	11.468	12.223	9.2459	45.140	14.273	82.334
#1	.00053	-.03339	.00316	-.00210	-.00036	-.00005	-.02333
#2	.00032	-.04199	.00365	-.00247	-.00089	-.00003	-.01095
#3	.00030	-.03731	.00286	-.00249	-.00097	-.00004	-.00302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**.00010**	**-.00179**	**-.00011**	**-.00126**	**.00112**	**.01217**
Stddev	.00004	.00003	.00024	.00018	.00072	.00076	.05033
%RSD	25.807	34.576	13.455	156.91	57.114	68.255	413.59
#1	-.00021	.00006	-.00157	-.00032	-.00112	.00133	-.04348
#2	-.00014	.00010	-.00204	.00000	-.00062	.00175	.05450
#3	-.00014	.00013	-.00175	-.00002	-.00203	.00027	.02548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.6906**	**3.4862**	**.01682**	**-.00402**	**-.00055**	**.00000**	**-.00015**
Stddev	1.9943	.5309	.01074	.00041	.00828	.0000	.00005
%RSD	29.807	15.229	63.839	10.246	1500.2	906.41	30.729
#1	8.9934	2.9523	.00835	-.00403	.00774	.00000	-.00010
#2	5.5434	4.0141	.02890	-.00443	-.00059	.00000	-.00016
#3	5.5349	3.4923	.01322	-.00361	-.00881	-.00001	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



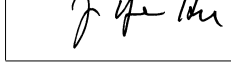
Sample Name: L1305088848SD Acquired: 6/4/2013 19:57:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04049**	**.00165**	F **-13.272**	**.00485**	F **-88.161**	**.43238**	F **-16.507**
Stddev	.01376	.00030	7.698	.00037	79.263	.04140	1.616
%RSD	33.992	18.027	57.999	7.6795	89.907	9.5739	9.7925
#1	-.05364	.00198	-8.1555	.00442	-178.89	.46295	-17.821
#2	-.04164	.00140	-9.5365	.00500	-53.204	.44891	-16.998
#3	-.02618	.00159	-22.125	.00512	-32.386	.38527	-14.702
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.00430**	**-.00955**	**-.00068**	**-.00019**	**.00251**	**.00268**
Stddev	.00043	.00008	.00049	.00057	.00006	.00091	.00017
%RSD	69.894	1.9673	5.1841	83.750	29.307	36.031	6.3671
#1	-.00063	.00435	-.00908	-.00134	-.00014	.00147	.00287
#2	-.00018	.00435	-.00950	-.00039	-.00019	.00293	.00255
#3	-.00104	.00420	-.01006	-.00031	-.00026	.00314	.00262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00017**	**.00028**	**1.0864**
Stddev	.00012	.00002	.2362
%RSD	68.089	6.1871	21.745
#1	.00008	.00029	1.2760
#2	.00030	.00027	.82175
#3	.00013	.00026	1.1614
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

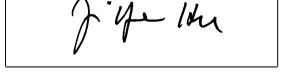
Approved: June 05, 2013



Sample Name: L1305088848SD Acquired: 6/4/2013 19:57:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**53667.**	**69718.**
Stddev	3815.	11725.
%RSD	7.1093	16.818
#1	58031.	56787.
#2	50964.	72707.
#3	52004.	79659.

Approved: June 05, 2013



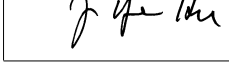
Sample Name: L1305088849 Acquired: 6/4/2013 20:01:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**-.03388**	**.00239**	**-.00221**	**-.00066**	**-.00003**	**-.01456**
Stddev	.00016	.00715	.00029	.00022	.00032	.00001	.01448
%RSD	46.464	21.091	11.993	10.067	48.930	24.262	99.427
#1	.00043	-.03145	.00266	-.00245	-.00030	-.00002	-.03128
#2	.00047	-.02827	.00242	-.00201	-.00074	-.00003	-.00619
#3	.00017	-.04193	.00209	-.00218	-.00092	-.00004	-.00622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00003**	**-.00173**	**-.00025**	**-.00265**	**.00167**	**-.07217**
Stddev	.00003	.00002	.00013	.00007	.00028	.00133	.03678
%RSD	22.485	69.666	7.4463	29.618	10.433	79.263	50.966
#1	-.00013	.00006	-.00160	-.00033	-.00294	.00158	-.11289
#2	-.00010	.00002	-.00185	-.00022	-.00239	.00304	-.06229
#3	-.00015	.00002	-.00173	-.00019	-.00261	.00040	-.04134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3441**	**4.1664**	**-.00479**	**-.00349**	**.00008**	**-.00001**	**-.00016**
Stddev	3.2895	.8340	.01529	.00015	.00255	.00003	.00007
%RSD	244.74	20.017	319.53	4.2041	3199.1	419.30	47.035
#1	1.6778	5.0761	-.00673	-.00364	.00141	.00002	-.00023
#2	4.4540	3.4379	.01139	-.00349	.00170	.00000	-.00016
#3	-2.0996	3.9853	-.01902	-.00334	-.00286	-.00004	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305088849 Acquired: 6/4/2013 20:01:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03943**	**.00189**	F **-19.602**	**.00455**	F **-89.104**	**.33449**	F **-11.370**
Stddev	.01464	.00007	4.497	.00019	53.301	.03570	.934
%RSD	37.127	3.7130	22.944	4.2250	59.819	10.673	8.2139
#1	-.05349	.00186	-14.434	.00443	-145.00	.37009	-12.069
#2	-.04053	.00197	-21.748	.00477	-83.466	.33471	-10.310
#3	-.02427	.00183	-22.625	.00446	-38.846	.29868	-11.733
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			450.00		9.0000		9.0000
Low Limit			-.00400		-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00101**	**.00492**	**-.01069**	**-.00074**	**-.00023**	**.00280**	**.00304**
Stddev	.00018	.00087	.00139	.00038	.00001	.00026	.00018
%RSD	17.851	17.646	12.972	52.077	4.6631	9.1739	5.8475
#1	-.00083	.00581	-.01205	-.00113	-.00022	.00251	.00302
#2	-.00101	.00408	-.01075	-.00070	-.00022	.00289	.00288
#3	-.00119	.00486	-.00928	-.00037	-.00024	.00299	.00323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00025**	**1.1297**
Stddev	.00010	.00002	.0360
%RSD	53.006	9.2824	3.1874
#1	.00020	.00026	1.1663
#2	.00009	.00027	1.1285
#3	.00029	.00022	1.0943
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305088849 Acquired: 6/4/2013 20:01:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**53860.**	**69220.**
Stddev	3104.	11866.
%RSD	5.7627	17.142
#1	57250.	56093.
#2	53170.	72385.
#3	51159.	79183.

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 20:04:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43963**	**9.6545**	F **.47240**	**.49500**	**.97861**	**.04977**	**9.6941**
Stddev	.00036	.0675	.00020	.00100	.00785	.00014	.1207
%RSD	.08083	.69952	.04129	.20137	.80194	.28107	1.2451
#1	.43969	9.7261	.47218	.49606	.98686	.04964	9.7947
#2	.43924	9.6454	.47256	.49487	.97773	.04992	9.7273
#3	.43995	9.5919	.47245	.49408	.97124	.04976	9.5602
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.40000				
Range			10.000%				

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.05726**	**.19779**	**.49742**	**.49743**	**3.8648**	**.98789**	F **.88595**
Stddev	.00019	.00034	.00208	.00108	.0339	.00222	.13495
%RSD	.33164	.16937	.41818	.21709	.87693	.22435	15.233
#1	.05733	.19751	.49588	.49654	3.9010	.98928	.74331
#2	.05704	.19770	.49979	.49713	3.8594	.98533	1.0116
#3	.05741	.19816	.49659	.49863	3.8339	.98906	.90294
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.05000						1.0000
Range	10.000%						-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-9.6090**	F **2.2816**	**48.490**	**1.0413**	**9.4792**	**.47616**	**.97430**
Stddev	4.9746	.5423	.240	.0108	.0290	.00371	.00160
%RSD	51.771	23.770	.49525	1.0346	.30617	.77862	.16396
#1	-14.363	1.8641	48.735	1.0508	9.4779	.47977	.97459
#2	-4.4397	2.0861	48.479	1.0436	9.5089	.47635	.97257
#3	-10.024	2.8945	48.255	1.0296	9.4509	.47236	.97573
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 20:04:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.829**	**.49486**	F **24.583**	**.49787**	F **-209.79**	**10.012**	F **11.108**
Stddev	.196	.00139	12.067	.00161	33.09	.092	1.003
%RSD	.39241	.27990	49.085	.32250	15.774	.91662	9.0315
#1	50.048	.49414	38.065	.49923	-178.91	10.050	11.251
#2	49.771	.49398	20.890	.49610	-244.72	10.079	12.032
#3	49.670	.49646	14.794	.49829	-205.75	9.9075	10.041
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value			10.000		10.000		10.000
Range			10.000%		-10.000%		10.000%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1941**	**.40207**	**4.9583**	**.92816**	**.97975**	**.97207**	**.49951**
Stddev	.0021	.00139	.0129	.00054	.00470	.00197	.00094
%RSD	.17175	.34573	.26099	.05775	.47988	.20229	.18827
#1	1.1962	.40176	4.9460	.92867	.98485	.97091	.50024
#2	1.1921	.40087	4.9571	.92821	.97880	.97434	.49845
#3	1.1940	.40360	4.9718	.92760	.97559	.97096	.49984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

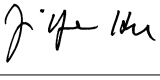
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.97654**	**.98555**	F **1.2047**
Stddev	.00192	.00186	.2025
%RSD	.19666	.18824	16.811
#1	.97864	.98739	.99437
#2	.97609	.98368	1.3984
#3	.97488	.98557	1.2213
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/4/2013 20:04:53 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22442.**	**30544.**
Stddev	35.	115.
%RSD	.15675	.37673
#1	22482.	30421.
#2	22428.	30561.
#3	22416.	30649.

Approved: June 05, 2013



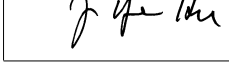
Sample Name: CCB Acquired: 6/4/2013 20:08:08 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.00370**	**-.00014**	**.00143**	**.00037**	**-.00025**	**-.04099**
Stddev	.00011	.01331	.00109	.00063	.00006	.00002	.01035
%RSD	18.269	360.02	779.33	43.745	17.112	8.7113	25.256
#1	-.00060	.01871	.00037	.00072	.00034	-.00027	-.04875
#2	-.00074	-.00665	.00060	.00190	.00045	-.00024	-.04499
#3	-.00051	-.00097	-.00139	.00167	.00034	-.00023	-.02924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**-.00001**	**-.00187**	**-.00021**	**-.00234**	**-.00043**	**-.08612**
Stddev	.00006	.00013	.00019	.00018	.00305	.00174	.18571
%RSD	83.889	1079.2	10.054	87.734	130.40	406.29	215.63
#1	-.00005	.00013	-.00182	-.00040	-.00428	.00066	.10036
#2	-.00015	-.00013	-.00208	-.00018	-.00390	.00048	-.27105
#3	-.00003	-.00003	-.00172	-.00004	.00118	-.00243	-.08767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.2386**	F **2.3490**	**-.02225**	**-.00051**	**.00905**	**.00008**	**.00107**
Stddev	7.9390	.3567	.00928	.00043	.00818	.00007	.00058
%RSD	354.64	15.186	41.716	85.187	90.427	86.484	54.669
#1	6.4607	2.1060	-.02009	-.00069	.00204	.00008	.00058
#2	-6.9193	2.1825	-.01424	-.00082	.01805	.00014	.00091
#3	7.1744	2.7585	-.03243	-.00001	.00707	.00001	.00171
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/4/2013 20:08:08 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04084**	**.00028**	F **-.64113**	**.00157**	F **-195.84**	**-.00447**	F **2.4023**
Stddev	.00961	.00017	9.1395	.00058	45.76	.03817	2.0525
%RSD	23.543	59.236	1425.5	36.766	23.366	854.21	85.436
#1	-.05046	.00046	-9.6786	.00223	-153.66	-.01228	2.1384
#2	-.03123	.00013	8.5970	.00132	-189.36	-.03813	4.5740
#3	-.04083	.00026	-.84181	.00116	-244.49	.03701	.49457
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit			.01000		.01000		.01000
Low Limit			-.01000		-.01000		-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00136**	**.00329**	**.00028**	**-.00021**	**.00000**	**.00132**	**.00072**
Stddev	.00084	.00075	.00057	.00027	.00003	.00079	.00097
%RSD	62.289	22.773	200.10	127.88	1408.2	59.558	135.35
#1	-.00207	.00303	-.00010	-.00047	.00001	.00042	.00105
#2	-.00042	.00270	.00094	-.00023	-.00003	.00188	-.00038
#3	-.00158	.00413	.00002	.00007	.00003	.00166	.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00005**	**.00021**	F **.33298**
Stddev	.00015	.00004	.17209
%RSD	320.84	19.837	51.681
#1	.00009	.00016	.29628
#2	-.00020	.00024	.52046
#3	-.00003	.00024	.18220
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/4/2013 20:08:08 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22318.**	**30398.**
Stddev	24.	81.
%RSD	.10566	.26774
#1	22345.	30339.
#2	22301.	30365.
#3	22309.	30491.

Approved: June 05, 2013

Sample Name: RINSE Acquired: 6/4/2013 20:11:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**-.00158**	**.00055**	**-.00077**	**.00040**	**-.00026**	**-.07808**
Stddev	.00020	.00789	.00061	.00132	.00016	.00001	.00849
%RSD	47.912	500.30	109.59	171.18	40.492	3.3935	10.877
#1	-.00025	-.00377	.00089	-.00040	.00052	-.00025	-.07873
#2	-.00063	.00717	.00092	-.00224	.00022	-.00025	-.08623
#3	-.00036	-.00814	-.00015	.00033	.00047	-.00027	-.06928
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00013**	**-.00195**	**-.00003**	**-.00076**	**.00455**	F **-.16782**
Stddev	.00009	.00005	.00011	.00016	.00392	.00149	.21862
%RSD	67.780	35.429	5.3924	627.78	514.42	32.663	130.27
#1	-.00022	.00017	-.00192	.00015	.00351	.00557	-.41964
#2	-.00013	.00012	-.00186	-.00008	-.00420	.00523	-.05737
#3	-.00004	.00008	-.00207	-.00015	-.00159	.00285	-.02647
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2422**	**2.0252**	**-.02713**	**-.00151**	**-.01445**	**.00001**	**.00158**
Stddev	2.1149	.5963	.00752	.00140	.00992	.00003	.00020
%RSD	94.322	29.442	27.728	92.919	68.669	465.25	12.412
#1	.10424	2.3167	-.02111	-.00007	-.01362	.00003	.00136
#2	2.2892	1.3393	-.03556	-.00286	-.02477	-.00003	.00169
#3	4.3333	2.4197	-.02471	-.00158	-.00497	.00003	.00170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: RINSE Acquired: 6/4/2013 20:11:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05348**	**-.00007**	**36.383**	**.00134**	F **-265.55**	**-.00026**	F **-1.4925**
Stddev	.00553	.00033	8.127	.00222	13.62	.02673	.8783
%RSD	10.341	449.20	22.338	165.72	5.1306	10249.	58.849
#1	-.05823	.00001	34.009	-.00061	-261.26	.02995	-2.2955
#2	-.05481	.00021	29.707	.00376	-280.80	-.02086	-1.6275
#3	-.04741	-.00044	45.433	.00087	-254.59	-.00987	-.55448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00177**	**.00213**	**-.00301**	**-.00206**	**-.00003**	**.00061**	**.00238**
Stddev	.00046	.00244	.00126	.00029	.00006	.00112	.00035
%RSD	25.754	114.27	41.868	14.250	228.89	181.60	14.693
#1	-.00169	.00299	-.00429	-.00239	-.00009	-.00046	.00225
#2	-.00136	.00403	-.00297	-.00193	.00003	.00177	.00277
#3	-.00226	-.00062	-.00177	-.00185	-.00002	.00053	.00211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00031**	**-.00015**	**.28932**
Stddev	.00016	.00008	.48326
%RSD	51.118	55.911	167.03
#1	.00015	-.00008	.16601
#2	.00030	-.00013	.82229
#3	.00047	-.00024	-.12033
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE Acquired: 6/4/2013 20:11:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22807.**	**30591.**
Stddev	50.	404.
%RSD	.22137	1.3191
#1	22854.	30125.
#2	22813.	30819.
#3	22754.	30828.

Approved: June 05, 2013

Sample Name: RINSE1 Acquired: 6/4/2013 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**-.00823**	**.00213**	**-.00144**	**.00038**	**-.00026**	**-.05945**
Stddev	.00034	.01895	.00051	.00066	.00010	.00002	.00127
%RSD	79.646	230.21	23.744	45.613	26.416	7.7113	2.1373
#1	-.00080	.01076	.00171	-.00217	.00049	-.00025	-.05842
#2	-.00016	-.00832	.00269	-.00091	.00030	-.00025	-.06087
#3	-.00031	-.02713	.00200	-.00123	.00035	-.00028	-.05906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.00021**	**-.00189**	**-.00042**	**.00131**	**.00332**	F **-.19017**
Stddev	.00005	.00007	.00023	.00013	.00354	.00276	.33895
%RSD	23.895	33.994	12.158	31.712	270.95	83.069	178.24
#1	-.00015	.00025	-.00182	-.00030	.00485	.00613	.19336
#2	-.00025	.00026	-.00170	-.00039	.00129	.00061	-.31436
#3	-.00021	.00013	-.00215	-.00056	-.00222	.00322	-.44951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6182**	**3.0130**	**-.02666**	**-.00239**	**.00036**	**.00006**	**.00132**
Stddev	6.3414	1.6455	.02571	.00075	.01002	.00003	.00026
%RSD	391.88	54.614	96.438	31.325	2779.5	47.404	19.383
#1	-4.1165	1.2366	-.05469	-.00226	.01185	.00009	.00103
#2	8.4286	4.4851	-.00417	-.00171	-.00419	.00004	.00141
#3	.54254	3.3172	-.02113	-.00319	-.00658	.00005	.00152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: RINSE1 Acquired: 6/4/2013 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05997**	**.00009**	**26.485**	**.00156**	F **-230.05**	**.04655**	F **-.38080**
Stddev	.00475	.00013	10.402	.00031	51.83	.03622	1.5476
%RSD	7.9238	153.20	39.275	19.788	22.532	77.803	406.41
#1	-.06395	.00024	30.215	.00173	-289.90	.01149	-2.0640
#2	-.06125	.00000	34.508	.00174	-199.43	.04435	-.05925
#3	-.05471	.00002	14.732	.00120	-200.82	.08383	.98079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00211**	**.00098**	**-.00404**	**-.00200**	**.00004**	**.00126**	**.00206**
Stddev	.00061	.00177	.00122	.00027	.00004	.00073	.00094
%RSD	28.631	180.51	30.255	13.608	94.509	57.714	45.430
#1	-.00281	-.00083	-.00440	-.00197	.00009	.00172	.00218
#2	-.00169	.00106	-.00504	-.00174	.00002	.00163	.00293
#3	-.00185	.00271	-.00268	-.00229	.00002	.00042	.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00000**	**-.00024**	**.28029**
Stddev	.00024	.00003	.09679
%RSD	397790.	13.050	34.533
#1	.00023	-.00027	.17087
#2	-.00024	-.00023	.31530
#3	.00001	-.00021	.35471
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE1 Acquired: 6/4/2013 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22757.**	**30577.**
Stddev	22.	498.
%RSD	.09515	1.6282
#1	22760.	30008.
#2	22777.	30786.
#3	22734.	30936.

Approved: June 05, 2013

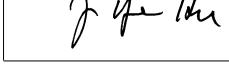
Sample Name: RINSE2 Acquired: 6/4/2013 20:19:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00227**	**.00163**	**-.00189**	**.00034**	**-.00024**	**-.06663**
Stddev	.00045	.00498	.00046	.00024	.00010	.00001	.00261
%RSD	105.58	218.98	28.086	12.787	28.659	5.1309	3.9206
#1	-.00083	.00802	.00112	-.00170	.00045	-.00025	-.06366
#2	.00006	-.00085	.00178	-.00216	.00032	-.00023	-.06767
#3	-.00052	-.00034	.00200	-.00181	.00026	-.00025	-.06856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.00013**	**-.00184**	**-.00004**	**-.00187**	**-.00014**	**.06154**
Stddev	.00001	.00009	.00017	.00041	.00084	.00159	.11292
%RSD	2.7497	73.195	9.2692	969.27	44.925	1113.8	183.48
#1	-.00027	.00022	-.00204	.00033	-.00283	-.00197	-.02100
#2	-.00026	.00004	-.00173	.00002	-.00131	.00067	.19023
#3	-.00027	.00011	-.00176	-.00047	-.00146	.00088	.01540
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.4146**	**1.5897**	**-.03720**	**-.00317**	**-.00753**	**.00004**	**.00089**
Stddev	4.9282	1.2590	.02390	.00109	.01103	.00003	.00039
%RSD	58.567	79.195	64.236	34.392	146.44	69.602	43.961
#1	14.092	2.9714	-.05880	-.00366	-.00322	.00007	.00045
#2	5.2393	1.2902	-.04128	-.00394	-.02006	.00004	.00100
#3	5.9126	.50749	-.01153	-.00192	.00069	.00001	.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: RINSE2 Acquired: 6/4/2013 20:19:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05919**	**-.00017**	**16.495**	**.00166**	F **-215.02**	**.01071**	F **-.58126**
Stddev	.00889	.00023	1.819	.00094	12.00	.02601	.58156
%RSD	15.016	136.53	11.029	57.027	5.5793	242.93	100.05
#1	-.06802	-.00039	14.818	.00193	-228.75	.00022	-.24490
#2	-.05931	.00007	18.429	.00061	-206.58	-.00842	-.24610
#3	-.05025	-.00019	16.237	.00244	-209.73	.04032	-1.2528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00222**	**.00029**	**-.00360**	**-.00213**	**-.00004**	**.00060**	**.00229**
Stddev	.00108	.00159	.00178	.00015	.00011	.00091	.00101
%RSD	48.507	550.63	49.405	6.9675	279.21	151.85	44.257
#1	-.00179	.00179	-.00458	-.00222	-.00017	-.00044	.00122
#2	-.00143	.00046	-.00468	-.00196	.00003	.00100	.00243
#3	-.00345	-.00138	-.00155	-.00221	.00001	.00124	.00323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00031**	**-.00012**	**.20658**
Stddev	.00019	.00006	.25547
%RSD	62.206	45.713	123.67
#1	.00033	-.00018	.10008
#2	.00048	-.00009	.49807
#3	.00011	-.00009	.02159
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE2 Acquired: 6/4/2013 20:19:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22759.**	**30839.**
Stddev	10.	666.
%RSD	.04256	2.1582
#1	22757.	30212.
#2	22750.	30769.
#3	22769.	31537.

Approved: June 05, 2013

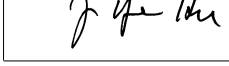
Sample Name: RINSE3 Acquired: 6/4/2013 20:22:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**-.00886**	**.00163**	**-.00109**	**.00031**	**-.00025**	**-.07179**
Stddev	.00020	.00843	.00032	.00095	.00024	.00002	.01108
%RSD	36.709	95.169	19.382	86.672	77.109	7.3396	15.435
#1	-.00040	-.00914	.00181	-.00036	.00003	-.00024	-.06478
#2	-.00078	-.00029	.00182	-.00076	.00044	-.00027	-.06602
#3	-.00048	-.01715	.00127	-.00217	.00045	-.00025	-.08456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.00010**	**-.00217**	**.00003**	**-.00115**	**.00145**	**-.03943**
Stddev	.00007	.00011	.00013	.00020	.00436	.00180	.21761
%RSD	31.511	110.23	5.9472	571.46	377.62	124.26	551.89
#1	-.00020	.00016	-.00205	.00022	-.00370	.00097	.19728
#2	-.00016	.00016	-.00231	-.00017	.00388	-.00006	-.23079
#3	-.00029	-.00003	-.00214	.00005	-.00364	.00344	-.08478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-3.3705**	**2.0504**	**-.02321**	**-.00237**	**-.01162**	**.00011**	**-.00041**
Stddev	6.9462	.9992	.03186	.00196	.00398	.00002	.00009
%RSD	206.09	48.730	137.30	82.867	34.213	16.892	22.102
#1	-5.2824	2.9538	-.04583	-.00394	-.00959	.00009	-.00033
#2	4.3314	.97723	-.03702	-.00300	-.01620	.00012	-.00039
#3	-9.1605	2.2202	.01323	-.00017	-.00907	.00011	-.00051
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



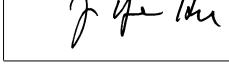
Sample Name: RINSE3 Acquired: 6/4/2013 20:22:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05710**	**-.00062**	**24.286**	**.00165**	F **-215.82**	**.03462**	**1.6791**
Stddev	.00436	.00011	2.046	.00091	35.90	.04165	.2115
%RSD	7.6420	17.048	8.4244	55.344	16.635	120.30	12.597
#1	-.05348	-.00072	26.260	.00211	-182.89	-.01336	1.9138
#2	-.05588	-.00051	22.175	.00060	-254.09	.05581	1.6199
#3	-.06195	-.00065	24.423	.00225	-210.47	.06141	1.5034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**-.00010**	**-.00461**	**-.00202**	**-.00014**	**.00053**	**.00122**
Stddev	.00077	.00134	.00320	.00024	.00004	.00011	.00156
%RSD	48.028	1282.0	69.432	12.005	28.591	21.235	127.43
#1	-.00227	-.00148	-.00293	-.00192	-.00010	.00058	-.00004
#2	-.00076	.00120	-.00259	-.00185	-.00014	.00062	.00296
#3	-.00180	-.00003	-.00829	-.00230	-.00018	.00041	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00025**	**.00008**	**.48199**
Stddev	.00022	.00002	.08780
%RSD	88.889	23.699	18.217
#1	.00041	.00007	.41375
#2	.00000	.00010	.45119
#3	.00035	.00007	.58105
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: RINSE3 Acquired: 6/4/2013 20:22:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22676.**	**31177.**
Stddev	21.	213.
%RSD	.09351	.68299
#1	22693.	30959.
#2	22684.	31187.
#3	22652.	31384.

Approved: June 05, 2013

Sample Name: RINSE4 Acquired: 6/4/2013 20:26:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**-.00138**	**.00138**	**-.00136**	**.00030**	**-.00025**	**-.06229**
Stddev	.00033	.01185	.00107	.00039	.00005	.00003	.00758
%RSD	63.116	856.04	77.565	28.662	17.890	10.882	12.168
#1	-.00044	.01176	.00171	-.00176	.00030	-.00027	-.06576
#2	-.00089	-.00464	.00225	-.00099	.00036	-.00026	-.06752
#3	-.00024	-.01127	.00018	-.00132	.00025	-.00022	-.05360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**.00016**	**-.00186**	**-.00041**	**-.00160**	**.00015**	F **-.13410**
Stddev	.00006	.00014	.00032	.00017	.00202	.00126	.23188
%RSD	35.310	87.784	16.982	41.182	126.44	821.06	172.92
#1	-.00022	.00016	-.00221	-.00056	.00007	.00161	-.34733
#2	-.00010	.00002	-.00179	-.00044	-.00384	-.00063	.11277
#3	-.00018	.00031	-.00159	-.00023	-.00102	-.00052	-.16774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.7215**	**3.1880**	**.00153**	**-.00325**	**-.01118**	**.00005**	**.00013**
Stddev	9.5306	.5811	.00599	.00152	.01629	.00002	.00020
%RSD	141.79	18.227	390.91	46.737	145.65	31.137	160.34
#1	-.76544	2.5947	.00714	-.00303	-.02885	.00003	.00000
#2	3.4798	3.7560	-.00478	-.00185	.00323	.00007	.00002
#3	17.450	3.2132	.00224	-.00486	-.00792	.00006	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

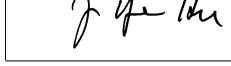
Sample Name: RINSE4 Acquired: 6/4/2013 20:26:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05214**	**.00011**	**29.037**	**.00207**	F **-202.20**	F **-.01306**	**1.8835**
Stddev	.00928	.00035	2.942	.00140	11.88	.01989	.8280
%RSD	17.794	310.97	10.130	67.474	5.8770	152.35	43.962
#1	-.04241	.00051	30.325	.00329	-215.92	-.03521	1.4985
#2	-.06089	-.00012	25.671	.00054	-195.61	-.00723	2.8340
#3	-.05313	-.00006	31.115	.00239	-195.07	.00327	1.3181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00188**	**-.00070**	**-.00191**	**-.00197**	**-.00011**	**.00112**	**.00231**
Stddev	.00065	.00102	.00163	.00005	.00006	.00051	.00070
%RSD	34.421	145.18	85.192	2.7014	54.618	45.904	30.327
#1	-.00210	-.00147	-.00031	-.00191	-.00005	.00142	.00311
#2	-.00240	-.00108	-.00186	-.00199	-.00012	.00053	.00206
#3	-.00115	.00045	-.00356	-.00201	-.00018	.00141	.00178
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00025**	**-.00017**	**.22769**
Stddev	.00011	.00004	.17495
%RSD	44.601	21.743	76.839
#1	.00033	-.00013	.15016
#2	.00030	-.00019	.10489
#3	.00012	-.00018	.42801
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: RINSE4 Acquired: 6/4/2013 20:26:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22653.**	**30986.**
Stddev	28.	498.
%RSD	.12149	1.6072
#1	22678.	30495.
#2	22623.	30974.
#3	22658.	31490.

Approved: June 05, 2013

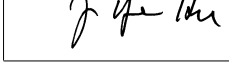
Sample Name: RINSE5 Acquired: 6/4/2013 20:29:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**.00432**	**.00138**	**-.00114**	**.00034**	**-.00025**	**-.07201**
Stddev	.00023	.01299	.00068	.00045	.00013	.00001	.00713
%RSD	35.328	300.96	49.754	39.402	37.943	4.7863	9.9083
#1	-.00092	-.00639	.00069	-.00093	.00048	-.00026	-.08020
#2	-.00061	.00057	.00206	-.00165	.00023	-.00025	-.06715
#3	-.00046	.01877	.00138	-.00083	.00032	-.00024	-.06867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00011**	**-.00199**	**-.00021**	**-.00403**	**.00146**	**.35046**
Stddev	.00007	.00015	.00020	.00017	.00279	.00050	.07982
%RSD	51.683	134.56	9.8743	79.910	69.322	34.425	22.776
#1	-.00006	.00028	-.00189	-.00018	-.00498	.00156	.43973
#2	-.00016	-.00001	-.00185	-.00006	-.00089	.00092	.32568
#3	-.00019	.00007	-.00221	-.00039	-.00623	.00191	.28597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3049**	**1.5172**	**-.03557**	**-.00148**	**-.00742**	**.00008**	**.00034**
Stddev	3.3611	.2741	.01675	.00174	.00591	.00001	.00020
%RSD	257.58	18.064	47.098	117.50	79.611	17.490	59.257
#1	5.0187	1.7736	-.01686	-.00189	-.00623	.00008	.00011
#2	.42404	1.2284	-.04917	.00043	-.00220	.00010	.00044
#3	-1.5282	1.5497	-.04069	-.00298	-.01384	.00007	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: RINSE5 Acquired: 6/4/2013 20:29:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05130**	**-.00014**	**21.580**	**.00212**	F **-193.03**	F **-.00781**	**.84569**
Stddev	.01250	.00043	7.568	.00057	11.94	.01107	1.4235
%RSD	24.356	307.65	35.067	26.834	6.1835	141.67	168.33
#1	-.06558	.00035	15.717	.00262	-179.58	-.01384	-.53535
#2	-.04596	-.00043	30.123	.00225	-202.36	-.01455	.76419
#3	-.04237	-.00034	18.901	.00150	-197.16	.00496	2.3082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00292**	**-.00070**	**-.00382**	**-.00206**	**-.00007**	**.00138**	**.00124**
Stddev	.00115	.00046	.00113	.00036	.00000	.00041	.00052
%RSD	39.515	65.572	29.624	17.526	1.9888	29.678	42.166
#1	-.00406	-.00095	-.00446	-.00199	-.00007	.00128	.00156
#2	-.00295	-.00099	-.00450	-.00245	-.00007	.00183	.00153
#3	-.00175	-.00017	-.00252	-.00173	-.00007	.00103	.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00036**	**-.00014**	**.37675**
Stddev	.00013	.00003	.06997
%RSD	35.957	20.156	18.572
#1	.00034	-.00011	.33184
#2	.00025	-.00015	.45736
#3	.00051	-.00016	.34104
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE5 Acquired: 6/4/2013 20:29:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22636.**	**30841.**
Stddev	48.	629.
%RSD	.21319	2.0395
#1	22678.	30116.
#2	22646.	31153.
#3	22583.	31252.

Approved: June 05, 2013

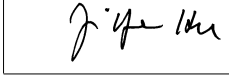
Sample Name: RINSE6 Acquired: 6/4/2013 20:33:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.01029**	**.00120**	**-.00145**	**.00039**	**-.00025**	**-.07082**
Stddev	.00042	.01909	.00054	.00039	.00022	.00002	.00919
%RSD	81.263	185.58	44.769	26.817	56.107	8.4625	12.978
#1	-.00078	.03160	.00182	-.00189	.00047	-.00023	-.06634
#2	-.00003	-.00527	.00091	-.00116	.00056	-.00027	-.08139
#3	-.00073	.00454	.00088	-.00131	.00014	-.00024	-.06473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00013**	**-.00197**	**-.00007**	**-.00309**	**.00241**	**.10995**
Stddev	.00003	.00002	.00009	.00023	.00162	.00314	.22082
%RSD	14.147	16.528	4.4894	345.13	52.441	130.46	200.85
#1	-.00020	.00015	-.00188	.00018	-.00148	-.00092	.16167
#2	-.00018	.00013	-.00196	-.00028	-.00473	.00532	-.13215
#3	-.00015	.00011	-.00205	-.00010	-.00307	.00282	.30031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.0183**	**1.5430**	**-.04015**	**-.00204**	**-.01508**	**-.00001**	**.00062**
Stddev	5.3323	2.4273	.02726	.00100	.00736	.00000	.00044
%RSD	132.70	157.32	67.909	49.242	48.764	62.871	70.508
#1	5.3688	2.0064	-.02851	-.00270	-.01428	-.00001	.00027
#2	8.5455	-1.0827	-.02063	-.00088	-.02281	-.00001	.00048
#3	-1.8594	3.7051	-.07130	-.00253	-.00816	.00000	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



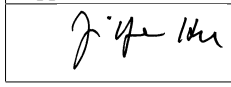
Sample Name: RINSE6 Acquired: 6/4/2013 20:33:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05554**	**.00003**	**16.831**	**.00242**	F **-219.52**	F **-.05250**	**.53210**
Stddev	.00866	.00040	9.408	.00144	17.94	.02237	1.7324
%RSD	15.593	1343.6	55.896	59.337	8.1708	42.613	325.57
#1	-.05525	-.00043	8.5469	.00203	-235.78	-.07754	2.5251
#2	-.06434	.00030	27.059	.00122	-222.49	-.04547	-.61316
#3	-.04703	.00022	14.888	.00402	-200.28	-.03448	-.31563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**.00022**	**-.00243**	**-.00205**	**-.00010**	**.00153**	**.00358**
Stddev	.00137	.00188	.00165	.00010	.00012	.00100	.00177
%RSD	121.79	844.89	68.233	4.9349	115.83	65.634	49.418
#1	-.00141	-.00168	-.00430	-.00204	-.00023	.00152	.00224
#2	.00036	.00027	-.00179	-.00215	.00000	.00053	.00290
#3	-.00234	.00208	-.00119	-.00195	-.00008	.00253	.00558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00004**	**-.00021**	**.43407**
Stddev	.00023	.00002	.17120
%RSD	580.39	11.137	39.441
#1	.00002	-.00019	.24436
#2	-.00030	-.00023	.48081
#3	.00016	-.00023	.57706
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: RINSE6 Acquired: 6/4/2013 20:33:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22647.**	**30527.**
Stddev	24.	591.
%RSD	.10707	1.9355
#1	22666.	29885.
#2	22620.	30648.
#3	22655.	31048.

Approved: June 05, 2013

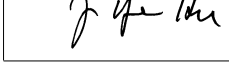
Sample Name: RINSE7 Acquired: 6/4/2013 20:37:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.00917**	**.00101**	**-.00146**	**.00035**	**-.00026**	**-.06955**
Stddev	.00016	.01076	.00023	.00026	.00016	.00001	.01024
%RSD	25.157	117.27	22.810	17.778	45.500	4.6577	14.716
#1	-.00061	.01168	.00123	-.00162	.00053	-.00027	-.08130
#2	-.00078	.01846	.00103	-.00116	.00030	-.00025	-.06253
#3	-.00047	-.00261	.00077	-.00159	.00022	-.00026	-.06483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.00006**	**-.00166**	**-.00033**	**-.00299**	**.00292**	**.00444**
Stddev	.00003	.00015	.00029	.00003	.00059	.00215	.12747
%RSD	21.429	250.39	17.537	10.302	19.630	73.481	2873.2
#1	-.00018	.00023	-.00135	-.00032	-.00367	.00436	-.14173
#2	-.00012	-.00005	-.00169	-.00030	-.00269	.00045	.06250
#3	-.00017	.00000	-.00193	-.00037	-.00262	.00394	.09254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.4872**	**3.9397**	**-.03686**	**-.00284**	**-.00131**	**-.00001**	**.00052**
Stddev	3.9258	.8473	.02035	.00098	.00720	.00003	.00026
%RSD	60.516	21.506	55.208	34.427	548.01	229.63	50.059
#1	9.3711	4.5236	-.05916	-.00367	-.00619	-.00004	.00032
#2	2.0164	2.9679	-.01930	-.00309	-.00471	-.00003	.00042
#3	8.0742	4.3275	-.03211	-.00176	.00696	.00002	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: RINSE7 Acquired: 6/4/2013 20:37:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05582**	**.00003**	**12.157**	**.00201**	F **-183.95**	F **-.03274**	**.46598**
Stddev	.00026	.00023	2.337	.00149	32.81	.03080	.24818
%RSD	.46504	764.58	19.226	74.170	17.837	94.092	53.260
#1	-.05562	.00025	13.390	.00068	-158.02	-.03483	.19271
#2	-.05573	.00005	13.621	.00174	-173.00	-.06244	.52787
#3	-.05611	-.00021	9.4617	.00363	-220.84	-.00094	.67735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	9.0000	
Low Limit					-.00400	-.00400	

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00289**	**.00098**	**-.00143**	**-.00183**	**-.00013**	**.00077**	**.00210**
Stddev	.00128	.00265	.00409	.00014	.00005	.00139	.00073
%RSD	44.339	271.76	285.13	7.8746	37.213	180.68	34.683
#1	-.00412	-.00010	-.00577	-.00197	-.00008	-.00058	.00287
#2	-.00297	.00400	-.00088	-.00168	-.00018	.00069	.00203
#3	-.00157	-.00097	.00235	-.00185	-.00013	.00219	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00025**	**-.00019**	**.27533**
Stddev	.00029	.00006	.29535
%RSD	118.10	31.691	107.27
#1	.00022	-.00021	-.06131
#2	-.00003	-.00024	.39633
#3	.00055	-.00013	.49096
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE7 Acquired: 6/4/2013 20:37:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22554.**	**30649.**
Stddev	117.	578.
%RSD	.51832	1.8860
#1	22682.	29984.
#2	22525.	31033.
#3	22454.	30929.

Approved: June 05, 2013

Sample Name: RINSE8 Acquired: 6/4/2013 20:40:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**.00689**	**.00218**	**-.00123**	**.00039**	**-.00027**	**-.06655**
Stddev	.00025	.01214	.00014	.00039	.00016	.00002	.01131
%RSD	46.850	176.21	6.3111	31.808	39.802	6.2415	16.990
#1	-.00025	.01973	.00231	-.00165	.00042	-.00025	-.05743
#2	-.00066	.00536	.00203	-.00117	.00022	-.00028	-.06301
#3	-.00072	-.00441	.00221	-.00087	.00053	-.00028	-.07920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00003**	**-.00194**	**-.00028**	**-.00239**	**-.00137**	F **-.27355**
Stddev	.00011	.00011	.00020	.00049	.00217	.00119	.23102
%RSD	47.133	399.22	10.299	174.80	90.537	86.751	84.451
#1	-.00010	-.00009	-.00192	-.00051	-.00042	-.00014	-.16760
#2	-.00028	.00004	-.00214	.00028	-.00471	-.00252	-.53854
#3	-.00029	.00013	-.00175	-.00062	-.00205	-.00146	-.11451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							45.000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-6.9813**	**2.2129**	**-.06031**	**-.00162**	**-.00343**	**.00001**	**.00044**
Stddev	4.9680	.6355	.03067	.00064	.01941	.00006	.00021
%RSD	71.162	28.719	50.856	39.262	565.95	848.64	47.517
#1	-10.070	2.8735	-.05212	-.00098	.01769	.00007	.00044
#2	-9.6230	1.6059	-.03456	-.00225	-.02048	-.00002	.00023
#3	-1.2505	2.1594	-.09424	-.00163	-.00749	-.00003	.00065
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013

Sample Name: RINSE8 Acquired: 6/4/2013 20:40:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05878**	**.00003**	**12.378**	**.00105**	F **-202.88**	**.10152**	F **-4.4094**
Stddev	.00629	.00032	4.706	.00083	32.20	.14100	9.0895
%RSD	10.700	929.46	38.019	78.743	15.869	138.88	206.14
#1	-.05161	.00032	16.215	.00049	-236.56	.02642	1.2455
#2	-.06334	.00009	7.1274	.00067	-172.41	.01397	.42049
#3	-.06140	-.00031	13.792	.00200	-199.69	.26417	-14.894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					9.0000		9.0000
Low Limit					-.00400		-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**.00285**	**-.00433**	**-.00206**	**-.00004**	**.00175**	**.00323**
Stddev	.00113	.00203	.00180	.00017	.00008	.00096	.00131
%RSD	114.08	71.449	41.517	8.0495	206.32	55.283	40.634
#1	-.00082	.00470	-.00402	-.00199	-.00002	.00187	.00474
#2	.00004	.00317	-.00627	-.00194	-.00013	.00072	.00241
#3	-.00220	.00067	-.00271	-.00225	.00003	.00264	.00253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00034**	**-.00021**	**.14513**
Stddev	.00014	.00005	.15016
%RSD	40.830	24.317	103.47
#1	.00026	-.00019	.31579
#2	.00050	-.00017	.08632
#3	.00026	-.00027	.03327
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: RINSE8 Acquired: 6/4/2013 20:40:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22463.**	**30271.**
Stddev	69.	490.
%RSD	.30890	1.6199
#1	22543.	29735.
#2	22426.	30383.
#3	22420.	30696.

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/5/2013 7:39:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.43593**	**9.5517**	**.40719**	**.49837**	**1.0048**	**.05190**	**9.3491**
Stddev	.00173	.0297	.00101	.00255	.0058	.00024	.0119
%RSD	.39647	.31133	.24763	.51191	.58116	.45390	.12723
#1	.43521	9.5858	.40820	.49687	1.0113	.05214	9.3360
#2	.43467	9.5381	.40618	.49692	.99989	.05167	9.3593
#3	.43790	9.5312	.40719	.50131	1.0033	.05187	9.3519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05095**	**.19969**	**.51828**	**.50498**	**4.1046**	**1.0070**	F **.85067**
Stddev	.00022	.00062	.00213	.00148	.0217	.0048	.28063
%RSD	.43702	.30990	.41129	.29403	.52965	.47436	32.989
#1	.05083	.20041	.52043	.50656	4.1293	1.0121	.79012
#2	.05081	.19931	.51617	.50362	4.0886	1.0026	1.1566
#3	.05121	.19936	.51825	.50477	4.0958	1.0063	.60527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1.0000
Range							-10.000%

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-1.5515**	F **1.1223**	**49.165**	**.97798**	**10.209**	**.50084**	**.97890**
Stddev	7.3633	1.0917	.366	.00556	.073	.00064	.00059
%RSD	474.58	97.270	.74464	.56896	.71743	.12871	.06060
#1	-9.5511	2.3688	49.587	.98340	10.293	.50146	.97888
#2	4.9429	.66182	48.928	.97228	10.174	.50018	.97950
#3	-.04641	.33634	48.981	.97826	10.160	.50089	.97831
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	10.000%					

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/5/2013 7:39:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.006**	**.51014**	F **17.565**	**.51685**	F **4.4502**	**10.279**	**9.0524**
Stddev	.255	.00155	25.560	.00193	7.2377	.127	.5789
%RSD	.50019	.30315	145.52	.37294	162.64	1.2360	6.3946
#1	51.290	.51001	-10.894	.51666	3.7284	10.399	9.6004
#2	50.796	.50866	38.568	.51502	-2.3996	10.146	9.1098
#3	50.932	.51174	25.020	.51886	12.022	10.292	8.4469
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			10.000%		-10.000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1994**	**.40565**	**5.1521**	**.95147**	**.96586**	**.99644**	**.51321**
Stddev	.0046	.00176	.0566	.00168	.00724	.00674	.00161
%RSD	.38274	.43279	1.0989	.17608	.74957	.67658	.31404
#1	1.1989	.40761	5.1054	.95264	.97373	1.0037	.51446
#2	1.1950	.40422	5.1359	.94955	.95949	.99036	.51139
#3	1.2042	.40512	5.2151	.95222	.96434	.99527	.51377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

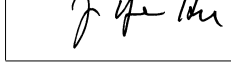
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99171**	**1.0389**	F **.85991**
Stddev	.00349	.0036	.17004
%RSD	.35221	.34895	19.774
#1	.99188	1.0431	.66454
#2	.98814	1.0371	.97452
#3	.99512	1.0366	.94066
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/5/2013 7:39:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22773.**	**29632.**
Stddev	90.	27.
%RSD	.39374	.09212
#1	22815.	29652.
#2	22834.	29601.
#3	22670.	29644.

Approved: June 05, 2013



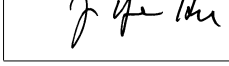
Sample Name: CCB Acquired: 6/5/2013 7:42:56 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00760**	**-.00049**	**.00007**	**.00015**	**-.00003**	**-.00809**
Stddev	.00040	.01549	.00076	.00129	.00030	.00002	.01199
%RSD	2330.1	203.88	155.81	1906.0	197.45	61.178	148.15
#1	.00001	-.00545	-.00090	.00106	.00012	-.00005	-.02062
#2	-.00043	.02471	-.00095	.00053	.00046	-.00001	.00327
#3	.00037	.00353	.00039	-.00139	-.00013	-.00003	-.00693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00005**	**.00040**	**.00039**	**.00089**	**-.00080**	**.09987**
Stddev	.00010	.00007	.00011	.00033	.00310	.00145	.10497
%RSD	152.00	134.97	26.756	86.069	348.30	181.23	105.11
#1	.00000	-.00011	.00045	.00075	.00438	.00053	.21422
#2	-.00017	-.00008	.00028	.00009	-.00154	-.00058	.00786
#3	-.00001	.00003	.00047	.00032	-.00017	-.00235	.07754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.18503**	F **2.6866**	**.01736**	**.00348**	**.00320**	**.00009**	**.00124**
Stddev	10.886	.8397	.01279	.00021	.01118	.00004	.00037
%RSD	5883.3	31.256	73.651	5.9597	349.99	43.113	29.400
#1	8.4686	1.7182	.02743	.00351	.00627	.00005	.00085
#2	-12.144	3.1277	.02169	.00326	-.00920	.00008	.00130
#3	4.2308	3.2138	.00297	.00367	.01252	.00013	.00158
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013



Sample Name: CCB Acquired: 6/5/2013 7:42:56 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00158**	**-.00005**	F **7.6100**	**.00079**	F **-53.443**	F **.05265**	F **-1.2155**
Stddev	.00516	.00018	7.7015	.00085	38.684	.04542	1.3245
%RSD	326.23	351.70	101.20	107.19	72.383	86.273	108.97
#1	.00126	-.00024	8.2388	.00166	-97.823	.10359	-2.5673
#2	-.00753	.00012	14.978	-.00003	-26.862	.01636	.07989
#3	.00153	-.00003	-.38667	.00074	-35.644	.03800	-1.1591
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00150**	**.00309**	**-.00241**	**-.00060**	**-.00006**	**.00161**	**.00041**
Stddev	.00102	.00208	.00256	.00025	.00014	.00035	.00057
%RSD	68.199	67.105	106.45	42.054	245.79	21.821	138.02
#1	-.00075	.00435	-.00271	-.00084	.00010	.00120	.00083
#2	-.00108	.00424	.00029	-.00064	-.00010	.00180	-.00023
#3	-.00267	.00070	-.00481	-.00034	-.00016	.00182	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

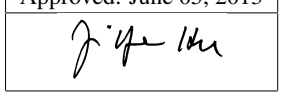
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00002**	F **.23976**
Stddev	.00016	.00002	.32899
%RSD	86.117	100.35	137.22
#1	.00032	.00001	.46542
#2	.00023	.00004	.39157
#3	.00001	.00000	-.13772
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/5/2013 7:42:56 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22720.**	**29353.**
Stddev	26.	258.
%RSD	.11579	.87918
#1	22691.	29340.
#2	22726.	29617.
#3	22743.	29102.

Approved: June 05, 2013



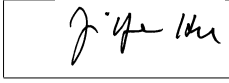
Sample Name: L1305145102 Acquired: 6/5/2013 7:46:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.00615**	**.00142**	**.00355**	**.00163**	**-.00002**	**26.151**
Stddev	.00028	.01218	.00047	.00032	.00015	.00001	.128
%RSD	641.29	198.26	33.367	8.9847	9.1151	74.792	.48860
#1	-.00034	-.00542	.00177	.00319	.00147	-.00002	26.191
#2	.00000	.00499	.00160	.00379	.00176	-.00002	26.008
#3	.00021	.01887	.00088	.00368	.00167	.00000	26.254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00024**	**.00062**	**-.00039**	**.00529**	**.15466**	**3.1904**
Stddev	.00003	.00013	.00023	.00028	.00132	.00472	.2328
%RSD	11.032	54.266	36.923	71.232	24.939	3.0515	7.2953
#1	.00026	.00025	.00079	-.00071	.00628	.14921	3.3544
#2	.00032	.00037	.00069	-.00017	.00580	.15760	2.9240
#3	.00027	.00011	.00036	-.00030	.00379	.15715	3.2929
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2086**	**.41335**	**1.4186**	**.00686**	**28.517**	**.00707**	**-.00014**
Stddev	4.1320	.62932	.0229	.00040	.336	.00009	.00013
%RSD	187.09	152.25	1.6133	5.8660	1.1795	1.3145	94.598
#1	4.9221	-.21901	1.4154	.00672	28.449	.00705	-.00016
#2	-2.5468	1.0396	1.3975	.00654	28.221	.00699	-.00027
#3	4.2505	.41949	1.4429	.00731	28.883	.00718	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



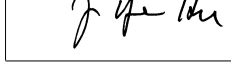
Sample Name: L1305145102 Acquired: 6/5/2013 7:46:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2230**	**.00133**	**40.247**	**.00151**	F **-23.094**	F **1329.8**	F **-66221.**
Stddev	.0129	.00050	2.082	.00018	31.790	26.8	1249.
%RSD	1.0527	37.578	5.1723	11.994	137.66	2.0123	1.8854
#1	1.2131	.00191	37.904	.00167	6.6317	1299.0	-64837.
#2	1.2184	.00104	41.882	.00153	-56.609	1343.6	-66564.
#3	1.2375	.00105	40.956	.00132	-19.305	1346.9	-67263.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00271**	**.00095**	**.21137**	**-.00190**	**.14556**	**.00084**	**.00148**
Stddev	.00091	.00302	.00564	.00002	.00127	.00054	.00172
%RSD	33.531	319.32	2.6669	1.0800	.87583	63.986	116.68
#1	-.00170	-.00208	.20497	-.00190	.14582	.00038	.00147
#2	-.00347	.00395	.21559	-.00192	.14417	.00070	.00321
#3	-.00296	.00097	.21355	-.00188	.14668	.00143	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00024**	**.00149**	**.06978**
Stddev	.00033	.00015	.19380
%RSD	133.72	9.9170	277.74
#1	.00041	.00148	-.14479
#2	.00046	.00164	.23211
#3	-.00013	.00134	.12201
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305145102 Acquired: 6/5/2013 7:46:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22733.**	**29613.**
Stddev	332.	253.
%RSD	1.4601	.85468
#1	23095.	29700.
#2	22659.	29811.
#3	22444.	29328.

Approved: June 05, 2013

Sample Name: L1305145103 Acquired: 6/5/2013 7:50:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00732**	**.00062**	**.00197**	**.00148**	**-.00002**	**26.720**
Stddev	.00029	.00542	.00081	.00047	.00018	.00004	.020
%RSD	175.68	74.136	131.52	23.843	11.918	152.98	.07488
#1	-.00016	.00482	-.00008	.00143	.00133	.00002	26.743
#2	.00025	.00359	.00151	.00231	.00143	-.00004	26.707
#3	.00041	.01354	.00043	.00217	.00167	-.00004	26.710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**.00022**	**.00062**	**.00017**	**.02220**	**.15848**	**3.2875**
Stddev	.00003	.00018	.00014	.00015	.00256	.00024	.3136
%RSD	11.149	85.145	22.182	84.546	11.538	.15430	9.5392
#1	.00025	.00014	.00074	.00001	.01979	.15845	2.9509
#2	.00025	.00043	.00047	.00020	.02489	.15874	3.5714
#3	.00020	.00008	.00066	.00030	.02194	.15825	3.3403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.090**	**1.1040**	**1.4337**	**.00619**	**28.879**	**.00718**	**-.00055**
Stddev	6.433	1.1749	.0111	.00044	.098	.00002	.00010
%RSD	63.754	106.43	.77685	7.0246	.33836	.34243	18.560
#1	17.518	1.1853	1.4412	.00571	28.967	.00719	-.00059
#2	6.3963	2.2361	1.4209	.00656	28.897	.00720	-.00062
#3	6.3561	-.10953	1.4389	.00632	28.774	.00715	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

Sample Name: L1305145103 Acquired: 6/5/2013 7:50:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2561**	**.00135**	**25.728**	**.00022**	F **-99.661**	F **1335.8**	F **-67265.**
Stddev	.0144	.00030	2.811	.00066	32.863	13.2	630.
%RSD	1.1452	22.326	10.925	292.38	32.975	.99065	.93646
#1	1.2412	.00170	28.662	.00005	-63.050	1323.4	-66607.
#2	1.2698	.00116	25.464	-.00033	-109.32	1334.4	-67324.
#3	1.2574	.00119	23.059	.00095	-126.61	1349.7	-67863.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00299**	**.00140**	**.21370**	**-.00181**	**.15080**	**.00142**	**.00209**
Stddev	.00118	.00226	.00167	.00034	.00067	.00092	.00118
%RSD	39.627	161.55	.78374	18.545	.44126	64.914	56.610
#1	-.00358	.00396	.21192	-.00161	.15146	.00244	.00260
#2	-.00162	-.00029	.21524	-.00162	.15080	.00065	.00294
#3	-.00376	.00052	.21393	-.00219	.15013	.00117	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00003**	**.00069**	**.08516**
Stddev	.00005	.00007	.07914
%RSD	146.60	10.858	92.940
#1	-.00002	.00076	.17642
#2	.00008	.00069	.03540
#3	.00004	.00061	.04365
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305145103 Acquired: 6/5/2013 7:50:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22563.**	**29283.**
Stddev	112.	31.
%RSD	.49563	.10421
#1	22684.	29310.
#2	22541.	29250.
#3	22463.	29288.

Approved: June 05, 2013

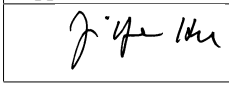
Sample Name: L1305088837 Acquired: 6/5/2013 7:53:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.04806**	**-.00007**	**.00422**	**.00024**	**.00001**	**1.3070**
Stddev	.00029	.01814	.00138	.00130	.00005	.00001	.0086
%RSD	280.64	37.737	1952.1	30.868	19.105	172.51	.65833
#1	.00022	.06577	-.00165	.00572	.00025	.00001	1.3126
#2	.00033	.02953	.00084	.00338	.00019	-.00001	1.2971
#3	-.00023	.04888	.00060	.00356	.00028	.00002	1.3114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00325**	**.00906**	**.00415**	**.08816**	**.34224**	**.00883**	**.40519**
Stddev	.00008	.00008	.00029	.00026	.00208	.00022	.11480
%RSD	2.4216	.89024	6.9311	.29948	.60876	2.4477	28.332
#1	.00333	.00915	.00429	.08842	.34388	.00878	.51216
#2	.00324	.00901	.00382	.08818	.34295	.00907	.41949
#3	.00318	.00901	.00434	.08789	.33990	.00865	.28391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12068**	**1.5530**	**.07220**	**.00374**	**.61316**	**.48289**	**-.00028**
Stddev	2.9684	1.0034	.01473	.00142	.01672	.00519	.00014
%RSD	2459.7	64.610	20.402	38.031	2.7271	1.0750	48.302
#1	-.02833	1.0900	.08140	.00451	.61741	.48795	-.00018
#2	3.1608	2.7043	.05521	.00462	.59472	.48316	-.00043
#3	-2.7704	.86472	.07999	.00210	.62734	.47758	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



Sample Name: L1305088837 Acquired: 6/5/2013 7:53:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50683**	**.01141**	**15.625**	**.00201**	F **-28.084**	F **120.16**	F **-6221.5**
Stddev	.01491	.00058	.663	.00177	20.045	.82	5.7
%RSD	2.9423	5.0873	4.2432	87.931	71.375	.68583	.09196
#1	.52324	.01113	14.980	.00250	-45.607	120.10	-6218.1
#2	.50316	.01103	15.592	.00005	-6.2264	119.36	-6228.1
#3	.49410	.01208	16.304	.00348	-32.418	121.01	-6218.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00268**	**.00063**	**.10552**	**-.00206**	**.00482**	**-.00006**	**.00244**
Stddev	.00148	.00085	.00092	.00019	.00002	.00114	.00050
%RSD	55.049	136.30	.86763	9.0287	.50124	1921.6	20.644
#1	-.00336	.00148	.10653	-.00204	.00480	.00052	.00189
#2	-.00369	-.00023	.10474	-.00225	.00483	-.00137	.00289
#3	-.00099	.00063	.10528	-.00188	.00484	.00068	.00254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

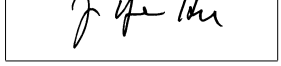
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00003**	**5.3467**	**.24112**
Stddev	.00003	.0229	.19755
%RSD	85.120	.42806	81.930
#1	.00001	5.3716	.17137
#2	.00007	5.3420	.08790
#3	.00002	5.3266	.46407
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305088837 Acquired: 6/5/2013 7:53:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22995.**	**30220.**
Stddev	64.	171.
%RSD	.28042	.56667
#1	22947.	30072.
#2	22970.	30180.
#3	23068.	30407.

Approved: June 05, 2013



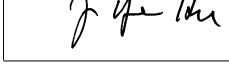
Sample Name: L1305088838 Acquired: 6/5/2013 7:57:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.03613**	**.00092**	**.00391**	**.00017**	**.00001**	**1.2988**
Stddev	.00038	.01120	.00104	.00053	.00013	.00003	.0127
%RSD	355.48	30.997	113.43	13.678	73.704	207.02	.98204
#1	.00021	.03396	.00210	.00330	.00011	.00003	1.3118
#2	.00000	.02617	.00055	.00414	.00032	-.00002	1.2863
#3	-.00054	.04825	.00011	.00429	.00008	.00003	1.2981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00333**	**.00888**	**.00438**	**.08881**	**.28424**	**.00704**	**.33106**
Stddev	.00007	.00016	.00028	.00135	.00922	.00272	.24325
%RSD	2.1583	1.7918	6.4052	1.5196	3.2429	38.588	73.477
#1	.00336	.00889	.00432	.08900	.27383	.00966	.06318
#2	.00338	.00903	.00414	.09005	.28754	.00722	.39183
#3	.00325	.00871	.00469	.08737	.29136	.00424	.53816
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.3824**	**.50825**	**.07097**	**.00551**	**.59110**	**.47353**	**-.00042**
Stddev	2.8788	.69908	.04165	.00163	.01207	.00144	.00005
%RSD	30.683	137.55	58.696	29.517	2.0419	.30408	11.548
#1	12.408	1.1777	.10994	.00585	.59810	.47449	-.00042
#2	9.0616	.56410	.07588	.00694	.57717	.47187	-.00047
#3	6.6774	-.21707	.02707	.00374	.59804	.47422	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



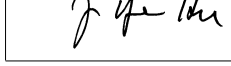
Sample Name: L1305088838 Acquired: 6/5/2013 7:57:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50044**	**.01123**	**9.7084**	**.00126**	F **-70.980**	F **121.10**	F **-6160.3**
Stddev	.01352	.00052	5.1412	.00014	22.366	1.84	81.3
%RSD	2.7021	4.6401	52.957	11.171	31.511	1.5223	1.3206
#1	.49257	.01155	3.8526	.00110	-65.737	120.24	-6142.5
#2	.49270	.01151	13.482	.00136	-95.502	123.22	-6249.1
#3	.51606	.01063	11.791	.00132	-51.701	119.84	-6089.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00309**	**-.00080**	**.10744**	**-.00200**	**.00473**	**.00035**	**.00271**
Stddev	.00043	.00171	.00175	.00005	.00001	.00043	.00061
%RSD	13.969	212.34	1.6261	2.6459	.14694	122.85	22.655
#1	-.00349	.00078	.10847	-.00199	.00473	.00019	.00213
#2	-.00263	-.00057	.10843	-.00206	.00473	.00003	.00336
#3	-.00313	-.00262	.10542	-.00195	.00472	.00084	.00265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00006**	**5.3067**	F **-.04922**
Stddev	.00017	.0677	.17463
%RSD	296.28	1.2765	354.78
#1	-.00025	5.2856	.05416
#2	-.00003	5.3825	-.25084
#3	.00010	5.2521	.04901
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.00400

Approved: June 05, 2013



Sample Name: L1305088838 Acquired: 6/5/2013 7:57:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22656.**	**29811.**
Stddev	218.	94.
%RSD	.96047	.31630
#1	22723.	29839.
#2	22413.	29888.
#3	22832.	29706.

Approved: June 05, 2013

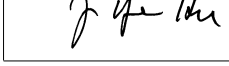
Sample Name: L1305088845 Acquired: 6/5/2013 8:00:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.27309**	**.00128**	**.00146**	**.00020**	**.00028**	**1.2649**
Stddev	.00030	.00719	.00019	.00027	.00016	.00002	.0141
%RSD	585.65	2.6333	15.143	18.446	80.051	8.8324	1.1109
#1	-.00014	.28002	.00115	.00175	.00029	.00030	1.2776
#2	.00040	.26567	.00151	.00121	.00001	.00029	1.2498
#3	-.00010	.27359	.00119	.00143	.00029	.00025	1.2674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00229**	**.03001**	**.01319**	**.03881**	**.21695**	**.01114**	**.12433**
Stddev	.00006	.00002	.00023	.00034	.00224	.00238	.13489
%RSD	2.8030	.05830	1.7519	.88588	1.0325	21.374	108.49
#1	.00232	.03002	.01293	.03900	.21440	.01366	.06165
#2	.00233	.03003	.01337	.03841	.21860	.00893	.27915
#3	.00222	.02999	.01327	.03901	.21785	.01084	.03219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.31022**	**1.8841**	**.08353**	**.00587**	**.59884**	**.64566**	**-.00044**
Stddev	2.6445	.9015	.02784	.00138	.01798	.00387	.00017
%RSD	852.44	47.849	33.327	23.496	3.0023	.59909	37.689
#1	2.7424	2.0559	.11536	.00647	.59969	.64936	-.00062
#2	-1.9023	.90902	.06372	.00429	.58045	.64599	-.00042
#3	-1.7707	2.6873	.07152	.00684	.61637	.64164	-.00029
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.10000						

Approved: June 05, 2013



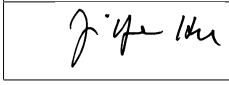
Sample Name: L1305088845 Acquired: 6/5/2013 8:00:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.93033**	**.01607**	**12.634**	**.00149**	F **-70.219**	F **270.88**	F **-13696.**
Stddev	.00992	.00048	12.869	.00088	27.037	.78	69.
%RSD	1.0660	3.0137	101.85	59.238	38.503	.28935	.50049
#1	.93720	.01556	.49503	.00149	-95.474	271.76	-13712.
#2	.91896	.01612	26.125	.00060	-41.697	270.26	-13621.
#3	.93484	.01653	11.282	.00236	-73.486	270.60	-13755.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00392**	**.00078**	**.16891**	**-.00210**	**.00849**	**.00081**	**.00169**
Stddev	.00164	.00093	.00226	.00027	.00007	.00107	.00140
%RSD	41.901	119.78	1.3363	12.913	.87390	131.97	82.403
#1	-.00229	.00019	.16914	-.00199	.00856	.00145	.00061
#2	-.00390	.00029	.17103	-.00190	.00841	.00139	.00121
#3	-.00558	.00185	.16654	-.00241	.00848	-.00042	.00327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00011**	**17.410**	**.15400**
Stddev	.00020	.076	.10801
%RSD	175.78	.43441	70.138
#1	.00002	17.453	.05155
#2	.00034	17.322	.26683
#3	-.00003	17.453	.14363
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088845 Acquired: 6/5/2013 8:00:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22857.**	**30138.**
Stddev	76.	108.
%RSD	.33237	.35846
#1	22831.	30015.
#2	22942.	30213.
#3	22797.	30188.

Approved: June 05, 2013

Sample Name: L1305088846 Acquired: 6/5/2013 8:03:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.27788**	**.00100**	**.00123**	**.00020**	**.00025**	**1.2201**
Stddev	.00022	.02230	.00069	.00008	.00019	.00003	.0224
%RSD	233.15	8.0243	69.122	6.4566	94.686	10.213	1.8325
#1	.00011	.29718	.00033	.00117	.00032	.00026	1.2400
#2	-.00007	.28300	.00096	.00132	.00029	.00026	1.1959
#3	-.00033	.25347	.00171	.00121	-.00002	.00022	1.2243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00221**	**.02857**	**.01233**	**.03686**	**.21056**	**.00754**	**.07973**
Stddev	.00017	.00014	.00021	.00028	.00342	.00228	.32065
%RSD	7.6525	.48772	1.7079	.75185	1.6259	30.267	402.18
#1	.00203	.02870	.01216	.03687	.20863	.00517	.19976
#2	.00236	.02858	.01257	.03658	.20853	.00972	.32305
#3	.00225	.02842	.01226	.03714	.21451	.00771	-.28362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.6624**	**1.3788**	**.10496**	**.00469**	**.57949**	**.62327**	**-.00047**
Stddev	4.4455	1.0688	.01368	.00164	.01592	.00684	.00019
%RSD	121.38	77.513	13.032	35.051	2.7473	1.0968	40.001
#1	4.8722	2.1203	.08918	.00628	.57267	.62288	-.00069
#2	7.3777	.15372	.11346	.00481	.56812	.63029	-.00036
#3	-1.2628	1.8624	.11223	.00299	.59769	.61663	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013

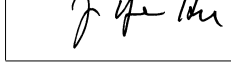
Sample Name: L1305088846 Acquired: 6/5/2013 8:03:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.89340**	**.01498**	**17.521**	**.00130**	F **-61.385**	F **251.68**	F **-12908.**
Stddev	.01109	.00009	2.231	.00122	36.957	1.92	28.
%RSD	1.2419	.58866	12.735	93.504	60.205	.76242	.21947
#1	.89794	.01501	18.185	.00056	-82.699	249.92	-12904.
#2	.90150	.01488	19.344	.00064	-82.746	253.72	-12939.
#3	.88076	.01504	15.033	.00271	-18.711	251.39	-12882.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00363**	**.00035**	**.15740**	**-.00197**	**.00825**	**.00164**	**.00243**
Stddev	.00124	.00036	.00510	.00016	.00006	.00078	.00090
%RSD	34.091	100.40	3.2409	8.1800	.69321	47.213	36.876
#1	-.00497	-.00003	.15169	-.00186	.00829	.00199	.00195
#2	-.00337	.00067	.16150	-.00189	.00829	.00219	.00347
#3	-.00254	.00042	.15901	-.00215	.00819	.00075	.00188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00006**	**16.466**	**.37968**
Stddev	.00021	.081	.16082
%RSD	382.18	.48929	42.356
#1	-.00030	16.437	.53344
#2	.00011	16.557	.39298
#3	.00002	16.405	.21263
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088846 Acquired: 6/5/2013 8:03:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22796.**	**29286.**
Stddev	77.	215.
%RSD	.33969	.73511
#1	22847.	29294.
#2	22707.	29066.
#3	22834.	29497.

Approved: June 05, 2013

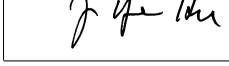
Sample Name: L1305088847S Acquired: 6/5/2013 8:07:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00217**	**.33605**	**.00220**	**.01154**	**.00528**	**.00052**	**1.3349**
Stddev	.00013	.01405	.00056	.00023	.00002	.00000	.0130
%RSD	5.9260	4.1820	25.481	2.0035	.46721	.66460	.97399
#1	.00209	.32351	.00194	.01158	.00530	.00052	1.3499
#2	.00211	.35124	.00181	.01129	.00525	.00053	1.3273
#3	.00232	.33340	.00284	.01175	.00527	.00052	1.3275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00262**	**.03108**	**.01577**	**.04215**	**.23481**	**.01552**	**.17865**
Stddev	.00002	.00008	.00040	.00041	.00314	.00287	.15267
%RSD	.94111	.25598	2.5178	.98260	1.3360	18.488	85.456
#1	.00264	.03106	.01622	.04168	.23155	.01543	.16614
#2	.00260	.03101	.01549	.04234	.23509	.01269	.03262
#3	.00263	.03116	.01559	.04244	.23780	.01843	.33719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.9565**	**.39538**	**.37299**	**.00827**	**.65899**	**.65041**	**.00380**
Stddev	4.8349	1.3572	.02338	.00111	.00493	.00275	.00019
%RSD	122.20	343.28	6.2693	13.487	.74850	.42229	5.1026
#1	3.7138	1.7642	.38966	.00846	.65988	.65045	.00385
#2	8.9081	.37187	.38305	.00927	.66343	.64764	.00396
#3	-.75258	-.94997	.34626	.00707	.65368	.65313	.00358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



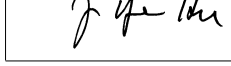
Sample Name: L1305088847S Acquired: 6/5/2013 8:07:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1616**	**.01870**	**17.125**	**.00477**	F **16.854**	F **267.03**	F **-13614.**
Stddev	.0124	.00036	12.402	.00079	7.840	2.16	41.
%RSD	1.0638	1.9458	72.419	16.461	46.519	.81040	.30270
#1	1.1487	.01830	10.845	.00415	8.9429	265.36	-13573.
#2	1.1628	.01880	9.1197	.00565	24.621	269.47	-13655.
#3	1.1733	.01901	31.411	.00451	16.997	266.25	-13614.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00227**	**.00321**	**.19747**	**.00215**	**.01363**	**.00591**	**.00566**
Stddev	.00147	.00110	.00414	.00025	.00010	.00034	.00110
%RSD	64.674	34.328	2.0966	11.562	.73259	5.7307	19.439
#1	.00381	.00232	.19403	.00235	.01352	.00627	.00628
#2	.00089	.00287	.19632	.00222	.01371	.00587	.00439
#3	.00212	.00445	.20207	.00187	.01366	.00559	.00630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00530**	**17.385**	**.39700**
Stddev	.00020	.104	.16163
%RSD	3.7054	.60026	40.713
#1	.00549	17.332	.23804
#2	.00510	17.505	.39180
#3	.00531	17.318	.56118
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088847S Acquired: 6/5/2013 8:07:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22610.**	**29602.**
Stddev	98.	94.
%RSD	.43176	.31898
#1	22672.	29553.
#2	22497.	29711.
#3	22661.	29543.

Approved: June 05, 2013

Sample Name: L1305088848SD Acquired: 6/5/2013 8:10:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00226**	**.33923**	**.00457**	**.01146**	**.00506**	**.00054**	**1.3672**
Stddev	.00019	.00904	.00181	.00067	.00014	.00003	.0078
%RSD	8.3803	2.6640	39.608	5.8770	2.8217	4.7994	.56797
#1	.00245	.33784	.00382	.01190	.00522	.00056	1.3602
#2	.00227	.34889	.00664	.01180	.00496	.00054	1.3658
#3	.00207	.33097	.00326	.01069	.00499	.00051	1.3756
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00257**	**.03192**	**.01600**	**.03963**	**.27446**	**.01788**	**.18374**
Stddev	.00010	.00023	.00010	.00064	.00430	.00349	.26488
%RSD	4.0808	.73393	.61147	1.6114	1.5673	19.491	144.16
#1	.00257	.03197	.01608	.04001	.27675	.02164	.13512
#2	.00247	.03167	.01589	.03889	.26950	.01476	.46956
#3	.00268	.03213	.01603	.03998	.27714	.01725	-.05347
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.5424**	**F -1.7289**	**.40061**	**.00750**	**.68262**	**.67793**	**.00429**
Stddev	9.9835	.9986	.02303	.00093	.01219	.00390	.00004
%RSD	152.60	57.760	5.7482	12.362	1.7853	.57562	1.0430
#1	13.814	-2.1394	.41401	.00831	.67848	.67870	.00433
#2	10.653	-2.4569	.37402	.00649	.69633	.68140	.00430
#3	-4.8401	-.59048	.41380	.00769	.67304	.67371	.00424
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		45.000					
Low Limit		-.10000					

Approved: June 05, 2013

Sample Name: L1305088848SD Acquired: 6/5/2013 8:10:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1946**	**.01856**	**5.3690**	**.00413**	F **12.011**	F **273.55**	F **-13993.**
Stddev	.0095	.00034	9.8077	.00065	20.264	1.91	76.
%RSD	.79684	1.8564	182.67	15.618	168.71	.69652	.53963
#1	1.2023	.01889	-5.7251	.00469	-7.1965	273.67	-14039.
#2	1.1974	.01820	12.887	.00342	10.042	271.59	-13906.
#3	1.1840	.01860	8.9452	.00428	33.188	275.40	-14034.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit					9.0000	9.0000	9.0000
Low Limit					-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00243**	**.00284**	**.18972**	**.00287**	**.01393**	**.00645**	**.00492**
Stddev	.00102	.00229	.00024	.00008	.00021	.00028	.00079
%RSD	41.833	80.403	.12906	2.8377	1.5408	4.3140	16.120
#1	.00339	.00273	.18965	.00278	.01418	.00662	.00413
#2	.00136	.00518	.18952	.00293	.01382	.00659	.00491
#3	.00254	.00062	.18999	.00291	.01380	.00612	.00572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

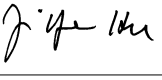
Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00545**	**17.715**	**.32536**
Stddev	.00014	.107	.21636
%RSD	2.4942	.60133	66.498
#1	.00551	17.807	.18828
#2	.00556	17.598	.57477
#3	.00530	17.740	.21301
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013

Sample Name: L1305088848SD Acquired: 6/5/2013 8:10:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment: WG431949-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22657.**	**29468.**
Stddev	177.	28.
%RSD	.78207	.09414
#1	22483.	29484.
#2	22651.	29436.
#3	22838.	29484.

Approved: June 05, 2013



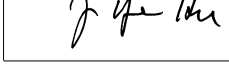
Sample Name: L1305088849 Acquired: 6/5/2013 8:14:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.28152**	**.00092**	**.00112**	**.00022**	**.00025**	**1.2712**
Stddev	.00015	.00540	.00243	.00052	.00004	.00003	.0112
%RSD	42.421	1.9166	263.26	46.473	18.840	11.577	.87683
#1	-.00048	.28234	.00192	.00055	.00020	.00026	1.2685
#2	-.00041	.28646	-.00185	.00125	.00026	.00028	1.2835
#3	-.00019	.27576	.00271	.00157	.00018	.00022	1.2617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00215**	**.02935**	**.01283**	**.03821**	**.21133**	**.00893**	**.18790**
Stddev	.00004	.00027	.00030	.00077	.00186	.00340	.21139
%RSD	1.9904	.92164	2.3020	2.0027	.87922	38.053	112.50
#1	.00220	.02961	.01316	.03875	.20919	.00520	.00691
#2	.00214	.02937	.01275	.03856	.21229	.01184	.42023
#3	.00212	.02907	.01259	.03734	.21251	.00976	.13657
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3918**	**2.3630**	**.12175**	**.00286**	**.60203**	**.63817**	**-.00013**
Stddev	5.8331	.5794	.01691	.00095	.01441	.00920	.00012
%RSD	243.87	24.518	13.892	33.092	2.3931	1.4421	89.139
#1	-3.6566	2.9990	.13751	.00307	.61467	.64461	-.00020
#2	7.9827	2.2248	.12387	.00368	.58634	.64228	.00000
#3	2.8494	1.8653	.10388	.00183	.60508	.62763	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: June 05, 2013



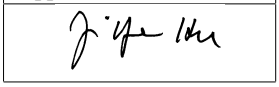
Sample Name: L1305088849 Acquired: 6/5/2013 8:14:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.89284**	**.01538**	**15.540**	**.00179**	**6.0051**	F **259.07**	F **-13303.**
Stddev	.01481	.00059	17.196	.00118	21.182	2.77	94.
%RSD	1.6588	3.8489	110.65	66.175	352.73	1.0681	.70396
#1	.90204	.01546	-3.6142	.00154	9.1472	261.52	-13407.
#2	.90072	.01475	20.586	.00075	25.440	256.07	-13225.
#3	.87575	.01593	29.648	.00307	-16.572	259.63	-13277.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						9.0000	9.0000
Low Limit						-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00454**	**.00081**	**.16047**	**-.00154**	**.00834**	**.00042**	**.00287**
Stddev	.00027	.00133	.00283	.00021	.00007	.00147	.00095
%RSD	5.9396	164.09	1.7611	13.324	.88562	353.59	33.180
#1	-.00444	.00147	.16219	-.00167	.00838	-.00098	.00396
#2	-.00433	-.00072	.15721	-.00165	.00840	.00028	.00233
#3	-.00484	.00168	.16201	-.00130	.00826	.00195	.00231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**16.879**	**.12683**
Stddev	.00006	.103	.37396
%RSD	131.63	.61229	294.86
#1	-.00002	16.992	-.18879
#2	.00008	16.789	.02941
#3	.00008	16.855	.53986
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Approved: June 05, 2013



Sample Name: L1305088849 Acquired: 6/5/2013 8:14:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: 100 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22478.**	**29305.**
Stddev	117.	359.
%RSD	.51890	1.2263
#1	22354.	29080.
#2	22585.	29115.
#3	22496.	29719.

Approved: June 05, 2013

Sample Name: CCV Acquired: 6/5/2013 8:17:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .44088	9.9461	.41039	.50005	1.0065	.05023	9.6953
Stddev	.00219	.0592	.00043	.00122	.0022	.00035	.0830
%RSD	.49746	.59481	.10552	.24313	.22035	.69091	.85638
#1	.43996	9.8876	.41027	.49970	1.0062	.05025	9.6184
#2	.43929	10.006	.41088	.49904	1.0088	.04987	9.7833
#3	.44338	9.9448	.41004	.50140	1.0044	.05057	9.6842
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.40000						
Range	10.000%						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05096	.19880	.49791	.50056	4.0443	1.0094	.96224
Stddev	.00027	.00073	.00250	.00148	.0091	.0074	.19306
%RSD	.52879	.36894	.50154	.29659	.22582	.73165	20.063
#1	.05094	.19796	.49928	.49895	4.0355	1.0026	1.0389
#2	.05071	.19928	.49503	.50086	4.0538	1.0172	1.1052
#3	.05124	.19917	.49943	.50187	4.0437	1.0083	.74262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.8271	F -.70950	50.557	1.0066	10.150	.50210	.97830
Stddev	3.2502	1.0229	.157	.0017	.099	.00132	.00262
%RSD	177.89	144.17	.31053	.16369	.97085	.26209	.26758
#1	1.7380	-.40396	50.417	1.0060	10.064	.50192	.97528
#2	-2.5940	-1.8504	50.727	1.0085	10.129	.50350	.97972
#3	-4.6252	.12582	50.529	1.0054	10.258	.50088	.97990
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.0000	1.0000					
Range	-10.000%	-10.000%					

Approved: June 05, 2013

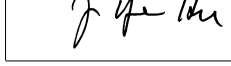
Sample Name: CCV Acquired: 6/5/2013 8:17:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.447**	**.50867**	F **23.835**	**.51164**	F **-23.744**	**10.310**	**9.3408**
Stddev	.080	.00141	10.357	.00151	11.855	.040	1.0897
%RSD	.15789	.27634	43.451	.29550	49.927	.38640	11.666
#1	50.433	.50719	25.264	.51236	-15.752	10.300	10.521
#2	50.533	.50885	33.403	.50991	-37.365	10.276	9.1282
#3	50.376	.50998	12.838	.51267	-18.116	10.354	8.3731
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			10.000		10.000		
Range			10.000%		-10.000%		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2114**	**.40094**	**5.2533**	**.95412**	**1.0163**	**1.0192**	**.51606**
Stddev	.0060	.00025	.0325	.00299	.0030	.0044	.00201
%RSD	.49114	.06216	.61941	.31312	.29339	.42731	.38959
#1	1.2137	.40116	5.2705	.95418	1.0142	1.0162	.51831
#2	1.2047	.40067	5.2158	.95111	1.0197	1.0172	.51444
#3	1.2159	.40100	5.2737	.95708	1.0150	1.0242	.51544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0014**	**1.0263**	F **.48660**
Stddev	.0040	.0025	.18693
%RSD	.40114	.24440	38.415
#1	1.0014	1.0236	.47291
#2	.99742	1.0267	.30689
#3	1.0055	1.0285	.68000
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Approved: June 05, 2013



Sample Name: CCV Acquired: 6/5/2013 8:17:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21984.**	**28387.**
Stddev	23.	119.
%RSD	.10535	.42046
#1	21992.	28453.
#2	22002.	28249.
#3	21958.	28459.

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/5/2013 8:21:06 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**-.00181**	**.00043**	**.00034**	**.00031**	**.00001**	**-.01871**
Stddev	.00010	.00445	.00064	.00057	.00009	.00000	.00649
%RSD	26.359	246.29	148.64	167.22	30.182	39.773	34.687
#1	-.00046	.00016	.00090	.00042	.00033	.00000	-.01924
#2	-.00044	.00132	-.00030	.00086	.00021	.00001	-.02491
#3	-.00027	-.00690	.00070	-.00026	.00039	.00001	-.01197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	Hf2322	Hf2641
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00008**	**.00011**	**.00000**	**.00009**	**-.00102**	F **.16985**
Stddev	.00020	.00012	.00009	.0003	.00102	.00133	.06368
%RSD	592.05	153.90	89.941	16482.	1171.0	129.68	37.490
#1	.00012	-.00003	.00000	-.00016	-.00086	-.00237	.20953
#2	.00004	.00005	.00016	-.00022	.00117	.00028	.09640
#3	-.00026	.00021	.00016	.00037	-.00006	-.00097	.20361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.10000
Low Limit							-.10000

Elem	Hf2773	Hf3399	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.7648**	F **1.7109**	**-.00506**	**.00279**	**.00034**	**.00008**	**.00119**
Stddev	6.0264	1.4519	.00149	.00018	.00369	.00003	.00049
%RSD	217.97	84.863	29.491	6.5050	1080.7	36.326	41.024
#1	8.5011	.60496	-.00518	.00263	.00229	.00006	.00076
#2	-3.5149	3.3551	-.00649	.00274	.00265	.00008	.00110
#3	3.3082	1.1727	-.00351	.00299	-.00391	.00012	.00172
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000	.10000					
Low Limit	-.10000	-.10000					

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/5/2013 8:21:06 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00219**	**.00012**	F **8.1234**	**.00022**	F **-20.812**	F **.02847**	F **2.0189**
Stddev	.00616	.00040	9.1609	.00168	11.549	.03486	2.4944
%RSD	281.48	336.17	112.77	749.14	55.494	122.44	123.56
#1	.00855	-.00031	2.0884	.00037	-25.018	.04684	3.1437
#2	.00177	.00019	18.665	.00182	-29.669	.05029	3.7528
#3	-.00375	.00048	3.6173	-.00152	-7.7490	-.01173	-.83988
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit			.01000		.01000	.01000	.01000
Low Limit			-.01000		-.01000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00095**	**.00413**	**-.00307**	**-.00080**	**.00010**	**.00108**	**.00057**
Stddev	.00050	.00038	.00151	.00031	.00004	.00096	.00039
%RSD	52.671	9.2918	49.164	38.669	44.444	88.505	68.515
#1	-.00037	.00456	-.00480	-.00104	.00014	.00018	.00046
#2	-.00124	.00384	-.00204	-.00091	.00011	.00097	.00101
#3	-.00124	.00397	-.00237	-.00045	.00005	.00209	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00004**	**.00116**	F **-.10223**
Stddev	.00009	.00007	.20265
%RSD	232.15	5.7748	198.23
#1	.00013	.00118	-.31509
#2	-.00003	.00109	-.07997
#3	.00001	.00122	.08838
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.10000
Low Limit			-.10000

Approved: June 05, 2013

Sample Name: CCB Acquired: 6/5/2013 8:21:06 Type: Blank
Method: ICP-THERMO2_6010_200.7(v2455) Mode: CONC Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21995.**	**28625.**
Stddev	21.	236.
%RSD	.09408	.82312
#1	21978.	28887.
#2	22018.	28429.
#3	21989.	28561.

Approved: June 05, 2013

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L13051242
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: WG432851 - The continuing calibration blanks analyzed on 04-June-2013 at 18:31 and 19:16 yielded results for antimony which exceeded the LOD but were below the LOQ. Client samples 01 through 04 yielded nondetected results for antimony. With permission of the project chemist, the antimony results were reported with 'B' qualifiers to indicate the association with noncompliant CCBs and no further action was taken.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

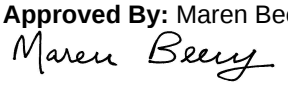
Serial Dilution/Post Digestion Spikes: WG432851 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 65329
Approved By: Maren Beery



Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL19-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:35
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	NI.060413.183505
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00193		0.00100	0.000500
Barium, Total	7440-39-3	0.0808		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00295		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00247		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL20-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:38
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	NI.060413.183851
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00318		0.00100	0.000500
Barium, Total	7440-39-3	0.0677		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00158	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00126	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00104	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00262	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0130		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL20-0513-2	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:42
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	NI.060413.184237
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00458		0.00100	0.000500
Barium, Total	7440-39-3	0.0673		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00151	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00174	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00372		0.00200	0.00100
Nickel, Total	7440-02-0	0.00358	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0188		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL6-0513-1	**Prep Method:**	3015	**Prep Date:**	06/04/2013 08:49
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/04/2013 12:47
Workgroup #:	WG432851	**Analyst:**	JYH	**Run Date:**	06/04/2013 18:46
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	NI.060413.184624
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		UB	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00176		0.00100	0.000500
Barium, Total	7440-39-3	0.116		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00355		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00300		0.00200	0.00100
Nickel, Total	7440-02-0	0.00220	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00278		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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a contaminated method blank.

Certificate of Analysis

2.1.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer NexION 300X

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	100
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/L)	0.25

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	200
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/kg)	40

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	40
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	50

50 ug/kg = 0.050 mg/kg

Perkin Elmer NexION ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - LLICV
QC Std 4 - ICSA
QC Std 5 - ICSAB
QC Std 6 - CCV
QC Std 7 - CCB
QC Std 8 - LLCCV

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.00005	0.05	0.1
Sb	10	0	0.00005	0.05	0.1
As	10	0	0.00005	0.05	0.1
Ba	10	0	0.00005	0.05	0.1
Be	10	0	0.00005	0.05	0.1
Ca	1000	0	0.005	5	10
Cd	10	0	0.0005	0.05	0.1
Cr	10	0	0.0005	0.05	0.1
Co	10	0	0.0005	0.05	0.1
Cu	10	0	0.0005	0.05	0.1
Fe	1000	0	0.005	5	10
Pb	10	0	0.00005	0.05	0.1
Mg	1000	0	0.005	5	10
Mn	10	0	0.00005	0.05	0.1
Ni	10	0	0.00005	0.05	0.1
K	1000	0	0.005	5	10
Se	10	0	0.00005	0.05	0.1
Ag	10	0	0.00005	0.05	0.1
Na	1000	0	0.005	5	10
Tl	10	0	0.00005	0.05	0.1
V	10	0	0.00005	0.05	0.1
U	1000	0	0.00005	0.05	0.1
Zn	10	0	0.00005	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG432798
Analyst: VC
Spike Analyst: VC
Run Date: 06/04/2013 08:49
Method: 3015
Balance: BAL016
Instrument: MW-2
Instrument Start: 06/04/2013 08:46

SOP: ME407 Revison 14
Spike Solution: STD57131
Spike Witness: ERP
HNO3 Lot #: COA16631
Digestion Tubes Lot #: COA16806
MS Filters- fisher-Lot#R RGT26840

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG432798-02	BLANK	1	40 mL	100 mL	205.709 g	205.682 g		
2	WG432399-01	FBLK	18	40 mL	100 mL	206.502 g	206.478 g		
3	WG432798-03	LCS	1	40 mL	100 mL	205.605 g	205.585 g	.25 mL	
4	L13051242-01	SAMP	1	40 mL	100 mL	206.926 g	206.893 g		06/03/13
5	L13051242-02	SAMP	1	40 mL	100 mL	206.213 g	206.186 g		06/03/13
6	L13051242-03	SAMP	1	40 mL	100 mL	206.445 g	206.407 g		06/03/13
7	L13051242-04	SAMP	1	40 mL	100 mL	207.069 g	207.053 g		06/03/13
8	L13051304-01	SAMP	1	40 mL	100 mL	207.332 g	207.307 g		06/04/13
9	L13051304-02	SAMP	1	40 mL	100 mL	205.778 g	205.762 g		06/04/13
10	L13051304-03	SAMP	1	40 mL	100 mL	206.632 g	206.612 g		06/04/13
11	L13051321-01	SAMP	1	40 mL	100 mL	205.646 g	205.629 g		06/04/13
12	L13051321-02	SAMP	1	40 mL	100 mL	206.665 g	206.645 g		06/04/13
13	L13051321-03	SAMP	1	40 mL	100 mL	209.278 g	209.251 g		06/04/13
14	L13051321-04	SAMP	1	40 mL	100 mL	206.748 g	206.717 g		06/04/13
15	L13051321-05	SAMP	1	40 mL	100 mL	205.374 g	205.341 g		06/04/13
16	L13051321-06	SAMP	1	40 mL	100 mL	206.932 g	206.912 g		06/04/13
17	L13051321-07	SAMP	1	40 mL	100 mL	209.008 g	208.993 g		06/04/13
18	L13051321-08	SAMP	1	40 mL	100 mL	207.841 g	207.814 g		06/04/13
19	WG432798-01	REF	1	40 mL	100 mL	207.466 g	207.452 g		
20	L13051321-09	SAMP	1	40 mL	100 mL	207.466 g	207.452 g		06/04/13
21	L13051523-02	SAMP	18	40 mL	100 mL	206.465 g	206.45 g		06/04/13
22	L13051523-04	SAMP	18	40 mL	100 mL	207.388 g	207.367 g		06/04/13
23	L13051524-02	SAMP	18	40 mL	100 mL	208.403 g	208.38 g		06/04/13
24	WG432798-04	MS	1	40 mL	100 mL	209.006 g	208.983 g	.25 mL	
25	WG432798-05	MSD	1	40 mL	100 mL	206.331 g	206.307 g	.25 mL	

L13051523-04	filtered digestate
L13051524-02	filtered digestate

Analyst: Vicki Collins

Reviewer: Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 2907587
Report generated: 06/04/2013 10:46

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 060413A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 46204

Calibration Std: STD57410 ICV Std: STD57413 Post Spike: STD53712
ICSA: STD57411 ICSAB: STD57412 Int. Std: RGT17735
CCV: STD58144 LLCCV: STD57415 Tuning Sol : STD58154
Stannous : Hydroxylamine :

Workgroups: 432851,432748

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.060413.123205	Blank	Blank		1		06/04/13 12:32
2	NI.060413.123552	WG432868-01	Calibration Point		1		06/04/13 12:35
3	NI.060413.123938	WG432868-02	Calibration Point		1		06/04/13 12:39
4	NI.060413.124324	WG432868-03	Calibration Point		1		06/04/13 12:43
5	NI.060413.124710	WG432868-04	Calibration Point		1		06/04/13 12:47
6	NI.060413.125058	WG432868-05	Initial Calibration Verification		1		06/04/13 12:50
7	NI.060413.125446	WG432868-06	QC Std 2		1		06/04/13 12:54
8	NI.060413.125843	WG432868-07	Initial Calib Blank		1		06/04/13 12:58
9	NI.060413.130231	WG432868-08	Low Level Initial Calibration V		1		06/04/13 13:02
10	NI.060413.130617	WG432868-09	Interference Check		1		06/04/13 13:06
11	NI.060413.131002	WG432868-10	Interference Check		1		06/04/13 13:10
12	NI.060413.131401	WG432868-11	CCV		1		06/04/13 13:14
13	NI.060413.131811	WG432868-12	CCB		1		06/04/13 13:18
14	NI.060413.132240	WG432798-02	Method/Prep Blank	40/100	1		06/04/13 13:22
15	NI.060413.132626	WG432399-01	Fluid Blank		1		06/04/13 13:26
16	NI.060413.133012	WG432798-03	Laboratory Control S	40/100	1		06/04/13 13:30
17	NI.060413.133358	WG432798-01	Reference Sample		1	L13051321-09	06/04/13 13:33
18	NI.060413.133744	WG432798-04	Matrix Spike	40/100	1	L13051321-09	06/04/13 13:37
19	NI.060413.134130	WG432798-05	Matrix Spike Duplica	40/100	1	L13051321-09	06/04/13 13:41
20	NI.060413.134516	L13051523-02	60500-SSP0320	40/100	1		06/04/13 13:45
21	NI.060413.134903	L13051523-04	60500-SSP0321	40/100	1		06/04/13 13:49
22	NI.060413.135249	WG432851-01	Post Digestion Spike		1	L13051523-04	06/04/13 13:52
23	NI.060413.135635	WG432851-02	Serial Dilution		5	L13051523-04	06/04/13 13:56
24	NI.060413.140023	WG432868-13	CCV		1		06/04/13 14:00
25	NI.060413.140410	WG432868-14	CCB		1		06/04/13 14:04
26	NI.060413.140758	L13051524-02	60500-C0176	40/100	1		06/04/13 14:07
27	NI.060413.141716	L13051523-04	60500-SSP0321	40/100	25		06/04/13 14:17
28	NI.060413.142102	WG432851-01	Post Digestion Spike		25	L13051523-04	06/04/13 14:21
29	NI.060413.142448	WG432851-02	Serial Dilution		125	L13051523-04	06/04/13 14:24
30	NI.060413.142834	L13051524-02	60500-C0176	40/100	25		06/04/13 14:28
31	NI.060413.143223	WG432868-15	CCV		1		06/04/13 14:32
32	NI.060413.143609	WG432868-16	CCB		1		06/04/13 14:36
33	NI.060413.144639	WG432680-02	Method/Prep Blank	.5/200	1		06/04/13 14:46
34	NI.060413.145025	WG432680-03	Laboratory Control S	.5/200	1		06/04/13 14:50

Page: 1 Approved: June 05, 2013

Maren Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 060413A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 46204

Calibration Std: STD57410 ICV Std: STD57413 Post Spike: STD53712
ICSA: STD57411 ICSAB: STD57412 Int. Std: RGT17735
CCV: STD58144 LLCCV: STD57415 Tuning Sol : STD58154
Stannous : Hydroxylamine :

Workgroups: 432851,432748

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.060413.145411	WG432680-01	Reference Sample		1	L13051595-17	06/04/13 14:54
36	NI.060413.145757	WG432680-04	Matrix Spike	.501/200	1	L13051595-17	06/04/13 14:57
37	NI.060413.150144	WG432680-05	Matrix Spike Duplica	.533/200	1	L13051595-17	06/04/13 15:01
38	NI.060413.150530	L13051595-01	PFK0078	.505/200	1		06/04/13 15:05
39	NI.060413.150916	L13051595-02	PFK0079	.526/200	1		06/04/13 15:09
40	NI.060413.151302	WG432748-01	Post Digestion Spike		1	L13051595-02	06/04/13 15:13
41	NI.060413.151648	WG432748-02	Serial Dilution		5	L13051595-02	06/04/13 15:16
42	NI.060413.152034	WG432748-02	Serial Dilution		25	L13051595-02	06/04/13 15:20
43	NI.060413.152423	WG432868-17	CCV		1		06/04/13 15:24
44	NI.060413.152809	WG432868-18	CCB		1		06/04/13 15:28
45	NI.060413.153157	L13051595-03	PFK0081	.511/200	1		06/04/13 15:31
46	NI.060413.153543	L13051595-04	PFK0082	.532/200	1		06/04/13 15:35
47	NI.060413.153929	L13051595-05	PFK0084	.509/200	1		06/04/13 15:39
48	NI.060413.154315	L13051595-06	PFK0085	.505/200	1		06/04/13 15:43
49	NI.060413.154701	L13051595-07	PFK0087	.522/200	1		06/04/13 15:47
50	NI.060413.155047	L13051595-08	PFK0089	.502/200	1		06/04/13 15:50
51	NI.060413.155433	L13051595-09	PFK0091	.537/200	1		06/04/13 15:54
52	NI.060413.155819	L13051595-10	PFK0092	.509/200	1		06/04/13 15:58
53	NI.060413.160345	L13051595-11	PFK0094	.517/200	1		06/04/13 16:03
54	NI.060413.160731	L13051595-12	PFK0095	.51/200	1		06/04/13 16:07
55	NI.060413.161119	WG432868-19	CCV		1		06/04/13 16:11
56	NI.060413.161505	WG432868-20	CCB		1		06/04/13 16:15
57	NI.060413.161909	L13051561-01	FILTER BAGS 5-30-13		25		06/04/13 16:19
58	NI.060413.162313	L13051595-13	PFK0097	.501/200	1		06/04/13 16:23
59	NI.060413.162659	L13051595-14	PFK0098	.541/200	1		06/04/13 16:26
60	NI.060413.163045	L13051595-15	PFK0101	.513/200	1		06/04/13 16:30
61	NI.060413.163431	L13051595-16	PFK0102	.531/200	1		06/04/13 16:34
62	NI.060413.163817	L13051507-01	BDC-1	.518/200	1		06/04/13 16:38
63	NI.060413.164203	L13051507-02	BDC-2	.509/200	1		06/04/13 16:42
64	NI.060413.164549	L13051507-03	BDC-3	.515/200	1		06/04/13 16:45
65	NI.060413.164935	WG432680-01	Reference Sample		50	L13051595-17	06/04/13 16:49
66	NI.060413.165702	WG432680-04	Matrix Spike	.501/200	50	L13051595-17	06/04/13 16:57
67	NI.060413.170050	WG432868-21	CCV		1		06/04/13 17:00
68	NI.060413.170436	WG432868-22	CCB		1		06/04/13 17:04

Page: 2 Approved: June 05, 2013

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 060413A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 46204

Calibration Std: STD57410 ICV Std: STD57413 Post Spike: STD53712
ICSA: STD57411 ICSAB: STD57412 Int. Std: RGT17735
CCV: STD58144 LLCCV: STD57415 Tuning Sol : STD58154
Stannous : Hydroxylamine :

Workgroups: 432851,432748

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	NI.060413.170824	WG432680-05	Matrix Spike Duplica	.533/200	50	L13051595-17	06/04/13 17:08
70	NI.060413.171210	L13051595-01	PFK0078	.505/200	50		06/04/13 17:12
71	NI.060413.171556	L13051595-02	PFK0079	.526/200	50		06/04/13 17:15
72	NI.060413.171942	WG432748-01	Post Digestion Spike		50	L13051595-02	06/04/13 17:19
73	NI.060413.172328	WG432748-02	Serial Dilution		250	L13051595-02	06/04/13 17:23
74	NI.060413.172714	L13051595-03	PFK0081	.511/200	50		06/04/13 17:27
75	NI.060413.173100	L13051595-04	PFK0082	.532/200	50		06/04/13 17:31
76	NI.060413.173446	L13051595-05	PFK0084	.509/200	100		06/04/13 17:34
77	NI.060413.173831	L13051595-06	PFK0085	.505/200	50		06/04/13 17:38
78	NI.060413.174217	L13051595-07	PFK0087	.522/200	50		06/04/13 17:42
79	NI.060413.174605	WG432868-23	CCV		1		06/04/13 17:46
80	NI.060413.174951	WG432868-24	CCB		1		06/04/13 17:49
81	NI.060413.175338	L13051595-08	PFK0089	.502/200	50		06/04/13 17:53
82	NI.060413.175724	L13051595-09	PFK0091	.537/200	100		06/04/13 17:57
83	NI.060413.180110	L13051595-10	PFK0092	.509/200	50		06/04/13 18:01
84	NI.060413.180455	L13051595-11	PFK0094	.517/200	50		06/04/13 18:04
85	NI.060413.180841	L13051595-12	PFK0095	.51/200	50		06/04/13 18:08
86	NI.060413.181227	L13051595-13	PFK0097	.501/200	50		06/04/13 18:12
87	NI.060413.181613	L13051595-14	PFK0098	.541/200	50		06/04/13 18:16
88	NI.060413.181959	L13051595-15	PFK0101	.513/200	50		06/04/13 18:19
89	NI.060413.182345	L13051595-16	PFK0102	.531/200	50		06/04/13 18:23
90	NI.060413.182732	WG432868-25	CCV		1		06/04/13 18:27
91	NI.060413.183118	WG432868-26	CCB		1		06/04/13 18:31
92	NI.060413.183505	L13051242-01	MPL19-0513-1	40/100	1		06/04/13 18:35
93	NI.060413.183851	L13051242-02	MPL20-0513-1	40/100	1		06/04/13 18:38
94	NI.060413.184237	L13051242-03	MPL20-0513-2	40/100	1		06/04/13 18:42
95	NI.060413.184624	L13051242-04	MPL6-0513-1	40/100	1		06/04/13 18:46
96	NI.060413.185010	L13051304-01	SMW1-0513-1	40/100	1		06/04/13 18:50
97	NI.060413.185356	L13051304-02	SMW4-0513-1	40/100	1		06/04/13 18:53
98	NI.060413.185742	L13051304-03	MPL25-0513-1	40/100	1		06/04/13 18:57
99	NI.060413.190128	L13051321-01	4104-MW1	40/100	1		06/04/13 19:01
100	NI.060413.190514	L13051321-02	4104-MW2	40/100	1		06/04/13 19:05
101	NI.060413.190900	L13051321-03	4104-MW3A	40/100	1		06/04/13 19:09
102	NI.060413.191249	WG432868-27	CCV		1		06/04/13 19:12

Page: 3 Approved: June 05, 2013

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 060413A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 46204

Calibration Std: STD57410 ICV Std: STD57413 Post Spike: STD53712
ICSA: STD57411 ICSAB: STD57412 Int. Std: RGT17735
CCV: STD58144 LLCCV: STD57415 Tuning Sol : STD58154
Stannous : Hydroxylamine :

Workgroups: 432851,432748

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	NI.060413.191635	WG432868-28	CCB		1		06/04/13 19:16
104	NI.060413.192023	L13051321-04	4104-MW4	40/100	1		06/04/13 19:20
105	NI.060413.192410	L13051321-05	4104-MW6A	40/100	1		06/04/13 19:24
106	NI.060413.192756	L13051321-06	4104-MW7D	40/100	1		06/04/13 19:27
107	NI.060413.193142	L13051321-07	4104-MW8A	40/100	1		06/04/13 19:31
108	NI.060413.193528	L13051321-08	4104-MW8B	40/100	1		06/04/13 19:35
109	NI.060413.193916	WG432868-29	CCV		1		06/04/13 19:39
110	NI.060413.194302	WG432868-30	CCB		1		06/04/13 19:43
111	NI.060413.194650	WG432868-31	Low Level Continuing Calibra		1		06/04/13 19:46

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7			Rerun for antimony.	

Page: 4 Approved: June 05, 2013

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 04-JUN-2013
Analyst: JYH
Analyst: NA
Method: 6020/6020A/200.8
Instrument: ICP-MS2
Curve Workgroup: 432868
Runlog ID: 53583
Analytical Workgroups: 432851

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	1523,1524,1242,1304,1595
Client Forms	X
Level X	
Level 3	
Level 4	1523,1524,1242,1304,1595
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
04-JUN-2013

Secondary Reviewer:
05-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-05-2013 13:26:54

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 **AAB#:** WG432851

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					06/04/2013	12.9	180		06/04/13	13.3	180	
MPL20-0513-1	02	05/22/13					06/04/2013	12.8	180		06/04/13	13.2	180	
MPL20-0513-2	03	05/22/13					06/04/2013	12.8	180		06/04/13	13.2	180	
MPL6-0513-1	04	05/22/13					06/04/2013	12.7	180		06/04/13	13.1	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2909732
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG432851
Blank File ID: NI.060413.132240
Blank Sample ID: WG432798-02
Prep Date: 06/04/13 08:49
Instrument ID: ICP-MS2
Analyzed Date: 06/04/13 13:22
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432798-03	NI.060413.133012	06/04/13 13:30	01
MPL19-0513-1	L13051242-01	NI.060413.183505	06/04/13 18:35	01
MPL20-0513-1	L13051242-02	NI.060413.183851	06/04/13 18:38	01
MPL20-0513-2	L13051242-03	NI.060413.184237	06/04/13 18:42	01
MPL6-0513-1	L13051242-04	NI.060413.184624	06/04/13 18:46	01

Report Name: BLANK_SUMMARY
PDF File ID: 2909733
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 06/04/13 08:49 Sample ID: WG432798-02
Instrument ID: ICP-MS2 Run Date: 06/04/13 13:22 Prep Method: 3015
File ID: NI.060413.132240 Analyst: JYH Method: 6020
Workgroup (AAB#): WG432851 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-04-JUN-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Arsenic, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Cobalt, Total	0.000500	0.00100	0.000500	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Silver, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U

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

Report Name:BLANK
PDF ID: 2909734
05-JUN-2013 08:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432798-03
Instrument ID: ICP-MS2 Run Time: 13:30 Prep Method: 3015
File ID: NI.060413.133012 Analyst: JYH Method: 6020
Workgroup (AAB#): WG432851 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD57131 Cal ID: ICP-MS-04-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0617	98.7	80 - 120	
Arsenic, Total	0.0625	0.0605	96.9	80 - 120	
Barium, Total	0.0625	0.0618	98.9	80 - 120	
Cadmium, Total	0.0625	0.0617	98.7	80 - 120	
Chromium, Total	0.0625	0.0623	99.7	80 - 120	
Cobalt, Total	0.0625	0.0610	97.7	80 - 120	
Copper, Total	0.0625	0.0631	101	80 - 120	
Lead, Total	0.0625	0.0618	98.9	80 - 120	
Manganese, Total	0.0625	0.0619	99.0	80 - 120	
Nickel, Total	0.0625	0.0633	101	80 - 120	
Selenium, Total	0.0625	0.0627	100	80 - 120	
Silver, Total	0.0625	0.0628	101	80 - 120	
Thallium, Total	0.0625	0.0616	98.6	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2909735
Report generated: 06/05/2013 08:17

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

Loginnum: L13051242 Cal ID: ICP-MS2- Worknum: WG432851
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: WG432798-01 File ID: NI.060413.133358 Dil: 1 Matrix: WATER
Sample ID: WG432798-04 MS File ID: NI.060413.133744 Dil: 1 Units: mg/L
Sample ID: WG432798-05 MSD File ID: NI.060413.134130 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.000977	0.0625	0.0592	93.2	0.0625	0.0616	97.0	3.95	80 - 120	20	
Arsenic, Total	0.00248	0.0625	0.0607	93.2	0.0625	0.0648	99.7	6.48	80 - 120	20	
Barium, Total	0.0854	0.0625	0.141	89.8	0.0625	0.147	99.3	4.12	80 - 120	20	
Cadmium, Total	ND	0.0625	0.0591	94.6	0.0625	0.0617	98.7	4.23	80 - 120	20	
Chromium, Total	0.00249	0.0625	0.0611	93.8	0.0625	0.0649	99.9	6.08	80 - 120	20	
Cobalt, Total	0.00687	0.0625	0.0636	90.8	0.0625	0.0666	95.6	4.56	80 - 120	20	
Copper, Total	0.00269	0.0625	0.0611	93.5	0.0625	0.0646	99.0	5.52	80 - 120	20	
Lead, Total	ND	0.0625	0.0596	95.3	0.0625	0.0630	101	5.62	80 - 120	20	
Manganese, Total	1.29	0.0625	1.32	50.9	0.0625	1.33	70.5	0.930	80 - 120	20	*
Nickel, Total	0.00432	0.0625	0.0635	94.7	0.0625	0.0669	100	5.23	80 - 120	20	
Selenium, Total	0.00979	0.0625	0.0675	92.3	0.0625	0.0747	104	10.1	80 - 120	20	
Silver, Total	ND	0.0625	0.0562	89.9	0.0625	0.0581	93.0	3.39	80 - 120	20	
Thallium, Total	ND	0.0625	0.0591	94.6	0.0625	0.0611	97.8	3.32	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: 2911630
Report generated 06/05/2013 15:50

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13051242 **Worknum:** WG432851
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG432851-02 **File ID:** NI.060413.142448 **Dil:** 125 **Units:** ug/L
Sample: L13051523-04 **File ID:** NI.060413.141716 **Dil:** 25

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	ND	U	ND	U		
Barium	88.0	X	88.1	F	0.02	
Cadmium	ND	U	ND	U		
Chromium	ND	U	ND	U		
Cobalt	ND	U	ND	U		
Copper	142	X	144	X	0.90	
Lead	139	X	138	X	0.82	
Manganese	64.2	X	57.4	F	10.50	
Nickel	ND	U	ND	U		
Selenium	ND	U	ND	U		
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2909730
06/05/2013 08:17

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13051242 **Worknum:** WG432851
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG432851-02 **File ID:** NI.060413.135635 **Dil:** 5 **Units:** ug/L
Sample: L13051523-04 **File ID:** NI.060413.134903 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	1.41	X	2.62	X	85.60	
Arsenic	3.93	X	3.80	X	3.38	
Barium	87.5		86.7		0.88	
Cadmium	0.391	X	ND	U		
Chromium	3.32	X	3.42	F	2.89	
Cobalt	0.674	X	ND	U		
Copper	136		137		0.68	
Lead	135		142		4.82	
Manganese	62.9		62.1		1.34	
Nickel	1.81	X	ND	U		
Selenium	0.651	X	ND	U		
Silver	1.20	X	1.21	F	1.24	
Thallium	0.0450	F	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2909730
06/05/2013 08:17

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13051242 **Worknum:** WG432851
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG432851-01 **File ID:** NI.060413.135249 **Dil:** 1 **Units:** ug/L
Sample ID: L13051523-04 **File ID:** NI.060413.134903 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	52.3		1.41		50	101.8	75 - 125	
ARSENIC	53.8		3.93		50	99.7	75 - 125	
BARIUM	139		87.5		50	103.7	75 - 125	
CADMIUM	51.8		0.391		50	102.8	75 - 125	
CHROMIUM	55.2		3.32		50	103.7	75 - 125	
COBALT	51.2		0.674		50	101.1	75 - 125	
COPPER	189		136		50	104.4	75 - 125	
LEAD	191		135		50	110.2	75 - 125	
MANGANESE	113		62.9		50	100.3	75 - 125	
NICKEL	53.9		1.81		50	104.2	75 - 125	
SELENIUM	51.0		0.651		50	100.7	75 - 125	
SILVER	53.3		1.20		50	104.2	75 - 125	
THALLIUM	50.6		0.0450	F	50	101.1	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: 2909731
Report generated: 06/05/2013 08:17

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13051242 **Worknum:** WG432851
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG432851-01 **File ID:** NI.060413.142102 **Dil:** 25 **Units:** ug/L
Sample ID: L13051523-04 **File ID:** NI.060413.141716 **Dil:** 25 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	53.6		0	U	50	107.1	75 - 125	
ARSENIC	54.4		0	U	50	108.8	75 - 125	
BARIUM	58.4		3.52		50	109.7	75 - 125	
CADMIUM	54.0		0	U	50	107.9	75 - 125	
CHROMIUM	55.5		0	U	50	111.0	75 - 125	
COBALT	53.4		0	U	50	106.7	75 - 125	
COPPER	62.5		5.69		50	113.6	75 - 125	
LEAD	61.0		5.56		50	110.8	75 - 125	
MANGANESE	56.9		2.57		50	108.8	75 - 125	
NICKEL	56.0		0	U	50	112.0	75 - 125	
SELENIUM	56.5		0	U	50	113.1	75 - 125	
SILVER	60.8		0	U	50	121.7	75 - 125	
THALLIUM	54.8		0	U	50	109.5	75 - 125	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2909731
Report generated: 06/05/2013 08:17

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L13051242**	Workgroup (AAB#):	**WG432851**
Analytical Method:	**6020**	Instrument ID:	**ICP-MS2**
ICAL Worknum:	**WG432868**	Initial Calibration Date:	**04-JUN-2013 12:47**

	WG432868-01		WG432868-02		WG432868-03		WG432868-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	76.1	.4	255	50	190000	100	376000	.999983	
ARSENIC	0	-146	.4	-74.8	50	63700	100	126000	.999998	
BARIUM	0	11.3	.4	124	50	85200	100	168000	.999985	
CADMIUM	0	2.00	.4	87.9	50	85000	100	167000	.999973	
CHROMIUM	0	4350	.4	4670	50	265000	100	510000	.999979	
COBALT	0	76.0	.4	376	50	281000	100	549000	.999992	
COPPER	0	92.0	.4	232	50	109000	100	213000	.999997	
LEAD	0	204	.4	498	50	256000	100	512000	.999911	
MANGANESE	0	1220	.4	1700	50	399000	100	777000	.999988	
NICKEL	0	285	.4	402	50	108000	100	213000	.999996	
SELENIUM	0	1.50	.4	6.80	50	6250	100	12500	.999972	
SILVER	0	50.0	.4	340	50	273000	100	534000	.99994	
THALLIUM	0	3.70	.4	274	50	267000	100	529000	.999962	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2909738
Report generated: 05-JUN-2013 08:17

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-07
Instrument ID: ICP-MS2 Run Time: 12:58 Method: 6020
File ID: NI.060413.125843 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG432851 Cal ID: ICP-MS2 - 04-JUN-13
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
MANGANESE	.4	.8	.4	U
NICKEL	.8	1.6	.8	U
LEAD	.2	.4	.2	U
ANTIMONY	.2	.4	.2	U
SELENIUM	.2	.4	.2	U
THALLIUM	.04	.08	.04	U

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

ICB - Modified 07/14/2009
PDF File ID: 2909740
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-12

Instrument ID: ICP-MS2 Run Time: 13:18 Method: 6020

File ID: NI.060413.131811 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2909743
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-14

Instrument ID: ICP-MS2 Run Time: 14:04 Method: 6020

File ID: NI.060413.140410 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2909743
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-16

Instrument ID: ICP-MS2 Run Time: 14:36 Method: 6020

File ID: NI.060413.143609 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.243	F
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

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

CCB - Modified 03/05/2008
PDF File ID: 2909743
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-26

Instrument ID: ICP-MS2 Run Time: 18:31 Method: 6020

File ID: NI.060413.183118 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.241	F
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

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

CCB - Modified 03/05/2008
PDF File ID: 2909743
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-28

Instrument ID: ICP-MS2 Run Time: 19:16 Method: 6020

File ID: NI.060413.191635 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.237	F
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

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

CCB - Modified 03/05/2008
PDF File ID: 2909743
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Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-05
Instrument ID: ICP-MS2 Run Time: 12:50 Method: 6020
File ID: NI.060413.125058 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	50.4	101	90 - 110	
Arsenic		50	49.4	98.9	90 - 110	
Barium		50	50.1	100	90 - 110	
Cadmium		50	50.2	100	90 - 110	
Chromium		50	49.8	99.5	90 - 110	
Cobalt		50	49.4	98.9	90 - 110	
Copper		50	49.8	99.7	90 - 110	
Lead		50	50.3	101	90 - 110	
Manganese		50	49.7	99.4	90 - 110	
Nickel		50	49.8	99.7	90 - 110	
Selenium		50	49.4	98.8	90 - 110	
Silver		50	50.7	101	90 - 110	
Thallium		50	50.2	100	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2909739
Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-11

Instrument ID: ICP-MS2 Run Time: 13:14 Method: 6020

File ID: NI.060413.131401 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.6	ug/L	101	90 - 110		
Arsenic		50.0	49.0	ug/L	98.0	90 - 110		
Barium		50.0	50.3	ug/L	101	90 - 110		
Cadmium		50.0	50.5	ug/L	101	90 - 110		
Chromium		50.0	49.4	ug/L	98.8	90 - 110		
Cobalt		50.0	49.0	ug/L	98.0	90 - 110		
Copper		50.0	49.1	ug/L	98.2	90 - 110		
Lead		50.0	50.4	ug/L	101	90 - 110		
Manganese		50.0	48.9	ug/L	97.9	90 - 110		
Nickel		50.0	50.5	ug/L	101	90 - 110		
Selenium		50.0	50.4	ug/L	101	90 - 110		
Silver		50.0	51.4	ug/L	103	90 - 110		
Thallium		50.0	50.1	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2909742

Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-13

Instrument ID: ICP-MS2 Run Time: 14:00 Method: 6020

File ID: NI.060413.140023 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.8	ug/L	97.5	90 - 110		
Arsenic		50.0	50.2	ug/L	100	90 - 110		
Barium		50.0	49.9	ug/L	99.9	90 - 110		
Cadmium		50.0	49.4	ug/L	98.7	90 - 110		
Chromium		50.0	50.9	ug/L	102	90 - 110		
Cobalt		50.0	49.1	ug/L	98.1	90 - 110		
Copper		50.0	50.7	ug/L	101	90 - 110		
Lead		50.0	49.7	ug/L	99.4	90 - 110		
Manganese		50.0	49.6	ug/L	99.1	90 - 110		
Nickel		50.0	52.2	ug/L	104	90 - 110		
Selenium		50.0	52.6	ug/L	105	90 - 110		
Silver		50.0	49.9	ug/L	99.7	90 - 110		
Thallium		50.0	50.6	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

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Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-15

Instrument ID: ICP-MS2 Run Time: 14:32 Method: 6020

File ID: NI.060413.143223 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	49.1	ug/L	98.3	90 - 110		
Arsenic		50.0	50.3	ug/L	101	90 - 110		
Barium		50.0	50.4	ug/L	101	90 - 110		
Cadmium		50.0	48.3	ug/L	96.5	90 - 110		
Chromium		50.0	50.7	ug/L	101	90 - 110		
Cobalt		50.0	48.6	ug/L	97.2	90 - 110		
Copper		50.0	51.0	ug/L	102	90 - 110		
Lead		50.0	49.7	ug/L	99.4	90 - 110		
Manganese		50.0	49.2	ug/L	98.4	90 - 110		
Nickel		50.0	52.5	ug/L	105	90 - 110		
Selenium		50.0	52.4	ug/L	105	90 - 110		
Silver		50.0	50.3	ug/L	101	90 - 110		
Thallium		50.0	49.9	ug/L	99.8	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2909742

Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-25

Instrument ID: ICP-MS2 Run Time: 18:27 Method: 6020

File ID: NI.060413.182732 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	47.9	ug/L	95.9	90 - 110		
Arsenic		50.0	49.8	ug/L	99.5	90 - 110		
Barium		50.0	50.4	ug/L	101	90 - 110		
Cadmium		50.0	45.8	ug/L	91.6	90 - 110		
Chromium		50.0	48.7	ug/L	97.4	90 - 110		
Cobalt		50.0	46.1	ug/L	92.2	90 - 110		
Copper		50.0	51.2	ug/L	102	90 - 110		
Lead		50.0	48.7	ug/L	97.3	90 - 110		
Manganese		50.0	47.2	ug/L	94.3	90 - 110		
Nickel		50.0	52.8	ug/L	106	90 - 110		
Selenium		50.0	51.7	ug/L	103	90 - 110		
Silver		50.0	51.3	ug/L	103	90 - 110		
Thallium		50.0	50.0	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2909742

Report generated 06/05/2013 08:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 06/04/2013 Sample ID: WG432868-27

Instrument ID: ICP-MS2 Run Time: 19:12 Method: 6020

File ID: NI.060413.191249 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG432851 Cal ID: ICP-MS - 04-JUN-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.1	ug/L	96.3	90 - 110		
Arsenic		50.0	50.4	ug/L	101	90 - 110		
Barium		50.0	49.3	ug/L	98.6	90 - 110		
Cadmium		50.0	47.1	ug/L	94.2	90 - 110		
Chromium		50.0	49.8	ug/L	99.7	90 - 110		
Cobalt		50.0	47.1	ug/L	94.3	90 - 110		
Copper		50.0	51.8	ug/L	104	90 - 110		
Lead		50.0	50.4	ug/L	101	90 - 110		
Manganese		50.0	47.9	ug/L	95.9	90 - 110		
Nickel		50.0	54.0	ug/L	108	90 - 110		
Selenium		50.0	53.1	ug/L	106	90 - 110		
Silver		50.0	46.9	ug/L	93.9	90 - 110		
Thallium		50.0	50.9	ug/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2909742

Report generated 06/05/2013 08:17

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L13051242 **Workgroup (AAB#):** WG432851
Instrument ID: ICP-MS2 **Method:** 6020
Sol. A : WG432868-09 **File ID:** NI.060413.130617 **Units:** ug/L
Sol. AB : WG432868-10 **File ID:** NI.060413.131002 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.112	NS	100	101	101	
Arsenic	NS	-0.000400	NS	100	100	100	
Barium	NS	0.0422	NS	100	99.3	99.3	
Cadmium	NS	-0.0273	NS	100	99.7	99.7	
Chromium	NS	0.0875	NS	100	98.5	98.5	
Cobalt	NS	0.0302	NS	100	96.8	96.8	
Copper	NS	0.180	NS	100	98.2	98.2	
Lead	NS	0.0200	NS	100	100	100	
Manganese	NS	0.0975	NS	100	97.5	97.5	
Nickel	NS	0.512	NS	100	99.6	99.6	
Selenium	NS	0.0193	NS	100	101	101	
Silver	NS	0.00120	NS	100	98.3	98.3	
Thallium	NS	0.00250	NS	100	98.7	98.7	

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: 2909741
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Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L13051242 **Analytical Method:** 6020
Analytical Workgroup: WG432851 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 04-JUN-2013 12:35

			BISMUTH	GERMANIUM	INDIUM	LITHIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L13051242-01	SAMP	04-JUN-2013 18:35	113.54	92.901	115.038	**132.458**
L13051242-02	SAMP	04-JUN-2013 18:38	112.407	92.299	114.545	**134.286**
L13051242-03	SAMP	04-JUN-2013 18:42	113.526	92.913	115.174	**138.286**
L13051242-04	SAMP	04-JUN-2013 18:46	116.956	93.689	117.151	**139.404**
WG432798-01	REF	04-JUN-2013 13:33	108.301	99.555	108.243	112.999
WG432798-02	BLANK	04-JUN-2013 13:22	100.078	87.039	94.237	92.027
WG432798-03	LCS	04-JUN-2013 13:30	109.199	100.088	109.111	114.146
WG432798-04	MS	04-JUN-2013 13:37	109.113	99.611	108.862	116.15
WG432798-05	MSD	04-JUN-2013 13:41	108.767	99.923	110.041	117.58
WG432851-01	PSPK	04-JUN-2013 13:52	116.767	103.603	113.848	**123.867**
WG432851-01	PSPK	04-JUN-2013 14:21	112.784	97.352	110.978	**120.707**
WG432851-02	SERIAL	04-JUN-2013 13:56	110.6	97.417	109.421	117.079
WG432851-02	SERIAL	04-JUN-2013 14:24	103.922	84.457	96.046	100.053
WG432868-05	ICV	04-JUN-2013 12:50	102.236	97.517	101.835	102.397
WG432868-07	ICB	04-JUN-2013 12:58	105.653	97.882	104.163	105.232
WG432868-08	LLICV	04-JUN-2013 13:02	105.428	98.05	104.243	105.805
WG432868-09	ICS	04-JUN-2013 13:06	98.717	90.976	95.551	96.131
WG432868-10	ICS	04-JUN-2013 13:10	107.308	100.188	107.579	110.22
WG432868-11	CCV	04-JUN-2013 13:14	107.243	99.724	106.244	110.371
WG432868-12	CCB	04-JUN-2013 13:18	103.128	93.582	97.063	100.593
WG432868-13	CCV	04-JUN-2013 14:00	108.393	95.49	108.217	113.741
WG432868-14	CCB	04-JUN-2013 14:04	108.538	94.256	106.335	112.199
WG432868-15	CCV	04-JUN-2013 14:32	110.561	94.517	109.373	117
WG432868-16	CCB	04-JUN-2013 14:36	111.757	93.411	109.02	117.137
WG432868-25	CCV	04-JUN-2013 18:27	111.367	92.743	111.677	**127.195**
WG432868-26	CCB	04-JUN-2013 18:31	113.12	91.42	113.855	**130.43**
WG432868-27	CCV	04-JUN-2013 19:12	116.043	91.923	117.349	**137.171**
WG432868-28	CCB	04-JUN-2013 19:16	116.991	92.955	115.356	**138.033**
WG432868-31	LLCCV	04-JUN-2013 19:46	114.861	91.114	113.78	**133.71**

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: 2909737
Report generated: 06/05/2013 08:17

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L13051242 **Analytical Method:** 6020
Analytical Workgroup: WG432851 **Matrix:** 18
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 04-JUN-2013 12:35

			BISMUTH	GERMANIUM	INDIUM	LITHIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L13051523-04	SAMP	04-JUN-2013 13:49	113.661	97.594	108.484	116.65
L13051523-04	SAMP	04-JUN-2013 14:17	102.92	84.23	97.696	101.723

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: 2909737
Report generated: 06/05/2013 08:17

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L13051242 **Date:** 03/12/2013
Insturment ID: ICP-MS2 **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Uranium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2909736
Report generated: 06/05/2013 08:17

2.1.2.3 Raw Data

MassCal File Name

Mass Calibration File Name Default.tun
MassCal File Path C:\NexIONData\MassCal\Default.tun
Peak Search Window: 1.00

Sample Information

Sample Date/Time: Tuesday, June 04, 2013 12:15:13

Mass Calibration and Resolution

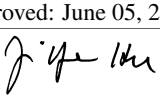
Analyte	E Mass	Meas Mass	Mass C DAC Val	Res DAC Value	Meas Peak WCustom Res
Li	7.016	6.975	1345	2024	0.707
Mg	23.985	24.025	4503	2019	0.709
Co	58.933	58.925	11685	2019	0.711
In	114.904	114.875	22859	2025	0.689
U	238.050	238.075	47464	2037	0.702

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	3.118
5.575	1.388
5.625	2.124
5.675	1.316
5.725	1.280
5.775	1.334
5.825	2.123
5.875	1.306
5.925	1.683
5.975	2.442
6.025	3.843
6.075	4.167
6.125	17.973
6.175	70.711
6.225	55.902
6.275	74.689
6.325	20.360
6.375	8.520
6.425	6.264
6.475	7.334
6.525	5.416
6.575	1.749
6.625	2.860
6.675	1.943
6.725	1.855
6.775	1.833
6.825	2.914

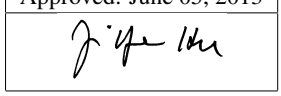
Report Date/Time: Tuesday, June 04, 2013 12:18:24
Page 1

Approved: June 05, 2013



6.875	2.177
6.925	1.052
6.975	1.715
7.025	1.776
7.075	1.323
7.125	4.580
7.175	4.671
7.225	55.902
7.275	121.835
7.325	136.931
7.375	91.287
7.425	104.583
7.475	70.711
7.525	91.287
7.575	91.287
7.625	104.583
7.675	37.268
7.725	69.722
7.775	0.000
7.825	91.287
7.875	136.931
7.925	
7.975	104.583
8.025	70.711
8.075	108.653
8.125	104.583
8.175	136.931
8.225	141.421
8.275	136.931
8.325	91.287
8.375	149.071
8.425	104.583
8.475	47.140
22.525	55.902
22.575	22.822
22.625	46.566
22.675	34.810
22.725	23.570
22.775	35.675
22.825	30.366
22.875	13.546
22.925	10.648
22.975	18.373
23.025	30.053
23.075	30.756
23.125	26.066
23.175	13.357

Approved: June 05, 2013

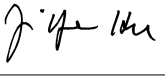


23.225	31.044
23.275	27.702
23.325	26.504
23.375	49.743
23.425	32.478
23.475	24.047
23.525	8.430
23.575	1.898
23.625	1.914
23.675	0.869
23.725	1.237
23.775	0.633
23.825	1.472
23.875	1.390
23.925	2.191
23.975	0.815
24.025	1.948
24.075	1.875
24.125	1.910
24.175	1.772
24.225	2.146
24.275	2.263
24.325	4.688
24.375	14.425
24.425	23.570
24.475	23.568
24.525	5.673
24.575	3.014
24.625	2.375
24.675	2.230
24.725	2.015
24.775	1.994
24.825	1.989
24.875	2.633
24.925	2.015
24.975	0.334
25.025	2.788
25.075	3.170
25.125	1.116
25.175	2.160
25.225	2.211
25.275	6.883
25.325	13.176
25.375	63.888
25.425	46.481
25.475	29.166
57.525	9.821

Approved: June 05, 2013

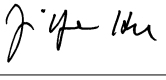
57.575	2.636
57.625	4.009
57.675	4.367
57.725	1.501
57.775	1.202
57.825	2.414
57.875	2.921
57.925	3.060
57.975	3.180
58.025	2.671
58.075	2.480
58.125	1.121
58.175	3.002
58.225	3.664
58.275	7.334
58.325	11.205
58.375	49.701
58.425	40.406
58.475	21.990
58.525	7.025
58.575	5.107
58.625	2.312
58.675	1.987
58.725	3.162
58.775	2.013
58.825	2.226
58.875	2.191
58.925	1.639
58.975	2.863
59.025	5.360
59.075	2.471
59.125	1.539
59.175	0.990
59.225	2.290
59.275	15.077
59.325	51.349
59.375	43.853
59.425	15.215
59.475	28.828
59.525	16.105
59.575	7.268
59.625	10.143
59.675	3.666
59.725	7.010
59.775	8.008
59.825	4.651
59.875	4.857

Approved: June 05, 2013



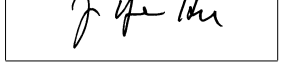
59.925	3.774
59.975	2.185
60.025	2.945
60.075	3.326
60.125	4.573
60.175	8.829
60.225	2.321
60.275	12.696
60.325	35.355
60.375	83.853
60.425	72.436
60.475	69.722
113.525	4.110
113.575	5.956
113.625	4.370
113.675	5.470
113.725	3.969
113.775	2.552
113.825	2.888
113.875	3.707
113.925	3.128
113.975	2.387
114.025	3.985
114.075	5.551
114.125	4.628
114.175	3.321
114.225	6.887
114.275	24.514
114.325	57.601
114.375	23.207
114.425	13.293
114.475	6.684
114.525	2.137
114.575	2.696
114.625	3.646
114.675	1.444
114.725	2.816
114.775	2.870
114.825	1.811
114.875	1.582
114.925	2.367
114.975	1.926
115.025	0.517
115.075	1.174
115.125	1.653
115.175	2.958
115.225	3.248

Approved: June 05, 2013



115.275	10.431
115.325	72.436
115.375	34.233
115.425	51.602
115.475	42.127
115.525	15.306
115.575	11.717
115.625	6.628
115.675	6.873
115.725	5.571
115.775	3.327
115.825	4.660
115.875	9.033
115.925	5.583
115.975	3.291
116.025	3.202
116.075	5.857
116.125	11.512
116.175	6.080
116.225	18.040
116.275	19.563
116.325	82.402
116.375	59.265
116.425	162.980
116.475	77.427
236.525	
236.575	35.334
236.625	75.357
236.675	45.079
236.725	50.047
236.775	24.786
236.825	34.641
236.875	32.969
236.925	56.398
236.975	30.987
237.025	14.425
237.075	54.565
237.125	44.304
237.175	24.786
237.225	30.619
237.275	81.223
237.325	71.148
237.375	41.163
237.425	43.301
237.475	49.793
237.525	35.392
237.575	19.183

Approved: June 05, 2013



237.625	14.415
237.675	4.484
237.725	3.283
237.775	1.526
237.825	2.337
237.875	2.362
237.925	1.994
237.975	1.679
238.025	1.268
238.075	1.812
238.125	2.426
238.175	2.331
238.225	1.264
238.275	2.377
238.325	3.397
238.375	4.101
238.425	3.138
238.475	7.588
238.525	11.679
238.575	22.822
238.625	42.127
238.675	30.619
238.725	39.491
238.775	32.969
238.825	34.233
238.875	54.935
238.925	36.099
238.975	50.461
239.025	14.142
239.075	45.015
239.125	33.535
239.175	10.648
239.225	62.828
239.275	97.183
239.325	46.481
239.375	57.334
239.425	26.352
239.475	62.828

Approved: June 05, 2013

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Tuesday, June 04, 2013 12:19:50
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\053013\Daily Performance Check.416
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 33
Current Dead Time (ns): 33

Torch Z position (mm): 0.50

Summary

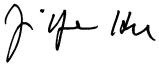
	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	7055.4	7055.376	73.740	1.0	Standard
	Mg	24.0	399018.0	399017.963	4327.317	1.1	Standard
	In	114.9	51369.2	51369.208	558.576	1.1	Standard
	U	238.1	35160.6	35160.554	396.057	1.1	Standard
⌈	CeO	155.9	1326.7	0.020	0.000	2.1	Standard
| >	Ce	139.9	67001.3	67001.289	510.788	0.8	Standard
⌊	Ce++	70.0	845.9	0.013	0.000	2.5	Standard
	Bkgd	220.0	0.2	0.200	0.183	91.3	Standard

Current Conditions File Data

Current Value	Description
0.97	Nebulizer Gas Flow STD/KED [NEB]
1.40	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-8.25	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
5.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.00	DRC Mode NEB
-7.00	DRC Mode QRO
-1.50	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.70	Cell Gas A
200.00	Axial Field Voltage
-17.00	KED Mode CRO
-12.00	KED Mode QRO
-5.00	KED Mode Cell Entrance Voltage
-23.00	KED Mode Cell Exit Voltage
3.00	KED Cell Gas A
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: Daily Performance Check
Report Date/Time: Tuesday, June 04, 2013 12:21:54
Page 1

Approved: June 05, 2013



SmartTune Wizard - Summary

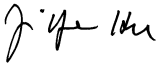
Optimization Summary

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

Start Time: 6/4/2013 12:19:50 PM
End Time: 6/4/2013 12:21:54 PM

Daily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 7055.38
Obtained Intensity (Mg 23.985): 399017.96
Obtained Intensity (In 114.904): 51369.21
Obtained Intensity (U 238.05): 35160.55
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (CeO 155.9 / Ce 139.905): 0.020 (=1326.72 / 67001.29)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=845.89 / 67001.29)

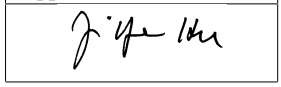
Approved: June 05, 2013



SmartTune Wizard - Details

```
Optimization Details

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

Optimization Status

Start Time: 6/4/2013 12:19:50 PM

Daily Performance Check
        Optimization Settings:
                Method: C:\NexIONData\Method\ESI Daily Performance.mth.
                Intensity Criterion: Be 9.0122 > 2000
                Intensity Criterion: Mg 23.985 > 15000
                Intensity Criterion: In 114.904 > 40000
                Intensity Criterion: U 238.05 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
                Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9.0122): 7055.38
                Obtained Intensity (Mg 23.985): 399017.96
                Obtained Intensity (In 114.904): 51369.21
                Obtained Intensity (U 238.05): 35160.55
                Obtained Intensity (Bkgd 220): 0.20
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.020 (=1326.72 / 67001.29)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=845.89 / 67001.29)
[Passed]  Optimum value(s): N/A

End Time: 6/4/2013 12:21:54 PM
```


Approved: June 05, 2013



Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, June 04, 2013 12:32:05
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	552026.7	0.3				ug/L		Standard
	Be	9	17.7	16.3				ug/L		Standard
	Al	27	841.4	1.9				ug/L		Standard
	Sc	45	35083.9	0.8				ug/L		Standard
	Ti	47	22.3	15.7				ug/L		Standard
	V	51	811.8	1.7				ug/L		Standard
	Cr	52	4274.3	2.1				ug/L		Standard
	Cr	53	1105.9	1.8				ug/L		Standard
	Mn	55	1206.7	4.9				ug/L		Standard
	Co	59	70.7	11.8				ug/L		Standard
	Ni	60	295.3	0.2				ug/L		Standard
	Cu	65	87.0	18.2				ug/L		Standard
	Zn	66	469.3	4.4				ug/L		Standard
>	Ge	72	514704.0	1.3				ug/L		Standard
	As	75	-121.1	21.9				ug/L		Standard
	Se	82	-0.9	199.7				ug/L		Standard
	Se-1	77	127.3	9.7				ug/L		Standard
>	Ga	71	175.0	4.9				mg/L		Standard
	Rb	85	50.0	26.5				ug/L		Standard
	Y	89	527498.6	1.7				ug/L		Standard
>	Rh	103	10.0					ug/L		Standard
	Mo	98	23.3	17.6				ug/L		Standard
	Ag	107	59.3	17.2				ug/L		Standard
	Cd	111	3.0	33.8				mg/L		Standard
	Cd	114	10.5	55.1				ug/L		Standard
>	In	115	537195.1	0.8				ug/L		Standard
	Sn	118	280.7	19.9				ug/L		Standard
	Sb	123	167.3	19.7				ug/L		Standard
	Ba	135	10.3	11.2				ug/L		Standard
	Ce	140	26.7	60.3				ug/L		Standard
>	Tb	159	758170.0	0.5				ug/L		Standard
	Ho	165	7.3	39.4				ug/L		Standard
	Tl	203	4.7	68.9				ug/L		Standard
	Tl	205	0.3	173.2				ug/L		Standard
	Pb	206	181.7	10.2				ug/L		Standard
	Pb	207	145.0	0.7				ug/L		Standard
	Pb	208	206.7	4.1				ug/L		Standard
	U	238	1.3	86.6				ug/L		Standard
>	Bi	209	325207.0	0.3				ug/L		Standard

Sample ID: Blank
Report Date/Time: Tuesday, June 04, 2013 12:34:57
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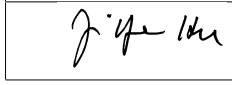
Approved: June 05, 2013



Na	23	0.0		mg/L	Standard
Mg	24	25.0	52.9	mg/L	Standard
K	39	3.3	86.6	mg/L	Standard
Ca	43	296.7	8.5	mg/L	Standard
Fe	54	91.2	13.7	mg/L	Standard
Fe	57	236.7	23.3	mg/L	Standard
Sc-1	45	35083.9	0.8	mg/L	Standard
Cl	35	29807.6	1.2	ug/L	Standard
Kr	83	38.4	0.5	ug/L	Standard
Br	81	965.0	4.4	ug/L	Standard
P	31	176735.0	1.9	ug/L	Standard
S	34	28890.9	1.1	ug/L	Standard
Sr	88	26.7	62.4	ug/L	Standard
C	12	6.7	43.3	mg/L	Standard
N	14	0.0		mg/L	Standard
Hg	202	3.3	86.6	mg/L	Standard
Dy	164	13.6	18.8	mg/L	Standard
Ho-1	165	7.3	39.4	mg/L	Standard
Er	166	8.3	59.2	mg/L	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72			
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			

Sample ID: Blank
Report Date/Time: Tuesday, June 04, 2013 12:34:57
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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Tuesday, June 04, 2013 12:34:57
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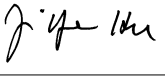

Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, June 04, 2013 12:35:52
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	565238.5	0.9				ug/L	552027	Standard
	Be	9	26.3	22.9				ug/L	18	Standard
	Al	27	885.0	3.8				ug/L	841	Standard
	Sc	45	35224.2	2.6				ug/L	35084	Standard
	Ti	47	22.0	20.8				ug/L	22	Standard
	V	51	795.9	7.2				ug/L	812	Standard
	Cr	52	4350.3	2.2				ug/L	4274	Standard
	Cr	53	1072.5	3.0				ug/L	1106	Standard
	Mn	55	1224.0	1.4				ug/L	1207	Standard
	Co	59	76.0	6.0				ug/L	71	Standard
	Ni	60	284.7	5.8				ug/L	295	Standard
	Cu	65	92.0	16.0				ug/L	87	Standard
	Zn	66	488.7	1.2				ug/L	469	Standard
>	Ge	72	513716.0	1.1				ug/L	514704	Standard
	As	75	-146.1	6.3				ug/L	-121	Standard
	Se	82	1.5	502.0				ug/L	-1	Standard
	Se-1	77	127.3	8.1				ug/L	127	Standard
>	Ga	71	176.7	1.6				mg/L	175	Standard
	Rb	85	51.7	20.1				ug/L	50	Standard
	Y	89	527883.6	2.5				ug/L	527499	Standard
>	Rh	103	10.0	50.0				ug/L	10	Standard
	Mo	98	18.7	21.4				ug/L	23	Standard
	Ag	107	50.0	9.2				ug/L	59	Standard
	Cd	111	2.0	50.3				mg/L	3	Standard
	Cd	114	16.7	38.9				ug/L	10	Standard
>	In	115	543922.3	2.3				ug/L	537195	Standard
	Sn	118	283.0	23.3				ug/L	281	Standard
	Sb	123	76.1	16.4				ug/L	167	Standard
	Ba	135	11.3	50.9				ug/L	10	Standard
	Ce	140	25.7	82.1				ug/L	27	Standard
>	Tb	159	772693.9	1.1				ug/L	758170	Standard
	Ho	165	5.7	10.2				ug/L	7	Standard
	Tl	203	3.7	41.7				ug/L	5	Standard
	Tl	205	0.0					ug/L	0	Standard
	Pb	206	174.0	6.0				ug/L	182	Standard
	Pb	207	147.3	1.7				ug/L	145	Standard
	Pb	208	204.0	9.1				ug/L	207	Standard
	U	238	0.3	173.2				ug/L	1	Standard
>	Bi	209	332540.8	0.7				ug/L	325207	Standard

Sample ID: Standard 1
Report Date/Time: Tuesday, June 04, 2013 12:38:44
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Na	23	1.7	173.2	mg/L	0	Standard
Mg	24	25.0	20.0	mg/L	25	Standard
K	39	10.0	86.6	mg/L	3	Standard
Ca	43	305.0	10.0	mg/L	297	Standard
Fe	54	122.9	15.6	mg/L	91	Standard
Fe	57	176.7	20.1	mg/L	237	Standard
Sc-1	45	35224.2	2.6	mg/L	35084	Standard
Cl	35	30413.5	0.9	ug/L	29808	Standard
Kr	83	36.3	1.6	ug/L	38	Standard
Br	81	1021.7	12.7	ug/L	965	Standard
P	31	179212.4	2.5	ug/L	176735	Standard
S	34	28106.9	1.2	ug/L	28891	Standard
Sr	88	30.8	18.7	ug/L	27	Standard
C	12	5.0	173.2	mg/L	7	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	0.0		mg/L	3	Standard
Dy	164	8.3	26.3	mg/L	14	Standard
Ho-1	165	5.7	10.2	mg/L	7	Standard
Er	166	7.7	37.7	mg/L	8	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72			
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			

Sample ID: Standard 1
Report Date/Time: Tuesday, June 04, 2013 12:38:44
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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 1
Report Date/Time: Tuesday, June 04, 2013 12:38:44
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Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, June 04, 2013 12:39:38
Number of Replicates: 3
Autosampler Position: 2
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	563283.3	0.9				ug/L	552027	Standard
	Be	9	117.7	2.5				ug/L	18	Standard
	Al	27	8692.8	8.3				ug/L	841	Standard
	Sc	45	35740.5	2.9				ug/L	35084	Standard
	Ti	47	40.7	12.6				ug/L	22	Standard
	V	51	1073.8	11.7				ug/L	812	Standard
	Cr	52	4669.1	1.7				ug/L	4274	Standard
	Cr	53	1128.4	6.3				ug/L	1106	Standard
	Mn	55	1702.8	4.9				ug/L	1207	Standard
	Co	59	375.7	8.0				ug/L	71	Standard
	Ni	60	401.7	4.8				ug/L	295	Standard
	Cu	65	232.0	7.8				ug/L	87	Standard
	Zn	66	882.0	2.0				ug/L	469	Standard
>	Ge	72	518252.7	1.8				ug/L	514704	Standard
	As	75	-74.8	41.0				ug/L	-121	Standard
	Se	82	6.8	93.0				ug/L	-1	Standard
	Se-1	77	121.3	8.4				ug/L	127	Standard
>	Ga	71	215.0	23.6				mg/L	175	Standard
	Rb	85	58.3	9.9				ug/L	50	Standard
	Y	89	545438.8	1.5				ug/L	527499	Standard
>	Rh	103	13.3	43.3				ug/L	10	Standard
	Mo	98	418.8	7.9				ug/L	23	Standard
	Ag	107	339.7	4.7				ug/L	59	Standard
	Cd	111	87.9	5.7				mg/L	3	Standard
	Cd	114	241.6	13.9				ug/L	10	Standard
>	In	115	548997.5	1.4				ug/L	537195	Standard
	Sn	118	562.3	11.4				ug/L	281	Standard
	Sb	123	254.8	2.4				ug/L	167	Standard
	Ba	135	124.3	12.9				ug/L	10	Standard
	Ce	140	26.3	71.9				ug/L	27	Standard
>	Tb	159	780084.5	1.4				ug/L	758170	Standard
	Ho	165	8.3	18.3				ug/L	7	Standard
	Tl	203	274.3	6.6				ug/L	5	Standard
	Tl	205	6.0	33.3				ug/L	0	Standard
	Pb	206	416.7	5.1				ug/L	182	Standard
	Pb	207	344.0	5.1				ug/L	145	Standard
	Pb	208	498.0	6.1				ug/L	207	Standard
	U	238	231.3	6.5				ug/L	1	Standard
>	Bi	209	335069.4	1.0				ug/L	325207	Standard

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	Na	23	6.7	43.3		mg/L	0	Standard
	Mg	24	43.3	29.0		mg/L	25	Standard
	K	39	3.3	86.6		mg/L	3	Standard
	Ca	43	293.3	13.7		mg/L	297	Standard
	Fe	54	104.6	12.6		mg/L	91	Standard
	Fe	57	183.3	29.9		mg/L	237	Standard
>	**Sc-1**	45	35740.5	2.9		mg/L	35084	Standard
	Cl	35	31137.0	0.9		ug/L	29808	Standard
	Kr	83	38.2	11.0		ug/L	38	Standard
	Br	81	1065.0	4.5		ug/L	965	Standard
	P	31	185258.5	2.2		ug/L	176735	Standard
	S	34	28832.4	1.8		ug/L	28891	Standard
	Sr	88	25.8	20.1		ug/L	27	Standard
	C	12	6.7	43.3		mg/L	7	Standard
	N	14	0.0			mg/L	0	Standard
	Hg	202	0.0			mg/L	3	Standard
	Dy	164	7.3	7.4		mg/L	14	Standard
	Ho-1	165	8.3	18.3		mg/L	7	Standard
	Er	166	7.0	24.7		mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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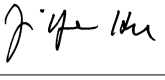

⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Tuesday, June 04, 2013 12:43:24
Number of Replicates: 3
Autosampler Position: 3
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	567651.7	1.0				ug/L	552027	Standard
	Be	9	96310.5	9.2	50.0000	4.344	8.7	ug/L	18	Standard
	Al	27	6925903.1	9.5	50.0000	4.556	9.1	ug/L	841	Standard
	Sc	45	35119.0	2.3				ug/L	35084	Standard
	Ti	47	21602.2	10.4	100.0000	8.498	8.5	ug/L	22	Standard
	V	51	296218.8	11.4	50.0000	4.759	9.5	ug/L	812	Standard
	Cr	52	264618.3	12.5	50.0000	5.409	10.8	ug/L	4274	Standard
	Cr	53	51271.5	11.3	50.0000	4.789	9.6	ug/L	1106	Standard
	Mn	55	399332.6	12.7	50.0000	5.503	11.0	ug/L	1207	Standard
	Co	59	280921.9	12.3	50.0000	5.210	10.4	ug/L	71	Standard
	Ni	60	107641.2	9.9	50.0000	4.033	8.1	ug/L	295	Standard
	Cu	65	108655.8	9.3	50.0000	3.773	7.5	ug/L	87	Standard
	Zn	66	57160.9	9.6	50.0000	3.834	7.7	ug/L	469	Standard
>	Ge	72	506948.3	2.2				ug/L	514704	Standard
	As	75	63708.8	9.3	50.0000	3.664	7.3	ug/L	-121	Standard
	Se	82	6251.7	8.6	50.0000	3.438	6.9	ug/L	-1	Standard
	Se-1	77	4237.9	8.1	50.0000	3.082	6.2	ug/L	127	Standard
>	Ga	71	241.7	6.0				mg/L	175	Standard
	Rb	85	3082.0	8.5				ug/L	50	Standard
	Y	89	550139.7	0.5				ug/L	527499	Standard
>	Rh	103	28.3	50.9				ug/L	10	Standard
	Mo	98	389873.1	10.6	100.0000	9.770	9.8	ug/L	23	Standard
	Ag	107	273336.0	8.0	50.0000	3.557	7.1	ug/L	59	Standard
	Cd	111	85008.7	10.3	50.0000	4.736	9.5	mg/L	3	Standard
	Cd	114	219705.3	10.9	50.0000	5.021	10.0	ug/L	10	Standard
>	In	115	547494.0	0.9				ug/L	537195	Standard
	Sn	118	241764.4	11.1	50.0000	5.149	10.3	ug/L	281	Standard
	Sb	123	190330.0	8.9	50.0000	4.017	8.0	ug/L	167	Standard
	Ba	135	85155.2	10.0	50.0000	4.554	9.1	ug/L	10	Standard
	Ce	140	88.7	6.8				ug/L	27	Standard
>	Tb	159	777967.0	1.2				ug/L	758170	Standard
	Ho	165	8.7	35.3				ug/L	7	Standard
	Tl	203	266637.5	6.8	50.0000	3.649	7.3	ug/L	5	Standard
	Tl	205	6951.3	7.8	50.0000	4.073	8.1	ug/L	0	Standard
	Pb	206	210562.1	10.3	50.0000	5.358	10.7	ug/L	182	Standard
	Pb	207	179290.9	9.8	50.0000	5.157	10.3	ug/L	145	Standard
	Pb	208	255821.8	9.9	50.0000	5.164	10.3	ug/L	207	Standard
	U	238	218976.9	11.2	50.0000	5.813	11.6	ug/L	1	Standard
>	Bi	209	334407.5	0.7				ug/L	325207	Standard

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	Na	23	36.7	31.5	**5.0000**	2.063	41.3	mg/L	0	Standard
	Mg	24	4750.8	10.7	**5.0000**	0.612	12.2	mg/L	25	Standard
	K	39	283.3	9.7	**5.0000**	0.474	9.5	mg/L	3	Standard
	Ca	43	1691.8	10.1	**5.0000**	0.674	13.5	mg/L	297	Standard
	Fe	54	4190.4	12.5	**5.0000**	0.664	13.3	mg/L	91	Standard
	Fe	57	1898.5	5.2	**5.0000**	0.294	5.9	mg/L	237	Standard
>	**Sc-1**	45	35119.0	2.3				mg/L	35084	Standard
	Cl	35	35582.4	2.5				ug/L	29808	Standard
	Kr	83	35.3	3.4				ug/L	38	Standard
	Br	81	999.2	6.8				ug/L	965	Standard
	P	31	199021.9	5.4				ug/L	176735	Standard
	S	34	39426.2	2.3				ug/L	28891	Standard
	Sr	88	34.2	11.2				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	10.1	20.4				mg/L	14	Standard
	Ho-1	165	8.7	35.3				mg/L	7	Standard
	Er	166	12.7	18.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: Standard 4
Sample Date/Time: Tuesday, June 04, 2013 12:47:10
Number of Replicates: 3
Autosampler Position: 4
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	567624.9	1.8				ug/L	552027	Standard
	Be	9	195631.2	10.0	**100.7549**	8.711	8.6	ug/L	18	Standard
	Al	27	14439281.1	10.5	**102.0507**	9.225	9.0	ug/L	841	Standard
	Sc	45	35356.2	3.6				ug/L	35084	Standard
	Ti	47	43107.4	10.9	**201.3863**	21.703	10.8	ug/L	22	Standard
	V	51	592245.5	11.7	**100.8451**	11.763	11.7	ug/L	812	Standard
	Cr	52	510042.3	13.1	**99.3542**	12.912	13.0	ug/L	4274	Standard
	Cr	53	102499.3	12.9	**101.3064**	13.214	13.0	ug/L	1106	Standard
	Mn	55	777223.9	11.3	**99.5166**	11.134	11.2	ug/L	1207	Standard
	Co	59	548502.4	11.2	**99.5976**	10.870	10.9	ug/L	71	Standard
	Ni	60	212785.2	11.1	**100.2692**	11.195	11.2	ug/L	295	Standard
	Cu	65	212834.7	10.3	**99.7684**	10.342	10.4	ug/L	87	Standard
	Zn	66	111682.1	10.5	**99.9677**	10.413	10.4	ug/L	469	Standard
>	Ge	72	499575.8	1.2				ug/L	514704	Standard
	As	75	126059.8	9.8	**100.1906**	9.775	9.8	ug/L	-121	Standard
	Se	82	12496.7	9.8	**100.7465**	9.812	9.7	ug/L	-1	Standard
	Se-1	77	8446.7	8.0	**101.3025**	8.234	8.1	ug/L	127	Standard
>	Ga	71	251.7	14.9				mg/L	175	Standard
	Rb	85	6162.9	9.2				ug/L	50	Standard
	Y	89	537221.9	0.8				ug/L	527499	Standard
>	Rh	103	46.7	22.3				ug/L	10	Standard
	Mo	98	778275.4	11.7	**199.9276**	21.092	10.5	ug/L	23	Standard
	Ag	107	534073.7	8.1	**98.9037**	6.892	7.0	ug/L	59	Standard
	Cd	111	167348.4	11.4	**99.2671**	10.243	10.3	mg/L	3	Standard
	Cd	114	430443.7	10.9	**99.0327**	9.721	9.8	ug/L	10	Standard
>	In	115	546729.5	1.2				ug/L	537195	Standard
	Sn	118	480283.0	11.8	**99.7534**	10.631	10.7	ug/L	281	Standard
	Sb	123	375753.0	9.9	**99.4184**	8.708	8.8	ug/L	167	Standard
	Ba	135	168235.9	10.0	**99.4603**	8.765	8.8	ug/L	10	Standard
	Ce	140	159.3	11.3				ug/L	27	Standard
>	Tb	159	766469.3	1.3				ug/L	758170	Standard
	Ho	165	397.0	13.8				ug/L	7	Standard
	Tl	203	528803.6	7.0	**100.8763**	6.963	6.9	ug/L	5	Standard
	Tl	205	13890.4	7.1	**101.2504**	7.043	7.0	ug/L	0	Standard
	Pb	206	418546.8	9.8	**101.0098**	9.803	9.7	ug/L	182	Standard
	Pb	207	355414.5	9.2	**100.8699**	9.231	9.2	ug/L	145	Standard
	Pb	208	511880.2	10.9	**101.3351**	10.842	10.7	ug/L	207	Standard
	U	238	459208.0	12.3	**103.6520**	12.549	12.1	ug/L	1	Standard
>	Bi	209	325763.8	1.2				ug/L	325207	Standard

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	Na	23	66.7	37.0	**9.9775**	4.507	45.2	mg/L	0	Standard
	Mg	24	9448.0	7.0	**9.9552**	0.752	7.6	mg/L	25	Standard
	K	39	545.0	22.5	**9.8087**	2.355	24.0	mg/L	3	Standard
	Ca	43	3158.7	9.9	**10.0690**	1.096	10.9	mg/L	297	Standard
	Fe	54	8731.8	14.2	**10.2398**	1.636	16.0	mg/L	91	Standard
	Fe	57	3757.1	9.0	**10.1729**	1.221	12.0	mg/L	237	Standard
>	**Sc-1**	45	35356.2	3.6				mg/L	35084	Standard
	Cl	35	34446.5	2.9				ug/L	29808	Standard
	Kr	83	38.3	6.8				ug/L	38	Standard
	Br	81	995.0	7.0				ug/L	965	Standard
	P	31	202099.3	3.7				ug/L	176735	Standard
	S	34	37950.8	2.2				ug/L	28891	Standard
	Sr	88	31.7	32.9				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	11.6	16.4				mg/L	14	Standard
	Ho-1	165	397.0	13.8				mg/L	7	Standard
	Er	166	14.7	27.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
| >	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, June 04, 2013 12:50:58
Number of Replicates: 3
Autosampler Position: 201
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	565260.4	2.0				ug/L	552027	Standard
	Be	9	94764.3	9.7	**49.0097**	4.080	8.3	ug/L	18	Standard
	Al	27	6881703.3	9.0	**48.8443**	3.648	7.5	ug/L	841	Standard
	Sc	45	34480.9	2.7				ug/L	35084	Standard
	Ti	47	21383.5	10.4	**99.3568**	9.615	9.7	ug/L	22	Standard
	V	51	294674.2	10.1	**49.8642**	4.806	9.6	ug/L	812	Standard
	Cr	52	258851.3	11.4	**49.7710**	5.562	11.2	ug/L	4274	Standard
	Cr	53	50903.6	11.2	**49.5441**	5.540	11.2	ug/L	1106	Standard
	Mn	55	390552.4	11.3	**49.6864**	5.466	11.0	ug/L	1207	Standard
	Co	59	273535.4	10.8	**49.4310**	5.178	10.5	ug/L	71	Standard
	Ni	60	106421.8	9.8	**49.8326**	4.593	9.2	ug/L	295	Standard
	Cu	65	106900.9	10.0	**49.8329**	4.710	9.5	ug/L	87	Standard
	Zn	66	57116.4	9.4	**50.5322**	4.674	9.2	ug/L	469	Standard
>	Ge	72	501924.1	1.9				ug/L	514704	Standard
	As	75	62451.1	8.8	**49.4456**	4.052	8.2	ug/L	-121	Standard
	Se	82	6158.6	7.9	**49.4075**	3.593	7.3	ug/L	-1	Standard
	Se-1	77	4187.9	6.9	**49.2887**	3.241	6.6	ug/L	127	Standard
>	Ga	71	228.3	9.1				mg/L	175	Standard
	Rb	85	3043.6	5.5				ug/L	50	Standard
	Y	89	539013.6	0.6				ug/L	527499	Standard
>	Rh	103	45.0	38.5				ug/L	10	Standard
	Mo	98	385983.5	10.6	**99.1502**	10.121	10.2	ug/L	23	Standard
	Ag	107	273914.1	7.7	**50.7059**	3.663	7.2	ug/L	59	Standard
	Cd	111	84597.5	9.8	**50.1765**	4.648	9.3	mg/L	3	Standard
	Cd	114	218824.0	10.5	**50.3387**	5.064	10.1	ug/L	10	Standard
>	In	115	547053.0	0.9				ug/L	537195	Standard
	Sn	118	239153.6	11.1	**49.6371**	5.334	10.7	ug/L	281	Standard
	Sb	123	190504.9	10.3	**50.3887**	4.959	9.8	ug/L	167	Standard
	Ba	135	84782.8	9.9	**50.1028**	4.720	9.4	ug/L	10	Standard
	Ce	140	90.0	13.7				ug/L	27	Standard
>	Tb	159	771118.7	1.1				ug/L	758170	Standard
	Ho	165	8.3	55.4				ug/L	7	Standard
	Tl	203	268319.8	7.7	**50.1538**	3.888	7.8	ug/L	5	Standard
	Tl	205	6989.6	7.9	**49.9254**	3.921	7.9	ug/L	0	Standard
	Pb	206	210587.7	10.2	**49.7730**	5.100	10.2	ug/L	182	Standard
	Pb	207	181395.5	9.8	**50.4219**	4.931	9.8	ug/L	145	Standard
	Pb	208	259304.9	9.8	**50.2807**	4.935	9.8	ug/L	207	Standard
	U	238	224504.5	10.8	**49.6600**	5.409	10.9	ug/L	1	Standard
>	Bi	209	332477.1	0.8				ug/L	325207	Standard

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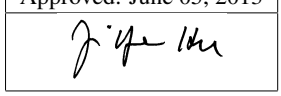

	Na	23	25.0	40.0	**3.1566**	1.806	57.2	mg/L	0	Standard
	Mg	24	4497.3	8.5	**4.8428**	0.516	10.7	mg/L	25	Standard
	K	39	303.3	16.8	**5.5760**	1.054	18.9	mg/L	3	Standard
	Ca	43	1615.1	9.7	**4.8000**	0.614	12.8	mg/L	297	Standard
	Fe	54	4233.9	9.4	**5.0299**	0.573	11.4	mg/L	91	Standard
	Fe	57	1816.8	6.7	**4.7792**	0.409	8.6	mg/L	237	Standard
>	**Sc-1**	45	34480.9	2.7				mg/L	35084	Standard
	Cl	35	33764.2	0.8				ug/L	29808	Standard
	Kr	83	34.9	11.2				ug/L	38	Standard
	Br	81	920.9	2.0				ug/L	965	Standard
	P	31	201154.6	2.7				ug/L	176735	Standard
	S	34	36702.7	1.0				ug/L	28891	Standard
	Sr	88	27.5	24.1				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	8.8	53.6				mg/L	14	Standard
	Ho-1	165	8.3	55.4				mg/L	7	Standard
	Er	166	11.0	9.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		102.397	
	Be	9	98.019		
	Al	27	97.689		
	Sc	45			
	Ti	47	99.357		
	V	51	99.728		
	Cr	52	99.542		
	Cr	53			
	Mn	55	99.373		
	Co	59	98.862		
	Ni	60	99.665		
	Cu	65	99.666		
	Zn	66	101.064		
>	Ge	72		97.517	
	As	75	98.891		
	Se	82	98.815		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	99.150	
|	Ag	107	101.412	
|	Cd	111	100.353	
|	Cd	114		
|>	In	115		101.835
|	Sn	118	99.274	
|	Sb	123	100.777	
⌊	Ba	135	100.206	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.308	
|	Tl	205		
|	Pb	206	99.546	
|	Pb	207	100.844	
|	Pb	208	100.561	
|	U	238	99.320	
⌊>	Bi	209		102.236
⌈	Na	23	63.131	
|	Mg	24	96.856	
|	K	39	111.521	
|	Ca	43	96.001	
|	Fe	54	100.599	
|	Fe	57	95.583	
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	
QC Std 1	K	39	

Sample ID: QC Std 1
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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, June 04, 2013 12:54:46
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	557934.2	5.8				ug/L	552027	Standard
	Be	9	38.7	16.8	**0.0092**	0.003	36.0	ug/L	18	Standard
	Al	27	1688.1	16.2	**0.0002**	0.002	992.0	ug/L	841	Standard
	Sc	45	34222.0	3.9				ug/L	35084	Standard
	Ti	47	21.7	22.8	**0.0197**	0.026	130.0	ug/L	22	Standard
	V	51	734.8	3.7	**0.0001**	0.008	8462.5	ug/L	812	Standard
	Cr	52	3874.8	8.1	**-0.0656**	0.046	70.7	ug/L	4274	Standard
	Cr	53	905.0	4.3	**-0.1224**	0.025	20.6	ug/L	1106	Standard
	Mn	55	1336.4	5.6	**0.0130**	0.013	101.6	ug/L	1207	Standard
	Co	59	94.3	4.0	**0.0016**	0.000	31.7	ug/L	71	Standard
	Ni	60	327.7	8.9	**0.0236**	0.013	54.3	ug/L	295	Standard
	Cu	65	101.0	26.0	**-0.0068**	0.013	195.6	ug/L	87	Standard
	Zn	66	530.3	9.2	**-0.2339**	0.037	15.9	ug/L	469	Standard
>	**Ge**	72	494364.0	2.7				ug/L	514704	Standard
	As	75	-128.2	26.5	**0.0047**	0.026	543.8	ug/L	-121	Standard
	Se	82	1.6	419.3	**0.0105**	0.056	533.7	ug/L	-1	Standard
	Se-1	77	107.7	6.0	**-0.0482**	0.066	137.6	ug/L	127	Standard
>	**Ga**	71	195.0	24.5				mg/L	175	Standard
	Rb	85	50.0	26.5				ug/L	50	Standard
	Y	89	523096.9	3.1				ug/L	527499	Standard
>	**Rh**	103	11.7	107.9				ug/L	10	Standard
	Mo	98	140.9	10.7	**0.0295**	0.005	15.8	ug/L	23	Standard
	Ag	107	109.7	41.2	**0.0081**	0.009	115.4	ug/L	59	Standard
	Cd	111	13.2	58.8	**0.0061**	0.005	82.4	mg/L	3	Standard
	Cd	114	47.4	65.1	**0.0059**	0.008	131.4	ug/L	10	Standard
>	**In**	115	539863.4	4.3				ug/L	537195	Standard
	Sn	118	555.3	59.5	**0.0522**	0.075	144.6	ug/L	281	Standard
	Sb	123	955.7	49.8	**0.2366**	0.122	51.7	ug/L	167	Standard
	Ba	135	24.7	49.5	**-0.0082**	0.008	97.7	ug/L	10	Standard
	Ce	140	20.7	40.3				ug/L	27	Standard
>	**Tb**	159	767372.1	3.5				ug/L	758170	Standard
	Ho	165	6.0	44.1				ug/L	7	Standard
	Tl	203	38.3	40.4	**0.0061**	0.003	45.9	ug/L	5	Standard
	Tl	205	0.7	86.6	**0.0121**	0.004	32.7	ug/L	0	Standard
	Pb	206	207.7	8.6	**0.0000**	0.004	17330.5	ug/L	182	Standard
	Pb	207	183.7	2.7	**0.0048**	0.001	21.1	ug/L	145	Standard
	Pb	208	246.3	3.7	**0.0007**	0.003	409.0	ug/L	207	Standard
	U	238	21.7	31.4	**0.0039**	0.001	36.4	ug/L	1	Standard
>	**Bi**	209	341552.0	2.7				ug/L	325207	Standard

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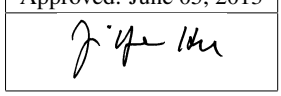

	Na	23	1.7	173.2	**-0.7943**	0.511	64.4	mg/L	0	Standard
	Mg	24	25.0	69.3	**-0.0124**	0.019	157.2	mg/L	25	Standard
	K	39	6.7	43.3	**0.0692**	0.053	77.0	mg/L	3	Standard
	Ca	43	253.3	16.8	**-0.0966**	0.137	141.6	mg/L	297	Standard
	Fe	54	101.1	41.6	**0.0052**	0.047	898.0	mg/L	91	Standard
	Fe	57	166.7	12.1	**-0.0230**	0.070	303.0	mg/L	237	Standard
>	**Sc-1**	45	34222.0	3.9				mg/L	35084	Standard
	Cl	35	32479.9	7.9				ug/L	29808	Standard
	Kr	83	36.0	11.4				ug/L	38	Standard
	Br	81	803.4	17.2				ug/L	965	Standard
	P	31	173872.5	22.5				ug/L	176735	Standard
	S	34	34277.2	7.0				ug/L	28891	Standard
	Sr	88	37.5	41.6				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	6.4	31.8				mg/L	14	Standard
	Ho-1	165	6.0	44.1				mg/L	7	Standard
	Er	166	13.3	4.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.070	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.048	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	100.497
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	105.026
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Sb	123	
QC Std 2	Na	23	

Sample ID: QC Std 2
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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, June 04, 2013 12:58:43
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	580909.2	0.0				ug/L	552027	Standard
	Be	9	40.3	8.0	**0.0092**	0.002	17.7	ug/L	18	Standard
	Al	27	1057.0	20.7	**-0.0047**	0.002	32.6	ug/L	841	Standard
	Sc	45	37125.5	2.7				ug/L	35084	Standard
	Ti	47	21.3	19.5	**0.0158**	0.019	122.4	ug/L	22	Standard
	V	51	851.3	13.3	**0.0171**	0.017	97.1	ug/L	812	Standard
	Cr	52	4098.2	4.2	**-0.0360**	0.024	65.7	ug/L	4274	Standard
	Cr	53	900.9	7.1	**-0.1433**	0.064	44.8	ug/L	1106	Standard
	Mn	55	1330.7	1.8	**0.0089**	0.007	75.8	ug/L	1207	Standard
	Co	59	91.7	13.1	**0.0008**	0.003	316.0	ug/L	71	Standard
	Ni	60	303.7	3.4	**0.0094**	0.003	31.1	ug/L	295	Standard
	Cu	65	87.0	17.4	**-0.0144**	0.006	43.7	ug/L	87	Standard
	Zn	66	544.3	4.7	**-0.2296**	0.034	14.8	ug/L	469	Standard
>	**Ge**	72	503802.5	2.3				ug/L	514704	Standard
	As	75	-125.5	15.1	**0.0083**	0.017	203.8	ug/L	-121	Standard
	Se	82	3.6	182.0	**0.0260**	0.053	205.1	ug/L	-1	Standard
	Se-1	77	99.3	8.1	**-0.1737**	0.083	47.9	ug/L	127	Standard
>	**Ga**	71	251.7	16.2				mg/L	175	Standard
	Rb	85	51.7	55.0				ug/L	50	Standard
	Y	89	552682.3	2.6				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	183.3	118.4	**0.0394**	0.056	141.4	ug/L	23	Standard
	Ag	107	131.7	90.0	**0.0114**	0.022	193.1	ug/L	59	Standard
	Cd	111	20.1	152.3	**0.0099**	0.018	182.5	mg/L	3	Standard
	Cd	114	62.6	134.5	**0.0089**	0.019	216.0	ug/L	10	Standard
>	**In**	115	559560.2	1.5				ug/L	537195	Standard
	Sn	118	423.7	36.5	**0.0198**	0.033	166.6	ug/L	281	Standard
	Sb	123	496.8	18.3	**0.1115**	0.025	22.1	ug/L	167	Standard
	Ba	135	24.3	74.6	**-0.0090**	0.011	119.4	ug/L	10	Standard
	Ce	140	13.0	35.3				ug/L	27	Standard
>	**Tb**	159	787554.1	1.4				ug/L	758170	Standard
	Ho	165	6.0	33.3				ug/L	7	Standard
	Tl	203	21.7	129.8	**0.0031**	0.005	167.4	ug/L	5	Standard
	Tl	205	0.0		**0.0075**	0.000	0.0	ug/L	0	Standard
	Pb	206	203.7	10.1	**-0.0011**	0.005	462.3	ug/L	182	Standard
	Pb	207	173.0	4.0	**0.0016**	0.002	100.8	ug/L	145	Standard
	Pb	208	216.7	5.4	**-0.0052**	0.003	49.9	ug/L	207	Standard
	U	238	9.0	77.0	**0.0012**	0.002	130.3	ug/L	1	Standard
>	**Bi**	209	343590.0	1.8				ug/L	325207	Standard

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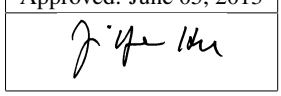

	Na	23	1.7	173.2	**-0.8347**	0.441	52.9	mg/L	0	Standard
	Mg	24	41.7	6.9	**0.0018**	0.002	115.1	mg/L	25	Standard
	K	39	10.0	100.0	**0.1189**	0.177	149.1	mg/L	3	Standard
	Ca	43	255.0	12.9	**-0.1598**	0.121	75.4	mg/L	297	Standard
	Fe	54	121.3	26.3	**0.0200**	0.039	192.6	mg/L	91	Standard
	Fe	57	156.7	14.4	**-0.0899**	0.055	61.6	mg/L	237	Standard
>	**Sc-1**	45	37125.5	2.7				mg/L	35084	Standard
	Cl	35	36010.1	1.6				ug/L	29808	Standard
	Kr	83	37.6	11.2				ug/L	38	Standard
	Br	81	895.9	9.1				ug/L	965	Standard
	P	31	196857.7	2.2				ug/L	176735	Standard
	S	34	36937.5	0.6				ug/L	28891	Standard
	Sr	88	31.7	47.6				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	8.5	11.3				mg/L	14	Standard
	Ho-1	165	6.0	33.3				mg/L	7	Standard
	Er	166	11.0	18.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.232	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.882	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: QC Std 2
Report Date/Time: Tuesday, June 04, 2013 13:01:35
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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.163
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	105.653
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Na	23	
QC Std 2	K	39	
QC Std 2	Ca	43	

Sample ID: QC Std 2
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Method 6020 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, June 04, 2013 13:02:31
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	584072.4	1.5				ug/L	552027	Standard
	Be	9	414.0	5.9	**0.1962**	0.009	4.6	ug/L	18	Standard
	Al	27	539.0	0.7	**-0.0083**	0.000	0.9	ug/L	841	Standard
	Sc	45	36380.3	2.2				ug/L	35084	Standard
	Ti	47	23.7	32.0	**0.0261**	0.034	128.9	ug/L	22	Standard
	V	51	3140.8	12.1	**0.4027**	0.054	13.5	ug/L	812	Standard
	Cr	52	8305.0	7.4	**0.7798**	0.090	11.5	ug/L	4274	Standard
	Cr	53	1662.6	9.2	**0.6063**	0.118	19.5	ug/L	1106	Standard
	Mn	55	5402.0	8.0	**0.5249**	0.043	8.2	ug/L	1207	Standard
	Co	59	2235.8	11.5	**0.3859**	0.040	10.4	ug/L	71	Standard
	Ni	60	3706.8	7.5	**1.5974**	0.097	6.1	ug/L	295	Standard
	Cu	65	1788.1	12.0	**0.7743**	0.085	11.0	ug/L	87	Standard
	Zn	66	7476.9	10.3	**5.9490**	0.557	9.4	ug/L	469	Standard
>	**Ge**	72	504667.6	2.0				ug/L	514704	Standard
	As	75	343.0	17.1	**0.3764**	0.041	10.9	ug/L	-121	Standard
	Se	82	46.5	19.5	**0.3672**	0.065	17.6	ug/L	-1	Standard
	Se-1	77	142.7	20.7	**0.3417**	0.322	94.2	ug/L	127	Standard
>	**Ga**	71	270.0	3.7				mg/L	175	Standard
	Rb	85	56.7	18.4				ug/L	50	Standard
	Y	89	546607.7	1.3				ug/L	527499	Standard
>	**Rh**	103	6.7	43.3				ug/L	10	Standard
	Mo	98	37.8	21.3	**0.0023**	0.002	88.8	ug/L	23	Standard
	Ag	107	2294.8	7.4	**0.4025**	0.028	6.9	ug/L	59	Standard
	Cd	111	408.6	10.6	**0.2348**	0.022	9.4	mg/L	3	Standard
	Cd	114	1034.7	9.2	**0.2270**	0.016	7.1	ug/L	10	Standard
>	**In**	115	559988.3	2.7				ug/L	537195	Standard
	Sn	118	387.0	19.8	**0.0122**	0.017	141.2	ug/L	281	Standard
	Sb	123	1891.6	10.1	**0.4716**	0.044	9.3	ug/L	167	Standard
	Ba	135	1270.7	12.9	**0.7103**	0.086	12.1	ug/L	10	Standard
	Ce	140	17.7	51.0				ug/L	27	Standard
>	**Tb**	159	779985.4	1.7				ug/L	758170	Standard
	Ho	165	8.7	26.6				ug/L	7	Standard
	Tl	203	423.0	11.4	**0.0757**	0.008	10.0	ug/L	5	Standard
	Tl	205	9.7	23.9	**0.0743**	0.015	20.3	ug/L	0	Standard
	Pb	206	1087.4	13.0	**0.2014**	0.029	14.2	ug/L	182	Standard
	Pb	207	850.0	8.9	**0.1842**	0.017	9.2	ug/L	145	Standard
	Pb	208	1249.0	9.8	**0.1890**	0.019	10.3	ug/L	207	Standard
	U	238	1786.4	12.0	**0.3820**	0.040	10.5	ug/L	1	Standard
>	**Bi**	209	342859.8	1.6				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	38.3	32.8	**-0.0008**	0.012	1490.6	mg/L	25	Standard
	K	39	1.7	173.2	**-0.0266**	0.049	185.8	mg/L	3	Standard
	Ca	43	253.3	11.9	**-0.1481**	0.115	77.9	mg/L	297	Standard
	Fe	54	118.8	10.9	**0.0197**	0.018	90.2	mg/L	91	Standard
	Fe	57	146.7	16.8	**-0.1092**	0.059	53.7	mg/L	237	Standard
>	**Sc-1**	45	36380.3	2.2				mg/L	35084	Standard
	Cl	35	37048.6	1.4				ug/L	29808	Standard
	Kr	83	34.4	12.3				ug/L	38	Standard
	Br	81	930.9	10.5				ug/L	965	Standard
	P	31	199393.7	3.6				ug/L	176735	Standard
	S	34	37033.5	1.4				ug/L	28891	Standard
	Sr	88	32.5	13.3				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	7.5	62.0				mg/L	14	Standard
	Ho-1	165	8.7	26.6				mg/L	7	Standard
	Er	166	10.0	17.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.805	
	Be	9	98.093		
	Al	27	-0.826		
	Sc	45			
	Ti	47			
	V	51	100.687		
	Cr	52	97.471		
	Cr	53			
	Mn	55	104.975		
	Co	59	96.464		
	Ni	60	99.839		
	Cu	65	96.788		
	Zn	66	95.183		
>	Ge	72		98.050	
	As	75	94.096		
	Se	82	91.807		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107	100.617	
|	Cd	111	97.817	
|	Cd	114		
|>	In	115		104.243
|	Sn	118		
|	Sb	123	117.898	
⌊	Ba	135	94.708	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	94.657	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	94.481	
|	U	238	95.495	
⌊>	Bi	209		105.428
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Al	27	

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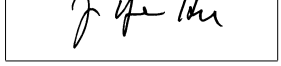

Method 6020 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, June 04, 2013 13:06:17
Number of Replicates: 3
Autosampler Position: 203
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	530666.5	2.1				ug/L	552027	Standard
	Be	9	26.0	10.2	**0.0032**	0.002	53.8	ug/L	18	Standard
	Al	27	6602617.5	7.5	**50.0224**	4.752	9.5	ug/L	841	Standard
	Sc	45	33981.4	1.4				ug/L	35084	Standard
	Ti	47	20785.7	8.9	**103.6348**	10.223	9.9	ug/L	22	Standard
	V	51	299.5	55.2	**-0.0720**	0.031	42.5	ug/L	812	Standard
	Cr	52	4396.3	3.3	**0.0875**	0.040	46.0	ug/L	4274	Standard
	Cr	53	2169.3	2.2	**1.2759**	0.076	5.9	ug/L	1106	Standard
	Mn	55	1885.1	2.7	**0.0975**	0.004	4.4	ug/L	1207	Standard
	Co	59	236.7	11.7	**0.0302**	0.006	19.4	ug/L	71	Standard
	Ni	60	1280.1	4.6	**0.5120**	0.036	7.0	ug/L	295	Standard
	Cu	65	468.7	10.3	**0.1799**	0.026	14.7	ug/L	87	Standard
	Zn	66	1273.4	5.6	**0.5087**	0.081	16.0	ug/L	469	Standard
>	**Ge**	72	468258.2	1.1				ug/L	514704	Standard
	As	75	-126.8	29.9	**-0.0004**	0.033	9406.1	ug/L	-121	Standard
	Se	82	2.7	479.4	**0.0193**	0.110	570.4	ug/L	-1	Standard
	Se-1	77	254.0	2.0	**1.9234**	0.066	3.4	ug/L	127	Standard
>	**Ga**	71	496.7	2.1				mg/L	175	Standard
	Rb	85	2920.3	5.2				ug/L	50	Standard
	Y	89	504042.6	2.2				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	345766.7	9.2	**94.7375**	9.477	10.0	ug/L	23	Standard
	Ag	107	70.3	7.3	**0.0012**	0.001	74.1	ug/L	59	Standard
	Cd	111	-40.0	59.4	**-0.0273**	0.015	55.7	mg/L	3	Standard
	Cd	114	660.2	5.8	**0.1566**	0.011	6.8	ug/L	10	Standard
>	**In**	115	513293.8	0.8				ug/L	537195	Standard
	Sn	118	564.3	14.9	**0.0583**	0.018	30.1	ug/L	281	Standard
	Sb	123	459.4	3.1	**0.1124**	0.004	3.5	ug/L	167	Standard
	Ba	135	103.7	12.1	**0.0422**	0.008	19.6	ug/L	10	Standard
	Ce	140	970.0	8.0				ug/L	27	Standard
>	**Tb**	159	744017.8	0.8				ug/L	758170	Standard
	Ho	165	8.3	59.2				ug/L	7	Standard
	Tl	203	17.3	33.8	**0.0025**	0.001	45.8	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0150**	0.007	49.8	ug/L	0	Standard
	Pb	206	298.0	8.9	**0.0253**	0.007	27.2	ug/L	182	Standard
	Pb	207	233.7	5.4	**0.0224**	0.004	19.0	ug/L	145	Standard
	Pb	208	328.0	0.9	**0.0200**	0.001	5.4	ug/L	207	Standard
	U	238	2.3	99.0	**-0.0002**	0.001	219.5	ug/L	1	Standard
>	**Bi**	209	321034.6	1.0				ug/L	325207	Standard

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	Na	23	88.3	44.0	**13.9661**	6.474	46.4	mg/L	0	Standard
	Mg	24	10747.2	9.7	**11.7733**	1.013	8.6	mg/L	25	Standard
	K	39	296.7	21.3	**5.5128**	1.148	20.8	mg/L	3	Standard
	Ca	43	4078.9	10.2	**13.8574**	1.316	9.5	mg/L	297	Standard
	Fe	54	9912.6	10.8	**12.0824**	1.171	9.7	mg/L	91	Standard
	Fe	57	4302.3	10.9	**12.1831**	1.226	10.1	mg/L	237	Standard
>	**Sc-1**	45	33981.4	1.4				mg/L	35084	Standard
	Cl	35	38454.4	0.6				ug/L	29808	Standard
	Kr	83	39.6	12.2				ug/L	38	Standard
	Br	81	734.2	6.6				ug/L	965	Standard
	P	31	116206.5	1.5				ug/L	176735	Standard
	S	34	37827.2	0.2				ug/L	28891	Standard
	Sr	88	31.7	38.9				ug/L	27	Standard
	C	12	10.0	100.0				mg/L	7	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	9.0	69.6				mg/L	14	Standard
	Ho-1	165	8.3	59.2				mg/L	7	Standard
	Er	166	13.3	48.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		96.131	
	Be	9			
	Al	27	1.000		
	Sc	45			
	Ti	47	103.635		
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.976	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98	94.738		
|	Ag	107			
|	Cd	111			
|	Cd	114			
|>	In	115			95.551
|	Sn	118			
|	Sb	123			
⌊	Ba	135			
⌈	Ce	140			
⌊>	Tb	159			
⌈	Ho	165			
|	Tl	203			
|	Tl	205			
|	Pb	206			
|	Pb	207			
|	Pb	208			
|	U	238			
⌊>	Bi	209			98.717
⌈	Na	23	111.728		
|	Mg	24	235.466		
|	K	39	110.256		
|	Ca	43	92.383		
|	Fe	54	96.659		
|	Fe	57	97.464		
⌊>	Sc-1	45			
	Cl	35			
	Kr	83			
	Br	81			
	P	31			
	S	34			
	Sr	88			
	C	12			
	N	14			
	Hg	202			
	Dy	164			
	Ho-1	165			
	Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Al	27	
QC Std 4	Mg	24	

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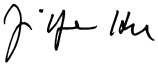

Method 6020 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, June 04, 2013 13:10:02
Number of Replicates: 3
Autosampler Position: 204
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	608443.1	1.6				ug/L	552027	Standard
	Be	9	203083.2	9.2	**97.6569**	8.890	9.1	ug/L	18	Standard
	Al	27	6138920.6	9.2	**40.5075**	3.701	9.1	ug/L	841	Standard
	Sc	45	37541.5	3.3				ug/L	35084	Standard
	Ti	47	18994.3	10.8	**85.8472**	8.098	9.4	ug/L	22	Standard
	V	51	588919.1	12.1	**97.0443**	10.454	10.8	ug/L	812	Standard
	Cr	52	522384.5	13.0	**98.4768**	11.552	11.7	ug/L	4274	Standard
	Cr	53	105159.5	11.8	**100.5820**	10.670	10.6	ug/L	1106	Standard
	Mn	55	787062.4	11.2	**97.5432**	9.639	9.9	ug/L	1207	Standard
	Co	59	550631.3	11.0	**96.7936**	9.410	9.7	ug/L	71	Standard
	Ni	60	218407.2	11.1	**99.6095**	9.728	9.8	ug/L	295	Standard
	Cu	65	216519.4	9.1	**98.2488**	7.624	7.8	ug/L	87	Standard
	Zn	66	118491.7	11.3	**102.6833**	10.302	10.0	ug/L	469	Standard
>	**Ge**	72	515670.2	1.4				ug/L	514704	Standard
	As	75	129950.3	9.6	**99.9808**	8.227	8.2	ug/L	-121	Standard
	Se	82	12937.6	8.8	**100.9761**	7.484	7.4	ug/L	-1	Standard
	Se-1	77	8604.5	8.4	**99.8813**	7.109	7.1	ug/L	127	Standard
>	**Ga**	71	508.3	7.0				mg/L	175	Standard
	Rb	85	2600.2	5.7				ug/L	50	Standard
	Y	89	549763.7	4.2				ug/L	527499	Standard
>	**Rh**	103	63.3	19.9				ug/L	10	Standard
	Mo	98	323386.8	10.5	**78.6682**	8.460	10.8	ug/L	23	Standard
	Ag	107	560684.6	8.2	**98.2953**	8.202	8.3	ug/L	59	Standard
	Cd	111	177605.3	10.6	**99.7457**	10.474	10.5	mg/L	3	Standard
	Cd	114	455012.8	9.3	**99.1185**	9.200	9.3	ug/L	10	Standard
>	**In**	115	577907.5	1.3				ug/L	537195	Standard
	Sn	118	882.0	2.8	**0.1070**	0.005	5.0	ug/L	281	Standard
	Sb	123	401840.5	8.6	**100.6727**	8.884	8.8	ug/L	167	Standard
	Ba	135	177347.8	9.3	**99.2717**	9.334	9.4	ug/L	10	Standard
	Ce	140	837.4	10.4				ug/L	27	Standard
>	**Tb**	159	811663.6	0.2				ug/L	758170	Standard
	Ho	165	9.0	19.2				ug/L	7	Standard
	Tl	203	553959.3	6.8	**98.6620**	7.032	7.1	ug/L	5	Standard
	Tl	205	14612.1	6.5	**99.4434**	6.806	6.8	ug/L	0	Standard
	Pb	206	439066.1	10.0	**98.9358**	10.197	10.3	ug/L	182	Standard
	Pb	207	377398.0	9.0	**100.0073**	9.354	9.4	ug/L	145	Standard
	Pb	208	541445.2	9.7	**100.0869**	9.971	10.0	ug/L	207	Standard
	U	238	459958.7	10.6	**96.9495**	10.551	10.9	ug/L	1	Standard
>	**Bi**	209	348974.5	0.4				ug/L	325207	Standard

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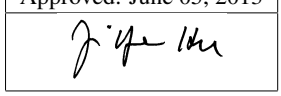

	Na	23	95.0	54.9	**13.5288**	7.680	56.8	mg/L	0	Standard
	Mg	24	9711.5	9.7	**9.6155**	0.632	6.6	mg/L	25	Standard
	K	39	261.7	27.2	**4.3726**	1.093	25.0	mg/L	3	Standard
	Ca	43	3737.1	11.4	**11.3105**	1.078	9.5	mg/L	297	Standard
	Fe	54	9408.8	12.8	**10.3510**	1.013	9.8	mg/L	91	Standard
	Fe	57	3837.2	12.8	**9.7238**	1.002	10.3	mg/L	237	Standard
>	**Sc-1**	45	37541.5	3.3				mg/L	35084	Standard
	Cl	35	41546.9	0.9				ug/L	29808	Standard
	Kr	83	43.1	11.7				ug/L	38	Standard
	Br	81	924.2	2.6				ug/L	965	Standard
	P	31	198353.8	2.6				ug/L	176735	Standard
	S	34	38415.3	1.4				ug/L	28891	Standard
	Sr	88	34.2	40.3				ug/L	27	Standard
	C	12	10.0	50.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	7.2	141.4				mg/L	14	Standard
	Ho-1	165	9.0	19.2				mg/L	7	Standard
	Er	166	16.7	34.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		110.220	
	Be	9	97.657		
	Al	27	0.810		
	Sc	45			
	Ti	47	85.847		
	V	51	97.044		
	Cr	52	98.477		
	Cr	53			
	Mn	55	97.543		
	Co	59	96.794		
	Ni	60	99.610		
	Cu	65	98.249		
	Zn	66	102.683		
>	Ge	72		100.188	
	As	75	99.981		
	Se	82	100.976		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	78.668	
|	Ag	107	98.295	
|	Cd	111	99.746	
|	Cd	114		
|>	In	115		107.579
|	Sn	118		
|	Sb	123	100.673	
⌊	Ba	135	99.272	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	98.662	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	100.087	
|	U	238	96.950	
⌊>	Bi	209		107.308
⌈	Na	23	108.230	
|	Mg	24	192.310	
|	K	39	87.451	
|	Ca	43	75.404	
|	Fe	54	82.808	
|	Fe	57	77.790	
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Al	27	
QC Std 5	Mo	98	
QC Std 5	Na	23	
QC Std 5	Mg	24	
QC Std 5	K	39	

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QC Std 5	Ca	43
QC Std 5	Fe	57

Sample ID: QC Std 5
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 13:14:01
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	609279.8	3.7				ug/L	552027	Standard
	Be	9	98997.8	10.7	**47.5242**	4.693	9.9	ug/L	18	Standard
	Al	27	7556589.3	9.9	**49.7938**	4.597	9.2	ug/L	841	Standard
	Sc	45	38336.8	2.3				ug/L	35084	Standard
	Ti	47	22464.4	9.8	**102.0176**	8.408	8.2	ug/L	22	Standard
	V	51	297664.7	10.3	**49.2176**	4.283	8.7	ug/L	812	Standard
	Cr	52	263118.3	12.1	**49.4169**	5.268	10.7	ug/L	4274	Standard
	Cr	53	52914.6	10.3	**50.3336**	4.407	8.8	ug/L	1106	Standard
	Mn	55	393758.7	11.5	**48.9387**	4.887	10.0	ug/L	1207	Standard
	Co	59	277717.2	12.6	**49.0223**	5.417	11.1	ug/L	71	Standard
	Ni	60	110356.2	9.6	**50.4995**	4.023	8.0	ug/L	295	Standard
	Cu	65	107837.0	10.1	**49.1198**	4.134	8.4	ug/L	87	Standard
	Zn	66	57331.3	10.1	**49.5433**	4.259	8.6	ug/L	469	Standard
>	**Ge**	72	513281.2	1.8				ug/L	514704	Standard
	As	75	63327.2	9.4	**48.9996**	3.820	7.8	ug/L	-121	Standard
	Se	82	6430.5	9.6	**50.4118**	3.976	7.9	ug/L	-1	Standard
	Se-1	77	4337.3	9.5	**49.8985**	4.100	8.2	ug/L	127	Standard
>	**Ga**	71	376.7	5.0				mg/L	175	Standard
	Rb	85	3065.3	8.5				ug/L	50	Standard
	Y	89	554473.7	0.8				ug/L	527499	Standard
>	**Rh**	103	28.3	56.7				ug/L	10	Standard
	Mo	98	404026.2	10.7	**99.4980**	10.551	10.6	ug/L	23	Standard
	Ag	107	289394.3	8.5	**51.3591**	4.346	8.5	ug/L	59	Standard
	Cd	111	88748.8	10.1	**50.4665**	5.037	10.0	mg/L	3	Standard
	Cd	114	231065.1	11.2	**50.9600**	5.641	11.1	ug/L	10	Standard
>	**In**	115	570740.1	0.6				ug/L	537195	Standard
	Sn	118	250873.8	12.1	**49.9199**	6.014	12.0	ug/L	281	Standard
	Sb	123	199401.0	10.3	**50.5650**	5.184	10.3	ug/L	167	Standard
	Ba	135	88828.4	11.1	**50.3277**	5.544	11.0	ug/L	10	Standard
	Ce	140	83.3	8.8				ug/L	27	Standard
>	**Tb**	159	807070.9	0.6				ug/L	758170	Standard
	Ho	165	8.0	21.7				ug/L	7	Standard
	Tl	203	281082.7	7.5	**50.0858**	3.772	7.5	ug/L	5	Standard
	Tl	205	7347.8	6.4	**50.0341**	3.249	6.5	ug/L	0	Standard
	Pb	206	222678.1	10.8	**50.1748**	5.439	10.8	ug/L	182	Standard
	Pb	207	192186.0	9.9	**50.9289**	5.064	9.9	ug/L	145	Standard
	Pb	208	272840.6	10.5	**50.4343**	5.305	10.5	ug/L	207	Standard
	U	238	233348.3	12.5	**49.2061**	6.161	12.5	ug/L	1	Standard
>	**Bi**	209	348761.6	0.2				ug/L	325207	Standard

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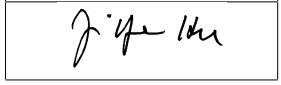

	Na	23	41.7	25.0	**5.2486**	1.680	32.0	mg/L	0	Standard
	Mg	24	4655.7	8.3	**4.4950**	0.277	6.2	mg/L	25	Standard
	K	39	300.0	16.4	**4.9390**	0.783	15.9	mg/L	3	Standard
	Ca	43	1608.4	7.5	**4.1850**	0.277	6.6	mg/L	297	Standard
	Fe	54	4531.3	12.0	**4.8230**	0.490	10.2	mg/L	91	Standard
	Fe	57	1828.4	10.0	**4.2681**	0.377	8.8	mg/L	237	Standard
>	**Sc-1**	45	38336.8	2.3				mg/L	35084	Standard
	Cl	35	41933.0	2.5				ug/L	29808	Standard
	Kr	83	38.7	4.8				ug/L	38	Standard
	Br	81	967.5	10.1				ug/L	965	Standard
	P	31	211144.2	2.8				ug/L	176735	Standard
	S	34	43433.8	1.7				ug/L	28891	Standard
	Sr	88	33.3	42.6				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.5	33.6				mg/L	14	Standard
	Ho-1	165	8.0	21.7				mg/L	7	Standard
	Er	166	17.0	17.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		110.371	
	Be	9	95.048		
	Al	27	99.588		
	Sc	45			
	Ti	47	102.018		
	V	51	98.435		
	Cr	52	98.834		
	Cr	53			
	Mn	55	97.877		
	Co	59	98.045		
	Ni	60	100.999		
	Cu	65	98.240		
	Zn	66	99.087		
>	Ge	72		99.724	
	As	75	97.999		
	Se	82	100.824		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98	99.498		
|	Ag	107	102.718		
|	Cd	111	100.933		
|	Cd	114			
|>	In	115			106.244
|	Sn	118	99.840		
|	Sb	123	101.130		
⌊	Ba	135	100.655		
⌈	Ce	140			
⌊>	Tb	159			
⌈	Ho	165			
|	Tl	203	100.172		
|	Tl	205			
|	Pb	206			
|	Pb	207			
|	Pb	208	100.869		
|	U	238	98.412		
⌊>	Bi	209			107.243
⌈	Na	23			
|	Mg	24			
|	K	39			
|	Ca	43			
|	Fe	54			
|	Fe	57			
⌊>	Sc-1	45			
	Cl	35			
	Kr	83			
	Br	81			
	P	31			
	S	34			
	Sr	88			
	C	12			
	N	14			
	Hg	202			
	Dy	164			
	Ho-1	165			
	Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 13:18:11
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	555300.0	6.8				ug/L	552027	Standard
	Be	9	64.3	52.6	**0.0237**	0.021	88.4	ug/L	18	Standard
	Al	27	2404.9	77.7	**0.0061**	0.015	251.1	ug/L	841	Standard
	Sc	45	35022.1	3.0				ug/L	35084	Standard
	Ti	47	24.0	41.0	**0.0330**	0.047	141.1	ug/L	22	Standard
	V	51	774.3	27.3	**0.0105**	0.038	365.8	ug/L	812	Standard
	Cr	52	3558.4	14.1	**-0.1085**	0.108	99.3	ug/L	4274	Standard
	Cr	53	830.9	5.3	**-0.1751**	0.043	24.7	ug/L	1106	Standard
	Mn	55	1788.4	9.5	**0.0774**	0.021	27.0	ug/L	1207	Standard
	Co	59	226.3	89.2	**0.0267**	0.038	140.5	ug/L	71	Standard
	Ni	60	342.0	4.3	**0.0347**	0.007	19.3	ug/L	295	Standard
	Cu	65	133.0	12.6	**0.0098**	0.008	76.4	ug/L	87	Standard
	Zn	66	572.0	3.1	**-0.1817**	0.020	11.2	ug/L	469	Standard
>	**Ge**	72	481668.1	1.0				ug/L	514704	Standard
	As	75	-104.8	27.0	**0.0212**	0.022	106.1	ug/L	-121	Standard
	Se	82	8.3	60.8	**0.0663**	0.042	63.6	ug/L	-1	Standard
	Se-1	77	113.0	8.5	**0.0548**	0.134	244.1	ug/L	127	Standard
>	**Ga**	71	330.0	14.5				mg/L	175	Standard
	Rb	85	33.3	31.2				ug/L	50	Standard
	Y	89	516386.2	3.2				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	158.4	66.6	**0.0353**	0.027	77.1	ug/L	23	Standard
	Ag	107	132.0	57.8	**0.0129**	0.014	109.6	ug/L	59	Standard
	Cd	111	27.5	81.4	**0.0152**	0.013	88.5	mg/L	3	Standard
	Cd	114	67.8	61.9	**0.0110**	0.010	88.2	ug/L	10	Standard
>	**In**	115	521416.9	8.0				ug/L	537195	Standard
	Sn	118	1101.4	16.6	**0.1725**	0.022	12.8	ug/L	281	Standard
	Sb	123	404.5	14.6	**0.0947**	0.008	8.0	ug/L	167	Standard
	Ba	135	30.0	47.3	**-0.0043**	0.009	219.7	ug/L	10	Standard
	Ce	140	18.7	11.2				ug/L	27	Standard
>	**Tb**	159	746848.5	6.3				ug/L	758170	Standard
	Ho	165	6.7	34.6				ug/L	7	Standard
	Tl	203	57.7	52.2	**0.0099**	0.005	54.3	ug/L	5	Standard
	Tl	205	5.0	111.4	**0.0453**	0.044	97.2	ug/L	0	Standard
	Pb	206	238.7	6.3	**0.0084**	0.005	54.0	ug/L	182	Standard
	Pb	207	191.0	6.8	**0.0079**	0.004	53.8	ug/L	145	Standard
	Pb	208	367.7	47.2	**0.0271**	0.041	152.6	ug/L	207	Standard
	U	238	115.7	133.6	**0.0267**	0.038	142.2	ug/L	1	Standard
>	**Bi**	209	335379.2	8.3				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	36.7	79.9	**-0.0004**	0.033	7785.0	mg/L	25	Standard
	K	39	1.7	173.2	**-0.0257**	0.051	197.9	mg/L	3	Standard
	Ca	43	263.3	10.5	**-0.0798**	0.105	131.1	mg/L	297	Standard
	Fe	54	94.7	13.7	**-0.0044**	0.013	295.4	mg/L	91	Standard
	Fe	57	160.0	8.3	**-0.0542**	0.041	74.9	mg/L	237	Standard
>	**Sc-1**	45	35022.1	3.0				mg/L	35084	Standard
	Cl	35	35499.1	17.8				ug/L	29808	Standard
	Kr	83	32.9	3.6				ug/L	38	Standard
	Br	81	688.3	12.7				ug/L	965	Standard
	P	31	135744.6	13.8				ug/L	176735	Standard
	S	34	38102.5	12.4				ug/L	28891	Standard
	Sr	88	38.3	38.2				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	8.8	25.4				mg/L	14	Standard
	Ho-1	165	6.7	34.6				mg/L	7	Standard
	Er	166	10.3	20.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		100.593	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.582	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	97.063
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.128
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: PBW AF WG432798-02
Sample Date/Time: Tuesday, June 04, 2013 13:22:40
Number of Replicates: 3
Autosampler Position: 401
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	508014.7	2.5				ug/L	552027	Standard
	Be	9	35.0	28.1	**0.0090**	0.006	63.2	ug/L	18	Standard
	Al	27	381.0	12.6	**-0.0090**	0.000	3.4	ug/L	841	Standard
	Sc	45	32902.4	1.2				ug/L	35084	Standard
	Ti	47	17.3	29.0	**0.0071**	0.025	354.0	ug/L	22	Standard
	V	51	732.9	20.8	**0.0126**	0.028	221.7	ug/L	812	Standard
	Cr	52	3471.1	2.5	**-0.0736**	0.025	34.2	ug/L	4274	Standard
	Cr	53	785.9	4.5	**-0.1600**	0.052	32.3	ug/L	1106	Standard
	Mn	55	1165.7	4.8	**0.0063**	0.009	148.0	ug/L	1207	Standard
	Co	59	58.0	14.9	**-0.0040**	0.002	47.9	ug/L	71	Standard
	Ni	60	462.7	54.8	**0.1115**	0.135	121.4	ug/L	295	Standard
	Cu	65	79.3	60.8	**-0.0132**	0.026	193.4	ug/L	87	Standard
	Zn	66	1429.4	90.1	**0.7264**	1.308	180.0	ug/L	469	Standard
>	Ge	72	447994.8	1.4				ug/L	514704	Standard
	As	75	-88.0	25.9	**0.0294**	0.020	67.6	ug/L	-121	Standard
	Se	82	6.3	103.0	**0.0535**	0.059	109.8	ug/L	-1	Standard
	Se-1	77	113.0	15.1	**0.1630**	0.249	152.6	ug/L	127	Standard
>	Ga	71	300.0	1.7				mg/L	175	Standard
	Rb	85	41.7	13.9				ug/L	50	Standard
	Y	89	478090.2	3.1				ug/L	527499	Standard
>	Rh	103	6.7	43.3				ug/L	10	Standard
	Mo	98	46.8	17.5	**0.0058**	0.002	37.9	ug/L	23	Standard
	Ag	107	48.3	8.4	**-0.0030**	0.001	24.0	ug/L	59	Standard
	Cd	111	4.9	53.4	**0.0012**	0.002	136.5	mg/L	3	Standard
	Cd	114	14.0	63.9	**-0.0018**	0.002	120.2	ug/L	10	Standard
>	In	115	506235.1	1.2				ug/L	537195	Standard
	Sn	118	422.3	21.3	**0.0282**	0.020	70.2	ug/L	281	Standard
	Sb	123	364.2	8.0	**0.0870**	0.009	9.9	ug/L	167	Standard
	Ba	135	8.3	56.7	**-0.0179**	0.003	17.2	ug/L	10	Standard
	Ce	140	11.0	27.3				ug/L	27	Standard
>	Tb	159	725017.2	1.5				ug/L	758170	Standard
	Ho	165	7.7	30.1				ug/L	7	Standard
	Tl	203	13.3	31.2	**0.0017**	0.001	47.0	ug/L	5	Standard
	Tl	205	0.7	86.6	**0.0124**	0.004	33.9	ug/L	0	Standard
	Pb	206	173.3	6.7	**-0.0059**	0.003	45.6	ug/L	182	Standard
	Pb	207	153.7	7.9	**-0.0013**	0.003	267.8	ug/L	145	Standard
	Pb	208	208.7	3.7	**-0.0045**	0.002	34.5	ug/L	207	Standard
	U	238	4.0	75.0	**0.0001**	0.001	508.1	ug/L	1	Standard
>	Bi	209	325459.4	0.4				ug/L	325207	Standard

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	Na	23	3.3	86.6	**-0.5033**	0.508	100.9	mg/L	0	Standard
	Mg	24	31.7	18.2	**-0.0041**	0.007	157.5	mg/L	25	Standard
	K	39	8.3	69.3	**0.1058**	0.110	103.6	mg/L	3	Standard
	Ca	43	261.7	14.6	**-0.0272**	0.138	508.5	mg/L	297	Standard
	Fe	54	49.6	19.7	**-0.0543**	0.012	21.6	mg/L	91	Standard
	Fe	57	135.0	17.0	**-0.1009**	0.073	72.2	mg/L	237	Standard
>	**Sc-1**	45	32902.4	1.2				mg/L	35084	Standard
	Cl	35	35981.3	1.4				ug/L	29808	Standard
	Kr	83	34.0	2.6				ug/L	38	Standard
	Br	81	643.3	4.2				ug/L	965	Standard
	P	31	67594.1	5.5				ug/L	176735	Standard
	S	34	39640.1	1.3				ug/L	28891	Standard
	Sr	88	41.7	9.2				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	9.7	37.4				mg/L	14	Standard
	Ho-1	165	7.7	30.1				mg/L	7	Standard
	Er	166	6.3	39.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		92.027	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		87.039	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: PBW AF WG432798-02
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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

94.237

100.078

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW AF WG432798-02
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Method 6020 - Summary Report

Sample ID: F BLANK WG432399-01
Sample Date/Time: Tuesday, June 04, 2013 13:26:26
Number of Replicates: 3
Autosampler Position: 402
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	568779.8	2.8				ug/L	552027	Standard
	Be	9	33.3	30.3	**0.0060**	0.005	87.0	ug/L	18	Standard
	Al	27	872.4	12.7	**-0.0058**	0.001	12.9	ug/L	841	Standard
	Sc	45	36540.7	0.9				ug/L	35084	Standard
	Ti	47	18.7	13.5	**0.0065**	0.011	168.2	ug/L	22	Standard
	V	51	917.1	9.7	**0.0341**	0.017	49.6	ug/L	812	Standard
	Cr	52	3972.2	1.7	**-0.0324**	0.012	38.1	ug/L	4274	Standard
	Cr	53	786.7	2.4	**-0.2281**	0.032	14.2	ug/L	1106	Standard
	Mn	55	1337.7	5.3	**0.0158**	0.007	41.4	ug/L	1207	Standard
	Co	59	80.3	3.1	**-0.0008**	0.000	61.5	ug/L	71	Standard
	Ni	60	865.4	2.7	**0.2870**	0.017	6.0	ug/L	295	Standard
	Cu	65	93.0	17.3	**-0.0100**	0.008	82.7	ug/L	87	Standard
	Zn	66	1490.4	6.6	**0.6641**	0.092	13.9	ug/L	469	Standard
>	**Ge**	72	486232.8	1.7				ug/L	514704	Standard
	As	75	-135.3	12.2	**-0.0032**	0.015	460.7	ug/L	-121	Standard
	Se	82	-0.3	1324.1	**-0.0055**	0.032	578.0	ug/L	-1	Standard
	Se-1	77	103.7	20.3	**-0.0735**	0.281	382.1	ug/L	127	Standard
>	**Ga**	71	333.3	12.1				mg/L	175	Standard
	Rb	85	41.7	36.7				ug/L	50	Standard
	Y	89	526998.2	3.8				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	47.3	27.7	**0.0050**	0.003	65.8	ug/L	23	Standard
	Ag	107	68.0	19.9	**0.0000**	0.002	62535.8	ug/L	59	Standard
	Cd	111	7.9	21.6	**0.0028**	0.001	37.4	mg/L	3	Standard
	Cd	114	22.6	36.2	**-0.0001**	0.002	1698.3	ug/L	10	Standard
>	**In**	115	543185.1	2.4				ug/L	537195	Standard
	Sn	118	435.7	19.4	**0.0246**	0.018	72.0	ug/L	281	Standard
	Sb	123	398.7	1.5	**0.0891**	0.003	3.6	ug/L	167	Standard
	Ba	135	11.0	18.2	**-0.0166**	0.001	7.4	ug/L	10	Standard
	Ce	140	14.7	14.2				ug/L	27	Standard
>	**Tb**	159	766147.3	1.9				ug/L	758170	Standard
	Ho	165	9.0	0.0				ug/L	7	Standard
	Tl	203	14.0	32.7	**0.0017**	0.001	46.5	ug/L	5	Standard
	Tl	205	0.3	173.2	**0.0099**	0.004	41.0	ug/L	0	Standard
	Pb	206	214.0	2.9	**0.0018**	0.002	102.2	ug/L	182	Standard
	Pb	207	157.7	9.8	**-0.0019**	0.005	243.9	ug/L	145	Standard
	Pb	208	236.0	11.0	**-0.0010**	0.005	500.5	ug/L	207	Standard
	U	238	7.3	68.6	**0.0008**	0.001	131.3	ug/L	1	Standard
>	**Bi**	209	339273.4	2.0				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	25.0	34.6	**-0.0145**	0.009	61.3	mg/L	25	Standard
	K	39	5.0	100.0	**0.0317**	0.087	273.4	mg/L	3	Standard
	Ca	43	278.3	20.8	**-0.0674**	0.204	302.5	mg/L	297	Standard
	Fe	54	91.2	8.4	**-0.0128**	0.009	70.1	mg/L	91	Standard
	Fe	57	158.3	6.6	**-0.0780**	0.032	41.2	mg/L	237	Standard
>	**Sc-1**	45	36540.7	0.9				mg/L	35084	Standard
	Cl	35	40176.5	1.2				ug/L	29808	Standard
	Kr	83	37.3	9.7				ug/L	38	Standard
	Br	81	830.9	8.5				ug/L	965	Standard
	P	31	146759.2	2.1				ug/L	176735	Standard
	S	34	40728.8	0.7				ug/L	28891	Standard
	Sr	88	39.2	32.1				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	5.9	17.5				mg/L	14	Standard
	Ho-1	165	9.0	0.0				mg/L	7	Standard
	Er	166	9.0	33.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.035	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.468	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.115
|	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	104.325
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: F BLANK WG432399-01
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Method 6020 - Summary Report

Sample ID: LCSW AF WG432798-03
Sample Date/Time: Tuesday, June 04, 2013 13:30:12
Number of Replicates: 3
Autosampler Position: 403
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	630115.1	2.7				ug/L	552027	Standard
	Be	9	49993.7	11.3	**23.1786**	2.196	9.5	ug/L	18	Standard
	Al	27	1504.4	10.2	**-0.0024**	0.001	32.6	ug/L	841	Standard
	Sc	45	39509.8	3.3				ug/L	35084	Standard
	Ti	47	19.3	15.8	**0.0047**	0.014	311.1	ug/L	22	Standard
	V	51	148844.9	10.8	**24.4567**	2.243	9.2	ug/L	812	Standard
	Cr	52	135437.7	12.4	**24.9339**	2.700	10.8	ug/L	4274	Standard
	Cr	53	26687.0	11.6	**24.7763**	2.586	10.4	ug/L	1106	Standard
	Mn	55	200593.4	12.8	**24.7587**	2.814	11.4	ug/L	1207	Standard
	Co	59	138845.9	11.3	**24.4158**	2.334	9.6	ug/L	71	Standard
	Ni	60	55632.4	8.3	**25.3056**	1.695	6.7	ug/L	295	Standard
	Cu	65	55647.4	10.1	**25.2297**	2.101	8.3	ug/L	87	Standard
	Zn	66	30108.5	11.0	**25.5779**	2.396	9.4	ug/L	469	Standard
>	Ge	72	515157.1	2.5				ug/L	514704	Standard
	As	75	31345.6	10.5	**24.2173**	2.110	8.7	ug/L	-121	Standard
	Se	82	3210.0	11.3	**25.0661**	2.395	9.6	ug/L	-1	Standard
	Se-1	77	2158.2	9.9	**24.0513**	2.219	9.2	ug/L	127	Standard
>	Ga	71	260.0	20.8				mg/L	175	Standard
	Rb	85	50.0	26.5				ug/L	50	Standard
	Y	89	566309.6	2.4				ug/L	527499	Standard
>	Rh	103	11.7	89.2				ug/L	10	Standard
	Mo	98	46.7	31.8	**0.0040**	0.004	90.2	ug/L	23	Standard
	Ag	107	145632.4	9.1	**25.1390**	1.840	7.3	ug/L	59	Standard
	Cd	111	44624.5	12.2	**24.6784**	2.566	10.4	mg/L	3	Standard
	Cd	114	115787.1	11.0	**24.8384**	2.341	9.4	ug/L	10	Standard
>	In	115	586138.4	2.2				ug/L	537195	Standard
	Sn	118	506.7	5.6	**0.0318**	0.008	23.9	ug/L	281	Standard
	Sb	123	100055.6	10.5	**24.6747**	2.197	8.9	ug/L	167	Standard
	Ba	135	44899.9	10.7	**24.7349**	2.243	9.1	ug/L	10	Standard
	Ce	140	105.7	7.9				ug/L	27	Standard
>	Tb	159	820710.6	1.5				ug/L	758170	Standard
	Ho	165	5.3	21.7				ug/L	7	Standard
	Tl	203	140958.6	8.3	**24.6502**	1.685	6.8	ug/L	5	Standard
	Tl	205	3692.5	9.8	**24.6763**	2.078	8.4	ug/L	0	Standard
	Pb	206	111309.6	10.4	**24.5846**	2.213	9.0	ug/L	182	Standard
	Pb	207	95078.4	10.9	**24.6968**	2.350	9.5	ug/L	145	Standard
	Pb	208	136427.3	11.0	**24.7195**	2.359	9.5	ug/L	207	Standard
	U	238	114982.6	12.2	**23.7846**	2.550	10.7	ug/L	1	Standard
>	Bi	209	355122.1	1.9				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8505**	0.414	48.7	mg/L	0	Standard
	Mg	24	36.7	15.7	**-0.0053**	0.006	110.4	mg/L	25	Standard
	K	39	8.3	34.6	**0.0799**	0.048	60.1	mg/L	3	Standard
	Ca	43	246.7	11.5	**-0.2365**	0.112	47.4	mg/L	297	Standard
	Fe	54	137.2	36.0	**0.0274**	0.049	177.1	mg/L	91	Standard
	Fe	57	126.7	13.9	**-0.1917**	0.038	20.1	mg/L	237	Standard
>	**Sc-1**	45	39509.8	3.3				mg/L	35084	Standard
	Cl	35	43955.0	2.4				ug/L	29808	Standard
	Kr	83	38.7	14.3				ug/L	38	Standard
	Br	81	931.7	6.6				ug/L	965	Standard
	P	31	217567.8	4.2				ug/L	176735	Standard
	S	34	41043.9	1.4				ug/L	28891	Standard
	Sr	88	27.5	0.0				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	11.9	18.7				mg/L	14	Standard
	Ho-1	165	5.3	21.7				mg/L	7	Standard
	Er	166	16.7	48.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		114.146	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		100.088	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: LCSW AF WG432798-03
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		109.111
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		109.199
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW AF WG432798-03
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Method 6020 - Summary Report

Sample ID: L1305132109 WG432798-01
Sample Date/Time: Tuesday, June 04, 2013 13:33:58
Number of Replicates: 3
Autosampler Position: 404
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	623783.7	0.8				ug/L	552027	Standard
	Be	9	78.3	10.6	**0.0256**	0.004	15.0	ug/L	18	Standard
	Al	27	5672534.7	8.7	**36.5112**	3.229	8.8	ug/L	841	Standard
	Sc	45	40992.1	3.4				ug/L	35084	Standard
	Ti	47	7271.1	11.6	**33.0273**	3.549	10.7	ug/L	22	Standard
	V	51	15142.7	11.8	**2.3886**	0.274	11.5	ug/L	812	Standard
	Cr	52	9559.7	6.5	**0.9962**	0.104	10.4	ug/L	4274	Standard
	Cr	53	2498.5	3.0	**1.3965**	0.056	4.0	ug/L	1106	Standard
	Mn	55	4117289.7	11.1	**514.3316**	52.537	10.2	ug/L	1207	Standard
	Co	59	15608.8	11.0	**2.7467**	0.280	10.2	ug/L	71	Standard
	Ni	60	4043.2	9.0	**1.7263**	0.151	8.7	ug/L	295	Standard
	Cu	65	2477.2	10.6	**1.0772**	0.110	10.3	ug/L	87	Standard
	Zn	66	15572.7	9.6	**12.9640**	1.184	9.1	ug/L	469	Standard
>	Ge	72	512415.3	1.1				ug/L	514704	Standard
	As	75	1142.4	9.9	**0.9912**	0.081	8.2	ug/L	-121	Standard
	Se	82	498.8	8.8	**3.9161**	0.315	8.0	ug/L	-1	Standard
	Se-1	77	185.7	5.2	**0.8303**	0.130	15.7	ug/L	127	Standard
>	Ga	71	1586.8	20.4				mg/L	175	Standard
	Rb	85	9948.3	9.4				ug/L	50	Standard
	Y	89	577056.9	2.2				ug/L	527499	Standard
>	Rh	103	153.3	13.2				ug/L	10	Standard
	Mo	98	332.7	49.1	**0.0730**	0.039	53.2	ug/L	23	Standard
	Ag	107	177.0	86.5	**0.0181**	0.026	146.2	ug/L	59	Standard
	Cd	111	64.6	53.7	**0.0341**	0.019	56.0	mg/L	3	Standard
	Cd	114	154.5	65.9	**0.0280**	0.022	77.7	ug/L	10	Standard
>	In	115	581474.6	0.8				ug/L	537195	Standard
	Sn	118	1050.0	3.5	**0.1388**	0.008	5.7	ug/L	281	Standard
	Sb	123	1638.1	7.2	**0.3906**	0.026	6.7	ug/L	167	Standard
	Ba	135	61457.8	9.6	**34.1561**	3.041	8.9	ug/L	10	Standard
	Ce	140	37319.0	11.6				ug/L	27	Standard
>	Tb	159	824967.3	0.1				ug/L	758170	Standard
	Ho	165	404.0	12.9				ug/L	7	Standard
	Tl	203	121.3	38.3	**0.0205**	0.008	39.9	ug/L	5	Standard
	Tl	205	1.7	34.6	**0.0188**	0.004	20.8	ug/L	0	Standard
	Pb	206	1114.4	10.2	**0.2011**	0.026	12.7	ug/L	182	Standard
	Pb	207	872.7	9.5	**0.1843**	0.022	12.0	ug/L	145	Standard
	Pb	208	1243.4	7.4	**0.1819**	0.017	9.3	ug/L	207	Standard
	U	238	129.0	17.5	**0.0262**	0.005	18.0	ug/L	1	Standard
>	Bi	209	352202.9	0.2				ug/L	325207	Standard

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	Na	23	90.0	14.7	**11.6584**	1.605	13.8	mg/L	0	Standard
	Mg	24	12056.5	10.7	**10.9368**	0.847	7.7	mg/L	25	Standard
	K	39	20.0	100.0	**0.2564**	0.306	119.1	mg/L	3	Standard
	Ca	43	4612.4	12.7	**12.9081**	1.331	10.3	mg/L	297	Standard
	Fe	54	815.9	4.6	**0.7157**	0.020	2.8	mg/L	91	Standard
	Fe	57	1671.8	13.5	**3.5720**	0.437	12.2	mg/L	237	Standard
>	**Sc-1**	45	40992.1	3.4				mg/L	35084	Standard
	Cl	35	44415.7	1.3				ug/L	29808	Standard
	Kr	83	37.9	13.7				ug/L	38	Standard
	Br	81	28497.7	8.8				ug/L	965	Standard
	P	31	352890.7	6.7				ug/L	176735	Standard
	S	34	38332.6	0.7				ug/L	28891	Standard
	Sr	88	130.8	15.9				ug/L	27	Standard
	C	12	23.3	24.7				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	21.7	26.6				mg/L	3	Standard
	Dy	164	562.1	14.4				mg/L	14	Standard
	Ho-1	165	404.0	12.9				mg/L	7	Standard
	Er	166	457.3	7.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		112.999	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.555	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.243
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	108.301
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305132109S WG432798-04
Sample Date/Time: Tuesday, June 04, 2013 13:37:44
Number of Replicates: 3
Autosampler Position: 405
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	641179.1	3.5				ug/L	552027	Standard
	Be	9	49172.2	10.5	**22.4177**	2.070	9.2	ug/L	18	Standard
	Al	27	5646794.8	9.1	**35.3432**	2.777	7.9	ug/L	841	Standard
	Sc	45	41904.6	4.6				ug/L	35084	Standard
	Ti	47	5669.7	10.8	**25.7234**	2.516	9.8	ug/L	22	Standard
	V	51	153798.3	11.3	**25.4120**	2.700	10.6	ug/L	812	Standard
	Cr	52	132137.8	12.3	**24.4456**	2.911	11.9	ug/L	4274	Standard
	Cr	53	26922.4	11.2	**25.1485**	2.802	11.1	ug/L	1106	Standard
	Mn	55	4220166.0	10.4	**527.0445**	51.139	9.7	ug/L	1207	Standard
	Co	59	143974.1	11.1	**25.4545**	2.635	10.4	ug/L	71	Standard
	Ni	60	55568.1	10.6	**25.4020**	2.477	9.7	ug/L	295	Standard
	Cu	65	53638.3	9.2	**24.4452**	2.023	8.3	ug/L	87	Standard
	Zn	66	45853.3	9.2	**39.5475**	3.340	8.4	ug/L	469	Standard
>	Ge	72	512703.2	2.1				ug/L	514704	Standard
	As	75	31282.1	9.3	**24.2976**	2.050	8.4	ug/L	-121	Standard
	Se	82	3437.0	8.5	**26.9873**	2.042	7.6	ug/L	-1	Standard
	Se-1	77	2102.5	6.6	**23.5234**	1.414	6.0	ug/L	127	Standard
>	Ga	71	1118.4	1.1				mg/L	175	Standard
	Rb	85	9164.4	4.9				ug/L	50	Standard
	Y	89	563830.8	1.5				ug/L	527499	Standard
>	Rh	103	168.3	24.7				ug/L	10	Standard
	Mo	98	166.7	4.4	**0.0329**	0.001	3.6	ug/L	23	Standard
	Ag	107	129838.2	7.3	**22.4720**	1.343	6.0	ug/L	59	Standard
	Cd	111	42643.2	10.8	**23.6474**	2.229	9.4	mg/L	3	Standard
	Cd	114	110523.6	10.0	**23.7713**	2.076	8.7	ug/L	10	Standard
>	In	115	584799.7	2.4				ug/L	537195	Standard
	Sn	118	891.4	3.7	**0.1069**	0.010	9.3	ug/L	281	Standard
	Sb	123	95816.3	9.6	**23.6907**	1.988	8.4	ug/L	167	Standard
	Ba	135	102396.3	9.7	**56.5936**	4.809	8.5	ug/L	10	Standard
	Ce	140	36558.7	10.2				ug/L	27	Standard
>	Tb	159	831061.8	1.5				ug/L	758170	Standard
	Ho	165	398.0	8.2				ug/L	7	Standard
	Tl	203	135033.5	7.4	**23.6429**	1.641	6.9	ug/L	5	Standard
	Tl	205	3534.7	8.5	**23.6543**	1.904	8.1	ug/L	0	Standard
	Pb	206	106900.1	9.7	**23.6414**	2.192	9.3	ug/L	182	Standard
	Pb	207	91931.2	10.0	**23.9120**	2.294	9.6	ug/L	145	Standard
	Pb	208	131350.7	10.8	**23.8317**	2.487	10.4	ug/L	207	Standard
	U	238	110380.1	11.5	**22.8670**	2.531	11.1	ug/L	1	Standard
>	Bi	209	354844.5	0.5				ug/L	325207	Standard

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	Na	23	118.3	19.1	**15.3508**	3.278	21.4	mg/L	0	Standard
	Mg	24	12074.8	9.8	**10.7289**	0.929	8.7	mg/L	25	Standard
	K	39	38.3	15.1	**0.5311**	0.105	19.8	mg/L	3	Standard
	Ca	43	4637.4	14.4	**12.6994**	1.816	14.3	mg/L	297	Standard
	Fe	54	615.8	6.7	**0.4989**	0.055	11.0	mg/L	91	Standard
	Fe	57	1585.1	12.9	**3.2828**	0.462	14.1	mg/L	237	Standard
>	**Sc-1**	45	41904.6	4.6				mg/L	35084	Standard
	Cl	35	44853.7	2.7				ug/L	29808	Standard
	Kr	83	41.1	13.0				ug/L	38	Standard
	Br	81	23111.9	11.4				ug/L	965	Standard
	P	31	342501.1	4.0				ug/L	176735	Standard
	S	34	38271.6	2.5				ug/L	28891	Standard
	Sr	88	153.3	11.6				ug/L	27	Standard
	C	12	33.3	8.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	23.3	118.0				mg/L	3	Standard
	Dy	164	514.4	10.9				mg/L	14	Standard
	Ho-1	165	398.0	8.2				mg/L	7	Standard
	Er	166	424.0	18.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.150	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.611	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.862
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	109.113
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305132109SD WG432798-05
Sample Date/Time: Tuesday, June 04, 2013 13:41:30
Number of Replicates: 3
Autosampler Position: 406
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	649071.2	0.2				ug/L	552027	Standard
	Be	9	52156.1	9.3	**23.5025**	2.183	9.3	ug/L	18	Standard
	Al	27	5756412.5	8.1	**35.6054**	2.928	8.2	ug/L	841	Standard
	Sc	45	41144.1	1.1				ug/L	35084	Standard
	Ti	47	8320.6	10.2	**37.6913**	3.768	10.0	ug/L	22	Standard
	V	51	167049.2	10.2	**27.5328**	2.716	9.9	ug/L	812	Standard
	Cr	52	140532.4	11.5	**25.9791**	3.002	11.6	ug/L	4274	Standard
	Cr	53	28747.4	8.6	**26.8506**	2.463	9.2	ug/L	1106	Standard
	Mn	55	4271776.8	9.5	**531.9676**	49.062	9.2	ug/L	1207	Standard
	Co	59	151097.9	11.8	**26.6422**	3.088	11.6	ug/L	71	Standard
	Ni	60	58692.5	9.4	**26.7653**	2.460	9.2	ug/L	295	Standard
	Cu	65	56826.3	9.3	**25.8322**	2.386	9.2	ug/L	87	Standard
	Zn	66	44301.3	8.6	**38.0774**	3.214	8.4	ug/L	469	Standard
>	Ge	72	514305.8	1.7				ug/L	514704	Standard
	As	75	33474.2	9.2	**25.9239**	2.379	9.2	ug/L	-121	Standard
	Se	82	3813.4	7.8	**29.8647**	2.367	7.9	ug/L	-1	Standard
	Se-1	77	2232.8	7.0	**24.9898**	1.771	7.1	ug/L	127	Standard
>	Ga	71	1615.1	11.2				mg/L	175	Standard
	Rb	85	10682.1	9.7				ug/L	50	Standard
	Y	89	575291.8	1.7				ug/L	527499	Standard
>	Rh	103	138.3	13.7				ug/L	10	Standard
	Mo	98	168.3	11.0	**0.0328**	0.004	13.3	ug/L	23	Standard
	Ag	107	135743.9	7.4	**23.2473**	1.594	6.9	ug/L	59	Standard
	Cd	111	44947.2	10.8	**24.6684**	2.546	10.3	mg/L	3	Standard
	Cd	114	116677.2	9.5	**24.8351**	2.223	9.0	ug/L	10	Standard
>	In	115	591134.7	0.6				ug/L	537195	Standard
	Sn	118	1338.1	2.3	**0.1908**	0.007	3.9	ug/L	281	Standard
	Sb	123	100728.4	9.7	**24.6455**	2.257	9.2	ug/L	167	Standard
	Ba	135	107830.7	8.9	**58.9752**	4.955	8.4	ug/L	10	Standard
	Ce	140	38010.3	11.2				ug/L	27	Standard
>	Tb	159	839228.2	0.6				ug/L	758170	Standard
	Ho	165	406.0	11.5				ug/L	7	Standard
	Tl	203	139080.0	6.8	**24.4416**	1.798	7.4	ug/L	5	Standard
	Tl	205	3618.1	6.4	**24.3000**	1.628	6.7	ug/L	0	Standard
	Pb	206	113406.8	9.1	**25.1769**	2.375	9.4	ug/L	182	Standard
	Pb	207	96987.2	8.2	**25.3232**	2.161	8.5	ug/L	145	Standard
	Pb	208	138409.3	9.6	**25.2087**	2.478	9.8	ug/L	207	Standard
	U	238	118817.2	11.7	**24.7115**	2.976	12.0	ug/L	1	Standard
>	Bi	209	353719.1	1.5				ug/L	325207	Standard

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	Na	23	98.3	21.2	**12.7873**	2.806	21.9	mg/L	0	Standard
	Mg	24	12431.8	6.7	**11.2490**	0.628	5.6	mg/L	25	Standard
	K	39	25.0	20.0	**0.3333**	0.082	24.5	mg/L	3	Standard
	Ca	43	4710.7	7.0	**13.1765**	0.838	6.4	mg/L	297	Standard
	Fe	54	847.0	14.0	**0.7435**	0.112	15.0	mg/L	91	Standard
	Fe	57	1675.1	12.0	**3.5705**	0.457	12.8	mg/L	237	Standard
>	**Sc-1**	45	41144.1	1.1				mg/L	35084	Standard
	Cl	35	46233.4	0.4				ug/L	29808	Standard
	Kr	83	38.9	7.9				ug/L	38	Standard
	Br	81	33254.1	7.3				ug/L	965	Standard
	P	31	357092.2	5.5				ug/L	176735	Standard
	S	34	39039.4	0.5				ug/L	28891	Standard
	Sr	88	150.0	9.3				ug/L	27	Standard
	C	12	21.7	13.3				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	23.3	32.7				mg/L	3	Standard
	Dy	164	581.5	14.1				mg/L	14	Standard
	Ho-1	165	406.0	11.5				mg/L	7	Standard
	Er	166	483.7	10.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.580	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.923	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.041
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	108.767
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305152302
Sample Date/Time: Tuesday, June 04, 2013 13:45:16
Number of Replicates: 3
Autosampler Position: 407
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	640035.6	2.0				ug/L	552027	Standard
	Be	9	238.0	14.3	**0.0975**	0.013	13.6	ug/L	18	Standard
	Al	27	1732737.0	9.2	**10.8539**	0.869	8.0	ug/L	841	Standard
	Sc	45	40487.4	1.1				ug/L	35084	Standard
	Ti	47	5495.0	9.8	**25.0933**	2.148	8.6	ug/L	22	Standard
	V	51	30090.5	12.7	**4.9004**	0.567	11.6	ug/L	812	Standard
	Cr	52	16244.4	9.4	**2.2936**	0.238	10.4	ug/L	4274	Standard
	Cr	53	3518.7	5.8	**2.4098**	0.158	6.6	ug/L	1106	Standard
	Mn	55	687623.8	10.6	**86.2749**	7.880	9.1	ug/L	1207	Standard
	Co	59	3384.7	12.5	**0.5868**	0.067	11.4	ug/L	71	Standard
	Ni	60	4154.6	8.3	**1.7891**	0.132	7.4	ug/L	295	Standard
	Cu	65	88280.6	10.2	**40.5249**	3.565	8.8	ug/L	87	Standard
	Zn	66	64392.7	9.4	**56.1930**	4.554	8.1	ug/L	469	Standard
>	**Ge**	72	509268.1	2.0				ug/L	514704	Standard
	As	75	35036.3	8.7	**27.3777**	2.033	7.4	ug/L	-121	Standard
	Se	82	63.7	23.0	**0.4992**	0.105	21.1	ug/L	-1	Standard
	Se-1	77	142.3	12.2	**0.3243**	0.172	53.0	ug/L	127	Standard
>	**Ga**	71	2251.8	11.8				mg/L	175	Standard
	Rb	85	41495.5	10.8				ug/L	50	Standard
	Y	89	579755.5	2.3				ug/L	527499	Standard
>	**Rh**	103	31.7	18.2				ug/L	10	Standard
	Mo	98	4967.0	11.0	**1.1806**	0.126	10.7	ug/L	23	Standard
	Ag	107	493.0	6.5	**0.0723**	0.005	7.3	ug/L	59	Standard
	Cd	111	341.5	9.1	**0.1866**	0.016	8.6	mg/L	3	Standard
	Cd	114	897.6	13.1	**0.1869**	0.024	13.1	ug/L	10	Standard
>	**In**	115	587665.3	0.6				ug/L	537195	Standard
	Sn	118	1657.4	6.0	**0.2541**	0.017	6.8	ug/L	281	Standard
	Sb	123	3388.8	8.3	**0.8176**	0.067	8.2	ug/L	167	Standard
	Ba	135	39236.1	10.6	**21.5708**	2.187	10.1	ug/L	10	Standard
	Ce	140	74800.0	11.1				ug/L	27	Standard
>	**Tb**	159	841557.6	0.8				ug/L	758170	Standard
	Ho	165	1119.4	11.5				ug/L	7	Standard
	Tl	203	211.7	19.6	**0.0358**	0.007	20.0	ug/L	5	Standard
	Tl	205	5.7	53.9	**0.0450**	0.020	44.0	ug/L	0	Standard
	Pb	206	79551.0	9.9	**17.4102**	1.632	9.4	ug/L	182	Standard
	Pb	207	67075.8	10.1	**17.2657**	1.652	9.6	ug/L	145	Standard
	Pb	208	96022.3	10.4	**17.2403**	1.701	9.9	ug/L	207	Standard
	U	238	994.7	14.7	**0.2032**	0.028	13.8	ug/L	1	Standard
>	**Bi**	209	358293.8	1.0				ug/L	325207	Standard

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	Na	23	63.3	44.9	**7.9870**	3.990	50.0	mg/L	0	Standard
	Mg	24	8535.7	7.9	**7.8418**	0.649	8.3	mg/L	25	Standard
	K	39	61.7	4.7	**0.9177**	0.056	6.1	mg/L	3	Standard
	Ca	43	3437.1	12.5	**9.5119**	1.294	13.6	mg/L	297	Standard
	Fe	54	1183.3	11.3	**1.1067**	0.148	13.3	mg/L	91	Standard
	Fe	57	1391.7	13.6	**2.9385**	0.486	16.5	mg/L	237	Standard
>	**Sc-1**	45	40487.4	1.1				mg/L	35084	Standard
	Cl	35	48888.4	1.2				ug/L	29808	Standard
	Kr	83	39.2	17.2				ug/L	38	Standard
	Br	81	1933.5	9.5				ug/L	965	Standard
	P	31	275143.6	6.2				ug/L	176735	Standard
	S	34	40984.5	1.7				ug/L	28891	Standard
	Sr	88	35.0	12.4				ug/L	27	Standard
	C	12	8.3	34.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	35.0	14.3				mg/L	3	Standard
	Dy	164	1696.8	11.6				mg/L	14	Standard
	Ho-1	165	1119.4	11.5				mg/L	7	Standard
	Er	166	994.7	12.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		115.943	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		98.944	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.395
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	110.174
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305152304
Sample Date/Time: Tuesday, June 04, 2013 13:49:03
Number of Replicates: 3
Autosampler Position: 408
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	643938.9	1.4				ug/L	552027	Standard
	Be	9	202.3	8.4	**0.0808**	0.007	8.4	ug/L	18	Standard
	Al	27	1610663.0	10.7	**10.0272**	0.983	9.8	ug/L	841	Standard
	Sc	45	39239.1	2.3				ug/L	35084	Standard
	Ti	47	7214.4	11.4	**33.4255**	3.431	10.3	ug/L	22	Standard
	V	51	14730.9	10.9	**2.3690**	0.242	10.2	ug/L	812	Standard
	Cr	52	21294.1	10.8	**3.3231**	0.402	12.1	ug/L	4274	Standard
	Cr	53	4480.7	8.9	**3.4102**	0.324	9.5	ug/L	1106	Standard
	Mn	55	495191.6	11.8	**62.9482**	6.691	10.6	ug/L	1207	Standard
	Co	59	3822.5	10.4	**0.6743**	0.064	9.4	ug/L	71	Standard
	Ni	60	4138.6	9.0	**1.8086**	0.159	8.8	ug/L	295	Standard
	Cu	65	292829.4	10.6	**136.4236**	12.796	9.4	ug/L	87	Standard
	Zn	66	178334.0	11.0	**159.0534**	15.604	9.8	ug/L	469	Standard
>	**Ge**	72	502320.5	1.7				ug/L	514704	Standard
	As	75	4848.4	11.2	**3.9323**	0.379	9.6	ug/L	-121	Standard
	Se	82	81.7	21.2	**0.6514**	0.134	20.6	ug/L	-1	Standard
	Se-1	77	187.0	10.7	**0.8878**	0.204	23.0	ug/L	127	Standard
>	**Ga**	71	2393.5	12.2				mg/L	175	Standard
	Rb	85	82190.1	8.6				ug/L	50	Standard
	Y	89	567770.2	2.6				ug/L	527499	Standard
>	**Rh**	103	105.0	16.5				ug/L	10	Standard
	Mo	98	7972.4	11.0	**1.9140**	0.183	9.6	ug/L	23	Standard
	Ag	107	6970.6	8.7	**1.1982**	0.082	6.9	ug/L	59	Standard
	Cd	111	705.9	8.4	**0.3910**	0.027	7.0	mg/L	3	Standard
	Cd	114	1895.8	10.4	**0.4038**	0.036	9.0	ug/L	10	Standard
>	**In**	115	582773.0	1.9				ug/L	537195	Standard
	Sn	118	8439.4	9.9	**1.5788**	0.136	8.6	ug/L	281	Standard
	Sb	123	5764.7	9.4	**1.4140**	0.115	8.1	ug/L	167	Standard
	Ba	135	157751.8	9.8	**87.4798**	7.251	8.3	ug/L	10	Standard
	Ce	140	180664.8	11.1				ug/L	27	Standard
>	**Tb**	159	834277.0	1.5				ug/L	758170	Standard
	Ho	165	847.0	12.9				ug/L	7	Standard
	Tl	203	272.7	4.2	**0.0450**	0.001	3.3	ug/L	5	Standard
	Tl	205	4.7	44.6	**0.0376**	0.014	36.3	ug/L	0	Standard
	Pb	206	652984.1	11.1	**138.8500**	14.651	10.6	ug/L	182	Standard
	Pb	207	538391.6	10.6	**134.6357**	13.432	10.0	ug/L	145	Standard
	Pb	208	776474.1	10.5	**135.4545**	13.509	10.0	ug/L	207	Standard
	U	238	1050.7	10.6	**0.2082**	0.021	10.2	ug/L	1	Standard
>	**Bi**	209	369632.7	1.4				ug/L	325207	Standard

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	Na	23	71.7	21.3	**9.5426**	2.306	24.2	mg/L	0	Standard
	Mg	24	8482.4	7.6	**8.0336**	0.441	5.5	mg/L	25	Standard
	K	39	116.7	13.1	**1.8402**	0.211	11.4	mg/L	3	Standard
	Ca	43	3243.7	9.3	**9.2256**	0.737	8.0	mg/L	297	Standard
	Fe	54	1776.6	15.0	**1.7741**	0.245	13.8	mg/L	91	Standard
	Fe	57	1311.7	11.1	**2.8375**	0.299	10.5	mg/L	237	Standard
>	**Sc-1**	45	39239.1	2.3				mg/L	35084	Standard
	Cl	35	51871.6	1.2				ug/L	29808	Standard
	Kr	83	36.9	14.1				ug/L	38	Standard
	Br	81	1608.4	2.5				ug/L	965	Standard
	P	31	254651.4	3.6				ug/L	176735	Standard
	S	34	42285.6	1.1				ug/L	28891	Standard
	Sr	88	56.7	28.7				ug/L	27	Standard
	C	12	10.0	86.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	240.0	15.0				mg/L	3	Standard
	Dy	164	1521.0	10.7				mg/L	14	Standard
	Ho-1	165	847.0	12.9				mg/L	7	Standard
	Er	166	794.7	8.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.650	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.594	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.484
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.661
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	
Pb 206 Upper, S, EEE	Pb	206	
Pb 207 Upper, S, EEE	Pb	207	
Pb 208 Upper, S, EEE	Pb	208	

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Method 6020 - Summary Report

Sample ID: L1305152304PS WG432851-01
Sample Date/Time: Tuesday, June 04, 2013 13:52:49
Number of Replicates: 3
Autosampler Position: 409
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	683778.0	1.0				ug/L	552027	Standard
	Be	9	111827.5	9.4	**47.8234**	4.119	8.6	ug/L	18	Standard
	Al	27	1722715.0	9.0	**10.1016**	0.831	8.2	ug/L	841	Standard
	Sc	45	42006.5	4.1				ug/L	35084	Standard
	Ti	47	7661.3	9.1	**33.4566**	2.891	8.6	ug/L	22	Standard
	V	51	341538.8	11.0	**54.4099**	5.732	10.5	ug/L	812	Standard
	Cr	52	304369.4	11.2	**55.1691**	6.039	10.9	ug/L	4274	Standard
	Cr	53	61163.8	8.7	**56.1623**	4.642	8.3	ug/L	1106	Standard
	Mn	55	942697.5	10.0	**113.0828**	10.791	9.5	ug/L	1207	Standard
	Co	59	301167.7	9.7	**51.2290**	4.842	9.5	ug/L	71	Standard
	Ni	60	122316.7	9.5	**53.9177**	4.775	8.9	ug/L	295	Standard
	Cu	65	429512.6	9.4	**188.6177**	16.890	9.0	ug/L	87	Standard
	Zn	66	241992.2	9.5	**203.6373**	18.491	9.1	ug/L	469	Standard
>	Ge	72	533249.4	1.6				ug/L	514704	Standard
	As	75	72191.2	8.8	**53.7910**	4.420	8.2	ug/L	-121	Standard
	Se	82	6754.1	8.3	**51.0013**	3.980	7.8	ug/L	-1	Standard
	Se-1	77	4399.3	11.3	**48.7262**	5.647	11.6	ug/L	127	Standard
>	Ga	71	2565.2	13.3				mg/L	175	Standard
	Rb	85	87880.2	8.0				ug/L	50	Standard
	Y	89	605294.6	3.5				ug/L	527499	Standard
>	Rh	103	123.3	12.4				ug/L	10	Standard
	Mo	98	8583.7	8.1	**1.9660**	0.161	8.2	ug/L	23	Standard
	Ag	107	321827.7	8.0	**53.2928**	3.961	7.4	ug/L	59	Standard
	Cd	111	97589.7	9.3	**51.7793**	4.560	8.8	mg/L	3	Standard
	Cd	114	249561.1	9.1	**51.3592**	4.509	8.8	ug/L	10	Standard
>	In	115	611586.4	1.8				ug/L	537195	Standard
	Sn	118	9496.0	8.8	**1.6993**	0.155	9.1	ug/L	281	Standard
	Sb	123	221082.5	8.7	**52.3139**	4.321	8.3	ug/L	167	Standard
	Ba	135	263422.5	8.9	**139.3128**	11.878	8.5	ug/L	10	Standard
	Ce	140	189929.6	10.1				ug/L	27	Standard
>	Tb	159	869011.6	1.9				ug/L	758170	Standard
	Ho	165	922.7	10.8				ug/L	7	Standard
	Tl	203	309209.0	7.6	**50.5937**	3.670	7.3	ug/L	5	Standard
	Tl	205	8141.5	7.2	**50.9068**	3.463	6.8	ug/L	0	Standard
	Pb	206	921617.2	8.9	**190.8146**	16.334	8.6	ug/L	182	Standard
	Pb	207	772497.6	8.2	**188.0898**	14.819	7.9	ug/L	145	Standard
	Pb	208	1121881.1	9.1	**190.5479**	16.809	8.8	ug/L	207	Standard
	U	238	259640.3	10.3	**50.2704**	5.002	9.9	ug/L	1	Standard
>	Bi	209	379734.7	0.4				ug/L	325207	Standard

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	Na	23	55.0	50.6	**6.4444**	3.611	56.0	mg/L	0	Standard
	Mg	24	8899.3	4.7	**7.8773**	0.048	0.6	mg/L	25	Standard
	K	39	101.7	14.2	**1.4953**	0.260	17.4	mg/L	3	Standard
	Ca	43	3498.7	11.4	**9.3038**	0.930	10.0	mg/L	297	Standard
	Fe	54	1982.8	15.7	**1.8522**	0.237	12.8	mg/L	91	Standard
	Fe	57	1456.7	12.3	**2.9599**	0.297	10.0	mg/L	237	Standard
>	**Sc-1**	45	42006.5	4.1				mg/L	35084	Standard
	Cl	35	52706.9	3.2				ug/L	29808	Standard
	Kr	83	43.6	3.2				ug/L	38	Standard
	Br	81	1625.9	4.8				ug/L	965	Standard
	P	31	333406.9	2.1				ug/L	176735	Standard
	S	34	41225.2	3.4				ug/L	28891	Standard
	Sr	88	50.0	13.2				ug/L	27	Standard
	C	12	10.0	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	271.7	8.7				mg/L	3	Standard
	Dy	164	1566.3	9.3				mg/L	14	Standard
	Ho-1	165	922.7	10.8				mg/L	7	Standard
	Er	166	810.0	8.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		123.867	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		103.603	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		113.848
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		116.767
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	
Ba 135 Upper, S, EEE	Ba	135	

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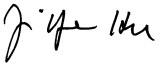

Pb 206 Upper, S, EEE	Pb	206
Pb 207 Upper, S, EEE	Pb	207
Pb 208 Upper, S, EEE	Pb	208

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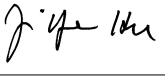

Method 6020 - Summary Report

Sample ID: L1305152304SDL WG432851-02
Sample Date/Time: Tuesday, June 04, 2013 13:56:35
Number of Replicates: 3
Autosampler Position: 410
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	646308.4	1.3				ug/L	552027	Standard
	Be	9	80.7	5.9	**0.0254**	0.002	8.2	ug/L	18	Standard
	Al	27	338841.2	9.1	**2.0921**	0.166	8.0	ug/L	841	Standard
	Sc	45	39078.7	1.9				ug/L	35084	Standard
	Ti	47	1448.1	8.6	**6.6580**	0.534	8.0	ug/L	22	Standard
	V	51	3676.0	12.5	**0.4972**	0.071	14.3	ug/L	812	Standard
	Cr	52	7758.3	6.9	**0.6838**	0.088	12.9	ug/L	4274	Standard
	Cr	53	1739.3	6.9	**0.6939**	0.095	13.7	ug/L	1106	Standard
	Mn	55	98514.9	10.4	**12.4208**	1.191	9.6	ug/L	1207	Standard
	Co	59	823.7	7.7	**0.1332**	0.009	7.0	ug/L	71	Standard
	Ni	60	944.4	5.6	**0.3112**	0.019	6.2	ug/L	295	Standard
	Cu	65	58945.9	10.5	**27.4706**	2.598	9.5	ug/L	87	Standard
	Zn	66	37345.9	9.6	**32.8091**	2.841	8.7	ug/L	469	Standard
>	**Ge**	72	501407.7	1.7				ug/L	514704	Standard
	As	75	825.5	15.5	**0.7599**	0.097	12.8	ug/L	-121	Standard
	Se	82	21.3	33.6	**0.1675**	0.056	33.5	ug/L	-1	Standard
	Se-1	77	122.7	8.2	**0.1144**	0.106	92.7	ug/L	127	Standard
>	**Ga**	71	535.0	15.6				mg/L	175	Standard
	Rb	85	16911.2	11.9				ug/L	50	Standard
	Y	89	565287.1	0.4				ug/L	527499	Standard
>	**Rh**	103	30.0	0.0				ug/L	10	Standard
	Mo	98	1583.4	9.3	**0.3711**	0.028	7.6	ug/L	23	Standard
	Ag	107	1482.1	8.3	**0.2426**	0.018	7.2	ug/L	59	Standard
	Cd	111	158.3	7.7	**0.0854**	0.005	5.9	mg/L	3	Standard
	Cd	114	375.3	11.3	**0.0750**	0.008	10.9	ug/L	10	Standard
>	**In**	115	587804.0	2.0				ug/L	537195	Standard
	Sn	118	2002.5	6.0	**0.3207**	0.018	5.6	ug/L	281	Standard
	Sb	123	2202.0	6.2	**0.5249**	0.023	4.4	ug/L	167	Standard
	Ba	135	31580.8	10.4	**17.3416**	1.519	8.8	ug/L	10	Standard
	Ce	140	36019.5	11.7				ug/L	27	Standard
>	**Tb**	159	835025.1	1.7				ug/L	758170	Standard
	Ho	165	167.7	9.8				ug/L	7	Standard
	Tl	203	96.3	22.4	**0.0157**	0.003	22.1	ug/L	5	Standard
	Tl	205	2.7	108.3	**0.0250**	0.019	74.6	ug/L	0	Standard
	Pb	206	133839.5	10.6	**29.2011**	2.775	9.5	ug/L	182	Standard
	Pb	207	110315.3	10.4	**28.3079**	2.677	9.5	ug/L	145	Standard
	Pb	208	158642.2	10.8	**28.3955**	2.799	9.9	ug/L	207	Standard
	U	238	230.0	14.8	**0.0463**	0.007	15.0	ug/L	1	Standard
>	**Bi**	209	359680.2	1.6				ug/L	325207	Standard

Sample ID: L1305152304SDL WG432851-02
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	Na	23	18.3	31.5	**1.6376**	0.852	52.0	mg/L	0	Standard
	Mg	24	1606.8	3.2	**1.4966**	0.032	2.2	mg/L	25	Standard
	K	39	25.0	40.0	**0.3513**	0.156	44.4	mg/L	3	Standard
	Ca	43	855.0	7.7	**1.6984**	0.171	10.0	mg/L	297	Standard
	Fe	54	474.6	17.6	**0.3903**	0.083	21.4	mg/L	91	Standard
	Fe	57	366.7	5.5	**0.4284**	0.041	9.6	mg/L	237	Standard
>	**Sc-1**	45	39078.7	1.9				mg/L	35084	Standard
	Cl	35	48469.4	0.9				ug/L	29808	Standard
	Kr	83	34.8	9.3				ug/L	38	Standard
	Br	81	991.7	2.1				ug/L	965	Standard
	P	31	215468.3	2.0				ug/L	176735	Standard
	S	34	42141.9	0.8				ug/L	28891	Standard
	Sr	88	45.8	6.3				ug/L	27	Standard
	C	12	6.7	114.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	63.3	38.9				mg/L	3	Standard
	Dy	164	313.1	16.9				mg/L	14	Standard
	Ho-1	165	167.7	9.8				mg/L	7	Standard
	Er	166	179.0	15.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.079	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.417	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.421
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	110.600
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1305152304SDL WG432851-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 14:00:23
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	627881.0	0.9				ug/L	552027	Standard
	Be	9	102824.6	10.5	**47.8811**	4.617	9.6	ug/L	18	Standard
	Al	27	8015037.2	9.7	**51.2249**	4.515	8.8	ug/L	841	Standard
	Sc	45	38495.5	1.0				ug/L	35084	Standard
	Ti	47	22932.5	10.7	**108.8017**	10.691	9.8	ug/L	22	Standard
	V	51	293537.7	9.9	**50.7198**	4.696	9.3	ug/L	812	Standard
	Cr	52	259251.4	11.4	**50.9096**	5.530	10.9	ug/L	4274	Standard
	Cr	53	52055.2	12.3	**51.7612**	6.069	11.7	ug/L	1106	Standard
	Mn	55	381717.8	11.2	**49.5747**	5.195	10.5	ug/L	1207	Standard
	Co	59	265950.9	10.9	**49.0613**	4.967	10.1	ug/L	71	Standard
	Ni	60	109268.7	11.6	**52.2460**	5.713	10.9	ug/L	295	Standard
	Cu	65	106607.3	10.2	**50.7354**	4.670	9.2	ug/L	87	Standard
	Zn	66	55684.4	9.6	**50.2902**	4.510	9.0	ug/L	469	Standard
>	Ge	72	491489.7	1.4				ug/L	514704	Standard
	As	75	62077.6	9.0	**50.1864**	4.178	8.3	ug/L	-121	Standard
	Se	82	6427.4	9.7	**52.6473**	4.744	9.0	ug/L	-1	Standard
	Se-1	77	4255.3	9.6	**51.1847**	4.769	9.3	ug/L	127	Standard
>	Ga	71	156.7	4.9				mg/L	175	Standard
	Rb	85	3295.4	5.8				ug/L	50	Standard
	Y	89	553843.6	2.1				ug/L	527499	Standard
>	Rh	103	45.0	29.4				ug/L	10	Standard
	Mo	98	399991.0	11.0	**96.6615**	9.845	10.2	ug/L	23	Standard
	Ag	107	286310.6	9.0	**49.8589**	3.901	7.8	ug/L	59	Standard
	Cd	111	88446.5	10.3	**49.3530**	4.588	9.3	mg/L	3	Standard
	Cd	114	232832.5	10.4	**50.3900**	4.780	9.5	ug/L	10	Standard
>	In	115	581338.4	1.7				ug/L	537195	Standard
	Sn	118	249176.8	11.4	**48.6448**	4.992	10.3	ug/L	281	Standard
	Sb	123	195941.7	10.5	**48.7528**	4.617	9.5	ug/L	167	Standard
	Ba	135	89828.2	9.9	**49.9418**	4.484	9.0	ug/L	10	Standard
	Ce	140	93.3	19.5				ug/L	27	Standard
>	Tb	159	822953.8	1.1				ug/L	758170	Standard
	Ho	165	10.0	17.3				ug/L	7	Standard
	Tl	203	287307.3	7.7	**50.6418**	3.696	7.3	ug/L	5	Standard
	Tl	205	7489.5	9.5	**50.4476**	4.606	9.1	ug/L	0	Standard
	Pb	206	224741.1	9.2	**50.0915**	4.458	8.9	ug/L	182	Standard
	Pb	207	192059.9	9.4	**50.3435**	4.532	9.0	ug/L	145	Standard
	Pb	208	271892.4	10.6	**49.7121**	5.076	10.2	ug/L	207	Standard
	U	238	234123.4	12.2	**48.8327**	5.797	11.9	ug/L	1	Standard
>	Bi	209	352503.2	1.3				ug/L	325207	Standard

Sample ID: QC Std 6
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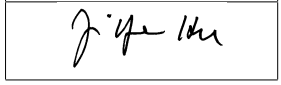

	Na	23	50.0	20.0	**6.4550**	1.442	22.3	mg/L	0	Standard
	Mg	24	4837.4	10.7	**4.6555**	0.481	10.3	mg/L	25	Standard
	K	39	316.7	27.6	**5.1950**	1.446	27.8	mg/L	3	Standard
	Ca	43	1743.4	9.0	**4.5997**	0.448	9.7	mg/L	297	Standard
	Fe	54	5113.4	12.8	**5.4416**	0.699	12.9	mg/L	91	Standard
	Fe	57	1691.8	14.7	**3.8958**	0.630	16.2	mg/L	237	Standard
>	**Sc-1**	45	38495.5	1.0				mg/L	35084	Standard
	Cl	35	53328.0	1.3				ug/L	29808	Standard
	Kr	83	36.1	2.3				ug/L	38	Standard
	Br	81	889.2	3.4				ug/L	965	Standard
	P	31	228850.8	3.4				ug/L	176735	Standard
	S	34	53790.3	0.3				ug/L	28891	Standard
	Sr	88	36.7	3.9				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	8.2	31.4				mg/L	14	Standard
	Ho-1	165	10.0	17.3				mg/L	7	Standard
	Er	166	9.7	26.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		113.741	
	Be	9	95.762		
	Al	27	102.450		
	Sc	45			
	Ti	47	108.802		
	V	51	101.440		
	Cr	52	101.819		
	Cr	53			
	Mn	55	99.149		
	Co	59	98.123		
	Ni	60	104.492		
	Cu	65	101.471		
	Zn	66	100.580		
>	Ge	72		95.490	
	As	75	100.373		
	Se	82	105.295		
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: QC Std 6
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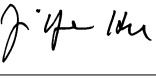

⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98	96.661		
|	Ag	107	99.718		
|	Cd	111	98.706		
|	Cd	114			
|>	In	115			108.217
|	Sn	118	97.290		
|	Sb	123	97.506		
⌊	Ba	135	99.884		
⌈	Ce	140			
⌊>	Tb	159			
⌈	Ho	165			
|	Tl	203	101.284		
|	Tl	205			
|	Pb	206			
|	Pb	207			
|	Pb	208	99.424		
|	U	238	97.665		
⌊>	Bi	209			108.393
⌈	Na	23			
|	Mg	24			
|	K	39			
|	Ca	43			
|	Fe	54			
|	Fe	57			
⌊>	Sc-1	45			
	Cl	35			
	Kr	83			
	Br	81			
	P	31			
	S	34			
	Sr	88			
	C	12			
	N	14			
	Hg	202			
	Dy	164			
	Ho-1	165			
	Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, June 04, 2013 14:03:15
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 14:04:10
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	619369.8	2.2				ug/L	552027	Standard
	Be	9	44.7	14.4	**0.0099**	0.003	27.1	ug/L	18	Standard
	Al	27	1887.8	25.7	**0.0002**	0.003	1270.8	ug/L	841	Standard
	Sc	45	38293.3	1.2				ug/L	35084	Standard
	Ti	47	23.0	31.4	**0.0275**	0.034	124.4	ug/L	22	Standard
	V	51	863.7	3.5	**0.0250**	0.003	12.7	ug/L	812	Standard
	Cr	52	3987.2	3.9	**-0.0278**	0.019	70.0	ug/L	4274	Standard
	Cr	53	861.7	1.9	**-0.1495**	0.010	6.4	ug/L	1106	Standard
	Mn	55	1118.7	7.1	**-0.0128**	0.008	64.8	ug/L	1207	Standard
	Co	59	90.0	16.4	**0.0011**	0.003	237.6	ug/L	71	Standard
	Ni	60	224.0	4.7	**-0.0238**	0.003	14.5	ug/L	295	Standard
	Cu	65	98.3	13.4	**-0.0074**	0.006	77.8	ug/L	87	Standard
	Zn	66	456.0	9.5	**-0.2934**	0.040	13.5	ug/L	469	Standard
>	**Ge**	72	485137.2	1.5				ug/L	514704	Standard
	As	75	-115.7	16.8	**0.0128**	0.015	120.5	ug/L	-121	Standard
	Se	82	5.3	99.4	**0.0409**	0.044	107.6	ug/L	-1	Standard
	Se-1	77	117.3	5.4	**0.0981**	0.078	79.3	ug/L	127	Standard
>	**Ga**	71	126.7	19.9				mg/L	175	Standard
	Rb	85	51.7	20.1				ug/L	50	Standard
	Y	89	544344.8	1.1				ug/L	527499	Standard
>	**Rh**	103	11.7	49.5				ug/L	10	Standard
	Mo	98	117.8	21.4	**0.0218**	0.006	28.7	ug/L	23	Standard
	Ag	107	85.0	28.1	**0.0024**	0.004	176.4	ug/L	59	Standard
	Cd	111	11.5	18.0	**0.0046**	0.001	28.5	mg/L	3	Standard
	Cd	114	30.2	33.1	**0.0013**	0.002	160.2	ug/L	10	Standard
>	**In**	115	571227.6	2.0				ug/L	537195	Standard
	Sn	118	401.0	15.1	**0.0134**	0.014	102.4	ug/L	281	Standard
	Sb	123	1015.9	7.3	**0.2401**	0.014	6.0	ug/L	167	Standard
	Ba	135	20.7	28.4	**-0.0115**	0.003	27.1	ug/L	10	Standard
	Ce	140	13.7	51.9				ug/L	27	Standard
>	**Tb**	159	813708.9	1.3				ug/L	758170	Standard
	Ho	165	8.7	54.5				ug/L	7	Standard
	Tl	203	28.7	15.7	**0.0042**	0.001	17.4	ug/L	5	Standard
	Tl	205	1.7	91.7	**0.0187**	0.010	54.3	ug/L	0	Standard
	Pb	206	225.3	7.8	**0.0024**	0.003	140.0	ug/L	182	Standard
	Pb	207	182.3	5.2	**0.0028**	0.002	67.1	ug/L	145	Standard
	Pb	208	282.7	11.7	**0.0057**	0.005	92.6	ug/L	207	Standard
	U	238	40.3	34.4	**0.0076**	0.003	36.7	ug/L	1	Standard
>	**Bi**	209	352972.0	1.4				ug/L	325207	Standard

Sample ID: QC Std 7
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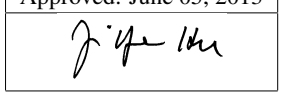

	Na	23	1.7	173.2	**-0.8342**	0.442	53.0	mg/L	0	Standard
	Mg	24	43.3	24.0	**0.0021**	0.010	452.8	mg/L	25	Standard
	K	39	8.3	69.3	**0.0843**	0.098	115.9	mg/L	3	Standard
	Ca	43	221.7	18.9	**-0.2961**	0.127	42.7	mg/L	297	Standard
	Fe	54	174.6	8.6	**0.0735**	0.016	22.3	mg/L	91	Standard
	Fe	57	98.3	25.6	**-0.2548**	0.069	26.9	mg/L	237	Standard
>	**Sc-1**	45	38293.3	1.2				mg/L	35084	Standard
	Cl	35	52221.2	3.0				ug/L	29808	Standard
	Kr	83	32.0	3.8				ug/L	38	Standard
	Br	81	781.7	7.1				ug/L	965	Standard
	P	31	214909.2	2.8				ug/L	176735	Standard
	S	34	50116.1	2.6				ug/L	28891	Standard
	Sr	88	40.8	19.7				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	7.6	14.5				mg/L	14	Standard
	Ho-1	165	8.7	54.5				mg/L	7	Standard
	Er	166	8.7	26.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		112.199	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.256	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: QC Std 7
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		106.335
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		108.538
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Sb	123	

Sample ID: QC Std 7
Report Date/Time: Tuesday, June 04, 2013 14:07:01
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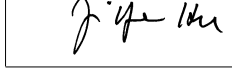

Method 6020 - Summary Report

Sample ID: L1305152402
Sample Date/Time: Tuesday, June 04, 2013 14:07:58
Number of Replicates: 3
Autosampler Position: 411
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	656809.0	1.3				ug/L	552027	Standard
	Be	9	59.3	34.6	**0.0152**	0.009	57.7	ug/L	18	Standard
	Al	27	386256.4	9.1	**2.3516**	0.240	10.2	ug/L	841	Standard
	Sc	45	38943.3	1.1				ug/L	35084	Standard
	Ti	47	492.0	7.0	**2.2410**	0.166	7.4	ug/L	22	Standard
	V	51	52224.0	10.6	**8.8733**	0.984	11.1	ug/L	812	Standard
	Cr	52	9124.1	3.9	**0.9774**	0.077	7.8	ug/L	4274	Standard
	Cr	53	1500.9	6.2	**0.4792**	0.099	20.7	ug/L	1106	Standard
	Mn	55	45451.8	9.5	**5.7318**	0.580	10.1	ug/L	1207	Standard
	Co	59	5287.3	12.1	**0.9551**	0.121	12.6	ug/L	71	Standard
	Ni	60	7672.6	7.8	**3.5265**	0.296	8.4	ug/L	295	Standard
	Cu	65	226990.1	9.4	**107.5472**	10.460	9.7	ug/L	87	Standard
	Zn	66	5225.6	10.0	**4.0455**	0.494	12.2	ug/L	469	Standard
>	**Ge**	72	494351.6	0.4				ug/L	514704	Standard
	As	75	1814.6	10.0	**1.5635**	0.150	9.6	ug/L	-121	Standard
	Se	82	137.6	9.7	**1.1181**	0.112	10.0	ug/L	-1	Standard
	Se-1	77	175.7	1.7	**0.7873**	0.045	5.7	ug/L	127	Standard
>	**Ga**	71	1453.4	4.3				mg/L	175	Standard
	Rb	85	12558.6	7.7				ug/L	50	Standard
	Y	89	544117.2	1.3				ug/L	527499	Standard
>	**Rh**	103	96.7	31.2				ug/L	10	Standard
	Mo	98	31823.5	9.2	**7.8717**	0.715	9.1	ug/L	23	Standard
	Ag	107	163.0	22.4	**0.0163**	0.006	36.4	ug/L	59	Standard
	Cd	111	43.0	34.9	**0.0226**	0.008	36.3	mg/L	3	Standard
	Cd	114	194.7	15.3	**0.0378**	0.006	15.2	ug/L	10	Standard
>	**In**	115	567803.6	1.9				ug/L	537195	Standard
	Sn	118	669.0	7.1	**0.0673**	0.008	12.2	ug/L	281	Standard
	Sb	123	3460.3	7.3	**0.8654**	0.068	7.9	ug/L	167	Standard
	Ba	135	27662.1	9.8	**15.7391**	1.525	9.7	ug/L	10	Standard
	Ce	140	3559.8	10.1				ug/L	27	Standard
>	**Tb**	159	823083.7	0.3				ug/L	758170	Standard
	Ho	165	57.7	15.7				ug/L	7	Standard
	Tl	203	66.3	35.1	**0.0110**	0.004	37.7	ug/L	5	Standard
	Tl	205	2.0	100.0	**0.0213**	0.014	64.5	ug/L	0	Standard
	Pb	206	7072.0	9.2	**1.5602**	0.149	9.5	ug/L	182	Standard
	Pb	207	5929.8	9.0	**1.5406**	0.144	9.3	ug/L	145	Standard
	Pb	208	8427.6	9.6	**1.5261**	0.153	10.0	ug/L	207	Standard
	U	238	165.7	19.5	**0.0345**	0.007	20.1	ug/L	1	Standard
>	**Bi**	209	345948.2	0.2				ug/L	325207	Standard

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	Na	23	445.0	33.3	**65.2225**	21.575	33.1	mg/L	0	Standard
	Mg	24	3613.8	4.3	**3.4279**	0.124	3.6	mg/L	25	Standard
	K	39	290.0	23.7	**4.6922**	1.086	23.1	mg/L	3	Standard
	Ca	43	20121.8	10.5	**63.0082**	6.088	9.7	mg/L	297	Standard
	Fe	54	212.4	20.2	**0.1111**	0.047	42.0	mg/L	91	Standard
	Fe	57	4970.8	11.8	**12.2879**	1.394	11.3	mg/L	237	Standard
>	**Sc-1**	45	38943.3	1.1				mg/L	35084	Standard
	Cl	35	112139.3	2.6				ug/L	29808	Standard
	Kr	83	39.1	12.2				ug/L	38	Standard
	Br	81	1969.3	1.5				ug/L	965	Standard
	P	31	252400.3	3.9				ug/L	176735	Standard
	S	34	46945.1	0.5				ug/L	28891	Standard
	Sr	88	79.2	14.6				ug/L	27	Standard
	C	12	15.0	57.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	48.3	6.0				mg/L	3	Standard
	Dy	164	252.6	118.1				mg/L	14	Standard
	Ho-1	165	57.7	15.7				mg/L	7	Standard
	Er	166	63.3	10.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		118.981	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.046	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.698
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	106.378
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cu 65 Upper, S, EEE	Cu	65	

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Method 6020 - Summary Report

Sample ID: L1305152304
Sample Date/Time: Tuesday, June 04, 2013 14:17:16
Number of Replicates: 3
Autosampler Position: 408
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	561535.5	2.4				ug/L	552027	Standard
	Be	9	33.7	15.2	**0.0065**	0.003	47.3	ug/L	18	Standard
	Al	27	61250.8	5.4	**0.4261**	0.021	4.9	ug/L	841	Standard
	Sc	45	33625.6	1.1				ug/L	35084	Standard
	Ti	47	269.0	1.6	**1.3658**	0.028	2.1	ug/L	22	Standard
	V	51	1516.2	0.5	**0.1712**	0.003	1.8	ug/L	812	Standard
	Cr	52	4671.1	4.4	**0.2233**	0.048	21.4	ug/L	4274	Standard
	Cr	53	821.7	3.4	**-0.0901**	0.029	32.1	ug/L	1106	Standard
	Mn	55	18456.3	8.0	**2.5677**	0.228	8.9	ug/L	1207	Standard
	Co	59	194.7	5.3	**0.0250**	0.002	9.3	ug/L	71	Standard
	Ni	60	400.0	6.3	**0.0849**	0.014	16.9	ug/L	295	Standard
	Cu	65	10630.4	7.1	**5.6909**	0.424	7.5	ug/L	87	Standard
	Zn	66	21950.6	25.2	**22.0926**	5.758	26.1	ug/L	469	Standard
>	**Ge**	72	433536.1	0.6				ug/L	514704	Standard
	As	75	64.4	14.7	**0.1661**	0.008	5.1	ug/L	-121	Standard
	Se	82	4.3	116.6	**0.0367**	0.046	126.3	ug/L	-1	Standard
	Se-1	77	101.0	3.0	**0.0440**	0.035	79.4	ug/L	127	Standard
>	**Ga**	71	180.0	9.6				mg/L	175	Standard
	Rb	85	3065.3	8.8				ug/L	50	Standard
	Y	89	481857.9	1.1				ug/L	527499	Standard
>	**Rh**	103	5.0	0.0				ug/L	10	Standard
	Mo	98	282.5	8.7	**0.0684**	0.006	8.6	ug/L	23	Standard
	Ag	107	304.0	3.6	**0.0460**	0.001	2.1	ug/L	59	Standard
	Cd	111	34.7	17.9	**0.0195**	0.004	20.2	mg/L	3	Standard
	Cd	114	95.9	13.5	**0.0176**	0.003	15.0	ug/L	10	Standard
>	**In**	115	524820.6	1.9				ug/L	537195	Standard
	Sn	118	575.3	10.2	**0.0580**	0.012	20.9	ug/L	281	Standard
	Sb	123	378.2	5.2	**0.0872**	0.007	8.2	ug/L	167	Standard
	Ba	135	5748.8	7.0	**3.5214**	0.255	7.2	ug/L	10	Standard
	Ce	140	6669.5	5.5				ug/L	27	Standard
>	**Tb**	159	747192.1	1.6				ug/L	758170	Standard
	Ho	165	35.0	22.9				ug/L	7	Standard
	Tl	203	16.3	12.7	**0.0022**	0.000	16.2	ug/L	5	Standard
	Tl	205	0.3	173.2	**0.0099**	0.004	41.7	ug/L	0	Standard
	Pb	206	24616.4	5.9	**5.7351**	0.279	4.9	ug/L	182	Standard
	Pb	207	20619.4	5.5	**5.6518**	0.256	4.5	ug/L	145	Standard
	Pb	208	29080.8	5.9	**5.5586**	0.272	4.9	ug/L	207	Standard
	U	238	36.7	20.1	**0.0073**	0.001	20.6	ug/L	1	Standard
>	**Bi**	209	334701.6	1.4				ug/L	325207	Standard

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	Na	23	3.3	86.6	**-0.5159**	0.497	96.3	mg/L	0	Standard
	Mg	24	323.3	11.2	**0.3191**	0.036	11.4	mg/L	25	Standard
	K	39	8.3	34.6	**0.1030**	0.055	53.1	mg/L	3	Standard
	Ca	43	376.7	5.4	**0.3759**	0.068	18.2	mg/L	297	Standard
	Fe	54	114.4	13.0	**0.0250**	0.017	67.8	mg/L	91	Standard
	Fe	57	136.7	8.4	**-0.1053**	0.030	28.8	mg/L	237	Standard
>	**Sc-1**	45	33625.6	1.1				mg/L	35084	Standard
	Cl	35	56679.2	0.7				ug/L	29808	Standard
	Kr	83	34.0	8.0				ug/L	38	Standard
	Br	81	621.7	5.8				ug/L	965	Standard
	P	31	79762.9	3.7				ug/L	176735	Standard
	S	34	53700.0	0.6				ug/L	28891	Standard
	Sr	88	26.7	30.1				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	91.7				mg/L	3	Standard
	Dy	164	54.9	15.3				mg/L	14	Standard
	Ho-1	165	35.0	22.9				mg/L	7	Standard
	Er	166	43.7	9.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.723	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		84.230	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

97.696

102.920

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305152304PS WG432851-01
Sample Date/Time: Tuesday, June 04, 2013 14:21:02
Number of Replicates: 3
Autosampler Position: 409
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	666332.5	1.5				ug/L	552027	Standard
	Be	9	117695.1	9.0	**51.6356**	3.951	7.7	ug/L	18	Standard
	Al	27	77353.1	9.3	**0.4539**	0.037	8.1	ug/L	841	Standard
	Sc	45	38056.1	1.0				ug/L	35084	Standard
	Ti	47	331.0	9.5	**1.4586**	0.132	9.0	ug/L	22	Standard
	V	51	327964.5	11.7	**55.5826**	6.042	10.9	ug/L	812	Standard
	Cr	52	287702.2	12.0	**55.4788**	6.265	11.3	ug/L	4274	Standard
	Cr	53	57125.7	10.1	**55.7973**	5.230	9.4	ug/L	1106	Standard
	Mn	55	446844.7	10.5	**56.9444**	5.514	9.7	ug/L	1207	Standard
	Co	59	294863.6	10.1	**53.3562**	4.980	9.3	ug/L	71	Standard
	Ni	60	119387.7	9.0	**56.0021**	4.541	8.1	ug/L	295	Standard
	Cu	65	133792.8	10.2	**62.4695**	5.837	9.3	ug/L	87	Standard
	Zn	66	71563.7	9.7	**63.5764**	5.690	8.9	ug/L	469	Standard
>	Ge	72	501073.9	1.0				ug/L	514704	Standard
	As	75	68627.0	7.9	**54.4054**	3.797	7.0	ug/L	-121	Standard
	Se	82	7035.3	6.8	**56.5279**	3.354	5.9	ug/L	-1	Standard
	Se-1	77	4629.7	6.0	**54.7156**	2.879	5.3	ug/L	127	Standard
>	Ga	71	251.7	6.4				mg/L	175	Standard
	Rb	85	3547.1	13.9				ug/L	50	Standard
	Y	89	557663.5	1.4				ug/L	527499	Standard
>	Rh	103	48.3	15.8				ug/L	10	Standard
	Mo	98	400.0	10.3	**0.0870**	0.008	9.4	ug/L	23	Standard
	Ag	107	358090.3	5.9	**60.8274**	2.931	4.8	ug/L	59	Standard
	Cd	111	99185.7	10.1	**53.9518**	4.623	8.6	mg/L	3	Standard
	Cd	114	263122.8	10.2	**55.5051**	4.774	8.6	ug/L	10	Standard
>	In	115	596170.1	2.1				ug/L	537195	Standard
	Sn	118	978.0	5.8	**0.1201**	0.013	10.8	ug/L	281	Standard
	Sb	123	220778.5	9.6	**53.5585**	4.372	8.2	ug/L	167	Standard
	Ba	135	107690.8	9.1	**58.3766**	4.451	7.6	ug/L	10	Standard
	Ce	140	8123.9	9.7				ug/L	27	Standard
>	Tb	159	836675.7	1.8				ug/L	758170	Standard
	Ho	165	46.3	12.5				ug/L	7	Standard
	Tl	203	323291.4	6.4	**54.7566**	2.974	5.4	ug/L	5	Standard
	Tl	205	8544.4	5.8	**55.3076**	2.760	5.0	ug/L	0	Standard
	Pb	206	286934.1	9.5	**61.4522**	5.298	8.6	ug/L	182	Standard
	Pb	207	244373.3	9.3	**61.5517**	5.160	8.4	ug/L	145	Standard
	Pb	208	346911.1	9.0	**60.9517**	4.921	8.1	ug/L	207	Standard
	U	238	261670.6	11.7	**52.4263**	5.610	10.7	ug/L	1	Standard
>	Bi	209	366782.6	1.4				ug/L	325207	Standard

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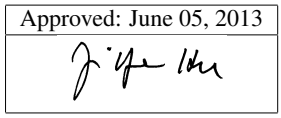

	Na	23	1.7	173.2	**-0.8327**	0.445	53.4	mg/L	0	Standard
	Mg	24	430.0	8.4	**0.3822**	0.034	8.8	mg/L	25	Standard
	K	39	10.0	50.0	**0.1125**	0.084	74.6	mg/L	3	Standard
	Ca	43	378.3	4.0	**0.2196**	0.037	16.9	mg/L	297	Standard
	Fe	54	193.9	5.1	**0.0960**	0.012	12.7	mg/L	91	Standard
	Fe	57	158.3	22.4	**-0.0957**	0.092	96.5	mg/L	237	Standard
>	**Sc-1**	45	38056.1	1.0				mg/L	35084	Standard
	Cl	35	62231.7	4.3				ug/L	29808	Standard
	Kr	83	36.1	5.6				ug/L	38	Standard
	Br	81	870.9	13.1				ug/L	965	Standard
	P	31	234126.7	4.6				ug/L	176735	Standard
	S	34	53563.7	2.8				ug/L	28891	Standard
	Sr	88	36.7	21.9				ug/L	27	Standard
	C	12	8.3	34.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	13.3	43.3				mg/L	3	Standard
	Dy	164	82.6	15.6				mg/L	14	Standard
	Ho-1	165	46.3	12.5				mg/L	7	Standard
	Er	166	44.0	13.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		120.707	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.352	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: L1305152304PS WG432851-01
Report Date/Time: Tuesday, June 04, 2013 14:23:54
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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.978
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.784
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1305152304SDL WG432851-02
Sample Date/Time: Tuesday, June 04, 2013 14:24:48
Number of Replicates: 3
Autosampler Position: 410
Sample Description: 125
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	552317.5	1.9				ug/L	552027	Standard
	Be	9	36.0	16.7	**0.0079**	0.003	40.7	ug/L	18	Standard
	Al	27	12696.3	4.4	**0.0803**	0.003	4.2	ug/L	841	Standard
	Sc	45	33904.6	1.2				ug/L	35084	Standard
	Ti	47	68.3	11.0	**0.2845**	0.046	16.1	ug/L	22	Standard
	V	51	1071.4	4.1	**0.0834**	0.011	13.7	ug/L	812	Standard
	Cr	52	3954.2	1.4	**0.0590**	0.033	55.3	ug/L	4274	Standard
	Cr	53	708.3	2.8	**-0.2220**	0.041	18.6	ug/L	1106	Standard
	Mn	55	4205.9	6.0	**0.4594**	0.032	6.9	ug/L	1207	Standard
	Co	59	101.3	23.4	**0.0054**	0.005	86.8	ug/L	71	Standard
	Ni	60	241.7	14.2	**-0.0017**	0.018	1043.9	ug/L	295	Standard
	Cu	65	2233.2	4.6	**1.1484**	0.028	2.4	ug/L	87	Standard
	Zn	66	2375.2	3.2	**1.7442**	0.053	3.0	ug/L	469	Standard
>	**Ge**	72	434703.5	2.3				ug/L	514704	Standard
	As	75	-68.1	51.1	**0.0451**	0.032	70.8	ug/L	-121	Standard
	Se	82	3.4	182.9	**0.0293**	0.058	197.7	ug/L	-1	Standard
	Se-1	77	89.7	4.6	**-0.1180**	0.052	44.2	ug/L	127	Standard
>	**Ga**	71	140.0	15.6				mg/L	175	Standard
	Rb	85	650.0	7.8				ug/L	50	Standard
	Y	89	479835.9	1.7				ug/L	527499	Standard
>	**Rh**	103	5.0	0.0				ug/L	10	Standard
	Mo	98	62.1	13.8	**0.0097**	0.002	20.7	ug/L	23	Standard
	Ag	107	121.3	24.8	**0.0111**	0.005	48.8	ug/L	59	Standard
	Cd	111	12.6	100.4	**0.0059**	0.008	131.2	mg/L	3	Standard
	Cd	114	35.1	58.9	**0.0032**	0.005	152.6	ug/L	10	Standard
>	**In**	115	515952.3	1.9				ug/L	537195	Standard
	Sn	118	344.3	25.9	**0.0094**	0.021	219.3	ug/L	281	Standard
	Sb	123	614.2	7.1	**0.1553**	0.015	9.8	ug/L	167	Standard
	Ba	135	1160.4	4.9	**0.7044**	0.034	4.8	ug/L	10	Standard
	Ce	140	1362.7	4.4				ug/L	27	Standard
>	**Tb**	159	749037.7	1.3				ug/L	758170	Standard
	Ho	165	13.0	7.7				ug/L	7	Standard
	Tl	203	37.0	56.8	**0.0060**	0.004	65.8	ug/L	5	Standard
	Tl	205	1.0	173.2	**0.0146**	0.012	83.9	ug/L	0	Standard
	Pb	206	5174.6	2.3	**1.1564**	0.019	1.6	ug/L	182	Standard
	Pb	207	4273.3	4.9	**1.1246**	0.056	5.0	ug/L	145	Standard
	Pb	208	6016.1	2.5	**1.1026**	0.018	1.6	ug/L	207	Standard
	U	238	34.7	32.2	**0.0068**	0.002	36.2	ug/L	1	Standard
>	**Bi**	209	337962.2	0.9				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8020**	0.498	62.1	mg/L	0	Standard
	Mg	24	105.0	9.5	**0.0757**	0.011	14.6	mg/L	25	Standard
	K	39	5.0	0.0	**0.0390**	0.001	2.8	mg/L	3	Standard
	Ca	43	281.7	13.1	**0.0171**	0.133	779.2	mg/L	297	Standard
	Fe	54	51.1	24.4	**-0.0541**	0.016	28.7	mg/L	91	Standard
	Fe	57	105.0	9.5	**-0.2024**	0.027	13.2	mg/L	237	Standard
>	**Sc-1**	45	33904.6	1.2				mg/L	35084	Standard
	Cl	35	53934.8	1.5				ug/L	29808	Standard
	Kr	83	30.6	18.0				ug/L	38	Standard
	Br	81	582.5	9.1				ug/L	965	Standard
	P	31	73492.4	6.0				ug/L	176735	Standard
	S	34	51408.7	0.2				ug/L	28891	Standard
	Sr	88	31.7	16.4				ug/L	27	Standard
	C	12	6.7	43.3				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	20.0	10.4				mg/L	14	Standard
	Ho-1	165	13.0	7.7				mg/L	7	Standard
	Er	166	13.0	0.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		100.053	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		84.457	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	96.046
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.922
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305152402
Sample Date/Time: Tuesday, June 04, 2013 14:28:34
Number of Replicates: 3
Autosampler Position: 411
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	570495.6	0.2				ug/L	552027	Standard
	Be	9	22.7	6.7	**0.0005**	0.001	163.1	ug/L	18	Standard
	Al	27	14748.5	8.2	**0.0918**	0.008	9.2	ug/L	841	Standard
	Sc	45	35012.1	2.4				ug/L	35084	Standard
	Ti	47	31.0	3.2	**0.0810**	0.005	5.9	ug/L	22	Standard
	V	51	2853.0	5.3	**0.4242**	0.031	7.3	ug/L	812	Standard
	Cr	52	4125.9	1.8	**0.0837**	0.020	24.0	ug/L	4274	Standard
	Cr	53	660.0	5.2	**-0.2893**	0.037	12.8	ug/L	1106	Standard
	Mn	55	2208.5	3.0	**0.1603**	0.011	7.0	ug/L	1207	Standard
	Co	59	249.0	8.7	**0.0355**	0.004	12.5	ug/L	71	Standard
	Ni	60	475.3	1.1	**0.1213**	0.004	3.3	ug/L	295	Standard
	Cu	65	8781.9	4.3	**4.6089**	0.197	4.3	ug/L	87	Standard
	Zn	66	1774.4	3.0	**1.0951**	0.063	5.8	ug/L	469	Standard
>	Ge	72	441174.6	0.6				ug/L	514704	Standard
	As	75	-34.4	88.2	**0.0765**	0.027	35.5	ug/L	-121	Standard
	Se	82	5.8	72.5	**0.0503**	0.039	77.1	ug/L	-1	Standard
	Se-1	77	93.3	14.5	**-0.0867**	0.179	206.5	ug/L	127	Standard
>	Ga	71	165.0	13.2				mg/L	175	Standard
	Rb	85	468.3	15.3				ug/L	50	Standard
	Y	89	486890.1	3.4				ug/L	527499	Standard
>	Rh	103	10.0	50.0				ug/L	10	Standard
	Mo	98	1126.5	8.7	**0.2930**	0.020	6.8	ug/L	23	Standard
	Ag	107	48.7	11.7	**-0.0033**	0.001	32.0	ug/L	59	Standard
	Cd	111	3.8	68.5	**0.0004**	0.002	419.6	mg/L	3	Standard
	Cd	114	21.0	14.8	**-0.0003**	0.001	206.4	ug/L	10	Standard
>	In	115	527068.4	2.2				ug/L	537195	Standard
	Sn	118	271.7	25.0	**-0.0078**	0.016	207.1	ug/L	281	Standard
	Sb	123	489.3	7.3	**0.1172**	0.008	7.1	ug/L	167	Standard
	Ba	135	1101.4	6.2	**0.6526**	0.031	4.8	ug/L	10	Standard
	Ce	140	144.0	21.6				ug/L	27	Standard
>	Tb	159	750579.5	1.2				ug/L	758170	Standard
	Ho	165	11.0	36.4				ug/L	7	Standard
	Tl	203	17.7	34.1	**0.0024**	0.001	44.7	ug/L	5	Standard
	Tl	205	0.0		**0.0075**	0.000	0.0	ug/L	0	Standard
	Pb	206	469.3	2.9	**0.0609**	0.002	3.2	ug/L	182	Standard
	Pb	207	394.0	11.4	**0.0623**	0.011	16.9	ug/L	145	Standard
	Pb	208	522.7	8.0	**0.0534**	0.007	13.8	ug/L	207	Standard
	U	238	11.3	68.5	**0.0017**	0.002	97.9	ug/L	1	Standard
>	Bi	209	339521.2	1.6				ug/L	325207	Standard

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	Na	23	18.3	83.3	**1.9759**	2.608	132.0	mg/L	0	Standard
	Mg	24	191.7	17.4	**0.1650**	0.039	23.7	mg/L	25	Standard
	K	39	13.3	78.1	**0.1851**	0.182	98.5	mg/L	3	Standard
	Ca	43	1040.0	3.8	**2.6697**	0.076	2.9	mg/L	297	Standard
	Fe	54	61.0	20.3	**-0.0442**	0.016	35.7	mg/L	91	Standard
	Fe	57	240.0	9.1	**0.1743**	0.046	26.4	mg/L	237	Standard
>	**Sc-1**	45	35012.1	2.4				mg/L	35084	Standard
	Cl	35	57734.2	2.4				ug/L	29808	Standard
	Kr	83	33.6	9.2				ug/L	38	Standard
	Br	81	649.2	5.8				ug/L	965	Standard
	P	31	79214.5	5.9				ug/L	176735	Standard
	S	34	53669.9	1.1				ug/L	28891	Standard
	Sr	88	40.0	22.5				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	8.2	27.6				mg/L	14	Standard
	Ho-1	165	11.0	36.4				mg/L	7	Standard
	Er	166	10.0	81.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.346	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.714	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.115
|	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	104.402
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 14:32:23
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	645869.1	1.6				ug/L	552027	Standard
	Be	9	104924.4	11.2	**47.4770**	4.592	9.7	ug/L	18	Standard
	Al	27	8214391.5	10.7	**51.0138**	4.722	9.3	ug/L	841	Standard
	Sc	45	39117.1	3.1				ug/L	35084	Standard
	Ti	47	23407.6	11.3	**112.2081**	11.894	10.6	ug/L	22	Standard
	V	51	291127.6	11.2	**50.8165**	5.345	10.5	ug/L	812	Standard
	Cr	52	255824.3	14.0	**50.7426**	6.853	13.5	ug/L	4274	Standard
	Cr	53	51380.4	12.6	**51.6142**	6.300	12.2	ug/L	1106	Standard
	Mn	55	375031.2	12.6	**49.2040**	5.873	11.9	ug/L	1207	Standard
	Co	59	260657.7	11.8	**48.5792**	5.416	11.1	ug/L	71	Standard
	Ni	60	108624.7	11.0	**52.4727**	5.410	10.3	ug/L	295	Standard
	Cu	65	106057.3	10.6	**50.9979**	5.059	9.9	ug/L	87	Standard
	Zn	66	55965.1	11.7	**51.0702**	5.708	11.2	ug/L	469	Standard
>	**Ge**	72	486481.5	0.7				ug/L	514704	Standard
	As	75	61570.1	9.4	**50.2841**	4.376	8.7	ug/L	-121	Standard
	Se	82	6331.9	8.5	**52.4006**	4.096	7.8	ug/L	-1	Standard
	Se-1	77	4220.3	9.2	**51.2842**	4.477	8.7	ug/L	127	Standard
>	**Ga**	71	156.7	4.9				mg/L	175	Standard
	Rb	85	3142.0	11.6				ug/L	50	Standard
	Y	89	544670.3	1.6				ug/L	527499	Standard
>	**Rh**	103	31.7	18.2				ug/L	10	Standard
	Mo	98	399961.2	11.1	**95.5643**	8.667	9.1	ug/L	23	Standard
	Ag	107	292118.9	8.0	**50.3162**	2.902	5.8	ug/L	59	Standard
	Cd	111	87507.2	11.7	**48.2726**	4.612	9.6	mg/L	3	Standard
	Cd	114	240165.4	10.6	**51.3911**	4.335	8.4	ug/L	10	Standard
>	**In**	115	587546.9	2.4				ug/L	537195	Standard
	Sn	118	251353.4	11.9	**48.5173**	4.799	9.9	ug/L	281	Standard
	Sb	123	199716.7	10.5	**49.1365**	4.075	8.3	ug/L	167	Standard
	Ba	135	91747.8	9.9	**50.4408**	3.961	7.9	ug/L	10	Standard
	Ce	140	90.0	9.7				ug/L	27	Standard
>	**Tb**	159	827398.1	1.4				ug/L	758170	Standard
	Ho	165	6.3	9.1				ug/L	7	Standard
	Tl	203	288928.1	7.7	**49.9081**	3.199	6.4	ug/L	5	Standard
	Tl	205	7503.2	7.8	**49.5287**	3.215	6.5	ug/L	0	Standard
	Pb	206	229474.0	10.7	**50.1089**	4.722	9.4	ug/L	182	Standard
	Pb	207	195913.4	10.0	**50.3156**	4.382	8.7	ug/L	145	Standard
	Pb	208	277428.9	10.5	**49.6994**	4.568	9.2	ug/L	207	Standard
	U	238	237701.4	11.6	**48.5711**	5.016	10.3	ug/L	1	Standard
>	**Bi**	209	359551.0	1.4				ug/L	325207	Standard

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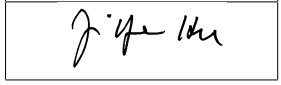

	Na	23	26.7	39.0	**2.8503**	1.475	51.7	mg/L	0	Standard
	Mg	24	4904.1	15.1	**4.6364**	0.597	12.9	mg/L	25	Standard
	K	39	298.3	16.8	**4.8073**	0.747	15.5	mg/L	3	Standard
	Ca	43	1721.8	11.2	**4.4361**	0.461	10.4	mg/L	297	Standard
	Fe	54	5155.0	13.5	**5.3866**	0.579	10.7	mg/L	91	Standard
	Fe	57	1635.1	15.3	**3.6732**	0.544	14.8	mg/L	237	Standard
>	**Sc-1**	45	39117.1	3.1				mg/L	35084	Standard
	Cl	35	65188.7	2.8				ug/L	29808	Standard
	Kr	83	38.2	5.0				ug/L	38	Standard
	Br	81	849.2	2.5				ug/L	965	Standard
	P	31	247794.7	4.3				ug/L	176735	Standard
	S	34	65097.9	0.9				ug/L	28891	Standard
	Sr	88	37.5	17.6				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	9.8	58.6				mg/L	14	Standard
	Ho-1	165	6.3	9.1				mg/L	7	Standard
	Er	166	12.0	38.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.000	
	Be	9	94.954		
	Al	27	102.028		
	Sc	45			
	Ti	47	112.208		
	V	51	101.633		
	Cr	52	101.485		
	Cr	53			
	Mn	55	98.408		
	Co	59	97.158		
	Ni	60	104.945		
	Cu	65	101.996		
	Zn	66	102.140		
>	Ge	72		94.517	
	As	75	100.568		
	Se	82	104.801		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	95.564	
|	Ag	107	100.632	
|	Cd	111	96.545	
|	Cd	114		
|>	In	115		109.373
|	Sn	118	97.035	
|	Sb	123	98.273	
⌊	Ba	135	100.882	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	99.816	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	99.399	
|	U	238	97.142	
⌊>	Bi	209		110.561
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Ti	47	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 14:36:09
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	646629.8	3.6				ug/L	552027	Standard
	Be	9	38.7	3.0	**0.0064**	0.001	17.3	ug/L	18	Standard
	Al	27	1290.1	2.8	**-0.0040**	0.000	6.9	ug/L	841	Standard
	Sc	45	38717.7	1.5				ug/L	35084	Standard
	Ti	47	17.3	14.5	**0.0012**	0.013	1068.5	ug/L	22	Standard
	V	51	1095.3	11.1	**0.0674**	0.022	32.1	ug/L	812	Standard
	Cr	52	4030.2	0.7	**-0.0115**	0.008	72.1	ug/L	4274	Standard
	Cr	53	631.7	4.6	**-0.3798**	0.039	10.2	ug/L	1106	Standard
	Mn	55	947.4	2.1	**-0.0342**	0.004	10.9	ug/L	1207	Standard
	Co	59	84.0	2.1	**0.0001**	0.000	317.1	ug/L	71	Standard
	Ni	60	200.7	2.9	**-0.0342**	0.003	9.6	ug/L	295	Standard
	Cu	65	85.3	10.5	**-0.0133**	0.004	29.4	ug/L	87	Standard
	Zn	66	439.7	7.2	**-0.3050**	0.025	8.1	ug/L	469	Standard
>	**Ge**	72	480788.1	1.2				ug/L	514704	Standard
	As	75	-135.6	9.9	**-0.0045**	0.010	227.3	ug/L	-121	Standard
	Se	82	5.6	73.8	**0.0443**	0.036	80.3	ug/L	-1	Standard
	Se-1	77	103.7	8.8	**-0.0606**	0.125	206.2	ug/L	127	Standard
>	**Ga**	71	80.0	25.0				mg/L	175	Standard
	Rb	85	48.3	11.9				ug/L	50	Standard
	Y	89	548981.9	1.6				ug/L	527499	Standard
>	**Rh**	103	10.0	50.0				ug/L	10	Standard
	Mo	98	123.2	19.5	**0.0223**	0.005	23.5	ug/L	23	Standard
	Ag	107	77.7	38.3	**0.0007**	0.005	685.4	ug/L	59	Standard
	Cd	111	6.9	88.3	**0.0018**	0.003	177.8	mg/L	3	Standard
	Cd	114	24.9	52.8	**-0.0000**	0.003	13611.2	ug/L	10	Standard
>	**In**	115	585648.6	2.0				ug/L	537195	Standard
	Sn	118	378.0	13.1	**0.0069**	0.011	157.3	ug/L	281	Standard
	Sb	123	1052.1	12.6	**0.2426**	0.028	11.4	ug/L	167	Standard
	Ba	135	14.3	22.4	**-0.0153**	0.002	10.5	ug/L	10	Standard
	Ce	140	11.7	21.6				ug/L	27	Standard
>	**Tb**	159	825861.0	1.5				ug/L	758170	Standard
	Ho	165	8.7	26.6				ug/L	7	Standard
	Tl	203	21.7	51.9	**0.0028**	0.002	65.0	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0141**	0.007	46.2	ug/L	0	Standard
	Pb	206	220.3	6.9	**-0.0001**	0.002	1662.1	ug/L	182	Standard
	Pb	207	173.7	8.2	**-0.0008**	0.003	332.8	ug/L	145	Standard
	Pb	208	243.7	9.7	**-0.0027**	0.003	117.9	ug/L	207	Standard
	U	238	16.0	12.5	**0.0025**	0.000	13.4	ug/L	1	Standard
>	**Bi**	209	363440.2	2.4				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8349**	0.441	52.8	mg/L	0	Standard
	Mg	24	38.3	30.1	**-0.0030**	0.011	382.7	mg/L	25	Standard
	K	39	3.3	86.6	**-0.0001**	0.048	78733.9	mg/L	3	Standard
	Ca	43	258.3	12.6	**-0.1844**	0.117	63.3	mg/L	297	Standard
	Fe	54	134.6	18.5	**0.0285**	0.029	100.8	mg/L	91	Standard
	Fe	57	110.0	9.1	**-0.2276**	0.030	13.3	mg/L	237	Standard
>	**Sc-1**	45	38717.7	1.5				mg/L	35084	Standard
	Cl	35	62829.4	2.6				ug/L	29808	Standard
	Kr	83	33.0	10.5				ug/L	38	Standard
	Br	81	763.4	2.2				ug/L	965	Standard
	P	31	235120.0	2.2				ug/L	176735	Standard
	S	34	61687.9	3.3				ug/L	28891	Standard
	Sr	88	35.8	44.9				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.3	71.2				mg/L	14	Standard
	Ho-1	165	8.7	26.6				mg/L	7	Standard
	Er	166	8.7	40.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.137	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.411	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.020
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	111.757
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Sb	123	

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Method 6020 - Summary Report

Sample ID: PBS B7 WG432680-02
Sample Date/Time: Tuesday, June 04, 2013 14:46:39
Number of Replicates: 3
Autosampler Position: 301
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	627023.1	1.2				ug/L	552027	Standard
	Be	9	31.7	21.0	**0.0036**	0.003	82.6	ug/L	18	Standard
	Al	27	5958.2	6.6	**0.0262**	0.002	9.4	ug/L	841	Standard
	Sc	45	36943.3	1.0				ug/L	35084	Standard
	Ti	47	23.3	13.1	**0.0309**	0.014	45.6	ug/L	22	Standard
	V	51	999.8	8.6	**0.0517**	0.018	34.1	ug/L	812	Standard
	Cr	52	4022.9	2.8	**-0.0079**	0.025	322.4	ug/L	4274	Standard
	Cr	53	657.5	3.7	**-0.3489**	0.033	9.4	ug/L	1106	Standard
	Mn	55	997.0	2.4	**-0.0267**	0.005	17.6	ug/L	1207	Standard
	Co	59	56.7	9.7	**-0.0050**	0.001	20.9	ug/L	71	Standard
	Ni	60	361.3	4.2	**0.0456**	0.006	12.4	ug/L	295	Standard
	Cu	65	121.7	5.8	**0.0048**	0.003	63.5	ug/L	87	Standard
	Zn	66	1767.4	7.5	**0.9484**	0.105	11.1	ug/L	469	Standard
>	**Ge**	72	477848.0	1.3				ug/L	514704	Standard
	As	75	-123.8	2.5	**0.0045**	0.003	63.6	ug/L	-121	Standard
	Se	82	1.7	206.7	**0.0117**	0.030	257.9	ug/L	-1	Standard
	Se-1	77	102.3	16.6	**-0.0710**	0.209	294.0	ug/L	127	Standard
>	**Ga**	71	93.3	6.2				mg/L	175	Standard
	Rb	85	53.3	43.3				ug/L	50	Standard
	Y	89	543978.2	1.8				ug/L	527499	Standard
>	**Rh**	103	8.3	34.6				ug/L	10	Standard
	Mo	98	45.5	13.0	**0.0038**	0.002	40.8	ug/L	23	Standard
	Ag	107	63.7	7.4	**-0.0015**	0.001	59.3	ug/L	59	Standard
	Cd	111	2.9	33.7	**-0.0003**	0.001	207.2	mg/L	3	Standard
	Cd	114	13.3	40.9	**-0.0024**	0.001	49.0	ug/L	10	Standard
>	**In**	115	579304.4	1.4				ug/L	537195	Standard
	Sn	118	337.0	25.8	**-0.0004**	0.018	4959.7	ug/L	281	Standard
	Sb	123	560.8	9.3	**0.1230**	0.014	11.4	ug/L	167	Standard
	Ba	135	21.7	7.1	**-0.0111**	0.001	6.3	ug/L	10	Standard
	Ce	140	14.3	34.4				ug/L	27	Standard
>	**Tb**	159	821834.6	1.9				ug/L	758170	Standard
	Ho	165	7.0	28.6				ug/L	7	Standard
	Tl	203	8.0	50.0	**0.0005**	0.001	136.5	ug/L	5	Standard
	Tl	205	0.3	173.2	**0.0097**	0.004	38.3	ug/L	0	Standard
	Pb	206	206.3	7.8	**-0.0030**	0.004	135.5	ug/L	182	Standard
	Pb	207	182.7	10.1	**0.0016**	0.004	244.0	ug/L	145	Standard
	Pb	208	239.3	10.0	**-0.0032**	0.005	152.0	ug/L	207	Standard
	U	238	0.7	86.6	**-0.0006**	0.000	18.7	ug/L	1	Standard
>	**Bi**	209	362296.7	1.6				ug/L	325207	Standard

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	Na	23	3.3	86.6	**-0.5626**	0.456	81.1	mg/L	0	Standard
	Mg	24	43.3	29.0	**0.0037**	0.012	338.4	mg/L	25	Standard
	K	39	8.3	91.7	**0.0893**	0.132	147.7	mg/L	3	Standard
	Ca	43	290.0	15.0	**-0.0401**	0.140	348.5	mg/L	297	Standard
	Fe	54	99.5	32.8	**-0.0043**	0.038	894.5	mg/L	91	Standard
	Fe	57	93.3	16.4	**-0.2592**	0.044	17.1	mg/L	237	Standard
>	**Sc-1**	45	36943.3	1.0				mg/L	35084	Standard
	Cl	35	61865.4	1.0				ug/L	29808	Standard
	Kr	83	35.4	13.2				ug/L	38	Standard
	Br	81	690.0	1.3				ug/L	965	Standard
	P	31	192799.7	3.2				ug/L	176735	Standard
	S	34	59486.5	0.4				ug/L	28891	Standard
	Sr	88	33.3	26.3				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	5.0	25.7				mg/L	14	Standard
	Ho-1	165	7.0	28.6				mg/L	7	Standard
	Er	166	14.0	25.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		113.586	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.839	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	107.839
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	111.405
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBS B7 WG432680-02
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Method 6020 - Summary Report

Sample ID: LCSS B7 WG432680-03
Sample Date/Time: Tuesday, June 04, 2013 14:50:25
Number of Replicates: 3
Autosampler Position: 302
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	662123.2	3.0				ug/L	552027	Standard
	Be	9	50247.4	10.4	**22.1851**	2.074	9.3	ug/L	18	Standard
	Al	27	4607.4	4.8	**0.0160**	0.001	7.5	ug/L	841	Standard
	Sc	45	39202.4	4.2				ug/L	35084	Standard
	Ti	47	25.3	35.4	**0.0382**	0.045	116.7	ug/L	22	Standard
	V	51	141774.0	10.2	**24.4858**	2.258	9.2	ug/L	812	Standard
	Cr	52	125076.2	12.6	**24.1810**	2.898	12.0	ug/L	4274	Standard
	Cr	53	25045.8	10.7	**24.4298**	2.517	10.3	ug/L	1106	Standard
	Mn	55	182188.5	11.4	**23.6297**	2.469	10.5	ug/L	1207	Standard
	Co	59	127935.6	12.0	**23.6456**	2.608	11.0	ug/L	71	Standard
	Ni	60	52747.0	10.2	**25.2087**	2.326	9.2	ug/L	295	Standard
	Cu	65	51784.4	10.9	**24.6737**	2.445	9.9	ug/L	87	Standard
	Zn	66	28301.6	10.0	**25.2653**	2.327	9.2	ug/L	469	Standard
>	**Ge**	72	490342.6	1.9				ug/L	514704	Standard
	As	75	29468.7	8.8	**23.9333**	1.862	7.8	ug/L	-121	Standard
	Se	82	3065.6	8.4	**25.1652**	1.828	7.3	ug/L	-1	Standard
	Se-1	77	2019.1	8.4	**23.6200**	1.789	7.6	ug/L	127	Standard
>	**Ga**	71	146.7	20.5				mg/L	175	Standard
	Rb	85	26.7	21.7				ug/L	50	Standard
	Y	89	557044.5	2.6				ug/L	527499	Standard
>	**Rh**	103	23.3	49.5				ug/L	10	Standard
	Mo	98	54.4	2.7	**0.0057**	0.001	11.1	ug/L	23	Standard
	Ag	107	141729.3	9.0	**24.1511**	1.622	6.7	ug/L	59	Standard
	Cd	111	43212.6	10.7	**23.5947**	2.015	8.5	mg/L	3	Standard
	Cd	114	114642.8	9.8	**24.2788**	1.849	7.6	ug/L	10	Standard
>	**In**	115	593658.9	2.6				ug/L	537195	Standard
	Sn	118	338.0	20.8	**-0.0017**	0.015	912.2	ug/L	281	Standard
	Sb	123	98053.0	9.8	**23.8701**	1.827	7.7	ug/L	167	Standard
	Ba	135	44785.2	9.7	**24.3570**	1.822	7.5	ug/L	10	Standard
	Ce	140	24.3	33.2				ug/L	27	Standard
>	**Tb**	159	846963.2	1.6				ug/L	758170	Standard
	Ho	165	7.7	30.1				ug/L	7	Standard
	Tl	203	141229.7	8.1	**23.6778**	1.587	6.7	ug/L	5	Standard
	Tl	205	3728.8	6.1	**23.8985**	1.102	4.6	ug/L	0	Standard
	Pb	206	113089.5	9.8	**23.9467**	2.019	8.4	ug/L	182	Standard
	Pb	207	97997.1	11.0	**24.4026**	2.340	9.6	ug/L	145	Standard
	Pb	208	136831.2	10.6	**23.7670**	2.176	9.2	ug/L	207	Standard
	U	238	114770.9	11.6	**22.7611**	2.299	10.1	ug/L	1	Standard
>	**Bi**	209	370424.3	1.8				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	35.0	14.3	**-0.0067**	0.005	81.0	mg/L	25	Standard
	K	39	5.0	100.0	**0.0269**	0.084	313.2	mg/L	3	Standard
	Ca	43	230.0	15.1	**-0.2853**	0.107	37.5	mg/L	297	Standard
	Fe	54	156.9	11.2	**0.0506**	0.023	45.8	mg/L	91	Standard
	Fe	57	101.7	12.4	**-0.2525**	0.033	13.1	mg/L	237	Standard
>	**Sc-1**	45	39202.4	4.2				mg/L	35084	Standard
	Cl	35	65505.3	2.2				ug/L	29808	Standard
	Kr	83	36.0	6.4				ug/L	38	Standard
	Br	81	895.0	2.0				ug/L	965	Standard
	P	31	234614.6	2.0				ug/L	176735	Standard
	S	34	60400.2	1.4				ug/L	28891	Standard
	Sr	88	45.8	19.2				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	10.5	24.7				mg/L	14	Standard
	Ho-1	165	7.7	30.1				mg/L	7	Standard
	Er	166	10.3	11.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		119.944	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.267	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.511
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.904
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSS B7 WG432680-03
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Method 6020 - Summary Report

Sample ID: L1305159517 WG432680-01
Sample Date/Time: Tuesday, June 04, 2013 14:54:11
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	661066.8	0.1				ug/L	552027	Standard
	Be	9	1581.4	10.7	**0.6888**	0.074	10.8	ug/L	18	Standard
	Al	27	739124.8	8.8	**4.4781**	0.397	8.9	ug/L	841	Standard
	Sc	45	54809.1	4.4				ug/L	35084	Standard
	Ti	47	7349.1	11.3	**34.3823**	3.340	9.7	ug/L	22	Standard
	V	51	368968.2	12.9	**62.9803**	7.190	11.4	ug/L	812	Standard
	Cr	52	245068.7	11.4	**47.4749**	4.753	10.0	ug/L	4274	Standard
	Cr	53	49562.5	11.5	**48.6140**	4.874	10.0	ug/L	1106	Standard
	Mn	55	15225241.8	11.0	**1959.2286**	186.355	9.5	ug/L	1207	Standard
	Co	59	101421.5	11.3	**18.4706**	1.824	9.9	ug/L	71	Standard
	Ni	60	9147.4	9.7	**4.1987**	0.350	8.3	ug/L	295	Standard
	Cu	65	17247.5	9.8	**8.0630**	0.676	8.4	ug/L	87	Standard
	Zn	66	24333.0	10.0	**21.3004**	1.892	8.9	ug/L	469	Standard
>	**Ge**	72	497356.5	1.8				ug/L	514704	Standard
	As	75	6668.3	10.7	**5.4198**	0.483	8.9	ug/L	-121	Standard
	Se	82	25.5	20.6	**0.2028**	0.039	19.1	ug/L	-1	Standard
	Se-1	77	172.0	7.6	**0.7280**	0.121	16.6	ug/L	127	Standard
>	**Ga**	71	46754.5	12.8				mg/L	175	Standard
	Rb	85	193095.6	6.0				ug/L	50	Standard
	Y	89	757915.4	2.0				ug/L	527499	Standard
>	**Rh**	103	20.0	25.0				ug/L	10	Standard
	Mo	98	1173.9	8.6	**0.2723**	0.024	8.7	ug/L	23	Standard
	Ag	107	1368.1	14.8	**0.2221**	0.034	15.2	ug/L	59	Standard
	Cd	111	242.7	12.9	**0.1315**	0.017	12.6	mg/L	3	Standard
	Cd	114	503.7	13.8	**0.1021**	0.014	14.0	ug/L	10	Standard
>	**In**	115	590265.1	0.5				ug/L	537195	Standard
	Sn	118	794.4	6.5	**0.0865**	0.011	12.4	ug/L	281	Standard
	Sb	123	287.9	5.4	**0.0534**	0.004	6.7	ug/L	167	Standard
	Ba	135	141967.8	8.9	**77.7765**	6.652	8.6	ug/L	10	Standard
	Ce	140	4369686.3	11.0				ug/L	27	Standard
>	**Tb**	159	837017.5	1.0				ug/L	758170	Standard
	Ho	165	13789.3	12.5				ug/L	7	Standard
	Tl	203	3320.4	8.0	**0.5590**	0.042	7.5	ug/L	5	Standard
	Tl	205	88.3	10.5	**0.5764**	0.054	9.3	ug/L	0	Standard
	Pb	206	179692.6	9.8	**38.2984**	3.577	9.3	ug/L	182	Standard
	Pb	207	143011.3	9.4	**35.8436**	3.173	8.9	ug/L	145	Standard
	Pb	208	208203.8	10.3	**36.4002**	3.566	9.8	ug/L	207	Standard
	U	238	20464.3	12.4	**4.0817**	0.486	11.9	ug/L	1	Standard
>	**Bi**	209	368485.6	1.0				ug/L	325207	Standard

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	Na	23	15.0	57.7	**0.5195**	0.950	182.9	mg/L	0	Standard
	Mg	24	61.7	12.4	**0.0022**	0.007	330.0	mg/L	25	Standard
	K	39	20.0	43.3	**0.1751**	0.093	53.2	mg/L	3	Standard
	Ca	43	716.7	1.1	**0.6104**	0.070	11.5	mg/L	297	Standard
	Fe	54	44416.1	13.9	**33.7060**	3.332	9.9	mg/L	91	Standard
	Fe	57	11345.9	10.8	**20.2247**	1.389	6.9	mg/L	237	Standard
>	**Sc-1**	45	54809.1	4.4				mg/L	35084	Standard
	Cl	35	61017.4	3.4				ug/L	29808	Standard
	Kr	83	66.7	1.8				ug/L	38	Standard
	Br	81	793.4	10.0				ug/L	965	Standard
	P	31	235923.5	3.8				ug/L	176735	Standard
	S	34	57454.7	4.9				ug/L	28891	Standard
	Sr	88	35.0	14.3				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	333.3	4.8				mg/L	3	Standard
	Dy	164	21194.4	11.3				mg/L	14	Standard
	Ho-1	165	13789.3	12.5				mg/L	7	Standard
	Er	166	13858.1	11.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		119.753	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.630	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		109.879
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		113.308
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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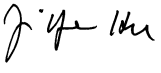

Method 6020 - Summary Report

Sample ID: L1305159517S WG432680-04
Sample Date/Time: Tuesday, June 04, 2013 14:57:57
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	669406.8	1.3				ug/L	552027	Standard
	Be	9	51225.9	8.6	22.3668	1.636	7.3	ug/L	18	Standard
	Al	27	969346.2	8.2	5.7999	0.408	7.0	ug/L	841	Standard
	Sc	45	56123.8	3.6				ug/L	35084	Standard
	Ti	47	22589.6	10.1	105.8142	10.508	9.9	ug/L	22	Standard
	V	51	741035.1	10.6	126.5749	13.014	10.3	ug/L	812	Standard
	Cr	52	664109.0	11.3	130.0086	14.449	11.1	ug/L	4274	Standard
	Cr	53	136509.5	8.8	135.6586	11.557	8.5	ug/L	1106	Standard
	Mn	55	15328460.0	10.4	1971.3846	198.365	10.1	ug/L	1207	Standard
	Co	59	221856.4	10.3	40.3978	4.012	9.9	ug/L	71	Standard
	Ni	60	69031.9	9.9	32.5323	3.103	9.5	ug/L	295	Standard
	Cu	65	80076.6	9.4	37.6100	3.463	9.2	ug/L	87	Standard
	Zn	66	80578.4	8.6	72.1424	5.979	8.3	ug/L	469	Standard
>	Ge	72	498027.9	0.7				ug/L	514704	Standard
	As	75	39269.2	8.7	31.3753	2.616	8.3	ug/L	-121	Standard
	Se	82	1856.1	6.3	15.0065	0.913	6.1	ug/L	-1	Standard
	Se-1	77	1380.1	6.2	15.4525	0.955	6.2	ug/L	127	Standard
>	Ga	71	73411.5	7.9				mg/L	175	Standard
	Rb	85	368023.4	6.6				ug/L	50	Standard
	Y	89	795907.9	3.2				ug/L	527499	Standard
>	Rh	103	25.0	52.9				ug/L	10	Standard
	Mo	98	2525.1	8.4	0.5974	0.048	8.0	ug/L	23	Standard
	Ag	107	135837.4	6.9	23.4327	1.491	6.4	ug/L	59	Standard
	Cd	111	40174.4	9.9	22.2092	2.075	9.3	mg/L	3	Standard
	Cd	114	110175.9	9.6	23.6206	2.146	9.1	ug/L	10	Standard
>	In	115	586871.6	0.6				ug/L	537195	Standard
	Sn	118	1102.7	4.3	0.1471	0.011	7.2	ug/L	281	Standard
	Sb	123	1367.5	11.9	0.3201	0.039	12.1	ug/L	167	Standard
	Ba	135	188504.9	9.0	103.8626	8.764	8.4	ug/L	10	Standard
	Ce	140	5269995.7	9.7				ug/L	27	Standard
>	Tb	159	829039.4	0.6				ug/L	758170	Standard
	Ho	165	14168.4	12.4				ug/L	7	Standard
	Tl	203	137834.5	8.6	23.2354	1.806	7.8	ug/L	5	Standard
	Tl	205	3665.8	6.7	23.6219	1.380	5.8	ug/L	0	Standard
	Pb	206	284955.9	8.6	60.7543	4.755	7.8	ug/L	182	Standard
	Pb	207	232721.7	9.1	58.3468	4.827	8.3	ug/L	145	Standard
	Pb	208	335165.5	9.3	58.6164	4.966	8.5	ug/L	207	Standard
	U	238	131131.6	10.3	26.1555	2.468	9.4	ug/L	1	Standard
>	Bi	209	368474.8	1.3				ug/L	325207	Standard

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	Na	23	11.7	24.7	**0.1275**	0.349	273.8	mg/L	0	Standard
	Mg	24	60.0	38.2	**-0.0003**	0.015	4543.6	mg/L	25	Standard
	K	39	25.0	20.0	**0.2298**	0.059	25.7	mg/L	3	Standard
	Ca	43	778.4	12.6	**0.7031**	0.161	22.9	mg/L	297	Standard
	Fe	54	61594.3	8.7	**45.7668**	2.492	5.4	mg/L	91	Standard
	Fe	57	15948.5	13.6	**27.9367**	2.912	10.4	mg/L	237	Standard
>	**Sc-1**	45	56123.8	3.6				mg/L	35084	Standard
	Cl	35	61127.4	1.3				ug/L	29808	Standard
	Kr	83	74.4	6.0				ug/L	38	Standard
	Br	81	946.7	5.5				ug/L	965	Standard
	P	31	241254.8	0.8				ug/L	176735	Standard
	S	34	57492.2	1.0				ug/L	28891	Standard
	Sr	88	35.8	14.5				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	335.0	23.5				mg/L	3	Standard
	Dy	164	21624.2	10.6				mg/L	14	Standard
	Ho-1	165	14168.4	12.4				mg/L	7	Standard
	Er	166	14154.3	11.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.263	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.760	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.247
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.305
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Upper, S, EEE	Ti	47	
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	

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Mn 55 Upper, S, EEE	Mn	55
Ba 135 Upper, S, EEE	Ba	135

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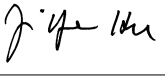

Method 6020 - Summary Report

Sample ID: L1305159517SD WG432680-05
Sample Date/Time: Tuesday, June 04, 2013 15:01:44
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	674030.7	0.7				ug/L	552027	Standard
	Be	9	53090.8	9.7	**23.0293**	2.108	9.2	ug/L	18	Standard
	Al	27	1055190.3	10.1	**6.2729**	0.608	9.7	ug/L	841	Standard
	Sc	45	57017.2	4.7				ug/L	35084	Standard
	Ti	47	18652.2	10.9	**88.4931**	9.274	10.5	ug/L	22	Standard
	V	51	780329.5	10.4	**135.0438**	13.451	10.0	ug/L	812	Standard
	Cr	52	502205.3	12.9	**99.4010**	12.535	12.6	ug/L	4274	Standard
	Cr	53	103400.2	10.8	**103.8579**	10.878	10.5	ug/L	1106	Standard
	Mn	55	21172833.8	10.6	**2758.8497**	282.137	10.2	ug/L	1207	Standard
	Co	59	288826.8	11.5	**53.2880**	5.912	11.1	ug/L	71	Standard
	Ni	60	73361.1	10.2	**35.0368**	3.460	9.9	ug/L	295	Standard
	Cu	65	84379.7	9.6	**40.1534**	3.698	9.2	ug/L	87	Standard
	Zn	66	87671.7	9.2	**79.5968**	7.048	8.9	ug/L	469	Standard
>	Ge	72	491544.8	0.4				ug/L	514704	Standard
	As	75	38780.6	9.7	**31.3910**	2.914	9.3	ug/L	-121	Standard
	Se	82	1548.0	10.2	**12.6775**	1.241	9.8	ug/L	-1	Standard
	Se-1	77	1190.0	12.6	**13.3252**	1.788	13.4	ug/L	127	Standard
>	Ga	71	86977.1	9.6				mg/L	175	Standard
	Rb	85	392125.3	9.8				ug/L	50	Standard
	Y	89	819838.5	2.3				ug/L	527499	Standard
>	Rh	103	56.7	13.5				ug/L	10	Standard
	Mo	98	2627.3	8.9	**0.6354**	0.058	9.1	ug/L	23	Standard
	Ag	107	137272.5	6.7	**24.1865**	1.650	6.8	ug/L	59	Standard
	Cd	111	40885.3	10.4	**23.0891**	2.436	10.6	mg/L	3	Standard
	Cd	114	112499.8	9.1	**24.6379**	2.277	9.2	ug/L	10	Standard
>	In	115	574779.8	0.2				ug/L	537195	Standard
	Sn	118	1100.0	3.4	**0.1510**	0.008	5.1	ug/L	281	Standard
	Sb	123	1641.1	14.0	**0.3963**	0.059	14.8	ug/L	167	Standard
	Ba	135	243759.6	9.5	**137.1995**	13.202	9.6	ug/L	10	Standard
	Ce	140	7046938.9	10.0				ug/L	27	Standard
>	Tb	159	813767.8	0.3				ug/L	758170	Standard
	Ho	165	17391.4	10.5				ug/L	7	Standard
	Tl	203	144145.2	9.2	**24.5446**	2.104	8.6	ug/L	5	Standard
	Tl	205	3751.5	8.8	**24.4157**	1.995	8.2	ug/L	0	Standard
	Pb	206	431482.1	10.1	**92.9443**	8.834	9.5	ug/L	182	Standard
	Pb	207	347494.9	9.8	**88.0277**	8.069	9.2	ug/L	145	Standard
	Pb	208	505100.4	10.9	**89.2523**	9.234	10.3	ug/L	207	Standard
	U	238	136993.4	11.7	**27.6017**	3.050	11.1	ug/L	1	Standard
>	Bi	209	364809.7	0.7				ug/L	325207	Standard

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	Na	23	8.3	124.9	**-0.2620**	1.034	394.5	mg/L	0	Standard
	Mg	24	65.0	50.4	**0.0020**	0.020	989.3	mg/L	25	Standard
	K	39	33.3	56.8	**0.3145**	0.200	63.6	mg/L	3	Standard
	Ca	43	786.7	3.5	**0.6989**	0.044	6.3	mg/L	297	Standard
	Fe	54	69326.0	12.6	**50.6458**	4.138	8.2	mg/L	91	Standard
	Fe	57	17405.1	14.0	**30.0372**	2.977	9.9	mg/L	237	Standard
>	**Sc-1**	45	57017.2	4.7				mg/L	35084	Standard
	Cl	35	61544.5	3.0				ug/L	29808	Standard
	Kr	83	83.4	9.2				ug/L	38	Standard
	Br	81	1008.4	11.9				ug/L	965	Standard
	P	31	256070.6	4.1				ug/L	176735	Standard
	S	34	59048.2	1.8				ug/L	28891	Standard
	Sr	88	34.2	22.4				ug/L	27	Standard
	C	12	3.3	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	336.7	8.2				mg/L	3	Standard
	Dy	164	26369.7	12.2				mg/L	14	Standard
	Ho-1	165	17391.4	10.5				mg/L	7	Standard
	Er	166	17507.9	11.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.101	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.500	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		106.996
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		112.178
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
V 51 Upper, S, EEE	V	51	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159501
Sample Date/Time: Tuesday, June 04, 2013 15:05:30
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	656838.0	1.4				ug/L	552027	Standard
	Be	9	1870.1	9.0	**0.8216**	0.067	8.2	ug/L	18	Standard
	Al	27	494292.0	9.1	**3.0087**	0.246	8.2	ug/L	841	Standard
	Sc	45	50542.5	1.7				ug/L	35084	Standard
	Ti	47	4212.3	11.1	**20.0033**	1.931	9.7	ug/L	22	Standard
	V	51	372322.7	11.2	**64.6355**	6.280	9.7	ug/L	812	Standard
	Cr	52	275513.4	11.4	**54.3859**	5.464	10.0	ug/L	4274	Standard
	Cr	53	55570.1	11.3	**55.5702**	5.581	10.0	ug/L	1106	Standard
	Mn	55	7377243.9	10.7	**965.1898**	89.007	9.2	ug/L	1207	Standard
	Co	59	45469.6	9.8	**8.4121**	0.701	8.3	ug/L	71	Standard
	Ni	60	4876.1	7.8	**2.2155**	0.147	6.6	ug/L	295	Standard
	Cu	65	16277.1	9.7	**7.7346**	0.636	8.2	ug/L	87	Standard
	Zn	66	15956.8	8.5	**13.9650**	1.034	7.4	ug/L	469	Standard
>	**Ge**	72	489163.4	1.6				ug/L	514704	Standard
	As	75	5476.2	8.9	**4.5442**	0.332	7.3	ug/L	-121	Standard
	Se	82	21.7	9.8	**0.1754**	0.015	8.8	ug/L	-1	Standard
	Se-1	77	169.7	9.6	**0.7338**	0.170	23.2	ug/L	127	Standard
>	**Ga**	71	37256.3	13.6				mg/L	175	Standard
	Rb	85	141195.8	7.8				ug/L	50	Standard
	Y	89	863840.4	5.3				ug/L	527499	Standard
>	**Rh**	103	18.3	83.3				ug/L	10	Standard
	Mo	98	1766.0	10.7	**0.4158**	0.040	9.5	ug/L	23	Standard
	Ag	107	1035.0	9.8	**0.1661**	0.016	9.6	ug/L	59	Standard
	Cd	111	142.7	11.0	**0.0770**	0.007	9.3	mg/L	3	Standard
	Cd	114	229.2	12.9	**0.0438**	0.005	12.4	ug/L	10	Standard
>	**In**	115	586371.1	1.8				ug/L	537195	Standard
	Sn	118	912.0	3.0	**0.1103**	0.008	6.9	ug/L	281	Standard
	Sb	123	268.4	15.2	**0.0490**	0.009	19.2	ug/L	167	Standard
	Ba	135	87306.8	9.8	**48.1257**	4.315	9.0	ug/L	10	Standard
	Ce	140	1846532.7	10.1				ug/L	27	Standard
>	**Tb**	159	826909.2	0.8				ug/L	758170	Standard
	Ho	165	16198.1	11.8				ug/L	7	Standard
	Tl	203	1901.1	8.1	**0.3247**	0.024	7.3	ug/L	5	Standard
	Tl	205	48.0	11.6	**0.3220**	0.040	12.4	ug/L	0	Standard
	Pb	206	160212.8	10.5	**34.6726**	3.424	9.9	ug/L	182	Standard
	Pb	207	126542.3	10.4	**32.2029**	3.096	9.6	ug/L	145	Standard
	Pb	208	186604.4	9.8	**33.1306**	3.042	9.2	ug/L	207	Standard
	U	238	20688.6	11.4	**4.1914**	0.457	10.9	ug/L	1	Standard
>	**Bi**	209	362796.3	1.3				ug/L	325207	Standard

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	Na	23	5.0	100.0	**-0.5131**	0.583	113.5	mg/L	0	Standard
	Mg	24	40.0		**-0.0105**	0.001	4.8	mg/L	25	Standard
	K	39	16.7	45.8	**0.1543**	0.092	59.8	mg/L	3	Standard
	Ca	43	618.3	6.1	**0.5038**	0.083	16.5	mg/L	297	Standard
	Fe	54	48009.9	13.1	**39.6149**	4.864	12.3	mg/L	91	Standard
	Fe	57	12231.6	11.9	**23.7585**	2.644	11.1	mg/L	237	Standard
>	**Sc-1**	45	50542.5	1.7				mg/L	35084	Standard
	Cl	35	61800.1	1.9				ug/L	29808	Standard
	Kr	83	68.2	4.6				ug/L	38	Standard
	Br	81	821.7	8.9				ug/L	965	Standard
	P	31	259012.1	1.6				ug/L	176735	Standard
	S	34	62252.6	1.4				ug/L	28891	Standard
	Sr	88	40.8	12.7				ug/L	27	Standard
	C	12	5.0	0.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	123.3	34.5				mg/L	3	Standard
	Dy	164	23859.7	12.0				mg/L	14	Standard
	Ho-1	165	16198.1	11.8				mg/L	7	Standard
	Er	166	15513.7	12.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		118.987	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.038	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		109.154
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		111.559
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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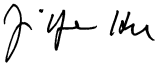

Method 6020 - Summary Report

Sample ID: L1305159502
Sample Date/Time: Tuesday, June 04, 2013 15:09:16
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	647929.1	3.1				ug/L	552027	Standard
	Be	9	2766.9	10.1	**1.2380**	0.113	9.2	ug/L	18	Standard
	Al	27	739783.7	9.4	**4.5726**	0.399	8.7	ug/L	841	Standard
	Sc	45	57607.7	3.7				ug/L	35084	Standard
	Ti	47	8925.0	8.6	**42.9718**	3.980	9.3	ug/L	22	Standard
	V	51	515011.9	10.8	**90.4953**	10.192	11.3	ug/L	812	Standard
	Cr	52	304224.0	11.7	**60.8572**	7.520	12.4	ug/L	4274	Standard
	Cr	53	62975.7	10.4	**63.8675**	7.167	11.2	ug/L	1106	Standard
	Mn	55	28092735.9	10.1	**3718.6718**	397.941	10.7	ug/L	1207	Standard
	Co	59	116779.1	10.3	**21.8796**	2.392	10.9	ug/L	71	Standard
	Ni	60	15428.2	8.1	**7.3804**	0.653	8.8	ug/L	295	Standard
	Cu	65	59041.9	9.8	**28.5232**	2.930	10.3	ug/L	87	Standard
	Zn	66	45350.2	9.3	**41.4832**	4.148	10.0	ug/L	469	Standard
>	**Ge**	72	484241.7	1.4				ug/L	514704	Standard
	As	75	10903.8	10.2	**9.0425**	0.959	10.6	ug/L	-121	Standard
	Se	82	63.1	9.6	**0.5218**	0.049	9.4	ug/L	-1	Standard
	Se-1	77	276.7	9.2	**2.1013**	0.356	16.9	ug/L	127	Standard
>	**Ga**	71	57090.0	11.7				mg/L	175	Standard
	Rb	85	274743.6	7.2				ug/L	50	Standard
	Y	89	1267319.8	6.8				ug/L	527499	Standard
>	**Rh**	103	51.7	5.6				ug/L	10	Standard
	Mo	98	1872.8	12.1	**0.4492**	0.051	11.3	ug/L	23	Standard
	Ag	107	1495.7	11.8	**0.2501**	0.029	11.4	ug/L	59	Standard
	Cd	111	335.3	10.2	**0.1867**	0.017	9.1	mg/L	3	Standard
	Cd	114	728.3	12.0	**0.1536**	0.018	11.7	ug/L	10	Standard
>	**In**	115	576408.8	1.3				ug/L	537195	Standard
	Sn	118	922.0	2.3	**0.1153**	0.003	2.8	ug/L	281	Standard
	Sb	123	380.2	7.4	**0.0783**	0.007	8.4	ug/L	167	Standard
	Ba	135	410641.5	9.5	**230.3814**	20.419	8.9	ug/L	10	Standard
	Ce	140	4395022.0	10.6				ug/L	27	Standard
>	**Tb**	159	837594.2	1.5				ug/L	758170	Standard
	Ho	165	40081.4	11.7				ug/L	7	Standard
	Tl	203	3972.5	7.9	**0.6764**	0.051	7.5	ug/L	5	Standard
	Tl	205	101.7	9.7	**0.6696**	0.058	8.6	ug/L	0	Standard
	Pb	206	244235.7	10.2	**52.6524**	5.125	9.7	ug/L	182	Standard
	Pb	207	194738.5	10.7	**49.3695**	5.079	10.3	ug/L	145	Standard
	Pb	208	281045.6	10.6	**49.7014**	5.036	10.1	ug/L	207	Standard
	U	238	19055.1	11.6	**3.8434**	0.429	11.2	ug/L	1	Standard
>	**Bi**	209	364422.0	0.9				ug/L	325207	Standard

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	Na	23	15.0	88.2	**0.4135**	1.313	317.5	mg/L	0	Standard
	Mg	24	56.7	10.2	**-0.0032**	0.005	154.6	mg/L	25	Standard
	K	39	50.0	40.0	**0.4959**	0.206	41.5	mg/L	3	Standard
	Ca	43	730.0	0.7	**0.5597**	0.055	9.8	mg/L	297	Standard
	Fe	54	55824.9	10.6	**40.3949**	3.276	8.1	mg/L	91	Standard
	Fe	57	14021.5	9.9	**23.8917**	1.886	7.9	mg/L	237	Standard
>	**Sc-1**	45	57607.7	3.7				mg/L	35084	Standard
	Cl	35	60350.0	2.1				ug/L	29808	Standard
	Kr	83	113.3	4.8				ug/L	38	Standard
	Br	81	871.7	5.3				ug/L	965	Standard
	P	31	255067.4	2.5				ug/L	176735	Standard
	S	34	59854.7	2.0				ug/L	28891	Standard
	Sr	88	39.2	25.8				ug/L	27	Standard
	C	12	5.0	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	246.7	9.1				mg/L	3	Standard
	Dy	164	58961.0	11.1				mg/L	14	Standard
	Ho-1	165	40081.4	11.7				mg/L	7	Standard
	Er	166	38819.8	11.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.373	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.082	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	107.300
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.058
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159502PS WG432748-01
Sample Date/Time: Tuesday, June 04, 2013 15:13:02
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	740598.9	2.0				ug/L	552027	Standard
	Be	9	119477.0	6.9	**47.1641**	2.371	5.0	ug/L	18	Standard
	Al	27	853456.9	7.8	**4.6124**	0.271	5.9	ug/L	841	Standard
	Sc	45	63275.3	3.1				ug/L	35084	Standard
	Ti	47	10215.8	9.7	**44.3578**	3.457	7.8	ug/L	22	Standard
	V	51	909117.5	9.4	**144.1487**	11.205	7.8	ug/L	812	Standard
	Cr	52	631346.4	10.3	**114.6117**	10.058	8.8	ug/L	4274	Standard
	Cr	53	129569.6	10.2	**119.3746**	10.281	8.6	ug/L	1106	Standard
	Mn	55	32123041.3	9.2	**3835.2340**	296.481	7.7	ug/L	1207	Standard
	Co	59	425061.7	8.8	**71.8651**	5.247	7.3	ug/L	71	Standard
	Ni	60	139095.1	8.7	**60.9638**	4.318	7.1	ug/L	295	Standard
	Cu	65	182856.1	8.3	**79.7811**	5.283	6.6	ug/L	87	Standard
	Zn	66	106510.3	8.8	**88.6739**	6.294	7.1	ug/L	469	Standard
>	**Ge**	72	536213.9	2.1				ug/L	514704	Standard
	As	75	78360.3	8.3	**58.0240**	3.795	6.5	ug/L	-121	Standard
	Se	82	6672.6	6.2	**50.0938**	2.253	4.5	ug/L	-1	Standard
	Se-1	77	4543.0	7.0	**50.0469**	2.797	5.6	ug/L	127	Standard
>	**Ga**	71	64884.2	8.2				mg/L	175	Standard
	Rb	85	298405.3	7.4				ug/L	50	Standard
	Y	89	1398091.6	6.5				ug/L	527499	Standard
>	**Rh**	103	63.3	12.1				ug/L	10	Standard
	Mo	98	2144.6	7.9	**0.4641**	0.035	7.5	ug/L	23	Standard
	Ag	107	322255.7	6.5	**51.0316**	3.027	5.9	ug/L	59	Standard
	Cd	111	94913.0	8.1	**48.1581**	3.620	7.5	mg/L	3	Standard
	Cd	114	259589.4	8.5	**51.0825**	4.080	8.0	ug/L	10	Standard
>	**In**	115	639491.4	0.6				ug/L	537195	Standard
	Sn	118	1263.7	3.9	**0.1581**	0.008	5.4	ug/L	281	Standard
	Sb	123	219416.8	6.9	**49.6480**	3.145	6.3	ug/L	167	Standard
	Ba	135	544533.7	7.6	**275.3915**	19.486	7.1	ug/L	10	Standard
	Ce	140	4851097.4	8.3				ug/L	27	Standard
>	**Tb**	159	905597.4	1.4				ug/L	758170	Standard
	Ho	165	43987.3	7.7				ug/L	7	Standard
	Tl	203	326337.8	5.9	**52.5773**	2.749	5.2	ug/L	5	Standard
	Tl	205	8545.1	7.1	**52.6073**	3.381	6.4	ug/L	0	Standard
	Pb	206	515142.8	7.9	**104.9943**	7.706	7.3	ug/L	182	Standard
	Pb	207	427485.7	8.2	**102.4617**	7.735	7.5	ug/L	145	Standard
	Pb	208	625554.3	8.6	**104.5891**	8.394	8.0	ug/L	207	Standard
	U	238	288868.6	9.5	**55.0662**	4.914	8.9	ug/L	1	Standard
>	**Bi**	209	385622.8	0.7				ug/L	325207	Standard

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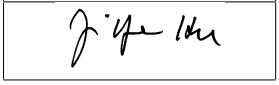

	Na	23	10.0	100.0	**-0.1541**	0.953	618.6	mg/L	0	Standard
	Mg	24	70.0	46.8	**0.0009**	0.019	2018.5	mg/L	25	Standard
	K	39	40.0	12.5	**0.3497**	0.063	17.9	mg/L	3	Standard
	Ca	43	826.7	9.7	**0.6052**	0.115	19.0	mg/L	297	Standard
	Fe	54	63607.8	8.7	**41.9106**	2.400	5.7	mg/L	91	Standard
	Fe	57	16399.0	14.0	**25.4397**	2.906	11.4	mg/L	237	Standard
>	**Sc-1**	45	63275.3	3.1				mg/L	35084	Standard
	Cl	35	67433.1	1.2				ug/L	29808	Standard
	Kr	83	131.8	4.1				ug/L	38	Standard
	Br	81	1104.2	6.6				ug/L	965	Standard
	P	31	408099.6	1.5				ug/L	176735	Standard
	S	34	60503.9	1.9				ug/L	28891	Standard
	Sr	88	44.2	11.8				ug/L	27	Standard
	C	12	15.0	33.3				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	248.3	24.3				mg/L	3	Standard
	Dy	164	64752.0	8.6				mg/L	14	Standard
	Ho-1	165	43987.3	7.7				mg/L	7	Standard
	Er	166	42362.4	8.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		134.160	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.179	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	119.043
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	118.578
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	

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Ba 135 Upper, S, EEE	Ba	135
Pb 206 Upper, S, EEE	Pb	206
Pb 207 Upper, S, EEE	Pb	207
Pb 208 Upper, S, EEE	Pb	208

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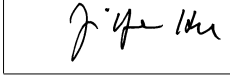

Method 6020 - Summary Report

Sample ID: L1305159502SDL WG432748-02
Sample Date/Time: Tuesday, June 04, 2013 15:16:48
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	586481.7	0.8				ug/L	552027	Standard
	Be	9	612.3	17.1	**0.2946**	0.054	18.4	ug/L	18	Standard
	Al	27	141339.9	9.7	**0.9560**	0.096	10.0	ug/L	841	Standard
	Sc	45	38610.8	0.8				ug/L	35084	Standard
	Ti	47	1661.4	8.8	**8.7383**	0.792	9.1	ug/L	22	Standard
	V	51	94205.1	9.1	**18.1192**	1.711	9.4	ug/L	812	Standard
	Cr	52	58437.4	8.8	**12.2078**	1.193	9.8	ug/L	4274	Standard
	Cr	53	11914.7	9.9	**12.4802**	1.396	11.2	ug/L	1106	Standard
	Mn	55	5187780.9	9.7	**755.7621**	76.640	10.1	ug/L	1207	Standard
	Co	59	21566.4	10.2	**4.4351**	0.475	10.7	ug/L	71	Standard
	Ni	60	3170.3	7.1	**1.5668**	0.128	8.2	ug/L	295	Standard
	Cu	65	11427.7	9.4	**6.0339**	0.597	9.9	ug/L	87	Standard
	Zn	66	10451.0	8.5	**9.9882**	0.961	9.6	ug/L	469	Standard
>	**Ge**	72	439843.1	0.7				ug/L	514704	Standard
	As	75	2111.8	8.5	**2.0122**	0.172	8.5	ug/L	-121	Standard
	Se	82	10.4	57.5	**0.0922**	0.056	60.3	ug/L	-1	Standard
	Se-1	77	127.0	11.0	**0.3829**	0.193	50.5	ug/L	127	Standard
>	**Ga**	71	10772.2	8.6				mg/L	175	Standard
	Rb	85	51082.9	6.5				ug/L	50	Standard
	Y	89	638906.4	0.8				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	358.0	3.0	**0.0865**	0.003	3.5	ug/L	23	Standard
	Ag	107	339.3	18.6	**0.0513**	0.012	23.2	ug/L	59	Standard
	Cd	111	73.6	24.7	**0.0425**	0.011	25.8	mg/L	3	Standard
	Cd	114	191.6	13.3	**0.0396**	0.006	15.1	ug/L	10	Standard
>	**In**	115	537267.0	0.3				ug/L	537195	Standard
	Sn	118	1704.1	3.9	**0.2941**	0.013	4.4	ug/L	281	Standard
	Sb	123	737.1	8.1	**0.1814**	0.016	8.7	ug/L	167	Standard
	Ba	135	79240.0	8.6	**47.6870**	4.018	8.4	ug/L	10	Standard
	Ce	140	781533.5	9.5				ug/L	27	Standard
>	**Tb**	159	779997.9	1.4				ug/L	758170	Standard
	Ho	165	7651.6	9.7				ug/L	7	Standard
	Tl	203	788.4	5.2	**0.1406**	0.007	5.2	ug/L	5	Standard
	Tl	205	20.3	28.8	**0.1468**	0.039	26.5	ug/L	0	Standard
	Pb	206	47261.3	8.4	**10.6894**	0.914	8.6	ug/L	182	Standard
	Pb	207	37557.7	8.7	**9.9904**	0.908	9.1	ug/L	145	Standard
	Pb	208	53921.7	8.9	**10.0047**	0.927	9.3	ug/L	207	Standard
	U	238	3524.1	10.0	**0.7478**	0.076	10.2	ug/L	1	Standard
>	**Bi**	209	346257.8	1.0				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8386**	0.434	51.8	mg/L	0	Standard
	Mg	24	35.0	51.5	**-0.0063**	0.017	276.0	mg/L	25	Standard
	K	39	8.3	34.6	**0.0824**	0.047	57.0	mg/L	3	Standard
	Ca	43	330.0	19.8	**0.0479**	0.216	452.1	mg/L	297	Standard
	Fe	54	10445.4	9.6	**11.2120**	1.172	10.4	mg/L	91	Standard
	Fe	57	2576.9	0.9	**6.1851**	0.017	0.3	mg/L	237	Standard
>	**Sc-1**	45	38610.8	0.8				mg/L	35084	Standard
	Cl	35	57031.5	1.9				ug/L	29808	Standard
	Kr	83	50.7	7.8				ug/L	38	Standard
	Br	81	664.2	3.7				ug/L	965	Standard
	P	31	119270.5	3.8				ug/L	176735	Standard
	S	34	60898.0	0.2				ug/L	28891	Standard
	Sr	88	40.0	10.8				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	63.3	24.1				mg/L	3	Standard
	Dy	164	11267.7	8.6				mg/L	14	Standard
	Ho-1	165	7651.6	9.7				mg/L	7	Standard
	Er	166	7280.4	10.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.242	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.456	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	100.013
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	106.473
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305159502SDL WG432748-02
Sample Date/Time: Tuesday, June 04, 2013 15:20:34
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	571116.1	0.5				ug/L	552027	Standard
	Be	9	144.3	10.7	**0.0628**	0.008	12.6	ug/L	18	Standard
	Al	27	28502.2	6.8	**0.1885**	0.014	7.7	ug/L	841	Standard
	Sc	45	34632.9	0.5				ug/L	35084	Standard
	Ti	47	322.3	8.7	**1.6647**	0.140	8.4	ug/L	22	Standard
	V	51	19099.9	8.3	**3.6510**	0.287	7.9	ug/L	812	Standard
	Cr	52	13964.1	4.9	**2.3490**	0.140	6.0	ug/L	4274	Standard
	Cr	53	2714.4	9.9	**2.1083**	0.289	13.7	ug/L	1106	Standard
	Mn	55	985061.1	5.9	**146.4186**	7.632	5.2	ug/L	1207	Standard
	Co	59	4299.6	6.6	**0.8904**	0.053	6.0	ug/L	71	Standard
	Ni	60	855.4	7.1	**0.3357**	0.031	9.3	ug/L	295	Standard
	Cu	65	2368.5	6.6	**1.2339**	0.075	6.1	ug/L	87	Standard
	Zn	66	3767.8	6.1	**3.2245**	0.213	6.6	ug/L	469	Standard
>	**Ge**	72	430471.7	0.8				ug/L	514704	Standard
	As	75	294.0	23.3	**0.3778**	0.061	16.2	ug/L	-121	Standard
	Se	82	5.8	26.6	**0.0515**	0.015	28.3	ug/L	-1	Standard
	Se-1	77	107.3	5.6	**0.1438**	0.090	62.9	ug/L	127	Standard
>	**Ga**	71	2288.5	11.8				mg/L	175	Standard
	Rb	85	10060.0	2.8				ug/L	50	Standard
	Y	89	515639.2	2.5				ug/L	527499	Standard
>	**Rh**	103	10.0	50.0				ug/L	10	Standard
	Mo	98	81.7	7.5	**0.0145**	0.002	13.7	ug/L	23	Standard
	Ag	107	102.7	3.4	**0.0070**	0.000	4.9	ug/L	59	Standard
	Cd	111	16.2	21.6	**0.0081**	0.002	28.8	mg/L	3	Standard
	Cd	114	43.6	14.9	**0.0051**	0.002	33.7	ug/L	10	Standard
>	**In**	115	529484.2	1.7				ug/L	537195	Standard
	Sn	118	487.0	16.1	**0.0380**	0.017	44.8	ug/L	281	Standard
	Sb	123	360.9	7.9	**0.0815**	0.009	10.7	ug/L	167	Standard
	Ba	135	15913.4	6.2	**9.7019**	0.614	6.3	ug/L	10	Standard
	Ce	140	159227.9	6.5				ug/L	27	Standard
>	**Tb**	159	760947.0	1.7				ug/L	758170	Standard
	Ho	165	1531.7	6.2				ug/L	7	Standard
	Tl	203	164.3	12.5	**0.0290**	0.004	13.1	ug/L	5	Standard
	Tl	205	4.7	86.6	**0.0402**	0.029	71.3	ug/L	0	Standard
	Pb	206	9508.0	6.2	**2.1389**	0.143	6.7	ug/L	182	Standard
	Pb	207	7483.2	5.6	**1.9792**	0.127	6.4	ug/L	145	Standard
	Pb	208	10647.4	6.5	**1.9632**	0.144	7.3	ug/L	207	Standard
	U	238	709.7	8.3	**0.1519**	0.014	9.3	ug/L	1	Standard
>	**Bi**	209	342088.6	1.4				ug/L	325207	Standard

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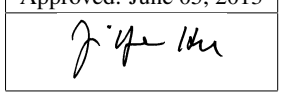

	Na	23	3.3	86.6	**-0.5300**	0.485	91.4	mg/L	0	Standard
	Mg	24	20.0	43.3	**-0.0185**	0.009	51.2	mg/L	25	Standard
	K	39	3.3	86.6	**0.0061**	0.053	863.8	mg/L	3	Standard
	Ca	43	285.0	11.0	**0.0074**	0.110	1483.9	mg/L	297	Standard
	Fe	54	2119.7	4.8	**2.4443**	0.113	4.6	mg/L	91	Standard
	Fe	57	585.0	10.7	**1.1819**	0.176	14.9	mg/L	237	Standard
>	**Sc-1**	45	34632.9	0.5				mg/L	35084	Standard
	Cl	35	57172.0	2.3				ug/L	29808	Standard
	Kr	83	35.6	5.7				ug/L	38	Standard
	Br	81	572.5	6.9				ug/L	965	Standard
	P	31	96187.4	5.1				ug/L	176735	Standard
	S	34	61187.5	0.4				ug/L	28891	Standard
	Sr	88	35.8	22.4				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	15.0	33.3				mg/L	3	Standard
	Dy	164	2250.3	5.8				mg/L	14	Standard
	Ho-1	165	1531.7	6.2				mg/L	7	Standard
	Er	166	1438.1	6.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.458	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		83.635	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		98.565
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		105.191
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 15:24:23
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	666879.6	2.5				ug/L	552027	Standard
	Be	9	105480.7	10.8	**46.2440**	4.487	9.7	ug/L	18	Standard
	Al	27	8548661.8	9.6	**51.4443**	4.439	8.6	ug/L	841	Standard
	Sc	45	39063.7	3.3				ug/L	35084	Standard
	Ti	47	24145.7	10.6	**114.6440**	9.269	8.1	ug/L	22	Standard
	V	51	291927.6	12.5	**50.4485**	5.023	10.0	ug/L	812	Standard
	Cr	52	251592.7	13.8	**49.3829**	5.743	11.6	ug/L	4274	Standard
	Cr	53	50996.3	10.1	**50.7367**	4.088	8.1	ug/L	1106	Standard
	Mn	55	371042.7	11.9	**48.2032**	4.515	9.4	ug/L	1207	Standard
	Co	59	255484.8	11.8	**47.1442**	4.263	9.0	ug/L	71	Standard
	Ni	60	108804.2	10.7	**52.0529**	4.219	8.1	ug/L	295	Standard
	Cu	65	105152.6	11.1	**50.0720**	4.304	8.6	ug/L	87	Standard
	Zn	66	56412.9	10.5	**50.9854**	4.075	8.0	ug/L	469	Standard
>	Ge	72	490791.4	3.3				ug/L	514704	Standard
	As	75	61546.1	10.0	**49.7856**	3.688	7.4	ug/L	-121	Standard
	Se	82	6371.9	9.5	**52.2294**	3.619	6.9	ug/L	-1	Standard
	Se-1	77	4111.2	8.1	**49.4562**	2.958	6.0	ug/L	127	Standard
>	Ga	71	123.3	4.7				mg/L	175	Standard
	Rb	85	3467.1	2.5				ug/L	50	Standard
	Y	89	549872.3	1.9				ug/L	527499	Standard
>	Rh	103	41.7	30.2				ug/L	10	Standard
	Mo	98	401663.6	10.4	**95.2149**	8.519	8.9	ug/L	23	Standard
	Ag	107	293968.5	9.1	**50.2248**	3.838	7.6	ug/L	59	Standard
	Cd	111	88278.0	10.5	**48.3176**	4.309	8.9	mg/L	3	Standard
	Cd	114	241247.9	10.9	**51.2120**	4.861	9.5	ug/L	10	Standard
>	In	115	592471.7	2.2				ug/L	537195	Standard
	Sn	118	258550.4	13.0	**49.5100**	5.724	11.6	ug/L	281	Standard
	Sb	123	200913.2	9.8	**49.0435**	4.111	8.4	ug/L	167	Standard
	Ba	135	92120.6	10.6	**50.2441**	4.703	9.4	ug/L	10	Standard
	Ce	140	443.7	76.2				ug/L	27	Standard
>	Tb	159	829887.7	1.2				ug/L	758170	Standard
	Ho	165	10.0	20.0				ug/L	7	Standard
	Tl	203	292282.4	7.9	**50.3644**	3.555	7.1	ug/L	5	Standard
	Tl	205	7733.6	8.6	**50.9231**	3.948	7.8	ug/L	0	Standard
	Pb	206	230462.1	9.6	**50.2111**	4.415	8.8	ug/L	182	Standard
	Pb	207	198462.6	10.3	**50.8502**	4.788	9.4	ug/L	145	Standard
	Pb	208	281519.8	11.1	**50.3137**	5.148	10.2	ug/L	207	Standard
	U	238	238135.1	12.4	**48.5454**	5.593	11.5	ug/L	1	Standard
>	Bi	209	360482.4	0.9				ug/L	325207	Standard

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Na	23	23.3	86.6	**2.3926**	3.075	128.5	mg/L	0	Standard
Mg	24	5020.8	8.7	**4.7627**	0.364	7.6	mg/L	25	Standard
K	39	311.7	22.2	**5.0255**	1.028	20.4	mg/L	3	Standard
Ca	43	1626.8	10.5	**4.1435**	0.395	9.5	mg/L	297	Standard
Fe	54	5686.6	12.7	**5.9699**	0.675	11.3	mg/L	91	Standard
Fe	57	1553.4	16.9	**3.4712**	0.599	17.2	mg/L	237	Standard
Sc-1	45	39063.7	3.3				mg/L	35084	Standard
Cl	35	72148.4	1.2				ug/L	29808	Standard
Kr	83	37.1	11.6				ug/L	38	Standard
Br	81	811.7	10.1				ug/L	965	Standard
P	31	279105.4	4.9				ug/L	176735	Standard
S	34	72751.8	1.1				ug/L	28891	Standard
Sr	88	32.5	20.4				ug/L	27	Standard
C	12	6.7	114.6				mg/L	7	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	86.6				mg/L	3	Standard
Dy	164	12.0	25.2				mg/L	14	Standard
Ho-1	165	10.0	20.0				mg/L	7	Standard
Er	166	13.0	35.3				mg/L	8	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		120.806	
Be	9	92.488		
Al	27	102.889		
Sc	45			
Ti	47	114.644		
V	51	100.897		
Cr	52	98.766		
Cr	53			
Mn	55	96.406		
Co	59	94.288		
Ni	60	104.106		
Cu	65	100.144		
Zn	66	101.971		
Ge	72		95.354	
As	75	99.571		
Se	82	104.459		
Se-1	77			
Ga	71			
Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	95.215	
|	Ag	107	100.450	
|	Cd	111	96.635	
|	Cd	114		
|>	In	115		110.290
|	Sn	118	99.020	
|	Sb	123	98.087	
⌊	Ba	135	100.488	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.729	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	100.627	
|	U	238	97.091	
⌊>	Bi	209		110.847
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 15:28:09
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	671366.6	1.6				ug/L	552027	Standard
	Be	9	46.0	28.4	**0.0089**	0.006	64.3	ug/L	18	Standard
	Al	27	1915.1	33.6	**-0.0005**	0.004	815.0	ug/L	841	Standard
	Sc	45	38851.4	0.5				ug/L	35084	Standard
	Ti	47	19.7	24.0	**0.0114**	0.022	191.0	ug/L	22	Standard
	V	51	1153.2	8.3	**0.0756**	0.015	19.5	ug/L	812	Standard
	Cr	52	3863.2	4.0	**-0.0534**	0.027	49.9	ug/L	4274	Standard
	Cr	53	425.8	12.7	**-0.5983**	0.051	8.4	ug/L	1106	Standard
	Mn	55	1047.4	6.0	**-0.0223**	0.007	31.3	ug/L	1207	Standard
	Co	59	89.3	31.7	**0.0009**	0.005	555.6	ug/L	71	Standard
	Ni	60	171.7	15.0	**-0.0493**	0.013	25.5	ug/L	295	Standard
	Cu	65	91.3	15.7	**-0.0107**	0.007	66.4	ug/L	87	Standard
	Zn	66	585.7	4.2	**-0.1735**	0.018	10.2	ug/L	469	Standard
>	**Ge**	72	485502.6	1.2				ug/L	514704	Standard
	As	75	-105.2	13.8	**0.0213**	0.012	55.3	ug/L	-121	Standard
	Se	82	6.6	103.7	**0.0522**	0.057	109.3	ug/L	-1	Standard
	Se-1	77	102.7	6.8	**-0.0867**	0.081	93.3	ug/L	127	Standard
>	**Ga**	71	125.0	0.0				mg/L	175	Standard
	Rb	85	53.3	14.3				ug/L	50	Standard
	Y	89	548562.9	2.0				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	95.1	3.2	**0.0154**	0.001	3.5	ug/L	23	Standard
	Ag	107	76.0	9.2	**0.0003**	0.001	318.6	ug/L	59	Standard
	Cd	111	4.2	27.4	**0.0004**	0.001	169.1	mg/L	3	Standard
	Cd	114	12.8	12.3	**-0.0026**	0.000	11.1	ug/L	10	Standard
>	**In**	115	592188.8	1.5				ug/L	537195	Standard
	Sn	118	406.3	17.8	**0.0115**	0.015	128.2	ug/L	281	Standard
	Sb	123	990.2	9.9	**0.2248**	0.023	10.1	ug/L	167	Standard
	Ba	135	12.3	24.8	**-0.0165**	0.002	10.1	ug/L	10	Standard
	Ce	140	40.3	3.8				ug/L	27	Standard
>	**Tb**	159	828208.8	1.3				ug/L	758170	Standard
	Ho	165	11.7	4.9				ug/L	7	Standard
	Tl	203	13.3	49.9	**0.0014**	0.001	77.6	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0139**	0.006	45.2	ug/L	0	Standard
	Pb	206	213.0	3.1	**-0.0024**	0.001	56.0	ug/L	182	Standard
	Pb	207	182.0	10.6	**0.0006**	0.004	675.7	ug/L	145	Standard
	Pb	208	286.0	7.6	**0.0041**	0.003	65.2	ug/L	207	Standard
	U	238	19.3	72.7	**0.0031**	0.003	88.6	ug/L	1	Standard
>	**Bi**	209	369156.2	2.3				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	45.0	19.2	**0.0032**	0.008	261.6	mg/L	25	Standard
	K	39	11.7	49.5	**0.1369**	0.096	69.8	mg/L	3	Standard
	Ca	43	213.3	26.3	**-0.3321**	0.179	53.9	mg/L	297	Standard
	Fe	54	189.4	15.9	**0.0866**	0.031	36.3	mg/L	91	Standard
	Fe	57	93.3	36.5	**-0.2717**	0.089	32.6	mg/L	237	Standard
>	**Sc-1**	45	38851.4	0.5				mg/L	35084	Standard
	Cl	35	70113.6	2.1				ug/L	29808	Standard
	Kr	83	30.7	18.6				ug/L	38	Standard
	Br	81	762.5	7.7				ug/L	965	Standard
	P	31	267784.1	2.5				ug/L	176735	Standard
	S	34	68976.7	2.9				ug/L	28891	Standard
	Sr	88	39.2	7.4				ug/L	27	Standard
	C	12	3.3	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	8.1	17.4				mg/L	14	Standard
	Ho-1	165	11.7	4.9				mg/L	7	Standard
	Er	166	11.7	21.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.619	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.327	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		110.237
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		113.514
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

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Method 6020 - Summary Report

Sample ID: L1305159503
Sample Date/Time: Tuesday, June 04, 2013 15:31:57
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	674294.0	1.4				ug/L	552027	Standard
	Be	9	1994.8	10.1	**0.8545**	0.086	10.0	ug/L	18	Standard
	Al	27	779924.5	9.6	**4.6330**	0.443	9.6	ug/L	841	Standard
	Sc	45	54441.0	2.8				ug/L	35084	Standard
	Ti	47	9480.0	8.9	**45.1845**	3.137	6.9	ug/L	22	Standard
	V	51	462869.8	11.5	**80.4666**	7.796	9.7	ug/L	812	Standard
	Cr	52	151774.8	12.5	**29.6120**	3.201	10.8	ug/L	4274	Standard
	Cr	53	31246.6	11.0	**30.8297**	2.939	9.5	ug/L	1106	Standard
	Mn	55	32137254.4	11.4	**4209.6059**	407.589	9.7	ug/L	1207	Standard
	Co	59	138450.1	11.7	**25.6680**	2.536	9.9	ug/L	71	Standard
	Ni	60	15460.3	9.6	**7.3194**	0.583	8.0	ug/L	295	Standard
	Cu	65	127494.1	9.1	**61.0317**	4.399	7.2	ug/L	87	Standard
	Zn	66	49328.7	9.9	**44.7147**	3.642	8.1	ug/L	469	Standard
>	**Ge**	72	488537.3	2.1				ug/L	514704	Standard
	As	75	9489.6	10.3	**7.8030**	0.649	8.3	ug/L	-121	Standard
	Se	82	32.6	24.6	**0.2652**	0.064	24.0	ug/L	-1	Standard
	Se-1	77	182.0	9.9	**0.8949**	0.268	29.9	ug/L	127	Standard
>	**Ga**	71	52237.4	12.1				mg/L	175	Standard
	Rb	85	287190.4	5.8				ug/L	50	Standard
	Y	89	807895.2	4.1				ug/L	527499	Standard
>	**Rh**	103	58.3	35.7				ug/L	10	Standard
	Mo	98	1331.9	10.7	**0.3091**	0.032	10.3	ug/L	23	Standard
	Ag	107	1511.4	16.1	**0.2461**	0.042	16.9	ug/L	59	Standard
	Cd	111	368.5	12.1	**0.2003**	0.025	12.6	mg/L	3	Standard
	Cd	114	865.4	6.6	**0.1788**	0.013	7.1	ug/L	10	Standard
>	**In**	115	591655.8	1.5				ug/L	537195	Standard
	Sn	118	843.7	0.7	**0.0956**	0.003	3.6	ug/L	281	Standard
	Sb	123	523.7	6.3	**0.1111**	0.010	9.0	ug/L	167	Standard
	Ba	135	276857.7	10.0	**151.3711**	15.057	9.9	ug/L	10	Standard
	Ce	140	6231595.2	9.6				ug/L	27	Standard
>	**Tb**	159	832931.5	1.6				ug/L	758170	Standard
	Ho	165	15029.5	10.6				ug/L	7	Standard
	Tl	203	4767.4	6.1	**0.8045**	0.047	5.8	ug/L	5	Standard
	Tl	205	121.7	13.3	**0.7927**	0.102	12.9	ug/L	0	Standard
	Pb	206	338012.2	10.2	**72.2126**	7.088	9.8	ug/L	182	Standard
	Pb	207	270306.0	9.7	**67.9124**	6.345	9.3	ug/L	145	Standard
	Pb	208	393286.0	10.1	**68.9310**	6.725	9.8	ug/L	207	Standard
	U	238	14688.5	10.2	**2.9354**	0.290	9.9	ug/L	1	Standard
>	**Bi**	209	367843.5	1.4				ug/L	325207	Standard

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	Na	23	16.7	62.4	**0.6723**	1.084	161.2	mg/L	0	Standard
	Mg	24	58.3	27.6	**0.0001**	0.012	16098.6	mg/L	25	Standard
	K	39	38.3	27.2	**0.3934**	0.116	29.4	mg/L	3	Standard
	Ca	43	970.0	12.2	**1.1945**	0.237	19.8	mg/L	297	Standard
	Fe	54	52213.7	11.2	**39.9651**	3.489	8.7	mg/L	91	Standard
	Fe	57	13194.1	10.8	**23.7742**	1.989	8.4	mg/L	237	Standard
>	**Sc-1**	45	54441.0	2.8				mg/L	35084	Standard
	Cl	35	64721.3	2.9				ug/L	29808	Standard
	Kr	83	68.6	10.8				ug/L	38	Standard
	Br	81	840.9	2.8				ug/L	965	Standard
	P	31	255523.2	3.4				ug/L	176735	Standard
	S	34	59925.8	1.5				ug/L	28891	Standard
	Sr	88	47.5	13.9				ug/L	27	Standard
	C	12	8.3	124.9				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	241.7	9.8				mg/L	3	Standard
	Dy	164	22535.6	10.6				mg/L	14	Standard
	Ho-1	165	15029.5	10.6				mg/L	7	Standard
	Er	166	14314.5	10.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.149	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.916	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		110.138
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		113.111
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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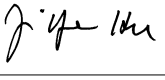

Method 6020 - Summary Report

Sample ID: L1305159504
Sample Date/Time: Tuesday, June 04, 2013 15:35:43
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	674019.1	1.3				ug/L	552027	Standard
	Be	9	1707.4	7.7	**0.7298**	0.051	7.0	ug/L	18	Standard
	Al	27	676866.9	10.2	**4.0183**	0.367	9.1	ug/L	841	Standard
	Sc	45	57171.1	4.6				ug/L	35084	Standard
	Ti	47	7527.5	9.0	**36.1423**	2.867	7.9	ug/L	22	Standard
	V	51	472155.8	9.3	**82.7480**	6.763	8.2	ug/L	812	Standard
	Cr	52	278084.1	12.3	**55.3927**	6.225	11.2	ug/L	4274	Standard
	Cr	53	56828.1	11.5	**57.3621**	5.937	10.4	ug/L	1106	Standard
	Mn	55	3272853.6	9.8	**431.9771**	37.489	8.7	ug/L	1207	Standard
	Co	59	29137.9	10.7	**5.4331**	0.526	9.7	ug/L	71	Standard
	Ni	60	5538.3	8.1	**2.5577**	0.181	7.1	ug/L	295	Standard
	Cu	65	18329.8	9.7	**8.7954**	0.762	8.7	ug/L	87	Standard
	Zn	66	19511.6	9.8	**17.3929**	1.565	9.0	ug/L	469	Standard
>	**Ge**	72	484945.2	1.7				ug/L	514704	Standard
	As	75	7366.0	10.2	**6.1276**	0.546	8.9	ug/L	-121	Standard
	Se	82	19.9	67.0	**0.1611**	0.108	67.2	ug/L	-1	Standard
	Se-1	77	147.3	9.7	**0.4730**	0.156	33.0	ug/L	127	Standard
>	**Ga**	71	43716.8	11.3				mg/L	175	Standard
	Rb	85	151660.5	6.2				ug/L	50	Standard
	Y	89	730601.5	4.4				ug/L	527499	Standard
>	**Rh**	103	35.0	14.3				ug/L	10	Standard
	Mo	98	1152.4	8.2	**0.2658**	0.021	7.9	ug/L	23	Standard
	Ag	107	1260.4	9.5	**0.2026**	0.020	10.0	ug/L	59	Standard
	Cd	111	133.7	13.1	**0.0712**	0.010	13.4	mg/L	3	Standard
	Cd	114	211.4	11.0	**0.0395**	0.005	11.9	ug/L	10	Standard
>	**In**	115	593247.0	1.2				ug/L	537195	Standard
	Sn	118	1240.7	3.7	**0.1712**	0.008	4.6	ug/L	281	Standard
	Sb	123	391.8	2.4	**0.0784**	0.002	2.1	ug/L	167	Standard
	Ba	135	77956.0	9.9	**42.4830**	4.052	9.5	ug/L	10	Standard
	Ce	140	1539677.9	11.0				ug/L	27	Standard
>	**Tb**	159	820203.5	0.5				ug/L	758170	Standard
	Ho	165	10482.7	12.2				ug/L	7	Standard
	Tl	203	1535.4	9.4	**0.2575**	0.023	8.9	ug/L	5	Standard
	Tl	205	41.3	7.8	**0.2731**	0.016	6.0	ug/L	0	Standard
	Pb	206	195379.9	10.2	**41.5597**	4.098	9.9	ug/L	182	Standard
	Pb	207	153442.6	9.5	**38.3852**	3.535	9.2	ug/L	145	Standard
	Pb	208	227212.9	10.5	**39.6471**	4.006	10.1	ug/L	207	Standard
	U	238	20015.3	11.7	**3.9841**	0.451	11.3	ug/L	1	Standard
>	**Bi**	209	369282.4	1.5				ug/L	325207	Standard

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	Na	23	16.7	96.4	**0.5834**	1.598	273.8	mg/L	0	Standard
	Mg	24	38.3	79.7	**-0.0148**	0.020	135.0	mg/L	25	Standard
	K	39	16.7	17.3	**0.1309**	0.030	22.9	mg/L	3	Standard
	Ca	43	565.0	13.9	**0.2109**	0.141	66.7	mg/L	297	Standard
	Fe	54	54870.2	14.0	**39.9371**	3.870	9.7	mg/L	91	Standard
	Fe	57	14345.2	13.3	**24.6013**	2.254	9.2	mg/L	237	Standard
>	**Sc-1**	45	57171.1	4.6				mg/L	35084	Standard
	Cl	35	65204.3	0.7				ug/L	29808	Standard
	Kr	83	60.1	15.1				ug/L	38	Standard
	Br	81	921.7	5.5				ug/L	965	Standard
	P	31	268439.4	2.0				ug/L	176735	Standard
	S	34	63824.1	0.6				ug/L	28891	Standard
	Sr	88	39.2	22.4				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	246.7	14.2				mg/L	3	Standard
	Dy	164	15717.0	11.2				mg/L	14	Standard
	Ho-1	165	10482.7	12.2				mg/L	7	Standard
	Er	166	10188.1	10.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.099	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.218	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.434
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.553
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305159505
Sample Date/Time: Tuesday, June 04, 2013 15:39:29
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	673378.7	3.8				ug/L	552027	Standard
	Be	9	4979.5	10.5	**2.1528**	0.216	10.0	ug/L	18	Standard
	Al	27	1380308.7	9.6	**8.2231**	0.787	9.6	ug/L	841	Standard
	Sc	45	58936.1	1.4				ug/L	35084	Standard
	Ti	47	10906.6	8.8	**53.3709**	4.865	9.1	ug/L	22	Standard
	V	51	375075.5	11.6	**66.9317**	7.963	11.9	ug/L	812	Standard
	Cr	52	167032.5	12.7	**33.5798**	4.508	13.4	ug/L	4274	Standard
	Cr	53	34009.3	10.9	**34.5736**	4.010	11.6	ug/L	1106	Standard
	Mn	55	50784313.9	9.6	**6829.7986**	678.092	9.9	ug/L	1207	Standard
	Co	59	142531.4	10.8	**27.1348**	3.015	11.1	ug/L	71	Standard
	Ni	60	36736.4	9.9	**18.0443**	1.863	10.3	ug/L	295	Standard
	Cu	65	117749.4	8.0	**57.8511**	4.832	8.4	ug/L	87	Standard
	Zn	66	77502.4	8.7	**72.5507**	6.531	9.0	ug/L	469	Standard
>	**Ge**	72	476519.5	1.0				ug/L	514704	Standard
	As	75	10881.6	9.5	**9.1666**	0.882	9.6	ug/L	-121	Standard
	Se	82	159.7	5.0	**1.3467**	0.061	4.6	ug/L	-1	Standard
	Se-1	77	492.0	10.1	**4.9023**	0.682	13.9	ug/L	127	Standard
>	**Ga**	71	52031.4	9.2				mg/L	175	Standard
	Rb	85	525425.6	7.1				ug/L	50	Standard
	Y	89	2230559.7	12.8				ug/L	527499	Standard
>	**Rh**	103	38.3	19.9				ug/L	10	Standard
	Mo	98	1253.9	14.8	**0.2965**	0.048	16.1	ug/L	23	Standard
	Ag	107	1426.4	9.4	**0.2360**	0.021	8.9	ug/L	59	Standard
	Cd	111	469.6	9.4	**0.2606**	0.026	10.0	mg/L	3	Standard
	Cd	114	1117.1	7.0	**0.2368**	0.018	7.4	ug/L	10	Standard
>	**In**	115	580893.9	1.9				ug/L	537195	Standard
	Sn	118	655.0	4.8	**0.0616**	0.006	9.2	ug/L	281	Standard
	Sb	123	331.2	6.9	**0.0653**	0.005	7.1	ug/L	167	Standard
	Ba	135	699908.3	9.8	**389.9194**	39.339	10.1	ug/L	10	Standard
	Ce	140	7655323.6	10.4				ug/L	27	Standard
>	**Tb**	159	892913.2	1.1				ug/L	758170	Standard
	Ho	165	92221.8	11.1				ug/L	7	Standard
	Tl	203	4907.1	8.3	**0.8460**	0.062	7.3	ug/L	5	Standard
	Tl	205	129.3	7.9	**0.8604**	0.058	6.7	ug/L	0	Standard
	Pb	206	407131.4	9.6	**88.8711**	7.586	8.5	ug/L	182	Standard
	Pb	207	328281.2	9.2	**84.2754**	6.803	8.1	ug/L	145	Standard
	Pb	208	479314.7	9.9	**85.8299**	7.552	8.8	ug/L	207	Standard
	U	238	14856.0	12.2	**3.0323**	0.339	11.2	ug/L	1	Standard
>	**Bi**	209	359899.3	1.2				ug/L	325207	Standard

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	Na	23	13.3	78.1	**0.2194**	1.006	458.4	mg/L	0	Standard
	Mg	24	71.7	26.4	**0.0054**	0.012	226.0	mg/L	25	Standard
	K	39	75.0	13.3	**0.7564**	0.097	12.8	mg/L	3	Standard
	Ca	43	856.7	1.5	**0.7896**	0.028	3.5	mg/L	297	Standard
	Fe	54	43443.0	12.3	**30.7135**	3.511	11.4	mg/L	91	Standard
	Fe	57	11040.7	10.3	**18.2757**	1.735	9.5	mg/L	237	Standard
>	**Sc-1**	45	58936.1	1.4				mg/L	35084	Standard
	Cl	35	62490.6	1.2				ug/L	29808	Standard
	Kr	83	221.2	8.5				ug/L	38	Standard
	Br	81	961.7	10.9				ug/L	965	Standard
	P	31	254694.8	2.9				ug/L	176735	Standard
	S	34	58185.7	2.7				ug/L	28891	Standard
	Sr	88	33.3	30.3				ug/L	27	Standard
	C	12	8.3	91.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	66.7	65.5				mg/L	3	Standard
	Dy	164	138976.9	10.7				mg/L	14	Standard
	Ho-1	165	92221.8	11.1				mg/L	7	Standard
	Er	166	87718.0	11.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.983	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.581	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		108.135
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		110.668
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159506
Sample Date/Time: Tuesday, June 04, 2013 15:43:15
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	672022.1	0.8				ug/L	552027	Standard
	Be	9	1651.4	9.3	**0.7083**	0.072	10.1	ug/L	18	Standard
	Al	27	760499.7	9.0	**4.5346**	0.439	9.7	ug/L	841	Standard
	Sc	45	55934.8	2.8				ug/L	35084	Standard
	Ti	47	16011.2	10.3	**75.8919**	8.170	10.8	ug/L	22	Standard
	V	51	567045.2	10.1	**98.0179**	10.381	10.6	ug/L	812	Standard
	Cr	52	233333.9	12.3	**45.7052**	5.916	12.9	ug/L	4274	Standard
	Cr	53	47597.9	12.4	**47.2105**	6.153	13.0	ug/L	1106	Standard
	Mn	55	12295941.7	11.0	**1600.7936**	182.889	11.4	ug/L	1207	Standard
	Co	59	97330.4	10.2	**17.9310**	1.891	10.5	ug/L	71	Standard
	Ni	60	17290.6	9.2	**8.1490**	0.793	9.7	ug/L	295	Standard
	Cu	65	27684.8	9.5	**13.1245**	1.291	9.8	ug/L	87	Standard
	Zn	66	44751.1	9.7	**40.2410**	4.117	10.2	ug/L	469	Standard
>	**Ge**	72	492264.6	0.9				ug/L	514704	Standard
	As	75	12292.6	9.3	**10.0142**	0.950	9.5	ug/L	-121	Standard
	Se	82	14.8	46.1	**0.1185**	0.056	47.4	ug/L	-1	Standard
	Se-1	77	161.7	5.3	**0.6238**	0.106	17.0	ug/L	127	Standard
>	**Ga**	71	66621.0	12.6				mg/L	175	Standard
	Rb	85	301773.1	8.0				ug/L	50	Standard
	Y	89	746217.4	2.4				ug/L	527499	Standard
>	**Rh**	103	30.0	60.1				ug/L	10	Standard
	Mo	98	1422.4	7.9	**0.3334**	0.029	8.8	ug/L	23	Standard
	Ag	107	1658.4	11.7	**0.2736**	0.035	12.9	ug/L	59	Standard
	Cd	111	281.1	10.8	**0.1535**	0.018	11.6	mg/L	3	Standard
	Cd	114	539.1	3.9	**0.1102**	0.005	4.7	ug/L	10	Standard
>	**In**	115	587293.2	0.7				ug/L	537195	Standard
	Sn	118	805.7	4.5	**0.0894**	0.006	7.0	ug/L	281	Standard
	Sb	123	271.2	5.5	**0.0497**	0.004	8.0	ug/L	167	Standard
	Ba	135	131739.1	9.7	**72.5836**	7.496	10.3	ug/L	10	Standard
	Ce	140	5938238.5	10.1				ug/L	27	Standard
>	**Tb**	159	822051.0	0.1				ug/L	758170	Standard
	Ho	165	13240.2	11.4				ug/L	7	Standard
	Tl	203	3858.8	8.3	**0.6509**	0.050	7.7	ug/L	5	Standard
	Tl	205	107.3	4.6	**0.7003**	0.025	3.6	ug/L	0	Standard
	Pb	206	205042.9	9.5	**43.7895**	3.971	9.1	ug/L	182	Standard
	Pb	207	163249.7	9.6	**40.9999**	3.767	9.2	ug/L	145	Standard
	Pb	208	237477.8	9.1	**41.6059**	3.626	8.7	ug/L	207	Standard
	U	238	17898.7	11.8	**3.5770**	0.413	11.5	ug/L	1	Standard
>	**Bi**	209	367808.4	0.9				ug/L	325207	Standard

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	Na	23	10.0	50.0	**-0.0514**	0.523	1016.4	mg/L	0	Standard
	Mg	24	58.3	52.4	**-0.0014**	0.020	1366.8	mg/L	25	Standard
	K	39	21.7	35.3	**0.1922**	0.088	46.0	mg/L	3	Standard
	Ca	43	561.7	13.6	**0.2339**	0.184	78.8	mg/L	297	Standard
	Fe	54	63370.3	12.1	**47.2701**	5.239	11.1	mg/L	91	Standard
	Fe	57	15850.0	11.2	**27.8993**	2.720	9.7	mg/L	237	Standard
>	**Sc-1**	45	55934.8	2.8				mg/L	35084	Standard
	Cl	35	65539.1	0.4				ug/L	29808	Standard
	Kr	83	76.0	10.3				ug/L	38	Standard
	Br	81	780.0	6.2				ug/L	965	Standard
	P	31	275429.6	1.5				ug/L	176735	Standard
	S	34	62144.7	1.0				ug/L	28891	Standard
	Sr	88	44.2	19.9				ug/L	27	Standard
	C	12	5.0	0.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	353.3	12.2				mg/L	3	Standard
	Dy	164	20038.1	10.7				mg/L	14	Standard
	Ho-1	165	13240.2	11.4				mg/L	7	Standard
	Er	166	13334.6	11.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.737	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.640	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.326
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.100
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: L1305159507
Sample Date/Time: Tuesday, June 04, 2013 15:47:01
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	666450.5	1.7				ug/L	552027	Standard
	Be	9	2885.9	10.5	**1.2550**	0.116	9.2	ug/L	18	Standard
	Al	27	913524.1	9.4	**5.4902**	0.466	8.5	ug/L	841	Standard
	Sc	45	54653.5	3.5				ug/L	35084	Standard
	Ti	47	16915.2	12.0	**81.8101**	9.036	11.0	ug/L	22	Standard
	V	51	515873.1	11.6	**90.9815**	9.703	10.7	ug/L	812	Standard
	Cr	52	433285.4	12.2	**87.3328**	9.847	11.3	ug/L	4274	Standard
	Cr	53	89453.4	12.3	**91.4699**	10.346	11.3	ug/L	1106	Standard
	Mn	55	27304093.1	10.2	**3627.6146**	332.607	9.2	ug/L	1207	Standard
	Co	59	135555.4	11.2	**25.4887**	2.564	10.1	ug/L	71	Standard
	Ni	60	24148.0	10.4	**11.6693**	1.075	9.2	ug/L	295	Standard
	Cu	65	70463.6	10.0	**34.1828**	3.137	9.2	ug/L	87	Standard
	Zn	66	53808.9	11.5	**49.5330**	5.227	10.6	ug/L	469	Standard
>	**Ge**	72	481945.2	1.8				ug/L	514704	Standard
	As	75	13452.9	9.9	**11.1729**	0.991	8.9	ug/L	-121	Standard
	Se	82	92.2	16.1	**0.7660**	0.110	14.4	ug/L	-1	Standard
	Se-1	77	313.3	10.3	**2.5746**	0.361	14.0	ug/L	127	Standard
>	**Ga**	71	59199.8	11.9				mg/L	175	Standard
	Rb	85	322334.7	7.4				ug/L	50	Standard
	Y	89	1345308.1	9.3				ug/L	527499	Standard
>	**Rh**	103	40.0	21.7				ug/L	10	Standard
	Mo	98	1824.9	11.8	**0.4333**	0.050	11.5	ug/L	23	Standard
	Ag	107	1675.1	11.8	**0.2786**	0.032	11.3	ug/L	59	Standard
	Cd	111	355.0	11.8	**0.1960**	0.023	11.8	mg/L	3	Standard
	Cd	114	2107.3	10.6	**0.4501**	0.044	9.7	ug/L	10	Standard
>	**In**	115	582171.9	1.3				ug/L	537195	Standard
	Sn	118	216746.1	11.5	**42.2530**	4.573	10.8	ug/L	281	Standard
	Sb	123	303.1	6.3	**0.0582**	0.004	6.9	ug/L	167	Standard
	Ba	135	423407.5	10.3	**235.1645**	22.321	9.5	ug/L	10	Standard
	Ce	140	5990259.6	10.4				ug/L	27	Standard
>	**Tb**	159	852233.6	1.4				ug/L	758170	Standard
	Ho	165	46321.6	10.8				ug/L	7	Standard
	Tl	203	4229.9	7.0	**0.7273**	0.049	6.8	ug/L	5	Standard
	Tl	205	120.7	8.9	**0.8009**	0.063	7.8	ug/L	0	Standard
	Pb	206	274303.1	8.7	**59.7164**	5.036	8.4	ug/L	182	Standard
	Pb	207	218114.5	9.5	**55.8404**	5.167	9.3	ug/L	145	Standard
	Pb	208	314991.9	10.1	**56.2550**	5.585	9.9	ug/L	207	Standard
	U	238	15779.0	12.0	**3.2133**	0.379	11.8	ug/L	1	Standard
>	**Bi**	209	360979.2	1.2				ug/L	325207	Standard

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	Na	23	31.7	39.7	**2.2692**	1.268	55.9	mg/L	0	Standard
	Mg	24	65.0	20.4	**0.0043**	0.008	188.2	mg/L	25	Standard
	K	39	46.7	16.4	**0.4885**	0.072	14.6	mg/L	3	Standard
	Ca	43	1101.7	17.0	**1.4787**	0.345	23.3	mg/L	297	Standard
	Fe	54	56417.5	13.0	**42.9944**	4.203	9.8	mg/L	91	Standard
	Fe	57	13991.5	12.3	**25.1301**	2.387	9.5	mg/L	237	Standard
>	**Sc-1**	45	54653.5	3.5				mg/L	35084	Standard
	Cl	35	64601.1	2.2				ug/L	29808	Standard
	Kr	83	133.6	7.1				ug/L	38	Standard
	Br	81	905.0	7.8				ug/L	965	Standard
	P	31	258321.1	3.6				ug/L	176735	Standard
	S	34	61369.1	2.6				ug/L	28891	Standard
	Sr	88	43.3	6.7				ug/L	27	Standard
	C	12	8.3	34.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	258.3	17.6				mg/L	3	Standard
	Dy	164	68994.0	12.1				mg/L	14	Standard
	Ho-1	165	46321.6	10.8				mg/L	7	Standard
	Er	166	44482.4	11.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		120.728	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.635	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		108.373
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		111.000
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159508
Sample Date/Time: Tuesday, June 04, 2013 15:50:47
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	668705.8	1.4				ug/L	552027	Standard
	Be	9	1439.4	8.5	**0.6192**	0.061	9.8	ug/L	18	Standard
	Al	27	944809.0	8.9	**5.6672**	0.575	10.1	ug/L	841	Standard
	Sc	45	56311.2	3.6				ug/L	35084	Standard
	Ti	47	19127.1	9.3	**92.2523**	7.913	8.6	ug/L	22	Standard
	V	51	627333.5	10.6	**110.3351**	10.974	9.9	ug/L	812	Standard
	Cr	52	334680.2	11.5	**67.0748**	7.463	11.1	ug/L	4274	Standard
	Cr	53	68347.3	10.0	**69.4465**	6.628	9.5	ug/L	1106	Standard
	Mn	55	12034650.4	10.0	**1594.0609**	150.523	9.4	ug/L	1207	Standard
	Co	59	125664.1	9.0	**23.5628**	1.995	8.5	ug/L	71	Standard
	Ni	60	21341.4	8.5	**10.2671**	0.785	7.6	ug/L	295	Standard
	Cu	65	32196.3	8.6	**15.5424**	1.262	8.1	ug/L	87	Standard
	Zn	66	59076.9	9.0	**54.2995**	4.632	8.5	ug/L	469	Standard
>	**Ge**	72	483525.3	1.7				ug/L	514704	Standard
	As	75	14470.4	8.6	**11.9740**	0.944	7.9	ug/L	-121	Standard
	Se	82	20.3	29.0	**0.1653**	0.047	28.4	ug/L	-1	Standard
	Se-1	77	167.7	8.7	**0.7376**	0.218	29.5	ug/L	127	Standard
>	**Ga**	71	76038.3	10.1				mg/L	175	Standard
	Rb	85	371556.1	8.4				ug/L	50	Standard
	Y	89	701225.5	2.7				ug/L	527499	Standard
>	**Rh**	103	33.3	48.2				ug/L	10	Standard
	Mo	98	1724.0	11.5	**0.4083**	0.046	11.2	ug/L	23	Standard
	Ag	107	1854.8	11.3	**0.3096**	0.036	11.6	ug/L	59	Standard
	Cd	111	278.4	9.8	**0.1530**	0.014	9.3	mg/L	3	Standard
	Cd	114	608.9	11.0	**0.1261**	0.013	10.5	ug/L	10	Standard
>	**In**	115	582988.8	1.1				ug/L	537195	Standard
	Sn	118	612.0	9.8	**0.0528**	0.013	24.2	ug/L	281	Standard
	Sb	123	254.0	6.1	**0.0459**	0.003	6.9	ug/L	167	Standard
	Ba	135	151108.1	9.0	**83.8087**	7.035	8.4	ug/L	10	Standard
	Ce	140	5195065.5	9.1				ug/L	27	Standard
>	**Tb**	159	812348.1	0.8				ug/L	758170	Standard
	Ho	165	9967.6	10.3				ug/L	7	Standard
	Tl	203	4539.3	7.9	**0.7731**	0.061	7.8	ug/L	5	Standard
	Tl	205	114.0	10.5	**0.7501**	0.075	10.0	ug/L	0	Standard
	Pb	206	240703.2	8.8	**51.8962**	4.469	8.6	ug/L	182	Standard
	Pb	207	191906.4	9.0	**48.6571**	4.282	8.8	ug/L	145	Standard
	Pb	208	279701.2	9.3	**49.4700**	4.511	9.1	ug/L	207	Standard
	U	238	17988.8	12.3	**3.6288**	0.443	12.2	ug/L	1	Standard
>	**Bi**	209	364446.5	0.6				ug/L	325207	Standard

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	Na	23	13.3	86.6	**0.3033**	1.208	398.3	mg/L	0	Standard
	Mg	24	71.7	35.1	**0.0078**	0.018	233.2	mg/L	25	Standard
	K	39	35.0	37.8	**0.3396**	0.140	41.3	mg/L	3	Standard
	Ca	43	898.4	10.4	**0.9623**	0.143	14.8	mg/L	297	Standard
	Fe	54	68046.8	11.3	**50.3668**	3.957	7.9	mg/L	91	Standard
	Fe	57	16659.3	13.8	**29.1083**	3.118	10.7	mg/L	237	Standard
>	**Sc-1**	45	56311.2	3.6				mg/L	35084	Standard
	Cl	35	65498.6	1.0				ug/L	29808	Standard
	Kr	83	65.9	9.9				ug/L	38	Standard
	Br	81	805.9	6.1				ug/L	965	Standard
	P	31	262072.1	2.4				ug/L	176735	Standard
	S	34	61779.9	1.0				ug/L	28891	Standard
	Sr	88	35.0	43.4				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	393.3	12.3				mg/L	3	Standard
	Dy	164	15039.5	9.9				mg/L	14	Standard
	Ho-1	165	9967.6	10.3				mg/L	7	Standard
	Er	166	9787.9	10.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.137	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.942	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.525
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.066
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
V 51 Upper, S, EEE	V	51	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305159509
Sample Date/Time: Tuesday, June 04, 2013 15:54:33
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	663827.1	1.5				ug/L	552027	Standard
	Be	9	3242.3	8.9	**1.4175**	0.115	8.1	ug/L	18	Standard
	Al	27	1230770.2	9.4	**7.4314**	0.655	8.8	ug/L	841	Standard
	Sc	45	55908.1	3.9				ug/L	35084	Standard
	Ti	47	15697.5	9.6	**75.1794**	6.645	8.8	ug/L	22	Standard
	V	51	497594.2	11.1	**86.8891**	8.982	10.3	ug/L	812	Standard
	Cr	52	396993.3	12.1	**79.1533**	8.979	11.3	ug/L	4274	Standard
	Cr	53	80799.4	12.1	**81.7025**	9.274	11.4	ug/L	1106	Standard
	Mn	55	32739645.9	9.6	**4306.7844**	371.817	8.6	ug/L	1207	Standard
	Co	59	139624.4	10.9	**25.9968**	2.614	10.1	ug/L	71	Standard
	Ni	60	30120.1	9.7	**14.4448**	1.292	8.9	ug/L	295	Standard
	Cu	65	32716.5	8.6	**15.6848**	1.227	7.8	ug/L	87	Standard
	Zn	66	58825.0	9.4	**53.6829**	4.607	8.6	ug/L	469	Standard
>	**Ge**	72	486782.4	1.2				ug/L	514704	Standard
	As	75	14333.9	8.6	**11.7813**	0.901	7.6	ug/L	-121	Standard
	Se	82	123.7	11.2	**1.0208**	0.119	11.7	ug/L	-1	Standard
	Se-1	77	324.3	10.0	**2.6730**	0.369	13.8	ug/L	127	Standard
>	**Ga**	71	61318.3	11.7				mg/L	175	Standard
	Rb	85	392078.9	6.6				ug/L	50	Standard
	Y	89	1322731.6	6.7				ug/L	527499	Standard
>	**Rh**	103	43.3	29.0				ug/L	10	Standard
	Mo	98	1933.9	9.9	**0.4606**	0.038	8.3	ug/L	23	Standard
	Ag	107	1509.4	9.8	**0.2505**	0.021	8.4	ug/L	59	Standard
	Cd	111	460.2	10.7	**0.2551**	0.023	9.1	mg/L	3	Standard
	Cd	114	1081.1	13.0	**0.2288**	0.027	11.6	ug/L	10	Standard
>	**In**	115	580469.0	1.9				ug/L	537195	Standard
	Sn	118	804.4	3.0	**0.0911**	0.008	8.5	ug/L	281	Standard
	Sb	123	275.6	3.7	**0.0515**	0.001	2.4	ug/L	167	Standard
	Ba	135	452456.8	9.2	**251.9366**	19.071	7.6	ug/L	10	Standard
	Ce	140	6268005.8	10.8				ug/L	27	Standard
>	**Tb**	159	847094.0	1.2				ug/L	758170	Standard
	Ho	165	46038.1	11.0				ug/L	7	Standard
	Tl	203	4289.9	7.3	**0.7332**	0.053	7.2	ug/L	5	Standard
	Tl	205	111.0	13.0	**0.7333**	0.094	12.9	ug/L	0	Standard
	Pb	206	272920.0	8.4	**59.0567**	4.873	8.3	ug/L	182	Standard
	Pb	207	215807.1	9.0	**54.9154**	4.849	8.8	ug/L	145	Standard
	Pb	208	313764.6	9.8	**55.6947**	5.357	9.6	ug/L	207	Standard
	U	238	14901.7	11.1	**3.0165**	0.331	11.0	ug/L	1	Standard
>	**Bi**	209	363171.3	0.5				ug/L	325207	Standard

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	Na	23	105.0	25.2	**9.7738**	2.306	23.6	mg/L	0	Standard
	Mg	24	61.7	32.8	**0.0014**	0.014	1022.8	mg/L	25	Standard
	K	39	45.0	19.2	**0.4591**	0.100	21.9	mg/L	3	Standard
	Ca	43	5744.4	7.1	**11.7179**	0.509	4.3	mg/L	297	Standard
	Fe	54	57025.7	12.5	**42.4904**	3.947	9.3	mg/L	91	Standard
	Fe	57	14887.4	10.0	**26.1798**	1.947	7.4	mg/L	237	Standard
>	**Sc-1**	45	55908.1	3.9				mg/L	35084	Standard
	Cl	35	67825.8	1.8				ug/L	29808	Standard
	Kr	83	123.8	10.8				ug/L	38	Standard
	Br	81	910.9	1.5				ug/L	965	Standard
	P	31	264419.1	4.1				ug/L	176735	Standard
	S	34	64890.4	3.4				ug/L	28891	Standard
	Sr	88	48.3	23.3				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	210.0	23.8				mg/L	3	Standard
	Dy	164	69062.7	11.0				mg/L	14	Standard
	Ho-1	165	46038.1	11.0				mg/L	7	Standard
	Er	166	44358.3	10.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		120.253	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.575	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		108.056
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		111.674
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: L1305159510
Sample Date/Time: Tuesday, June 04, 2013 15:58:19
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	681799.0	2.0				ug/L	552027	Standard
	Be	9	947.4	8.6	**0.3958**	0.040	10.1	ug/L	18	Standard
	Al	27	564463.8	7.4	**3.3154**	0.284	8.6	ug/L	841	Standard
	Sc	45	56219.2	3.8				ug/L	35084	Standard
	Ti	47	6884.2	10.4	**32.7933**	3.058	9.3	ug/L	22	Standard
	V	51	401508.8	9.1	**69.8212**	5.638	8.1	ug/L	812	Standard
	Cr	52	232615.2	10.0	**45.8595**	4.152	9.1	ug/L	4274	Standard
	Cr	53	48327.4	9.8	**48.2680**	4.294	8.9	ug/L	1106	Standard
	Mn	55	6219054.6	10.1	**814.8185**	73.589	9.0	ug/L	1207	Standard
	Co	59	87031.0	10.3	**16.1369**	1.500	9.3	ug/L	71	Standard
	Ni	60	6187.6	8.0	**2.8509**	0.206	7.2	ug/L	295	Standard
	Cu	65	12987.3	8.1	**6.1696**	0.435	7.1	ug/L	87	Standard
	Zn	66	18158.9	9.5	**16.0125**	1.419	8.9	ug/L	469	Standard
>	**Ge**	72	488592.5	1.1				ug/L	514704	Standard
	As	75	5418.4	7.9	**4.5036**	0.300	6.7	ug/L	-121	Standard
	Se	82	13.1	84.3	**0.1051**	0.091	86.2	ug/L	-1	Standard
	Se-1	77	131.0	6.1	**0.2577**	0.100	38.8	ug/L	127	Standard
>	**Ga**	71	43800.2	9.1				mg/L	175	Standard
	Rb	85	127051.2	4.7				ug/L	50	Standard
	Y	89	641929.3	2.3				ug/L	527499	Standard
>	**Rh**	103	20.0	50.0				ug/L	10	Standard
	Mo	98	858.4	12.9	**0.1967**	0.027	13.6	ug/L	23	Standard
	Ag	107	1203.4	9.8	**0.1934**	0.021	10.7	ug/L	59	Standard
	Cd	111	185.1	10.8	**0.0995**	0.010	10.2	mg/L	3	Standard
	Cd	114	327.1	9.0	**0.0643**	0.007	10.3	ug/L	10	Standard
>	**In**	115	591894.4	1.0				ug/L	537195	Standard
	Sn	118	790.7	1.7	**0.0853**	0.003	3.2	ug/L	281	Standard
	Sb	123	281.9	10.2	**0.0518**	0.007	14.2	ug/L	167	Standard
	Ba	135	93547.8	8.1	**51.1206**	4.278	8.4	ug/L	10	Standard
	Ce	140	1781701.7	8.8				ug/L	27	Standard
>	**Tb**	159	820134.8	0.6				ug/L	758170	Standard
	Ho	165	6000.2	9.6				ug/L	7	Standard
	Tl	203	2669.6	8.3	**0.4510**	0.039	8.5	ug/L	5	Standard
	Tl	205	71.0	16.6	**0.4666**	0.075	16.1	ug/L	0	Standard
	Pb	206	284637.0	7.6	**60.9376**	4.784	7.9	ug/L	182	Standard
	Pb	207	228413.9	7.6	**57.5072**	4.503	7.8	ug/L	145	Standard
	Pb	208	333150.7	8.6	**58.5114**	5.204	8.9	ug/L	207	Standard
	U	238	19734.3	9.8	**3.9526**	0.397	10.0	ug/L	1	Standard
>	**Bi**	209	367160.4	0.3				ug/L	325207	Standard

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	Na	23	5.0	0.0	**-0.5718**	0.020	3.4	mg/L	0	Standard
	Mg	24	33.3	22.9	**-0.0178**	0.006	31.9	mg/L	25	Standard
	K	39	18.3	15.7	**0.1527**	0.028	18.5	mg/L	3	Standard
	Ca	43	501.7	16.1	**0.0928**	0.169	182.2	mg/L	297	Standard
	Fe	54	48832.8	8.6	**36.2221**	2.487	6.9	mg/L	91	Standard
	Fe	57	12395.1	10.1	**21.5980**	1.819	8.4	mg/L	237	Standard
>	**Sc-1**	45	56219.2	3.8				mg/L	35084	Standard
	Cl	35	66169.2	1.2				ug/L	29808	Standard
	Kr	83	55.7	11.0				ug/L	38	Standard
	Br	81	878.4	5.3				ug/L	965	Standard
	P	31	276374.8	1.4				ug/L	176735	Standard
	S	34	60944.8	1.6				ug/L	28891	Standard
	Sr	88	40.0	12.5				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	368.3	11.4				mg/L	3	Standard
	Dy	164	9215.3	9.5				mg/L	14	Standard
	Ho-1	165	6000.2	9.6				mg/L	7	Standard
	Er	166	5992.2	10.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		123.508	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.927	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.182
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.901
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: L1305159511
Sample Date/Time: Tuesday, June 04, 2013 16:03:45
Number of Replicates: 3
Autosampler Position: 319
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	677243.3	2.8				ug/L	552027	Standard
	Be	9	2478.5	8.0	**1.0598**	0.081	7.7	ug/L	18	Standard
	Al	27	602334.0	9.0	**3.5591**	0.295	8.3	ug/L	841	Standard
	Sc	45	51905.5	3.3				ug/L	35084	Standard
	Ti	47	9523.7	10.7	**46.1613**	5.379	11.7	ug/L	22	Standard
	V	51	376045.3	9.3	**66.4734**	6.841	10.3	ug/L	812	Standard
	Cr	52	249231.2	10.6	**50.0324**	5.863	11.7	ug/L	4274	Standard
	Cr	53	50731.3	10.6	**51.5849**	6.029	11.7	ug/L	1106	Standard
	Mn	55	23152877.8	10.6	**3084.8005**	355.404	11.5	ug/L	1207	Standard
	Co	59	141290.8	10.1	**26.6454**	2.913	10.9	ug/L	71	Standard
	Ni	60	15678.5	9.5	**7.5522**	0.802	10.6	ug/L	295	Standard
	Cu	65	16331.5	10.0	**7.9021**	0.870	11.0	ug/L	87	Standard
	Zn	66	31975.5	8.9	**29.2298**	2.930	10.0	ug/L	469	Standard
>	**Ge**	72	481229.2	1.0				ug/L	514704	Standard
	As	75	8025.3	9.2	**6.7261**	0.669	9.9	ug/L	-121	Standard
	Se	82	66.5	21.9	**0.5545**	0.126	22.7	ug/L	-1	Standard
	Se-1	77	249.0	9.9	**1.7717**	0.316	17.8	ug/L	127	Standard
>	**Ga**	71	45769.5	9.9				mg/L	175	Standard
	Rb	85	250258.3	5.0				ug/L	50	Standard
	Y	89	1128318.2	3.8				ug/L	527499	Standard
>	**Rh**	103	28.3	10.2				ug/L	10	Standard
	Mo	98	1106.4	7.6	**0.2590**	0.023	8.7	ug/L	23	Standard
	Ag	107	1306.4	10.3	**0.2138**	0.023	10.9	ug/L	59	Standard
	Cd	111	261.8	17.0	**0.1434**	0.024	16.9	mg/L	3	Standard
	Cd	114	597.5	9.7	**0.1233**	0.012	9.5	ug/L	10	Standard
>	**In**	115	584451.6	1.3				ug/L	537195	Standard
	Sn	118	664.7	8.7	**0.0626**	0.010	16.0	ug/L	281	Standard
	Sb	123	245.3	8.2	**0.0436**	0.006	12.9	ug/L	167	Standard
	Ba	135	363874.4	9.0	**201.5007**	19.330	9.6	ug/L	10	Standard
	Ce	140	4917364.2	9.6				ug/L	27	Standard
>	**Tb**	159	842973.2	1.4				ug/L	758170	Standard
	Ho	165	35415.0	11.2				ug/L	7	Standard
	Tl	203	3416.4	7.5	**0.5826**	0.046	8.0	ug/L	5	Standard
	Tl	205	72.7	6.2	**0.4816**	0.027	5.6	ug/L	0	Standard
	Pb	206	243366.8	9.2	**52.5646**	5.080	9.7	ug/L	182	Standard
	Pb	207	195068.6	8.7	**49.5477**	4.539	9.2	ug/L	145	Standard
	Pb	208	282930.9	9.7	**50.1318**	5.082	10.1	ug/L	207	Standard
	U	238	14341.5	11.0	**2.8982**	0.333	11.5	ug/L	1	Standard
>	**Bi**	209	363937.4	0.5				ug/L	325207	Standard

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	Na	23	26.7	43.3	**1.9187**	1.376	71.7	mg/L	0	Standard
	Mg	24	61.7	4.7	**0.0044**	0.003	66.7	mg/L	25	Standard
	K	39	23.3	75.3	**0.2359**	0.221	93.5	mg/L	3	Standard
	Ca	43	1123.4	16.5	**1.6634**	0.357	21.5	mg/L	297	Standard
	Fe	54	44739.0	10.2	**35.9430**	3.280	9.1	mg/L	91	Standard
	Fe	57	11734.6	11.1	**22.1454**	1.929	8.7	mg/L	237	Standard
>	**Sc-1**	45	51905.5	3.3				mg/L	35084	Standard
	Cl	35	66282.7	1.9				ug/L	29808	Standard
	Kr	83	115.7	6.5				ug/L	38	Standard
	Br	81	869.2	3.5				ug/L	965	Standard
	P	31	264853.4	2.6				ug/L	176735	Standard
	S	34	61919.6	0.3				ug/L	28891	Standard
	Sr	88	39.2	29.5				ug/L	27	Standard
	C	12	6.7	114.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	161.7	1.8				mg/L	3	Standard
	Dy	164	53461.7	10.6				mg/L	14	Standard
	Ho-1	165	35415.0	11.2				mg/L	7	Standard
	Er	166	34377.3	10.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.683	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.496	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		108.797
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		111.909
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159512
Sample Date/Time: Tuesday, June 04, 2013 16:07:31
Number of Replicates: 3
Autosampler Position: 320
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	673013.8	1.7				ug/L	552027	Standard
	Be	9	1427.4	8.4	**0.6097**	0.054	8.9	ug/L	18	Standard
	Al	27	993087.8	9.0	**5.9170**	0.573	9.7	ug/L	841	Standard
	Sc	45	59510.1	4.6				ug/L	35084	Standard
	Ti	47	17751.8	10.0	**84.6245**	8.165	9.6	ug/L	22	Standard
	V	51	781637.7	10.2	**135.9278**	13.511	9.9	ug/L	812	Standard
	Cr	52	642257.3	10.9	**127.9772**	13.507	10.6	ug/L	4274	Standard
	Cr	53	133584.9	9.7	**135.1624**	13.207	9.8	ug/L	1106	Standard
	Mn	55	6183510.2	9.4	**809.5783**	74.175	9.2	ug/L	1207	Standard
	Co	59	36183.8	10.6	**6.6954**	0.701	10.5	ug/L	71	Standard
	Ni	60	13771.3	8.5	**6.5024**	0.557	8.6	ug/L	295	Standard
	Cu	65	26372.7	8.5	**12.5723**	1.009	8.0	ug/L	87	Standard
	Zn	66	45017.5	9.3	**40.7170**	3.628	8.9	ug/L	469	Standard
>	**Ge**	72	489240.1	1.6				ug/L	514704	Standard
	As	75	12604.4	9.4	**10.3236**	0.917	8.9	ug/L	-121	Standard
	Se	82	13.9	57.1	**0.1112**	0.065	58.3	ug/L	-1	Standard
	Se-1	77	163.3	5.3	**0.6581**	0.138	21.0	ug/L	127	Standard
>	**Ga**	71	90806.5	10.2				mg/L	175	Standard
	Rb	85	221761.7	6.1				ug/L	50	Standard
	Y	89	692353.3	1.7				ug/L	527499	Standard
>	**Rh**	103	31.7	63.8				ug/L	10	Standard
	Mo	98	2218.9	11.2	**0.5198**	0.057	10.9	ug/L	23	Standard
	Ag	107	1835.4	13.0	**0.3015**	0.040	13.1	ug/L	59	Standard
	Cd	111	225.9	11.0	**0.1220**	0.014	11.3	mg/L	3	Standard
	Cd	114	346.4	4.7	**0.0684**	0.004	5.3	ug/L	10	Standard
>	**In**	115	591717.5	1.1				ug/L	537195	Standard
	Sn	118	892.7	1.4	**0.1050**	0.004	4.1	ug/L	281	Standard
	Sb	123	259.6	12.9	**0.0463**	0.008	16.5	ug/L	167	Standard
	Ba	135	99422.3	9.2	**54.3201**	4.667	8.6	ug/L	10	Standard
	Ce	140	2808481.3	9.6				ug/L	27	Standard
>	**Tb**	159	806286.4	0.3				ug/L	758170	Standard
	Ho	165	8933.3	10.7				ug/L	7	Standard
	Tl	203	2500.2	6.1	**0.4233**	0.024	5.8	ug/L	5	Standard
	Tl	205	60.0	3.3	**0.3965**	0.012	3.0	ug/L	0	Standard
	Pb	206	180354.3	9.2	**38.6756**	3.435	8.9	ug/L	182	Standard
	Pb	207	143088.8	9.1	**36.0835**	3.186	8.8	ug/L	145	Standard
	Pb	208	209660.3	9.1	**36.8821**	3.257	8.8	ug/L	207	Standard
	U	238	25902.0	12.5	**5.1984**	0.632	12.2	ug/L	1	Standard
>	**Bi**	209	366274.0	0.4				ug/L	325207	Standard

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	Na	23	13.3	57.3	**0.2260**	0.757	335.2	mg/L	0	Standard
	Mg	24	40.0	21.7	**-0.0149**	0.006	39.2	mg/L	25	Standard
	K	39	75.0	24.0	**0.7509**	0.195	25.9	mg/L	3	Standard
	Ca	43	1090.0	10.0	**1.2558**	0.151	12.0	mg/L	297	Standard
	Fe	54	83042.4	9.4	**58.2146**	3.225	5.5	mg/L	91	Standard
	Fe	57	21677.3	12.2	**35.9686**	3.074	8.5	mg/L	237	Standard
>	**Sc-1**	45	59510.1	4.6				mg/L	35084	Standard
	Cl	35	68646.2	0.3				ug/L	29808	Standard
	Kr	83	68.3	10.1				ug/L	38	Standard
	Br	81	965.0	4.2				ug/L	965	Standard
	P	31	283087.9	3.4				ug/L	176735	Standard
	S	34	64642.6	1.1				ug/L	28891	Standard
	Sr	88	58.3	17.3				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	333.3	5.3				mg/L	3	Standard
	Dy	164	13209.7	10.4				mg/L	14	Standard
	Ho-1	165	8933.3	10.7				mg/L	7	Standard
	Er	166	8917.0	11.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.917	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.053	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.149
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.628
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 16:11:19
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	668495.3	2.7				ug/L	552027	Standard
	Be	9	104513.2	10.5	**45.6840**	3.844	8.4	ug/L	18	Standard
	Al	27	8745387.1	9.5	**52.4712**	3.838	7.3	ug/L	841	Standard
	Sc	45	39097.1	2.9				ug/L	35084	Standard
	Ti	47	24142.7	10.2	**118.1362**	10.087	8.5	ug/L	22	Standard
	V	51	289950.7	12.0	**51.6527**	5.407	10.5	ug/L	812	Standard
	Cr	52	246186.3	13.1	**49.8093**	5.694	11.4	ug/L	4274	Standard
	Cr	53	50155.2	10.8	**51.4209**	4.723	9.2	ug/L	1106	Standard
	Mn	55	361606.0	10.2	**48.4204**	4.044	8.4	ug/L	1207	Standard
	Co	59	249163.3	11.4	**47.3873**	4.493	9.5	ug/L	71	Standard
	Ni	60	106669.8	10.3	**52.5915**	4.454	8.5	ug/L	295	Standard
	Cu	65	103958.3	9.7	**51.0202**	3.962	7.8	ug/L	87	Standard
	Zn	66	55417.0	11.4	**51.6097**	4.910	9.5	ug/L	469	Standard
>	Ge	72	476424.8	2.7				ug/L	514704	Standard
	As	75	59774.4	9.6	**49.8262**	3.867	7.8	ug/L	-121	Standard
	Se	82	6109.6	9.4	**51.5990**	3.837	7.4	ug/L	-1	Standard
	Se-1	77	4069.5	8.8	**50.4542**	3.573	7.1	ug/L	127	Standard
>	Ga	71	300.0	7.6				mg/L	175	Standard
	Rb	85	3333.7	5.8				ug/L	50	Standard
	Y	89	551998.7	0.4				ug/L	527499	Standard
>	Rh	103	23.3	53.9				ug/L	10	Standard
	Mo	98	396971.4	10.3	**93.6168**	8.518	9.1	ug/L	23	Standard
	Ag	107	290837.0	8.3	**49.4327**	3.493	7.1	ug/L	59	Standard
	Cd	111	88164.6	10.7	**48.0091**	4.607	9.6	mg/L	3	Standard
	Cd	114	241467.5	10.2	**50.9974**	4.619	9.1	ug/L	10	Standard
>	In	115	595589.0	1.3				ug/L	537195	Standard
	Sn	118	261653.1	11.3	**49.8557**	5.083	10.2	ug/L	281	Standard
	Sb	123	201634.6	9.3	**48.9673**	4.015	8.2	ug/L	167	Standard
	Ba	135	92224.1	10.2	**50.0356**	4.495	9.0	ug/L	10	Standard
	Ce	140	617.0	68.7				ug/L	27	Standard
>	Tb	159	826164.3	1.4				ug/L	758170	Standard
	Ho	165	7.7	37.7				ug/L	7	Standard
	Tl	203	292727.8	7.4	**50.6015**	3.482	6.9	ug/L	5	Standard
	Tl	205	7670.9	7.3	**50.6752**	3.486	6.9	ug/L	0	Standard
	Pb	206	231326.1	9.1	**50.5572**	4.273	8.5	ug/L	182	Standard
	Pb	207	198906.3	9.0	**51.1264**	4.245	8.3	ug/L	145	Standard
	Pb	208	280476.2	10.9	**50.2872**	5.166	10.3	ug/L	207	Standard
	U	238	239374.6	10.9	**48.9626**	5.100	10.4	ug/L	1	Standard
>	Bi	209	359453.0	2.1				ug/L	325207	Standard

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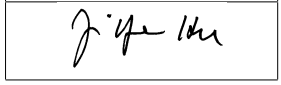

	Na	23	28.3	36.7	**3.1497**	1.648	52.3	mg/L	0	Standard
	Mg	24	4902.5	10.6	**4.6440**	0.444	9.6	mg/L	25	Standard
	K	39	288.3	10.2	**4.6492**	0.395	8.5	mg/L	3	Standard
	Ca	43	1690.1	4.3	**4.3455**	0.080	1.8	mg/L	297	Standard
	Fe	54	5700.5	8.7	**5.9828**	0.454	7.6	mg/L	91	Standard
	Fe	57	1725.1	12.3	**3.9119**	0.493	12.6	mg/L	237	Standard
>	**Sc-1**	45	39097.1	2.9				mg/L	35084	Standard
	Cl	35	72265.3	1.0				ug/L	29808	Standard
	Kr	83	41.6	10.7				ug/L	38	Standard
	Br	81	743.4	15.6				ug/L	965	Standard
	P	31	292752.1	3.8				ug/L	176735	Standard
	S	34	71788.0	0.6				ug/L	28891	Standard
	Sr	88	47.5	19.0				ug/L	27	Standard
	C	12	5.0	0.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	34.6				mg/L	3	Standard
	Dy	164	15.7	39.3				mg/L	14	Standard
	Ho-1	165	7.7	37.7				mg/L	7	Standard
	Er	166	13.0	26.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.098	
	Be	9	91.368		
	Al	27	104.942		
	Sc	45			
	Ti	47	118.136		
	V	51	103.305		
	Cr	52	99.619		
	Cr	53			
	Mn	55	96.841		
	Co	59	94.775		
	Ni	60	105.183		
	Cu	65	102.040		
	Zn	66	103.219		
>	Ge	72		92.563	
	As	75	99.652		
	Se	82	103.198		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	93.617	
|	Ag	107	98.865	
|	Cd	111	96.018	
|	Cd	114		
|>	In	115		110.870
|	Sn	118	99.711	
|	Sb	123	97.935	
⌊	Ba	135	100.071	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	101.203	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	100.574	
|	U	238	97.925	
⌊>	Bi	209		110.531
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 16:15:05
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	677958.6	1.6				ug/L	552027	Standard
	Be	9	45.0	48.2	**0.0082**	0.009	112.0	ug/L	18	Standard
	Al	27	2974.0	51.3	**0.0056**	0.009	160.4	ug/L	841	Standard
	Sc	45	39314.3	3.2				ug/L	35084	Standard
	Ti	47	23.3	36.4	**0.0327**	0.043	132.4	ug/L	22	Standard
	V	51	1048.9	4.9	**0.0629**	0.007	11.9	ug/L	812	Standard
	Cr	52	3703.5	4.6	**-0.0633**	0.016	25.7	ug/L	4274	Standard
	Cr	53	444.2	13.1	**-0.5655**	0.060	10.7	ug/L	1106	Standard
	Mn	55	1765.4	21.4	**0.0795**	0.051	64.0	ug/L	1207	Standard
	Co	59	88.3	8.8	**0.0012**	0.001	86.3	ug/L	71	Standard
	Ni	60	185.0	9.5	**-0.0402**	0.007	17.4	ug/L	295	Standard
	Cu	65	113.7	31.8	**0.0016**	0.018	1101.7	ug/L	87	Standard
	Zn	66	665.0	7.6	**-0.0806**	0.058	72.2	ug/L	469	Standard
>	**Ge**	72	471340.2	2.5				ug/L	514704	Standard
	As	75	-109.0	18.1	**0.0152**	0.019	122.2	ug/L	-121	Standard
	Se	82	-0.2	2530.6	**-0.0053**	0.039	738.3	ug/L	-1	Standard
	Se-1	77	97.3	6.0	**-0.1158**	0.088	75.5	ug/L	127	Standard
>	**Ga**	71	291.7	12.6				mg/L	175	Standard
	Rb	85	143.3	35.3				ug/L	50	Standard
	Y	89	546463.3	2.8				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	94.9	34.7	**0.0148**	0.007	47.7	ug/L	23	Standard
	Ag	107	95.7	36.5	**0.0033**	0.006	169.8	ug/L	59	Standard
	Cd	111	10.6	71.5	**0.0037**	0.004	108.3	mg/L	3	Standard
	Cd	114	39.5	44.1	**0.0029**	0.004	122.5	ug/L	10	Standard
>	**In**	115	603176.9	2.7				ug/L	537195	Standard
	Sn	118	489.3	8.2	**0.0258**	0.010	39.1	ug/L	281	Standard
	Sb	123	924.2	9.8	**0.2044**	0.016	7.8	ug/L	167	Standard
	Ba	135	27.0	42.1	**-0.0088**	0.006	65.7	ug/L	10	Standard
	Ce	140	243.0	67.3				ug/L	27	Standard
>	**Tb**	159	828088.2	2.4				ug/L	758170	Standard
	Ho	165	9.7	41.8				ug/L	7	Standard
	Tl	203	29.3	59.6	**0.0040**	0.003	70.8	ug/L	5	Standard
	Tl	205	1.3	114.6	**0.0162**	0.010	62.1	ug/L	0	Standard
	Pb	206	226.7	15.7	**0.0003**	0.008	2163.6	ug/L	182	Standard
	Pb	207	195.0	5.9	**0.0038**	0.004	107.3	ug/L	145	Standard
	Pb	208	268.0	2.0	**0.0008**	0.002	254.5	ug/L	207	Standard
	U	238	33.7	58.7	**0.0059**	0.004	68.3	ug/L	1	Standard
>	**Bi**	209	370434.9	2.8				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8375**	0.437	52.1	mg/L	0	Standard
	Mg	24	25.0	20.0	**-0.0162**	0.005	33.3	mg/L	25	Standard
	K	39	3.3	86.6	**-0.0000**	0.048321	352.2	mg/L	3	Standard
	Ca	43	228.3	18.6	**-0.2943**	0.120	40.7	mg/L	297	Standard
	Fe	54	199.3	34.4	**0.0936**	0.066	70.1	mg/L	91	Standard
	Fe	57	116.7	13.1	**-0.2152**	0.038	17.6	mg/L	237	Standard
>	**Sc-1**	45	39314.3	3.2				mg/L	35084	Standard
	Cl	35	70998.1	4.0				ug/L	29808	Standard
	Kr	83	37.4	4.1				ug/L	38	Standard
	Br	81	721.7	8.6				ug/L	965	Standard
	P	31	280380.1	1.8				ug/L	176735	Standard
	S	34	68840.3	3.1				ug/L	28891	Standard
	Sr	88	39.2	13.3				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	114.6				mg/L	3	Standard
	Dy	164	9.4	26.8				mg/L	14	Standard
	Ho-1	165	9.7	41.8				mg/L	7	Standard
	Er	166	12.7	24.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.813	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.575	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	112.283
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.907
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

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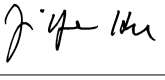

Method 6020 - Summary Report

Sample ID: L1305156101
Sample Date/Time: Tuesday, June 04, 2013 16:19:09
Number of Replicates: 3
Autosampler Position: 205
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	697764.7	0.4				ug/L	552027	Standard
	Be	9	53.7	18.4	**0.0114**	0.004	35.8	ug/L	18	Standard
	Al	27	1928092.7	9.9	**11.0852**	1.101	9.9	ug/L	841	Standard
	Sc	45	40565.9	1.0				ug/L	35084	Standard
	Ti	47	401.3	10.0	**1.8754**	0.190	10.1	ug/L	22	Standard
	V	51	326.0	106.9	**-0.0688**	0.061	89.3	ug/L	812	Standard
	Cr	52	6978.6	3.3	**0.5974**	0.051	8.5	ug/L	4274	Standard
	Cr	53	6071.2	3.7	**5.2952**	0.274	5.2	ug/L	1106	Standard
	Mn	55	155507.2	10.9	**20.6672**	2.291	11.1	ug/L	1207	Standard
	Co	59	514.0	9.9	**0.0818**	0.010	12.2	ug/L	71	Standard
	Ni	60	2529.2	7.6	**1.1136**	0.098	8.8	ug/L	295	Standard
	Cu	65	20742.9	9.0	**10.1032**	0.913	9.0	ug/L	87	Standard
	Zn	66	264154.6	9.6	**247.9763**	24.077	9.7	ug/L	469	Standard
>	**Ge**	72	478441.9	0.9				ug/L	514704	Standard
	As	75	202.8	35.6	**0.2756**	0.061	22.1	ug/L	-121	Standard
	Se	82	689.9	8.1	**5.8059**	0.485	8.4	ug/L	-1	Standard
	Se-1	77	1170.4	5.6	**13.4849**	0.859	6.4	ug/L	127	Standard
>	**Ga**	71	455.0	6.1				mg/L	175	Standard
	Rb	85	26354.6	7.0				ug/L	50	Standard
	Y	89	548488.3	0.8				ug/L	527499	Standard
>	**Rh**	103	11.7	89.2				ug/L	10	Standard
	Mo	98	1225.3	8.4	**0.2831**	0.023	8.2	ug/L	23	Standard
	Ag	107	112.7	17.4	**0.0066**	0.003	51.1	ug/L	59	Standard
	Cd	111	3579.4	11.1	**1.9562**	0.210	10.7	mg/L	3	Standard
	Cd	114	9498.2	9.3	**2.0101**	0.180	9.0	ug/L	10	Standard
>	**In**	115	593157.3	0.4				ug/L	537195	Standard
	Sn	118	2306.5	4.7	**0.3755**	0.019	5.0	ug/L	281	Standard
	Sb	123	1645.7	7.7	**0.3844**	0.030	7.7	ug/L	167	Standard
	Ba	135	11671.2	9.3	**6.3413**	0.569	9.0	ug/L	10	Standard
	Ce	140	1092.4	15.1				ug/L	27	Standard
>	**Tb**	159	828564.4	0.9				ug/L	758170	Standard
	Ho	165	21.0	29.7				ug/L	7	Standard
	Tl	203	241.0	9.5	**0.0353**	0.003	7.8	ug/L	5	Standard
	Tl	205	4.3	66.6	**0.0322**	0.016	50.4	ug/L	0	Standard
	Pb	206	14597.7	9.6	**2.7247**	0.205	7.5	ug/L	182	Standard
	Pb	207	11766.3	10.7	**2.5824**	0.219	8.5	ug/L	145	Standard
	Pb	208	16974.0	10.9	**2.5982**	0.230	8.9	ug/L	207	Standard
	U	238	60.0	13.6	**0.0099**	0.001	14.0	ug/L	1	Standard
>	**Bi**	209	413685.3	2.7				ug/L	325207	Standard

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	Na	23	161.7	27.7	**22.0683**	6.343	28.7	mg/L	0	Standard
	Mg	24	8033.8	9.7	**7.3607**	0.686	9.3	mg/L	25	Standard
	K	39	380.0	21.7	**5.9269**	1.315	22.2	mg/L	3	Standard
	Ca	43	5826.1	12.2	**16.7920**	2.149	12.8	mg/L	297	Standard
	Fe	54	181.1	16.1	**0.0694**	0.028	40.6	mg/L	91	Standard
	Fe	57	830.0	4.8	**1.5401**	0.084	5.4	mg/L	237	Standard
>	**Sc-1**	45	40565.9	1.0				mg/L	35084	Standard
	Cl	35	84154.4	1.7				ug/L	29808	Standard
	Kr	83	40.4	17.0				ug/L	38	Standard
	Br	81	1157.5	1.3				ug/L	965	Standard
	P	31	286559.8	2.6				ug/L	176735	Standard
	S	34	71067.9	0.2				ug/L	28891	Standard
	Sr	88	60.8	9.5				ug/L	27	Standard
	C	12	11.7	65.5				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	16.7	45.8				mg/L	3	Standard
	Dy	164	25.9	9.4				mg/L	14	Standard
	Ho-1	165	21.0	29.7				mg/L	7	Standard
	Er	166	23.7	20.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		126.401	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.955	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: L1305156101
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		110.417
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		127.207
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Zn 66 Upper, S, EEE	Zn	66	
Bi 209 Int Std for sample	Bi	209	Rerun sample

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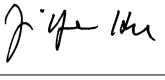

Method 6020 - Summary Report

Sample ID: L1305159513
Sample Date/Time: Tuesday, June 04, 2013 16:23:13
Number of Replicates: 3
Autosampler Position: 321
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	690664.3	1.1				ug/L	552027	Standard
	Be	9	2195.2	7.4	**0.9185**	0.060	6.5	ug/L	18	Standard
	Al	27	1009135.8	7.9	**5.8532**	0.412	7.0	ug/L	841	Standard
	Sc	45	54175.3	6.3				ug/L	35084	Standard
	Ti	47	18137.3	10.3	**87.1916**	8.802	10.1	ug/L	22	Standard
	V	51	524736.5	10.8	**91.9774**	9.803	10.7	ug/L	812	Standard
	Cr	52	388216.1	10.9	**77.6854**	8.440	10.9	ug/L	4274	Standard
	Cr	53	81366.8	9.9	**82.6026**	8.089	9.8	ug/L	1106	Standard
	Mn	55	18083245.3	10.0	**2387.5936**	233.905	9.8	ug/L	1207	Standard
	Co	59	127959.5	11.6	**23.9133**	2.726	11.4	ug/L	71	Standard
	Ni	60	23384.1	9.1	**11.2267**	1.010	9.0	ug/L	295	Standard
	Cu	65	26145.7	9.7	**12.5693**	1.192	9.5	ug/L	87	Standard
	Zn	66	51832.8	10.1	**47.3957**	4.777	10.1	ug/L	469	Standard
>	**Ge**	72	485166.7	0.3				ug/L	514704	Standard
	As	75	14607.1	9.4	**12.0469**	1.094	9.1	ug/L	-121	Standard
	Se	82	72.7	10.6	**0.6000**	0.062	10.4	ug/L	-1	Standard
	Se-1	77	250.3	16.3	**1.7615**	0.502	28.5	ug/L	127	Standard
>	**Ga**	71	68276.7	12.2				mg/L	175	Standard
	Rb	85	352498.2	5.6				ug/L	50	Standard
	Y	89	1025970.6	4.8				ug/L	527499	Standard
>	**Rh**	103	30.0	28.9				ug/L	10	Standard
	Mo	98	2019.6	10.8	**0.4741**	0.052	11.0	ug/L	23	Standard
	Ag	107	1578.4	10.1	**0.2585**	0.027	10.6	ug/L	59	Standard
	Cd	111	230.8	12.4	**0.1251**	0.016	12.6	mg/L	3	Standard
	Cd	114	506.5	5.9	**0.1028**	0.006	6.1	ug/L	10	Standard
>	**In**	115	589847.0	0.3				ug/L	537195	Standard
	Sn	118	704.0	5.5	**0.0691**	0.007	10.6	ug/L	281	Standard
	Sb	123	380.5	8.4	**0.0762**	0.008	10.4	ug/L	167	Standard
	Ba	135	275993.4	9.6	**151.3631**	14.597	9.6	ug/L	10	Standard
	Ce	140	4802789.1	9.7				ug/L	27	Standard
>	**Tb**	159	838315.3	0.9				ug/L	758170	Standard
	Ho	165	26982.5	10.8				ug/L	7	Standard
	Tl	203	3686.8	7.7	**0.6274**	0.047	7.6	ug/L	5	Standard
	Tl	205	102.3	10.0	**0.6734**	0.059	8.8	ug/L	0	Standard
	Pb	206	204365.0	8.6	**44.0313**	3.749	8.5	ug/L	182	Standard
	Pb	207	162222.7	8.9	**41.0990**	3.570	8.7	ug/L	145	Standard
	Pb	208	238227.5	8.9	**42.1059**	3.714	8.8	ug/L	207	Standard
	U	238	15400.2	10.8	**3.1045**	0.328	10.6	ug/L	1	Standard
>	**Bi**	209	364662.8	1.1				ug/L	325207	Standard

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	Na	23	6.7	86.6	**-0.3625**	0.633	174.6	mg/L	0	Standard
	Mg	24	31.7	18.2	**-0.0184**	0.003	15.0	mg/L	25	Standard
	K	39	55.0	24.1	**0.5916**	0.136	22.9	mg/L	3	Standard
	Ca	43	521.7	6.2	**0.1813**	0.024	13.1	mg/L	297	Standard
	Fe	54	58338.8	13.1	**44.8237**	3.184	7.1	mg/L	91	Standard
	Fe	57	15004.1	10.5	**27.2325**	1.261	4.6	mg/L	237	Standard
>	**Sc-1**	45	54175.3	6.3				mg/L	35084	Standard
	Cl	35	69052.7	1.4				ug/L	29808	Standard
	Kr	83	100.0	7.5				ug/L	38	Standard
	Br	81	841.7	5.1				ug/L	965	Standard
	P	31	265943.1	1.5				ug/L	176735	Standard
	S	34	63109.5	0.7				ug/L	28891	Standard
	Sr	88	51.7	40.6				ug/L	27	Standard
	C	12	8.3	124.9				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	195.0	24.5				mg/L	3	Standard
	Dy	164	40709.0	11.0				mg/L	14	Standard
	Ho-1	165	26982.5	10.8				mg/L	7	Standard
	Er	166	25952.4	10.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		125.114	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.261	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		109.801
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		112.133
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1305159514
Sample Date/Time: Tuesday, June 04, 2013 16:26:59
Number of Replicates: 3
Autosampler Position: 322
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	679616.7	2.8				ug/L	552027	Standard
	Be	9	1134.0	9.8	**0.4769**	0.041	8.7	ug/L	18	Standard
	Al	27	260875.5	8.7	**1.5292**	0.120	7.9	ug/L	841	Standard
	Sc	45	58047.9	6.3				ug/L	35084	Standard
	Ti	47	7077.3	9.9	**34.3329**	3.091	9.0	ug/L	22	Standard
	V	51	468499.3	10.1	**83.0035**	8.178	9.9	ug/L	812	Standard
	Cr	52	322892.3	11.4	**65.1814**	7.269	11.2	ug/L	4274	Standard
	Cr	53	66745.2	10.4	**68.3183**	6.965	10.2	ug/L	1106	Standard
	Mn	55	4930531.3	10.3	**657.8978**	64.266	9.8	ug/L	1207	Standard
	Co	59	51878.7	11.2	**9.7903**	1.044	10.7	ug/L	71	Standard
	Ni	60	6642.8	9.5	**3.1289**	0.288	9.2	ug/L	295	Standard
	Cu	65	18405.6	9.1	**8.9281**	0.765	8.6	ug/L	87	Standard
	Zn	66	22815.6	8.6	**20.6936**	1.785	8.6	ug/L	469	Standard
>	**Ge**	72	479942.8	1.8				ug/L	514704	Standard
	As	75	5994.5	8.9	**5.0608**	0.426	8.4	ug/L	-121	Standard
	Se	82	6.7	96.0	**0.0528**	0.053	99.9	ug/L	-1	Standard
	Se-1	77	151.0	6.1	**0.5389**	0.081	15.1	ug/L	127	Standard
>	**Ga**	71	54562.2	10.8				mg/L	175	Standard
	Rb	85	152267.7	7.8				ug/L	50	Standard
	Y	89	659853.8	3.3				ug/L	527499	Standard
>	**Rh**	103	16.7	17.3				ug/L	10	Standard
	Mo	98	1146.0	12.9	**0.2668**	0.031	11.7	ug/L	23	Standard
	Ag	107	1360.7	11.7	**0.2218**	0.024	10.7	ug/L	59	Standard
	Cd	111	161.1	12.7	**0.0870**	0.010	11.6	mg/L	3	Standard
	Cd	114	314.3	4.7	**0.0620**	0.002	3.4	ug/L	10	Standard
>	**In**	115	587267.8	1.6				ug/L	537195	Standard
	Sn	118	14863.6	6.9	**2.8135**	0.227	8.1	ug/L	281	Standard
	Sb	123	323.0	5.3	**0.0624**	0.003	4.9	ug/L	167	Standard
	Ba	135	77946.5	9.4	**42.8912**	3.532	8.2	ug/L	10	Standard
	Ce	140	3393250.3	9.9				ug/L	27	Standard
>	**Tb**	159	813585.3	1.8				ug/L	758170	Standard
	Ho	165	7924.8	11.8				ug/L	7	Standard
	Tl	203	2298.2	5.1	**0.3899**	0.015	3.9	ug/L	5	Standard
	Tl	205	66.3	22.7	**0.4378**	0.093	21.3	ug/L	0	Standard
	Pb	206	230034.6	9.5	**49.4358**	4.099	8.3	ug/L	182	Standard
	Pb	207	182570.0	8.8	**46.1430**	3.538	7.7	ug/L	145	Standard
	Pb	208	267373.2	10.3	**47.1368**	4.341	9.2	ug/L	207	Standard
	U	238	22006.7	9.7	**4.4254**	0.381	8.6	ug/L	1	Standard
>	**Bi**	209	365412.0	1.7				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.9097**	0.311	34.2	mg/L	0	Standard
	Mg	24	71.7	28.2	**0.0065**	0.015	236.4	mg/L	25	Standard
	K	39	11.7	24.7	**0.0726**	0.026	36.0	mg/L	3	Standard
	Ca	43	255.0	18.7	**-0.4707**	0.071	15.1	mg/L	297	Standard
	Fe	54	57479.0	12.2	**41.2244**	2.598	6.3	mg/L	91	Standard
	Fe	57	14165.0	11.4	**23.9368**	1.610	6.7	mg/L	237	Standard
>	**Sc-1**	45	58047.9	6.3				mg/L	35084	Standard
	Cl	35	67568.0	1.8				ug/L	29808	Standard
	Kr	83	62.4	5.9				ug/L	38	Standard
	Br	81	972.5	16.3				ug/L	965	Standard
	P	31	266348.5	2.8				ug/L	176735	Standard
	S	34	64471.1	2.1				ug/L	28891	Standard
	Sr	88	50.0	13.2				ug/L	27	Standard
	C	12	5.0	0.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	418.3	8.4				mg/L	3	Standard
	Dy	164	12091.8	10.4				mg/L	14	Standard
	Ho-1	165	7924.8	11.8				mg/L	7	Standard
	Er	166	7996.5	11.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		123.113	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.246	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	109.321	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	112.363	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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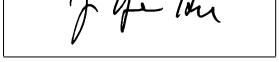

Method 6020 - Summary Report

Sample ID: L1305159515
Sample Date/Time: Tuesday, June 04, 2013 16:30:45
Number of Replicates: 3
Autosampler Position: 323
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	687819.6	0.8				ug/L	552027	Standard
	Be	9	2886.9	10.1	**1.2165**	0.114	9.4	ug/L	18	Standard
	Al	27	2778686.8	7.8	**16.2059**	1.150	7.1	ug/L	841	Standard
	Sc	45	54032.9	2.9				ug/L	35084	Standard
	Ti	47	7339.5	11.2	**35.4517**	3.898	11.0	ug/L	22	Standard
	V	51	333062.9	10.5	**58.6942**	6.024	10.3	ug/L	812	Standard
	Cr	52	201930.7	10.5	**40.2598**	4.222	10.5	ug/L	4274	Standard
	Cr	53	41660.1	9.8	**42.0525**	4.100	9.7	ug/L	1106	Standard
	Mn	55	32229305.9	9.4	**4281.7417**	394.149	9.2	ug/L	1207	Standard
	Co	59	131652.7	10.9	**24.7567**	2.655	10.7	ug/L	71	Standard
	Ni	60	22926.7	8.1	**11.0735**	0.885	8.0	ug/L	295	Standard
	Cu	65	1047061.8	9.1	**508.6337**	45.016	8.9	ug/L	87	Standard
	Zn	66	156591.3	10.0	**145.5303**	14.221	9.8	ug/L	469	Standard
>	**Ge**	72	482181.7	0.3				ug/L	514704	Standard
	As	75	10649.9	8.3	**8.8663**	0.705	7.9	ug/L	-121	Standard
	Se	82	95.4	14.7	**0.7938**	0.116	14.6	ug/L	-1	Standard
	Se-1	77	301.7	6.3	**2.4282**	0.233	9.6	ug/L	127	Standard
>	**Ga**	71	36835.1	11.4				mg/L	175	Standard
	Rb	85	219804.9	6.0				ug/L	50	Standard
	Y	89	1442412.7	4.6				ug/L	527499	Standard
>	**Rh**	103	206.7	1.4				ug/L	10	Standard
	Mo	98	1686.8	7.7	**0.3924**	0.033	8.3	ug/L	23	Standard
	Ag	107	2040.8	8.2	**0.3357**	0.030	8.8	ug/L	59	Standard
	Cd	111	1510.2	10.1	**0.8242**	0.087	10.5	mg/L	3	Standard
	Cd	114	4091.5	9.4	**0.8626**	0.085	9.8	ug/L	10	Standard
>	**In**	115	593599.5	0.6				ug/L	537195	Standard
	Sn	118	2116.5	8.5	**0.3390**	0.036	10.7	ug/L	281	Standard
	Sb	123	794.7	10.0	**0.1767**	0.020	11.6	ug/L	167	Standard
	Ba	135	477017.5	8.5	**260.0464**	23.327	9.0	ug/L	10	Standard
	Ce	140	4959488.1	9.7				ug/L	27	Standard
>	**Tb**	159	869982.6	1.0				ug/L	758170	Standard
	Ho	165	46651.6	10.6				ug/L	7	Standard
	Tl	203	3075.3	7.2	**0.5155**	0.039	7.6	ug/L	5	Standard
	Tl	205	82.7	2.5	**0.5379**	0.017	3.2	ug/L	0	Standard
	Pb	206	633213.6	9.1	**134.5230**	12.449	9.3	ug/L	182	Standard
	Pb	207	519322.3	8.7	**129.7438**	11.564	8.9	ug/L	145	Standard
	Pb	208	754173.2	9.1	**131.4303**	12.092	9.2	ug/L	207	Standard
	U	238	12988.6	10.5	**2.5800**	0.273	10.6	ug/L	1	Standard
>	**Bi**	209	370156.8	0.7				ug/L	325207	Standard

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	Na	23	61.7	40.8	**5.5201**	2.645	47.9	mg/L	0	Standard
	Mg	24	66.7	15.6	**0.0059**	0.006	108.4	mg/L	25	Standard
	K	39	43.3	6.7	**0.4572**	0.037	8.1	mg/L	3	Standard
	Ca	43	2851.9	11.8	**5.5239**	0.656	11.9	mg/L	297	Standard
	Fe	54	37117.7	12.6	**28.5924**	3.000	10.5	mg/L	91	Standard
	Fe	57	9583.1	11.0	**17.2720**	1.696	9.8	mg/L	237	Standard
>	**Sc-1**	45	54032.9	2.9				mg/L	35084	Standard
	Cl	35	70936.7	1.1				ug/L	29808	Standard
	Kr	83	130.0	10.3				ug/L	38	Standard
	Br	81	976.7	7.2				ug/L	965	Standard
	P	31	270336.0	3.1				ug/L	176735	Standard
	S	34	66491.4	0.8				ug/L	28891	Standard
	Sr	88	47.5	10.5				ug/L	27	Standard
	C	12	11.7	24.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	283.3	17.7				mg/L	3	Standard
	Dy	164	68902.2	10.8				mg/L	14	Standard
	Ho-1	165	46651.6	10.6				mg/L	7	Standard
	Er	166	44252.3	10.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		124.599	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.681	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		110.500
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		113.822
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	
Ba 135 Upper, S, EEE	Ba	135	

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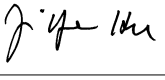

Pb 206 Upper, S, EEE	Pb	206
Pb 207 Upper, S, EEE	Pb	207
Pb 208 Upper, S, EEE	Pb	208

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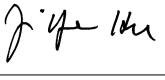

Method 6020 - Summary Report

Sample ID: L1305159516
Sample Date/Time: Tuesday, June 04, 2013 16:34:31
Number of Replicates: 3
Autosampler Position: 324
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	683374.5	2.4				ug/L	552027	Standard
	Be	9	3025.3	8.6	**1.2842**	0.105	8.2	ug/L	18	Standard
	Al	27	1033453.3	9.7	**6.0607**	0.566	9.3	ug/L	841	Standard
	Sc	45	61660.4	4.3				ug/L	35084	Standard
	Ti	47	22597.3	12.4	**108.4782**	12.547	11.6	ug/L	22	Standard
	V	51	840278.2	9.9	**147.1711**	13.750	9.3	ug/L	812	Standard
	Cr	52	376319.0	10.5	**75.1733**	7.521	10.0	ug/L	4274	Standard
	Cr	53	78575.6	10.8	**79.6188**	8.169	10.3	ug/L	1106	Standard
	Mn	55	19322155.2	10.0	**2547.5973**	236.374	9.3	ug/L	1207	Standard
	Co	59	94469.4	10.5	**17.6260**	1.728	9.8	ug/L	71	Standard
	Ni	60	15830.3	9.8	**7.5465**	0.693	9.2	ug/L	295	Standard
	Cu	65	36779.2	10.1	**17.6783**	1.659	9.4	ug/L	87	Standard
	Zn	66	69576.4	9.9	**63.7730**	5.925	9.3	ug/L	469	Standard
>	Ge	72	485701.6	1.0				ug/L	514704	Standard
	As	75	20654.5	8.7	**16.9681**	1.357	8.0	ug/L	-121	Standard
	Se	82	11.9	137.6	**0.0952**	0.135	141.5	ug/L	-1	Standard
	Se-1	77	206.3	11.6	**1.2076**	0.279	23.1	ug/L	127	Standard
>	Ga	71	94926.4	9.2				mg/L	175	Standard
	Rb	85	308073.0	7.3				ug/L	50	Standard
	Y	89	967201.5	5.1				ug/L	527499	Standard
>	Rh	103	21.7	35.3				ug/L	10	Standard
	Mo	98	4433.1	10.2	**1.0637**	0.107	10.1	ug/L	23	Standard
	Ag	107	1657.1	9.1	**0.2759**	0.025	9.2	ug/L	59	Standard
	Cd	111	323.5	6.7	**0.1785**	0.012	7.0	mg/L	3	Standard
	Cd	114	578.2	9.5	**0.1198**	0.011	9.5	ug/L	10	Standard
>	In	115	581832.0	1.1				ug/L	537195	Standard
	Sn	118	974.0	2.9	**0.1238**	0.007	5.6	ug/L	281	Standard
	Sb	123	300.6	12.8	**0.0576**	0.010	16.8	ug/L	167	Standard
	Ba	135	117979.0	8.9	**65.5761**	5.769	8.8	ug/L	10	Standard
	Ce	140	3929535.4	9.2				ug/L	27	Standard
>	Tb	159	810159.2	0.7				ug/L	758170	Standard
	Ho	165	21580.8	11.4				ug/L	7	Standard
	Tl	203	3686.8	6.9	**0.6292**	0.046	7.3	ug/L	5	Standard
	Tl	205	94.0	18.1	**0.6213**	0.112	18.0	ug/L	0	Standard
	Pb	206	154537.8	8.0	**33.3799**	2.846	8.5	ug/L	182	Standard
	Pb	207	122128.4	8.2	**31.0191**	2.663	8.6	ug/L	145	Standard
	Pb	208	177788.8	9.1	**31.5019**	2.994	9.5	ug/L	207	Standard
	U	238	24599.1	10.0	**4.9744**	0.519	10.4	ug/L	1	Standard
>	Bi	209	363746.2	1.2				ug/L	325207	Standard

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	Na	23	13.3	78.1	**0.1433**	0.922	643.7	mg/L	0	Standard
	Mg	24	66.7	37.7	**-0.0001**	0.014	16534.2	mg/L	25	Standard
	K	39	45.0	11.1	**0.4108**	0.047	11.5	mg/L	3	Standard
	Ca	43	756.7	10.1	**0.5063**	0.092	18.2	mg/L	297	Standard
	Fe	54	101524.1	10.7	**68.6994**	5.152	7.5	mg/L	91	Standard
	Fe	57	25516.7	11.7	**40.9396**	3.339	8.2	mg/L	237	Standard
>	**Sc-1**	45	61660.4	4.3				mg/L	35084	Standard
	Cl	35	70207.3	0.7				ug/L	29808	Standard
	Kr	83	106.4	10.0				ug/L	38	Standard
	Br	81	801.7	2.9				ug/L	965	Standard
	P	31	275509.9	2.4				ug/L	176735	Standard
	S	34	65704.7	0.1				ug/L	28891	Standard
	Sr	88	49.2	28.0				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	161.7	38.7				mg/L	3	Standard
	Dy	164	31070.7	10.4				mg/L	14	Standard
	Ho-1	165	21580.8	11.4				mg/L	7	Standard
	Er	166	20298.7	11.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		123.794	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.365	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		108.309
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		111.851
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Upper, S, EEE	Ti	47	
V 51 Upper, S, EEE	V	51	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305150701
Sample Date/Time: Tuesday, June 04, 2013 16:38:17
Number of Replicates: 3
Autosampler Position: 325
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	669388.6	1.1				ug/L	552027	Standard
	Be	9	2775.9	9.2	**1.2017**	0.100	8.3	ug/L	18	Standard
	Al	27	67473696.3	9.2	**404.5659**	33.528	8.3	ug/L	841	Standard
	Sc	45	48960.7	4.1				ug/L	35084	Standard
	Ti	47	3888.5	9.6	**19.8936**	1.754	8.8	ug/L	22	Standard
	V	51	172552.4	11.1	**32.1960**	3.194	9.9	ug/L	812	Standard
	Cr	52	105715.6	10.5	**21.9868**	2.135	9.7	ug/L	4274	Standard
	Cr	53	21834.2	12.5	**22.9180**	2.741	12.0	ug/L	1106	Standard
	Mn	55	7637151.1	9.8	**1076.3079**	94.062	8.7	ug/L	1207	Standard
	Co	59	118109.4	9.7	**23.5602**	1.999	8.5	ug/L	71	Standard
	Ni	60	141466.3	9.9	**73.2142**	6.367	8.7	ug/L	295	Standard
	Cu	65	97142.5	8.2	**50.0135**	3.444	6.9	ug/L	87	Standard
	Zn	66	164591.7	9.7	**162.3354**	13.512	8.3	ug/L	469	Standard
>	**Ge**	72	454333.6	2.3				ug/L	514704	Standard
	As	75	28417.8	9.1	**24.9020**	1.965	7.9	ug/L	-121	Standard
	Se	82	110.9	6.0	**0.9809**	0.070	7.2	ug/L	-1	Standard
	Se-1	77	245.3	8.3	**1.9085**	0.268	14.0	ug/L	127	Standard
>	**Ga**	71	24832.1	10.1				mg/L	175	Standard
	Rb	85	261843.1	6.7				ug/L	50	Standard
	Y	89	977966.3	5.7				ug/L	527499	Standard
>	**Rh**	103	41.7	27.7				ug/L	10	Standard
	Mo	98	35195.6	9.3	**8.8019**	0.875	9.9	ug/L	23	Standard
	Ag	107	880.0	11.9	**0.1460**	0.019	13.2	ug/L	59	Standard
	Cd	111	1105.3	8.1	**0.6365**	0.049	7.7	mg/L	3	Standard
	Cd	114	2981.3	11.2	**0.6629**	0.078	11.8	ug/L	10	Standard
>	**In**	115	561951.3	1.7				ug/L	537195	Standard
	Sn	118	682.0	18.2	**0.0713**	0.024	33.6	ug/L	281	Standard
	Sb	123	555.1	14.1	**0.1258**	0.020	15.7	ug/L	167	Standard
	Ba	135	197240.6	9.4	**113.5983**	11.467	10.1	ug/L	10	Standard
	Ce	140	984190.0	10.7				ug/L	27	Standard
>	**Tb**	159	806363.4	1.0				ug/L	758170	Standard
	Ho	165	24664.6	12.2				ug/L	7	Standard
	Tl	203	7096.3	10.4	**1.2850**	0.127	9.9	ug/L	5	Standard
	Tl	205	194.0	6.4	**1.3513**	0.090	6.6	ug/L	0	Standard
	Pb	206	146691.1	10.1	**33.5958**	3.244	9.7	ug/L	182	Standard
	Pb	207	114188.3	10.3	**30.7525**	3.009	9.8	ug/L	145	Standard
	Pb	208	164316.0	10.0	**30.8686**	2.943	9.5	ug/L	207	Standard
	U	238	12468.8	10.8	**2.6727**	0.273	10.2	ug/L	1	Standard
>	**Bi**	209	342848.8	0.8				ug/L	325207	Standard

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	Na	23	480.0	8.3	**56.0326**	5.959	10.6	mg/L	0	Standard
	Mg	24	138.3	5.5	**0.0658**	0.010	14.7	mg/L	25	Standard
	K	39	123.3	2.3	**1.5556**	0.094	6.0	mg/L	3	Standard
	Ca	43	21693.9	7.7	**53.8701**	2.030	3.8	mg/L	297	Standard
	Fe	54	53421.6	12.5	**45.4457**	3.933	8.7	mg/L	91	Standard
	Fe	57	16293.8	9.7	**32.8343**	1.922	5.9	mg/L	237	Standard
>	**Sc-1**	45	48960.7	4.1				mg/L	35084	Standard
	Cl	35	78147.7	1.6				ug/L	29808	Standard
	Kr	83	95.1	16.9				ug/L	38	Standard
	Br	81	1400.9	3.7				ug/L	965	Standard
	P	31	289604.2	3.2				ug/L	176735	Standard
	S	34	78978.7	1.1				ug/L	28891	Standard
	Sr	88	52.5	21.8				ug/L	27	Standard
	C	12	30.0	33.3				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	76.7	13.6				mg/L	3	Standard
	Dy	164	38705.6	11.2				mg/L	14	Standard
	Ho-1	165	24664.6	12.2				mg/L	7	Standard
	Er	166	22287.5	11.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.260	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		88.271	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: L1305150701
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		104.608
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		105.425
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	
Ba 135 Upper, S, EEE	Ba	135	

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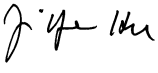

Method 6020 - Summary Report

Sample ID: L1305150702
Sample Date/Time: Tuesday, June 04, 2013 16:42:03
Number of Replicates: 3
Autosampler Position: 326
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	639020.2	2.0				ug/L	552027	Standard
	Be	9	2308.8	8.8	**1.0453**	0.076	7.3	ug/L	18	Standard
	Al	27	116025531.5	10.0	**728.4508**	60.907	8.4	ug/L	841	Standard
	Sc	45	48761.7	2.0				ug/L	35084	Standard
	Ti	47	3924.8	9.7	**20.5634**	2.033	9.9	ug/L	22	Standard
	V	51	147083.5	11.0	**28.0899**	3.048	10.9	ug/L	812	Standard
	Cr	52	94285.9	12.7	**20.0067**	2.588	12.9	ug/L	4274	Standard
	Cr	53	19425.0	10.5	**20.7904**	2.272	10.9	ug/L	1106	Standard
	Mn	55	6041118.1	10.7	**871.7430**	92.499	10.6	ug/L	1207	Standard
	Co	59	97464.5	11.4	**19.9087**	2.276	11.4	ug/L	71	Standard
	Ni	60	118986.7	8.6	**63.0501**	5.436	8.6	ug/L	295	Standard
	Cu	65	85837.3	8.7	**45.2470**	3.871	8.6	ug/L	87	Standard
	Zn	66	137336.0	9.1	**138.6159**	12.351	8.9	ug/L	469	Standard
>	**Ge**	72	443929.8	1.5				ug/L	514704	Standard
	As	75	24677.0	8.8	**22.1551**	1.917	8.7	ug/L	-121	Standard
	Se	82	105.9	15.3	**0.9568**	0.132	13.8	ug/L	-1	Standard
	Se-1	77	227.3	4.4	**1.7386**	0.112	6.5	ug/L	127	Standard
>	**Ga**	71	20584.0	7.8				mg/L	175	Standard
	Rb	85	212666.8	7.0				ug/L	50	Standard
	Y	89	954777.4	4.8				ug/L	527499	Standard
>	**Rh**	103	76.7	54.7				ug/L	10	Standard
	Mo	98	31688.5	10.7	**8.2054**	0.781	9.5	ug/L	23	Standard
	Ag	107	746.4	12.7	**0.1267**	0.016	12.9	ug/L	59	Standard
	Cd	111	869.5	7.7	**0.5185**	0.034	6.6	mg/L	3	Standard
	Cd	114	2423.9	9.4	**0.5573**	0.047	8.4	ug/L	10	Standard
>	**In**	115	541982.6	1.2				ug/L	537195	Standard
	Sn	118	783.0	4.6	**0.0977**	0.009	9.4	ug/L	281	Standard
	Sb	123	438.9	0.2	**0.1001**	0.001	1.3	ug/L	167	Standard
	Ba	135	149044.6	9.3	**88.8888**	7.217	8.1	ug/L	10	Standard
	Ce	140	865061.9	10.0				ug/L	27	Standard
>	**Tb**	159	799169.4	1.2				ug/L	758170	Standard
	Ho	165	23576.5	10.5				ug/L	7	Standard
	Tl	203	5904.5	7.2	**1.1253**	0.065	5.8	ug/L	5	Standard
	Tl	205	148.0	13.3	**1.0852**	0.125	11.6	ug/L	0	Standard
	Pb	206	126830.9	10.6	**30.5611**	2.817	9.2	ug/L	182	Standard
	Pb	207	97526.4	10.2	**27.6333**	2.428	8.8	ug/L	145	Standard
	Pb	208	140120.2	10.0	**27.6953**	2.369	8.6	ug/L	207	Standard
	U	238	13033.0	11.0	**2.9397**	0.282	9.6	ug/L	1	Standard
>	**Bi**	209	325663.8	2.3				ug/L	325207	Standard

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	Na	23	911.7	1.1	**107.6696**	3.076	2.9	mg/L	0	Standard
	Mg	24	211.7	22.7	**0.1225**	0.039	31.8	mg/L	25	Standard
	K	39	101.7	7.5	**1.2775**	0.124	9.7	mg/L	3	Standard
	Ca	43	43826.8	7.1	**110.4837**	8.754	7.9	mg/L	297	Standard
	Fe	54	44837.8	8.0	**38.3884**	3.304	8.6	mg/L	91	Standard
	Fe	57	16484.1	12.6	**33.4600**	4.780	14.3	mg/L	237	Standard
>	**Sc-1**	45	48761.7	2.0				mg/L	35084	Standard
	Cl	35	78616.5	1.8				ug/L	29808	Standard
	Kr	83	92.3	9.0				ug/L	38	Standard
	Br	81	1365.1	5.3				ug/L	965	Standard
	P	31	277070.6	2.6				ug/L	176735	Standard
	S	34	76154.3	1.9				ug/L	28891	Standard
	Sr	88	108.3	18.5				ug/L	27	Standard
	C	12	36.7	28.4				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	85.0	20.4				mg/L	3	Standard
	Dy	164	36969.9	11.6				mg/L	14	Standard
	Ho-1	165	23576.5	10.5				mg/L	7	Standard
	Er	166	21449.3	10.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		115.759	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		86.250	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: L1305150702
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		100.891
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		100.140
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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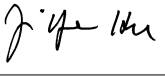

Method 6020 - Summary Report

Sample ID: L1305150703
Sample Date/Time: Tuesday, June 04, 2013 16:45:49
Number of Replicates: 3
Autosampler Position: 327
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	645165.7	2.4				ug/L	552027	Standard
	Be	9	2324.2	9.1	**1.0425**	0.085	8.2	ug/L	18	Standard
	Al	27	82921929.4	8.8	**515.9650**	40.946	7.9	ug/L	841	Standard
	Sc	45	49345.3	3.4				ug/L	35084	Standard
	Ti	47	3939.5	11.5	**20.4921**	2.314	11.3	ug/L	22	Standard
	V	51	147460.9	9.7	**27.9669**	2.687	9.6	ug/L	812	Standard
	Cr	52	90393.0	11.1	**19.0090**	2.159	11.4	ug/L	4274	Standard
	Cr	53	18072.5	10.2	**19.1279**	2.017	10.5	ug/L	1106	Standard
	Mn	55	6551260.4	10.0	**938.7889**	92.496	9.9	ug/L	1207	Standard
	Co	59	104234.2	10.3	**21.1425**	2.155	10.2	ug/L	71	Standard
	Ni	60	125025.1	8.9	**65.7905**	5.792	8.8	ug/L	295	Standard
	Cu	65	82343.5	8.4	**43.0973**	3.477	8.1	ug/L	87	Standard
	Zn	66	136448.4	9.7	**136.7590**	13.146	9.6	ug/L	469	Standard
>	**Ge**	72	447011.8	0.9				ug/L	514704	Standard
	As	75	22327.4	8.2	**19.9165**	1.588	8.0	ug/L	-121	Standard
	Se	82	103.4	7.0	**0.9286**	0.057	6.1	ug/L	-1	Standard
	Se-1	77	218.0	11.5	**1.5910**	0.343	21.5	ug/L	127	Standard
>	**Ga**	71	20418.9	12.1				mg/L	175	Standard
	Rb	85	228892.2	8.4				ug/L	50	Standard
	Y	89	933028.0	4.6				ug/L	527499	Standard
>	**Rh**	103	75.0	37.1				ug/L	10	Standard
	Mo	98	31205.5	9.6	**8.0634**	0.787	9.8	ug/L	23	Standard
	Ag	107	788.0	7.9	**0.1342**	0.012	8.9	ug/L	59	Standard
	Cd	111	1012.7	10.4	**0.6029**	0.064	10.6	mg/L	3	Standard
	Cd	114	2808.1	8.4	**0.6451**	0.056	8.7	ug/L	10	Standard
>	**In**	115	543578.8	0.3				ug/L	537195	Standard
	Sn	118	629.0	3.5	**0.0650**	0.004	6.6	ug/L	281	Standard
	Sb	123	550.5	11.5	**0.1295**	0.017	13.2	ug/L	167	Standard
	Ba	135	158936.9	9.5	**94.5839**	9.130	9.7	ug/L	10	Standard
	Ce	140	881830.8	9.7				ug/L	27	Standard
>	**Tb**	159	801097.3	0.3				ug/L	758170	Standard
	Ho	165	22643.4	10.6				ug/L	7	Standard
	Tl	203	6372.3	7.5	**1.2013**	0.092	7.7	ug/L	5	Standard
	Tl	205	174.3	19.3	**1.2640**	0.242	19.1	ug/L	0	Standard
	Pb	206	120595.1	9.3	**28.7468**	2.729	9.5	ug/L	182	Standard
	Pb	207	92984.7	10.0	**26.0648**	2.657	10.2	ug/L	145	Standard
	Pb	208	132823.4	9.3	**25.9707**	2.458	9.5	ug/L	207	Standard
	U	238	11443.0	10.1	**2.5539**	0.263	10.3	ug/L	1	Standard
>	**Bi**	209	329454.0	0.3				ug/L	325207	Standard

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	Na	23	753.4	18.0	**87.6392**	14.980	17.1	mg/L	0	Standard
	Mg	24	153.3	19.1	**0.0756**	0.019	24.8	mg/L	25	Standard
	K	39	88.3	11.8	**1.0877**	0.125	11.5	mg/L	3	Standard
	Ca	43	32693.8	10.8	**80.9949**	6.252	7.7	mg/L	297	Standard
	Fe	54	44803.9	11.2	**37.8199**	3.035	8.0	mg/L	91	Standard
	Fe	57	15344.5	11.9	**30.6384**	2.743	9.0	mg/L	237	Standard
>	**Sc-1**	45	49345.3	3.4				mg/L	35084	Standard
	Cl	35	78091.4	0.9				ug/L	29808	Standard
	Kr	83	85.1	15.1				ug/L	38	Standard
	Br	81	1253.4	6.6				ug/L	965	Standard
	P	31	275861.6	1.8				ug/L	176735	Standard
	S	34	76934.0	0.4				ug/L	28891	Standard
	Sr	88	67.5	14.8				ug/L	27	Standard
	C	12	20.0	25.0				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	81.7	9.4				mg/L	3	Standard
	Dy	164	35241.6	11.9				mg/L	14	Standard
	Ho-1	165	22643.4	10.6				mg/L	7	Standard
	Er	166	20249.6	11.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.872	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		86.848	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
| >	In	115		101.188
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		101.306
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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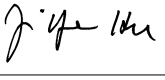

Method 6020 - Summary Report

Sample ID: L1305159517 WG432680-01
Sample Date/Time: Tuesday, June 04, 2013 16:49:35
Number of Replicates: 3
Autosampler Position: 328
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	555747.7	1.0				ug/L	552027	Standard
	Be	9	52.7	9.6	**0.0166**	0.002	14.3	ug/L	18	Standard
	Al	27	21926.7	12.9	**0.1464**	0.019	12.9	ug/L	841	Standard
	Sc	45	36841.4	0.9				ug/L	35084	Standard
	Ti	47	176.7	11.9	**0.9217**	0.131	14.3	ug/L	22	Standard
	V	51	8392.7	3.4	**1.6126**	0.049	3.0	ug/L	812	Standard
	Cr	52	8011.5	2.3	**1.0791**	0.044	4.1	ug/L	4274	Standard
	Cr	53	1310.1	4.0	**0.5553**	0.085	15.3	ug/L	1106	Standard
	Mn	55	302589.4	4.6	**47.0190**	2.248	4.8	ug/L	1207	Standard
	Co	59	2049.8	3.2	**0.4369**	0.014	3.2	ug/L	71	Standard
	Ni	60	989.4	5.1	**0.4350**	0.034	7.7	ug/L	295	Standard
	Cu	65	433.7	5.0	**0.1924**	0.010	5.3	ug/L	87	Standard
	Zn	66	2153.2	2.6	**1.6432**	0.060	3.7	ug/L	469	Standard
>	**Ge**	72	410976.3	1.5				ug/L	514704	Standard
	As	75	56.5	43.0	**0.1617**	0.023	14.3	ug/L	-121	Standard
	Se	82	3.6	96.4	**0.0324**	0.035	106.3	ug/L	-1	Standard
	Se-1	77	85.3	13.1	**-0.1086**	0.177	162.8	ug/L	127	Standard
>	**Ga**	71	1070.0	5.6				mg/L	175	Standard
	Rb	85	4130.6	2.4				ug/L	50	Standard
	Y	89	474043.4	0.7				ug/L	527499	Standard
>	**Rh**	103	3.3	86.6				ug/L	10	Standard
	Mo	98	47.8	20.6	**0.0058**	0.003	45.3	ug/L	23	Standard
	Ag	107	70.3	9.7	**0.0012**	0.001	111.5	ug/L	59	Standard
	Cd	111	7.3	21.0	**0.0027**	0.001	37.0	mg/L	3	Standard
	Cd	114	27.0	31.1	**0.0013**	0.002	161.3	ug/L	10	Standard
>	**In**	115	514676.7	0.4				ug/L	537195	Standard
	Sn	118	361.0	24.0	**0.0131**	0.019	145.1	ug/L	281	Standard
	Sb	123	181.6	2.0	**0.0339**	0.001	3.6	ug/L	167	Standard
	Ba	135	3207.0	3.2	**1.9928**	0.067	3.4	ug/L	10	Standard
	Ce	140	92231.5	3.9				ug/L	27	Standard
>	**Tb**	159	735075.3	1.9				ug/L	758170	Standard
	Ho	165	314.0	6.7				ug/L	7	Standard
	Tl	203	73.0	11.2	**0.0129**	0.002	13.4	ug/L	5	Standard
	Tl	205	2.7	94.4	**0.0265**	0.018	66.9	ug/L	0	Standard
	Pb	206	4096.9	3.1	**0.9284**	0.035	3.7	ug/L	182	Standard
	Pb	207	3261.0	3.6	**0.8688**	0.036	4.1	ug/L	145	Standard
	Pb	208	4624.6	2.4	**0.8578**	0.009	1.1	ug/L	207	Standard
	U	238	416.0	3.8	**0.0919**	0.005	5.0	ug/L	1	Standard
>	**Bi**	209	330170.1	1.8				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	36.7	55.1	**-0.0030**	0.020	669.7	mg/L	25	Standard
	K	39	11.7	49.5	**0.1476**	0.101	68.6	mg/L	3	Standard
	Ca	43	220.0	25.3	**-0.2728**	0.186	68.0	mg/L	297	Standard
	Fe	54	1124.3	6.4	**1.1596**	0.071	6.1	mg/L	91	Standard
	Fe	57	365.0	17.2	**0.4808**	0.165	34.3	mg/L	237	Standard
>	**Sc-1**	45	36841.4	0.9				mg/L	35084	Standard
	Cl	35	68082.6	1.1				ug/L	29808	Standard
	Kr	83	33.1	13.3				ug/L	38	Standard
	Br	81	575.0	10.1				ug/L	965	Standard
	P	31	90917.3	4.4				ug/L	176735	Standard
	S	34	72779.4	1.0				ug/L	28891	Standard
	Sr	88	45.0	53.0				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0	50.0				mg/L	3	Standard
	Dy	164	485.8	10.6				mg/L	14	Standard
	Ho-1	165	314.0	6.7				mg/L	7	Standard
	Er	166	302.7	8.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		100.674	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		79.847	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	95.808
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.526
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159517S WG432680-04
Sample Date/Time: Tuesday, June 04, 2013 16:57:02
Number of Replicates: 3
Autosampler Position: 329
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	562613.7	1.5				ug/L	552027	Standard
	Be	9	1084.7	4.8	**0.5530**	0.025	4.5	ug/L	18	Standard
	Al	27	21362.5	9.8	**0.1406**	0.016	11.6	ug/L	841	Standard
	Sc	45	36602.5	1.1				ug/L	35084	Standard
	Ti	47	461.3	11.9	**2.5045**	0.294	11.7	ug/L	22	Standard
	V	51	14942.0	9.0	**2.9306**	0.260	8.9	ug/L	812	Standard
	Cr	52	15566.3	5.4	**2.8364**	0.180	6.3	ug/L	4274	Standard
	Cr	53	2847.8	1.5	**2.3780**	0.045	1.9	ug/L	1106	Standard
	Mn	55	279016.5	4.6	**42.7928**	1.747	4.1	ug/L	1207	Standard
	Co	59	4214.6	6.7	**0.9031**	0.057	6.3	ug/L	71	Standard
	Ni	60	2224.8	7.1	**1.1273**	0.082	7.3	ug/L	295	Standard
	Cu	65	1593.1	2.4	**0.8421**	0.018	2.2	ug/L	87	Standard
	Zn	66	3320.0	4.5	**2.8762**	0.143	5.0	ug/L	469	Standard
>	Ge	72	416131.8	0.6				ug/L	514704	Standard
	As	75	677.4	13.7	**0.7527**	0.085	11.3	ug/L	-121	Standard
	Se	82	43.6	7.9	**0.4192**	0.031	7.5	ug/L	-1	Standard
	Se-1	77	126.3	8.2	**0.4726**	0.145	30.6	ug/L	127	Standard
>	Ga	71	1445.1	9.3				mg/L	175	Standard
	Rb	85	6933.3	6.9				ug/L	50	Standard
	Y	89	484725.5	1.1				ug/L	527499	Standard
>	Rh	103	8.3	34.6				ug/L	10	Standard
	Mo	98	62.6	46.2	**0.0097**	0.008	80.4	ug/L	23	Standard
	Ag	107	2762.3	2.3	**0.5258**	0.013	2.5	ug/L	59	Standard
	Cd	111	823.3	2.6	**0.5122**	0.013	2.5	mg/L	3	Standard
	Cd	114	2288.9	6.5	**0.5491**	0.037	6.7	ug/L	10	Standard
>	In	115	519789.3	0.2				ug/L	537195	Standard
	Sn	118	956.0	2.3	**0.1425**	0.005	3.2	ug/L	281	Standard
	Sb	123	189.2	13.4	**0.0355**	0.007	19.8	ug/L	167	Standard
	Ba	135	3914.2	5.5	**2.4132**	0.135	5.6	ug/L	10	Standard
	Ce	140	102492.0	6.0				ug/L	27	Standard
>	Tb	159	742353.1	0.3				ug/L	758170	Standard
	Ho	165	294.0	9.2				ug/L	7	Standard
	Tl	203	1928.5	5.0	**0.3602**	0.018	4.9	ug/L	5	Standard
	Tl	205	56.7	21.8	**0.4128**	0.088	21.3	ug/L	0	Standard
	Pb	206	5857.5	4.0	**1.3402**	0.058	4.3	ug/L	182	Standard
	Pb	207	4671.4	0.4	**1.2567**	0.007	0.6	ug/L	145	Standard
	Pb	208	6507.9	3.9	**1.2192**	0.051	4.2	ug/L	207	Standard
	U	238	2405.2	8.2	**0.5321**	0.044	8.3	ug/L	1	Standard
>	Bi	209	331949.6	0.2				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8246**	0.459	55.6	mg/L	0	Standard
	Mg	24	45.0	11.1	**0.0058**	0.005	84.3	mg/L	25	Standard
	K	39	5.0	100.0	**0.0327**	0.088	269.6	mg/L	3	Standard
	Ca	43	236.7	9.8	**-0.2111**	0.078	37.2	mg/L	297	Standard
	Fe	54	1333.2	12.2	**1.4087**	0.202	14.3	mg/L	91	Standard
	Fe	57	433.3	4.8	**0.6749**	0.045	6.7	mg/L	237	Standard
>	**Sc-1**	45	36602.5	1.1				mg/L	35084	Standard
	Cl	35	67532.9	1.6				ug/L	29808	Standard
	Kr	83	31.6	5.8				ug/L	38	Standard
	Br	81	539.2	2.6				ug/L	965	Standard
	P	31	90314.8	5.7				ug/L	176735	Standard
	S	34	69663.1	1.2				ug/L	28891	Standard
	Sr	88	45.8	27.5				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	20.0	50.0				mg/L	3	Standard
	Dy	164	431.3	2.5				mg/L	14	Standard
	Ho-1	165	294.0	9.2				mg/L	7	Standard
	Er	166	272.0	7.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.918	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		80.849	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

96.760

102.073

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 17:00:50
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	668150.4	2.1				ug/L	552027	Standard
	Be	9	106869.2	9.5	**46.7879**	4.310	9.2	ug/L	18	Standard
	Al	27	8977217.5	9.8	**53.9409**	5.098	9.5	ug/L	841	Standard
	Sc	45	40236.7	2.2				ug/L	35084	Standard
	Ti	47	24854.9	10.6	**122.6276**	12.133	9.9	ug/L	22	Standard
	V	51	288258.6	11.4	**51.7796**	5.483	10.6	ug/L	812	Standard
	Cr	52	245453.4	12.1	**50.0992**	5.828	11.6	ug/L	4274	Standard
	Cr	53	50485.6	11.8	**52.2109**	5.983	11.5	ug/L	1106	Standard
	Mn	55	360108.9	11.1	**48.6268**	5.138	10.6	ug/L	1207	Standard
	Co	59	250107.2	12.2	**47.9724**	5.547	11.6	ug/L	71	Standard
	Ni	60	107919.8	10.6	**53.6654**	5.530	10.3	ug/L	295	Standard
	Cu	65	104241.5	10.8	**51.5965**	5.419	10.5	ug/L	87	Standard
	Zn	66	54664.2	10.6	**51.3452**	5.224	10.2	ug/L	469	Standard
>	Ge	72	472766.5	1.7				ug/L	514704	Standard
	As	75	59388.2	9.4	**49.9218**	4.462	8.9	ug/L	-121	Standard
	Se	82	6101.5	8.1	**51.9697**	3.959	7.6	ug/L	-1	Standard
	Se-1	77	4035.5	7.3	**50.4519**	3.452	6.8	ug/L	127	Standard
>	Ga	71	115.0	27.2				mg/L	175	Standard
	Rb	85	3163.7	4.2				ug/L	50	Standard
	Y	89	535320.6	1.5				ug/L	527499	Standard
>	Rh	103	35.0	42.9				ug/L	10	Standard
	Mo	98	401196.4	9.5	**95.7622**	8.623	9.0	ug/L	23	Standard
	Ag	107	299007.9	7.8	**51.4338**	3.777	7.3	ug/L	59	Standard
	Cd	111	85755.0	10.7	**47.2611**	4.839	10.2	mg/L	3	Standard
	Cd	114	244183.0	10.1	**52.1954**	5.035	9.6	ug/L	10	Standard
>	In	115	588735.5	0.9				ug/L	537195	Standard
	Sn	118	253185.9	10.3	**48.8311**	4.872	10.0	ug/L	281	Standard
	Sb	123	196747.9	9.0	**48.3583**	4.188	8.7	ug/L	167	Standard
	Ba	135	91637.4	10.0	**50.3239**	4.844	9.6	ug/L	10	Standard
	Ce	140	131.0	26.4				ug/L	27	Standard
>	Tb	159	817989.7	0.8				ug/L	758170	Standard
	Ho	165	10.7	44.3				ug/L	7	Standard
	Tl	203	287083.4	7.5	**50.4484**	3.724	7.4	ug/L	5	Standard
	Tl	205	7540.9	8.0	**50.6390**	4.000	7.9	ug/L	0	Standard
	Pb	206	225307.7	9.5	**50.0641**	4.713	9.4	ug/L	182	Standard
	Pb	207	194068.0	10.0	**50.7156**	5.017	9.9	ug/L	145	Standard
	Pb	208	267387.8	9.6	**48.7419**	4.660	9.6	ug/L	207	Standard
	U	238	227281.5	10.9	**47.2615**	5.088	10.8	ug/L	1	Standard
>	Bi	209	353615.9	0.2				ug/L	325207	Standard

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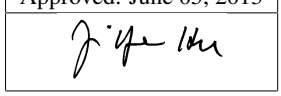

	Na	23	36.7	15.7	**4.2075**	0.812	19.3	mg/L	0	Standard
	Mg	24	5122.5	10.9	**4.7147**	0.453	9.6	mg/L	25	Standard
	K	39	338.3	19.7	**5.3017**	0.959	18.1	mg/L	3	Standard
	Ca	43	1765.1	10.4	**4.4199**	0.445	10.1	mg/L	297	Standard
	Fe	54	6091.2	10.9	**6.2140**	0.607	9.8	mg/L	91	Standard
	Fe	57	1595.1	14.5	**3.4660**	0.581	16.8	mg/L	237	Standard
>	**Sc-1**	45	40236.7	2.2				mg/L	35084	Standard
	Cl	35	81004.4	2.4				ug/L	29808	Standard
	Kr	83	36.3	3.3				ug/L	38	Standard
	Br	81	690.0	1.3				ug/L	965	Standard
	P	31	295889.7	0.8				ug/L	176735	Standard
	S	34	79042.3	0.5				ug/L	28891	Standard
	Sr	88	45.0	25.5				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	7.6	38.7				mg/L	14	Standard
	Ho-1	165	10.7	44.3				mg/L	7	Standard
	Er	166	8.7	40.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		121.036	
	Be	9	93.576		
	Al	27	107.882		
	Sc	45			
	Ti	47	122.628		
	V	51	103.559		
	Cr	52	100.198		
	Cr	53			
	Mn	55	97.254		
	Co	59	95.945		
	Ni	60	107.331		
	Cu	65	103.193		
	Zn	66	102.690		
>	Ge	72		91.852	
	As	75	99.844		
	Se	82	103.939		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	95.762	
|	Ag	107	102.868	
|	Cd	111	94.522	
|	Cd	114		
|>	In	115		109.594
|	Sn	118	97.662	
|	Sb	123	96.717	
⌊	Ba	135	100.648	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.897	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	97.484	
|	U	238	94.523	
⌊>	Bi	209		108.736
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Ti	47	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 17:04:36
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	689363.9	1.9				ug/L	552027	Standard
	Be	9	62.0	10.6	**0.0152**	0.002	15.2	ug/L	18	Standard
	Al	27	10490.6	116.9	**0.0499**	0.073	146.5	ug/L	841	Standard
	Sc	45	40621.1	1.2				ug/L	35084	Standard
	Ti	47	20.0	22.9	**0.0155**	0.025	161.5	ug/L	22	Standard
	V	51	1203.8	7.2	**0.0889**	0.016	17.7	ug/L	812	Standard
	Cr	52	3973.2	4.0	**-0.0149**	0.019	125.4	ug/L	4274	Standard
	Cr	53	273.3	8.7	**-0.7486**	0.030	3.9	ug/L	1106	Standard
	Mn	55	1068.7	6.8	**-0.0163**	0.013	82.5	ug/L	1207	Standard
	Co	59	111.0	48.9	**0.0054**	0.010	191.5	ug/L	71	Standard
	Ni	60	143.7	12.0	**-0.0613**	0.010	16.8	ug/L	295	Standard
	Cu	65	116.0	12.9	**0.0024**	0.009	360.8	ug/L	87	Standard
	Zn	66	647.7	2.8	**-0.1034**	0.023	21.9	ug/L	469	Standard
>	**Ge**	72	475848.9	2.6				ug/L	514704	Standard
	As	75	-134.1	4.7	**-0.0045**	0.003	67.9	ug/L	-121	Standard
	Se	82	0.4	654.2	**0.0003**	0.022	7901.7	ug/L	-1	Standard
	Se-1	77	95.3	10.1	**-0.1514**	0.153	101.2	ug/L	127	Standard
>	**Ga**	71	98.3	10.6				mg/L	175	Standard
	Rb	85	80.0	6.3				ug/L	50	Standard
	Y	89	553657.3	2.2				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	114.4	15.2	**0.0193**	0.004	20.7	ug/L	23	Standard
	Ag	107	89.0	4.1	**0.0022**	0.000	22.1	ug/L	59	Standard
	Cd	111	5.9	44.9	**0.0012**	0.001	118.5	mg/L	3	Standard
	Cd	114	26.6	9.3	**0.0002**	0.001	279.8	ug/L	10	Standard
>	**In**	115	606050.1	1.6				ug/L	537195	Standard
	Sn	118	475.3	8.9	**0.0226**	0.009	38.2	ug/L	281	Standard
	Sb	123	950.2	7.1	**0.2098**	0.014	6.8	ug/L	167	Standard
	Ba	135	16.0	10.8	**-0.0146**	0.001	7.2	ug/L	10	Standard
	Ce	140	31.7	71.8				ug/L	27	Standard
>	**Tb**	159	838530.6	1.7				ug/L	758170	Standard
	Ho	165	7.7	37.7				ug/L	7	Standard
	Tl	203	42.3	87.8	**0.0064**	0.006	100.5	ug/L	5	Standard
	Tl	205	2.0	173.2	**0.0206**	0.023	109.8	ug/L	0	Standard
	Pb	206	239.7	11.1	**0.0038**	0.006	149.1	ug/L	182	Standard
	Pb	207	196.0	18.8	**0.0047**	0.010	203.8	ug/L	145	Standard
	Pb	208	315.0	31.8	**0.0098**	0.018	183.8	ug/L	207	Standard
	U	238	55.0	122.9	**0.0104**	0.014	132.6	ug/L	1	Standard
>	**Bi**	209	365223.9	1.4				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	33.3	34.6	**-0.0095**	0.010	109.2	mg/L	25	Standard
	K	39	6.7	114.6	**0.0500**	0.120	240.1	mg/L	3	Standard
	Ca	43	228.3	20.2	**-0.3158**	0.141	44.7	mg/L	297	Standard
	Fe	54	144.5	9.2	**0.0315**	0.012	38.0	mg/L	91	Standard
	Fe	57	105.0	20.8	**-0.2539**	0.052	20.4	mg/L	237	Standard
>	**Sc-1**	45	40621.1	1.2				mg/L	35084	Standard
	Cl	35	81054.0	2.1				ug/L	29808	Standard
	Kr	83	34.1	8.9				ug/L	38	Standard
	Br	81	710.0	3.7				ug/L	965	Standard
	P	31	282479.9	2.4				ug/L	176735	Standard
	S	34	75553.1	3.5				ug/L	28891	Standard
	Sr	88	27.5	27.3				ug/L	27	Standard
	C	12	8.3	91.7				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	9.3	59.0				mg/L	14	Standard
	Ho-1	165	7.7	37.7				mg/L	7	Standard
	Er	166	14.7	27.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		124.879	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.451	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		112.817
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		112.305
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

Sample ID: QC Std 7
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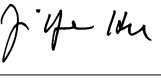

Method 6020 - Summary Report

Sample ID: L1305159517SD WG432680-05
Sample Date/Time: Tuesday, June 04, 2013 17:08:24
Number of Replicates: 3
Autosampler Position: 330
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	569601.6	1.6				ug/L	552027	Standard
	Be	9	1042.0	6.0	**0.5240**	0.025	4.7	ug/L	18	Standard
	Al	27	20736.9	6.5	**0.1342**	0.008	6.2	ug/L	841	Standard
	Sc	45	36445.5	1.8				ug/L	35084	Standard
	Ti	47	407.3	5.4	**2.2232**	0.135	6.1	ug/L	22	Standard
	V	51	14619.3	6.5	**2.8920**	0.196	6.8	ug/L	812	Standard
	Cr	52	11727.5	4.9	**1.9561**	0.134	6.9	ug/L	4274	Standard
	Cr	53	2016.8	4.7	**1.4038**	0.128	9.1	ug/L	1106	Standard
	Mn	55	354997.2	7.0	**54.9807**	3.829	7.0	ug/L	1207	Standard
	Co	59	4940.5	6.4	**1.0710**	0.067	6.2	ug/L	71	Standard
	Ni	60	1552.7	1.6	**0.7547**	0.012	1.6	ug/L	295	Standard
	Cu	65	1661.1	3.2	**0.8887**	0.032	3.7	ug/L	87	Standard
	Zn	66	3302.7	5.2	**2.8897**	0.187	6.5	ug/L	469	Standard
>	**Ge**	72	412484.9	0.8				ug/L	514704	Standard
	As	75	610.3	10.4	**0.6940**	0.059	8.5	ug/L	-121	Standard
	Se	82	32.7	21.0	**0.3162**	0.066	20.8	ug/L	-1	Standard
	Se-1	77	117.0	13.6	**0.3520**	0.234	66.6	ug/L	127	Standard
>	**Ga**	71	1485.1	9.3				mg/L	175	Standard
	Rb	85	6811.5	1.7				ug/L	50	Standard
	Y	89	471969.8	2.6				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	64.1	3.5	**0.0101**	0.001	5.4	ug/L	23	Standard
	Ag	107	2677.9	4.2	**0.5100**	0.023	4.5	ug/L	59	Standard
	Cd	111	775.6	6.9	**0.4831**	0.035	7.3	mg/L	3	Standard
	Cd	114	2273.4	10.4	**0.5457**	0.054	9.8	ug/L	10	Standard
>	**In**	115	519186.3	1.1				ug/L	537195	Standard
	Sn	118	1222.0	5.9	**0.2010**	0.015	7.3	ug/L	281	Standard
	Sb	123	295.5	9.4	**0.0652**	0.008	12.7	ug/L	167	Standard
	Ba	135	4832.1	4.8	**2.9877**	0.134	4.5	ug/L	10	Standard
	Ce	140	128949.3	6.5				ug/L	27	Standard
>	**Tb**	159	738601.7	0.9				ug/L	758170	Standard
	Ho	165	332.3	9.0				ug/L	7	Standard
	Tl	203	1958.5	6.8	**0.3667**	0.023	6.3	ug/L	5	Standard
	Tl	205	59.0	17.7	**0.4305**	0.073	17.0	ug/L	0	Standard
	Pb	206	8082.2	4.0	**1.8726**	0.087	4.6	ug/L	182	Standard
	Pb	207	6626.5	4.4	**1.8065**	0.086	4.8	ug/L	145	Standard
	Pb	208	9157.4	6.6	**1.7391**	0.124	7.1	ug/L	207	Standard
	U	238	2326.8	10.8	**0.5161**	0.056	10.8	ug/L	1	Standard
>	**Bi**	209	331080.0	0.8				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	45.0	40.1	**0.0063**	0.019	310.0	mg/L	25	Standard
	K	39	1.7	173.2	**-0.0263**	0.050	190.2	mg/L	3	Standard
	Ca	43	235.0	11.8	**-0.2122**	0.107	50.4	mg/L	297	Standard
	Fe	54	1345.7	11.5	**1.4286**	0.180	12.6	mg/L	91	Standard
	Fe	57	450.0	8.8	**0.7268**	0.116	16.0	mg/L	237	Standard
>	**Sc-1**	45	36445.5	1.8				mg/L	35084	Standard
	Cl	35	66578.6	1.0				ug/L	29808	Standard
	Kr	83	35.7	10.1				ug/L	38	Standard
	Br	81	526.7	7.5				ug/L	965	Standard
	P	31	87996.9	5.3				ug/L	176735	Standard
	S	34	68856.2	2.7				ug/L	28891	Standard
	Sr	88	45.0	19.2				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	34.6				mg/L	3	Standard
	Dy	164	521.5	6.8				mg/L	14	Standard
	Ho-1	165	332.3	9.0				mg/L	7	Standard
	Er	166	331.3	5.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.184	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		80.140	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	96.648
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.806
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159501
Sample Date/Time: Tuesday, June 04, 2013 17:12:10
Number of Replicates: 3
Autosampler Position: 331
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	576810.8	0.8				ug/L	552027	Standard
	Be	9	85.7	17.9	**0.0324**	0.008	24.7	ug/L	18	Standard
	Al	27	11136.4	3.1	**0.0656**	0.003	4.2	ug/L	841	Standard
	Sc	45	36243.3	2.5				ug/L	35084	Standard
	Ti	47	103.7	3.4	**0.4954**	0.014	2.9	ug/L	22	Standard
	V	51	8445.7	4.4	**1.5922**	0.057	3.6	ug/L	812	Standard
	Cr	52	8678.2	2.6	**1.2014**	0.041	3.4	ug/L	4274	Standard
	Cr	53	1407.6	10.4	**0.6414**	0.154	24.0	ug/L	1106	Standard
	Mn	55	142118.6	3.6	**21.5990**	0.530	2.5	ug/L	1207	Standard
	Co	59	988.4	7.0	**0.1985**	0.012	6.1	ug/L	71	Standard
	Ni	60	231.0	6.0	**-0.0025**	0.008	340.0	ug/L	295	Standard
	Cu	65	444.3	7.7	**0.1942**	0.022	11.3	ug/L	87	Standard
	Zn	66	1890.5	0.9	**1.3184**	0.015	1.1	ug/L	469	Standard
>	**Ge**	72	418400.6	1.4				ug/L	514704	Standard
	As	75	12.7	115.2	**0.1192**	0.014	11.6	ug/L	-121	Standard
	Se	82	-0.7	1277.7	**-0.0109**	0.090	831.3	ug/L	-1	Standard
	Se-1	77	95.3	7.1	**0.0127**	0.090	704.8	ug/L	127	Standard
>	**Ga**	71	756.7	8.4				mg/L	175	Standard
	Rb	85	3007.0	1.8				ug/L	50	Standard
	Y	89	484150.0	1.7				ug/L	527499	Standard
>	**Rh**	103	8.3	34.6				ug/L	10	Standard
	Mo	98	52.5	11.4	**0.0069**	0.002	23.3	ug/L	23	Standard
	Ag	107	66.7	14.6	**0.0003**	0.002	761.5	ug/L	59	Standard
	Cd	111	12.3	57.8	**0.0057**	0.004	77.7	mg/L	3	Standard
	Cd	114	51.8	8.2	**0.0071**	0.001	13.6	ug/L	10	Standard
>	**In**	115	522854.1	0.6				ug/L	537195	Standard
	Sn	118	406.7	21.1	**0.0218**	0.018	83.1	ug/L	281	Standard
	Sb	123	164.8	9.6	**0.0285**	0.005	15.9	ug/L	167	Standard
	Ba	135	1912.1	2.9	**1.1601**	0.040	3.4	ug/L	10	Standard
	Ce	140	42885.0	3.9				ug/L	27	Standard
>	**Tb**	159	743720.3	0.9				ug/L	758170	Standard
	Ho	165	342.0	4.5				ug/L	7	Standard
	Tl	203	71.7	13.2	**0.0124**	0.002	14.2	ug/L	5	Standard
	Tl	205	1.3	43.3	**0.0170**	0.004	23.9	ug/L	0	Standard
	Pb	206	3564.1	4.6	**0.7900**	0.034	4.4	ug/L	182	Standard
	Pb	207	2855.3	3.0	**0.7443**	0.020	2.7	ug/L	145	Standard
	Pb	208	4066.5	3.1	**0.7383**	0.021	2.9	ug/L	207	Standard
	U	238	418.7	9.7	**0.0912**	0.009	9.4	ug/L	1	Standard
>	**Bi**	209	334582.9	0.5				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8190**	0.469	57.2	mg/L	0	Standard
	Mg	24	31.7	24.1	**-0.0076**	0.007	92.8	mg/L	25	Standard
	K	39	1.7	173.2	**-0.0266**	0.049	185.7	mg/L	3	Standard
	Ca	43	210.0	7.1	**-0.2949**	0.035	12.0	mg/L	297	Standard
	Fe	54	1185.9	7.0	**1.2544**	0.128	10.2	mg/L	91	Standard
	Fe	57	390.0	11.2	**0.5694**	0.146	25.6	mg/L	237	Standard
>	**Sc-1**	45	36243.3	2.5				mg/L	35084	Standard
	Cl	35	66209.7	1.3				ug/L	29808	Standard
	Kr	83	36.2	14.3				ug/L	38	Standard
	Br	81	482.5	6.3				ug/L	965	Standard
	P	31	85820.2	4.4				ug/L	176735	Standard
	S	34	66240.3	0.8				ug/L	28891	Standard
	Sr	88	48.3	14.9				ug/L	27	Standard
	C	12	8.3	34.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	512.4	7.3				mg/L	14	Standard
	Ho-1	165	342.0	4.5				mg/L	7	Standard
	Er	166	333.7	4.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.490	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.290	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		97.330
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		102.883
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159502
Sample Date/Time: Tuesday, June 04, 2013 17:15:56
Number of Replicates: 3
Autosampler Position: 332
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	569962.2	1.5				ug/L	552027	Standard
	Be	9	77.0	6.9	**0.0284**	0.003	11.5	ug/L	18	Standard
	Al	27	15222.0	6.0	**0.0952**	0.005	5.2	ug/L	841	Standard
	Sc	45	36393.7	1.7				ug/L	35084	Standard
	Ti	47	189.0	7.4	**0.9736**	0.068	7.0	ug/L	22	Standard
	V	51	10106.0	7.4	**1.9354**	0.160	8.2	ug/L	812	Standard
	Cr	52	8642.8	4.3	**1.1981**	0.109	9.1	ug/L	4274	Standard
	Cr	53	1415.1	10.6	**0.6552**	0.178	27.2	ug/L	1106	Standard
	Mn	55	487730.7	6.5	**74.7153**	5.463	7.3	ug/L	1207	Standard
	Co	59	2134.8	8.1	**0.4486**	0.043	9.6	ug/L	71	Standard
	Ni	60	445.7	5.8	**0.1191**	0.017	14.0	ug/L	295	Standard
	Cu	65	1246.7	3.5	**0.6450**	0.031	4.8	ug/L	87	Standard
	Zn	66	2794.6	6.4	**2.2987**	0.207	9.0	ug/L	469	Standard
>	**Ge**	72	417544.5	1.7				ug/L	514704	Standard
	As	75	99.1	36.3	**0.2018**	0.036	17.9	ug/L	-121	Standard
	Se	82	-0.6	0.5	**-0.0088**	0.000	1.3	ug/L	-1	Standard
	Se-1	77	100.0	16.5	**0.0867**	0.266	307.0	ug/L	127	Standard
>	**Ga**	71	971.7	11.1				mg/L	175	Standard
	Rb	85	5204.2	3.9				ug/L	50	Standard
	Y	89	488049.3	1.9				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	45.8	6.1	**0.0050**	0.001	12.6	ug/L	23	Standard
	Ag	107	78.3	10.7	**0.0024**	0.002	66.8	ug/L	59	Standard
	Cd	111	7.9	33.3	**0.0030**	0.002	56.2	mg/L	3	Standard
	Cd	114	39.0	9.0	**0.0040**	0.001	25.3	ug/L	10	Standard
>	**In**	115	526193.1	1.9				ug/L	537195	Standard
	Sn	118	474.0	8.0	**0.0359**	0.010	28.4	ug/L	281	Standard
	Sb	123	222.7	7.8	**0.0440**	0.004	8.5	ug/L	167	Standard
	Ba	135	8060.8	7.6	**4.9301**	0.303	6.1	ug/L	10	Standard
	Ce	140	81194.0	7.2				ug/L	27	Standard
>	**Tb**	159	737709.6	1.7				ug/L	758170	Standard
	Ho	165	754.4	6.5				ug/L	7	Standard
	Tl	203	79.7	8.1	**0.0139**	0.001	6.3	ug/L	5	Standard
	Tl	205	2.7	78.1	**0.0266**	0.015	56.6	ug/L	0	Standard
	Pb	206	4824.4	4.4	**1.0851**	0.041	3.8	ug/L	182	Standard
	Pb	207	3850.8	5.9	**1.0182**	0.048	4.8	ug/L	145	Standard
	Pb	208	5333.7	6.4	**0.9813**	0.053	5.4	ug/L	207	Standard
	U	238	328.3	2.5	**0.0713**	0.002	2.2	ug/L	1	Standard
>	**Bi**	209	334926.1	2.2				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8182**	0.470	57.4	mg/L	0	Standard
	Mg	24	26.7	54.1	**-0.0126**	0.015	119.7	mg/L	25	Standard
	K	39	5.0	0.0	**0.0326**	0.001	4.6	mg/L	3	Standard
	Ca	43	245.0	8.9	**-0.1779**	0.077	43.3	mg/L	297	Standard
	Fe	54	1258.9	8.3	**1.3321**	0.145	10.9	mg/L	91	Standard
	Fe	57	388.3	9.8	**0.5593**	0.124	22.2	mg/L	237	Standard
>	**Sc-1**	45	36393.7	1.7				mg/L	35084	Standard
	Cl	35	65457.4	0.3				ug/L	29808	Standard
	Kr	83	32.8	1.2				ug/L	38	Standard
	Br	81	545.8	7.7				ug/L	965	Standard
	P	31	86780.5	3.1				ug/L	176735	Standard
	S	34	64558.1	2.3				ug/L	28891	Standard
	Sr	88	43.3	8.8				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	1099.7	8.4				mg/L	14	Standard
	Ho-1	165	754.4	6.5				mg/L	7	Standard
	Er	166	724.0	9.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.249	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.123	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	97.952
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.989
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159502PS WG432748-01
Sample Date/Time: Tuesday, June 04, 2013 17:19:42
Number of Replicates: 3
Autosampler Position: 333
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	697137.6	2.2				ug/L	552027	Standard
	Be	9	110380.9	9.9	**46.2976**	4.186	9.0	ug/L	18	Standard
	Al	27	18881.2	10.8	**0.0967**	0.010	10.1	ug/L	841	Standard
	Sc	45	41468.3	1.4				ug/L	35084	Standard
	Ti	47	219.7	4.1	**0.9871**	0.032	3.2	ug/L	22	Standard
	V	51	304085.1	11.1	**53.8878**	5.519	10.2	ug/L	812	Standard
	Cr	52	257658.5	12.6	**51.8956**	6.093	11.7	ug/L	4274	Standard
	Cr	53	52454.6	10.0	**53.5334**	4.955	9.3	ug/L	1106	Standard
	Mn	55	915354.8	10.3	**122.1551**	11.311	9.3	ug/L	1207	Standard
	Co	59	256901.0	10.9	**48.6044**	4.833	9.9	ug/L	71	Standard
	Ni	60	111987.5	10.2	**54.9230**	5.079	9.2	ug/L	295	Standard
	Cu	65	111339.6	9.3	**54.3526**	4.481	8.2	ug/L	87	Standard
	Zn	66	57813.4	9.2	**53.5959**	4.474	8.3	ug/L	469	Standard
>	**Ge**	72	479172.0	1.2				ug/L	514704	Standard
	As	75	61360.0	8.9	**50.8689**	3.969	7.8	ug/L	-121	Standard
	Se	82	6281.0	8.2	**52.7652**	3.799	7.2	ug/L	-1	Standard
	Se-1	77	4061.5	6.5	**50.0806**	2.897	5.8	ug/L	127	Standard
>	**Ga**	71	1140.0	13.3				mg/L	175	Standard
	Rb	85	5792.8	10.8				ug/L	50	Standard
	Y	89	571020.5	1.2				ug/L	527499	Standard
>	**Rh**	103	50.0	10.0				ug/L	10	Standard
	Mo	98	81.1	14.6	**0.0115**	0.003	21.8	ug/L	23	Standard
	Ag	107	314540.9	9.1	**52.4084**	3.900	7.4	ug/L	59	Standard
	Cd	111	88618.6	10.6	**47.3040**	4.246	9.0	mg/L	3	Standard
	Cd	114	246196.3	10.1	**50.9704**	4.299	8.4	ug/L	10	Standard
>	**In**	115	607402.2	1.8				ug/L	537195	Standard
	Sn	118	1306.7	3.2	**0.1781**	0.009	4.9	ug/L	281	Standard
	Sb	123	204737.6	9.8	**48.7384**	3.937	8.1	ug/L	167	Standard
	Ba	135	104262.0	10.4	**55.4536**	4.808	8.7	ug/L	10	Standard
	Ce	140	89060.5	10.5				ug/L	27	Standard
>	**Tb**	159	837156.4	1.2				ug/L	758170	Standard
	Ho	165	864.7	13.9				ug/L	7	Standard
	Tl	203	296634.0	7.6	**50.4259**	4.115	8.2	ug/L	5	Standard
	Tl	205	7743.7	6.6	**50.3095**	3.779	7.5	ug/L	0	Standard
	Pb	206	240447.6	8.5	**51.6892**	4.719	9.1	ug/L	182	Standard
	Pb	207	205513.4	9.8	**51.9508**	5.228	10.1	ug/L	145	Standard
	Pb	208	287649.0	9.8	**50.7294**	5.265	10.4	ug/L	207	Standard
	U	238	233156.6	10.9	**46.9071**	5.374	11.5	ug/L	1	Standard
>	**Bi**	209	365710.7	1.6				ug/L	325207	Standard

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	Na	23	5.0	100.0	**-0.3823**	0.713	186.4	mg/L	0	Standard
	Mg	24	31.7	59.8	**-0.0115**	0.017	150.5	mg/L	25	Standard
	K	39	10.0	50.0	**0.0989**	0.077	77.4	mg/L	3	Standard
	Ca	43	221.7	13.0	**-0.3504**	0.081	23.1	mg/L	297	Standard
	Fe	54	1435.5	6.0	**1.3313**	0.076	5.7	mg/L	91	Standard
	Fe	57	416.7	6.8	**0.4949**	0.055	11.2	mg/L	237	Standard
>	**Sc-1**	45	41468.3	1.4				mg/L	35084	Standard
	Cl	35	74866.3	3.0				ug/L	29808	Standard
	Kr	83	32.8	4.2				ug/L	38	Standard
	Br	81	767.5	3.3				ug/L	965	Standard
	P	31	264570.6	3.1				ug/L	176735	Standard
	S	34	63876.1	1.8				ug/L	28891	Standard
	Sr	88	40.0	21.7				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	1215.3	14.9				mg/L	14	Standard
	Ho-1	165	864.7	13.9				mg/L	7	Standard
	Er	166	787.7	12.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		126.287	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.097	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		113.069
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		112.455
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305159502SDL WG432748-02
Sample Date/Time: Tuesday, June 04, 2013 17:23:28
Number of Replicates: 3
Autosampler Position: 334
Sample Description: 250
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	570249.1	2.0				ug/L	552027	Standard
	Be	9	48.3	43.9	**0.0136**	0.010	76.6	ug/L	18	Standard
	Al	27	5400.9	64.3	**0.0258**	0.023	91.1	ug/L	841	Standard
	Sc	45	35551.7	1.2				ug/L	35084	Standard
	Ti	47	47.7	16.3	**0.1896**	0.043	22.4	ug/L	22	Standard
	V	51	2682.7	5.7	**0.4335**	0.028	6.6	ug/L	812	Standard
	Cr	52	4205.9	2.5	**0.1780**	0.030	16.9	ug/L	4274	Standard
	Cr	53	492.5	11.0	**-0.4329**	0.069	15.9	ug/L	1106	Standard
	Mn	55	98263.1	4.6	**15.2738**	0.595	3.9	ug/L	1207	Standard
	Co	59	501.0	8.5	**0.0957**	0.009	9.0	ug/L	71	Standard
	Ni	60	399.3	5.9	**0.0981**	0.012	12.3	ug/L	295	Standard
	Cu	65	309.7	13.3	**0.1230**	0.023	18.4	ug/L	87	Standard
	Zn	66	1941.5	4.8	**1.4269**	0.086	6.0	ug/L	469	Standard
>	**Ge**	72	407832.1	0.8				ug/L	514704	Standard
	As	75	-62.8	31.0	**0.0462**	0.019	41.3	ug/L	-121	Standard
	Se	82	3.1	67.6	**0.0272**	0.020	74.9	ug/L	-1	Standard
	Se-1	77	101.3	7.4	**0.1378**	0.102	74.0	ug/L	127	Standard
>	**Ga**	71	288.3	10.2				mg/L	175	Standard
	Rb	85	1045.0	5.8				ug/L	50	Standard
	Y	89	477725.2	1.3				ug/L	527499	Standard
>	**Rh**	103	0.0					ug/L	10	Standard
	Mo	98	20.0	43.8	**-0.0017**	0.002	133.6	ug/L	23	Standard
	Ag	107	75.0	21.2	**0.0021**	0.003	139.1	ug/L	59	Standard
	Cd	111	8.0	86.7	**0.0031**	0.004	139.3	mg/L	3	Standard
	Cd	114	28.7	15.2	**0.0017**	0.001	58.2	ug/L	10	Standard
>	**In**	115	512120.6	0.9				ug/L	537195	Standard
	Sn	118	482.0	8.8	**0.0404**	0.010	24.5	ug/L	281	Standard
	Sb	123	658.0	4.7	**0.1688**	0.009	5.2	ug/L	167	Standard
	Ba	135	1590.4	3.2	**0.9814**	0.023	2.3	ug/L	10	Standard
	Ce	140	16909.1	3.3				ug/L	27	Standard
>	**Tb**	159	733514.8	1.4				ug/L	758170	Standard
	Ho	165	152.3	9.9				ug/L	7	Standard
	Tl	203	44.0	41.1	**0.0074**	0.003	44.9	ug/L	5	Standard
	Tl	205	2.0	86.6	**0.0218**	0.012	55.9	ug/L	0	Standard
	Pb	206	1097.0	2.5	**0.2128**	0.004	2.0	ug/L	182	Standard
	Pb	207	864.7	5.3	**0.1966**	0.010	5.3	ug/L	145	Standard
	Pb	208	1259.7	2.9	**0.1996**	0.005	2.4	ug/L	207	Standard
	U	238	82.7	6.7	**0.0176**	0.001	7.7	ug/L	1	Standard
>	**Bi**	209	331065.2	1.2				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	35.0	24.7	**-0.0033**	0.009	270.2	mg/L	25	Standard
	K	39	10.0		**0.1245**	0.002	1.8	mg/L	3	Standard
	Ca	43	196.7	15.5	**-0.3261**	0.115	35.1	mg/L	297	Standard
	Fe	54	287.6	7.9	**0.2211**	0.023	10.3	mg/L	91	Standard
	Fe	57	185.0	4.7	**0.0094**	0.027	288.5	mg/L	237	Standard
>	**Sc-1**	45	35551.7	1.2				mg/L	35084	Standard
	Cl	35	62942.8	0.9				ug/L	29808	Standard
	Kr	83	33.3	1.7				ug/L	38	Standard
	Br	81	493.3	4.6				ug/L	965	Standard
	P	31	81286.9	4.6				ug/L	176735	Standard
	S	34	60032.9	1.0				ug/L	28891	Standard
	Sr	88	40.8	7.1				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	227.3	10.0				mg/L	14	Standard
	Ho-1	165	152.3	9.9				mg/L	7	Standard
	Er	166	161.3	8.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.301	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		79.236	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	95.332
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.801
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159503
Sample Date/Time: Tuesday, June 04, 2013 17:27:14
Number of Replicates: 3
Autosampler Position: 335
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	576236.3	0.6				ug/L	552027	Standard
	Be	9	63.7	11.4	**0.0212**	0.004	18.2	ug/L	18	Standard
	Al	27	14115.9	3.6	**0.0864**	0.004	4.1	ug/L	841	Standard
	Sc	45	36640.9	3.0				ug/L	35084	Standard
	Ti	47	178.3	2.3	**0.9176**	0.034	3.7	ug/L	22	Standard
	V	51	8619.9	5.6	**1.6372**	0.100	6.1	ug/L	812	Standard
	Cr	52	5635.0	2.6	**0.4946**	0.039	7.8	ug/L	4274	Standard
	Cr	53	720.9	5.9	**-0.1717**	0.048	27.9	ug/L	1106	Standard
	Mn	55	516249.3	7.4	**79.3118**	5.988	7.5	ug/L	1207	Standard
	Co	59	2297.8	7.2	**0.4853**	0.039	8.0	ug/L	71	Standard
	Ni	60	435.3	4.4	**0.1140**	0.014	12.2	ug/L	295	Standard
	Cu	65	2273.8	3.5	**1.2249**	0.038	3.1	ug/L	87	Standard
	Zn	66	2784.9	5.0	**2.2966**	0.144	6.3	ug/L	469	Standard
>	**Ge**	72	416255.4	1.3				ug/L	514704	Standard
	As	75	48.7	42.4	**0.1536**	0.019	12.4	ug/L	-121	Standard
	Se	82	4.1	80.5	**0.0364**	0.032	87.6	ug/L	-1	Standard
	Se-1	77	96.7	6.7	**0.0401**	0.102	253.6	ug/L	127	Standard
>	**Ga**	71	961.7	6.3				mg/L	175	Standard
	Rb	85	5032.5	5.1				ug/L	50	Standard
	Y	89	479211.5	3.1				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	30.0	10.5	**0.0009**	0.001	102.6	ug/L	23	Standard
	Ag	107	94.0	8.3	**0.0057**	0.001	24.9	ug/L	59	Standard
	Cd	111	11.0	27.4	**0.0049**	0.002	36.8	mg/L	3	Standard
	Cd	114	37.0	27.8	**0.0036**	0.002	65.9	ug/L	10	Standard
>	**In**	115	519179.7	1.1				ug/L	537195	Standard
	Sn	118	434.0	15.9	**0.0285**	0.016	54.9	ug/L	281	Standard
	Sb	123	322.7	4.9	**0.0728**	0.005	6.9	ug/L	167	Standard
	Ba	135	4914.8	4.4	**3.0393**	0.123	4.0	ug/L	10	Standard
	Ce	140	105022.5	5.7				ug/L	27	Standard
>	**Tb**	159	738716.0	0.8				ug/L	758170	Standard
	Ho	165	257.0	4.7				ug/L	7	Standard
	Tl	203	82.0	4.9	**0.0145**	0.001	5.6	ug/L	5	Standard
	Tl	205	0.7	86.6	**0.0124**	0.004	33.7	ug/L	0	Standard
	Pb	206	6010.5	4.8	**1.3816**	0.073	5.3	ug/L	182	Standard
	Pb	207	4866.1	4.2	**1.3158**	0.060	4.5	ug/L	145	Standard
	Pb	208	6726.2	4.2	**1.2663**	0.060	4.8	ug/L	207	Standard
	U	238	239.3	8.8	**0.0525**	0.005	9.4	ug/L	1	Standard
>	**Bi**	209	330805.7	1.3				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	25.0	72.1	**-0.0145**	0.019	129.3	mg/L	25	Standard
	K	39	13.3	86.6	**0.1740**	0.199	114.1	mg/L	3	Standard
	Ca	43	190.0	10.5	**-0.3700**	0.063	17.1	mg/L	297	Standard
	Fe	54	994.1	6.6	**1.0203**	0.104	10.2	mg/L	91	Standard
	Fe	57	370.0	6.8	**0.5016**	0.087	17.3	mg/L	237	Standard
>	**Sc-1**	45	36640.9	3.0				mg/L	35084	Standard
	Cl	35	62620.5	1.2				ug/L	29808	Standard
	Kr	83	30.4	6.4				ug/L	38	Standard
	Br	81	500.0	4.3				ug/L	965	Standard
	P	31	85528.8	6.1				ug/L	176735	Standard
	S	34	60174.3	0.7				ug/L	28891	Standard
	Sr	88	48.3	10.8				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	124.9				mg/L	3	Standard
	Dy	164	411.4	9.4				mg/L	14	Standard
	Ho-1	165	257.0	4.7				mg/L	7	Standard
	Er	166	256.7	8.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.386	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		80.873	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		96.646
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		101.722
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159504
Sample Date/Time: Tuesday, June 04, 2013 17:31:00
Number of Replicates: 3
Autosampler Position: 336
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	587795.6	0.6				ug/L	552027	Standard
	Be	9	57.3	2.7	**0.0174**	0.001	3.8	ug/L	18	Standard
	Al	27	13475.0	8.0	**0.0801**	0.007	8.6	ug/L	841	Standard
	Sc	45	37143.8	0.6				ug/L	35084	Standard
	Ti	47	135.3	15.4	**0.6674**	0.122	18.3	ug/L	22	Standard
	V	51	9302.3	8.9	**1.7541**	0.178	10.2	ug/L	812	Standard
	Cr	52	7917.7	4.6	**1.0100**	0.094	9.3	ug/L	4274	Standard
	Cr	53	1250.9	4.8	**0.4452**	0.076	17.1	ug/L	1106	Standard
	Mn	55	56272.2	6.3	**8.3967**	0.580	6.9	ug/L	1207	Standard
	Co	59	573.7	2.9	**0.1078**	0.003	3.0	ug/L	71	Standard
	Ni	60	244.0	12.4	**0.0039**	0.018	451.9	ug/L	295	Standard
	Cu	65	414.7	4.0	**0.1758**	0.011	6.1	ug/L	87	Standard
	Zn	66	2071.8	3.7	**1.4980**	0.098	6.6	ug/L	469	Standard
>	**Ge**	72	421442.5	0.8				ug/L	514704	Standard
	As	75	-6.6	529.0	**0.1011**	0.032	32.1	ug/L	-121	Standard
	Se	82	-2.7	129.7	**-0.0291**	0.034	115.3	ug/L	-1	Standard
	Se-1	77	84.7	14.1	**-0.1496**	0.183	122.1	ug/L	127	Standard
>	**Ga**	71	840.0	10.8				mg/L	175	Standard
	Rb	85	2928.6	3.6				ug/L	50	Standard
	Y	89	476010.8	1.2				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	22.8	11.2	**-0.0011**	0.001	65.1	ug/L	23	Standard
	Ag	107	61.3	4.7	**-0.0008**	0.001	73.1	ug/L	59	Standard
	Cd	111	7.0	43.0	**0.0024**	0.002	78.9	mg/L	3	Standard
	Cd	114	13.2	39.5	**-0.0022**	0.001	59.7	ug/L	10	Standard
>	**In**	115	523063.2	0.8				ug/L	537195	Standard
	Sn	118	638.7	4.9	**0.0722**	0.007	9.6	ug/L	281	Standard
	Sb	123	271.9	5.1	**0.0581**	0.004	7.6	ug/L	167	Standard
	Ba	135	1533.1	8.0	**0.9252**	0.078	8.5	ug/L	10	Standard
	Ce	140	30736.2	6.8				ug/L	27	Standard
>	**Tb**	159	733042.6	0.3				ug/L	758170	Standard
	Ho	165	201.0	10.6				ug/L	7	Standard
	Tl	203	50.3	32.1	**0.0085**	0.003	35.3	ug/L	5	Standard
	Tl	205	2.3	24.7	**0.0242**	0.004	17.1	ug/L	0	Standard
	Pb	206	3767.5	5.4	**0.8424**	0.048	5.7	ug/L	182	Standard
	Pb	207	2928.3	6.2	**0.7687**	0.050	6.5	ug/L	145	Standard
	Pb	208	4220.9	4.6	**0.7723**	0.037	4.8	ug/L	207	Standard
	U	238	344.3	4.0	**0.0753**	0.003	4.0	ug/L	1	Standard
>	**Bi**	209	332870.1	0.1				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	25.0	40.0	**-0.0149**	0.010	67.3	mg/L	25	Standard
	K	39	0.0		**-0.0552**	0.000	0.0	mg/L	3	Standard
	Ca	43	183.3	35.6	**-0.4001**	0.221	55.1	mg/L	297	Standard
	Fe	54	1133.7	9.9	**1.1608**	0.134	11.6	mg/L	91	Standard
	Fe	57	370.0	8.4	**0.4871**	0.091	18.6	mg/L	237	Standard
>	**Sc-1**	45	37143.8	0.6				mg/L	35084	Standard
	Cl	35	63356.6	2.0				ug/L	29808	Standard
	Kr	83	35.4	2.4				ug/L	38	Standard
	Br	81	518.3	16.4				ug/L	965	Standard
	P	31	84837.1	4.0				ug/L	176735	Standard
	S	34	60289.7	1.0				ug/L	28891	Standard
	Sr	88	53.3	15.1				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	114.6				mg/L	3	Standard
	Dy	164	293.0	13.4				mg/L	14	Standard
	Ho-1	165	201.0	10.6				mg/L	7	Standard
	Er	166	202.3	6.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.480	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.881	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	97.369
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.356
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159505
Sample Date/Time: Tuesday, June 04, 2013 17:34:46
Number of Replicates: 3
Autosampler Position: 337
Sample Description: 100
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	580528.7	1.8				ug/L	552027	Standard
	Be	9	73.0	16.7	**0.0256**	0.005	21.2	ug/L	18	Standard
	Al	27	16410.9	3.1	**0.1016**	0.005	4.7	ug/L	841	Standard
	Sc	45	36036.1	0.6				ug/L	35084	Standard
	Ti	47	133.7	9.8	**0.6673**	0.073	10.9	ug/L	22	Standard
	V	51	4971.4	2.2	**0.8913**	0.022	2.5	ug/L	812	Standard
	Cr	52	4941.5	0.7	**0.3318**	0.005	1.5	ug/L	4274	Standard
	Cr	53	553.3	1.9	**-0.3719**	0.009	2.4	ug/L	1106	Standard
	Mn	55	531753.3	4.2	**81.7566**	3.609	4.4	ug/L	1207	Standard
	Co	59	1583.4	4.4	**0.3298**	0.017	5.1	ug/L	71	Standard
	Ni	60	556.0	3.5	**0.1825**	0.013	7.1	ug/L	295	Standard
	Cu	65	1425.7	3.7	**0.7482**	0.025	3.3	ug/L	87	Standard
	Zn	66	2774.6	7.3	**2.2873**	0.209	9.1	ug/L	469	Standard
>	**Ge**	72	415939.0	0.6				ug/L	514704	Standard
	As	75	7.7	301.9	**0.1145**	0.022	19.3	ug/L	-121	Standard
	Se	82	2.3	443.3	**0.0186**	0.098	527.1	ug/L	-1	Standard
	Se-1	77	99.7	8.1	**0.0842**	0.113	133.8	ug/L	127	Standard
>	**Ga**	71	651.7	2.5				mg/L	175	Standard
	Rb	85	5846.1	2.1				ug/L	50	Standard
	Y	89	497319.5	1.5				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	21.2	10.3	**-0.0015**	0.001	38.2	ug/L	23	Standard
	Ag	107	65.7	9.3	**0.0000**	0.001	9501.0	ug/L	59	Standard
	Cd	111	8.6	17.7	**0.0034**	0.001	29.5	mg/L	3	Standard
	Cd	114	23.6	19.9	**0.0003**	0.001	334.9	ug/L	10	Standard
>	**In**	115	524826.6	1.3				ug/L	537195	Standard
	Sn	118	438.0	12.1	**0.0284**	0.013	44.9	ug/L	281	Standard
	Sb	123	241.0	1.3	**0.0493**	0.001	1.6	ug/L	167	Standard
	Ba	135	8324.0	2.4	**5.1081**	0.101	2.0	ug/L	10	Standard
	Ce	140	84676.0	1.7				ug/L	27	Standard
>	**Tb**	159	746001.8	1.6				ug/L	758170	Standard
	Ho	165	1037.0	2.5				ug/L	7	Standard
	Tl	203	58.3	18.2	**0.0100**	0.002	18.9	ug/L	5	Standard
	Tl	205	1.3	173.2	**0.0170**	0.016	96.2	ug/L	0	Standard
	Pb	206	4747.7	2.2	**1.0774**	0.023	2.1	ug/L	182	Standard
	Pb	207	3953.2	2.1	**1.0567**	0.012	1.1	ug/L	145	Standard
	Pb	208	5352.0	2.6	**0.9948**	0.035	3.5	ug/L	207	Standard
	U	238	154.0	2.3	**0.0334**	0.001	2.3	ug/L	1	Standard
>	**Bi**	209	331892.9	1.0				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8187**	0.469	57.3	mg/L	0	Standard
	Mg	24	45.0	38.5	**0.0065**	0.018	272.1	mg/L	25	Standard
	K	39	11.7	49.5	**0.1518**	0.103	67.7	mg/L	3	Standard
	Ca	43	198.3	11.4	**-0.3307**	0.074	22.4	mg/L	297	Standard
	Fe	54	582.9	1.9	**0.5598**	0.016	2.8	mg/L	91	Standard
	Fe	57	213.3	11.1	**0.0814**	0.070	85.4	mg/L	237	Standard
>	**Sc-1**	45	36036.1	0.6				mg/L	35084	Standard
	Cl	35	63467.0	0.2				ug/L	29808	Standard
	Kr	83	35.9	20.2				ug/L	38	Standard
	Br	81	535.0	5.4				ug/L	965	Standard
	P	31	83126.8	3.9				ug/L	176735	Standard
	S	34	58977.9	1.1				ug/L	28891	Standard
	Sr	88	40.8	3.5				ug/L	27	Standard
	C	12	6.7	114.6				mg/L	7	Standard
	N	14	3.3	86.6				mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	1592.4	5.2				mg/L	14	Standard
	Ho-1	165	1037.0	2.5				mg/L	7	Standard
	Er	166	960.7	3.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.163	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		80.811	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		97.698
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		102.056
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1305159505
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Method 6020 - Summary Report

Sample ID: L1305159506
Sample Date/Time: Tuesday, June 04, 2013 17:38:31
Number of Replicates: 3
Autosampler Position: 338
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	577882.8	2.1				ug/L	552027	Standard
	Be	9	56.3	16.8	**0.0173**	0.004	24.6	ug/L	18	Standard
	Al	27	17882.2	1.3	**0.1124**	0.004	3.4	ug/L	841	Standard
	Sc	45	36914.9	1.9				ug/L	35084	Standard
	Ti	47	379.0	6.2	**2.0256**	0.148	7.3	ug/L	22	Standard
	V	51	12816.2	4.7	**2.4741**	0.144	5.8	ug/L	812	Standard
	Cr	52	8069.1	0.6	**1.0522**	0.025	2.4	ug/L	4274	Standard
	Cr	53	1250.1	9.4	**0.4503**	0.150	33.3	ug/L	1106	Standard
	Mn	55	251932.2	4.7	**38.2979**	2.115	5.5	ug/L	1207	Standard
	Co	59	2076.5	3.8	**0.4332**	0.020	4.6	ug/L	71	Standard
	Ni	60	940.0	11.1	**0.3948**	0.054	13.7	ug/L	295	Standard
	Cu	65	697.3	6.9	**0.3344**	0.029	8.6	ug/L	87	Standard
	Zn	66	2729.2	2.2	**2.2116**	0.087	3.9	ug/L	469	Standard
>	Ge	72	419850.9	0.9				ug/L	514704	Standard
	As	75	193.4	10.8	**0.2901**	0.021	7.3	ug/L	-121	Standard
	Se	82	4.9	83.5	**0.0436**	0.039	90.0	ug/L	-1	Standard
	Se-1	77	92.7	15.6	**-0.0290**	0.220	756.8	ug/L	127	Standard
>	Ga	71	1373.4	3.0				mg/L	175	Standard
	Rb	85	6606.4	1.3				ug/L	50	Standard
	Y	89	488297.3	0.9				ug/L	527499	Standard
>	Rh	103	10.0	50.0				ug/L	10	Standard
	Mo	98	49.5	41.4	**0.0060**	0.006	91.9	ug/L	23	Standard
	Ag	107	90.0	37.5	**0.0047**	0.007	140.7	ug/L	59	Standard
	Cd	111	14.6	91.7	**0.0071**	0.008	117.3	mg/L	3	Standard
	Cd	114	47.3	35.5	**0.0060**	0.004	67.6	ug/L	10	Standard
>	In	115	525778.0	0.6				ug/L	537195	Standard
	Sn	118	1565.4	1.8	**0.2720**	0.006	2.1	ug/L	281	Standard
	Sb	123	226.7	13.9	**0.0453**	0.009	19.9	ug/L	167	Standard
	Ba	135	3048.6	1.2	**1.8529**	0.032	1.8	ug/L	10	Standard
	Ce	140	126630.5	3.9				ug/L	27	Standard
>	Tb	159	743932.6	0.4				ug/L	758170	Standard
	Ho	165	304.0	4.3				ug/L	7	Standard
	Tl	203	102.3	15.5	**0.0183**	0.003	16.8	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0147**	0.007	48.6	ug/L	0	Standard
	Pb	206	4620.4	3.1	**1.0474**	0.034	3.2	ug/L	182	Standard
	Pb	207	3767.1	0.2	**1.0051**	0.007	0.7	ug/L	145	Standard
	Pb	208	5273.4	2.4	**0.9794**	0.019	1.9	ug/L	207	Standard
	U	238	367.7	8.7	**0.0807**	0.007	8.3	ug/L	1	Standard
>	Bi	209	331840.3	0.6				ug/L	325207	Standard

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	Na	23	3.3	86.6	**-0.5679**	0.452	79.6	mg/L	0	Standard
	Mg	24	40.0	21.7	**0.0003**	0.008	2603.7	mg/L	25	Standard
	K	39	5.0	100.0	**0.0312**	0.087	279.7	mg/L	3	Standard
	Ca	43	180.0	9.6	**-0.4074**	0.069	16.8	mg/L	297	Standard
	Fe	54	1515.6	9.2	**1.6030**	0.183	11.4	mg/L	91	Standard
	Fe	57	421.7	8.3	**0.6338**	0.101	15.9	mg/L	237	Standard
>	**Sc-1**	45	36914.9	1.9				mg/L	35084	Standard
	Cl	35	62659.0	0.9				ug/L	29808	Standard
	Kr	83	31.8	11.5				ug/L	38	Standard
	Br	81	543.3	3.3				ug/L	965	Standard
	P	31	84144.9	3.7				ug/L	176735	Standard
	S	34	58769.6	1.0				ug/L	28891	Standard
	Sr	88	45.0	27.8				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	11.7	24.7				mg/L	3	Standard
	Dy	164	450.3	5.9				mg/L	14	Standard
	Ho-1	165	304.0	4.3				mg/L	7	Standard
	Er	166	301.0	8.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.684	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.571	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: L1305159506
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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		97.875
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		102.040
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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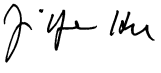

Method 6020 - Summary Report

Sample ID: L1305159507
Sample Date/Time: Tuesday, June 04, 2013 17:42:17
Number of Replicates: 3
Autosampler Position: 339
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	588004.9	0.7				ug/L	552027	Standard
	Be	9	94.7	15.9	**0.0360**	0.007	20.2	ug/L	18	Standard
	Al	27	22413.9	4.3	**0.1411**	0.006	4.0	ug/L	841	Standard
	Sc	45	37376.0	1.0				ug/L	35084	Standard
	Ti	47	424.7	14.5	**2.2750**	0.359	15.8	ug/L	22	Standard
	V	51	12438.3	6.2	**2.3913**	0.169	7.1	ug/L	812	Standard
	Cr	52	12689.3	4.4	**2.1256**	0.141	6.6	ug/L	4274	Standard
	Cr	53	2186.8	7.4	**1.5564**	0.187	12.0	ug/L	1106	Standard
	Mn	55	601954.6	6.1	**91.5094**	6.061	6.6	ug/L	1207	Standard
	Co	59	3186.3	6.2	**0.6715**	0.045	6.7	ug/L	71	Standard
	Ni	60	713.4	7.4	**0.2671**	0.032	12.1	ug/L	295	Standard
	Cu	65	1759.8	7.1	**0.9252**	0.076	8.2	ug/L	87	Standard
	Zn	66	3199.7	4.0	**2.7084**	0.154	5.7	ug/L	469	Standard
>	**Ge**	72	420825.0	0.9				ug/L	514704	Standard
	As	75	202.3	14.0	**0.2981**	0.028	9.4	ug/L	-121	Standard
	Se	82	7.5	84.0	**0.0684**	0.060	87.8	ug/L	-1	Standard
	Se-1	77	101.0	2.0	**0.0870**	0.041	46.6	ug/L	127	Standard
>	**Ga**	71	1456.7	14.9				mg/L	175	Standard
	Rb	85	7486.9	6.0				ug/L	50	Standard
	Y	89	495138.8	0.6				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	302.1	6.0	**0.0733**	0.004	5.2	ug/L	23	Standard
	Ag	107	394.7	6.0	**0.0632**	0.005	8.6	ug/L	59	Standard
	Cd	111	10.7	65.0	**0.0047**	0.004	93.3	mg/L	3	Standard
	Cd	114	35.7	14.0	**0.0032**	0.001	39.0	ug/L	10	Standard
>	**In**	115	527251.7	1.3				ug/L	537195	Standard
	Sn	118	456.7	9.1	**0.0319**	0.009	29.2	ug/L	281	Standard
	Sb	123	228.5	4.8	**0.0456**	0.002	5.2	ug/L	167	Standard
	Ba	135	10230.8	6.0	**6.2544**	0.364	5.8	ug/L	10	Standard
	Ce	140	135696.5	4.7				ug/L	27	Standard
>	**Tb**	159	746021.6	1.3				ug/L	758170	Standard
	Ho	165	1060.7	6.0				ug/L	7	Standard
	Tl	203	108.3	8.0	**0.0191**	0.002	9.6	ug/L	5	Standard
	Tl	205	1.3	114.6	**0.0170**	0.011	63.8	ug/L	0	Standard
	Pb	206	6578.4	4.4	**1.4885**	0.055	3.7	ug/L	182	Standard
	Pb	207	5251.2	6.1	**1.3972**	0.080	5.7	ug/L	145	Standard
	Pb	208	7284.3	3.3	**1.3497**	0.036	2.7	ug/L	207	Standard
	U	238	329.7	5.0	**0.0712**	0.004	5.4	ug/L	1	Standard
>	**Bi**	209	336749.8	1.3				ug/L	325207	Standard

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	Na	23	5.0	173.2	**-0.3049**	1.359	445.7	mg/L	0	Standard
	Mg	24	33.3	17.3	**-0.0068**	0.005	80.0	mg/L	25	Standard
	K	39	8.3	69.3	**0.0873**	0.099	113.3	mg/L	3	Standard
	Ca	43	221.7	26.4	**-0.2763**	0.200	72.2	mg/L	297	Standard
	Fe	54	1545.4	9.8	**1.6128**	0.160	9.9	mg/L	91	Standard
	Fe	57	433.3	11.6	**0.6512**	0.141	21.7	mg/L	237	Standard
>	**Sc-1**	45	37376.0	1.0				mg/L	35084	Standard
	Cl	35	63228.0	1.5				ug/L	29808	Standard
	Kr	83	34.9	3.1				ug/L	38	Standard
	Br	81	550.0	4.5				ug/L	965	Standard
	P	31	84066.2	4.0				ug/L	176735	Standard
	S	34	57460.4	0.6				ug/L	28891	Standard
	Sr	88	43.3	18.5				ug/L	27	Standard
	C	12	5.0	0.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	1657.2	6.5				mg/L	14	Standard
	Ho-1	165	1060.7	6.0				mg/L	7	Standard
	Er	166	1027.7	5.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.517	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.761	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89	
Rh	103	
Mo	98	
Ag	107	
Cd	111	
Cd	114	
In	115	98.149
Sn	118	
Sb	123	
Ba	135	
Ce	140	
Tb	159	
Ho	165	
Tl	203	
Tl	205	
Pb	206	
Pb	207	
Pb	208	
U	238	
Bi	209	103.549
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	
C	12	
N	14	
Hg	202	
Dy	164	
Ho-1	165	
Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 17:46:05
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	696604.9	1.9				ug/L	552027	Standard
	Be	9	107169.5	8.4	**45.0234**	3.990	8.9	ug/L	18	Standard
	Al	27	9262802.2	9.0	**53.4068**	4.989	9.3	ug/L	841	Standard
	Sc	45	42283.9	0.2				ug/L	35084	Standard
	Ti	47	25210.1	10.0	**123.8240**	13.011	10.5	ug/L	22	Standard
	V	51	288644.5	12.4	**51.6246**	6.670	12.9	ug/L	812	Standard
	Cr	52	244195.1	12.2	**49.6190**	6.421	12.9	ug/L	4274	Standard
	Cr	53	51169.3	9.5	**52.6854**	5.333	10.1	ug/L	1106	Standard
	Mn	55	355314.0	10.9	**47.7631**	5.475	11.5	ug/L	1207	Standard
	Co	59	246067.2	11.5	**46.9885**	5.632	12.0	ug/L	71	Standard
	Ni	60	106928.8	9.3	**52.9224**	5.222	9.9	ug/L	295	Standard
	Cu	65	104751.2	10.6	**51.6076**	5.763	11.2	ug/L	87	Standard
	Zn	66	54851.9	8.5	**51.2835**	4.683	9.1	ug/L	469	Standard
>	**Ge**	72	475264.3	1.0				ug/L	514704	Standard
	As	75	59928.2	9.4	**50.1369**	4.937	9.8	ug/L	-121	Standard
	Se	82	6165.5	9.1	**52.2638**	4.971	9.5	ug/L	-1	Standard
	Se-1	77	4065.9	8.6	**50.5961**	4.774	9.4	ug/L	127	Standard
>	**Ga**	71	105.0	17.2				mg/L	175	Standard
	Rb	85	3157.0	6.6				ug/L	50	Standard
	Y	89	541065.6	1.2				ug/L	527499	Standard
>	**Rh**	103	23.3	61.9				ug/L	10	Standard
	Mo	98	402119.4	9.7	**93.7333**	9.159	9.8	ug/L	23	Standard
	Ag	107	300131.8	8.1	**50.4057**	3.926	7.8	ug/L	59	Standard
	Cd	111	85338.6	9.5	**45.9369**	4.466	9.7	mg/L	3	Standard
	Cd	114	243405.4	9.5	**50.8101**	4.827	9.5	ug/L	10	Standard
>	**In**	115	603079.8	1.5				ug/L	537195	Standard
	Sn	118	257503.5	10.0	**48.4975**	4.829	10.0	ug/L	281	Standard
	Sb	123	199164.5	8.8	**47.8051**	4.279	9.0	ug/L	167	Standard
	Ba	135	92783.0	8.9	**49.7615**	4.520	9.1	ug/L	10	Standard
	Ce	140	116.7	27.9				ug/L	27	Standard
>	**Tb**	159	829076.8	1.5				ug/L	758170	Standard
	Ho	165	8.3	48.5				ug/L	7	Standard
	Tl	203	287698.7	7.3	**50.0960**	3.883	7.8	ug/L	5	Standard
	Tl	205	7438.5	6.1	**49.5086**	3.569	7.2	ug/L	0	Standard
	Pb	206	228190.6	8.9	**50.2459**	4.685	9.3	ug/L	182	Standard
	Pb	207	196407.9	8.8	**50.8682**	4.806	9.4	ug/L	145	Standard
	Pb	208	273405.7	9.2	**49.3966**	4.916	10.0	ug/L	207	Standard
	U	238	229653.0	10.0	**47.3381**	5.139	10.9	ug/L	1	Standard
>	**Bi**	209	357036.6	2.2				ug/L	325207	Standard

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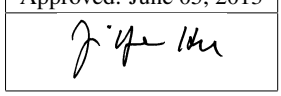

	Na	23	38.3	65.7	**4.1851**	3.465	82.8	mg/L	0	Standard
	Mg	24	5195.9	8.6	**4.5536**	0.406	8.9	mg/L	25	Standard
	K	39	305.0	19.9	**4.5516**	0.926	20.3	mg/L	3	Standard
	Ca	43	1653.4	9.6	**3.8361**	0.476	12.4	mg/L	297	Standard
	Fe	54	6055.6	10.3	**5.8780**	0.629	10.7	mg/L	91	Standard
	Fe	57	1633.4	8.8	**3.3642**	0.345	10.2	mg/L	237	Standard
>	**Sc-1**	45	42283.9	0.2				mg/L	35084	Standard
	Cl	35	79779.2	1.8				ug/L	29808	Standard
	Kr	83	36.9	10.0				ug/L	38	Standard
	Br	81	739.2	6.3				ug/L	965	Standard
	P	31	271194.0	0.9				ug/L	176735	Standard
	S	34	75161.0	1.1				ug/L	28891	Standard
	Sr	88	48.3	25.5				ug/L	27	Standard
	C	12	8.3	91.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.9	25.6				mg/L	14	Standard
	Ho-1	165	8.3	48.5				mg/L	7	Standard
	Er	166	10.0	45.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		126.190	
	Be	9	90.047		
	Al	27	106.814		
	Sc	45			
	Ti	47	123.824		
	V	51	103.249		
	Cr	52	99.238		
	Cr	53			
	Mn	55	95.526		
	Co	59	93.977		
	Ni	60	105.845		
	Cu	65	103.215		
	Zn	66	102.567		
>	Ge	72		92.337	
	As	75	100.274		
	Se	82	104.528		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	93.733	
|	Ag	107	100.811	
|	Cd	111	91.874	
|	Cd	114		
|>	In	115		112.265
|	Sn	118	96.995	
|	Sb	123	95.610	
⌊	Ba	135	99.523	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.192	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	98.793	
|	U	238	94.676	
⌊>	Bi	209		109.787
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Ti	47	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 17:49:51
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	712138.8	2.4				ug/L	552027	Standard
	Be	9	32.3	9.4	**0.0021**	0.001	46.8	ug/L	18	Standard
	Al	27	1854.1	21.3	**-0.0015**	0.002	137.7	ug/L	841	Standard
	Sc	45	42357.5	1.8				ug/L	35084	Standard
	Ti	47	21.0	19.0	**0.0194**	0.019	99.1	ug/L	22	Standard
	V	51	1173.5	0.5	**0.0822**	0.002	2.6	ug/L	812	Standard
	Cr	52	3872.5	1.1	**-0.0401**	0.010	24.8	ug/L	4274	Standard
	Cr	53	275.0	9.5	**-0.7488**	0.027	3.6	ug/L	1106	Standard
	Mn	55	975.7	5.4	**-0.0298**	0.007	23.4	ug/L	1207	Standard
	Co	59	86.3	26.9	**0.0006**	0.004	701.7	ug/L	71	Standard
	Ni	60	120.3	9.6	**-0.0734**	0.006	7.6	ug/L	295	Standard
	Cu	65	88.0	5.0	**-0.0118**	0.002	15.7	ug/L	87	Standard
	Zn	66	552.7	2.5	**-0.1966**	0.014	7.1	ug/L	469	Standard
>	**Ge**	72	478608.6	0.7				ug/L	514704	Standard
	As	75	-142.3	7.2	**-0.0107**	0.009	87.4	ug/L	-121	Standard
	Se	82	5.3	78.0	**0.0415**	0.035	84.1	ug/L	-1	Standard
	Se-1	77	95.0	11.1	**-0.1654**	0.130	78.7	ug/L	127	Standard
>	**Ga**	71	91.7	25.8				mg/L	175	Standard
	Rb	85	46.7	40.6				ug/L	50	Standard
	Y	89	554348.2	3.5				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	95.2	25.9	**0.0148**	0.006	37.7	ug/L	23	Standard
	Ag	107	70.3	12.8	**-0.0010**	0.001	128.0	ug/L	59	Standard
	Cd	111	3.9	50.8	**0.0001**	0.001	765.8	mg/L	3	Standard
	Cd	114	21.3	56.0	**-0.0009**	0.003	274.1	ug/L	10	Standard
>	**In**	115	608505.4	2.8				ug/L	537195	Standard
	Sn	118	536.7	5.6	**0.0338**	0.007	21.1	ug/L	281	Standard
	Sb	123	1093.0	9.6	**0.2429**	0.025	10.3	ug/L	167	Standard
	Ba	135	15.7	29.5	**-0.0149**	0.002	14.7	ug/L	10	Standard
	Ce	140	28.7	10.7				ug/L	27	Standard
>	**Tb**	159	839400.3	2.9				ug/L	758170	Standard
	Ho	165	9.0	38.5				ug/L	7	Standard
	Tl	203	15.0	41.6	**0.0017**	0.001	60.9	ug/L	5	Standard
	Tl	205	0.7	173.2	**0.0117**	0.007	61.9	ug/L	0	Standard
	Pb	206	215.0	12.2	**-0.0019**	0.005	246.5	ug/L	182	Standard
	Pb	207	183.0	3.8	**0.0010**	0.002	161.7	ug/L	145	Standard
	Pb	208	289.3	8.9	**0.0048**	0.003	70.4	ug/L	207	Standard
	U	238	28.7	77.2	**0.0049**	0.004	86.7	ug/L	1	Standard
>	**Bi**	209	367906.8	2.4				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8594**	0.398	46.4	mg/L	0	Standard
	Mg	24	33.3	45.8	**-0.0108**	0.013	119.6	mg/L	25	Standard
	K	39	8.3	69.3	**0.0708**	0.088	124.2	mg/L	3	Standard
	Ca	43	201.7	22.9	**-0.4219**	0.139	32.8	mg/L	297	Standard
	Fe	54	161.2	1.9	**0.0420**	0.001	2.2	mg/L	91	Standard
	Fe	57	96.7	21.5	**-0.2844**	0.045	15.9	mg/L	237	Standard
>	**Sc-1**	45	42357.5	1.8				mg/L	35084	Standard
	Cl	35	79419.6	1.5				ug/L	29808	Standard
	Kr	83	34.4	4.4				ug/L	38	Standard
	Br	81	705.8	2.2				ug/L	965	Standard
	P	31	266983.9	5.5				ug/L	176735	Standard
	S	34	71367.7	2.3				ug/L	28891	Standard
	Sr	88	46.7	20.3				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	13.4	34.8				mg/L	14	Standard
	Ho-1	165	9.0	38.5				mg/L	7	Standard
	Er	166	12.0	16.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		129.004	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.987	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	113.275
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.130
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1305159508
Sample Date/Time: Tuesday, June 04, 2013 17:53:38
Number of Replicates: 3
Autosampler Position: 340
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	600872.5	2.0				ug/L	552027	Standard
	Be	9	56.0	3.1	**0.0161**	0.001	7.0	ug/L	18	Standard
	Al	27	22775.5	3.4	**0.1402**	0.002	1.6	ug/L	841	Standard
	Sc	45	37656.7	1.9				ug/L	35084	Standard
	Ti	47	450.7	7.6	**2.4185**	0.206	8.5	ug/L	22	Standard
	V	51	14505.8	5.7	**2.8091**	0.160	5.7	ug/L	812	Standard
	Cr	52	10343.9	4.5	**1.5781**	0.104	6.6	ug/L	4274	Standard
	Cr	53	1702.6	2.9	**0.9826**	0.051	5.2	ug/L	1106	Standard
	Mn	55	249894.4	5.6	**37.8824**	1.948	5.1	ug/L	1207	Standard
	Co	59	2776.9	6.1	**0.5830**	0.034	5.8	ug/L	71	Standard
	Ni	60	629.0	1.5	**0.2197**	0.007	3.0	ug/L	295	Standard
	Cu	65	792.4	6.5	**0.3862**	0.026	6.8	ug/L	87	Standard
	Zn	66	3166.0	4.4	**2.6713**	0.119	4.5	ug/L	469	Standard
>	**Ge**	72	420818.1	1.2				ug/L	514704	Standard
	As	75	206.5	10.3	**0.3020**	0.020	6.8	ug/L	-121	Standard
	Se	82	-2.3	116.5	**-0.0249**	0.025	101.2	ug/L	-1	Standard
	Se-1	77	92.0	4.3	**-0.0425**	0.072	169.4	ug/L	127	Standard
>	**Ga**	71	1796.8	9.1				mg/L	175	Standard
	Rb	85	8265.6	4.4				ug/L	50	Standard
	Y	89	488301.8	1.7				ug/L	527499	Standard
>	**Rh**	103	0.0					ug/L	10	Standard
	Mo	98	67.5	8.7	**0.0107**	0.002	15.3	ug/L	23	Standard
	Ag	107	92.7	30.3	**0.0050**	0.005	100.7	ug/L	59	Standard
	Cd	111	6.9	14.5	**0.0023**	0.001	24.0	mg/L	3	Standard
	Cd	114	33.5	20.8	**0.0026**	0.002	65.4	ug/L	10	Standard
>	**In**	115	529725.5	1.6				ug/L	537195	Standard
	Sn	118	466.0	15.9	**0.0335**	0.016	49.0	ug/L	281	Standard
	Sb	123	285.0	11.0	**0.0607**	0.009	15.0	ug/L	167	Standard
	Ba	135	3663.4	3.7	**2.2143**	0.075	3.4	ug/L	10	Standard
	Ce	140	116551.1	4.5				ug/L	27	Standard
>	**Tb**	159	762590.9	1.9				ug/L	758170	Standard
	Ho	165	212.0	10.2				ug/L	7	Standard
	Tl	203	111.7	2.3	**0.0195**	0.000	2.5	ug/L	5	Standard
	Tl	205	4.3	26.6	**0.0376**	0.008	20.0	ug/L	0	Standard
	Pb	206	5813.4	3.2	**1.2915**	0.012	0.9	ug/L	182	Standard
	Pb	207	4536.7	3.7	**1.1843**	0.036	3.1	ug/L	145	Standard
	Pb	208	6361.2	3.7	**1.1563**	0.023	2.0	ug/L	207	Standard
	U	238	368.7	6.0	**0.0787**	0.005	6.3	ug/L	1	Standard
>	**Bi**	209	341384.2	2.6				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8263**	0.456	55.2	mg/L	0	Standard
	Mg	24	15.0	33.3	**-0.0252**	0.005	20.9	mg/L	25	Standard
	K	39	18.3	56.8	**0.2580**	0.184	71.4	mg/L	3	Standard
	Ca	43	225.0	5.9	**-0.2716**	0.050	18.5	mg/L	297	Standard
	Fe	54	1736.6	10.9	**1.8150**	0.232	12.8	mg/L	91	Standard
	Fe	57	490.0	9.8	**0.7922**	0.113	14.3	mg/L	237	Standard
>	**Sc-1**	45	37656.7	1.9				mg/L	35084	Standard
	Cl	35	68333.4	0.3				ug/L	29808	Standard
	Kr	83	37.9	10.2				ug/L	38	Standard
	Br	81	535.8	8.9				ug/L	965	Standard
	P	31	88586.6	2.2				ug/L	176735	Standard
	S	34	67784.7	2.5				ug/L	28891	Standard
	Sr	88	53.3	33.9				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	114.6				mg/L	3	Standard
	Dy	164	366.5	5.6				mg/L	14	Standard
	Ho-1	165	212.0	10.2				mg/L	7	Standard
	Er	166	239.3	8.2				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		108.848	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.759	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.610
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.974
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159509
Sample Date/Time: Tuesday, June 04, 2013 17:57:24
Number of Replicates: 3
Autosampler Position: 341
Sample Description: 100
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	585737.8	0.5				ug/L	552027	Standard
	Be	9	46.0	18.6	**0.0119**	0.004	36.7	ug/L	18	Standard
	Al	27	11296.2	4.1	**0.0655**	0.003	4.7	ug/L	841	Standard
	Sc	45	37264.1	1.9				ug/L	35084	Standard
	Ti	47	153.7	8.1	**0.7692**	0.072	9.3	ug/L	22	Standard
	V	51	4969.8	6.1	**0.8781**	0.047	5.4	ug/L	812	Standard
	Cr	52	6362.7	3.4	**0.6484**	0.023	3.5	ug/L	4274	Standard
	Cr	53	910.9	5.1	**0.0430**	0.037	85.7	ug/L	1106	Standard
	Mn	55	260261.7	6.3	**39.4242**	2.052	5.2	ug/L	1207	Standard
	Co	59	1182.4	7.6	**0.2389**	0.016	6.7	ug/L	71	Standard
	Ni	60	457.3	6.9	**0.1232**	0.014	11.0	ug/L	295	Standard
	Cu	65	361.0	2.4	**0.1461**	0.007	5.1	ug/L	87	Standard
	Zn	66	2175.2	5.3	**1.6094**	0.107	6.7	ug/L	469	Standard
>	**Ge**	72	421117.3	1.9				ug/L	514704	Standard
	As	75	21.0	101.9	**0.1271**	0.020	15.9	ug/L	-121	Standard
	Se	82	-0.3	1687.9	**-0.0062**	0.046	754.0	ug/L	-1	Standard
	Se-1	77	85.7	15.9	**-0.1351**	0.198	146.9	ug/L	127	Standard
>	**Ga**	71	588.3	5.7				mg/L	175	Standard
	Rb	85	3338.7	0.4				ug/L	50	Standard
	Y	89	485508.6	2.3				ug/L	527499	Standard
>	**Rh**	103	6.7	43.3				ug/L	10	Standard
	Mo	98	33.2	24.4	**0.0016**	0.002	135.6	ug/L	23	Standard
	Ag	107	66.0	19.3	**-0.0001**	0.002	4584.4	ug/L	59	Standard
	Cd	111	5.0	20.1	**0.0011**	0.001	56.2	mg/L	3	Standard
	Cd	114	20.0	22.0	**-0.0006**	0.001	183.1	ug/L	10	Standard
>	**In**	115	529667.6	0.5				ug/L	537195	Standard
	Sn	118	335.3	12.8	**0.0054**	0.009	175.7	ug/L	281	Standard
	Sb	123	241.8	3.9	**0.0489**	0.002	4.9	ug/L	167	Standard
	Ba	135	4071.2	4.2	**2.4634**	0.098	4.0	ug/L	10	Standard
	Ce	140	53078.2	3.4				ug/L	27	Standard
>	**Tb**	159	750713.2	1.8				ug/L	758170	Standard
	Ho	165	396.0	4.6				ug/L	7	Standard
	Tl	203	42.0	4.1	**0.0068**	0.000	3.3	ug/L	5	Standard
	Tl	205	0.3	173.2	**0.0099**	0.004	41.3	ug/L	0	Standard
	Pb	206	2597.6	2.4	**0.5555**	0.017	3.1	ug/L	182	Standard
	Pb	207	2023.8	2.6	**0.5076**	0.008	1.5	ug/L	145	Standard
	Pb	208	2876.1	2.5	**0.5019**	0.007	1.3	ug/L	207	Standard
	U	238	116.0	8.3	**0.0244**	0.002	8.2	ug/L	1	Standard
>	**Bi**	209	338716.6	1.3				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8351**	0.441	52.8	mg/L	0	Standard
	Mg	24	25.0	40.0	**-0.0151**	0.010	63.3	mg/L	25	Standard
	K	39	3.3	173.2	**0.0026**	0.100	3811.7	mg/L	3	Standard
	Ca	43	248.3	19.3	**-0.1861**	0.164	88.2	mg/L	297	Standard
	Fe	54	494.1	6.1	**0.4374**	0.025	5.8	mg/L	91	Standard
	Fe	57	231.7	18.4	**0.1116**	0.120	107.8	mg/L	237	Standard
>	**Sc-1**	45	37264.1	1.9				mg/L	35084	Standard
	Cl	35	66092.5	1.5				ug/L	29808	Standard
	Kr	83	36.3	1.8				ug/L	38	Standard
	Br	81	515.0	2.1				ug/L	965	Standard
	P	31	82990.3	4.7				ug/L	176735	Standard
	S	34	62736.3	1.3				ug/L	28891	Standard
	Sr	88	38.3	27.2				ug/L	27	Standard
	C	12	8.3	124.9				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	644.1	3.1				mg/L	14	Standard
	Ho-1	165	396.0	4.6				mg/L	7	Standard
	Er	166	401.7	3.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.107	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.817	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		98.599
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		104.154
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159510
Sample Date/Time: Tuesday, June 04, 2013 18:01:10
Number of Replicates: 3
Autosampler Position: 342
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	589847.6	0.8				ug/L	552027	Standard
	Be	9	44.0	4.5	**0.0107**	0.001	10.8	ug/L	18	Standard
	Al	27	11445.0	5.2	**0.0660**	0.004	6.1	ug/L	841	Standard
	Sc	45	36559.1	2.6				ug/L	35084	Standard
	Ti	47	148.7	15.1	**0.7422**	0.122	16.4	ug/L	22	Standard
	V	51	8094.6	6.9	**1.5128**	0.106	7.0	ug/L	812	Standard
	Cr	52	7150.0	3.7	**0.8346**	0.053	6.3	ug/L	4274	Standard
	Cr	53	1083.4	6.1	**0.2496**	0.074	29.6	ug/L	1106	Standard
	Mn	55	110244.7	5.4	**16.6369**	0.830	5.0	ug/L	1207	Standard
	Co	59	1618.1	3.6	**0.3335**	0.011	3.4	ug/L	71	Standard
	Ni	60	226.3	2.4	**-0.0058**	0.003	44.4	ug/L	295	Standard
	Cu	65	335.3	3.8	**0.1321**	0.008	6.0	ug/L	87	Standard
	Zn	66	2560.2	4.2	**2.0256**	0.104	5.1	ug/L	469	Standard
>	**Ge**	72	420445.8	0.5				ug/L	514704	Standard
	As	75	2.1	892.7	**0.1092**	0.018	16.1	ug/L	-121	Standard
	Se	82	3.5	172.9	**0.0308**	0.058	190.0	ug/L	-1	Standard
	Se-1	77	102.3	1.5	**0.1074**	0.017	15.7	ug/L	127	Standard
>	**Ga**	71	850.0	9.6				mg/L	175	Standard
	Rb	85	2490.2	8.1				ug/L	50	Standard
	Y	89	481313.8	0.4				ug/L	527499	Standard
>	**Rh**	103	8.3	34.6				ug/L	10	Standard
	Mo	98	31.2	47.0	**0.0010**	0.004	358.8	ug/L	23	Standard
	Ag	107	92.0	44.2	**0.0049**	0.007	152.9	ug/L	59	Standard
	Cd	111	10.6	43.3	**0.0046**	0.003	59.1	mg/L	3	Standard
	Cd	114	37.7	57.3	**0.0036**	0.005	137.8	ug/L	10	Standard
>	**In**	115	528889.5	1.7				ug/L	537195	Standard
	Sn	118	369.7	13.3	**0.0129**	0.011	84.7	ug/L	281	Standard
	Sb	123	242.1	10.4	**0.0490**	0.006	11.8	ug/L	167	Standard
	Ba	135	1914.5	8.3	**1.1474**	0.087	7.6	ug/L	10	Standard
	Ce	140	37707.7	6.5				ug/L	27	Standard
>	**Tb**	159	741225.9	1.4				ug/L	758170	Standard
	Ho	165	112.3	16.4				ug/L	7	Standard
	Tl	203	60.3	13.8	**0.0104**	0.002	14.6	ug/L	5	Standard
	Tl	205	2.0	100.0	**0.0218**	0.014	65.3	ug/L	0	Standard
	Pb	206	5751.4	5.6	**1.3069**	0.073	5.6	ug/L	182	Standard
	Pb	207	4579.7	3.6	**1.2236**	0.043	3.5	ug/L	145	Standard
	Pb	208	6359.5	4.8	**1.1829**	0.055	4.7	ug/L	207	Standard
	U	238	359.3	2.2	**0.0784**	0.002	2.6	ug/L	1	Standard
>	**Bi**	209	333907.9	0.3				ug/L	325207	Standard

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	Na	23	3.3	173.2	**-0.5440**	0.945	173.7	mg/L	0	Standard
	Mg	24	41.7	27.7	**0.0024**	0.011	458.7	mg/L	25	Standard
	K	39	6.7	43.3	**0.0612**	0.050	81.5	mg/L	3	Standard
	Ca	43	186.7	4.1	**-0.3797**	0.023	6.1	mg/L	297	Standard
	Fe	54	1083.8	2.8	**1.1245**	0.061	5.5	mg/L	91	Standard
	Fe	57	355.0	2.8	**0.4622**	0.043	9.3	mg/L	237	Standard
>	**Sc-1**	45	36559.1	2.6				mg/L	35084	Standard
	Cl	35	64444.8	0.4				ug/L	29808	Standard
	Kr	83	32.3	14.3				ug/L	38	Standard
	Br	81	523.3	2.4				ug/L	965	Standard
	P	31	85532.6	3.6				ug/L	176735	Standard
	S	34	60568.3	1.1				ug/L	28891	Standard
	Sr	88	50.0	26.5				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	15.0	33.3				mg/L	3	Standard
	Dy	164	178.1	6.7				mg/L	14	Standard
	Ho-1	165	112.3	16.4				mg/L	7	Standard
	Er	166	123.0	4.5				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.851	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.687	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		98.454
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		102.675
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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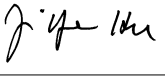

Method 6020 - Summary Report

Sample ID: L1305159511
Sample Date/Time: Tuesday, June 04, 2013 18:04:55
Number of Replicates: 3
Autosampler Position: 343
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	594053.8	1.4				ug/L	552027	Standard
	Be	9	74.0	11.8	**0.0253**	0.004	15.0	ug/L	18	Standard
	Al	27	13197.1	5.0	**0.0772**	0.004	4.8	ug/L	841	Standard
	Sc	45	36975.1	2.9				ug/L	35084	Standard
	Ti	47	211.0	5.3	**1.0981**	0.060	5.4	ug/L	22	Standard
	V	51	8446.6	8.1	**1.5977**	0.130	8.1	ug/L	812	Standard
	Cr	52	8057.5	4.3	**1.0618**	0.080	7.6	ug/L	4274	Standard
	Cr	53	1243.4	11.0	**0.4506**	0.150	33.3	ug/L	1106	Standard
	Mn	55	444211.1	6.1	**68.0670**	3.882	5.7	ug/L	1207	Standard
	Co	59	2878.3	5.7	**0.6103**	0.032	5.2	ug/L	71	Standard
	Ni	60	441.7	5.9	**0.1169**	0.012	9.9	ug/L	295	Standard
	Cu	65	424.0	8.7	**0.1832**	0.019	10.2	ug/L	87	Standard
	Zn	66	2222.8	3.3	**1.6833**	0.060	3.6	ug/L	469	Standard
>	**Ge**	72	417100.4	1.3				ug/L	514704	Standard
	As	75	74.9	30.3	**0.1784**	0.021	11.8	ug/L	-121	Standard
	Se	82	1.2	281.1	**0.0081**	0.032	396.1	ug/L	-1	Standard
	Se-1	77	91.3	1.7	**-0.0409**	0.011	26.9	ug/L	127	Standard
>	**Ga**	71	926.7	9.8				mg/L	175	Standard
	Rb	85	5165.9	5.3				ug/L	50	Standard
	Y	89	492696.4	1.0				ug/L	527499	Standard
>	**Rh**	103	3.3	86.6				ug/L	10	Standard
	Mo	98	32.2	31.1	**0.0014**	0.003	203.0	ug/L	23	Standard
	Ag	107	81.3	20.0	**0.0029**	0.003	101.0	ug/L	59	Standard
	Cd	111	10.0	30.0	**0.0042**	0.002	46.1	mg/L	3	Standard
	Cd	114	28.0	5.5	**0.0013**	0.000	17.2	ug/L	10	Standard
>	**In**	115	527677.5	2.0				ug/L	537195	Standard
	Sn	118	385.3	13.5	**0.0165**	0.012	74.4	ug/L	281	Standard
	Sb	123	275.2	6.5	**0.0583**	0.003	5.8	ug/L	167	Standard
	Ba	135	7892.1	5.4	**4.8161**	0.260	5.4	ug/L	10	Standard
	Ce	140	99331.9	5.7				ug/L	27	Standard
>	**Tb**	159	742575.6	1.8				ug/L	758170	Standard
	Ho	165	735.4	5.7				ug/L	7	Standard
	Tl	203	76.7	17.8	**0.0133**	0.003	20.9	ug/L	5	Standard
	Tl	205	1.3	86.6	**0.0170**	0.008	48.1	ug/L	0	Standard
	Pb	206	5288.9	4.4	**1.1877**	0.068	5.7	ug/L	182	Standard
	Pb	207	4168.9	4.9	**1.1003**	0.069	6.3	ug/L	145	Standard
	Pb	208	5983.1	3.0	**1.1005**	0.046	4.2	ug/L	207	Standard
	U	238	274.7	4.3	**0.0592**	0.002	3.5	ug/L	1	Standard
>	**Bi**	209	336880.0	1.8				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	33.3	22.9	**-0.0065**	0.007	104.3	mg/L	25	Standard
	K	39	8.3	34.6	**0.0889**	0.050	56.6	mg/L	3	Standard
	Ca	43	190.0	2.6	**-0.3755**	0.017	4.5	mg/L	297	Standard
	Fe	54	1019.2	2.5	**1.0374**	0.055	5.3	mg/L	91	Standard
	Fe	57	346.7	10.1	**0.4278**	0.088	20.5	mg/L	237	Standard
>	**Sc-1**	45	36975.1	2.9				mg/L	35084	Standard
	Cl	35	64140.5	1.0				ug/L	29808	Standard
	Kr	83	34.9	11.0				ug/L	38	Standard
	Br	81	519.2	5.6				ug/L	965	Standard
	P	31	84346.0	3.8				ug/L	176735	Standard
	S	34	58598.1	1.0				ug/L	28891	Standard
	Sr	88	38.3	39.8				ug/L	27	Standard
	C	12	0.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	15.0	0.0				mg/L	3	Standard
	Dy	164	1129.0	6.1				mg/L	14	Standard
	Ho-1	165	735.4	5.7				mg/L	7	Standard
	Er	166	711.7	6.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		107.613	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		81.037	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		98.228
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		103.589
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159512
Sample Date/Time: Tuesday, June 04, 2013 18:08:41
Number of Replicates: 3
Autosampler Position: 344
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	591972.5	2.0				ug/L	552027	Standard
	Be	9	63.0	6.3	**0.0200**	0.002	9.4	ug/L	18	Standard
	Al	27	24206.0	3.3	**0.1522**	0.003	2.0	ug/L	841	Standard
	Sc	45	37514.7	1.9				ug/L	35084	Standard
	Ti	47	441.3	4.7	**2.3504**	0.135	5.7	ug/L	22	Standard
	V	51	18612.5	4.4	**3.6144**	0.114	3.1	ug/L	812	Standard
	Cr	52	17170.7	3.7	**3.1428**	0.082	2.6	ug/L	4274	Standard
	Cr	53	3064.5	3.8	**2.5719**	0.085	3.3	ug/L	1106	Standard
	Mn	55	132584.2	4.2	**19.8863**	0.516	2.6	ug/L	1207	Standard
	Co	59	809.4	4.6	**0.1576**	0.008	5.3	ug/L	71	Standard
	Ni	60	924.4	5.3	**0.3818**	0.029	7.5	ug/L	295	Standard
	Cu	65	707.0	2.8	**0.3362**	0.007	2.1	ug/L	87	Standard
	Zn	66	2992.6	1.0	**2.4654**	0.052	2.1	ug/L	469	Standard
>	**Ge**	72	423640.3	1.7				ug/L	514704	Standard
	As	75	193.3	17.6	**0.2882**	0.031	10.6	ug/L	-121	Standard
	Se	82	4.7	124.1	**0.0413**	0.056	134.8	ug/L	-1	Standard
	Se-1	77	102.0	18.0	**0.0935**	0.277	295.7	ug/L	127	Standard
>	**Ga**	71	2038.5	2.8				mg/L	175	Standard
	Rb	85	5142.5	2.2				ug/L	50	Standard
	Y	89	476213.8	1.4				ug/L	527499	Standard
>	**Rh**	103	6.7	114.6				ug/L	10	Standard
	Mo	98	59.8	10.4	**0.0089**	0.002	17.9	ug/L	23	Standard
	Ag	107	84.7	10.3	**0.0037**	0.002	42.1	ug/L	59	Standard
	Cd	111	5.3	61.0	**0.0013**	0.002	150.3	mg/L	3	Standard
	Cd	114	27.1	7.0	**0.0012**	0.001	42.4	ug/L	10	Standard
>	**In**	115	522613.3	0.8				ug/L	537195	Standard
	Sn	118	293.0	11.1	**-0.0028**	0.007	262.2	ug/L	281	Standard
	Sb	123	227.2	7.0	**0.0458**	0.005	10.4	ug/L	167	Standard
	Ba	135	2419.9	3.7	**1.4746**	0.044	3.0	ug/L	10	Standard
	Ce	140	64512.1	3.3				ug/L	27	Standard
>	**Tb**	159	742201.8	0.7				ug/L	758170	Standard
	Ho	165	222.3	5.3				ug/L	7	Standard
	Tl	203	61.0	2.8	**0.0105**	0.000	3.6	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0146**	0.007	48.1	ug/L	0	Standard
	Pb	206	4475.0	2.5	**1.0092**	0.042	4.2	ug/L	182	Standard
	Pb	207	3536.4	1.4	**0.9370**	0.012	1.3	ug/L	145	Standard
	Pb	208	4921.3	2.3	**0.9076**	0.033	3.6	ug/L	207	Standard
	U	238	573.3	12.5	**0.1258**	0.015	12.2	ug/L	1	Standard
>	**Bi**	209	333123.8	1.5				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8281**	0.453	54.7	mg/L	0	Standard
	Mg	24	31.7	39.7	**-0.0085**	0.013	150.1	mg/L	25	Standard
	K	39	10.0	50.0	**0.1150**	0.086	74.7	mg/L	3	Standard
	Ca	43	166.7	11.4	**-0.4623**	0.057	12.4	mg/L	297	Standard
	Fe	54	2173.4	4.2	**2.3085**	0.120	5.2	mg/L	91	Standard
	Fe	57	553.3	12.3	**0.9679**	0.188	19.4	mg/L	237	Standard
>	**Sc-1**	45	37514.7	1.9				mg/L	35084	Standard
	Cl	35	62540.8	0.4				ug/L	29808	Standard
	Kr	83	34.3	5.4				ug/L	38	Standard
	Br	81	508.3	3.3				ug/L	965	Standard
	P	31	84719.6	2.3				ug/L	176735	Standard
	S	34	57360.0	0.1				ug/L	28891	Standard
	Sr	88	50.8	24.3				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	91.7				mg/L	3	Standard
	Dy	164	324.7	1.8				mg/L	14	Standard
	Ho-1	165	222.3	5.3				mg/L	7	Standard
	Er	166	215.3	7.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		107.236	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		82.308	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	97.286
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.434
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159513
Sample Date/Time: Tuesday, June 04, 2013 18:12:27
Number of Replicates: 3
Autosampler Position: 345
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	602145.3	1.5				ug/L	552027	Standard
	Be	9	72.7	14.3	**0.0242**	0.006	22.9	ug/L	18	Standard
	Al	27	21812.7	4.0	**0.1335**	0.005	4.0	ug/L	841	Standard
	Sc	45	37264.1	0.9				ug/L	35084	Standard
	Ti	47	419.3	13.4	**2.2283**	0.303	13.6	ug/L	22	Standard
	V	51	11748.5	3.0	**2.2358**	0.062	2.8	ug/L	812	Standard
	Cr	52	10988.7	4.3	**1.7118**	0.097	5.7	ug/L	4274	Standard
	Cr	53	1892.6	6.4	**1.1933**	0.139	11.7	ug/L	1106	Standard
	Mn	55	350711.9	5.4	**52.8867**	2.637	5.0	ug/L	1207	Standard
	Co	59	2616.2	2.9	**0.5448**	0.014	2.6	ug/L	71	Standard
	Ni	60	608.0	3.7	**0.2058**	0.014	6.7	ug/L	295	Standard
	Cu	65	613.0	2.4	**0.2843**	0.007	2.3	ug/L	87	Standard
	Zn	66	2775.6	3.7	**2.2347**	0.098	4.4	ug/L	469	Standard
>	**Ge**	72	423530.6	0.5				ug/L	514704	Standard
	As	75	185.8	18.1	**0.2812**	0.031	11.0	ug/L	-121	Standard
	Se	82	-1.4	205.2	**-0.0166**	0.028	166.3	ug/L	-1	Standard
	Se-1	77	103.0	11.4	**0.1057**	0.163	153.9	ug/L	127	Standard
>	**Ga**	71	1421.7	6.6				mg/L	175	Standard
	Rb	85	7481.9	5.8				ug/L	50	Standard
	Y	89	492098.7	0.4				ug/L	527499	Standard
>	**Rh**	103	11.7	65.5				ug/L	10	Standard
	Mo	98	46.2	11.9	**0.0049**	0.001	27.9	ug/L	23	Standard
	Ag	107	89.3	4.2	**0.0042**	0.001	19.3	ug/L	59	Standard
	Cd	111	8.9	33.5	**0.0035**	0.002	51.1	mg/L	3	Standard
	Cd	114	29.3	29.6	**0.0016**	0.002	131.4	ug/L	10	Standard
>	**In**	115	535086.7	1.6				ug/L	537195	Standard
	Sn	118	400.3	25.2	**0.0185**	0.022	116.5	ug/L	281	Standard
	Sb	123	242.1	2.6	**0.0483**	0.001	1.6	ug/L	167	Standard
	Ba	135	6117.6	3.7	**3.6767**	0.163	4.4	ug/L	10	Standard
	Ce	140	96172.2	3.4				ug/L	27	Standard
>	**Tb**	159	754571.5	1.2				ug/L	758170	Standard
	Ho	165	579.7	3.8				ug/L	7	Standard
	Tl	203	90.7	7.5	**0.0157**	0.001	9.1	ug/L	5	Standard
	Tl	205	1.0	0.0	**0.0145**	0.000	0.5	ug/L	0	Standard
	Pb	206	4551.7	3.2	**1.0037**	0.032	3.2	ug/L	182	Standard
	Pb	207	3610.1	3.1	**0.9358**	0.028	3.0	ug/L	145	Standard
	Pb	208	5107.0	2.8	**0.9220**	0.026	2.8	ug/L	207	Standard
	U	238	300.0	9.6	**0.0640**	0.006	8.9	ug/L	1	Standard
>	**Bi**	209	340480.1	1.1				ug/L	325207	Standard

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	Na	23	3.3	173.2	**-0.5671**	0.905	159.5	mg/L	0	Standard
	Mg	24	25.0	20.0	**-0.0150**	0.005	32.1	mg/L	25	Standard
	K	39	8.3	34.6	**0.0879**	0.050	57.4	mg/L	3	Standard
	Ca	43	168.3	14.0	**-0.4523**	0.082	18.2	mg/L	297	Standard
	Fe	54	1301.6	9.4	**1.3440**	0.124	9.2	mg/L	91	Standard
	Fe	57	405.0	6.9	**0.5779**	0.078	13.5	mg/L	237	Standard
>	**Sc-1**	45	37264.1	0.9				mg/L	35084	Standard
	Cl	35	62280.4	1.6				ug/L	29808	Standard
	Kr	83	39.4	13.1				ug/L	38	Standard
	Br	81	578.3	10.6				ug/L	965	Standard
	P	31	82741.3	2.8				ug/L	176735	Standard
	S	34	55791.7	0.2				ug/L	28891	Standard
	Sr	88	42.5	25.6				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	5.0	173.2				mg/L	3	Standard
	Dy	164	893.2	2.9				mg/L	14	Standard
	Ho-1	165	579.7	3.8				mg/L	7	Standard
	Er	166	568.0	8.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		109.079	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		82.286	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	99.608
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.696
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159514
Sample Date/Time: Tuesday, June 04, 2013 18:16:13
Number of Replicates: 3
Autosampler Position: 346
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	601040.9	1.2				ug/L	552027	Standard
	Be	9	45.7	14.1	**0.0111**	0.003	28.6	ug/L	18	Standard
	Al	27	6570.8	6.2	**0.0319**	0.002	7.3	ug/L	841	Standard
	Sc	45	37524.8	1.6				ug/L	35084	Standard
	Ti	47	180.3	8.6	**0.8999**	0.081	9.0	ug/L	22	Standard
	V	51	11170.3	5.4	**2.0939**	0.097	4.6	ug/L	812	Standard
	Cr	52	10150.1	1.9	**1.4914**	0.020	1.3	ug/L	4274	Standard
	Cr	53	1792.6	3.9	**1.0518**	0.065	6.2	ug/L	1106	Standard
	Mn	55	104995.2	5.2	**15.5416**	0.657	4.2	ug/L	1207	Standard
	Co	59	1172.7	6.8	**0.2326**	0.015	6.3	ug/L	71	Standard
	Ni	60	248.0	2.8	**0.0039**	0.005	127.4	ug/L	295	Standard
	Cu	65	484.0	9.4	**0.2098**	0.023	11.1	ug/L	87	Standard
	Zn	66	2177.8	5.9	**1.5726**	0.112	7.1	ug/L	469	Standard
>	**Ge**	72	428310.6	1.1				ug/L	514704	Standard
	As	75	6.2	78.5	**0.1130**	0.005	4.0	ug/L	-121	Standard
	Se	82	-3.2	222.8	**-0.0333**	0.067	201.4	ug/L	-1	Standard
	Se-1	77	102.3	1.5	**0.0803**	0.020	24.6	ug/L	127	Standard
>	**Ga**	71	1258.4	5.2				mg/L	175	Standard
	Rb	85	3502.1	2.3				ug/L	50	Standard
	Y	89	484394.7	0.5				ug/L	527499	Standard
>	**Rh**	103	1.7	173.2				ug/L	10	Standard
	Mo	98	43.1	24.6	**0.0041**	0.003	65.8	ug/L	23	Standard
	Ag	107	93.3	18.4	**0.0050**	0.003	65.2	ug/L	59	Standard
	Cd	111	6.0	67.0	**0.0017**	0.002	144.5	mg/L	3	Standard
	Cd	114	19.2	54.2	**-0.0008**	0.002	290.2	ug/L	10	Standard
>	**In**	115	535742.7	1.4				ug/L	537195	Standard
	Sn	118	366.7	24.8	**0.0114**	0.021	180.1	ug/L	281	Standard
	Sb	123	234.5	16.9	**0.0462**	0.011	23.1	ug/L	167	Standard
	Ba	135	1846.1	6.5	**1.0912**	0.061	5.6	ug/L	10	Standard
	Ce	140	73701.8	4.8				ug/L	27	Standard
>	**Tb**	159	755311.8	1.0				ug/L	758170	Standard
	Ho	165	182.3	11.1				ug/L	7	Standard
	Tl	203	85.0	49.0	**0.0146**	0.007	50.4	ug/L	5	Standard
	Tl	205	1.3	114.6	**0.0168**	0.010	62.5	ug/L	0	Standard
	Pb	206	5492.0	2.1	**1.2214**	0.026	2.2	ug/L	182	Standard
	Pb	207	4323.0	4.0	**1.1297**	0.043	3.8	ug/L	145	Standard
	Pb	208	6062.1	3.1	**1.1032**	0.027	2.5	ug/L	207	Standard
	U	238	470.3	7.8	**0.1008**	0.007	7.0	ug/L	1	Standard
>	**Bi**	209	340381.3	1.3				ug/L	325207	Standard

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	Na	23	5.0	0.0	**-0.3146**	0.012	3.9	mg/L	0	Standard
	Mg	24	26.7	47.2	**-0.0135**	0.013	93.0	mg/L	25	Standard
	K	39	5.0	100.0	**0.0308**	0.086	279.8	mg/L	3	Standard
	Ca	43	191.7	1.5	**-0.3793**	0.018	4.7	mg/L	297	Standard
	Fe	54	1508.7	9.8	**1.5644**	0.144	9.2	mg/L	91	Standard
	Fe	57	466.7	2.7	**0.7350**	0.015	2.0	mg/L	237	Standard
>	**Sc-1**	45	37524.8	1.6				mg/L	35084	Standard
	Cl	35	64304.5	0.4				ug/L	29808	Standard
	Kr	83	36.1	8.9				ug/L	38	Standard
	Br	81	543.3	1.9				ug/L	965	Standard
	P	31	84768.3	2.8				ug/L	176735	Standard
	S	34	56610.6	0.6				ug/L	28891	Standard
	Sr	88	33.3	4.3				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	17.3				mg/L	3	Standard
	Dy	164	267.1	16.9				mg/L	14	Standard
	Ho-1	165	182.3	11.1				mg/L	7	Standard
	Er	166	193.7	12.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		108.879	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		83.215	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

99.730

104.666

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159515
Sample Date/Time: Tuesday, June 04, 2013 18:19:59
Number of Replicates: 3
Autosampler Position: 347
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	596763.5	0.6				ug/L	552027	Standard
	Be	9	72.7	4.4	**0.0245**	0.001	6.0	ug/L	18	Standard
	Al	27	57439.2	5.6	**0.3745**	0.020	5.4	ug/L	841	Standard
	Sc	45	37498.0	2.0				ug/L	35084	Standard
	Ti	47	167.0	8.4	**0.8406**	0.081	9.7	ug/L	22	Standard
	V	51	7255.0	5.5	**1.3366**	0.077	5.7	ug/L	812	Standard
	Cr	52	6938.3	3.6	**0.7784**	0.055	7.1	ug/L	4274	Standard
	Cr	53	1080.0	7.8	**0.2403**	0.098	40.8	ug/L	1106	Standard
	Mn	55	603396.0	6.6	**91.3890**	5.823	6.4	ug/L	1207	Standard
	Co	59	2643.9	5.4	**0.5524**	0.029	5.3	ug/L	71	Standard
	Ni	60	601.3	6.1	**0.2030**	0.020	9.8	ug/L	295	Standard
	Cu	65	22437.3	6.3	**12.3936**	0.752	6.1	ug/L	87	Standard
	Zn	66	5229.6	3.2	**4.8614**	0.169	3.5	ug/L	469	Standard
>	Ge	72	422252.0	0.5				ug/L	514704	Standard
	As	75	123.3	43.7	**0.2230**	0.050	22.6	ug/L	-121	Standard
	Se	82	8.0	134.3	**0.0728**	0.102	140.4	ug/L	-1	Standard
	Se-1	77	100.0	7.5	**0.0678**	0.114	168.4	ug/L	127	Standard
>	Ga	71	850.0	14.4				mg/L	175	Standard
	Rb	85	4375.6	3.4				ug/L	50	Standard
	Y	89	496795.9	1.4				ug/L	527499	Standard
>	Rh	103	8.3	91.7				ug/L	10	Standard
	Mo	98	39.4	4.5	**0.0032**	0.000	15.1	ug/L	23	Standard
	Ag	107	88.7	14.0	**0.0042**	0.002	54.2	ug/L	59	Standard
	Cd	111	30.0	12.0	**0.0163**	0.002	12.9	mg/L	3	Standard
	Cd	114	99.5	15.1	**0.0181**	0.003	18.8	ug/L	10	Standard
>	In	115	532999.0	0.7				ug/L	537195	Standard
	Sn	118	505.0	14.2	**0.0412**	0.016	39.2	ug/L	281	Standard
	Sb	123	255.7	4.1	**0.0523**	0.003	5.4	ug/L	167	Standard
	Ba	135	10128.1	5.3	**6.1232**	0.281	4.6	ug/L	10	Standard
	Ce	140	96501.4	4.6				ug/L	27	Standard
>	Tb	159	749023.9	1.6				ug/L	758170	Standard
	Ho	165	905.7	6.1				ug/L	7	Standard
	Tl	203	65.7	14.1	**0.0112**	0.002	14.3	ug/L	5	Standard
	Tl	205	1.7	91.7	**0.0193**	0.011	56.0	ug/L	0	Standard
	Pb	206	13527.4	3.7	**3.0991**	0.099	3.2	ug/L	182	Standard
	Pb	207	10962.3	6.1	**2.9536**	0.164	5.6	ug/L	145	Standard
	Pb	208	15133.9	4.8	**2.8419**	0.117	4.1	ug/L	207	Standard
	U	238	236.0	13.9	**0.0505**	0.007	13.8	ug/L	1	Standard
>	Bi	209	338084.6	1.0				ug/L	325207	Standard

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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	31.7	32.9	**-0.0084**	0.011	128.0	mg/L	25	Standard
	K	39	6.7	43.3	**0.0578**	0.047	80.6	mg/L	3	Standard
	Ca	43	268.3	8.4	**-0.1259**	0.066	52.4	mg/L	297	Standard
	Fe	54	810.8	11.7	**0.7889**	0.117	14.9	mg/L	91	Standard
	Fe	57	308.3	6.6	**0.3131**	0.069	22.1	mg/L	237	Standard
>	**Sc-1**	45	37498.0	2.0				mg/L	35084	Standard
	Cl	35	63378.3	1.2				ug/L	29808	Standard
	Kr	83	33.8	13.1				ug/L	38	Standard
	Br	81	532.5	4.9				ug/L	965	Standard
	P	31	84747.5	4.8				ug/L	176735	Standard
	S	34	56262.6	0.6				ug/L	28891	Standard
	Sr	88	46.7	3.1				ug/L	27	Standard
	C	12	3.3	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	8.3	91.7				mg/L	3	Standard
	Dy	164	1416.8	5.2				mg/L	14	Standard
	Ho-1	165	905.7	6.1				mg/L	7	Standard
	Er	166	903.7	7.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		108.104	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		82.038	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		99.219
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		103.960
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1305159516
Sample Date/Time: Tuesday, June 04, 2013 18:23:45
Number of Replicates: 3
Autosampler Position: 348
Sample Description: 50
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	608534.7	0.5				ug/L	552027	Standard
	Be	9	86.3	9.3	**0.0304**	0.004	12.7	ug/L	18	Standard
	Al	27	23454.5	6.5	**0.1428**	0.009	6.5	ug/L	841	Standard
	Sc	45	38528.9	0.1				ug/L	35084	Standard
	Ti	47	510.3	6.2	**2.7107**	0.169	6.2	ug/L	22	Standard
	V	51	18515.2	8.2	**3.5702**	0.293	8.2	ug/L	812	Standard
	Cr	52	10661.4	5.2	**1.6189**	0.119	7.4	ug/L	4274	Standard
	Cr	53	1811.8	5.7	**1.0832**	0.115	10.6	ug/L	1106	Standard
	Mn	55	385773.3	6.7	**57.7859**	3.737	6.5	ug/L	1207	Standard
	Co	59	2042.8	9.0	**0.4188**	0.038	9.1	ug/L	71	Standard
	Ni	60	460.7	1.7	**0.1220**	0.005	4.1	ug/L	295	Standard
	Cu	65	894.7	4.1	**0.4366**	0.019	4.3	ug/L	87	Standard
	Zn	66	3194.3	5.0	**2.6564**	0.159	6.0	ug/L	469	Standard
>	**Ge**	72	426496.4	0.3				ug/L	514704	Standard
	As	75	359.8	12.7	**0.4418**	0.041	9.4	ug/L	-121	Standard
	Se	82	-0.4	1313.9	**-0.0070**	0.051	727.7	ug/L	-1	Standard
	Se-1	77	88.7	1.7	**-0.1081**	0.021	19.6	ug/L	127	Standard
>	**Ga**	71	2093.5	8.1				mg/L	175	Standard
	Rb	85	6769.9	8.0				ug/L	50	Standard
	Y	89	495591.6	1.9				ug/L	527499	Standard
>	**Rh**	103	8.3	34.6				ug/L	10	Standard
	Mo	98	144.6	69.7	**0.0312**	0.027	85.3	ug/L	23	Standard
	Ag	107	127.3	73.9	**0.0117**	0.018	153.1	ug/L	59	Standard
	Cd	111	18.8	96.3	**0.0096**	0.011	115.1	mg/L	3	Standard
	Cd	114	59.3	90.3	**0.0088**	0.013	144.7	ug/L	10	Standard
>	**In**	115	528513.4	0.8				ug/L	537195	Standard
	Sn	118	375.0	18.0	**0.0141**	0.015	107.2	ug/L	281	Standard
	Sb	123	215.4	22.7	**0.0418**	0.013	31.2	ug/L	167	Standard
	Ba	135	2744.2	4.4	**1.6564**	0.061	3.7	ug/L	10	Standard
	Ce	140	83023.9	6.8				ug/L	27	Standard
>	**Tb**	159	747639.5	1.0				ug/L	758170	Standard
	Ho	165	468.3	4.5				ug/L	7	Standard
	Tl	203	88.3	15.5	**0.0153**	0.002	16.0	ug/L	5	Standard
	Tl	205	1.7	34.6	**0.0192**	0.004	20.8	ug/L	0	Standard
	Pb	206	3559.1	5.6	**0.7773**	0.044	5.7	ug/L	182	Standard
	Pb	207	2779.3	6.4	**0.7128**	0.049	6.8	ug/L	145	Standard
	Pb	208	3932.5	5.8	**0.7021**	0.045	6.4	ug/L	207	Standard
	U	238	495.7	7.0	**0.1067**	0.007	6.9	ug/L	1	Standard
>	**Bi**	209	339283.7	0.5				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8379**	0.436	52.0	mg/L	0	Standard
	Mg	24	50.0	26.5	**0.0084**	0.013	152.3	mg/L	25	Standard
	K	39	5.0	173.2	**0.0278**	0.144	517.2	mg/L	3	Standard
	Ca	43	196.7	24.7	**-0.3798**	0.157	41.3	mg/L	297	Standard
	Fe	54	2395.3	5.9	**2.4849**	0.152	6.1	mg/L	91	Standard
	Fe	57	686.7	12.5	**1.2758**	0.225	17.7	mg/L	237	Standard
>	**Sc-1**	45	38528.9	0.1				mg/L	35084	Standard
	Cl	35	62878.2	1.1				ug/L	29808	Standard
	Kr	83	38.0	4.6				ug/L	38	Standard
	Br	81	586.7	2.0				ug/L	965	Standard
	P	31	84000.9	4.5				ug/L	176735	Standard
	S	34	56193.2	0.5				ug/L	28891	Standard
	Sr	88	47.5	13.9				ug/L	27	Standard
	C	12	1.7	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	86.6				mg/L	3	Standard
	Dy	164	668.8	9.3				mg/L	14	Standard
	Ho-1	165	468.3	4.5				mg/L	7	Standard
	Er	166	443.0	6.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		110.236	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		82.862	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.384
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.329
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1305159516
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 18:27:32
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	702147.7	3.0				ug/L	552027	Standard
	Be	9	106620.4	9.6	**44.4187**	3.999	9.0	ug/L	18	Standard
	Al	27	9353800.7	8.9	**53.4961**	4.685	8.8	ug/L	841	Standard
	Sc	45	41735.8	3.7				ug/L	35084	Standard
	Ti	47	25367.0	9.2	**123.9263**	9.811	7.9	ug/L	22	Standard
	V	51	286709.2	11.7	**50.9824**	5.254	10.3	ug/L	812	Standard
	Cr	52	241279.1	11.9	**48.7224**	5.171	10.6	ug/L	4274	Standard
	Cr	53	50394.3	10.7	**51.5904**	5.122	9.9	ug/L	1106	Standard
	Mn	55	352838.8	11.6	**47.1600**	4.883	10.4	ug/L	1207	Standard
	Co	59	242793.6	11.6	**46.1011**	4.768	10.3	ug/L	71	Standard
	Ni	60	107353.0	9.7	**52.8420**	4.415	8.4	ug/L	295	Standard
	Cu	65	104464.8	9.7	**51.1791**	4.182	8.2	ug/L	87	Standard
	Zn	66	54687.4	9.5	**50.8477**	4.158	8.2	ug/L	469	Standard
>	Ge	72	477351.9	2.2				ug/L	514704	Standard
	As	75	59790.1	9.3	**49.7545**	3.974	8.0	ug/L	-121	Standard
	Se	82	6125.7	7.9	**51.6594**	3.447	6.7	ug/L	-1	Standard
	Se-1	77	4069.5	7.6	**50.3728**	3.257	6.5	ug/L	127	Standard
>	Ga	71	93.3	3.1				mg/L	175	Standard
	Rb	85	3105.3	9.2				ug/L	50	Standard
	Y	89	542146.8	2.1				ug/L	527499	Standard
>	Rh	103	35.0	37.8				ug/L	10	Standard
	Mo	98	400914.0	10.2	**93.8411**	8.000	8.5	ug/L	23	Standard
	Ag	107	303968.4	8.9	**51.2752**	3.542	6.9	ug/L	59	Standard
	Cd	111	84755.1	9.9	**45.8082**	3.710	8.1	mg/L	3	Standard
	Cd	114	245019.7	10.7	**51.3527**	4.526	8.8	ug/L	10	Standard
>	In	115	599926.0	2.3				ug/L	537195	Standard
	Sn	118	257958.2	11.2	**48.7756**	4.536	9.3	ug/L	281	Standard
	Sb	123	198890.7	9.1	**47.9376**	3.444	7.2	ug/L	167	Standard
	Ba	135	93646.5	9.4	**50.4299**	3.755	7.4	ug/L	10	Standard
	Ce	140	106.0	11.1				ug/L	27	Standard
>	Tb	159	830793.6	0.6				ug/L	758170	Standard
	Ho	165	9.7	26.0				ug/L	7	Standard
	Tl	203	291475.5	7.1	**50.0090**	3.494	7.0	ug/L	5	Standard
	Tl	205	7454.8	7.9	**48.8782**	3.782	7.7	ug/L	0	Standard
	Pb	206	230828.6	9.4	**50.0781**	4.662	9.3	ug/L	182	Standard
	Pb	207	197792.4	9.1	**50.4664**	4.544	9.0	ug/L	145	Standard
	Pb	208	273415.0	10.0	**48.6606**	4.794	9.9	ug/L	207	Standard
	U	238	231914.1	10.6	**47.0852**	4.942	10.5	ug/L	1	Standard
>	Bi	209	362173.1	0.2				ug/L	325207	Standard

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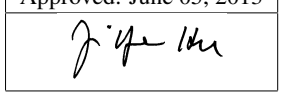

	Na	23	28.3	44.4	**2.8981**	1.891	65.3	mg/L	0	Standard
	Mg	24	5010.8	8.8	**4.4577**	0.516	11.6	mg/L	25	Standard
	K	39	243.3	10.3	**3.6700**	0.392	10.7	mg/L	3	Standard
	Ca	43	1771.8	9.7	**4.2592**	0.592	13.9	mg/L	297	Standard
	Fe	54	6048.6	10.0	**5.9643**	0.775	13.0	mg/L	91	Standard
	Fe	57	1736.8	3.3	**3.6704**	0.290	7.9	mg/L	237	Standard
>	**Sc-1**	45	41735.8	3.7				mg/L	35084	Standard
	Cl	35	80091.8	1.4				ug/L	29808	Standard
	Kr	83	40.4	11.0				ug/L	38	Standard
	Br	81	687.5	5.4				ug/L	965	Standard
	P	31	274170.2	5.7				ug/L	176735	Standard
	S	34	74805.1	1.0				ug/L	28891	Standard
	Sr	88	50.8	2.8				ug/L	27	Standard
	C	12	5.0	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	9.7	41.4				mg/L	14	Standard
	Ho-1	165	9.7	26.0				mg/L	7	Standard
	Er	166	12.7	19.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		127.195	
	Be	9	88.837		
	Al	27	106.992		
	Sc	45			
	Ti	47	123.926		
	V	51	101.965		
	Cr	52	97.445		
	Cr	53			
	Mn	55	94.320		
	Co	59	92.202		
	Ni	60	105.684		
	Cu	65	102.358		
	Zn	66	101.695		
>	Ge	72		92.743	
	As	75	99.509		
	Se	82	103.319		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	93.841	
|	Ag	107	102.550	
|	Cd	111	91.616	
|	Cd	114		
|>	In	115		111.677
|	Sn	118	97.551	
|	Sb	123	95.875	
⌊	Ba	135	100.860	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.018	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	97.321	
|	U	238	94.170	
⌊>	Bi	209		111.367
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Be	9	
QC Std 6	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 18:31:18
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	720006.0	1.9				ug/L	552027	Standard
	Be	9	40.0	63.1	**0.0050**	0.010	197.4	ug/L	18	Standard
	Al	27	2554.3	74.2	**0.0022**	0.010	474.2	ug/L	841	Standard
	Sc	45	41829.4	3.4				ug/L	35084	Standard
	Ti	47	18.7	39.5	**0.0092**	0.035	376.5	ug/L	22	Standard
	V	51	1101.1	8.0	**0.0726**	0.013	18.1	ug/L	812	Standard
	Cr	52	3754.5	5.2	**-0.0514**	0.027	52.5	ug/L	4274	Standard
	Cr	53	250.0	14.2	**-0.7699**	0.043	5.5	ug/L	1106	Standard
	Mn	55	912.7	2.8	**-0.0361**	0.006	15.9	ug/L	1207	Standard
	Co	59	79.7	5.1	**-0.0004**	0.001	285.5	ug/L	71	Standard
	Ni	60	114.0	15.3	**-0.0756**	0.008	10.0	ug/L	295	Standard
	Cu	65	94.3	24.5	**-0.0080**	0.011	132.4	ug/L	87	Standard
	Zn	66	518.7	6.2	**-0.2205**	0.022	9.9	ug/L	469	Standard
>	**Ge**	72	470540.6	2.0				ug/L	514704	Standard
	As	75	-107.3	44.4	**0.0171**	0.039	226.9	ug/L	-121	Standard
	Se	82	5.9	125.0	**0.0485**	0.064	131.6	ug/L	-1	Standard
	Se-1	77	97.7	9.5	**-0.1110**	0.105	94.4	ug/L	127	Standard
>	**Ga**	71	71.7	8.1				mg/L	175	Standard
	Rb	85	48.3	29.9				ug/L	50	Standard
	Y	89	551340.7	1.8				ug/L	527499	Standard
>	**Rh**	103	5.0	100.0				ug/L	10	Standard
	Mo	98	94.9	34.7	**0.0146**	0.007	51.3	ug/L	23	Standard
	Ag	107	85.3	7.1	**0.0015**	0.001	73.0	ug/L	59	Standard
	Cd	111	4.6	87.9	**0.0005**	0.002	430.4	mg/L	3	Standard
	Cd	114	26.1	12.1	**0.0000**	0.001	1358.6	ug/L	10	Standard
>	**In**	115	611621.3	1.4				ug/L	537195	Standard
	Sn	118	491.7	6.7	**0.0249**	0.007	29.6	ug/L	281	Standard
	Sb	123	1091.6	6.7	**0.2411**	0.014	5.7	ug/L	167	Standard
	Ba	135	18.7	6.2	**-0.0133**	0.001	4.4	ug/L	10	Standard
	Ce	140	24.0	20.8				ug/L	27	Standard
>	**Tb**	159	839880.0	2.1				ug/L	758170	Standard
	Ho	165	9.0	29.4				ug/L	7	Standard
	Tl	203	16.3	3.5	**0.0019**	0.000	1.9	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0140**	0.007	46.5	ug/L	0	Standard
	Pb	206	224.3	8.5	**0.0002**	0.004	2118.6	ug/L	182	Standard
	Pb	207	188.7	6.3	**0.0025**	0.003	112.8	ug/L	145	Standard
	Pb	208	269.0	1.0	**0.0013**	0.001	96.3	ug/L	207	Standard
	U	238	13.3	37.0	**0.0019**	0.001	53.2	ug/L	1	Standard
>	**Bi**	209	367873.4	2.4				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8499**	0.415	48.8	mg/L	0	Standard
	Mg	24	38.3	41.9	**-0.0061**	0.014	227.0	mg/L	25	Standard
	K	39	3.3	86.6	**-0.0034**	0.045	1328.5	mg/L	3	Standard
	Ca	43	201.7	10.3	**-0.4159**	0.042	10.1	mg/L	297	Standard
	Fe	54	169.5	30.9	**0.0513**	0.047	90.6	mg/L	91	Standard
	Fe	57	125.0	22.3	**-0.2114**	0.077	36.5	mg/L	237	Standard
>	**Sc-1**	45	41829.4	3.4				mg/L	35084	Standard
	Cl	35	78982.8	2.8				ug/L	29808	Standard
	Kr	83	36.7	3.1				ug/L	38	Standard
	Br	81	638.3	2.0				ug/L	965	Standard
	P	31	268170.6	3.2				ug/L	176735	Standard
	S	34	71073.1	3.3				ug/L	28891	Standard
	Sr	88	52.5	34.3				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	12.5	16.8				mg/L	14	Standard
	Ho-1	165	9.0	29.4				mg/L	7	Standard
	Er	166	10.7	32.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		130.430	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.420	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		113.855
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		113.120
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

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Method 6020 - Summary Report

Sample ID: L1305124201
Sample Date/Time: Tuesday, June 04, 2013 18:35:05
Number of Replicates: 3
Autosampler Position: 401
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	731203.4	1.8				ug/L	552027	Standard
	Be	9	33.0	25.9	**0.0021**	0.004	170.9	ug/L	18	Standard
	Al	27	4539867.7	7.2	**24.9167**	1.649	6.6	ug/L	841	Standard
	Sc	45	42855.5	2.0				ug/L	35084	Standard
	Ti	47	279.3	14.5	**1.2787**	0.167	13.0	ug/L	22	Standard
	V	51	18050.3	11.3	**3.0847**	0.303	9.8	ug/L	812	Standard
	Cr	52	9827.5	9.0	**1.1811**	0.144	12.2	ug/L	4274	Standard
	Cr	53	1561.7	7.5	**0.5952**	0.144	24.1	ug/L	1106	Standard
	Mn	55	4007.5	6.7	**0.3763**	0.028	7.5	ug/L	1207	Standard
	Co	59	231.3	7.4	**0.0281**	0.003	9.7	ug/L	71	Standard
	Ni	60	1476.4	6.8	**0.5951**	0.045	7.5	ug/L	295	Standard
	Cu	65	569.7	12.4	**0.2239**	0.029	13.0	ug/L	87	Standard
	Zn	66	5262.6	8.8	**4.2366**	0.356	8.4	ug/L	469	Standard
>	Ge	72	478163.5	2.3				ug/L	514704	Standard
	As	75	801.4	9.7	**0.7715**	0.053	6.9	ug/L	-121	Standard
	Se	82	117.6	7.8	**0.9875**	0.075	7.6	ug/L	-1	Standard
	Se-1	77	164.3	4.1	**0.7176**	0.114	15.9	ug/L	127	Standard
>	Ga	71	96.7	23.3				mg/L	175	Standard
	Rb	85	9653.1	6.6				ug/L	50	Standard
	Y	89	553374.7	1.9				ug/L	527499	Standard
>	Rh	103	65.0	27.7				ug/L	10	Standard
	Mo	98	6048.1	9.5	**1.3683**	0.127	9.3	ug/L	23	Standard
	Ag	107	82.0	15.9	**0.0008**	0.002	274.0	ug/L	59	Standard
	Cd	111	13.3	30.7	**0.0051**	0.002	42.8	mg/L	3	Standard
	Cd	114	64.6	1.4	**0.0078**	0.000	2.5	ug/L	10	Standard
>	In	115	617978.7	0.4				ug/L	537195	Standard
	Sn	118	611.3	4.4	**0.0459**	0.005	11.9	ug/L	281	Standard
	Sb	123	656.8	9.3	**0.1367**	0.015	10.8	ug/L	167	Standard
	Ba	135	61806.7	8.5	**32.3290**	2.668	8.3	ug/L	10	Standard
	Ce	140	594.0	7.0				ug/L	27	Standard
>	Tb	159	858557.9	1.1				ug/L	758170	Standard
	Ho	165	13.0	7.7				ug/L	7	Standard
	Tl	203	78.7	11.5	**0.0124**	0.001	11.9	ug/L	5	Standard
	Tl	205	1.7	91.7	**0.0183**	0.010	53.7	ug/L	0	Standard
	Pb	206	583.0	6.9	**0.0764**	0.008	10.6	ug/L	182	Standard
	Pb	207	458.0	3.4	**0.0698**	0.005	6.9	ug/L	145	Standard
	Pb	208	641.3	6.2	**0.0662**	0.006	9.6	ug/L	207	Standard
	U	238	1338.4	8.5	**0.2658**	0.023	8.6	ug/L	1	Standard
>	Bi	209	369240.4	1.1				ug/L	325207	Standard

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	Na	23	85.0	31.1	**10.4377**	3.567	34.2	mg/L	0	Standard
	Mg	24	8805.9	8.1	**7.6365**	0.529	6.9	mg/L	25	Standard
	K	39	61.7	20.4	**0.8613**	0.169	19.6	mg/L	3	Standard
	Ca	43	4659.1	8.4	**12.4573**	0.937	7.5	mg/L	297	Standard
	Fe	54	172.3	17.3	**0.0514**	0.033	63.3	mg/L	91	Standard
	Fe	57	460.0	12.2	**0.5645**	0.133	23.5	mg/L	237	Standard
>	**Sc-1**	45	42855.5	2.0				mg/L	35084	Standard
	Cl	35	87758.2	2.3				ug/L	29808	Standard
	Kr	83	36.1	5.4				ug/L	38	Standard
	Br	81	2926.1	5.7				ug/L	965	Standard
	P	31	363705.5	4.7				ug/L	176735	Standard
	S	34	61636.0	3.4				ug/L	28891	Standard
	Sr	88	107.5	12.9				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	114.6				mg/L	3	Standard
	Dy	164	19.0	4.9				mg/L	14	Standard
	Ho-1	165	13.0	7.7				mg/L	7	Standard
	Er	166	20.0	8.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		132.458	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.901	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		115.038
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		113.540
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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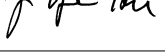

Method 6020 - Summary Report

Sample ID: L1305124202
Sample Date/Time: Tuesday, June 04, 2013 18:38:51
Number of Replicates: 3
Autosampler Position: 402
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	741293.9	0.9				ug/L	552027	Standard
	Be	9	38.3	6.6	**0.0040**	0.001	27.7	ug/L	18	Standard
	Al	27	9619266.9	8.4	**52.1122**	4.549	8.7	ug/L	841	Standard
	Sc	45	43554.2	3.0				ug/L	35084	Standard
	Ti	47	249.0	17.4	**1.1381**	0.183	16.1	ug/L	22	Standard
	V	51	9510.5	8.5	**1.5777**	0.128	8.1	ug/L	812	Standard
	Cr	52	7095.0	4.3	**0.6311**	0.031	4.9	ug/L	4274	Standard
	Cr	53	1956.8	8.4	**1.0215**	0.205	20.1	ug/L	1106	Standard
	Mn	55	4276.6	10.0	**0.4159**	0.049	11.7	ug/L	1207	Standard
	Co	59	431.3	5.1	**0.0667**	0.005	7.2	ug/L	71	Standard
	Ni	60	2378.9	9.0	**1.0469**	0.088	8.4	ug/L	295	Standard
	Cu	65	1130.0	7.2	**0.5022**	0.030	6.1	ug/L	87	Standard
	Zn	66	5839.1	8.0	**4.8166**	0.374	7.8	ug/L	469	Standard
>	**Ge**	72	475064.8	2.3				ug/L	514704	Standard
	As	75	1396.4	7.3	**1.2727**	0.071	5.6	ug/L	-121	Standard
	Se	82	615.1	5.7	**5.2120**	0.284	5.4	ug/L	-1	Standard
	Se-1	77	237.0	2.2	**1.6592**	0.058	3.5	ug/L	127	Standard
>	**Ga**	71	100.0	22.9				mg/L	175	Standard
	Rb	85	24792.0	9.0				ug/L	50	Standard
	Y	89	559038.2	2.3				ug/L	527499	Standard
>	**Rh**	103	115.0	4.3				ug/L	10	Standard
	Mo	98	2471.0	8.3	**0.5569**	0.038	6.8	ug/L	23	Standard
	Ag	107	95.3	21.9	**0.0031**	0.004	119.1	ug/L	59	Standard
	Cd	111	25.6	23.8	**0.0116**	0.003	29.8	mg/L	3	Standard
	Cd	114	83.3	8.4	**0.0117**	0.002	13.2	ug/L	10	Standard
>	**In**	115	615328.3	2.1				ug/L	537195	Standard
	Sn	118	522.7	13.7	**0.0301**	0.015	49.8	ug/L	281	Standard
	Sb	123	487.1	4.6	**0.0974**	0.004	4.1	ug/L	167	Standard
	Ba	135	51584.0	8.1	**27.0812**	1.773	6.5	ug/L	10	Standard
	Ce	140	714.7	10.6				ug/L	27	Standard
>	**Tb**	159	854806.8	0.5				ug/L	758170	Standard
	Ho	165	16.7	39.0				ug/L	7	Standard
	Tl	203	103.3	13.6	**0.0167**	0.002	14.9	ug/L	5	Standard
	Tl	205	1.3	86.6	**0.0162**	0.007	46.3	ug/L	0	Standard
	Pb	206	528.7	11.7	**0.0659**	0.012	18.9	ug/L	182	Standard
	Pb	207	441.0	5.0	**0.0666**	0.005	7.5	ug/L	145	Standard
	Pb	208	631.3	1.8	**0.0655**	0.001	1.7	ug/L	207	Standard
	U	238	1124.7	11.4	**0.2254**	0.025	11.2	ug/L	1	Standard
>	**Bi**	209	365556.9	0.9				ug/L	325207	Standard

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	Na	23	201.7	22.4	**25.7459**	5.310	20.6	mg/L	0	Standard
	Mg	24	13839.7	9.0	**11.8333**	0.956	8.1	mg/L	25	Standard
	K	39	50.0	10.0	**0.6794**	0.091	13.4	mg/L	3	Standard
	Ca	43	8794.2	6.2	**24.0132**	1.100	4.6	mg/L	297	Standard
	Fe	54	290.7	17.2	**0.1616**	0.043	26.5	mg/L	91	Standard
	Fe	57	861.7	6.9	**1.4717**	0.101	6.9	mg/L	237	Standard
>	**Sc-1**	45	43554.2	3.0				mg/L	35084	Standard
	Cl	35	101233.8	1.8				ug/L	29808	Standard
	Kr	83	33.9	4.4				ug/L	38	Standard
	Br	81	23689.3	2.8				ug/L	965	Standard
	P	31	375436.4	3.4				ug/L	176735	Standard
	S	34	62026.7	1.0				ug/L	28891	Standard
	Sr	88	148.3	18.9				ug/L	27	Standard
	C	12	6.7	43.3				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	8.3	34.6				mg/L	3	Standard
	Dy	164	20.8	3.8				mg/L	14	Standard
	Ho-1	165	16.7	39.0				mg/L	7	Standard
	Er	166	18.7	31.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		134.286	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.299	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	114.545
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	112.407
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1305124203
Sample Date/Time: Tuesday, June 04, 2013 18:42:37
Number of Replicates: 3
Autosampler Position: 403
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	763376.7	2.8				ug/L	552027	Standard
	Be	9	41.3	18.8	**0.0048**	0.003	70.7	ug/L	18	Standard
	Al	27	9609379.0	9.1	**50.4904**	3.510	7.0	ug/L	841	Standard
	Sc	45	42969.2	3.2				ug/L	35084	Standard
	Ti	47	261.7	13.1	**1.1926**	0.139	11.6	ug/L	22	Standard
	V	51	9249.5	8.4	**1.5193**	0.104	6.9	ug/L	812	Standard
	Cr	52	7000.3	4.0	**0.6021**	0.030	4.9	ug/L	4274	Standard
	Cr	53	2196.8	3.8	**1.2578**	0.134	10.6	ug/L	1106	Standard
	Mn	55	12278.1	16.9	**1.4895**	0.316	21.2	ug/L	1207	Standard
	Co	59	466.7	2.4	**0.0729**	0.004	5.3	ug/L	71	Standard
	Ni	60	3170.3	5.0	**1.4303**	0.078	5.5	ug/L	295	Standard
	Cu	65	1535.4	4.3	**0.6979**	0.042	6.0	ug/L	87	Standard
	Zn	66	15944.8	12.9	**14.3337**	2.248	15.7	ug/L	469	Standard
>	**Ge**	72	478224.9	2.4				ug/L	514704	Standard
	As	75	2082.1	11.2	**1.8318**	0.156	8.5	ug/L	-121	Standard
	Se	82	896.2	10.6	**7.5353**	0.641	8.5	ug/L	-1	Standard
	Se-1	77	272.3	10.1	**2.0876**	0.340	16.3	ug/L	127	Standard
>	**Ga**	71	113.3	17.8				mg/L	175	Standard
	Rb	85	23845.5	8.0				ug/L	50	Standard
	Y	89	554906.8	1.5				ug/L	527499	Standard
>	**Rh**	103	128.3	12.5				ug/L	10	Standard
	Mo	98	2586.9	7.5	**0.5802**	0.034	5.8	ug/L	23	Standard
	Ag	107	83.7	2.5	**0.0010**	0.000	46.9	ug/L	59	Standard
	Cd	111	26.5	10.2	**0.0120**	0.002	14.5	mg/L	3	Standard
	Cd	114	80.2	12.1	**0.0110**	0.002	17.3	ug/L	10	Standard
>	**In**	115	618711.6	2.2				ug/L	537195	Standard
	Sn	118	1321.7	17.3	**0.1770**	0.047	26.7	ug/L	281	Standard
	Sb	123	708.1	10.0	**0.1487**	0.019	12.7	ug/L	167	Standard
	Ba	135	51606.6	9.2	**26.9356**	1.913	7.1	ug/L	10	Standard
	Ce	140	648.0	10.5				ug/L	27	Standard
>	**Tb**	159	869103.8	2.5				ug/L	758170	Standard
	Ho	165	18.0	24.2				ug/L	7	Standard
	Tl	203	85.0	15.4	**0.0135**	0.002	17.3	ug/L	5	Standard
	Tl	205	4.7	81.1	**0.0376**	0.025	65.2	ug/L	0	Standard
	Pb	206	653.3	2.4	**0.0914**	0.003	3.1	ug/L	182	Standard
	Pb	207	526.3	6.2	**0.0870**	0.009	10.8	ug/L	145	Standard
	Pb	208	743.0	13.1	**0.0840**	0.018	21.2	ug/L	207	Standard
	U	238	1132.4	7.1	**0.2247**	0.014	6.2	ug/L	1	Standard
>	**Bi**	209	369194.9	1.0				ug/L	325207	Standard

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	Na	23	210.0	7.1	**27.3149**	1.449	5.3	mg/L	0	Standard
	Mg	24	13674.5	9.4	**11.8412**	0.792	6.7	mg/L	25	Standard
	K	39	63.3	24.1	**0.8823**	0.201	22.8	mg/L	3	Standard
	Ca	43	8861.0	12.8	**24.5038**	2.527	10.3	mg/L	297	Standard
	Fe	54	266.9	2.8	**0.1429**	0.013	8.9	mg/L	91	Standard
	Fe	57	815.0	13.2	**1.3913**	0.247	17.8	mg/L	237	Standard
>	**Sc-1**	45	42969.2	3.2				mg/L	35084	Standard
	Cl	35	103756.0	5.1				ug/L	29808	Standard
	Kr	83	35.9	8.4				ug/L	38	Standard
	Br	81	37321.2	9.7				ug/L	965	Standard
	P	31	381043.1	6.7				ug/L	176735	Standard
	S	34	62627.5	1.6				ug/L	28891	Standard
	Sr	88	146.7	13.7				ug/L	27	Standard
	C	12	11.7	24.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	57.3				mg/L	3	Standard
	Dy	164	27.0	24.4				mg/L	14	Standard
	Ho-1	165	18.0	24.2				mg/L	7	Standard
	Er	166	20.3	2.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		138.286	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.913	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		115.174
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		113.526
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1305124203
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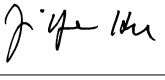

Method 6020 - Summary Report

Sample ID: L1305124204
Sample Date/Time: Tuesday, June 04, 2013 18:46:24
Number of Replicates: 3
Autosampler Position: 404
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	769547.2	1.4				ug/L	552027	Standard
	Be	9	35.3	15.6	**0.0023**	0.002	95.6	ug/L	18	Standard
	Al	27	5314835.0	8.6	**27.7057**	2.019	7.3	ug/L	841	Standard
	Sc	45	43955.3	1.3				ug/L	35084	Standard
	Ti	47	368.0	11.9	**1.6972**	0.185	10.9	ug/L	22	Standard
	V	51	16900.7	9.2	**2.8572**	0.246	8.6	ug/L	812	Standard
	Cr	52	11069.1	8.3	**1.4181**	0.172	12.2	ug/L	4274	Standard
	Cr	53	2396.9	8.8	**1.4443**	0.225	15.5	ug/L	1106	Standard
	Mn	55	10236.5	9.9	**1.1995**	0.130	10.9	ug/L	1207	Standard
	Co	59	263.3	4.8	**0.0338**	0.002	7.3	ug/L	71	Standard
	Ni	60	2068.8	9.1	**0.8784**	0.086	9.7	ug/L	295	Standard
	Cu	65	585.0	4.6	**0.2293**	0.010	4.2	ug/L	87	Standard
	Zn	66	24965.7	9.1	**22.5988**	2.047	9.1	ug/L	469	Standard
>	**Ge**	72	482219.8	1.8				ug/L	514704	Standard
	As	75	726.0	12.2	**0.7044**	0.073	10.3	ug/L	-121	Standard
	Se	82	133.3	8.3	**1.1110**	0.104	9.4	ug/L	-1	Standard
	Se-1	77	189.3	7.0	**1.0136**	0.164	16.2	ug/L	127	Standard
>	**Ga**	71	93.3	34.9				mg/L	175	Standard
	Rb	85	20577.4	9.4				ug/L	50	Standard
	Y	89	565680.8	2.6				ug/L	527499	Standard
>	**Rh**	103	56.7	25.5				ug/L	10	Standard
	Mo	98	6396.6	10.6	**1.4209**	0.138	9.7	ug/L	23	Standard
	Ag	107	865.7	9.5	**0.1268**	0.014	11.1	ug/L	59	Standard
	Cd	111	14.0	57.3	**0.0053**	0.004	79.7	mg/L	3	Standard
	Cd	114	68.5	48.2	**0.0084**	0.007	80.3	ug/L	10	Standard
>	**In**	115	629327.4	2.0				ug/L	537195	Standard
	Sn	118	479.3	8.6	**0.0201**	0.008	42.0	ug/L	281	Standard
	Sb	123	466.5	7.0	**0.0901**	0.006	6.5	ug/L	167	Standard
	Ba	135	90635.5	9.2	**46.5525**	3.880	8.3	ug/L	10	Standard
	Ce	140	2899.6	5.9				ug/L	27	Standard
>	**Tb**	159	886332.3	1.4				ug/L	758170	Standard
	Ho	165	25.3	21.7				ug/L	7	Standard
	Tl	203	83.3	18.4	**0.0128**	0.003	19.8	ug/L	5	Standard
	Tl	205	0.7	173.2	**0.0117**	0.007	61.5	ug/L	0	Standard
	Pb	206	464.7	4.9	**0.0483**	0.004	7.7	ug/L	182	Standard
	Pb	207	388.3	5.6	**0.0495**	0.005	9.4	ug/L	145	Standard
	Pb	208	550.0	11.0	**0.0474**	0.010	20.3	ug/L	207	Standard
	U	238	1289.7	7.9	**0.2485**	0.018	7.1	ug/L	1	Standard
>	**Bi**	209	380349.5	1.1				ug/L	325207	Standard

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	Na	23	86.7	21.8	**10.3881**	2.583	24.9	mg/L	0	Standard
	Mg	24	8749.2	9.3	**7.3946**	0.597	8.1	mg/L	25	Standard
	K	39	41.7	38.6	**0.5491**	0.228	41.5	mg/L	3	Standard
	Ca	43	4844.1	9.5	**12.6412**	1.118	8.8	mg/L	297	Standard
	Fe	54	206.8	2.6	**0.0796**	0.005	6.0	mg/L	91	Standard
	Fe	57	470.0	11.3	**0.5601**	0.118	21.1	mg/L	237	Standard
>	**Sc-1**	45	43955.3	1.3				mg/L	35084	Standard
	Cl	35	88815.1	3.3				ug/L	29808	Standard
	Kr	83	34.2	6.6				ug/L	38	Standard
	Br	81	3855.5	6.9				ug/L	965	Standard
	P	31	395935.8	5.3				ug/L	176735	Standard
	S	34	63636.7	2.2				ug/L	28891	Standard
	Sr	88	105.0	18.9				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	11.7	65.5				mg/L	3	Standard
	Dy	164	41.5	2.6				mg/L	14	Standard
	Ho-1	165	25.3	21.7				mg/L	7	Standard
	Er	166	37.3	6.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		139.404	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.689	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		117.151
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		116.956
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1305124204
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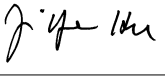

Method 6020 - Summary Report

Sample ID: L1305130401
Sample Date/Time: Tuesday, June 04, 2013 18:50:10
Number of Replicates: 3
Autosampler Position: 405
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	764164.4	0.6				ug/L	552027	Standard
	Be	9	29.3	5.2	**0.0001**	0.001	540.5	ug/L	18	Standard
	Al	27	6073472.7	8.3	**31.8998**	2.524	7.9	ug/L	841	Standard
	Sc	45	43193.2	4.6				ug/L	35084	Standard
	Ti	47	218.0	11.3	**0.9724**	0.106	10.9	ug/L	22	Standard
	V	51	9089.1	10.6	**1.4788**	0.153	10.4	ug/L	812	Standard
	Cr	52	4419.6	2.6	**0.0659**	0.012	18.4	ug/L	4274	Standard
	Cr	53	974.2	6.4	**-0.0273**	0.056	204.7	ug/L	1106	Standard
	Mn	55	5342.3	8.3	**0.5495**	0.051	9.2	ug/L	1207	Standard
	Co	59	182.0	3.8	**0.0185**	0.001	5.1	ug/L	71	Standard
	Ni	60	1150.4	8.0	**0.4298**	0.037	8.7	ug/L	295	Standard
	Cu	65	432.3	9.4	**0.1553**	0.018	11.7	ug/L	87	Standard
	Zn	66	11099.7	8.3	**9.6529**	0.749	7.8	ug/L	469	Standard
>	**Ge**	72	481854.4	1.4				ug/L	514704	Standard
	As	75	137.5	39.2	**0.2201**	0.043	19.4	ug/L	-121	Standard
	Se	82	119.7	7.7	**0.9972**	0.063	6.3	ug/L	-1	Standard
	Se-1	77	194.0	4.1	**1.0736**	0.070	6.5	ug/L	127	Standard
>	**Ga**	71	75.0	6.7				mg/L	175	Standard
	Rb	85	1566.7	3.0				ug/L	50	Standard
	Y	89	560563.1	0.5				ug/L	527499	Standard
>	**Rh**	103	53.3	5.4				ug/L	10	Standard
	Mo	98	8543.8	8.3	**1.9035**	0.139	7.3	ug/L	23	Standard
	Ag	107	69.0	12.9	**-0.0015**	0.001	94.6	ug/L	59	Standard
	Cd	111	19.9	31.5	**0.0083**	0.003	37.2	mg/L	3	Standard
	Cd	114	77.8	12.9	**0.0102**	0.002	17.4	ug/L	10	Standard
>	**In**	115	628255.0	1.4				ug/L	537195	Standard
	Sn	118	739.4	5.1	**0.0673**	0.009	12.9	ug/L	281	Standard
	Sb	123	351.5	9.2	**0.0638**	0.007	11.6	ug/L	167	Standard
	Ba	135	54128.5	9.9	**27.8325**	2.442	8.8	ug/L	10	Standard
	Ce	140	294.3	12.8				ug/L	27	Standard
>	**Tb**	159	877961.1	1.9				ug/L	758170	Standard
	Ho	165	11.7	51.7				ug/L	7	Standard
	Tl	203	60.3	8.3	**0.0091**	0.001	7.6	ug/L	5	Standard
	Tl	205	1.0	100.0	**0.0139**	0.006	45.2	ug/L	0	Standard
	Pb	206	282.0	3.2	**0.0110**	0.003	24.8	ug/L	182	Standard
	Pb	207	222.7	2.9	**0.0096**	0.002	24.7	ug/L	145	Standard
	Pb	208	332.3	3.2	**0.0110**	0.002	17.2	ug/L	207	Standard
	U	238	360.3	6.1	**0.0694**	0.003	4.8	ug/L	1	Standard
>	**Bi**	209	377269.9	1.5				ug/L	325207	Standard

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	Na	23	88.3	22.9	**10.7482**	2.223	20.7	mg/L	0	Standard
	Mg	24	9863.2	5.4	**8.4997**	0.423	5.0	mg/L	25	Standard
	K	39	41.7	54.1	**0.5534**	0.305	55.2	mg/L	3	Standard
	Ca	43	3937.2	12.2	**10.2985**	1.431	13.9	mg/L	297	Standard
	Fe	54	184.6	16.9	**0.0609**	0.022	35.3	mg/L	91	Standard
	Fe	57	403.3	10.1	**0.4270**	0.124	29.1	mg/L	237	Standard
>	**Sc-1**	45	43193.2	4.6				mg/L	35084	Standard
	Cl	35	94068.9	2.4				ug/L	29808	Standard
	Kr	83	33.6	16.1				ug/L	38	Standard
	Br	81	2905.3	8.5				ug/L	965	Standard
	P	31	392933.4	4.3				ug/L	176735	Standard
	S	34	63387.3	1.8				ug/L	28891	Standard
	Sr	88	84.2	10.4				ug/L	27	Standard
	C	12	6.7	86.6				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	13.6	29.6				mg/L	14	Standard
	Ho-1	165	11.7	51.7				mg/L	7	Standard
	Er	166	16.0	21.7				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		138.429	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.618	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		116.951
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		116.009
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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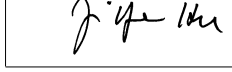

Method 6020 - Summary Report

Sample ID: L1305130402
Sample Date/Time: Tuesday, June 04, 2013 18:53:56
Number of Replicates: 3
Autosampler Position: 406
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	790403.2	2.7				ug/L	552027	Standard
	Be	9	41.3	28.4	**0.0041**	0.004	102.1	ug/L	18	Standard
	Al	27	6524346.1	8.6	**33.1197**	2.386	7.2	ug/L	841	Standard
	Sc	45	44632.3	1.9				ug/L	35084	Standard
	Ti	47	223.0	13.0	**0.9783**	0.122	12.4	ug/L	22	Standard
	V	51	8000.7	12.7	**1.2626**	0.158	12.5	ug/L	812	Standard
	Cr	52	27516.9	11.7	**4.6704**	0.543	11.6	ug/L	4274	Standard
	Cr	53	5971.2	9.1	**5.0367**	0.425	8.4	ug/L	1106	Standard
	Mn	55	6249.3	9.1	**0.6560**	0.060	9.1	ug/L	1207	Standard
	Co	59	373.3	10.4	**0.0533**	0.006	10.8	ug/L	71	Standard
	Ni	60	58007.7	8.4	**27.7491**	1.819	6.6	ug/L	295	Standard
	Cu	65	1149.7	9.9	**0.4944**	0.044	8.9	ug/L	87	Standard
	Zn	66	7881.7	8.3	**6.5231**	0.482	7.4	ug/L	469	Standard
>	**Ge**	72	490000.3	2.2				ug/L	514704	Standard
	As	75	209.2	13.2	**0.2770**	0.026	9.4	ug/L	-121	Standard
	Se	82	134.9	3.2	**1.1066**	0.047	4.3	ug/L	-1	Standard
	Se-1	77	191.7	7.3	**1.0029**	0.125	12.4	ug/L	127	Standard
>	**Ga**	71	66.7	37.7				mg/L	175	Standard
	Rb	85	2236.8	5.3				ug/L	50	Standard
	Y	89	561635.4	2.9				ug/L	527499	Standard
>	**Rh**	103	60.0					ug/L	10	Standard
	Mo	98	7522.8	9.3	**1.6649**	0.147	8.9	ug/L	23	Standard
	Ag	107	67.3	17.9	**-0.0019**	0.002	104.2	ug/L	59	Standard
	Cd	111	21.1	6.5	**0.0089**	0.001	7.9	mg/L	3	Standard
	Cd	114	86.1	10.9	**0.0118**	0.002	14.2	ug/L	10	Standard
>	**In**	115	632265.2	1.1				ug/L	537195	Standard
	Sn	118	655.0	2.7	**0.0512**	0.004	8.1	ug/L	281	Standard
	Sb	123	368.2	10.9	**0.0671**	0.009	12.8	ug/L	167	Standard
	Ba	135	61449.7	8.7	**31.4101**	2.537	8.1	ug/L	10	Standard
	Ce	140	376.0	8.5				ug/L	27	Standard
>	**Tb**	159	879675.9	1.9				ug/L	758170	Standard
	Ho	165	10.0	26.5				ug/L	7	Standard
	Tl	203	82.0	11.6	**0.0126**	0.002	14.4	ug/L	5	Standard
	Tl	205	2.3	24.7	**0.0221**	0.003	14.5	ug/L	0	Standard
	Pb	206	322.7	8.8	**0.0191**	0.005	25.2	ug/L	182	Standard
	Pb	207	262.3	9.8	**0.0190**	0.006	30.9	ug/L	145	Standard
	Pb	208	391.3	6.1	**0.0206**	0.003	13.7	ug/L	207	Standard
	U	238	477.3	15.2	**0.0916**	0.013	13.9	ug/L	1	Standard
>	**Bi**	209	379342.1	2.6				ug/L	325207	Standard

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	Na	23	93.3	35.7	**11.0446**	4.257	38.5	mg/L	0	Standard
	Mg	24	10748.8	9.6	**8.9570**	0.772	8.6	mg/L	25	Standard
	K	39	60.0	22.0	**0.8011**	0.172	21.5	mg/L	3	Standard
	Ca	43	4664.1	8.2	**11.9406**	0.989	8.3	mg/L	297	Standard
	Fe	54	213.5	20.0	**0.0833**	0.042	51.0	mg/L	91	Standard
	Fe	57	433.3	12.0	**0.4611**	0.113	24.4	mg/L	237	Standard
>	**Sc-1**	45	44632.3	1.9				mg/L	35084	Standard
	Cl	35	93838.4	2.0				ug/L	29808	Standard
	Kr	83	35.9	17.2				ug/L	38	Standard
	Br	81	3917.2	5.1				ug/L	965	Standard
	P	31	414471.5	5.0				ug/L	176735	Standard
	S	34	62765.6	2.1				ug/L	28891	Standard
	Sr	88	105.0	8.6				ug/L	27	Standard
	C	12	5.0	173.2				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	12.0	20.4				mg/L	14	Standard
	Ho-1	165	10.0	26.5				mg/L	7	Standard
	Er	166	13.7	22.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		143.182	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.200	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89	
> Rh	103	
Mo	98	
Ag	107	
Cd	111	
Cd	114	
> In	115	117.697
Sn	118	
Sb	123	
Ba	135	
Ce	140	
> Tb	159	
Ho	165	
Tl	203	
Tl	205	
Pb	206	
Pb	207	
Pb	208	
U	238	
> Bi	209	116.646
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	
C	12	
N	14	
Hg	202	
Dy	164	
Ho-1	165	
Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1305130402
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Method 6020 - Summary Report

Sample ID: L1305130403
Sample Date/Time: Tuesday, June 04, 2013 18:57:42
Number of Replicates: 3
Autosampler Position: 407
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	773309.2	2.0				ug/L	552027	Standard
	Be	9	55.7	21.1	**0.0100**	0.005	47.7	ug/L	18	Standard
	Al	27	8092284.0	8.6	**42.0000**	3.289	7.8	ug/L	841	Standard
	Sc	45	44266.3	3.4				ug/L	35084	Standard
	Ti	47	448.3	6.6	**2.1169**	0.162	7.7	ug/L	22	Standard
	V	51	11785.4	10.7	**1.9804**	0.206	10.4	ug/L	812	Standard
	Cr	52	5981.9	7.4	**0.3985**	0.079	19.7	ug/L	4274	Standard
	Cr	53	2131.8	1.5	**1.1985**	0.048	4.0	ug/L	1106	Standard
	Mn	55	9708.5	12.3	**1.1444**	0.136	11.9	ug/L	1207	Standard
	Co	59	368.0	8.7	**0.0543**	0.004	7.6	ug/L	71	Standard
	Ni	60	1799.8	11.1	**0.7583**	0.097	12.8	ug/L	295	Standard
	Cu	65	768.7	4.8	**0.3234**	0.013	4.1	ug/L	87	Standard
	Zn	66	5594.7	9.1	**4.5715**	0.383	8.4	ug/L	469	Standard
>	**Ge**	72	476143.0	2.7				ug/L	514704	Standard
	As	75	457.4	3.1	**0.4884**	0.009	1.9	ug/L	-121	Standard
	Se	82	215.3	3.1	**1.8188**	0.078	4.3	ug/L	-1	Standard
	Se-1	77	229.3	2.8	**1.5552**	0.097	6.3	ug/L	127	Standard
>	**Ga**	71	125.0	50.1				mg/L	175	Standard
	Rb	85	12445.2	11.4				ug/L	50	Standard
	Y	89	554771.9	4.5				ug/L	527499	Standard
>	**Rh**	103	81.7	23.2				ug/L	10	Standard
	Mo	98	5393.6	9.2	**1.2032**	0.086	7.2	ug/L	23	Standard
	Ag	107	111.3	11.1	**0.0054**	0.002	38.0	ug/L	59	Standard
	Cd	111	31.4	27.2	**0.0143**	0.004	28.9	mg/L	3	Standard
	Cd	114	114.7	8.8	**0.0178**	0.002	12.4	ug/L	10	Standard
>	**In**	115	625819.8	2.5				ug/L	537195	Standard
	Sn	118	929.7	2.6	**0.1024**	0.007	7.1	ug/L	281	Standard
	Sb	123	399.5	7.6	**0.0753**	0.008	11.1	ug/L	167	Standard
	Ba	135	52088.7	10.4	**26.8817**	2.389	8.9	ug/L	10	Standard
	Ce	140	2751.9	29.2				ug/L	27	Standard
>	**Tb**	159	878516.4	2.2				ug/L	758170	Standard
	Ho	165	35.7	15.4				ug/L	7	Standard
	Tl	203	139.3	10.1	**0.0221**	0.002	8.2	ug/L	5	Standard
	Tl	205	3.0	33.3	**0.0266**	0.007	24.6	ug/L	0	Standard
	Pb	206	452.7	2.2	**0.0469**	0.001	1.7	ug/L	182	Standard
	Pb	207	406.3	7.2	**0.0549**	0.006	11.2	ug/L	145	Standard
	Pb	208	574.7	6.7	**0.0527**	0.007	13.2	ug/L	207	Standard
	U	238	1326.1	9.8	**0.2583**	0.022	8.4	ug/L	1	Standard
>	**Bi**	209	376071.4	2.2				ug/L	325207	Standard

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	Na	23	103.3	17.0	**12.5438**	2.717	21.7	mg/L	0	Standard
	Mg	24	11697.9	9.4	**9.8350**	0.835	8.5	mg/L	25	Standard
	K	39	58.3	17.8	**0.7837**	0.121	15.5	mg/L	3	Standard
	Ca	43	6423.0	9.7	**16.9741**	1.591	9.4	mg/L	297	Standard
	Fe	54	195.8	10.3	**0.0680**	0.020	29.9	mg/L	91	Standard
	Fe	57	520.0	15.9	**0.6636**	0.157	23.7	mg/L	237	Standard
>	**Sc-1**	45	44266.3	3.4				mg/L	35084	Standard
	Cl	35	93139.0	4.1				ug/L	29808	Standard
	Kr	83	38.1	6.7				ug/L	38	Standard
	Br	81	7395.1	6.6				ug/L	965	Standard
	P	31	417588.1	3.7				ug/L	176735	Standard
	S	34	63458.5	1.2				ug/L	28891	Standard
	Sr	88	126.7	16.4				ug/L	27	Standard
	C	12	6.7	43.3				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	114.6				mg/L	3	Standard
	Dy	164	54.9	9.6				mg/L	14	Standard
	Ho-1	165	35.7	15.4				mg/L	7	Standard
	Er	166	37.3	16.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		140.085	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.508	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	116.498
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	115.641
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: L1305132101
Sample Date/Time: Tuesday, June 04, 2013 19:01:28
Number of Replicates: 3
Autosampler Position: 408
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	778029.4	4.1				ug/L	552027	Standard
	Be	9	551.7	7.6	**0.1962**	0.008	4.0	ug/L	18	Standard
	Al	27	2827056.9	8.6	**14.5628**	0.687	4.7	ug/L	841	Standard
	Sc	45	42551.4	2.5				ug/L	35084	Standard
	Ti	47	428.0	21.4	**1.9901**	0.430	21.6	ug/L	22	Standard
	V	51	2032.3	10.3	**0.2327**	0.034	14.7	ug/L	812	Standard
	Cr	52	10716.8	7.4	**1.3488**	0.130	9.7	ug/L	4274	Standard
	Cr	53	1780.9	6.1	**0.8091**	0.105	12.9	ug/L	1106	Standard
	Mn	55	466439.0	11.2	**61.8553**	6.229	10.1	ug/L	1207	Standard
	Co	59	9620.4	12.6	**1.7957**	0.208	11.6	ug/L	71	Standard
	Ni	60	10569.4	6.6	**5.0391**	0.283	5.6	ug/L	295	Standard
	Cu	65	3502.1	7.9	**1.6483**	0.117	7.1	ug/L	87	Standard
	Zn	66	19392.5	11.2	**17.4085**	1.825	10.5	ug/L	469	Standard
>	**Ge**	72	481531.0	1.6				ug/L	514704	Standard
	As	75	103.7	17.8	**0.1929**	0.016	8.5	ug/L	-121	Standard
	Se	82	93.0	7.4	**0.7741**	0.048	6.2	ug/L	-1	Standard
	Se-1	77	136.3	8.8	**0.3481**	0.139	40.0	ug/L	127	Standard
>	**Ga**	71	101.7	57.0				mg/L	175	Standard
	Rb	85	4457.3	11.5				ug/L	50	Standard
	Y	89	566737.9	1.5				ug/L	527499	Standard
>	**Rh**	103	13.3	57.3				ug/L	10	Standard
	Mo	98	43.4	19.7	**0.0024**	0.002	76.9	ug/L	23	Standard
	Ag	107	65.0	21.8	**-0.0023**	0.002	86.7	ug/L	59	Standard
	Cd	111	128.0	3.4	**0.0634**	0.001	1.5	mg/L	3	Standard
	Cd	114	331.2	9.4	**0.0602**	0.005	9.1	ug/L	10	Standard
>	**In**	115	635692.8	2.1				ug/L	537195	Standard
	Sn	118	863.7	2.4	**0.0879**	0.006	6.3	ug/L	281	Standard
	Sb	123	323.3	2.2	**0.0565**	0.002	3.5	ug/L	167	Standard
	Ba	135	65253.2	10.3	**33.1617**	2.976	9.0	ug/L	10	Standard
	Ce	140	2180.5	10.3				ug/L	27	Standard
>	**Tb**	159	883746.4	1.8				ug/L	758170	Standard
	Ho	165	182.0	9.7				ug/L	7	Standard
	Tl	203	63.7	7.7	**0.0095**	0.001	7.5	ug/L	5	Standard
	Tl	205	2.7	57.3	**0.0240**	0.009	38.7	ug/L	0	Standard
	Pb	206	326.7	9.0	**0.0193**	0.005	26.9	ug/L	182	Standard
	Pb	207	295.3	11.9	**0.0263**	0.008	29.9	ug/L	145	Standard
	Pb	208	378.7	9.8	**0.0179**	0.006	31.9	ug/L	207	Standard
	U	238	24.3	15.6	**0.0039**	0.001	17.6	ug/L	1	Standard
>	**Bi**	209	382941.0	1.2				ug/L	325207	Standard

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	Na	23	16.7	62.4	**1.1866**	1.407	118.6	mg/L	0	Standard
	Mg	24	2920.3	9.5	**2.5287**	0.285	11.3	mg/L	25	Standard
	K	39	10.0	50.0	**0.0954**	0.076	79.1	mg/L	3	Standard
	Ca	43	840.0	16.2	**1.4392**	0.425	29.5	mg/L	297	Standard
	Fe	54	195.9	14.2	**0.0756**	0.029	38.4	mg/L	91	Standard
	Fe	57	218.3	14.7	**0.0013**	0.067	5110.2	mg/L	237	Standard
>	**Sc-1**	45	42551.4	2.5				mg/L	35084	Standard
	Cl	35	80435.1	2.9				ug/L	29808	Standard
	Kr	83	32.6	11.2				ug/L	38	Standard
	Br	81	4578.2	8.1				ug/L	965	Standard
	P	31	326709.2	5.1				ug/L	176735	Standard
	S	34	63027.5	1.9				ug/L	28891	Standard
	Sr	88	77.5	0.0				ug/L	27	Standard
	C	12	55.0	9.1				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	951.7	6.3				mg/L	3	Standard
	Dy	164	236.6	7.0				mg/L	14	Standard
	Ho-1	165	182.0	9.7				mg/L	7	Standard
	Er	166	182.3	7.8				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		140.941	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.555	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		118.336
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		117.753
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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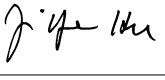

Method 6020 - Summary Report

Sample ID: L1305132102
Sample Date/Time: Tuesday, June 04, 2013 19:05:14
Number of Replicates: 3
Autosampler Position: 409
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	797311.0	0.7				ug/L	552027	Standard
	Be	9	42.7	29.7	**0.0045**	0.005	102.6	ug/L	18	Standard
	Al	27	884431.2	8.3	**4.4414**	0.346	7.8	ug/L	841	Standard
	Sc	45	45819.2	1.2				ug/L	35084	Standard
	Ti	47	669.7	36.0	**3.1211**	1.142	36.6	ug/L	22	Standard
	V	51	8816.8	10.0	**1.4127**	0.132	9.4	ug/L	812	Standard
	Cr	52	5471.7	4.5	**0.2672**	0.034	12.7	ug/L	4274	Standard
	Cr	53	725.0	6.6	**-0.2938**	0.040	13.8	ug/L	1106	Standard
	Mn	55	8894.6	9.4	**1.0080**	0.097	9.6	ug/L	1207	Standard
	Co	59	264.3	5.0	**0.0334**	0.002	5.5	ug/L	71	Standard
	Ni	60	1301.4	13.2	**0.4960**	0.074	15.0	ug/L	295	Standard
	Cu	65	911.4	12.7	**0.3827**	0.049	12.9	ug/L	87	Standard
	Zn	66	2998.6	8.3	**2.0523**	0.193	9.4	ug/L	469	Standard
>	**Ge**	72	487440.7	1.5				ug/L	514704	Standard
	As	75	-96.3	33.3	**0.0289**	0.026	90.8	ug/L	-121	Standard
	Se	82	14.8	45.1	**0.1188**	0.055	46.3	ug/L	-1	Standard
	Se-1	77	108.7	6.1	**-0.0171**	0.072	419.5	ug/L	127	Standard
>	**Ga**	71	145.0	29.5				mg/L	175	Standard
	Rb	85	2283.5	6.6				ug/L	50	Standard
	Y	89	555865.0	0.8				ug/L	527499	Standard
>	**Rh**	103	25.0	20.0				ug/L	10	Standard
	Mo	98	34.5	10.2	**0.0004**	0.001	181.6	ug/L	23	Standard
	Ag	107	61.3	3.4	**-0.0029**	0.000	7.7	ug/L	59	Standard
	Cd	111	35.0	14.9	**0.0158**	0.002	15.0	mg/L	3	Standard
	Cd	114	87.8	12.4	**0.0120**	0.002	18.3	ug/L	10	Standard
>	**In**	115	639050.5	1.4				ug/L	537195	Standard
	Sn	118	816.0	4.4	**0.0786**	0.006	7.2	ug/L	281	Standard
	Sb	123	282.2	5.9	**0.0467**	0.004	7.8	ug/L	167	Standard
	Ba	135	13333.2	8.6	**6.7256**	0.544	8.1	ug/L	10	Standard
	Ce	140	2792.3	11.0				ug/L	27	Standard
>	**Tb**	159	889766.9	1.6				ug/L	758170	Standard
	Ho	165	27.7	12.7				ug/L	7	Standard
	Tl	203	32.0	15.6	**0.0043**	0.001	17.0	ug/L	5	Standard
	Tl	205	0.7	86.6	**0.0117**	0.004	30.8	ug/L	0	Standard
	Pb	206	327.0	6.0	**0.0193**	0.003	17.7	ug/L	182	Standard
	Pb	207	258.3	13.6	**0.0173**	0.008	45.4	ug/L	145	Standard
	Pb	208	383.0	4.5	**0.0186**	0.003	15.9	ug/L	207	Standard
	U	238	10.3	20.1	**0.0012**	0.000	35.1	ug/L	1	Standard
>	**Bi**	209	383248.9	1.5				ug/L	325207	Standard

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	Na	23	13.3	21.7	**0.6055**	0.383	63.2	mg/L	0	Standard
	Mg	24	5726.1	8.8	**4.6284**	0.363	7.8	mg/L	25	Standard
	K	39	10.0	86.6	**0.0851**	0.121	142.7	mg/L	3	Standard
	Ca	43	976.7	7.8	**1.6287**	0.174	10.7	mg/L	297	Standard
	Fe	54	195.7	14.5	**0.0613**	0.024	39.0	mg/L	91	Standard
	Fe	57	163.3	21.7	**-0.1546**	0.082	53.0	mg/L	237	Standard
>	**Sc-1**	45	45819.2	1.2				mg/L	35084	Standard
	Cl	35	78092.0	4.3				ug/L	29808	Standard
	Kr	83	31.1	1.2				ug/L	38	Standard
	Br	81	1300.1	7.2				ug/L	965	Standard
	P	31	477822.8	5.2				ug/L	176735	Standard
	S	34	58005.2	5.3				ug/L	28891	Standard
	Sr	88	70.0	9.4				ug/L	27	Standard
	C	12	30.0	16.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	38.3	82.8				mg/L	3	Standard
	Dy	164	39.5	17.3				mg/L	14	Standard
	Ho-1	165	27.7	12.7				mg/L	7	Standard
	Er	166	32.0	25.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		144.433	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.703	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	118.961
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	117.848
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1305132103
Sample Date/Time: Tuesday, June 04, 2013 19:09:00
Number of Replicates: 3
Autosampler Position: 410
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	779624.5	3.4				ug/L	552027	Standard
	Be	9	48.7	9.7	**0.0072**	0.002	32.7	ug/L	18	Standard
	Al	27	12183763.0	9.4	**62.6818**	4.347	6.9	ug/L	841	Standard
	Sc	45	44241.2	4.1				ug/L	35084	Standard
	Ti	47	3896.2	20.9	**18.6710**	3.646	19.5	ug/L	22	Standard
	V	51	12444.9	11.5	**2.0610**	0.221	10.7	ug/L	812	Standard
	Cr	52	6796.2	6.3	**0.5431**	0.062	11.4	ug/L	4274	Standard
	Cr	53	1234.2	6.7	**0.2367**	0.087	36.7	ug/L	1106	Standard
	Mn	55	13470.7	12.6	**1.6204**	0.195	12.0	ug/L	1207	Standard
	Co	59	423.0	19.7	**0.0634**	0.014	22.4	ug/L	71	Standard
	Ni	60	3349.4	11.2	**1.4964**	0.151	10.1	ug/L	295	Standard
	Cu	65	657.7	16.1	**0.2631**	0.047	17.9	ug/L	87	Standard
	Zn	66	3784.1	11.1	**2.8003**	0.322	11.5	ug/L	469	Standard
>	**Ge**	72	484040.5	2.2				ug/L	514704	Standard
	As	75	84.5	23.6	**0.1766**	0.016	9.3	ug/L	-121	Standard
	Se	82	76.3	7.7	**0.6310**	0.036	5.7	ug/L	-1	Standard
	Se-1	77	136.7	4.7	**0.3448**	0.096	28.0	ug/L	127	Standard
>	**Ga**	71	763.4	23.3				mg/L	175	Standard
	Rb	85	3480.4	17.9				ug/L	50	Standard
	Y	89	556180.0	2.6				ug/L	527499	Standard
>	**Rh**	103	40.0	12.5				ug/L	10	Standard
	Mo	98	376.3	9.3	**0.0763**	0.008	9.9	ug/L	23	Standard
	Ag	107	76.0	16.5	**-0.0005**	0.002	421.4	ug/L	59	Standard
	Cd	111	26.3	17.0	**0.0115**	0.002	20.0	mg/L	3	Standard
	Cd	114	67.1	9.6	**0.0080**	0.001	15.3	ug/L	10	Standard
>	**In**	115	633121.8	0.9				ug/L	537195	Standard
	Sn	118	617.3	9.1	**0.0443**	0.011	23.7	ug/L	281	Standard
	Sb	123	332.5	11.3	**0.0588**	0.009	14.5	ug/L	167	Standard
	Ba	135	39405.2	10.2	**20.1084**	1.983	9.9	ug/L	10	Standard
	Ce	140	11932.8	13.1				ug/L	27	Standard
>	**Tb**	159	883045.6	1.4				ug/L	758170	Standard
	Ho	165	80.0	18.2				ug/L	7	Standard
	Tl	203	95.7	4.0	**0.0149**	0.001	5.3	ug/L	5	Standard
	Tl	205	3.0	57.7	**0.0265**	0.011	42.3	ug/L	0	Standard
	Pb	206	476.3	4.1	**0.0514**	0.004	7.1	ug/L	182	Standard
	Pb	207	401.7	7.5	**0.0534**	0.008	14.7	ug/L	145	Standard
	Pb	208	623.3	7.9	**0.0606**	0.008	12.6	ug/L	207	Standard
	U	238	254.7	18.3	**0.0488**	0.009	18.1	ug/L	1	Standard
>	**Bi**	209	377701.4	1.8				ug/L	325207	Standard

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	Na	23	56.7	27.0	**6.3886**	2.182	34.1	mg/L	0	Standard
	Mg	24	10268.5	9.3	**8.6280**	0.590	6.8	mg/L	25	Standard
	K	39	33.3	22.9	**0.4282**	0.121	28.1	mg/L	3	Standard
	Ca	43	2928.6	6.7	**7.1888**	0.220	3.1	mg/L	297	Standard
	Fe	54	367.5	22.1	**0.2288**	0.065	28.4	mg/L	91	Standard
	Fe	57	345.0	3.8	**0.2707**	0.050	18.5	mg/L	237	Standard
>	**Sc-1**	45	44241.2	4.1				mg/L	35084	Standard
	Cl	35	80262.4	1.3				ug/L	29808	Standard
	Kr	83	38.0	0.9				ug/L	38	Standard
	Br	81	4335.6	9.4				ug/L	965	Standard
	P	31	442984.4	6.7				ug/L	176735	Standard
	S	34	55475.6	1.9				ug/L	28891	Standard
	Sr	88	99.2	14.3				ug/L	27	Standard
	C	12	30.0	44.1				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	21.7	81.0				mg/L	3	Standard
	Dy	164	142.0	11.1				mg/L	14	Standard
	Ho-1	165	80.0	18.2				mg/L	7	Standard
	Er	166	91.0	11.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		141.229	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.042	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		117.857
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		116.142
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1305132103
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 19:12:49
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	757218.1	3.2				ug/L	552027	Standard
	Be	9	114357.1	10.6	**44.1098**	3.306	7.5	ug/L	18	Standard
	Al	27	9872721.0	9.4	**52.2773**	3.292	6.3	ug/L	841	Standard
	Sc	45	43012.7	2.1				ug/L	35084	Standard
	Ti	47	26025.5	9.2	**128.2586**	9.987	7.8	ug/L	22	Standard
	V	51	291120.3	13.4	**52.2173**	6.300	12.1	ug/L	812	Standard
	Cr	52	244532.7	13.1	**49.8315**	5.970	12.0	ug/L	4274	Standard
	Cr	53	51401.9	10.8	**53.1025**	5.079	9.6	ug/L	1106	Standard
	Mn	55	355395.4	10.1	**47.9261**	4.205	8.8	ug/L	1207	Standard
	Co	59	246148.3	12.5	**47.1428**	5.237	11.1	ug/L	71	Standard
	Ni	60	108813.1	9.7	**54.0339**	4.488	8.3	ug/L	295	Standard
	Cu	65	104856.3	10.7	**51.8211**	4.817	9.3	ug/L	87	Standard
	Zn	66	54843.4	10.1	**51.4461**	4.525	8.8	ug/L	469	Standard
>	**Ge**	72	473133.5	1.6				ug/L	514704	Standard
	As	75	60050.2	8.0	**50.4147**	3.319	6.6	ug/L	-121	Standard
	Se	82	6238.8	8.6	**53.0682**	3.784	7.1	ug/L	-1	Standard
	Se-1	77	4069.9	6.8	**50.8331**	2.762	5.4	ug/L	127	Standard
>	**Ga**	71	106.7	10.8				mg/L	175	Standard
	Rb	85	3082.0	3.0				ug/L	50	Standard
	Y	89	544088.6	0.5				ug/L	527499	Standard
>	**Rh**	103	31.7	36.5				ug/L	10	Standard
	Mo	98	406521.8	9.1	**90.6093**	7.689	8.5	ug/L	23	Standard
	Ag	107	292205.0	7.8	**46.9348**	3.355	7.1	ug/L	59	Standard
	Cd	111	91531.4	10.3	**47.1055**	4.517	9.6	mg/L	3	Standard
	Cd	114	255666.0	9.9	**51.0311**	4.736	9.3	ug/L	10	Standard
>	**In**	115	630390.7	0.7				ug/L	537195	Standard
	Sn	118	271428.9	10.8	**48.8782**	4.981	10.2	ug/L	281	Standard
	Sb	123	209758.4	8.8	**48.1405**	3.912	8.1	ug/L	167	Standard
	Ba	135	96135.2	8.7	**49.2971**	3.945	8.0	ug/L	10	Standard
	Ce	140	86.3	3.3				ug/L	27	Standard
>	**Tb**	159	874177.5	1.1				ug/L	758170	Standard
	Ho	165	5.3	78.1				ug/L	7	Standard
	Tl	203	309263.5	8.3	**50.8844**	3.307	6.5	ug/L	5	Standard
	Tl	205	8144.5	9.4	**51.2019**	3.891	7.6	ug/L	0	Standard
	Pb	206	241809.3	10.3	**50.2974**	4.278	8.5	ug/L	182	Standard
	Pb	207	207569.7	10.2	**50.7782**	4.251	8.4	ug/L	145	Standard
	Pb	208	295537.0	10.6	**50.4292**	4.441	8.8	ug/L	207	Standard
	U	238	251777.1	10.8	**49.0070**	4.393	9.0	ug/L	1	Standard
>	**Bi**	209	377381.1	1.9				ug/L	325207	Standard

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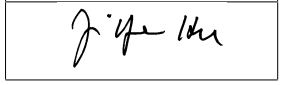

	Na	23	41.7	45.4	**4.5091**	2.468	54.7	mg/L	0	Standard
	Mg	24	5342.6	2.8	**4.6025**	0.072	1.6	mg/L	25	Standard
	K	39	313.3	10.6	**4.5980**	0.514	11.2	mg/L	3	Standard
	Ca	43	1718.4	4.3	**3.9416**	0.216	5.5	mg/L	297	Standard
	Fe	54	6092.0	10.3	**5.8043**	0.490	8.4	mg/L	91	Standard
	Fe	57	1726.8	8.6	**3.5124**	0.261	7.4	mg/L	237	Standard
>	**Sc-1**	45	43012.7	2.1				mg/L	35084	Standard
	Cl	35	81173.6	1.4				ug/L	29808	Standard
	Kr	83	42.4	12.9				ug/L	38	Standard
	Br	81	752.5	6.6				ug/L	965	Standard
	P	31	267470.9	3.2				ug/L	176735	Standard
	S	34	67047.3	4.0				ug/L	28891	Standard
	Sr	88	49.2	22.9				ug/L	27	Standard
	C	12	5.0	100.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	8.6	35.6				mg/L	14	Standard
	Ho-1	165	5.3	78.1				mg/L	7	Standard
	Er	166	14.3	38.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		137.171	
	Be	9	88.220		
	Al	27	104.555		
	Sc	45			
	Ti	47	128.259		
	V	51	104.435		
	Cr	52	99.663		
	Cr	53			
	Mn	55	95.852		
	Co	59	94.286		
	Ni	60	108.068		
	Cu	65	103.642		
	Zn	66	102.892		
>	Ge	72		91.923	
	As	75	100.829		
	Se	82	106.136		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	90.609	
|	Ag	107	93.870	
|	Cd	111	94.211	
|	Cd	114		
|>	In	115		117.349
|	Sn	118	97.756	
|	Sb	123	96.281	
⌊	Ba	135	98.594	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	101.769	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	100.858	
|	U	238	98.014	
⌊>	Bi	209		116.043
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Be	9	
QC Std 6	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 19:16:35
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	761979.6	2.0				ug/L	552027	Standard
	Be	9	40.3	43.5	**0.0043**	0.006	151.0	ug/L	18	Standard
	Al	27	2598.9	46.7	**0.0017**	0.006	372.8	ug/L	841	Standard
	Sc	45	42347.4	0.6				ug/L	35084	Standard
	Ti	47	14.7	51.2	**-0.0117**	0.036	309.0	ug/L	22	Standard
	V	51	1193.5	5.5	**0.0858**	0.012	13.5	ug/L	812	Standard
	Cr	52	3938.2	0.8	**-0.0263**	0.006	24.7	ug/L	4274	Standard
	Cr	53	450.0	8.2	**-0.5665**	0.034	6.0	ug/L	1106	Standard
	Mn	55	938.4	5.1	**-0.0348**	0.006	16.1	ug/L	1207	Standard
	Co	59	82.7	12.2	**-0.0001**	0.002	3847.8	ug/L	71	Standard
	Ni	60	113.0	6.2	**-0.0770**	0.003	3.7	ug/L	295	Standard
	Cu	65	99.0	8.0	**-0.0064**	0.003	52.9	ug/L	87	Standard
	Zn	66	433.7	6.3	**-0.3086**	0.022	7.1	ug/L	469	Standard
>	**Ge**	72	478442.7	1.3				ug/L	514704	Standard
	As	75	-108.6	6.0	**0.0172**	0.006	36.4	ug/L	-121	Standard
	Se	82	5.6	45.0	**0.0443**	0.022	49.3	ug/L	-1	Standard
	Se-1	77	99.7	4.2	**-0.1052**	0.063	59.8	ug/L	127	Standard
>	**Ga**	71	83.3	30.8				mg/L	175	Standard
	Rb	85	50.0	36.1				ug/L	50	Standard
	Y	89	555124.2	3.8				ug/L	527499	Standard
>	**Rh**	103	3.3	86.6				ug/L	10	Standard
	Mo	98	185.9	89.5	**0.0349**	0.038	108.5	ug/L	23	Standard
	Ag	107	134.7	89.6	**0.0094**	0.020	211.2	ug/L	59	Standard
	Cd	111	27.8	158.3	**0.0127**	0.023	182.5	mg/L	3	Standard
	Cd	114	61.5	131.0	**0.0072**	0.016	228.5	ug/L	10	Standard
>	**In**	115	619686.7	1.8				ug/L	537195	Standard
	Sn	118	663.0	15.7	**0.0552**	0.021	37.2	ug/L	281	Standard
	Sb	123	1086.5	13.9	**0.2365**	0.034	14.2	ug/L	167	Standard
	Ba	135	33.0	110.3	**-0.0059**	0.019	322.1	ug/L	10	Standard
	Ce	140	18.7	22.3				ug/L	27	Standard
>	**Tb**	159	859287.6	2.5				ug/L	758170	Standard
	Ho	165	11.0	27.3				ug/L	7	Standard
	Tl	203	33.7	93.2	**0.0047**	0.005	112.2	ug/L	5	Standard
	Tl	205	0.7	173.2	**0.0116**	0.007	60.6	ug/L	0	Standard
	Pb	206	245.3	11.1	**0.0029**	0.005	185.5	ug/L	182	Standard
	Pb	207	195.7	14.3	**0.0026**	0.007	264.4	ug/L	145	Standard
	Pb	208	288.0	8.7	**0.0030**	0.005	172.7	ug/L	207	Standard
	U	238	18.0	89.4	**0.0027**	0.003	116.4	ug/L	1	Standard
>	**Bi**	209	380463.7	2.2				ug/L	325207	Standard

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	Na	23	1.7	173.2	**-0.8593**	0.399	46.4	mg/L	0	Standard
	Mg	24	36.7	34.3	**-0.0078**	0.011	139.9	mg/L	25	Standard
	K	39	8.3	91.7	**0.0706**	0.116	163.8	mg/L	3	Standard
	Ca	43	186.7	18.8	**-0.4667**	0.099	21.3	mg/L	297	Standard
	Fe	54	172.7	16.1	**0.0535**	0.029	53.2	mg/L	91	Standard
	Fe	57	116.7	16.2	**-0.2366**	0.044	18.8	mg/L	237	Standard
>	**Sc-1**	45	42347.4	0.6				mg/L	35084	Standard
	Cl	35	80778.9	3.6				ug/L	29808	Standard
	Kr	83	35.1	8.1				ug/L	38	Standard
	Br	81	690.0	13.6				ug/L	965	Standard
	P	31	256829.2	4.2				ug/L	176735	Standard
	S	34	65197.6	4.2				ug/L	28891	Standard
	Sr	88	50.8	22.7				ug/L	27	Standard
	C	12	3.3	86.6				mg/L	7	Standard
	N	14	1.7	173.2				mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	13.0	37.9				mg/L	14	Standard
	Ho-1	165	11.0	27.3				mg/L	7	Standard
	Er	166	13.3	34.6				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		138.033	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.955	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	115.356
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	116.991
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

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Method 6020 - Summary Report

Sample ID: L1305132104
Sample Date/Time: Tuesday, June 04, 2013 19:20:23
Number of Replicates: 3
Autosampler Position: 411
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	769222.3	2.1				ug/L	552027	Standard
	Be	9	154.7	7.1	**0.0477**	0.003	6.3	ug/L	18	Standard
	Al	27	236755.9	9.6	**1.2228**	0.094	7.7	ug/L	841	Standard
	Sc	45	43248.3	0.5				ug/L	35084	Standard
	Ti	47	2909.6	29.8	**14.0137**	4.123	29.4	ug/L	22	Standard
	V	51	6142.0	9.0	**0.9597**	0.080	8.3	ug/L	812	Standard
	Cr	52	6325.3	5.9	**0.4553**	0.051	11.1	ug/L	4274	Standard
	Cr	53	1104.2	10.4	**0.1084**	0.105	97.3	ug/L	1106	Standard
	Mn	55	69391.3	10.2	**9.0692**	0.767	8.5	ug/L	1207	Standard
	Co	59	1361.4	10.3	**0.2407**	0.022	9.2	ug/L	71	Standard
	Ni	60	1033.0	7.6	**0.3730**	0.028	7.4	ug/L	295	Standard
	Cu	65	2481.9	10.7	**1.1522**	0.106	9.2	ug/L	87	Standard
	Zn	66	18365.5	9.7	**16.4556**	1.317	8.0	ug/L	469	Standard
>	**Ge**	72	481193.3	2.3				ug/L	514704	Standard
	As	75	-18.7	85.1	**0.0918**	0.013	14.3	ug/L	-121	Standard
	Se	82	9.6	69.0	**0.0784**	0.057	73.1	ug/L	-1	Standard
	Se-1	77	121.0	10.6	**0.1562**	0.154	98.4	ug/L	127	Standard
>	**Ga**	71	336.7	10.5				mg/L	175	Standard
	Rb	85	8439.0	11.6				ug/L	50	Standard
	Y	89	555348.7	1.2				ug/L	527499	Standard
>	**Rh**	103	13.3	43.3				ug/L	10	Standard
	Mo	98	247.7	0.7	**0.0484**	0.002	4.0	ug/L	23	Standard
	Ag	107	123.0	11.0	**0.0072**	0.002	27.8	ug/L	59	Standard
	Cd	111	37.1	18.0	**0.0172**	0.003	16.9	mg/L	3	Standard
	Cd	114	137.7	14.6	**0.0223**	0.003	14.6	ug/L	10	Standard
>	**In**	115	626432.7	3.1				ug/L	537195	Standard
	Sn	118	1537.7	3.7	**0.2125**	0.004	1.7	ug/L	281	Standard
	Sb	123	811.1	9.6	**0.1704**	0.019	11.2	ug/L	167	Standard
	Ba	135	18962.9	10.4	**9.7579**	0.772	7.9	ug/L	10	Standard
	Ce	140	7158.7	12.0				ug/L	27	Standard
>	**Tb**	159	869204.9	2.1				ug/L	758170	Standard
	Ho	165	83.7	26.9				ug/L	7	Standard
	Tl	203	90.0	67.7	**0.0139**	0.010	73.3	ug/L	5	Standard
	Tl	205	2.0	0.0	**0.0200**	0.000	1.1	ug/L	0	Standard
	Pb	206	2583.2	7.1	**0.4861**	0.030	6.2	ug/L	182	Standard
	Pb	207	2009.8	6.9	**0.4435**	0.028	6.2	ug/L	145	Standard
	Pb	208	3036.8	9.0	**0.4690**	0.041	8.7	ug/L	207	Standard
	U	238	66.7	25.5	**0.0121**	0.003	28.4	ug/L	1	Standard
>	**Bi**	209	380381.2	1.8				ug/L	325207	Standard

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	Na	23	6.7	114.6	**-0.1905**	1.033	542.1	mg/L	0	Standard
	Mg	24	1821.8	9.0	**1.5344**	0.140	9.1	mg/L	25	Standard
	K	39	20.0	75.0	**0.2399**	0.221	91.9	mg/L	3	Standard
	Ca	43	300.0	17.6	**-0.1523**	0.155	101.7	mg/L	297	Standard
	Fe	54	550.8	15.3	**0.4160**	0.084	20.2	mg/L	91	Standard
	Fe	57	233.3	15.2	**0.0286**	0.084	293.1	mg/L	237	Standard
>	**Sc-1**	45	43248.3	0.5				mg/L	35084	Standard
	Cl	35	73687.3	4.6				ug/L	29808	Standard
	Kr	83	33.1	11.9				ug/L	38	Standard
	Br	81	931.7	6.2				ug/L	965	Standard
	P	31	332951.4	4.4				ug/L	176735	Standard
	S	34	51673.9	4.4				ug/L	28891	Standard
	Sr	88	40.0	6.3				ug/L	27	Standard
	C	12	11.7	65.5				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	57.3				mg/L	3	Standard
	Dy	164	113.6	27.7				mg/L	14	Standard
	Ho-1	165	83.7	26.9				mg/L	7	Standard
	Er	166	85.0	20.4				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		139.345	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.489	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	116.612
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	116.966
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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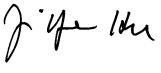

Method 6020 - Summary Report

Sample ID: L1305132105
Sample Date/Time: Tuesday, June 04, 2013 19:24:10
Number of Replicates: 3
Autosampler Position: 412
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	753132.6	2.6				ug/L	552027	Standard
	Be	9	32.3	24.0	**0.0015**	0.003	218.7	ug/L	18	Standard
	Al	27	13331140.2	8.2	**71.0710**	5.557	7.8	ug/L	841	Standard
	Sc	45	43621.1	2.6				ug/L	35084	Standard
	Ti	47	805.0	23.4	**3.9218**	0.892	22.7	ug/L	22	Standard
	V	51	2811.0	9.2	**0.3840**	0.041	10.6	ug/L	812	Standard
	Cr	52	7026.0	4.8	**0.6371**	0.051	7.9	ug/L	4274	Standard
	Cr	53	935.9	6.5	**-0.0385**	0.076	197.9	ug/L	1106	Standard
	Mn	55	1058705.5	9.9	**144.5295**	12.848	8.9	ug/L	1207	Standard
	Co	59	10757.5	11.3	**2.0664**	0.216	10.5	ug/L	71	Standard
	Ni	60	3342.4	7.4	**1.5481**	0.105	6.8	ug/L	295	Standard
	Cu	65	872.4	12.3	**0.3810**	0.048	12.6	ug/L	87	Standard
	Zn	66	4273.3	9.7	**3.3886**	0.355	10.5	ug/L	469	Standard
>	**Ge**	72	468536.9	1.3				ug/L	514704	Standard
	As	75	302.9	19.2	**0.3634**	0.046	12.7	ug/L	-121	Standard
	Se	82	156.4	10.6	**1.3402**	0.129	9.7	ug/L	-1	Standard
	Se-1	77	140.0	9.3	**0.4431**	0.156	35.2	ug/L	127	Standard
>	**Ga**	71	233.3	22.0				mg/L	175	Standard
	Rb	85	6354.7	12.7				ug/L	50	Standard
	Y	89	541097.2	1.5				ug/L	527499	Standard
>	**Rh**	103	126.7	13.9				ug/L	10	Standard
	Mo	98	198.1	12.0	**0.0383**	0.005	13.3	ug/L	23	Standard
	Ag	107	102.7	12.4	**0.0043**	0.002	46.7	ug/L	59	Standard
	Cd	111	31.1	8.0	**0.0146**	0.001	7.6	mg/L	3	Standard
	Cd	114	90.1	18.2	**0.0132**	0.003	23.4	ug/L	10	Standard
>	**In**	115	610936.6	1.4				ug/L	537195	Standard
	Sn	118	731.0	3.0	**0.0695**	0.006	8.0	ug/L	281	Standard
	Sb	123	513.8	1.7	**0.1046**	0.002	1.7	ug/L	167	Standard
	Ba	135	180647.8	8.6	**95.6134**	7.677	8.0	ug/L	10	Standard
	Ce	140	7990.8	10.6				ug/L	27	Standard
>	**Tb**	159	857541.9	1.5				ug/L	758170	Standard
	Ho	165	123.7	13.4				ug/L	7	Standard
	Tl	203	84.3	11.4	**0.0134**	0.002	13.1	ug/L	5	Standard
	Tl	205	2.3	65.5	**0.0225**	0.010	42.5	ug/L	0	Standard
	Pb	206	408.0	1.8	**0.0395**	0.001	3.2	ug/L	182	Standard
	Pb	207	318.0	4.4	**0.0350**	0.002	6.4	ug/L	145	Standard
	Pb	208	480.0	6.6	**0.0384**	0.005	13.9	ug/L	207	Standard
	U	238	116.3	25.0	**0.0225**	0.006	24.9	ug/L	1	Standard
>	**Bi**	209	367642.2	1.8				ug/L	325207	Standard

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	Na	23	143.3	14.1	**17.9812**	2.215	12.3	mg/L	0	Standard
	Mg	24	8607.4	4.8	**7.3366**	0.333	4.5	mg/L	25	Standard
	K	39	38.3	7.5	**0.5055**	0.030	5.9	mg/L	3	Standard
	Ca	43	5704.4	7.8	**15.2184**	1.514	10.0	mg/L	297	Standard
	Fe	54	272.4	15.0	**0.1437**	0.033	23.3	mg/L	91	Standard
	Fe	57	531.7	12.6	**0.7108**	0.157	22.1	mg/L	237	Standard
>	**Sc-1**	45	43621.1	2.6				mg/L	35084	Standard
	Cl	35	84143.3	0.3				ug/L	29808	Standard
	Kr	83	38.7	7.4				ug/L	38	Standard
	Br	81	7672.8	7.3				ug/L	965	Standard
	P	31	375972.2	3.9				ug/L	176735	Standard
	S	34	62006.8	4.2				ug/L	28891	Standard
	Sr	88	175.0	11.2				ug/L	27	Standard
	C	12	60.0	25.0				mg/L	7	Standard
	N	14	3.3	86.6				mg/L	0	Standard
	Hg	202	63.3	47.6				mg/L	3	Standard
	Dy	164	176.6	9.3				mg/L	14	Standard
	Ho-1	165	123.7	13.4				mg/L	7	Standard
	Er	166	125.7	17.9				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		136.430	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.030	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		113.727
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		113.049
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305132106
Sample Date/Time: Tuesday, June 04, 2013 19:27:56
Number of Replicates: 3
Autosampler Position: 413
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	753243.8	1.7				ug/L	552027	Standard
	Be	9	30.3	24.7	**0.0007**	0.003	459.3	ug/L	18	Standard
	Al	27	8574155.3	8.0	**45.7201**	3.903	8.5	ug/L	841	Standard
	Sc	45	42571.4	2.4				ug/L	35084	Standard
	Ti	47	605.3	19.8	**2.9280**	0.568	19.4	ug/L	22	Standard
	V	51	5322.7	8.7	**0.8398**	0.071	8.5	ug/L	812	Standard
	Cr	52	5390.6	5.0	**0.2940**	0.041	13.8	ug/L	4274	Standard
	Cr	53	616.7	8.3	**-0.3788**	0.063	16.6	ug/L	1106	Standard
	Mn	55	83345.1	10.8	**11.2202**	1.081	9.6	ug/L	1207	Standard
	Co	59	385.0	5.0	**0.0588**	0.003	4.6	ug/L	71	Standard
	Ni	60	1480.1	14.3	**0.6106**	0.096	15.8	ug/L	295	Standard
	Cu	65	551.0	7.6	**0.2204**	0.017	7.7	ug/L	87	Standard
	Zn	66	4627.0	10.4	**3.7250**	0.400	10.7	ug/L	469	Standard
>	**Ge**	72	468795.5	1.4				ug/L	514704	Standard
	As	75	-25.5	28.0	**0.0857**	0.006	7.4	ug/L	-121	Standard
	Se	82	28.8	15.7	**0.2436**	0.036	14.6	ug/L	-1	Standard
	Se-1	77	111.3	10.8	**0.0731**	0.175	239.9	ug/L	127	Standard
>	**Ga**	71	130.0	21.4				mg/L	175	Standard
	Rb	85	1166.7	13.5				ug/L	50	Standard
	Y	89	539161.7	2.8				ug/L	527499	Standard
>	**Rh**	103	35.0	62.3				ug/L	10	Standard
	Mo	98	1222.7	8.4	**0.2737**	0.022	8.0	ug/L	23	Standard
	Ag	107	73.3	7.0	**-0.0005**	0.001	182.1	ug/L	59	Standard
	Cd	111	26.3	11.8	**0.0120**	0.002	13.0	mg/L	3	Standard
	Cd	114	91.5	8.9	**0.0135**	0.002	11.2	ug/L	10	Standard
>	**In**	115	611688.3	1.1				ug/L	537195	Standard
	Sn	118	789.0	2.3	**0.0801**	0.003	4.2	ug/L	281	Standard
	Sb	123	345.2	3.1	**0.0645**	0.003	4.2	ug/L	167	Standard
	Ba	135	16487.0	8.5	**8.6952**	0.703	8.1	ug/L	10	Standard
	Ce	140	16151.0	10.1				ug/L	27	Standard
>	**Tb**	159	858661.4	1.2				ug/L	758170	Standard
	Ho	165	55.3	7.5				ug/L	7	Standard
	Tl	203	34.3	29.8	**0.0049**	0.002	33.0	ug/L	5	Standard
	Tl	205	1.3	43.3	**0.0162**	0.004	24.0	ug/L	0	Standard
	Pb	206	331.0	7.0	**0.0230**	0.005	23.5	ug/L	182	Standard
	Pb	207	277.0	0.4	**0.0246**	0.001	5.7	ug/L	145	Standard
	Pb	208	405.7	4.2	**0.0252**	0.003	10.5	ug/L	207	Standard
	U	238	651.3	8.5	**0.1293**	0.010	7.8	ug/L	1	Standard
>	**Bi**	209	368190.4	1.7				ug/L	325207	Standard

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	Na	23	90.0	5.6	**11.2016**	0.544	4.9	mg/L	0	Standard
	Mg	24	6748.2	9.3	**5.8833**	0.511	8.7	mg/L	25	Standard
	K	39	70.0	37.1	**1.0009**	0.409	40.8	mg/L	3	Standard
	Ca	43	3480.4	11.8	**9.1125**	1.032	11.3	mg/L	297	Standard
	Fe	54	226.0	12.7	**0.1050**	0.029	28.1	mg/L	91	Standard
	Fe	57	340.0	19.8	**0.2891**	0.164	56.6	mg/L	237	Standard
>	**Sc-1**	45	42571.4	2.4				mg/L	35084	Standard
	Cl	35	81644.5	2.9				ug/L	29808	Standard
	Kr	83	31.3	8.0				ug/L	38	Standard
	Br	81	1679.3	8.7				ug/L	965	Standard
	P	31	406813.0	3.7				ug/L	176735	Standard
	S	34	62283.6	2.3				ug/L	28891	Standard
	Sr	88	75.8	13.3				ug/L	27	Standard
	C	12	30.0	33.3				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	43.3				mg/L	3	Standard
	Dy	164	110.9	11.9				mg/L	14	Standard
	Ho-1	165	55.3	7.5				mg/L	7	Standard
	Er	166	57.3	5.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		136.451	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.081	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	113.867
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	113.217
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1305132107
Sample Date/Time: Tuesday, June 04, 2013 19:31:42
Number of Replicates: 3
Autosampler Position: 414
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	761602.4	1.7				ug/L	552027	Standard
	Be	9	59.0	12.8	**0.0115**	0.003	23.3	ug/L	18	Standard
	Al	27	4036345.7	8.9	**21.2597**	1.666	7.8	ug/L	841	Standard
	Sc	45	42965.8	0.2				ug/L	35084	Standard
	Ti	47	2823.6	16.4	**13.6959**	1.998	14.6	ug/L	22	Standard
	V	51	4687.5	6.4	**0.7090**	0.037	5.2	ug/L	812	Standard
	Cr	52	5890.5	5.0	**0.3762**	0.042	11.2	ug/L	4274	Standard
	Cr	53	1309.2	0.5	**0.3327**	0.036	10.7	ug/L	1106	Standard
	Mn	55	1792574.0	9.1	**240.1343**	16.828	7.0	ug/L	1207	Standard
	Co	59	2300.8	9.4	**0.4211**	0.032	7.7	ug/L	71	Standard
	Ni	60	2997.6	7.7	**1.3460**	0.084	6.2	ug/L	295	Standard
	Cu	65	2115.8	11.1	**0.9821**	0.095	9.6	ug/L	87	Standard
	Zn	66	4211.6	3.7	**3.2559**	0.116	3.6	ug/L	469	Standard
>	**Ge**	72	477487.7	2.2				ug/L	514704	Standard
	As	75	209.5	14.8	**0.2814**	0.025	9.0	ug/L	-121	Standard
	Se	82	104.2	6.1	**0.8754**	0.043	4.9	ug/L	-1	Standard
	Se-1	77	137.7	9.9	**0.3822**	0.198	51.7	ug/L	127	Standard
>	**Ga**	71	921.7	20.8				mg/L	175	Standard
	Rb	85	3680.5	11.6				ug/L	50	Standard
	Y	89	548988.8	1.6				ug/L	527499	Standard
>	**Rh**	103	38.3	30.1				ug/L	10	Standard
	Mo	98	311.1	10.2	**0.0627**	0.006	9.5	ug/L	23	Standard
	Ag	107	92.0	1.9	**0.0022**	0.001	24.2	ug/L	59	Standard
	Cd	111	15.3	22.7	**0.0060**	0.002	27.7	mg/L	3	Standard
	Cd	114	57.8	20.3	**0.0063**	0.002	39.3	ug/L	10	Standard
>	**In**	115	625293.0	1.9				ug/L	537195	Standard
	Sn	118	915.7	0.9	**0.1000**	0.004	3.7	ug/L	281	Standard
	Sb	123	479.4	6.8	**0.0938**	0.007	7.1	ug/L	167	Standard
	Ba	135	34884.4	9.7	**18.0140**	1.532	8.5	ug/L	10	Standard
	Ce	140	44668.3	11.5				ug/L	27	Standard
>	**Tb**	159	873430.2	1.3				ug/L	758170	Standard
	Ho	165	251.0	5.9				ug/L	7	Standard
	Tl	203	77.0	7.9	**0.0119**	0.001	7.8	ug/L	5	Standard
	Tl	205	1.7	34.6	**0.0181**	0.004	20.2	ug/L	0	Standard
	Pb	206	555.0	3.9	**0.0684**	0.004	5.7	ug/L	182	Standard
	Pb	207	453.0	3.9	**0.0665**	0.004	5.4	ug/L	145	Standard
	Pb	208	628.0	4.3	**0.0619**	0.004	6.4	ug/L	207	Standard
	U	238	233.7	5.7	**0.0449**	0.002	5.2	ug/L	1	Standard
>	**Bi**	209	375849.4	0.7				ug/L	325207	Standard

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	Na	23	33.3	52.7	**3.4238**	2.380	69.5	mg/L	0	Standard
	Mg	24	9791.5	7.1	**8.4776**	0.595	7.0	mg/L	25	Standard
	K	39	93.3	38.8	**1.3311**	0.535	40.2	mg/L	3	Standard
	Ca	43	1915.1	6.8	**4.5137**	0.377	8.3	mg/L	297	Standard
	Fe	54	855.9	14.4	**0.7164**	0.119	16.7	mg/L	91	Standard
	Fe	57	365.0	6.3	**0.3395**	0.052	15.3	mg/L	237	Standard
>	**Sc-1**	45	42965.8	0.2				mg/L	35084	Standard
	Cl	35	82133.0	0.4				ug/L	29808	Standard
	Kr	83	34.1	13.3				ug/L	38	Standard
	Br	81	5357.6	6.2				ug/L	965	Standard
	P	31	335747.1	6.0				ug/L	176735	Standard
	S	34	59360.3	4.0				ug/L	28891	Standard
	Sr	88	84.2	22.3				ug/L	27	Standard
	C	12	10.0					mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	5.0	100.0				mg/L	3	Standard
	Dy	164	348.5	7.0				mg/L	14	Standard
	Ho-1	165	251.0	5.9				mg/L	7	Standard
	Er	166	296.3	10.3				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		137.965	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.769	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	116.400
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	115.572
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1305132108
Sample Date/Time: Tuesday, June 04, 2013 19:35:28
Number of Replicates: 3
Autosampler Position: 415
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	761314.4	2.1				ug/L	552027	Standard
	Be	9	32.3	3.6	**0.0013**	0.001	51.4	ug/L	18	Standard
	Al	27	8633395.8	6.8	**45.5438**	3.294	7.2	ug/L	841	Standard
	Sc	45	44401.6	1.1				ug/L	35084	Standard
	Ti	47	1474.7	30.2	**7.2019**	2.196	30.5	ug/L	22	Standard
	V	51	6333.0	9.0	**1.0147**	0.094	9.3	ug/L	812	Standard
	Cr	52	5529.0	2.6	**0.3143**	0.011	3.7	ug/L	4274	Standard
	Cr	53	779.2	9.8	**-0.2135**	0.066	30.7	ug/L	1106	Standard
	Mn	55	1007582.1	9.6	**136.4348**	12.047	8.8	ug/L	1207	Standard
	Co	59	3485.1	11.3	**0.6534**	0.070	10.7	ug/L	71	Standard
	Ni	60	1557.4	13.4	**0.6440**	0.099	15.3	ug/L	295	Standard
	Cu	65	1711.1	10.7	**0.7932**	0.081	10.2	ug/L	87	Standard
	Zn	66	4183.3	14.2	**3.2677**	0.516	15.8	ug/L	469	Standard
>	**Ge**	72	472418.8	1.8				ug/L	514704	Standard
	As	75	44.8	70.9	**0.1446**	0.026	18.0	ug/L	-121	Standard
	Se	82	48.2	9.5	**0.4074**	0.035	8.5	ug/L	-1	Standard
	Se-1	77	126.7	12.1	**0.2596**	0.219	84.4	ug/L	127	Standard
>	**Ga**	71	386.7	19.4				mg/L	175	Standard
	Rb	85	1348.4	11.8				ug/L	50	Standard
	Y	89	547307.7	3.6				ug/L	527499	Standard
>	**Rh**	103	45.0	33.3				ug/L	10	Standard
	Mo	98	491.4	7.0	**0.1052**	0.007	6.3	ug/L	23	Standard
	Ag	107	62.7	18.4	**-0.0024**	0.002	69.9	ug/L	59	Standard
	Cd	111	15.8	14.5	**0.0064**	0.001	20.8	mg/L	3	Standard
	Cd	114	51.3	22.9	**0.0052**	0.002	46.7	ug/L	10	Standard
>	**In**	115	614046.9	2.3				ug/L	537195	Standard
	Sn	118	634.0	7.4	**0.0509**	0.010	20.1	ug/L	281	Standard
	Sb	123	295.9	3.8	**0.0526**	0.001	2.1	ug/L	167	Standard
	Ba	135	36020.0	9.4	**18.9459**	1.578	8.3	ug/L	10	Standard
	Ce	140	18696.6	9.6				ug/L	27	Standard
>	**Tb**	159	861740.0	1.8				ug/L	758170	Standard
	Ho	165	60.0	12.0				ug/L	7	Standard
	Tl	203	49.7	14.6	**0.0074**	0.001	17.7	ug/L	5	Standard
	Tl	205	4.0	25.0	**0.0330**	0.007	20.4	ug/L	0	Standard
	Pb	206	388.3	9.7	**0.0338**	0.007	20.2	ug/L	182	Standard
	Pb	207	280.0	7.7	**0.0243**	0.006	26.1	ug/L	145	Standard
	Pb	208	414.0	5.8	**0.0255**	0.004	15.7	ug/L	207	Standard
	U	238	622.0	12.3	**0.1215**	0.014	11.7	ug/L	1	Standard
>	**Bi**	209	373990.7	1.5				ug/L	325207	Standard

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	Na	23	90.0	16.7	**10.6902**	1.908	17.9	mg/L	0	Standard
	Mg	24	8325.6	8.4	**6.9725**	0.645	9.2	mg/L	25	Standard
	K	39	55.0	24.1	**0.7360**	0.191	26.0	mg/L	3	Standard
	Ca	43	3540.4	7.3	**8.8785**	0.805	9.1	mg/L	297	Standard
	Fe	54	544.4	8.7	**0.3963**	0.051	12.8	mg/L	91	Standard
	Fe	57	400.0	10.8	**0.3912**	0.099	25.2	mg/L	237	Standard
>	**Sc-1**	45	44401.6	1.1				mg/L	35084	Standard
	Cl	35	80534.5	1.1				ug/L	29808	Standard
	Kr	83	34.4	8.7				ug/L	38	Standard
	Br	81	2710.2	3.2				ug/L	965	Standard
	P	31	401430.9	4.5				ug/L	176735	Standard
	S	34	59568.5	1.3				ug/L	28891	Standard
	Sr	88	86.7	4.4				ug/L	27	Standard
	C	12	21.7	48.0				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	115.4	26.4				mg/L	14	Standard
	Ho-1	165	60.0	12.0				mg/L	7	Standard
	Er	166	69.0	10.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		137.913	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.785	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		114.306
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		115.001
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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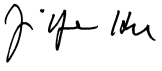

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 04, 2013 19:39:16
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	750801.9	1.4				ug/L	552027	Standard
	Be	9	112249.8	9.6	**43.7186**	3.860	8.8	ug/L	18	Standard
	Al	27	9790871.3	8.0	**52.3385**	3.778	7.2	ug/L	841	Standard
	Sc	45	42639.9	2.8				ug/L	35084	Standard
	Ti	47	26156.7	9.5	**129.5685**	11.058	8.5	ug/L	22	Standard
	V	51	288914.1	9.4	**52.1106**	4.372	8.4	ug/L	812	Standard
	Cr	52	241119.6	12.2	**49.3916**	5.628	11.4	ug/L	4274	Standard
	Cr	53	51652.7	10.2	**53.6541**	5.063	9.4	ug/L	1106	Standard
	Mn	55	351794.0	9.6	**47.6880**	4.106	8.6	ug/L	1207	Standard
	Co	59	243490.4	10.2	**46.8872**	4.296	9.2	ug/L	71	Standard
	Ni	60	108379.7	9.8	**54.0975**	4.764	8.8	ug/L	295	Standard
	Cu	65	104093.4	9.4	**51.7174**	4.346	8.4	ug/L	87	Standard
	Zn	66	54579.3	8.5	**51.4721**	3.910	7.6	ug/L	469	Standard
>	Ge	72	470787.8	1.1				ug/L	514704	Standard
	As	75	60043.7	8.6	**50.6657**	3.851	7.6	ug/L	-121	Standard
	Se	82	6152.9	7.4	**52.6132**	3.350	6.4	ug/L	-1	Standard
	Se-1	77	4112.6	7.6	**51.6491**	3.523	6.8	ug/L	127	Standard
>	Ga	71	111.7	40.6				mg/L	175	Standard
	Rb	85	3182.0	4.2				ug/L	50	Standard
	Y	89	537843.2	0.7				ug/L	527499	Standard
>	Rh	103	33.3	45.8				ug/L	10	Standard
	Mo	98	397957.9	9.1	**92.6422**	9.343	10.1	ug/L	23	Standard
	Ag	107	287834.8	6.8	**48.2786**	3.785	7.8	ug/L	59	Standard
	Cd	111	90263.4	9.1	**48.5210**	4.906	10.1	mg/L	3	Standard
	Cd	114	252405.8	8.7	**52.6214**	5.152	9.8	ug/L	10	Standard
>	In	115	604239.9	1.1				ug/L	537195	Standard
	Sn	118	269123.7	10.0	**50.6286**	5.615	11.1	ug/L	281	Standard
	Sb	123	205846.1	8.4	**49.3409**	4.678	9.5	ug/L	167	Standard
	Ba	135	95730.9	8.4	**51.2701**	4.864	9.5	ug/L	10	Standard
	Ce	140	93.7	11.3				ug/L	27	Standard
>	Tb	159	853321.4	1.0				ug/L	758170	Standard
	Ho	165	5.7	44.4				ug/L	7	Standard
	Tl	203	302674.0	6.7	**50.4978**	3.400	6.7	ug/L	5	Standard
	Tl	205	7980.4	7.9	**50.8803**	4.051	8.0	ug/L	0	Standard
	Pb	206	237425.3	8.1	**50.0895**	4.071	8.1	ug/L	182	Standard
	Pb	207	205426.7	8.4	**50.9693**	4.310	8.5	ug/L	145	Standard
	Pb	208	293657.2	9.3	**50.8251**	4.743	9.3	ug/L	207	Standard
	U	238	247705.4	10.3	**48.9054**	5.067	10.4	ug/L	1	Standard
>	Bi	209	372483.3	0.1				ug/L	325207	Standard

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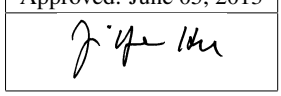

	Na	23	38.3	19.9	**4.1285**	0.953	23.1	mg/L	0	Standard
	Mg	24	5069.2	13.1	**4.4037**	0.577	13.1	mg/L	25	Standard
	K	39	301.7	15.0	**4.4548**	0.597	13.4	mg/L	3	Standard
	Ca	43	1801.8	7.8	**4.2265**	0.388	9.2	mg/L	297	Standard
	Fe	54	6349.9	12.5	**6.1170**	0.782	12.8	mg/L	91	Standard
	Fe	57	1750.1	4.6	**3.6098**	0.260	7.2	mg/L	237	Standard
>	**Sc-1**	45	42639.9	2.8				mg/L	35084	Standard
	Cl	35	85410.4	1.5				ug/L	29808	Standard
	Kr	83	43.2	4.7				ug/L	38	Standard
	Br	81	758.4	7.8				ug/L	965	Standard
	P	31	279852.2	1.9				ug/L	176735	Standard
	S	34	74267.5	3.3				ug/L	28891	Standard
	Sr	88	48.3	34.4				ug/L	27	Standard
	C	12	8.3	91.7				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	10.2	15.0				mg/L	14	Standard
	Ho-1	165	5.7	44.4				mg/L	7	Standard
	Er	166	10.0					mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		136.008	
	Be	9	87.437		
	Al	27	104.677		
	Sc	45			
	Ti	47	129.568		
	V	51	104.221		
	Cr	52	98.783		
	Cr	53			
	Mn	55	95.376		
	Co	59	93.774		
	Ni	60	108.195		
	Cu	65	103.435		
	Zn	66	102.944		
>	Ge	72		91.468	
	As	75	101.331		
	Se	82	105.226		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	92.642	
|	Ag	107	96.557	
|	Cd	111	97.042	
|	Cd	114		
|>	In	115		112.481
|	Sn	118	101.257	
|	Sb	123	98.682	
⌊	Ba	135	102.540	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.996	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	101.650	
|	U	238	97.811	
⌊>	Bi	209		114.537
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 6	Be	9	
QC Std 6	Ti	47	

Sample ID: QC Std 6
Report Date/Time: Tuesday, June 04, 2013 19:42:08
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 04, 2013 19:43:02
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	741682.0	4.3				ug/L	552027	Standard
	Be	9	36.3	15.2	**0.0032**	0.002	53.5	ug/L	18	Standard
	Al	27	2297.5	25.9	**0.0004**	0.003	676.3	ug/L	841	Standard
	Sc	45	42225.4	1.3				ug/L	35084	Standard
	Ti	47	15.7	39.0	**-0.0055**	0.028	517.4	ug/L	22	Standard
	V	51	1109.7	5.7	**0.0752**	0.005	7.3	ug/L	812	Standard
	Cr	52	3797.8	2.1	**-0.0378**	0.013	34.0	ug/L	4274	Standard
	Cr	53	441.7	17.0	**-0.5654**	0.072	12.8	ug/L	1106	Standard
	Mn	55	1029.7	8.1	**-0.0196**	0.007	35.0	ug/L	1207	Standard
	Co	59	100.0	22.1	**0.0036**	0.004	104.5	ug/L	71	Standard
	Ni	60	89.7	20.0	**-0.0875**	0.009	10.3	ug/L	295	Standard
	Cu	65	93.7	3.7	**-0.0079**	0.002	20.8	ug/L	87	Standard
	Zn	66	442.0	7.4	**-0.2917**	0.021	7.3	ug/L	469	Standard
>	**Ge**	72	468118.8	3.2				ug/L	514704	Standard
	As	75	-74.7	39.6	**0.0442**	0.024	54.1	ug/L	-121	Standard
	Se	82	10.3	82.7	**0.0854**	0.073	85.9	ug/L	-1	Standard
	Se-1	77	98.0	14.2	**-0.1018**	0.150	147.0	ug/L	127	Standard
>	**Ga**	71	58.3	40.5				mg/L	175	Standard
	Rb	85	43.3	63.5				ug/L	50	Standard
	Y	89	548716.6	5.0				ug/L	527499	Standard
>	**Rh**	103	15.0	57.7				ug/L	10	Standard
	Mo	98	112.0	19.5	**0.0187**	0.004	22.4	ug/L	23	Standard
	Ag	107	69.0	16.5	**-0.0012**	0.002	134.9	ug/L	59	Standard
	Cd	111	7.9	21.7	**0.0023**	0.001	34.2	mg/L	3	Standard
	Cd	114	28.5	11.5	**0.0006**	0.001	137.7	ug/L	10	Standard
>	**In**	115	606647.3	3.4				ug/L	537195	Standard
	Sn	118	629.3	7.4	**0.0516**	0.012	23.1	ug/L	281	Standard
	Sb	123	1115.5	11.3	**0.2486**	0.023	9.1	ug/L	167	Standard
	Ba	135	25.7	41.3	**-0.0095**	0.006	58.7	ug/L	10	Standard
	Ce	140	14.3	17.6				ug/L	27	Standard
>	**Tb**	159	851832.7	2.6				ug/L	758170	Standard
	Ho	165	8.7	40.5				ug/L	7	Standard
	Tl	203	24.3	37.1	**0.0032**	0.002	47.3	ug/L	5	Standard
	Tl	205	2.0	100.0	**0.0201**	0.012	61.4	ug/L	0	Standard
	Pb	206	220.0	5.2	**-0.0014**	0.001	79.6	ug/L	182	Standard
	Pb	207	191.3	3.1	**0.0025**	0.002	85.7	ug/L	145	Standard
	Pb	208	278.3	13.8	**0.0021**	0.005	248.5	ug/L	207	Standard
	U	238	37.0	86.4	**0.0064**	0.006	93.9	ug/L	1	Standard
>	**Bi**	209	373217.3	2.8				ug/L	325207	Standard

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	Na	23	3.3	86.6	**-0.6313**	0.397	62.9	mg/L	0	Standard
	Mg	24	48.3	21.5	**0.0026**	0.009	330.1	mg/L	25	Standard
	K	39	5.0	100.0	**0.0211**	0.076	362.4	mg/L	3	Standard
	Ca	43	175.0	20.0	**-0.4996**	0.098	19.6	mg/L	297	Standard
	Fe	54	181.1	18.8	**0.0624**	0.036	57.4	mg/L	91	Standard
	Fe	57	136.7	15.2	**-0.1886**	0.045	23.9	mg/L	237	Standard
>	**Sc-1**	45	42225.4	1.3				mg/L	35084	Standard
	Cl	35	83529.2	3.8				ug/L	29808	Standard
	Kr	83	37.1	5.7				ug/L	38	Standard
	Br	81	724.2	3.3				ug/L	965	Standard
	P	31	260543.0	5.0				ug/L	176735	Standard
	S	34	70892.4	4.8				ug/L	28891	Standard
	Sr	88	55.0	19.8				ug/L	27	Standard
	C	12	8.3	124.9				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	7.6	45.4				mg/L	14	Standard
	Ho-1	165	8.7	40.5				mg/L	7	Standard
	Er	166	16.0	25.0				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		134.356	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.949	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: QC Std 7
Report Date/Time: Tuesday, June 04, 2013 19:45:54
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Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		112.929
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		114.763
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample
QC Std 7	Sb	123	

Sample ID: QC Std 7
Report Date/Time: Tuesday, June 04, 2013 19:45:54
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Approved: June 05, 2013

Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, June 04, 2013 19:46:50
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	738114.5	1.9				ug/L	552027	Standard
	Be	9	469.0	6.7	**0.1747**	0.010	5.7	ug/L	18	Standard
	Al	27	1343.4	67.0	**-0.0047**	0.005	106.1	ug/L	841	Standard
	Sc	45	42085.1	3.3				ug/L	35084	Standard
	Ti	47	18.3	8.3	**0.0083**	0.009	109.8	ug/L	22	Standard
	V	51	3365.7	3.6	**0.4846**	0.019	3.9	ug/L	812	Standard
	Cr	52	7634.3	5.8	**0.7632**	0.079	10.3	ug/L	4274	Standard
	Cr	53	1235.9	4.7	**0.2800**	0.081	29.0	ug/L	1106	Standard
	Mn	55	4651.4	1.0	**0.4752**	0.008	1.7	ug/L	1207	Standard
	Co	59	1962.5	11.9	**0.3636**	0.040	11.0	ug/L	71	Standard
	Ni	60	3489.1	8.6	**1.6203**	0.132	8.2	ug/L	295	Standard
	Cu	65	1752.4	10.5	**0.8201**	0.082	10.0	ug/L	87	Standard
	Zn	66	7042.3	9.5	**6.0433**	0.568	9.4	ug/L	469	Standard
>	**Ge**	72	468967.4	2.2				ug/L	514704	Standard
	As	75	340.0	5.9	**0.3947**	0.012	3.0	ug/L	-121	Standard
	Se	82	50.3	10.2	**0.4286**	0.040	9.3	ug/L	-1	Standard
	Se-1	77	132.0	6.6	**0.3385**	0.106	31.3	ug/L	127	Standard
>	**Ga**	71	63.3	18.2				mg/L	175	Standard
	Rb	85	40.0	12.5				ug/L	50	Standard
	Y	89	540647.4	1.0				ug/L	527499	Standard
>	**Rh**	103	3.3	173.2				ug/L	10	Standard
	Mo	98	62.2	44.9	**0.0070**	0.006	87.8	ug/L	23	Standard
	Ag	107	2318.5	10.9	**0.3712**	0.034	9.3	ug/L	59	Standard
	Cd	111	411.9	10.7	**0.2166**	0.019	8.8	mg/L	3	Standard
	Cd	114	1181.3	9.8	**0.2377**	0.019	8.1	ug/L	10	Standard
>	**In**	115	611220.4	2.0				ug/L	537195	Standard
	Sn	118	550.7	16.3	**0.0361**	0.019	52.4	ug/L	281	Standard
	Sb	123	2082.6	7.2	**0.4758**	0.027	5.7	ug/L	167	Standard
	Ba	135	1389.7	12.0	**0.7114**	0.075	10.5	ug/L	10	Standard
	Ce	140	16.7	18.3				ug/L	27	Standard
>	**Tb**	159	845661.5	2.1				ug/L	758170	Standard
	Ho	165	8.7	43.7				ug/L	7	Standard
	Tl	203	540.0	12.1	**0.0890**	0.011	12.2	ug/L	5	Standard
	Tl	205	15.3	19.9	**0.1052**	0.021	19.6	ug/L	0	Standard
	Pb	206	1210.4	5.6	**0.2070**	0.012	5.7	ug/L	182	Standard
	Pb	207	1044.0	2.1	**0.2136**	0.007	3.3	ug/L	145	Standard
	Pb	208	1446.7	8.3	**0.2040**	0.020	9.8	ug/L	207	Standard
	U	238	2009.1	9.4	**0.3948**	0.038	9.7	ug/L	1	Standard
>	**Bi**	209	373536.9	1.3				ug/L	325207	Standard

Sample ID: QC Std 8
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	Na	23	0.0		**-1.0895**	0.000	0.0	mg/L	0	Standard
	Mg	24	33.3	17.3	**-0.0104**	0.006	58.5	mg/L	25	Standard
	K	39	8.3	124.9	**0.0747**	0.164	219.1	mg/L	3	Standard
	Ca	43	170.0	16.4	**-0.5134**	0.066	12.8	mg/L	297	Standard
	Fe	54	178.8	22.0	**0.0599**	0.033	55.6	mg/L	91	Standard
	Fe	57	153.3	32.8	**-0.1456**	0.125	86.0	mg/L	237	Standard
>	**Sc-1**	45	42085.1	3.3				mg/L	35084	Standard
	Cl	35	81507.1	2.9				ug/L	29808	Standard
	Kr	83	34.0	13.3				ug/L	38	Standard
	Br	81	722.5	8.7				ug/L	965	Standard
	P	31	253758.0	4.8				ug/L	176735	Standard
	S	34	65617.7	3.7				ug/L	28891	Standard
	Sr	88	45.8	17.5				ug/L	27	Standard
	C	12	6.7	43.3				mg/L	7	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	1.7	173.2				mg/L	3	Standard
	Dy	164	10.6	6.7				mg/L	14	Standard
	Ho-1	165	8.7	43.7				mg/L	7	Standard
	Er	166	14.3	20.1				mg/L	8	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		133.710	
	Be	9	87.360		
	Al	27			
	Sc	45			
	Ti	47			
	V	51	121.162		
	Cr	52	95.401		
	Cr	53			
	Mn	55	95.033		
	Co	59	90.911		
	Ni	60	101.266		
	Cu	65	102.515		
	Zn	66	96.692		
>	Ge	72		91.114	
	As	75	98.675		
	Se	82	107.139		
	Se-1	77			
>	Ga	71			
	Rb	85			

Sample ID: QC Std 8
Report Date/Time: Tuesday, June 04, 2013 19:49:42
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Approved: June 05, 2013

⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98		
|	Ag	107	92.801	
|	Cd	111	90.239	
|	Cd	114		
|>	In	115		113.780
|	Sn	118		
|	Sb	123	118.959	
⌊	Ba	135	94.858	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	111.218	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	101.990	
|	U	238	98.710	
⌊>	Bi	209		114.861
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for QC Std	Li	6	Rerun sample

Sample ID: QC Std 8
Report Date/Time: Tuesday, June 04, 2013 19:49:42
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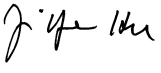
Approved: June 05, 2013



2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Login Number: L13051242
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.

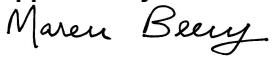
Serial Dilution/Post Digestion Spikes: WG431944 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 64690
Approved By: Maren Beery



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL19-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:01
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	M7.052813.150143
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 #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL20-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:04
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	M7.052813.150414
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 #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL20-0513-2	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:06
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	M7.052813.150646
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 #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL6-0513-1	**Prep Method:**	7470A	**Prep Date:**	05/24/2013 10:15
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/28/2013 14:08
Workgroup #:	WG431944	**Analyst:**	PDM	**Run Date:**	05/28/2013 15:09
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	M7.052813.150917
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 / CETAC M-7600 Quick Trace Mercury Analyzer

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

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

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG431651
Analyst: BRG
Spike Analyst: BRG
Method: 7470A
Run Date: 05/24/2013 10:15
Hotblock Start Temp: 95 @ 10:05
Hotblock End Temp: 95 @ 12:05
Instrument: HB6

SOP: ME404 Revison 14
Spike Solution: STD58121
Spike Witness: ERP
HNO3 Lot #: COA16631
KMnO4 1:1 Lot #: RGT26362
H2SO4 Lot #: COA16424
K2S2O8 1:1 Lot #: RGT27069
Mercury Water ICV Lot #: STD58123
HG H2O STDS 10PPM Lot #: STD58129
Digestion Tubes Lot #: COA16806

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG431651-02	BLANK	1	40 mL	40 mL		
2	WG431553-01	FBLK	17	4 mL	40 mL		
3	WG431651-03	LCS	1	40 mL	40 mL	4 mL	
4	L13051132-01	SAMP	1	40 mL	40 mL		06/04/13
5	L13051227-01	SAMP	17	4 mL	40 mL		05/30/13
6	L13051227-02	SAMP	17	4 mL	40 mL		05/30/13
7	L13051229-01	SAMP	17	4 mL	40 mL		05/29/13
8	L13051229-02	SAMP	17	4 mL	40 mL		05/29/13
9	L13051229-03	SAMP	17	4 mL	40 mL		05/29/13
10	WG431651-01	REF	17	4 mL	40 mL		
11	L13051229-04	SAMP	17	4 mL	40 mL		05/29/13
12	L13051242-01	SAMP	1	40 mL	40 mL		06/03/13
13	L13051242-02	SAMP	1	40 mL	40 mL		06/03/13
14	L13051242-03	SAMP	1	40 mL	40 mL		06/03/13
15	L13051242-04	SAMP	1	40 mL	40 mL		06/03/13
16	WG431651-04	MS	1	4 mL	40 mL	4 mL	
17	WG431651-05	MSD	1	4 mL	40 mL	4 mL	

Analyst: Brenda Gregory

Reviewer: Erin Potter

*** All calibration and check standards are prepared and digested with sample batch following the procedures in section 7.0 of SOP ME404/ME405.**

HB_DIG - Modified 07/26/2012
PDF ID: 2892277
Report generated: 05/24/2013 12:58

Microbac Laboratories Inc.

Instrument Run Log

Instrument: CVAA1 Dataset: 052813C.CSV
Analyst1: PDM Analyst2: N/A
Method: 7470 SOP: ME404 Rev: 14
Maintenance Log ID: 46100

Calibration Std: STD58129 ICV Std: STD58123 Post Spike: STD58129
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV: Tuning Sol :
Stannous : RGT26183 Hydroxylamine : RGT26602

Workgroups: 431994

Comments: Sequences 33 through 43 not reported due to software error causing analysis to stop prior to the analysis of a closing CCB.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	M7.052813.135547	WG432114-01	Calibration Point		1		05/28/13 13:55
2	M7.052813.135819	WG432114-02	Calibration Point		1		05/28/13 13:58
3	M7.052813.140051	WG432114-03	Calibration Point		1		05/28/13 14:00
4	M7.052813.140323	WG432114-04	Calibration Point		1		05/28/13 14:03
5	M7.052813.140556	WG432114-05	Calibration Point		1		05/28/13 14:05
6	M7.052813.140830	WG432114-06	Calibration Point		1		05/28/13 14:08
7	M7.052813.141104	WG432114-07	Initial Calibration Verification		1		05/28/13 14:11
8	M7.052813.141335	WG432114-08	Initial Calib Blank		1		05/28/13 14:13
9	M7.052813.141608	WG432114-09	CCV		1		05/28/13 14:16
10	M7.052813.141838	WG432114-10	CCB		1		05/28/13 14:18
11	M7.052813.142109	WG431651-02	Method/Prep Blank	40/40	1		05/28/13 14:21
12	M7.052813.142340	WG431651-03	Laboratory Control S	40/40	1		05/28/13 14:23
13	M7.052813.142612	WG431553-01	Fluid Blank		1		05/28/13 14:26
14	M7.052813.142844	L13051132-01	USDA 4/23/13	40/40	1		05/28/13 14:28
15	M7.052813.143116	WG431944-01	Post Digestion Spike		1	L13051132-01	05/28/13 14:31
16	M7.052813.143348	L13051227-01	USTAS3628-SP01	4/40	1		05/28/13 14:33
17	M7.052813.143620	WG431944-02	Post Digestion Spike		1	L13051227-01	05/28/13 14:36
18	M7.052813.143853	L13051227-02	USTAS3628-SP02	4/40	1		05/28/13 14:38
19	M7.052813.144126	L13051229-01	B616	4/40	1		05/28/13 14:41
20	M7.052813.144400	L13051229-02	B949	4/40	1		05/28/13 14:44
21	M7.052813.144632	WG432114-11	CCV		1		05/28/13 14:46
22	M7.052813.144903	WG432114-12	CCB		1		05/28/13 14:49
23	M7.052813.145137	L13051229-03	B703	4/40	1		05/28/13 14:51
24	M7.052813.145411	L13051229-04	B1022	4/40	1	WG431651-01	05/28/13 14:54
25	M7.052813.145641	WG431651-04	Matrix Spike	4/40	1	L13051229-04	05/28/13 14:56
26	M7.052813.145912	WG431651-05	Matrix Spike Duplica	4/40	1	L13051229-04	05/28/13 14:59
27	M7.052813.150143	L13051242-01	MPL19-0513-1	40/40	1		05/28/13 15:01
28	M7.052813.150414	L13051242-02	MPL20-0513-1	40/40	1		05/28/13 15:04
29	M7.052813.150646	L13051242-03	MPL20-0513-2	40/40	1		05/28/13 15:06
30	M7.052813.150917	L13051242-04	MPL6-0513-1	40/40	1		05/28/13 15:09
31	M7.052813.151150	WG432114-13	CCV		1		05/28/13 15:11
32	M7.052813.151420	WG432114-14	CCB		1		05/28/13 15:14
33	M7.052813.151653	WG431607-02	Method/Prep Blank		1		05/28/13 15:16
34	M7.052813.151925	WG431607-03	Laboratory Control S		1		05/28/13 15:19

Page: 1 Approved: May 29, 2013

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: CVAA1 Dataset: 052813C.CSV

Analyst1: PDM Analyst2: N/A

Method: 7470 SOP: ME404 Rev: 14

Maintenance Log ID: 46100

Calibration Std: STD58129 ICV Std: STD58123 Post Spike: STD58129

ICSA: N/A ICSAB: N/A Int. Std:

CCV: LLCCV: Tuning Sol :

Stannous : RGT26183 Hydroxylamine : RGT26602

Workgroups: 431994

Comments: Sequences 33 through 43 not reported due to software error causing analysis to stop prior to the analysis of a closing CCB.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	M7.052813.152158	L13051146-01	MPL23-0513-1		1	WG431607-01	05/28/13 15:21
36	M7.052813.152431	WG431607-04	Matrix Spike		1	L13051146-01	05/28/13 15:24
37	M7.052813.152704	WG431607-05	Matrix Spike Duplica		1	L13051146-01	05/28/13 15:27
38	M7.052813.152938	L13051146-02	MPL24-0513-1		1		05/28/13 15:29
39	M7.052813.153208	WG431947-01	Post Digestion Spike		1	L13051146-02	05/28/13 15:32
40	M7.052813.153439	L13051182-01	TW-65D		1		05/28/13 15:34
41	M7.052813.153710	L13051182-02	TW-65D		1		05/28/13 15:37
42	M7.052813.153941	L13051182-03	TW-65S		1		05/28/13 15:39
43	M7.052813.154214	WG432114-15	CCV		1		05/28/13 15:42

Page: 2 Approved: May 29, 2013

Maren Berry

Microbac

Microbac Laboratories Inc.

Data Checklist

Date: 28-MAY-2013
Analyst: PDM
Analyst: NA
Method: 7470A
Instrument: CVAA1
Curve Workgroup: 432114
Runlog ID: 53440
Analytical Workgroups: 431994

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	1229,1242
Client Forms	X
Level X	
Level 3	
Level 4	1229,1242
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	PDM
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
29-MAY-2013
Pierce Morris

Secondary Reviewer:
29-MAY-2013
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-29-2013 15:42:38

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A **AAB#:** WG431944

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/24/2013	1.9	28		05/28/13	6.1	28	
MPL20-0513-1	02	05/22/13					05/24/2013	1.9	28		05/28/13	6.1	28	
MPL20-0513-2	03	05/22/13					05/24/2013	1.9	28		05/28/13	6.1	28	
MPL6-0513-1	04	05/22/13					05/24/2013	1.8	28		05/28/13	6	28	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2896763
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number:	L13051242	Work Group:	WG431944
Blank File ID:	M7.052813.142109	Blank Sample ID:	WG431651-02
Prep Date:	05/24/13 10:15	Instrument ID:	CVAA1
Analyzed Date:	05/28/13 14:21	Method:	7470A
Analyst:	PDM		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG431651-03	M7.052813.142340	05/28/13 14:23	01
MPL19-0513-1	L13051242-01	M7.052813.150143	05/28/13 15:01	01
MPL20-0513-1	L13051242-02	M7.052813.150414	05/28/13 15:04	01
MPL20-0513-2	L13051242-03	M7.052813.150646	05/28/13 15:06	01
MPL6-0513-1	L13051242-04	M7.052813.150917	05/28/13 15:09	01

Report Name: BLANK_SUMMARY
PDF File ID: 2896765
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/24/13 10:15 Sample ID: WG431651-02
Instrument ID: CVAA1 Run Date: 05/28/13 14:21 Prep Method: 7470A
File ID: M7.052813.142109 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG431944 Matrix: Water Units: mg/L
Contract #: Cal ID: CVAA1-28-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

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

Report Name:BLANK
PDF ID: 2896767
29-MAY-2013 11:05

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/28/2013 **Sample ID:** WG431651-03
Instrument ID: CVAA1 **Run Time:** 14:23 **Prep Method:** 7470A
File ID: M7.052813.142340 **Analyst:** PDM **Method:** 7470A
Workgroup (AAB#): WG431944 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD58121 **Cal ID:** CVAA1-28-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00421	105	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2896768
Report generated: 05/29/2013 11:05

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L13051242 Cal ID: CVAA1- Worknum: WG431944
Instrument ID: CVAA1 Contract #: Method: 7470A
Parent ID: WG431651-01 File ID: M7.052813.145411 Dil: 1 Matrix: WATER
Sample ID: WG431651-04 MS File ID: M7.052813.145641 Dil: 1 Units: mg/L
Sample ID: WG431651-05 MSD File ID: M7.052813.145912 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.0400	0.0434	109	0.0400	0.0432	108	0.600	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: 2911624
Report generated 06/05/2013 15:47

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13051242 **Worknum:** WG431944
Instrument ID: CVAA1 **Method:** 7470A
Post Spike ID: WG431944-01 **File ID:** M7.052813.143116 **Dil:** 1 **Units:** ug/L
Sample ID: L13051132-01 **File ID:** M7.052813.142844 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	2.03		1.03		1	111.2	85 - 115	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2896761
Report generated: 05/29/2013 11:04

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13051242
Analytical Method: 7470A
ICAL Worknum: WG432114

Workgroup (AAB#): WG431944
Instrument ID: CVAA1
Initial Calibration Date: 05/28/2013 14:08

Analyte	WG432114-01		WG432114-02		WG432114-03		WG432114-04		WG432114-05		WG432114-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	-30.32	0.200	1309	1.00	6620	2.00	12630	5.00	31780	10.0	63040

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: 2896769
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13051242
Analytical Method: 7470A
ICAL Worknum: WG432114

Workgroup (AAB#): WG431944
Instrument ID: CVAA1
Initial Calibration Date: 05/28/2013 14:08

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: 2896769
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number:	L13051242	Run Date:	05/28/2013	Sample ID:	WG432114-08
Instrument ID:	CVAA1	Run Time:	14:13	Method:	7470A
File ID:	M7.052813.141335	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG431944	Cal ID:	CVAA1 - 28-MAY-13		
Matrix:	WATER				

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: 2896771
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L13051242	Run Date:	05/28/2013	Sample ID:	WG432114-10
Instrument ID:	CVAA1	Run Time:	14:18	Method:	7470A
File ID:	M7.052813.141838	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG431944	Cal ID:	CVAA1 - 28-MAY-13		
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: 2896773
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L13051242	Run Date:	05/28/2013	Sample ID:	WG432114-12
Instrument ID:	CVAA1	Run Time:	14:49	Method:	7470A
File ID:	M7.052813.144903	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG431944	Cal ID:	CVAA1 - 28-MAY-13		
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: 2896773
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L13051242	Run Date:	05/28/2013	Sample ID:	WG432114-14
Instrument ID:	CVAA1	Run Time:	15:14	Method:	7470A
File ID:	M7.052813.151420	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG431944	Cal ID:	CVAA1 - 28-MAY-13		
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: 2896773
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13051242 Run Date: 05/28/2013 Sample ID: WG432114-07
Instrument ID: CVAA1 Run Time: 14:11 Method: 7470A
File ID: M7.052813.141104 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG431944 Cal ID: CVAA1 - 28-MAY-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.16	108	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2896770
Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/28/2013 Sample ID: WG432114-09

Instrument ID: CVAA1 Run Time: 14:16 Method: 7470A

File ID: M7.052813.141608 Analyst: PDM QC Key: DOD4

Workgroup (AAB#): WG431944 Cal ID: CVAA1 - 28-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00215	mg/L	108	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2896772

Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/28/2013 Sample ID: WG432114-11

Instrument ID: CVAA1 Run Time: 14:46 Method: 7470A

File ID: M7.052813.144632 Analyst: PDM QC Key: DOD4

Workgroup (AAB#): WG431944 Cal ID: CVAA1 - 28-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00206	mg/L	103	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2896772

Report generated 05/29/2013 11:05

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/28/2013 Sample ID: WG432114-13

Instrument ID: CVAA1 Run Time: 15:11 Method: 7470A

File ID: M7.052813.151150 Analyst: PDM QC Key: DOD4

Workgroup (AAB#): WG431944 Cal ID: CVAA1 - 28-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00219	mg/L	109	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 2896772

Report generated 05/29/2013 11:05

2.1.3.3 Raw Data

PDM

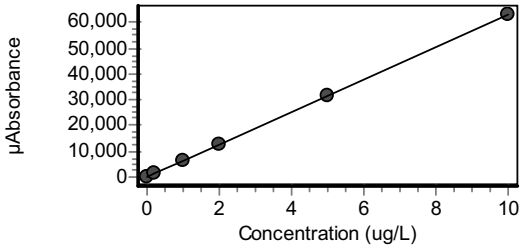
Report Generated By CETAC QuickTrace
Analyst: Mercury Analyzer
Worksheet file: C:\Program Files\QuickTrace\Worksheets\052813C.wsz
Date Started: 5/28/2013 12:57:14 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Standard #0					STD	05/28/13 01:55:47 pm	0.0000	-30	51.89		1.00
Replicates	-52.6	-24.1	-28.6	-16.0							
Standard #1 (0.2 ug/L)					STD	05/28/13 01:58:19 pm	0.2000	1309	0.69		1.00
Replicates	1319.7	1298.5	1312.2	1306.0							
Standard #2 (1.0 ug/L)					STD	05/28/13 02:00:51 pm	1.0000	6620	1.21		1.00
Replicates	6548.3	6565.2	6644.4	6722.2							
Standard #3 (2.0 ug/L)					STD	05/28/13 02:03:23 pm	2.0000	12628	0.83		1.00
Replicates	12522.4	12572.8	12656.1	12761.8							
Standard #4 (5.0 ug/L)					STD	05/28/13 02:05:56 pm	5.0000	31785	0.63		1.00
Replicates	31643.4	31633.0	31803.5	32058.8							
Standard #5 (10.0 ug/L)					STD	05/28/13 02:08:30 pm	10.0000	63042	0.63		1.00
Replicates	62608.0	62852.3	63181.6	63525.3							

Calibration

Equation: A = 110.561 + 6301.658C
R2: 0.99996
SEE: 165.0445
Flags:



ICV					ICV	05/28/13 02:11:04 pm	2.1550	13688	0.53		1.00
Replicates	13602.0	13662.1	13714.0	13773.6							
% Recovery	107.73										

Approved: 05/29/2013 11:18
Pierce Morris

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
ICB					ICB	05/28/13 02:13:35 pm	-0.0189	-8	85.23		1.00
	Replicates	-14.2	-1.4	-3.1	-15.3						
CCV					CCV	05/28/13 02:16:08 pm	2.1530	13675	0.46		1.00
	Replicates	13595.9	13660.0	13699.5	13744.8						
	% Recovery	107.63									
CCB					CCB	05/28/13 02:18:38 pm	-0.0172	2	480.87		1.00
	Replicates	-1.1	16.4	-8.8	2.2						
WG431651-02					MB	05/28/13 02:21:09 pm	-0.0143	21	60.78		1.00
	Replicates	16.4	5.3	27.0	34.2						
WG431651-03					LCS	05/28/13 02:23:40 pm	4.2140	26669	0.66		1.00
	Replicates	26484.4	26567.7	26748.2	26873.9						
	% Recovery	105.36									
WG431553-01					UNK	05/28/13 02:26:12 pm	-0.0120	35	23.69		1.00
	Replicates	25.0	38.7	44.2	32.2						
L1305113201					UNK	05/28/13 02:28:44 pm	1.0250	6567	0.66		1.00
	Replicates	6509.5	6558.8	6597.1	6603.0						
WG431944-01					SPK	05/28/13 02:31:16 pm	2.0340	12926	0.62		1.00
	Replicates	12844.3	12888.1	12941.6	13031.8						
	% Recovery	100.92									
L1305122701					UNK	05/28/13 02:33:48 pm	-0.0146	19	43.21		1.00
	Replicates	12.9	15.7	30.4	15.1						
WG431944-02					SPK	05/28/13 02:36:20 pm	1.0160	6510	0.74		1.00
	Replicates	6465.3	6473.7	6538.4	6562.4						
	% Recovery	103.01									
L1305122702					UNK	05/28/13 02:38:53 pm	-0.0132	27	26.98		1.00
	Replicates	28.5	16.4	31.2	32.2						
L1305122901					UNK	05/28/13 02:41:26 pm	-0.0130	29	40.54		1.00
	Replicates	16.8	29.3	24.8	44.6						

Approved: 05/29/2013 11:18

Pierce Morris

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
L1305122902					UNK	05/28/13 02:44:00 pm	-0.0151	16	45.74		1.00
Replicates	23.2	11.1	20.1	8.1							
CCV					CCV	05/28/13 02:46:32 pm	2.0610	13101	0.70		1.00
Replicates	12993.6	13067.4	13134.7	13207.7							
% Recovery	103.07										
CCB					CCB	05/28/13 02:49:03 pm	-0.0171	3	321.71		1.00
Replicates	-9.8	11.1	2.1	8.1							
L1305122903					UNK	05/28/13 02:51:37 pm	-0.0113	39	44.95		1.00
Replicates	64.1	27.4	25.9	40.0							
L1305122904					UNK	05/28/13 02:54:11 pm	-0.0127	31	35.53		1.00
Replicates	40.2	16.8	38.8	27.3							
WG431651-04					MSK	05/28/13 02:56:41 pm	4.3440	27487	0.71		1.00
Replicates	27268.4	27396.7	27569.7	27712.0							
% Recovery	108.92										
WG431651-05					MSDUP	05/28/13 02:59:12 pm	4.3180	27324	0.77		1.00
Replicates	27071.0	27243.8	27433.5	27546.5							
% Recovery	108.28	RPD 0.60									
L1305124201					UNK	05/28/13 03:01:43 pm	-0.0204	-18	63.02		1.00
Replicates	-21.5	-28.6	-2.1	-19.0							
L1305124202					UNK	05/28/13 03:04:14 pm	-0.0055	76	13.89		1.00
Replicates	91.3	70.8	71.6	68.9							
L1305124203					UNK	05/28/13 03:06:46 pm	-0.0058	74	10.24		1.00
Replicates	78.1	81.2	72.2	64.0							
L1305124204					UNK	05/28/13 03:09:17 pm	-0.0165	7	120.78		1.00
Replicates	-5.4	11.1	9.1	12.1							
CCV					CCV	05/28/13 03:11:50 pm	2.1870	13893	0.63		1.00
Replicates	13795.6	13856.3	13921.0	13998.0							
% Recovery	109.35										

Approved: 05/29/2013 11:18

Pierce Morris

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCB				CCB	05/28/13 03:14:20 pm	-0.0160	10	117.77		1.00
Replicates	19.7	9.0	-6.2	16.8						
WG431607-02				MB	05/28/13 03:16:53 pm	-0.0177	-1	486.55		1.00
Replicates	-7.3	9.2	8.2	-13.1						
WG431607-03				LCS	05/28/13 03:19:25 pm	4.1730	26405	0.98		1.00
Replicates	26114.6	26285.2	26512.1	26707.2						
% Recovery	104.31									
L1305114601				UNK	05/28/13 03:21:58 pm	-0.0144	20	56.02		1.00
Replicates	33.0	23.8	8.0	14.0						
WG431607-04				MSK	05/28/13 03:24:31 pm	4.2310	26771	1.13		1.00
Replicates	26472.2	26624.7	26818.0	27170.9						
% Recovery	106.13									
WG431607-05				MSDUP	05/28/13 03:27:04 pm	4.2110	26646	0.60		1.00
Replicates	26472.8	26572.6	26693.6	26845.4						
% Recovery	105.63	RPD 0.47								
L1305114602				UNK	05/28/13 03:29:38 pm	-0.0140	22	65.31		1.00
Replicates	12.7	42.2	10.5	23.0						
WG431947-01				SPK	05/28/13 03:32:08 pm	1.0110	6481	0.96		1.00
Replicates	6412.5	6451.3	6506.0	6554.7						
% Recovery	102.50									
L1305118201				UNK	05/28/13 03:34:39 pm	-0.0174	1	929.11		1.00
Replicates	1.3	7.7	-10.0	4.2						
L1305118202				UNK	05/28/13 03:37:10 pm	-0.0142	21	63.68		1.00
Replicates	8.1	11.9	27.0	36.7						
L1305118203				UNK	05/28/13 03:39:41 pm	-0.0089	54	31.87		1.00
Replicates	60.4	29.1	59.0	68.6						
CCV				CCV	05/28/13 03:42:14 pm	2.2460	14264	0.36		1.00
Replicates	14204.1	14246.4	14280.6	14324.4						
% Recovery	112.30									

Approved: 05/29/2013 11:18

Pierce Morris

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L13051242
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis EPA300.0/SW846 9056

HOLDING TIMES

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

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The client did not specify an MS/MSD for this sample delivery group. The laboratory selected sample 01 for MS/MSD analysis and all acceptance criteria were met.

SAMPLES

Samples: Fractions -02 and -03 were analyzed at dilutions only due to concentrations of the target analytes greater than the ICAL.

MANUAL INTEGRATION: No manual integration was required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65112
Approved By: Eric Lawson

Certificate of Analysis

Sample #: L13051242-01 **PrePrep Method:** N/A **Instrument:** IC1
Client ID: MPL19-0513-1 **Prep Method:** 300.0 **Prep Date:** 05/31/2013 11:49
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 05/01/2013 13:02
Workgroup #: WG432606 **Analyst:** JBK **Run Date:** 05/31/2013 20:02
Collect Date: 05/22/2013 12:15 **Dilution:** 1 **File ID:** I1_053113-30
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.7		0.200	0.100
Sulfate	14808-79-8	49.7		1.00	0.500

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** IC1
Client ID: MPL20-0513-1 **Prep Method:** 300.0 **Prep Date:** 05/31/2013 11:49
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 05/01/2013 13:02
Workgroup #: WG432606 **Analyst:** JBK **Run Date:** 05/31/2013 16:03
Collect Date: 05/22/2013 13:50 **Dilution:** 5 **File ID:** I1_053113-17
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	71.9		1.00	0.500
Sulfate	14808-79-8	92.0		5.00	2.50

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** IC1
Client ID: MPL20-0513-2 **Prep Method:** 300.0 **Prep Date:** 05/31/2013 11:49
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 05/01/2013 13:02
Workgroup #: WG432606 **Analyst:** JBK **Run Date:** 05/31/2013 16:22
Collect Date: 05/22/2013 13:50 **Dilution:** 5 **File ID:** I1_053113-18
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	72.8		1.00	0.500
Sulfate	14808-79-8	92.6		5.00	2.50

Sample #: L13051242-04 **PrePrep Method:** N/A **Instrument:** IC1
Client ID: MPL6-0513-1 **Prep Method:** 300.0 **Prep Date:** 05/31/2013 11:49
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 05/01/2013 13:02
Workgroup #: WG432606 **Analyst:** JBK **Run Date:** 05/31/2013 16:40
Collect Date: 05/22/2013 15:25 **Dilution:** 1 **File ID:** I1_053113-19
Sample Tag: 01 **Units:** mg/L

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	20.0		0.200	0.100
Sulfate	14808-79-8	38.1		1.00	0.500

2.2.1.2 QC Summary Data

Example Calculations - Ion Chromatography

A. Methods 9056/300.0 (Quadratic with Offset)

1. Retrieve Curve Data from the ICAL Curve

c2 = the value of curve constant
c1= the curve slope
c0 = the curve offset

2. Obtain the area, y , from the instrument raw data

3. Calculate the concentration of the analyte, f(y), where:

$$f(y) = \frac{1}{2 * c_2} * \left(- c_1 \pm \sqrt{c_1^2 - 4 * c_2 * (c_0 - y)} \right)$$

Example Calculation:

Value of constant, c2, (curve):	0.0003
Value of curve constant, c1, (slope):	0.0869
Value of curve constant, c0, (offset):	-0.0103
Area of target analyte, y, (uS*min):	2.993
Calculated concentration, f(y), (mg/L):	31.1998864
or:	-40.1161215 *
Dilution factor (D):	1.00
Concentration of analyte in sample (mg/L):	31.200

* There are two possible solutions, but only one is valid.

B. Method 314.0 - Perchlorate (Linear)

Retrieve Curve Data from Linear Plot

c1 = the curve slope

Obtain the area, y , from the quantitation report

Calculate the concentration of the analyte, f(y), where:

f (y) = y / c1

Example Calculation:

Value of c1, slope:	0.0034
Area of target analyte, y:	0.083
Calculated concentration:	24.4117647
Dilution Factor:	1
Concentration in sample:	24.4117647

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 050113 ICAL IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: Syringe Filter Lot#:
Eluent ID#: RGT26018
Column 1 ID: AG14A Column 2 ID: AS14A
Workgroups: WG428777 (ICAL) WG428971 (LOD/LOQ)
Internal STD: NA Surrogate STD: NA Calibration STD 01-MAY-2013
CCV STD: STD57462 LCS STD: STD57462 MS/MSD STD: STD57462

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I1_050113-01	WG428777-01 STD 6	1	1		05/01/13 11:30
2	I1_050113-02	WG428777-02 STD 5	1	1		05/01/13 11:48
3	I1_050113-03	WG428777-03 STD 4	1	1		05/01/13 12:07
4	I1_050113-04	WG428777-04 STD 3	1	1		05/01/13 12:25
5	I1_050113-05	WG428777-05 STD 2	1	1		05/01/13 12:44
6	I1_050113-06	WG428777-06 STD 1	1	1		05/01/13 13:02
7	I1_050113-07	STD NR	1	1		05/01/13 13:21
8	I1_050113-08	L13040001-01 (F,CL,BR,SO4)	1	1		05/01/13 13:39
9	I1_050113-09	L13040001-01 (NO2,NO3)	1	1		05/01/13 13:57
10	I1_050113-10	L13040003-01 (F,CL,BR,SO4)	1	1		05/01/13 14:16
11	I1_050113-11	L13040003-01 (NO2,NO3)	1	1		05/01/13 14:34
12	I1_050113-12	LCR TEST LEVEL 6	1	1		05/01/13 14:53
13	I1_050113-13	LCR TEST LEVEL 0	1	1		05/01/13 15:11
14	I1_050113-14	WG428777-07 ALT STD	1	1		05/01/13 15:29
15	I1_050113-15	END	1	1		05/01/13 15:48

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 03-MAY-13

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 053113 IC1.SEQ

Analyst1: KRB Analyst2: JBK

Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: 46164 Syringe Filter Lot#: 00159090

Eluent ID#: RGT26018

Column 1 ID: AG14A Column 2 ID: AS14A

Workgroups: WG432606

Internal STD: NA Surrogate STD: NA Calibration STD 01-MAY-2013

CCV STD: STD57462 LCS STD: STD57462 MS/MSD STD: STD57462

Comments: L13051242-02 and -03 were analyzed at dilutions only due to concentrations of target analytes greater than the ICAL.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I1_053113-01	ELUENT	1	1		05/31/13 11:09
2	I1_053113-02	DI WATER	1	1		05/31/13 11:27
3	I1_053113-03	WG432607-01 ANION CCV	1	1		05/31/13 11:45
4	I1_053113-04	WG432607-02 ANION CCB	1	1		05/31/13 12:04
5	I1_053113-05	WG432606-01 ANION BLANK	1	1		05/31/13 12:22
6	I1_053113-06	WG432606-02 ANION LCS	1	1		05/31/13 12:41
7	I1_053113-07	L13051228-01 1/5 (SO4)	2	5		05/31/13 12:59
8	I1_053113-08	L13051228-03 (SO4)	2	1		05/31/13 13:17
9	I1_053113-09	L13051228-05 1/5 (SO4) NR	2	5		05/31/13 13:36
10	I1_053113-10	L13051228-07 (SO4)	2	1		05/31/13 13:54
11	I1_053113-11	L13051228-09 (SO4)	2	1		05/31/13 14:13
12	I1_053113-12	L13051228-11 (SO4)	2	1		05/31/13 14:31
13	I1_053113-13	L13051228-13 1/5 (SO4)	2	5		05/31/13 14:49
14	I1_053113-14	L13051242-01 1/5 (CL,SO4) NR	1	5		05/31/13 15:08
15	I1_053113-15	WG432607-03 ANION CCV	1	1		05/31/13 15:26
16	I1_053113-16	WG432607-04 ANION CCB	1	1		05/31/13 15:45
17	I1_053113-17	L13051242-02 1/5 (CL,SO4)	1	5		05/31/13 16:03
18	I1_053113-18	L13051242-03 1/5 (CL,SO4)	1	5		05/31/13 16:22
19	I1_053113-19	L13051242-04 (CL,SO4)	1	1		05/31/13 16:40
20	I1_053113-20	L13051244-01 1/5 (CL,BR,SO4)	1	5		05/31/13 16:58
21	I1_053113-21	L13051228-05 1/10 (SO4)	2	10		05/31/13 17:17
22	I1_053113-22	L13051581-26 (NO3,NO2,SO4)	1	1		05/31/13 17:35
23	I1_053113-23	L13051581-27 (NO3,NO2,SO4)	1	1		05/31/13 17:54
24	I1_053113-24	L13051581-40 (NO3,NO2,SO4)	1	1		05/31/13 18:12
25	I1_053113-25	L13051581-46 (NO3,NO2,SO4)	1	1		05/31/13 18:30
26	I1_053113-26	L13051581-48 (NO3,NO2,SO4)	1	1		05/31/13 18:49
27	I1_053113-27	WG432607-05 ANION CCV	1	1		05/31/13 19:07
28	I1_053113-28	WG432607-06 ANION CCB	1	1		05/31/13 19:26
29	I1_053113-29	L13051581-50 (NO3,NO2,SO4)	1	1		05/31/13 19:44
30	I1_053113-30	L13051242-01 (CL,SO4)	1	1		05/31/13 20:02
31	I1_053113-31	WG432606-04 DUP 1242-01	1	1		05/31/13 20:21
32	I1_053113-32	WG432606-05 MS 1242-01	1	1		05/31/13 20:39
33	I1_053113-33	WG432606-06 SD 1242-01	1	1		05/31/13 20:58

Page: 1 Approved: 04-JUN-13

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 053113 IC1.SEQ

Analyst1: KRB Analyst2: JBK

Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: 46164 Syringe Filter Lot#: 00159090

Eluent ID#: RGT26018

Column 1 ID: AG14A Column 2 ID: AS14A

Workgroups: WG432606

Internal STD: NA Surrogate STD: NA 01-MAY-2013

CCV STD: STD57462 LCS STD: STD57462 STD57462

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I1_053113-34	WG432607-07 ANION CCV	1	1		05/31/13 21:16
35	I1_053113-35	WG432607-08 ANION CCB	1	1		05/31/13 21:34
36	I1_053113-36	END	1	1		05/31/13 21:53

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 2 Approved: 04-JUN-13

Microbac Laboratories Inc.

Data Checklist

Date: 01-MAY-2013
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 52904
Analytical Workgroups: WG428777 (ICAL) WG428971 (LOD/LOQ)

ANALYTICAL	
System Performance Check	NA
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	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	NA
% D/% Drift	NA
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	NA
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
03-MAY-2013

Secondary Reviewer:
03-MAY-2013

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-07-2013 16:19:43

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAY-2013
Analyst: KRB
Analyst: JBK
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 53533
Analytical Workgroups: 05-1228, 05-1242, 05-1244, 05-1581

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	NA
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	ECL

Primary Reviewer:
03-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 08:48:22

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 **AAB#:** WG432606

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9	2	*	05/31/13	9.3	2	*
MPL20-0513-1	02	05/22/13					05/31/2013	8.9	2	*	05/31/13	9.1	2	*
MPL20-0513-2	03	05/22/13					05/31/2013	8.9	2	*	05/31/13	9.1	2	*
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	2	*	05/31/13	9.1	2	*

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2904886
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG432606
Blank File ID: I1_053113-05
Blank Sample ID: WG432606-01
Prep Date: 05/31/13 11:49
Instrument ID: IC1
Analyzed Date: 05/31/13 12:22
Method: 300.0
Analyst: JBK

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432606-02	I1_053113-06	05/31/13 12:41	01
MPL20-0513-1	L13051242-02	I1_053113-17	05/31/13 16:03	DL01
MPL20-0513-2	L13051242-03	I1_053113-18	05/31/13 16:22	DL01
MPL6-0513-1	L13051242-04	I1_053113-19	05/31/13 16:40	01
MPL19-0513-1	L13051242-01	I1_053113-30	05/31/13 20:02	01
DUP	WG432606-04	I1_053113-31	05/31/13 20:21	01

Report Name: BLANK_SUMMARY
PDF File ID: 2904887
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 11:49 Sample ID: WG432606-01
Instrument ID: IC1 Run Date: 05/31/13 12:22 Prep Method: 300.0
File ID: I1_053113-05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG432606 Matrix: Water Units: mg/L
Contract #: Cal ID: IC1-01-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Chloride	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: 2904888
04-JUN-2013 09:07

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG432606-02
Instrument ID: IC1 **Run Time:** 12:41 **Prep Method:** 300.0
File ID: I1_053113-06 **Analyst:** JBK **Method:** 300.0
Workgroup (AAB#): WG432606 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD57462 **Cal ID:** IC1-01-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	8.00	7.97	99.6	90 - 110	
Sulfate	40.0	38.4	96.1	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2904889
Report generated: 06/04/2013 09:07

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13051242 Cal ID:IC1 - Worknum:WG432606

Instrument ID:IC1 Contract #: Method:300.0

Parent ID:WG432606-03 File ID:I1_053113-30 Dil:1 Matrix:WATER

Sample ID:WG432606-05 MS File ID:I1_053113-32 Dil:1 Units:mg/L

Sample ID:WG432606-06 MSD File ID:I1_053113-33 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Chloride	14.7	8.00	23.4	109	8.00	23.5	110	0.396	90 - 110	20	
Sulfate	49.7	40.0	93.2	109	40.0	93.3	109	0.163	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: 2907290

Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13051242
Analytical Method: 300.0
ICAL Workgroup: WG428777

Instrument ID: IC1
Initial Calibration Date: 01-MAY-13 13:02
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		5.481	6.54	0.99800	
Sulfate		7.488	11.1	0.99600	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2904890
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L13051242
Analytical Method: 300.0

Instrument ID: IC1
Initial Calibration Date: 01-MAY-13 13:02
Column ID: F

Analyte	WG428777-01			WG428777-02			WG428777-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	4.78200000	5.019	12.0	2.19700000	5.462	8.00	1.43500000	5.575
Sulfate	120	19.0270000	6.307	60.0	8.71800000	6.882	40.0	5.40200000	7.405

INT_CAL - Modified 03/06/2008
PDF File ID: 2904890
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L13051242
Analytical Method: 300.0

Instrument ID: IC1
Initial Calibration Date: 01-MAY-13 13:02
Column ID: F

Analyte	WG428777-04			WG428777-05			WG428777-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	4.00	0.679000000	5.891	1.00	0.172000000	5.814	0.200	0.0390000000	5.128
Sulfate	20.0	2.59500000	7.707	5.00	0.608000000	8.224	1.00	0.119000000	8.403

INT_CAL - Modified 03/06/2008
PDF File ID: 2904890
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L13051242 Run Date: 05/01/2013 Sample ID: WG428777-07
Instrument ID: IC1 Run Time: 15:29 Method: 300.0
File ID: I1_050113-14 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG428777 Cal ID: IC1 - 01-MAY-13

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	7.86	mg/L	5.67	1.80	10	
Sulfate		40.0	39.3	mg/L	7.42	1.80	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2904891
Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-02

Instrument ID: IC1 Run Time: 12:04 Method: 300.0

File ID: I1_053113-04 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	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: 2904893
Report generated 06/04/2013 09:08

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-04

Instrument ID: IC1 Run Time: 15:45 Method: 300.0

File ID: I1_053113-16 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	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: 2904893
Report generated 06/04/2013 09:08

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-06

Instrument ID: IC1 Run Time: 19:26 Method: 300.0

File ID: I1_053113-28 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	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: 2904893
Report generated 06/04/2013 09:08

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-08

Instrument ID: IC1 Run Time: 21:34 Method: 300.0

File ID: I1_053113-35 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	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: 2904893
Report generated 06/04/2013 09:08

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-01

Instrument ID: IC1 Run Time: 11:45 Method: 300.0

File ID: I1_053113-03 Analyst: JBK QC Key: DOD4

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.99	mg/L	5.57	0.0750	10	
Sulfate		40.0	38.2	mg/L	7.61	4.39	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2904892

Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-03

Instrument ID: IC1 Run Time: 15:26 Method: 300.0

File ID: I1_053113-15 Analyst: JBK QC Key: DOD4

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.01	mg/L	5.56	0.138	10	
Sulfate		40.0	38.2	mg/L	7.62	4.41	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2904892

Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-05

Instrument ID: IC1 Run Time: 19:07 Method: 300.0

File ID: I1_053113-27 Analyst: JBK QC Key: DOD4

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.94	mg/L	5.61	0.800	10	
Sulfate		40.0	38.8	mg/L	7.51	3.11	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2904892

Report generated 06/04/2013 09:07

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13051242 Run Date: 05/31/2013 Sample ID: WG432607-07

Instrument ID: IC1 Run Time: 21:16 Method: 300.0

File ID: I1_053113-34 Analyst: JBK QC Key: DOD4

Workgroup (AAB#): WG432606 Cal ID: IC1 - 01-MAY-13

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.04	mg/L	5.54	0.525	10	
Sulfate		40.0	38.5	mg/L	7.56	3.68	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 2904892

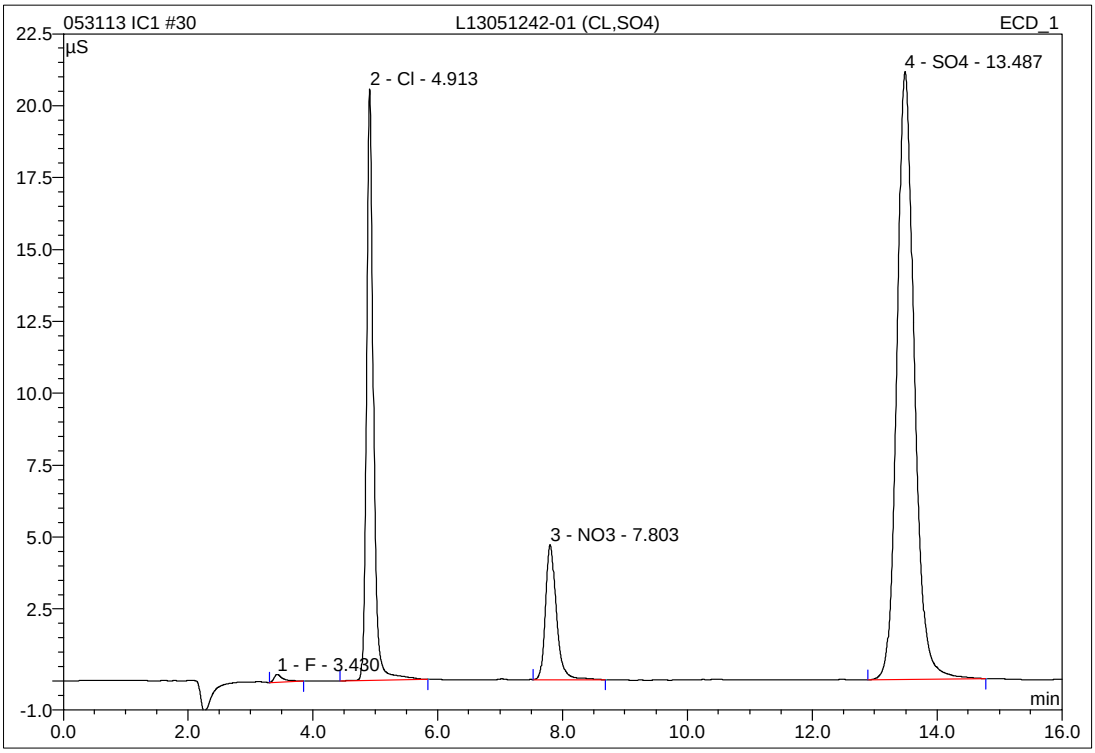
Report generated 06/04/2013 09:07

2.2.1.3 Sample Data

30 L13051242-01 (CL,SO4)

1,1 JBK WG432606-03 REF

Sample Name:	**L13051242-01 (CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 20:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

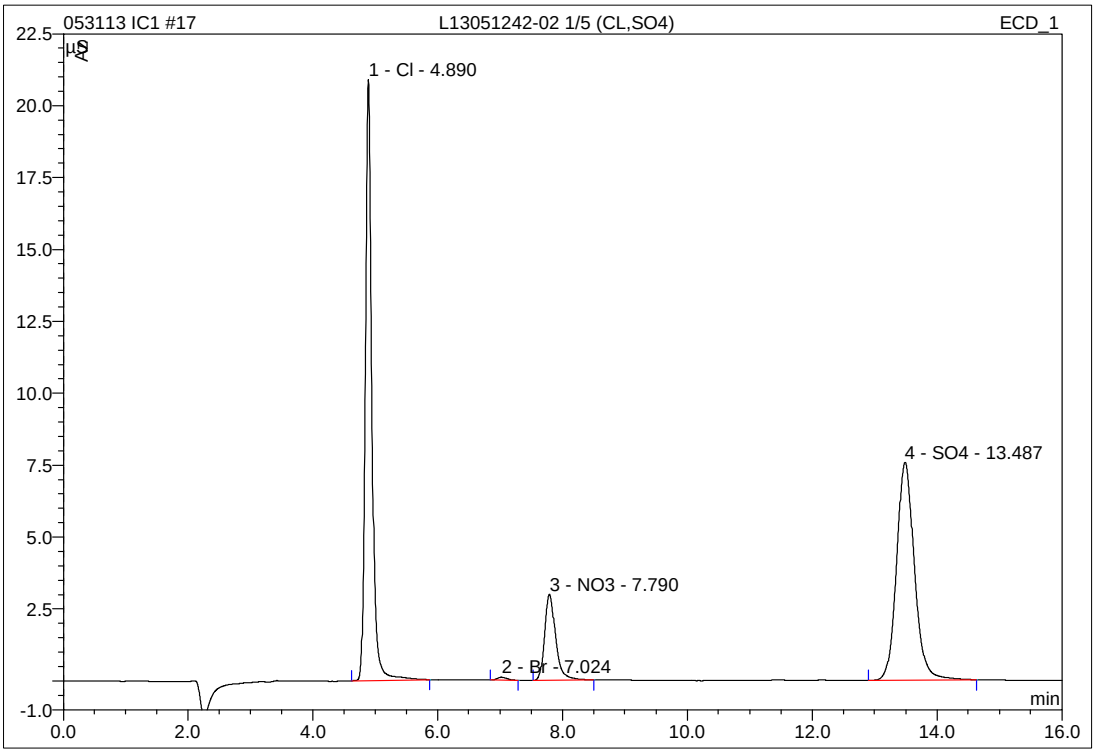


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.43	F	0.269	0.045	0.43	0.225	BMB
2	4.91	Cl	20.571	2.638	25.19	14.696	BMB
3	7.80	NO3	4.687	0.951	9.09	2.150	BMB
4	13.49	SO4	21.136	6.837	65.30	49.732	BMB
Total:			46.663	10.471	100.00	66.803	

17 L13051242-02 1/5 (CL,SO4)

1,5 JBK

Sample Name:	**L13051242-02 1/5 (CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 16:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

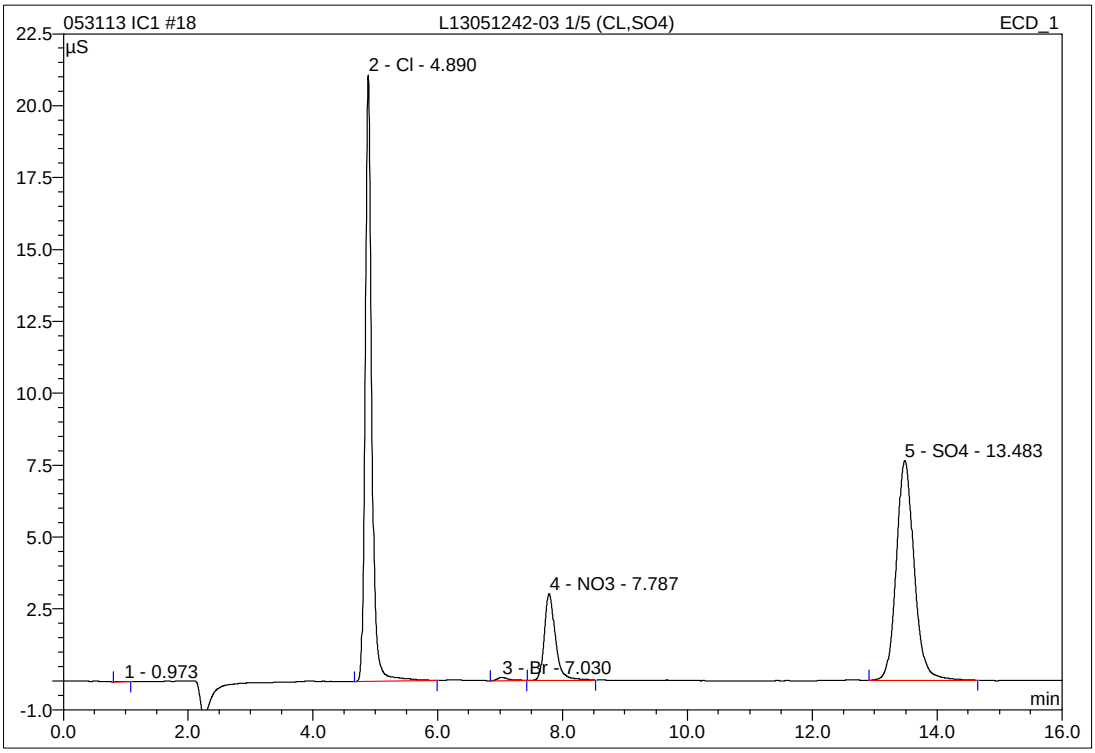


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	4.89	Cl	20.882	2.581	45.04	14.381	BMB
2	7.02	Br	0.100	0.018	0.31	0.285	BMB
3	7.79	NO3	2.996	0.616	10.74	1.394	BMB
4	13.49	SO4	7.582	2.517	43.92	18.406	BMB
Total:			31.561	5.732	100.00	34.466	

18 L13051242-03 1/5 (CL,SO4)

1,5 JBK

Sample Name:	**L13051242-03 1/5 (CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 16:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

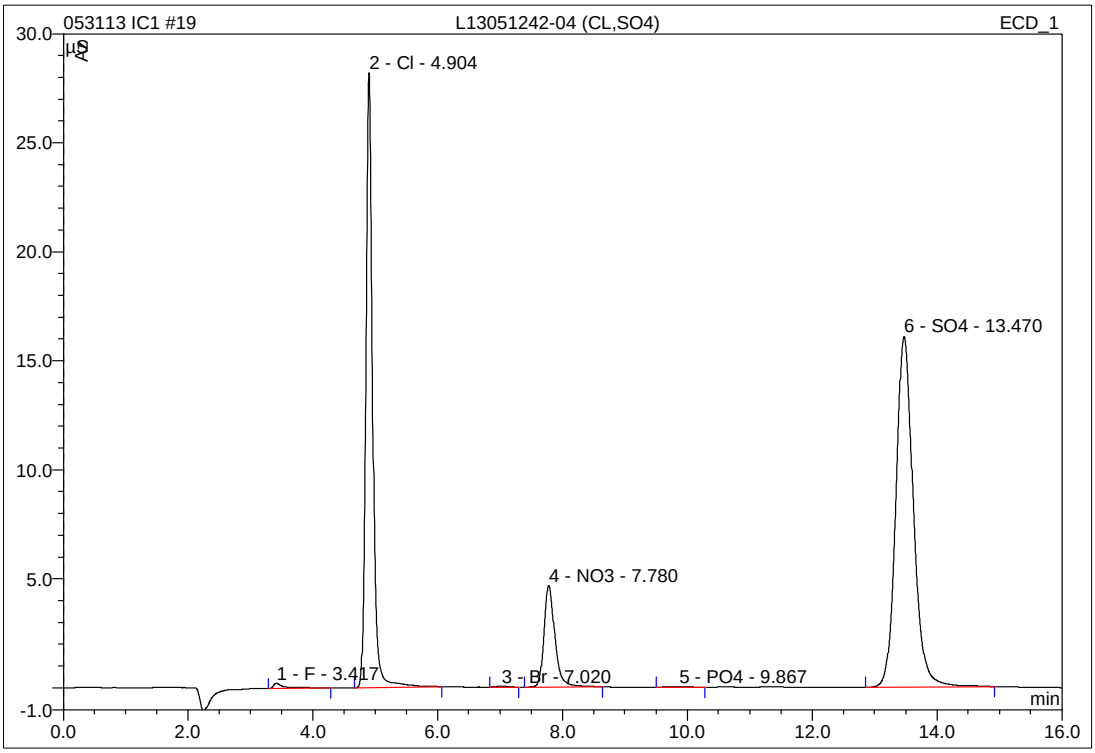


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.97	n.a.	0.011	0.002	0.03	n.a.	BMB
2	4.89	Cl	21.090	2.612	45.11	14.550	BMB
3	7.03	Br	0.110	0.022	0.39	0.351	BMB
4	7.79	NO3	3.011	0.621	10.73	1.407	BMB
5	13.48	SO4	7.641	2.533	43.74	18.521	BMB
Total:			31.863	5.790	100.00	34.829	

19 L13051242-04 (CL,SO4)

1,1 JBK

Sample Name:	**L13051242-04 (CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 16:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



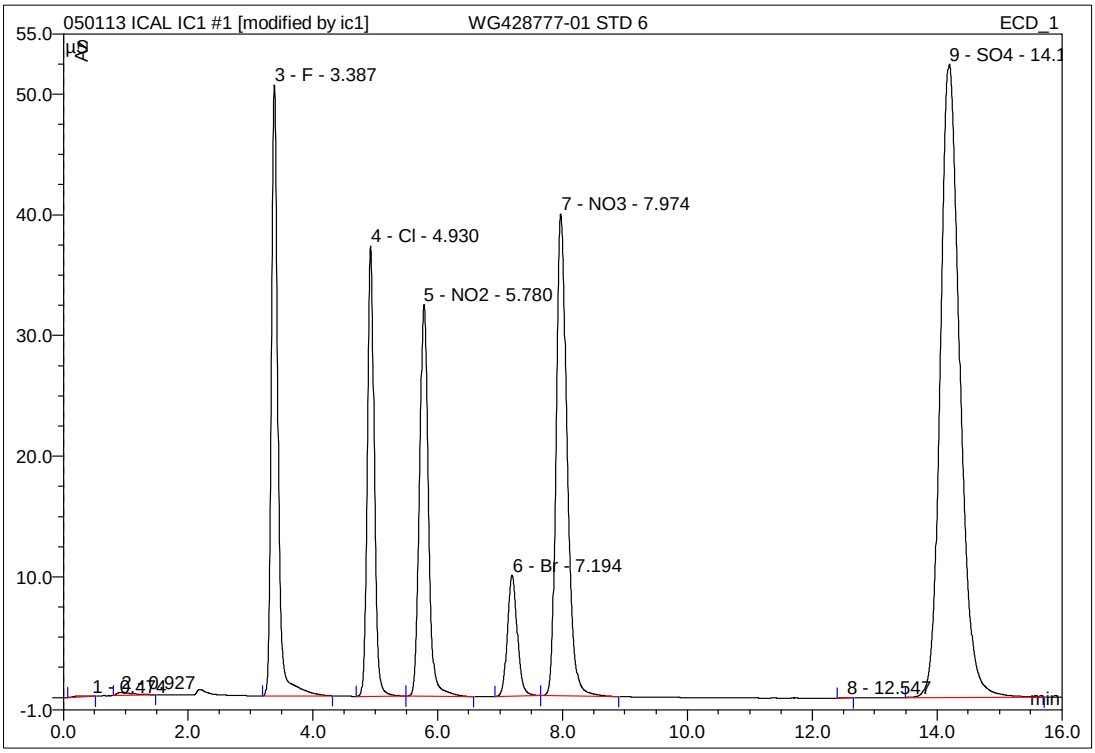
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	0.248	0.056	0.57	0.272	BMB
2	4.90	Cl	28.199	3.596	36.48	20.040	BMB
3	7.02	Br	0.054	0.010	0.10	0.181	BMB
4	7.78	NO3	4.663	0.952	9.65	2.151	BMB
5	9.87	PO4	0.030	0.012	0.13	n.a.	BMB
6	13.47	SO4	16.079	5.231	53.07	38.088	BMB
Total:			49.273	9.858	100.00	60.733	

2.2.1.4 Standards Data

1 WG428777-01 STD 6

1,1 JBK STD57462

Sample Name:	**WG428777-01 STD 6**	*Injection Volume:*	**20.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/1/2013 11:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

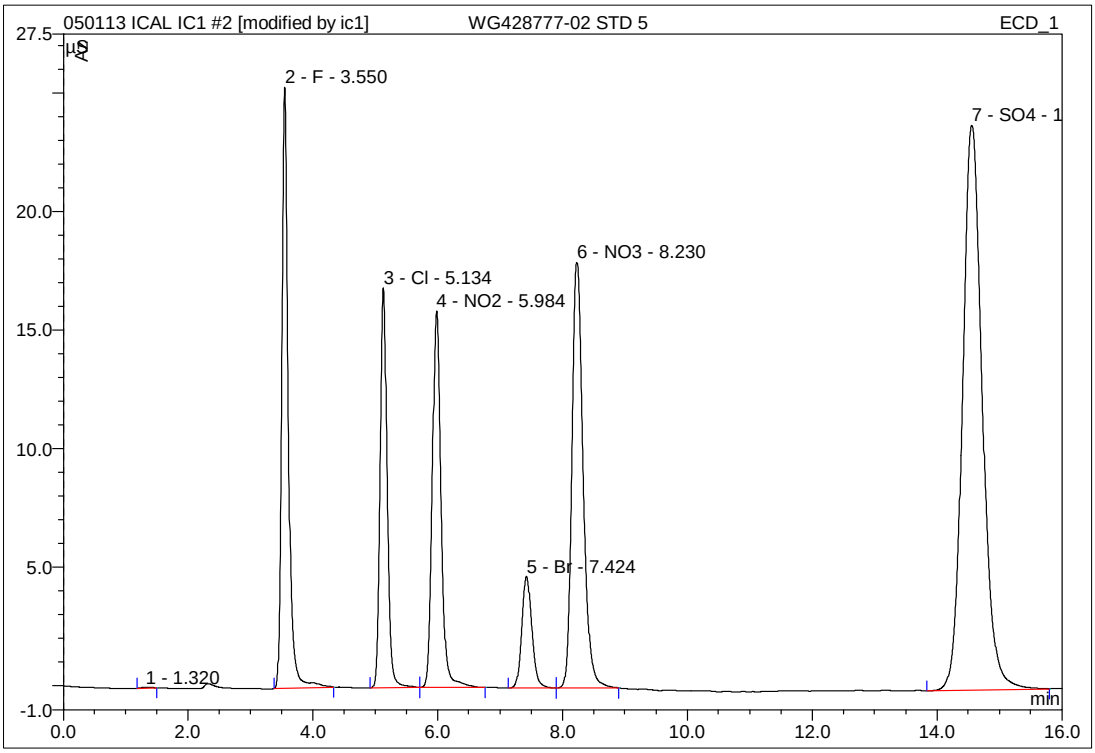


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.47	n.a.	0.018	0.017	0.04	n.a.	BMB
2	0.93	n.a.	0.234	0.071	0.16	n.a.	BMB
3	3.39	F	50.653	6.293	13.80	25.453	BMB*
4	4.93	Cl	37.272	4.782	10.48	26.650	BMb
5	5.78	NO2	32.440	5.392	11.82	15.298	bMB
6	7.19	Br	10.038	1.851	4.06	25.298	BMb
7	7.97	NO3	39.962	8.168	17.91	18.403	bMB
8	12.55	n.a.	0.036	0.004	0.01	n.a.	BMB
9	14.20	SO4	52.461	19.027	41.72	138.135	BMB
Total:			223.114	45.605	100.00	249.238	

2 WG428777-02 STD 5

1,1 JBK STD57462

Sample Name:	**WG428777-02 STD 5**	*Injection Volume:*	**20.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/1/2013 11:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

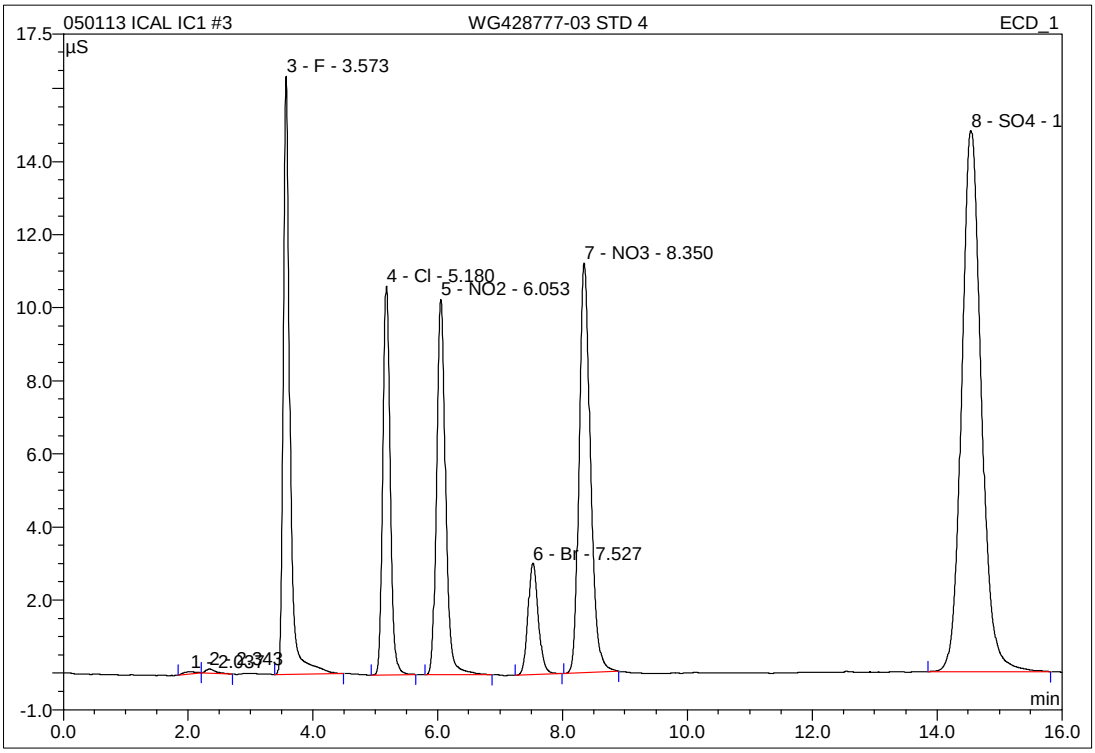


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	1.32	n.a.	0.030	0.006	0.03	n.a.	BMB
2	3.55	F	25.351	3.123	14.70	12.653	BMB*
3	5.13	Cl	16.875	2.197	10.34	12.238	BMb*
4	5.98	NO2	15.873	2.597	12.22	7.376	bMB
5	7.42	Br	4.713	0.884	4.16	12.101	BMB
6	8.23	NO3	17.941	3.721	17.52	8.389	BMB
7	14.56	SO4	23.811	8.718	41.04	63.375	BMB
Total:			104.594	21.246	100.00	116.132	

3 WG428777-03 STD 4

1,1 JBK STD57462

Sample Name:	**WG428777-03 STD 4**	*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:	**5/1/2013 12:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

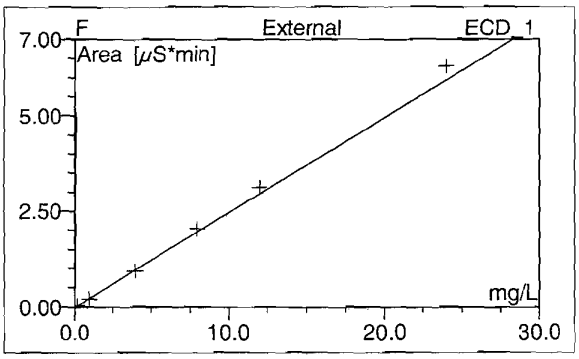


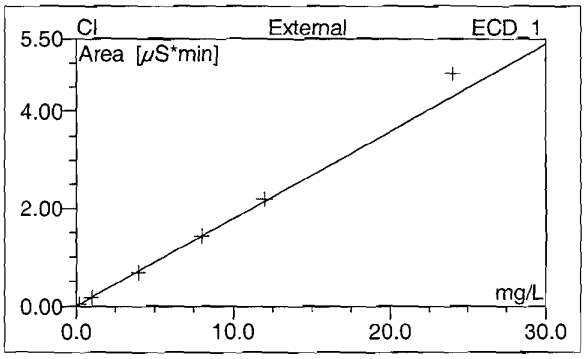
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.04	n.a.	0.059	0.014	0.10	n.a.	BMb
2	2.34	n.a.	0.112	0.020	0.15	n.a.	bMB
3	3.57	F	16.362	2.031	14.97	8.246	BMB
4	5.18	Cl	10.640	1.435	10.57	7.986	BMB
5	6.05	NO2	10.278	1.722	12.68	4.893	BMB
6	7.53	Br	3.050	0.587	4.33	8.058	BMB
7	8.35	NO3	11.219	2.361	17.40	5.326	BMB
8	14.55	SO4	14.804	5.402	39.80	39.325	BMB
Total:			66.523	13.572	100.00	73.834	

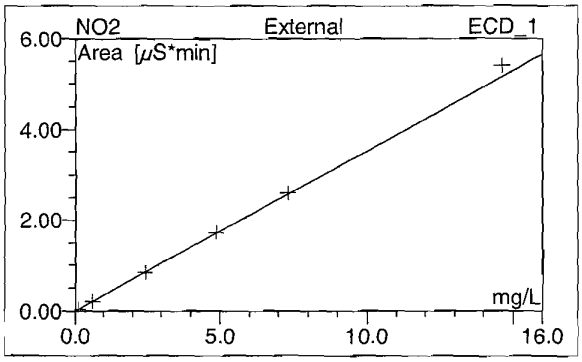
3 WG428777-03 STD 4

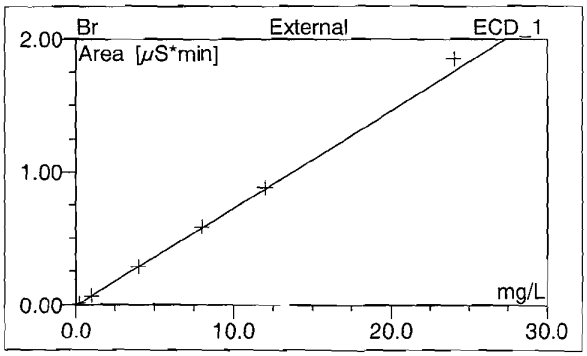
1,1 JBK STD57462

Sample Name:	**WG428777-03 STD 4**	*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:	**5/1/2013 12:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**







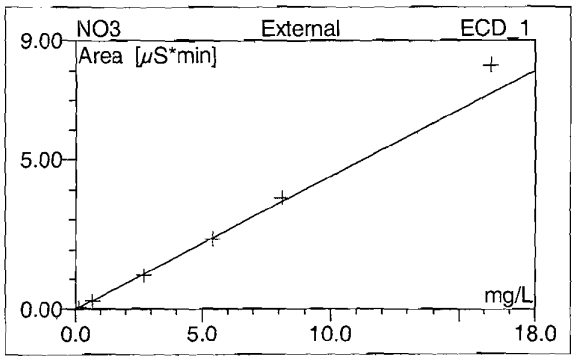


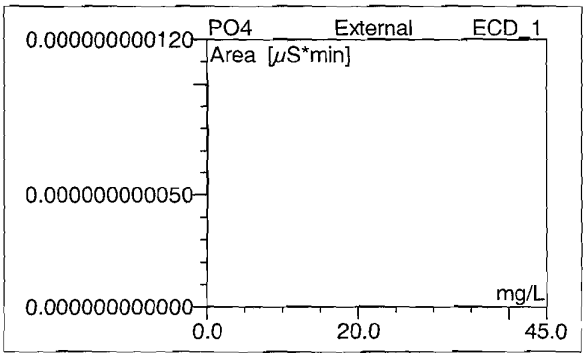
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.04	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2.34	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	3.57	F	YYLOff	6	99.8055	-0.0112	0.2477	0.0000
4	5.18	Cl	YYLOff	6	99.8014	0.0026	0.1793	0.0000
5	6.05	NO2	YYLOff	6	99.9530	-0.0045	0.3527	0.0000
6	7.53	Br	YYLOff	6	99.9278	-0.0033	0.0733	0.0000
7	8.35	NO3	YYLOff	6	99.7419	-0.0034	0.4440	0.0000
8	14.55	SO4	YYLOff	6	99.6160	-0.0209	0.1379	0.0000
Average:					99.8076	-0.0068	0.2392	0.0000

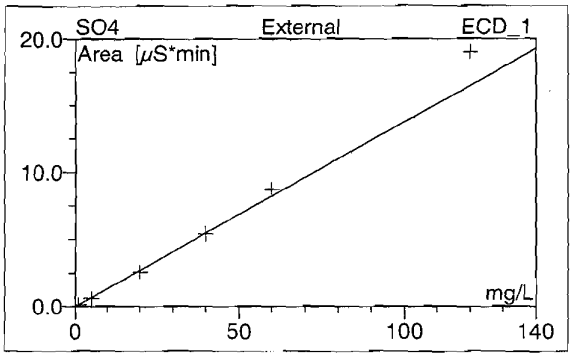
3 WG428777-03 STD 4

1,1 JBK STD57462

Sample Name:	**WG428777-03 STD 4**	*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:	**5/1/2013 12:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**





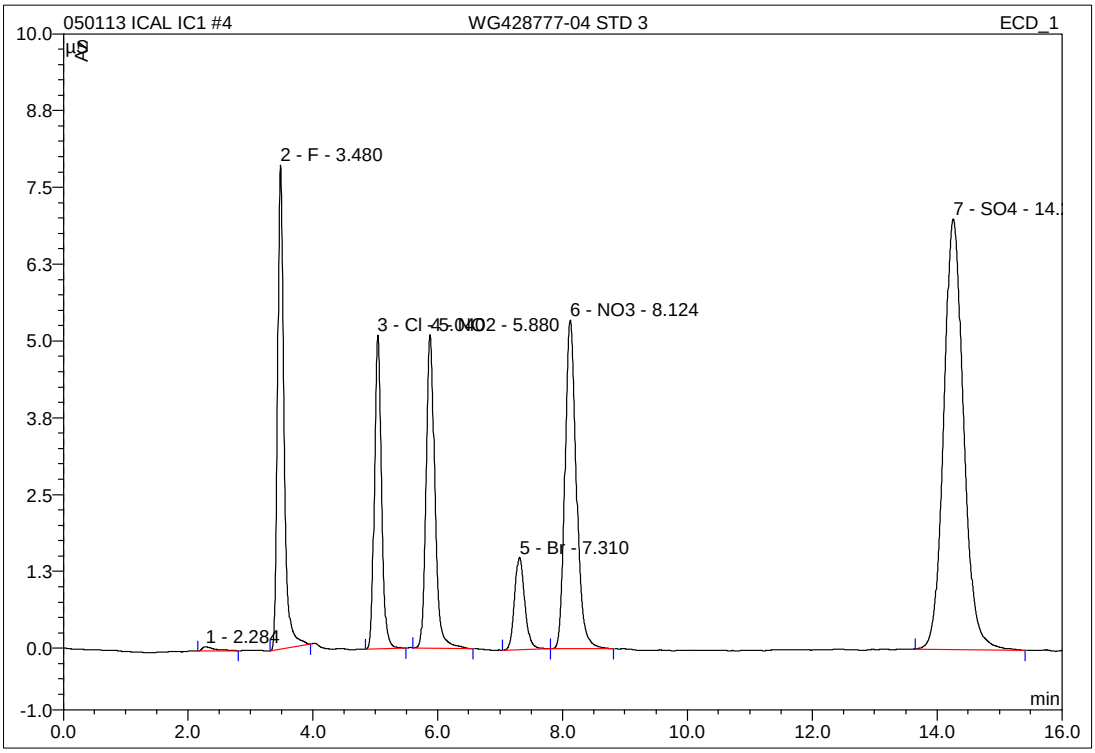


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.04	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2.34	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	3.57	F	YYLOff	6	99.8055	-0.0112	0.2477	0.0000
4	5.18	Cl	YYLOff	6	99.8014	0.0026	0.1793	0.0000
5	6.05	NO2	YYLOff	6	99.9530	-0.0045	0.3527	0.0000
6	7.53	Br	YYLOff	6	99.9278	-0.0033	0.0733	0.0000
7	8.35	NO3	YYLOff	6	99.7419	-0.0034	0.4440	0.0000
8	14.55	SO4	YYLOff	6	99.6160	-0.0209	0.1379	0.0000
Average:					99.8076	-0.0068	0.2392	0.0000

4 WG428777-04 STD 3

1,1 JBK STD57462

Sample Name:	**WG428777-04 STD 3**	*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:	**5/1/2013 12:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

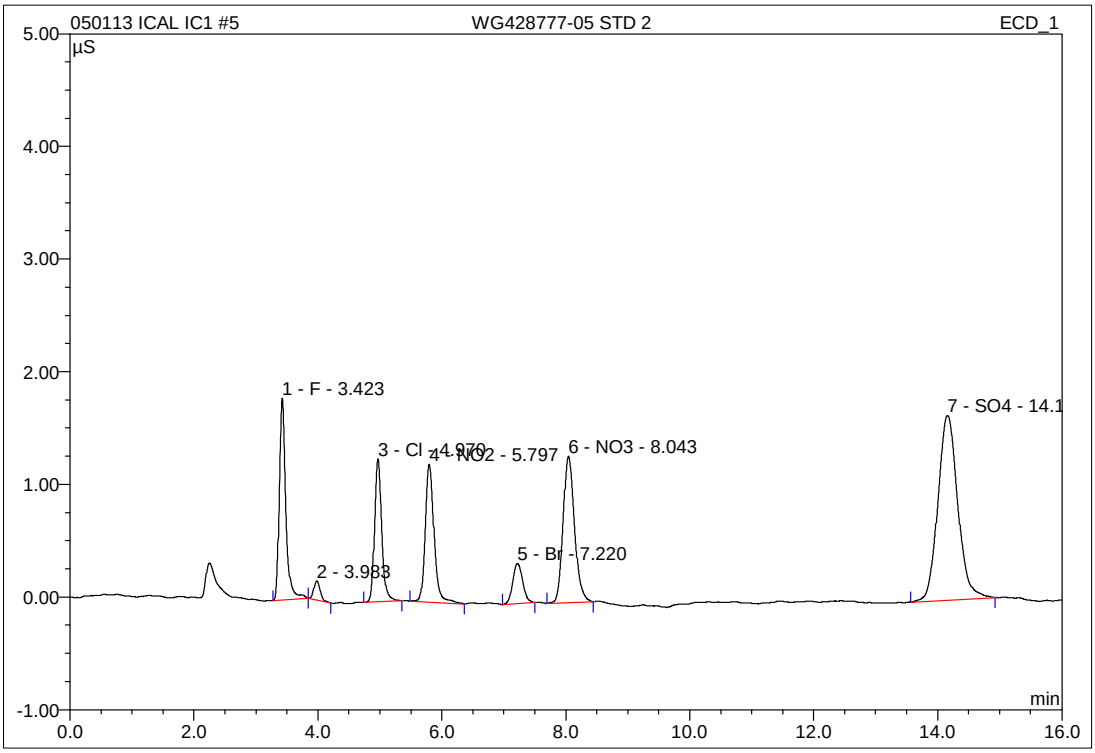


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.28	n.a.	0.069	0.017	0.26	n.a.	BMB
2	3.48	F	7.874	0.933	14.39	3.812	BMB
3	5.04	Cl	5.105	0.679	10.48	3.774	BMB
4	5.88	NO2	5.102	0.833	12.86	2.375	BMB
5	7.31	Br	1.503	0.286	4.42	3.954	BMB
6	8.12	NO3	5.349	1.137	17.55	2.569	BMB
7	14.26	SO4	7.006	2.595	40.04	18.968	BMB
Total:			32.008	6.481	100.00	35.452	

5 WG428777-05 STD 2

1,1 JBK STD57462

Sample Name:	**WG428777-05 STD 2**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/1/2013 12:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

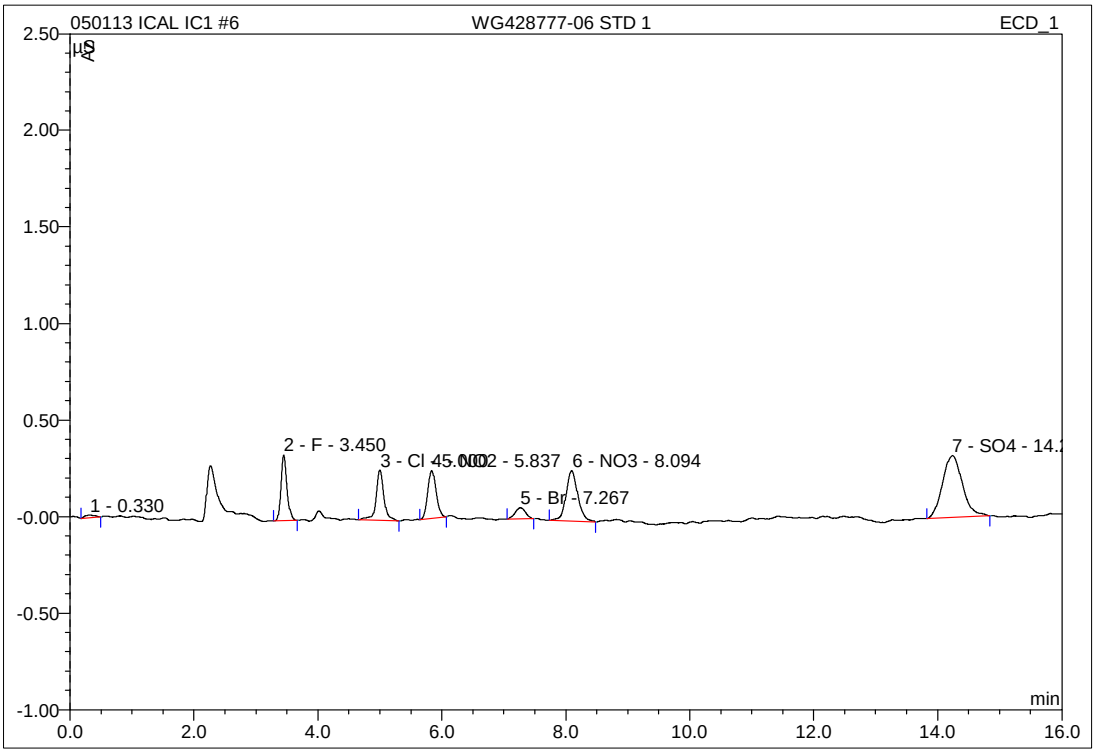


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	1.790	0.217	13.88	0.923	BMb
2	3.98	n.a.	0.169	0.020	1.28	n.a.	bMB
3	4.97	Cl	1.270	0.172	11.01	0.947	BMB
4	5.80	NO2	1.222	0.203	12.96	0.588	BMB
5	7.22	Br	0.354	0.066	4.22	0.947	BMB
6	8.04	NO3	1.300	0.279	17.81	0.636	BMB
7	14.16	SO4	1.638	0.608	38.82	4.560	BMB
Total:			7.744	1.566	100.00	8.600	

6 WG428777-06 STD 1

1,1 JBK STD57462

Sample Name:	**WG428777-06 STD 1**	*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:	**5/1/2013 13:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

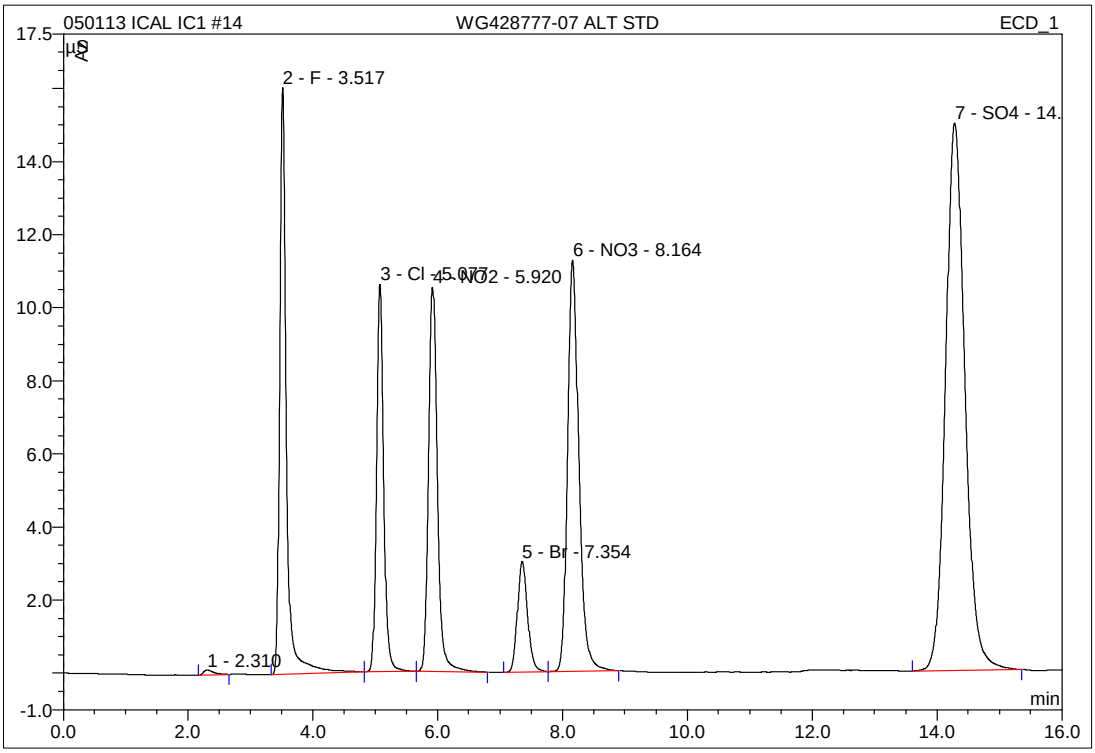


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.33	n.a.	0.015	0.002	0.81	n.a.	BMB
2	3.45	F	0.340	0.039	12.67	0.203	BMB
3	5.00	Cl	0.261	0.039	12.67	0.203	BMB
4	5.84	NO2	0.246	0.039	12.58	0.123	BMB
5	7.27	Br	0.058	0.011	3.73	0.202	BMB
6	8.09	NO3	0.261	0.058	18.74	0.138	BMB
7	14.23	SO4	0.321	0.119	38.80	1.018	BMB
Total:			1.502	0.308	100.00	1.886	

14 WG428777-07 ALT STD

1,1 JBK STD57463

Sample Name:	**WG428777-07 ALT STD**	*Injection Volume:*	**20.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/1/2013 15:29**	*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	2.31	n.a.	0.134	0.025	0.18	n.a.	BMB
2	3.52	F	16.052	2.015	14.91	8.182	BMB
3	5.08	Cl	10.603	1.412	10.44	7.857	BMb
4	5.92	NO2	10.523	1.729	12.79	4.914	bMB
5	7.35	Br	3.027	0.574	4.25	7.876	BMB
6	8.16	NO3	11.248	2.371	17.54	5.346	BMB
7	14.28	SO4	14.987	5.393	39.89	39.261	BMB
Total:			66.574	13.518	100.00	73.437	

14 WG428777-07 ALT STD

1,1 JBK STD57463

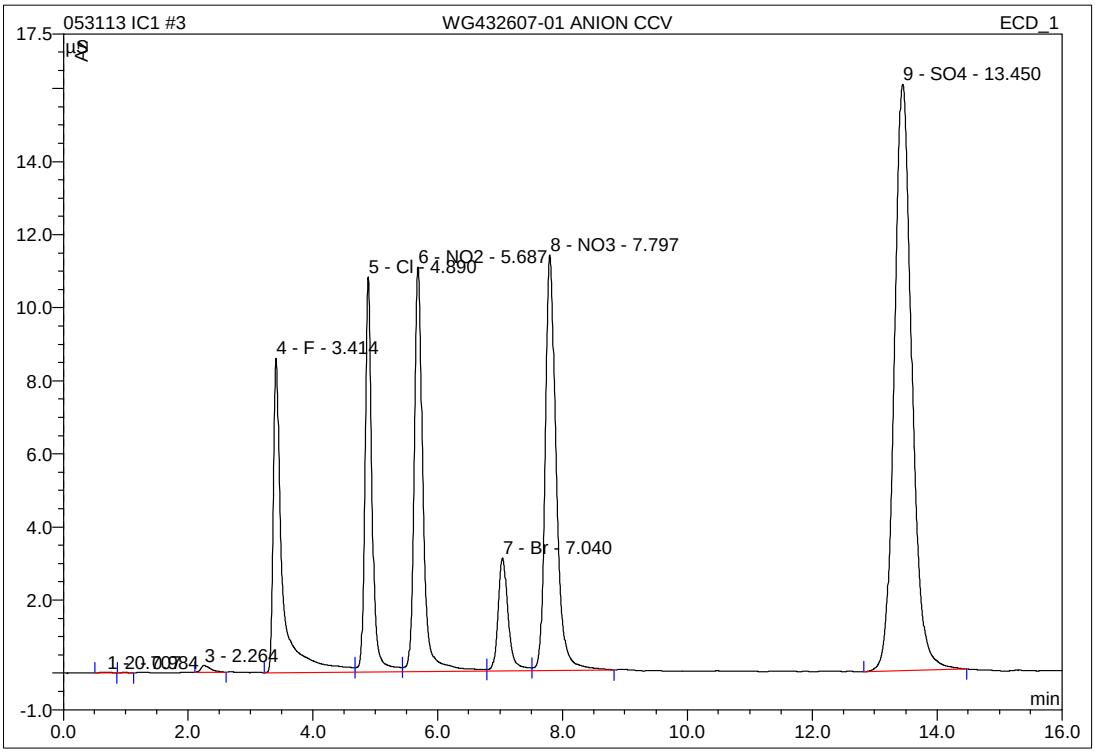
Sample Name:	**WG428777-07 ALT STD**	*Injection Volume:*	**20.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/1/2013 15:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG428777-07 ALT S	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.1817	2.27	PASS
Cl	8.00	7.8571	-1.79	PASS
NO2-N	4.8714	4.9141	0.88	PASS
Br	8.00	7.8764	-1.55	PASS
NO3-N	5.4216	5.3464	-1.39	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	39.2614	-1.85	PASS

3 WG432607-01 ANION CCV

1,1 JBK STD57462 _____ psi @ _____

Sample Name:	**WG432607-01 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:	**5/31/2013 11:45**	*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	0.71	n.a.	0.018	0.003	0.03	n.a.	BMB
2	0.98	n.a.	0.010	0.002	0.01	n.a.	BMB
3	2.26	n.a.	0.183	0.032	0.25	n.a.	BMB
4	3.41	F	8.603	1.454	11.26	5.915	BM
5	4.89	Cl	10.819	1.436	11.12	7.994	M
6	5.69	NO2	11.069	1.818	14.08	5.168	M
7	7.04	Br	3.087	0.583	4.51	7.994	M
8	7.80	NO3	11.367	2.331	18.05	5.256	MB
9	13.45	SO4	16.051	5.253	40.68	38.243	BMB
Total:			61.208	12.911	100.00	70.571	

3 WG432607-01 ANION CCV

1,1 JBK STD57462 _____ psi @ _____

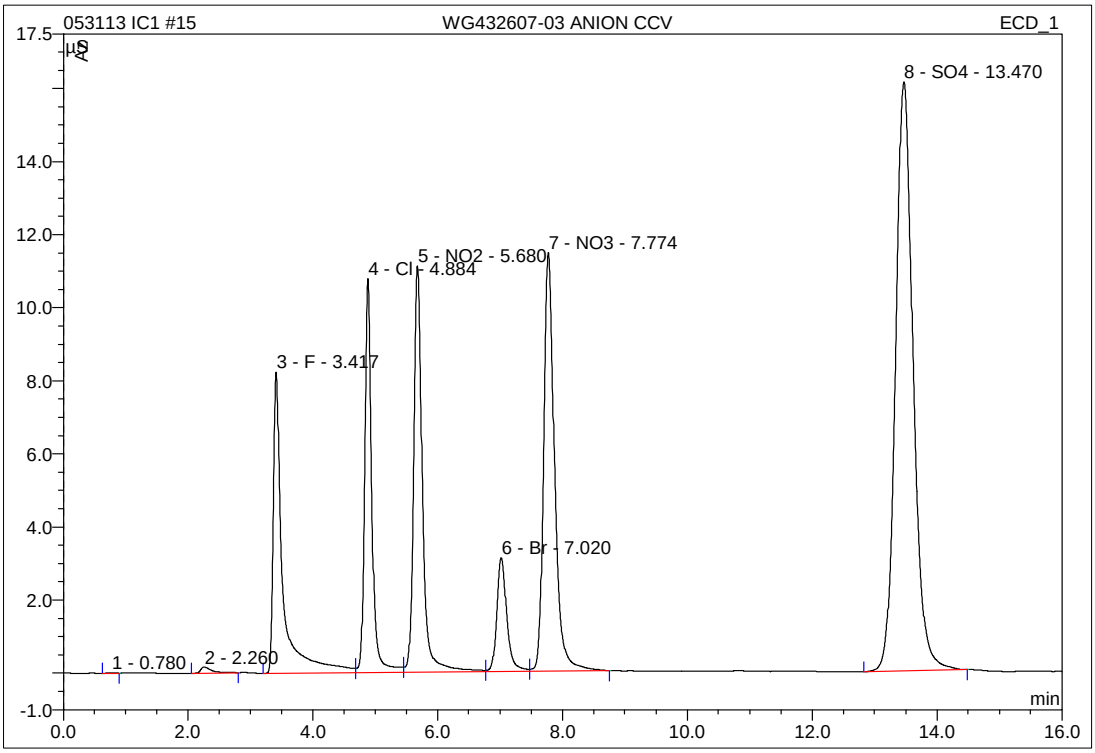
Sample Name:	**WG432607-01 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 11:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG432607-01 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	5.9150	-26.06	FAIL
Cl	8.00	7.9937	-0.08	PASS
NO2-N	4.8714	5.1681	6.09	PASS
Br	8.00	7.9942	-0.07	PASS
NO3-N	5.4216	5.2563	-3.05	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	38.2434	-4.39	PASS

15 WG432607-03 ANION CCV

1,1 JBK STD57462

Sample Name:	**WG432607-03 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:	**5/31/2013 15:26**	*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	0.78	n.a.	0.012	0.002	0.02	n.a.	BMB
2	2.26	n.a.	0.173	0.033	0.26	n.a.	BMB
3	3.42	F	8.244	1.444	11.21	5.875	BM
4	4.88	Cl	10.788	1.439	11.17	8.011	M
5	5.68	NO2	11.124	1.810	14.05	5.145	M
6	7.02	Br	3.112	0.577	4.48	7.919	M
7	7.77	NO3	11.453	2.326	18.05	5.245	MB
8	13.47	SO4	16.123	5.252	40.76	38.238	BMB
Total:			61.029	12.884	100.00	70.434	

15 WG432607-03 ANION CCV

1,1 JBK STD57462

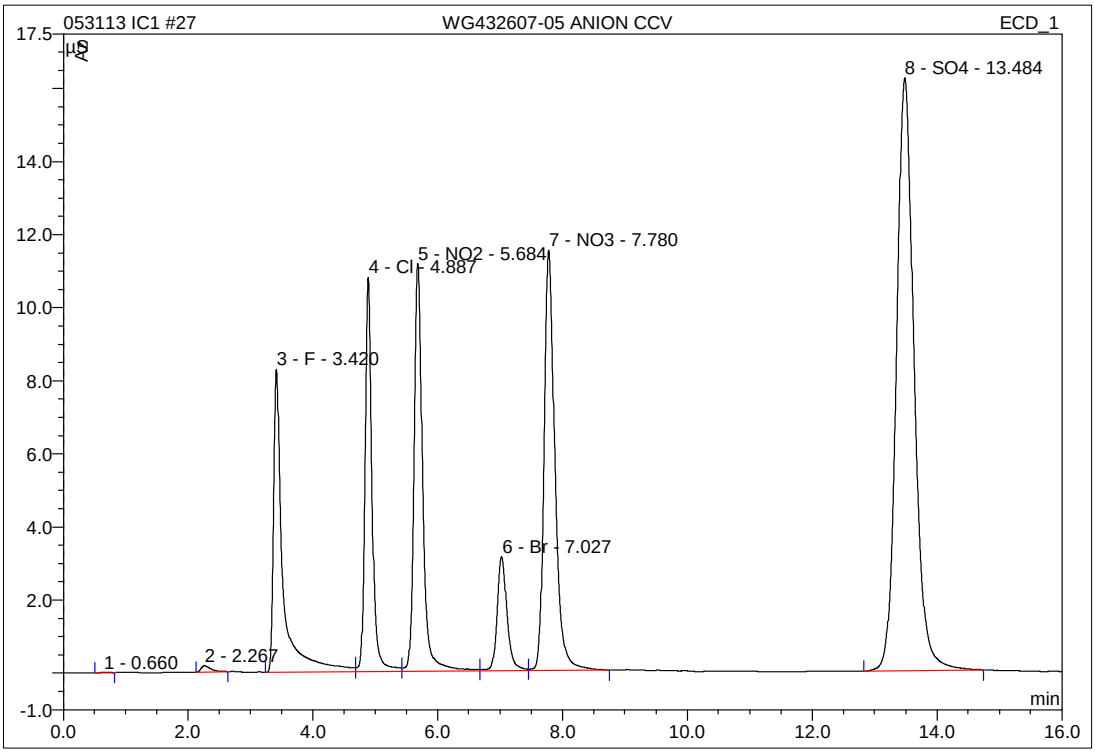
Sample Name:	**WG432607-03 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 15:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG432607-03 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	5.8752	-26.56	FAIL
Cl	8.00	8.0112	0.14	PASS
NO2-N	4.8714	5.1451	5.62	PASS
Br	8.00	7.9190	-1.01	PASS
NO3-N	5.4216	5.2454	-3.25	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	38.2384	-4.40	PASS

27 WG432607-05 ANION CCV

1,1 JBK STD57462

Sample Name:	**WG432607-05 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 19:07**	*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	0.66	n.a.	0.015	0.002	0.02	n.a.	BMB
2	2.27	n.a.	0.173	0.030	0.23	n.a.	BMB
3	3.42	F	8.299	1.434	11.11	5.834	BM
4	4.89	Cl	10.796	1.426	11.05	7.936	M
5	5.68	NO2	11.164	1.791	13.88	5.090	M
6	7.03	Br	3.118	0.576	4.47	7.909	M
7	7.78	NO3	11.492	2.319	17.97	5.230	MB
8	13.48	SO4	16.221	5.323	41.26	38.757	BMB
Total:			61.277	12.902	100.00	70.756	

27 WG432607-05 ANION CCV

1,1 JBK STD57462

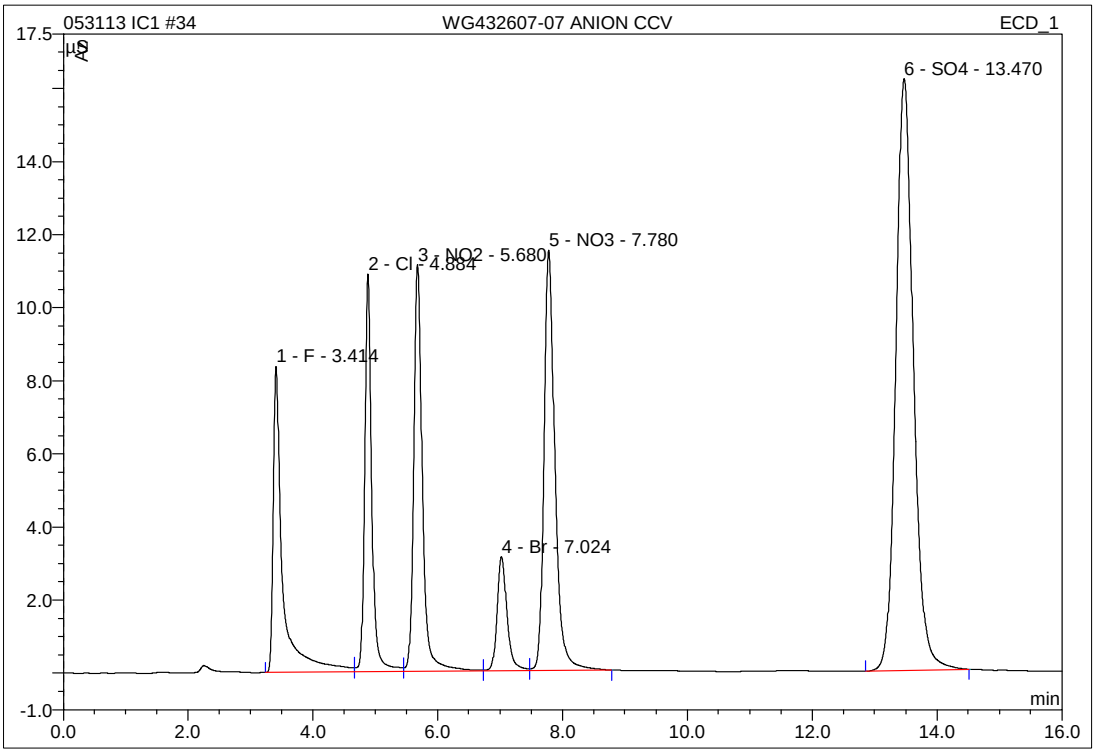
Sample Name:	**WG432607-05 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 19:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG432607-05 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	5.8342	-27.07	FAIL
Cl	8.00	7.9357	-0.80	PASS
NO2-N	4.8714	5.0905	4.50	PASS
Br	8.00	7.9085	-1.14	PASS
NO3-N	5.4216	5.2301	-3.53	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	38.7567	-3.11	PASS

34 WG432607-07 ANION CCV

1,1 JBK STD57462

Sample Name:	**WG432607-07 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 21:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.41	F	8.366	1.452	11.25	5.909	BM
2	4.88	Cl	10.889	1.445	11.19	8.042	M
3	5.68	NO2	11.128	1.800	13.94	5.116	M
4	7.02	Br	3.118	0.581	4.50	7.966	M
5	7.78	NO3	11.497	2.343	18.15	5.284	MB
6	13.47	SO4	16.199	5.292	40.98	38.528	BMB
Total:			61.198	12.913	100.00	70.846	

34 WG432607-07 ANION CCV

1,1 JBK STD57462

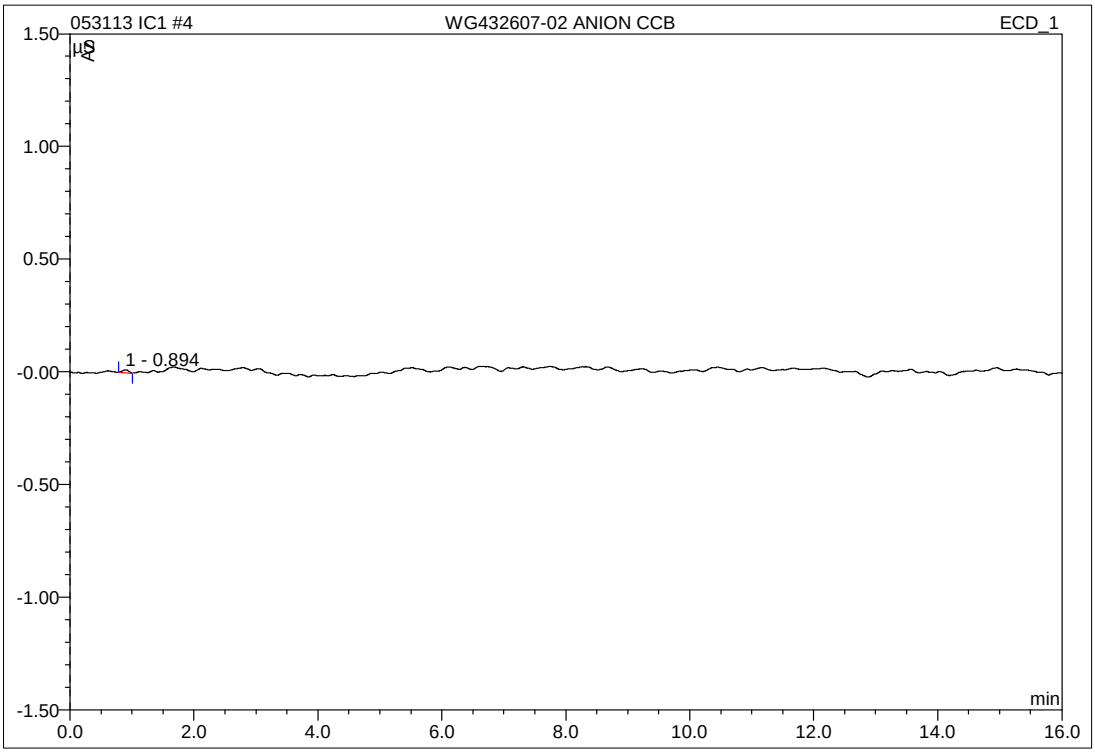
Sample Name:	**WG432607-07 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 21:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG432607-07 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	5.9092	-26.14	FAIL
Cl	8.00	8.0419	0.52	PASS
NO2-N	4.8714	5.1164	5.03	PASS
Br	8.00	7.9663	-0.42	PASS
NO3-N	5.4216	5.2844	-2.53	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	38.5282	-3.68	PASS

4 WG432607-02 ANION CCB

1,1 JBK

Sample Name:	**WG432607-02 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:	**5/31/2013 12:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

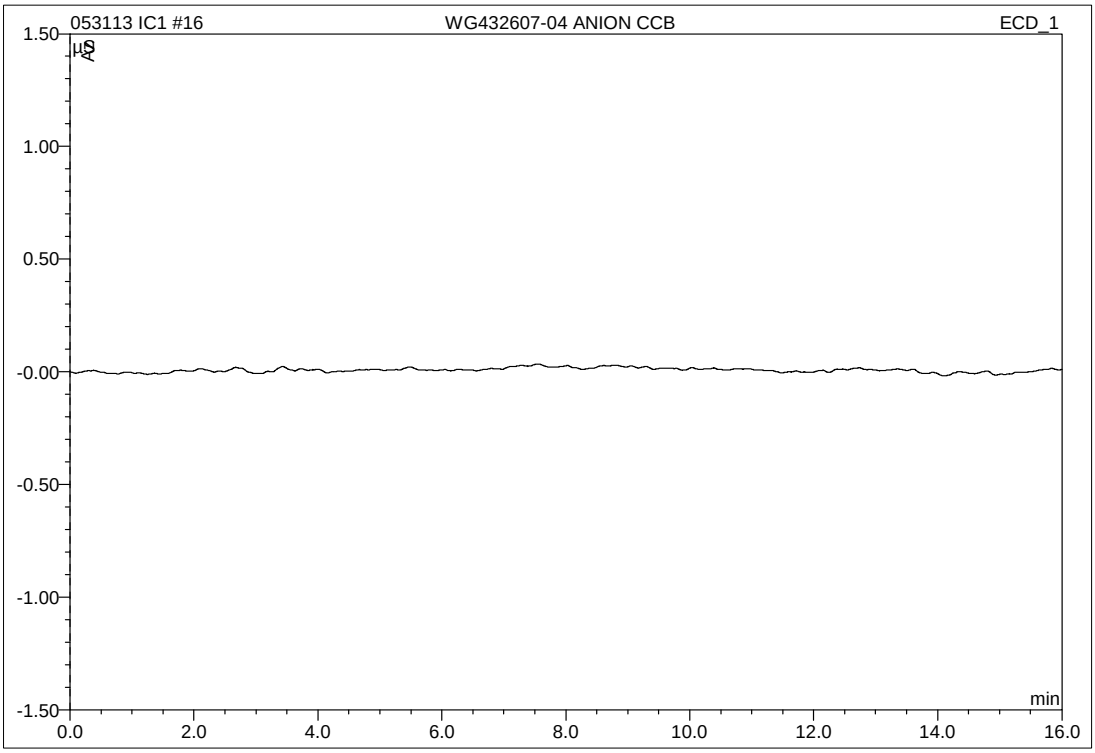


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.89	n.a.	0.013	0.002	100.00	n.a.	BMB
Total:			0.013	0.002	100.00	0.000	

16 WG432607-04 ANION CCB

1,1 JBK

Sample Name:	**WG432607-04 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:	**5/31/2013 15:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

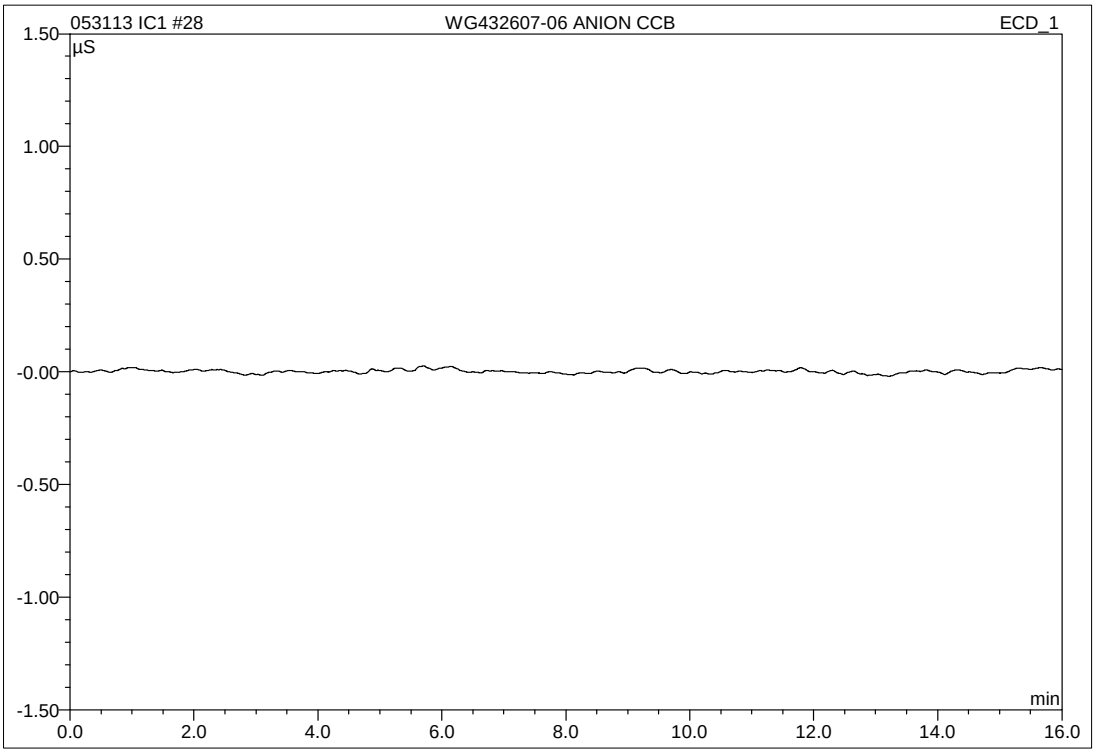


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

28 WG432607-06 ANION CCB

1,1 JBK

Sample Name:	**WG432607-06 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 19:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

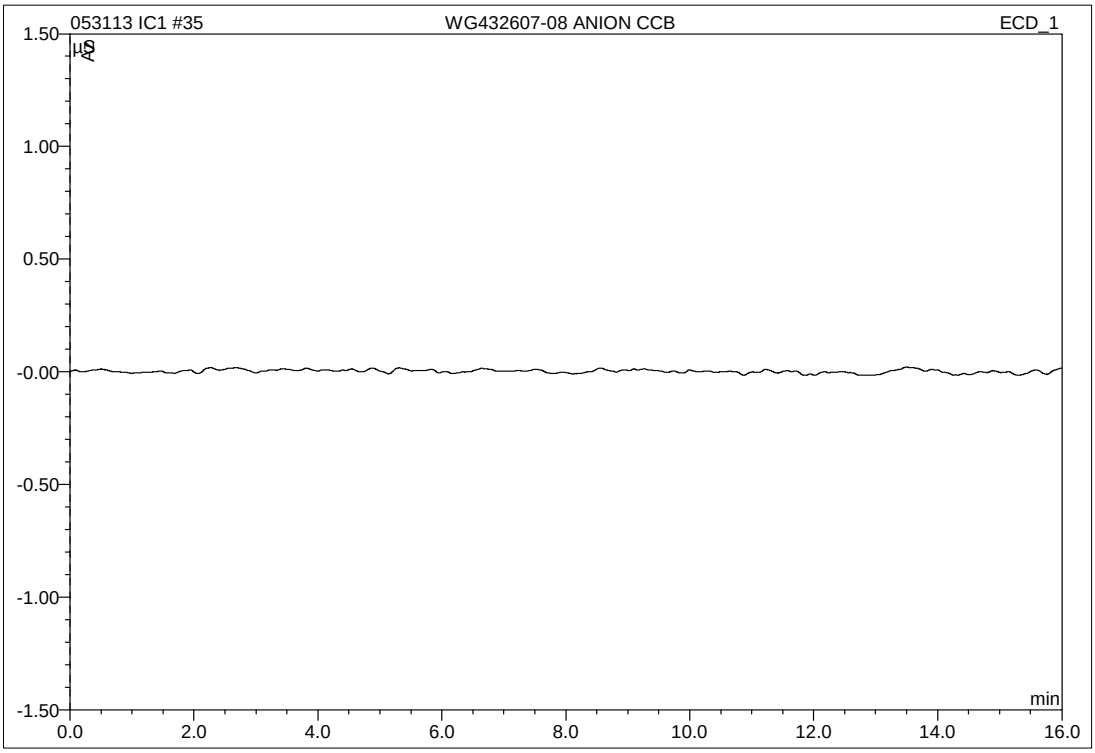


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

35 WG432607-08 ANION CCB

1,1 JBK

Sample Name:	**WG432607-08 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/31/2013 21:34**	*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	

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

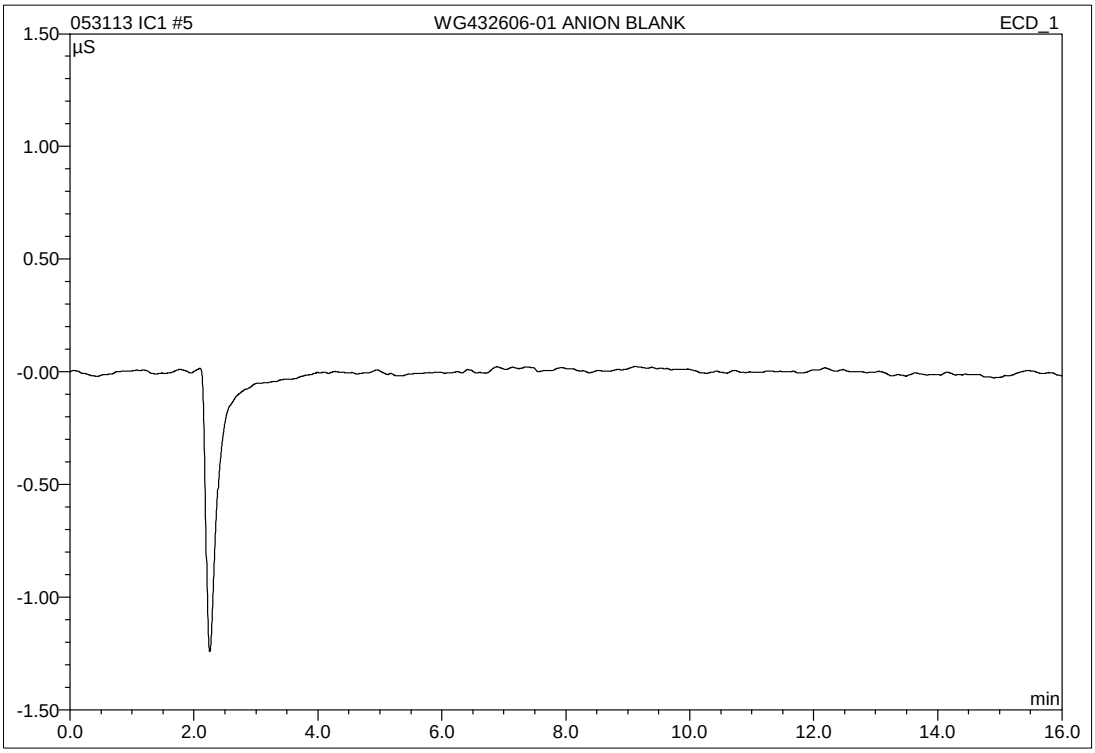
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.387	3.377	3.367	0.030
Cl	4.867	4.864	4.837	0.050
NO2-N	5.724	5.717	5.684	0.064
Br	7.174	7.160	7.117	0.089
NO3-N	8.020	8.007	7.954	0.105
PO4-P	10.640	10.607	10.580	0.090
SO4	12.580	12.574	12.507	0.122

2.2.1.5 Raw QC Data

5 WG432606-01 ANION BLANK

1,1 JBK

Sample Name:	**WG432606-01 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:	**5/31/2013 12:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

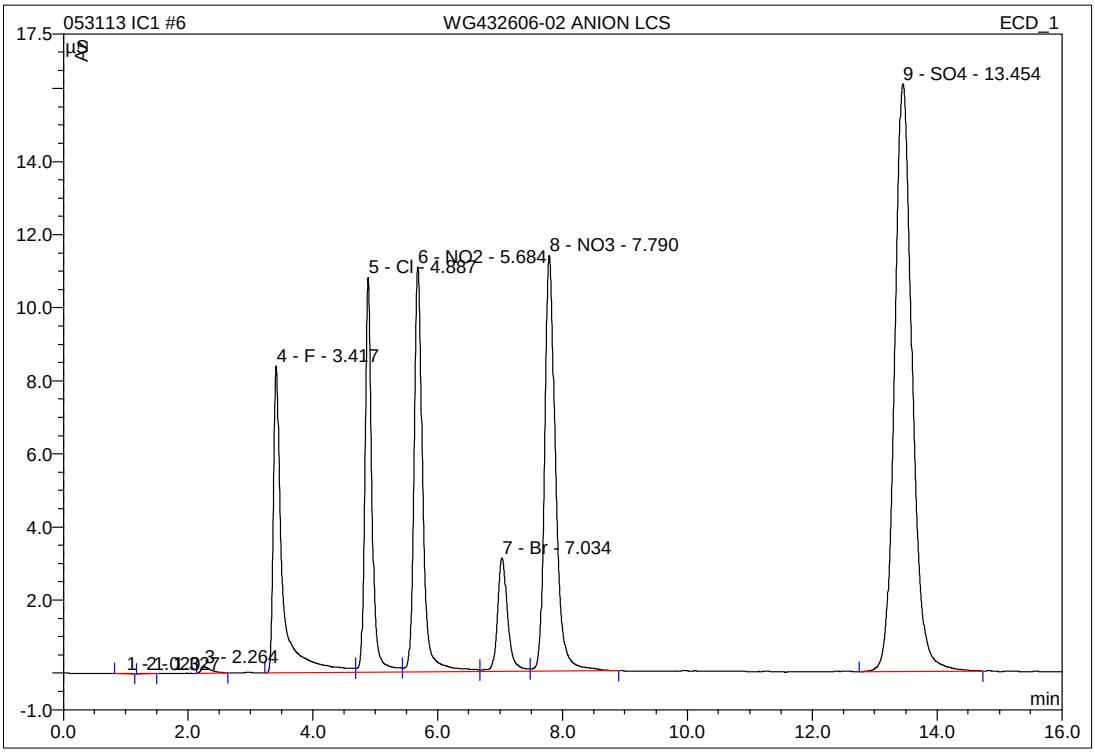


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

6 WG432606-02 ANION LCS

1,1 JBK

Sample Name:	**WG432606-02 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:	**5/31/2013 12:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

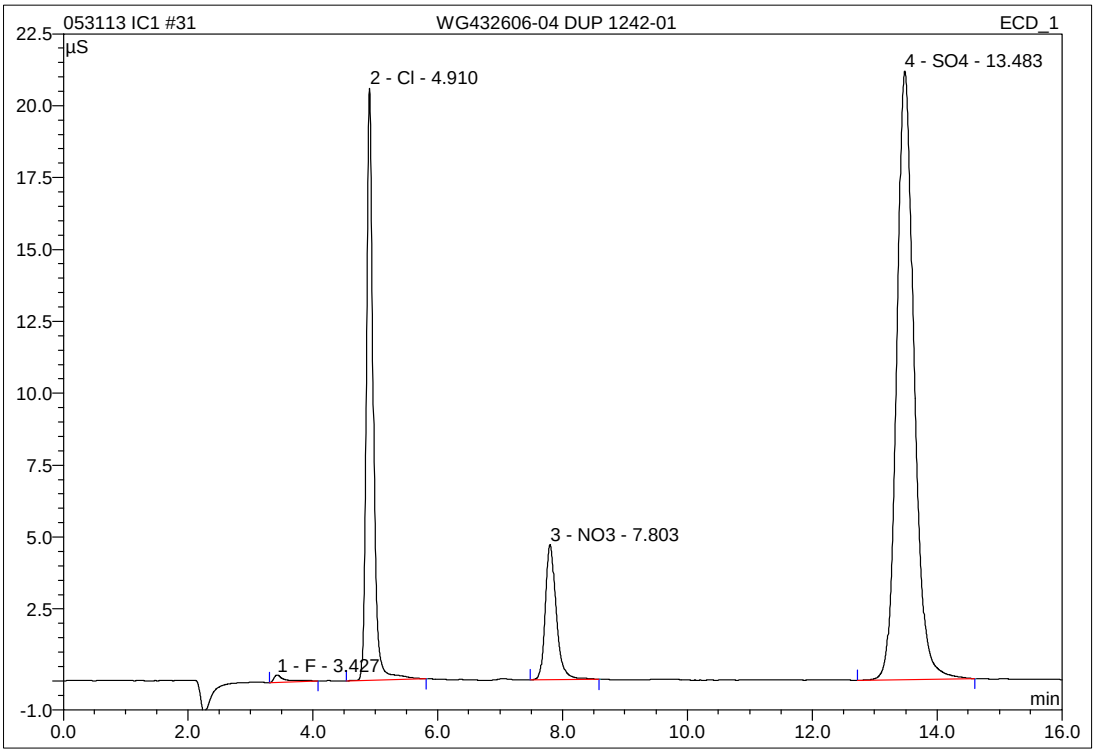


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	1.02	n.a.	0.013	0.002	0.02	n.a.	BMB
2	1.33	n.a.	0.016	0.003	0.02	n.a.	BMB
3	2.26	n.a.	0.179	0.032	0.25	n.a.	BMB
4	3.42	F	8.402	1.409	10.93	5.733	BM
5	4.89	Cl	10.802	1.431	11.10	7.965	M
6	5.68	NO2	11.086	1.807	14.03	5.137	M
7	7.03	Br	3.104	0.592	4.59	8.118	M
8	7.79	NO3	11.378	2.333	18.11	5.262	MB
9	13.45	SO4	16.090	5.277	40.95	38.423	BMB
Total:			61.071	12.886	100.00	70.638	

31 WG432606-04 DUP 1242-01

1,1 JBK

Sample Name:	**WG432606-04 DUP 1242-01**	*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:	**5/31/2013 20:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

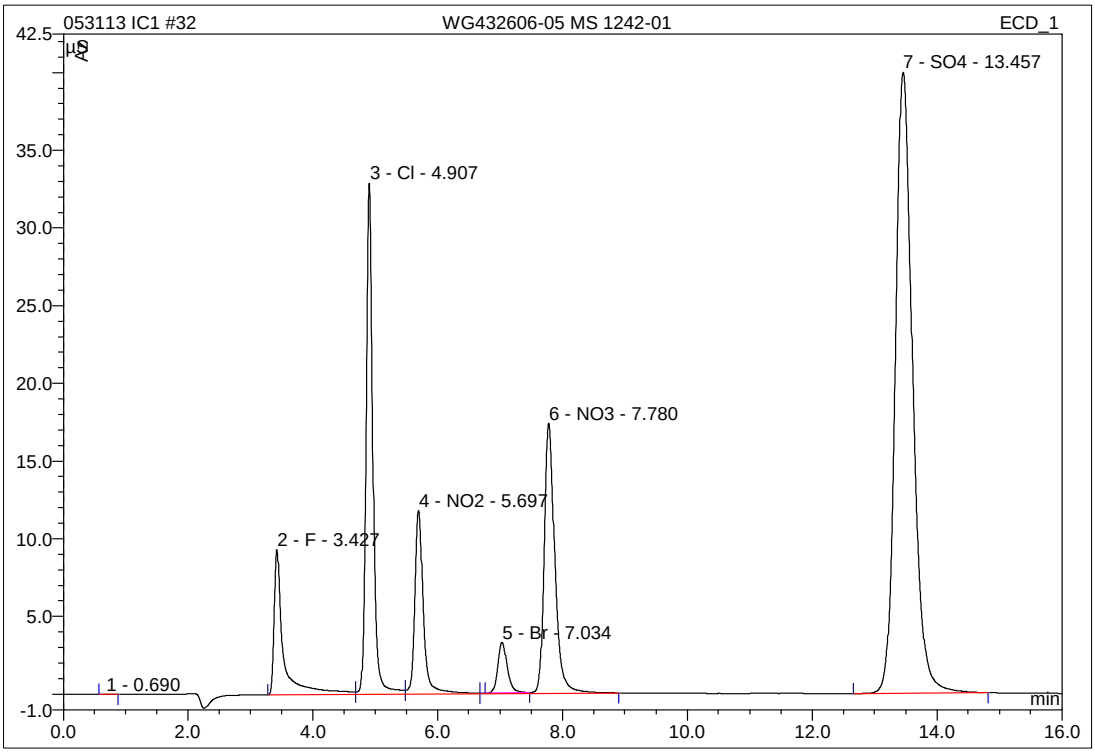


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.43	F	0.260	0.053	0.50	0.257	BMB
2	4.91	Cl	20.583	2.629	25.11	14.647	BMB
3	7.80	NO3	4.696	0.955	9.12	2.158	BMB
4	13.48	SO4	21.166	6.832	65.26	49.699	BMB
Total:			46.706	10.469	100.00	66.761	

32 WG432606-05 MS 1242-01

1,1 JBK

Sample Name:	**WG432606-05 MS 1242-01**	*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:	**5/31/2013 20:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

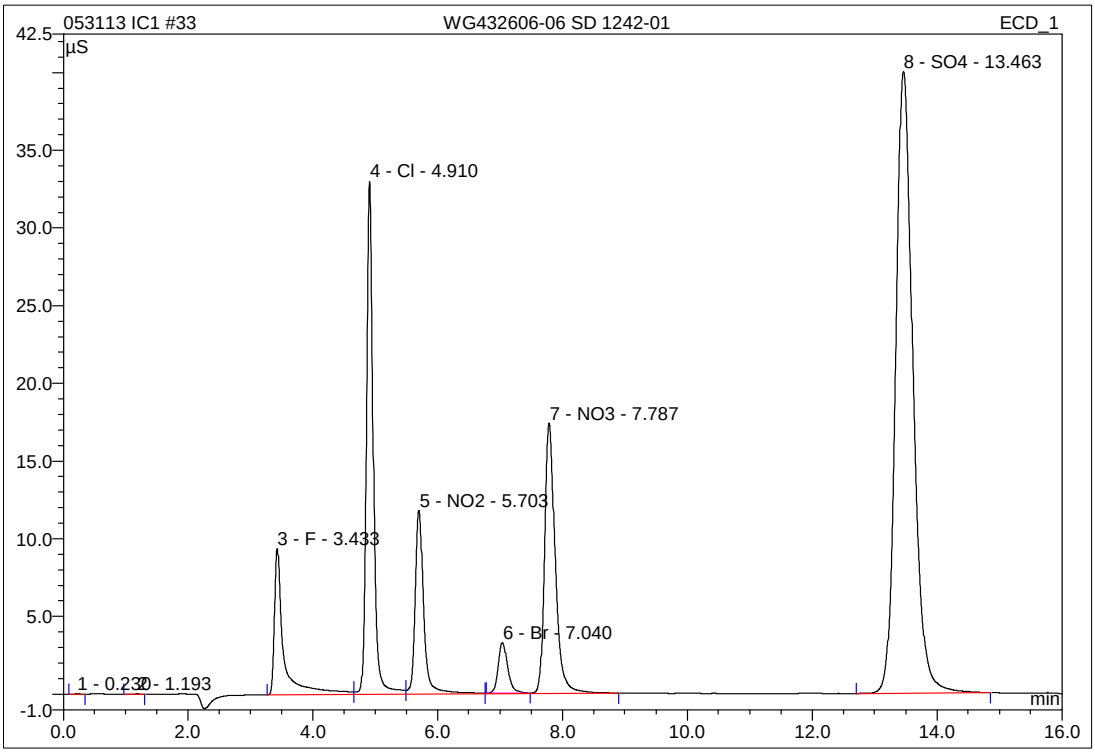


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.69	n.a.	0.010	0.001	0.01	n.a.	BMB
2	3.43	F	9.359	1.609	6.54	6.544	BM
3	4.91	Cl	32.915	4.205	17.10	23.434	M
4	5.70	NO2	11.810	1.891	7.69	5.373	M
5	7.03	Br	3.239	0.569	2.31	7.802	Ru
6	7.78	NO3	17.405	3.494	14.21	7.877	MB
7	13.46	SO4	39.967	12.826	52.15	93.168	BMB
Total:			114.705	24.596	100.00	144.198	

33 WG432606-06 SD 1242-01

1,1 JBK

Sample Name:	**WG432606-06 SD 1242-01**	*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:	**5/31/2013 20:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.23	n.a.	0.013	0.002	0.01	n.a.	BMB
2	1.19	n.a.	0.014	0.002	0.01	n.a.	BMB
3	3.43	F	9.419	1.594	6.48	6.480	BM
4	4.91	Cl	32.995	4.222	17.15	23.527	M
5	5.70	NO2	11.819	1.890	7.68	5.371	M
6	7.04	Br	3.249	0.574	2.33	7.878	Ru
7	7.79	NO3	17.416	3.481	14.15	7.848	MB
8	13.46	SO4	40.010	12.847	52.20	93.320	BMB
Total:			114.934	24.612	100.00	144.424	

2.2.2 PH Data

2.2.2.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Tammy Morris

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.

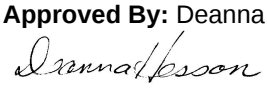
Duplicates: All acceptance criteria were met.

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: 65227
Approved By: Deanna Hesson



Certificate of Analysis

Sample #: L13051242-01 **PrePrep Method:** N/A **Instrument:** ORION-4STAR
Client ID: MPL19-0513-1 **Prep Method:** 9040C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9040C **Cal Date:**
Workgroup #: WG431562 **Analyst:** TMM **Run Date:** 05/23/2013 16:03
Collect Date: 05/22/2013 12:15 **Dilution:** 1 **File ID:** OS13052912145201
Sample Tag: **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.60		0.000	0.000

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** ORION-4STAR
Client ID: MPL20-0513-1 **Prep Method:** 9040C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9040C **Cal Date:**
Workgroup #: WG431562 **Analyst:** TMM **Run Date:** 05/23/2013 16:04
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** OS13052912145501
Sample Tag: **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.51		0.000	0.000

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** ORION-4STAR
Client ID: MPL20-0513-2 **Prep Method:** 9040C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9040C **Cal Date:**
Workgroup #: WG431562 **Analyst:** TMM **Run Date:** 05/23/2013 16:06
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** OS13052912145801
Sample Tag: **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.53		0.000	0.000

Sample #: L13051242-04 **PrePrep Method:** N/A **Instrument:** ORION-4STAR
Client ID: MPL6-0513-1 **Prep Method:** 9040C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9040C **Cal Date:**
Workgroup #: WG431562 **Analyst:** TMM **Run Date:** 05/23/2013 16:08
Collect Date: 05/22/2013 15:25 **Dilution:** 1 **File ID:** OS13052912150401
Sample Tag: **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.73		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

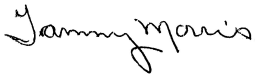
Microbac Laboratories Inc.

Data Checklist

Date: 23-MAY-2013
Analyst: TMM
Analyst: NA
Method: PH
Instrument: OIRON4-STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431562

Calibration/Linearity	5/23/13
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	
LCS/LCS Dup	
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	TMM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
28-MAY-2013



Secondary Reviewer:
30-MAY-2013

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-30-2013 11:25:28

2.2.2.3 Raw Data

wg 431562

pH

Sample	Calibration Buffers	Time of Calibration	A Water Misc. Liquid	B 50% Slurry Of Solid	C 50% Water Org. Liq. Mix	Time Analyzed
LCS 6 Std 57616	7,4,10	1600	5.97			1601
05-1242-01			7.60			1603
-02			7.51			1604
-03			7.53			1606
-04			7.73			1608
05-1162-01			7.10			1610
-03			7.23			1612
-05			6.55			1614
-07			6.93			1619
05-1167-01			7.51			1622
-03			6.99			1625
05-1175-01			8.66			1626
-03			8.39			1628
05-1161-17			7.72			1630
05-1179-01			7.97			1631
05-1194-03			7.27	X		1633
-04			5.94	X		1634
-05			7.72	X		1635
-06			8.10	X		1636
05-1234-01			7.37			1638
-03			7.76			1639
DUP 05-1162-07			6.95			1640
LCS 9 Std 57672			9.02			1640

B,C) SW846 9045D

A) SM 4500-H(+)-B

A) EPA 150.1

A) SW846 9040C

SOP K1501 Rev ____

Circle Instrument

Orion 4-Star

Orion 710A #1

Orion 710A #2

Bante 922

Analyst: Tammy Mauk Date: 5/23/13

DCN#95690

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

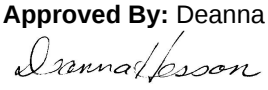
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65225
Approved By: Deanna Hesson



Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130529005.016
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	69.5		20.0	10.0

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:48
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130529005.017
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-1 **Prep Method:** SM2320B-1997 **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM2320B-1997 **Cal Date:** 05/29/2013 14:43
Workgroup #: WG432161 **Analyst:** BAF **Run Date:** 05/29/2013 14:48
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** SC130529005.017
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	69.5		20.0	10.0

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-2 **Prep Method:** SM2320B-1997 **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM2320B-1997 **Cal Date:** 05/29/2013 14:43
Workgroup #: WG432161 **Analyst:** BAF **Run Date:** 05/29/2013 14:49
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** SC130529005.018
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	70.9		20.0	10.0

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-2 **Prep Method:** SM2320B-1997 **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM2320B-1997 **Cal Date:** 05/29/2013 14:43
Workgroup #: WG432161 **Analyst:** BAF **Run Date:** 05/29/2013 14:49
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** SC130529005.018
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	70.9		20.0	10.0

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-2 **Prep Method:** SM2320B-1997 **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM2320B-1997 **Cal Date:** 05/29/2013 14:43
Workgroup #: WG432161 **Analyst:** BAF **Run Date:** 05/29/2013 14:49
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** SC130529005.018
Sample Tag: 01 **Units:** mg/L

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	86.9		20.0	10.0

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL6-0513-1	**Prep Method:**	SM2320B-1997	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B-1997	**Cal Date:**	05/29/2013 14:43
Workgroup #:	WG432161	**Analyst:**	BAF	**Run Date:**	05/29/2013 14:50
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	SC130529005.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	86.9		20.0	10.0

2.2.3.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 29-MAY-2013
Analyst: BAF
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432161 WG432185 WG432134

Calibration/Linearity	5-29-2013
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	BAF
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
30-MAY-2013
Brice Fenton

Secondary Reviewer:
04-JUN-2013
Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 07:19:00

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2320B-1997 AAB#: WG432161

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/29/2013	7.1	14		05/29/13	7.1	14	
MPL20-0513-1	02	05/22/13					05/29/2013	7	14		05/29/13	7	14	
MPL20-0513-2	03	05/22/13					05/29/2013	7	14		05/29/13	7	14	
MPL6-0513-1	04	05/22/13					05/29/2013	7	14		05/29/13	7	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2905102
Report generated 06/03/2013 09:43

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG432161
Blank File ID: SC130529005.010
Blank Sample ID: WG432161-01
Prep Date: 05/29/13 14:44
Instrument ID: SMARTCHEM
Analyzed Date: 05/29/13 14:44
Method: SM2320B-1997
Analyst: BAF

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432161-02	SC130529005.011	05/29/13 14:44	01
LCS2	WG432161-03	SC130529005.012	05/29/13 14:45	01
MPL19-0513-1	L13051242-01	SC130529005.016	05/29/13 14:48	01
MPL19-0513-1	L13051242-01	SC130529005.016	05/29/13 14:48	01
MPL19-0513-1	L13051242-01	SC130529005.016	05/29/13 14:48	01
MPL20-0513-1	L13051242-02	SC130529005.017	05/29/13 14:48	01
MPL20-0513-1	L13051242-02	SC130529005.017	05/29/13 14:48	01
MPL20-0513-1	L13051242-02	SC130529005.017	05/29/13 14:48	01
MPL20-0513-2	L13051242-03	SC130529005.018	05/29/13 14:49	01
MPL20-0513-2	L13051242-03	SC130529005.018	05/29/13 14:49	01
MPL20-0513-2	L13051242-03	SC130529005.018	05/29/13 14:49	01
MPL6-0513-1	L13051242-04	SC130529005.021	05/29/13 14:50	01
MPL6-0513-1	L13051242-04	SC130529005.021	05/29/13 14:50	01
MPL6-0513-1	L13051242-04	SC130529005.021	05/29/13 14:50	01
DUP	WG432161-05	SC130529005.024	05/29/13 14:52	01

Report Name: BLANK_SUMMARY
PDF File ID: 2905103
Report generated 06/03/2013 09:43

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/29/13 14:44 Sample ID: WG432161-01
Instrument ID: SMARTCHEM Run Date: 05/29/13 14:44 Prep Method: SM2320B-1997
File ID: SC130529005.010 Analyst: BAF Method: SM2320B-1997
Workgroup (AAB#): WG432161 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-29-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Bicarbonate (as CaCO3)	10.0	20.0	-57.6	1	*

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

Report Name:BLANK
PDF ID: 2905104
03-JUN-2013 09:43

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 Analyst: BAF Prep Method: SM2320B-1997
Instrument ID: SMARTCHEM Matrix: Water Method: SM2320B-1997
Workgroup (AAB#): WG432161 Units: mg/L
QC Key: DOD4 Lot #: STD57678

Sample ID: WG432161-02 LCS File ID: SC130529005.011 Run Date: 05/29/2013 14:44
Sample ID: WG432161-03 LCS2 File ID: SC130529005.012 Run Date: 05/29/2013 14:45

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Bicarbonate (as CaCO3)	200	178	89.0	200	186	92.8	4.19	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2905105
Report generated: 06/03/2013 09:43

2.2.3.3 Raw Data

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG432134

432161

432185

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9

Syringe filter lot # _____

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

1) **Workgroup** 432134
   Plan # 20130529004
2) **Workgroup** 432161
   Plan # 20130529005
3) **Workgroup** 432185
   Plan # 20130529006

	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	05-1464-01			+C
1-6	02			↓
1-7	03			↓
1-8	04			↓
1-9	05			↓
1-10	BLK ~~06~~			↓
1-11	07			↓
1-12	05-1182-01			+BC
1-13	03			↓
1-14	05			↓
1-15	07			↓
1-16	09			↓
1-17	11			↓
1-18	13			↓
1-19	05-1320-02	1/5		color
1-20	03	1/5		↓
1-21	05	1/5		↓
1-22	06	1/5		↓
2-1	08	1/5		↓
2-2	09	1/5		↓
2-3	DUP ↓	1/5		↓

Position	Analyte	1	2	3
	Run2			
2-4 1	ICV 250			
2-5 2	Blk			
2-6 3	LCS 200			
2-7 4	LCSDUP			
2-8 5	05-1359-01			
2-9 6	02			
2-10 7	05-1360-01			
2-11 8	05-1242-01			+BC
2-12 9	02			↓
2-13 10	03			↓
2-14 11	04			↓
2-15 12	05-1244-01			
2-16 13	05-1262-01			+BC
2-17 14	DUP 01			↓
2-18 15	MS 03			↓
2-19 16	MSD 05			↓
2-20 17	07			↓
2-21 18	09			↓
2-22 19	11			↓
2-23 20	05-1295-01	1/10		
2-24 21	05-1304-01			+BC
2-25 22	02			↓
2-26 1	03			↓
3-1 2	05-1310-01			+B
3-2 3	~~DUP~~ ↓			↓
4				
5				

NOTES:
* Run NO2 std on NO3 runs
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#95761

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG432134

Position	Analyte	1	2	3
1	RUN3			
2	ICV 250			
3	BLK			
4	LCS 200			
5	LCSDUP			
6	05-1310-03			+B
7	05-1323-17			+BC
8	19			
9	21			
10	05-1389-02	1/5		color
11	03	1/5		
12	05	1/5		
13	06	1/5		
14	05-1489-01			

Position	Analyte	1	2	3
14	05-1373-01			+BC
15	DUP 01			
16	MS 02			
17	MSD 03			
18	04			
19	05-1408-01			+BC
20	04			
21	06			
22	08			
1	10			
2	16			
3				

	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	E3102 Rev. 15		RGT 26070
Curve Stock (SC made)	Std 56388		RGT 27171
Curve ID (user made)			RGT 27197
ICV	Std 57677		
CCV	Std 57795		
LCS	Std 57678		
MS	Std 56389 Dilution 04(2500) 1/10 =100		

Comments: All +B, +C samples pH ≤ 8.3.

Analyst: Bruce Fenton Date: 5/29/13

DCN#95761

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	0.6892	0.00		1:23:48 PM
DIL-1	RBL	0.0	0.6845	0.00		1:24:06 PM
DIL-1	RBL	0.0	0.6918	0.00		1:25:00 PM
DIL-1	Std-1	0.0	-0.0027	0.00		1:25:18 PM
SR5-1	Std-2	10.0	-0.0139	0.00		1:26:12 PM
SR5-2	Std-3	20.0	-0.0210	0.00		1:26:30 PM
SR5-3	Std-4	50.0	-0.0690	0.00		1:27:24 PM
SR5-4	Std-5	100.0	-0.1473	0.00		1:27:42 PM
SR5-5	Std-6	200.0	-0.3002	0.00		1:28:36 PM
SR5-6	Std-7	250.0	-0.3833	0.00		1:28:54 PM
SR5-7	Std-8	300.0	-0.4561	0.00		1:29:48 PM
1	ICV	233.6	-0.3533	0.00		1:30:06 PM
2	WG432134-01 BLK	-49.3	0.0750	0.00	INV,><,LL	1:31:00 PM
3	WG432134-02 LCS	187.8	-0.2816	0.00		1:31:18 PM
4	WG432134-03 LCSDUP	190.0	-0.2850	0.00		1:32:12 PM
5	L13051464-01	-18.1	0.0294	0.00	INV,><,LL	1:32:30 PM
6	L13051464-02	-0.9	0.0040	0.00	INV,><,LL	1:33:24 PM
7	L13051464-03	-79.8	0.1193	0.00	INV,><,LL	1:33:42 PM
8	L13051464-04	-57.1	0.0864	0.00	INV,><,LL	1:34:37 PM
9	L13051464-05	-21.5	0.0344	0.00	INV,><,LL	1:34:54 PM
10	L13051464-06	14.9	-0.0193	0.00		1:35:49 PM
ST-2	CCV (150 mg/L)	155.0	-0.2309	103.32		1:36:06 PM
ST-3	CCB (0 mg/L)	-44.5	0.0680	0.00	INV,><,LL	1:37:01 PM
11	L13051464-07	27.5	-0.0381	0.00		1:37:19 PM
12	L13051182-01	167.0	-0.2495	0.00		1:38:13 PM
13	L13051182-03	185.3	-0.2778	0.00		1:38:31 PM
14	L13051182-05	245.7	-0.3723	0.00		1:39:25 PM
15	L13051182-07	203.6	-0.3062	0.00		1:39:43 PM
16	L13051182-09	X300.8	-0.4601	0.00	><,LH	1:40:37 PM
17	L13051182-11	75.4	-0.1098	0.00		1:40:55 PM
18	L13051182-13	24.4	-0.0334	0.00		1:41:49 PM
19	L13051320-02 (5)	163.9	-0.2446	0.00		1:42:07 PM

Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529004**

Plan Description : ALK-A-BAF/5/29/2013

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	L13051320-03 (5)	119.6	-0.1767	0.00		1:43:01 PM
ST-2	CCV (150 mg/L)	156.7	-0.2336	104.49		1:43:19 PM
ST-3	CCB (0 mg/L)	-27.3	0.0429	0.00	INV,><,LL	1:44:13 PM
21	L13051320-05 (5)	195.8	-0.2941	0.00		1:44:31 PM
22	L13051320-06 (5)	120.8	-0.1785	0.00		1:45:25 PM
23	L13051320-08 (5)	179.1	-0.2681	0.00		1:45:43 PM
24	L13051320-09 (5)	117.7	-0.1738	0.00		1:46:37 PM
25	WG432134-05 (5) DUP	124.5	-0.1842	0.00		1:46:55 PM
26	ID 26	-29.4	0.0460	0.00	INV,><,LL	1:47:49 PM
27	ID 27	-21.3	0.0340	0.00	INV,><,LL	1:48:07 PM
ST-2	CCV (150 mg/L)	165.4	-0.2470	110.28		1:49:01 PM
ST-3	CCB (0 mg/L)	-22.7	0.0361	0.00	INV,><,LL	1:49:19 PM
16-[1/2]	L13051182-09	408.9	-0.3076	0.00	LH	1:56:59 PM
ST-2	CCV (150 mg/L)	171.4	-0.2562	114.25		1:56:59 PM
ST-3	CCB (0 mg/L)	-10.7	0.0184	0.00	INV,><,LL	1:57:53 PM

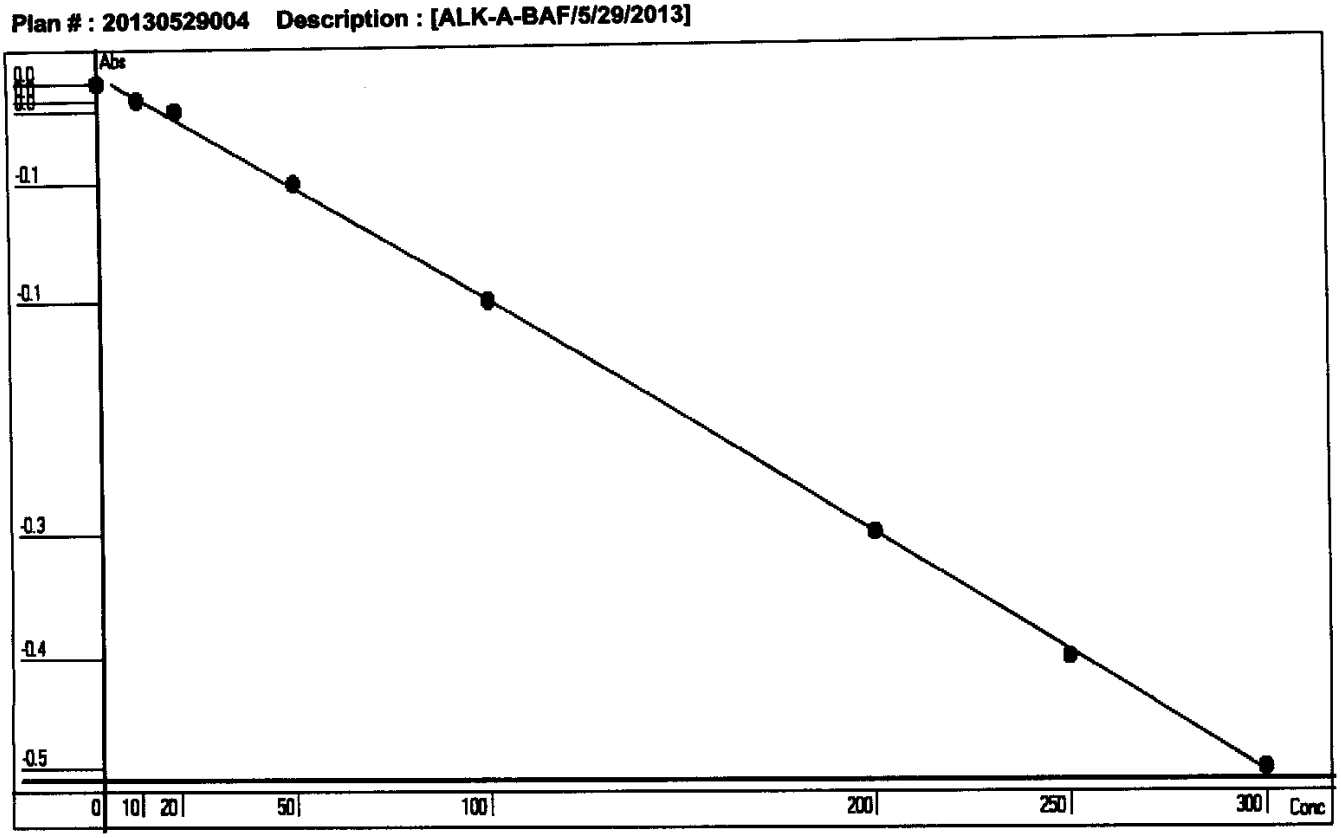
Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529004**

Plan Description : ALK-A-BAF/5/29/2013

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20130529004 Description : [ALK-A-BAF/5/29/2013]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0027	0	3.6457	364.57
2	-0.0139	10	11.2166	12.17
3	-0.0210	20	16.0083	-19.96
4	-0.0690	50	48.2469	-3.51
5	-0.1473	100	100.2522	0.25
6	-0.3002	200	199.7182	-0.14
7	-0.3833	250	252.6193	1.05
8	-0.4561	300	298.2934	-0.57

Conc= -59.0406*Abso^2 -676.9504*Abso +1.8184 R^2=0.9996

RBL
0.6905
0

Report Date 5/29/2013 Run Date 5/29/2013

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	0.5596	0.00		2:37:21 PM
DIL-1	RBL	0.0	0.5629	0.00		2:37:39 PM
DIL-1	RBL	0.0	0.5630	0.00		2:38:33 PM
DIL-1	Std-1	0.0	-0.0028	0.00		2:38:51 PM
SR5-1	Std-2	10.0	-0.0132	0.00		2:39:45 PM
SR5-2	Std-3	20.0	-0.0251	0.00		2:40:03 PM
SR5-3	Std-4	50.0	-0.0519	0.00		2:40:57 PM
SR5-4	Std-5	100.0	-0.1235	0.00		2:41:15 PM
SR5-5	Std-6	200.0	-0.2509	0.00		2:42:09 PM
SR5-6	Std-7	250.0	-0.3174	0.00		2:42:27 PM
SR5-7	Std-8	300.0	-0.3720	0.00		2:43:21 PM
1	ICV	232.3	-0.2901	0.00		2:43:39 PM
2	WG432161-01 BLK	-57.6	0.0723	0.00	INV,><,LL	2:44:33 PM
3	WG432161-02 LCS	178.1	-0.2216	0.00		2:44:51 PM
4	WG432161-03 LCSDUP	185.7	-0.2312	0.00		2:45:45 PM
5	L13051359-01	264.1	-0.3304	0.00		2:46:03 PM
6	L13051359-02	200.4	-0.2497	0.00		2:46:58 PM
7	L13051360-01	179.2	-0.2230	0.00		2:47:16 PM
8	L13051242-01	77.7	-0.0957	0.00		2:48:10 PM
9	L13051242-02	69.5	-0.0855	0.00		2:48:28 PM
10	L13051242-03	70.9	-0.0872	0.00		2:49:22 PM
ST-2	CCV (150 mg/L)	149.3	-0.1854	99.54		2:49:40 PM
ST-3	CCB (0 mg/L)	-41.5	0.0523	0.00	INV,><,LL	2:50:34 PM
11	L13051242-04	86.9	-0.1072	0.00		2:50:52 PM
12	L13051244-01	261.5	-0.3271	0.00		2:51:46 PM
13	L13051262-01	294.0	-0.3685	0.00		2:52:04 PM
14	WG432161-05 DUP	ok X 300.1	-0.3762	0.00	><,LH	2:52:58 PM
15	L13051262-03 MS	ok 342.5	-0.4304	0.00	><,LH	2:53:16 PM
16	L13051262-05 MSD	ok 333.4	-0.4188	0.00	><,LH	2:54:10 PM
17	L13051262-07	225.2	-0.2811	0.00		2:54:28 PM
18	L13051262-09	292.3	-0.3663	0.00		2:55:22 PM
19	L13051262-11	276.4	-0.3461	0.00		2:55:40 PM

Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529005**

Plan Description : ALK-B-BAF/5/29/2013

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	L13051295-01 (10)	-38.8	0.0490	0.00	INV,><,LL	2:56:34 PM
ST-2	CCV (150 mg/L)	150.6	-0.1870	100.39		2:56:52 PM
ST-3	CCB (0 mg/L)	-39.8	0.0502	0.00	INV,><,LL	2:57:46 PM
21	L13051304-01	78.4	-0.0966	0.00		2:58:04 PM
22	L13051304-02	95.1	-0.1174	0.00		2:58:58 PM
23	L13051304-03	91.3	-0.1127	0.00		2:59:16 PM
24	L13051310-01	261.9	-0.3277	0.00		3:00:10 PM
25	ID 25	23.4	-0.0281	0.00		3:00:28 PM
26	ID 26	-32.9	0.0418	0.00	INV,><,LL	3:01:22 PM
27	ID 27	-38.8	0.0490	0.00	INV,><,LL	3:01:40 PM
ST-2	CCV (150 mg/L)	161.2	-0.2004	107.49		3:02:34 PM
ST-3	CCB (0 mg/L)	-37.0	0.0468	0.00	INV,><,LL	3:02:52 PM
14-[1/2]	WG432161-05 DUP	351.4	-0.2186	0.00	LH	3:10:32 PM
15-[1/2]	L13051262-03 MS	449.3	-0.2804	0.00	LH	3:11:44 PM
16-[1/2]	L13051262-05 MSD	424.3	-0.2646	0.00	LH	3:12:56 PM
ST-2	CCV (150 mg/L)	163.2	-0.2029	108.82		3:12:56 PM
ST-3	CCB (0 mg/L)	-37.0	0.0468	0.00	INV,><,LL	3:13:50 PM

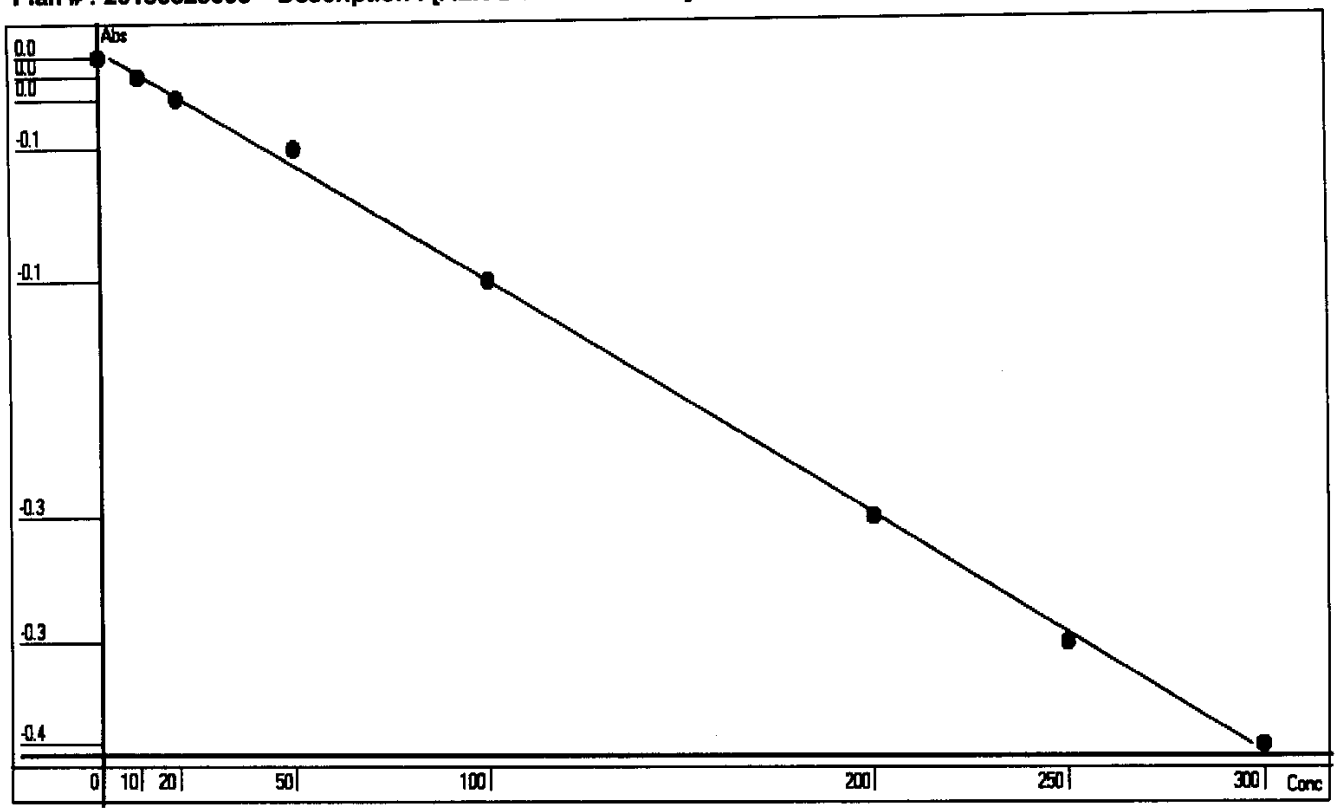
Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529005**

Plan Description : ALK-B-BAF/5/29/2013

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20130529005 Description : [ALK-B-BAF/5/29/2013]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0028	0	3.0914	309.14
2	-0.0132	10	11.4741	14.74
3	-0.0251	20	21.0581	5.29
4	-0.0519	50	42.6119	-14.78
5	-0.1235	100	99.9898	-0.01
6	-0.2509	200	201.3423	0.67
7	-0.3174	250	253.8688	1.55
8	-0.3720	300	296.8024	-1.07

Conc= -29.2558*Abso^2 -806.4988*Abso +0.8334 R^2=0.9990

RBL
0.563
0

Report Date 5/29/2013 Run Date 5/29/2013

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	0.5298	0.00		4:01:56 PM
DIL-1	RBL	0.0	0.5252	0.00		4:02:14 PM
DIL-1	RBL	0.0	0.5188	0.00		4:03:08 PM
DIL-1	Std-1	0.0	-0.0088	0.00		4:03:26 PM
SR5-1	Std-2	10.0	-0.0210	0.00		4:04:20 PM
SR5-2	Std-3	20.0	-0.0256	0.00		4:04:38 PM
SR5-3	Std-4	50.0	-0.0450	0.00		4:05:32 PM
SR5-4	Std-5	100.0	-0.1123	0.00		4:05:50 PM
SR5-5	Std-6	200.0	-0.2244	0.00		4:06:44 PM
SR5-6	Std-7	250.0	-0.2945	0.00		4:07:02 PM
SR5-7	Std-8	300.0	-0.3493	0.00		4:07:56 PM
1	ICV	236.0	-0.2699	0.00		4:08:14 PM
2	WG432185-01 BLK	-51.8	0.0457	0.00	INV,><,LL	4:09:08 PM
3	WG432185-02 LCS	188.8	-0.2119	0.00		4:09:26 PM
4	WG432185-03 LCSDUP	189.3	-0.2125	0.00		4:10:20 PM
5	L13051310-03	233.2	-0.2663	0.00		4:10:38 PM
6	L13051323-17	294.8	-0.3469	0.00		4:11:33 PM
7	L13051323-19	X 300.9	-0.3552	0.00	><,LH	4:11:51 PM
8	L13051323-21	10.4	-0.0160	0.00		4:12:45 PM
9	L13051389-02 (5)	174.1	-0.1945	0.00		4:13:02 PM
10	L13051389-03 (5)	106.8	-0.1179	0.00		4:13:57 PM
ST-2	CCV (150 mg/L)	151.4	-0.1680	100.91		4:14:15 PM
ST-3	CCB (0 mg/L)	-41.2	0.0354	0.00	INV,><,LL	4:15:09 PM
11	L13051389-05 (5)	169.9	-0.1895	0.00		4:15:27 PM
12	L13051389-06 (5)	96.4	-0.1065	0.00		4:16:21 PM
13	L13051489-01	218.0	-0.2474	0.00		4:16:39 PM
14	L13051373-01	133.7	-0.1479	0.00		4:17:33 PM
15	WG432185-05 DUP	139.2	-0.1541	0.00		4:17:51 PM
16	L13051373-02 MS	225.1	-0.2562	0.00		4:18:45 PM
17	L13051373-03 MSD	217.2	-0.2464	0.00		4:19:03 PM
18	L13051373-04	93.6	-0.1034	0.00		4:19:57 PM
19	L13051408-01	213.7	-0.2421	0.00		4:20:15 PM

Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529006**

Plan Description : ALK-C-BAF/5/29/2013

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	L13051408-04	290.7	-0.3414	0.00		4:21:09 PM
ST-2	CCV (150 mg/L)	157.9	-0.1755	105.24		4:21:27 PM
ST-3	CCB (0 mg/L)	-29.9	0.0243	0.00	INV,><,LL	4:22:21 PM
21	L13051408-06	289.1	-0.3392	0.00		4:22:39 PM
22	L13051408-08	280.5	-0.3276	0.00		4:23:33 PM
23	L13051408-10	265.7	-0.3081	0.00		4:23:51 PM
24	L13051408-16	16.5	-0.0222	0.00		4:24:45 PM
25	ID 25	-55.3	0.0491	0.00	INV,><,LL	4:25:03 PM
26	ID 26	-65.9	0.0593	0.00	INV,><,LL	4:25:57 PM
ST-2	CCV (150 mg/L)	159.8	-0.1778	106.56		4:26:15 PM
ST-3	CCB (0 mg/L)	-35.9	0.0302	0.00	INV,><,LL	4:27:09 PM
7-[1/2]	L13051323-19	359.1	-0.2009	0.00	LH	4:34:49 PM
ST-2	CCV (150 mg/L)	159.2	-0.1770	106.10		4:34:49 PM
ST-3	CCB (0 mg/L)	-13.2	0.0078	0.00	INV,><,LL	4:35:43 PM

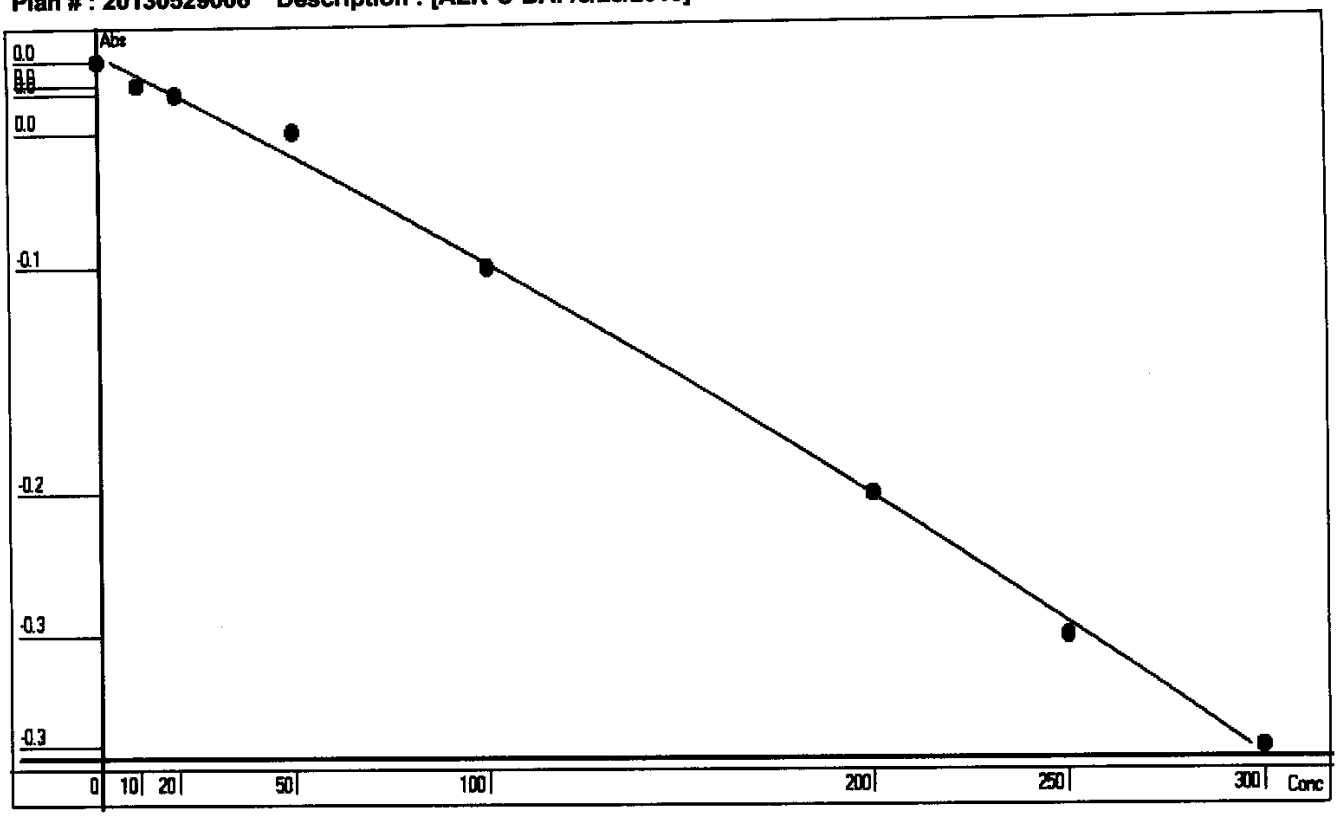
Report Date :05/29/2013 **Run Date :5/29/2013** **Operator : WESTCO** **Plan # :20130529006**

Plan Description : ALK-C-BAF/5/29/2013

Calibrant Report - WALK -

Callb Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20130529006 Description : [ALK-C-BAF/5/29/2013]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0088	0	3.3271	332.71
2	-0.0210	10	15.3505	53.51
3	-0.0256	20	19.8546	-0.73
4	-0.0450	50	38.6740	-22.65
5	-0.1123	100	101.7495	1.75
6	-0.2244	200	199.1954	-0.40
7	-0.2945	250	255.2938	2.12
8	-0.3493	300	296.5556	-1.15

Conc= -378.7794*Abso^2 -996.8113*Abso -5.4155 R^2=0.9978

RBL
0.5275
0

Report Date 5/29/2013 Run Date 5/29/2013

2.2.4 Cyanide Data

2.2.4.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Holly Reed

METHOD

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

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

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

Duplicates: All acceptance criteria were met.

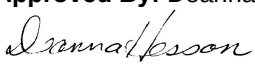
Matrix Spikes: All acceptance criteria were met.

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: 65161
Approved By: Deanna Hesson



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311310-12
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311300-06
Sample Tag:	a	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305311320-07
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 #: L13051242-02 **PrePrep Method:** N/A **Instrument:** UV-120-1V
Client ID: MPL20-0513-1 **Prep Method:** 9014-9010C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9014-9010C **Cal Date:** 05/31/2013 09:45
Workgroup #: WG431926 **Analyst:** HJR **Run Date:** 05/31/2013 13:10
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** 1V.1305311310-13
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.343		0.0100	0.00500

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** UV-120-1V
Client ID: MPL20-0513-1 **Prep Method:** SM4500-CN-C,G-1999 **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM4500-CN-C,G-1999 **Cal Date:** 05/31/2013 09:45
Workgroup #: WG432137 **Analyst:** HJR **Run Date:** 05/31/2013 13:00
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** 1V.1305311300-07
Sample Tag: a **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.338		0.0100	0.00500

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** UV-120-1V
Client ID: MPL20-0513-1 **Prep Method:** SM4500-CN-I **Prep Date:** N/A
Matrix: Water **Analytical Method:** SM4500-CN-I **Cal Date:** 05/31/2013 10:00
Workgroup #: WG432053 **Analyst:** HJR **Run Date:** 05/31/2013 13:20
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** 1V.1305311320-08
Sample Tag: wd **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0303		0.0100	0.00500

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** UV-120-1V
Client ID: MPL20-0513-2 **Prep Method:** 9014-9010C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9014-9010C **Cal Date:** 05/31/2013 09:45
Workgroup #: WG431926 **Analyst:** HJR **Run Date:** 05/31/2013 13:10
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** 1V.1305311310-14
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.188		0.0100	0.00500

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311300-08
Sample Tag:	a	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.184		0.0100	0.00500

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305311320-09
Sample Tag:	wd	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0462		0.0100	0.00500

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG431926	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:10
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311310-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00572	J	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	05/31/2013 09:45
Workgroup #:	WG432137	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:00
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311300-09
Sample Tag:	a	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	05/31/2013 10:00
Workgroup #:	WG432053	**Analyst:**	HJR	**Run Date:**	05/31/2013 13:20
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305311320-10
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

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: 31-MAY-2013
Analyst: HJR
Analyst: NA
Method: CN-T
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431926

Calibration/Linearity	31-MAY-2013
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	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	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
03-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 07:21:27

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAY-2013
Analyst: HJR
Analyst: NA
Method: CN-WD
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432053

Calibration/Linearity	31-MAY-2013
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
03-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 07:21:25

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAY-2013
Analyst: HJR
Analyst: NA
Method: CN-A
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432137

Calibration/Linearity	31-MAY-2013
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
03-JUN-2013

Secondary Reviewer:
04-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 07:21:24

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C AAB#: WG431926

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-1	02	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-2	03	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	14		05/31/13	8.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2906634
Report generated 06/03/2013 15:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G-19 AAB#: WG432137

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-1	02	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-2	03	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	14		05/31/13	8.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2906571
Report generated 06/03/2013 14:46

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I AAB#: WG432053

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-1	02	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL20-0513-2	03	05/22/13					05/31/2013	9	14		05/31/13	9	14	
MPL6-0513-1	04	05/22/13					05/31/2013	8.9	14		05/31/13	8.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2906655
Report generated 06/03/2013 15:03

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: 1V.1305311310-03
Prep Date: 05/31/13 13:10
Analyzed Date: 05/31/13 13:10
Analyst: HJR

Work Group: WG431926
Blank Sample ID: WG431926-01
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	WG431926-02	1V.1305311310-04	05/31/13 13:10	
LCS	WG431926-03	1V.1305311310-05	05/31/13 13:10	
MPL19-0513-1	L13051242-01	1V.1305311310-12	05/31/13 13:10	
MPL20-0513-1	L13051242-02	1V.1305311310-13	05/31/13 13:10	
MPL20-0513-2	L13051242-03	1V.1305311310-14	05/31/13 13:10	
MPL6-0513-1	L13051242-04	1V.1305311310-15	05/31/13 13:10	
DUP	WG431926-05	1V.1305311310-23	05/31/13 13:10	

Report Name: BLANK_SUMMARY
PDF File ID: 2906635
Report generated 06/03/2013 15:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: 1V.1305311300-02
Prep Date: 05/31/13 13:00
Analyzed Date: 05/31/13 13:00
Analyst: HJR

Work Group: WG432137
Blank Sample ID: WG432137-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G-19

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432137-02	1V.1305311300-03	05/31/13 13:00	a
MPL19-0513-1	L13051242-01	1V.1305311300-06	05/31/13 13:00	a
MPL20-0513-1	L13051242-02	1V.1305311300-07	05/31/13 13:00	a
MPL20-0513-2	L13051242-03	1V.1305311300-08	05/31/13 13:00	a
MPL6-0513-1	L13051242-04	1V.1305311300-09	05/31/13 13:00	a
DUP	WG432137-04	1V.1305311300-17	05/31/13 13:00	a

Report Name: BLANK_SUMMARY
PDF File ID: 2906572
Report generated 06/03/2013 14:46

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number:	L13051242	Work Group:	WG432053
Blank File ID:	1V.1305311320-02	Blank Sample ID:	WG432053-01
Prep Date:	05/31/13 13:20	Instrument ID:	UV-120-1V
Analyzed Date:	05/31/13 13:20	Method:	SM4500-CN-I
Analyst:	HJR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432053-02	1V.1305311320-03	05/31/13 13:20	wd
MPL19-0513-1	L13051242-01	1V.1305311320-07	05/31/13 13:20	wd
MPL20-0513-1	L13051242-02	1V.1305311320-08	05/31/13 13:20	wd
MPL20-0513-2	L13051242-03	1V.1305311320-09	05/31/13 13:20	wd
MPL6-0513-1	L13051242-04	1V.1305311320-10	05/31/13 13:20	wd
DUP	WG432053-04	1V.1305311320-18	05/31/13 13:20	wd

Report Name: BLANK_SUMMARY
PDF File ID: 2906656
Report generated 06/03/2013 15:03

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 13:10 Sample ID: WG431926-01
Instrument ID: UV-120-1V Run Date: 05/31/13 13:10 Prep Method: 9014-9010C
File ID: 1V.1305311310-03 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG431926 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.00500	1	U

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

Report Name:BLANK
PDF ID: 2906636
03-JUN-2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 13:00 Sample ID: WG432137-01
Instrument ID: UV-120-1V Run Date: 05/31/13 13:00 Prep Method: SM4500-CN-C,G-1
File ID: 1V.1305311300-02 Analyst: HJR Method: SM4500-CN-C,G-1
Workgroup (AAB#): WG432137 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.00500	1	U

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

Report Name:BLANK
PDF ID: 2906573
03-JUN-2013 14:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 13:20 Sample ID: WG432053-01
Instrument ID: UV-120-1V Run Date: 05/31/13 13:20 Prep Method: SM4500-CN-I
File ID: 1V.1305311320-02 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG432053 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.00500	1	U

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

Report Name:BLANK
PDF ID: 2906657
03-JUN-2013 15:03

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG431926-02
Instrument ID: UV-120-1V **Run Time:** 13:10 **Prep Method:** 9014-9010C
File ID: 1V.1305311310-04 **Analyst:** HJR **Method:** 9014-9010C
Workgroup (AAB#): WG431926 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD55637 **Cal ID:** UV-120-31-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.201	0.203	101	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2906637
Report generated: 06/03/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG431926-03
Instrument ID: UV-120-1V **Run Time:** 13:10 **Prep Method:** 9014-9010C
File ID: 1V.1305311310-05 **Analyst:** HJR **Method:** 9014-9010C
Workgroup (AAB#): WG431926 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD55637 **Cal ID:** UV-120-31-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0403	0.0396	98.4	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2906637
Report generated: 06/03/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG432137-02
Instrument ID: UV-120-1V **Run Time:** 13:00 **Prep Method:** SM4500-CN-C,G-1
File ID: 1V.1305311300-03 **Analyst:** HJR **Method:** SM4500-CN-C,G-1
Workgroup (AAB#): WG432137 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD55637 **Cal ID:** UV-120-31-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.201	0.00585	2.91	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2906574
Report generated: 06/03/2013 14:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG432053-02
Instrument ID: UV-120-1V **Run Time:** 13:20 **Prep Method:** SM4500-CN-I
File ID: 1V.1305311320-03 **Analyst:** HJR **Method:** SM4500-CN-I
Workgroup (AAB#): WG432053 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD55637 **Cal ID:** UV-120-31-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0403	0.0395	98.1	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2906658
Report generated: 06/03/2013 15:03

2.2.4.3 Raw Data

WG432514

Curves

Parameter: CN-High

Spectrophotometer: DR-1200 1V

Calibration (Curve) standard stock: ~~Std~~ 555636

Concentration: 999 mg/L

Recipe for preparation of curve standards found in:

SOP: K3354 Revision: 14 Page: 15

Second Source Stock: ~~Std~~ 555637 (concentration: 1007)

Daily Preparation: 5/1007/250 = 20.14
10/20.14/1000 = 2.014

concentration = 5/2014/50 = 0.2014

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.3996	50	1cm	578	0.608
0.2997				0.461
0.1998				0.304
0.0999				0.150
0.03996				0.061
0.01998				0.030
0.000				0.002
2nd source (0.2014)	↓	↓	↓	0.308

Analyst: [signature] Date/Time: 5/31/13 0945

DCN#95799

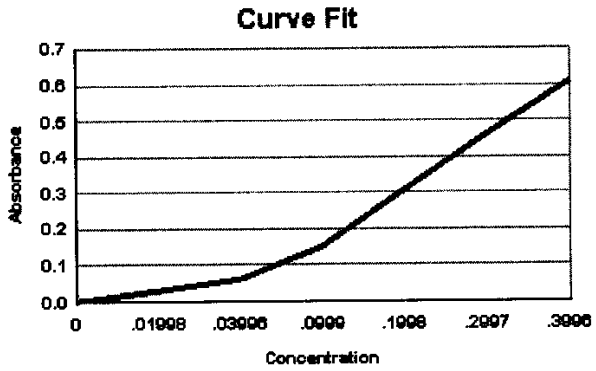
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup:WG432514
Analytical Method:300
Instrument ID:UV-120-1V

Analyst:HJR
Initial Calibration Date:05/31/2013

Analyte: CYANIDE
Number of Points: 7
Slope: 1.52558
Y-Intercept: 0.0000722940
Coef. Of Correlation (R^2): 0.999916
Coef. Of Correlation (R): 0.999958

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00200	0.00	0.00	0.0000722940
0.0200	0.0300	0.000399	0.000599	0.0305533
0.0400	0.0610	0.00160	0.00244	0.0610343
0.0999	0.150	0.00998	0.0150	0.152477
0.200	0.304	0.0399	0.0607	0.304882
0.300	0.461	0.0898	0.138	0.457288
0.400	0.608	0.160	0.243	0.609693



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 05/31/2013 16:38

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG432514
File ID: 1V.1305310945-08
CCV ID: WG432514-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 09:45
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13 09:45:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.201	0.202	1.53	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 05/31/2013 16:39

[redacted]

WG432515

Curves

Parameter: CN-LOW

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std 55636

Concentration: 999

Recipe for preparation of curve standards found in:
SOP: IC 335A Revision: 14 Page: 15

Second Source Stock: Std 55637 (concentration: 1007)

Daily Preparation: 5(1007)/250 = 20.14
16(2014)/100 = 0.2014
concentration = 1(2.014)/50 = 0.04028

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.04995	50	5CM	578	0.380
0.03996				0.304
0.02997				0.220
0.01998				0.160
0.00999				0.082
0.004995				0.041
0.000				0.002
2nd source (0.04028				0.308

5/31/13

Analyst: [signature] Date/Time: 5/31/13 1000

DCN#95800

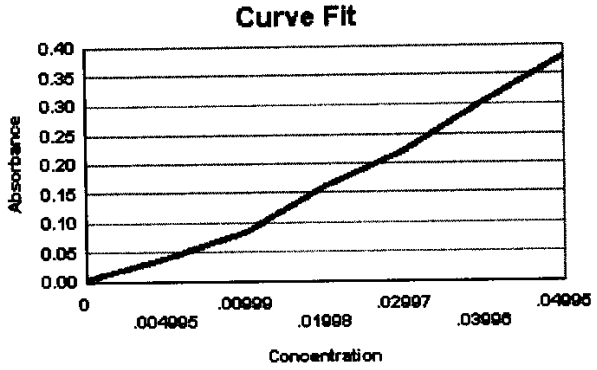
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup:WG432515
Analytical Method:300
Instrument ID:UV-120-1V

Analyst:HJR
Initial Calibration Date:05/31/2013

Analyte: CYANIDE
Number of Points: 7
Slope: 7.48872
Y-Intercept: 0.00420137
Coef. Of Correlation (R^2): 0.998890
Coef. Of Correlation (R): 0.999445

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00200	0.00	0.00	0.00420137
0.00500	0.0410	0.0000250	0.000205	0.0416075
0.00999	0.0820	0.0000998	0.000819	0.0790137
0.0200	0.160	0.000399	0.00320	0.153826
0.0300	0.220	0.000898	0.00659	0.228638
0.0400	0.304	0.00160	0.0121	0.303451
0.0500	0.380	0.00250	0.0190	0.378263



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 05/31/2013 16:41

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG432515
File ID: 1V.1305311000-08
CCV ID: WG432515-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 10:00
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13 10:00:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0403	0.0406	7.65	0.7	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 05/31/2013 16:41

[redacted]

WORKGROUP: WG432053

Cyanide

(cyanide3)

☐ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2

☐ CN – Ameanable (same as total methods)

☑ WD method SM4500 CN I

SOP: K3354 Rev 15
Spec: UV-120-IV
Instrument: Easy-Dist
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: 5/31/13

CCV: Std 55636

True Value: 999

LCS: Std 55637

True Value: 1007

Spike: Std 55637

True Value: 1007

Daily Dilution: 5(999)/250=19.98
10(19.98)/100=1.998
10(1.998)/100=0.1998
5(1.998)/50=0.1998 5(0.1998)/50=0.01998

Daily Dilution: 5(1007)/250=20.14
10(20.14)/100=2.014
5(2.014)/50=0.2014
1(2.014)/50=0.04028

Daily Dilution:
1(2.014)/50=
0.04028

Distillation Reagents

RGT 21085
RGT 21994
RGT 21986

Colorimetric Reagents

RGT 21219
RGT 21165
RGT 21217

DCN#95756

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): ppm			X=none			
CCV(low): 0.01998 ppm	50	✓	X		5cm	0.153
Blank	50	✓	X		5cm	0.001
LCS: ppm						
LCS: 0.04028 ppm	50	✓	X		5cm	0.300
05-1089-02	56	✓	X		5cm	0.054
05-1146-01	50	✓	X		5cm	0.043
-02	56	✓	X		5cm	0.129
05-1242-01	50	✓	X		5cm	0.004
-02	50	✓	X		5cm	0.231
-03	50	✓	X		5cm	0.350
-04	56	✓	X		5cm	0.010
05-1307-01	50	✓	X		5cm	0.004
-02	50	✓	X		5cm	0.006
-03	56	✓	X		5cm	0.008
05-1373-01RS	50	✓	X		5cm	0.309
(0.04) -02MS	56	✓	X		5cm	0.615
(0.04) -03MSD	50	✓	X		5cm	0.610
-04	50	✓	X		5cm	0.209
CCV H						
CCV L						
Duplicate: 05-1089-02	50	✓	X		5cm	0.050
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)						
CCV low: (0.01998 ppm)	50	✓	X		5cm	0.150

Distilled 5/29/13
Std. 5/29/13

Analyst: _____ Date/Time (on) 5/29/13 0930
(off) 5/29/13 1100
(color) 5/31/13 1320

DCN#95756

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG432053
Analyte: CYANIDE

Analyst: HJR
Date: 05/31/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG432053-01	50	50	0.00100	7.489	0.004201	-0.00042749	-0.00042749	1	mg/L
WG432053-02	50	50	0.300	7.489	0.004201	0.039499	0.039499	1	mg/L
L13051089-02	50	50	0.0540	7.489	0.004201	0.0066498	ND	1	mg/L
WG432053-03	50	50	0.0540	7.489	0.004201	0.0066498	0.0066498	1	mg/L
L13051146-01	50	50	0.0430	7.489	0.004201	0.0051809	0.0051809 F	1	mg/L
L13051146-02	50	50	0.129	7.489	0.004201	0.016665	0.016665	1	mg/L
L13051242-01	50	50	0.00400	7.489	0.004201	-0.000026889	ND	1	mg/L
L13051242-02	50	50	0.231	7.489	0.004201	0.030285	0.030285	1	mg/L
L13051242-03	50	50	0.350	7.489	0.004201	0.046176	0.046176	1	mg/L
L13051242-04	50	50	0.0100	7.489	0.004201	0.00077432	ND	1	mg/L
L13051304-01	50	50	0.00400	7.489	0.004201	-0.000026889	ND	1	mg/L
L13051304-02	50	50	0.00600	7.489	0.004201	0.00024018	ND	1	mg/L
L13051304-03	50	50	0.00800	7.489	0.004201	0.00050725	ND	1	mg/L
L13051373-01	50	50	0.309	7.489	0.004201	0.040701	0.040701	1	mg/L
WG432053-05	50	50	0.309	7.489	0.004201	0.040701	0.040701	1	mg/L
L13051373-02	50	50	0.615	7.489	0.004201	0.081563	0.081563 I	1	mg/L
WG432053-06	50	50	0.615	7.489	0.004201	0.081563	0.081563	1	mg/L
L13051373-03	50	50	0.610	7.489	0.004201	0.080895	0.080895 I	1	mg/L
WG432053-07	50	50	0.610	7.489	0.004201	0.080895	0.080895	1	mg/L
L13051373-04	50	50	0.209	7.489	0.004201	0.027348	0.027348	1	mg/L
WG432053-04	50	50	0.0500	7.489	0.004201	0.0061157	0.0061157	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 06/03/2013 13:38

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432716
File ID: 1V.1305311320-01
CCV ID: WG432716-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:20
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0199	7.66	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:36

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432716
File ID: 1V.1305311320-19
CCV ID: WG432716-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:20
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0195	7.51	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:36

[redacted]

WORKGROUP: WG431926

Cyanide
(cyanide3)

- [x] Total method 9010B/9014
  SM4500 CN C,E
  EPA 335.2
- [ ] CN – Ameanable (same as total methods)
- [ ] WD method SM4500 CN I

SOP: K3354 Rev 15
Spec: UV-120-IV
Instrument: ~~Easy-Dist~~
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: ~~4/25/13~~ 5/31/13 5/3/13

CCV: ~~Std 55629~~ 55636

True Value: 999

LCS: ~~Std~~ 55637

True Value: 1007

Spike: Std 55637

True Value: 1007

Daily Dilution: 5(999)/250=19.98
10(19.98)/100=1.998
10(1.998)/100=0.1998
5(0.1998)/50=0.01998 5(1.998)/50=0.1998

Daily Dilution: 5(1007)/250=20.14
10(20.14)/100=2.014
5(2.014)/50=0.2014
1(2.014)/50=0.04028

Daily Dilution: _____
1(2.014)/50=0.04028

Distillation Reagents

~~RGT 27085~~ 26336
~~RGT 26986~~ 26334
~~RGT 26994~~ 26804

5/29/13

Colorimetric Reagents

RGT 27219
RGT 27165
RGT 27217

DCN#95739

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.1998 ppm	50	✓	X=none		1cm	0.306
CCV(low): 0.01998 ppm	50	✓	X		5cm	0.152
Blank	50	✓	X		5cm	0.001
LCS: 0.2014 ppm	50	✓	X		1cm	0.310
LCS: 6.04028 ppm	50	✓	X		5cm	0.301
05-1146-01	50	✓	X		1cm	0.326
-02	50	✓	X		1cm	0.224
05-1182-07	50	✓	X		5cm	0.008
-09	50	✓	X		5cm	0.010
-11	50	✓	X		5cm	0.007
-13 EB	50	✓	X		5cm	0.002
05-1242-01	50	✓	X		5cm	0.011
-02	50	✓	X		1cm ***	0.523
-03	50	✓	X		1cm	0.287
-04	50	✓	X		5cm	0.047
05-1262-01BS	50	✓	X		5cm	0.005
(6.04028) -03MS	50	✓	X		5cm	0.308
(6.04028) -05MSD	50	✓	X		5cm	0.304
-07	50	✓	X		5cm	0.010
-09	50	✓	X		5cm	0.009
-11	50	✓	X		5cm	0.008
05-1295-01	50/150	✓	X		5cm	0.005
Duplicate: 05-1182-09	50	✓	X		5cm	0.009
MS: (ppm)						
MSD: (ppm)						
CCV high: (0.1998 ppm)	50	✓	X		1cm	0.305
CCV low: (0.01998 ppm)	50	✓	X		5cm	0.150

Analyst: [signature] Date/Time (on) 5/28/13 1300 5/31/13

(off) 5/28/13 ~~1530~~ 1430

(color) 5/31/13 1810

DCN#95739

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG431926 **Analyst:** HJR
Analyte: CYANIDE **Date:** 05/31/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG431926-01	50	50	0.00100	7.489	0.004201	-0.00042749	-0.00042749	1	mg/L
WG431926-02	50	50	0.310	1.526	0.00007229	0.20315	0.20315	1	mg/L
WG431926-03	50	50	0.301	7.489	0.004201	0.039633	0.039633	1	mg/L
L13051146-01	50	50	0.326	1.526	0.00007229	0.21364	0.21364	1	mg/L
L13051146-02	50	50	0.224	1.526	0.00007229	0.14678	0.14678	1	mg/L
L13051182-07	50	50	0.00800	7.489	0.004201	0.00050725	ND	1	mg/L
L13051182-09	50	50	0.0100	7.489	0.004201	0.00077432	ND	1	mg/L
WG431926-04	50	50	0.0100	7.489	0.004201	0.00077432	0.00077432	1	mg/L
L13051182-11	50	50	0.00700	7.489	0.004201	0.00037371	ND	1	mg/L
L13051182-13	50	50	0.00200	7.489	0.004201	-0.00029396	ND	1	mg/L
L13051242-01	50	50	0.0110	7.489	0.004201	0.00090785	ND	1	mg/L
L13051242-02	50	50	0.523	1.526	0.00007229	0.34277	0.34277	1	mg/L
L13051242-03	50	50	0.287	1.526	0.00007229	0.18808	0.18808	1	mg/L
L13051242-04	50	50	0.0470	7.489	0.004201	0.0057151	0.0057151 F	1	mg/L
L13051262-01	50	50	0.00500	7.489	0.004201	0.00010665	ND	1	mg/L
WG431926-06	50	50	0.00500	7.489	0.004201	0.00010665	0.00010665	1	mg/L
L13051262-03	50	50	0.308	7.489	0.004201	0.040568	0.040568	1	mg/L
WG431926-07	50	50	0.308	7.489	0.004201	0.040568	0.040568	1	mg/L
L13051262-05	50	50	0.304	7.489	0.004201	0.040033	0.040033	1	mg/L
WG431926-08	50	50	0.304	7.489	0.004201	0.040033	0.040033	1	mg/L
L13051262-07	50	50	0.0100	7.489	0.004201	0.00077432	ND	1	mg/L
L13051262-09	50	50	0.00900	7.489	0.004201	0.00064078	ND	1	mg/L
L13051262-11	50	50	0.00800	7.489	0.004201	0.00050725	ND	1	mg/L
L13051295-01	50	50	0.00500	7.489	0.004201	0.00010665	ND	50	mg/L
WG431926-05	50	50	0.00900	7.489	0.004201	0.00064078	0.00064078	1	mg/L

[redacted]

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 06/03/2013 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432714
File ID: 1V.1305311310-01
CCV ID: WG432714-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:10
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.201	1.53	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:30

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432714
File ID: 1V.1305311310-02
CCV ID: WG432714-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:10
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0197	7.61	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:30

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432714
File ID: 1V.1305311310-24
CCV ID: WG432714-03
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:10
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.200	1.53	0.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:30

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432714
File ID: 1V.1305311310-25
CCV ID: WG432714-04
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:10
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0195	7.51	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:30

[redacted]

WORKGROUP: WG432137

Cyanide
(cyanide3)

☐ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2

☑ CN – Ameanable (same as total methods)

☐ WD method SM4500 CN I

SOP: K3354 Rev 15
Spec: UV-120-IV
Instrument: ~~Easy-Dist~~
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: 5/31/13

CCV: ~~Std~~ 55636

True Value: 999

LCS: ~~Std~~ 55637

True Value: 1007

Spike: ~~Std~~ 55637

True Value: 1067

Daily Dilution: 5(999)/250=19.98
10(19.98)/100=1.998
10(1.998)/100=0.1998
5(0.1998)/50=0.01998 5(1.998)/50=0.0.1998

Daily Dilution: 5(1007)/250=20.14
10(20.14)/100=2.014
5(2.014)/50=0.2014

Daily Dilution:
5(2.014)/50=
0.2014

Distillation Reagents

RGT 26338
RGT 26334
RGT 26804

Colorimetric Reagents

RGT 27219
RGT 27165
RGT 27217

DCN#95762

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.1998 ppm	50	✓	X-none		1cm	0.309
CCV(low): ppm						
Blank	50	✓	X		1cm	0.001
LCS: ~~0.1998~~ ppm					~~1cm~~	~~0.009~~
LCS: ~~0.08~~ 0.2014 ppm	50	✓	X		1cm	0.009
05-1146-01	50	✓	X		1cm	0.003
-02	50	✓	X			0.010
05-1242-01	50	✓	X			0.008
-02	50	✓	X			0.007
-03	50	✓	X			0.006
-04	50	✓	X			0.003
05-1304-01	50	✓	X			0.004
-02	50	✓	X			0.004
-03	50	✓	X			0.005
05-1373-01	50	✓	X			0.002
(0.2014) -02MS	50	✓	X			0.009
(0.2014) -03MSD	50	✓	X			0.008
-04	50	✓	X		✓	0.006
Duplicate: 05-1146-01	50	✓	X		1cm	0.004
MS: (ppm)						
MSD: (ppm)						
CCV high: (0.1998 ppm)	50	✓	X		1cm	0.310
CCV low: (ppm)					~~1cm~~	

Analyst: _____ Date/Time (on) 5/29/13 1300

(off) 5/29/13 1430

(color) 5/31/13 1300

DCN#95762

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG432137 **Analyst:** HJR
Analyte: CYANIDE **Date:** 05/31/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG432137-01	50	50	0.00100	1.526	0.00007229	0.00060810	0.00060810	1	mg/L
WG432137-02	50	50	0.00900	1.526	0.00007229	0.0058520	0.0058520	1	mg/L
L13051146-01	50	50	0.00300	1.526	0.00007229	0.0019191	ND	1	mg/L
WG432137-03	50	50	0.00300	1.526	0.00007229	0.0019191	0.0019191	1	mg/L
L13051146-02	50	50	0.0100	1.526	0.00007229	0.0065075	0.0065075 F	1	mg/L
L13051242-01	50	50	0.00800	1.526	0.00007229	0.0051965	0.0051965 F	1	mg/L
L13051242-02	50	50	0.00700	1.526	0.00007229	0.0045410	ND	1	mg/L
L13051242-03	50	50	0.00600	1.526	0.00007229	0.0038856	ND	1	mg/L
L13051242-04	50	50	0.00300	1.526	0.00007229	0.0019191	ND	1	mg/L
L13051304-01	50	50	0.00400	1.526	0.00007229	0.0025746	ND	1	mg/L
L13051304-02	50	50	0.00400	1.526	0.00007229	0.0025746	ND	1	mg/L
L13051304-03	50	50	0.00500	1.526	0.00007229	0.0032301	ND	1	mg/L
L13051373-01	50	50	0.00200	1.526	0.00007229	0.0012636	ND	1	mg/L
WG432137-05	50	50	0.00200	1.526	0.00007229	0.0012636	0.0012636	1	mg/L
L13051373-02	50	50	0.00900	1.526	0.00007229	0.0058520	0.0058520 F	1	mg/L
WG432137-06	50	50	0.00900	1.526	0.00007229	0.0058520	0.0058520	1	mg/L
L13051373-03	50	50	0.00800	1.526	0.00007229	0.0051965	0.0051965 F	1	mg/L
WG432137-07	50	50	0.00800	1.526	0.00007229	0.0051965	0.0051965	1	mg/L
L13051373-04	50	50	0.00600	1.526	0.00007229	0.0038856	ND	1	mg/L
WG432137-04	50	50	0.00400	1.526	0.00007229	0.0025746	0.0025746	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 06/03/2013 13:43

Cyanide, Amenable to Chlorination (mg/L)
CN (Total) - CN (Treated) = CN-A

SAMPLE	5/31/2013 CN (Total)	5/31/2013 CN (Treated)	CN-A
L13051146-01	0.21364	0.0019191	0.211721
L13051146-02	0.14678	0.0065075	0.140273
L13051242-01	0.0009	0.0051965	-0.004297
L13051242-02	0.34277	0.004541	0.338229
L13051242-03	0.18808	0.0038856	0.184194
L13051242-04	0.0057151	0.0019191	0.003796
L13051304-01	0.0064078	0.0025746	0.003833
L13051304-02	0.0009078	0.0025746	-0.001667
L13051304-03	0.00077432	0.0032301	-0.002456
L13051373-01	0.31131	0.0012636	0.310046
L13051373-02	0.50337	0.005852	0.497518
L13051373-03	0.50665	0.0051965	0.501454
L13051373-04	0.26805	0.0038856	0.264164
			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 #: WG432717
File ID: 1V.1305311300-01
CCV ID: WG432717-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:00
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.202	1.55	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:41

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG432717
File ID: 1V.1305311300-18
CCV ID: WG432717-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 05/31/2013
Run Time: 13:00
Analyst: HJR
Cal ID: UV-120 - 31-MAY-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.203	1.55	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 06/03/2013 13:41

[redacted]

2.2.5 Conductivity Data

2.2.5.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

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.

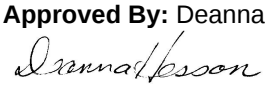
Matrix Spikes: All acceptance criteria were met.

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: 65226
Approved By: Deanna Hesson



2.2.5.2 QC Summary Data

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 24-MAY-2013
Analyst: DIH
Analyst: NA
Method: PH/COND/ALK
Instrument: TIAMO
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431691 WG431684 WG431689 WG431681 WG431688

Calibration/Linearity	5/24/13
Second Source Check	X
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
01-JUN-2013
Dianna Ibsson

Secondary Reviewer:
01-JUN-2013
Dianna Ibsson

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-01-2013 08:32:46

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 **AAB#:** WG431689

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/24/2013	2.2	28		05/24/13	2.2	28	
MPL20-0513-1	02	05/22/13					05/24/2013	2.1	28		05/24/13	2.1	28	
MPL20-0513-2	03	05/22/13					05/24/2013	2.1	28		05/24/13	2.1	28	
MPL6-0513-1	04	05/22/13					05/24/2013	2.1	28		05/24/13	2.1	28	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2900256
Report generated 05/30/2013 14:36

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG431689
Blank File ID: TI.052413.1602CO
Blank Sample ID: WG431689-01
Prep Date: 05/24/13 16:02
Instrument ID: TIAMO1
Analyzed Date: 05/24/13 16:02
Method: 120.1
Analyst: BAF

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG431689-02	TI.052413.1604CO	05/24/13 16:04	01
MPL19-0513-1	L13051242-01	TI.052413.1635CO	05/24/13 16:35	01
MPL20-0513-1	L13051242-02	TI.052413.1637CO	05/24/13 16:37	01
MPL20-0513-2	L13051242-03	TI.052413.1639CO	05/24/13 16:39	01
MPL6-0513-1	L13051242-04	TI.052413.1641CO	05/24/13 16:41	01
DUP	WG431689-05	TI.052413.1702CO	05/24/13 17:02	01
DUP	WG431689-05	TI.052413.1708CO	05/24/13 17:08	02

Report Name: BLANK_SUMMARY
PDF File ID: 2900257
Report generated 05/30/2013 14:36

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13051242 Prep Date:05/24/13 16:02 Sample ID:WG431689-01
Instrument ID:TIAMO1 Run Date:05/24/13 16:02 Prep Method:120.1
File ID:TI.052413.1602CO Analyst:BAF Method:120.1
Workgroup (AAB#):WG431689 Matrix:Water Units:umhos/cm
Contract #: Cal ID:TIAMO1-

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Conductivity	10.0	50.0	11.3	1	J

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

Report Name:BLANK
PDF ID: 2900258
30-MAY-2013 14:36

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/24/2013 **Sample ID:** WG431689-02
Instrument ID: TIAMO1 **Run Time:** 16:04 **Prep Method:** 120.1
File ID: TI.052413.1604CO **Analyst:** BAF **Method:** 120.1
Workgroup (AAB#): WG431689 **Matrix:** Water **Units:** umhos/cm
QC Key: DOD4 **Lot#:** STD57495 **Cal ID:** TIAMO1 -

Analytes	Expected	Found	% Rec	LCS Limits	Q
Conductivity	1410	1480	105	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2900259
Report generated: 05/30/2013 14:36

2.2.5.3 Raw Data

Metrohm Tiamo

Instrument: Tiamo

pH: EPA 150.1 / SM 4500-H(+)-B / SW846 904C

LCS 6: std 57616 Calibration: 5/24/13

LCS 9: std 16822

4316864
431691

Note: • an LCS is analyzed every 20 samples
• alternate levels

Cond: EPA 120.1 / SM 2510B

LCS: _____ Daily Dil.: _____

wg 431684
431689

Note: • LCS/LCSDUP required each work group
• end run with an LCS
• sample duplicate every 10 samples

ALK: EPA 310.1 / SM2320B

wg 431681
431688

LCS: _____ Daily Dil.: _____

Titrant: 0.1N H_2SO_4: T: _____

Note: • LCS/LCSDUP required each workgroup

Analyst: [signature] Date: 5/24/13

DCN#95704

Metrohm Tiamo

	Sample ID	Dilution	pH	Cond	ALK	Acid
1	pH 6		✓			
2	BLK			✓		
3	LCS 1412			✓		
4	BLK				✓	
5	LCS 100				✓	
6	LCSDUP				✓	
7	05-1258-01			✓	✓	
8	05-1225-10		✓	✓	✓	
9	05-1237-01		✓	✓	✓	
10	03		✓	✓	✓	
11	05		✓	✓	✓	
12	05-1247-01		✓	✓	✓	
13	03		✓	✓	✓	
14	05		✓	✓	✓	
15	05-1249-01		✓	✓	✓	
16	05-1289-01	1290-01	✓	✓	✓	
17	03	-02	✓	✓	✓	
18	05	-03	✓	✓	✓	
19	07	-04	✓	✓	✓	
20	09	-05	✓	✓	✓	
21	11	-06	✓	✓	✓	
22	~~05-1290-01~~		✓	✓	✓	
23	~~02~~		✓	✓	✓	
24	~~03~~		✓	✓	✓	
25	~~04~~		✓	✓	✓	
26	~~05~~		✓	✓	✓	
27	DUP 1289-05				✓	
28	DUP 1290-05			✓		
29	LCS 1412			✓		
30	~~05-1170-03~~		✓			
31	DUP 1287-01		✓			
32	pH 9		✓			
33	BLK			✓		
34	LCS1412			✓		
35	BLK				✓	
36	LCS 100				✓	
37	LCSDUP				✓	
38	~~05-1290-06~~		✓	✓	✓	
39	~~DUP~~				✓	
40	05-1228-01			✓		
41	03			✓		
42	05			✓		
43	07			✓		
44	09			✓		
45	11			✓		
46	13			✓		
47	05-1242-01			✓		
48	02			✓		
49	03			✓		

	Sample ID	Dilution	pH	Cond	ALK	Acid
50	05-1242-04			✓		
51	05-1244-01			✓		
52	05-1304-01		✓	✓		
53	02		✓	✓		
54	03		✓	✓		
55	DUP ↓			✓		
56	~~05-1295-01~~		✓	NO		
57	~~DUP ↓~~		✓			
58	pH 6		✓			
59						
60						
61						
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63						
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66						
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92						
93						
94						
95						
96						
97						
98						

Dup pH 1304-02

LCS 1412

Analyst: _____ Date: 5/24/13

DCN#95704

Determination overview

1	2013-05-24 13:42:59 UTC-4	pH	PH 6	sample pH
2	2013-05-24 13:48:27 UTC-4	Conductivity_042413	WG4311684-01	sample Conduntivity
3	2013-05-24 13:50:20 UTC-4	Conductivity_042413	WG4311684-02	sample Conduntivity
4	2013-05-24 13:52:19 UTC-4	Alkalinity to 4-5	WG4311681-01	Alkal mg/L CaCO3
5	2013-05-24 13:56:46 UTC-4	Alkalinity to 4-5	WG4311681-02	Alkal mg/L CaCO3
6	2013-05-24 14:01:51 UTC-4	Alkalinity to 4-5	WG4311681-03	Alkal mg/L CaCO3
7	2013-05-24 14:07:03 UTC-4	cond, pH, and alkalinity to 4-5	L13051258-01	sample Conduntivity
8	2013-05-24 14:12:58 UTC-4	cond, pH, and alkalinity to 4-5	L13051225-10	sample Conduntivity
9	2013-05-24 14:20:26 UTC-4	cond, pH, and alkalinity to 4-5	L13051237-01	sample Conduntivity
10	2013-05-24 14:26:54 UTC-4	cond, pH, and alkalinity to 4-5	L13051237-03	sample Conduntivity
11	2013-05-24 14:33:23 UTC-4	cond, pH, and alkalinity to 4-5	L13051237-05	sample Conduntivity
12	2013-05-24 14:40:26 UTC-4	cond, pH, and alkalinity to 4-5	L13051247-01	sample Conduntivity
13	2013-05-24 14:47:01 UTC-4	cond, pH, and alkalinity to 4-5	L13051247-03	sample Conduntivity
14	2013-05-24 14:53:37 UTC-4	cond, pH, and alkalinity to 4-5	L13051247-05	sample Conduntivity
15	2013-05-24 15:00:44 UTC-4	cond, pH, and alkalinity to 4-5	L13051249-01	sample Conduntivity
16	2013-05-24 15:07:20 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-01	sample Conduntivity
17	2013-05-24 15:13:57 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-03	sample Conduntivity
18	2013-05-24 15:20:23 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-05	sample Conduntivity
19	2013-05-24 15:26:42 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-07	sample Conduntivity
20	2013-05-24 15:33:00 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-09	sample Conduntivity
21	2013-05-24 15:39:11 UTC-4	cond, pH, and alkalinity to 4-5	L13051289-11	sample Conduntivity
22	2013-05-24 15:45:24 UTC-4	Alkalinity to 4-5	WG431681-05	Alkal mg/L CaCO3
23	2013-05-24 15:50:14 UTC-4	Conductivity_042413	WG431684-05	sample Conduntivity
24	2013-05-24 15:52:07 UTC-4	Conductivity_042413	WG431684-03	sample Conduntivity
25	2013-05-24 15:54:02 UTC-4	pH	WG431686-02	sample pH
26	2013-05-24 15:58:16 UTC-4	pH	PH 9	sample pH
27	2013-05-24 16:02:27 UTC-4	Conductivity_042413	WG431689-01	sample Conduntivity
28	2013-05-24 16:04:15 UTC-4	Conductivity_042413	WG431689-02	sample Conduntivity
29	2013-05-24 16:06:10 UTC-4	Alkalinity to 4-5	WG431688-01	Alkal mg/L CaCO3
30	2013-05-24 16:10:34 UTC-4	Alkalinity to 4-5	WG431688-02	Alkal mg/L CaCO3
31	2013-05-24 16:15:28 UTC-4	Alkalinity to 4-5	WG431688-03	Alkal mg/L CaCO3
32	2013-05-24 16:20:35 UTC-4	Conductivity_042413	L13051228-01	sample Conduntivity
33	2013-05-24 16:22:29 UTC-4	Conductivity_042413	L13051228-03	sample Conduntivity
34	2013-05-24 16:24:32 UTC-4	Conductivity_042413	L13051228-05	sample Conduntivity
35	2013-05-24 16:26:36 UTC-4	Conductivity_042413	L13051228-07	sample Conduntivity
36	2013-05-24 16:28:41 UTC-4	Conductivity_042413	L13051228-09	sample Conduntivity
37	2013-05-24 16:30:47 UTC-4	Conductivity_042413	L13051228-11	sample Conduntivity
38	2013-05-24 16:32:55 UTC-4	Conductivity_042413	L13051228-13	sample Conduntivity
39	2013-05-24 16:35:03 UTC-4	Conductivity_042413	L13051242-01	sample Conduntivity
40	2013-05-24 16:37:13 UTC-4	Conductivity_042413	L13051242-02	sample Conduntivity
41	2013-05-24 16:39:22 UTC-4	Conductivity_042413	L13051242-03	sample Conduntivity
42	2013-05-24 16:41:32 UTC-4	Conductivity_042413	L13051242-04	sample Conduntivity
43	2013-05-24 16:43:40 UTC-4	Conductivity_042413	L13051244-01	sample Conduntivity
44	2013-05-24 16:45:47 UTC-4	pH and Conductivity_042413	L13051304-01	sample Conduntivity
45	2013-05-24 16:51:17 UTC-4	pH and Conductivity_042413	L13051304-02	sample Conduntivity
46	2013-05-24 16:56:45 UTC-4	pH and Conductivity_042413	L13051304-03	sample Conduntivity
47	2013-05-24 17:02:13 UTC-4	Conductivity_042413	WG431689-05	sample Conduntivity
48	2013-05-24 17:04:13 UTC-4	pH	WG431691-02	sample pH
49	2013-05-24 17:06:36 UTC-4	Conductivity_042413	WG431689-05	sample Conduntivity

Determination overview

1	6.032	pH		
2	22.600	µS/cm		
3	1469.400	µS/cm		
4	5.00	mg/L		
5	93.15	mg/L		
6	92.80	mg/L		
7	1782.400	µS/cm	sample pH	9.008
8	554.200	µS/cm	sample pH	8.340
9	229.100	µS/cm	sample pH	7.518
10	264.900	µS/cm	sample pH	7.868
11	346.000	µS/cm	sample pH	7.946
12	325.200	µS/cm	sample pH	7.988
13	351.200	µS/cm	sample pH	7.993
14	347.900	µS/cm	sample pH	7.972
15	263.500	µS/cm	sample pH	7.700
16	1878.100	µS/cm	sample pH	7.783
17	1629.300	µS/cm	sample pH	7.556
18	1099.800	µS/cm	sample pH	7.128
19	1126.900	µS/cm	sample pH	7.204
20	659.900	µS/cm	sample pH	7.068
21	662.500	µS/cm	sample pH	7.599
22	14.20	mg/L		
23	731.200	µS/cm		
24	1464.600	µS/cm		
25	7.559	pH		
26	9.082	pH		
27	11.300	µS/cm		
28	1482.300	µS/cm		
29	9.80	mg/L		
30	93.20	mg/L		
31	93.38	mg/L		
32	1138.900	µS/cm		
33	150.200	µS/cm		
34	1452.900	µS/cm		
35	344.500	µS/cm		
36	308.000	µS/cm		
37	31.500	µS/cm		
38	1182.800	µS/cm		
39	331.000	µS/cm		
40	663.100	µS/cm		
41	661.200	µS/cm		
42	330.500	µS/cm		
43	1217.300	µS/cm		
44	356.400	µS/cm	sample pH	7.354
45	374.200	µS/cm	sample pH	7.653
46	488.400	µS/cm	sample pH	7.973
47	490.000	µS/cm		
48	7.692	pH		
49	1496.400	µS/cm		

Determination overview

1					
2					
3					
4					
5					
6					
7	pH	Alkal mg/L CaCO3	22.97	mg/L	
8	pH	Alkal mg/L CaCO3	229.00	mg/L	
9	pH	Alkal mg/L CaCO3	50.80	mg/L	
10	pH	Alkal mg/L CaCO3	56.40	mg/L	
11	pH	Alkal mg/L CaCO3	133.00	mg/L	
12	pH	Alkal mg/L CaCO3	67.00	mg/L	
13	pH	Alkal mg/L CaCO3	69.00	mg/L	
14	pH	Alkal mg/L CaCO3	133.74	mg/L	
15	pH	Alkal mg/L CaCO3	58.16	mg/L	
16	pH	Alkal mg/L CaCO3	54.12	mg/L	
17	pH	Alkal mg/L CaCO3	33.00	mg/L	
18	pH	Alkal mg/L CaCO3	17.20	mg/L	
19	pH	Alkal mg/L CaCO3	18.00	mg/L	
20	pH	Alkal mg/L CaCO3	14.20	mg/L	
21	pH	Alkal mg/L CaCO3	17.35	mg/L	
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
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36					
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41					
42					
43					
44	pH				
45	pH				
46	pH				
47					
48					
49					

Determination overview

50	2013-05-24 17:10:29 UTC-4	pH	PH 6	sample pH

Determination overview

50	6.033	pH

2.2.6 Fluoride Data

2.2.6.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Tammy Morris

METHOD

Analysis SM4500-F-C (Fluoride)

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.

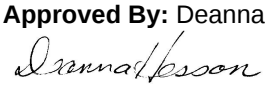
Matrix Spikes: All acceptance criteria were met.

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: 65233
Approved By: Deanna Hesson



2.2.6.2 QC Summary Data

Example Fluoride Calculations

(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: 29-MAY-2013
Analyst: TMM
Analyst: NA
Method: FLUORIDE
Instrument: ORION4-STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432165

Calibration/Linearity	5/29/13
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	TMM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
30-MAY-2013

Secondary Reviewer:
30-MAY-2013

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-30-2013 11:19:42

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-F-C-1997 AAB#: WG432165

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/29/2013	7.1	28		05/29/13	7.1	28	
MPL20-0513-1	02	05/22/13					05/29/2013	7.1	28		05/29/13	7.1	28	
MPL20-0513-2	03	05/22/13					05/29/2013	7.1	28		05/29/13	7.1	28	
MPL6-0513-1	04	05/22/13					05/29/2013	7	28		05/29/13	7	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2900080
Report generated 05/30/2013 13:30

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: O113053011024501
Prep Date: 05/29/13 15:28
Analyzed Date: 05/29/13 15:28
Analyst: TMM

Work Group: WG432165
Blank Sample ID: WG432165-01
Instrument ID: ORION-710A1
Method: SM4500-F-C-1997

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
DUP	WG432165-06	O113053011030901	05/29/13 15:28	
MPL6-0513-1	L13051242-04	O113053011035701	05/29/13 15:28	
LCS	WG432165-02	O113053011025001	05/29/13 15:28	
LCS	WG432165-04	O113053011030001	05/29/13 15:28	1
MPL19-0513-1	L13051242-01	O113053011034301	05/29/13 15:28	
MPL20-0513-2	L13051242-03	O113053011035301	05/29/13 15:28	
MPL20-0513-1	L13051242-02	O113053011034801	05/29/13 15:28	
LCS2	WG432165-03	O113053011025301	05/29/13 15:28	

Report Name: BLANK_SUMMARY
PDF File ID: 2900081
Report generated 05/30/2013 13:30

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13051242 Prep Date:05/29/13 15:28 Sample ID:WG432165-01
Instrument ID:ORION-710A1 Run Date:05/29/13 15:28 Prep Method:SM4500-F-C-1997
File ID:O113053011024501 Analyst:TMM Method:SM4500-F-C-1997
Workgroup (AAB#):WG432165 Matrix:Water Units:mg/L
Contract #: Cal ID:ORION--

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Fluoride	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: 2900082
30-MAY-2013 13:30

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** TMM **Prep Method:** SM4500-F-C-1997
Instrument ID: ORION-710A1 **Matrix:** Water **Method:** SM4500-F-C-1997
Workgroup (AAB#): WG432165 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD57948

Sample ID: WG432165-02 LCS **File ID:** O113053011025001 **Run Date:** 05/29/2013 15:28
Sample ID: WG432165-03 LCS2 **File ID:** O113053011025301 **Run Date:** 05/29/2013 15:28

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	1.88	94.0	2.00	1.91	95.5	1.58	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2900083
Report generated: 05/30/2013 13:30

2.2.6.3 Raw Data

FLUORIDE

(flouride2)

Cal. Stds: 54283 LCS/ICV: Std 57948

10/100 of 1000 = 100 mg/L
10/100 of 100 = 10 mg/L
10/100 of 10 = 1.0 mg/L
10/100 of 1.0 = 0.10 mg/L

non-dist method SM4500-F C 1997/ EPA 340.2
SOP #: K3402 Rev. #: 13
TISAB COA: 16767
Slope: -58.8 (-54 to -60)
Volumes are in mL / readout and result are in mg/L

Daily Dilution: 2
Daily Dilution: 5(25)/25=0.4
Spk dilution: 1(10)/25=0.4
CCV: 1 mg/L
Instrument: Orion 710-A #1

SAMPLE	VOLUME	DILUTION	READOUT	FINAL RESULT
ICV / LCS (2 ppm)	25		1.88	
ICB / BLANK	25		0.000	
LCS: (0.4 ppm)	25		0.393	
lcs Dup	25		1.91	
05-1088-01	25		0.336	
05-1146-01	25		0.193	
02	25		0.0884	
03	25		0.0753	
05-1304-01	25		0.194	
02	25		~~0.194~~ 0.0992	0.194
03	25		~~0.0003~~	0.0992
05-1373-01 Rx	25		0.0003	
02MS	25		0.367	
03msD	25		0.376	
04	25		0.000	
05-1242-01	25		0.194	
02	25		0.0747	
03	25		0.0705	
04	25		0.172	
05-146401	25		5.43	
" 02	25	1/2	7.64	
" 03	25	1/10	6.07	
" 04	25	1/10	5.49	
DUP: 05-1304-03	25		0.101	
~~MS:~~ 05-1464-05	25	1/10	4.36	
~~MSD:~~ ( ) " 06	25		4.52	
CCV: (ppm)	25		9.77	

Analyst: Tammy Moore Date: 5/29/13 @ 1528

05-1464-07	25		2.08

DCN#95763

2.2.7 Ammonia Data

2.2.7.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

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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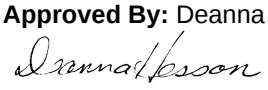
Narrative ID: 65228
Approved By: Deanna Hesson



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL19-0513-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:54
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	SC130531001.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0736	J	0.100	0.0500

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL20-0513-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	05/31/2013 09:09
Workgroup #:	WG432395	**Analyst:**	BAF	**Run Date:**	05/31/2013 09:56
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	SC130531001.058
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0628	J	0.100	0.0500

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

Certificate of Analysis

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-2 **Prep Method:** 350.1 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 350.1 **Cal Date:** 05/31/2013 09:09
Workgroup #: WG432395 **Analyst:** BAF **Run Date:** 05/31/2013 09:56
Collect Date: 05/22/2013 13:50 **Dilution:** 1 **File ID:** SC130531001.059
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.104		0.100	0.0500

Sample #: L13051242-04 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL6-0513-1 **Prep Method:** 350.1 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 350.1 **Cal Date:** 05/31/2013 09:09
Workgroup #: WG432395 **Analyst:** BAF **Run Date:** 05/31/2013 09:58
Collect Date: 05/22/2013 15:25 **Dilution:** 1 **File ID:** SC130531001.060
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.115		0.100	0.0500

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: 31-MAY-2013
Analyst: BAF
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432393 WG432395 WG432396

Calibration/Linearity	5-31-2013
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	BAF
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
31-MAY-2013
Brice Fenton

Secondary Reviewer:
01-JUN-2013
Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-01-2013 08:08:53

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 **AAB#:** WG432395

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	8.9	28		05/31/13	8.9	28	
MPL20-0513-1	02	05/22/13					05/31/2013	8.8	28		05/31/13	8.8	28	
MPL20-0513-2	03	05/22/13					05/31/2013	8.8	28		05/31/13	8.8	28	
MPL6-0513-1	04	05/22/13					05/31/2013	8.8	28		05/31/13	8.8	28	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2902682
Report generated 05/31/2013 12:48

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: SC130531001.040
Prep Date: 05/31/13 09:40
Analyzed Date: 05/31/13 09:40
Analyst: BAF

Work Group: WG432395
Blank Sample ID: WG432395-01
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
MPL19-0513-1	L13051242-01	SC130531001.057	05/31/13 09:54	01
MPL20-0513-1	L13051242-02	SC130531001.058	05/31/13 09:56	01
MPL20-0513-2	L13051242-03	SC130531001.059	05/31/13 09:56	01
MPL6-0513-1	L13051242-04	SC130531001.060	05/31/13 09:58	01
DUP	WG432395-06	SC130531001.071	05/31/13 10:07	01
LCS	WG432395-02	SC130531001.087	05/31/13 10:21	01

Report Name: BLANK_SUMMARY
PDF File ID: 2902683
Report generated 05/31/2013 12:48

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 09:40 Sample ID: WG432395-01
Instrument ID: SMARTCHEM Run Date: 05/31/13 09:40 Prep Method: 350.1
File ID: SC130531001.040 Analyst: BAF Method: 350.1
Workgroup (AAB#): WG432395 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC - 31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrogen, Ammonia	0.0500	0.100	0.0559	1	*

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

Report Name:BLANK
PDF ID: 2902684
31-MAY-2013 12:48

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Run Date:** 05/31/2013 **Sample ID:** WG432395-02
Instrument ID: SMARTCHEM **Run Time:** 10:21 **Prep Method:** 350.1
File ID: SC130531001.087 **Analyst:** BAF **Method:** 350.1
Workgroup (AAB#): WG432395 **Matrix:** Water **Units:** mg/L
QC Key: DOD4 **Lot#:** STD55893 **Cal ID:** SMARTC-31-MAY-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	2.10	105	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2902685
Report generated: 05/31/2013 12:48

2.2.7.3 Raw Data

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG432393

432395
432396

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9

Syringe filter lot # _____

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

1) **Workgroup** _____
Plan # 20130531001
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Position	Analyte	1	2	3
	NH3	Dilution		
	SC Prepared Curve			
	Position			
1-1	ICV 1.5			
1-2	Blk			
1-3	LCS 2			
1-4	05-1272-02			
1-5	05-1299-01	2/50		
1-6	02	1/50 Auto 1/2		
1-7	03			
1-8	04			
1-9	05			
1-10	06			
1-11	07	1/50 Auto 1/2		
1-12	08	1/50		
1-13	09	1/50		
1-14	10	1/50		
1-15	11			
1-16	12			
1-17	05-1311-02			
1-18	05-1395-01			
1-19	05-1396-01			
1-20	05-1222-01			
1-21	MS 02			
1-22	MSD 03			
2-1	05-1231-01			
2-2	02			
2-3	03			

Position	Analyte	1	2	3
2-4	05-1420-01			
2-5	DUP 1231-01			
2-6	MS 1311-02			
2-7	Blk			
2-8	LCS 2			
2-9	05-1399-01	2/50	Auto 1/5	
2-10	02	1/50	" 1/5	
2-11	03	1/50 x 1/4		
2-12	04	1/50	Auto 1/5	
2-13	05			
2-14	06	1/50	Auto 1/2	
2-15	05-1221-01			
2-16	MS 02			
2-17	MSD 03			
2-18	05-1232-01			
2-19	02			
2-20	05-1242-01			
2-21	02			
2-22	03			
2-23	04			
2-24	05-1295-01	1/50		
2-25	05-1304-01			
2-26	02			
3-1	03			
3-2	05-1373-01			

NOTES:
* Run NO2 std on NO3 runs
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#95795

SMARTCHEM RUN LOG
(smartchem2, smartchem3)

WORKGROUP: WG432393

Position	Analyte	1	2	3
3-3	05-1373-02	MS		
3-4	MSD 03			
3-5	05-1373-04			
3-6	DUP ↓			
3-7	Blk			
3-8	LCS 2			
3-9	LCSDUP			
3-10	05-1359-01			
3-11	02			
3-12	05-1378-34			
3-13	36			
3-14	38			
3-15	DUP 36			

Position	Analyte	1	2	3
3-16	MS 1378-36			
3-17				
3-18				
3-19				
3-20	LCS set 2			
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

	Chloride	EPA 325.2/SM 4500-CI 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	NH3	NH3AA	Reagents
SOP & Revision	K3501 Rev. 18 →		RGT26972
Curve Stock (SC made)	Std57973 →		RGT26904
Curve ID (user made)			RGT26908
ICV	Std57975 →		
CCV	Std57974 →		
LCS		Std57976	
MS	see dist. wrg Dilution	Std55893 0.1/(100/10) = 1	

Comments: _____

Analyst: Bruce Fenton Date: 5/31/13

DCN#95795

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: 55893 10(100)/100=10 DAILY DIL. 10(10)/50=2.0

SPIKE: Std 55893 10(100)/100=10 DAILY DIL. 5(10)/50=1.0

WATER (mg/L) SOIL (mg/Kg)

☑ easy-dist method ☐ macro method

RGT 26756 RGT 27117

NO ✓ PH yes ✓

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK	50	✓	✓	
LCS(2.0)	50	✓	✓	
05-1272-02	50	✓	✓	
05-1299-01	2	✓	✓	
02	1	✓	✓	
03	50	yes	✓	
04	50	yes	✓	
05	50	yes	✓	
06	50	✓	✓	
07	1	✓	✓	
08	1	yes	✓	
09	1	✓	✓	
10	1	✓	✓	
11	50	yes	✓	
12	50	yes	✓	
05-1311-02	50	✓	✓	
05-1395-01	50	✓	✓	
05-1396-01	50	✓	✓	
05-1222-01 Rx	50	✓	✓	
02 MS	(1.0) 50	✓	✓	
03 MSD	(1.0) 50	✓	✓	
05-1231-01	50	✓	✓	
~~DUP~~ " 02	50	✓	✓	
~~MS~~ " 03	50	✓	✓	
Dup 05-~~1231~~-04	50	✓	✓	

Analyst: Tammy Moore 1pm 5/31/13 Date/Time: 5/30/13 @ 820

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

MS 05-1311-02	(1.0) 50	✓	✓	
05-1420-01	50	✓	✓	

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: 55893 10(100)/100=10 DAILY DIL. 10(10)/50=2.0

SPIKE: 55893 10(100)/100=10 DAILY DIL. 5(10)/50=1.0

WATER (mg/L)

SOIL (mg/Kg)

☑ easy-dist method ☐ macro method

RGT 26750
RGT 27117

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT? NO ✓	pH ADJUSTED 9.5 ± 0.2 yes ✓	COMMENTS
BLANK	50	✓	✓	
LCS(2.0)	↓	✓	✓	
05-1399-01	2	✓	✓	V-P #Cooker
02	1	✓	✓	V-P Waste Heat
03	1	✓	✓	V-P Cooker #2
04	1	✓	✓	feather
05	50	✓	✓	
06	1	✓	✓	V-P Dog 1
05-1221-01 Rep	50	✓	✓	
" 02ms		✓	✓	
" 03msd		✓	✓	
05-1232-01		✓	✓	
" 02		✓	✓	
05-1242-01		✓	✓	
02		✓	✓	
03		✓	✓	
04	↓	✓	✓	
05-1295-01	1	✓	✓	
05-1304-01	50	✓	✓	
02		✓	✓	
03		✓	✓	
05-1373-01		✓	✓	
~~DUP~~ MS 05-1373 02 (1.0)	↓	✓	✓	
MS MSD " 03 (1.0)	50	✓	✓	
05-1373-04	50	✓	✓	

Analyst: Tammy Morris Date/Time: 5/30/13 1220

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

Dup 05-1373-4 IZ 50 | 50 | ✓ | ✓

TM 5/30/13

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	0.0459	0.00		9:02:13 AM
DIL-1	RBL	0.000	0.0484	0.00		9:02:30 AM
DIL-1	RBL	0.000	0.0466	0.00		9:04:01 AM
DIL-1	Std-1	0.000	-0.0004	0.00	INV	9:04:18 AM
SR5-1	Std-2	0.030	0.0121	0.00		9:05:49 AM
SR5-2	Std-3	0.094	0.0266	0.00		9:06:07 AM
SR5-3	Std-4	0.600	0.1751	0.00		9:07:37 AM
SR5-4	Std-5	1.050	0.3078	0.00		9:07:55 AM
SR5-5	Std-6	2.100	0.6001	0.00		9:09:25 AM
ST-1	Std-7	3.000	0.8668	0.00		9:09:43 AM
1	ICV	1.480	0.4272	0.00		9:11:13 AM
2	WG432393-01 BLK	0.069	0.0213	0.00		9:11:31 AM
3	WG432393-02 LCS	1.937	0.5588	0.00		9:13:01 AM
4	L13051272-01	0.183	0.0542	0.00		9:13:19 AM
5	L13051299-01 (25)	0.954	0.2760	0.00		9:14:49 AM
6	L13051299-02 (50)	X 8.005	2.3045	0.00	><,LH	9:15:07 AM
7	L13051299-03	0.206	0.0609	0.00		9:16:37 AM
8	L13051299-04	0.093	0.0284	0.00		9:16:55 AM
9	L13051299-05	0.128	0.0382	0.00		9:18:25 AM
10	L13051299-06	0.173	0.0514	0.00		9:18:43 AM
ST-2	CCV (1.5 mg/L)	1.526	0.4406	101.75		9:20:13 AM
ST-3	CCB (0 mg/L)	0.011	0.0047	0.00		9:20:31 AM
11	L13051299-07 (50)	X 7.284	2.0971	0.00	EPL,><,LH	9:22:01 AM
12	L13051299-08 (50)	1.916	0.5526	0.00		9:22:19 AM
13	L13051299-09 (50)	0.277	0.0812	0.00		9:23:49 AM
14	L13051299-10 (50)	0.543	0.1577	0.00		9:24:07 AM
15	L13051299-11	0.762	0.2208	0.00		9:25:37 AM
16	L13051299-12	0.728	0.2110	0.00		9:25:55 AM
17	L13051311-02	1.801	0.5195	0.00		9:27:25 AM
18	L13051395-01	0.139	0.0415	0.00		9:27:43 AM
19	L13051396-01	0.108	0.0326	0.00		9:29:14 AM
20	L13051222-01	0.116	0.0348	0.00		9:29:31 AM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531001**

Plan Description : NH3-A-BAF/5/31/2013

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)	1.527	0.4408	101.79		9:31:01 AM
ST-3	CCB (0 mg/L)	0.012	0.0049	0.00		9:31:19 AM
21	L13051222-02 MS	1.056	0.3053	0.00		9:32:50 AM
22	L13051222-03 MSD	1.112	0.3214	0.00		9:33:07 AM
23	L13051231-01	0.097	0.0294	0.00		9:34:38 AM
24	L13051231-02	0.110	0.0332	0.00		9:34:56 AM
25	L13051231-03	0.081	0.0247	0.00		9:36:26 AM
26	L13051420-01	0.869	0.2514	0.00		9:36:44 AM
27	WG432393-06 DUP	0.077	0.0237	0.00		9:38:14 AM
28	WG432393-07 MS	2.245	0.6474	0.00		9:38:32 AM
29	WG432395-01 BLK	0.056	0.0176	0.00		9:40:02 AM
30	WG432395-02 LCS	X1.771	0.5109	0.00		9:40:20 AM
ST-2	CCV (1.5 mg/L)	1.557	0.4495	103.81		9:41:50 AM
ST-3	CCB (0 mg/L)	0.016	0.0060	0.00		9:42:08 AM
31	L13051399-01 (25)	X14.726	4.2380	0.00	EPL,><,LH	9:43:38 AM
32	L13051399-02 (50)	X14.720	4.2364	0.00	><,LH	9:43:56 AM
33	L13051399-03 (200)	X 5.322	1.5325	0.00	><,LH	9:45:26 AM
34	L13051399-04 (50)	X16.343	4.7031	0.00	><,LH	9:45:44 AM
35	L13051399-05	0.144	0.0429	0.00		9:47:14 AM
36	L13051399-06 (50)	X9.351	2.6917	0.00	EPL,><,LH	9:47:32 AM
37	L13051221-01	0.220	0.0647	0.00		9:49:02 AM
38	L13051221-02 MS	0.985	0.2850	0.00		9:49:20 AM
39	L13051221-03 MSD	1.116	0.3227	0.00		9:50:50 AM
40	L13051232-01	0.084	0.0256	0.00		9:51:08 AM
ST-2	CCV (1.5 mg/L)	1.555	0.4488	103.65		9:52:38 AM
ST-3	CCB (0 mg/L)	0.022	0.0078	0.00		9:52:56 AM
41	L13051232-02	0.115	0.0347	0.00		9:54:26 AM
42	L13051242-01	0.074	0.0227	0.00		9:54:44 AM
43	L13051242-02	0.063	0.0196	0.00		9:56:14 AM
44	L13051242-03	0.104	0.0313	0.00		9:56:32 AM
45	L13051242-04	0.115	0.0346	0.00		9:58:02 AM
46	L13051295-01 (50)	X3.700	1.0659	0.00	><,LH	9:58:20 AM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531001**

Plan Description : NH3-A-BAF/5/31/2013

MICROBAC (OVD)
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
47	L13051304-01	0.077	0.0238	0.00		9:59:50 AM
48	L13051304-02	0.062	0.0194	0.00		10:00:08 AM
49	L13051304-03	0.050	0.0160	0.00		10:01:39 AM
50	L13051373-01	0.040	0.0130	0.00		10:01:56 AM
ST-2	CCV (1.5 mg/L)	1.590	0.4588	105.96		10:03:26 AM
ST-3	CCB (0 mg/L)	0.026	0.0091	0.00		10:03:44 AM
51	L13051373-02 MS	0.986	0.2853	0.00		10:05:15 AM
52	L13051373-03 MSD	0.907	0.2624	0.00		10:05:32 AM
53	L13051373-04	0.063	0.0195	0.00		10:07:03 AM
54	WG432395-06 DUP	0.081	0.0247	0.00		10:07:21 AM
55	WG432396-01 BLK	0.024	0.0084	0.00		10:08:51 AM
56	WG432396-02 LCS	2.120	0.6114	0.00		10:09:09 AM
57	WG432396-03 LCSDUP	2.116	0.6102	0.00		10:10:39 AM
58	L13051359-01	0.022	0.0076	0.00		10:10:57 AM
59	L13051359-02	0.018	0.0065	0.00		10:12:27 AM
60	L13051378-34	0.012	0.0049	0.00		10:12:45 AM
ST-2	CCV (1.5 mg/L)	1.586	0.4579	105.76		10:14:15 AM
ST-3	CCB (0 mg/L)	0.019	0.0069	0.00		10:14:33 AM
61	L13051378-36	0.004	0.0027	0.00		10:16:03 AM
62	L13051378-38	0.031	0.0103	0.00		10:16:21 AM
63	WG432396-05 DUP	-0.002	0.0008	0.00	LL	10:17:51 AM
64	WG432396-06 MS	0.898	0.2600	0.00		10:18:09 AM
65	ID 65	0.022	0.0078	0.00		10:19:39 AM
66	ID 66	0.005	0.0029	0.00		10:19:57 AM
67	ID 67	-0.038	-0.0096	0.00	INV,><,LL	10:21:27 AM
68	ID 68 LCS set 2	2.097	0.6047	0.00		10:21:45 AM
69	ID 69	2.122	0.6119	0.00		10:23:15 AM
70	ID 70	2.108	0.6080	0.00		10:23:33 AM
ST-2	CCV (1.5 mg/L)	1.590	0.4589	105.99		10:25:03 AM
ST-3	CCB (0 mg/L)	0.020	0.0071	0.00		10:25:21 AM
6-[1/2]	L13051299-02 (50)(2)	4.523	0.6521	0.00	LH	10:37:21 AM
11-[1/2]	L13051299-07 (50)(2)	3.976	0.5735	0.00	LH	10:39:09 AM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531001**

Plan Description : NH3-A-BAF/5/31/2013

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
31-[1/2]	L13051399-01 (25)(5)	X11.033	1.5885	0.00	><,LH	10:40:57 AM
32-[1/2]	L13051399-02 (50)(5)	X10.089	1.4528	0.00	><,LH	10:42:45 AM
33-[1/2]	L13051399-03 (200)(4) 5/31/13	5.657	0.8153	0.00	LH	10:44:33 AM
34-[1/2]	L13051399-04 (50)(5)	4.578	0.6601	0.00	LH	10:46:21 AM
36-[1/2]	L13051399-06 (50)(2)	5.061	0.7295	0.00	LH	10:48:09 AM
46-[1/2]	L13051295-01 (50)	3.848	0.5550	0.00	LH	10:49:57 AM
ST-2	CCV (1.5 mg/L)	1.569	0.4528	104.57		10:49:57 AM
ST-3	CCB (0 mg/L)	0.036	0.0120	0.00		10:51:27 AM
31-[1/5]	L13051399-01 (25)(5)	11.535	0.6652	0.00	LH	11:03:38 AM
32-[1/5]	L13051399-02 (50)(5)	10.156	0.5859	0.00	LH	11:05:26 AM
ST-2	CCV (1.5 mg/L)	1.605	0.4633	107.01		11:05:26 AM
ST-3	CCB (0 mg/L)	0.037	0.0121	0.00		11:06:56 AM

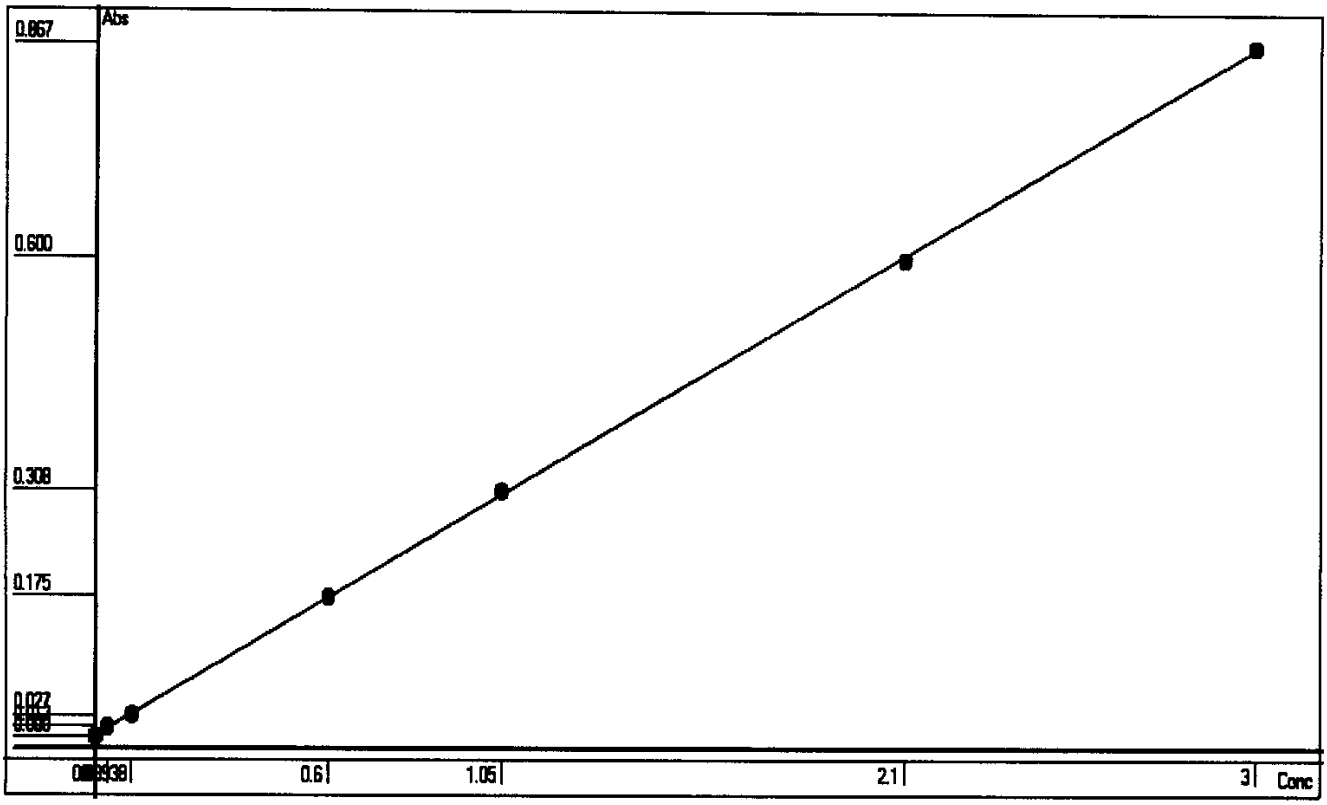
Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531001**

Plan Description : NH3-A-BAF/5/31/2013

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20130531001 Description : [NH3-A-BAF/5/31/2013]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0004	0	-0.0065	-0.65
2	0.0121	0.03	0.0370	23.33
3	0.0266	0.0938	0.0874	-6.82
4	0.1751	0.6	0.6035	0.58
5	0.3078	1.05	1.0648	1.41
6	0.6001	2.1	2.0808	-0.91
7	0.8668	3	3.0079	0.26

Conc= +3.476*Abso -0.0051 **R^2=0.9999**

RBL
0.0463
0

Report Date 5/31/2013 Run Date 5/31/2013

2.2.8 Nitrate Data

2.2.8.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

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

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

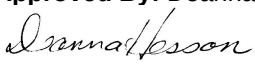
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65229
Approved By: Deanna Hesson



Certificate of Analysis

Sample #: L13051242-01 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL19-0513-1 **Prep Method:** 353.2 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 353.2 **Cal Date:** 05/31/2013 13:14
Workgroup #: WG432373 **Analyst:** BAF **Run Date:** 05/31/2013 16:10
Collect Date: 05/22/2013 12:15 **Dilution:** 4 **File ID:** SC13060408295901
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.66		0.200	0.100

Sample #: L13051242-02 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-1 **Prep Method:** 353.2 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 353.2 **Cal Date:** 05/31/2013 13:14
Workgroup #: WG432373 **Analyst:** BAF **Run Date:** 05/31/2013 16:10
Collect Date: 05/22/2013 13:50 **Dilution:** 8 **File ID:** SC13060408300601
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		7.58		0.400	0.200

Sample #: L13051242-03 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL20-0513-2 **Prep Method:** 353.2 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 353.2 **Cal Date:** 05/31/2013 13:14
Workgroup #: WG432375 **Analyst:** BAF **Run Date:** 05/31/2013 16:50
Collect Date: 05/22/2013 13:50 **Dilution:** 8 **File ID:** SC13060408185601
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		8.30		0.400	0.200

Sample #: L13051242-04 **PrePrep Method:** N/A **Instrument:** SMARTCHEM
Client ID: MPL6-0513-1 **Prep Method:** 353.2 **Prep Date:** N/A
Matrix: Water **Analytical Method:** 353.2 **Cal Date:** 05/31/2013 13:14
Workgroup #: WG432375 **Analyst:** BAF **Run Date:** 05/31/2013 16:50
Collect Date: 05/22/2013 15:25 **Dilution:** 4 **File ID:** SC13060408200601
Sample Tag: **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.59		0.200	0.100

2.2.8.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAY-2013
Analyst: BAF
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432373 WG432375

Calibration/Linearity	5-31-2013
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	BAF
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
03-JUN-2013
Brice Fenton

Secondary Reviewer:
04-JUN-2013
Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-04-2013 07:18:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 **AAB#:** WG432373

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	9.2	28		05/31/13	9.2	28	
MPL20-0513-1	02	05/22/13					05/31/2013	9.1	28		05/31/13	9.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2907331
Report generated 06/04/2013 09:23

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 **AAB#:** WG432375

Login Number: L13051242

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
MPL20-0513-2	03	05/22/13					05/31/2013	9.1	28		05/31/13	9.1	28	
MPL6-0513-1	04	05/22/13					05/31/2013	9.1	28		05/31/13	9.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2907331
Report generated 06/04/2013 09:23

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG432373
Blank File ID: SC13060408245501
Blank Sample ID: WG432373-01
Prep Date: 05/31/13 16:10
Instrument ID: SMARTCHEM
Analyzed Date: 05/31/13 16:10
Method: 353.2
Analyst: BAF

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432373-02	SC13060408250401	05/31/13 16:10	
DUP	WG432373-06	SC13060408253001	05/31/13 16:10	
MPL19-0513-1	L13051242-01	SC13060408295901	05/31/13 16:10	
LCS2	WG432373-03	SC13060408250901	05/31/13 16:10	
MPL20-0513-1	L13051242-02	SC13060408300601	05/31/13 16:10	

Report Name: BLANK_SUMMARY
PDF File ID: 2907332
Report generated 06/04/2013 09:23

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: SC13060408171001
Prep Date: 05/31/13 16:50
Analyzed Date: 05/31/13 16:50
Analyst: BAF

Work Group: WG432375
Blank Sample ID: WG432375-01
Instrument ID: SMARTCHEM
Method: 353.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
DUP	WG432375-06	SC13060408181501	05/31/13 16:50	
LCS2	WG432375-03	SC13060408174801	05/31/13 16:50	
MPL6-0513-1	L13051242-04	SC13060408200601	05/31/13 16:50	
LCS	WG432375-02	SC13060408174301	05/31/13 16:50	
MPL20-0513-2	L13051242-03	SC13060408185601	05/31/13 16:50	

Report Name: BLANK_SUMMARY
PDF File ID: 2907332
Report generated 06/04/2013 09:23

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 16:10 Sample ID: WG432373-01
Instrument ID: SMARTCHEM Run Date: 05/31/13 16:10 Prep Method: 353.2
File ID: SC13060408245501 Analyst: BAF Method: 353.2
Workgroup (AAB#): WG432373 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrate-Nitrite (as N)	0.0250	0.0500	0.0250	1	U

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

Report Name:BLANK
PDF ID: 2907333
04-JUN-2013 09:23

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/31/13 16:50 Sample ID: WG432375-01
Instrument ID: SMARTCHEM Run Date: 05/31/13 16:50 Prep Method: 353.2
File ID: SC13060408171001 Analyst: BAF Method: 353.2
Workgroup (AAB#): WG432375 Matrix: Water 2 Units: mg/L
Contract #: Cal ID: SMARTC - 31-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrate-Nitrite (as N)	0.0250	0.0500	0.0250	1	U

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

Report Name:BLANK
PDF ID: 2907333
04-JUN-2013 09:23

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** BAF **Prep Method:** 353.2
Instrument ID: SMARTCHEM **Matrix:** Water **Method:** 353.2
Workgroup (AAB#): WG432375 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD58237

Sample ID: WG432375-02 LCS **File ID:** SC13060408174301 **Run Date:** 05/31/2013 16:50
Sample ID: WG432375-03 LCS2 **File ID:** SC13060408174801 **Run Date:** 05/31/2013 16:50

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	1.00	100	1.00	0.993	99.3	0.802	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2907334
Report generated: 06/04/2013 09:23

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** BAF **Prep Method:** 353.2
Instrument ID: SMARTCHEM **Matrix:** Water **Method:** 353.2
Workgroup (AAB#): WG432373 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD58237

Sample ID: WG432373-02 LCS **File ID:** SC13060408250401 **Run Date:** 05/31/2013 16:10
Sample ID: WG432373-03 LCS2 **File ID:** SC13060408250901 **Run Date:** 05/31/2013 16:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	1.01	101	1.00	1.01	101	0.198	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2907334
Report generated: 06/04/2013 09:23

2.2.8.3 Raw Data

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG432373

432375

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [x] NO3 Reagent bottle connected / purged
- [x] NO3 pH adj to pH 5-9

Syringe filter lot # 159090

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

1) Workgroup _____
   Plan # 20130531003
2) Workgroup _____
   Plan # _____
3) Workgroup _____
   Plan # _____

Analyte		1 NO3	2	3
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 1.5			
1-2	BIK			
1-3	LCS 1			
1-4	LCSDUP			
1-5	NO2 1			
1-6	05-1489-01			
1-7	05-1492-01	1/2		
1-8	02	1/2		
1-9	03	1/100		
1-10	04	1/100		
1-11	05	1/10		
1-12	06	1/100		
1-13	07	1/100		
1-14	08	1/100		
1-15	09	1/100		
1-16	10	1/100		
1-17	11	1/50		
1-18	12	1/10		
1-19	05-1231-01	1/5		color
1-20	02	1/5		↓
1-21	03	1/5		↓
1-22	05-1232-01			
2-1	02			
2-2	05-1242-01			
2-3	02	Auto 1/2		

Position	Analyte	1	2	3
2-4	DUP 1232-01			
2-5	MS ↓			
2-6	MS 1232-02			
2-7	BIK			
2-8	LCS 1			
2-9	LCS DUP			
2-10	05-1242-03	Auto 1/2		
2-11	04			
2-12	05-1304-01			
2-13	02			
2-14	03			
2-15	05-1542-01			
2-16	04			
2-17	05-1373-01	Auto 1/2		
2-18	DUP ↓	" 1/2		
2-19	MS 02	" 1/2		
2-20	MSD 03	" 1/2		
2-21	04			
2-22	05-1540-01			
2-23	02			
2-24	05-1545-01			
2-25	02			
2-26	03			
3-1	04			
3-2	05			

NOTES:
* Run NO2 std on NO3 runs
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#95792

SMARTCHEM RUN LOG
(smartchem2, smartchem3)

WORKGROUP: WG432373

Position	Analyte	1	2	3
3-3	05-154507			
3-4	08			
3-5	09	Auto 1/2		
3-6	MS j304-02			
3-7	05-1586-02	1/10		
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	K3532 Rev. 19		RGT26764
Curve Stock (SC made)	Std58041		RGT26762
Curve ID (user made)			
ICV	Std57931		
CCV	Std58042		
LCS	Std58237		
MS	Std55642 Dilution 0.1/5 [25] = 0.5		

Comments: _____

Analyst: Brice Fenton Date: 5/31/13

DCN#95792

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	0.0177	0.00		3:58:53 PM
DIL-1	RBL	0.000	0.0121	0.00		4:00:05 PM
DIL-1	RBL	0.000	0.0116	0.00		4:01:17 PM
DIL-1	RBL	0.000	0.0096	0.00		4:02:29 PM
DIL-1	Std-1	0.000	-0.0008	0.00	INV	4:03:41 PM
SR5-1	Std-2	0.040	0.0111	0.00		4:04:53 PM
SR5-2	Std-3	0.100	0.0312	0.00		4:06:05 PM
SR5-3	Std-4	0.500	0.1524	0.00		4:07:17 PM
SR5-4	Std-5	1.000	0.3216	0.00		4:08:29 PM
ST-1	Std-6	2.000	0.6248	0.00		4:09:41 PM
1	ICV	1.554	0.4876	0.00		4:10:53 PM
2	WG432373-01 BLK	-0.005	-0.0022	0.00	INV,><,LL	4:12:05 PM
3	WG432373-02 LCS	1.010	0.3169	0.00		4:13:17 PM
4	WG432373-03 LCSDUP	1.012	0.3175	0.00		4:14:29 PM
5	NO2	1.019	0.3195	0.00	NO2	4:15:41 PM
6	L13051489-01	0.503	0.1574	0.00	0	4:16:53 PM
7	L13051492-01 (2)	0.692	0.2169	0.00	0.115	4:18:05 PM
8	L13051492-02 (2)	0.275	0.0857	0.00	0.023	4:19:18 PM
9	L13051492-03 (100)	0.981	0.3077	0.00	13.165	4:20:29 PM
10	L13051492-04 (100)	1.083	0.3398	0.00	22.782	4:21:42 PM
ST-2	CCV (1 mg/L)	0.986	0.3091	98.55		4:22:54 PM
ST-3	CCB (0 mg/L)	-0.010	-0.0038	0.00	INV,><,LL	4:24:06 PM
11	L13051492-05 (10)	0.262	0.0816	0.00	0	4:25:18 PM
12	L13051492-06 (100)	1.256	0.3940	0.00	3.146	4:26:30 PM
13	L13051492-07 (100)	1.201	0.3769	0.00	1.909	4:27:42 PM
14	L13051492-08 (100)	1.584	0.4972	0.00	0.716	4:28:54 PM
15	L13051492-09 (100)	1.251	0.3925	0.00	0.683	4:30:06 PM
16	L13051492-10 (100)	1.249	0.3920	0.00	0.656	4:31:18 PM
17	L13051492-11 (50)	X2.372	0.7446	0.00	0.551	><,LH 4:32:30 PM
18	L13051492-12 (10)	0.251	0.0782	0.00	0.025	4:33:42 PM
19	L13051231-01 (5)	0.231	0.0719	0.00		4:34:54 PM
20	L13051231-02 (5)	0.325	0.1017	0.00		4:36:06 PM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531003**

Plan Description : NO3-A-BAF/5/31/2013

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)	0.974	0.3056	97.44		4:37:18 PM
ST-3	CCB (0 mg/L)	-0.013	-0.0048	0.00	INV,><,LL	4:38:30 PM
21	L13051231-03 (5)	0.245	0.0765	0.00		4:39:42 PM
22	L13051232-01	0.818	0.2564	0.00		4:40:54 PM
23	L13051232-02	0.674	0.2112	0.00		4:42:06 PM
24	L13051242-01	X2.536	0.7964	0.00	><,LH	4:43:18 PM
25	L13051242-02	X7.619	2.3934	0.00	><,LH	4:44:30 PM
26	WG432373-06 DUP	0.634	0.1985	0.00		4:45:42 PM
27	WG432373-07 MS	1.061	0.3327	0.00		4:46:54 PM
28	WG432373-08 MS	1.174	0.3683	0.00		4:48:06 PM
29	WG432375-01 BLK	-0.010	-0.0037	0.00	INV,><,LL	4:49:18 PM
30	WG432375-02 LCS	1.001	0.3141	0.00		4:50:30 PM
ST-2	CCV (1 mg/L)	1.009	0.3164	100.87		4:51:42 PM
ST-3	CCB (0 mg/L)	-0.008	-0.0033	0.00	INV,><,LL	4:52:54 PM
31	WG432375-03 LCSDUP	0.993	0.3113	0.00		4:54:06 PM
32	L13051242-03	X8.299	2.6070	0.00	><,LH	4:55:18 PM
33	L13051242-04	X2.480	0.7786	0.00	><,LH	4:56:30 PM
34	L13051304-01	X2.830	0.8887	0.00	><,LH	4:57:42 PM
35	L13051304-02	X3.149	0.9888	0.00	><,LH	4:58:54 PM
36	L13051304-03	X5.293	1.6625	0.00	><,LH	5:00:06 PM
37	L13051542-02	0.758	0.2377	0.00		5:01:18 PM
38	L13051542-04	0.941	0.2950	0.00		5:02:30 PM
39	L13051373-01	X8.492	2.6679	0.00	><,LH	5:03:42 PM
40	WG432375-06 DUP	X8.385	2.6340	0.00	EPL,><,LH	5:04:54 PM
ST-2	CCV (1 mg/L)	1.016	0.3187	101.60		5:06:06 PM
ST-3	CCB (0 mg/L)	-0.004	-0.0020	0.00	INV,><,LL	5:07:18 PM
41	L13051373-02 MS	X8.408	2.6415	0.00	EPL,><,LH	5:08:31 PM
42	L13051373-03 MSD	X8.735	2.7442	0.00	EPL,><,LH	5:09:42 PM
43	L13051373-04	X6.788	2.1324	0.00	><,LH	5:10:55 PM
44	L13051540-01	1.802	0.5655	0.00		5:12:07 PM
45	L13051540-02	1.356	0.4255	0.00		5:13:19 PM
46	L13051545-01	0.661	0.2072	0.00		5:14:31 PM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531003**

Plan Description : NO3-A-BAF/5/31/2013

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
47	L13051545-02	0.873	0.2737	0.00 NO2		5:15:43 PM
48	L13051545-03	0.796	0.2495	0.00		5:16:55 PM
49	L13051545-04	0.886	0.2778	0.00		5:18:07 PM
50	L13051545-05	0.869	0.2726	0.00		5:19:19 PM
ST-2	CCV (1 mg/L)	1.027	0.3220	102.65		5:20:31 PM
ST-3	CCB (0 mg/L)	-0.009	-0.0035	0.00	INV,><,LL	5:21:43 PM
51	L13051545-07	0.418	0.1307	0.00		5:22:55 PM
52	L13051545-08	0.436	0.1365	0.00		5:24:07 PM
53	L13051545-09	X 11.300	3.5500	0.00	EPL,><,LH	5:25:19 PM
54	WG432375-09 MS	X 3.556	1.1168	0.00	><,LH	5:26:31 PM
55	L13051586-02 (10)	0.633	0.1984	0.00 0.157		5:27:43 PM
56	ID 56	-0.010	-0.0037	0.00	INV,><,LL	5:28:55 PM
57	ID 57	-0.003	-0.0015	0.00	INV,><,LL	5:30:07 PM
58	ID 58	1.035	0.3246	0.00		5:31:19 PM
59	ID 59	1.038	0.3256	0.00		5:32:31 PM
60	ID 60	1.167	0.3661	0.00		5:33:43 PM
ST-2	CCV (1 mg/L)	1.022	0.3206	102.21		5:34:55 PM
17-[1/4]	L13051492-11 (50)	2.534	0.1985	0.00 0.551	LH	5:44:06 PM
24-[1/4]	L13051242-01	2.655	0.2080	0.00	LH	5:46:12 PM
25-[1/4]	L13051242-02 (2)	3.788	0.2970	0.00	LH	5:48:18 PM
32-[1/4]	L13051242-03 (2)	4.152	0.3256	0.00	LH	5:50:24 PM
33-[1/4]	L13051242-04	2.593	0.2031	0.00	LH	5:52:30 PM
34-[1/4]	L13051304-01	3.146	0.2466	0.00	LH	5:54:36 PM
35-[1/4]	L13051304-02	3.241	0.2540	0.00	LH	5:56:41 PM
36-[1/4]	L13051304-03	5.710	0.4480	0.00	LH	5:58:47 PM
39-[1/4]	L13051373-01 (2)	4.442	0.3484	0.00	LH	6:00:53 PM
40-[1/4]	WG432375-06 DUP (2)	4.365	0.3423	0.00	LH	6:02:59 PM
ST-2	CCV (1 mg/L)	0.997	0.3126	99.66		6:03:53 PM
ST-3	CCB (0 mg/L)	***	-0.0066	0.00	SS	6:05:06 PM
41-[1/4]	L13051373-02 MS (2)	4.624	0.3627	0.00	LH	6:10:48 PM
42-[1/4]	L13051373-03 MSD (2)	4.589	0.3599	0.00	LH	6:12:54 PM
43-[1/4]	L13051373-04	7.371	0.5785	0.00	LH	6:15:00 PM

Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531003**

Plan Description : NO3-A-BAF/5/31/2013

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
53-[1/4]	L13051545-09 (2)	5.803	0.4553	0.00	LH	6:17:06 PM
54-[1/4]	WG432375-09 MS	3.757	0.2946	0.00	LH	6:19:12 PM
ST-2	CCV (1 mg/L)	***	-0.0039	-1.03	SS	6:20:06 PM
ST-3	CCB (0 mg/L)	-0.007	-0.0028	0.00	INV,><,LL	6:30:20 PM

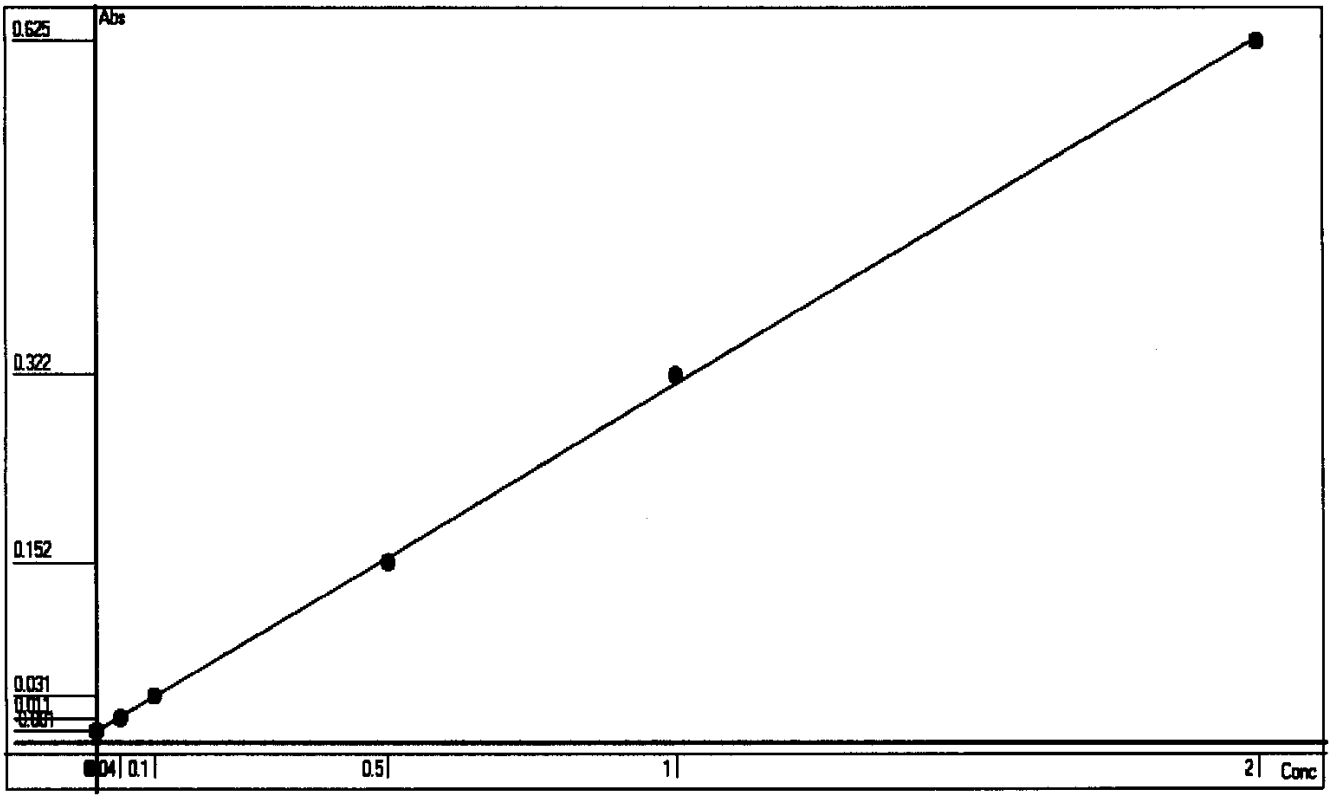
Report Date :05/31/2013 **Run Date :5/31/2013** **Operator : WESTCO** **Plan # :20130531003**

Plan Description : NO3-A-BAF/5/31/2013

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20130531003 Description : [NO3-A-BAF/5/31/2013]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0008	0	-0.0006	-0.06
2	0.0111	0.04	0.0372	-7.00
3	0.0312	0.1	0.1012	1.20
4	0.1524	0.5	0.4869	-2.62
5	0.3216	1	1.0254	2.54
6	0.6248	2	1.9903	-0.49

Conc= +3.1825*Abso +0.0019 R^2=0.9997

RBL
0.0119
0

Report Date 5/31/2013 Run Date 5/31/2013

2.2.9 Orthophosphate Data

2.2.9.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 365.2/SM4500-P E (Orthophosphate)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

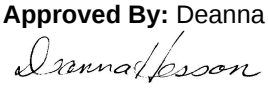
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65230
Approved By: Deanna Hesson



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL19-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	1V.1305231430-05
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 #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305231430-06
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL20-0513-2	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	1V.1305231430-07
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL6-0513-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	04/24/2013 13:20
Workgroup #:	WG431557	**Analyst:**	HJR	**Run Date:**	05/23/2013 14:30
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	1V.1305231430-08
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

2.2.9.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 23-MAY-2013
Analyst: HJR
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431557

Calibration/Linearity	4/23/13
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	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	LSB
Comments	

Primary Reviewer:
24-MAY-2013

Secondary Reviewer:
28-MAY-2013

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-28-2013 15:37:57

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-1999 AAB#: WG431557

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/23/2013	1.1	2		05/23/13	1.1	2	
MPL20-0513-1	02	05/22/13					05/23/2013	1	2		05/23/13	1	2	
MPL20-0513-2	03	05/22/13					05/23/2013	1	2		05/23/13	1	2	
MPL6-0513-1	04	05/22/13					05/23/2013	1	2		05/23/13	1	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2895801
Report generated 05/28/2013 15:42

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Blank File ID: 1V.1305231430-02
Prep Date: 05/23/13 14:30
Analyzed Date: 05/23/13 14:30
Analyst: HJR

Work Group: WG431557
Blank Sample ID: WG431557-01
Instrument ID: UV-120-1V
Method: SM4500-P-E-1999

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG431557-02	1V.1305231430-03	05/23/13 14:30	
LCS2	WG431557-03	1V.1305231430-04	05/23/13 14:30	
MPL19-0513-1	L13051242-01	1V.1305231430-05	05/23/13 14:30	
MPL20-0513-1	L13051242-02	1V.1305231430-06	05/23/13 14:30	
MPL20-0513-2	L13051242-03	1V.1305231430-07	05/23/13 14:30	
MPL6-0513-1	L13051242-04	1V.1305231430-08	05/23/13 14:30	
DUP	WG431557-05	1V.1305231430-09	05/23/13 14:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2895802
Report generated 05/28/2013 15:42

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/23/13 14:30 Sample ID: WG431557-01
Instrument ID: UV-120-1V Run Date: 05/23/13 14:30 Prep Method: SM4500-P-E-1999
File ID: 1V.1305231430-02 Analyst: HJR Method: SM4500-P-E-1999
Workgroup (AAB#): WG431557 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-10-MAY-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Orthophosphate	0.0250	0.0500	0.0250	1	U

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

Report Name:BLANK
PDF ID: 2895803
28-MAY-2013 15:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** HJR **Prep Method:** SM4500-P-E-1999
Instrument ID: UV-120-1V **Matrix:** Water **Method:** SM4500-P-E-1999
Workgroup (AAB#): WG431557 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD58048

Sample ID: WG431557-02 LCS **File ID:** 1V.1305231430-03 **Run Date:** 05/23/2013 14:30
Sample ID: WG431557-03 LCS2 **File ID:** 1V.1305231430-04 **Run Date:** 05/23/2013 14:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	1.02	102	1.00	1.02	102	0.481	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2895804
Report generated: 05/28/2013 15:42

2.2.9.3 Raw Data

WG427922

Curves

Parameter: P04

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std 55071

Concentration: 1000 mg/L

Recipe for preparation of curve standards found in:

SOP: 3153 Revision: 14 Page: 9

Second Source Stock: Std 57447 (concentration: 10mg/L)

Daily Preparation: 5(10)/50=

concentration = 1.0 mg/L

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
1.0	50	1cm	880	0.613
0.7				0.422
0.5				0.307
0.2				0.121
0.1				0.060
0.05				0.029
0.00				0.001
2nd source (1.0)	↓	↓	↓	0.616

Analyst: [signature] Date/Time: 4/24/13 1320

DCN#95184

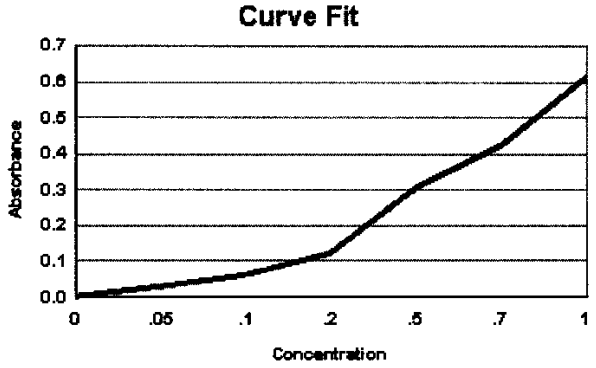
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup:WG427922
Analytical Method:300
Instrument ID:UV-120-1V

Analyst:HJR
Initial Calibration Date:04/24/2013

Analyte: ORTHOPHOSPHATE
Number of Points: 7
Slope: 0.611199
Y-Intercept: -0.000794045
Coef. Of Correlation (R^2): 0.999873
Coef. Of Correlation (R): 0.999936

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	-0.000794045
0.0500	0.0290	0.00250	0.00145	0.0297659
0.100	0.0600	0.0100	0.00600	0.0603259
0.200	0.121	0.0400	0.0242	0.121446
0.500	0.307	0.250	0.154	0.304806
0.700	0.422	0.490	0.295	0.427045
1.00	0.613	1.00	0.613	0.610405



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 04/24/2013 13:43

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG427922
File ID: 1V.1304241320-08
CCV ID: WG427922-08
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 04/24/2013
Run Time: 13:20
Analyst: HJR
Cal ID: UV-120 - 24-APR-13 13:20:07

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	1	1.01	0.616	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 04/24/2013 13:43

[redacted]

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 14

Color Reagent Chemicals
Rgt 24264
Rgt 24194
Rgt 24394
EDTA 16278

CCV: Std58049
Daily Dilution: 5(5)/50
Daily Dilution: 0.5
Spectrophotometer: UV-120-1V

LCS: Std58048
Daily Dilution: 5(10)/50
Daily Dilution: 1.0
Curve ID: 4/23/13

Spike: Std58048
Daily Dilution: 2(10)/50
Daily Dilution: 0.4

SAMPLE	VOLUME	pH 7 ± 0.2	DILUTION	ABSORBANCE @ 880 nm
CCV: 0.5 mg/L	50	✓		0.310
BLANK	50	✓		0.001
LCS: 1.6 ppm	50	✓		0.621
LCSDUP: 1.0 ppm	50	✓		0.624
05-1242-01	50	✓		0.003
-02	50	✓		0.005
-03	50	✓		0.004
-04	50	✓		0.004
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
DUP: 05-1242-01	50	✓		0.004
MS: (0.4) -02	50	✓		0.250
MSD: (___) ___	50			
CCV: (0.5) ___	50	✓		0.311

ANALYST: [signature]

DATE / TIME: 5/23/13 1430

DCN#95692

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG431557 **Analyst:** HJR
Analyte: ORTHOPHOSPHATE **Date:** 05/23/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG431557-01	50	50	0.00100	0.6112	-0.0007940	0.0029353	0.0029353	1	mg/L
WG431557-02	50	50	0.621	0.6112	-0.0007940	1.0173	1.0173	1	mg/L
WG431557-03	50	50	0.624	0.6112	-0.0007940	1.0222	1.0222	1	mg/L
L13051242-01	50	50	0.00300	0.6112	-0.0007940	0.0062075	ND	1	mg/L
WG431557-04	50	50	0.00300	0.6112	-0.0007940	0.0062075	0.0062075	1	mg/L
L13051242-02	50	50	0.00500	0.6112	-0.0007940	0.0094798	ND	1	mg/L
WG431557-06	50	50	0.00500	0.6112	-0.0007940	0.0094798	0.0094798	1	mg/L
L13051242-03	50	50	0.00400	0.6112	-0.0007940	0.0078437	ND	1	mg/L
L13051242-04	50	50	0.00400	0.6112	-0.0007940	0.0078437	ND	1	mg/L
WG431557-05	50	50	0.00400	0.6112	-0.0007940	0.0078437	0.0078437	1	mg/L
WG431557-07	50	50	0.250	0.6112	-0.0007940	0.41033	0.41033	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 05/24/2013 10:51

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG431661
File ID: 1V.1305231430-01
CCV ID: WG431661-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 05/23/2013
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 10-MAY-13

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.508	0.620	1.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 05/24/2013 10:38

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG431661
File ID: 1V.1305231430-11
CCV ID: WG431661-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 05/23/2013
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 10-MAY-13

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.510	0.622	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 05/24/2013 10:38

[redacted]

2.2.10 Total Dissolved Solids Data

2.2.10.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: April Greene

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

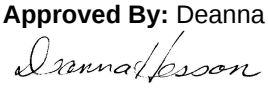
Matrix Spikes: All acceptance criteria were met.

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: 65234
Approved By: Deanna Hesson



Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL19-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	EN.1305250920-17
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		262		20.0	10.0

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250920-18
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		252		20.0	10.0

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-2	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250920-19
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		486		20.0	10.0

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL6-0513-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG431759	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:20
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	EN.1305250920-20
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		506		20.0	10.0

2.2.10.2 QC Summary Data

Example Total Dissolved Solids Calculations

[(WT2 - WT1) * 1000000]/volume = mg/L

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 25-MAY-2013
Analyst: ADG
Analyst: NA
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431759

Calibration/Linearity	05/25/13
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
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	ADG
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
31-MAY-2013

Secondary Reviewer:
01-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-01-2013 08:05:10

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2540-C-1997 **AAB#:** WG431759

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/25/2013	2.9	7		05/25/13	2.9	7	
MPL20-0513-1	02	05/22/13					05/25/2013	2.8	7		05/25/13	2.8	7	
MPL20-0513-2	03	05/22/13					05/25/2013	2.8	7		05/25/13	2.8	7	
MPL6-0513-1	04	05/22/13					05/25/2013	2.7	7		05/25/13	2.7	7	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2903941
Report generated 05/31/2013 16:47

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG431759
Blank File ID: EN.1305250920-13
Blank Sample ID: WG431759-01
Prep Date: 05/25/13 09:20
Instrument ID: OVEN
Analyzed Date: 05/25/13 09:20
Method: SM2540-C-1997
Analyst: ADG

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG431759-02	EN.1305250920-14	05/25/13 09:20	
LCS2	WG431759-03	EN.1305250920-15	05/25/13 09:20	
MPL19-0513-1	L13051242-01	EN.1305250920-17	05/25/13 09:20	
MPL20-0513-1	L13051242-02	EN.1305250920-18	05/25/13 09:20	
MPL20-0513-2	L13051242-03	EN.1305250920-19	05/25/13 09:20	
MPL6-0513-1	L13051242-04	EN.1305250920-20	05/25/13 09:20	
DUP	WG431759-05	EN.1305250920-36	05/25/13 09:20	
DUP	WG431759-07	EN.1305250920-37	05/25/13 09:20	

Report Name: BLANK_SUMMARY
PDF File ID: 2903942
Report generated 05/31/2013 16:47

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/25/13 09:20 Sample ID: WG431759-01
Instrument ID: OVEN Run Date: 05/25/13 09:20 Prep Method: 160.1/SM2540C
File ID: EN.1305250920-13 Analyst: ADG Method: SM2540-C-1997
Workgroup (AAB#): WG431759 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: 2903943
31-MAY-2013 16:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** ADG **Prep Method:** 160.1/SM2540C
Instrument ID: OVEN **Matrix:** Water **Method:** SM2540-C-1997
Workgroup (AAB#): WG431759 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD57652

Sample ID: WG431759-02 LCS **File ID:** EN.1305250920-14 **Run Date:** 05/25/2013 09:20
Sample ID: WG431759-03 LCS2 **File ID:** EN.1305250920-15 **Run Date:** 05/25/2013 09:20

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	504	101	500	500	100	0.797	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2903944
Report generated: 05/31/2013 16:47

2.2.10.3 Raw Data

WORKGROUP: WG431759

TOTAL DISSOLVED SOLIDS

(tds1)

Oven: TDS MICS1
☐ EPA 160.1 / SM2540C
LCS: Std 571652
Daily Dilution: 5(5000) 1:2 = 500

Balance: AND GR-202 / Other
Matrix Spike:
Daily Dilution:
Filter Lot #: 73083

			On Temp/Time:	158/1145	179.8 7:00	181 1140	1
SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)	
BLANK	BLK LS	100					
LCS: mg/L	LCS1	50					
LCSDUP: mg/L	LCS2	50					
1228-13	1	50					
1242-01	2						
-02	3						
03	4						
04	5						
1244-01	6						
1246-01	7						
-02	8						
1514-01 1328-01	9						
02 03	10						
03 05	11						
04 07	12						
05 09	13						
1515-01 1329-01	14						
-02 -03	15						
-03 -05	16						
-04 -07	17						
-05 -09	18						
-06 -11	19						
-07 -13	20						
DUP: 1242-01	Dup1						
DUP: 1329-13	Dup2 N3	↓					
			Off Temp/Time:	167 1900	172/1755	179 1535	1

ANALYST: Agustin Gomez

* Duplicate required on 10% of samples

DATE/TIME: (on) 5-25-13
DATE/TIME: (off) 5-28-13
DATE/TIME: (off)
DATE/TIME: (off)

DCN#95721

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG431759
Analyst: ADG
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument#: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD57652
Daily Dilution:

SAMPLE NUMBER		INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG431759-01	BLK	100	80.246	80.2466	80.2462		2.000	2.000	mg/L
WG431759-02	LCS	50	59.6891	59.714	59.7143		504.0	504.0	mg/L
WG431759-03	LCS2	50	64.183	64.2075	64.208		500.0	500.0	mg/L
L13051228-13	1	50	51.9071	51.9508	51.9507		872.0	872.0	mg/L
L13051242-01	2	50	67.7899	67.8026	67.803		262.0	262.0	mg/L
WG431759-04	2	50	67.7899	67.8026	67.803		262.0	262.0	mg/L
L13051242-02	3	50	55.6206	55.633	55.6332		252.0	252.0	mg/L
L13051242-03	4	50	64.41	64.4339	64.4343		486.0	486.0	mg/L
L13051242-04	5	50	57.0678	57.0928	57.0931		506.0	506.0	mg/L
L13051244-01	6	50	55.2528	55.2933	55.293		804.0	804.0	mg/L
L13051246-01	7	50	56.6281	56.6871	56.6872		1182	1182	mg/L
L13051246-02	8	50	61.1292	61.3392	61.3396		4208	4208	mg/L
L13051328-01	9	50	56.1198	56.277	56.2773		3150	3150	mg/L
L13051328-03	10	50	52.1251	52.2865	52.2861		3220	3220	mg/L
L13051328-05	11	50	63.4047	63.5627	63.5622		3150	3150	mg/L
L13051328-07	12	50	64.067	64.1665	64.1662		1984	1984	mg/L
L13051328-09	13	50	64.03	64.1519	64.1514		2428	2428	mg/L
L13051329-01	14	50	58.5633	58.5735	58.5732		198.0	198.0	mg/L
L13051329-03	15	50	60.9918	61.032	61.032		804.0	804.0	mg/L
L13051329-05	16	50	68.4817	68.5432	68.5435		1236	1236	mg/L
L13051329-07	17	50	61.7145	61.7462	61.7464		638.0	638.0	mg/L
L13051329-09	18	50	63.1812	63.2207	63.221		796.0	796.0	mg/L
L13051329-11	19	50	56.8281	56.8808	56.8806		1050	1050	mg/L
L13051329-13	20	50	61.0578	61.1029	61.1029		902.0	902.0	mg/L
WG431759-06	20	50	61.0578	61.1029	61.1029		902.0	902.0	mg/L
WG431759-05	DUP1	50	60.5462	60.5594	60.5593		262.0	262.0	mg/L
WG431759-07	DUP2	50	55.3611	55.4151	55.4146		1070	1070	mg/L

Analyst: April Greene

*Duplicate required on 10% of samples

Date/Time (on) : 05/25/2013 09:20
Date/Time (off): 05/28/2013 13:54
Date/Time (off): 05/28/2013 16:31
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2893475
Report generated: 05/31/2013 07:48

2.2.11 Total Organic Carbon Data

2.2.11.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: Brice Fenton

METHOD

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

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

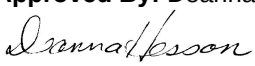
Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65231
Approved By: Deanna Hesson



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL19-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:18
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	TC05302013.046
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL20-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:38
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TC05302013.047
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL20-0513-2	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 04:58
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	TC05302013.048
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL6-0513-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	08/06/2012 08:11
Workgroup #:	WG432335	**Analyst:**	BAF	**Run Date:**	05/31/2013 05:19
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	TC05302013.049
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

2.2.11.2 QC Summary Data

Total Organic Carbon Example Calculations
(Direct Readout Parameter)

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 30-MAY-2013
Analyst: BAF
Analyst: NA
Method: TOC
Instrument: TOC-VWP
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG432331 WG432335 WG432337

Calibration/Linearity	8-1-2012
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	BAF
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
31-MAY-2013
Brice Fenton

Secondary Reviewer:
31-MAY-2013
Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-31-2013 16:26:50

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 **AAB#:** WG432335

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/31/2013	8.7	28		05/31/13	8.7	28	
MPL20-0513-1	02	05/22/13					05/31/2013	8.6	28		05/31/13	8.6	28	
MPL20-0513-2	03	05/22/13					05/31/2013	8.6	28		05/31/13	8.6	28	
MPL6-0513-1	04	05/22/13					05/31/2013	8.6	28		05/31/13	8.6	28	

*** = SEE PROJECT QAPP REQUIREMENTS**

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2903845
Report generated 05/31/2013 16:25

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number:	L13051242	Work Group:	WG432335
Blank File ID:	TC05302013.033	Blank Sample ID:	WG432335-01
Prep Date:	05/30/13 23:59	Instrument ID:	TOC-VWP
Analyzed Date:	05/30/13 23:59	Method:	415.1
Analyst:	BAF		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG432335-02	TC05302013.034	05/31/13 00:18	01
LCS2	WG432335-03	TC05302013.035	05/31/13 00:40	01
MPL19-0513-1	L13051242-01	TC05302013.046	05/31/13 04:18	01
MPL20-0513-1	L13051242-02	TC05302013.047	05/31/13 04:38	01
MPL20-0513-2	L13051242-03	TC05302013.048	05/31/13 04:58	01
MPL6-0513-1	L13051242-04	TC05302013.049	05/31/13 05:19	01
DUP	WG432335-05	TC05302013.052	05/31/13 06:01	01

Report Name: BLANK_SUMMARY
PDF File ID: 2903846
Report generated 05/31/2013 16:25

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/30/13 23:59 Sample ID: WG432335-01
Instrument ID: TOC-VWP Run Date: 05/30/13 23:59 Prep Method: 415.1
File ID: TC05302013.033 Analyst: BAF Method: 415.1
Workgroup (AAB#): WG432335 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-06-AUG-12

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: 2903847
31-MAY-2013 16:25

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 Analyst: BAF Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG432335 Units: mg/L
QC Key: DOD4 Lot #: STD57523

Sample ID: WG432335-02 LCS File ID: TC05302013.034 Run Date: 05/31/2013 00:18
Sample ID: WG432335-03 LCS2 File ID: TC05302013.035 Run Date: 05/31/2013 00:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	21.8	87.2	25.0	22.2	88.8	1.91	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2903848
Report generated: 05/31/2013 16:25

2.2.11.3 Raw Data

~~wg 405365~~ wg 405562 8/8/12

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): 1

Calibration Curve Date: _____

Reagent: R6+17495 R6+17230

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____

WG_____

SOP: K 4151 Rev. 14

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☐ waste container

Position	Sample ID	Dilution
1	TC curve	
2	TIC curve	
3	TC ICV	
4	TIC ICV	
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21	all points	
22		
23		
24		
25		

Position	Sample ID	Dilution
26		
27		
28	TC Curve	
29	std 52016	
30	see SOP for	
31		
32	TC ICV	
33	std 50986	
34	5/200(1000)=25	
35		
36		
37	TIC Curve	
38	std 50244	
39	see SOP for	
40		
41	TIC ICV	
42	std 53128	
43	5/200(1000)=25	
44		
45		
46	analyzed in	
47		
48		
49		
50		

Position	Sample ID	Dilution
51		
52		
53		
54		
55	curve points	
56		
57		
58		
59		
60		
61		
62		
63		
64	curve pts	
65		
66		
67		
68		
69		
70		
71	duplicate	
72		
73		
74		
75		

Analyst: Deanna Dixon Date/Time: 8/1/12

DCN#91827

	Analysi	Sample Name	Result	Status	Date / Time	Vial
1	TC	TCCURVE		Completed	8/1/2012 12:49:06 PM	0, 1,
2	IC	TICCURVE		Completed	8/1/2012 2:02:12 PM	0, 6,
3	TC	TC ICV	TC:24.96mg/L	Completed	8/1/2012 2:15:51 PM	11
4	IC	TIC ICV	IC:23.44mg/L	Completed	8/1/2012 2:27:54 PM	12

Instr.Information

System: TOCVW ASI
Detector: Wet Chemical

Cal. Curve

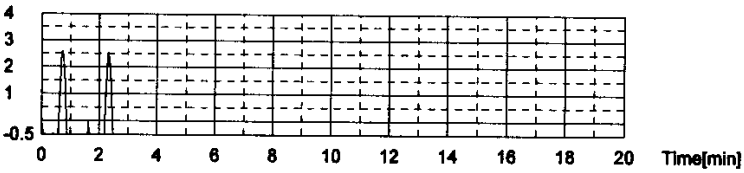
Sample Name: TCCURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-08-01-2012.2012_08_01_11_45_23.cal
Status: Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	9.931	500uL	1	********		8/1/2012 11:49:07 AM
2	9.253	500uL	1	********		8/1/2012 11:52:47 AM

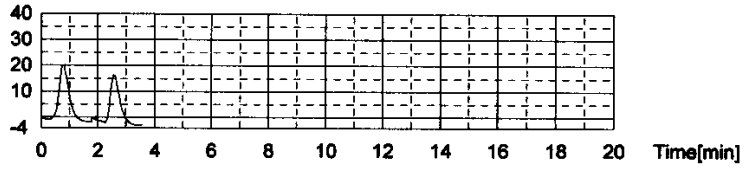
Acid Add. 0.000%
Mean Area 9.592



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	50.85	500uL	1	********		8/1/2012 11:58:18 AM
2	41.17	500uL	1	********		8/1/2012 12:02:20 PM

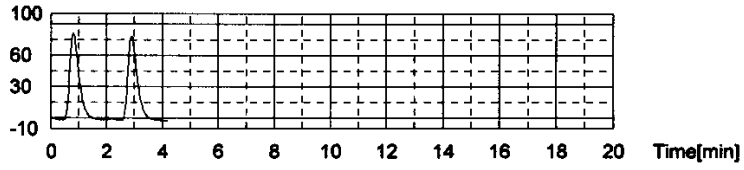
Acid Add. 0.000%
Mean Area 46.01



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	191.8	500uL	1	********		8/1/2012 12:08:22 PM
2	190.2	500uL	1	********		8/1/2012 12:12:44 PM

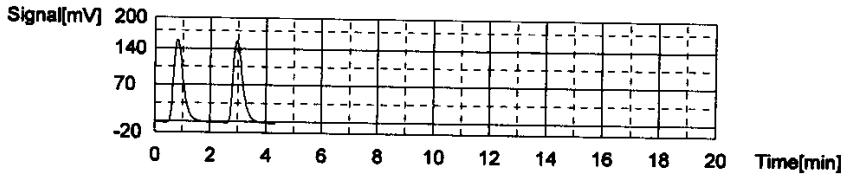
Acid Add. 0.000%
Mean Area 191.0



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	377.0	500uL	1	*******		8/1/2012 12:18:49 PM
2	378.7	500uL	1	*******		8/1/2012 12:23:25 PM

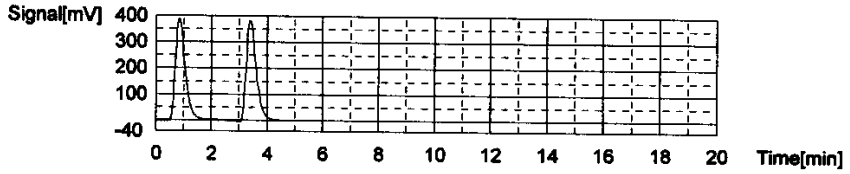
Acid Add. 0.000%
Mean Area 377.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	962.3	500uL	1	*******		8/1/2012 12:29:55 PM
2	953.1	500uL	1	*******		8/1/2012 12:35:22 PM

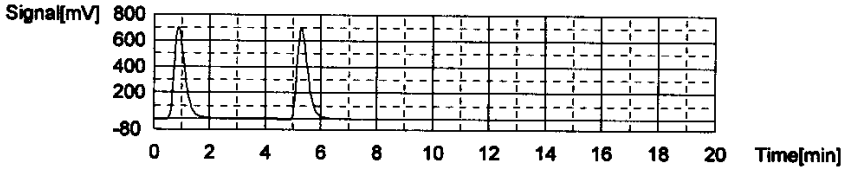
Acid Add. 0.000%
Mean Area 957.7



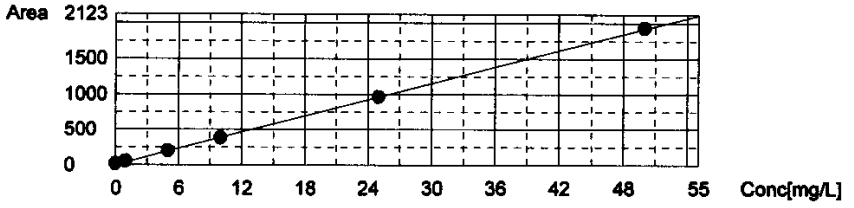
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1952	500uL	1	*******		8/1/2012 12:43:44 PM
2	1908	500uL	1	*******		8/1/2012 12:49:06 PM

Acid Add. 0.000%
Mean Area 1930



Slope: 38.46
Intercept 2.031
r^2 0.999915
Zero Shift No



Cal. Curve

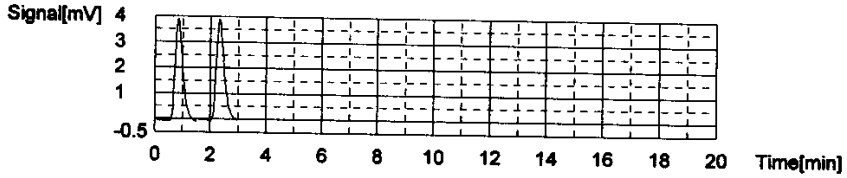
Sample Name: TICCURVE
Sample ID:
Cal. Curve: TICCURVE-08-01-2012.2012_08_01_12_49_06.cal
Status Completed

Type	Anal.
Standard	IC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.630	500uL	1	*******		8/1/2012 12:53:06 PM
2	7.558	500uL	1	*******		8/1/2012 12:57:02 PM

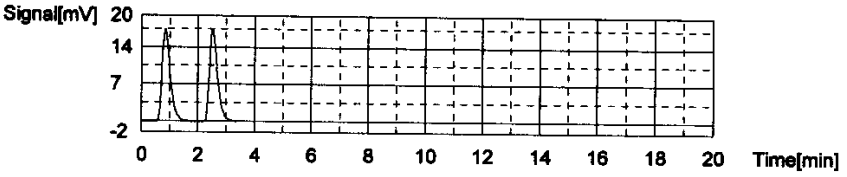
Acid Add. 10.00%
Mean Area 7.594



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	34.30	500uL	1	*******		8/1/2012 1:04:33 PM
2	34.42	500uL	1	*******		8/1/2012 1:08:55 PM

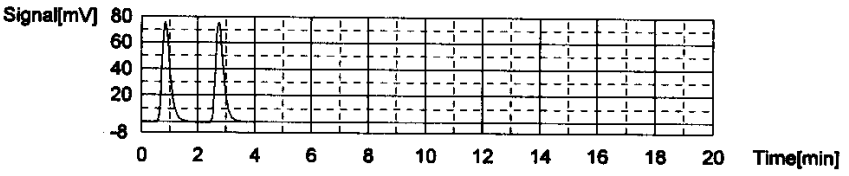
Acid Add. 10.00%
Mean Area 34.36



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	149.6	500uL	1	*******		8/1/2012 1:16:46 PM
2	147.7	500uL	1	*******		8/1/2012 1:21:22 PM

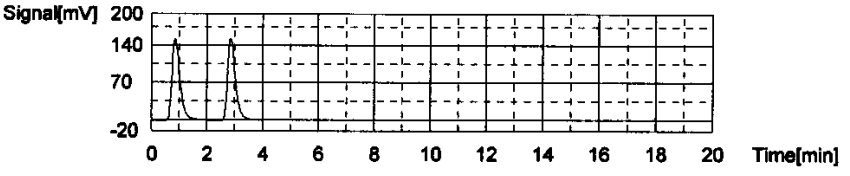
Acid Add. 10.00%
Mean Area 148.7



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	299.8	500uL	1	*******		8/1/2012 1:29:18 PM
2	298.0	500uL	1	*******		8/1/2012 1:34:07 PM

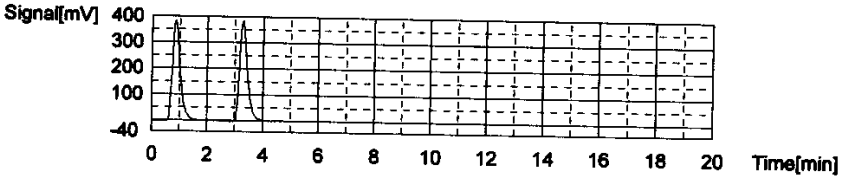
Acid Add. 10.00%
Mean Area 298.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	746.0	500uL	1	*******		8/1/2012 1:42:39 PM
2	739.9	500uL	1	*******		8/1/2012 1:47:36 PM

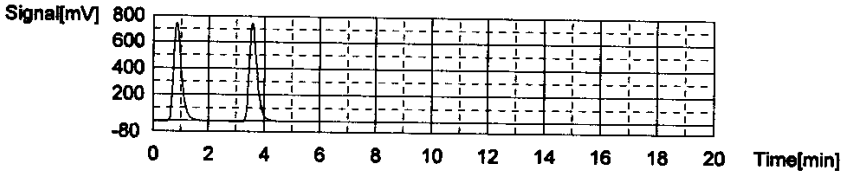
Acid Add. 10.00%
Mean Area 743.0



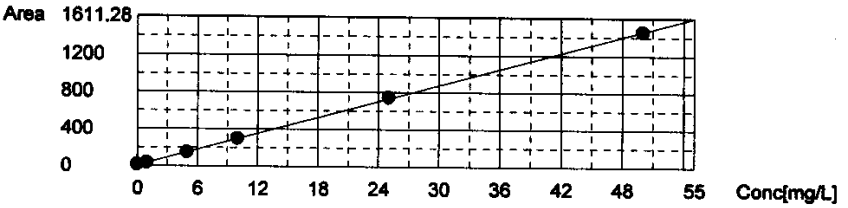
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1467	500uL	1	*******		8/1/2012 1:56:37 PM
2	1456	500uL	1	*******		8/1/2012 2:02:12 PM

Acid Add. 10.00%
Mean Area 1462



Slope: 29.16
Intercept 6.703
r^2 0.999949
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-08-01-2012.cal
Status Completed
Chk. Result

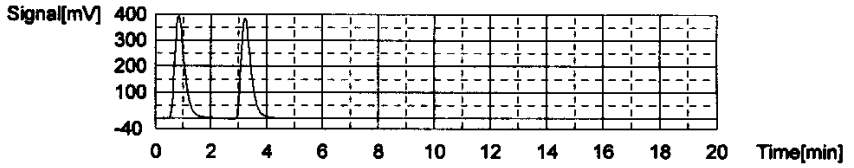
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:24.96mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	966.2	25.07mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_28	8/1/2012 2:10:01 PM
2	958.0	24.86mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_28	8/1/2012 2:15:51 PM

Mean Area 962.1
Mean Conc. 24.96mg/L



Sample

Sample Name:	TIC ICV
Sample ID:	
Origin:	TICCURVE-08-01-2012.cal
Status	Completed
Chk. Result	

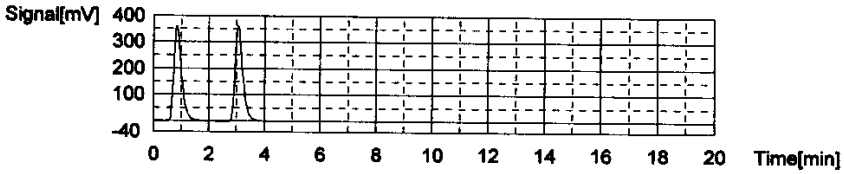
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:23.44mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	689.0	23.40mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	8/1/2012 2:22:39 PM
2	691.3	23.48mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	8/1/2012 2:27:54 PM

Mean Area 690.2
Mean Conc. 23.44mg/L



WORKGROUP: WG432331

(432335)

Total Organic Carbon

432337

MAKE DAILY

CCV (TOC): Std53579 (5/200)(1000) = 25mg/L

LCS (TOC): Std 57523 (5/200)(1000) = 25mg/L

CCV (TIC): Std56127 (5/200)(1000) = 25mg/L

MS (TOC): Std 57523 0.4/40 (1000) = 10

Calibration Curve Date: 8-1-2012

Reagent: RGT26966 / RGT26254

☑ SM5310-C : Matrix 2 WG 432335

☑ EPA 415.1/9060A(mod): Matrix 1 WG 432331 SOP: K 4151 Rev. 15

WG 432337 Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution
1	TIC 25	
2	CCV 25	
~~3~~ 0	Blk	
4	LCS 25	
~~5~~ 4	LCSDUP	
6	05-800-02	1/10
7	03	
8	05-804-01	1/40
9	02	
10	05-805-01	1/20
11	04	
12	DUP 04	
13	MS 05	
14	CCV	
~~15~~ 0	CCB	
16	05-805-06 USD	
17	07	1/2
18	05-910-02	1/10
19	05-1264-02	1/50
20	05-1279-01	1/4
21	02	1/4
22	05-1033-01	
23	05-1071-01	1/100
24	05-1146-01	
25	02	

Position	Sample ID	Dilution
~~26~~ 2	CCV	
~~27~~ 0	CCB	
28	05-1240-03	
29	04	
30	05	
31	06	
32	07	
~~33~~ 0	Blk	
34	LCS 25	
~~33 35~~ 34	LCSDUP	
36	05-1228-01	
37	03	
~~38~~ 14	CCV	
~~39~~ 0	CCB	
40	05-1228-05	
41	07	
42	09	
43	11	
44	13	
45	05-1240-08	
46	05-1242-01	
47	02	
48	03	
49	04	
~~50~~ 14	CCV	

Position	Sample ID	Dilution
~~51~~ 0	CCB	
52	DUP 1242-03	
53	MS ↓	
54	Blk-diss.	
55	LCS 25	
~~56~~ 55	LCSDUP	
57	05-1256-13	
58	14	
59	15	
60	16	
61	17	
62	CCV	
~~63~~ 0	CCB	
64	05-1256-18	
65	19	
66	20	
67	21	
68	23	V
~~69~~ 3	25	
~~70~~ 5	29	
~~71~~ 5	31	
~~72~~ 27	05-1295-01	1/500 *
~~73~~ 35	05-1302-01	
~~74~~ 2	CCV	
~~75~~ 0	CCB	

Analyst: Bruce Fenton Date/Time: 5/30/13/1430

DCN#95785

page 1

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

MS (TOC): _____

Calibration Curve Date: _____

Reagent: _____

☐ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ SOP: K _____ Rev. _____

WG_____ Instrument: Shimadzu 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~~ 39	05-1302-02	
~~2~~ 51	03	
~~3~~ 56	04	
~~4~~ 03	05	
~~5~~ 26	06	
~~6~~ 38	DUP 1256-31	
~~7~~ 50	MS	
~~8~~ 62	CCV	
~~9~~ 0	CCB	
~~10~~ 2	05-1279-02	1/10
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

Position	Sample ID	Dilution
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
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42		
43		
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46		
47		
48		
49		
50		

Position	Sample ID	Dilution
51		
52		
53		
54		
55		
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58		
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60		
61		
62		
63		
64		
65		
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68		
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70		
71		
72		
73		
74		
75		

Analyst: _____ Date/Time: _____

DCN#95785

page 2

	Analy	Sample Name	Result	Status	Date / Time	Vial
1	TOC	TIC 25	TOC:0.4033mg/L TC:26.52mg/L IC:26.12mg/L	Complete	5/30/2013 5:19:52 P	1
2	TOC	CCV 25	TOC:22.12mg/L TC:22.25mg/L IC:0.1278mg/L	Complete	5/30/2013 5:32:18 P	2
3	TOC	WG432331-01 BLK	TOC:0.1633mg/L TC:0.1724mg/L IC:0.00910mg/L	Complete	5/30/2013 5:41:18 P	0
4	TOC	WG432331-02 LCS	TOC:21.97mg/L TC:22.20mg/L IC:0.2351mg/L	Complete	5/30/2013 5:53:38 P	4
5	TOC	WG432331-03 LCSDUP	TOC:21.85mg/L TC:22.07mg/L IC:0.2183mg/L	Complete	5/30/2013 6:04:32 P	4
6	TOC	L13050800-02 (10)	TOC:26.17mg/L TC:30.99mg/L IC:4.818mg/L	Complete	5/30/2013 6:17:56 P	6
7	TOC	L13050800-03	TOC:3.558mg/L TC:19.28mg/L IC:15.73mg/L	Complete	5/30/2013 6:31:10 P	7
8	TOC	L13050804-01 (40)	TOC:16.99mg/L TC:19.51mg/L IC:2.523mg/L	Complete	5/30/2013 6:44:04 P	8
9	TOC	L13050804-02	TOC:2.770mg/L TC:24.55mg/L IC:21.78mg/L	Complete	5/30/2013 6:57:28 P	9
10	TOC	L13050805-01 (20)	TOC:21.12mg/L TC:25.84mg/L IC:4.722mg/L	Complete	5/30/2013 7:10:40 P	10
11	TOC	L13050805-04	TOC:2.479mg/L TC:19.25mg/L IC:16.77mg/L	Complete	5/30/2013 7:23:59 P	11
12	TOC	WG432331-05 DUP	TOC:1.123mg/L TC:19.31mg/L IC:18.19mg/L	Complete	5/30/2013 7:37:09 P	12
13	TOC	L13050805-05 MS	TOC:10.46mg/L TC:20.31mg/L IC:9.848mg/L	Complete	5/30/2013 7:50:02 P	13
14	TOC	CCV	TOC:21.71mg/L TC:21.84mg/L IC:0.1357mg/L	Complete	5/30/2013 8:02:29 P	14
15	TOC	CCB	TOC:0.1396mg/L TC:0.1565mg/L IC:0.01692mg/L	Complete	5/30/2013 8:11:28 P	0
16	TOC	L13050805-06 MSD	TOC:9.710mg/L TC:17.99mg/L IC:8.281mg/L	Complete	5/30/2013 8:24:01 P	16
17	TOC	L13050805-07 (2)	TOC:16.31mg/L TC:21.62mg/L IC:5.301mg/L	Complete	5/30/2013 8:37:34 P	17
18	TOC	L13050910-02 (10)	TOC:24.19mg/L TC:29.22mg/L IC:5.034mg/L	Complete	5/30/2013 8:50:35 P	18
19	TOC	L13051246-02 (50)	TOC:11.43mg/L TC:30.03mg/L IC:18.60mg/L	Complete	5/30/2013 9:04:10 P	19
20	TOC	L13051279-01 (4)	TOC:18.36mg/L TC:19.31mg/L IC:0.9566mg/L	Complete	5/30/2013 9:17:22 P	20
21	TOC		TOC:46.95mg/L TC:63.93mg/L IC:16.98mg/L	Complete	5/30/2013 9:31:52 P	21
22	TOC	L13051033-01	TOC:3.668mg/L TC:16.31mg/L IC:12.65mg/L	Complete	5/30/2013 9:45:45 P	22
23	TOC	L13051071-01 (100)	TOC:6.334mg/L TC:30.97mg/L IC:24.63mg/L	Complete	5/30/2013 9:59:35 P	23
24	TOC	L13051146-01	TOC:0.3982mg/L TC:3.824mg/L IC:3.426mg/L	Complete	5/30/2013 10:11:37	24
25	TOC	L13051146-02	TOC:0.4237mg/L TC:3.325mg/L IC:2.901mg/L	Complete	5/30/2013 10:23:37	25
26	TOC	CCV	TOC:21.87mg/L TC:21.94mg/L IC:0.06733mg/L	Complete	5/30/2013 10:36:05	2
27	TOC	CCB	TOC:0.1554mg/L TC:0.1624mg/L IC:0.00698mg/L	Complete	5/30/2013 10:45:06	0
28	TOC	L13051240-03	TOC:0.7448mg/L TC:16.18mg/L IC:15.43mg/L	Complete	5/30/2013 10:58:23	28
29	TOC	L13051240-04	TOC:0.8722mg/L TC:20.50mg/L IC:19.63mg/L	Complete	5/30/2013 11:11:31	29
30	TOC	L13051240-05	TOC:1.081mg/L TC:17.13mg/L IC:16.04mg/L	Complete	5/30/2013 11:24:46	30
31	TOC	L13051240-06	TOC:1.214mg/L TC:22.77mg/L IC:21.56mg/L	Complete	5/30/2013 11:38:25	31
32	TOC	L13051240-07	TOC:30.13mg/L TC:41.37mg/L IC:11.24mg/L	Complete	5/30/2013 11:53:50	32
33	TOC	WG432335-01 BLK	TOC:0.1162mg/L TC:0.1564mg/L IC:0.04024mg/L	Complete	5/31/2013 12:10:37	0
34	TOC	WG432335-02 LCS	TOC:21.79mg/L TC:21.91mg/L IC:0.1199mg/L	Complete	5/31/2013 12:31:54	34
35	TOC	WG432335-03 LCSDUP	TOC:22.21mg/L TC:22.32mg/L IC:0.1125mg/L	Complete	5/31/2013 12:53:21	33
36	TOC	L13051228-01	TOC:2.506mg/L TC:21.88mg/L IC:19.37mg/L	Complete	5/31/2013 1:16:24 A	36
37	TOC	L13051228-03	TOC:0.7026mg/L TC:4.891mg/L IC:4.189mg/L	Complete	5/31/2013 1:37:16 A	37
38	TOC	CCV	TOC:21.34mg/L TC:21.44mg/L IC:0.1035mg/L	Complete	5/31/2013 1:49:29 A	14
39	TOC	CCB	TOC:0.1311mg/L TC:0.1510mg/L IC:0.01984mg/L	Complete	5/31/2013 1:58:27 A	0
40	TOC	L13051228-05	TOC:5.412mg/L TC:23.83mg/L IC:18.42mg/L	Complete	5/31/2013 2:22:21 A	40
41	TOC	L13051228-07	TOC:0.4274mg/L TC:9.002mg/L IC:8.574mg/L	Complete	5/31/2013 2:44:01 A	41
42	TOC	L13051228-09	TOC:0.8567mg/L TC:10.13mg/L IC:9.277mg/L	Complete	5/31/2013 3:06:01 A	42
43	TOC	L13051228-11	TOC:0.3147mg/L TC:0.3218mg/L IC:0.00717mg/L	Complete	5/31/2013 3:25:22 A	43
44	TOC	L13051228-13	TOC:2.682mg/L TC:21.55mg/L IC:18.87mg/L	Complete	5/31/2013 3:48:40 A	44
45	TOC	L13051240-08	TOC:2.724mg/L TC:13.76mg/L IC:11.04mg/L	Complete	5/31/2013 4:11:14 A	45
46	TOC	L13051242-01	TOC:0.3121mg/L TC:1.850mg/L IC:1.538mg/L	Complete	5/31/2013 4:31:21 A	46
47	TOC	L13051242-02	TOC:0.4375mg/L TC:1.983mg/L IC:1.546mg/L	Complete	5/31/2013 4:51:45 A	47
48	TOC	L13051242-03	TOC:0.4072mg/L TC:1.992mg/L IC:1.585mg/L	Complete	5/31/2013 5:11:53 A	48
49	TOC	L13051242-04	TOC:0.3462mg/L TC:1.935mg/L IC:1.589mg/L	Complete	5/31/2013 5:32:09 A	49
50	TOC	CCV	TOC:21.26mg/L TC:21.41mg/L IC:0.1439mg/L	Complete	5/31/2013 5:44:37 A	14
51	TOC	CCB	TOC:0.1131mg/L TC:0.1498mg/L IC:0.03671mg/L	Complete	5/31/2013 5:53:41 A	0
52	TOC	WG432335-05 DUP	TOC:0.4682mg/L TC:1.493mg/L IC:1.025mg/L	Complete	5/31/2013 6:13:57 A	52
53	TOC	WG432335-06 MS	TOC:9.313mg/L TC:10.18mg/L IC:0.8675mg/L	Complete	5/31/2013 6:34:42 A	53
54	TOC	WG432337-01 BLK	TOC:0.2446mg/L TC:0.2961mg/L IC:0.05149mg/L	Complete	5/31/2013 6:45:59 A	54
55	TOC	WG432337-02 LCS	TOC:21.99mg/L TC:22.19mg/L IC:0.2043mg/L	Complete	5/31/2013 6:58:31 A	55
56	TOC	WG432337-03 LCSDUP	TOC:21.80mg/L TC:22.01mg/L IC:0.2115mg/L	Complete	5/31/2013 7:09:39 A	55
57	TOC	L13051256-13	TOC:3.160mg/L TC:5.139mg/L IC:1.980mg/L	Complete	5/31/2013 7:21:54 A	57
58	TOC	L13051256-14	TOC:1.144mg/L TC:2.491mg/L IC:1.348mg/L	Complete	5/31/2013 7:33:47 A	58
59	TOC	L13051256-15	TOC:1.010mg/L TC:2.268mg/L IC:1.259mg/L	Complete	5/31/2013 7:45:37 A	59
60	TOC	L13051256-16	TOC:1.146mg/L TC:2.950mg/L IC:1.804mg/L	Complete	5/31/2013 7:57:29 A	60
61	TOC	L13051256-17	TOC:0.9715mg/L TC:2.214mg/L IC:1.243mg/L	Complete	5/31/2013 8:09:22 A	61
62	TOC	CCV	!!Error!! TOC:21.71mg/L TC:21.69mg/L IC:-0.01980m	Complete	5/31/2013 8:37:52 A	62
63	TOC	CCB	TOC:0.1291mg/L TC:0.1644mg/L IC:0.03530mg/L	Complete	5/31/2013 8:46:54 A	0
64	TOC	L13051256-18	TOC:1.127mg/L TC:1.942mg/L IC:0.8150mg/L	Complete	5/31/2013 8:58:47 A	64
65	TOC	L13051256-19	TOC:1.376mg/L TC:2.719mg/L IC:1.343mg/L	Complete	5/31/2013 9:10:52 A	65
66	TOC	L13051256-20	TOC:1.166mg/L TC:2.358mg/L IC:1.192mg/L	Complete	5/31/2013 9:22:54 A	66
67	TOC	L13051256-21	TOC:0.8990mg/L TC:2.096mg/L IC:1.197mg/L	Complete	5/31/2013 9:34:44 A	67

1264 →

	Analy	Sample Name	Result	Status	Date / Time	Vial
68	TOC	L13051256-23	TOC:3.430mg/L TC:5.048mg/L IC:1.619mg/L	Complete	5/31/2013 9:47:00 A	68
69	TOC	L13051256-25	TOC:2.963mg/L TC:3.015mg/L IC:0.05241mg/L	Complete	5/31/2013 9:58:52 A	3
70	TOC	L13051256-29	TOC:1.375mg/L TC:2.094mg/L IC:0.7186mg/L	Complete	5/31/2013 10:10:44	5
71	TOC	L13051256-31	TOC:0.9121mg/L TC:1.327mg/L IC:0.4151mg/L	Complete	5/31/2013 10:22:27	15
72	TOC	L13051295-01 (500)	TOC:6.670mg/L TC:6.697mg/L IC:0.02666mg/L	Complete	5/31/2013 10:35:33	27
73	TOC	L13051302-01	TOC:0.8771mg/L TC:1.792mg/L IC:0.9148mg/L	Complete	5/31/2013 10:47:23	35
74	TOC	CCV	TOC:21.61mg/L TC:21.74mg/L IC:0.1240mg/L	Complete	5/31/2013 10:59:52	2
75	TOC	CCB	TOC:0.1072mg/L TC:0.1509mg/L IC:0.04370mg/L	Complete	5/31/2013 11:08:51	0
76	TOC	L13051302-02	TOC:0.7742mg/L TC:1.582mg/L IC:0.8081mg/L	Complete	5/31/2013 11:20:43	39
77	TOC	L13051302-03	TOC:0.8059mg/L TC:1.702mg/L IC:0.8966mg/L	Complete	5/31/2013 11:32:41	51
78	TOC	L13051302-04	TOC:1.101mg/L TC:2.049mg/L IC:0.9484mg/L	Complete	5/31/2013 11:44:43	56
79	TOC	L13051302-05	TOC:1.251mg/L TC:1.976mg/L IC:0.7248mg/L	Complete	5/31/2013 11:56:44	63
80	TOC	L13051302-06	TOC:1.115mg/L TC:1.758mg/L IC:0.6432mg/L	Complete	5/31/2013 12:08:46	26
81	TOC	WG432337-05 DUP	TOC:1.087mg/L TC:1.313mg/L IC:0.2255mg/L	Complete	5/31/2013 12:20:34	38
82	TOC	WG432337-06 MS	TOC:10.44mg/L TC:10.64mg/L IC:0.1926mg/L	Complete	5/31/2013 12:32:44	50
83	TOC	L13051279-02 (10)	TOC:15.34mg/L TC:22.55mg/L IC:7.211mg/L	Complete	5/31/2013 12:46:21	21
84	TOC	CCV	TOC:21.54mg/L TC:21.85mg/L IC:0.3160mg/L	Complete	5/31/2013 12:58:49	62
85	TOC	CCB	TOC:0.1144mg/L TC:0.1644mg/L IC:0.05001mg/L	Complete	5/31/2013 1:07:54 P	0

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

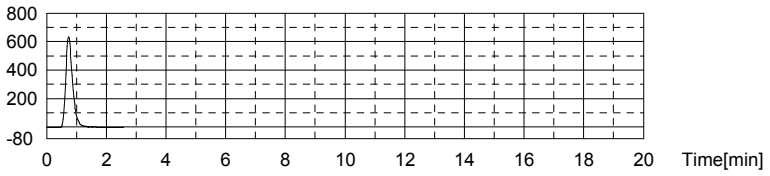
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4033mg/L TC:26.52mg/L IC:26.12mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1022	26.52mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 5:14:05 PM

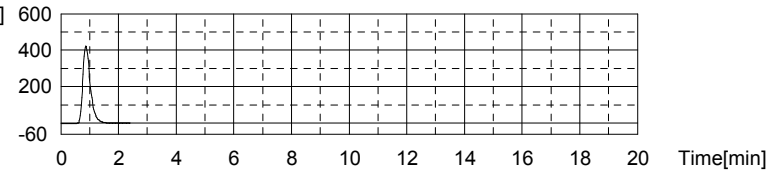
Mean Area 1022
Mean Conc. 26.52mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	768.3	26.12mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 5:19:52 PM

Mean Area 768.3
Mean Conc. 26.12mg/L



Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

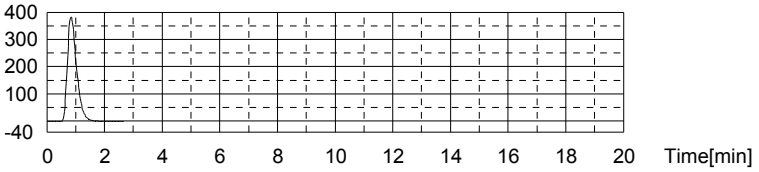
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:22.12mg/L TC:22.25mg/L IC:0.1278mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	857.6	22.25mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 5:27:57 PM

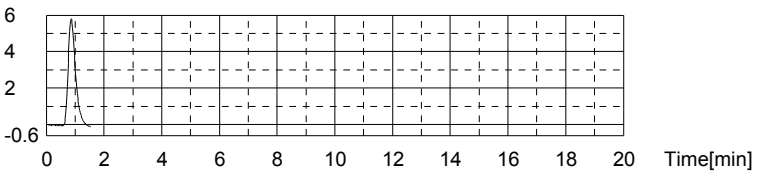
Mean Area 857.6
Mean Conc. 22.25mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.43	0.1278mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 5:32:18 PM

Mean Area 10.43
Mean Conc. 0.1278mg/L



Sample

Sample Name: WG432331-01 BLK
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

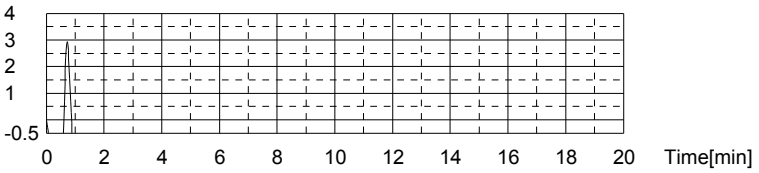
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1633mg/L TC:0.1724mg/L IC:0.00910mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.664	0.1724mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 5:37:27 PM

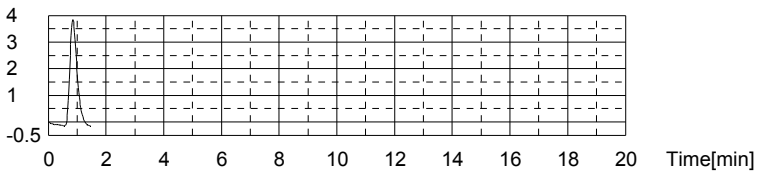
Mean Area 8.664
Mean Conc. 0.1724mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.969	0.00910mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 5:41:18 PM

Mean Area 6.969
Mean Conc. 0.00910mg/L



Sample

Sample Name: WG432331-02 LCS
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

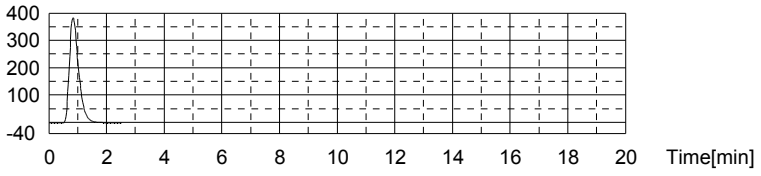
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.97mg/L TC:22.20mg/L IC:0.2351mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	856.0	22.20mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 5:49:16 PM

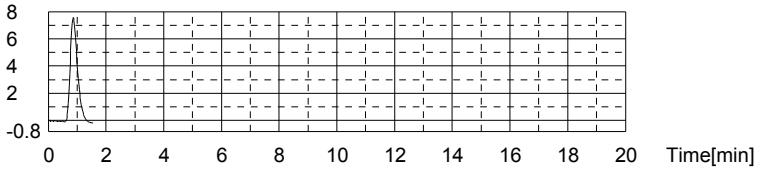
Mean Area 856.0
Mean Conc. 22.20mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.56	0.2351mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 5:53:38 PM

Mean Area 13.56
Mean Conc. 0.2351mg/L



Sample

Sample Name: WG432331-03 LCSDUP
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

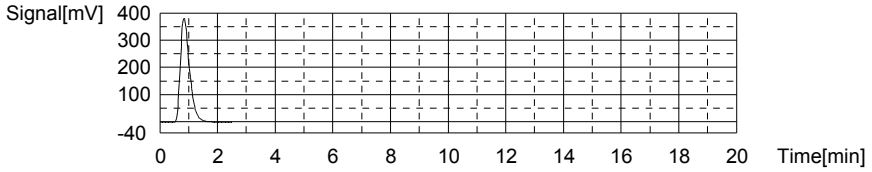
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.85mg/L TC:22.07mg/L IC:0.2183mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	850.8	22.07mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 6:00:07 PM

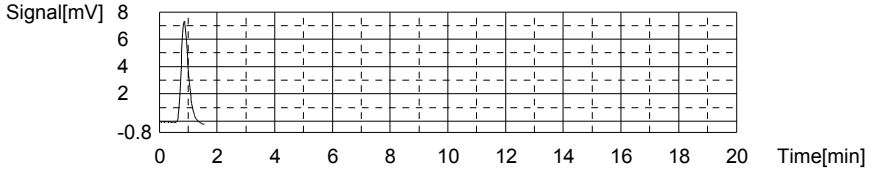
Mean Area 850.8
Mean Conc. 22.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.07	0.2183mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 6:04:32 PM

Mean Area 13.07
Mean Conc. 0.2183mg/L



Sample

Sample Name: L13050800-02 (10)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

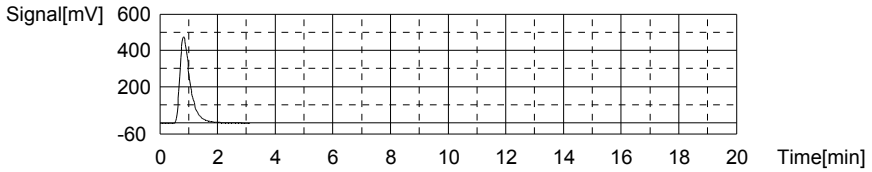
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:26.17mg/L TC:30.99mg/L IC:4.818mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1194	30.99mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 6:13:06 PM

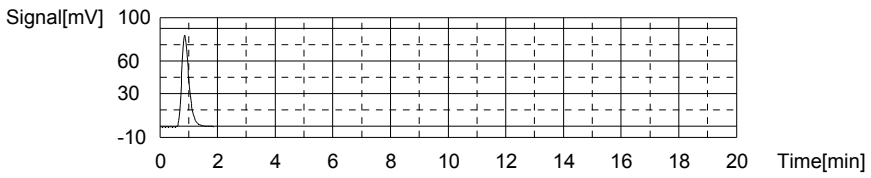
Mean Area 1194
Mean Conc. 30.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	147.2	4.818mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 6:17:56 PM

Mean Area 147.2
Mean Conc. 4.818mg/L



Sample

Sample Name: L13050800-03
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

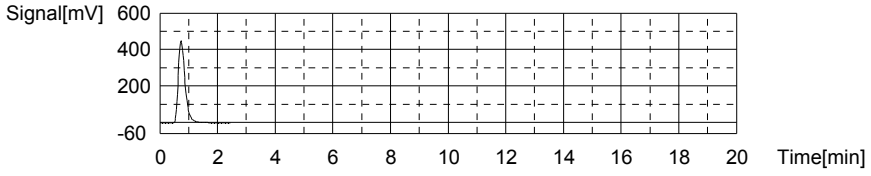
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.558mg/L TC:19.28mg/L IC:15.73mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	743.7	19.28mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 6:25:48 PM

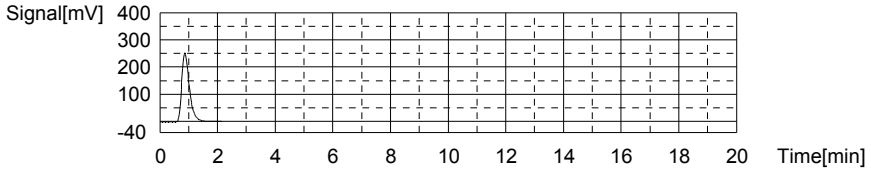
Mean Area 743.7
Mean Conc. 19.28mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	465.3	15.73mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 6:31:10 PM

Mean Area 465.3
Mean Conc. 15.73mg/L



Sample

Sample Name: L13050804-01 (40)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

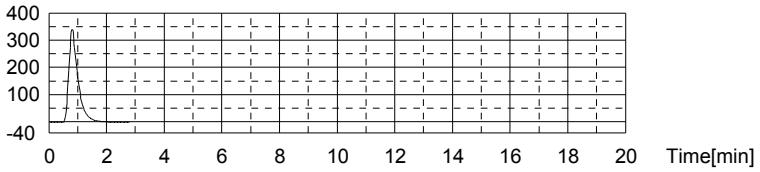
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:16.99mg/L TC:19.51mg/L IC:2.523mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	752.4	19.51mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 6:39:23 PM

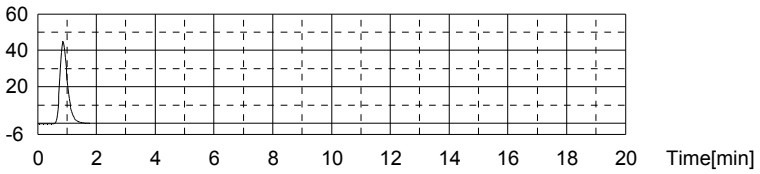
Mean Area 752.4
Mean Conc. 19.51mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.28	2.523mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 6:44:04 PM

Mean Area 80.28
Mean Conc. 2.523mg/L



Sample

Sample Name: L13050804-02
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

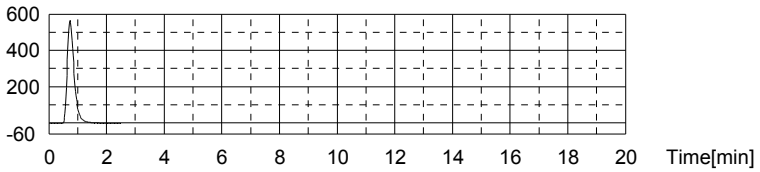
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.770mg/L TC:24.55mg/L IC:21.78mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	946.2	24.55mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 6:52:00 PM

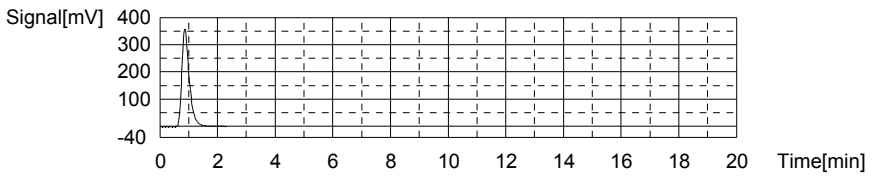
Mean Area 946.2
Mean Conc. 24.55mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	641.8	21.78mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 6:57:28 PM

Mean Area 641.8
Mean Conc. 21.78mg/L



Sample

Sample Name: L13050805-01 (20)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

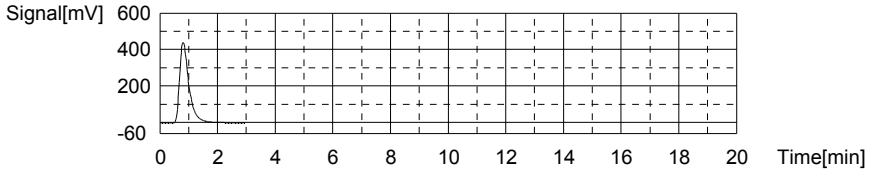
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.12mg/L TC:25.84mg/L IC:4.722mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	995.9	25.84mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 7:05:51 PM

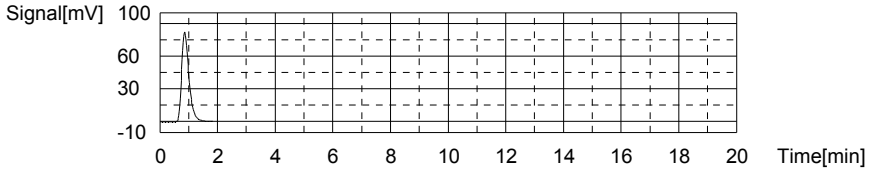
Mean Area 995.9
Mean Conc. 25.84mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	144.4	4.722mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 7:10:40 PM

Mean Area 144.4
Mean Conc. 4.722mg/L



Sample

Sample Name: L13050805-04
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

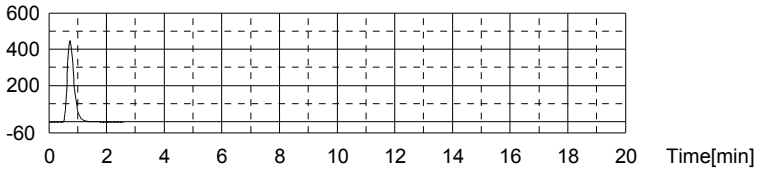
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.479mg/L TC:19.25mg/L IC:16.77mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	742.3	19.25mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 7:18:42 PM

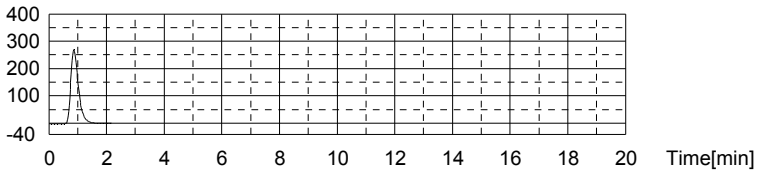
Mean Area 742.3
Mean Conc. 19.25mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	495.7	16.77mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 7:23:59 PM

Mean Area 495.7
Mean Conc. 16.77mg/L



Sample

Sample Name: WG432331-05 DUP
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

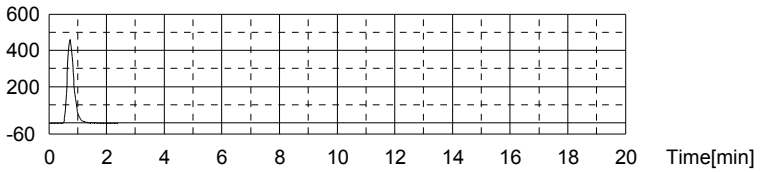
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.123mg/L TC:19.31mg/L IC:18.19mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	744.9	19.31mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 7:31:51 PM

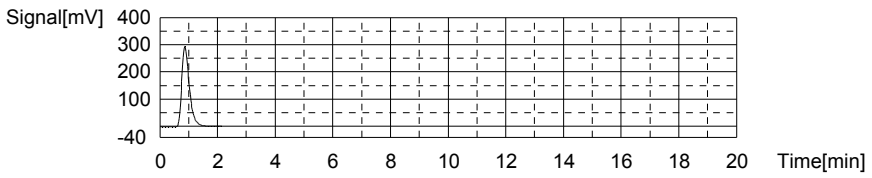
Mean Area 744.9
Mean Conc. 19.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	537.2	18.19mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 7:37:09 PM

Mean Area 537.2
Mean Conc. 18.19mg/L



Sample

Sample Name: L13050805-05 MS
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

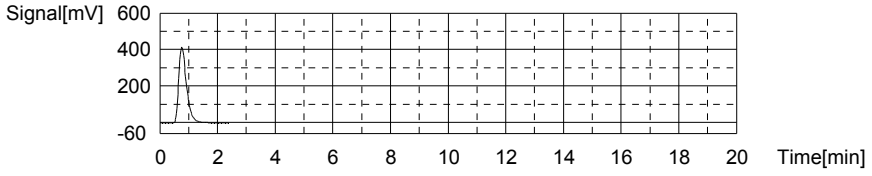
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.46mg/L TC:20.31mg/L IC:9.848mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	783.0	20.31mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 7:44:58 PM

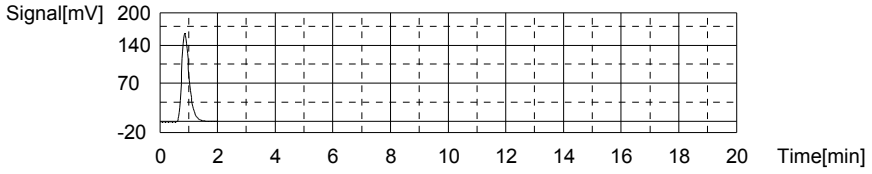
Mean Area 783.0
Mean Conc. 20.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	293.9	9.848mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 7:50:02 PM

Mean Area 293.9
Mean Conc. 9.848mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

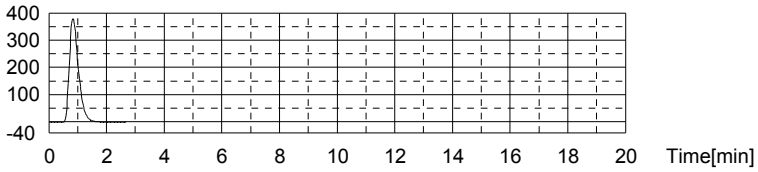
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.71mg/L TC:21.84mg/L IC:0.1357mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	842.2	21.84mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 7:58:09 PM

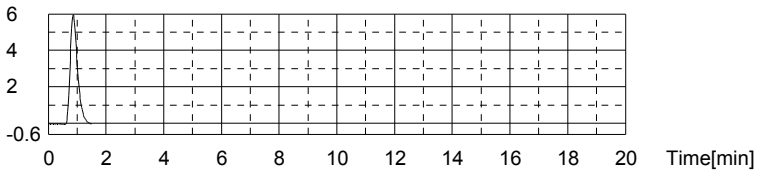
Mean Area 842.2
Mean Conc. 21.84mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.66	0.1357mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 8:02:29 PM

Mean Area 10.66
Mean Conc. 0.1357mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

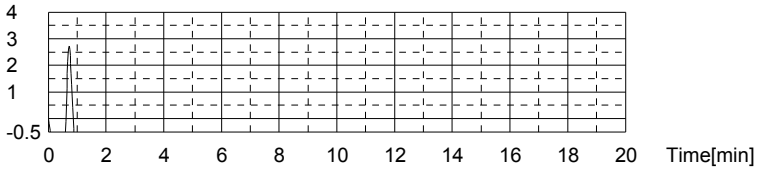
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1396mg/L TC:0.1565mg/L IC:0.01692mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.052	0.1565mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 8:07:39 PM

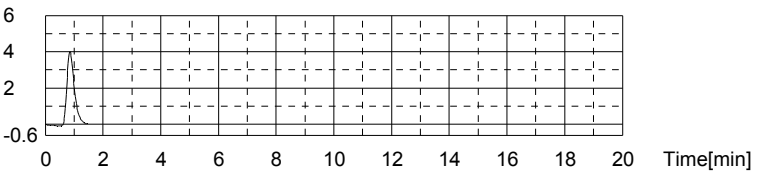
Mean Area 8.052
Mean Conc. 0.1565mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.197	0.01692mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 8:11:28 PM

Mean Area 7.197
Mean Conc. 0.01692mg/L



Sample

Sample Name: L13050805-06 MSD
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

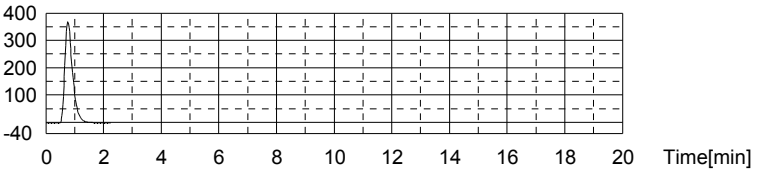
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.710mg/L TC:17.99mg/L IC:8.281mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	694.0	17.99mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 8:19:08 PM

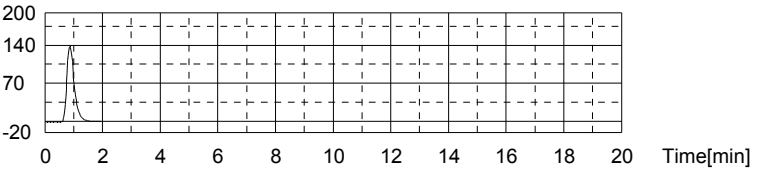
Mean Area 694.0
Mean Conc. 17.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	248.2	8.281mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 8:24:01 PM

Mean Area 248.2
Mean Conc. 8.281mg/L



Sample

Sample Name: L13050805-07 (2)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

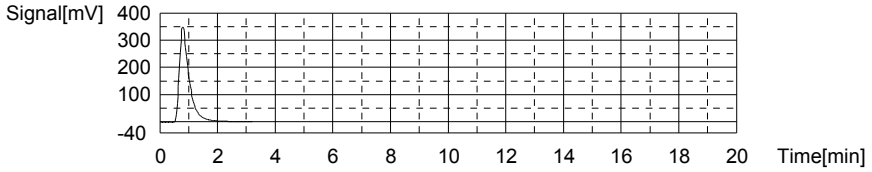
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:16.31mg/L TC:21.62mg/L IC:5.301mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	833.4	21.62mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 8:32:40 PM

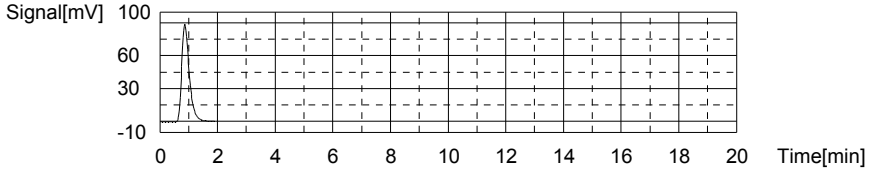
Mean Area 833.4
Mean Conc. 21.62mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	161.3	5.301mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 8:37:34 PM

Mean Area 161.3
Mean Conc. 5.301mg/L



Sample

Sample Name: L13050910-02 (10)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

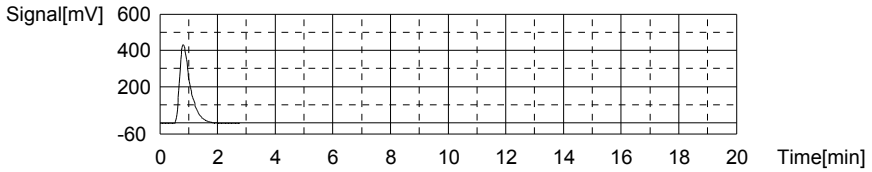
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:24.19mg/L TC:29.22mg/L IC:5.034mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1126	29.22mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 8:45:46 PM

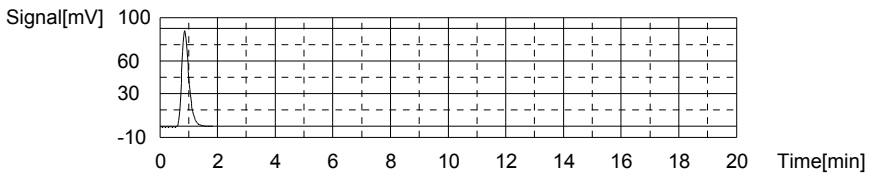
Mean Area 1126
Mean Conc. 29.22mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	153.5	5.034mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 8:50:35 PM

Mean Area 153.5
Mean Conc. 5.034mg/L



Sample

Sample Name: L13051246-02 (50)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

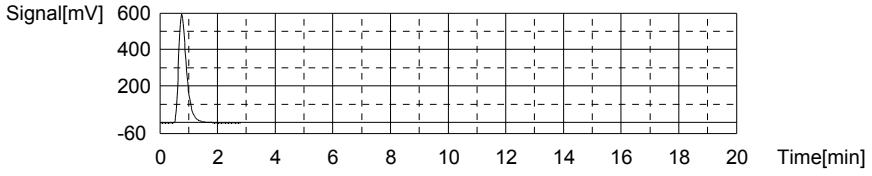
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.43mg/L TC:30.03mg/L IC:18.60mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1157	30.03mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 8:58:50 PM

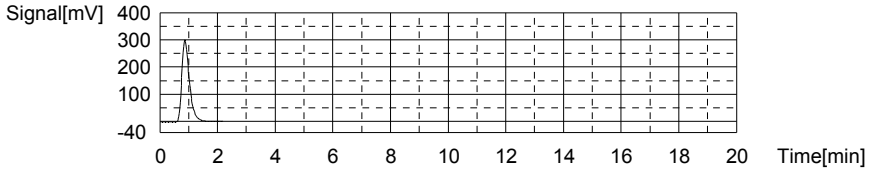
Mean Area 1157
Mean Conc. 30.03mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	549.1	18.60mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 9:04:10 PM

Mean Area 549.1
Mean Conc. 18.60mg/L



Sample

Sample Name: L13051279-01 (4)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

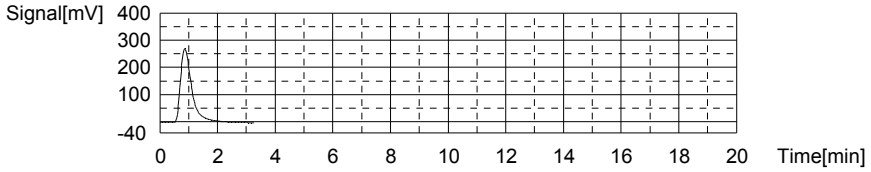
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:18.36mg/L TC:19.31mg/L IC:0.9566mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	744.8	19.31mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 9:12:51 PM

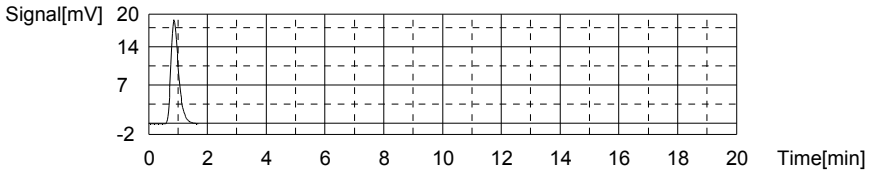
Mean Area 744.8
Mean Conc. 19.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.60	0.9566mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 9:17:22 PM

Mean Area 34.60
Mean Conc. 0.9566mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

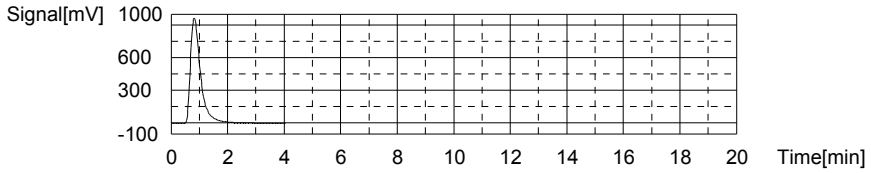
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:46.95mg/L TC:63.93mg/L IC:16.98mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2461	63.93mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 9:26:50 PM

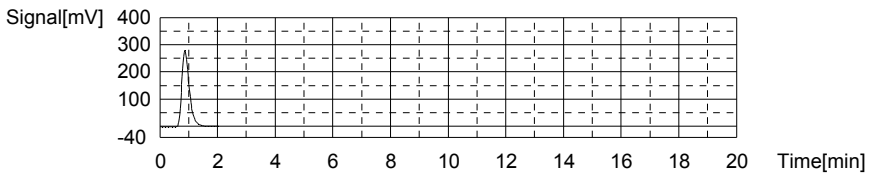
Mean Area 2461
Mean Conc. 63.93mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	501.9	16.98mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 9:31:52 PM

Mean Area 501.9
Mean Conc. 16.98mg/L



Sample

Sample Name: L13051033-01
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

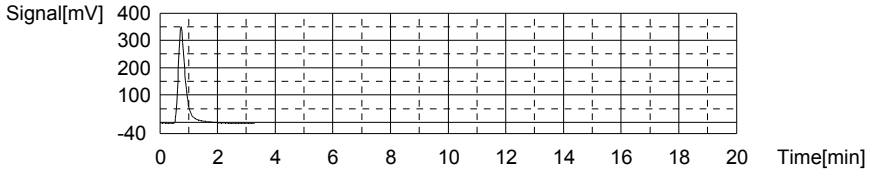
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.668mg/L TC:16.31mg/L IC:12.65mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	629.5	16.31mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 9:40:35 PM

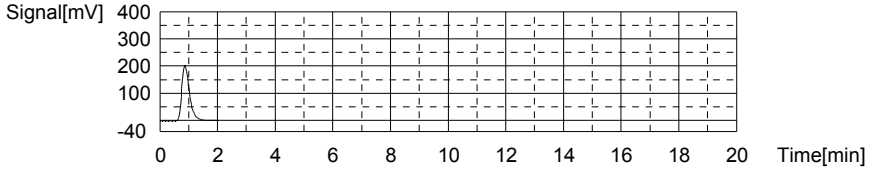
Mean Area 629.5
Mean Conc. 16.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	375.5	12.65mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 9:45:45 PM

Mean Area 375.5
Mean Conc. 12.65mg/L



Sample

Sample Name: L13051071-01 (100)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

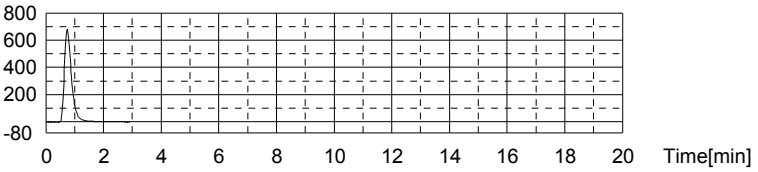
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.334mg/L TC:30.97mg/L IC:24.63mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1193	30.97mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 9:54:05 PM

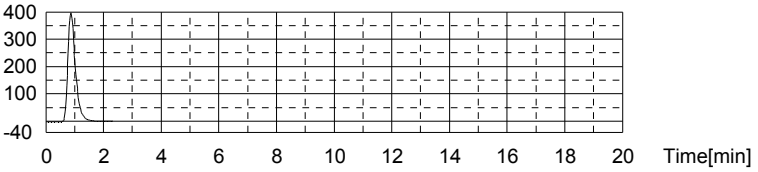
Mean Area 1193
Mean Conc. 30.97mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	725.0	24.63mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 9:59:35 PM

Mean Area 725.0
Mean Conc. 24.63mg/L



Sample

Sample Name: L13051146-01
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

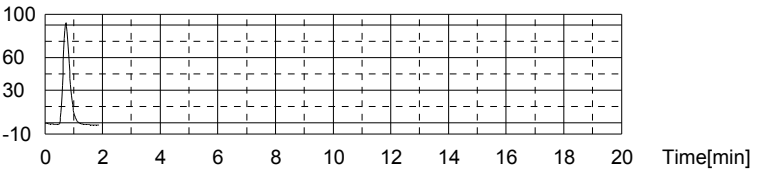
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.3982mg/L TC:3.824mg/L IC:3.426mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	149.1	3.824mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 10:06:54 PM

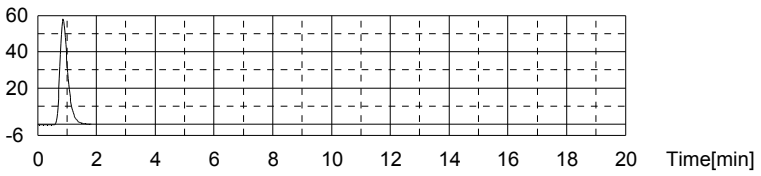
Mean Area 149.1
Mean Conc. 3.824mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	106.6	3.426mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 10:11:37 PM

Mean Area 106.6
Mean Conc. 3.426mg/L



Sample

Sample Name: L13051146-02
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

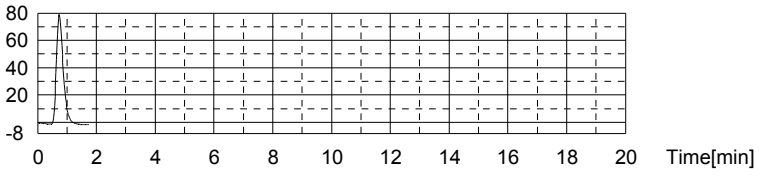
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4237mg/L TC:3.325mg/L IC:2.901mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	129.9	3.325mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 10:18:51 PM

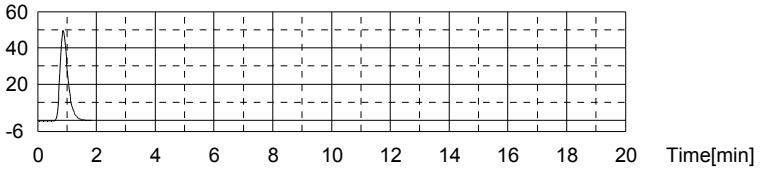
Mean Area 129.9
Mean Conc. 3.325mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	91.30	2.901mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 10:23:37 PM

Mean Area 91.30
Mean Conc. 2.901mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

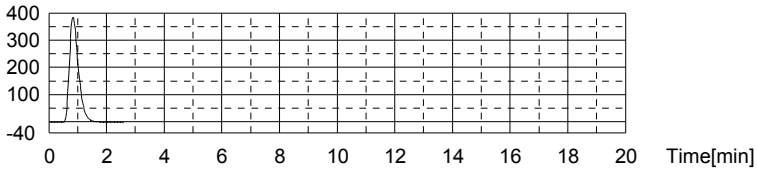
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.87mg/L TC:21.94mg/L IC:0.06733mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	845.8	21.94mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 10:31:40 PM

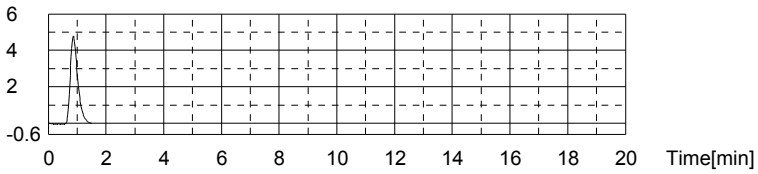
Mean Area 845.8
Mean Conc. 21.94mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.667	0.06733mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 10:36:05 PM

Mean Area 8.667
Mean Conc. 0.06733mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

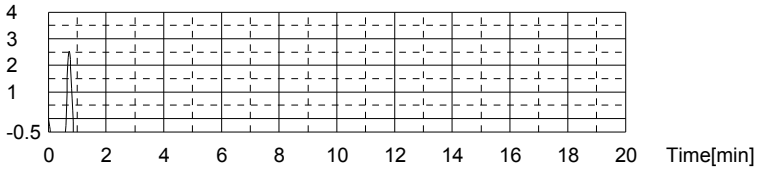
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1554mg/L TC:0.1624mg/L IC:0.00698mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.276	0.1624mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 10:41:13 PM

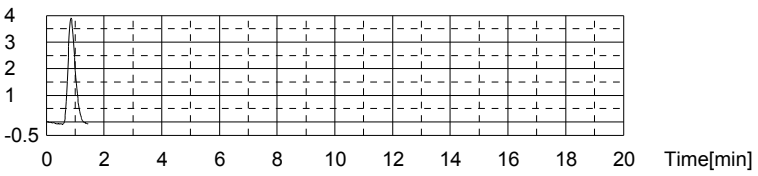
Mean Area 8.276
Mean Conc. 0.1624mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.907	0.00698mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 10:45:06 PM

Mean Area 6.907
Mean Conc. 0.00698mg/L



Sample

Sample Name: L13051240-03
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

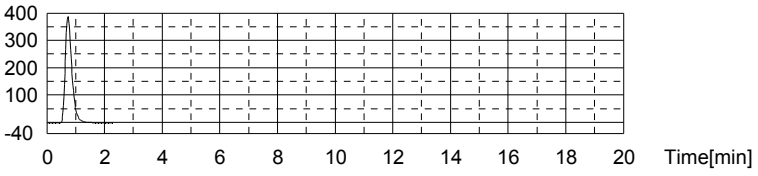
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7448mg/L TC:16.18mg/L IC:15.43mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	624.3	16.18mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_2	5/30/2013 10:53:06 PM

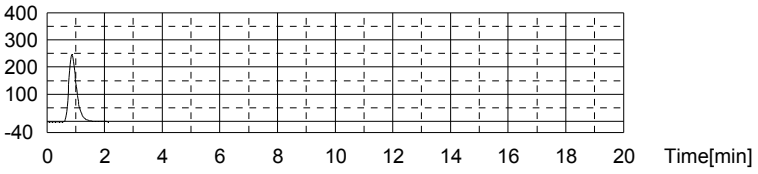
Mean Area 624.3
Mean Conc. 16.18mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	456.8	15.43mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/30/2013 10:58:23 PM

Mean Area 456.8
Mean Conc. 15.43mg/L



Sample

Sample Name: L13051240-04
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

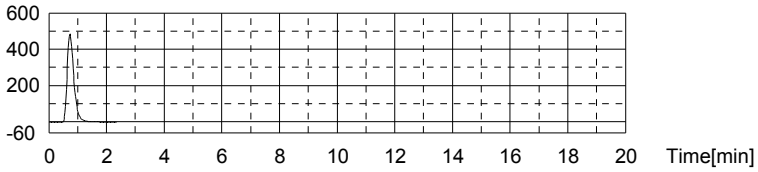
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8722mg/L TC:20.50mg/L IC:19.63mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	790.5	20.50mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 11:06:10 PM

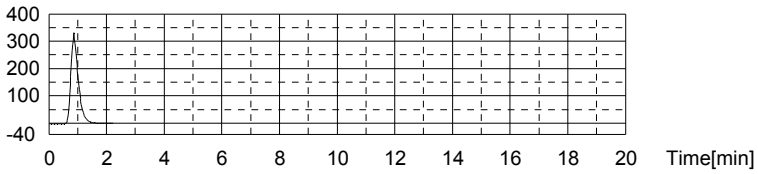
Mean Area 790.5
Mean Conc. 20.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	579.1	19.63mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 11:11:31 PM

Mean Area 579.1
Mean Conc. 19.63mg/L



Sample

Sample Name: L13051240-05
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

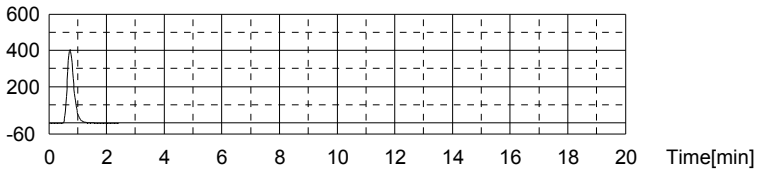
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.081mg/L TC:17.13mg/L IC:16.04mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	660.7	17.13mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 11:19:24 PM

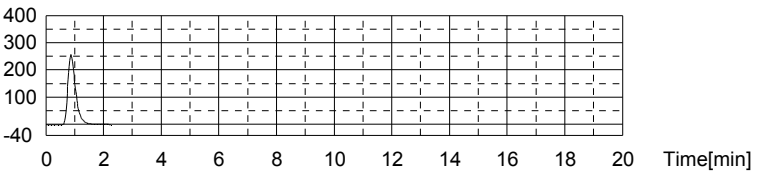
Mean Area 660.7
Mean Conc. 17.13mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	474.6	16.04mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 11:24:46 PM

Mean Area 474.6
Mean Conc. 16.04mg/L



Sample

Sample Name: L13051240-06
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

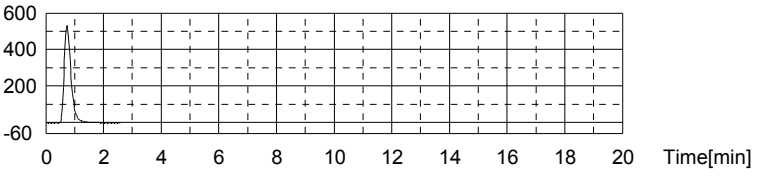
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.214mg/L TC:22.77mg/L IC:21.56mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	877.9	22.77mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 11:32:47 PM

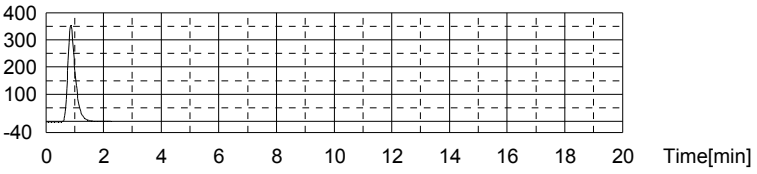
Mean Area 877.9
Mean Conc. 22.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	635.4	21.56mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 11:38:25 PM

Mean Area 635.4
Mean Conc. 21.56mg/L



Sample

Sample Name: L13051240-07
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

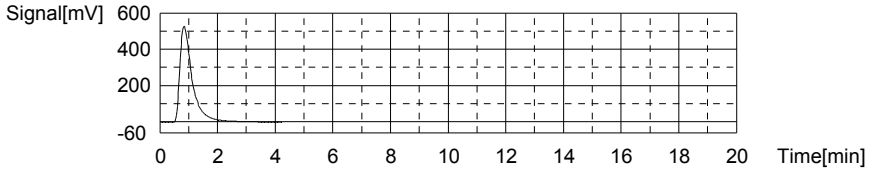
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:30.13mg/L TC:41.37mg/L IC:11.24mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1593	41.37mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 11:48:07 PM

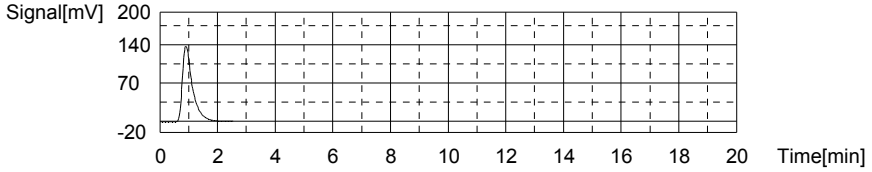
Mean Area 1593
Mean Conc. 41.37mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	334.4	11.24mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/30/2013 11:53:50 PM

Mean Area 334.4
Mean Conc. 11.24mg/L



Sample

Sample Name: WG432335-01 BLK
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

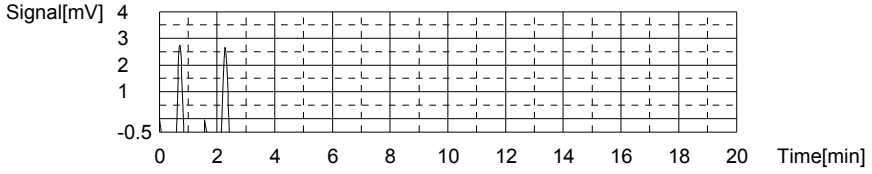
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1162mg/L TC:0.1564mg/L IC:0.04024mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.452	0.1669mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/30/2013 11:59:02 PM
2	7.645	0.1460mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:02:42 AM

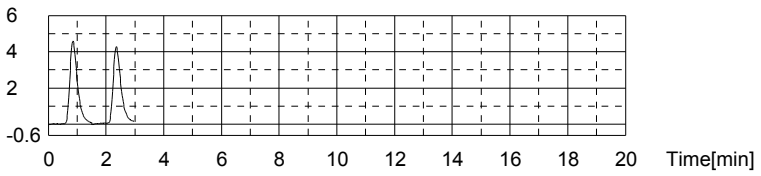
Mean Area 8.049
Mean Conc. 0.1564mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.187	0.05087mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:06:41 AM
2	7.567	0.02961mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:10:37 AM

Mean Area 7.877
Mean Conc. 0.04024mg/L



Sample

Sample Name: WG432335-02 LCS
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

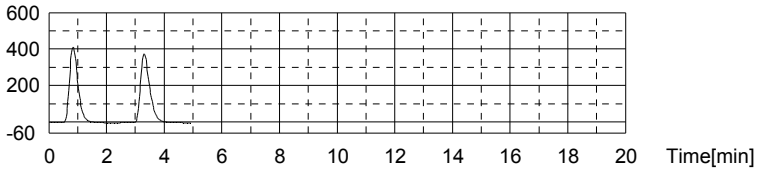
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.79mg/L TC:21.91mg/L IC:0.1199mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	849.8	22.04mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:18:32 AM
2	839.9	21.78mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:23:18 AM

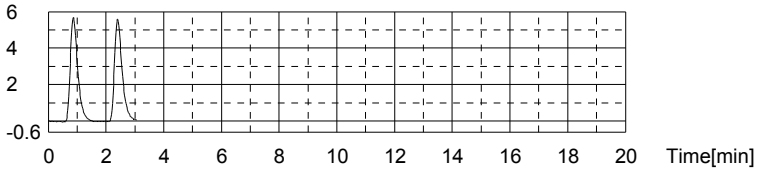
Mean Area 844.9
Mean Conc. 21.91mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.28	0.1226mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:27:44 AM
2	10.12	0.1172mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:31:54 AM

Mean Area 10.20
Mean Conc. 0.1199mg/L



Sample

Sample Name: WG432335-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

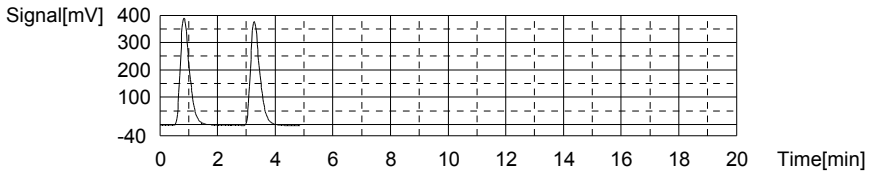
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:22.21mg/L TC:22.32mg/L IC:0.1125mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	870.4	22.58mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:40:03 AM
2	850.7	22.07mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:44:46 AM

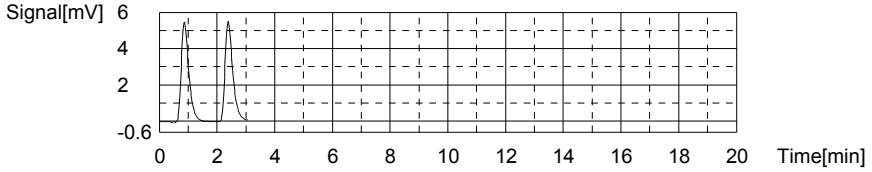
Mean Area 860.6
Mean Conc. 22.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.918	0.1102mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:49:08 AM
2	10.05	0.1148mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:53:21 AM

Mean Area 9.984
Mean Conc. 0.1125mg/L



Sample

Sample Name: L13051228-01
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

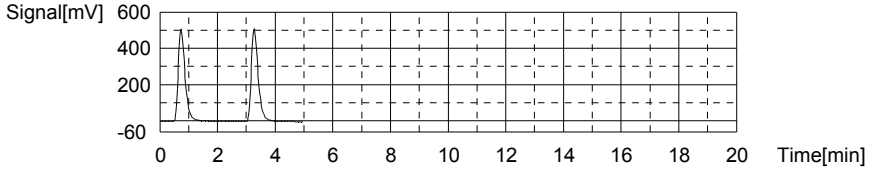
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.506mg/L TC:21.88mg/L IC:19.37mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	839.1	21.76mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:01:21 AM
2	847.7	21.99mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:06:02 AM

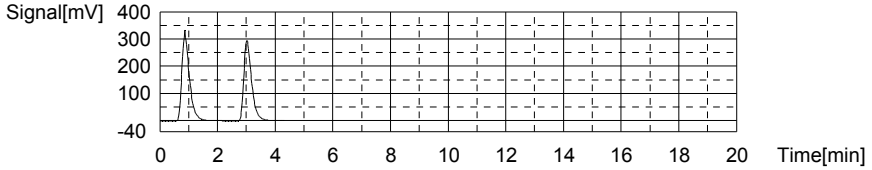
Mean Area 843.4
Mean Conc. 21.88mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	591.2	20.04mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:11:20 AM
2	551.9	18.70mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:16:24 AM

Mean Area 571.5
Mean Conc. 19.37mg/L



Sample

Sample Name: L13051228-03
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

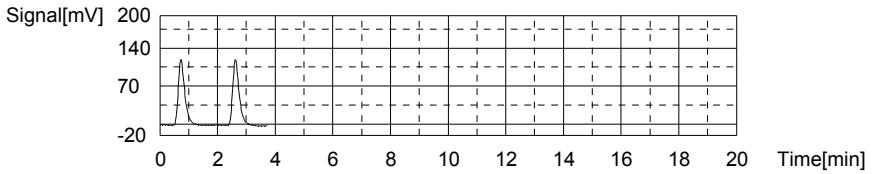
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7026mg/L TC:4.891mg/L IC:4.189mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	190.4	4.898mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:23:45 AM
2	189.9	4.885mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:27:51 AM

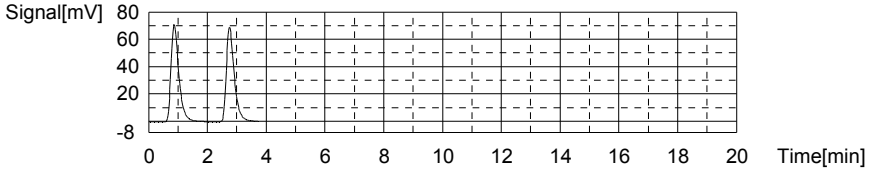
Mean Area 190.2
Mean Conc. 4.891mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	130.7	4.252mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:32:42 AM
2	127.0	4.125mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:37:16 AM

Mean Area 128.9
Mean Conc. 4.189mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

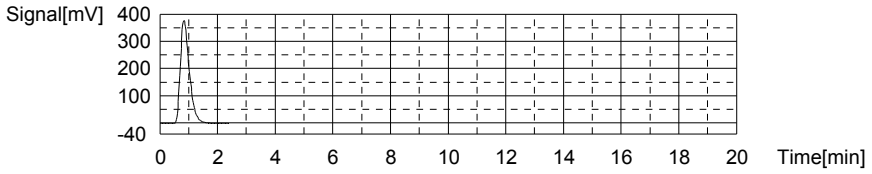
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.34mg/L TC:21.44mg/L IC:0.1035mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	826.8	21.44mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:45:06 AM

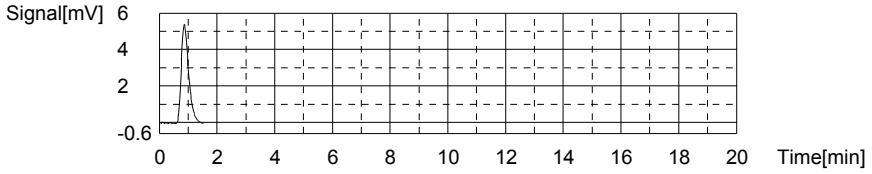
Mean Area 826.8
Mean Conc. 21.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.722	0.1035mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:49:29 AM

Mean Area 9.722
Mean Conc. 0.1035mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

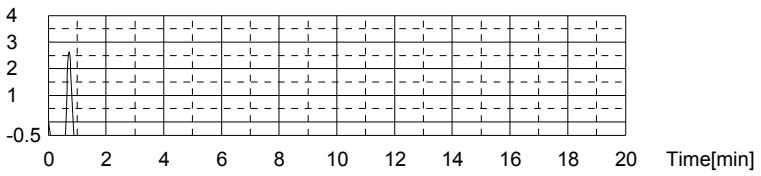
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1311mg/L TC:0.1510mg/L IC:0.01984mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.838	0.1510mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:54:35 AM

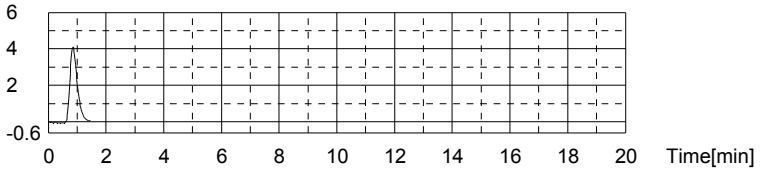
Mean Area 7.838
Mean Conc. 0.1510mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.282	0.01984mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 1:58:27 AM

Mean Area 7.282
Mean Conc. 0.01984mg/L



Sample

Sample Name: L13051228-05
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

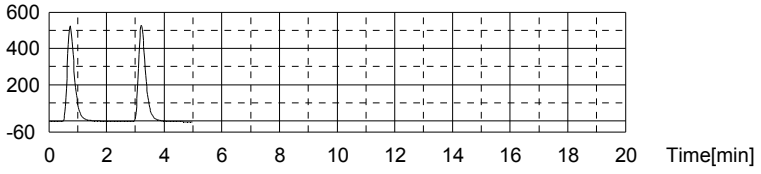
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.412mg/L TC:23.83mg/L IC:18.42mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	912.9	23.68mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:06:23 AM
2	924.1	23.97mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:11:53 AM

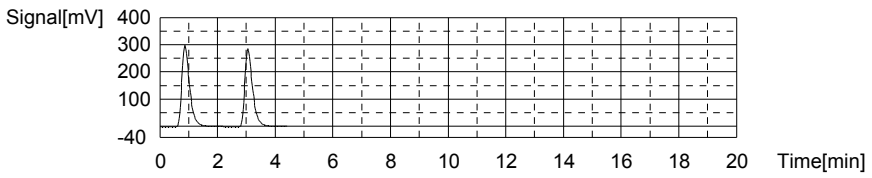
Mean Area 918.5
Mean Conc. 23.83mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	556.8	18.86mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 2:17:14 AM
2	530.7	17.97mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 2:22:21 AM

Mean Area 543.8
Mean Conc. 18.42mg/L



Sample

Sample Name: L13051228-07
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

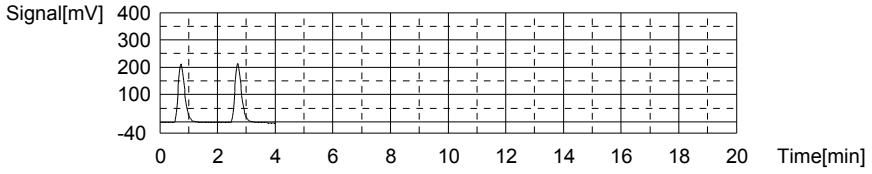
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4274mg/L TC:9.002mg/L IC:8.574mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	346.1	8.946mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:29:47 AM
2	350.4	9.058mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:34:11 AM

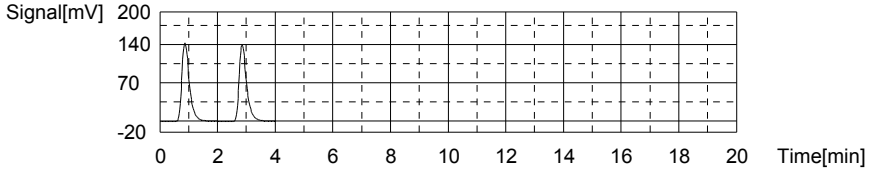
Mean Area 348.3
Mean Conc. 9.002mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	259.3	8.662mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 2:39:13 AM
2	254.2	8.487mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 2:44:01 AM

Mean Area 256.8
Mean Conc. 8.574mg/L



Sample

Sample Name: L13051228-09
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

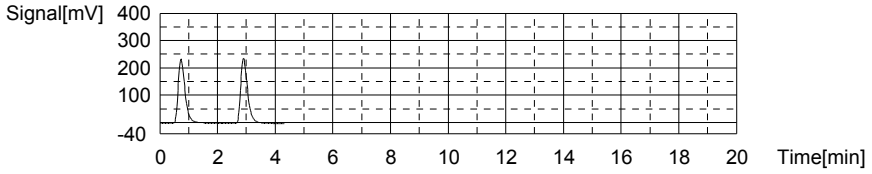
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8567mg/L TC:10.13mg/L IC:9.277mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	388.9	10.06mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:51:38 AM
2	394.7	10.21mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 2:56:02 AM

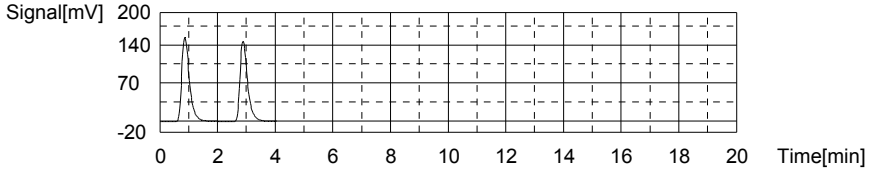
Mean Area 391.8
Mean Conc. 10.13mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	284.2	9.516mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 3:01:09 AM
2	270.3	9.039mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 3:06:01 AM

Mean Area 277.3
Mean Conc. 9.277mg/L



Sample

Sample Name: L13051228-11
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

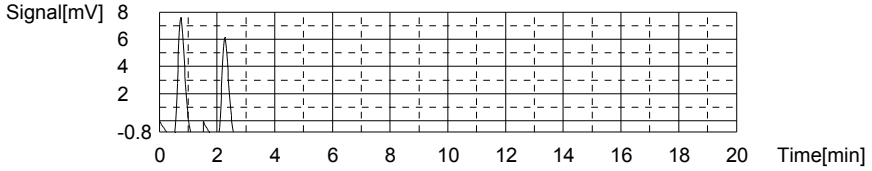
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.3147mg/L TC:0.3218mg/L IC:0.00717mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.52	0.3507mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 3:12:59 AM
2	13.30	0.2930mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 3:16:50 AM

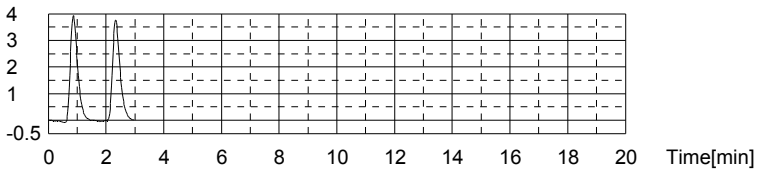
Mean Area 14.41
Mean Conc. 0.3218mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.105	0.01377mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 3:21:12 AM
2	6.720	0.00057mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 3:25:22 AM

Mean Area 6.913
Mean Conc. 0.00717mg/L



Sample

Sample Name: L13051228-13
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

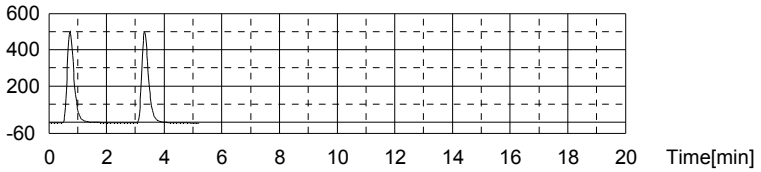
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.682mg/L TC:21.55mg/L IC:18.87mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	831.8	21.57mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 3:33:25 AM
2	830.0	21.53mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 3:38:18 AM

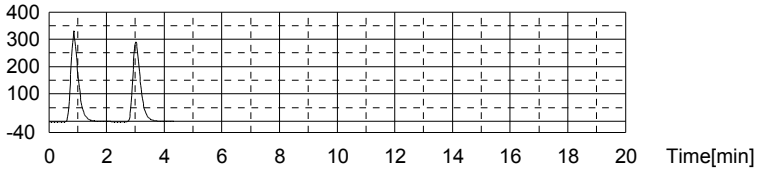
Mean Area 830.9
Mean Conc. 21.55mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	576.2	19.53mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 3:43:36 AM
2	537.7	18.21mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 3:48:40 AM

Mean Area 557.0
Mean Conc. 18.87mg/L



Sample

Sample Name: L13051240-08
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

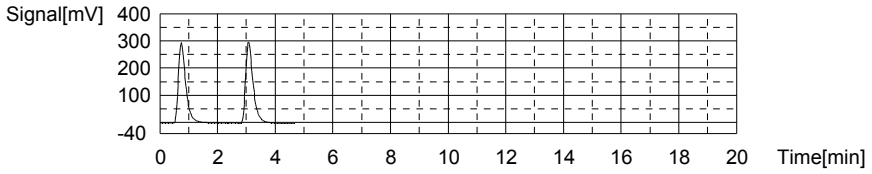
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.724mg/L TC:13.76mg/L IC:11.04mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	526.3	13.63mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 3:56:27 AM
2	536.5	13.90mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:01:03 AM

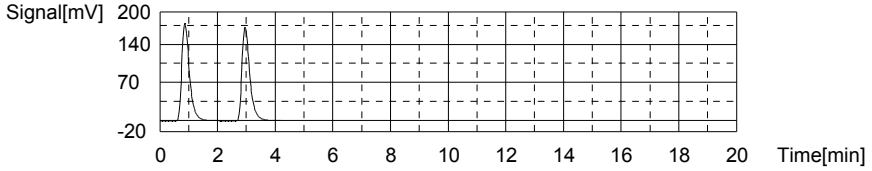
Mean Area 531.4
Mean Conc. 13.76mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	331.7	11.14mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 4:06:16 AM
2	325.6	10.94mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 4:11:14 AM

Mean Area 328.6
Mean Conc. 11.04mg/L



Sample

Sample Name: L13051242-01
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

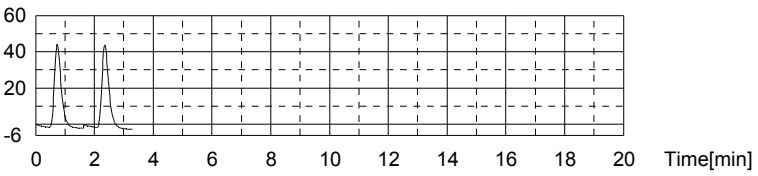
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.3121mg/L TC:1.850mg/L IC:1.538mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	72.98	1.845mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:18:18 AM
2	73.36	1.855mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:22:14 AM

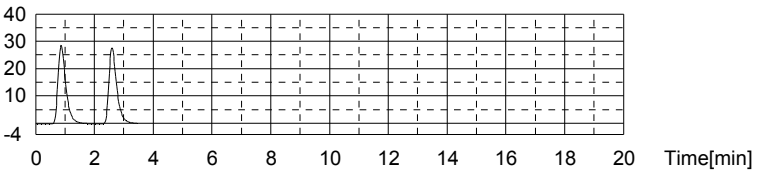
Mean Area 73.17
Mean Conc. 1.850mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.36	1.566mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 4:26:55 AM
2	50.72	1.509mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 4:31:21 AM

Mean Area 51.54
Mean Conc. 1.538mg/L



Sample

Sample Name: L13051242-02
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

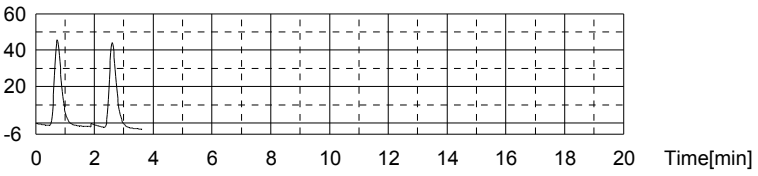
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4375mg/L TC:1.983mg/L IC:1.546mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79.55	2.016mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:38:41 AM
2	77.08	1.951mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:42:42 AM

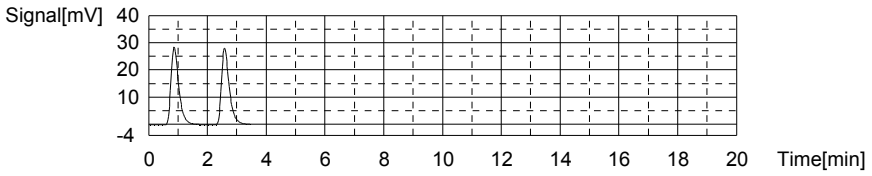
Mean Area 78.31
Mean Conc. 1.983mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.27	1.563mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 4:47:19 AM
2	51.30	1.529mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 4:51:45 AM

Mean Area 51.79
Mean Conc. 1.546mg/L



Sample

Sample Name: L13051242-03
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

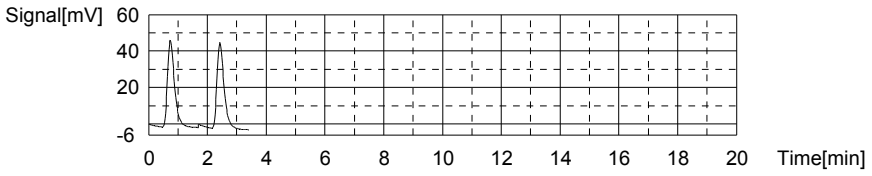
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4072mg/L TC:1.992mg/L IC:1.585mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.92	1.999mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 4:58:54 AM
2	78.36	1.985mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 5:02:53 AM

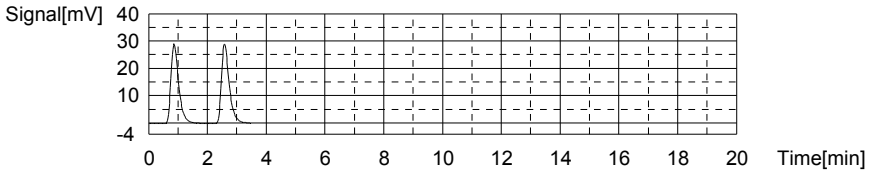
Mean Area 78.64
Mean Conc. 1.992mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.87	1.583mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 5:07:30 AM
2	52.96	1.586mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 5:11:53 AM

Mean Area 52.92
Mean Conc. 1.585mg/L



Sample

Sample Name: L13041242-04
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

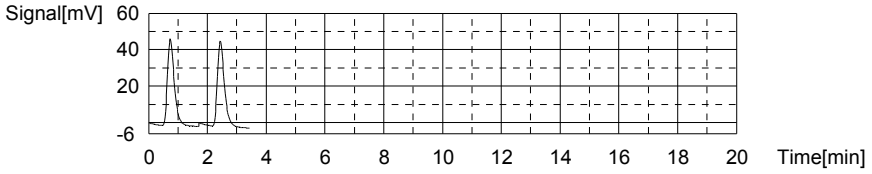
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.3462mg/L TC:1.935mg/L IC:1.589mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.54	1.937mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 5:19:04 AM
2	76.35	1.932mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 5:23:03 AM

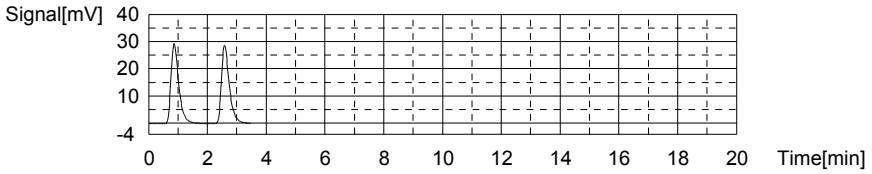
Mean Area 76.45
Mean Conc. 1.935mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.38	1.601mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 5:27:43 AM
2	52.68	1.577mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 5:32:09 AM

Mean Area 53.03
Mean Conc. 1.589mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

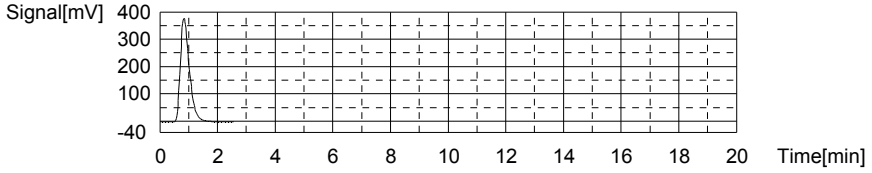
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.26mg/L TC:21.41mg/L IC:0.1439mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	825.4	21.41mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 5:40:15 AM

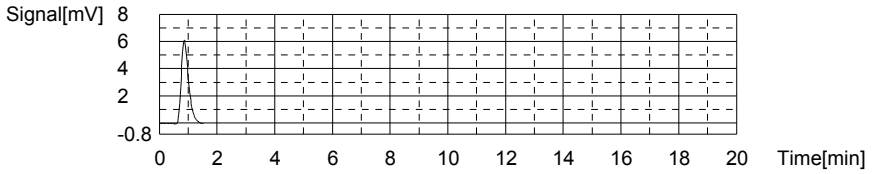
Mean Area 825.4
Mean Conc. 21.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.90	0.1439mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 5:44:37 AM

Mean Area 10.90
Mean Conc. 0.1439mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

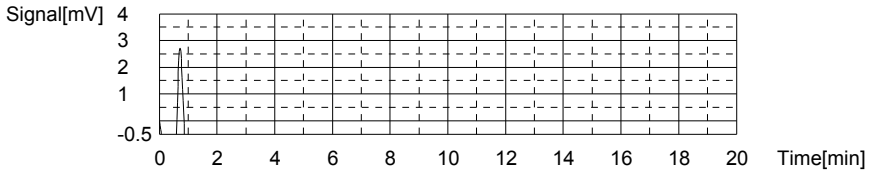
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1131mg/L TC:0.1498mg/L IC:0.03671mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.792	0.1498mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 5:49:46 AM

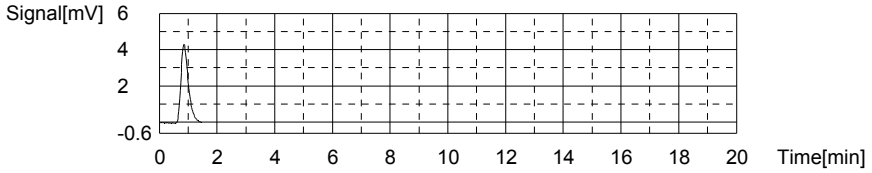
Mean Area 7.792
Mean Conc. 0.1498mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.774	0.03671mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 5:53:41 AM

Mean Area 7.774
Mean Conc. 0.03671mg/L



Sample

Sample Name: WG432335-05 DUP
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

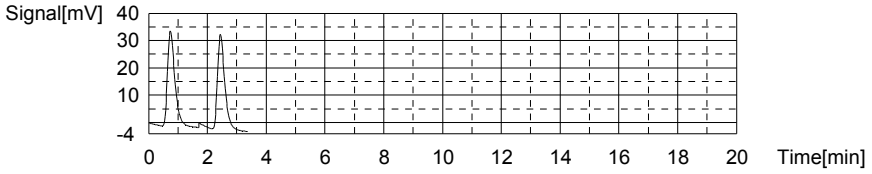
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.4682mg/L TC:1.493mg/L IC:1.025mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.99	1.507mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:01:04 AM
2	58.95	1.480mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:05:01 AM

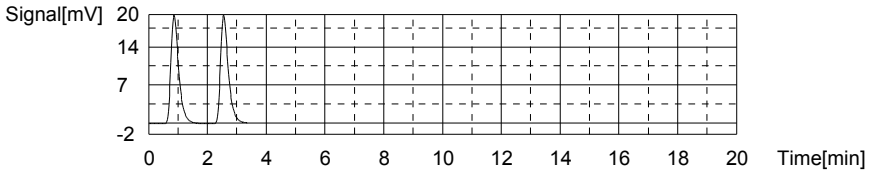
Mean Area 59.47
Mean Conc. 1.493mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	36.61	1.026mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 6:09:34 AM
2	36.59	1.025mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 6:13:57 AM

Mean Area 36.60
Mean Conc. 1.025mg/L



Sample

Sample Name: WG432335-06 MS
Sample ID: <Untitled>
Origin: TOC-08-01-2012A.met
Status Completed
Chk. Result

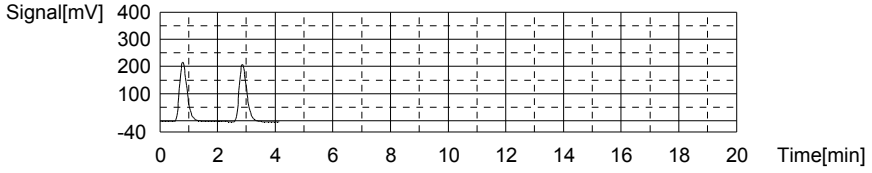
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.313mg/L TC:10.18mg/L IC:0.8675mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	397.7	10.29mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:21:30 AM
2	389.5	10.07mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:25:50 AM

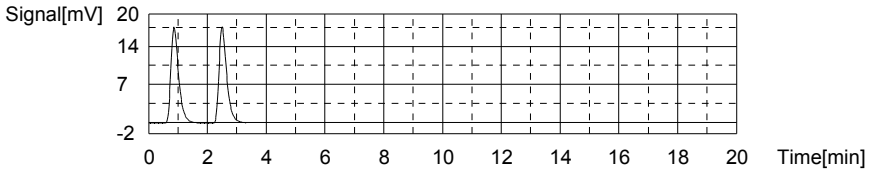
Mean Area 393.6
Mean Conc. 10.18mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.90	0.8640mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 6:30:21 AM
2	32.10	0.8709mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 6:34:42 AM

Mean Area 32.00
Mean Conc. 0.8675mg/L



Sample

Sample Name: WG432337-01 BLK
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

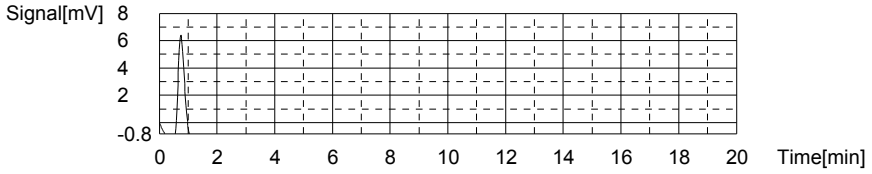
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.2446mg/L TC:0.2961mg/L IC:0.05149mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.42	0.2961mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:41:36 AM

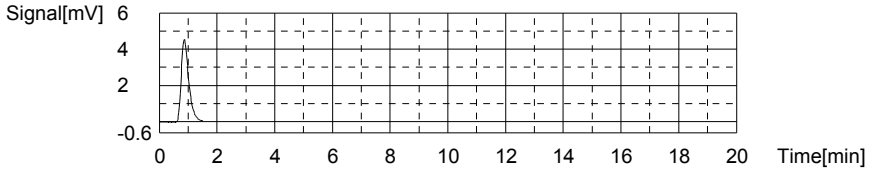
Mean Area 13.42
Mean Conc. 0.2961mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.205	0.05149mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 6:45:59 AM

Mean Area 8.205
Mean Conc. 0.05149mg/L



Sample

Sample Name: WG432337-02 LCS
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

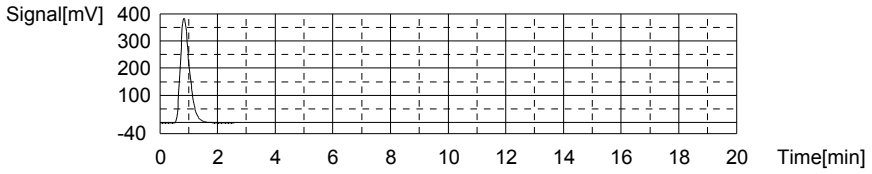
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.99mg/L TC:22.19mg/L IC:0.2043mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	855.6	22.19mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 6:54:02 AM

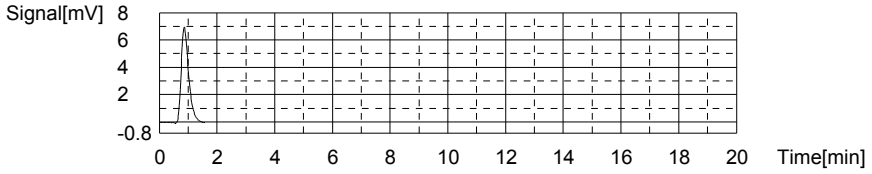
Mean Area 855.6
Mean Conc. 22.19mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.66	0.2043mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 6:58:31 AM

Mean Area 12.66
Mean Conc. 0.2043mg/L



Sample

Sample Name: WG432337-03 LCSDUP
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

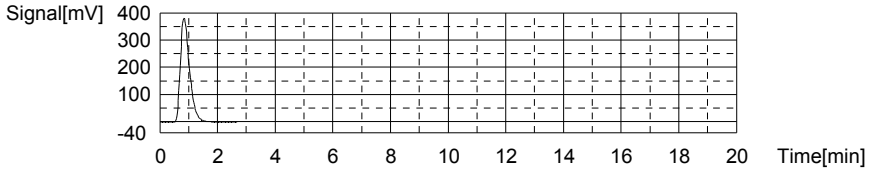
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.80mg/L TC:22.01mg/L IC:0.2115mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	848.6	22.01mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 7:05:10 AM

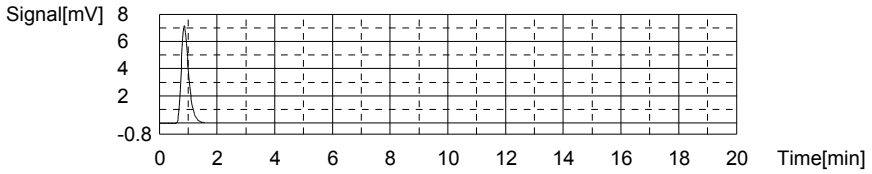
Mean Area 848.6
Mean Conc. 22.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.87	0.2115mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 7:09:39 AM

Mean Area 12.87
Mean Conc. 0.2115mg/L



Sample

Sample Name: L13051256-13
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

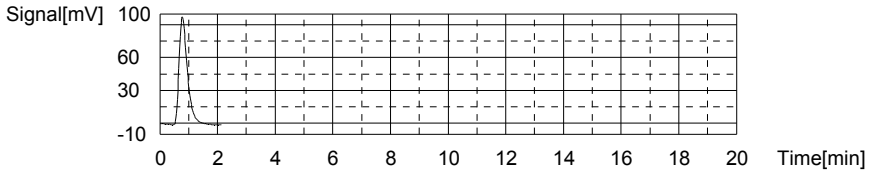
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.160mg/L TC:5.139mg/L IC:1.980mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	199.7	5.139mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 7:17:15 AM

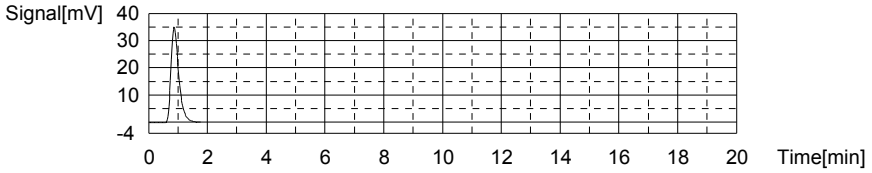
Mean Area 199.7
Mean Conc. 5.139mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.44	1.980mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 7:21:54 AM

Mean Area 64.44
Mean Conc. 1.980mg/L



Sample

Sample Name: L13051256-14
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

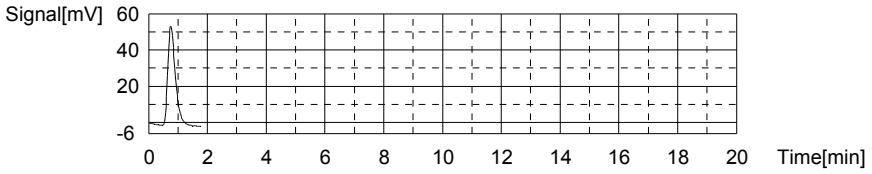
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.144mg/L TC:2.491mg/L IC:1.348mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	97.84	2.491mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 7:29:10 AM

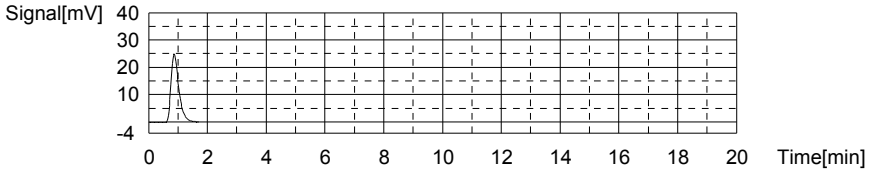
Mean Area 97.84
Mean Conc. 2.491mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	46.00	1.348mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 7:33:47 AM

Mean Area 46.00
Mean Conc. 1.348mg/L



Sample

Sample Name: L13051256-15
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

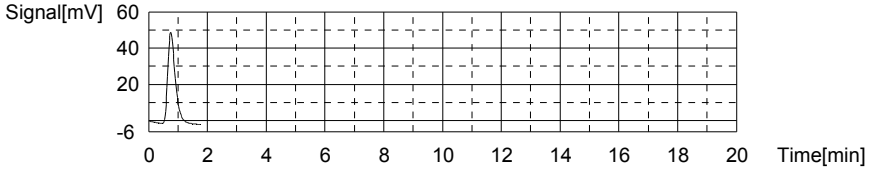
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.010mg/L TC:2.268mg/L IC:1.259mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	89.27	2.268mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 7:41:01 AM

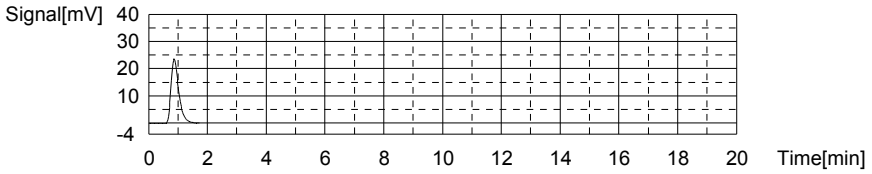
Mean Area 89.27
Mean Conc. 2.268mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43.41	1.259mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 7:45:37 AM

Mean Area 43.41
Mean Conc. 1.259mg/L



Sample

Sample Name: L13051256-16
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

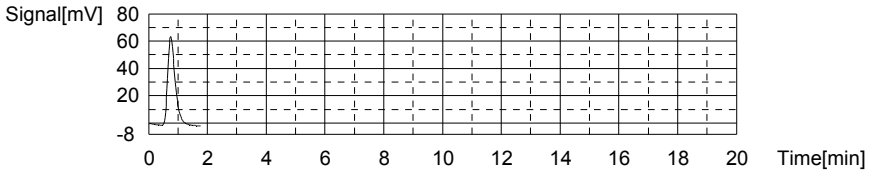
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.146mg/L TC:2.950mg/L IC:1.804mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	115.5	2.950mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 7:52:50 AM

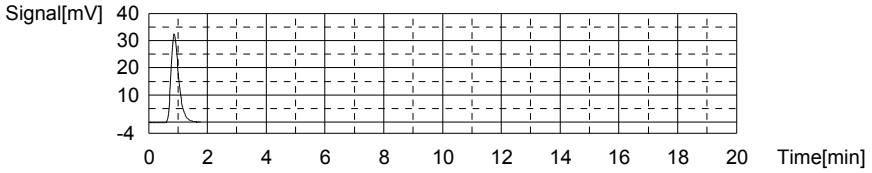
Mean Area 115.5
Mean Conc. 2.950mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	59.32	1.804mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 7:57:29 AM

Mean Area 59.32
Mean Conc. 1.804mg/L



Sample

Sample Name: L13051256-17
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

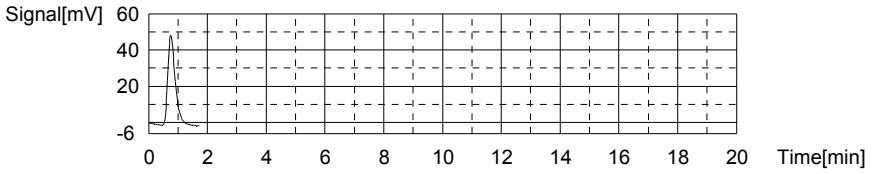
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9715mg/L TC:2.214mg/L IC:1.243mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	87.20	2.214mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 8:04:41 AM

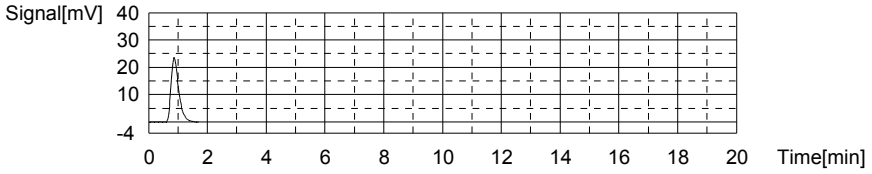
Mean Area 87.20
Mean Conc. 2.214mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	42.95	1.243mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 8:09:22 AM

Mean Area 42.95
Mean Conc. 1.243mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

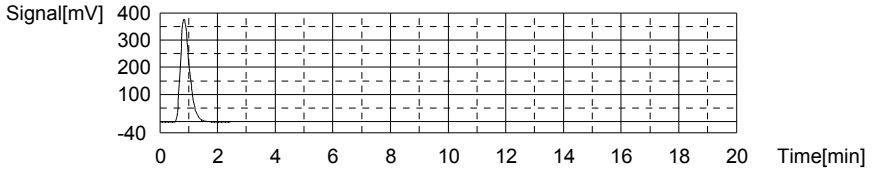
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:21.71mg/L TC:21.69mg/L IC:-0.01980mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	836.1	21.69mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 8:33:31 AM

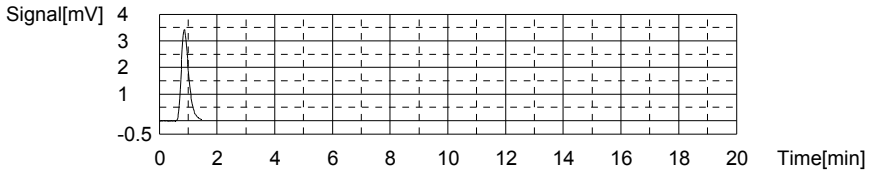
Mean Area 836.1
Mean Conc. 21.69mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.126	-0.01980mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 8:37:52 AM

Mean Area 6.126
Mean Conc. -0.01980mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

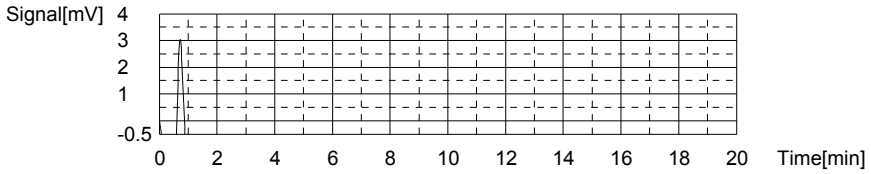
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1291mg/L TC:0.1644mg/L IC:0.03530mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.355	0.1644mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 8:42:58 AM

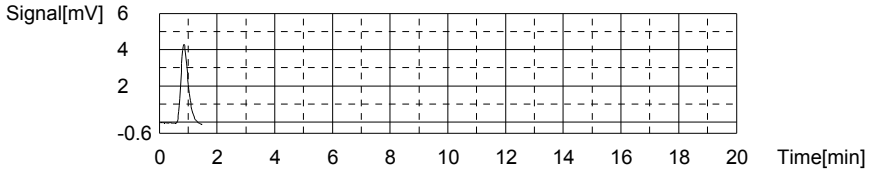
Mean Area 8.355
Mean Conc. 0.1644mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.733	0.03530mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 8:46:54 AM

Mean Area 7.733
Mean Conc. 0.03530mg/L



Sample

Sample Name: L13051256-18
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

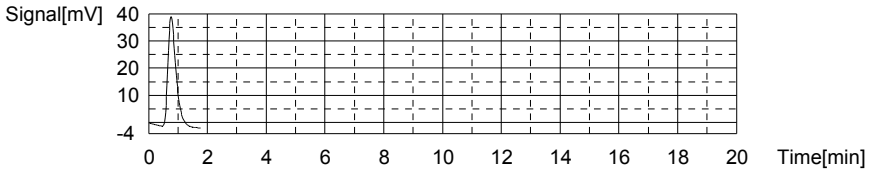
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.127mg/L TC:1.942mg/L IC:0.8150mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	76.71	1.942mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 8:54:11 AM

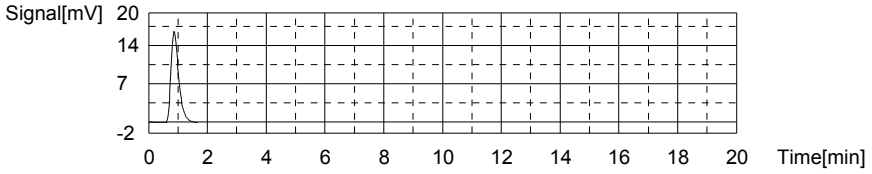
Mean Area 76.71
Mean Conc. 1.942mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.47	0.8150mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 8:58:47 AM

Mean Area 30.47
Mean Conc. 0.8150mg/L



Sample

Sample Name: L13051256-19
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

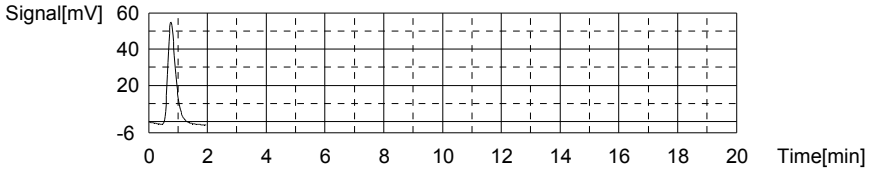
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.376mg/L TC:2.719mg/L IC:1.343mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	106.6	2.719mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 9:06:14 AM

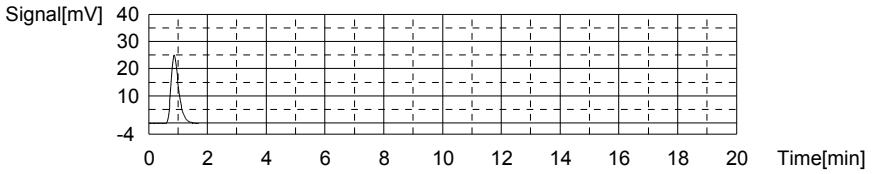
Mean Area 106.6
Mean Conc. 2.719mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	45.86	1.343mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 9:10:52 AM

Mean Area 45.86
Mean Conc. 1.343mg/L



Sample

Sample Name: L13051256-20
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

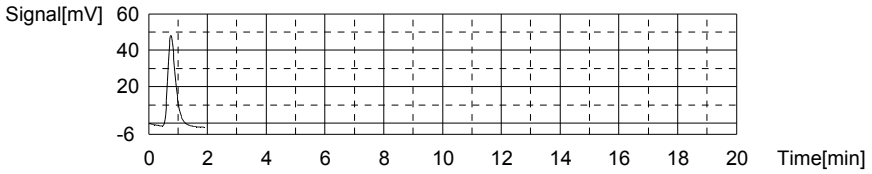
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.166mg/L TC:2.358mg/L IC:1.192mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	92.74	2.358mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 9:18:14 AM

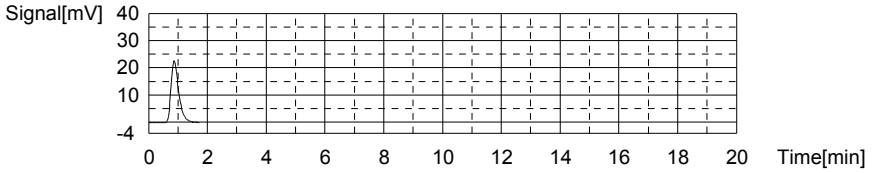
Mean Area 92.74
Mean Conc. 2.358mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.47	1.192mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 9:22:54 AM

Mean Area 41.47
Mean Conc. 1.192mg/L



Sample

Sample Name: L13051256-21
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

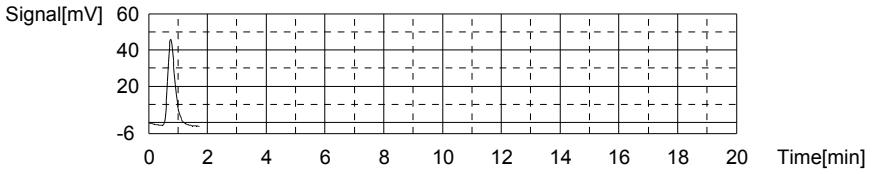
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8990mg/L TC:2.096mg/L IC:1.197mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	82.66	2.096mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 9:30:06 AM

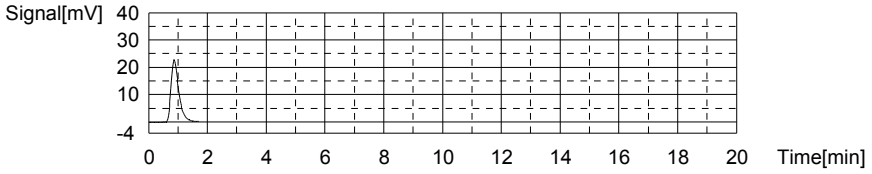
Mean Area 82.66
Mean Conc. 2.096mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.62	1.197mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 9:34:44 AM

Mean Area 41.62
Mean Conc. 1.197mg/L



Sample

Sample Name: L13051256-23
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

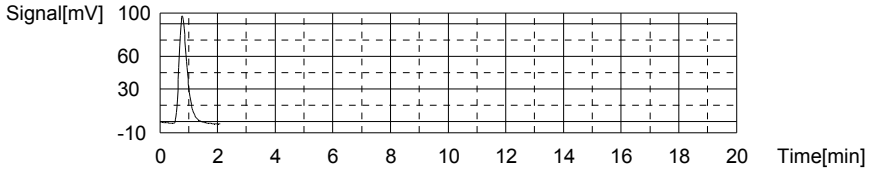
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.430mg/L TC:5.048mg/L IC:1.619mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	196.2	5.048mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 9:42:19 AM

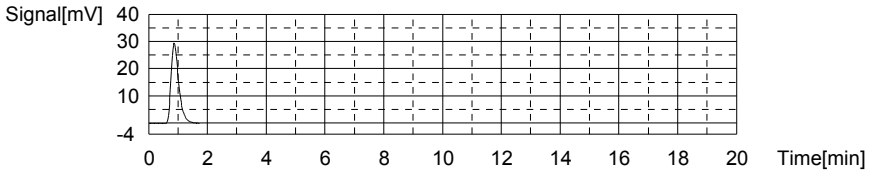
Mean Area 196.2
Mean Conc. 5.048mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.91	1.619mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 9:47:00 AM

Mean Area 53.91
Mean Conc. 1.619mg/L



Sample

Sample Name: L13051256-25
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

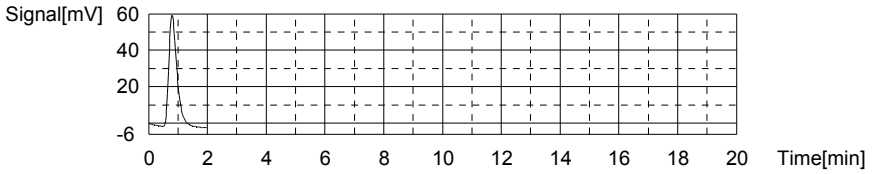
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.963mg/L TC:3.015mg/L IC:0.05241mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	118.0	3.015mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 9:54:28 AM

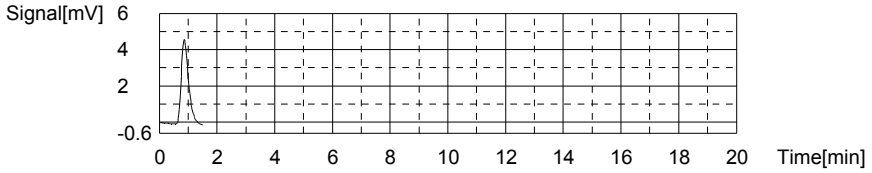
Mean Area 118.0
Mean Conc. 3.015mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.232	0.05241mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 9:58:52 AM

Mean Area 8.232
Mean Conc. 0.05241mg/L



Sample

Sample Name: L13051256-29
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

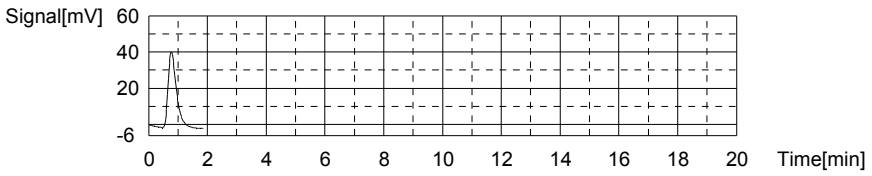
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.375mg/L TC:2.094mg/L IC:0.7186mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	82.56	2.094mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 10:06:10 AM

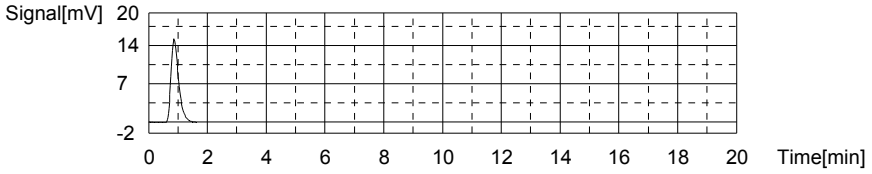
Mean Area 82.56
Mean Conc. 2.094mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.66	0.7186mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 10:10:44 AM

Mean Area 27.66
Mean Conc. 0.7186mg/L



Sample

Sample Name: L13051256-31
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

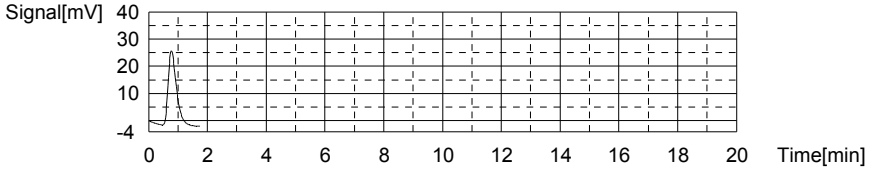
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9121mg/L TC:1.327mg/L IC:0.4151mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.08	1.327mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 10:18:00 AM

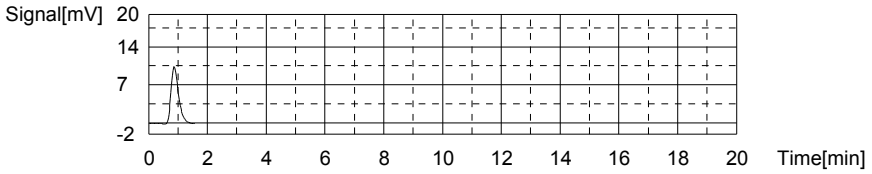
Mean Area 53.08
Mean Conc. 1.327mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.81	0.4151mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 10:22:27 AM

Mean Area 18.81
Mean Conc. 0.4151mg/L



Sample

Sample Name: L13051295-01 (500)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

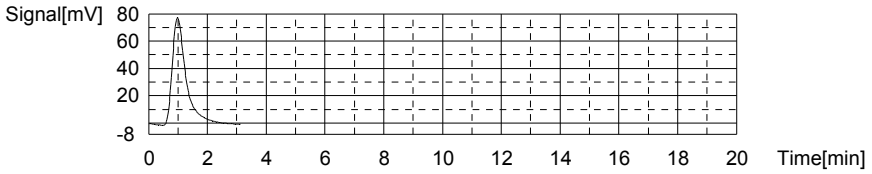
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.670mg/L TC:6.697mg/L IC:0.02666mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	259.6	6.697mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 10:31:07 AM

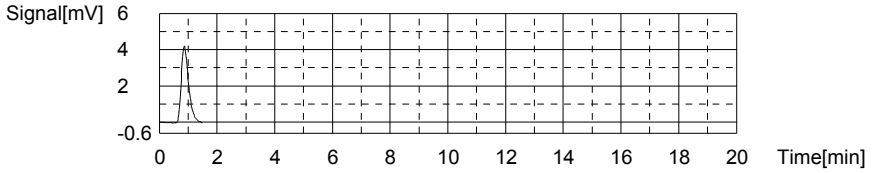
Mean Area 259.6
Mean Conc. 6.697mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.481	0.02666mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 10:35:33 AM

Mean Area 7.481
Mean Conc. 0.02666mg/L



Sample

Sample Name: L13051302-01
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

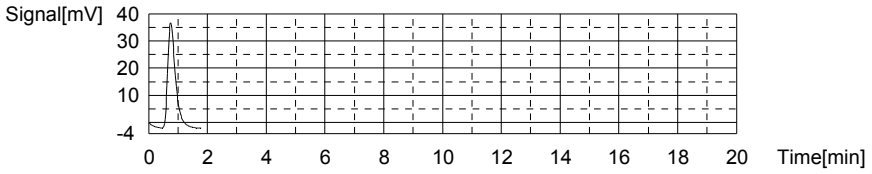
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8771mg/L TC:1.792mg/L IC:0.9148mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	70.95	1.792mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 10:42:53 AM

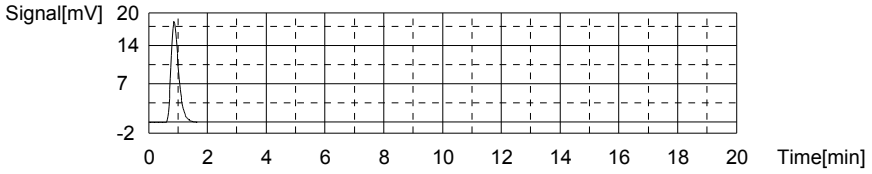
Mean Area 70.95
Mean Conc. 1.792mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.38	0.9148mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 10:47:23 AM

Mean Area 33.38
Mean Conc. 0.9148mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

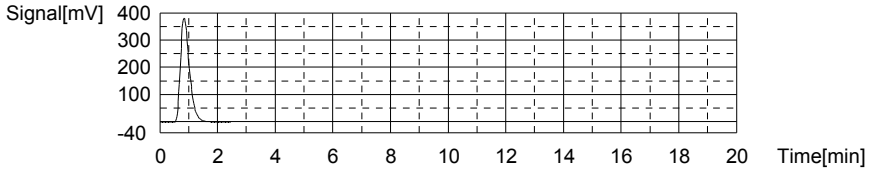
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.61mg/L TC:21.74mg/L IC:0.1240mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	838.0	21.74mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 10:55:28 AM

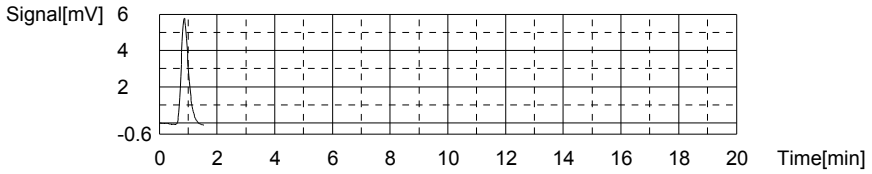
Mean Area 838.0
Mean Conc. 21.74mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.32	0.1240mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 10:59:52 AM

Mean Area 10.32
Mean Conc. 0.1240mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

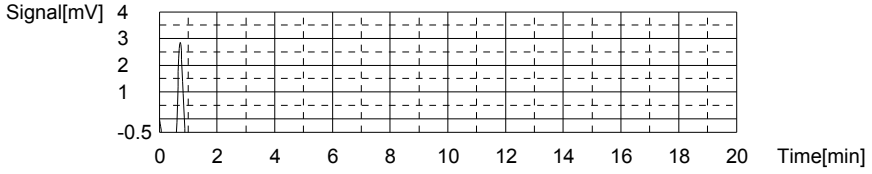
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1072mg/L TC:0.1509mg/L IC:0.04370mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.836	0.1509mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 11:04:59 AM

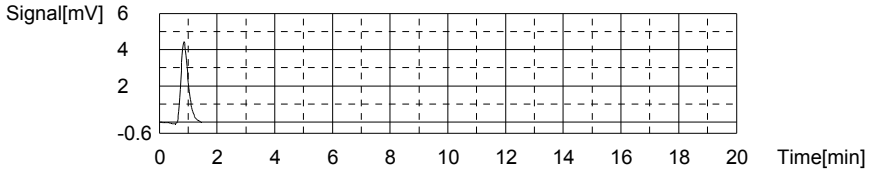
Mean Area 7.836
Mean Conc. 0.1509mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.978	0.04370mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 11:08:51 AM

Mean Area 7.978
Mean Conc. 0.04370mg/L



Sample

Sample Name: L13051302-02
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

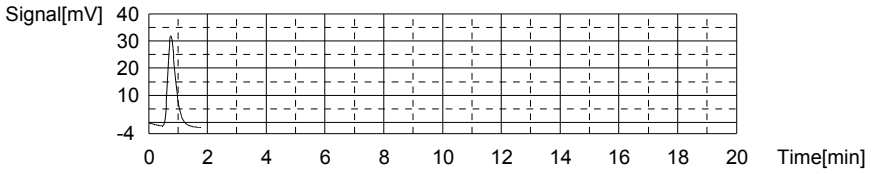
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7742mg/L TC:1.582mg/L IC:0.8081mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.89	1.582mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 11:16:12 AM

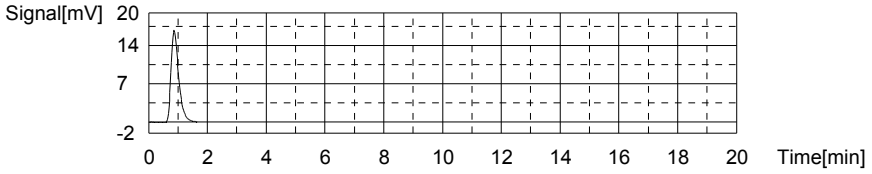
Mean Area 62.89
Mean Conc. 1.582mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.27	0.8081mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 11:20:43 AM

Mean Area 30.27
Mean Conc. 0.8081mg/L



Sample

Sample Name: L13051302-03
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

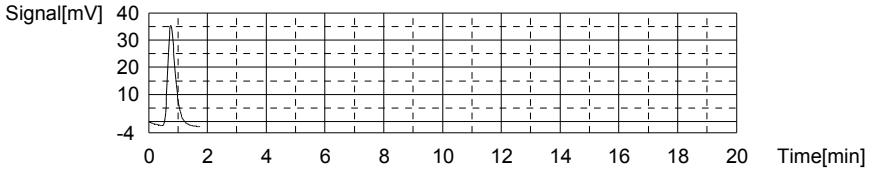
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8059mg/L TC:1.702mg/L IC:0.8966mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.51	1.702mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 11:28:06 AM

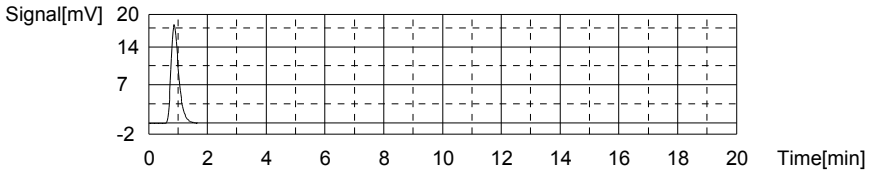
Mean Area 67.51
Mean Conc. 1.702mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32.85	0.8966mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 11:32:41 AM

Mean Area 32.85
Mean Conc. 0.8966mg/L



Sample

Sample Name: L13051302-04
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

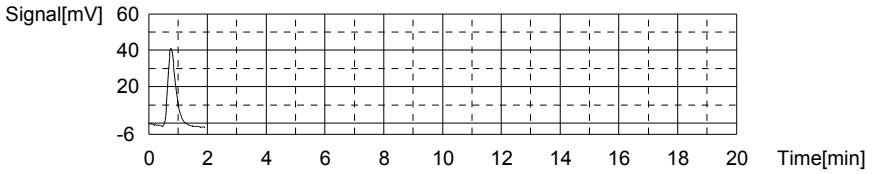
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.101mg/L TC:2.049mg/L IC:0.9484mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	80.84	2.049mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 11:40:07 AM

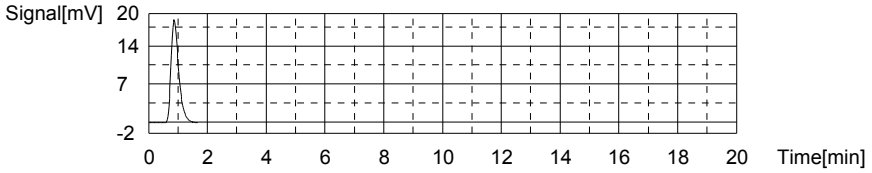
Mean Area 80.84
Mean Conc. 2.049mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.36	0.9484mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 11:44:43 AM

Mean Area 34.36
Mean Conc. 0.9484mg/L



Sample

Sample Name: L13051302-05
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

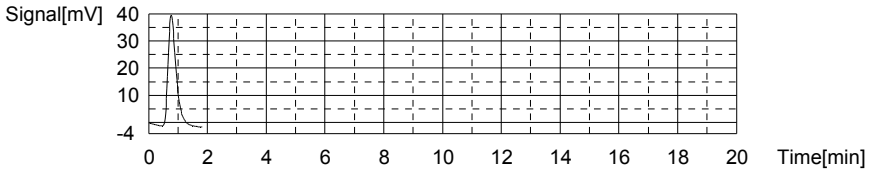
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.251mg/L TC:1.976mg/L IC:0.7248mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.02	1.976mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 11:52:10 AM

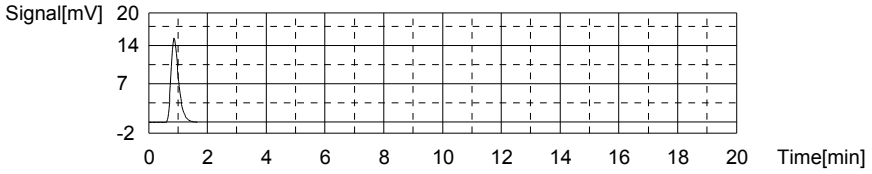
Mean Area 78.02
Mean Conc. 1.976mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.84	0.7248mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 11:56:44 AM

Mean Area 27.84
Mean Conc. 0.7248mg/L



Sample

Sample Name: L13051302-06
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

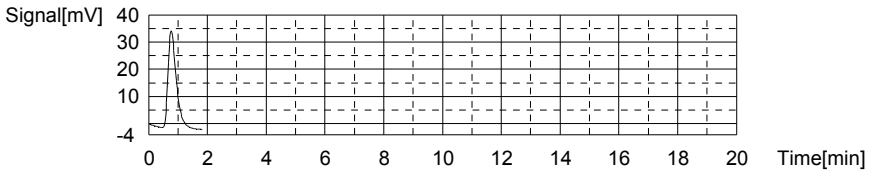
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.115mg/L TC:1.758mg/L IC:0.6432mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	69.65	1.758mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:04:11 PM

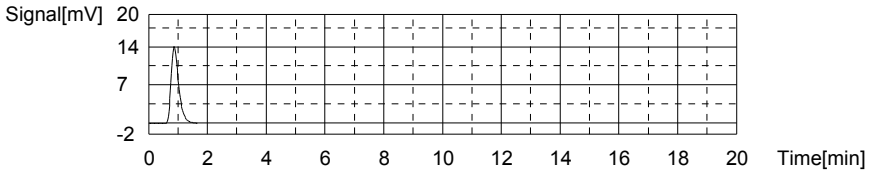
Mean Area 69.65
Mean Conc. 1.758mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	25.46	0.6432mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 12:08:46 PM

Mean Area 25.46
Mean Conc. 0.6432mg/L



Sample

Sample Name: WG432337-05 DUP
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

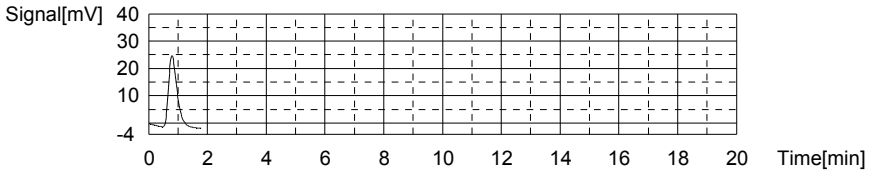
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.087mg/L TC:1.313mg/L IC:0.2255mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.53	1.313mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:16:09 PM

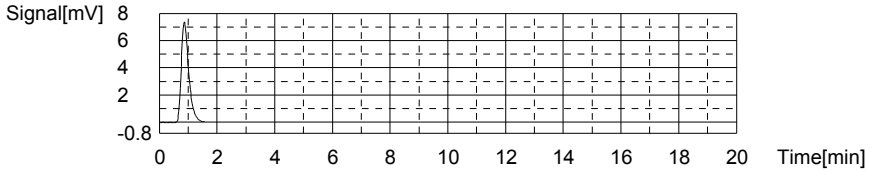
Mean Area 52.53
Mean Conc. 1.313mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.28	0.2255mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 12:20:34 PM

Mean Area 13.28
Mean Conc. 0.2255mg/L



Sample

Sample Name: WG432337-06 MS
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

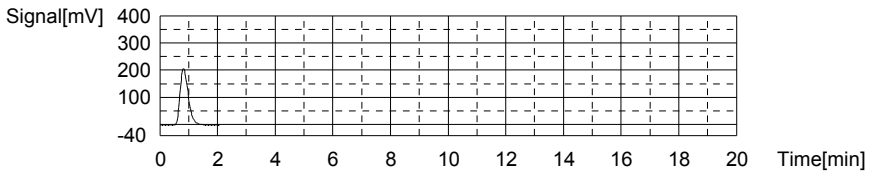
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.44mg/L TC:10.64mg/L IC:0.1926mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	411.1	10.64mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:28:16 PM

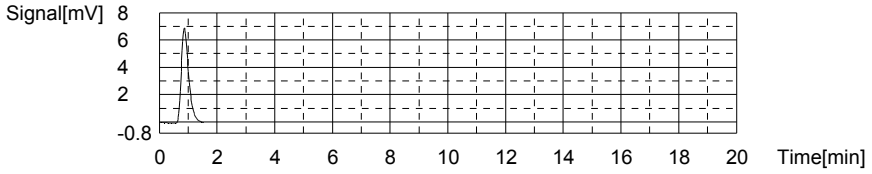
Mean Area 411.1
Mean Conc. 10.64mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.32	0.1926mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 12:32:44 PM

Mean Area 12.32
Mean Conc. 0.1926mg/L



Sample

Sample Name: L13051279-02 (10)
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

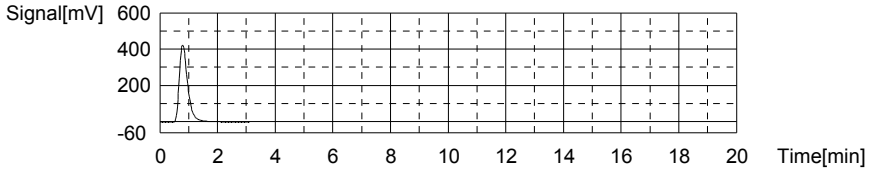
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.34mg/L TC:22.55mg/L IC:7.211mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	869.4	22.55mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:41:26 PM

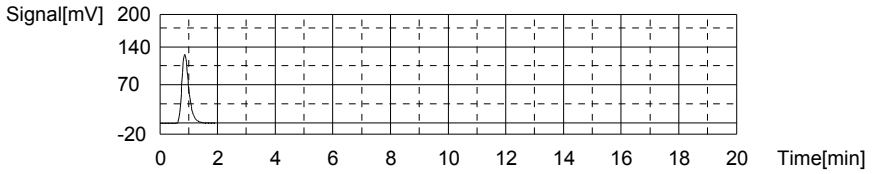
Mean Area 869.4
Mean Conc. 22.55mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	217.0	7.211mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 12:46:21 PM

Mean Area 217.0
Mean Conc. 7.211mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

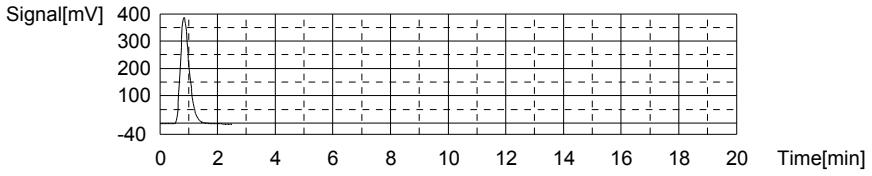
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.54mg/L TC:21.85mg/L IC:0.3160mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	842.5	21.85mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 12:54:23 PM

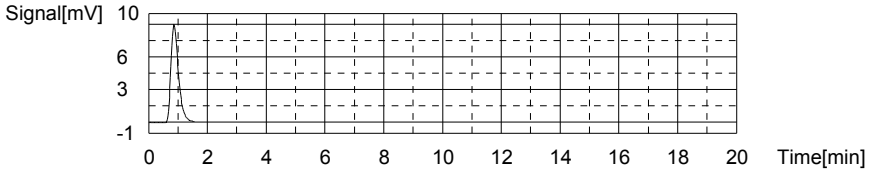
Mean Area 842.5
Mean Conc. 21.85mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.92	0.3160mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_0	5/31/2013 12:58:49 PM

Mean Area 15.92
Mean Conc. 0.3160mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-08-01-2012.met
Status Completed
Chk. Result

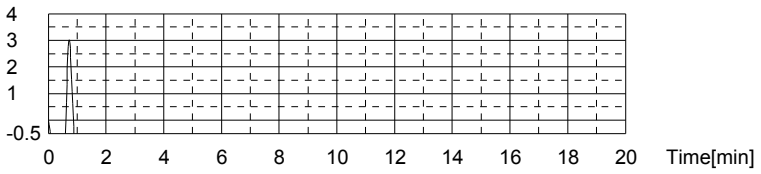
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.1144mg/L TC:0.1644mg/L IC:0.05001mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.355	0.1644mg/L	500uL	1		TCCURVE-08-01-2012.2012_08_01_11_45_25	5/31/2013 1:03:59 PM

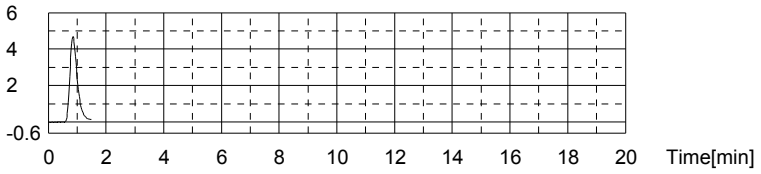
Mean Area 8.355
Mean Conc. 0.1644mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.162	0.05001mg/L	500uL	1		TICCURVE-08-01-2012.2012_08_01_12_49_05	5/31/2013 1:07:54 PM

Mean Area 8.162
Mean Conc. 0.05001mg/L



2.2.12 Total Suspended Solids Data

2.2.12.1 Summary Data

Login Number: L13051242
Department: Conventionals
Analyst: April Greene

METHOD

Analysis EPA 160.2/SM2540 D (Total Suspended Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

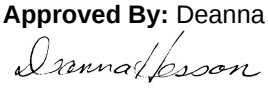
Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 65232
Approved By: Deanna Hesson



Microbac

Lab Report #: L13051242
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13051242-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL19-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 12:15	**Dilution:**	1	**File ID:**	EN.1305250934-13
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250934-14
Sample Tag:		**Units:**	mg/L		

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

Sample #:	L13051242-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL20-0513-2	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 13:50	**Dilution:**	1	**File ID:**	EN.1305250934-15
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L13051242-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL6-0513-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG431758	**Analyst:**	ADG	**Run Date:**	05/25/2013 09:34
Collect Date:	05/22/2013 15:25	**Dilution:**	1	**File ID:**	EN.1305250934-16
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

2.2.12.2 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: 25-MAY-2013
Analyst: ADG
Analyst: NA
Method: TSS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG431758

Calibration/Linearity	05/25/13
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
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	ADG
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
30-MAY-2013

Secondary Reviewer:
01-JUN-2013

CHECKLIST1 - Modified 03/05/2008
Generated: JUN-01-2013 08:03:00

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2540-D-1997 AAB#: WG431758

Login Number: L13051242

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
MPL19-0513-1	01	05/22/13					05/25/2013	2.9	7		05/25/13	2.9	7	
MPL20-0513-1	02	05/22/13					05/25/2013	2.8	7		05/25/13	2.8	7	
MPL20-0513-2	03	05/22/13					05/25/2013	2.8	7		05/25/13	2.8	7	
MPL6-0513-1	04	05/22/13					05/25/2013	2.8	7		05/25/13	2.8	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2900346
Report generated 05/30/2013 14:59

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13051242
Work Group: WG431758
Blank File ID: EN.1305250934-01
Blank Sample ID: WG431758-01
Prep Date: 05/25/13 09:34
Instrument ID: OVEN
Analyzed Date: 05/25/13 09:34
Method: SM2540-D-1997
Analyst: ADG

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG431758-02	EN.1305250934-02	05/25/13 09:34	
LCS2	WG431758-03	EN.1305250934-03	05/25/13 09:34	
MPL19-0513-1	L13051242-01	EN.1305250934-13	05/25/13 09:34	
MPL20-0513-1	L13051242-02	EN.1305250934-14	05/25/13 09:34	
MPL20-0513-2	L13051242-03	EN.1305250934-15	05/25/13 09:34	
MPL6-0513-1	L13051242-04	EN.1305250934-16	05/25/13 09:34	
DUP	WG431758-05	EN.1305250934-24	05/25/13 09:34	
DUP	WG431758-07	EN.1305250934-25	05/25/13 09:34	

Report Name: BLANK_SUMMARY
PDF File ID: 2900347
Report generated 05/30/2013 14:59

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13051242 Prep Date: 05/25/13 09:34 Sample ID: WG431758-01
Instrument ID: OVEN Run Date: 05/25/13 09:34 Prep Method: 160.2/SM2540D
File ID: EN.1305250934-01 Analyst: ADG Method: SM2540-D-1997
Workgroup (AAB#): WG431758 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: 2900348
30-MAY-2013 14:59

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13051242 **Analyst:** ADG **Prep Method:** 160.2/SM2540D
Instrument ID: OVEN **Matrix:** Water **Method:** SM2540-D-1997
Workgroup (AAB#): WG431758 **Units:** mg/L
QC Key: DOD4 **Lot #:** STD58140

Sample ID: WG431758-02 LCS **File ID:** EN.1305250934-02 **Run Date:** 05/25/2013 09:34
Sample ID: WG431758-03 LCS2 **File ID:** EN.1305250934-03 **Run Date:** 05/25/2013 09:34

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	38.0	76.0	50.0	41.0	82.0	7.59	75 - 125	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2900349
Report generated: 05/30/2013 14:59

2.2.12.3 Raw Data

Trip 5

WORKGROUP: WG431758

TOTAL SUSPENDED SOLIDS

(tss1)

Oven: TSS1 Other
Method: EPA 160.2 / SM2540D
LCS: Std 58140
MS: 100 mL LCS & _____ mL sample

Balance: AND GR-202 / Other
SOP: K1602 Rev #:
Filter Lot #: ~~73053~~ AG 5/28/13
105 1422 0498594

			On Temp/Time:	KH / 1045	~~1028~~ 1040	/	/
SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BLK	200				
LCS: mg/L	LCS1	100				
LCSDUP: mg/L	LCS2	100				
1225-09	1	200				
10	2	200				
1228-01	3	200				
-03	4	100				
-05	5	200				
-07	6	200				
-09	7	200				
-11	8	200				
-13	9	200				
1242-01	10	200				
-02	11	200				
-03	12	200				
-04	13	200				
1244-01	14	200				
1246-01	15	50				
-02	16	20				
1273-02	17	200				
1289-01	18	200				
03	19	200				
05	20	200				
DUP: 1225-09	Dup1	200				
DUP: 1273-02	Dup2	200				
			Off Temp/Time:	~~1028 1400~~ 103 1330	103 1435	/	/

ANALYST: _____

* Duplicate required on 10% of samples

DATE/TIME: (on) 5-25-13
DATE/TIME: (off) 5-28-13
DATE/TIME: (off)
DATE/TIME: (off)

DCN#95720

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG431758 | Method: 160.2/SM2540D
Analyst: ADG | SOP: K1602 Revison 13
Analyte: TOTAL SUSPENDED SOLIDS | Spike Solution: STD58140
Balance: BAL004 | Daily Dilution:
Instrument#: OVEN

SAMPLE NUMBER		INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG431758-01	BLK	200	0.0937	0.0932	0.0932		-2.500	-2.500	mg/L
WG431758-02	LCS	100	0.0921	0.0964	0.0959		38.00	38.00	mg/L
WG431758-03	LCS2	100	0.0917	0.0958	0.0958		41.00	41.00	mg/L
L13051225-09	1	200	0.0923	0.0959	0.0956		16.50	16.50	mg/L
WG431758-04	1	200	0.0923	0.0959	0.0956		16.50	16.50	mg/L
L13051225-10	2	200	0.0935	0.0948	0.0947		6.000	6.000	mg/L
L13051228-01	3	200	0.0922	0.0941	0.0941		9.500	9.500	mg/L
L13051228-03	4	100	0.0926	0.1281	0.1279		353.0	353.0	mg/L
L13051228-05	5	200	0.0933	0.0978	0.0977		22.00	22.00	mg/L
L13051228-07	6	200	0.0918	0.1	0.1		41.00	41.00	mg/L
L13051228-09	7	200	0.0927	0.0995	0.0992		32.50	32.50	mg/L
L13051228-11	8	200	0.0928	0.0927	0.0927		-0.5000	ND	mg/L
L13051228-13	9	200	0.0931	0.0957	0.0957		13.00	13.00	mg/L
L13051242-01	10	200	0.0931	0.0931	0.093		-0.5000	ND	mg/L
L13051242-02	11	200	0.0926	0.0945	0.0944		9.000	9.000	mg/L
L13051242-03	12	200	0.0931	0.0932	0.0933		1.000	ND	mg/L
L13051242-04	13	200	0.0935	0.0932	0.0927		-4.000	ND	mg/L
L13051244-01	14	200	0.0927	0.0935	0.0933		3.000	ND	mg/L
L13051246-01	15	50	0.0928	0.1311	0.1308		760.0	760.0	mg/L
L13051246-02	16	20	0.0924	0.1547	0.1546		3110	3110	mg/L
L13051273-02	17	200	0.0927	0.0926	0.0929		1.000	ND	mg/L
WG431758-06	17	200	0.0927	0.0926	0.0929		1.000	1.000	mg/L
L13051289-01	18	200	0.094	0.0939	0.0939		-0.5000	ND	mg/L
L13051289-03	19	200	0.0948	0.092	0.0919		-14.50	ND	mg/L
L13051289-05	20	200	0.0937	0.0957	0.0957		10.00	10.00	mg/L
WG431758-05	DUP1	200	0.0923	0.0946	0.0946		11.50	11.50	mg/L
WG431758-07	DUP2	200	0.093	0.0944	0.0939		4.500	4.500	mg/L

Analyst: April Greene

*Duplicate required on 10% of samples

Date/Time (on) : 05/25/2013 09:34
Date/Time (off): 05/28/2013 14:11
Date/Time (off): 05/28/2013 15:55
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2893479
Report generated: 05/28/2013 16:06

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
June 5, 2013

---

001 – BIO-CHEM TESTING	001 – BIO-CHEM TESTING WVDEP 220	002 – REIC Cons
002 – REIC Consultants, Inc. WVDEP 060	ADC – ANTHONY D. CANTER	ADG – APRIL D.
AJF – AMANDA J. FICKIESEN	AML – TONY M. LONG	AZH – AFTER HOU
BAF – BRICE A. FENTON	BLG – BRENDA L. GREENWALT	BRG – BRENDA R
CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS	CEB – CHAD E.
CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER	CLW – CHARISSA
CPD – CHAD P. DAVIS	CRW – CHRISTINA R. WILSON	CSH – CHRIS S.
CTB – CHRIS T. BUCINA	DAK – DEAN A. K	DDE – DEBRA D.
DEV – DAVID E. VANDENBERG	DIH – DEANNA I. HESSON	DLB – DAVID L.
DLP – DOROTHY L. PAYNE	DLR – DIANNA L. RAUCH	DSM – DAVID S.
ECL – ERIC C. LAWSON	EDL – ERIN D. LONG	EPT – ETHAN P.
ERP – ERIN R. PORTER	FJB – FRANCES J. BOLDEN	HJR – HOLLY J.
JBK – JEREMY B. KINNEY	JDH – JUSTIN D. HESSON	JKS – JANE K. S
JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES	JYH – JI Y. HU
KDW – KATHRYN D. WELCH	KEB – KATIE E. BARNES	KHR – KIM H. RI
KRA – KATHY R. ALBERTSON	LKN – LINDA K. NEDEFF	LSB – LESLIE S
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN	MES – MARY E. S
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR	MSW – MATT S. W
PDM – PIERCE D. MORRIS	PIT – MICROBAC WARRENDALE	QX – QIN XU
RAH – ROY A. HALSTEAD	REK – BOB E. KYER	RLB – BOB BUCHA
RS – ROSEMARY SCOTT	RWC – RODNEY W. CAMPBELL	SEP – SUZANNE J
SLM – STEPHANIE L. MOSSBURG	SLP – SHERI L. PFALZGRAF	TMB – TIFFANY M
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER	WJB – WILL J. I
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
June 05, 2013

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Greater than
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
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)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
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 tentativley 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.
UB	Analyte was not detected. The concentration is below the reported LOQ, however the reported result is associated with a c
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 35194

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: C B & I

Project Contact: Mark Lyon | Contact Phone #: 505-262-8920

Turn Around Requirements: Normal | Location: WSMR STP

Project ID: WSMR STP

Sampler (print): Bradley T. Davis | Signature: Bradley T. Davis

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	CN Total	CN Amenable	CN Free	Metals - Sb, As, Ba, Be	Cd, Cr, Co, Cu, Pb, Ni,	Se, Ag, TL, Sn, V, Zn, Hg	Chloride, Fluoride, Sulfate	Ammonia-N	Nitrate + Nitrite - N	pH, Spec. Conductance	TDS, TSS, TOC	Alkalinity	PO4	Na, K, Mg, Mn		TOTAL # (LAB USE)
MPL 19-0513-1		X	5-22-13	1215	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL 20-0513-1		X	5-22-13	1350	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL 20-0513-2		X	5-22-13	1350	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL 6-0513-1		X	5-22-13	1525	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B Davis	5-22-13	1600	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Microbac OVD
Received: 05/23/2013 11:24
By: BOB BUCHANAN 221000036423
RF Buchanan

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-01	193514	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	SEM	31-MAY-2013 09:26	JBK	JBK	

Samplenum	Container ID	Products
L13051242-01	193515	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	29-MAY-2013 14:17	BAF	RS	
3	STORE	WET	A1	30-MAY-2013 07:59	AZH	TMM	

Samplenum	Container ID	Products
L13051242-01	193516	COND COR-PH PO4 F

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	23-MAY-2013 13:41	JKT		
2	STORE	WET	A1	29-MAY-2013 15:57	RS	BAF	

Samplenum	Container ID	Products
L13051242-01	193517	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	25-MAY-2013 09:09	ADG	AZH	
3	STORE	WET	A1	28-MAY-2013 07:58	AZH	ADG	

Samplenum	Container ID	Products
L13051242-01	193518	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		<2
2	ANALYZ	W1	WET	28-MAY-2013 12:19	BAF	RS	
3	STORE	WET	A1	31-MAY-2013 18:13	RS	BAF	

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: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-01	193519	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-MAY-2013 13:41	JKT		
2	PREP	W1	DIG	24-MAY-2013 09:46	BRG	JKS	
3	ANALYZ*	DIG	METALS	28-MAY-2013 11:48	PDM	BRG	
4	STORE	DIG	A1	04-JUN-2013 15:54	ERP	CLS	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	STORE	W1	A2	03-JUN-2013 09:17	RS	RS	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L13051242-01	193520	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	28-MAY-2013 08:12	HJR	RS	
3	STORE	WET	A1	03-JUN-2013 08:58	RS	HJR	

Samplenum	Container ID	Products
L13051242-02	193521	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	SEM	31-MAY-2013 09:26	JBK	JBK	

Samplenum	Container ID	Products
L13051242-02	193522	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	29-MAY-2013 14:17	BAF	RS	
3	STORE	WET	A1	30-MAY-2013 07:59	AZH	TMM	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-02	193523	COND COR-PH PO4 F

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	23-MAY-2013 14:46	DLP	JKS	
3	STORE	WET	A1	29-MAY-2013 15:57	RS	BAF	

Samplenum	Container ID	Products
L13051242-02	193524	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	25-MAY-2013 09:09	ADG	AZH	
3	STORE	WET	A1	28-MAY-2013 07:57	AZH	ADG	

Samplenum	Container ID	Products
L13051242-02	193525	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		<2
2	ANALYZ	W1	WET	28-MAY-2013 12:19	BAF	RS	
3	STORE	WET	A1	31-MAY-2013 18:13	RS	BAF	

Samplenum	Container ID	Products
L13051242-02	193526	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-MAY-2013 13:41	JKT		
2	PREP	W1	DIG	24-MAY-2013 09:46	BRG	JKS	
3	ANALYZ*	DIG	METALS	28-MAY-2013 11:48	PDM	BRG	
4	STORE	DIG	A1	04-JUN-2013 15:54	ERP	CLS	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	STORE	W1	A2	03-JUN-2013 09:16	RS	RS	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-02	193527	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	28-MAY-2013 08:12	HJR	RS	
3	STORE	WET	A1	03-JUN-2013 08:58	RS	HJR	

Samplenum	Container ID	Products
L13051242-03	193528	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	29-MAY-2013 15:05	EPT	JKS	
3	ANALYZ	WET	W1	29-MAY-2013 17:56	RS	EPT	
4	ANALYZ	W1	SEM	31-MAY-2013 09:36	JBK	RS	

Samplenum	Container ID	Products
L13051242-03	193529	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	29-MAY-2013 14:17	BAF	RS	
3	STORE	WET	A1	30-MAY-2013 07:59	AZH	TMM	

Samplenum	Container ID	Products
L13051242-03	193530	COND COR-PH PO4 F

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	23-MAY-2013 14:46	DLP	JKS	
3	STORE	WET	A1	29-MAY-2013 15:57	RS	BAF	

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: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-03	193531	TSS TDS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	25-MAY-2013 09:09	ADG	AZH	
3	STORE	WET	A1	28-MAY-2013 07:58	AZH	ADG	

Samplenum	Container ID	Products
L13051242-03	193532	TOC NH3 NO3NO2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		<2
2	ANALYZ	W1	WET	28-MAY-2013 12:19	BAF	RS	
3	STORE	WET	A1	31-MAY-2013 18:13	RS	BAF	

Samplenum	Container ID	Products
L13051242-03	193533	AG-MS AS-MS BA-MS BE-AX CA V ZN CD-MS CO-MS CF

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	PREP	W1	DIG	24-MAY-2013 09:46	BRG	JKS	
3	ANALYZ*	DIG	METALS	28-MAY-2013 11:48	PDM	BRG	
4	STORE	DIG	A1	04-JUN-2013 15:54	ERP	CLS	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	STORE	W1	A2	03-JUN-2013 09:16	RS	RS	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L13051242-03	193534	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	28-MAY-2013 08:12	HJR	RS	
3	STORE	WET	A1	03-JUN-2013 08:59	RS	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: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-04	193535	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	SEM	31-MAY-2013 09:25	JBK	JBK	

Samplenum	Container ID	Products
L13051242-04	193536	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	29-MAY-2013 14:18	BAF	RS	
3	STORE	WET	A1	30-MAY-2013 07:59	AZH	TMM	

Samplenum	Container ID	Products
L13051242-04	193537	COND COR-PH PO4 F

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	23-MAY-2013 14:46	DLP	JKS	
3	STORE	WET	A1	29-MAY-2013 15:57	RS	BAF	

Samplenum	Container ID	Products
L13051242-04	193538	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	25-MAY-2013 09:09	ADG	AZH	
3	STORE	WET	A1	28-MAY-2013 07:58	AZH	ADG	

Samplenum	Container ID	Products
L13051242-04	193539	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		<2
2	ANALYZ	W1	WET	28-MAY-2013 12:19	BAF	RS	
3	STORE	WET	A1	31-MAY-2013 18:13	RS	BAF	

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: L13051242
Account: 3005
Project: 3005.011
Samples: 4
Due Date: 03-JUN-2013

Samplenum	Container ID	Products
L13051242-04	193540	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-MAY-2013 13:41	JKT		
2	PREP	W1	DIG	24-MAY-2013 09:46	BRG	JKS	
3	ANALYZ*	DIG	METALS	28-MAY-2013 11:48	PDM	BRG	
4	STORE	DIG	A1	04-JUN-2013 15:54	ERP	CLS	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	STORE	W1	A2	03-JUN-2013 09:16	RS	RS	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L13051242-04	193541	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	23-MAY-2013 13:41	JKT		
2	ANALYZ	W1	WET	28-MAY-2013 08:12	HJR	RS	
3	STORE	WET	A1	03-JUN-2013 08:58	RS	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login