SDG # 8304641

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Tronox LLC, Henderson

SDG: 8304641
Lots #: D9J270261, D9J270263, D9J280280, D9J280283, D9J290310, D9J300353, D9J300356, and D9J310138

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TestAmerica Laboratories, Inc.

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November 12, 2009

Case Narrative
SDG 8304641

The samples presented in this report were submitted to TestAmerica by Northgate Environmental Management, Inc. from the Tronox/Henderson site. The samples were received according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the methods summary page in accordance with the methods indicated.

The results apply only to the samples included in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have been found to be compliant with laboratory protocols, with the exception of any items noted below.

Sample Receiving

One sample was received under chain of custody at a temperature of 2.6°C on October 27, 2009, and was logged under lot D9J270261. One sample was received under chain of custody at a temperature of 2.6°C on October 27, 2009, and was logged under lot D9J270263. One sample was received under chain of custody at a temperature of 1.1°C on October 28, 2009, and was logged under lot D9J280280. One sample was received under chain of custody at a temperature of 1.1°C on October 28, 2009, and was logged under lot D9J280283. Four samples were received under chain of custody at a temperature of 2.2°C on October 29, 2009, and were logged under lot D9J290310. Two samples were received under chain of custody at a temperature of 2.9°C on October 30, 2009, and were logged under lot D9J300353. One sample was received under chain of custody at a temperature of 2.9°C on October 30, 2009, and was logged under lot D9J300356. One sample was received under chain of custody at a temperature of 2.7°C on October 31, 2009, and was logged under lot D9J310138. These lots are reported here under SDG 8304641.

Total and Dissolved Arsenic and Selenium – SW846 Method 6020/Collision Cell

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. All of the samples except D9J300353-002 (M-137BDISS) and D9J310138-001 (EB103009-GWA4) were analyzed for Arsenic and Selenium at dilutions of 2X or 5X due to the sample matrix. The reporting limits have been adjusted relative to the dilutions required.

The method required MS/MSD was performed for Total Metals QC batch 9303185 using sample D9J270261-001 (M-139B), and exhibited MS/MSD recoveries for both Arsenic and Selenium that were within the QC control limits even though the concentration of Arsenic in the parent sample was greater than 4X the spike amount. The MS and MSD results for Arsenic have been flagged with "MSB".

The method required MS/MSD was performed for Total Metals QC batch 9306276 using sample D9J310138-001 (EB103009-GWA4), and all results were in control.

The method required MS/MSD was performed for Dissolved Metals QC batch 9303187 using sample D9J290310-003 (M-138BDISS), and exhibited MS/MSD recoveries for both Arsenic and Selenium that were within the QC control limits even though the concentration of Arsenic in the parent sample was greater than 4X the spike amount. The MS and MSD results for Arsenic have been flagged with "MSB".

The method required MS/MSD was performed for Dissolved Metals QC batch 9306272 using sample D9J300353-002 (M-137BDISS), and exhibited MS/MSD recoveries for both Arsenic and Selenium that were within the QC control limits even though the concentration of Arsenic in the parent sample was greater than 4X the spike amount. The MS and MSD results for Arsenic have been flagged with "MSB".

Quality Control Definitions of Terms

Term	Definition
Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which is spiked with known amounts of representative target analytes and required surrogates. A LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. An LCSD is a second Laboratory Control Sample.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MS/MSDs are carried throughout the entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.
Sample Duplicate	A second aliquot of an environmental sample, taken from the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative of the precision for other samples in the batch.
Method Detection Limit "MDL"	The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from replicate analyses of low level standards in a typical representative matrix.
Reporting Limit "RL"	The TestAmerica reporting limit is normally the lowest level at which measurements become quantitatively meaningful, ie., the quantitation limit, which is approximately three times the MDL. Some projects require RLs that are less than the quantitation limit to achieve particular maximum contaminant levels (MCLs) or relevant and appropriate requirements (ARARs), but RLs cannot be less than the statistically determined MDL.

Quality Control Definitions of Qualifiers

Qualifier	Definition
*	Surrogate or Relative Percent Difference (RPD) is outside control limits.
a	Spiked analyte recovery is outside control limits.
B	Organics: Method blank contamination. The associated method blank contains the target analyte at a reportable level. Inorganics: Estimated result. Result is less than the RL
COL	More than 40% difference between the primary and confirmation detector results. The lower of the two results is reported.
DIL	The concentration is estimated or not reported due to dilution.
E	Estimated result. Result concentration exceeds the calibration range.
G	Inorganics: Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Organics: Estimated result. Result is less than RL Inorganics: Method blank contamination. The associated method blank contains the target analyte at a reportable level.
L	Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present
N	Spiked analyte recovery is outside stated control limits.
NC	The recovery and/or RPD were not calculated.
ND	The analyte was not detected at the MDL concentration and with a measurable degree of confidence can be said not to be present at or above the RL concentration.
p	Relative percent difference (RPD) is outside stated control limits.
Q	Elevated reporting limit. The reporting limit is elevated due to high analyte levels.
V	General Chemistry: Elevated reporting limit due to limited sample volume.
Wa	Post digestion spike recovery fell between 40-85% due to matrix interference.
Wb	Post digestion spike recovery fell between 115-150% due to matrix interference.
I	Percent recovery is estimated since the results exceeded the calibration range.
T1	A tentatively identified compound that did not generate a spectral match of 80% or greater. Typically called "unknown"
T2	A tentatively identified compound with a spectral match of 80% or better
T3	A tentatively identified compound that was calibrated for by the lab, but not on the client target analyte list.
IC	Diluted due to high inorganic chloride.

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J270261

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-139B 10/26/09 12:55 001				
Arsenic	190	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J270263

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-145B 10/26/09 10:15 001				
Arsenic	69	25	ug/L	SW846 6020
Selenium	4.0 B	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J280280

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-146B 10/27/09 09:30 001				
Arsenic	280	25	ug/L	SW846 6020
Selenium	9.0 B	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J280283

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-144B 10/27/09 12:25 001				
Arsenic	210	25	ug/L	SW846 6020
Selenium	3.5 B	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J290310

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-138B 10/28/09 11:15 001				
Arsenic	350	25	ug/L	SW846 6020
M-138009B 10/28/09 11:15 002				
Arsenic	340	25	ug/L	SW846 6020
M-138BDISS 10/28/09 11:15 003				
Arsenic - DISSOLVED	340	10	ug/L	SW846 6020
Selenium - DISSOLVED	2.4 B	10	ug/L	SW846 6020
M-138009BDISS 10/28/09 11:15 004				
Arsenic - DISSOLVED	330	10	ug/L	SW846 6020
Selenium - DISSOLVED	2.4 B	10	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J300353

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-137B 10/29/09 13:30 001				
Arsenic	200	10	ug/L	SW846 6020
Selenium	3.2 B	10	ug/L	SW846 6020
M-137BDISS 10/29/09 13:30 002				
Arsenic - DISSOLVED	190	5.0	ug/L	SW846 6020
Selenium - DISSOLVED	2.2 B	5.0	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304641 : D9J300356

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-148B 10/29/09 09:10 001				
Arsenic	110	10	ug/L	SW846 6020
Selenium	6.6 B	10	ug/L	SW846 6020

EXECUTIVE SUMMARY - Detection Highlights

D9J310138

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD

NO DETECTABLE PARAMETERS

METHODS SUMMARY

8304641

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
ICP-MS (6020)	SW846 6020	SW846 3005A
ICP-MS (6020)	SW846 6020	SW846 3020A

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

8304641

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6020	Luis Diaz	004729
SW846 6020	Luis Diaz	4729
SW846 6020	Thomas Lill	006929

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

8304641 : D9J270261

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNC7F	001	M-139B	10/26/09	12:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

(Continued on next page)

SAMPLE SUMMARY

8304641 : D9J270263

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNC7L	001	M-145B	10/26/09	10:15

NOTE(S):

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SAMPLE SUMMARY

8304641 : D9J280280

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNFGD	001	M-146B	10/27/09	09:30

NOTE(S):

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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

(Continued on next page)

SAMPLE SUMMARY

8304641 : D9J280283

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNFG2	001	M-144B	10/27/09	12:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SAMPLE SUMMARY

8304641 : D9J290310

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNH2J	001	M-138B	10/28/09	11:15
LNH2K	002	M-138009B	10/28/09	11:15
LNH2L	003	M-138BDISS	10/28/09	11:15
LNH2N	004	M-138009BDISS	10/28/09	11:15

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SAMPLE SUMMARY

8304641 : D9J300353

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNLN9	001	M-137B	10/29/09	13:30
LNLPF	002	M-137BDISS	10/29/09	13:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SAMPLE SUMMARY

8304641 : D9J300356

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNLR4	001	M-148B	10/29/09	09:10

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

(Continued on next page)

SAMPLE SUMMARY

8304641 : D9J310138

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNME4	001	EB103009-GWA4	10/30/09	11:10

NOTE(S):

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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9J270261

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9303185	9303114

QC DATA ASSOCIATION SUMMARY

D9J270263

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9303185	9303114

QC DATA ASSOCIATION SUMMARY

D9J280280

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9303185	9303114

QC DATA ASSOCIATION SUMMARY

D9J280283

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9303185	9303114

QC DATA ASSOCIATION SUMMARY

D9J290310

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9303185	9303114
002	WG	SW846 6020		9303185	9303114
003	WG	SW846 6020		9303187	9303116
004	WG	SW846 6020		9303187	9303116

QC DATA ASSOCIATION SUMMARY

D9J300353

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9306276	9306166
002	WG	SW846 6020		9306272	9306161

QC DATA ASSOCIATION SUMMARY

D9J300356

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6020		9306276	9306166

QC DATA ASSOCIATION SUMMARY

D9J310138

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WQ	SW846 6020		9306276	9306166

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J270261

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J270261

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-139B	D9J270261-001
M-139B MS	D9J270261-001S
M-139B MSD	D9J270261-001SD

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

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THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-139B
Lot/SDG Number:	D9J270261	**Lab Sample ID:**	D9J270261-001
Matrix:	WATER	**Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:44
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**190**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	50.2	100.4	M
Selenium				50.0	49.4	98.8	52.9	105.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	50.6	101.2	50.3	100.6	M
Selenium				50.0	51.9	103.8	50.7	101.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270261

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

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Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J270261	**Lab Sample ID:**	D9J300000-185B
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

TestAmerica

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-139B
Lot/SDG Number:	D9J270261	**MS Lab Sample ID:**	D9J270261-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:53
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		237	MSB	116		85 - 117
Selenium	40.0	3.5	U	41.0		98		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-139B
Lot/SDG Number:	D9J270261	**MSD Lab Sample ID:**	D9J270261-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:04
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		236	MSB	113		0.46		85 - 117	20
Selenium	40.0	3.5	U	42.4		101		3.3		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: M-139B PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	232.300		38.140		200.00	97.1		M
Selenium	75 - 125	204.200		0.700	U	200.00	102.1		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J270261	**Lab Sample ID:**	D9J300000-185C
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:42
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	34.7	87		85 - 117
Selenium	40.0	35.6	89		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

M-139B SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	38.140		37.570		1.5		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Total Metals Analvsis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Form XII - IN

TestAmerica

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270261

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-139B	11/2/2009	50.0	50.0
M-139B MS	11/2/2009	50.0	50.0
M-139B MSD	11/2/2009	50.0	50.0
MB9303185	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270261

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	02:25				X															X						
100 PPB	1.00	02:28				X															X						
CCV	1.00	02:31				X															X						
CCB	1.00	02:33				X															X						
MB9303185	1.00	02:39				X															X						
Check Sample	1.00	02:42				X															X						
M-139B	5.00	02:44				X															X						
M-139B SER	25.00	02:47				X															X						
M-139B PDS	1.00	02:50				X															X						
M-139B MS	5.00	02:53				X															X						
CCV	1.00	02:56				X															X						
CCB	1.00	02:58				X															X						
M-139B MSD	5.00	03:04				X															X						
CCV	1.00	03:21				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270261

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	03:23				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J270263

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J270263

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-145B	D9J270263-001

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-145B
Lot/SDG Number:	D9J270263	**Lab Sample ID:**	D9J270263-001
Matrix:	WATER	**Lab WorkOrder:**	LNC7L
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 10:15
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:07
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**69**	1.0	25	
7782-49-2	Selenium	**4.0**	3.5	25	B

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	50.2	100.4	M
Selenium				50.0	49.4	98.8	52.9	105.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	50.6	101.2	50.3	100.6	M
Selenium				50.0	51.9	103.8	50.7	101.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

TestAmerica

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270263

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J270263	**Lab Sample ID:**	D9J300000-185B
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

TestAmerica

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J270263	**MS Lab Sample ID:**	D9J270261-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:53
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		237	MSB	116		85 - 117
Selenium	40.0	3.5	U	41.0		98		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J270263	**MSD Lab Sample ID:**	D9J270261-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:04
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		236	MSB	113		0.46		85 - 117	20
Selenium	40.0	3.5	U	42.4		101		3.3		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	232.300		38.140		200.00	97.1		M
Selenium	75 - 125	204.200		0.700	U	200.00	102.1		M

Comments: _____

Form V (PART 2) - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J270263	**Lab Sample ID:**	D9J300000-185C
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:42
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	34.7	87		85 - 117
Selenium	40.0	35.6	89		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	38.140		37.570		1.5		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Total Metals Analvsis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Form XII - IN

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J270263

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	11/2/2009	50.0	50.0
LAB MS/MSD MS	11/2/2009	50.0	50.0
LAB MS/MSD MSD	11/2/2009	50.0	50.0
M-145B	11/2/2009	50.0	50.0
MB9303185	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270263

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	02:25				X															X						
100 PPB	1.00	02:28				X															X						
CCV	1.00	02:31				X															X						
CCB	1.00	02:33				X															X						
MB9303185	1.00	02:39				X															X						
Check Sample	1.00	02:42				X															X						
INTRA-LAB QC	5.00	02:44				X															X						
INTRA-LAB QC SER	25.00	02:47				X															X						
INTRA-LAB QC PDS	1.00	02:50				X															X						
LAB MS/MSD MS	5.00	02:53				X															X						
CCV	1.00	02:56				X															X						
CCB	1.00	02:58				X															X						
LAB MS/MSD MSD	5.00	03:04				X															X						
M-145B	5.00	03:07				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J270263

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	03:21				X															X						
CCB	1.00	03:23				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J280280

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J280280

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-146B	D9J280280-001

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-146B
Lot/SDG Number:	D9J280280	**Lab Sample ID:**	D9J280280-001
Matrix:	WATER	**Lab WorkOrder:**	LNFGD
% Moisture:	N/A	**Date/Time Collected:**	10/27/09 09:30
Basis:	Wet	**Date/Time Received:**	10/28/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:09
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**280**	1.0	25	
7782-49-2	Selenium	**9.0**	3.5	25	B

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	50.2	100.4	M
Selenium				50.0	49.4	98.8	52.9	105.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	50.6	101.2	50.3	100.6	M
Selenium				50.0	51.9	103.8	50.7	101.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280280

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J280280	**Lab Sample ID:**	D9J300000-185B
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

Total Metals Analvsis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J280280	**MS Lab Sample ID:**	D9J270261-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:53
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		237	MSB	116		85 - 117
Selenium	40.0	3.5	U	41.0		98		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J280280	**MSD Lab Sample ID:**	D9J270261-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:04
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		236	MSB	113		0.46		85 - 117	20
Selenium	40.0	3.5	U	42.4		101		3.3		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	232.300		38.140		200.00	97.1		M
Selenium	75 - 125	204.200		0.700	U	200.00	102.1		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J280280	**Lab Sample ID:**	D9J300000-185C
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:42
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	34.7	87		85 - 117
Selenium	40.0	35.6	89		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	38.140		37.570		1.5		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

TestAmerica

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280280

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	11/2/2009	50.0	50.0
LAB MS/MSD MS	11/2/2009	50.0	50.0
LAB MS/MSD MSD	11/2/2009	50.0	50.0
M-146B	11/2/2009	50.0	50.0
MB9303185	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280280

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	02:25				X															X						
100 PPB	1.00	02:28				X															X						
CCV	1.00	02:31				X															X						
CCB	1.00	02:33				X															X						
MB9303185	1.00	02:39				X															X						
Check Sample	1.00	02:42				X															X						
INTRA-LAB QC	5.00	02:44				X															X						
INTRA-LAB QC SER	25.00	02:47				X															X						
INTRA-LAB QC PDS	1.00	02:50				X															X						
LAB MS/MSD MS	5.00	02:53				X															X						
CCV	1.00	02:56				X															X						
CCB	1.00	02:58				X															X						
LAB MS/MSD MSD	5.00	03:04				X															X						
M-146B	5.00	03:09				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280280

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	03:21				X															X						
CCB	1.00	03:23				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J280283

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J280283

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-144B	D9J280283-001

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-144B
Lot/SDG Number:	D9J280283	**Lab Sample ID:**	D9J280283-001
Matrix:	WATER	**Lab WorkOrder:**	LNFG2
% Moisture:	N/A	**Date/Time Collected:**	10/27/09 12:25
Basis:	Wet	**Date/Time Received:**	10/28/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:12
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**210**	1.0	25	
7782-49-2	Selenium	**3.5**	3.5	25	B

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	50.2	100.4	M
Selenium				50.0	49.4	98.8	52.9	105.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	50.6	101.2	50.3	100.6	M
Selenium				50.0	51.9	103.8	50.7	101.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280283

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J280283	**Lab Sample ID:**	D9J300000-185B
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Total Metals Analysis

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J280283	**MS Lab Sample ID:**	D9J270261-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:53
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		237	MSB	116		85 - 117
Selenium	40.0	3.5	U	41.0		98		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J280283	**MSD Lab Sample ID:**	D9J270261-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:04
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		236	MSB	113		0.46		85 - 117	20
Selenium	40.0	3.5	U	42.4		101		3.3		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	232.300		38.140		200.00	97.1		M
Selenium	75 - 125	204.200		0.700	U	200.00	102.1		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J280283	**Lab Sample ID:**	D9J300000-185C
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:42
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	34.7	87		85 - 117
Selenium	40.0	35.6	89		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	38.140		37.570		1.5		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J280283

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	11/2/2009	50.0	50.0
LAB MS/MSD MS	11/2/2009	50.0	50.0
LAB MS/MSD MSD	11/2/2009	50.0	50.0
M-144B	11/2/2009	50.0	50.0
MB9303185	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280283

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	02:25				X															X						
100 PPB	1.00	02:28				X															X						
CCV	1.00	02:31				X															X						
CCB	1.00	02:33				X															X						
MB9303185	1.00	02:39				X															X						
Check Sample	1.00	02:42				X															X						
INTRA-LAB QC	5.00	02:44				X															X						
INTRA-LAB QC SER	25.00	02:47				X															X						
INTRA-LAB QC PDS	1.00	02:50				X															X						
LAB MS/MSD MS	5.00	02:53				X															X						
CCV	1.00	02:56				X															X						
CCB	1.00	02:58				X															X						
LAB MS/MSD MSD	5.00	03:04				X															X						
M-144B	5.00	03:12				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J280283

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	03:21				X															X						
CCB	1.00	03:23				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J290310

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001, 002

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J290310

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-138009B	D9J290310-002
M-138B	D9J290310-001

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138B
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J290310-001
Matrix:	WATER	**Lab WorkOrder:**	LNH2J
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:15
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**350**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138009B
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J290310-002
Matrix:	WATER	**Lab WorkOrder:**	LNH2K
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:18
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**340**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	50.2	100.4	M
Selenium				50.0	49.4	98.8	52.9	105.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	50.6	101.2	50.3	100.6	M
Selenium				50.0	51.9	103.8	50.7	101.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J300000-185B
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J290310	**MS Lab Sample ID:**	D9J270261-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:53
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		237	MSB	116		85 - 117
Selenium	40.0	3.5	U	41.0		98		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J290310	**MSD Lab Sample ID:**	D9J270261-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNC7F
% Moisture:	N/A	**Date/Time Collected:**	10/26/09 12:55
Basis:	Wet	**Date/Time Received:**	10/27/09 09:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 03:04
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	5		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		236	MSB	113		0.46		85 - 117	20
Selenium	40.0	3.5	U	42.4		101		3.3		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	232.300		38.140		200.00	97.1		M
Selenium	75 - 125	204.200		0.700	U	200.00	102.1		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J300000-185C
Matrix:	WATER	**Lab WorkOrder:**	LNJNV
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303185	**Date/Time Analyzed:**	11/08/09 02:42
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	34.7	87		85 - 117
Selenium	40.0	35.6	89		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	38.140		37.570		1.5		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

TestAmerica

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	11/2/2009	50.0	50.0
LAB MS/MSD MS	11/2/2009	50.0	50.0
LAB MS/MSD MSD	11/2/2009	50.0	50.0
M-138B	11/2/2009	50.0	50.0
M-138009B	11/2/2009	50.0	50.0
MB9303185	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	02:25				X															X						
100 PPB	1.00	02:28				X															X						
CCV	1.00	02:31				X															X						
CCB	1.00	02:33				X															X						
MB9303185	1.00	02:39				X															X						
Check Sample	1.00	02:42				X															X						
INTRA-LAB QC	5.00	02:44				X															X						
INTRA-LAB QC SER	25.00	02:47				X															X						
INTRA-LAB QC PDS	1.00	02:50				X															X						
LAB MS/MSD MS	5.00	02:53				X															X						
CCV	1.00	02:56				X															X						
CCB	1.00	02:58				X															X						
LAB MS/MSD MSD	5.00	03:04				X															X						
M-138B	5.00	03:15				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
M-138009B	5.00	03:18				X															X						
CCV	1.00	03:21				X															X						
CCB	1.00	03:23				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Dissolved Metals

CLP-Like Forms

Lot ID: D9J290310

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 003, 004

TestAmerica

Dissolved Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J290310

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-138009BDISS	D9J290310-004
M-138BDISS	D9J290310-003
M-138BDISS MS	D9J290310-003S
M-138BDISS MSD	D9J290310-003SD

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/10/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138BDISS
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J290310-003
Matrix:	WATER	**Lab WorkOrder:**	LNH2L
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 01:52
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	2		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**340**	0.42	10	
7782-49-2	Selenium	**2.4**	1.4	10	B

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138009BDISS
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J290310-004
Matrix:	WATER	**Lab WorkOrder:**	LNH2N
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 02:06
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	2		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**330**	0.42	10	
7782-49-2	Selenium	**2.4**	1.4	10	B

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	39.4	98.5	50.0	49.6	99.2	50.9	101.8	M
Selenium	40.0	39.0	97.5	50.0	51.3	102.6	51.0	102.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	51.0	102.0	49.1	98.2	M
Selenium				50.0	49.4	98.8	48.5	97.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	49.7	99.4	49.8	99.6	M
Selenium				50.0	49.0	98.0	49.6	99.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.009	100.9		
Selenium				1.00	0.851	85.1		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J300000-187B
Matrix:	WATER	**Lab WorkOrder:**	LNJN5
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 01:46
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

Dissolved Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Dissolved Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U	0.210	U			M
Selenium			0.700	U	0.700	U	0.700	U			M

Comments:

TestAmerica

Dissolved Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.35	99.50	99.5	0.31	101.10	101.1
Selenium	0.0	100.0	0.47	105.90	105.9	-0.18	105.10	105.1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138BDISS
Lot/SDG Number:	D9J290310	**MS Lab Sample ID:**	D9J290310-003S
Matrix:	WATER	**MS Lab WorkOrder:**	LNH2L
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 02:00
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	2		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	340		374	MSB	95		85 - 117
Selenium	40.0	2.4	B	39.8		93		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-138BDISS
Lot/SDG Number:	D9J290310	**MSD Lab Sample ID:**	D9J290310-003D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNH2L
% Moisture:	N/A	**Date/Time Collected:**	10/28/09 11:15
Basis:	Wet	**Date/Time Received:**	10/29/09 10:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 02:03
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	2		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	340		377	MSB	102		0.74		85 - 117	20
Selenium	40.0	2.4	B	41.4		98		4.1		77 - 122	20

Dissolved Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

M-138BDISS PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	363.400		168.250		200.00	97.6		M
Selenium	75 - 125	213.900		1.211	B	200.00	106.3		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J290310	**Lab Sample ID:**	D9J300000-187C
Matrix:	WATER	**Lab WorkOrder:**	LNJN5
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/02/09 14:30
QC Batch ID:	9303187	**Date/Time Analyzed:**	11/08/09 01:49
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	35.9	90		85 - 117
Selenium	40.0	34.0	85		77 - 122

Dissolved Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

M-138BDISS SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	168.250		161.650		3.9		M
Selenium	1.211	B	3.500	U	100.0		M

Comments: _____

TestAmerica

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Dissolved Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

TestAmerica

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J290310

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-138BDISS	11/2/2009	50.0	50.0
M-138BDISS MS	11/2/2009	50.0	50.0
M-138BDISS MSD	11/2/2009	50.0	50.0
M-138009BDISS	11/2/2009	50.0	50.0
MB9303187	11/2/2009	50.0	50.0
Check Sample	11/2/2009	50.0	50.0

Comments:

TestAmerica

Dissolved Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	15:09				X															X						
100 PPB	1.00	15:12				X															X						
ICV	1.00	15:15				X															X						
ICB	1.00	15:20				X															X						
RL STD	1.00	15:23				X															X						
ICSA	1.00	15:31				X															X						
ICSAB	1.00	15:34				X															X						
RINSE	1.00	15:37				X															X						
LR1	1.00	15:40				X															X						
RINSE	1.00	15:42				X															X						
CCV	1.00	15:45				X															X						
CCB	1.00	15:48				X															X						
CCV	1.00	19:25				X															X						
CCB	1.00	19:28				X															X						
ICSA	1.00	19:33				X															X						
ICSAB	1.00	19:36				X															X						
WASH	1.00	19:39				X															X						
CCV	1.00	19:41				X															X						
CCB	1.00	19:44				X															X						
CAL BLANK	1.00	23:44				X															X						
100 PPB	1.00	23:47				X															X						
CCV	1.00	23:50				X															X						
CCB	1.00	23:52				X															X						
CCV	1.00	01:38				X															X						
CCB	1.00	01:41				X															X						
MB9303187	1.00	01:46				X															X						
Check Sample	1.00	01:49				X															X						
M-138BDISS	2.00	01:52				X															X						
M-138BDISS SER	10.00	01:55				X															X						
M-138BDISS PDS	1.00	01:58				X															X						
M-138BDISS MS	2.00	02:00				X															X						
M-138BDISS MSD	2.00	02:03				X															X						
M-138009BDISS	2.00	02:06				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Dissolved Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J290310

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/7/2009 End Date: 11/8/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	02:09				X															X						
CCB	1.00	02:11				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J300353

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J300353

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-137B	D9J300353-001

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/11/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-137B
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9J300353-001
Matrix:	WATER	**Lab WorkOrder:**	LNLN9
% Moisture:	N/A	**Date/Time Collected:**	10/29/09 13:30
Basis:	Wet	**Date/Time Received:**	10/30/09 10:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:21
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	2		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**200**	0.42	10	
7782-49-2	Selenium	**3.2**	1.4	10	B

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	40.1	100.2	50.0	50.9	101.8	51.4	102.8	M
Selenium	40.0	40.2	100.5	50.0	51.9	103.8	50.6	101.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300353

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.051	105.1		
Selenium				1.00	1.232	123.2		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9K020000-276B
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:16
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U			0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U			0.70	U	M

Comments:

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.28	101.00	101.0			
Selenium	0.0	100.0	0.38	100.00	100.0			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J300353	**MS Lab Sample ID:**	D9J310138-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:35
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	0.21	U	39.7		99		85 - 117
Selenium	40.0	0.70	U	37.7		93		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J300353	**MSD Lab Sample ID:**	D9J310138-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:38
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	0.21	U	39.6		99		0.17		85 - 117	20
Selenium	40.0	0.70	U	37.1		92		1.6		77 - 122	20

TestAmerica

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	190.300		0.210	U	200.00	95.2		M
Selenium	75 - 125	185.700		0.700	U	200.00	92.8		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9K020000-276C
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:19
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	40.8	102		85 - 117
Selenium	40.0	38.2	95		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	0.210	U	1.050	U			M
Selenium	0.700	U	3.500	U			M

Comments: _____

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-137B	11/3/2009	50.0	50.0
INTRA-LAB QC	11/3/2009	50.0	50.0
LAB MS/MSD MS	11/3/2009	50.0	50.0
LAB MS/MSD MSD	11/3/2009	50.0	50.0
MB9306276	11/3/2009	50.0	50.0
Check Sample	11/3/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300353

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/9/2009 End Date: 11/9/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	20:32				X															X						
100 PPB	1.00	20:35				X															X						
ICV	1.00	20:37				X															X						
ICB	1.00	20:43				X															X						
RL STD	1.00	20:46				X															X						
ICSA	1.00	20:54				X															X						
ICSAB	1.00	20:57				X															X						
RINSE	1.00	20:59				X															X						
LR1	1.00	21:02				X															X						
RINSE	1.00	21:05				X															X						
CCV	1.00	21:08				X															X						
CCB	1.00	21:10				X															X						
MB9306276	1.00	21:16				X															X						
Check Sample	1.00	21:19				X															X						
M-137B	2.00	21:21				X															X						
INTRA-LAB QC	1.00	21:27				X															X						
INTRA-LAB QC SER	5.00	21:30				X															X						
INTRA-LAB QC PDS	1.00	21:32				X															X						
LAB MS/MSD MS	1.00	21:35				X															X						
LAB MS/MSD MSD	1.00	21:38				X															X						
CCV	1.00	21:41				X															X						
CCB	1.00	21:43				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Dissolved Metals

CLP-Like Forms

Lot ID: D9J300353

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 002

TestAmerica

Dissolved Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J300353

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-137BDISS	D9J300353-002
M-137BDISS MS	D9J300353-002S
M-137BDISS MSD	D9J300353-002SD

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/11/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-137BDISS
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9J300353-002
Matrix:	WATER	**Lab WorkOrder:**	LNLPF
% Moisture:	N/A	**Date/Time Collected:**	10/29/09 13:30
Basis:	Wet	**Date/Time Received:**	10/30/09 10:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/09/09 14:00
QC Batch ID:	9306272	**Date/Time Analyzed:**	11/10/09 02:22
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**190**	0.21	5.0	
7782-49-2	Selenium	**2.2**	0.70	5.0	B

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	40.1	100.2	50.0	50.9	101.8	50.5	101.0	M
Selenium	40.0	40.2	100.5	50.0	51.9	103.8	49.5	99.0	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic				50.0	49.9	99.8	49.5	99.0	M
Selenium				50.0	51.0	102.0	47.9	95.8	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				50.0	49.3	98.6			M
Selenium				50.0	48.2	96.4			M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300353

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.051	105.1		
Selenium				1.00	1.232	123.2		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9K020000-272B
Matrix:	WATER	**Lab WorkOrder:**	LNNPL
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/09/09 14:00
QC Batch ID:	9306272	**Date/Time Analyzed:**	11/10/09 02:16
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Dissolved Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U	0.210	U	0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U	0.700	U	0.70	U	M

Comments:

TestAmerica

Dissolved Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			0.210	U	0.210	U					M
Selenium			0.700	U	0.700	U					M

Comments:

TestAmerica

Dissolved Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.28	101.00	101.0	0.40	98.23	98.2
Selenium	0.0	100.0	0.38	100.00	100.0	0.25	104.70	104.7

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-137BDISS
Lot/SDG Number:	D9J300353	**MS Lab Sample ID:**	D9J300353-002S
Matrix:	WATER	**MS Lab WorkOrder:**	LNLPF
% Moisture:	N/A	**Date/Time Collected:**	10/29/09 13:30
Basis:	Wet	**Date/Time Received:**	10/30/09 10:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/09/09 14:00
QC Batch ID:	9306272	**Date/Time Analyzed:**	11/10/09 02:30
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	190		235	MSB	106		85 - 117
Selenium	40.0	2.2	B	47.1		112		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-137BDISS
Lot/SDG Number:	D9J300353	**MSD Lab Sample ID:**	D9J300353-002D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNLPF
% Moisture:	N/A	**Date/Time Collected:**	10/29/09 13:30
Basis:	Wet	**Date/Time Received:**	10/30/09 10:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/09/09 14:00
QC Batch ID:	9306272	**Date/Time Analyzed:**	11/10/09 02:33
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	190		235	MSB	105		0.12		85 - 117	20
Selenium	40.0	2.2	B	45.5		108		3.5		77 - 122	20

Dissolved Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: M-137BDISS PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	382.300		193.000		200.00	94.6		M
Selenium	75 - 125	213.200		2.230	B	200.00	105.5		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300353	**Lab Sample ID:**	D9K020000-272C
Matrix:	WATER	**Lab WorkOrder:**	LNNPL
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/09/09 14:00
QC Batch ID:	9306272	**Date/Time Analyzed:**	11/10/09 02:19
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	40.9	102		85 - 117
Selenium	40.0	37.9	95		77 - 122

Dissolved Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

M-137BDISS SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	193.000		189.050		2.0		M
Selenium	2.230	B	3.819	B	71.3		M

Comments: _____

TestAmerica

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

TestAmerica

Dissolved Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300353

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-137BDISS	11/9/2009	50.0	50.0
M-137BDISS MS	11/9/2009	50.0	50.0
M-137BDISS MSD	11/9/2009	50.0	50.0
MB9306272	11/9/2009	50.0	50.0
Check Sample	11/9/2009	50.0	50.0

Comments:

Dissolved Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300353

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/9/2009 End Date: 11/10/2009

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	20:32				X															X						
100 PPB	1.00	20:35				X															X						
ICV	1.00	20:37				X															X						
ICB	1.00	20:43				X															X						
RL STD	1.00	20:46				X															X						
ICSA	1.00	20:54				X															X						
ICSAB	1.00	20:57				X															X						
RINSE	1.00	20:59				X															X						
LR1	1.00	21:02				X															X						
RINSE	1.00	21:05				X															X						
CCV	1.00	21:08				X															X						
CCB	1.00	21:10				X															X						
CAL BLANK	1.00	23:23				X															X						
100 PPB	1.00	23:26				X															X						
CCV	1.00	23:29				X															X						
CCB	1.00	23:32				X															X						
ICSA	1.00	23:37				X															X						
ICSAB	1.00	23:40				X															X						
WASH	1.00	23:43				X															X						
CCV	1.00	23:45				X															X						
CCB	1.00	23:48				X															X						
CAL BLANK	1.00	02:03				X															X						
100 PPB	1.00	02:05				X															X						
CCV	1.00	02:08				X															X						
CCB	1.00	02:11				X															X						
MB9306272	1.00	02:16				X															X						
Check Sample	1.00	02:19				X															X						
M-137BDISS	1.00	02:22				X															X						
M-137BDISS SER	5.00	02:25				X															X						
M-137BDISS PDS	1.00	02:27				X															X						
M-137BDISS MS	1.00	02:30				X															X						
M-137BDISS MSD	1.00	02:33				X															X						
CCV	1.00	02:36				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Dissolved Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300353

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/9/2009 End Date: 11/10/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	02:38				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J300356

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J300356

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
M-148B	D9J300356-001

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/11/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-148B
Lot/SDG Number:	D9J300356	**Lab Sample ID:**	D9J300356-001
Matrix:	WATER	**Lab WorkOrder:**	LNLR4
% Moisture:	N/A	**Date/Time Collected:**	10/29/09 09:10
Basis:	Wet	**Date/Time Received:**	10/30/09 10:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:24
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	2		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**110**	0.42	10	
7782-49-2	Selenium	**6.6**	1.4	10	B

Total Metals Analysis
-2A-
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic	40.0	40.1	100.2	50.0	50.9	101.8	51.4	102.8	M
Selenium	40.0	40.2	100.5	50.0	51.9	103.8	50.6	101.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

TestAmerica

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300356

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.051	105.1		
Selenium				1.00	1.232	123.2		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300356	**Lab Sample ID:**	D9K020000-276B
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:16
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U			0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U			0.70	U	M

Comments:

TestAmerica

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.28	101.00	101.0			
Selenium	0.0	100.0	0.38	100.00	100.0			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J300356	**MS Lab Sample ID:**	D9J310138-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:35
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	0.21	U	39.7		99		85 - 117
Selenium	40.0	0.70	U	37.7		93		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J300356	**MSD Lab Sample ID:**	D9J310138-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:38
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	0.21	U	39.6		99		0.17		85 - 117	20
Selenium	40.0	0.70	U	37.1		92		1.6		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: INTRA-LAB QC PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	190.300		0.210	U	200.00	95.2		M
Selenium	75 - 125	185.700		0.700	U	200.00	92.8		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J300356	**Lab Sample ID:**	D9K020000-276C
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:19
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	40.8	102		85 - 117
Selenium	40.0	38.2	95		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	0.210	U	1.050	U			M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J300356

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-148B	11/3/2009	50.0	50.0
INTRA-LAB QC	11/3/2009	50.0	50.0
LAB MS/MSD MS	11/3/2009	50.0	50.0
LAB MS/MSD MSD	11/3/2009	50.0	50.0
MB9306276	11/3/2009	50.0	50.0
Check Sample	11/3/2009	50.0	50.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J300356

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/9/2009 End Date: 11/9/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	20:32				X															X						
100 PPB	1.00	20:35				X															X						
ICV	1.00	20:37				X															X						
ICB	1.00	20:43				X															X						
RL STD	1.00	20:46				X															X						
ICSA	1.00	20:54				X															X						
ICSAB	1.00	20:57				X															X						
RINSE	1.00	20:59				X															X						
LR1	1.00	21:02				X															X						
RINSE	1.00	21:05				X															X						
CCV	1.00	21:08				X															X						
CCB	1.00	21:10				X															X						
MB9306276	1.00	21:16				X															X						
Check Sample	1.00	21:19				X															X						
M-148B	2.00	21:24				X															X						
INTRA-LAB QC	1.00	21:27				X															X						
INTRA-LAB QC SER	5.00	21:30				X															X						
INTRA-LAB QC PDS	1.00	21:32				X															X						
LAB MS/MSD MS	1.00	21:35				X															X						
LAB MS/MSD MSD	1.00	21:38				X															X						
CCV	1.00	21:41				X															X						
CCB	1.00	21:43				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9J310138

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Samples: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9J310138

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
EB103009-GWA4	D9J310138-001
EB103009-GWA4 MS	D9J310138-001S
EB103009-GWA4 MSD	D9J310138-001SD

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 11/11/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	EB103009-GWA4
Lot/SDG Number:	D9J310138	**Lab Sample ID:**	D9J310138-001
Matrix:	WATER	**Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:27
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

Total Metals Analysis
-2A-
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Arsenic	40.0	40.1	100.2	50.0	50.9	101.8	51.4	102.8	M
Selenium	40.0	40.2	100.5	50.0	51.9	103.8	50.6	101.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2A-
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	40.0	40.1	100.2	50.0	50.9	101.8	51.4	102.8	M
Selenium	40.0	40.2	100.5	50.0	51.9	103.8	50.6	101.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J310138

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	1.051	105.1		
Selenium				1.00	1.232	123.2		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J310138	**Lab Sample ID:**	D9K020000-276B
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:16
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	0.21	0.21	5.0	U
7782-49-2	Selenium	0.70	0.70	5.0	U

Total Metals Analysis

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	0.210	U	0.210	U	0.210	U			0.21	U	M
Selenium	0.700	U	0.700	U	0.700	U			0.70	U	M

Comments:

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.0	100.0	0.28	101.00	101.0			
Selenium	0.0	100.0	0.38	100.00	100.0			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	EB103009-GWA4
Lot/SDG Number:	D9J310138	**MS Lab Sample ID:**	D9J310138-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:35
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	0.21	U	39.7		99		85 - 117
Selenium	40.0	0.70	U	37.7		93		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	EB103009-GWA4
Lot/SDG Number:	D9J310138	**MSD Lab Sample ID:**	D9J310138-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LNME4
% Moisture:	N/A	**Date/Time Collected:**	10/30/09 11:10
Basis:	Wet	**Date/Time Received:**	10/31/09 08:30
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:38
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	0.21	U	39.6		99		0.17		85 - 117	20
Selenium	40.0	0.70	U	37.1		92		1.6		77 - 122	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

EB103009-GWA4 PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Arsenic	75 - 125	190.300		0.210	U	200.00	95.2		M
Selenium	75 - 125	185.700		0.700	U	200.00	92.8		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J310138	**Lab Sample ID:**	D9K020000-276C
Matrix:	WATER	**Lab WorkOrder:**	LNNP6
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	11/03/09 14:00
QC Batch ID:	9306276	**Date/Time Analyzed:**	11/09/09 21:19
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	40.8	102		85 - 117
Selenium	40.0	38.2	95		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

EB103009-GWA4 SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	0.210	U	1.050	U			M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

ICP ID Number: Agilent 7500 Date: 4/23/2009

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Arsenic	75		5.000	0.2100	M
Selenium	78		5.000	0.7000	M

Comments: _____

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

ICP ID Number: Agilent 7500 Date: 10/1/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Arsenic	0.001	3600	M
Selenium	0.001	3600	M

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J310138

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
EB103009-GWA4	11/3/2009	50.0	50.0
EB103009-GWA4 MS	11/3/2009	50.0	50.0
EB103009-GWA4 MSD	11/3/2009	50.0	50.0
MB9306276	11/3/2009	50.0	50.0
Check Sample	11/3/2009	50.0	50.0

Comments:

Total Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J310138

Instrument ID Number: Agilent 7500 Method: M

Start Date: 11/9/2009 End Date: 11/9/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	20:32				X															X						
100 PPB	1.00	20:35				X															X						
ICV	1.00	20:37				X															X						
ICB	1.00	20:43				X															X						
RL STD	1.00	20:46				X															X						
ICSA	1.00	20:54				X															X						
ICSAB	1.00	20:57				X															X						
RINSE	1.00	20:59				X															X						
LR1	1.00	21:02				X															X						
RINSE	1.00	21:05				X															X						
CCV	1.00	21:08				X															X						
CCB	1.00	21:10				X															X						
MB9306276	1.00	21:16				X															X						
Check Sample	1.00	21:19				X															X						
EB103009-GWA4	1.00	21:27				X															X						
EB103009-GWA4 SER	5.00	21:30				X															X						
EB103009-GWA4 PDS	1.00	21:32				X															X						
EB103009-GWA4 MS	1.00	21:35				X															X						
EB103009-GWA4 MSD	1.00	21:38				X															X						
CCV	1.00	21:41				X															X						
CCB	1.00	21:43				X															X						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

2.6°C AC 10/27/09 IR1

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northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01113
Page: 1 of 1
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:

Lab Name:	TestAmerica
Address:	4955 Yarrow Street
	Arvada, CO 80002
Lab PM:	Michael P. Phillips
Phone/Fax:	303-736-0157
Lab PM email	michael.phillips@testamericainc.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	949-375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley, Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949)260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush		Mark One
If Rush, Date due				
QC level Required: Standard		Special	EPA Stage 4	Mark one
NJ Reduced Deliverable Package?				
MA MCP Cert?		CT RCP Cert?		Mark One

Lab Project ID (lab use)

Valid Matrix Codes: DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (LF), FREE PRODUCT (FP), SOIL (SO), OIL (OL), WIPE (SW), AMBIENT AIR (AA), SVE AIR, SOIL GAS (AE), WATER (W), WW SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), GS ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 6020/Collision Ce	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-139B	WG	G	10/26/09	1255	1	N			X						X		500 ml Plastic
2	~~M-139BDISS~~	WG	G			1	Y			X						X		~~500 ml Plastic~~ JWO
3																		
4																		
5																		
6																		
7	JWO																	
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] GES	10/26	1405	[signature] GES	10/26	1405
[signature] GES	10/26	1600	Corrine Hui	10/26/09	0930
			am	10/27/09	

Sample Receipt Conditions

Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ~~Dana Brown~~ JWO JOSH W OTIS

SIGNATURE of SAMPLER: [signature]

DATE Signed 10/23 Time: 1340

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J270261 Date/Time Received: 10-27-09/0930

Company Name & Sampling Site: Northgate - TRONOX

PM to Complete This Section: *Yes* *No* *Yes* *No*
Residual chlorine check required: ☐ ☒ Quarantined : ☐ ☒

Quote #: 830416

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 2.4 _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☒	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No: ___	
	☒	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☒	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☐	☒	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☒	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J270261

Login Checks:

Initials: [illegible]

N/A	Yes	No		
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? 1	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials: LC

☒	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
☑	☐	☐	29. Were sample labels double-checked by a second person?	
☒	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☒	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☒	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☒	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

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northgate environmental management, inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01110
Page: 1 of 1
Cooler # ____ of ____
Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	TestAmerica	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day X	Rush / Mark One
Address:	4955 Yarrow Street	Project #	2027.001	Address:	PO Box 55	If Rush, Date due	
	Arvada, CO 80002	Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009 Phone #: (949)260-9293	QC level Required: Standard	Special / EPA Stage 4 / Mark one
Lab PM:	Michael P. Phillips	City	Henderson State NV	Reimbursement project?	X Non-reimbursement project? Mark one	NJ Reduced Deliverable Package?	
Phone/Fax:	303-736-0157	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	MA MCP Cert?	CT RCP Cert? / Mark One
Lab PM email	michael.phillips@testamericainc.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only	Lab Project ID (lab use)	
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

SAMPLE ID: One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER WW; FREE PRODUCT LF; SOIL SO; OIL OL; WIPE WP; AMBIENT AIR AA; SVE AIR AE; SOIL GAS GS. MATRIX — WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; RINSEATE WH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	EPA 6020/Collision Ce	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-145B	WG	G	10/26/09	1015	1	N			X						X		500 ml Plastic
2	~~M-145BDISS~~	~~WG~~	~~G~~			~~1~~	~~Y~~			~~X~~						~~X~~		~~500 ml Plastic~~ JWO
3																		
4																		
5																		
6	JWO																	
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:
As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions		
[signature]	10/26	1405	[signature] GES	10/26	1405	Y/N	Y/N	Y/N
[signature] GES	10/26	1600	[signature]	10/27/09	0930	Y/N	Y/N	Y/N
						Y/N	Y/N	Y/N
						Y/N	Y/N	Y/N

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: ~~Dana Brown~~ JOSH W OTIS
SIGNATURE of SAMPLER: [signature] DATE Signed 10/26 Time: 1045

Temp in 0C | Samples on Ice? | Sample intact? | Trip Blank?

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J270263 Date/Time Received: 10-27-09 / 0930

Company Name & Sampling Site: Tronox / Normgate

PM to Complete This Section: *Yes* *No* *Yes* *No*
Residual chlorine check required: ☐ ☒ Quarantined : ☐ ☒

Quote #: 83046

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 7.4 _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☒	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No: ____	
	☒	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☒	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☐	☒	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☒	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9T2702G3

Login Checks:

N/A	Yes	No		Initials
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	CMR
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? All	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
☐	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

				Initials
☒	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	YC
	☒	☐	29. Were sample labels double-checked by a second person?	
☒	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☒	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☒	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☒	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

northgate
environmental management, inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01111
Page: 1 of 1
Cooler # ____ of ____
Collection Area: II

Required Ship to Lab:		Required Project Information:		Required Invoice Information:					
Lab Name:	TestAmerica	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X	Rush	Mark One
Address:	4955 Yarrow Street	Project #	2027.001	Address:	PO Box 55	If Rush, Date due			
Arvada, CO 80002		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293	QC level Required: Standard	Special / EPA Stage 4 / Mark one
Lab PM:	Michael P. Phillips	City	Henderson	State	NV	Reimbursement project?	X	Non-reimbursement project?	Mark one
Phone/Fax:	303-736-0157	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	NJ Reduced Deliverable Package?			
Lab PM email	michael.phillips@testamericainc.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only	MA MCP Cert?		CT RCP Cert?	Mark One
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below	Lab Project ID (lab use)			

Valid Matrix Codes
MATRIX: DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (WW), FREE PRODUCT (LF), SOIL (SO), OIL (OL), WIPE (SW), AMBIENT AIR (AA), SVE AIR (AE), BOIL GAS (GB), WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 6020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-146B	WG	G	10/27/09	0930	1	N			X						X		500 ml Plastic
2	~~M-146BDISS~~	WG	G			~~1~~	Y			X						X		~~500 ml Plastic~~ JWO
3																		
4																		
5																		
6	JWO																	
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:
As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
GES	10/27	1410	GES	10/27	1410
GES	10/27	1600		10/28	1000

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W. Otis
SIGNATURE of SAMPLER:
DATE Signed: 10/27 Time: 1055

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J280280 Date/Time Received: 10/28/09 1000

Company Name & Sampling Site: Northgate - FRONX

	Yes	No		Yes	No		Yes	No
PM to Complete This Section: Residual chlorine check required:	☐	☒	Quarantined :	☐	☒	MIS prep :	☐	☒

Quote #: 830446

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 1.1 _____ _____ _____ _____ _____ _____ _____

N/A	Yes	No		Initials
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	CHK
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:____	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☑	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☑	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☑	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☑	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☑	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☑	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☑	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☑	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☑	17. Are analyses with short holding times requested?	
	☐	☑	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9T280280

Login Checks:

Initials MB

N/A	Yes	No		
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? /	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials JM

☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☑	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

1.1

northgate
environmental management, inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01109
Page: 1 of 1
Cooler # ____ of ____

Collection Area: IV

Required Ship to Lab:

Lab Name:	TestAmerica
Address:	4955 Yarrow Street
	Arvada, CO 80002
Lab PM:	Michael P. Phillips
Phone/Fax:	303-736-0157
Lab PM email	michael.phillips@testamericainc.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	949-375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley, Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949)260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush	Mark One
If Rush, Date due			
QC level Required: Standard		Special	EPA Stage 4 / Mark one
NJ Reduced Deliverable Package?			
MA MCP Cert?		CT RCP Cert?	Mark One
Lab Project ID (lab use)			

Valid Matrix Codes: DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (LF), FREE PRODUCT (SO), SOIL (SW), OIL (AA), WIPE (AE), AMBIENT AIR (GS), SVE AIR, SOIL GAS (OIL), WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-144B	WG	G	10/27/09	1225	1	N			X						X		500 ml Plastic
2	M-~~144BDISS~~	WG	G			~~1~~	Y			X						X		~~500 ml Plastic~~ JWO
3																		
4																		
5																		
6	JWO																	
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
JWO GES	10/27	1410	DP GES	10/27	1410
DP GES	10/27	1600	Aaron Birdsell	10/28/09	1000

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh W. Otis

SIGNATURE of SAMPLER: JWO

DATE Signed: 10/27 Time: 1340

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J280283 Date/Time Received: 10/28/09 1000

Company Name & Sampling Site: Northgate - TRONOX

PM to Complete This Section:	Yes	No		Yes	No		Yes	No
Residual chlorine check required:	☐	☒	Quarantined :	☐	☒	MIS prep :	☐	☒

Quote #: 830416

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 1.1 _____ _____ _____ _____ _____ _____ _____

N/A	Yes	No		Initials
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	CdV
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:____	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☐	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☑	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☑	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☑	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☑	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☑	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☑	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☑	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☑	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☑	17. Are analyses with short holding times requested?	
	☐	☑	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J280283

Login Checks:

Initials MB

N/A	Yes	No		
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? 1	
☐	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials MM

☐	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	☐	☐	29. Were sample labels double-checked by a second person?	
☐	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☐	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☐	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☐	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

2.2°C dc
10/29/09 JRZ

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01115
Page: 1 of 1
Cooler # ____ of ____

Collection Area: IV

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	TestAmerica	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X
Address:	4955 Yarrow Street	Project #	2027.001	Address:	PO Box 55	If Rush, Date due	
	Arvada, CO 80002	Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293
Lab PM:	Michael P. Phillips	City	Henderson	State	NV	Reimbursement project?	X
Phone/Fax:	303-736-0157	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com		
Lab PM email	michael.phillips@testamericainc.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only		
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

Rush		Mark One
QC level Required: Standard		Special
EPA Stage 4		Mark one
NJ Reduced Deliverable Package?		
MA MCP Cert?		CT RCP Cert?
		Mark One

Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER LF; FREE PRODUCT SO; SOIL OIL; OIL SW; WIPE AA; AMBIENT AIR AE; SVE AIR; SOIL GAS; WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; RINSATE WH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 6020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-138B	WG	G	10/28/2009	1115	1	N			X						X		500 ml Plastic
2	M-138009B	WG	G	10/28/2009	1115	1	N			X						X		500 ml Plastic
3	M-138BDISS	WG	G	10/28/2009	1115	1	Y			X						X		500 ml Plastic
4	M-138009BDISS	WG	G	10/28/2009	1115	1	Y			X						X		500 ml Plastic
5																		
6																		
7																		
8	JWO																	
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
GBS	10/28	1350	GBS	10/28	1350
GBS	10/28	1600		10/29	1000

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER:
DATE Signed: 10/28 Time: 1340

Sample Receipt Conditions			
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: 280310 Date/Time Received: 10/29/09 1000

Company Name & Sampling Site: Northgate TRONOX

PM to Complete This Section: *Yes*	*No*		*Yes*	*No*		*Yes*	*No*
Residual chlorine check required:	☒	Quarantined :	☐	☒	MIS prep :	☐	☒

Quote #: 83046

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 2.2

N/A	*Yes*	*No*		*Initials*
☐	☐	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☐	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ___ No: ___	
	☐	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☐	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☐	5. Multiphasic samples obvious? If yes, document on CUR.	
	☐	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☐	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☐	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☐	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☐	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☐	12. Did samples require preservation with sodium thiosulfate?	
☐	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☐	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☐	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☐	17. Are analyses with short holding times requested?	
	☐	☐	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J290310

Login Checks:

Initials MB

N/A Yes No

- ☑ ☐ ☐ 19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
- ☑ ☐ ☐ 20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
- ☑ ☐ ☐ 21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
- ☐ ☑ ☐ 22. Were special log in instructions read and followed?
- ☑ ☐ ☐ 23. Were AFCEE metals logged for refrigerated storage?
- ☑ ☐ ☐ 24. Were tests logged checked against the COC? Which samples were confirmed? 1
- ☑ ☐ ☐ 25. Was a Rush form completed for quick TAT?
- ☑ ☐ ☐ 26. Was a Short Hold form completed for any short holds?
- ☐ ☐ ☑ 27. Were special archiving instructions indicated in the General Comments? If so, what were they?

Labeling and Storage Checks:

Initials XC

- ☒ ☐ ☐ 28. Was the subcontract COC signed and sent with samples to bottle prep?
- ☒ ☐ ☐ 29. Were sample labels double-checked by a second person?
- ☒ ☐ ☐ 30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☒ ☐ ☐ 31. Did the sample ID, Date, and Time from label match what was logged?
- ☒ ☐ ☐ 32. Were stickers for special archiving instructions affixed to each box? See #27
- ☒ ☐ ☐ 33. Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

2.9°C

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01114
Page: 1 of 1
Cooler # ____ of ____

Collection Area: IV

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	TestAmerica	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X
Address:	4955 Yarrow Street	Project #	2027.001	Address:	PO Box 55	Rush	Mark One
Arvada, CO 80002		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #: (949)260-9293	If Rush, Date due
Lab PM:	Michael P. Phillips	City	Henderson	State	NV	QC level Required: Standard	Special / EPA Stage 4 / Mark one
Phone/Fax:	303-736-0157	Site PM Name	Derrick Willis	Reimbursement project?	X	Non-reimbursement project?	Mark one
Lab PM email	michael.phillips@testamericainc.com	Phone/Fax:	949-375-7004	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	NJ Reduced Deliverable Package?	
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	PDF Electronic Version Only	MA MCP Cert? / CT RCP Cert?	Mark One
				CC Hardcopy report to	see additional comments below	Lab Project ID (lab use)	

Valid Matrix Codes: DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (WW), FREE PRODUCT (LF), SOIL (SO), OIL (OL), WIPE (WI), AMBIENT AIR (AA), SVE AIR (AE), SOIL GAS (GS), WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-137B	WG	G	10/29/09 I	1330 I	1	N			X						X		500 ml Plastic
2	M-137BDISS	WG	G			1	Y			X						X		500 ml Plastic
3																		
4																		
5																		
6	JWO																	
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	10/29	1445	GES	10/29	1445
GES	10/29	1700		10/30/09	1030

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) — UPS COURIER FEDEX / US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ~~Dana Brown~~ JOSH W OTIS

SIGNATURE of SAMPLER:

DATE Signed: 10/29 Time: 1415

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J300353 Date/Time Received: 10/30/09 1030

Company Name & Sampling Site: TRONOX - Northgate

PM to Complete This Section: *Yes* *No* *Yes* *No*
Residual chlorine check required: ☐ ☒ Quarantined : ☐ ☒

Quote #: 83046

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 2.9

N/A	*Yes*	*No*		*Initials*
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☑	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☑	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☐	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☐	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☐	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☐	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☐	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☐	17. Are analyses with short holding times requested?	
	☐	☐	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9T300353

Login Checks:

N/A	Yes	No		Initials
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? 1	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

				Initials
☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☑	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

2-9 IR2AB fm 10/30/09

250

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01119
Page: 1 of 1
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:					
Lab Name:	TestAmerica	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X	Rush	Mark One
Address:	4955 Yarrow Street	Project #	2027.001	Address:	PO Box 55	If Rush, Date due			
Arvada, CO 80002		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293	QC level Required: Standard	Special: EPA Stage 4 — Mark one
Lab PM:	Michael P. Phillips	City	Henderson	State	NV	Reimbursement project?	X	Non-reimbursement project?	Mark one
Phone/Fax:	303-736-0157	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	NJ Reduced Deliverable Package?			
Lab PM email	michael.phillips@testamericainc.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only	MA MCP Cert?		CT RCP Cert?	Mark One
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below	Lab Project ID (lab use)			

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER WW; FREE PRODUCT LF; SOIL SO; OIL OL; WIPE WI; AMBIENT AIR AA; SVE AIR AE; SOIL GAS SG; WATER W; SURFACE WATER WS; WATER QC WQ; BLUDGE BL; RINSEATE WH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 6020/Collision Ce, EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-148B	WG	G	10/29/09	0910	1	N			X						X	500 ml Plastic
2	~~M-148BDISS~~	~~WG~~	~~G~~	I	I	~~1~~	~~Y~~			X						X	~~500 ml Plastic~~ JWO
3																	
4																	
5																	
6	JWO																
7																	
8																	
9																	
10																	
11																	
12																	

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Josh WG	10/29	1445	[illegible] GES	10/29	1445
[illegible] GES	10/30	1000	Thermo Fisher	10/30/09	1030

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) — UPS COURIER FEDEX / US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ~~Dana Brown~~ JOSH W OTIS

SIGNATURE of SAMPLER: Josh WG — DATE Signed: 10/29 — Time: 1000

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J300356 Date/Time Received: 10/30/09 1030

Company Name & Sampling Site: Northgate - Tronox

	Yes	No		Yes	No		Yes	No
PM to Complete This Section: Residual chlorine check required:	☐	☒	Quarantined :	☐	☒	MIS prep :	☐	☒

Quote #: 330416

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 2.9

N/A	Yes	No		Initials
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:____	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☐	☑	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☑	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☐	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☐	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☐	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☐	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☐	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☐	17. Are analyses with short holding times requested?	
	☐	☐	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J300356

Login Checks:

Initials AB

N/A	Yes	No		
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? 1	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials CW

☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☐	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☑	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

2.7 JKI
AO 10/31/09

253

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01132
Page: 1 of 1
Cooler # ____ of ____
Collection Area: III

Required Ship to Lab:

Lab Name:	TestAmerica
Address:	4955 Yarrow Street
	Arvada, CO 80002
Lab PM:	Michael P. Phillips
Phone/Fax:	303-736-0157
Lab PM email	michael.phillips@testamericainc.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City / State	Henderson / NV
Site PM Name	Derrick Willis
Phone/Fax:	949-375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley, Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949)260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush	Mark One
If Rush, Date due			
QC level Required: Standard		Special	EPA Stage 4 / Mark one
NJ Reduced Deliverable Package?			
MA MCP Cert?		CT RCP Cert?	Mark One
Lab Project ID (lab use)			

Valid Matrix Codes: MATRIX — DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (WW), FREE PRODUCT (LF), SOIL (SO), OIL (OL), WIPE (SL), AMBIENT AIR (AA), SVE AIR (AE), SOIL GAS (GS); MATRIX — WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8020/Collision Ce	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	EB103009-GWA4	WG	G	10/30/09	1110	1	N			X						X		500 ml Plastic
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

JWO

Additional Comments/Special Instructions:

As Se only by collison cell
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] GES	10/30	1550	[signature] GES	10/30	1330
[signature] GES	10/30	1800	[signature]	10/31/9	0830

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N

Temp in Cooler | Samples on Ice? | Sample intact? | Trip Blank?

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER: [signature]
DATE Signed: 10/30 Time: 1230

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J310138 Date/Time Received: 10/31/9 0830

Company Name & Sampling Site: Northgate

PM to Complete This Section:	*Yes*	*No*		*Yes*	*No*		*Yes*	*No*
Residual chlorine check required:	❑	❑	Quarantined :	❑	❑	MIS prep :	❑	❑

Quote #:

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 2.7

Initials AG

N/A	*Yes*	*No*	
❑	☑	❑	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.
	☑	❑	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:___
	☑	❑	3. Chain of custody present? If no, document on CUR.
	❑	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.
	❑	☑	5. Multiphasic samples obvious? If yes, document on CUR.
	☑	❑	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.
❑	☑	❑	7. pH of all samples checked and meet requirements? If no, document on CUR.
	☑	❑	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
	☑	❑	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.
☑	❑	❑	10. Were VOA samples without headspace? If no, document on CUR.
☑	❑	❑	11. Were VOA vials preserved? Preservative ❑HCl ❑4±2°C ❑Sodium Thiosulfate ❑ Ascorbic Acid
	❑	☑	12. Did samples require preservation with sodium thiosulfate?
☑	❑	❑	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.
☑	❑	❑	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.
☑	❑	❑	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
	❑	☑	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
	❑	☑	17. Are analyses with short holding times requested?
	❑	☑	18. Was a quick Turn Around (TAT) requested?

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J310138

Login Checks:

Initials

N/A	Yes	No		
	☑	☐	19.	Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
☑	☐	☐	20.	Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
	☑	☐	21.	Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
☐	☑	☐	22.	Were special log in instructions read and followed?
☑	☐	☐	23.	Were AFCEE metals logged for refrigerated storage?
	☑	☐	24.	Were tests logged checked against the COC? Which samples were confirmed? All
☑	☐	☐	25.	Was a Rush form completed for quick TAT?
☑	☐	☐	26.	Was a Short Hold form completed for any short holds?
	☐	☑	27.	Were special archiving instructions indicated in the General Comments? If so, what were they?

Labeling and Storage Checks:

Initials

☑	☐	☐	28.	Was the subcontract COC signed and sent with samples to bottle prep?
	☑	☐	29.	Were sample labels double-checked by a second person?
☐	☑	☐	30.	Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☑	☐	31.	Did the sample ID, Date, and Time from label match what was logged?
☑	☐	☐	32.	Were stickers for special archiving instructions affixed to each box? See #27
☑	☐	☐	33.	Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J27026/

Client: Northgate Environmental

Batch(es) #: 9303185

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 11/9/09

Metals Raw Data RoadMap

LotID	*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J270261 1 D	SE	LNC7F1AH	20091108	6020TOTA	9303185	AG110709	024
D9J270261 1 S	SE	LNC7F1AG	20091108	6020TOTA	9303185	AG110709	024
D9J270261 1 D	AS	LNC7F1AF	20091108	6020TOTA	9303185	AG110709	024
D9J270261 1 S	AS	LNC7F1AE	20091108	6020TOTA	9303185	AG110709	024
D9J270261 1	SE	LNC7F1AC	20091108	6020TOTA	9303185	AG110709	024
D9J270261 1	AS	LNC7F1AA	20091108	6020TOTA	9303185	AG110709	024

METALS PREPARATION LOGS ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9303185**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/2/09 ~~10/30/09~~ JRW

Due Date: 11/09/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJNV**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJNV**	C	Due Date: SDG:	50 mL
D9J270261 Water	**LNC7F** Total		Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	S	Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	D	Due Date: 11/09/09 SDG:	50 mL
D9J270263 Water	**LNC7L** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280280 Water	**LNFGD** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280283 Water	**LNFG2** Total		Due Date: 11/09/09 SDG:	50 mL
D9J290310 Water	**LNH2J** Total		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2K** Total		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9303185	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4082 Block & Cup # : 4/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1430	95	1845	95
HNO3	1900	95	1930	93
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

TestAmerica Denver

Standards Preparation Logbook Record

Nov-09-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6836-09, ICP-MS BLANK

Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-07-2009
Date Expires(1): 05-07-2010 (6 Months)
Date Expires(2): 05-07-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6835-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6837-09, ICP-MS HIGH CAL STD

Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	10.000
Ca	2,000.0	10.000
Fe	2,000.0	10.000
K	2,000.0	10.000
Mg	2,000.0	10.000
Na	2,000.0	10.000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6838-09, ICP-MS HIGH CCV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500
Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	5.0000
Ca	2,000.0	5.0000
Fe	2,000.0	5.0000
K	2,000.0	5.0000
Mg	2,000.0	5.0000

Na	2,000.0	5.0000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6839-09, ICP-MS HIGH RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6837-09, ICP-MS HIGH CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010
Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010
Al	10.000	0.1000
Ca	10.000	0.1000
Fe	10.000	0.1000
K	10.000	0.1000
Mg	10.000	0.1000
Na	10.000	0.1000

Nb	0.2000	0.0020
Pd	0.1000	0.0010
Pt	0.1000	0.0010
W	0.1000	0.0010

STD6840-09, ICP-MS HIGH AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000

Date Prep./Opened: 11-07-2009

Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6839-09, ICP-MS HIGH RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002
Al	0.1000	0.0200
Ca	0.1000	0.0200
Fe	0.1000	0.0200
K	0.1000	0.0200
Mg	0.1000	0.0200
Na	0.1000	0.0200
Nb	0.0020	0.0004
Pd	0.0010	0.0002
Pt	0.0010	0.0002
W	0.0010	0.0002
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018

STD6841-09, ICP-MS HIGH ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	100.00
Ca	2,000.0	100.00
Fe	2,000.0	100.00
K	2,000.0	100.00
Mg	2,000.0	100.00
Na	2,000.0	100.00

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	2.0000
Pd	20.000	1.0000
Pt	20.000	1.0000

W	20.000	1.0000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6842-09, ICP-MS HIGH LR STD1 Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000
Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6843-09, ICP-MS HIGH ICV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

Parent Std No.: STD3115-09, ICP-MS TA ICV Alt Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	4.0000
Ca	2,000.0	4.0000
Fe	2,000.0	4.0000
K	2,000.0	4.0000
Mg	2,000.0	4.0000
Na	2,000.0	4.0000

Parent Std No.: STD3116-09, ICP-MS TA ICV BRC Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.0800
Pd	20.000	0.0400
Pt	20.000	0.0400

W	20.000	0.0400

STD6844-09, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6855-09, LLCCV/RLICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD3106-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000
Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD3107-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

Parent Std No.: STD3108-09, ICP-MS BRC LLCCV 1 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Nb	4.0000	40.000
Pd	0.1000	1.0000
Pt	0.1000	1.0000
W	0.5000	5.0000

Reviewed By: 11/9/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/07/09 15:09		☐
4	100 ppb				1.0	11/07/09 15:12		☐
5	ICV				1.0	11/07/09 15:15		☐
6	RLIV				1.0	11/07/09 15:18		☐
7	ICB				1.0	11/07/09 15:20		☐
8	RL STD				1.0	11/07/09 15:23		☐
9	AFCEE RL				1.0	11/07/09 15:26		☐
10	ALTSe				1.0	11/07/09 15:29		☐
11	ICSA				1.0	11/07/09 15:31		☐
12	ICSAB				1.0	11/07/09 15:34		☐
13	RINSE				1.0	11/07/09 15:37		☐
14	LR1				1.0	11/07/09 15:40		☐
15	RINSE				1.0	11/07/09 15:42		☐
16	CCV				1.0	11/07/09 15:45		☐
17	CCB				1.0	11/07/09 15:48		☐
18	RLCV				1.0	11/07/09 15:50		☐
19	LNDMKB	D9J280000	9301081	46	1.0	11/07/09 15:53		☐
20	LNDMKC	D9J280000	9301081	46	1.0	11/07/09 15:56		☐
21	LM9FJ	D9J240188-1	9301081	46	1.0	11/07/09 15:59		☐
22	LM9FJP5	D9J240188	9301081		5.0	11/07/09 16:01		☐
23	LM9FJZ	D9J240188-1	9301081		1.0	11/07/09 16:04		☐
24	LM9FJS	D9J240188-1	9301081	46	1.0	11/07/09 16:07		☐
25	LM9FJD	D9J240188-1	9301081	46	1.0	11/07/09 16:09		☐
26	LM9FK	D9J240188-2	9301081	46	1.0	11/07/09 16:12		☐
27	CCV				1.0	11/07/09 16:15		☐
28	CCB				1.0	11/07/09 16:18		☐
29	RLCV				1.0	11/07/09 16:20		☐
30	LNJT4B	D9J300000	9303213	MS	1.0	11/07/09 16:23		☐
31	LNJT4C	D9J300000	9303213	MS	1.0	11/07/09 16:26		☐
32	LM8A7	D9J230367-1	9303213	MS	1.0	11/07/09 16:29		☐
33	LM8CG	D9J230367-2	9303213	MS	1.0	11/07/09 16:32		☐
34	LM8CV	D9J230367-3	9303213	MS	1.0	11/07/09 16:34		☐
35	LM8C1	D9J230367-4	9303213	MS	1.0	11/07/09 16:37		☐
36	LM8C1P5	D9J230367	9303213		5.0	11/07/09 16:40		☐
37	LM8C1Z	D9J230367-4	9303213		1.0	11/07/09 16:43		☐
38	LM8C1S	D9J230367-4	9303213	MS	1.0	11/07/09 16:45		☐
39	LM8C1D	D9J230367-4	9303213	MS	1.0	11/07/09 16:48		☐
40	CCV				1.0	11/07/09 16:51		☐
41	CCB				1.0	11/07/09 16:53		☐
42	RLCV				1.0	11/07/09 16:57		☐
43	LNDMTB	D9J280000	9301086	46	1.0	11/07/09 17:00		☐
44	LNDMTC	D9J280000	9301086	46	1.0	11/07/09 17:02		☐
45	LM8E2	D9J230373-1	9301086	46	1.0	11/07/09 17:05		☐
46	LM8E2P5	D9J230373	9301086		5.0	11/07/09 17:08		☐
47	LM8E2Z	D9J230373-1	9301086		1.0	11/07/09 17:11		☐
48	LM8E2S	D9J230373-1	9301086	46	1.0	11/07/09 17:13		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM8E2D	D9J230373-1	9301086	46	1.0	11/07/09 17:16		☐
50	LM8E6	D9J230373-2	9301086	46	1.0	11/07/09 17:19		☐
51	CCV				1.0	11/07/09 17:22		☐
52	CCB				1.0	11/07/09 17:24		☐
53	RLCV				1.0	11/07/09 17:27		☐
54	LM8E7	D9J230373-3	9301086	46	1.0	11/07/09 17:30		☐
55	LM8E9	D9J230373-4	9301086	46	1.0	11/07/09 17:33		☐
56	LM8FA	D9J230373-5	9301086	46	1.0	11/07/09 17:35		☐
57	LM8FC	D9J230373-6	9301086	46	1.0	11/07/09 17:38		☐
58	LM8FD	D9J230373-7	9301086	46	1.0	11/07/09 17:41		☐
59	LM8FE	D9J230373-8	9301086	46	1.0	11/07/09 17:44		☐
60	LM8FF	D9J230373-9	9301086	46	1.0	11/07/09 17:47		☐
61	LM8FG	D9J230373-10	9301086	46	1.0	11/07/09 17:51		☐
62	LM8FH	D9J230373-11	9301086	46	1.0	11/07/09 17:53		☐
63	CCV				1.0	11/07/09 17:56		☐
64	CCB				1.0	11/07/09 17:59		☐
65	RLCV				1.0	11/07/09 18:02		☐
66	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 18:04~~	VT 11/9/09 Did not use.	☐
67	LNDMPB	D9J280000	9301083	46	1.0	11/07/09 18:07		☐
68	LNDMPC	D9J280000	9301083	46	1.0	11/07/09 18:10		☐
69	LM8CT	D9J230370-1	9301083	46	1.0	11/07/09 18:13		☐
70	LM8CTP5	D9J230370	9301083		5.0	11/07/09 18:16		☐
71	LM8CTZ	D9J230370-1	9301083		1.0	11/07/09 18:18		☐
72	LM8CTS	D9J230370-1	9301083	46	1.0	11/07/09 18:21		☐
73	LM8CTD	D9J230370-1	9301083	46	1.0	11/07/09 18:24		☐
74	CCV				1.0	11/07/09 18:27		☐
75	CCB				1.0	11/07/09 18:29		☐
76	RLCV				1.0	11/07/09 18:32		☐
77	LM8C5	D9J230370-2	9301083	46	1.0	11/07/09 18:35		☐
78	LM8C8	D9J230370-3	9301083	46	1.0	11/07/09 18:38		☐
79	LM8C9	D9J230370-4	9301083	46	1.0	11/07/09 18:40		☐
80	LM8DA	D9J230370-5	9301083	46	1.0	11/07/09 18:43		☐
81	LM8DC	D9J230370-6	9301083	46	1.0	11/07/09 18:46		☐
82	LM8DF	D9J230370-7	9301083	46	1.0	11/07/09 18:49		☐
83	LM8DG	D9J230370-8	9301083	46	1.0	11/07/09 18:51		☐
84	CCV				1.0	11/07/09 18:54		☐
85	CCB				1.0	11/07/09 18:57		☐
86	RLCV				1.0	11/07/09 19:00		☐
87	LM8DH	D9J230370-9	9301083	46	1.0	11/07/09 19:03		☐
88	LM8DK	D9J230370-10	9301083	46	1.0	11/07/09 19:05		☐
89	LM8DL	D9J230370-11	9301083	46	1.0	11/07/09 19:08		☐
90	LM8DN	D9J230370-12	9301083	46	1.0	11/07/09 19:11		☐
91	LM8DQ	D9J230370-13	9301083	46	1.0	11/07/09 19:14		☐
92	LM8DT	D9J230370-14	9301083	46	1.0	11/07/09 19:17		☐
93	LM8DV	D9J230370-15	9301083	46	1.0	11/07/09 19:19		☐
94	LM8D4	D9J230370-16	9301083	46	1.0	11/07/09 19:22		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
95	CCV				1.0	11/07/09 19:25		
96	CCB				1.0	11/07/09 19:28		
97	RLCV				1.0	11/07/09 19:30		
98	ICSA				1.0	11/07/09 19:33		
99	ICSAB				1.0	11/07/09 19:36		
100	WASH				1.0	11/07/09 19:39		
101	CCV				1.0	11/07/09 19:41		
102	CCB				1.0	11/07/09 19:44		
103	RLCV				1.0	11/07/09 19:47		
104	LNPKXBQ	D9K030000	9307099	U1	1.0	11/07/09 19:50		
105	LNPKXCQ	D9K030000	9307099	U1	1.0	11/07/09 19:52		
106	LNN4FQ	D9K020448-1	9307099	U1	1.0	11/07/09 19:55		
107	LNN4FP5Q	D9K020448	9307099		5.0	11/07/09 19:58		
108	LNN4FZQ	D9K020448-1	9307099		1.0	11/07/09 20:01		
109	LNN4FSQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:03		
110	LNN4FDQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:06		
111	CCV				1.0	11/07/09 20:09		
112	CCB				1.0	11/07/09 20:12		
113	RLCV				1.0	11/07/09 20:14		
114	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 20:17~~		
115	LNNVDC	D9K020000	9306332	04	2.5	11/07/09 20:20		
116	LNKT9	D9J300258-1	9306332	04	2.5	11/07/09 20:23		
117	LNKT9S	D9J300258-1	9306332	04	2.5	11/07/09 20:25		
118	LNKT9D	D9J300258-1	9306332	04	2.5	11/07/09 20:28		
119	CCV				1.0	11/07/09 20:31		
120	CCB				1.0	11/07/09 20:34		
121	RLCV				1.0	11/07/09 20:36		
122	RINSE				1.0	11/07/09 20:39		
123	~~RINSE~~				1.0	11/07/09 20:42		
124	~~Cal Blank~~				~~1.0~~	~~11/07/09 20:45~~	KF 11/9/09 Did not use.	
125	Cal Blank				1.0	11/07/09 20:47		
126	100 ppb				1.0	11/07/09 20:50		
127	CCV				1.0	11/07/09 20:53		
128	CCB				1.0	11/07/09 20:56		
129	RLCV				1.0	11/07/09 20:58		
130	~~LNNQ5BF~~	~~D9K020000~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:01~~		
131	LNNQ5CF	D9K020000	9306285	MD	1.0	11/07/09 21:04		
132	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/07/09 21:07		
133	LNLG3F	D9J300326-2	9306285	MD	1.0	11/07/09 21:10		
134	LNLG4F	D9J300326-3	9306285	MD	1.0	11/07/09 21:12		
135	LNLHHF	D9J300329-1	9306285	MD	1.0	11/07/09 21:15		
136	LNLHMF	D9J300329-2	9306285	MD	1.0	11/07/09 21:18		
137	CCV				1.0	11/07/09 21:21		
138	CCB				1.0	11/07/09 21:23		
139	RLCV				1.0	11/07/09 21:26		
140	~~LNLHPF~~	~~D9J300329-3~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:29~~	KF 11/9/09 Did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
141	~~LNLJJF~~	~~D9J300340-1~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:32~~		☐
142	LNLJJP5F	D9J300340	9306285		5.0	11/07/09 21:35		☐
143	LNLJJZF	D9J300340-1	9306285		1.0	11/07/09 21:37		☐
144	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/07/09 21:40		☐
145	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/07/09 21:43		☐
146	~~LNLJME~~	~~D9J300340-2~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:45~~	RT 11/9/09 Did not use.	☐
147	CCV				1.0	11/07/09 21:48		☐
148	CCB				1.0	11/07/09 21:51		☐
149	RLCV				1.0	11/07/09 21:54		☐
150	LNJXTB	D9J300000	9303237	04	1.0	11/07/09 21:57		☐
151	LNJXTC	D9J300000	9303237	04	1.0	11/07/09 21:59		☐
152	LNG33	D9J290197-1	9303237	04	1.0	11/07/09 22:02		☐
153	LNG4H	D9J290197-2	9303237	04	1.0	11/07/09 22:05		☐
154	LNG4L	D9J290197-3	9303237	04	1.0	11/07/09 22:08		☐
155	LNG4LP5	D9J290197	9303237		5.0	11/07/09 22:10		☐
156	LNG4LZ	D9J290197-3	9303237		1.0	11/07/09 22:13		☐
157	LNG4LS	D9J290197-3	9303237	04	1.0	11/07/09 22:16		☐
158	LNG4LD	D9J290197-3	9303237	04	1.0	11/07/09 22:19		☐
159	CCV				1.0	11/07/09 22:21		☐
160	CCB				1.0	11/07/09 22:24		☐
161	RLCV				1.0	11/07/09 22:27		☐
162	LNG4N	D9J290197-4	9303237	04	1.0	11/07/09 22:30		☐
163	LNG4R	D9J290197-5	9303237	04	1.0	11/07/09 22:32		☐
164	LNG4W	D9J290197-6	9303237	04	1.0	11/07/09 22:35		☐
165	LNG4X	D9J290197-7	9303237	04	1.0	11/07/09 22:38		☐
166	LNG41	D9J290197-8	9303237	04	1.0	11/07/09 22:41		☐
167	LNG42	D9J290197-9	9303237	04	1.0	11/07/09 22:43		☐
168	LNG44	D9J290197-10	9303237	04	1.0	11/07/09 22:46		☐
169	LNG46	D9J290197-11	9303237	04	1.0	11/07/09 22:49		☐
170	CCV				1.0	11/07/09 22:52		☐
171	CCB				1.0	11/07/09 22:54		☐
172	RLCV				1.0	11/07/09 22:57		☐
173	LNWCQB	D9K050000	9309120	04	2.5	11/07/09 23:00		☐
174	LNWCQC	D9K050000	9309120	04	2.5	11/07/09 23:03		☐
175	LNTEH	D9K040465-33	9309120	04	2.5	11/07/09 23:06		☐
176	LNTEQ	D9K040465-35	9309120	04	2.5	11/07/09 23:08		☐
177	LNTET	D9K040465-37	9309120	04	2.5	11/07/09 23:11		☐
178	LNTE0	D9K040465-39	9309120	04	2.5	11/07/09 23:14		☐
179	LNTE5	D9K040465-41	9309120	04	2.5	11/07/09 23:17		☐
180	LNTE5S	D9K040465-41	9309120	04	2.5	11/07/09 23:19		☐
181	LNTE5D	D9K040465-41	9309120	04	2.5	11/07/09 23:22		☐
182	LNTFA	D9K040465-43	9309120	04	2.5	11/07/09 23:25		☐
183	CCV				1.0	11/07/09 23:28		☐
184	CCB				1.0	11/07/09 23:30		☐
185	RLCV				1.0	11/07/09 23:33		☐
186	RINSE				1.0	11/07/09 23:36		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
187	~~RINSE~~				~~1.0~~	~~11/07/09 23:39~~		
188	~~Cal Blank~~				~~1.0~~	~~11/07/09 23:41~~	VL 11/9/09 Did not use.	
189	Cal Blank				1.0	11/07/09 23:44		
190	100 ppb				1.0	11/07/09 23:47		
191	CCV				1.0	11/07/09 23:50		
192	CCB				1.0	11/07/09 23:52		
193	RLCV				1.0	11/07/09 23:55		
194	LNEMRZF	D9J280200-5	9302146		1.0	11/07/09 23:58		
195	LNEMRSF	D9J280200-5	9302146	MD	1.0	11/08/09 00:01		
196	LNEMRDF	D9J280200-5	9302146	MD	1.0	11/08/09 00:03		
197	LNEMWF	D9J280200-6	9302146	MD	1.0	11/08/09 00:06		
198	LNEM0F	D9J280200-7	9302146	MD	1.0	11/08/09 00:09		
199	LNEM3F	D9J280200-8	9302146	MD	1.0	11/08/09 00:12		
200	LNEM4F	D9J280200-9	9302146	MD	1.0	11/08/09 00:15		
201	LNEM7F	D9J280200-10	9302146	MD	1.0	11/08/09 00:17		
202	CCV				1.0	11/08/09 00:20		
203	CCB				1.0	11/08/09 00:23		
204	RLCV				1.0	11/08/09 00:26		
205	LN0N2B	D9K060000	9310060	04	2.5	11/08/09 00:28		
206	LN0N2C	D9K060000	9310060	04	2.5	11/08/09 00:31		
207	LNW5P	D9K050485-2	9310060	04	2.5	11/08/09 00:34		
208	LNW55	D9K050485-4	9310060	04	2.5	11/08/09 00:37		
209	LNW6E	D9K050485-6	9310060	04	2.5	11/08/09 00:40		
210	LNW6ES	D9K050485-6	9310060	04	2.5	11/08/09 00:42		
211	LNW6ED	D9K050485-6	9310060	04	2.5	11/08/09 00:45		
212	CCV				1.0	11/08/09 00:48		
213	CCB				1.0	11/08/09 00:51		
214	RLCV				1.0	11/08/09 00:53		
215	LNF42B	D9J290000	9302121	MS	1.0	11/08/09 00:56		
216	LNF42C	D9J290000	9302121	MS	1.0	11/08/09 00:59		
217	LNE4T	D9J280246-1	9302121	MS	1.0	11/08/09 01:02		
218	LNE40 10X	D9J280246-2	9302121	MS	10.0	11/08/09 01:05		
219	LNE41 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:07		
220	LNE41P25	D9J280246	9302121		25.0	11/08/09 01:10		
221	CCV				1.0	11/08/09 01:13		
222	CCB				1.0	11/08/09 01:16		
223	RLCV				1.0	11/08/09 01:19		
224	LNE41Z	D9J280246-3	9302121		1.0	11/08/09 01:21		
225	LNE41S 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:24		
226	LNE41D 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:27		
227	LNE44 5X	D9J280246-4	9302121	MS	5.0	11/08/09 01:30		
228	LNE47 2X	D9J280246-5	9302121	MS	2.0	11/08/09 01:32		
229	LNE5A 2X	D9J280246-6	9302121	MS	2.0	11/08/09 01:35		
230	CCV				1.0	11/08/09 01:38		
231	CCB				1.0	11/08/09 01:41		
232	RLCV				1.0	11/08/09 01:44		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
233	LNJN5BF	D9J300000	9303187	MD	1.0	11/08/09 01:46		☐
234	LNJN5CF	D9J300000	9303187	MD	1.0	11/08/09 01:49		☐
235	LNH2LF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 01:52		☐
236	LNH2LP10F	D9J290310	9303187		10.0	11/08/09 01:55		☐
237	LNH2LZF	D9J290310-3	9303187		1.0	11/08/09 01:58		☐
238	LNH2LSF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:00		☐
239	LNH2LDF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:03		☐
240	LNH2NF 2X	D9J290310-4	9303187	MD	2.0	11/08/09 02:06		☐
241	CCV				1.0	11/08/09 02:09		☐
242	CCB				1.0	11/08/09 02:11		☐
243	RLCV				1.0	11/08/09 02:14		☐
244	~~RINSE~~				~~1.0~~	~~11/08/09 02:17~~		☐
245	RINSE				1.0	11/08/09 02:20		☐
246	~~Cal Blank~~				~~1.0~~	~~11/08/09 02:22~~	KF 11/9/09 did not use	☐
247	Cal Blank				1.0	11/08/09 02:25		☐
248	100 ppb				1.0	11/08/09 02:28		☐
249	CCV				1.0	11/08/09 02:31		☐
250	CCB				1.0	11/08/09 02:33		☐
251	RLCV				1.0	11/08/09 02:36		☐
252	LNJNVB	D9J300000	9303185	MS	1.0	11/08/09 02:39		☐
253	LNJNVC	D9J300000	9303185	MS	1.0	11/08/09 02:42		☐
254	LNC7F 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:44		☐
255	LNC7FP25	D9J270261	9303185		25.0	11/08/09 02:47		☐
256	LNC7FZ	D9J270261-1	9303185		1.0	11/08/09 02:50		☐
257	LNC7FS 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:53		☐
258	CCV				1.0	11/08/09 02:56		☐
259	CCB				1.0	11/08/09 02:58		☐
260	RLCV				1.0	11/08/09 03:01		☐
261	LNC7FD 5X	D9J270261-1	9303185	MS	5.0	11/08/09 03:04		☐
262	LNC7L 5X	D9J270263-1	9303185	MS	5.0	11/08/09 03:07		☐
263	LNFGD 5X	D9J280280-1	9303185	MS	5.0	11/08/09 03:09		☐
264	LNFG2 5X	D9J280283-1	9303185	MS	5.0	11/08/09 03:12		☐
265	LNH2J 5X	D9J290310-1	9303185	MS	5.0	11/08/09 03:15		☐
266	LNH2K 5X	D9J290310-2	9303185	MS	5.0	11/08/09 03:18		☐
267	CCV				1.0	11/08/09 03:21		☐
268	CCB				1.0	11/08/09 03:23		☐
269	RLCV				1.0	11/08/09 03:26		☐
270	LNJ8HB	D9J300000	9303310	04	1.0	11/08/09 03:29		☐
271	LNJ8HC	D9J300000	9303310	04	1.0	11/08/09 03:32		☐
272	LNHRC	D9J290285-1	9303310	04	1.0	11/08/09 03:34		☐
273	LNHRK	D9J290285-2	9303310	04	1.0	11/08/09 03:37		☐
274	LNHRN	D9J290285-3	9303310	04	1.0	11/08/09 03:40		☐
275	LNHRP	D9J290285-4	9303310	04	1.0	11/08/09 03:43		☐
276	LNHRR	D9J290285-5	9303310	04	1.0	11/08/09 03:46		☐
277	CCV				1.0	11/08/09 03:48		☐
278	CCB				1.0	11/08/09 03:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
279	RLCV				1.0	11/08/09 03:54		☐
280	LNHRT	D9J290285-6	9303310	04	1.0	11/08/09 03:57		☐
281	LNHRTP5	D9J290285	9303310		5.0	11/08/09 03:59		☐
282	LNHRTZ	D9J290285-6	9303310		1.0	11/08/09 04:02		☐
283	LNHRTS	D9J290285-6	9303310	04	1.0	11/08/09 04:05		☐
284	LNHRTD	D9J290285-6	9303310	04	1.0	11/08/09 04:08		☐
285	LNHRV	D9J290285-7	9303310	04	1.0	11/08/09 04:10		☐
286	LNHRW	D9J290285-8	9303310	04	1.0	11/08/09 04:13		☐
287	LNHRX	D9J290285-9	9303310	04	1.0	11/08/09 04:16		☐
288	LNHR0	D9J290285-10	9303310	04	1.0	11/08/09 04:19		☐
289	CCV				1.0	11/08/09 04:21		☐
290	CCB				1.0	11/08/09 04:24		☐
291	RLCV				1.0	11/08/09 04:27		☐
292	~~Cal Blank~~				1.0	11/08/09 04:30	KF 11/9/09 Did not use.	☐
293	Cal Blank				1.0	11/08/09 04:32		☐
294	100 ppb				1.0	11/08/09 04:35		☐
295	CCV				1.0	11/08/09 04:38		☐
296	CCB				1.0	11/08/09 04:41		☐
297	RLCV				1.0	11/08/09 04:43		☐
298	LM7XN 10X	D9J230319-2	9299274	04	1.0	11/08/09 04:46		☐
299	CCV				1.0	11/08/09 04:49		☐
300	CCB				1.0	11/08/09 04:52		☐
301	RLCV				1.0	11/08/09 04:54		☐
302	~~LNNV0B~~	~~D9K020000~~	~~9306340~~	~~04~~	~~1.0~~	~~11/08/09 04:57~~		☐
303	LNNV0C	D9K020000	9306340	04	1.0	11/08/09 05:00		☐
304	LNLGN 5X	D9J300319-1	9306340	04	5.0	11/08/09 05:03		☐
305	LNJ05	D9J300168-1	9306340	04	1.0	11/08/09 05:05		☐
306	LNJ1A	D9J300168-2	9306340	04	1.0	11/08/09 05:08		☐
307	LNJ1C	D9J300168-3	9306340	04	1.0	11/08/09 05:11		☐
308	LNJ1D	D9J300168-4	9306340	04	1.0	11/08/09 05:14		☐
309	LNJ1F	D9J300168-5	9306340	04	1.0	11/08/09 05:16		☐
310	CCV				1.0	11/08/09 05:19		☐
311	CCB				1.0	11/08/09 05:22		☐
312	RLCV				1.0	11/08/09 05:25		☐
313	LNJ41	D9J300188-1	9306340	04	1.0	11/08/09 05:27		☐
314	LNJ43	D9J300188-2	9306340	04	1.0	11/08/09 05:30		☐
315	LNJ44	D9J300188-3	9306340	04	1.0	11/08/09 05:33		☐
316	LNJ45	D9J300188-4	9306340	04	1.0	11/08/09 05:36		☐
317	LNMA5 5X	D9J310124-1	9306340	04	5.0	11/08/09 05:38		☐
318	LNMCH	D9J310127-1	9306340	04	1.0	11/08/09 05:41		☐
319	CCV				1.0	11/08/09 05:44		☐
320	CCB				1.0	11/08/09 05:47		☐
321	RLCV				1.0	11/08/09 05:49		☐
322	LNMCN	D9J310127-2	9306340	04	1.0	11/08/09 05:52		☐
323	LNMCNP5	D9J310127	9306340		5.0	11/08/09 05:55		☐
324	~~LNMCNZ~~	~~D9J310127-2~~	~~9306340~~		~~1.0~~	~~11/08/09 05:58~~	KF 11/9/09 Did not use.	☐

Denver

RUN SUMMARY

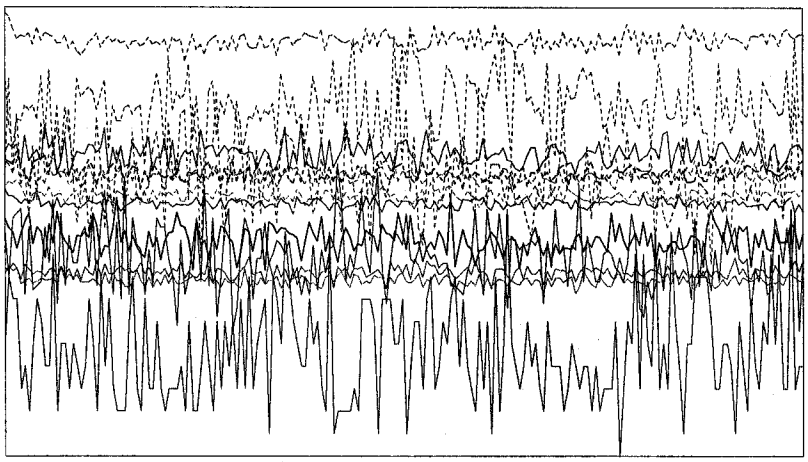
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
325	~~LNMCNS~~	D9J310127-2	9306340	04	1.0	~~11/08/09 06:00~~		☐
326	LNMCND	D9J310127-2	9306340	04	1.0	~~11/08/09~~ 06:03		☐
327	LNMCP	D9J310127-3	9306340	04	1.0	11/08/09 06:06		☐
328	LNMCQ	D9J310127-4	9306340	04	1.0	11/08/09 06:09		☐
329	CCV				1.0	11/08/09 06:11		☐
330	CCB				1.0	11/08/09 06:14		☐
331	~~BLCV~~				~~1.0~~	~~11/08/09 06:17~~	VF 11/9/09 Did not use.	☐

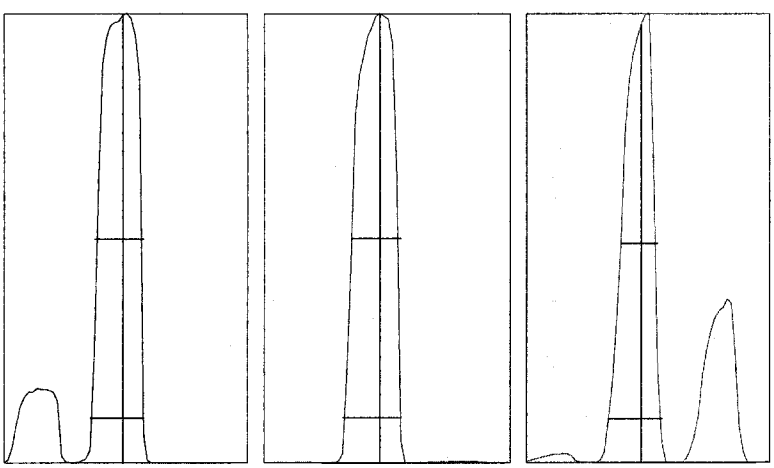
Tune Report

Tune File : NORM.U
Comment : AG110709



Integration Time: 0.1000 sec
Sampling Period: 1.5300 sec
n: 200
Oxide: 156/140 1.612%
Doubly Charged: 70/140 1.671%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	3382.0	3366.1	3.56	0.90
7	50,000	21859.0	20537.5	3.14	0.60
59	50,000	19576.0	19580.9	2.84	0.60
63	100	45.0	44.7	15.57	1.00
70	1,000	496.0	483.0	6.13	0.40
75	20	4.0	4.7	47.83	0.70
78	200	148.0	156.0	8.38	1.00
89	50,000	31217.0	31239.5	2.30	1.00
115	50,000	29852.0	29031.4	2.15	1.60
118	100	66.0	62.9	12.89	1.40
137	5,000	3148.0	3148.6	2.66	1.90
205	20,000	18784.0	18500.3	1.84	2.60
238	50,000	27256.0	28130.6	1.67	2.70
156/140	5	1.542%	1.636%	6.62	
70/140	5	1.747%	1.698%	6.33	



m/z:	7	89	205
Height:	20,610	31,605	18,257
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:09

Tune Report

Tune File : NORM.U
Comment : AG110709

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:12

P/A Factor Tuning Report

Acquired:Nov 7 2009 02:18 pm

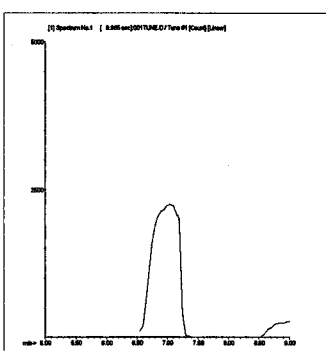
Mass[amu]	Element	P/A Factor
6	Li	0.054257
7	(Li)	Sensitivity too low
9	Be	0.059350
23	Na	0.063944
24	Mg	0.064875
27	Al	0.065819
39	K	0.066026
43	Ca	Sensitivity too low
45	Sc	0.066849
51	V	0.067403
52	Cr	0.068152
53	(Cr)	Sensitivity too low
55	Mn	0.068773
57	Fe	Sensitivity too low
59	Co	0.069652
60	Ni	Sensitivity too low
63	Cu	0.069964
66	Zn	0.070153
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.072052
98	(Mo)	0.071277
99	(Mo)	Sensitivity too low
105	Pd	0.071221
106	(Cd)	0.070815
107	Ag	Sensitivity too low
108	(Cd)	0.071381
111	Cd	0.070975
115	In	0.070220
118	Sn	0.070317
121	Sb	0.070422
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071611
206	(Pb)	0.070464
207	(Pb)	0.070565
208	Pb	0.069648
232	Th	0.069671
238	U	0.069782

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

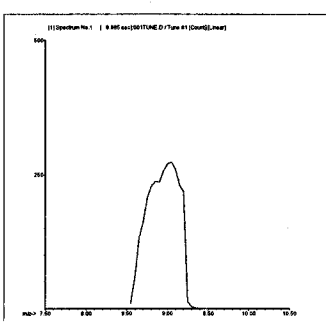
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D
Date Acquired: Nov 7 2009 03:04 pm
Acq. Method: tun_isis.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	23098	23358	23173	22978	22919	23063	0.75	5.00	
9 Be	2804	2779	2831	2892	2712	2807	2.36	5.00	
24 Mg	13819	13879	13741	14010	13810	13653	0.98	5.00	
59 Co	53596	53850	53962	53966	52908	53294	0.88	5.00	
115 In	1005351	1004408	1002826	1008799	1004052	1006672	0.24	5.00	
208 Pb	62719	64001	62223	62327	62711	62333	1.18	5.00	
238 U	130895	133955	130889	130170	131168	128294	1.56	5.00	

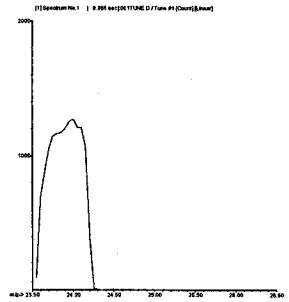


7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D



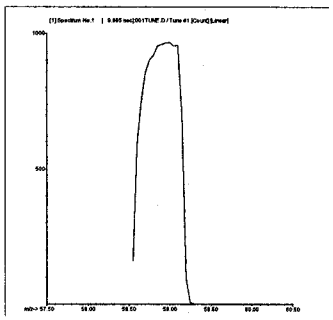
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



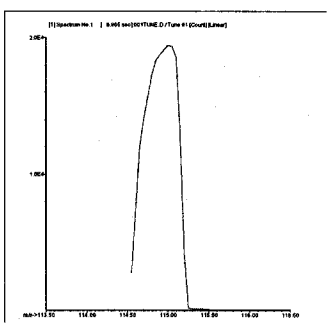
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



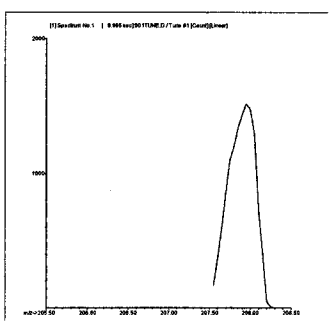
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



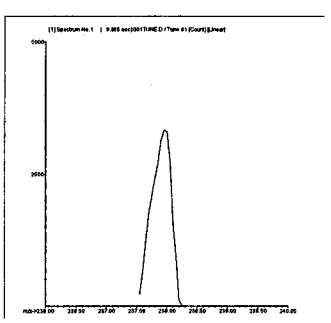
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\002CALB.D\002CALB.D#
Date Acquired: Nov 7 2009 03:07 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

9/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	130	55.47
52	Cr	72	1	2920	1.23
55	Mn	72	1	487	11.32
59	Co	72	1	43	35.25
60	Ni	72	1	67	56.79
63	Cu	72	1	247	16.39
66	Zn	72	1	177	1.72
75	As	72	1	38	36.84
78	Se	72	1	290	18.25
95	Mo	72	1	17	69.28
107	Ag	115	1	17	91.65
111	Cd	115	1	6	90.67
118	Sn	115	1	120	25.00
121	Sb	115	1	7	0.00
137	Ba	115	1	11	17.32
205	Tl	165	1	53	12.50
208	Pb	165	1	250	7.42
232	Th	165	1	93	59.01
238	U	165	1	83	36.66

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	450969	0.62
45	Sc	1	1353461	1.72
72	Ge	1	599452	0.37
115	In	1	1813996	0.92
165	Ho	1	3291682	1.21

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#
Date Acquired: Nov 7 2009 03:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	107	14.32
52	Cr	72	1	2804	3.71
55	Mn	72	1	517	15.52
59	Co	72	1	27	21.65
60	Ni	72	1	90	0.00
63	Cu	72	1	277	2.09
66	Zn	72	1	301	6.45
75	As	72	1	36	30.93
78	Se	72	1	263	32.30
95	Mo	72	1	20	50.00
107	Ag	115	1	10	100.00
111	Cd	115	1	-7	207.08
118	Sn	115	1	510	8.55
121	Sb	115	1	13	43.30
137	Ba	115	1	76	40.99
205	Tl	165	1	24	34.32
208	Pb	165	1	256	8.68
232	Th	165	1	100	62.45
238	U	165	1	27	57.28

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	455621	1.61
45	Sc	1	1356727	0.85
72	Ge	1	598490	0.65
115	In	1	1797032	1.18
165	Ho	1	3253654	1.35

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 7 2009 03:12 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:10 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52398	1.41
51	V	72	1	764367	2.20
52	Cr	72	1	771475	1.19
55	Mn	72	1	912002	1.09
59	Co	72	1	914930	2.11
60	Ni	72	1	193364	2.37
63	Cu	72	1	465989	1.20
66	Zn	72	1	112029	1.18
75	As	72	1	90135	1.29
78	Se	72	1	18683	1.97
95	Mo	72	1	260394	0.61
107	Ag	115	1	765784	1.36
111	Cd	115	1	157700	1.34
118	Sn	115	1	441054	2.17
121	Sb	115	1	510967	1.02
137	Ba	115	1	213858	1.06
205	Tl	165	1	1838240	1.05
208	Pb	165	1	2519619	0.58
232	Th	165	1	2643067	0.57
238	U	165	1	2792671	0.69

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	449267	0.99	455621	98.6	30 - 120	
45	Sc	1	1332198	2.77	1356727	98.2	30 - 120	
72	Ge	1	575467	1.00	598490	96.2	30 - 120	
115	In	1	1781328	1.07	1797032	99.1	30 - 120	
165	Ho	1	3275522	1.43	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 7 2009 03:15 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.37	ppb	1.43	40	100.9	90 - 110	
51 V	72	1	38.46	ppb	0.46	40	96.2	90 - 110	
52 Cr	72	1	39.20	ppb	1.19	40	98.0	90 - 110	
55 Mn	72	1	39.82	ppb	0.12	40	99.6	90 - 110	
59 Co	72	1	38.88	ppb	0.70	40	97.2	90 - 110	
60 Ni	72	1	40.10	ppb	0.16	40	100.3	90 - 110	
63 Cu	72	1	39.43	ppb	0.82	40	98.6	90 - 110	
66 Zn	72	1	40.09	ppb	0.20	40	100.2	90 - 110	
75 As	72	1	39.44	ppb	0.27	40	98.6	90 - 110	
78 Se	72	1	38.96	ppb	4.82	40	97.4	90 - 110	
95 Mo	72	1	39.50	ppb	0.72	40	98.8	90 - 110	
107 Ag	115	1	38.87	ppb	1.47	40	97.2	90 - 110	
111 Cd	115	1	39.30	ppb	0.98	40	98.3	90 - 110	
118 Sn	115	1	39.04	ppb	1.08	40	97.6	90 - 110	
121 Sb	115	1	39.64	ppb	1.29	40	99.1	90 - 110	
137 Ba	115	1	38.76	ppb	1.35	40	96.9	90 - 110	
205 Tl	165	1	39.29	ppb	2.05	40	98.2	90 - 110	
208 Pb	165	1	40.72	ppb	2.07	40	101.8	90 - 110	
232 Th	165	1	41.00	ppb	0.86	40	102.5	90 - 110	
238 U	165	1	40.29	ppb	1.06	40	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448116	0.63	455621	98.4	30 - 120	
45 Sc	1	1362171	0.61	1356727	100.4	30 - 120	
72 Ge	1	576140	0.97	598490	96.3	30 - 120	
115 In	1	1802991	1.36	1797032	100.3	30 - 120	
165 Ho	1	3291704	0.83	3253654	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\006WASH.D\006WASH.D#
Date Acquired: Nov 7 2009 03:18 pm
Operator: TEL
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.014 ppb	15.49	1.30	
51 V	72	1	4.659 ppb	1.34	6.50	
52 Cr	72	1	1.891 ppb	2.95	2.60	
55 Mn	72	1	1.009 ppb	5.61	1.30	
59 Co	72	1	0.959 ppb	4.52	1.30	
60 Ni	72	1	2.093 ppb	8.35	2.60	
63 Cu	72	1	1.903 ppb	3.09	2.60	
66 Zn	72	1	9.821 ppb	1.82	13.00	
75 As	72	1	4.879 ppb	0.84	6.50	
78 Se	72	1	4.897 ppb	10.67	6.50	
95 Mo	72	1	2.003 ppb	7.36	2.60	
107 Ag	115	1	4.951 ppb	3.27	6.50	
111 Cd	115	1	1.010 ppb	5.23	1.30	
118 Sn	115	1	10.070 ppb	2.63	13.00	
121 Sb	115	1	2.216 ppb	0.33	2.60	
137 Ba	115	1	0.996 ppb	4.86	1.30	
205 Tl	165	1	1.209 ppb	0.85	1.30	
208 Pb	165	1	1.032 ppb	2.04	1.30	
232 Th	165	1	2.207 ppb	1.51	2.60	
238 U	165	1	1.091 ppb	3.35	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	450702	0.54	455621	98.9	30 - 120	
45 Sc	1	1340626	0.89	1356727	98.8	30 - 120	
72 Ge	1	589280	0.55	598490	98.5	30 - 120	
115 In	1	1800289	1.54	1797032	100.2	30 - 120	
165 Ho	1	3280239	1.67	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 7 2009 03:20 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	0.01	ppb	78.95	1.00	
52 Cr	72	1	0.00	ppb	801.07	1.00	
55 Mn	72	1	0.00	ppb	167.97	1.00	
59 Co	72	1	0.00	ppb	88.12	1.00	
60 Ni	72	1	0.00	ppb	330.87	1.00	
63 Cu	72	1	-0.02	ppb	18.87	1.00	
66 Zn	72	1	-0.08	ppb	16.28	1.00	
75 As	72	1	0.00	ppb	320.71	1.00	
78 Se	72	1	-0.34	ppb	104.80	1.00	
95 Mo	72	1	0.03	ppb	28.62	1.00	
107 Ag	115	1	0.01	ppb	75.43	1.00	
111 Cd	115	1	0.01	ppb	156.14	1.00	
118 Sn	115	1	0.05	ppb	28.25	1.00	
121 Sb	115	1	0.08	ppb	20.91	1.00	
137 Ba	115	1	-0.02	ppb	26.22	1.00	
205 Tl	165	1	0.04	ppb	12.74	1.00	
208 Pb	165	1	0.00	ppb	28.23	1.00	
232 Th	165	1	0.02	ppb	38.30	1.00	
238 U	165	1	0.00	ppb	35.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453788	0.69	455621	99.6	30 - 120	
45 Sc	1	1334714	1.17	1356727	98.4	30 - 120	
72 Ge	1	592403	0.34	598490	99.0	30 - 120	
115 In	1	1792165	0.66	1797032	99.7	30 - 120	
165 Ho	1	3254324	0.30	3253654	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\008RLST.D\008RLST.D#
Date Acquired: Nov 7 2009 03:23 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1.03	ppb	7.07	1	102.9	50 - 150	
51 V	72	1	0.95	ppb	2.40	1	94.6	50 - 150	
52 Cr	72	1	0.95	ppb	9.15	1	94.9	50 - 150	
55 Mn	72	1	0.98	ppb	3.40	1	97.8	50 - 150	
59 Co	72	1	0.99	ppb	1.20	1	99.3	50 - 150	
60 Ni	72	1	0.99	ppb	1.44	1	98.7	50 - 150	
63 Cu	72	1	0.97	ppb	3.25	1	96.6	50 - 150	
66 Zn	72	1	9.84	ppb	1.62	10	98.4	50 - 150	
75 As	72	1	1.01	ppb	1.47	1	100.9	50 - 150	
78 Se	72	1	0.85	ppb	29.55	1	85.1	50 - 150	
95 Mo	72	1	0.98	ppb	3.69	1	98.3	50 - 150	
107 Ag	115	1	0.98	ppb	6.91	1	98.4	50 - 150	
111 Cd	115	1	0.98	ppb	2.94	1	97.7	50 - 150	
118 Sn	115	1	9.90	ppb	3.50	10	99.0	50 - 150	
121 Sb	115	1	1.06	ppb	2.89	1	105.8	50 - 150	
137 Ba	115	1	0.93	ppb	4.92	1	92.9	50 - 150	
205 Tl	165	1	1.05	ppb	1.24	1	104.9	50 - 150	
208 Pb	165	1	1.05	ppb	0.65	1	104.5	50 - 150	
232 Th	165	1	1.07	ppb	0.78	1	106.6	50 - 150	
238 U	165	1	1.09	ppb	0.98	1	109.3	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	452942	1.17	455621	99.4	30 - 120	
45 Sc	1	1350845	0.67	1356727	99.6	30 - 120	
72 Ge	1	590050	0.39	598490	98.6	30 - 120	
115 In	1	1791700	1.48	1797032	99.7	30 - 120	
165 Ho	1	3276677	0.55	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 7 2009 03:26 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.18	ppb	4.87	0	85.7	80 - 120	
51 V	72	1	0.19	ppb	1.60	0	98.1	80 - 120	
52 Cr	72	1	0.17	ppb	19.24	0	88.9	80 - 120	
55 Mn	72	1	0.24	ppb	0.90	0	122.4	80 - 120	
59 Co	72	1	0.21	ppb	2.54	0	105.0	80 - 120	
60 Ni	72	1	0.19	ppb	33.14	0	95.0	80 - 120	
63 Cu	72	1	0.19	ppb	26.00	0	96.8	80 - 120	
66 Zn	72	1	1.99	ppb	0.59	2	101.2	80 - 120	
75 As	72	1	0.22	ppb	3.49	0	111.1	80 - 120	
78 Se	72	1	-0.03	ppb	493.20	0	-19.4	80 - 120	
95 Mo	72	1	0.20	ppb	10.11	0	102.9	80 - 120	
107 Ag	115	1	0.19	ppb	9.51	0	98.0	80 - 120	
111 Cd	115	1	0.20	ppb	6.38	0	102.8	80 - 120	
118 Sn	115	1	1.96	ppb	1.89	2	99.1	80 - 120	
121 Sb	115	1	0.22	ppb	4.04	0	104.0	80 - 120	
137 Ba	115	1	0.19	ppb	4.99	0	101.2	80 - 120	
205 Tl	165	1	0.21	ppb	2.78	0	101.1	80 - 120	
208 Pb	165	1	0.21	ppb	2.60	0	100.1	80 - 120	
232 Th	165	1	0.21	ppb	3.95	0	98.4	80 - 120	
238 U	165	1	0.21	ppb	3.63	0	98.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453567	1.29	455621	99.5	30 - 120	
45 Sc	1	1337172	0.83	1356727	98.6	30 - 120	
72 Ge	1	590407	0.86	598490	98.6	30 - 120	
115 In	1	1781901	0.99	1797032	99.2	30 - 120	
165 Ho	1	3288568	1.80	3253654	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 7 2009 03:29 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	0.00	0.00	ppb	62.04	3600	
52 Cr	72	1	0.00	0.00	ppb	1081.40	3600	
55 Mn	72	1	0.00	0.00	ppb	140.46	3600	
59 Co	72	1	0.00	0.00	ppb	189.04	3600	
60 Ni	72	1	0.00	0.00	ppb	522.21	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.36	3600	
66 Zn	72	1	0.05	0.05	ppb	55.06	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	2.16	2.16	ppb	11.88	3600	
95 Mo	72	1	0.00	0.00	ppb	222.57	3600	
107 Ag	115	1	0.01	0.01	ppb	10.07	3600	
111 Cd	115	1	0.00	0.00	ppb	89.77	3600	
118 Sn	115	1	0.00	0.00	ppb	293.54	3600	
121 Sb	115	1	0.02	0.02	ppb	23.95	3600	
137 Ba	115	1	-0.02	-0.02	ppb	16.61	3600	
205 Tl	165	1	0.01	0.01	ppb	2.14	3600	
208 Pb	165	1	0.00	0.00	ppb	39.67	3600	
232 Th	165	1	0.00	0.00	ppb	17.19	1000	
238 U	165	1	0.00	0.00	ppb	388.10	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453890	1.30	455621	99.6	30 - 120	
45 Sc	1	1357795	0.37	1356727	100.1	30 - 120	
72 Ge	1	592423	0.94	598490	99.0	30 - 120	
115 In	1	1792023	1.18	1797032	99.7	30 - 120	
165 Ho	1	3279675	0.39	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 7 2009 03:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.45 ppb	8.60	1.00	
52 Cr	72	1	1.86 ppb	3.80	1.00	
55 Mn	72	1	3.11 ppb	0.88	1.00	
59 Co	72	1	0.12 ppb	10.19	1.00	
60 Ni	72	1	1.23 ppb	9.98	1.00	
63 Cu	72	1	0.56 ppb	5.58	1.00	
66 Zn	72	1	4.20 ppb	1.79	10.00	
75 As	72	1	0.35 ppb	13.35	1.00	
78 Se	72	1	0.47 ppb	67.55	1.00	
95 Mo	72	1	2055.00 ppb	1.11	2000.00	
107 Ag	115	1	0.03 ppb	8.56	1.00	
111 Cd	115	1	0.40 ppb	30.97	1.00	
118 Sn	115	1	0.93 ppb	18.89	10.00	
121 Sb	115	1	0.95 ppb	3.56	1.00	
137 Ba	115	1	0.00 ppb	326.02	1.00	
205 Tl	165	1	0.04 ppb	20.03	1.00	
208 Pb	165	1	1.04 ppb	2.03	1.00	
232 Th	165	1	0.02 ppb	5.48	1.00	
238 U	165	1	0.00 ppb	14.89	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	297281	2.41	455621	65.2	30 - 120	
45 Sc	1	939322	1.85	1356727	69.2	30 - 120	
72 Ge	1	429449	0.82	598490	71.8	30 - 120	
115 In	1	1325081	0.92	1797032	73.7	30 - 120	
165 Ho	1	2485688	0.47	3253654	76.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 7 2009 03:34 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	108.90	0.75	100	108.9	80 - 120	
51 V	72	1	92.27	0.38	100	92.3	80 - 120	
52 Cr	72	1	90.40	0.96	100	90.4	80 - 120	
55 Mn	72	1	92.59	1.18	100	92.6	80 - 120	
59 Co	72	1	88.85	0.30	100	88.9	80 - 120	
60 Ni	72	1	89.72	0.28	100	89.7	80 - 120	
63 Cu	72	1	85.14	0.90	100	85.1	80 - 120	
66 Zn	72	1	95.65	0.49	100	95.7	80 - 120	
75 As	72	1	99.50	0.47	100	99.5	80 - 120	
78 Se	72	1	105.90	0.80	100	105.9	80 - 120	
95 Mo	72	1	2149.00	1.99	2100	102.3	80 - 120	
107 Ag	115	1	84.00	7.96	100	84.0	80 - 120	
111 Cd	115	1	93.62	2.89	100	93.6	80 - 120	
118 Sn	115	1	96.78	1.78	100	96.8	80 - 120	
121 Sb	115	1	100.10	2.32	100	100.1	80 - 120	
137 Ba	115	1	96.82	2.12	100	96.8	80 - 120	
205 Tl	165	1	94.83	0.67	100	94.8	80 - 120	
208 Pb	165	1	93.97	0.82	100	94.0	80 - 120	
232 Th	165	1	101.90	0.67	100	101.9	80 - 120	
238 U	165	1	100.20	0.45	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272241	2.18	455621	59.8	30 - 120	
45 Sc	1	935334	1.15	1356727	68.9	30 - 120	
72 Ge	1	419509	1.32	598490	70.1	30 - 120	
115 In	1	1327038	1.55	1797032	73.8	30 - 120	
165 Ho	1	2524289	0.15	3253654	77.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 7 2009 03:37 pm
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0	0.0	80 - 120	
51 V	72	1	0.06	ppb	15.15	0	29.2	80 - 120	
52 Cr	72	1	0.00	ppb	941.54	0	-2.5	80 - 120	
55 Mn	72	1	0.00	ppb	87.90	0	-2.5	80 - 120	
59 Co	72	1	0.00	ppb	138.19	0	-0.5	80 - 120	
60 Ni	72	1	-0.01	ppb	79.76	0	-6.6	80 - 120	
63 Cu	72	1	-0.02	ppb	11.32	0	-10.3	80 - 120	
66 Zn	72	1	-0.12	ppb	4.66	2	-6.1	80 - 120	
75 As	72	1	0.00	ppb	172.97	0	2.3	80 - 120	
78 Se	72	1	0.18	ppb	157.63	0	105.8	80 - 120	
95 Mo	72	1	0.92	ppb	26.25	0	470.1	80 - 120	
107 Ag	115	1	0.01	ppb	38.83	0	5.1	80 - 120	
111 Cd	115	1	0.00	ppb	268.01	0	2.2	80 - 120	
118 Sn	115	1	-0.03	ppb	57.94	2	-1.3	80 - 120	
121 Sb	115	1	0.13	ppb	22.58	0	60.8	80 - 120	
137 Ba	115	1	-0.03	ppb	10.98	0	-13.6	80 - 120	
205 Tl	165	1	0.00	ppb	35.28	0	1.1	80 - 120	
208 Pb	165	1	0.00	ppb	109.50	0	-0.7	80 - 120	
232 Th	165	1	0.03	ppb	14.09	0	14.5	80 - 120	
238 U	165	1	0.02	ppb	14.78	0	7.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	392251	1.40	455621	86.1	30 - 120	
45 Sc	1	1236871	2.21	1356727	91.2	30 - 120	
72 Ge	1	563469	0.48	598490	94.1	30 - 120	
115 In	1	1720438	0.38	1797032	95.7	30 - 120	
165 Ho	1	3228952	0.84	3253654	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\014 LR.D\014 LR.D#
Date Acquired: Nov 7 2009 03:40 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1021.00 ppb	0.96	1000	102.1	90 - 110	
51 V	72	1	925.30 ppb	0.26	1000	92.5	90 - 110	
52 Cr	72	1	921.80 ppb	1.18	1000	92.2	90 - 110	
55 Mn	72	1	929.00 ppb	0.53	1000	92.9	90 - 110	
59 Co	72	1	937.60 ppb	0.95	1000	93.8	90 - 110	
60 Ni	72	1	990.00 ppb	1.83	1000	99.0	90 - 110	
63 Cu	72	1	941.00 ppb	0.34	1000	94.1	90 - 110	
66 Zn	72	1	1002.00 ppb	1.56	1000	100.2	90 - 110	
75 As	72	1	1025.00 ppb	1.12	1000	102.5	90 - 110	
78 Se	72	1	1031.00 ppb	0.90	1000	103.1	90 - 110	
95 Mo	72	1	1009.00 ppb	0.81	1000	100.9	90 - 110	
107 Ag	115	1	955.40 ppb	0.47	1000	95.5	90 - 110	
111 Cd	115	1	993.10 ppb	0.32	1000	99.3	90 - 110	
118 Sn	115	1	954.10 ppb	1.58	1000	95.4	90 - 110	
121 Sb	115	1	963.20 ppb	0.99	1000	96.3	90 - 110	
137 Ba	115	1	967.40 ppb	1.98	1000	96.7	90 - 110	
205 Tl	165	1	966.90 ppb	1.78	1000	96.7	90 - 110	
208 Pb	165	1	947.60 ppb	1.76	1000	94.8	90 - 110	
232 Th	165	1	989.70 ppb	1.92	1000	99.0	90 - 110	
238 U	165	1	989.00 ppb	1.57	1000	98.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	400820	0.66	455621	88.0	30 - 120	
45 Sc	1	1229119	1.48	1356727	90.6	30 - 120	
72 Ge	1	547741	0.96	598490	91.5	30 - 120	
115 In	1	1703051	0.61	1797032	94.8	30 - 120	
165 Ho	1	3245351	1.45	3253654	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 7 2009 03:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.22	3600	
51 V	72	1	0.03	0.03	ppb	5.05	3600	
52 Cr	72	1	-0.02	-0.02	ppb	115.91	3600	
55 Mn	72	1	0.00	0.00	ppb	108.03	3600	
59 Co	72	1	0.00	0.00	ppb	73.71	3600	
60 Ni	72	1	-0.01	-0.01	ppb	98.85	3600	
63 Cu	72	1	-0.01	-0.01	ppb	57.10	3600	
66 Zn	72	1	-0.10	-0.10	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	18.58	3600	
78 Se	72	1	0.26	0.26	ppb	60.51	3600	
95 Mo	72	1	0.62	0.62	ppb	25.89	3600	
107 Ag	115	1	0.03	0.03	ppb	13.50	3600	
111 Cd	115	1	0.01	0.01	ppb	106.57	3600	
118 Sn	115	1	1.01	1.01	ppb	28.84	3600	
121 Sb	115	1	1.39	1.39	ppb	19.23	3600	
137 Ba	115	1	-0.02	-0.02	ppb	4.07	3600	
205 Tl	165	1	0.06	0.06	ppb	11.15	3600	
208 Pb	165	1	0.01	0.01	ppb	28.34	3600	
232 Th	165	1	0.12	0.12	ppb	15.82	1000	
238 U	165	1	0.14	0.14	ppb	23.45	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	416465	0.36	455621	91.4	30 - 120	
45 Sc	1	1277469	0.68	1356727	94.2	30 - 120	
72 Ge	1	579692	0.72	598490	96.9	30 - 120	
115 In	1	1790861	0.65	1797032	99.7	30 - 120	
165 Ho	1	3297951	1.06	3253654	101.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 7 2009 03:45 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	0.98	50	101.6	90 - 110	
51 V	72	1	47.69	ppb	0.85	50	95.4	90 - 110	
52 Cr	72	1	47.81	ppb	0.72	50	95.6	90 - 110	
55 Mn	72	1	47.91	ppb	0.63	50	95.8	90 - 110	
59 Co	72	1	48.31	ppb	1.05	50	96.6	90 - 110	
60 Ni	72	1	49.87	ppb	0.51	50	99.7	90 - 110	
63 Cu	72	1	48.27	ppb	0.97	50	96.5	90 - 110	
66 Zn	72	1	49.24	ppb	0.51	50	98.5	90 - 110	
75 As	72	1	49.61	ppb	0.57	50	99.2	90 - 110	
78 Se	72	1	51.34	ppb	3.01	50	102.7	90 - 110	
95 Mo	72	1	49.43	ppb	1.34	50	98.9	90 - 110	
107 Ag	115	1	48.77	ppb	0.60	50	97.5	90 - 110	
111 Cd	115	1	49.46	ppb	1.05	50	98.9	90 - 110	
118 Sn	115	1	49.42	ppb	0.94	50	98.8	90 - 110	
121 Sb	115	1	49.48	ppb	0.82	50	99.0	90 - 110	
137 Ba	115	1	48.65	ppb	1.08	50	97.3	90 - 110	
205 Tl	165	1	49.98	ppb	1.20	50	100.0	90 - 110	
208 Pb	165	1	50.63	ppb	2.15	50	101.3	90 - 110	
232 Th	165	1	50.61	ppb	1.41	50	101.2	90 - 110	
238 U	165	1	50.58	ppb	0.97	50	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	424171	1.07	455621	93.1	30 - 120	
45 Sc	1	1298607	1.88	1356727	95.7	30 - 120	
72 Ge	1	570018	0.80	598490	95.2	30 - 120	
115 In	1	1777686	0.76	1797032	98.9	30 - 120	
165 Ho	1	3306431	1.43	3253654	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 7 2009 03:48 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	0.018	ppb	26.29	1.00	
52 Cr	72	1	0.021	ppb	89.72	1.00	
55 Mn	72	1	-0.002	ppb	258.47	1.00	
59 Co	72	1	0.000	ppb	7.74	1.00	
60 Ni	72	1	-0.003	ppb	365.53	1.00	
63 Cu	72	1	-0.006	ppb	212.36	1.00	
66 Zn	72	1	-0.070	ppb	18.30	1.00	
75 As	72	1	0.022	ppb	32.72	1.00	
78 Se	72	1	0.156	ppb	92.00	1.00	
95 Mo	72	1	0.115	ppb	30.30	1.00	
107 Ag	115	1	0.011	ppb	38.12	1.00	
111 Cd	115	1	0.002	ppb	113.82	1.00	
118 Sn	115	1	0.224	ppb	27.67	1.00	
121 Sb	115	1	0.348	ppb	18.44	1.00	
137 Ba	115	1	-0.026	ppb	8.86	1.00	
205 Tl	165	1	0.021	ppb	16.25	1.00	
208 Pb	165	1	0.000	ppb	463.86	1.00	
232 Th	165	1	0.056	ppb	20.03	1.00	
238 U	165	1	0.020	ppb	23.07	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	432937	1.72	455621	95.0	30 - 120	
45 Sc	1	1320709	0.75	1356727	97.3	30 - 120	
72 Ge	1	592471	0.93	598490	99.0	30 - 120	
115 In	1	1824111	0.70	1797032	101.5	30 - 120	
165 Ho	1	3304082	2.00	3253654	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\018WASH.D\018WASH.D#
Date Acquired: Nov 7 2009 03:50 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.089 ppb	20.89	1.30	
51 V	72	1	4.721 ppb	1.02	6.50	
52 Cr	72	1	1.919 ppb	1.17	2.60	
55 Mn	72	1	0.984 ppb	3.79	1.30	
59 Co	72	1	0.988 ppb	7.05	1.30	
60 Ni	72	1	1.975 ppb	5.09	2.60	
63 Cu	72	1	1.890 ppb	1.03	2.60	
66 Zn	72	1	9.815 ppb	1.05	13.00	
75 As	72	1	4.945 ppb	0.93	6.50	
78 Se	72	1	5.017 ppb	5.41	6.50	
95 Mo	72	1	2.030 ppb	4.90	2.60	
107 Ag	115	1	5.119 ppb	1.83	6.50	
111 Cd	115	1	0.998 ppb	8.12	1.30	
118 Sn	115	1	10.310 ppb	2.66	13.00	
121 Sb	115	1	2.181 ppb	2.54	2.60	
137 Ba	115	1	0.995 ppb	2.40	1.30	
205 Tl	165	1	1.063 ppb	1.61	1.30	
208 Pb	165	1	1.038 ppb	1.89	1.30	
232 Th	165	1	2.164 ppb	2.13	2.60	
238 U	165	1	1.100 ppb	1.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	443603	0.24	455621	97.4	30 - 120	
45 Sc	1	1335995	1.35	1356727	98.5	30 - 120	
72 Ge	1	596206	0.64	598490	99.6	30 - 120	
115 In	1	1804793	1.75	1797032	100.4	30 - 120	
165 Ho	1	3324168	1.02	3253654	102.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\095 CCV.D\095 CCV.D#
Date Acquired: Nov 7 2009 07:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.00	ppb	3.68	50	100.0	90 - 110	
51 V	72	1	49.46	ppb	0.96	50	98.9	90 - 110	
52 Cr	72	1	49.13	ppb	0.63	50	98.3	90 - 110	
55 Mn	72	1	48.00	ppb	0.58	50	96.0	90 - 110	
59 Co	72	1	49.88	ppb	1.19	50	99.8	90 - 110	
60 Ni	72	1	52.70	ppb	0.96	50	105.4	90 - 110	
63 Cu	72	1	50.75	ppb	0.19	50	101.5	90 - 110	
66 Zn	72	1	48.83	ppb	0.18	50	97.7	90 - 110	
75 As	72	1	50.85	ppb	1.33	50	101.7	90 - 110	
78 Se	72	1	50.97	ppb	2.08	50	101.9	90 - 110	
95 Mo	72	1	49.28	ppb	0.59	50	98.6	90 - 110	
107 Ag	115	1	48.69	ppb	1.80	50	97.4	90 - 110	
111 Cd	115	1	48.20	ppb	1.31	50	96.4	90 - 110	
118 Sn	115	1	47.65	ppb	1.87	50	95.3	90 - 110	
121 Sb	115	1	47.61	ppb	2.17	50	95.2	90 - 110	
137 Ba	115	1	48.23	ppb	1.87	50	96.5	90 - 110	
205 Tl	165	1	49.17	ppb	1.01	50	98.3	90 - 110	
208 Pb	165	1	50.08	ppb	1.74	50	100.2	90 - 110	
232 Th	165	1	49.66	ppb	0.53	50	99.3	90 - 110	
238 U	165	1	49.60	ppb	0.64	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	431764	0.94	455621	94.8	30 - 120	
45 Sc	1	1275635	0.72	1356727	94.0	30 - 120	
72 Ge	1	557000	0.87	598490	93.1	30 - 120	
115 In	1	1717369	0.76	1797032	95.6	30 - 120	
165 Ho	1	3017615	0.61	3253654	92.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\096 CCB.D\096 CCB.D#
Date Acquired: Nov 7 2009 07:28 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.006	ppb	24.61	1.00	
52 Cr	72	1	0.005	ppb	16.13	1.00	
55 Mn	72	1	0.012	ppb	40.48	1.00	
59 Co	72	1	0.003	ppb	90.18	1.00	
60 Ni	72	1	0.005	ppb	115.47	1.00	
63 Cu	72	1	-0.001	ppb	1434.90	1.00	
66 Zn	72	1	0.040	ppb	39.82	1.00	
75 As	72	1	-0.001	ppb	689.47	1.00	
78 Se	72	1	0.203	ppb	119.68	1.00	
95 Mo	72	1	0.030	ppb	15.19	1.00	
107 Ag	115	1	0.009	ppb	17.39	1.00	
111 Cd	115	1	0.008	ppb	214.98	1.00	
118 Sn	115	1	0.033	ppb	87.07	1.00	
121 Sb	115	1	0.133	ppb	16.18	1.00	
137 Ba	115	1	-0.005	ppb	66.27	1.00	
205 Tl	165	1	0.010	ppb	5.85	1.00	
208 Pb	165	1	0.007	ppb	10.03	1.00	
232 Th	165	1	0.031	ppb	21.92	1.00	
238 U	165	1	0.010	ppb	23.45	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	442577	1.12	455621	97.1	30 - 120	
45 Sc	1	1308803	1.31	1356727	96.5	30 - 120	
72 Ge	1	575158	0.41	598490	96.1	30 - 120	
115 In	1	1692957	0.78	1797032	94.2	30 - 120	
165 Ho	1	3023523	0.70	3253654	92.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\097WASH.D\097WASH.D#
Date Acquired:	Nov 7 2009 07:30 pm
Operator:	TEL
Sample Name:	RLCV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Nov 07 2009 03:13 pm
Sample Type:	WASH
Total Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.033 ppb	16.46	1.30	
51 V	72	1	4.891 ppb	1.41	6.50	
52 Cr	72	1	2.023 ppb	4.58	2.60	
55 Mn	72	1	0.940 ppb	0.94	1.30	
59 Co	72	1	1.033 ppb	0.60	1.30	
60 Ni	72	1	2.129 ppb	10.31	2.60	
63 Cu	72	1	2.031 ppb	2.60	2.60	
66 Zn	72	1	10.080 ppb	0.14	13.00	
75 As	72	1	5.048 ppb	1.66	6.50	
78 Se	72	1	5.042 ppb	13.65	6.50	
95 Mo	72	1	2.050 ppb	1.88	2.60	
107 Ag	115	1	5.260 ppb	2.15	6.50	
111 Cd	115	1	0.998 ppb	4.13	1.30	
118 Sn	115	1	9.995 ppb	1.00	13.00	
121 Sb	115	1	2.042 ppb	0.94	2.60	
137 Ba	115	1	1.003 ppb	6.96	1.30	
205 Tl	165	1	1.017 ppb	1.09	1.30	
208 Pb	165	1	1.046 ppb	1.73	1.30	
232 Th	165	1	2.137 ppb	1.47	2.60	
238 U	165	1	1.065 ppb	1.95	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448328	0.34	455621	98.4	30 - 120	
45 Sc	1	1294487	0.37	1356727	95.4	30 - 120	
72 Ge	1	577791	0.38	598490	96.5	30 - 120	
115 In	1	1706897	0.23	1797032	95.0	30 - 120	
165 Ho	1	3033777	0.64	3253654	93.2	30 - 120	

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures	0 :Max. Number of Failures Allowed
0 :ISTD Failures	0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\098ICSA.D\098ICSA.D#
Date Acquired: Nov 7 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.01 ppb	173.15	1.00	
51 V	72	1	2.34 ppb	2.35	1.00	
52 Cr	72	1	1.89 ppb	3.80	1.00	
55 Mn	72	1	3.08 ppb	1.35	1.00	
59 Co	72	1	0.13 ppb	9.32	1.00	
60 Ni	72	1	1.54 ppb	6.59	1.00	
63 Cu	72	1	0.62 ppb	13.41	1.00	
66 Zn	72	1	4.36 ppb	1.67	10.00	
75 As	72	1	0.31 ppb	11.37	1.00	
78 Se	72	1	-0.18 ppb	17.27	1.00	
95 Mo	72	1	2024.00 ppb	0.75	2000.00	
107 Ag	115	1	0.04 ppb	30.78	1.00	
111 Cd	115	1	0.44 ppb	34.74	1.00	
118 Sn	115	1	0.41 ppb	9.39	10.00	
121 Sb	115	1	0.94 ppb	2.45	1.00	
137 Ba	115	1	0.02 ppb	61.87	1.00	
205 Tl	165	1	0.04 ppb	26.87	1.00	
208 Pb	165	1	1.05 ppb	0.68	1.00	
232 Th	165	1	0.02 ppb	35.17	1.00	
238 U	165	1	0.01 ppb	14.16	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	316325	1.25	455621	69.4	30 - 120	
45 Sc	1	945462	1.56	1356727	69.7	30 - 120	
72 Ge	1	429131	0.94	598490	71.7	30 - 120	
115 In	1	1251973	0.62	1797032	69.7	30 - 120	
165 Ho	1	2302241	0.67	3253654	70.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\099ICSB.D\099ICSB.D#
Date Acquired: Nov 7 2009 07:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.10	0.81	100	101.1	80 - 120	
51 V	72	1	96.26	0.64	100	96.3	80 - 120	
52 Cr	72	1	92.97	0.53	100	93.0	80 - 120	
55 Mn	72	1	92.78	0.33	100	92.8	80 - 120	
59 Co	72	1	90.72	0.50	100	90.7	80 - 120	
60 Ni	72	1	92.71	0.31	100	92.7	80 - 120	
63 Cu	72	1	87.81	1.07	100	87.8	80 - 120	
66 Zn	72	1	94.31	0.22	100	94.3	80 - 120	
75 As	72	1	101.10	0.38	100	101.1	80 - 120	
78 Se	72	1	105.10	1.94	100	105.1	80 - 120	
95 Mo	72	1	2106.00	1.43	2100	100.3	80 - 120	
107 Ag	115	1	85.35	1.62	100	85.4	80 - 120	
111 Cd	115	1	91.55	1.47	100	91.6	80 - 120	
118 Sn	115	1	96.95	1.86	100	97.0	80 - 120	
121 Sb	115	1	101.90	1.14	100	101.9	80 - 120	
137 Ba	115	1	97.10	2.05	100	97.1	80 - 120	
205 Tl	165	1	93.31	1.80	100	93.3	80 - 120	
208 Pb	165	1	92.31	0.40	100	92.3	80 - 120	
232 Th	165	1	98.27	1.03	100	98.3	80 - 120	
238 U	165	1	97.38	0.98	100	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298307	2.13	455621	65.5	30 - 120	
45 Sc	1	951400	0.73	1356727	70.1	30 - 120	
72 Ge	1	417924	0.89	598490	69.8	30 - 120	
115 In	1	1269948	0.83	1797032	70.7	30 - 120	
165 Ho	1	2339416	0.71	3253654	71.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\100WASH.D\100WASH.D#
Date Acquired: Nov 7 2009 07:39 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	1.30	
51 V	72	1	0.142 ppb	7.89	6.50	
52 Cr	72	1	0.005 ppb	257.91	2.60	
55 Mn	72	1	0.007 ppb	90.77	1.30	
59 Co	72	1	0.000 ppb	202.05	1.30	
60 Ni	72	1	0.093 ppb	12.92	2.60	
63 Cu	72	1	-0.001 ppb	1876.80	2.60	
66 Zn	72	1	0.085 ppb	20.36	13.00	
75 As	72	1	0.006 ppb	156.23	6.50	
78 Se	72	1	-0.186 ppb	140.52	6.50	
95 Mo	72	1	0.818 ppb	23.12	2.60	
107 Ag	115	1	0.010 ppb	12.80	6.50	
111 Cd	115	1	0.005 ppb	231.49	1.30	
118 Sn	115	1	-0.010 ppb	165.88	13.00	
121 Sb	115	1	0.032 ppb	29.89	2.60	
137 Ba	115	1	-0.014 ppb	32.29	1.30	
205 Tl	165	1	0.003 ppb	28.88	1.30	
208 Pb	165	1	0.004 ppb	10.63	1.30	
232 Th	165	1	0.024 ppb	19.02	2.60	
238 U	165	1	0.016 ppb	20.26	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	387692	1.32	455621	85.1	30 - 120	
45 Sc	1	1182675	0.32	1356727	87.2	30 - 120	
72 Ge	1	534827	0.26	598490	89.4	30 - 120	
115 In	1	1606789	1.96	1797032	89.4	30 - 120	
165 Ho	1	2912559	0.89	3253654	89.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\101 CCV.D\101 CCV.D#
Date Acquired: Nov 7 2009 07:41 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.02	ppb	3.60	50	102.0	90 - 110	
51 V	72	1	49.10	ppb	0.68	50	98.2	90 - 110	
52 Cr	72	1	48.80	ppb	0.79	50	97.6	90 - 110	
55 Mn	72	1	48.00	ppb	0.60	50	96.0	90 - 110	
59 Co	72	1	49.55	ppb	0.61	50	99.1	90 - 110	
60 Ni	72	1	52.06	ppb	1.46	50	104.1	90 - 110	
63 Cu	72	1	50.22	ppb	0.56	50	100.4	90 - 110	
66 Zn	72	1	48.51	ppb	1.13	50	97.0	90 - 110	
75 As	72	1	50.95	ppb	0.50	50	101.9	90 - 110	
78 Se	72	1	49.38	ppb	4.19	50	98.8	90 - 110	
95 Mo	72	1	50.11	ppb	1.38	50	100.2	90 - 110	
107 Ag	115	1	49.66	ppb	0.85	50	99.3	90 - 110	
111 Cd	115	1	49.01	ppb	1.42	50	98.0	90 - 110	
118 Sn	115	1	48.68	ppb	1.81	50	97.4	90 - 110	
121 Sb	115	1	48.87	ppb	1.17	50	97.7	90 - 110	
137 Ba	115	1	49.35	ppb	1.09	50	98.7	90 - 110	
205 Tl	165	1	49.79	ppb	1.41	50	99.6	90 - 110	
208 Pb	165	1	49.95	ppb	1.13	50	99.9	90 - 110	
232 Th	165	1	49.72	ppb	0.91	50	99.4	90 - 110	
238 U	165	1	49.59	ppb	1.94	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398557	1.14	455621	87.5	30 - 120	
45 Sc	1	1252262	1.05	1356727	92.3	30 - 120	
72 Ge	1	546607	0.97	598490	91.3	30 - 120	
115 In	1	1673358	0.50	1797032	93.1	30 - 120	
165 Ho	1	3013021	0.51	3253654	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\102 CCB.D\102 CCB.D#
Date Acquired: Nov 7 2009 07:44 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.18	1.00	
51 V	72	1	0.072	ppb	11.11	1.00	
52 Cr	72	1	0.002	ppb	1427.90	1.00	
55 Mn	72	1	-0.002	ppb	998.74	1.00	
59 Co	72	1	0.004	ppb	62.33	1.00	
60 Ni	72	1	0.095	ppb	21.31	1.00	
63 Cu	72	1	0.001	ppb	1376.50	1.00	
66 Zn	72	1	0.050	ppb	67.37	1.00	
75 As	72	1	0.009	ppb	154.12	1.00	
78 Se	72	1	0.133	ppb	315.07	1.00	
95 Mo	72	1	0.099	ppb	50.63	1.00	
107 Ag	115	1	0.009	ppb	39.54	1.00	
111 Cd	115	1	0.005	ppb	103.50	1.00	
118 Sn	115	1	0.062	ppb	107.54	1.00	
121 Sb	115	1	0.138	ppb	16.19	1.00	
137 Ba	115	1	-0.017	ppb	52.66	1.00	
205 Tl	165	1	0.016	ppb	15.17	1.00	
208 Pb	165	1	0.005	ppb	21.11	1.00	
232 Th	165	1	0.033	ppb	24.50	1.00	
238 U	165	1	0.010	ppb	34.21	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422194	1.15	455621	92.7	30 - 120	
45 Sc	1	1291748	1.74	1356727	95.2	30 - 120	
72 Ge	1	580761	0.52	598490	97.0	30 - 120	
115 In	1	1717581	0.13	1797032	95.6	30 - 120	
165 Ho	1	3049966	0.69	3253654	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\103WASH.D\103WASH.D#
Date Acquired: Nov 7 2009 07:47 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.046 ppb	12.02	1.30	
51 V	72	1	4.990 ppb	4.96	6.50	
52 Cr	72	1	1.987 ppb	0.39	2.60	
55 Mn	72	1	0.984 ppb	3.75	1.30	
59 Co	72	1	0.995 ppb	2.96	1.30	
60 Ni	72	1	2.088 ppb	2.52	2.60	
63 Cu	72	1	1.963 ppb	3.31	2.60	
66 Zn	72	1	10.010 ppb	1.27	13.00	
75 As	72	1	5.172 ppb	1.14	6.50	
78 Se	72	1	5.100 ppb	6.11	6.50	
95 Mo	72	1	2.120 ppb	2.97	2.60	
107 Ag	115	1	5.166 ppb	1.31	6.50	
111 Cd	115	1	1.008 ppb	8.01	1.30	
118 Sn	115	1	10.170 ppb	2.75	13.00	
121 Sb	115	1	2.047 ppb	1.41	2.60	
137 Ba	115	1	1.038 ppb	2.48	1.30	
205 Tl	165	1	1.010 ppb	2.74	1.30	
208 Pb	165	1	1.022 ppb	1.36	1.30	
232 Th	165	1	2.079 ppb	0.26	2.60	
238 U	165	1	1.053 ppb	0.29	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	429072	0.78	455621	94.2	30 - 120	
45 Sc	1	1319350	0.97	1356727	97.2	30 - 120	
72 Ge	1	590123	0.79	598490	98.6	30 - 120	
115 In	1	1750317	1.57	1797032	97.4	30 - 120	
165 Ho	1	3092496	0.17	3253654	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/09

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#
Date Acquired:	Nov 7 2009 08:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 07 2009 08:45 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1013	6.79
52	Cr	72	1	2664	5.06
55	Mn	72	1	580	4.28
59	Co	72	1	50	19.75
60	Ni	72	1	80	25.27
63	Cu	72	1	293	22.51
66	Zn	72	1	673	6.79
75	As	72	1	36	27.55
78	Se	72	1	257	13.42
95	Mo	72	1	170	5.64
107	Ag	115	1	33	16.66
111	Cd	115	1	17	83.01
118	Sn	115	1	497	10.06
121	Sb	115	1	144	3.89
137	Ba	115	1	74	17.43
205	Tl	165	1	49	39.41
208	Pb	165	1	258	3.04
232	Th	165	1	170	44.95
238	U	165	1	24	20.55

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	398155	0.17
45	Sc	1	1273788	1.37
72	Ge	1	577640	0.30
115	In	1	1726730	0.64
165	Ho	1	3039108	1.07

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\126ICAL.D\126ICAL.D#
Date Acquired: Nov 7 2009 08:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 08:48 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	47883	0.67
51	V	72	1	747976	1.49
52	Cr	72	1	754628	1.13
55	Mn	72	1	865964	0.71
59	Co	72	1	889724	1.22
60	Ni	72	1	191586	1.40
63	Cu	72	1	456036	0.95
66	Zn	72	1	106780	0.65
75	As	72	1	89192	0.61
78	Se	72	1	18229	1.26
95	Mo	72	1	254493	1.19
107	Ag	115	1	752402	0.75
111	Cd	115	1	150239	1.10
118	Sn	115	1	420016	0.73
121	Sb	115	1	483973	0.74
137	Ba	115	1	204383	0.51
205	Tl	165	1	1701616	0.60
208	Pb	165	1	2338107	2.25
232	Th	165	1	2413552	1.92
238	U	165	1	2559276	1.77

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	398883	0.56	398155	100.2	30 - 120	
45	Sc	1	1260434	1.10	1273788	99.0	30 - 120	
72	Ge	1	556836	0.86	577640	96.4	30 - 120	
115	In	1	1704167	0.61	1726730	98.7	30 - 120	
165	Ho	1	3052265	1.25	3039108	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\127 CCV.D\127 CCV.D#
Date Acquired: Nov 7 2009 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.43	ppb	3.83	50	100.9	90 - 110	
51 V	72	1	48.44	ppb	0.77	50	96.9	90 - 110	
52 Cr	72	1	48.00	ppb	0.40	50	96.0	90 - 110	
55 Mn	72	1	48.98	ppb	0.83	50	98.0	90 - 110	
59 Co	72	1	49.19	ppb	0.88	50	98.4	90 - 110	
60 Ni	72	1	51.00	ppb	2.25	50	102.0	90 - 110	
63 Cu	72	1	50.40	ppb	1.04	50	100.8	90 - 110	
66 Zn	72	1	49.66	ppb	0.82	50	99.3	90 - 110	
75 As	72	1	49.96	ppb	1.36	50	99.9	90 - 110	
78 Se	72	1	50.40	ppb	4.89	50	100.8	90 - 110	
95 Mo	72	1	49.49	ppb	0.61	50	99.0	90 - 110	
107 Ag	115	1	48.04	ppb	0.50	50	96.1	90 - 110	
111 Cd	115	1	48.84	ppb	0.25	50	97.7	90 - 110	
118 Sn	115	1	48.90	ppb	0.50	50	97.8	90 - 110	
121 Sb	115	1	49.44	ppb	0.72	50	98.9	90 - 110	
137 Ba	115	1	49.58	ppb	0.98	50	99.2	90 - 110	
205 Tl	165	1	50.08	ppb	0.23	50	100.2	90 - 110	
208 Pb	165	1	49.87	ppb	2.65	50	99.7	90 - 110	
232 Th	165	1	50.94	ppb	1.78	50	101.9	90 - 110	
238 U	165	1	50.49	ppb	2.18	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401327	1.29	398155	100.8	30 - 120	
45 Sc	1	1286634	0.38	1273788	101.0	30 - 120	
72 Ge	1	558660	0.70	577640	96.7	30 - 120	
115 In	1	1725819	0.46	1726730	99.9	30 - 120	
165 Ho	1	3087824	1.47	3039108	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\128 CCB.D\128 CCB.D#
Date Acquired: Nov 7 2009 08:56 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.14	1.00	
51 V	72	1	-0.043	ppb	23.48	1.00	
52 Cr	72	1	0.013	ppb	34.25	1.00	
55 Mn	72	1	0.004	ppb	271.40	1.00	
59 Co	72	1	0.003	ppb	58.98	1.00	
60 Ni	72	1	0.013	ppb	122.65	1.00	
63 Cu	72	1	-0.010	ppb	116.03	1.00	
66 Zn	72	1	-0.311	ppb	3.85	1.00	
75 As	72	1	0.007	ppb	208.78	1.00	
78 Se	72	1	0.060	ppb	542.70	1.00	
95 Mo	72	1	0.010	ppb	195.90	1.00	
107 Ag	115	1	0.008	ppb	34.15	1.00	
111 Cd	115	1	-0.003	ppb	158.97	1.00	
118 Sn	115	1	0.071	ppb	72.17	1.00	
121 Sb	115	1	0.186	ppb	24.43	1.00	
137 Ba	115	1	-0.019	ppb	41.26	1.00	
205 Tl	165	1	0.019	ppb	3.88	1.00	
208 Pb	165	1	0.007	ppb	24.82	1.00	
232 Th	165	1	0.050	ppb	27.19	1.00	
238 U	165	1	0.014	ppb	24.25	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	411177	0.79	398155	103.3	30 - 120	
45 Sc	1	1305310	1.03	1273788	102.5	30 - 120	
72 Ge	1	581950	0.43	577640	100.7	30 - 120	
115 In	1	1731683	0.78	1726730	100.3	30 - 120	
165 Ho	1	3093323	0.73	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\129WASH.D\129WASH.D#
Date Acquired: Nov 7 2009 08:58 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.958 ppb	18.19	1.30	
51 V	72	1	4.710 ppb	2.17	6.50	
52 Cr	72	1	1.943 ppb	1.74	2.60	
55 Mn	72	1	0.998 ppb	3.15	1.30	
59 Co	72	1	0.952 ppb	3.16	1.30	
60 Ni	72	1	2.004 ppb	2.33	2.60	
63 Cu	72	1	1.937 ppb	4.73	2.60	
66 Zn	72	1	9.953 ppb	1.74	13.00	
75 As	72	1	4.981 ppb	2.08	6.50	
78 Se	72	1	5.557 ppb	13.16	6.50	
95 Mo	72	1	2.076 ppb	4.26	2.60	
107 Ag	115	1	5.018 ppb	2.22	6.50	
111 Cd	115	1	1.021 ppb	8.96	1.30	
118 Sn	115	1	10.330 ppb	1.36	13.00	
121 Sb	115	1	2.063 ppb	0.86	2.60	
137 Ba	115	1	1.033 ppb	9.68	1.30	
205 Tl	165	1	1.037 ppb	1.68	1.30	
208 Pb	165	1	1.033 ppb	2.31	1.30	
232 Th	165	1	2.176 ppb	3.62	2.60	
238 U	165	1	1.072 ppb	1.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	417105	1.00	398155	104.8	30 - 120	
45 Sc	1	1297902	0.97	1273788	101.9	30 - 120	
72 Ge	1	579634	1.13	577640	100.3	30 - 120	
115 In	1	1734765	0.59	1726730	100.5	30 - 120	
165 Ho	1	3094755	1.05	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#
Date Acquired: Nov 7 2009 11:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:42 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1073	15.01
52	Cr	72	1	2617	8.78
55	Mn	72	1	867	12.42
59	Co	72	1	87	35.66
60	Ni	72	1	110	27.47
63	Cu	72	1	480	6.51
66	Zn	72	1	677	4.34
75	As	72	1	47	6.82
78	Se	72	1	303	21.28
95	Mo	72	1	213	24.37
107	Ag	115	1	40	65.92
111	Cd	115	1	2	917.60
118	Sn	115	1	410	22.77
121	Sb	115	1	161	7.01
137	Ba	115	1	137	14.12
205	Tl	165	1	107	32.25
208	Pb	165	1	403	9.15
232	Th	165	1	173	13.01
238	U	165	1	122	7.26

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	401411	0.88
45	Sc	1	1190683	1.29
72	Ge	1	533218	0.44
115	In	1	1552104	0.57
165	Ho	1	2681412	0.51

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\190ICAL.D\190ICAL.D#
Date Acquired: Nov 7 2009 11:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:45 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	45518	1.54
51	V	72	1	700879	1.29
52	Cr	72	1	693042	2.18
55	Mn	72	1	795858	1.60
59	Co	72	1	850264	1.89
60	Ni	72	1	181428	0.41
63	Cu	72	1	431089	0.73
66	Zn	72	1	95751	0.48
75	As	72	1	84617	1.05
78	Se	72	1	17278	1.91
95	Mo	72	1	230286	0.80
107	Ag	115	1	661266	1.42
111	Cd	115	1	131853	1.14
118	Sn	115	1	371875	2.20
121	Sb	115	1	432362	1.85
137	Ba	115	1	187475	1.78
205	Tl	165	1	1498644	1.03
208	Pb	165	1	2042776	1.12
232	Th	165	1	2142976	0.23
238	U	165	1	2200342	0.40

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	389965	0.80	401411	97.1	30 - 120	
45	Sc	1	1171540	0.60	1190683	98.4	30 - 120	
72	Ge	1	507906	1.25	533218	95.3	30 - 120	
115	In	1	1532161	1.02	1552104	98.7	30 - 120	
165	Ho	1	2672323	0.90	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\191 CCV.D\191 CCV.D#
Date Acquired: Nov 7 2009 11:50 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.23	ppb	3.26	50	98.5	90 - 110	
51 V	72	1	48.52	ppb	1.74	50	97.0	90 - 110	
52 Cr	72	1	48.49	ppb	0.29	50	97.0	90 - 110	
55 Mn	72	1	48.47	ppb	1.24	50	96.9	90 - 110	
59 Co	72	1	48.02	ppb	0.67	50	96.0	90 - 110	
60 Ni	72	1	49.69	ppb	1.50	50	99.4	90 - 110	
63 Cu	72	1	49.62	ppb	0.90	50	99.2	90 - 110	
66 Zn	72	1	48.96	ppb	1.42	50	97.9	90 - 110	
75 As	72	1	49.10	ppb	0.76	50	98.2	90 - 110	
78 Se	72	1	48.52	ppb	4.63	50	97.0	90 - 110	
95 Mo	72	1	49.23	ppb	0.82	50	98.5	90 - 110	
107 Ag	115	1	49.55	ppb	1.37	50	99.1	90 - 110	
111 Cd	115	1	49.69	ppb	1.93	50	99.4	90 - 110	
118 Sn	115	1	49.87	ppb	1.50	50	99.7	90 - 110	
121 Sb	115	1	49.85	ppb	1.58	50	99.7	90 - 110	
137 Ba	115	1	49.38	ppb	1.63	50	98.8	90 - 110	
205 Tl	165	1	50.07	ppb	0.63	50	100.1	90 - 110	
208 Pb	165	1	50.67	ppb	1.87	50	101.3	90 - 110	
232 Th	165	1	50.33	ppb	1.25	50	100.7	90 - 110	
238 U	165	1	51.37	ppb	0.78	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	391774	1.28	401411	97.6	30 - 120	
45 Sc	1	1173327	0.14	1190683	98.5	30 - 120	
72 Ge	1	511730	0.36	533218	96.0	30 - 120	
115 In	1	1536232	0.41	1552104	99.0	30 - 120	
165 Ho	1	2663987	0.61	2681412	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\192 CCB.D\192 CCB.D#
Date Acquired: Nov 7 2009 11:52 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.021	ppb	99.86	1.00	
51 V	72	1	-0.024	ppb	36.47	1.00	
52 Cr	72	1	0.015	ppb	57.14	1.00	
55 Mn	72	1	0.032	ppb	9.94	1.00	
59 Co	72	1	0.000	ppb	241.41	1.00	
60 Ni	72	1	-0.008	ppb	160.82	1.00	
63 Cu	72	1	-0.035	ppb	57.76	1.00	
66 Zn	72	1	-0.363	ppb	4.76	1.00	
75 As	72	1	0.004	ppb	177.30	1.00	
78 Se	72	1	0.169	ppb	283.55	1.00	
95 Mo	72	1	-0.009	ppb	169.70	1.00	
107 Ag	115	1	0.008	ppb	60.74	1.00	
111 Cd	115	1	0.009	ppb	130.00	1.00	
118 Sn	115	1	0.105	ppb	79.70	1.00	
121 Sb	115	1	0.172	ppb	19.79	1.00	
137 Ba	115	1	-0.007	ppb	70.67	1.00	
205 Tl	165	1	0.024	ppb	16.62	1.00	
208 Pb	165	1	0.009	ppb	31.16	1.00	
232 Th	165	1	0.066	ppb	21.79	1.00	
238 U	165	1	0.019	ppb	10.85	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398355	0.67	401411	99.2	30 - 120	
45 Sc	1	1182289	0.51	1190683	99.3	30 - 120	
72 Ge	1	527088	0.39	533218	98.9	30 - 120	
115 In	1	1549776	0.77	1552104	99.8	30 - 120	
165 Ho	1	2689530	0.71	2681412	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\193WASH.D\193WASH.D#
Date Acquired: Nov 7 2009 11:55 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.091 ppb	4.11	1.30	
51 V	72	1	4.811 ppb	1.97	6.50	
52 Cr	72	1	1.975 ppb	0.98	2.60	
55 Mn	72	1	1.025 ppb	2.63	1.30	
59 Co	72	1	0.940 ppb	2.79	1.30	
60 Ni	72	1	2.047 ppb	4.84	2.60	
63 Cu	72	1	1.979 ppb	2.92	2.60	
66 Zn	72	1	9.930 ppb	1.74	13.00	
75 As	72	1	4.933 ppb	2.85	6.50	
78 Se	72	1	4.816 ppb	29.67	6.50	
95 Mo	72	1	1.981 ppb	4.92	2.60	
107 Ag	115	1	5.175 ppb	3.70	6.50	
111 Cd	115	1	0.978 ppb	1.91	1.30	
118 Sn	115	1	10.300 ppb	2.13	13.00	
121 Sb	115	1	2.097 ppb	1.97	2.60	
137 Ba	115	1	0.975 ppb	2.19	1.30	
205 Tl	165	1	1.046 ppb	3.18	1.30	
208 Pb	165	1	1.053 ppb	2.27	1.30	
232 Th	165	1	2.155 ppb	2.03	2.60	
238 U	165	1	1.095 ppb	4.14	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	397871	0.78	401411	99.1	30 - 120	
45 Sc	1	1191820	1.19	1190683	100.1	30 - 120	
72 Ge	1	527413	0.74	533218	98.9	30 - 120	
115 In	1	1527888	0.75	1552104	98.4	30 - 120	
165 Ho	1	2673393	1.59	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#
Date Acquired: Nov 8 2009 02:25 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:23 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	620	12.63
52	Cr	72	1	2680	1.78
55	Mn	72	1	813	8.79
59	Co	72	1	67	30.95
60	Ni	72	1	113	13.08
63	Cu	72	1	490	11.82
66	Zn	72	1	656	6.46
75	As	72	1	45	17.63
78	Se	72	1	333	20.05
95	Mo	72	1	257	16.03
107	Ag	115	1	40	74.94
111	Cd	115	1	11	116.88
118	Sn	115	1	477	0.80
121	Sb	115	1	156	24.28
137	Ba	115	1	152	14.20
205	Tl	165	1	96	21.83
208	Pb	165	1	372	9.02
232	Th	165	1	160	32.65
238	U	165	1	140	10.99

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	376079	0.79
45	Sc	1	1186897	1.34
72	Ge	1	539567	0.45
115	In	1	1576174	1.52
165	Ho	1	2717767	0.30

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\248ICAL.D\248ICAL.D#
Date Acquired: Nov 8 2009 02:28 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:26 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42446	1.21
51	V	72	1	684937	3.17
52	Cr	72	1	670667	0.81
55	Mn	72	1	787843	0.97
59	Co	72	1	839400	0.67
60	Ni	72	1	178958	0.70
63	Cu	72	1	424705	0.79
66	Zn	72	1	94491	0.73
75	As	72	1	84032	1.05
78	Se	72	1	16841	1.85
95	Mo	72	1	231498	1.15
107	Ag	115	1	664263	0.80
111	Cd	115	1	132542	1.42
118	Sn	115	1	376743	0.98
121	Sb	115	1	435060	0.49
137	Ba	115	1	188704	0.74
205	Tl	165	1	1479617	0.97
208	Pb	165	1	2033413	0.75
232	Th	165	1	2126721	0.55
238	U	165	1	2198988	0.53

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	364624	0.78	376079	97.0	30 - 120	
45	Sc	1	1151280	0.55	1186897	97.0	30 - 120	
72	Ge	1	510601	1.68	539567	94.6	30 - 120	
115	In	1	1555316	0.82	1576174	98.7	30 - 120	
165	Ho	1	2687981	0.46	2717767	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\249 CCV.D\249 CCV.D#
Date Acquired: Nov 8 2009 02:31 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.21	ppb	0.59	50	100.4	90 - 110	
51 V	72	1	49.66	ppb	0.22	50	99.3	90 - 110	
52 Cr	72	1	50.51	ppb	0.78	50	101.0	90 - 110	
55 Mn	72	1	49.52	ppb	0.42	50	99.0	90 - 110	
59 Co	72	1	48.78	ppb	0.64	50	97.6	90 - 110	
60 Ni	72	1	50.96	ppb	0.39	50	101.9	90 - 110	
63 Cu	72	1	50.45	ppb	0.98	50	100.9	90 - 110	
66 Zn	72	1	51.04	ppb	1.32	50	102.1	90 - 110	
75 As	72	1	50.22	ppb	0.79	50	100.4	90 - 110	
78 Se	72	1	52.93	ppb	2.64	50	105.9	90 - 110	
95 Mo	72	1	50.88	ppb	0.45	50	101.8	90 - 110	
107 Ag	115	1	50.92	ppb	2.20	50	101.8	90 - 110	
111 Cd	115	1	51.72	ppb	2.62	50	103.4	90 - 110	
118 Sn	115	1	51.06	ppb	2.41	50	102.1	90 - 110	
121 Sb	115	1	51.12	ppb	1.48	50	102.2	90 - 110	
137 Ba	115	1	50.77	ppb	1.68	50	101.5	90 - 110	
205 Tl	165	1	51.85	ppb	1.16	50	103.7	90 - 110	
208 Pb	165	1	51.54	ppb	2.32	50	103.1	90 - 110	
232 Th	165	1	51.27	ppb	1.18	50	102.5	90 - 110	
238 U	165	1	51.61	ppb	0.90	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360601	1.23	376079	95.9	30 - 120	
45 Sc	1	1152210	0.10	1186897	97.1	30 - 120	
72 Ge	1	506331	0.64	539567	93.8	30 - 120	
115 In	1	1532589	0.89	1576174	97.2	30 - 120	
165 Ho	1	2667156	1.17	2717767	98.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\250 CCB.D\250 CCB.D#
Date Acquired: Nov 8 2009 02:33 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	147.29	1.00	
51 V	72	1	-0.021	ppb	31.34	1.00	
52 Cr	72	1	0.037	ppb	45.39	1.00	
55 Mn	72	1	-0.003	ppb	461.47	1.00	
59 Co	72	1	0.004	ppb	46.27	1.00	
60 Ni	72	1	-0.025	ppb	13.04	1.00	
63 Cu	72	1	-0.035	ppb	22.37	1.00	
66 Zn	72	1	-0.398	ppb	5.33	1.00	
75 As	72	1	0.015	ppb	70.97	1.00	
78 Se	72	1	-0.320	ppb	40.38	1.00	
95 Mo	72	1	-0.054	ppb	35.32	1.00	
107 Ag	115	1	0.008	ppb	9.23	1.00	
111 Cd	115	1	0.005	ppb	52.43	1.00	
118 Sn	115	1	0.107	ppb	31.44	1.00	
121 Sb	115	1	0.188	ppb	20.19	1.00	
137 Ba	115	1	-0.042	ppb	4.94	1.00	
205 Tl	165	1	0.020	ppb	20.00	1.00	
208 Pb	165	1	-0.001	ppb	65.74	1.00	
232 Th	165	1	0.055	ppb	6.90	1.00	
238 U	165	1	0.016	ppb	10.74	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366061	0.27	376079	97.3	30 - 120	
45 Sc	1	1155485	0.15	1186897	97.4	30 - 120	
72 Ge	1	519106	0.69	539567	96.2	30 - 120	
115 In	1	1540332	1.11	1576174	97.7	30 - 120	
165 Ho	1	2657124	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\251WASH.D\251WASH.D#
Date Acquired: Nov 8 2009 02:36 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.182 ppb	14.87	1.30	
51 V	72	1	4.893 ppb	1.96	6.50	
52 Cr	72	1	2.065 ppb	5.46	2.60	
55 Mn	72	1	1.011 ppb	1.63	1.30	
59 Co	72	1	0.945 ppb	4.66	1.30	
60 Ni	72	1	1.991 ppb	4.27	2.60	
63 Cu	72	1	1.920 ppb	3.33	2.60	
66 Zn	72	1	9.756 ppb	2.19	13.00	
75 As	72	1	5.100 ppb	2.23	6.50	
78 Se	72	1	5.391 ppb	16.99	6.50	
95 Mo	72	1	2.008 ppb	7.03	2.60	
107 Ag	115	1	5.374 ppb	2.29	6.50	
111 Cd	115	1	1.096 ppb	8.86	1.30	
118 Sn	115	1	10.340 ppb	1.46	13.00	
121 Sb	115	1	2.090 ppb	3.04	2.60	
137 Ba	115	1	1.046 ppb	6.76	1.30	
205 Tl	165	1	1.069 ppb	2.14	1.30	
208 Pb	165	1	1.064 ppb	1.63	1.30	
232 Th	165	1	2.171 ppb	1.98	2.60	
238 U	165	1	1.109 ppb	2.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368083	0.81	376079	97.9	30 - 120	
45 Sc	1	1152236	1.34	1186897	97.1	30 - 120	
72 Ge	1	519228	0.64	539567	96.2	30 - 120	
115 In	1	1550740	0.66	1576174	98.4	30 - 120	
165 Ho	1	2657605	1.00	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\252 BLK.D\252 BLK.D#
Date Acquired: Nov 8 2009 02:39 am
Operator: TEL
Sample Name: LNJNVB
Misc Info: BLANK 9303185 6020
Vial Number: 4402
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	4060.10	2.00	
51 V	72	1	-0.023 ppb	51.25	2.00	
52 Cr	72	1	0.146 ppb	18.63	2.00	
55 Mn	72	1	0.029 ppb	14.35	2.00	
59 Co	72	1	-0.002 ppb	130.67	2.00	
60 Ni	72	1	0.009 ppb	200.76	2.00	
63 Cu	72	1	0.048 ppb	17.11	2.00	
66 Zn	72	1	0.350 ppb	15.65	2.00	
75 As	72	1	0.002 ppb	591.35	2.00	
78 Se	72	1	-0.304 ppb	77.33	2.00	
95 Mo	72	1	-0.059 ppb	27.75	2.00	
107 Ag	115	1	0.003 ppb	141.04	2.00	
111 Cd	115	1	0.004 ppb	198.21	2.00	
118 Sn	115	1	0.129 ppb	35.95	2.00	
121 Sb	115	1	0.037 ppb	34.11	2.00	
137 Ba	115	1	-0.021 ppb	145.57	2.00	
205 Tl	165	1	0.012 ppb	15.96	2.00	
208 Pb	165	1	0.006 ppb	18.89	2.00	
232 Th	165	1	0.019 ppb	29.60	2.00	
238 U	165	1	0.002 ppb	114.88	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364912	0.52	376079	97.0	30 - 120	
45 Sc	1	1141984	0.82	1186897	96.2	30 - 120	
72 Ge	1	513818	0.75	539567	95.2	30 - 120	
115 In	1	1528677	1.58	1576174	97.0	30 - 120	
165 Ho	1	2647917	1.14	2717767	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\253 LCS.D\253 LCS.D#
Date Acquired: Nov 8 2009 02:42 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJNVC
Misc Info: LCS
Vial Number: 4403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	35.70	1.01	40	89.3	80 - 120	
51 V	72	1	35.52	0.20	40	88.8	80 - 120	
52 Cr	72	1	36.08	0.50	40	90.2	80 - 120	
55 Mn	72	1	35.14	0.07	40	87.9	80 - 120	
59 Co	72	1	34.82	0.49	40	87.1	80 - 120	
60 Ni	72	1	36.40	0.69	40	91.0	80 - 120	
63 Cu	72	1	35.92	0.24	40	89.8	80 - 120	
66 Zn	72	1	35.76	1.51	40	89.4	80 - 120	
75 As	72	1	34.71	0.72	40	86.8	80 - 120	
78 Se	72	1	35.62	2.21	40	89.1	80 - 120	
95 Mo	72	1	32.10	0.70	40	80.3	80 - 120	
107 Ag	115	1	35.79	2.12	40	89.5	80 - 120	
111 Cd	115	1	35.37	1.53	40	88.4	80 - 120	
118 Sn	115	1	0.02	168.39	40	0.0	80 - 120	
121 Sb	115	1	32.20	2.07	40	80.5	80 - 120	
137 Ba	115	1	35.77	2.20	40	89.4	80 - 120	
205 Tl	165	1	36.57	2.09	40	91.4	80 - 120	
208 Pb	165	1	36.87	2.16	40	92.2	80 - 120	
232 Th	165	1	36.61	1.54	40	91.5	80 - 120	
238 U	165	1	36.97	1.94	40	92.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358195	0.31	376079	95.2	30 - 120	
45 Sc	1	1130666	0.47	1186897	95.3	30 - 120	
72 Ge	1	497032	0.74	539567	92.1	30 - 120	
115 In	1	1523173	1.15	1576174	96.6	30 - 120	
165 Ho	1	2638001	1.37	2717767	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#
Date Acquired: Nov 8 2009 02:44 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7F 5X
Misc Info: D9J270261
Vial Number: 4404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: AllRef
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.02	ppb	140.55	3600	
51 V	72	1	58.25	11.65	ppb	0.99	3600	
52 Cr	72	1	96.60	19.32	ppb	0.56	3600	
55 Mn	72	1	20.01	4.00	ppb	1.83	3600	
59 Co	72	1	0.41	0.08	ppb	18.64	3600	
60 Ni	72	1	2.50	0.50	ppb	10.52	3600	
63 Cu	72	1	0.61	0.12	ppb	13.42	3600	
66 Zn	72	1	18.56	3.71	ppb	2.43	3600	
75 As	72	1	190.75	38.15	ppb	0.69	3600	
78 Se	72	1	1.93	0.39	ppb	57.06	3600	
95 Mo	72	1	26.48	5.30	ppb	2.72	3600	
107 Ag	115	1	0.03	0.01	ppb	125.97	3600	
111 Cd	115	1	0.02	0.00	ppb	229.82	3600	
118 Sn	115	1	0.25	0.05	ppb	45.32	3600	
121 Sb	115	1	0.30	0.06	ppb	29.45	3600	
137 Ba	115	1	23.70	4.74	ppb	1.34	3600	
205 Tl	165	1	0.23	0.05	ppb	17.38	3600	
208 Pb	165	1	0.18	0.04	ppb	14.05	3600	
232 Th	165	1	0.24	0.05	ppb	4.71	1000	
238 U	165	1	13.31	2.66	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	333341	1.09	376079	88.6	30 - 120	
45 Sc	1	1062523	0.59	1186897	89.5	30 - 120	
72 Ge	1	462502	0.27	539567	85.7	30 - 120	
115 In	1	1375002	1.04	1576174	87.2	30 - 120	
165 Ho	1	2471361	0.80	2717767	90.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\255SDIL.D\255SDIL.D#
Date Acquired: Nov 8 2009 02:47 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FP25
Misc Info: SERIAL DILUTION
Vial Number: 4405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	0.57	0.00	458.7	90 - 110	
51 V	72	1	2.26	ppb	2.18	2.33	97.2	90 - 110	
52 Cr	72	1	3.94	ppb	1.55	3.86	101.9	90 - 110	
55 Mn	72	1	0.83	ppb	10.87	0.80	103.6	90 - 110	
59 Co	72	1	0.02	ppb	18.64	0.02	109.5	90 - 110	
60 Ni	72	1	0.11	ppb	52.76	0.10	106.7	90 - 110	
63 Cu	72	1	0.01	ppb	230.36	0.02	26.5	90 - 110	
66 Zn	72	1	0.47	ppb	7.87	0.74	62.8	90 - 110	
75 As	72	1	7.52	ppb	0.96	7.63	98.5	90 - 110	
78 Se	72	1	-0.04	ppb	1143.50	0.08	-52.9	90 - 110	
95 Mo	72	1	0.94	ppb	9.86	1.06	88.3	90 - 110	
107 Ag	115	1	0.00	ppb	99.28	0.00	-232.5	90 - 110	
111 Cd	115	1	-0.01	ppb	100.17	0.00	-679.0	90 - 110	
118 Sn	115	1	0.09	ppb	4.94	0.01	892.4	90 - 110	
121 Sb	115	1	0.01	ppb	131.02	0.01	58.5	90 - 110	
137 Ba	115	1	0.94	ppb	4.03	0.95	99.3	90 - 110	
205 Tl	165	1	0.01	ppb	8.96	0.01	141.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.12	0.01	165.2	90 - 110	
232 Th	165	1	0.01	ppb	22.37	0.01	123.4	90 - 110	
238 U	165	1	0.53	ppb	1.52	0.53	100.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355060	0.39	376079	94.4	30 - 120	
45 Sc	1	1125653	0.19	1186897	94.8	30 - 120	
72 Ge	1	502164	0.65	539567	93.1	30 - 120	
115 In	1	1479317	0.60	1576174	93.9	30 - 120	
165 Ho	1	2614578	1.08	2717767	96.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:46

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNC7FP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG110709 # 255 | Method 6020_
Acquired: 11/08/2009 02:47:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	10	0.41625	0.09076	359		*	
7440-62-2	Vanadium	51	15823	56.600	58.240	2.82		*	
7440-47-3	Chromium	52	28379	98.450	96.590	1.93		*	
7439-96-5	Manganese	55	7172	20.725	20.010	3.57		*	
7440-48-4	Cobalt	59	210	0.44850	0.40970	9.47		*	
7440-02-0	Nickel	60	293	2.6645	2.4980	6.67		*	
7440-50-8	Copper	63	483	0.16105	0.60710	73.5		*	
7440-66-6	Zinc	66	1041	11.650	18.550	37.2		*	
7440-38-2	Arsenic	75	6250	187.85	190.70	1.49	0.21	1.5	☑
7782-49-2	Selenium	78	303	-1.0210	1.9300	153	0.70	NC	☑
7439-98-7	Molybdenum	95	2367	23.385	26.470	11.7		*	
7440-22-4	Silver	107	20	-0.06975	0.02999	333		*	
7440-43-9	Cadmium	111	3	-0.14365	0.02116	779		*	
7440-31-5	Tin	118	770	2.2540	0.25260	792		*	
7440-36-0	Antimony	121	176	0.17570	0.30050	41.5		*	
7440-39-3	Barium	137	1831	23.535	23.690	0.654		*	
7440-28-0	Thallium	205	281	0.32890	0.23210	41.7		*	
7439-92-1	Lead	208	597	0.30195	0.18290	65.1		*	
7440-61-1	Uranium	238	11545	13.340	13.300	0.301		*	
7440-29-1	Thorium	232	403	0.30120	0.24410	23.4		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\256PDS.D\256PDS.D#
Date Acquired: Nov 8 2009 02:50 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 4406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	198.50	0.02	ppb	0.67	200	99.2	75 - 125	
51 V	72	1	208.00	11.65	ppb	2.08	200	98.3	75 - 125	
52 Cr	72	1	214.70	19.32	ppb	2.35	200	97.9	75 - 125	
55 Mn	72	1	195.40	4.00	ppb	1.86	200	95.8	75 - 125	
59 Co	72	1	183.60	0.08	ppb	1.60	200	91.8	75 - 125	
60 Ni	72	1	182.50	0.50	ppb	0.31	200	91.0	75 - 125	
63 Cu	72	1	178.40	0.12	ppb	0.81	200	89.1	75 - 125	
66 Zn	72	1	197.00	3.71	ppb	0.21	200	96.7	75 - 125	
75 As	72	1	232.30	38.15	ppb	0.67	200	97.5	75 - 125	
78 Se	72	1	204.20	0.39	ppb	2.34	200	101.9	75 - 125	
95 Mo	72	1	205.90	5.30	ppb	0.26	200	100.3	75 - 125	
107 Ag	115	1	41.50	0.01	ppb	1.74	50	83.0	75 - 125	
111 Cd	115	1	191.50	0.00	ppb	1.67	200	95.7	75 - 125	
118 Sn	115	1	177.60	0.05	ppb	1.20	200	88.8	75 - 125	
121 Sb	115	1	198.30	0.06	ppb	1.40	200	99.1	75 - 125	
137 Ba	115	1	196.40	4.74	ppb	1.33	200	95.9	75 - 125	
205 Tl	165	1	183.20	0.05	ppb	0.81	200	91.6	75 - 125	
208 Pb	165	1	182.30	0.04	ppb	0.75	200	91.1	75 - 125	
232 Th	165	1	0.04	0.05	ppb	6.86	200	0.0	75 - 125	
238 U	165	1	193.60	2.66	ppb	1.34	200	95.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328783	0.12	376079	87.4	30 - 120	
45 Sc	1	1063276	1.17	1186897	89.6	30 - 120	
72 Ge	1	452940	1.07	539567	83.9	30 - 120	
115 In	1	1385133	0.59	1576174	87.9	30 - 120	
165 Ho	1	2473070	1.04	2717767	91.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:49

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNC7FZ** Spike Dilution: **1.00** Sample Dilution: **5.00**

Instrument: **Agilent7500** Channel 272
File: AG110709 # 256 Method 6020_
Acquired: 11/08/2009 02:50:00 ICPMS_024 Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75977	198.50	0.01815	99.2	200		☐
7440-62-2	Vanadium	51	1263250	208.00	11.648	98.2	200		☑
7440-47-3	Chromium	52	1274690	214.70	19.318	97.7	200		☑
7439-96-5	Manganese	55	1365200	195.40	4.0020	95.7	200		☑
7440-48-4	Cobalt	59	1366970	183.60	0.08194	91.8	200		☐
7440-02-0	Nickel	60	289636	182.50	0.49960	91.0	200		☑
7440-50-8	Copper	63	671724	178.40	0.12142	89.1	200		☑
7440-66-6	Zinc	66	164629	197.00	3.7100	96.6	200		☑
7440-38-2	Arsenic	75	173144	232.30	38.140	97.1	200		☑
7782-49-2	Selenium	78	30217	204.20	0.38600	102	200		☑
7439-98-7	Molybdenum	95	422659	205.90	5.2940	100	200		☐
7440-22-4	Silver	107	245476	41.500	0.00600	83.0	50.0		☐
7440-43-9	Cadmium	111	225972	191.50	0.00423	95.7	200		☑
7440-31-5	Tin	118	595460	177.60	0.05052	88.8	200		☑
7440-36-0	Antimony	121	768070	198.30	0.06010	99.1	200		☑
7440-39-3	Barium	137	329990	196.40	4.7380	95.8	200		☑
7440-28-0	Thallium	205	2493600	183.20	0.04642	91.6	200		☑
7439-92-1	Lead	208	3410220	182.30	0.03658	91.1	200		☑
7440-61-1	Uranium	238	3915870	193.60	2.6600	95.5	200		☐
7440-29-1	Thorium	232	963	0.04179	0.04882				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\257_MS.D\257_MS.D#
Date Acquired: Nov 8 2009 02:53 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FS 5X
Misc Info: MATRIX SPIKE
Vial Number: 4407
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MS
Prep Dil. Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	7.56	0.02	ppb	3.41	40	18.9	50 - 150	
51 V	72	1	19.50	11.65	ppb	0.31	40	37.8	50 - 150	
52 Cr	72	1	27.55	19.32	ppb	1.08	40	46.4	50 - 150	
55 Mn	72	1	11.53	4.00	ppb	1.57	40	26.2	50 - 150	
59 Co	72	1	6.92	0.08	ppb	2.08	40	17.3	50 - 150	
60 Ni	72	1	7.47	0.50	ppb	3.08	40	18.4	50 - 150	
63 Cu	72	1	6.92	0.12	ppb	1.37	40	17.2	50 - 150	
66 Zn	72	1	12.20	3.71	ppb	0.22	40	27.9	50 - 150	
75 As	72	1	47.40	38.15	ppb	0.47	40	60.7	50 - 150	
78 Se	72	1	8.21	0.39	ppb	9.17	40	20.3	50 - 150	
95 Mo	72	1	12.33	5.30	ppb	1.48	40	27.2	50 - 150	
107 Ag	115	1	6.98	0.01	ppb	1.82	40	17.5	50 - 150	
111 Cd	115	1	7.47	0.00	ppb	3.17	40	18.7	50 - 150	
118 Sn	115	1	0.39	0.05	ppb	33.82	40	1.0	50 - 150	
121 Sb	115	1	6.89	0.06	ppb	1.31	40	17.2	50 - 150	
137 Ba	115	1	12.69	4.74	ppb	1.37	40	28.4	50 - 150	
205 Tl	165	1	7.17	0.05	ppb	1.41	40	17.9	50 - 150	
208 Pb	165	1	7.25	0.04	ppb	1.49	40	18.1	50 - 150	
232 Th	165	1	7.88	0.05	ppb	1.73	40	19.7	50 - 150	
238 U	165	1	10.53	2.66	ppb	1.84	40	24.7	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	332623	0.65	376079	88.4	30 - 120	
45 Sc	1	1062418	1.11	1186897	89.5	30 - 120	
72 Ge	1	462138	0.38	539567	85.6	30 - 120	
115 In	1	1389102	1.17	1576174	88.1	30 - 120	
165 Ho	1	2485285	0.80	2717767	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\258 CCV.D\258 CCV.D#
Date Acquired: Nov 8 2009 02:56 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.17	ppb	1.68	50	102.3	90 - 110	
51 V	72	1	49.76	ppb	0.58	50	99.5	90 - 110	
52 Cr	72	1	50.23	ppb	0.59	50	100.5	90 - 110	
55 Mn	72	1	49.80	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	48.86	ppb	0.97	50	97.7	90 - 110	
60 Ni	72	1	51.09	ppb	0.38	50	102.2	90 - 110	
63 Cu	72	1	50.55	ppb	1.39	50	101.1	90 - 110	
66 Zn	72	1	51.57	ppb	0.26	50	103.1	90 - 110	
75 As	72	1	50.59	ppb	0.46	50	101.2	90 - 110	
78 Se	72	1	51.92	ppb	0.28	50	103.8	90 - 110	
95 Mo	72	1	50.29	ppb	1.00	50	100.6	90 - 110	
107 Ag	115	1	51.22	ppb	2.07	50	102.4	90 - 110	
111 Cd	115	1	51.60	ppb	0.81	50	103.2	90 - 110	
118 Sn	115	1	50.56	ppb	0.85	50	101.1	90 - 110	
121 Sb	115	1	51.03	ppb	1.10	50	102.1	90 - 110	
137 Ba	115	1	50.92	ppb	1.12	50	101.8	90 - 110	
205 Tl	165	1	52.43	ppb	1.68	50	104.9	90 - 110	
208 Pb	165	1	52.24	ppb	2.12	50	104.5	90 - 110	
232 Th	165	1	51.78	ppb	2.94	50	103.6	90 - 110	
238 U	165	1	52.22	ppb	2.20	50	104.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366110	0.29	376079	97.3	30 - 120	
45 Sc	1	1169831	1.16	1186897	98.6	30 - 120	
72 Ge	1	507682	1.25	539567	94.1	30 - 120	
115 In	1	1542474	0.57	1576174	97.9	30 - 120	
165 Ho	1	2664119	1.36	2717767	98.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\259 CCB.D\259 CCB.D#
Date Acquired: Nov 8 2009 02:58 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	31.75	1.00	
52 Cr	72	1	0.015	ppb	240.08	1.00	
55 Mn	72	1	-0.003	ppb	454.38	1.00	
59 Co	72	1	0.007	ppb	19.00	1.00	
60 Ni	72	1	-0.021	ppb	92.00	1.00	
63 Cu	72	1	-0.023	ppb	91.13	1.00	
66 Zn	72	1	-0.387	ppb	12.46	1.00	
75 As	72	1	0.025	ppb	95.41	1.00	
78 Se	72	1	-0.065	ppb	394.03	1.00	
95 Mo	72	1	-0.040	ppb	70.76	1.00	
107 Ag	115	1	0.007	ppb	79.32	1.00	
111 Cd	115	1	0.012	ppb	73.39	1.00	
118 Sn	115	1	0.112	ppb	71.47	1.00	
121 Sb	115	1	0.150	ppb	17.00	1.00	
137 Ba	115	1	-0.041	ppb	5.14	1.00	
205 Tl	165	1	0.021	ppb	28.23	1.00	
208 Pb	165	1	0.003	ppb	8.31	1.00	
232 Th	165	1	0.048	ppb	25.86	1.00	
238 U	165	1	0.018	ppb	13.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367818	0.80	376079	97.8	30 - 120	
45 Sc	1	1153232	0.32	1186897	97.2	30 - 120	
72 Ge	1	519534	0.26	539567	96.3	30 - 120	
115 In	1	1546385	0.40	1576174	98.1	30 - 120	
165 Ho	1	2700530	0.45	2717767	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\260WASH.D\260WASH.D#
Date Acquired: Nov 8 2009 03:01 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.019 ppb	27.17	1.30	
51 V	72	1	4.885 ppb	1.68	6.50	
52 Cr	72	1	2.082 ppb	0.83	2.60	
55 Mn	72	1	1.036 ppb	7.67	1.30	
59 Co	72	1	0.946 ppb	2.04	1.30	
60 Ni	72	1	1.988 ppb	1.59	2.60	
63 Cu	72	1	1.986 ppb	0.32	2.60	
66 Zn	72	1	9.700 ppb	2.08	13.00	
75 As	72	1	4.976 ppb	1.71	6.50	
78 Se	72	1	5.005 ppb	25.32	6.50	
95 Mo	72	1	1.940 ppb	1.93	2.60	
107 Ag	115	1	5.369 ppb	0.73	6.50	
111 Cd	115	1	1.082 ppb	5.90	1.30	
118 Sn	115	1	10.260 ppb	0.06	13.00	
121 Sb	115	1	2.114 ppb	1.71	2.60	
137 Ba	115	1	0.981 ppb	3.28	1.30	
205 Tl	165	1	1.051 ppb	2.60	1.30	
208 Pb	165	1	1.037 ppb	1.65	1.30	
232 Th	165	1	2.110 ppb	1.80	2.60	
238 U	165	1	1.105 ppb	2.71	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367841	0.83	376079	97.8	30 - 120	
45 Sc	1	1154162	0.97	1186897	97.2	30 - 120	
72 Ge	1	516753	0.66	539567	95.8	30 - 120	
115 In	1	1524519	0.33	1576174	96.7	30 - 120	
165 Ho	1	2680772	0.38	2717767	98.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\261 MSD.D\261 MSD.D#
Date Acquired: Nov 8 2009 03:04 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MSD
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\257 MS.D\257 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.15	ppb	4.97	7.56	5.64	20	
51 V	72	1	19.44	ppb	0.87	19.50	0.31	20	
52 Cr	72	1	27.63	ppb	0.44	27.55	0.29	20	
55 Mn	72	1	11.89	ppb	0.71	11.53	3.07	20	
59 Co	72	1	6.96	ppb	0.22	6.92	0.55	20	
60 Ni	72	1	7.63	ppb	4.71	7.47	2.13	20	
63 Cu	72	1	6.96	ppb	2.26	6.92	0.55	20	
66 Zn	72	1	11.24	ppb	0.91	12.20	8.19	20	
75 As	72	1	47.18	ppb	1.02	47.40	0.47	20	
78 Se	72	1	8.49	ppb	8.60	8.21	3.34	20	
95 Mo	72	1	12.08	ppb	2.93	12.33	2.05	20	
107 Ag	115	1	6.86	ppb	1.67	6.98	1.81	20	
111 Cd	115	1	7.38	ppb	2.12	7.47	1.12	20	
118 Sn	115	1	0.11	ppb	30.03	0.39	111.83	20	
121 Sb	115	1	6.82	ppb	2.78	6.89	1.02	20	
137 Ba	115	1	12.78	ppb	1.44	12.69	0.71	20	
205 Tl	165	1	7.29	ppb	1.19	7.17	1.61	20	
208 Pb	165	1	7.29	ppb	2.38	7.25	0.51	20	
232 Th	165	1	7.89	ppb	2.55	7.88	0.08	20	
238 U	165	1	10.55	ppb	1.44	10.53	0.19	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329103	0.78	376079	87.5	30 - 120	
45 Sc	1	1057955	1.12	1186897	89.1	30 - 120	
72 Ge	1	456662	0.47	539567	84.6	30 - 120	
115 In	1	1365390	0.56	1576174	86.6	30 - 120	
165 Ho	1	2474617	1.07	2717767	91.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\262SMPL.D\262SMPL.D#
Date Acquired: Nov 8 2009 03:07 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7L 5X
Misc Info: D9J270263
Vial Number: 4409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	157.59	3600	
51 V	72	1	46.85	9.37	ppb	1.89	3600	
52 Cr	72	1	12.39	2.48	ppb	5.61	3600	
55 Mn	72	1	171.35	34.27	ppb	1.07	3600	
59 Co	72	1	264.35	52.87	ppb	1.02	3600	
60 Ni	72	1	102.35	20.47	ppb	3.34	3600	
63 Cu	72	1	53.95	10.79	ppb	1.03	3600	
66 Zn	72	1	17.02	3.40	ppb	3.85	3600	
75 As	72	1	69.40	13.88	ppb	0.45	3600	
78 Se	72	1	3.99	0.80	ppb	47.95	3600	
95 Mo	72	1	6.46	1.29	ppb	6.25	3600	
107 Ag	115	1	0.02	0.00	ppb	159.25	3600	
111 Cd	115	1	0.13	0.03	ppb	54.73	3600	
118 Sn	115	1	0.20	0.04	ppb	29.32	3600	
121 Sb	115	1	0.23	0.05	ppb	27.91	3600	
137 Ba	115	1	43.61	8.72	ppb	1.89	3600	
205 Tl	165	1	0.08	0.02	ppb	8.14	3600	
208 Pb	165	1	1.84	0.37	ppb	5.27	3600	
232 Th	165	1	0.14	0.03	ppb	17.77	1000	
238 U	165	1	38.02	7.60	ppb	1.66	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343401	0.74	376079	91.3	30 - 120	
45 Sc	1	1089536	0.75	1186897	91.8	30 - 120	
72 Ge	1	479909	1.11	539567	88.9	30 - 120	
115 In	1	1451981	1.22	1576174	92.1	30 - 120	
165 Ho	1	2546093	0.95	2717767	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\263SMPL.D\263SMPL.D#
Date Acquired: Nov 8 2009 03:09 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFGD 5X
Misc Info: D9J280280
Vial Number: 4410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.02	ppb	241.44	3600	
51 V	72	1	54.75	10.95	ppb	1.40	3600	
52 Cr	72	1	88.30	17.66	ppb	0.52	3600	
55 Mn	72	1	36.34	7.27	ppb	0.95	3600	
59 Co	72	1	0.85	0.17	ppb	10.77	3600	
60 Ni	72	1	4.50	0.90	ppb	6.77	3600	
63 Cu	72	1	1.33	0.27	ppb	18.06	3600	
66 Zn	72	1	7.36	1.47	ppb	5.00	3600	
75 As	72	1	275.25	55.05	ppb	1.01	3600	
78 Se	72	1	8.96	1.79	ppb	43.45	3600	
95 Mo	72	1	14.49	2.90	ppb	3.73	3600	
107 Ag	115	1	0.03	0.01	ppb	18.83	3600	
111 Cd	115	1	0.09	0.02	ppb	136.04	3600	
118 Sn	115	1	0.02	0.00	ppb	387.10	3600	
121 Sb	115	1	0.10	0.02	ppb	24.58	3600	
137 Ba	115	1	40.38	8.08	ppb	3.21	3600	
205 Tl	165	1	0.13	0.03	ppb	5.33	3600	
208 Pb	165	1	0.86	0.17	ppb	3.75	3600	
232 Th	165	1	0.77	0.15	ppb	2.79	1000	
238 U	165	1	23.16	4.63	ppb	1.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	321308	0.11	376079	85.4	30 - 120	
45 Sc	1	1048585	0.63	1186897	88.3	30 - 120	
72 Ge	1	451006	0.46	539567	83.6	30 - 120	
115 In	1	1344838	0.54	1576174	85.3	30 - 120	
165 Ho	1	2446552	0.31	2717767	90.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\264SMPL.D\264SMPL.D#
Date Acquired: Nov 8 2009 03:12 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFG2 5X
Misc Info: D9J280283
Vial Number: 4411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	85.35	17.07	ppb	2.36	3600	
52 Cr	72	1	57.90	11.58	ppb	0.78	3600	
55 Mn	72	1	3.89	0.78	ppb	2.20	3600	
59 Co	72	1	0.62	0.12	ppb	8.11	3600	
60 Ni	72	1	3.33	0.67	ppb	9.62	3600	
63 Cu	72	1	0.28	0.06	ppb	57.58	3600	
66 Zn	72	1	12.63	2.53	ppb	2.86	3600	
75 As	72	1	208.15	41.63	ppb	0.43	3600	
78 Se	72	1	3.45	0.69	ppb	57.20	3600	
95 Mo	72	1	15.54	3.11	ppb	4.05	3600	
107 Ag	115	1	0.00	0.00	ppb	548.29	3600	
111 Cd	115	1	0.00	0.00	ppb	1744.50	3600	
118 Sn	115	1	0.74	0.15	ppb	40.17	3600	
121 Sb	115	1	0.12	0.02	ppb	20.77	3600	
137 Ba	115	1	43.12	8.62	ppb	2.46	3600	
205 Tl	165	1	0.08	0.02	ppb	18.16	3600	
208 Pb	165	1	0.09	0.02	ppb	0.87	3600	
232 Th	165	1	0.06	0.01	ppb	45.22	1000	
238 U	165	1	42.88	8.58	ppb	2.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326264	0.73	376079	86.8	30 - 120	
45 Sc	1	1072928	0.34	1186897	90.4	30 - 120	
72 Ge	1	463601	0.73	539567	85.9	30 - 120	
115 In	1	1385017	0.88	1576174	87.9	30 - 120	
165 Ho	1	2507716	1.26	2717767	92.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\265SMPL.D\265SMPL.D#
Date Acquired: Nov 8 2009 03:15 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2J 5X
Misc Info: D9J290310
Vial Number: 4412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	309.81	3600	
51 V	72	1	48.61	9.72	ppb	1.22	3600	
52 Cr	72	1	57.70	11.54	ppb	0.94	3600	
55 Mn	72	1	53.90	10.78	ppb	1.00	3600	
59 Co	72	1	0.55	0.11	ppb	6.70	3600	
60 Ni	72	1	3.54	0.71	ppb	8.58	3600	
63 Cu	72	1	0.41	0.08	ppb	3.58	3600	
66 Zn	72	1	14.51	2.90	ppb	6.49	3600	
75 As	72	1	347.90	69.58	ppb	0.62	3600	
78 Se	72	1	2.80	0.56	ppb	43.90	3600	
95 Mo	72	1	35.21	7.04	ppb	2.31	3600	
107 Ag	115	1	0.00	0.00	ppb	348.44	3600	
111 Cd	115	1	0.01	0.00	ppb	1737.40	3600	
118 Sn	115	1	0.09	0.02	ppb	257.92	3600	
121 Sb	115	1	0.10	0.02	ppb	32.62	3600	
137 Ba	115	1	27.88	5.58	ppb	4.08	3600	
205 Tl	165	1	0.07	0.01	ppb	9.45	3600	
208 Pb	165	1	0.24	0.05	ppb	12.24	3600	
232 Th	165	1	0.20	0.04	ppb	2.64	1000	
238 U	165	1	67.45	13.49	ppb	1.58	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335558	0.24	376079	89.2	30 - 120	
45 Sc	1	1081740	0.75	1186897	91.1	30 - 120	
72 Ge	1	467673	0.66	539567	86.7	30 - 120	
115 In	1	1401937	0.62	1576174	88.9	30 - 120	
165 Ho	1	2517760	0.48	2717767	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\266SMPL.D\266SMPL.D#
Date Acquired: Nov 8 2009 03:18 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2K 5X
Misc Info: D9J290310
Vial Number: 4501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	48.25	9.65	ppb	1.58	3600	
52 Cr	72	1	57.55	11.51	ppb	1.78	3600	
55 Mn	72	1	53.60	10.72	ppb	0.45	3600	
59 Co	72	1	0.70	0.14	ppb	10.31	3600	
60 Ni	72	1	4.12	0.82	ppb	7.90	3600	
63 Cu	72	1	0.61	0.12	ppb	18.78	3600	
66 Zn	72	1	14.52	2.90	ppb	5.26	3600	
75 As	72	1	343.30	68.66	ppb	0.80	3600	
78 Se	72	1	0.28	0.06	ppb	532.16	3600	
95 Mo	72	1	34.43	6.89	ppb	3.09	3600	
107 Ag	115	1	0.03	0.01	ppb	118.50	3600	
111 Cd	115	1	0.06	0.01	ppb	110.88	3600	
118 Sn	115	1	0.20	0.04	ppb	15.50	3600	
121 Sb	115	1	0.06	0.01	ppb	80.38	3600	
137 Ba	115	1	30.09	6.02	ppb	1.47	3600	
205 Tl	165	1	0.06	0.01	ppb	4.80	3600	
208 Pb	165	1	0.28	0.06	ppb	1.80	3600	
232 Th	165	1	0.20	0.04	ppb	29.47	1000	
238 U	165	1	67.55	13.51	ppb	1.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329739	0.51	376079	87.7	30 - 120	
45 Sc	1	1074128	1.38	1186897	90.5	30 - 120	
72 Ge	1	466433	0.80	539567	86.4	30 - 120	
115 In	1	1385476	1.23	1576174	87.9	30 - 120	
165 Ho	1	2494439	1.00	2717767	91.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\267 CCV.D\267 CCV.D#
Date Acquired: Nov 8 2009 03:21 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.22	ppb	2.08	50	102.4	90 - 110	
51 V	72	1	49.65	ppb	0.54	50	99.3	90 - 110	
52 Cr	72	1	50.22	ppb	0.76	50	100.4	90 - 110	
55 Mn	72	1	49.57	ppb	0.78	50	99.1	90 - 110	
59 Co	72	1	48.62	ppb	0.28	50	97.2	90 - 110	
60 Ni	72	1	50.60	ppb	1.48	50	101.2	90 - 110	
63 Cu	72	1	50.08	ppb	0.86	50	100.2	90 - 110	
66 Zn	72	1	52.09	ppb	0.68	50	104.2	90 - 110	
75 As	72	1	50.33	ppb	0.35	50	100.7	90 - 110	
78 Se	72	1	50.70	ppb	1.91	50	101.4	90 - 110	
95 Mo	72	1	50.34	ppb	1.97	50	100.7	90 - 110	
107 Ag	115	1	50.13	ppb	2.37	50	100.3	90 - 110	
111 Cd	115	1	50.15	ppb	1.77	50	100.3	90 - 110	
118 Sn	115	1	49.99	ppb	1.62	50	100.0	90 - 110	
121 Sb	115	1	50.52	ppb	2.60	50	101.0	90 - 110	
137 Ba	115	1	50.62	ppb	1.41	50	101.2	90 - 110	
205 Tl	165	1	51.11	ppb	0.42	50	102.2	90 - 110	
208 Pb	165	1	51.54	ppb	1.74	50	103.1	90 - 110	
232 Th	165	1	51.26	ppb	1.28	50	102.5	90 - 110	
238 U	165	1	51.53	ppb	0.94	50	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360685	1.10	376079	95.9	30 - 120	
45 Sc	1	1157595	0.85	1186897	97.5	30 - 120	
72 Ge	1	507944	1.20	539567	94.1	30 - 120	
115 In	1	1559749	0.93	1576174	99.0	30 - 120	
165 Ho	1	2711611	1.14	2717767	99.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\268 CCB.D\268 CCB.D#
Date Acquired: Nov 8 2009 03:23 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	19.15	1.00	
52 Cr	72	1	-0.002	ppb	789.67	1.00	
55 Mn	72	1	-0.001	ppb	1184.70	1.00	
59 Co	72	1	0.000	ppb	707.73	1.00	
60 Ni	72	1	-0.014	ppb	130.22	1.00	
63 Cu	72	1	-0.051	ppb	28.29	1.00	
66 Zn	72	1	-0.413	ppb	3.98	1.00	
75 As	72	1	0.005	ppb	390.64	1.00	
78 Se	72	1	0.068	ppb	260.94	1.00	
95 Mo	72	1	-0.051	ppb	12.59	1.00	
107 Ag	115	1	0.003	ppb	126.88	1.00	
111 Cd	115	1	0.000	ppb	7618.50	1.00	
118 Sn	115	1	0.047	ppb	150.30	1.00	
121 Sb	115	1	0.138	ppb	23.66	1.00	
137 Ba	115	1	-0.038	ppb	11.83	1.00	
205 Tl	165	1	0.021	ppb	17.52	1.00	
208 Pb	165	1	0.003	ppb	111.74	1.00	
232 Th	165	1	0.051	ppb	16.07	1.00	
238 U	165	1	0.016	ppb	14.92	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365082	0.17	376079	97.1	30 - 120	
45 Sc	1	1142137	0.98	1186897	96.2	30 - 120	
72 Ge	1	516032	0.47	539567	95.6	30 - 120	
115 In	1	1530746	0.77	1576174	97.1	30 - 120	
165 Ho	1	2669057	1.87	2717767	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\269WASH.D\269WASH.D#
Date Acquired: Nov 8 2009 03:26 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.901 ppb	17.96	1.30	
51 V	72	1	4.935 ppb	2.34	6.50	
52 Cr	72	1	2.001 ppb	2.44	2.60	
55 Mn	72	1	1.030 ppb	4.04	1.30	
59 Co	72	1	0.990 ppb	2.41	1.30	
60 Ni	72	1	2.129 ppb	7.48	2.60	
63 Cu	72	1	1.903 ppb	4.00	2.60	
66 Zn	72	1	9.748 ppb	0.16	13.00	
75 As	72	1	4.893 ppb	4.12	6.50	
78 Se	72	1	5.130 ppb	8.01	6.50	
95 Mo	72	1	1.974 ppb	8.49	2.60	
107 Ag	115	1	5.301 ppb	1.96	6.50	
111 Cd	115	1	1.056 ppb	7.93	1.30	
118 Sn	115	1	10.460 ppb	2.46	13.00	
121 Sb	115	1	2.083 ppb	0.79	2.60	
137 Ba	115	1	1.029 ppb	5.53	1.30	
205 Tl	165	1	1.089 ppb	0.37	1.30	
208 Pb	165	1	1.075 ppb	0.39	1.30	
232 Th	165	1	2.216 ppb	0.39	2.60	
238 U	165	1	1.111 ppb	0.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	359039	1.01	376079	95.5	30 - 120	
45 Sc	1	1142332	0.80	1186897	96.2	30 - 120	
72 Ge	1	512301	0.61	539567	94.9	30 - 120	
115 In	1	1537362	0.42	1576174	97.5	30 - 120	
165 Ho	1	2658916	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J270263

Client: Northgate Environmental

Batch(es) #: 9303185

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 11/9/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J270263	1	SE	LNC7L1AC	20091108	6020TOTA	9303185	AG110709	024
D9J270263	1	AS	LNC7L1AA	20091108	6020TOTA	9303185	AG110709	024

METALS PREPARATION LOGS ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9303185**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/2/09 ~~10/30/09~~ JRW

Due Date: 11/09/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJNV**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJNV**	C	Due Date: SDG:	50 mL
D9J270261 Water	**LNC7F** Total		Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	S	Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	D	Due Date: 11/09/09 SDG:	50 mL
D9J270263 Water	**LNC7L** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280280 Water	**LNFGD** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280283 Water	**LNFG2** Total		Due Date: 11/09/09 SDG:	50 mL
D9J290310 Water	**LNH2J** Total		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2K** Total		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9303185	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4082 Block & Cup # : 4/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1430	95	1845	95
HNO3	1900	95	1930	93
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

TestAmerica Denver

Standards Preparation Logbook Record

Nov-09-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6836-09, ICP-MS BLANK

Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-07-2009
Date Expires(1): 05-07-2010 (6 Months)
Date Expires(2): 05-07-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6835-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6837-09, ICP-MS HIGH CAL STD

Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	10.000
Ca	2,000.0	10.000
Fe	2,000.0	10.000
K	2,000.0	10.000
Mg	2,000.0	10.000
Na	2,000.0	10.000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6838-09, ICP-MS HIGH CCV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500
Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	5.0000
Ca	2,000.0	5.0000
Fe	2,000.0	5.0000
K	2,000.0	5.0000
Mg	2,000.0	5.0000

Na	2,000.0	5.0000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6839-09, ICP-MS HIGH RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6837-09, ICP-MS HIGH CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010
Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010
Al	10.000	0.1000
Ca	10.000	0.1000
Fe	10.000	0.1000
K	10.000	0.1000
Mg	10.000	0.1000
Na	10.000	0.1000

Nb	0.2000	0.0020
Pd	0.1000	0.0010
Pt	0.1000	0.0010
W	0.1000	0.0010

STD6840-09, ICP-MS HIGH AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000

Date Prep./Opened: 11-07-2009

Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6839-09, ICP-MS HIGH RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002
Al	0.1000	0.0200
Ca	0.1000	0.0200
Fe	0.1000	0.0200
K	0.1000	0.0200
Mg	0.1000	0.0200
Na	0.1000	0.0200
Nb	0.0020	0.0004
Pd	0.0010	0.0002
Pt	0.0010	0.0002
W	0.0010	0.0002
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018

STD6841-09, ICP-MS HIGH ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	100.00
Ca	2,000.0	100.00
Fe	2,000.0	100.00
K	2,000.0	100.00
Mg	2,000.0	100.00
Na	2,000.0	100.00

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	2.0000
Pd	20.000	1.0000
Pt	20.000	1.0000

W	20.000	1.0000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6842-09, ICP-MS HIGH LR STD1 — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000
Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6843-09, ICP-MS HIGH ICV STD — Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

Parent Std No.: STD3115-09, ICP-MS TA ICV Alt — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	4.0000
Ca	2,000.0	4.0000
Fe	2,000.0	4.0000
K	2,000.0	4.0000
Mg	2,000.0	4.0000
Na	2,000.0	4.0000

Parent Std No.: STD3116-09, ICP-MS TA ICV BRC — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.0800
Pd	20.000	0.0400
Pt	20.000	0.0400

W	20.000	0.0400

STD6844-09, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6855-09, LLCCV/RLICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD3106-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000
Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD3107-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

Parent Std No.: STD3108-09, ICP-MS BRC LLCCV 1 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Nb	4.0000	40.000
Pd	0.1000	1.0000
Pt	0.1000	1.0000
W	0.5000	5.0000

Reviewed By: 11/9/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/07/09 15:09		☐
4	100 ppb				1.0	11/07/09 15:12		☐
5	ICV				1.0	11/07/09 15:15		☐
6	RLIV				1.0	11/07/09 15:18		☐
7	ICB				1.0	11/07/09 15:20		☐
8	RL STD				1.0	11/07/09 15:23		☐
9	AFCEE RL				1.0	11/07/09 15:26		☐
10	ALTSe				1.0	11/07/09 15:29		☐
11	ICSA				1.0	11/07/09 15:31		☐
12	ICSAB				1.0	11/07/09 15:34		☐
13	RINSE				1.0	11/07/09 15:37		☐
14	LR1				1.0	11/07/09 15:40		☐
15	RINSE				1.0	11/07/09 15:42		☐
16	CCV				1.0	11/07/09 15:45		☐
17	CCB				1.0	11/07/09 15:48		☐
18	RLCV				1.0	11/07/09 15:50		☐
19	LNDMKB	D9J280000	9301081	46	1.0	11/07/09 15:53		☐
20	LNDMKC	D9J280000	9301081	46	1.0	11/07/09 15:56		☐
21	LM9FJ	D9J240188-1	9301081	46	1.0	11/07/09 15:59		☐
22	LM9FJP5	D9J240188	9301081		5.0	11/07/09 16:01		☐
23	LM9FJZ	D9J240188-1	9301081		1.0	11/07/09 16:04		☐
24	LM9FJS	D9J240188-1	9301081	46	1.0	11/07/09 16:07		☐
25	LM9FJD	D9J240188-1	9301081	46	1.0	11/07/09 16:09		☐
26	LM9FK	D9J240188-2	9301081	46	1.0	11/07/09 16:12		☐
27	CCV				1.0	11/07/09 16:15		☐
28	CCB				1.0	11/07/09 16:18		☐
29	RLCV				1.0	11/07/09 16:20		☐
30	LNJT4B	D9J300000	9303213	MS	1.0	11/07/09 16:23		☐
31	LNJT4C	D9J300000	9303213	MS	1.0	11/07/09 16:26		☐
32	LM8A7	D9J230367-1	9303213	MS	1.0	11/07/09 16:29		☐
33	LM8CG	D9J230367-2	9303213	MS	1.0	11/07/09 16:32		☐
34	LM8CV	D9J230367-3	9303213	MS	1.0	11/07/09 16:34		☐
35	LM8C1	D9J230367-4	9303213	MS	1.0	11/07/09 16:37		☐
36	LM8C1P5	D9J230367	9303213		5.0	11/07/09 16:40		☐
37	LM8C1Z	D9J230367-4	9303213		1.0	11/07/09 16:43		☐
38	LM8C1S	D9J230367-4	9303213	MS	1.0	11/07/09 16:45		☐
39	LM8C1D	D9J230367-4	9303213	MS	1.0	11/07/09 16:48		☐
40	CCV				1.0	11/07/09 16:51		☐
41	CCB				1.0	11/07/09 16:53		☐
42	RLCV				1.0	11/07/09 16:57		☐
43	LNDMTB	D9J280000	9301086	46	1.0	11/07/09 17:00		☐
44	LNDMTC	D9J280000	9301086	46	1.0	11/07/09 17:02		☐
45	LM8E2	D9J230373-1	9301086	46	1.0	11/07/09 17:05		☐
46	LM8E2P5	D9J230373	9301086		5.0	11/07/09 17:08		☐
47	LM8E2Z	D9J230373-1	9301086		1.0	11/07/09 17:11		☐
48	LM8E2S	D9J230373-1	9301086	46	1.0	11/07/09 17:13		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM8E2D	D9J230373-1	9301086	46	1.0	11/07/09 17:16		☐
50	LM8E6	D9J230373-2	9301086	46	1.0	11/07/09 17:19		☐
51	CCV				1.0	11/07/09 17:22		☐
52	CCB				1.0	11/07/09 17:24		☐
53	RLCV				1.0	11/07/09 17:27		☐
54	LM8E7	D9J230373-3	9301086	46	1.0	11/07/09 17:30		☐
55	LM8E9	D9J230373-4	9301086	46	1.0	11/07/09 17:33		☐
56	LM8FA	D9J230373-5	9301086	46	1.0	11/07/09 17:35		☐
57	LM8FC	D9J230373-6	9301086	46	1.0	11/07/09 17:38		☐
58	LM8FD	D9J230373-7	9301086	46	1.0	11/07/09 17:41		☐
59	LM8FE	D9J230373-8	9301086	46	1.0	11/07/09 17:44		☐
60	LM8FF	D9J230373-9	9301086	46	1.0	11/07/09 17:47		☐
61	LM8FG	D9J230373-10	9301086	46	1.0	11/07/09 17:51		☐
62	LM8FH	D9J230373-11	9301086	46	1.0	11/07/09 17:53		☐
63	CCV				1.0	11/07/09 17:56		☐
64	CCB				1.0	11/07/09 17:59		☐
65	RLCV				1.0	11/07/09 18:02		☐
66	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 18:04~~	VT 11/9/09 Did not use.	☐
67	LNDMPB	D9J280000	9301083	46	1.0	11/07/09 18:07		☐
68	LNDMPC	D9J280000	9301083	46	1.0	11/07/09 18:10		☐
69	LM8CT	D9J230370-1	9301083	46	1.0	11/07/09 18:13		☐
70	LM8CTP5	D9J230370	9301083		5.0	11/07/09 18:16		☐
71	LM8CTZ	D9J230370-1	9301083		1.0	11/07/09 18:18		☐
72	LM8CTS	D9J230370-1	9301083	46	1.0	11/07/09 18:21		☐
73	LM8CTD	D9J230370-1	9301083	46	1.0	11/07/09 18:24		☐
74	CCV				1.0	11/07/09 18:27		☐
75	CCB				1.0	11/07/09 18:29		☐
76	RLCV				1.0	11/07/09 18:32		☐
77	LM8C5	D9J230370-2	9301083	46	1.0	11/07/09 18:35		☐
78	LM8C8	D9J230370-3	9301083	46	1.0	11/07/09 18:38		☐
79	LM8C9	D9J230370-4	9301083	46	1.0	11/07/09 18:40		☐
80	LM8DA	D9J230370-5	9301083	46	1.0	11/07/09 18:43		☐
81	LM8DC	D9J230370-6	9301083	46	1.0	11/07/09 18:46		☐
82	LM8DF	D9J230370-7	9301083	46	1.0	11/07/09 18:49		☐
83	LM8DG	D9J230370-8	9301083	46	1.0	11/07/09 18:51		☐
84	CCV				1.0	11/07/09 18:54		☐
85	CCB				1.0	11/07/09 18:57		☐
86	RLCV				1.0	11/07/09 19:00		☐
87	LM8DH	D9J230370-9	9301083	46	1.0	11/07/09 19:03		☐
88	LM8DK	D9J230370-10	9301083	46	1.0	11/07/09 19:05		☐
89	LM8DL	D9J230370-11	9301083	46	1.0	11/07/09 19:08		☐
90	LM8DN	D9J230370-12	9301083	46	1.0	11/07/09 19:11		☐
91	LM8DQ	D9J230370-13	9301083	46	1.0	11/07/09 19:14		☐
92	LM8DT	D9J230370-14	9301083	46	1.0	11/07/09 19:17		☐
93	LM8DV	D9J230370-15	9301083	46	1.0	11/07/09 19:19		☐
94	LM8D4	D9J230370-16	9301083	46	1.0	11/07/09 19:22		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
95	CCV				1.0	11/07/09 19:25		
96	CCB				1.0	11/07/09 19:28		
97	RLCV				1.0	11/07/09 19:30		
98	ICSA				1.0	11/07/09 19:33		
99	ICSAB				1.0	11/07/09 19:36		
100	WASH				1.0	11/07/09 19:39		
101	CCV				1.0	11/07/09 19:41		
102	CCB				1.0	11/07/09 19:44		
103	RLCV				1.0	11/07/09 19:47		
104	LNPKXBQ	D9K030000	9307099	U1	1.0	11/07/09 19:50		
105	LNPKXCQ	D9K030000	9307099	U1	1.0	11/07/09 19:52		
106	LNN4FQ	D9K020448-1	9307099	U1	1.0	11/07/09 19:55		
107	LNN4FP5Q	D9K020448	9307099		5.0	11/07/09 19:58		
108	LNN4FZQ	D9K020448-1	9307099		1.0	11/07/09 20:01		
109	LNN4FSQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:03		
110	LNN4FDQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:06		
111	CCV				1.0	11/07/09 20:09		
112	CCB				1.0	11/07/09 20:12		
113	RLCV				1.0	11/07/09 20:14		
114	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 20:17~~		
115	LNNVDC	D9K020000	9306332	04	2.5	11/07/09 20:20		
116	LNKT9	D9J300258-1	9306332	04	2.5	11/07/09 20:23		
117	LNKT9S	D9J300258-1	9306332	04	2.5	11/07/09 20:25		
118	LNKT9D	D9J300258-1	9306332	04	2.5	11/07/09 20:28		
119	CCV				1.0	11/07/09 20:31		
120	CCB				1.0	11/07/09 20:34		
121	RLCV				1.0	11/07/09 20:36		
122	RINSE				1.0	11/07/09 20:39		
123	~~RINSE~~				1.0	11/07/09 20:42		
124	~~Cal Blank~~				~~1.0~~	~~11/07/09 20:45~~	KF 11/9/09 Did not use.	
125	Cal Blank				1.0	11/07/09 20:47		
126	100 ppb				1.0	11/07/09 20:50		
127	CCV				1.0	11/07/09 20:53		
128	CCB				1.0	11/07/09 20:56		
129	RLCV				1.0	11/07/09 20:58		
130	~~LNNQ5BF~~	~~D9K020000~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:01~~		
131	LNNQ5CF	D9K020000	9306285	MD	1.0	11/07/09 21:04		
132	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/07/09 21:07		
133	LNLG3F	D9J300326-2	9306285	MD	1.0	11/07/09 21:10		
134	LNLG4F	D9J300326-3	9306285	MD	1.0	11/07/09 21:12		
135	LNLHHF	D9J300329-1	9306285	MD	1.0	11/07/09 21:15		
136	LNLHMF	D9J300329-2	9306285	MD	1.0	11/07/09 21:18		
137	CCV				1.0	11/07/09 21:21		
138	CCB				1.0	11/07/09 21:23		
139	RLCV				1.0	11/07/09 21:26		
140	~~LNLHPF~~	~~D9J300329-3~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:29~~	KF 11/9/09 Did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
141	~~LNLJJF~~	~~D9J300340-1~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:32~~		☐
142	LNLJJP5F	D9J300340	9306285		5.0	11/07/09 21:35		☐
143	LNLJJZF	D9J300340-1	9306285		1.0	11/07/09 21:37		☐
144	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/07/09 21:40		☐
145	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/07/09 21:43		☐
146	~~LNLJME~~	~~D9J300340-2~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:45~~	RT 11/9/09 Did not use.	☐
147	CCV				1.0	11/07/09 21:48		☐
148	CCB				1.0	11/07/09 21:51		☐
149	RLCV				1.0	11/07/09 21:54		☐
150	LNJXTB	D9J300000	9303237	04	1.0	11/07/09 21:57		☐
151	LNJXTC	D9J300000	9303237	04	1.0	11/07/09 21:59		☐
152	LNG33	D9J290197-1	9303237	04	1.0	11/07/09 22:02		☐
153	LNG4H	D9J290197-2	9303237	04	1.0	11/07/09 22:05		☐
154	LNG4L	D9J290197-3	9303237	04	1.0	11/07/09 22:08		☐
155	LNG4LP5	D9J290197	9303237		5.0	11/07/09 22:10		☐
156	LNG4LZ	D9J290197-3	9303237		1.0	11/07/09 22:13		☐
157	LNG4LS	D9J290197-3	9303237	04	1.0	11/07/09 22:16		☐
158	LNG4LD	D9J290197-3	9303237	04	1.0	11/07/09 22:19		☐
159	CCV				1.0	11/07/09 22:21		☐
160	CCB				1.0	11/07/09 22:24		☐
161	RLCV				1.0	11/07/09 22:27		☐
162	LNG4N	D9J290197-4	9303237	04	1.0	11/07/09 22:30		☐
163	LNG4R	D9J290197-5	9303237	04	1.0	11/07/09 22:32		☐
164	LNG4W	D9J290197-6	9303237	04	1.0	11/07/09 22:35		☐
165	LNG4X	D9J290197-7	9303237	04	1.0	11/07/09 22:38		☐
166	LNG41	D9J290197-8	9303237	04	1.0	11/07/09 22:41		☐
167	LNG42	D9J290197-9	9303237	04	1.0	11/07/09 22:43		☐
168	LNG44	D9J290197-10	9303237	04	1.0	11/07/09 22:46		☐
169	LNG46	D9J290197-11	9303237	04	1.0	11/07/09 22:49		☐
170	CCV				1.0	11/07/09 22:52		☐
171	CCB				1.0	11/07/09 22:54		☐
172	RLCV				1.0	11/07/09 22:57		☐
173	LNWCQB	D9K050000	9309120	04	2.5	11/07/09 23:00		☐
174	LNWCQC	D9K050000	9309120	04	2.5	11/07/09 23:03		☐
175	LNTEH	D9K040465-33	9309120	04	2.5	11/07/09 23:06		☐
176	LNTEQ	D9K040465-35	9309120	04	2.5	11/07/09 23:08		☐
177	LNTET	D9K040465-37	9309120	04	2.5	11/07/09 23:11		☐
178	LNTE0	D9K040465-39	9309120	04	2.5	11/07/09 23:14		☐
179	LNTE5	D9K040465-41	9309120	04	2.5	11/07/09 23:17		☐
180	LNTE5S	D9K040465-41	9309120	04	2.5	11/07/09 23:19		☐
181	LNTE5D	D9K040465-41	9309120	04	2.5	11/07/09 23:22		☐
182	LNTFA	D9K040465-43	9309120	04	2.5	11/07/09 23:25		☐
183	CCV				1.0	11/07/09 23:28		☐
184	CCB				1.0	11/07/09 23:30		☐
185	RLCV				1.0	11/07/09 23:33		☐
186	RINSE				1.0	11/07/09 23:36		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
187	~~RINSE~~				~~1.0~~	~~11/07/09 23:39~~		
188	~~Cal Blank~~				~~1.0~~	~~11/07/09 23:41~~	VL 11/9/09 Did not use.	
189	Cal Blank				1.0	11/07/09 23:44		
190	100 ppb				1.0	11/07/09 23:47		
191	CCV				1.0	11/07/09 23:50		
192	CCB				1.0	11/07/09 23:52		
193	RLCV				1.0	11/07/09 23:55		
194	LNEMRZF	D9J280200-5	9302146		1.0	11/07/09 23:58		
195	LNEMRSF	D9J280200-5	9302146	MD	1.0	11/08/09 00:01		
196	LNEMRDF	D9J280200-5	9302146	MD	1.0	11/08/09 00:03		
197	LNEMWF	D9J280200-6	9302146	MD	1.0	11/08/09 00:06		
198	LNEM0F	D9J280200-7	9302146	MD	1.0	11/08/09 00:09		
199	LNEM3F	D9J280200-8	9302146	MD	1.0	11/08/09 00:12		
200	LNEM4F	D9J280200-9	9302146	MD	1.0	11/08/09 00:15		
201	LNEM7F	D9J280200-10	9302146	MD	1.0	11/08/09 00:17		
202	CCV				1.0	11/08/09 00:20		
203	CCB				1.0	11/08/09 00:23		
204	RLCV				1.0	11/08/09 00:26		
205	LN0N2B	D9K060000	9310060	04	2.5	11/08/09 00:28		
206	LN0N2C	D9K060000	9310060	04	2.5	11/08/09 00:31		
207	LNW5P	D9K050485-2	9310060	04	2.5	11/08/09 00:34		
208	LNW55	D9K050485-4	9310060	04	2.5	11/08/09 00:37		
209	LNW6E	D9K050485-6	9310060	04	2.5	11/08/09 00:40		
210	LNW6ES	D9K050485-6	9310060	04	2.5	11/08/09 00:42		
211	LNW6ED	D9K050485-6	9310060	04	2.5	11/08/09 00:45		
212	CCV				1.0	11/08/09 00:48		
213	CCB				1.0	11/08/09 00:51		
214	RLCV				1.0	11/08/09 00:53		
215	LNF42B	D9J290000	9302121	MS	1.0	11/08/09 00:56		
216	LNF42C	D9J290000	9302121	MS	1.0	11/08/09 00:59		
217	LNE4T	D9J280246-1	9302121	MS	1.0	11/08/09 01:02		
218	LNE40 10X	D9J280246-2	9302121	MS	10.0	11/08/09 01:05		
219	LNE41 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:07		
220	LNE41P25	D9J280246	9302121		25.0	11/08/09 01:10		
221	CCV				1.0	11/08/09 01:13		
222	CCB				1.0	11/08/09 01:16		
223	RLCV				1.0	11/08/09 01:19		
224	LNE41Z	D9J280246-3	9302121		1.0	11/08/09 01:21		
225	LNE41S 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:24		
226	LNE41D 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:27		
227	LNE44 5X	D9J280246-4	9302121	MS	5.0	11/08/09 01:30		
228	LNE47 2X	D9J280246-5	9302121	MS	2.0	11/08/09 01:32		
229	LNE5A 2X	D9J280246-6	9302121	MS	2.0	11/08/09 01:35		
230	CCV				1.0	11/08/09 01:38		
231	CCB				1.0	11/08/09 01:41		
232	RLCV				1.0	11/08/09 01:44		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
233	LNJN5BF	D9J300000	9303187	MD	1.0	11/08/09 01:46		☐
234	LNJN5CF	D9J300000	9303187	MD	1.0	11/08/09 01:49		☐
235	LNH2LF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 01:52		☐
236	LNH2LP10F	D9J290310	9303187		10.0	11/08/09 01:55		☐
237	LNH2LZF	D9J290310-3	9303187		1.0	11/08/09 01:58		☐
238	LNH2LSF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:00		☐
239	LNH2LDF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:03		☐
240	LNH2NF 2X	D9J290310-4	9303187	MD	2.0	11/08/09 02:06		☐
241	CCV				1.0	11/08/09 02:09		☐
242	CCB				1.0	11/08/09 02:11		☐
243	RLCV				1.0	11/08/09 02:14		☐
244	~~RINSE~~				~~1.0~~	~~11/08/09 02:17~~		☐
245	RINSE				1.0	11/08/09 02:20		☐
246	~~Cal Blank~~				~~1.0~~	~~11/08/09 02:22~~	KF 11/9/09 did not use	☐
247	Cal Blank				1.0	11/08/09 02:25		☐
248	100 ppb				1.0	11/08/09 02:28		☐
249	CCV				1.0	11/08/09 02:31		☐
250	CCB				1.0	11/08/09 02:33		☐
251	RLCV				1.0	11/08/09 02:36		☐
252	LNJNVB	D9J300000	9303185	MS	1.0	11/08/09 02:39		☐
253	LNJNVC	D9J300000	9303185	MS	1.0	11/08/09 02:42		☐
254	LNC7F 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:44		☐
255	LNC7FP25	D9J270261	9303185		25.0	11/08/09 02:47		☐
256	LNC7FZ	D9J270261-1	9303185		1.0	11/08/09 02:50		☐
257	LNC7FS 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:53		☐
258	CCV				1.0	11/08/09 02:56		☐
259	CCB				1.0	11/08/09 02:58		☐
260	RLCV				1.0	11/08/09 03:01		☐
261	LNC7FD 5X	D9J270261-1	9303185	MS	5.0	11/08/09 03:04		☐
262	LNC7L 5X	D9J270263-1	9303185	MS	5.0	11/08/09 03:07		☐
263	LNFGD 5X	D9J280280-1	9303185	MS	5.0	11/08/09 03:09		☐
264	LNFG2 5X	D9J280283-1	9303185	MS	5.0	11/08/09 03:12		☐
265	LNH2J 5X	D9J290310-1	9303185	MS	5.0	11/08/09 03:15		☐
266	LNH2K 5X	D9J290310-2	9303185	MS	5.0	11/08/09 03:18		☐
267	CCV				1.0	11/08/09 03:21		☐
268	CCB				1.0	11/08/09 03:23		☐
269	RLCV				1.0	11/08/09 03:26		☐
270	LNJ8HB	D9J300000	9303310	04	1.0	11/08/09 03:29		☐
271	LNJ8HC	D9J300000	9303310	04	1.0	11/08/09 03:32		☐
272	LNHRC	D9J290285-1	9303310	04	1.0	11/08/09 03:34		☐
273	LNHRK	D9J290285-2	9303310	04	1.0	11/08/09 03:37		☐
274	LNHRN	D9J290285-3	9303310	04	1.0	11/08/09 03:40		☐
275	LNHRP	D9J290285-4	9303310	04	1.0	11/08/09 03:43		☐
276	LNHRR	D9J290285-5	9303310	04	1.0	11/08/09 03:46		☐
277	CCV				1.0	11/08/09 03:48		☐
278	CCB				1.0	11/08/09 03:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
279	RLCV				1.0	11/08/09 03:54		☐
280	LNHRT	D9J290285-6	9303310	04	1.0	11/08/09 03:57		☐
281	LNHRTP5	D9J290285	9303310		5.0	11/08/09 03:59		☐
282	LNHRTZ	D9J290285-6	9303310		1.0	11/08/09 04:02		☐
283	LNHRTS	D9J290285-6	9303310	04	1.0	11/08/09 04:05		☐
284	LNHRTD	D9J290285-6	9303310	04	1.0	11/08/09 04:08		☐
285	LNHRV	D9J290285-7	9303310	04	1.0	11/08/09 04:10		☐
286	LNHRW	D9J290285-8	9303310	04	1.0	11/08/09 04:13		☐
287	LNHRX	D9J290285-9	9303310	04	1.0	11/08/09 04:16		☐
288	LNHR0	D9J290285-10	9303310	04	1.0	11/08/09 04:19		☐
289	CCV				1.0	11/08/09 04:21		☐
290	CCB				1.0	11/08/09 04:24		☐
291	RLCV				1.0	11/08/09 04:27		☐
292	~~Cal Blank~~				1.0	11/08/09 04:30	KF 11/9/09 Did not use.	☐
293	Cal Blank				1.0	11/08/09 04:32		☐
294	100 ppb				1.0	11/08/09 04:35		☐
295	CCV				1.0	11/08/09 04:38		☐
296	CCB				1.0	11/08/09 04:41		☐
297	RLCV				1.0	11/08/09 04:43		☐
298	LM7XN 10X	D9J230319-2	9299274	04	1.0	11/08/09 04:46		☐
299	CCV				1.0	11/08/09 04:49		☐
300	CCB				1.0	11/08/09 04:52		☐
301	RLCV				1.0	11/08/09 04:54		☐
302	~~LNNV0B~~	~~D9K020000~~	~~9306340~~	~~04~~	~~1.0~~	~~11/08/09 04:57~~		☐
303	LNNV0C	D9K020000	9306340	04	1.0	11/08/09 05:00		☐
304	LNLGN 5X	D9J300319-1	9306340	04	5.0	11/08/09 05:03		☐
305	LNJ05	D9J300168-1	9306340	04	1.0	11/08/09 05:05		☐
306	LNJ1A	D9J300168-2	9306340	04	1.0	11/08/09 05:08		☐
307	LNJ1C	D9J300168-3	9306340	04	1.0	11/08/09 05:11		☐
308	LNJ1D	D9J300168-4	9306340	04	1.0	11/08/09 05:14		☐
309	LNJ1F	D9J300168-5	9306340	04	1.0	11/08/09 05:16		☐
310	CCV				1.0	11/08/09 05:19		☐
311	CCB				1.0	11/08/09 05:22		☐
312	RLCV				1.0	11/08/09 05:25		☐
313	LNJ41	D9J300188-1	9306340	04	1.0	11/08/09 05:27		☐
314	LNJ43	D9J300188-2	9306340	04	1.0	11/08/09 05:30		☐
315	LNJ44	D9J300188-3	9306340	04	1.0	11/08/09 05:33		☐
316	LNJ45	D9J300188-4	9306340	04	1.0	11/08/09 05:36		☐
317	LNMA5 5X	D9J310124-1	9306340	04	5.0	11/08/09 05:38		☐
318	LNMCH	D9J310127-1	9306340	04	1.0	11/08/09 05:41		☐
319	CCV				1.0	11/08/09 05:44		☐
320	CCB				1.0	11/08/09 05:47		☐
321	RLCV				1.0	11/08/09 05:49		☐
322	LNMCN	D9J310127-2	9306340	04	1.0	11/08/09 05:52		☐
323	LNMCNP5	D9J310127	9306340		5.0	11/08/09 05:55		☐
324	~~LNMCNZ~~	~~D9J310127-2~~	~~9306340~~		~~1.0~~	~~11/08/09 05:58~~	KF 11/9/09 Did not use.	☐

Denver

RUN SUMMARY

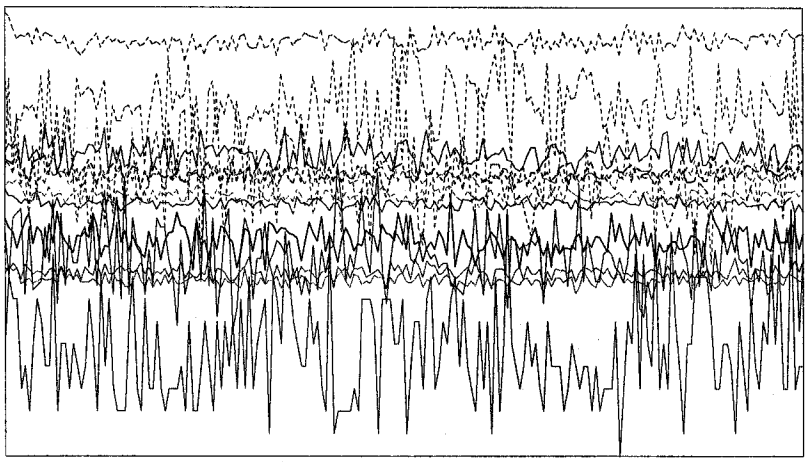
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
325	~~LNMCNS~~	D9J310127-2	9306340	04	1.0	~~11/08/09 06:00~~		☐
326	LNMCND	D9J310127-2	9306340	04	1.0	~~11/08/09~~ 06:03		☐
327	LNMCP	D9J310127-3	9306340	04	1.0	11/08/09 06:06		☐
328	LNMCQ	D9J310127-4	9306340	04	1.0	11/08/09 06:09		☐
329	CCV				1.0	11/08/09 06:11		☐
330	CCB				1.0	11/08/09 06:14		☐
331	~~BLCV~~				~~1.0~~	~~11/08/09 06:17~~	VF 11/9/09 Did not use.	☐

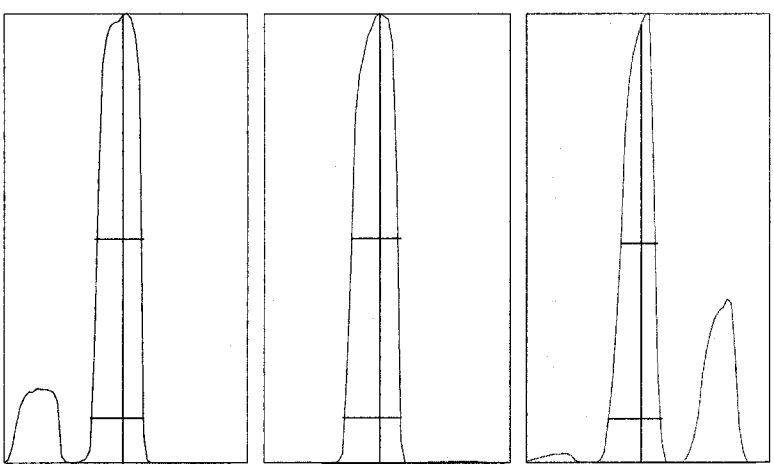
Tune Report

Tune File : NORM.U
Comment : AG110709



Integration Time: 0.1000 sec
Sampling Period: 1.5300 sec
n: 200
Oxide: 156/140 1.612%
Doubly Charged: 70/140 1.671%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	3382.0	3366.1	3.56	0.90
7	50,000	21859.0	20537.5	3.14	0.60
59	50,000	19576.0	19580.9	2.84	0.60
63	100	45.0	44.7	15.57	1.00
70	1,000	496.0	483.0	6.13	0.40
75	20	4.0	4.7	47.83	0.70
78	200	148.0	156.0	8.38	1.00
89	50,000	31217.0	31239.5	2.30	1.00
115	50,000	29852.0	29031.4	2.15	1.60
118	100	66.0	62.9	12.89	1.40
137	5,000	3148.0	3148.6	2.66	1.90
205	20,000	18784.0	18500.3	1.84	2.60
238	50,000	27256.0	28130.6	1.67	2.70
156/140	5	1.542%	1.636%	6.62	
70/140	5	1.747%	1.698%	6.33	



m/z:	7	89	205
Height:	20,610	31,605	18,257
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:09

Tune Report

Tune File : NORM.U
Comment : AG110709

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:12

P/A Factor Tuning Report

Acquired:Nov 7 2009 02:18 pm

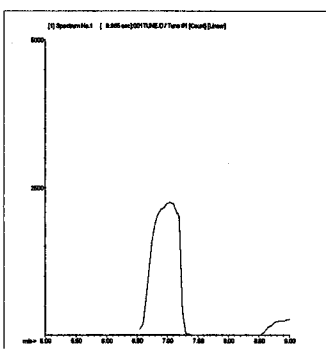
Mass[amu]	Element	P/A Factor
6	Li	0.054257
7	(Li)	Sensitivity too low
9	Be	0.059350
23	Na	0.063944
24	Mg	0.064875
27	Al	0.065819
39	K	0.066026
43	Ca	Sensitivity too low
45	Sc	0.066849
51	V	0.067403
52	Cr	0.068152
53	(Cr)	Sensitivity too low
55	Mn	0.068773
57	Fe	Sensitivity too low
59	Co	0.069652
60	Ni	Sensitivity too low
63	Cu	0.069964
66	Zn	0.070153
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.072052
98	(Mo)	0.071277
99	(Mo)	Sensitivity too low
105	Pd	0.071221
106	(Cd)	0.070815
107	Ag	Sensitivity too low
108	(Cd)	0.071381
111	Cd	0.070975
115	In	0.070220
118	Sn	0.070317
121	Sb	0.070422
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071611
206	(Pb)	0.070464
207	(Pb)	0.070565
208	Pb	0.069648
232	Th	0.069671
238	U	0.069782

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

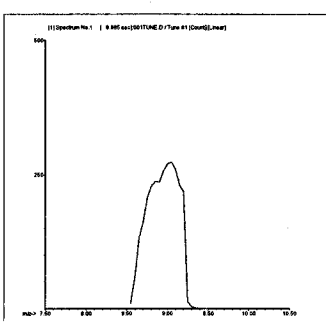
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D
Date Acquired: Nov 7 2009 03:04 pm
Acq. Method: tun_isis.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	23098	23358	23173	22978	22919	23063	0.75	5.00	
9 Be	2804	2779	2831	2892	2712	2807	2.36	5.00	
24 Mg	13819	13879	13741	14010	13810	13653	0.98	5.00	
59 Co	53596	53850	53962	53966	52908	53294	0.88	5.00	
115 In	1005351	1004408	1002826	1008799	1004052	1006672	0.24	5.00	
208 Pb	62719	64001	62223	62327	62711	62333	1.18	5.00	
238 U	130895	133955	130889	130170	131168	128294	1.56	5.00	

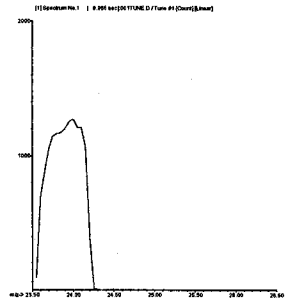


7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D



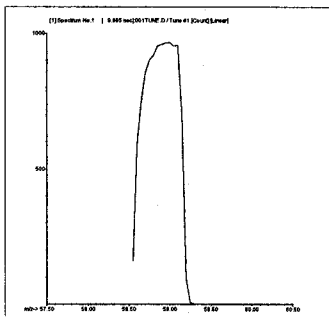
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



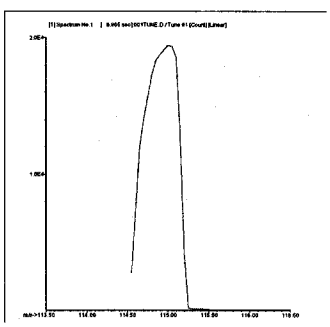
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



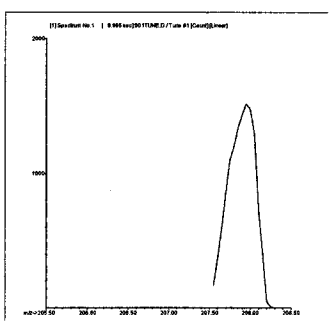
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



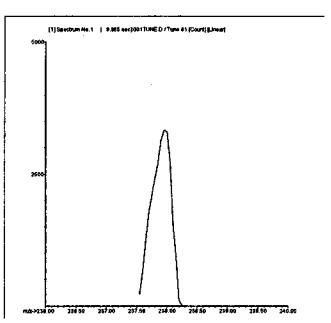
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\002CALB.D\002CALB.D#
Date Acquired: Nov 7 2009 03:07 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

9/6/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	130	55.47
52	Cr	72	1	2920	1.23
55	Mn	72	1	487	11.32
59	Co	72	1	43	35.25
60	Ni	72	1	67	56.79
63	Cu	72	1	247	16.39
66	Zn	72	1	177	1.72
75	As	72	1	38	36.84
78	Se	72	1	290	18.25
95	Mo	72	1	17	69.28
107	Ag	115	1	17	91.65
111	Cd	115	1	6	90.67
118	Sn	115	1	120	25.00
121	Sb	115	1	7	0.00
137	Ba	115	1	11	17.32
205	Tl	165	1	53	12.50
208	Pb	165	1	250	7.42
232	Th	165	1	93	59.01
238	U	165	1	83	36.66

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	450969	0.62
45	Sc	1	1353461	1.72
72	Ge	1	599452	0.37
115	In	1	1813996	0.92
165	Ho	1	3291682	1.21

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#
Date Acquired: Nov 7 2009 03:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	107	14.32
52	Cr	72	1	2804	3.71
55	Mn	72	1	517	15.52
59	Co	72	1	27	21.65
60	Ni	72	1	90	0.00
63	Cu	72	1	277	2.09
66	Zn	72	1	301	6.45
75	As	72	1	36	30.93
78	Se	72	1	263	32.30
95	Mo	72	1	20	50.00
107	Ag	115	1	10	100.00
111	Cd	115	1	-7	207.08
118	Sn	115	1	510	8.55
121	Sb	115	1	13	43.30
137	Ba	115	1	76	40.99
205	Tl	165	1	24	34.32
208	Pb	165	1	256	8.68
232	Th	165	1	100	62.45
238	U	165	1	27	57.28

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	455621	1.61
45	Sc	1	1356727	0.85
72	Ge	1	598490	0.65
115	In	1	1797032	1.18
165	Ho	1	3253654	1.35

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 7 2009 03:12 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:10 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52398	1.41
51	V	72	1	764367	2.20
52	Cr	72	1	771475	1.19
55	Mn	72	1	912002	1.09
59	Co	72	1	914930	2.11
60	Ni	72	1	193364	2.37
63	Cu	72	1	465989	1.20
66	Zn	72	1	112029	1.18
75	As	72	1	90135	1.29
78	Se	72	1	18683	1.97
95	Mo	72	1	260394	0.61
107	Ag	115	1	765784	1.36
111	Cd	115	1	157700	1.34
118	Sn	115	1	441054	2.17
121	Sb	115	1	510967	1.02
137	Ba	115	1	213858	1.06
205	Tl	165	1	1838240	1.05
208	Pb	165	1	2519619	0.58
232	Th	165	1	2643067	0.57
238	U	165	1	2792671	0.69

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	449267	0.99	455621	98.6	30 - 120	
45	Sc	1	1332198	2.77	1356727	98.2	30 - 120	
72	Ge	1	575467	1.00	598490	96.2	30 - 120	
115	In	1	1781328	1.07	1797032	99.1	30 - 120	
165	Ho	1	3275522	1.43	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 7 2009 03:15 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.37	ppb	1.43	40	100.9	90 - 110	
51 V	72	1	38.46	ppb	0.46	40	96.2	90 - 110	
52 Cr	72	1	39.20	ppb	1.19	40	98.0	90 - 110	
55 Mn	72	1	39.82	ppb	0.12	40	99.6	90 - 110	
59 Co	72	1	38.88	ppb	0.70	40	97.2	90 - 110	
60 Ni	72	1	40.10	ppb	0.16	40	100.3	90 - 110	
63 Cu	72	1	39.43	ppb	0.82	40	98.6	90 - 110	
66 Zn	72	1	40.09	ppb	0.20	40	100.2	90 - 110	
75 As	72	1	39.44	ppb	0.27	40	98.6	90 - 110	
78 Se	72	1	38.96	ppb	4.82	40	97.4	90 - 110	
95 Mo	72	1	39.50	ppb	0.72	40	98.8	90 - 110	
107 Ag	115	1	38.87	ppb	1.47	40	97.2	90 - 110	
111 Cd	115	1	39.30	ppb	0.98	40	98.3	90 - 110	
118 Sn	115	1	39.04	ppb	1.08	40	97.6	90 - 110	
121 Sb	115	1	39.64	ppb	1.29	40	99.1	90 - 110	
137 Ba	115	1	38.76	ppb	1.35	40	96.9	90 - 110	
205 Tl	165	1	39.29	ppb	2.05	40	98.2	90 - 110	
208 Pb	165	1	40.72	ppb	2.07	40	101.8	90 - 110	
232 Th	165	1	41.00	ppb	0.86	40	102.5	90 - 110	
238 U	165	1	40.29	ppb	1.06	40	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448116	0.63	455621	98.4	30 - 120	
45 Sc	1	1362171	0.61	1356727	100.4	30 - 120	
72 Ge	1	576140	0.97	598490	96.3	30 - 120	
115 In	1	1802991	1.36	1797032	100.3	30 - 120	
165 Ho	1	3291704	0.83	3253654	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\006WASH.D\006WASH.D#
Date Acquired: Nov 7 2009 03:18 pm
Operator: TEL
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.014 ppb	15.49	1.30	
51 V	72	1	4.659 ppb	1.34	6.50	
52 Cr	72	1	1.891 ppb	2.95	2.60	
55 Mn	72	1	1.009 ppb	5.61	1.30	
59 Co	72	1	0.959 ppb	4.52	1.30	
60 Ni	72	1	2.093 ppb	8.35	2.60	
63 Cu	72	1	1.903 ppb	3.09	2.60	
66 Zn	72	1	9.821 ppb	1.82	13.00	
75 As	72	1	4.879 ppb	0.84	6.50	
78 Se	72	1	4.897 ppb	10.67	6.50	
95 Mo	72	1	2.003 ppb	7.36	2.60	
107 Ag	115	1	4.951 ppb	3.27	6.50	
111 Cd	115	1	1.010 ppb	5.23	1.30	
118 Sn	115	1	10.070 ppb	2.63	13.00	
121 Sb	115	1	2.216 ppb	0.33	2.60	
137 Ba	115	1	0.996 ppb	4.86	1.30	
205 Tl	165	1	1.209 ppb	0.85	1.30	
208 Pb	165	1	1.032 ppb	2.04	1.30	
232 Th	165	1	2.207 ppb	1.51	2.60	
238 U	165	1	1.091 ppb	3.35	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	450702	0.54	455621	98.9	30 - 120	
45 Sc	1	1340626	0.89	1356727	98.8	30 - 120	
72 Ge	1	589280	0.55	598490	98.5	30 - 120	
115 In	1	1800289	1.54	1797032	100.2	30 - 120	
165 Ho	1	3280239	1.67	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 7 2009 03:20 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	0.01	ppb	78.95	1.00	
52 Cr	72	1	0.00	ppb	801.07	1.00	
55 Mn	72	1	0.00	ppb	167.97	1.00	
59 Co	72	1	0.00	ppb	88.12	1.00	
60 Ni	72	1	0.00	ppb	330.87	1.00	
63 Cu	72	1	-0.02	ppb	18.87	1.00	
66 Zn	72	1	-0.08	ppb	16.28	1.00	
75 As	72	1	0.00	ppb	320.71	1.00	
78 Se	72	1	-0.34	ppb	104.80	1.00	
95 Mo	72	1	0.03	ppb	28.62	1.00	
107 Ag	115	1	0.01	ppb	75.43	1.00	
111 Cd	115	1	0.01	ppb	156.14	1.00	
118 Sn	115	1	0.05	ppb	28.25	1.00	
121 Sb	115	1	0.08	ppb	20.91	1.00	
137 Ba	115	1	-0.02	ppb	26.22	1.00	
205 Tl	165	1	0.04	ppb	12.74	1.00	
208 Pb	165	1	0.00	ppb	28.23	1.00	
232 Th	165	1	0.02	ppb	38.30	1.00	
238 U	165	1	0.00	ppb	35.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453788	0.69	455621	99.6	30 - 120	
45 Sc	1	1334714	1.17	1356727	98.4	30 - 120	
72 Ge	1	592403	0.34	598490	99.0	30 - 120	
115 In	1	1792165	0.66	1797032	99.7	30 - 120	
165 Ho	1	3254324	0.30	3253654	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\008RLST.D\008RLST.D#
Date Acquired: Nov 7 2009 03:23 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1.03 ppb	7.07	1	102.9	50 - 150	
51 V	72	1	0.95 ppb	2.40	1	94.6	50 - 150	
52 Cr	72	1	0.95 ppb	9.15	1	94.9	50 - 150	
55 Mn	72	1	0.98 ppb	3.40	1	97.8	50 - 150	
59 Co	72	1	0.99 ppb	1.20	1	99.3	50 - 150	
60 Ni	72	1	0.99 ppb	1.44	1	98.7	50 - 150	
63 Cu	72	1	0.97 ppb	3.25	1	96.6	50 - 150	
66 Zn	72	1	9.84 ppb	1.62	10	98.4	50 - 150	
75 As	72	1	1.01 ppb	1.47	1	100.9	50 - 150	
78 Se	72	1	0.85 ppb	29.55	1	85.1	50 - 150	
95 Mo	72	1	0.98 ppb	3.69	1	98.3	50 - 150	
107 Ag	115	1	0.98 ppb	6.91	1	98.4	50 - 150	
111 Cd	115	1	0.98 ppb	2.94	1	97.7	50 - 150	
118 Sn	115	1	9.90 ppb	3.50	10	99.0	50 - 150	
121 Sb	115	1	1.06 ppb	2.89	1	105.8	50 - 150	
137 Ba	115	1	0.93 ppb	4.92	1	92.9	50 - 150	
205 Tl	165	1	1.05 ppb	1.24	1	104.9	50 - 150	
208 Pb	165	1	1.05 ppb	0.65	1	104.5	50 - 150	
232 Th	165	1	1.07 ppb	0.78	1	106.6	50 - 150	
238 U	165	1	1.09 ppb	0.98	1	109.3	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	452942	1.17	455621	99.4	30 - 120	
45 Sc	1	1350845	0.67	1356727	99.6	30 - 120	
72 Ge	1	590050	0.39	598490	98.6	30 - 120	
115 In	1	1791700	1.48	1797032	99.7	30 - 120	
165 Ho	1	3276677	0.55	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 7 2009 03:26 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.18	ppb	4.87	0	85.7	80 - 120	
51 V	72	1	0.19	ppb	1.60	0	98.1	80 - 120	
52 Cr	72	1	0.17	ppb	19.24	0	88.9	80 - 120	
55 Mn	72	1	0.24	ppb	0.90	0	122.4	80 - 120	
59 Co	72	1	0.21	ppb	2.54	0	105.0	80 - 120	
60 Ni	72	1	0.19	ppb	33.14	0	95.0	80 - 120	
63 Cu	72	1	0.19	ppb	26.00	0	96.8	80 - 120	
66 Zn	72	1	1.99	ppb	0.59	2	101.2	80 - 120	
75 As	72	1	0.22	ppb	3.49	0	111.1	80 - 120	
78 Se	72	1	-0.03	ppb	493.20	0	-19.4	80 - 120	
95 Mo	72	1	0.20	ppb	10.11	0	102.9	80 - 120	
107 Ag	115	1	0.19	ppb	9.51	0	98.0	80 - 120	
111 Cd	115	1	0.20	ppb	6.38	0	102.8	80 - 120	
118 Sn	115	1	1.96	ppb	1.89	2	99.1	80 - 120	
121 Sb	115	1	0.22	ppb	4.04	0	104.0	80 - 120	
137 Ba	115	1	0.19	ppb	4.99	0	101.2	80 - 120	
205 Tl	165	1	0.21	ppb	2.78	0	101.1	80 - 120	
208 Pb	165	1	0.21	ppb	2.60	0	100.1	80 - 120	
232 Th	165	1	0.21	ppb	3.95	0	98.4	80 - 120	
238 U	165	1	0.21	ppb	3.63	0	98.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453567	1.29	455621	99.5	30 - 120	
45 Sc	1	1337172	0.83	1356727	98.6	30 - 120	
72 Ge	1	590407	0.86	598490	98.6	30 - 120	
115 In	1	1781901	0.99	1797032	99.2	30 - 120	
165 Ho	1	3288568	1.80	3253654	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 7 2009 03:29 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	0.00	0.00	ppb	62.04	3600	
52 Cr	72	1	0.00	0.00	ppb	1081.40	3600	
55 Mn	72	1	0.00	0.00	ppb	140.46	3600	
59 Co	72	1	0.00	0.00	ppb	189.04	3600	
60 Ni	72	1	0.00	0.00	ppb	522.21	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.36	3600	
66 Zn	72	1	0.05	0.05	ppb	55.06	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	2.16	2.16	ppb	11.88	3600	
95 Mo	72	1	0.00	0.00	ppb	222.57	3600	
107 Ag	115	1	0.01	0.01	ppb	10.07	3600	
111 Cd	115	1	0.00	0.00	ppb	89.77	3600	
118 Sn	115	1	0.00	0.00	ppb	293.54	3600	
121 Sb	115	1	0.02	0.02	ppb	23.95	3600	
137 Ba	115	1	-0.02	-0.02	ppb	16.61	3600	
205 Tl	165	1	0.01	0.01	ppb	2.14	3600	
208 Pb	165	1	0.00	0.00	ppb	39.67	3600	
232 Th	165	1	0.00	0.00	ppb	17.19	1000	
238 U	165	1	0.00	0.00	ppb	388.10	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453890	1.30	455621	99.6	30 - 120	
45 Sc	1	1357795	0.37	1356727	100.1	30 - 120	
72 Ge	1	592423	0.94	598490	99.0	30 - 120	
115 In	1	1792023	1.18	1797032	99.7	30 - 120	
165 Ho	1	3279675	0.39	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 7 2009 03:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.45 ppb	8.60	1.00	
52 Cr	72	1	1.86 ppb	3.80	1.00	
55 Mn	72	1	3.11 ppb	0.88	1.00	
59 Co	72	1	0.12 ppb	10.19	1.00	
60 Ni	72	1	1.23 ppb	9.98	1.00	
63 Cu	72	1	0.56 ppb	5.58	1.00	
66 Zn	72	1	4.20 ppb	1.79	10.00	
75 As	72	1	0.35 ppb	13.35	1.00	
78 Se	72	1	0.47 ppb	67.55	1.00	
95 Mo	72	1	2055.00 ppb	1.11	2000.00	
107 Ag	115	1	0.03 ppb	8.56	1.00	
111 Cd	115	1	0.40 ppb	30.97	1.00	
118 Sn	115	1	0.93 ppb	18.89	10.00	
121 Sb	115	1	0.95 ppb	3.56	1.00	
137 Ba	115	1	0.00 ppb	326.02	1.00	
205 Tl	165	1	0.04 ppb	20.03	1.00	
208 Pb	165	1	1.04 ppb	2.03	1.00	
232 Th	165	1	0.02 ppb	5.48	1.00	
238 U	165	1	0.00 ppb	14.89	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	297281	2.41	455621	65.2	30 - 120	
45 Sc	1	939322	1.85	1356727	69.2	30 - 120	
72 Ge	1	429449	0.82	598490	71.8	30 - 120	
115 In	1	1325081	0.92	1797032	73.7	30 - 120	
165 Ho	1	2485688	0.47	3253654	76.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 7 2009 03:34 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	108.90	0.75	100	108.9	80 - 120	
51 V	72	1	92.27	0.38	100	92.3	80 - 120	
52 Cr	72	1	90.40	0.96	100	90.4	80 - 120	
55 Mn	72	1	92.59	1.18	100	92.6	80 - 120	
59 Co	72	1	88.85	0.30	100	88.9	80 - 120	
60 Ni	72	1	89.72	0.28	100	89.7	80 - 120	
63 Cu	72	1	85.14	0.90	100	85.1	80 - 120	
66 Zn	72	1	95.65	0.49	100	95.7	80 - 120	
75 As	72	1	99.50	0.47	100	99.5	80 - 120	
78 Se	72	1	105.90	0.80	100	105.9	80 - 120	
95 Mo	72	1	2149.00	1.99	2100	102.3	80 - 120	
107 Ag	115	1	84.00	7.96	100	84.0	80 - 120	
111 Cd	115	1	93.62	2.89	100	93.6	80 - 120	
118 Sn	115	1	96.78	1.78	100	96.8	80 - 120	
121 Sb	115	1	100.10	2.32	100	100.1	80 - 120	
137 Ba	115	1	96.82	2.12	100	96.8	80 - 120	
205 Tl	165	1	94.83	0.67	100	94.8	80 - 120	
208 Pb	165	1	93.97	0.82	100	94.0	80 - 120	
232 Th	165	1	101.90	0.67	100	101.9	80 - 120	
238 U	165	1	100.20	0.45	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272241	2.18	455621	59.8	30 - 120	
45 Sc	1	935334	1.15	1356727	68.9	30 - 120	
72 Ge	1	419509	1.32	598490	70.1	30 - 120	
115 In	1	1327038	1.55	1797032	73.8	30 - 120	
165 Ho	1	2524289	0.15	3253654	77.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 7 2009 03:37 pm
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0	0.0	80 - 120	
51 V	72	1	0.06	ppb	15.15	0	29.2	80 - 120	
52 Cr	72	1	0.00	ppb	941.54	0	-2.5	80 - 120	
55 Mn	72	1	0.00	ppb	87.90	0	-2.5	80 - 120	
59 Co	72	1	0.00	ppb	138.19	0	-0.5	80 - 120	
60 Ni	72	1	-0.01	ppb	79.76	0	-6.6	80 - 120	
63 Cu	72	1	-0.02	ppb	11.32	0	-10.3	80 - 120	
66 Zn	72	1	-0.12	ppb	4.66	2	-6.1	80 - 120	
75 As	72	1	0.00	ppb	172.97	0	2.3	80 - 120	
78 Se	72	1	0.18	ppb	157.63	0	105.8	80 - 120	
95 Mo	72	1	0.92	ppb	26.25	0	470.1	80 - 120	
107 Ag	115	1	0.01	ppb	38.83	0	5.1	80 - 120	
111 Cd	115	1	0.00	ppb	268.01	0	2.2	80 - 120	
118 Sn	115	1	-0.03	ppb	57.94	2	-1.3	80 - 120	
121 Sb	115	1	0.13	ppb	22.58	0	60.8	80 - 120	
137 Ba	115	1	-0.03	ppb	10.98	0	-13.6	80 - 120	
205 Tl	165	1	0.00	ppb	35.28	0	1.1	80 - 120	
208 Pb	165	1	0.00	ppb	109.50	0	-0.7	80 - 120	
232 Th	165	1	0.03	ppb	14.09	0	14.5	80 - 120	
238 U	165	1	0.02	ppb	14.78	0	7.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	392251	1.40	455621	86.1	30 - 120	
45 Sc	1	1236871	2.21	1356727	91.2	30 - 120	
72 Ge	1	563469	0.48	598490	94.1	30 - 120	
115 In	1	1720438	0.38	1797032	95.7	30 - 120	
165 Ho	1	3228952	0.84	3253654	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\014 LR.D\014 LR.D#
Date Acquired: Nov 7 2009 03:40 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1021.00 ppb	0.96	1000	102.1	90 - 110	
51 V	72	1	925.30 ppb	0.26	1000	92.5	90 - 110	
52 Cr	72	1	921.80 ppb	1.18	1000	92.2	90 - 110	
55 Mn	72	1	929.00 ppb	0.53	1000	92.9	90 - 110	
59 Co	72	1	937.60 ppb	0.95	1000	93.8	90 - 110	
60 Ni	72	1	990.00 ppb	1.83	1000	99.0	90 - 110	
63 Cu	72	1	941.00 ppb	0.34	1000	94.1	90 - 110	
66 Zn	72	1	1002.00 ppb	1.56	1000	100.2	90 - 110	
75 As	72	1	1025.00 ppb	1.12	1000	102.5	90 - 110	
78 Se	72	1	1031.00 ppb	0.90	1000	103.1	90 - 110	
95 Mo	72	1	1009.00 ppb	0.81	1000	100.9	90 - 110	
107 Ag	115	1	955.40 ppb	0.47	1000	95.5	90 - 110	
111 Cd	115	1	993.10 ppb	0.32	1000	99.3	90 - 110	
118 Sn	115	1	954.10 ppb	1.58	1000	95.4	90 - 110	
121 Sb	115	1	963.20 ppb	0.99	1000	96.3	90 - 110	
137 Ba	115	1	967.40 ppb	1.98	1000	96.7	90 - 110	
205 Tl	165	1	966.90 ppb	1.78	1000	96.7	90 - 110	
208 Pb	165	1	947.60 ppb	1.76	1000	94.8	90 - 110	
232 Th	165	1	989.70 ppb	1.92	1000	99.0	90 - 110	
238 U	165	1	989.00 ppb	1.57	1000	98.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	400820	0.66	455621	88.0	30 - 120	
45 Sc	1	1229119	1.48	1356727	90.6	30 - 120	
72 Ge	1	547741	0.96	598490	91.5	30 - 120	
115 In	1	1703051	0.61	1797032	94.8	30 - 120	
165 Ho	1	3245351	1.45	3253654	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 7 2009 03:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.22	3600	
51 V	72	1	0.03	0.03	ppb	5.05	3600	
52 Cr	72	1	-0.02	-0.02	ppb	115.91	3600	
55 Mn	72	1	0.00	0.00	ppb	108.03	3600	
59 Co	72	1	0.00	0.00	ppb	73.71	3600	
60 Ni	72	1	-0.01	-0.01	ppb	98.85	3600	
63 Cu	72	1	-0.01	-0.01	ppb	57.10	3600	
66 Zn	72	1	-0.10	-0.10	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	18.58	3600	
78 Se	72	1	0.26	0.26	ppb	60.51	3600	
95 Mo	72	1	0.62	0.62	ppb	25.89	3600	
107 Ag	115	1	0.03	0.03	ppb	13.50	3600	
111 Cd	115	1	0.01	0.01	ppb	106.57	3600	
118 Sn	115	1	1.01	1.01	ppb	28.84	3600	
121 Sb	115	1	1.39	1.39	ppb	19.23	3600	
137 Ba	115	1	-0.02	-0.02	ppb	4.07	3600	
205 Tl	165	1	0.06	0.06	ppb	11.15	3600	
208 Pb	165	1	0.01	0.01	ppb	28.34	3600	
232 Th	165	1	0.12	0.12	ppb	15.82	1000	
238 U	165	1	0.14	0.14	ppb	23.45	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	416465	0.36	455621	91.4	30 - 120	
45 Sc	1	1277469	0.68	1356727	94.2	30 - 120	
72 Ge	1	579692	0.72	598490	96.9	30 - 120	
115 In	1	1790861	0.65	1797032	99.7	30 - 120	
165 Ho	1	3297951	1.06	3253654	101.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 7 2009 03:45 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	0.98	50	101.6	90 - 110	
51 V	72	1	47.69	ppb	0.85	50	95.4	90 - 110	
52 Cr	72	1	47.81	ppb	0.72	50	95.6	90 - 110	
55 Mn	72	1	47.91	ppb	0.63	50	95.8	90 - 110	
59 Co	72	1	48.31	ppb	1.05	50	96.6	90 - 110	
60 Ni	72	1	49.87	ppb	0.51	50	99.7	90 - 110	
63 Cu	72	1	48.27	ppb	0.97	50	96.5	90 - 110	
66 Zn	72	1	49.24	ppb	0.51	50	98.5	90 - 110	
75 As	72	1	49.61	ppb	0.57	50	99.2	90 - 110	
78 Se	72	1	51.34	ppb	3.01	50	102.7	90 - 110	
95 Mo	72	1	49.43	ppb	1.34	50	98.9	90 - 110	
107 Ag	115	1	48.77	ppb	0.60	50	97.5	90 - 110	
111 Cd	115	1	49.46	ppb	1.05	50	98.9	90 - 110	
118 Sn	115	1	49.42	ppb	0.94	50	98.8	90 - 110	
121 Sb	115	1	49.48	ppb	0.82	50	99.0	90 - 110	
137 Ba	115	1	48.65	ppb	1.08	50	97.3	90 - 110	
205 Tl	165	1	49.98	ppb	1.20	50	100.0	90 - 110	
208 Pb	165	1	50.63	ppb	2.15	50	101.3	90 - 110	
232 Th	165	1	50.61	ppb	1.41	50	101.2	90 - 110	
238 U	165	1	50.58	ppb	0.97	50	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	424171	1.07	455621	93.1	30 - 120	
45 Sc	1	1298607	1.88	1356727	95.7	30 - 120	
72 Ge	1	570018	0.80	598490	95.2	30 - 120	
115 In	1	1777686	0.76	1797032	98.9	30 - 120	
165 Ho	1	3306431	1.43	3253654	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 7 2009 03:48 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	0.018	ppb	26.29	1.00	
52 Cr	72	1	0.021	ppb	89.72	1.00	
55 Mn	72	1	-0.002	ppb	258.47	1.00	
59 Co	72	1	0.000	ppb	7.74	1.00	
60 Ni	72	1	-0.003	ppb	365.53	1.00	
63 Cu	72	1	-0.006	ppb	212.36	1.00	
66 Zn	72	1	-0.070	ppb	18.30	1.00	
75 As	72	1	0.022	ppb	32.72	1.00	
78 Se	72	1	0.156	ppb	92.00	1.00	
95 Mo	72	1	0.115	ppb	30.30	1.00	
107 Ag	115	1	0.011	ppb	38.12	1.00	
111 Cd	115	1	0.002	ppb	113.82	1.00	
118 Sn	115	1	0.224	ppb	27.67	1.00	
121 Sb	115	1	0.348	ppb	18.44	1.00	
137 Ba	115	1	-0.026	ppb	8.86	1.00	
205 Tl	165	1	0.021	ppb	16.25	1.00	
208 Pb	165	1	0.000	ppb	463.86	1.00	
232 Th	165	1	0.056	ppb	20.03	1.00	
238 U	165	1	0.020	ppb	23.07	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	432937	1.72	455621	95.0	30 - 120	
45 Sc	1	1320709	0.75	1356727	97.3	30 - 120	
72 Ge	1	592471	0.93	598490	99.0	30 - 120	
115 In	1	1824111	0.70	1797032	101.5	30 - 120	
165 Ho	1	3304082	2.00	3253654	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\018WASH.D\018WASH.D#
Date Acquired: Nov 7 2009 03:50 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.089 ppb	20.89	1.30	
51 V	72	1	4.721 ppb	1.02	6.50	
52 Cr	72	1	1.919 ppb	1.17	2.60	
55 Mn	72	1	0.984 ppb	3.79	1.30	
59 Co	72	1	0.988 ppb	7.05	1.30	
60 Ni	72	1	1.975 ppb	5.09	2.60	
63 Cu	72	1	1.890 ppb	1.03	2.60	
66 Zn	72	1	9.815 ppb	1.05	13.00	
75 As	72	1	4.945 ppb	0.93	6.50	
78 Se	72	1	5.017 ppb	5.41	6.50	
95 Mo	72	1	2.030 ppb	4.90	2.60	
107 Ag	115	1	5.119 ppb	1.83	6.50	
111 Cd	115	1	0.998 ppb	8.12	1.30	
118 Sn	115	1	10.310 ppb	2.66	13.00	
121 Sb	115	1	2.181 ppb	2.54	2.60	
137 Ba	115	1	0.995 ppb	2.40	1.30	
205 Tl	165	1	1.063 ppb	1.61	1.30	
208 Pb	165	1	1.038 ppb	1.89	1.30	
232 Th	165	1	2.164 ppb	2.13	2.60	
238 U	165	1	1.100 ppb	1.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	443603	0.24	455621	97.4	30 - 120	
45 Sc	1	1335995	1.35	1356727	98.5	30 - 120	
72 Ge	1	596206	0.64	598490	99.6	30 - 120	
115 In	1	1804793	1.75	1797032	100.4	30 - 120	
165 Ho	1	3324168	1.02	3253654	102.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\095 CCV.D\095 CCV.D#
Date Acquired: Nov 7 2009 07:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.00	ppb	3.68	50	100.0	90 - 110	
51 V	72	1	49.46	ppb	0.96	50	98.9	90 - 110	
52 Cr	72	1	49.13	ppb	0.63	50	98.3	90 - 110	
55 Mn	72	1	48.00	ppb	0.58	50	96.0	90 - 110	
59 Co	72	1	49.88	ppb	1.19	50	99.8	90 - 110	
60 Ni	72	1	52.70	ppb	0.96	50	105.4	90 - 110	
63 Cu	72	1	50.75	ppb	0.19	50	101.5	90 - 110	
66 Zn	72	1	48.83	ppb	0.18	50	97.7	90 - 110	
75 As	72	1	50.85	ppb	1.33	50	101.7	90 - 110	
78 Se	72	1	50.97	ppb	2.08	50	101.9	90 - 110	
95 Mo	72	1	49.28	ppb	0.59	50	98.6	90 - 110	
107 Ag	115	1	48.69	ppb	1.80	50	97.4	90 - 110	
111 Cd	115	1	48.20	ppb	1.31	50	96.4	90 - 110	
118 Sn	115	1	47.65	ppb	1.87	50	95.3	90 - 110	
121 Sb	115	1	47.61	ppb	2.17	50	95.2	90 - 110	
137 Ba	115	1	48.23	ppb	1.87	50	96.5	90 - 110	
205 Tl	165	1	49.17	ppb	1.01	50	98.3	90 - 110	
208 Pb	165	1	50.08	ppb	1.74	50	100.2	90 - 110	
232 Th	165	1	49.66	ppb	0.53	50	99.3	90 - 110	
238 U	165	1	49.60	ppb	0.64	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	431764	0.94	455621	94.8	30 - 120	
45 Sc	1	1275635	0.72	1356727	94.0	30 - 120	
72 Ge	1	557000	0.87	598490	93.1	30 - 120	
115 In	1	1717369	0.76	1797032	95.6	30 - 120	
165 Ho	1	3017615	0.61	3253654	92.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\096 CCB.D\096 CCB.D#
Date Acquired: Nov 7 2009 07:28 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.006	ppb	24.61	1.00	
52 Cr	72	1	0.005	ppb	16.13	1.00	
55 Mn	72	1	0.012	ppb	40.48	1.00	
59 Co	72	1	0.003	ppb	90.18	1.00	
60 Ni	72	1	0.005	ppb	115.47	1.00	
63 Cu	72	1	-0.001	ppb	1434.90	1.00	
66 Zn	72	1	0.040	ppb	39.82	1.00	
75 As	72	1	-0.001	ppb	689.47	1.00	
78 Se	72	1	0.203	ppb	119.68	1.00	
95 Mo	72	1	0.030	ppb	15.19	1.00	
107 Ag	115	1	0.009	ppb	17.39	1.00	
111 Cd	115	1	0.008	ppb	214.98	1.00	
118 Sn	115	1	0.033	ppb	87.07	1.00	
121 Sb	115	1	0.133	ppb	16.18	1.00	
137 Ba	115	1	-0.005	ppb	66.27	1.00	
205 Tl	165	1	0.010	ppb	5.85	1.00	
208 Pb	165	1	0.007	ppb	10.03	1.00	
232 Th	165	1	0.031	ppb	21.92	1.00	
238 U	165	1	0.010	ppb	23.45	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	442577	1.12	455621	97.1	30 - 120	
45 Sc	1	1308803	1.31	1356727	96.5	30 - 120	
72 Ge	1	575158	0.41	598490	96.1	30 - 120	
115 In	1	1692957	0.78	1797032	94.2	30 - 120	
165 Ho	1	3023523	0.70	3253654	92.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\097WASH.D\097WASH.D#
Date Acquired:	Nov 7 2009 07:30 pm
Operator:	TEL
Sample Name:	RLCV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Nov 07 2009 03:13 pm
Sample Type:	WASH
Total Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.033 ppb	16.46	1.30	
51 V	72	1	4.891 ppb	1.41	6.50	
52 Cr	72	1	2.023 ppb	4.58	2.60	
55 Mn	72	1	0.940 ppb	0.94	1.30	
59 Co	72	1	1.033 ppb	0.60	1.30	
60 Ni	72	1	2.129 ppb	10.31	2.60	
63 Cu	72	1	2.031 ppb	2.60	2.60	
66 Zn	72	1	10.080 ppb	0.14	13.00	
75 As	72	1	5.048 ppb	1.66	6.50	
78 Se	72	1	5.042 ppb	13.65	6.50	
95 Mo	72	1	2.050 ppb	1.88	2.60	
107 Ag	115	1	5.260 ppb	2.15	6.50	
111 Cd	115	1	0.998 ppb	4.13	1.30	
118 Sn	115	1	9.995 ppb	1.00	13.00	
121 Sb	115	1	2.042 ppb	0.94	2.60	
137 Ba	115	1	1.003 ppb	6.96	1.30	
205 Tl	165	1	1.017 ppb	1.09	1.30	
208 Pb	165	1	1.046 ppb	1.73	1.30	
232 Th	165	1	2.137 ppb	1.47	2.60	
238 U	165	1	1.065 ppb	1.95	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448328	0.34	455621	98.4	30 - 120	
45 Sc	1	1294487	0.37	1356727	95.4	30 - 120	
72 Ge	1	577791	0.38	598490	96.5	30 - 120	
115 In	1	1706897	0.23	1797032	95.0	30 - 120	
165 Ho	1	3033777	0.64	3253654	93.2	30 - 120	

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures	0 :Max. Number of Failures Allowed
0 :ISTD Failures	0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\098ICSA.D\098ICSA.D#
Date Acquired: Nov 7 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.01 ppb	173.15	1.00	
51 V	72	1	2.34 ppb	2.35	1.00	
52 Cr	72	1	1.89 ppb	3.80	1.00	
55 Mn	72	1	3.08 ppb	1.35	1.00	
59 Co	72	1	0.13 ppb	9.32	1.00	
60 Ni	72	1	1.54 ppb	6.59	1.00	
63 Cu	72	1	0.62 ppb	13.41	1.00	
66 Zn	72	1	4.36 ppb	1.67	10.00	
75 As	72	1	0.31 ppb	11.37	1.00	
78 Se	72	1	-0.18 ppb	17.27	1.00	
95 Mo	72	1	2024.00 ppb	0.75	2000.00	
107 Ag	115	1	0.04 ppb	30.78	1.00	
111 Cd	115	1	0.44 ppb	34.74	1.00	
118 Sn	115	1	0.41 ppb	9.39	10.00	
121 Sb	115	1	0.94 ppb	2.45	1.00	
137 Ba	115	1	0.02 ppb	61.87	1.00	
205 Tl	165	1	0.04 ppb	26.87	1.00	
208 Pb	165	1	1.05 ppb	0.68	1.00	
232 Th	165	1	0.02 ppb	35.17	1.00	
238 U	165	1	0.01 ppb	14.16	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	316325	1.25	455621	69.4	30 - 120	
45 Sc	1	945462	1.56	1356727	69.7	30 - 120	
72 Ge	1	429131	0.94	598490	71.7	30 - 120	
115 In	1	1251973	0.62	1797032	69.7	30 - 120	
165 Ho	1	2302241	0.67	3253654	70.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\099ICSB.D\099ICSB.D#
Date Acquired: Nov 7 2009 07:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.10	0.81	100	101.1	80 - 120	
51 V	72	1	96.26	0.64	100	96.3	80 - 120	
52 Cr	72	1	92.97	0.53	100	93.0	80 - 120	
55 Mn	72	1	92.78	0.33	100	92.8	80 - 120	
59 Co	72	1	90.72	0.50	100	90.7	80 - 120	
60 Ni	72	1	92.71	0.31	100	92.7	80 - 120	
63 Cu	72	1	87.81	1.07	100	87.8	80 - 120	
66 Zn	72	1	94.31	0.22	100	94.3	80 - 120	
75 As	72	1	101.10	0.38	100	101.1	80 - 120	
78 Se	72	1	105.10	1.94	100	105.1	80 - 120	
95 Mo	72	1	2106.00	1.43	2100	100.3	80 - 120	
107 Ag	115	1	85.35	1.62	100	85.4	80 - 120	
111 Cd	115	1	91.55	1.47	100	91.6	80 - 120	
118 Sn	115	1	96.95	1.86	100	97.0	80 - 120	
121 Sb	115	1	101.90	1.14	100	101.9	80 - 120	
137 Ba	115	1	97.10	2.05	100	97.1	80 - 120	
205 Tl	165	1	93.31	1.80	100	93.3	80 - 120	
208 Pb	165	1	92.31	0.40	100	92.3	80 - 120	
232 Th	165	1	98.27	1.03	100	98.3	80 - 120	
238 U	165	1	97.38	0.98	100	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298307	2.13	455621	65.5	30 - 120	
45 Sc	1	951400	0.73	1356727	70.1	30 - 120	
72 Ge	1	417924	0.89	598490	69.8	30 - 120	
115 In	1	1269948	0.83	1797032	70.7	30 - 120	
165 Ho	1	2339416	0.71	3253654	71.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\100WASH.D\100WASH.D#
Date Acquired: Nov 7 2009 07:39 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	1.30	
51 V	72	1	0.142 ppb	7.89	6.50	
52 Cr	72	1	0.005 ppb	257.91	2.60	
55 Mn	72	1	0.007 ppb	90.77	1.30	
59 Co	72	1	0.000 ppb	202.05	1.30	
60 Ni	72	1	0.093 ppb	12.92	2.60	
63 Cu	72	1	-0.001 ppb	1876.80	2.60	
66 Zn	72	1	0.085 ppb	20.36	13.00	
75 As	72	1	0.006 ppb	156.23	6.50	
78 Se	72	1	-0.186 ppb	140.52	6.50	
95 Mo	72	1	0.818 ppb	23.12	2.60	
107 Ag	115	1	0.010 ppb	12.80	6.50	
111 Cd	115	1	0.005 ppb	231.49	1.30	
118 Sn	115	1	-0.010 ppb	165.88	13.00	
121 Sb	115	1	0.032 ppb	29.89	2.60	
137 Ba	115	1	-0.014 ppb	32.29	1.30	
205 Tl	165	1	0.003 ppb	28.88	1.30	
208 Pb	165	1	0.004 ppb	10.63	1.30	
232 Th	165	1	0.024 ppb	19.02	2.60	
238 U	165	1	0.016 ppb	20.26	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	387692	1.32	455621	85.1	30 - 120	
45 Sc	1	1182675	0.32	1356727	87.2	30 - 120	
72 Ge	1	534827	0.26	598490	89.4	30 - 120	
115 In	1	1606789	1.96	1797032	89.4	30 - 120	
165 Ho	1	2912559	0.89	3253654	89.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\101 CCV.D\101 CCV.D#
Date Acquired: Nov 7 2009 07:41 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.02	ppb	3.60	50	102.0	90 - 110	
51 V	72	1	49.10	ppb	0.68	50	98.2	90 - 110	
52 Cr	72	1	48.80	ppb	0.79	50	97.6	90 - 110	
55 Mn	72	1	48.00	ppb	0.60	50	96.0	90 - 110	
59 Co	72	1	49.55	ppb	0.61	50	99.1	90 - 110	
60 Ni	72	1	52.06	ppb	1.46	50	104.1	90 - 110	
63 Cu	72	1	50.22	ppb	0.56	50	100.4	90 - 110	
66 Zn	72	1	48.51	ppb	1.13	50	97.0	90 - 110	
75 As	72	1	50.95	ppb	0.50	50	101.9	90 - 110	
78 Se	72	1	49.38	ppb	4.19	50	98.8	90 - 110	
95 Mo	72	1	50.11	ppb	1.38	50	100.2	90 - 110	
107 Ag	115	1	49.66	ppb	0.85	50	99.3	90 - 110	
111 Cd	115	1	49.01	ppb	1.42	50	98.0	90 - 110	
118 Sn	115	1	48.68	ppb	1.81	50	97.4	90 - 110	
121 Sb	115	1	48.87	ppb	1.17	50	97.7	90 - 110	
137 Ba	115	1	49.35	ppb	1.09	50	98.7	90 - 110	
205 Tl	165	1	49.79	ppb	1.41	50	99.6	90 - 110	
208 Pb	165	1	49.95	ppb	1.13	50	99.9	90 - 110	
232 Th	165	1	49.72	ppb	0.91	50	99.4	90 - 110	
238 U	165	1	49.59	ppb	1.94	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398557	1.14	455621	87.5	30 - 120	
45 Sc	1	1252262	1.05	1356727	92.3	30 - 120	
72 Ge	1	546607	0.97	598490	91.3	30 - 120	
115 In	1	1673358	0.50	1797032	93.1	30 - 120	
165 Ho	1	3013021	0.51	3253654	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\102 CCB.D\102 CCB.D#
Date Acquired: Nov 7 2009 07:44 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.18	1.00	
51 V	72	1	0.072	ppb	11.11	1.00	
52 Cr	72	1	0.002	ppb	1427.90	1.00	
55 Mn	72	1	-0.002	ppb	998.74	1.00	
59 Co	72	1	0.004	ppb	62.33	1.00	
60 Ni	72	1	0.095	ppb	21.31	1.00	
63 Cu	72	1	0.001	ppb	1376.50	1.00	
66 Zn	72	1	0.050	ppb	67.37	1.00	
75 As	72	1	0.009	ppb	154.12	1.00	
78 Se	72	1	0.133	ppb	315.07	1.00	
95 Mo	72	1	0.099	ppb	50.63	1.00	
107 Ag	115	1	0.009	ppb	39.54	1.00	
111 Cd	115	1	0.005	ppb	103.50	1.00	
118 Sn	115	1	0.062	ppb	107.54	1.00	
121 Sb	115	1	0.138	ppb	16.19	1.00	
137 Ba	115	1	-0.017	ppb	52.66	1.00	
205 Tl	165	1	0.016	ppb	15.17	1.00	
208 Pb	165	1	0.005	ppb	21.11	1.00	
232 Th	165	1	0.033	ppb	24.50	1.00	
238 U	165	1	0.010	ppb	34.21	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422194	1.15	455621	92.7	30 - 120	
45 Sc	1	1291748	1.74	1356727	95.2	30 - 120	
72 Ge	1	580761	0.52	598490	97.0	30 - 120	
115 In	1	1717581	0.13	1797032	95.6	30 - 120	
165 Ho	1	3049966	0.69	3253654	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\103WASH.D\103WASH.D#
Date Acquired: Nov 7 2009 07:47 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.046 ppb	12.02	1.30	
51 V	72	1	4.990 ppb	4.96	6.50	
52 Cr	72	1	1.987 ppb	0.39	2.60	
55 Mn	72	1	0.984 ppb	3.75	1.30	
59 Co	72	1	0.995 ppb	2.96	1.30	
60 Ni	72	1	2.088 ppb	2.52	2.60	
63 Cu	72	1	1.963 ppb	3.31	2.60	
66 Zn	72	1	10.010 ppb	1.27	13.00	
75 As	72	1	5.172 ppb	1.14	6.50	
78 Se	72	1	5.100 ppb	6.11	6.50	
95 Mo	72	1	2.120 ppb	2.97	2.60	
107 Ag	115	1	5.166 ppb	1.31	6.50	
111 Cd	115	1	1.008 ppb	8.01	1.30	
118 Sn	115	1	10.170 ppb	2.75	13.00	
121 Sb	115	1	2.047 ppb	1.41	2.60	
137 Ba	115	1	1.038 ppb	2.48	1.30	
205 Tl	165	1	1.010 ppb	2.74	1.30	
208 Pb	165	1	1.022 ppb	1.36	1.30	
232 Th	165	1	2.079 ppb	0.26	2.60	
238 U	165	1	1.053 ppb	0.29	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	429072	0.78	455621	94.2	30 - 120	
45 Sc	1	1319350	0.97	1356727	97.2	30 - 120	
72 Ge	1	590123	0.79	598490	98.6	30 - 120	
115 In	1	1750317	1.57	1797032	97.4	30 - 120	
165 Ho	1	3092496	0.17	3253654	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/09

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#
Date Acquired:	Nov 7 2009 08:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 07 2009 08:45 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1013	6.79
52	Cr	72	1	2664	5.06
55	Mn	72	1	580	4.28
59	Co	72	1	50	19.75
60	Ni	72	1	80	25.27
63	Cu	72	1	293	22.51
66	Zn	72	1	673	6.79
75	As	72	1	36	27.55
78	Se	72	1	257	13.42
95	Mo	72	1	170	5.64
107	Ag	115	1	33	16.66
111	Cd	115	1	17	83.01
118	Sn	115	1	497	10.06
121	Sb	115	1	144	3.89
137	Ba	115	1	74	17.43
205	Tl	165	1	49	39.41
208	Pb	165	1	258	3.04
232	Th	165	1	170	44.95
238	U	165	1	24	20.55

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	398155	0.17
45	Sc	1	1273788	1.37
72	Ge	1	577640	0.30
115	In	1	1726730	0.64
165	Ho	1	3039108	1.07

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\126ICAL.D\126ICAL.D#
Date Acquired: Nov 7 2009 08:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 08:48 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	47883	0.67
51	V	72	1	747976	1.49
52	Cr	72	1	754628	1.13
55	Mn	72	1	865964	0.71
59	Co	72	1	889724	1.22
60	Ni	72	1	191586	1.40
63	Cu	72	1	456036	0.95
66	Zn	72	1	106780	0.65
75	As	72	1	89192	0.61
78	Se	72	1	18229	1.26
95	Mo	72	1	254493	1.19
107	Ag	115	1	752402	0.75
111	Cd	115	1	150239	1.10
118	Sn	115	1	420016	0.73
121	Sb	115	1	483973	0.74
137	Ba	115	1	204383	0.51
205	Tl	165	1	1701616	0.60
208	Pb	165	1	2338107	2.25
232	Th	165	1	2413552	1.92
238	U	165	1	2559276	1.77

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	398883	0.56	398155	100.2	30 - 120	
45	Sc	1	1260434	1.10	1273788	99.0	30 - 120	
72	Ge	1	556836	0.86	577640	96.4	30 - 120	
115	In	1	1704167	0.61	1726730	98.7	30 - 120	
165	Ho	1	3052265	1.25	3039108	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\127 CCV.D\127 CCV.D#
Date Acquired: Nov 7 2009 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.43	ppb	3.83	50	100.9	90 - 110	
51 V	72	1	48.44	ppb	0.77	50	96.9	90 - 110	
52 Cr	72	1	48.00	ppb	0.40	50	96.0	90 - 110	
55 Mn	72	1	48.98	ppb	0.83	50	98.0	90 - 110	
59 Co	72	1	49.19	ppb	0.88	50	98.4	90 - 110	
60 Ni	72	1	51.00	ppb	2.25	50	102.0	90 - 110	
63 Cu	72	1	50.40	ppb	1.04	50	100.8	90 - 110	
66 Zn	72	1	49.66	ppb	0.82	50	99.3	90 - 110	
75 As	72	1	49.96	ppb	1.36	50	99.9	90 - 110	
78 Se	72	1	50.40	ppb	4.89	50	100.8	90 - 110	
95 Mo	72	1	49.49	ppb	0.61	50	99.0	90 - 110	
107 Ag	115	1	48.04	ppb	0.50	50	96.1	90 - 110	
111 Cd	115	1	48.84	ppb	0.25	50	97.7	90 - 110	
118 Sn	115	1	48.90	ppb	0.50	50	97.8	90 - 110	
121 Sb	115	1	49.44	ppb	0.72	50	98.9	90 - 110	
137 Ba	115	1	49.58	ppb	0.98	50	99.2	90 - 110	
205 Tl	165	1	50.08	ppb	0.23	50	100.2	90 - 110	
208 Pb	165	1	49.87	ppb	2.65	50	99.7	90 - 110	
232 Th	165	1	50.94	ppb	1.78	50	101.9	90 - 110	
238 U	165	1	50.49	ppb	2.18	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401327	1.29	398155	100.8	30 - 120	
45 Sc	1	1286634	0.38	1273788	101.0	30 - 120	
72 Ge	1	558660	0.70	577640	96.7	30 - 120	
115 In	1	1725819	0.46	1726730	99.9	30 - 120	
165 Ho	1	3087824	1.47	3039108	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\128 CCB.D\128 CCB.D#
Date Acquired: Nov 7 2009 08:56 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.14	1.00	
51 V	72	1	-0.043	ppb	23.48	1.00	
52 Cr	72	1	0.013	ppb	34.25	1.00	
55 Mn	72	1	0.004	ppb	271.40	1.00	
59 Co	72	1	0.003	ppb	58.98	1.00	
60 Ni	72	1	0.013	ppb	122.65	1.00	
63 Cu	72	1	-0.010	ppb	116.03	1.00	
66 Zn	72	1	-0.311	ppb	3.85	1.00	
75 As	72	1	0.007	ppb	208.78	1.00	
78 Se	72	1	0.060	ppb	542.70	1.00	
95 Mo	72	1	0.010	ppb	195.90	1.00	
107 Ag	115	1	0.008	ppb	34.15	1.00	
111 Cd	115	1	-0.003	ppb	158.97	1.00	
118 Sn	115	1	0.071	ppb	72.17	1.00	
121 Sb	115	1	0.186	ppb	24.43	1.00	
137 Ba	115	1	-0.019	ppb	41.26	1.00	
205 Tl	165	1	0.019	ppb	3.88	1.00	
208 Pb	165	1	0.007	ppb	24.82	1.00	
232 Th	165	1	0.050	ppb	27.19	1.00	
238 U	165	1	0.014	ppb	24.25	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	411177	0.79	398155	103.3	30 - 120	
45 Sc	1	1305310	1.03	1273788	102.5	30 - 120	
72 Ge	1	581950	0.43	577640	100.7	30 - 120	
115 In	1	1731683	0.78	1726730	100.3	30 - 120	
165 Ho	1	3093323	0.73	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\129WASH.D\129WASH.D#
Date Acquired: Nov 7 2009 08:58 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.958 ppb	18.19	1.30	
51 V	72	1	4.710 ppb	2.17	6.50	
52 Cr	72	1	1.943 ppb	1.74	2.60	
55 Mn	72	1	0.998 ppb	3.15	1.30	
59 Co	72	1	0.952 ppb	3.16	1.30	
60 Ni	72	1	2.004 ppb	2.33	2.60	
63 Cu	72	1	1.937 ppb	4.73	2.60	
66 Zn	72	1	9.953 ppb	1.74	13.00	
75 As	72	1	4.981 ppb	2.08	6.50	
78 Se	72	1	5.557 ppb	13.16	6.50	
95 Mo	72	1	2.076 ppb	4.26	2.60	
107 Ag	115	1	5.018 ppb	2.22	6.50	
111 Cd	115	1	1.021 ppb	8.96	1.30	
118 Sn	115	1	10.330 ppb	1.36	13.00	
121 Sb	115	1	2.063 ppb	0.86	2.60	
137 Ba	115	1	1.033 ppb	9.68	1.30	
205 Tl	165	1	1.037 ppb	1.68	1.30	
208 Pb	165	1	1.033 ppb	2.31	1.30	
232 Th	165	1	2.176 ppb	3.62	2.60	
238 U	165	1	1.072 ppb	1.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	417105	1.00	398155	104.8	30 - 120	
45 Sc	1	1297902	0.97	1273788	101.9	30 - 120	
72 Ge	1	579634	1.13	577640	100.3	30 - 120	
115 In	1	1734765	0.59	1726730	100.5	30 - 120	
165 Ho	1	3094755	1.05	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#
Date Acquired: Nov 7 2009 11:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:42 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1073	15.01
52	Cr	72	1	2617	8.78
55	Mn	72	1	867	12.42
59	Co	72	1	87	35.66
60	Ni	72	1	110	27.47
63	Cu	72	1	480	6.51
66	Zn	72	1	677	4.34
75	As	72	1	47	6.82
78	Se	72	1	303	21.28
95	Mo	72	1	213	24.37
107	Ag	115	1	40	65.92
111	Cd	115	1	2	917.60
118	Sn	115	1	410	22.77
121	Sb	115	1	161	7.01
137	Ba	115	1	137	14.12
205	Tl	165	1	107	32.25
208	Pb	165	1	403	9.15
232	Th	165	1	173	13.01
238	U	165	1	122	7.26

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	401411	0.88
45	Sc	1	1190683	1.29
72	Ge	1	533218	0.44
115	In	1	1552104	0.57
165	Ho	1	2681412	0.51

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\190ICAL.D\190ICAL.D#
Date Acquired: Nov 7 2009 11:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:45 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	45518	1.54
51	V	72	1	700879	1.29
52	Cr	72	1	693042	2.18
55	Mn	72	1	795858	1.60
59	Co	72	1	850264	1.89
60	Ni	72	1	181428	0.41
63	Cu	72	1	431089	0.73
66	Zn	72	1	95751	0.48
75	As	72	1	84617	1.05
78	Se	72	1	17278	1.91
95	Mo	72	1	230286	0.80
107	Ag	115	1	661266	1.42
111	Cd	115	1	131853	1.14
118	Sn	115	1	371875	2.20
121	Sb	115	1	432362	1.85
137	Ba	115	1	187475	1.78
205	Tl	165	1	1498644	1.03
208	Pb	165	1	2042776	1.12
232	Th	165	1	2142976	0.23
238	U	165	1	2200342	0.40

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	389965	0.80	401411	97.1	30 - 120	
45	Sc	1	1171540	0.60	1190683	98.4	30 - 120	
72	Ge	1	507906	1.25	533218	95.3	30 - 120	
115	In	1	1532161	1.02	1552104	98.7	30 - 120	
165	Ho	1	2672323	0.90	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\191 CCV.D\191 CCV.D#
Date Acquired: Nov 7 2009 11:50 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.23	ppb	3.26	50	98.5	90 - 110	
51 V	72	1	48.52	ppb	1.74	50	97.0	90 - 110	
52 Cr	72	1	48.49	ppb	0.29	50	97.0	90 - 110	
55 Mn	72	1	48.47	ppb	1.24	50	96.9	90 - 110	
59 Co	72	1	48.02	ppb	0.67	50	96.0	90 - 110	
60 Ni	72	1	49.69	ppb	1.50	50	99.4	90 - 110	
63 Cu	72	1	49.62	ppb	0.90	50	99.2	90 - 110	
66 Zn	72	1	48.96	ppb	1.42	50	97.9	90 - 110	
75 As	72	1	49.10	ppb	0.76	50	98.2	90 - 110	
78 Se	72	1	48.52	ppb	4.63	50	97.0	90 - 110	
95 Mo	72	1	49.23	ppb	0.82	50	98.5	90 - 110	
107 Ag	115	1	49.55	ppb	1.37	50	99.1	90 - 110	
111 Cd	115	1	49.69	ppb	1.93	50	99.4	90 - 110	
118 Sn	115	1	49.87	ppb	1.50	50	99.7	90 - 110	
121 Sb	115	1	49.85	ppb	1.58	50	99.7	90 - 110	
137 Ba	115	1	49.38	ppb	1.63	50	98.8	90 - 110	
205 Tl	165	1	50.07	ppb	0.63	50	100.1	90 - 110	
208 Pb	165	1	50.67	ppb	1.87	50	101.3	90 - 110	
232 Th	165	1	50.33	ppb	1.25	50	100.7	90 - 110	
238 U	165	1	51.37	ppb	0.78	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	391774	1.28	401411	97.6	30 - 120	
45 Sc	1	1173327	0.14	1190683	98.5	30 - 120	
72 Ge	1	511730	0.36	533218	96.0	30 - 120	
115 In	1	1536232	0.41	1552104	99.0	30 - 120	
165 Ho	1	2663987	0.61	2681412	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\192 CCB.D\192 CCB.D#
Date Acquired: Nov 7 2009 11:52 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.021	ppb	99.86	1.00	
51 V	72	1	-0.024	ppb	36.47	1.00	
52 Cr	72	1	0.015	ppb	57.14	1.00	
55 Mn	72	1	0.032	ppb	9.94	1.00	
59 Co	72	1	0.000	ppb	241.41	1.00	
60 Ni	72	1	-0.008	ppb	160.82	1.00	
63 Cu	72	1	-0.035	ppb	57.76	1.00	
66 Zn	72	1	-0.363	ppb	4.76	1.00	
75 As	72	1	0.004	ppb	177.30	1.00	
78 Se	72	1	0.169	ppb	283.55	1.00	
95 Mo	72	1	-0.009	ppb	169.70	1.00	
107 Ag	115	1	0.008	ppb	60.74	1.00	
111 Cd	115	1	0.009	ppb	130.00	1.00	
118 Sn	115	1	0.105	ppb	79.70	1.00	
121 Sb	115	1	0.172	ppb	19.79	1.00	
137 Ba	115	1	-0.007	ppb	70.67	1.00	
205 Tl	165	1	0.024	ppb	16.62	1.00	
208 Pb	165	1	0.009	ppb	31.16	1.00	
232 Th	165	1	0.066	ppb	21.79	1.00	
238 U	165	1	0.019	ppb	10.85	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398355	0.67	401411	99.2	30 - 120	
45 Sc	1	1182289	0.51	1190683	99.3	30 - 120	
72 Ge	1	527088	0.39	533218	98.9	30 - 120	
115 In	1	1549776	0.77	1552104	99.8	30 - 120	
165 Ho	1	2689530	0.71	2681412	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\193WASH.D\193WASH.D#
Date Acquired: Nov 7 2009 11:55 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.091 ppb	4.11	1.30	
51 V	72	1	4.811 ppb	1.97	6.50	
52 Cr	72	1	1.975 ppb	0.98	2.60	
55 Mn	72	1	1.025 ppb	2.63	1.30	
59 Co	72	1	0.940 ppb	2.79	1.30	
60 Ni	72	1	2.047 ppb	4.84	2.60	
63 Cu	72	1	1.979 ppb	2.92	2.60	
66 Zn	72	1	9.930 ppb	1.74	13.00	
75 As	72	1	4.933 ppb	2.85	6.50	
78 Se	72	1	4.816 ppb	29.67	6.50	
95 Mo	72	1	1.981 ppb	4.92	2.60	
107 Ag	115	1	5.175 ppb	3.70	6.50	
111 Cd	115	1	0.978 ppb	1.91	1.30	
118 Sn	115	1	10.300 ppb	2.13	13.00	
121 Sb	115	1	2.097 ppb	1.97	2.60	
137 Ba	115	1	0.975 ppb	2.19	1.30	
205 Tl	165	1	1.046 ppb	3.18	1.30	
208 Pb	165	1	1.053 ppb	2.27	1.30	
232 Th	165	1	2.155 ppb	2.03	2.60	
238 U	165	1	1.095 ppb	4.14	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	397871	0.78	401411	99.1	30 - 120	
45 Sc	1	1191820	1.19	1190683	100.1	30 - 120	
72 Ge	1	527413	0.74	533218	98.9	30 - 120	
115 In	1	1527888	0.75	1552104	98.4	30 - 120	
165 Ho	1	2673393	1.59	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#
Date Acquired: Nov 8 2009 02:25 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:23 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	620	12.63
52	Cr	72	1	2680	1.78
55	Mn	72	1	813	8.79
59	Co	72	1	67	30.95
60	Ni	72	1	113	13.08
63	Cu	72	1	490	11.82
66	Zn	72	1	656	6.46
75	As	72	1	45	17.63
78	Se	72	1	333	20.05
95	Mo	72	1	257	16.03
107	Ag	115	1	40	74.94
111	Cd	115	1	11	116.88
118	Sn	115	1	477	0.80
121	Sb	115	1	156	24.28
137	Ba	115	1	152	14.20
205	Tl	165	1	96	21.83
208	Pb	165	1	372	9.02
232	Th	165	1	160	32.65
238	U	165	1	140	10.99

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	376079	0.79
45	Sc	1	1186897	1.34
72	Ge	1	539567	0.45
115	In	1	1576174	1.52
165	Ho	1	2717767	0.30

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\248ICAL.D\248ICAL.D#
Date Acquired: Nov 8 2009 02:28 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:26 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42446	1.21
51	V	72	1	684937	3.17
52	Cr	72	1	670667	0.81
55	Mn	72	1	787843	0.97
59	Co	72	1	839400	0.67
60	Ni	72	1	178958	0.70
63	Cu	72	1	424705	0.79
66	Zn	72	1	94491	0.73
75	As	72	1	84032	1.05
78	Se	72	1	16841	1.85
95	Mo	72	1	231498	1.15
107	Ag	115	1	664263	0.80
111	Cd	115	1	132542	1.42
118	Sn	115	1	376743	0.98
121	Sb	115	1	435060	0.49
137	Ba	115	1	188704	0.74
205	Tl	165	1	1479617	0.97
208	Pb	165	1	2033413	0.75
232	Th	165	1	2126721	0.55
238	U	165	1	2198988	0.53

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	364624	0.78	376079	97.0	30 - 120	
45	Sc	1	1151280	0.55	1186897	97.0	30 - 120	
72	Ge	1	510601	1.68	539567	94.6	30 - 120	
115	In	1	1555316	0.82	1576174	98.7	30 - 120	
165	Ho	1	2687981	0.46	2717767	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\249 CCV.D\249 CCV.D#
Date Acquired: Nov 8 2009 02:31 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.21	ppb	0.59	50	100.4	90 - 110	
51 V	72	1	49.66	ppb	0.22	50	99.3	90 - 110	
52 Cr	72	1	50.51	ppb	0.78	50	101.0	90 - 110	
55 Mn	72	1	49.52	ppb	0.42	50	99.0	90 - 110	
59 Co	72	1	48.78	ppb	0.64	50	97.6	90 - 110	
60 Ni	72	1	50.96	ppb	0.39	50	101.9	90 - 110	
63 Cu	72	1	50.45	ppb	0.98	50	100.9	90 - 110	
66 Zn	72	1	51.04	ppb	1.32	50	102.1	90 - 110	
75 As	72	1	50.22	ppb	0.79	50	100.4	90 - 110	
78 Se	72	1	52.93	ppb	2.64	50	105.9	90 - 110	
95 Mo	72	1	50.88	ppb	0.45	50	101.8	90 - 110	
107 Ag	115	1	50.92	ppb	2.20	50	101.8	90 - 110	
111 Cd	115	1	51.72	ppb	2.62	50	103.4	90 - 110	
118 Sn	115	1	51.06	ppb	2.41	50	102.1	90 - 110	
121 Sb	115	1	51.12	ppb	1.48	50	102.2	90 - 110	
137 Ba	115	1	50.77	ppb	1.68	50	101.5	90 - 110	
205 Tl	165	1	51.85	ppb	1.16	50	103.7	90 - 110	
208 Pb	165	1	51.54	ppb	2.32	50	103.1	90 - 110	
232 Th	165	1	51.27	ppb	1.18	50	102.5	90 - 110	
238 U	165	1	51.61	ppb	0.90	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360601	1.23	376079	95.9	30 - 120	
45 Sc	1	1152210	0.10	1186897	97.1	30 - 120	
72 Ge	1	506331	0.64	539567	93.8	30 - 120	
115 In	1	1532589	0.89	1576174	97.2	30 - 120	
165 Ho	1	2667156	1.17	2717767	98.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\250 CCB.D\250 CCB.D#
Date Acquired: Nov 8 2009 02:33 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	147.29	1.00	
51 V	72	1	-0.021	ppb	31.34	1.00	
52 Cr	72	1	0.037	ppb	45.39	1.00	
55 Mn	72	1	-0.003	ppb	461.47	1.00	
59 Co	72	1	0.004	ppb	46.27	1.00	
60 Ni	72	1	-0.025	ppb	13.04	1.00	
63 Cu	72	1	-0.035	ppb	22.37	1.00	
66 Zn	72	1	-0.398	ppb	5.33	1.00	
75 As	72	1	0.015	ppb	70.97	1.00	
78 Se	72	1	-0.320	ppb	40.38	1.00	
95 Mo	72	1	-0.054	ppb	35.32	1.00	
107 Ag	115	1	0.008	ppb	9.23	1.00	
111 Cd	115	1	0.005	ppb	52.43	1.00	
118 Sn	115	1	0.107	ppb	31.44	1.00	
121 Sb	115	1	0.188	ppb	20.19	1.00	
137 Ba	115	1	-0.042	ppb	4.94	1.00	
205 Tl	165	1	0.020	ppb	20.00	1.00	
208 Pb	165	1	-0.001	ppb	65.74	1.00	
232 Th	165	1	0.055	ppb	6.90	1.00	
238 U	165	1	0.016	ppb	10.74	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366061	0.27	376079	97.3	30 - 120	
45 Sc	1	1155485	0.15	1186897	97.4	30 - 120	
72 Ge	1	519106	0.69	539567	96.2	30 - 120	
115 In	1	1540332	1.11	1576174	97.7	30 - 120	
165 Ho	1	2657124	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\251WASH.D\251WASH.D#
Date Acquired: Nov 8 2009 02:36 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.182 ppb	14.87	1.30	
51 V	72	1	4.893 ppb	1.96	6.50	
52 Cr	72	1	2.065 ppb	5.46	2.60	
55 Mn	72	1	1.011 ppb	1.63	1.30	
59 Co	72	1	0.945 ppb	4.66	1.30	
60 Ni	72	1	1.991 ppb	4.27	2.60	
63 Cu	72	1	1.920 ppb	3.33	2.60	
66 Zn	72	1	9.756 ppb	2.19	13.00	
75 As	72	1	5.100 ppb	2.23	6.50	
78 Se	72	1	5.391 ppb	16.99	6.50	
95 Mo	72	1	2.008 ppb	7.03	2.60	
107 Ag	115	1	5.374 ppb	2.29	6.50	
111 Cd	115	1	1.096 ppb	8.86	1.30	
118 Sn	115	1	10.340 ppb	1.46	13.00	
121 Sb	115	1	2.090 ppb	3.04	2.60	
137 Ba	115	1	1.046 ppb	6.76	1.30	
205 Tl	165	1	1.069 ppb	2.14	1.30	
208 Pb	165	1	1.064 ppb	1.63	1.30	
232 Th	165	1	2.171 ppb	1.98	2.60	
238 U	165	1	1.109 ppb	2.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368083	0.81	376079	97.9	30 - 120	
45 Sc	1	1152236	1.34	1186897	97.1	30 - 120	
72 Ge	1	519228	0.64	539567	96.2	30 - 120	
115 In	1	1550740	0.66	1576174	98.4	30 - 120	
165 Ho	1	2657605	1.00	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\252 BLK.D\252 BLK.D#
Date Acquired: Nov 8 2009 02:39 am
Operator: TEL
Sample Name: LNJNVB
Misc Info: BLANK 9303185 6020
Vial Number: 4402
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	4060.10	2.00	
51 V	72	1	-0.023 ppb	51.25	2.00	
52 Cr	72	1	0.146 ppb	18.63	2.00	
55 Mn	72	1	0.029 ppb	14.35	2.00	
59 Co	72	1	-0.002 ppb	130.67	2.00	
60 Ni	72	1	0.009 ppb	200.76	2.00	
63 Cu	72	1	0.048 ppb	17.11	2.00	
66 Zn	72	1	0.350 ppb	15.65	2.00	
75 As	72	1	0.002 ppb	591.35	2.00	
78 Se	72	1	-0.304 ppb	77.33	2.00	
95 Mo	72	1	-0.059 ppb	27.75	2.00	
107 Ag	115	1	0.003 ppb	141.04	2.00	
111 Cd	115	1	0.004 ppb	198.21	2.00	
118 Sn	115	1	0.129 ppb	35.95	2.00	
121 Sb	115	1	0.037 ppb	34.11	2.00	
137 Ba	115	1	-0.021 ppb	145.57	2.00	
205 Tl	165	1	0.012 ppb	15.96	2.00	
208 Pb	165	1	0.006 ppb	18.89	2.00	
232 Th	165	1	0.019 ppb	29.60	2.00	
238 U	165	1	0.002 ppb	114.88	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364912	0.52	376079	97.0	30 - 120	
45 Sc	1	1141984	0.82	1186897	96.2	30 - 120	
72 Ge	1	513818	0.75	539567	95.2	30 - 120	
115 In	1	1528677	1.58	1576174	97.0	30 - 120	
165 Ho	1	2647917	1.14	2717767	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\253 LCS.D\253 LCS.D#
Date Acquired: Nov 8 2009 02:42 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJNVC
Misc Info: LCS
Vial Number: 4403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	35.70	1.01	40	89.3	80 - 120	
51 V	72	1	35.52	0.20	40	88.8	80 - 120	
52 Cr	72	1	36.08	0.50	40	90.2	80 - 120	
55 Mn	72	1	35.14	0.07	40	87.9	80 - 120	
59 Co	72	1	34.82	0.49	40	87.1	80 - 120	
60 Ni	72	1	36.40	0.69	40	91.0	80 - 120	
63 Cu	72	1	35.92	0.24	40	89.8	80 - 120	
66 Zn	72	1	35.76	1.51	40	89.4	80 - 120	
75 As	72	1	34.71	0.72	40	86.8	80 - 120	
78 Se	72	1	35.62	2.21	40	89.1	80 - 120	
95 Mo	72	1	32.10	0.70	40	80.3	80 - 120	
107 Ag	115	1	35.79	2.12	40	89.5	80 - 120	
111 Cd	115	1	35.37	1.53	40	88.4	80 - 120	
118 Sn	115	1	0.02	168.39	40	0.0	80 - 120	
121 Sb	115	1	32.20	2.07	40	80.5	80 - 120	
137 Ba	115	1	35.77	2.20	40	89.4	80 - 120	
205 Tl	165	1	36.57	2.09	40	91.4	80 - 120	
208 Pb	165	1	36.87	2.16	40	92.2	80 - 120	
232 Th	165	1	36.61	1.54	40	91.5	80 - 120	
238 U	165	1	36.97	1.94	40	92.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358195	0.31	376079	95.2	30 - 120	
45 Sc	1	1130666	0.47	1186897	95.3	30 - 120	
72 Ge	1	497032	0.74	539567	92.1	30 - 120	
115 In	1	1523173	1.15	1576174	96.6	30 - 120	
165 Ho	1	2638001	1.37	2717767	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#
Date Acquired: Nov 8 2009 02:44 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7F 5X
Misc Info: D9J270261
Vial Number: 4404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: AllRef
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.02	ppb	140.55	3600	
51 V	72	1	58.25	11.65	ppb	0.99	3600	
52 Cr	72	1	96.60	19.32	ppb	0.56	3600	
55 Mn	72	1	20.01	4.00	ppb	1.83	3600	
59 Co	72	1	0.41	0.08	ppb	18.64	3600	
60 Ni	72	1	2.50	0.50	ppb	10.52	3600	
63 Cu	72	1	0.61	0.12	ppb	13.42	3600	
66 Zn	72	1	18.56	3.71	ppb	2.43	3600	
75 As	72	1	190.75	38.15	ppb	0.69	3600	
78 Se	72	1	1.93	0.39	ppb	57.06	3600	
95 Mo	72	1	26.48	5.30	ppb	2.72	3600	
107 Ag	115	1	0.03	0.01	ppb	125.97	3600	
111 Cd	115	1	0.02	0.00	ppb	229.82	3600	
118 Sn	115	1	0.25	0.05	ppb	45.32	3600	
121 Sb	115	1	0.30	0.06	ppb	29.45	3600	
137 Ba	115	1	23.70	4.74	ppb	1.34	3600	
205 Tl	165	1	0.23	0.05	ppb	17.38	3600	
208 Pb	165	1	0.18	0.04	ppb	14.05	3600	
232 Th	165	1	0.24	0.05	ppb	4.71	1000	
238 U	165	1	13.31	2.66	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	333341	1.09	376079	88.6	30 - 120	
45 Sc	1	1062523	0.59	1186897	89.5	30 - 120	
72 Ge	1	462502	0.27	539567	85.7	30 - 120	
115 In	1	1375002	1.04	1576174	87.2	30 - 120	
165 Ho	1	2471361	0.80	2717767	90.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\255SDIL.D\255SDIL.D#
Date Acquired: Nov 8 2009 02:47 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FP25
Misc Info: SERIAL DILUTION
Vial Number: 4405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	0.57	0.00	458.7	90 - 110	
51 V	72	1	2.26	ppb	2.18	2.33	97.2	90 - 110	
52 Cr	72	1	3.94	ppb	1.55	3.86	101.9	90 - 110	
55 Mn	72	1	0.83	ppb	10.87	0.80	103.6	90 - 110	
59 Co	72	1	0.02	ppb	18.64	0.02	109.5	90 - 110	
60 Ni	72	1	0.11	ppb	52.76	0.10	106.7	90 - 110	
63 Cu	72	1	0.01	ppb	230.36	0.02	26.5	90 - 110	
66 Zn	72	1	0.47	ppb	7.87	0.74	62.8	90 - 110	
75 As	72	1	7.52	ppb	0.96	7.63	98.5	90 - 110	
78 Se	72	1	-0.04	ppb	1143.50	0.08	-52.9	90 - 110	
95 Mo	72	1	0.94	ppb	9.86	1.06	88.3	90 - 110	
107 Ag	115	1	0.00	ppb	99.28	0.00	-232.5	90 - 110	
111 Cd	115	1	-0.01	ppb	100.17	0.00	-679.0	90 - 110	
118 Sn	115	1	0.09	ppb	4.94	0.01	892.4	90 - 110	
121 Sb	115	1	0.01	ppb	131.02	0.01	58.5	90 - 110	
137 Ba	115	1	0.94	ppb	4.03	0.95	99.3	90 - 110	
205 Tl	165	1	0.01	ppb	8.96	0.01	141.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.12	0.01	165.2	90 - 110	
232 Th	165	1	0.01	ppb	22.37	0.01	123.4	90 - 110	
238 U	165	1	0.53	ppb	1.52	0.53	100.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355060	0.39	376079	94.4	30 - 120	
45 Sc	1	1125653	0.19	1186897	94.8	30 - 120	
72 Ge	1	502164	0.65	539567	93.1	30 - 120	
115 In	1	1479317	0.60	1576174	93.9	30 - 120	
165 Ho	1	2614578	1.08	2717767	96.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:46

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNC7FP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG110709 # 255 | Method 6020_
Acquired: 11/08/2009 02:47:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	10	0.41625	0.09076	359		*	
7440-62-2	Vanadium	51	15823	56.600	58.240	2.82		*	
7440-47-3	Chromium	52	28379	98.450	96.590	1.93		*	
7439-96-5	Manganese	55	7172	20.725	20.010	3.57		*	
7440-48-4	Cobalt	59	210	0.44850	0.40970	9.47		*	
7440-02-0	Nickel	60	293	2.6645	2.4980	6.67		*	
7440-50-8	Copper	63	483	0.16105	0.60710	73.5		*	
7440-66-6	Zinc	66	1041	11.650	18.550	37.2		*	
7440-38-2	Arsenic	75	6250	187.85	190.70	1.49	0.21	1.5	☑
7782-49-2	Selenium	78	303	-1.0210	1.9300	153	0.70	NC	☑
7439-98-7	Molybdenum	95	2367	23.385	26.470	11.7		*	
7440-22-4	Silver	107	20	-0.06975	0.02999	333		*	
7440-43-9	Cadmium	111	3	-0.14365	0.02116	779		*	
7440-31-5	Tin	118	770	2.2540	0.25260	792		*	
7440-36-0	Antimony	121	176	0.17570	0.30050	41.5		*	
7440-39-3	Barium	137	1831	23.535	23.690	0.654		*	
7440-28-0	Thallium	205	281	0.32890	0.23210	41.7		*	
7439-92-1	Lead	208	597	0.30195	0.18290	65.1		*	
7440-61-1	Uranium	238	11545	13.340	13.300	0.301		*	
7440-29-1	Thorium	232	403	0.30120	0.24410	23.4		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\256PDS.D\256PDS.D#
Date Acquired: Nov 8 2009 02:50 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 4406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	198.50	0.02	ppb	0.67	200	99.2	75 - 125	
51 V	72	1	208.00	11.65	ppb	2.08	200	98.3	75 - 125	
52 Cr	72	1	214.70	19.32	ppb	2.35	200	97.9	75 - 125	
55 Mn	72	1	195.40	4.00	ppb	1.86	200	95.8	75 - 125	
59 Co	72	1	183.60	0.08	ppb	1.60	200	91.8	75 - 125	
60 Ni	72	1	182.50	0.50	ppb	0.31	200	91.0	75 - 125	
63 Cu	72	1	178.40	0.12	ppb	0.81	200	89.1	75 - 125	
66 Zn	72	1	197.00	3.71	ppb	0.21	200	96.7	75 - 125	
75 As	72	1	232.30	38.15	ppb	0.67	200	97.5	75 - 125	
78 Se	72	1	204.20	0.39	ppb	2.34	200	101.9	75 - 125	
95 Mo	72	1	205.90	5.30	ppb	0.26	200	100.3	75 - 125	
107 Ag	115	1	41.50	0.01	ppb	1.74	50	83.0	75 - 125	
111 Cd	115	1	191.50	0.00	ppb	1.67	200	95.7	75 - 125	
118 Sn	115	1	177.60	0.05	ppb	1.20	200	88.8	75 - 125	
121 Sb	115	1	198.30	0.06	ppb	1.40	200	99.1	75 - 125	
137 Ba	115	1	196.40	4.74	ppb	1.33	200	95.9	75 - 125	
205 Tl	165	1	183.20	0.05	ppb	0.81	200	91.6	75 - 125	
208 Pb	165	1	182.30	0.04	ppb	0.75	200	91.1	75 - 125	
232 Th	165	1	0.04	0.05	ppb	6.86	200	0.0	75 - 125	
238 U	165	1	193.60	2.66	ppb	1.34	200	95.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328783	0.12	376079	87.4	30 - 120	
45 Sc	1	1063276	1.17	1186897	89.6	30 - 120	
72 Ge	1	452940	1.07	539567	83.9	30 - 120	
115 In	1	1385133	0.59	1576174	87.9	30 - 120	
165 Ho	1	2473070	1.04	2717767	91.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:49

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNC7FZ** Spike Dilution: **1.00** Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG110709 # 256
Acquired: 11/08/2009 02:50:00
Calibrated: 11/08/2009 02:25:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75977	198.50	0.01815	99.2	200		☐
7440-62-2	Vanadium	51	1263250	208.00	11.648	98.2	200		☑
7440-47-3	Chromium	52	1274690	214.70	19.318	97.7	200		☑
7439-96-5	Manganese	55	1365200	195.40	4.0020	95.7	200		☑
7440-48-4	Cobalt	59	1366970	183.60	0.08194	91.8	200		☐
7440-02-0	Nickel	60	289636	182.50	0.49960	91.0	200		☑
7440-50-8	Copper	63	671724	178.40	0.12142	89.1	200		☑
7440-66-6	Zinc	66	164629	197.00	3.7100	96.6	200		☑
7440-38-2	Arsenic	75	173144	232.30	38.140	97.1	200		☑
7782-49-2	Selenium	78	30217	204.20	0.38600	102	200		☑
7439-98-7	Molybdenum	95	422659	205.90	5.2940	100	200		☐
7440-22-4	Silver	107	245476	41.500	0.00600	83.0	50.0		☐
7440-43-9	Cadmium	111	225972	191.50	0.00423	95.7	200		☑
7440-31-5	Tin	118	595460	177.60	0.05052	88.8	200		☑
7440-36-0	Antimony	121	768070	198.30	0.06010	99.1	200		☑
7440-39-3	Barium	137	329990	196.40	4.7380	95.8	200		☑
7440-28-0	Thallium	205	2493600	183.20	0.04642	91.6	200		☑
7439-92-1	Lead	208	3410220	182.30	0.03658	91.1	200		☑
7440-61-1	Uranium	238	3915870	193.60	2.6600	95.5	200		☐
7440-29-1	Thorium	232	963	0.04179	0.04882				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\257_MS.D\257_MS.D#
Date Acquired: Nov 8 2009 02:53 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FS 5X
Misc Info: MATRIX SPIKE
Vial Number: 4407
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MS
Prep Dil. Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	7.56	0.02	ppb	3.41	40	18.9	50 - 150	
51 V	72	1	19.50	11.65	ppb	0.31	40	37.8	50 - 150	
52 Cr	72	1	27.55	19.32	ppb	1.08	40	46.4	50 - 150	
55 Mn	72	1	11.53	4.00	ppb	1.57	40	26.2	50 - 150	
59 Co	72	1	6.92	0.08	ppb	2.08	40	17.3	50 - 150	
60 Ni	72	1	7.47	0.50	ppb	3.08	40	18.4	50 - 150	
63 Cu	72	1	6.92	0.12	ppb	1.37	40	17.2	50 - 150	
66 Zn	72	1	12.20	3.71	ppb	0.22	40	27.9	50 - 150	
75 As	72	1	47.40	38.15	ppb	0.47	40	60.7	50 - 150	
78 Se	72	1	8.21	0.39	ppb	9.17	40	20.3	50 - 150	
95 Mo	72	1	12.33	5.30	ppb	1.48	40	27.2	50 - 150	
107 Ag	115	1	6.98	0.01	ppb	1.82	40	17.5	50 - 150	
111 Cd	115	1	7.47	0.00	ppb	3.17	40	18.7	50 - 150	
118 Sn	115	1	0.39	0.05	ppb	33.82	40	1.0	50 - 150	
121 Sb	115	1	6.89	0.06	ppb	1.31	40	17.2	50 - 150	
137 Ba	115	1	12.69	4.74	ppb	1.37	40	28.4	50 - 150	
205 Tl	165	1	7.17	0.05	ppb	1.41	40	17.9	50 - 150	
208 Pb	165	1	7.25	0.04	ppb	1.49	40	18.1	50 - 150	
232 Th	165	1	7.88	0.05	ppb	1.73	40	19.7	50 - 150	
238 U	165	1	10.53	2.66	ppb	1.84	40	24.7	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	332623	0.65	376079	88.4	30 - 120	
45 Sc	1	1062418	1.11	1186897	89.5	30 - 120	
72 Ge	1	462138	0.38	539567	85.6	30 - 120	
115 In	1	1389102	1.17	1576174	88.1	30 - 120	
165 Ho	1	2485285	0.80	2717767	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\258 CCV.D\258 CCV.D#
Date Acquired: Nov 8 2009 02:56 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.17	ppb	1.68	50	102.3	90 - 110	
51 V	72	1	49.76	ppb	0.58	50	99.5	90 - 110	
52 Cr	72	1	50.23	ppb	0.59	50	100.5	90 - 110	
55 Mn	72	1	49.80	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	48.86	ppb	0.97	50	97.7	90 - 110	
60 Ni	72	1	51.09	ppb	0.38	50	102.2	90 - 110	
63 Cu	72	1	50.55	ppb	1.39	50	101.1	90 - 110	
66 Zn	72	1	51.57	ppb	0.26	50	103.1	90 - 110	
75 As	72	1	50.59	ppb	0.46	50	101.2	90 - 110	
78 Se	72	1	51.92	ppb	0.28	50	103.8	90 - 110	
95 Mo	72	1	50.29	ppb	1.00	50	100.6	90 - 110	
107 Ag	115	1	51.22	ppb	2.07	50	102.4	90 - 110	
111 Cd	115	1	51.60	ppb	0.81	50	103.2	90 - 110	
118 Sn	115	1	50.56	ppb	0.85	50	101.1	90 - 110	
121 Sb	115	1	51.03	ppb	1.10	50	102.1	90 - 110	
137 Ba	115	1	50.92	ppb	1.12	50	101.8	90 - 110	
205 Tl	165	1	52.43	ppb	1.68	50	104.9	90 - 110	
208 Pb	165	1	52.24	ppb	2.12	50	104.5	90 - 110	
232 Th	165	1	51.78	ppb	2.94	50	103.6	90 - 110	
238 U	165	1	52.22	ppb	2.20	50	104.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366110	0.29	376079	97.3	30 - 120	
45 Sc	1	1169831	1.16	1186897	98.6	30 - 120	
72 Ge	1	507682	1.25	539567	94.1	30 - 120	
115 In	1	1542474	0.57	1576174	97.9	30 - 120	
165 Ho	1	2664119	1.36	2717767	98.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\259 CCB.D\259 CCB.D#
Date Acquired: Nov 8 2009 02:58 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	31.75	1.00	
52 Cr	72	1	0.015	ppb	240.08	1.00	
55 Mn	72	1	-0.003	ppb	454.38	1.00	
59 Co	72	1	0.007	ppb	19.00	1.00	
60 Ni	72	1	-0.021	ppb	92.00	1.00	
63 Cu	72	1	-0.023	ppb	91.13	1.00	
66 Zn	72	1	-0.387	ppb	12.46	1.00	
75 As	72	1	0.025	ppb	95.41	1.00	
78 Se	72	1	-0.065	ppb	394.03	1.00	
95 Mo	72	1	-0.040	ppb	70.76	1.00	
107 Ag	115	1	0.007	ppb	79.32	1.00	
111 Cd	115	1	0.012	ppb	73.39	1.00	
118 Sn	115	1	0.112	ppb	71.47	1.00	
121 Sb	115	1	0.150	ppb	17.00	1.00	
137 Ba	115	1	-0.041	ppb	5.14	1.00	
205 Tl	165	1	0.021	ppb	28.23	1.00	
208 Pb	165	1	0.003	ppb	8.31	1.00	
232 Th	165	1	0.048	ppb	25.86	1.00	
238 U	165	1	0.018	ppb	13.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367818	0.80	376079	97.8	30 - 120	
45 Sc	1	1153232	0.32	1186897	97.2	30 - 120	
72 Ge	1	519534	0.26	539567	96.3	30 - 120	
115 In	1	1546385	0.40	1576174	98.1	30 - 120	
165 Ho	1	2700530	0.45	2717767	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\260WASH.D\260WASH.D#
Date Acquired: Nov 8 2009 03:01 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.019 ppb	27.17	1.30	
51 V	72	1	4.885 ppb	1.68	6.50	
52 Cr	72	1	2.082 ppb	0.83	2.60	
55 Mn	72	1	1.036 ppb	7.67	1.30	
59 Co	72	1	0.946 ppb	2.04	1.30	
60 Ni	72	1	1.988 ppb	1.59	2.60	
63 Cu	72	1	1.986 ppb	0.32	2.60	
66 Zn	72	1	9.700 ppb	2.08	13.00	
75 As	72	1	4.976 ppb	1.71	6.50	
78 Se	72	1	5.005 ppb	25.32	6.50	
95 Mo	72	1	1.940 ppb	1.93	2.60	
107 Ag	115	1	5.369 ppb	0.73	6.50	
111 Cd	115	1	1.082 ppb	5.90	1.30	
118 Sn	115	1	10.260 ppb	0.06	13.00	
121 Sb	115	1	2.114 ppb	1.71	2.60	
137 Ba	115	1	0.981 ppb	3.28	1.30	
205 Tl	165	1	1.051 ppb	2.60	1.30	
208 Pb	165	1	1.037 ppb	1.65	1.30	
232 Th	165	1	2.110 ppb	1.80	2.60	
238 U	165	1	1.105 ppb	2.71	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367841	0.83	376079	97.8	30 - 120	
45 Sc	1	1154162	0.97	1186897	97.2	30 - 120	
72 Ge	1	516753	0.66	539567	95.8	30 - 120	
115 In	1	1524519	0.33	1576174	96.7	30 - 120	
165 Ho	1	2680772	0.38	2717767	98.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\261 MSD.D\261 MSD.D#
Date Acquired: Nov 8 2009 03:04 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MSD
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\257 MS.D\257 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.15	ppb	4.97	7.56	5.64	20	
51 V	72	1	19.44	ppb	0.87	19.50	0.31	20	
52 Cr	72	1	27.63	ppb	0.44	27.55	0.29	20	
55 Mn	72	1	11.89	ppb	0.71	11.53	3.07	20	
59 Co	72	1	6.96	ppb	0.22	6.92	0.55	20	
60 Ni	72	1	7.63	ppb	4.71	7.47	2.13	20	
63 Cu	72	1	6.96	ppb	2.26	6.92	0.55	20	
66 Zn	72	1	11.24	ppb	0.91	12.20	8.19	20	
75 As	72	1	47.18	ppb	1.02	47.40	0.47	20	
78 Se	72	1	8.49	ppb	8.60	8.21	3.34	20	
95 Mo	72	1	12.08	ppb	2.93	12.33	2.05	20	
107 Ag	115	1	6.86	ppb	1.67	6.98	1.81	20	
111 Cd	115	1	7.38	ppb	2.12	7.47	1.12	20	
118 Sn	115	1	0.11	ppb	30.03	0.39	111.83	20	
121 Sb	115	1	6.82	ppb	2.78	6.89	1.02	20	
137 Ba	115	1	12.78	ppb	1.44	12.69	0.71	20	
205 Tl	165	1	7.29	ppb	1.19	7.17	1.61	20	
208 Pb	165	1	7.29	ppb	2.38	7.25	0.51	20	
232 Th	165	1	7.89	ppb	2.55	7.88	0.08	20	
238 U	165	1	10.55	ppb	1.44	10.53	0.19	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329103	0.78	376079	87.5	30 - 120	
45 Sc	1	1057955	1.12	1186897	89.1	30 - 120	
72 Ge	1	456662	0.47	539567	84.6	30 - 120	
115 In	1	1365390	0.56	1576174	86.6	30 - 120	
165 Ho	1	2474617	1.07	2717767	91.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\262SMPL.D\262SMPL.D#
Date Acquired: Nov 8 2009 03:07 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7L 5X
Misc Info: D9J270263
Vial Number: 4409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	157.59	3600	
51 V	72	1	46.85	9.37	ppb	1.89	3600	
52 Cr	72	1	12.39	2.48	ppb	5.61	3600	
55 Mn	72	1	171.35	34.27	ppb	1.07	3600	
59 Co	72	1	264.35	52.87	ppb	1.02	3600	
60 Ni	72	1	102.35	20.47	ppb	3.34	3600	
63 Cu	72	1	53.95	10.79	ppb	1.03	3600	
66 Zn	72	1	17.02	3.40	ppb	3.85	3600	
75 As	72	1	69.40	13.88	ppb	0.45	3600	
78 Se	72	1	3.99	0.80	ppb	47.95	3600	
95 Mo	72	1	6.46	1.29	ppb	6.25	3600	
107 Ag	115	1	0.02	0.00	ppb	159.25	3600	
111 Cd	115	1	0.13	0.03	ppb	54.73	3600	
118 Sn	115	1	0.20	0.04	ppb	29.32	3600	
121 Sb	115	1	0.23	0.05	ppb	27.91	3600	
137 Ba	115	1	43.61	8.72	ppb	1.89	3600	
205 Tl	165	1	0.08	0.02	ppb	8.14	3600	
208 Pb	165	1	1.84	0.37	ppb	5.27	3600	
232 Th	165	1	0.14	0.03	ppb	17.77	1000	
238 U	165	1	38.02	7.60	ppb	1.66	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343401	0.74	376079	91.3	30 - 120	
45 Sc	1	1089536	0.75	1186897	91.8	30 - 120	
72 Ge	1	479909	1.11	539567	88.9	30 - 120	
115 In	1	1451981	1.22	1576174	92.1	30 - 120	
165 Ho	1	2546093	0.95	2717767	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\263SMPL.D\263SMPL.D#
Date Acquired: Nov 8 2009 03:09 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFGD 5X
Misc Info: D9J280280
Vial Number: 4410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.02	ppb	241.44	3600	
51 V	72	1	54.75	10.95	ppb	1.40	3600	
52 Cr	72	1	88.30	17.66	ppb	0.52	3600	
55 Mn	72	1	36.34	7.27	ppb	0.95	3600	
59 Co	72	1	0.85	0.17	ppb	10.77	3600	
60 Ni	72	1	4.50	0.90	ppb	6.77	3600	
63 Cu	72	1	1.33	0.27	ppb	18.06	3600	
66 Zn	72	1	7.36	1.47	ppb	5.00	3600	
75 As	72	1	275.25	55.05	ppb	1.01	3600	
78 Se	72	1	8.96	1.79	ppb	43.45	3600	
95 Mo	72	1	14.49	2.90	ppb	3.73	3600	
107 Ag	115	1	0.03	0.01	ppb	18.83	3600	
111 Cd	115	1	0.09	0.02	ppb	136.04	3600	
118 Sn	115	1	0.02	0.00	ppb	387.10	3600	
121 Sb	115	1	0.10	0.02	ppb	24.58	3600	
137 Ba	115	1	40.38	8.08	ppb	3.21	3600	
205 Tl	165	1	0.13	0.03	ppb	5.33	3600	
208 Pb	165	1	0.86	0.17	ppb	3.75	3600	
232 Th	165	1	0.77	0.15	ppb	2.79	1000	
238 U	165	1	23.16	4.63	ppb	1.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	321308	0.11	376079	85.4	30 - 120	
45 Sc	1	1048585	0.63	1186897	88.3	30 - 120	
72 Ge	1	451006	0.46	539567	83.6	30 - 120	
115 In	1	1344838	0.54	1576174	85.3	30 - 120	
165 Ho	1	2446552	0.31	2717767	90.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\264SMPL.D\264SMPL.D#
Date Acquired: Nov 8 2009 03:12 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFG2 5X
Misc Info: D9J280283
Vial Number: 4411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	85.35	17.07	ppb	2.36	3600	
52 Cr	72	1	57.90	11.58	ppb	0.78	3600	
55 Mn	72	1	3.89	0.78	ppb	2.20	3600	
59 Co	72	1	0.62	0.12	ppb	8.11	3600	
60 Ni	72	1	3.33	0.67	ppb	9.62	3600	
63 Cu	72	1	0.28	0.06	ppb	57.58	3600	
66 Zn	72	1	12.63	2.53	ppb	2.86	3600	
75 As	72	1	208.15	41.63	ppb	0.43	3600	
78 Se	72	1	3.45	0.69	ppb	57.20	3600	
95 Mo	72	1	15.54	3.11	ppb	4.05	3600	
107 Ag	115	1	0.00	0.00	ppb	548.29	3600	
111 Cd	115	1	0.00	0.00	ppb	1744.50	3600	
118 Sn	115	1	0.74	0.15	ppb	40.17	3600	
121 Sb	115	1	0.12	0.02	ppb	20.77	3600	
137 Ba	115	1	43.12	8.62	ppb	2.46	3600	
205 Tl	165	1	0.08	0.02	ppb	18.16	3600	
208 Pb	165	1	0.09	0.02	ppb	0.87	3600	
232 Th	165	1	0.06	0.01	ppb	45.22	1000	
238 U	165	1	42.88	8.58	ppb	2.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326264	0.73	376079	86.8	30 - 120	
45 Sc	1	1072928	0.34	1186897	90.4	30 - 120	
72 Ge	1	463601	0.73	539567	85.9	30 - 120	
115 In	1	1385017	0.88	1576174	87.9	30 - 120	
165 Ho	1	2507716	1.26	2717767	92.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\265SMPL.D\265SMPL.D#
Date Acquired: Nov 8 2009 03:15 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2J 5X
Misc Info: D9J290310
Vial Number: 4412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	309.81	3600	
51 V	72	1	48.61	9.72	ppb	1.22	3600	
52 Cr	72	1	57.70	11.54	ppb	0.94	3600	
55 Mn	72	1	53.90	10.78	ppb	1.00	3600	
59 Co	72	1	0.55	0.11	ppb	6.70	3600	
60 Ni	72	1	3.54	0.71	ppb	8.58	3600	
63 Cu	72	1	0.41	0.08	ppb	3.58	3600	
66 Zn	72	1	14.51	2.90	ppb	6.49	3600	
75 As	72	1	347.90	69.58	ppb	0.62	3600	
78 Se	72	1	2.80	0.56	ppb	43.90	3600	
95 Mo	72	1	35.21	7.04	ppb	2.31	3600	
107 Ag	115	1	0.00	0.00	ppb	348.44	3600	
111 Cd	115	1	0.01	0.00	ppb	1737.40	3600	
118 Sn	115	1	0.09	0.02	ppb	257.92	3600	
121 Sb	115	1	0.10	0.02	ppb	32.62	3600	
137 Ba	115	1	27.88	5.58	ppb	4.08	3600	
205 Tl	165	1	0.07	0.01	ppb	9.45	3600	
208 Pb	165	1	0.24	0.05	ppb	12.24	3600	
232 Th	165	1	0.20	0.04	ppb	2.64	1000	
238 U	165	1	67.45	13.49	ppb	1.58	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335558	0.24	376079	89.2	30 - 120	
45 Sc	1	1081740	0.75	1186897	91.1	30 - 120	
72 Ge	1	467673	0.66	539567	86.7	30 - 120	
115 In	1	1401937	0.62	1576174	88.9	30 - 120	
165 Ho	1	2517760	0.48	2717767	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\266SMPL.D\266SMPL.D#
Date Acquired: Nov 8 2009 03:18 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2K 5X
Misc Info: D9J290310
Vial Number: 4501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	48.25	9.65	ppb	1.58	3600	
52 Cr	72	1	57.55	11.51	ppb	1.78	3600	
55 Mn	72	1	53.60	10.72	ppb	0.45	3600	
59 Co	72	1	0.70	0.14	ppb	10.31	3600	
60 Ni	72	1	4.12	0.82	ppb	7.90	3600	
63 Cu	72	1	0.61	0.12	ppb	18.78	3600	
66 Zn	72	1	14.52	2.90	ppb	5.26	3600	
75 As	72	1	343.30	68.66	ppb	0.80	3600	
78 Se	72	1	0.28	0.06	ppb	532.16	3600	
95 Mo	72	1	34.43	6.89	ppb	3.09	3600	
107 Ag	115	1	0.03	0.01	ppb	118.50	3600	
111 Cd	115	1	0.06	0.01	ppb	110.88	3600	
118 Sn	115	1	0.20	0.04	ppb	15.50	3600	
121 Sb	115	1	0.06	0.01	ppb	80.38	3600	
137 Ba	115	1	30.09	6.02	ppb	1.47	3600	
205 Tl	165	1	0.06	0.01	ppb	4.80	3600	
208 Pb	165	1	0.28	0.06	ppb	1.80	3600	
232 Th	165	1	0.20	0.04	ppb	29.47	1000	
238 U	165	1	67.55	13.51	ppb	1.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329739	0.51	376079	87.7	30 - 120	
45 Sc	1	1074128	1.38	1186897	90.5	30 - 120	
72 Ge	1	466433	0.80	539567	86.4	30 - 120	
115 In	1	1385476	1.23	1576174	87.9	30 - 120	
165 Ho	1	2494439	1.00	2717767	91.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\267 CCV.D\267 CCV.D#
Date Acquired: Nov 8 2009 03:21 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.22	ppb	2.08	50	102.4	90 - 110	
51 V	72	1	49.65	ppb	0.54	50	99.3	90 - 110	
52 Cr	72	1	50.22	ppb	0.76	50	100.4	90 - 110	
55 Mn	72	1	49.57	ppb	0.78	50	99.1	90 - 110	
59 Co	72	1	48.62	ppb	0.28	50	97.2	90 - 110	
60 Ni	72	1	50.60	ppb	1.48	50	101.2	90 - 110	
63 Cu	72	1	50.08	ppb	0.86	50	100.2	90 - 110	
66 Zn	72	1	52.09	ppb	0.68	50	104.2	90 - 110	
75 As	72	1	50.33	ppb	0.35	50	100.7	90 - 110	
78 Se	72	1	50.70	ppb	1.91	50	101.4	90 - 110	
95 Mo	72	1	50.34	ppb	1.97	50	100.7	90 - 110	
107 Ag	115	1	50.13	ppb	2.37	50	100.3	90 - 110	
111 Cd	115	1	50.15	ppb	1.77	50	100.3	90 - 110	
118 Sn	115	1	49.99	ppb	1.62	50	100.0	90 - 110	
121 Sb	115	1	50.52	ppb	2.60	50	101.0	90 - 110	
137 Ba	115	1	50.62	ppb	1.41	50	101.2	90 - 110	
205 Tl	165	1	51.11	ppb	0.42	50	102.2	90 - 110	
208 Pb	165	1	51.54	ppb	1.74	50	103.1	90 - 110	
232 Th	165	1	51.26	ppb	1.28	50	102.5	90 - 110	
238 U	165	1	51.53	ppb	0.94	50	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360685	1.10	376079	95.9	30 - 120	
45 Sc	1	1157595	0.85	1186897	97.5	30 - 120	
72 Ge	1	507944	1.20	539567	94.1	30 - 120	
115 In	1	1559749	0.93	1576174	99.0	30 - 120	
165 Ho	1	2711611	1.14	2717767	99.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\268 CCB.D\268 CCB.D#
Date Acquired: Nov 8 2009 03:23 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	19.15	1.00	
52 Cr	72	1	-0.002	ppb	789.67	1.00	
55 Mn	72	1	-0.001	ppb	1184.70	1.00	
59 Co	72	1	0.000	ppb	707.73	1.00	
60 Ni	72	1	-0.014	ppb	130.22	1.00	
63 Cu	72	1	-0.051	ppb	28.29	1.00	
66 Zn	72	1	-0.413	ppb	3.98	1.00	
75 As	72	1	0.005	ppb	390.64	1.00	
78 Se	72	1	0.068	ppb	260.94	1.00	
95 Mo	72	1	-0.051	ppb	12.59	1.00	
107 Ag	115	1	0.003	ppb	126.88	1.00	
111 Cd	115	1	0.000	ppb	7618.50	1.00	
118 Sn	115	1	0.047	ppb	150.30	1.00	
121 Sb	115	1	0.138	ppb	23.66	1.00	
137 Ba	115	1	-0.038	ppb	11.83	1.00	
205 Tl	165	1	0.021	ppb	17.52	1.00	
208 Pb	165	1	0.003	ppb	111.74	1.00	
232 Th	165	1	0.051	ppb	16.07	1.00	
238 U	165	1	0.016	ppb	14.92	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365082	0.17	376079	97.1	30 - 120	
45 Sc	1	1142137	0.98	1186897	96.2	30 - 120	
72 Ge	1	516032	0.47	539567	95.6	30 - 120	
115 In	1	1530746	0.77	1576174	97.1	30 - 120	
165 Ho	1	2669057	1.87	2717767	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\269WASH.D\269WASH.D#
Date Acquired: Nov 8 2009 03:26 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.901 ppb	17.96	1.30	
51 V	72	1	4.935 ppb	2.34	6.50	
52 Cr	72	1	2.001 ppb	2.44	2.60	
55 Mn	72	1	1.030 ppb	4.04	1.30	
59 Co	72	1	0.990 ppb	2.41	1.30	
60 Ni	72	1	2.129 ppb	7.48	2.60	
63 Cu	72	1	1.903 ppb	4.00	2.60	
66 Zn	72	1	9.748 ppb	0.16	13.00	
75 As	72	1	4.893 ppb	4.12	6.50	
78 Se	72	1	5.130 ppb	8.01	6.50	
95 Mo	72	1	1.974 ppb	8.49	2.60	
107 Ag	115	1	5.301 ppb	1.96	6.50	
111 Cd	115	1	1.056 ppb	7.93	1.30	
118 Sn	115	1	10.460 ppb	2.46	13.00	
121 Sb	115	1	2.083 ppb	0.79	2.60	
137 Ba	115	1	1.029 ppb	5.53	1.30	
205 Tl	165	1	1.089 ppb	0.37	1.30	
208 Pb	165	1	1.075 ppb	0.39	1.30	
232 Th	165	1	2.216 ppb	0.39	2.60	
238 U	165	1	1.111 ppb	0.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	359039	1.01	376079	95.5	30 - 120	
45 Sc	1	1142332	0.80	1186897	96.2	30 - 120	
72 Ge	1	512301	0.61	539567	94.9	30 - 120	
115 In	1	1537362	0.42	1576174	97.5	30 - 120	
165 Ho	1	2658916	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J280280

Client: Northgate Environmental

Batch(es) #: 9303185

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 11/9/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J280280	1	SE	LNFGD1AC	20091108	6020TOTA	9303185	AG110709	024
D9J280280	1	AS	LNFGD1AA	20091108	6020TOTA	9303185	AG110709	024

METALS PREPARATION LOGS ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9303185**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/2/09 ~~10/30/09~~ JRW

Due Date: 11/09/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJNV**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJNV**	C	Due Date: SDG:	50 mL
D9J270261 Water	**LNC7F** Total		Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	S	Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	D	Due Date: 11/09/09 SDG:	50 mL
D9J270263 Water	**LNC7L** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280280 Water	**LNFGD** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280283 Water	**LNFG2** Total		Due Date: 11/09/09 SDG:	50 mL
D9J290310 Water	**LNH2J** Total		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2K** Total		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9303185	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4082 Block & Cup # : 4/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1430	95	1845	95
HNO3	1900	95	1930	93
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

TestAmerica Denver

Standards Preparation Logbook Record

Nov-09-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6836-09, ICP-MS BLANK

Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-07-2009
Date Expires(1): 05-07-2010 (6 Months)
Date Expires(2): 05-07-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6835-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6837-09, ICP-MS HIGH CAL STD

Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	10.000
Ca	2,000.0	10.000
Fe	2,000.0	10.000
K	2,000.0	10.000
Mg	2,000.0	10.000
Na	2,000.0	10.000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6838-09, ICP-MS HIGH CCV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500
Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	5.0000
Ca	2,000.0	5.0000
Fe	2,000.0	5.0000
K	2,000.0	5.0000
Mg	2,000.0	5.0000

Na	2,000.0	5.0000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6839-09, ICP-MS HIGH RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6837-09, ICP-MS HIGH CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010
Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010
Al	10.000	0.1000
Ca	10.000	0.1000
Fe	10.000	0.1000
K	10.000	0.1000
Mg	10.000	0.1000
Na	10.000	0.1000

Nb	0.2000	0.0020
Pd	0.1000	0.0010
Pt	0.1000	0.0010
W	0.1000	0.0010

STD6840-09, ICP-MS HIGH AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000

Date Prep./Opened: 11-07-2009

Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6839-09, ICP-MS HIGH RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002
Al	0.1000	0.0200
Ca	0.1000	0.0200
Fe	0.1000	0.0200
K	0.1000	0.0200
Mg	0.1000	0.0200
Na	0.1000	0.0200
Nb	0.0020	0.0004
Pd	0.0010	0.0002
Pt	0.0010	0.0002
W	0.0010	0.0002
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018

STD6841-09, ICP-MS HIGH ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	100.00
Ca	2,000.0	100.00
Fe	2,000.0	100.00
K	2,000.0	100.00
Mg	2,000.0	100.00
Na	2,000.0	100.00

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	2.0000
Pd	20.000	1.0000
Pt	20.000	1.0000

W	20.000	1.0000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6842-09, ICP-MS HIGH LR STD1 — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000
Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6843-09, ICP-MS HIGH ICV STD — Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

Parent Std No.: STD3115-09, ICP-MS TA ICV Alt — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	4.0000
Ca	2,000.0	4.0000
Fe	2,000.0	4.0000
K	2,000.0	4.0000
Mg	2,000.0	4.0000
Na	2,000.0	4.0000

Parent Std No.: STD3116-09, ICP-MS TA ICV BRC — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.0800
Pd	20.000	0.0400
Pt	20.000	0.0400

W	20.000	0.0400

STD6844-09, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6855-09, LLCCV/RLICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD3106-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000
Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD3107-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

Parent Std No.: STD3108-09, ICP-MS BRC LLCCV 1 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Nb	4.0000	40.000
Pd	0.1000	1.0000
Pt	0.1000	1.0000
W	0.5000	5.0000

Reviewed By: 11/9/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/07/09 15:09		☐
4	100 ppb				1.0	11/07/09 15:12		☐
5	ICV				1.0	11/07/09 15:15		☐
6	RLIV				1.0	11/07/09 15:18		☐
7	ICB				1.0	11/07/09 15:20		☐
8	RL STD				1.0	11/07/09 15:23		☐
9	AFCEE RL				1.0	11/07/09 15:26		☐
10	ALTSe				1.0	11/07/09 15:29		☐
11	ICSA				1.0	11/07/09 15:31		☐
12	ICSAB				1.0	11/07/09 15:34		☐
13	RINSE				1.0	11/07/09 15:37		☐
14	LR1				1.0	11/07/09 15:40		☐
15	RINSE				1.0	11/07/09 15:42		☐
16	CCV				1.0	11/07/09 15:45		☐
17	CCB				1.0	11/07/09 15:48		☐
18	RLCV				1.0	11/07/09 15:50		☐
19	LNDMKB	D9J280000	9301081	46	1.0	11/07/09 15:53		☐
20	LNDMKC	D9J280000	9301081	46	1.0	11/07/09 15:56		☐
21	LM9FJ	D9J240188-1	9301081	46	1.0	11/07/09 15:59		☐
22	LM9FJP5	D9J240188	9301081		5.0	11/07/09 16:01		☐
23	LM9FJZ	D9J240188-1	9301081		1.0	11/07/09 16:04		☐
24	LM9FJS	D9J240188-1	9301081	46	1.0	11/07/09 16:07		☐
25	LM9FJD	D9J240188-1	9301081	46	1.0	11/07/09 16:09		☐
26	LM9FK	D9J240188-2	9301081	46	1.0	11/07/09 16:12		☐
27	CCV				1.0	11/07/09 16:15		☐
28	CCB				1.0	11/07/09 16:18		☐
29	RLCV				1.0	11/07/09 16:20		☐
30	LNJT4B	D9J300000	9303213	MS	1.0	11/07/09 16:23		☐
31	LNJT4C	D9J300000	9303213	MS	1.0	11/07/09 16:26		☐
32	LM8A7	D9J230367-1	9303213	MS	1.0	11/07/09 16:29		☐
33	LM8CG	D9J230367-2	9303213	MS	1.0	11/07/09 16:32		☐
34	LM8CV	D9J230367-3	9303213	MS	1.0	11/07/09 16:34		☐
35	LM8C1	D9J230367-4	9303213	MS	1.0	11/07/09 16:37		☐
36	LM8C1P5	D9J230367	9303213		5.0	11/07/09 16:40		☐
37	LM8C1Z	D9J230367-4	9303213		1.0	11/07/09 16:43		☐
38	LM8C1S	D9J230367-4	9303213	MS	1.0	11/07/09 16:45		☐
39	LM8C1D	D9J230367-4	9303213	MS	1.0	11/07/09 16:48		☐
40	CCV				1.0	11/07/09 16:51		☐
41	CCB				1.0	11/07/09 16:53		☐
42	RLCV				1.0	11/07/09 16:57		☐
43	LNDMTB	D9J280000	9301086	46	1.0	11/07/09 17:00		☐
44	LNDMTC	D9J280000	9301086	46	1.0	11/07/09 17:02		☐
45	LM8E2	D9J230373-1	9301086	46	1.0	11/07/09 17:05		☐
46	LM8E2P5	D9J230373	9301086		5.0	11/07/09 17:08		☐
47	LM8E2Z	D9J230373-1	9301086		1.0	11/07/09 17:11		☐
48	LM8E2S	D9J230373-1	9301086	46	1.0	11/07/09 17:13		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM8E2D	D9J230373-1	9301086	46	1.0	11/07/09 17:16		☐
50	LM8E6	D9J230373-2	9301086	46	1.0	11/07/09 17:19		☐
51	CCV				1.0	11/07/09 17:22		☐
52	CCB				1.0	11/07/09 17:24		☐
53	RLCV				1.0	11/07/09 17:27		☐
54	LM8E7	D9J230373-3	9301086	46	1.0	11/07/09 17:30		☐
55	LM8E9	D9J230373-4	9301086	46	1.0	11/07/09 17:33		☐
56	LM8FA	D9J230373-5	9301086	46	1.0	11/07/09 17:35		☐
57	LM8FC	D9J230373-6	9301086	46	1.0	11/07/09 17:38		☐
58	LM8FD	D9J230373-7	9301086	46	1.0	11/07/09 17:41		☐
59	LM8FE	D9J230373-8	9301086	46	1.0	11/07/09 17:44		☐
60	LM8FF	D9J230373-9	9301086	46	1.0	11/07/09 17:47		☐
61	LM8FG	D9J230373-10	9301086	46	1.0	11/07/09 17:51		☐
62	LM8FH	D9J230373-11	9301086	46	1.0	11/07/09 17:53		☐
63	CCV				1.0	11/07/09 17:56		☐
64	CCB				1.0	11/07/09 17:59		☐
65	RLCV				1.0	11/07/09 18:02		☐
66	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 18:04~~	VT 11/9/09 Did not use.	☐
67	LNDMPB	D9J280000	9301083	46	1.0	11/07/09 18:07		☐
68	LNDMPC	D9J280000	9301083	46	1.0	11/07/09 18:10		☐
69	LM8CT	D9J230370-1	9301083	46	1.0	11/07/09 18:13		☐
70	LM8CTP5	D9J230370	9301083		5.0	11/07/09 18:16		☐
71	LM8CTZ	D9J230370-1	9301083		1.0	11/07/09 18:18		☐
72	LM8CTS	D9J230370-1	9301083	46	1.0	11/07/09 18:21		☐
73	LM8CTD	D9J230370-1	9301083	46	1.0	11/07/09 18:24		☐
74	CCV				1.0	11/07/09 18:27		☐
75	CCB				1.0	11/07/09 18:29		☐
76	RLCV				1.0	11/07/09 18:32		☐
77	LM8C5	D9J230370-2	9301083	46	1.0	11/07/09 18:35		☐
78	LM8C8	D9J230370-3	9301083	46	1.0	11/07/09 18:38		☐
79	LM8C9	D9J230370-4	9301083	46	1.0	11/07/09 18:40		☐
80	LM8DA	D9J230370-5	9301083	46	1.0	11/07/09 18:43		☐
81	LM8DC	D9J230370-6	9301083	46	1.0	11/07/09 18:46		☐
82	LM8DF	D9J230370-7	9301083	46	1.0	11/07/09 18:49		☐
83	LM8DG	D9J230370-8	9301083	46	1.0	11/07/09 18:51		☐
84	CCV				1.0	11/07/09 18:54		☐
85	CCB				1.0	11/07/09 18:57		☐
86	RLCV				1.0	11/07/09 19:00		☐
87	LM8DH	D9J230370-9	9301083	46	1.0	11/07/09 19:03		☐
88	LM8DK	D9J230370-10	9301083	46	1.0	11/07/09 19:05		☐
89	LM8DL	D9J230370-11	9301083	46	1.0	11/07/09 19:08		☐
90	LM8DN	D9J230370-12	9301083	46	1.0	11/07/09 19:11		☐
91	LM8DQ	D9J230370-13	9301083	46	1.0	11/07/09 19:14		☐
92	LM8DT	D9J230370-14	9301083	46	1.0	11/07/09 19:17		☐
93	LM8DV	D9J230370-15	9301083	46	1.0	11/07/09 19:19		☐
94	LM8D4	D9J230370-16	9301083	46	1.0	11/07/09 19:22		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
95	CCV				1.0	11/07/09 19:25		
96	CCB				1.0	11/07/09 19:28		
97	RLCV				1.0	11/07/09 19:30		
98	ICSA				1.0	11/07/09 19:33		
99	ICSAB				1.0	11/07/09 19:36		
100	WASH				1.0	11/07/09 19:39		
101	CCV				1.0	11/07/09 19:41		
102	CCB				1.0	11/07/09 19:44		
103	RLCV				1.0	11/07/09 19:47		
104	LNPKXBQ	D9K030000	9307099	U1	1.0	11/07/09 19:50		
105	LNPKXCQ	D9K030000	9307099	U1	1.0	11/07/09 19:52		
106	LNN4FQ	D9K020448-1	9307099	U1	1.0	11/07/09 19:55		
107	LNN4FP5Q	D9K020448	9307099		5.0	11/07/09 19:58		
108	LNN4FZQ	D9K020448-1	9307099		1.0	11/07/09 20:01		
109	LNN4FSQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:03		
110	LNN4FDQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:06		
111	CCV				1.0	11/07/09 20:09		
112	CCB				1.0	11/07/09 20:12		
113	RLCV				1.0	11/07/09 20:14		
114	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 20:17~~		
115	LNNVDC	D9K020000	9306332	04	2.5	11/07/09 20:20		
116	LNKT9	D9J300258-1	9306332	04	2.5	11/07/09 20:23		
117	LNKT9S	D9J300258-1	9306332	04	2.5	11/07/09 20:25		
118	LNKT9D	D9J300258-1	9306332	04	2.5	11/07/09 20:28		
119	CCV				1.0	11/07/09 20:31		
120	CCB				1.0	11/07/09 20:34		
121	RLCV				1.0	11/07/09 20:36		
122	RINSE				1.0	11/07/09 20:39		
123	RINSE				1.0	11/07/09 20:42		
124	~~Cal Blank~~				~~1.0~~	~~11/07/09 20:45~~	KF 11/9/09 Did not use.	
125	Cal Blank				1.0	11/07/09 20:47		
126	100 ppb				1.0	11/07/09 20:50		
127	CCV				1.0	11/07/09 20:53		
128	CCB				1.0	11/07/09 20:56		
129	RLCV				1.0	11/07/09 20:58		
130	~~LNNQ5BF~~	~~D9K020000~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:01~~		
131	LNNQ5CF	D9K020000	9306285	MD	1.0	11/07/09 21:04		
132	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/07/09 21:07		
133	LNLG3F	D9J300326-2	9306285	MD	1.0	11/07/09 21:10		
134	LNLG4F	D9J300326-3	9306285	MD	1.0	11/07/09 21:12		
135	LNLHHF	D9J300329-1	9306285	MD	1.0	11/07/09 21:15		
136	LNLHMF	D9J300329-2	9306285	MD	1.0	11/07/09 21:18		
137	CCV				1.0	11/07/09 21:21		
138	CCB				1.0	11/07/09 21:23		
139	RLCV				1.0	11/07/09 21:26		
140	~~LNLHPF~~	~~D9J300329-3~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:29~~	KF 11/9/09 Did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
141	~~LNLJJF~~	~~D9J300340-1~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:32~~		☐
142	LNLJJP5F	D9J300340	9306285		5.0	11/07/09 21:35		☐
143	LNLJJZF	D9J300340-1	9306285		1.0	11/07/09 21:37		☐
144	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/07/09 21:40		☐
145	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/07/09 21:43		☐
146	~~LNLJME~~	~~D9J300340-2~~	~~9306285~~	~~MD~~	1.0	~~11/07/09 21:45~~	RE 11/9/09 Did not use.	☐
147	CCV				1.0	11/07/09 21:48		☐
148	CCB				1.0	11/07/09 21:51		☐
149	RLCV				1.0	11/07/09 21:54		☐
150	LNJXTB	D9J300000	9303237	04	1.0	11/07/09 21:57		☐
151	LNJXTC	D9J300000	9303237	04	1.0	11/07/09 21:59		☐
152	LNG33	D9J290197-1	9303237	04	1.0	11/07/09 22:02		☐
153	LNG4H	D9J290197-2	9303237	04	1.0	11/07/09 22:05		☐
154	LNG4L	D9J290197-3	9303237	04	1.0	11/07/09 22:08		☐
155	LNG4LP5	D9J290197	9303237		5.0	11/07/09 22:10		☐
156	LNG4LZ	D9J290197-3	9303237		1.0	11/07/09 22:13		☐
157	LNG4LS	D9J290197-3	9303237	04	1.0	11/07/09 22:16		☐
158	LNG4LD	D9J290197-3	9303237	04	1.0	11/07/09 22:19		☐
159	CCV				1.0	11/07/09 22:21		☐
160	CCB				1.0	11/07/09 22:24		☐
161	RLCV				1.0	11/07/09 22:27		☐
162	LNG4N	D9J290197-4	9303237	04	1.0	11/07/09 22:30		☐
163	LNG4R	D9J290197-5	9303237	04	1.0	11/07/09 22:32		☐
164	LNG4W	D9J290197-6	9303237	04	1.0	11/07/09 22:35		☐
165	LNG4X	D9J290197-7	9303237	04	1.0	11/07/09 22:38		☐
166	LNG41	D9J290197-8	9303237	04	1.0	11/07/09 22:41		☐
167	LNG42	D9J290197-9	9303237	04	1.0	11/07/09 22:43		☐
168	LNG44	D9J290197-10	9303237	04	1.0	11/07/09 22:46		☐
169	LNG46	D9J290197-11	9303237	04	1.0	11/07/09 22:49		☐
170	CCV				1.0	11/07/09 22:52		☐
171	CCB				1.0	11/07/09 22:54		☐
172	RLCV				1.0	11/07/09 22:57		☐
173	LNWCQB	D9K050000	9309120	04	2.5	11/07/09 23:00		☐
174	LNWCQC	D9K050000	9309120	04	2.5	11/07/09 23:03		☐
175	LNTEH	D9K040465-33	9309120	04	2.5	11/07/09 23:06		☐
176	LNTEQ	D9K040465-35	9309120	04	2.5	11/07/09 23:08		☐
177	LNTET	D9K040465-37	9309120	04	2.5	11/07/09 23:11		☐
178	LNTE0	D9K040465-39	9309120	04	2.5	11/07/09 23:14		☐
179	LNTE5	D9K040465-41	9309120	04	2.5	11/07/09 23:17		☐
180	LNTE5S	D9K040465-41	9309120	04	2.5	11/07/09 23:19		☐
181	LNTE5D	D9K040465-41	9309120	04	2.5	11/07/09 23:22		☐
182	LNTFA	D9K040465-43	9309120	04	2.5	11/07/09 23:25		☐
183	CCV				1.0	11/07/09 23:28		☐
184	CCB				1.0	11/07/09 23:30		☐
185	RLCV				1.0	11/07/09 23:33		☐
186	RINSE				1.0	11/07/09 23:36		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
187	~~RINSE~~				~~1.0~~	~~11/07/09 23:39~~		
188	~~Cal Blank~~				~~1.0~~	~~11/07/09 23:41~~	VL 11/9/09 Did not use.	
189	Cal Blank				1.0	11/07/09 23:44		
190	100 ppb				1.0	11/07/09 23:47		
191	CCV				1.0	11/07/09 23:50		
192	CCB				1.0	11/07/09 23:52		
193	RLCV				1.0	11/07/09 23:55		
194	LNEMRZF	D9J280200-5	9302146		1.0	11/07/09 23:58		
195	LNEMRSF	D9J280200-5	9302146	MD	1.0	11/08/09 00:01		
196	LNEMRDF	D9J280200-5	9302146	MD	1.0	11/08/09 00:03		
197	LNEMWF	D9J280200-6	9302146	MD	1.0	11/08/09 00:06		
198	LNEM0F	D9J280200-7	9302146	MD	1.0	11/08/09 00:09		
199	LNEM3F	D9J280200-8	9302146	MD	1.0	11/08/09 00:12		
200	LNEM4F	D9J280200-9	9302146	MD	1.0	11/08/09 00:15		
201	LNEM7F	D9J280200-10	9302146	MD	1.0	11/08/09 00:17		
202	CCV				1.0	11/08/09 00:20		
203	CCB				1.0	11/08/09 00:23		
204	RLCV				1.0	11/08/09 00:26		
205	LN0N2B	D9K060000	9310060	04	2.5	11/08/09 00:28		
206	LN0N2C	D9K060000	9310060	04	2.5	11/08/09 00:31		
207	LNW5P	D9K050485-2	9310060	04	2.5	11/08/09 00:34		
208	LNW55	D9K050485-4	9310060	04	2.5	11/08/09 00:37		
209	LNW6E	D9K050485-6	9310060	04	2.5	11/08/09 00:40		
210	LNW6ES	D9K050485-6	9310060	04	2.5	11/08/09 00:42		
211	LNW6ED	D9K050485-6	9310060	04	2.5	11/08/09 00:45		
212	CCV				1.0	11/08/09 00:48		
213	CCB				1.0	11/08/09 00:51		
214	RLCV				1.0	11/08/09 00:53		
215	LNF42B	D9J290000	9302121	MS	1.0	11/08/09 00:56		
216	LNF42C	D9J290000	9302121	MS	1.0	11/08/09 00:59		
217	LNE4T	D9J280246-1	9302121	MS	1.0	11/08/09 01:02		
218	LNE40 10X	D9J280246-2	9302121	MS	10.0	11/08/09 01:05		
219	LNE41 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:07		
220	LNE41P25	D9J280246	9302121		25.0	11/08/09 01:10		
221	CCV				1.0	11/08/09 01:13		
222	CCB				1.0	11/08/09 01:16		
223	RLCV				1.0	11/08/09 01:19		
224	LNE41Z	D9J280246-3	9302121		1.0	11/08/09 01:21		
225	LNE41S 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:24		
226	LNE41D 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:27		
227	LNE44 5X	D9J280246-4	9302121	MS	5.0	11/08/09 01:30		
228	LNE47 2X	D9J280246-5	9302121	MS	2.0	11/08/09 01:32		
229	LNE5A 2X	D9J280246-6	9302121	MS	2.0	11/08/09 01:35		
230	CCV				1.0	11/08/09 01:38		
231	CCB				1.0	11/08/09 01:41		
232	RLCV				1.0	11/08/09 01:44		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
233	LNJN5BF	D9J300000	9303187	MD	1.0	11/08/09 01:46		☐
234	LNJN5CF	D9J300000	9303187	MD	1.0	11/08/09 01:49		☐
235	LNH2LF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 01:52		☐
236	LNH2LP10F	D9J290310	9303187		10.0	11/08/09 01:55		☐
237	LNH2LZF	D9J290310-3	9303187		1.0	11/08/09 01:58		☐
238	LNH2LSF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:00		☐
239	LNH2LDF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:03		☐
240	LNH2NF 2X	D9J290310-4	9303187	MD	2.0	11/08/09 02:06		☐
241	CCV				1.0	11/08/09 02:09		☐
242	CCB				1.0	11/08/09 02:11		☐
243	RLCV				1.0	11/08/09 02:14		☐
244	~~RINSE~~				1.0	~~11/08/09 02:17~~		☐
245	RINSE				1.0	11/08/09 02:20		☐
246	~~Cal Blank~~				1.0	~~11/08/09 02:22~~	KF 11/9/09 did not use	☐
247	Cal Blank				1.0	11/08/09 02:25		☐
248	100 ppb				1.0	11/08/09 02:28		☐
249	CCV				1.0	11/08/09 02:31		☐
250	CCB				1.0	11/08/09 02:33		☐
251	RLCV				1.0	11/08/09 02:36		☐
252	LNJNVB	D9J300000	9303185	MS	1.0	11/08/09 02:39		☐
253	LNJNVC	D9J300000	9303185	MS	1.0	11/08/09 02:42		☐
254	LNC7F 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:44		☐
255	LNC7FP25	D9J270261	9303185		25.0	11/08/09 02:47		☐
256	LNC7FZ	D9J270261-1	9303185		1.0	11/08/09 02:50		☐
257	LNC7FS 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:53		☐
258	CCV				1.0	11/08/09 02:56		☐
259	CCB				1.0	11/08/09 02:58		☐
260	RLCV				1.0	11/08/09 03:01		☐
261	LNC7FD 5X	D9J270261-1	9303185	MS	5.0	11/08/09 03:04		☐
262	LNC7L 5X	D9J270263-1	9303185	MS	5.0	11/08/09 03:07		☐
263	LNFGD 5X	D9J280280-1	9303185	MS	5.0	11/08/09 03:09		☐
264	LNFG2 5X	D9J280283-1	9303185	MS	5.0	11/08/09 03:12		☐
265	LNH2J 5X	D9J290310-1	9303185	MS	5.0	11/08/09 03:15		☐
266	LNH2K 5X	D9J290310-2	9303185	MS	5.0	11/08/09 03:18		☐
267	CCV				1.0	11/08/09 03:21		☐
268	CCB				1.0	11/08/09 03:23		☐
269	RLCV				1.0	11/08/09 03:26		☐
270	LNJ8HB	D9J300000	9303310	04	1.0	11/08/09 03:29		☐
271	LNJ8HC	D9J300000	9303310	04	1.0	11/08/09 03:32		☐
272	LNHRC	D9J290285-1	9303310	04	1.0	11/08/09 03:34		☐
273	LNHRK	D9J290285-2	9303310	04	1.0	11/08/09 03:37		☐
274	LNHRN	D9J290285-3	9303310	04	1.0	11/08/09 03:40		☐
275	LNHRP	D9J290285-4	9303310	04	1.0	11/08/09 03:43		☐
276	LNHRR	D9J290285-5	9303310	04	1.0	11/08/09 03:46		☐
277	CCV				1.0	11/08/09 03:48		☐
278	CCB				1.0	11/08/09 03:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
279	RLCV				1.0	11/08/09 03:54		☐
280	LNHRT	D9J290285-6	9303310	04	1.0	11/08/09 03:57		☐
281	LNHRTP5	D9J290285	9303310		5.0	11/08/09 03:59		☐
282	LNHRTZ	D9J290285-6	9303310		1.0	11/08/09 04:02		☐
283	LNHRTS	D9J290285-6	9303310	04	1.0	11/08/09 04:05		☐
284	LNHRTD	D9J290285-6	9303310	04	1.0	11/08/09 04:08		☐
285	LNHRV	D9J290285-7	9303310	04	1.0	11/08/09 04:10		☐
286	LNHRW	D9J290285-8	9303310	04	1.0	11/08/09 04:13		☐
287	LNHRX	D9J290285-9	9303310	04	1.0	11/08/09 04:16		☐
288	LNHR0	D9J290285-10	9303310	04	1.0	11/08/09 04:19		☐
289	CCV				1.0	11/08/09 04:21		☐
290	CCB				1.0	11/08/09 04:24		☐
291	RLCV				1.0	11/08/09 04:27		☐
292	~~Cal Blank~~				1.0	11/08/09 04:30	KF 11/9/09 Did not use.	☐
293	Cal Blank				1.0	11/08/09 04:32		☐
294	100 ppb				1.0	11/08/09 04:35		☐
295	CCV				1.0	11/08/09 04:38		☐
296	CCB				1.0	11/08/09 04:41		☐
297	RLCV				1.0	11/08/09 04:43		☐
298	LM7XN 10X	D9J230319-2	9299274	04	1.0	11/08/09 04:46		☐
299	CCV				1.0	11/08/09 04:49		☐
300	CCB				1.0	11/08/09 04:52		☐
301	RLCV				1.0	11/08/09 04:54		☐
302	~~LNNV0B~~	~~D9K020000~~	~~9306340~~	~~04~~	~~1.0~~	~~11/08/09 04:57~~		☐
303	LNNV0C	D9K020000	9306340	04	1.0	11/08/09 05:00		☐
304	LNLGN 5X	D9J300319-1	9306340	04	5.0	11/08/09 05:03		☐
305	LNJ05	D9J300168-1	9306340	04	1.0	11/08/09 05:05		☐
306	LNJ1A	D9J300168-2	9306340	04	1.0	11/08/09 05:08		☐
307	LNJ1C	D9J300168-3	9306340	04	1.0	11/08/09 05:11		☐
308	LNJ1D	D9J300168-4	9306340	04	1.0	11/08/09 05:14		☐
309	LNJ1F	D9J300168-5	9306340	04	1.0	11/08/09 05:16		☐
310	CCV				1.0	11/08/09 05:19		☐
311	CCB				1.0	11/08/09 05:22		☐
312	RLCV				1.0	11/08/09 05:25		☐
313	LNJ41	D9J300188-1	9306340	04	1.0	11/08/09 05:27		☐
314	LNJ43	D9J300188-2	9306340	04	1.0	11/08/09 05:30		☐
315	LNJ44	D9J300188-3	9306340	04	1.0	11/08/09 05:33		☐
316	LNJ45	D9J300188-4	9306340	04	1.0	11/08/09 05:36		☐
317	LNMA5 5X	D9J310124-1	9306340	04	5.0	11/08/09 05:38		☐
318	LNMCH	D9J310127-1	9306340	04	1.0	11/08/09 05:41		☐
319	CCV				1.0	11/08/09 05:44		☐
320	CCB				1.0	11/08/09 05:47		☐
321	RLCV				1.0	11/08/09 05:49		☐
322	LNMCN	D9J310127-2	9306340	04	1.0	11/08/09 05:52		☐
323	LNMCNP5	D9J310127	9306340		5.0	11/08/09 05:55		☐
324	~~LNMCNZ~~	~~D9J310127-2~~	~~9306340~~		~~1.0~~	~~11/08/09 05:58~~	KF 11/9/09 Did not use.	☐

Denver

RUN SUMMARY

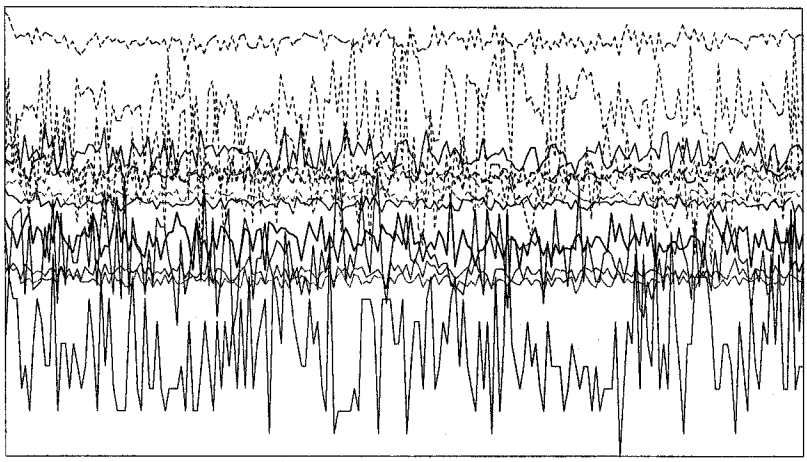
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
325	~~LNMCNS~~	D9J310127-2	9306340	04	1.0	~~11/08/09 06:00~~		☐
326	LNMCND	D9J310127-2	9306340	04	1.0	~~11/08/09~~ 11/08/09 06:03		☐
327	LNMCP	D9J310127-3	9306340	04	1.0	11/08/09 06:06		☐
328	LNMCQ	D9J310127-4	9306340	04	1.0	11/08/09 06:09		☐
329	CCV				1.0	11/08/09 06:11		☐
330	CCB				1.0	11/08/09 06:14		☐
331	~~BLCV~~				~~1.0~~	~~11/08/09 06:17~~	VF 11/9/09 Did not use.	☐

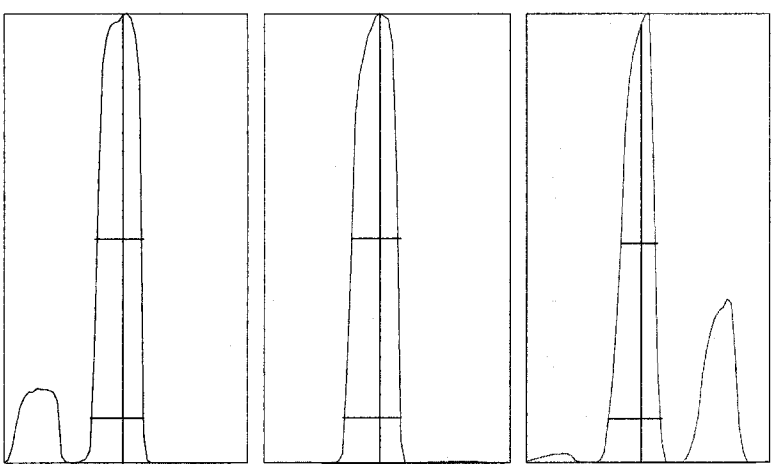
Tune Report

Tune File : NORM.U
Comment : AG110709



Integration Time: 0.1000 sec
Sampling Period: 1.5300 sec
n: 200
Oxide: 156/140 1.612%
Doubly Charged: 70/140 1.671%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	3382.0	3366.1	3.56	0.90
7	50,000	21859.0	20537.5	3.14	0.60
59	50,000	19576.0	19580.9	2.84	0.60
63	100	45.0	44.7	15.57	1.00
70	1,000	496.0	483.0	6.13	0.40
75	20	4.0	4.7	47.83	0.70
78	200	148.0	156.0	8.38	1.00
89	50,000	31217.0	31239.5	2.30	1.00
115	50,000	29852.0	29031.4	2.15	1.60
118	100	66.0	62.9	12.89	1.40
137	5,000	3148.0	3148.6	2.66	1.90
205	20,000	18784.0	18500.3	1.84	2.60
238	50,000	27256.0	28130.6	1.67	2.70
156/140	5	1.542%	1.636%	6.62	
70/140	5	1.747%	1.698%	6.33	



m/z:	7	89	205
Height:	20,610	31,605	18,257
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:09

Tune Report

Tune File : NORM.U
Comment : AG110709

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:12

P/A Factor Tuning Report

Acquired:Nov 7 2009 02:18 pm

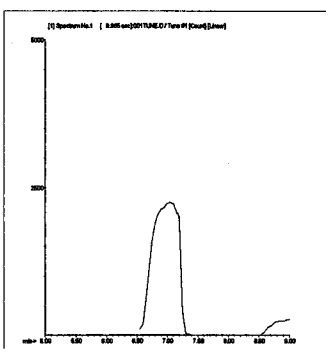
Mass[amu]	Element	P/A Factor
6	Li	0.054257
7	(Li)	Sensitivity too low
9	Be	0.059350
23	Na	0.063944
24	Mg	0.064875
27	Al	0.065819
39	K	0.066026
43	Ca	Sensitivity too low
45	Sc	0.066849
51	V	0.067403
52	Cr	0.068152
53	(Cr)	Sensitivity too low
55	Mn	0.068773
57	Fe	Sensitivity too low
59	Co	0.069652
60	Ni	Sensitivity too low
63	Cu	0.069964
66	Zn	0.070153
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.072052
98	(Mo)	0.071277
99	(Mo)	Sensitivity too low
105	Pd	0.071221
106	(Cd)	0.070815
107	Ag	Sensitivity too low
108	(Cd)	0.071381
111	Cd	0.070975
115	In	0.070220
118	Sn	0.070317
121	Sb	0.070422
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071611
206	(Pb)	0.070464
207	(Pb)	0.070565
208	Pb	0.069648
232	Th	0.069671
238	U	0.069782

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

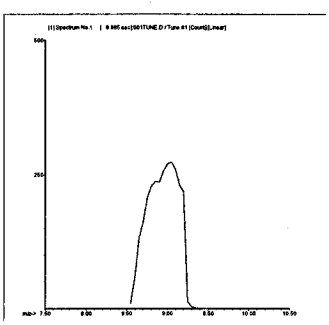
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D
Date Acquired: Nov 7 2009 03:04 pm
Acq. Method: tun_isis.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	23098	23358	23173	22978	22919	23063	0.75	5.00	
9 Be	2804	2779	2831	2892	2712	2807	2.36	5.00	
24 Mg	13819	13879	13741	14010	13810	13653	0.98	5.00	
59 Co	53596	53850	53962	53966	52908	53294	0.88	5.00	
115 In	1005351	1004408	1002826	1008799	1004052	1006672	0.24	5.00	
208 Pb	62719	64001	62223	62327	62711	62333	1.18	5.00	
238 U	130895	133955	130889	130170	131168	128294	1.56	5.00	

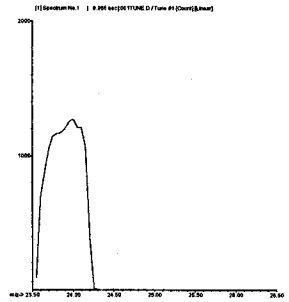


7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D



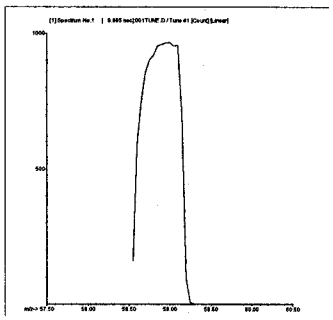
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



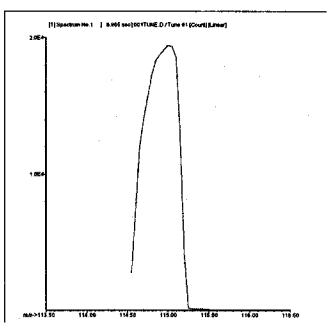
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



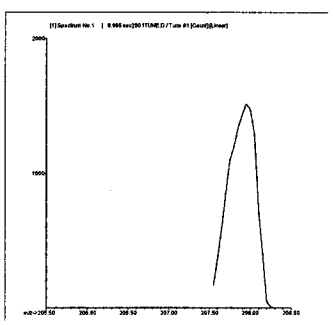
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



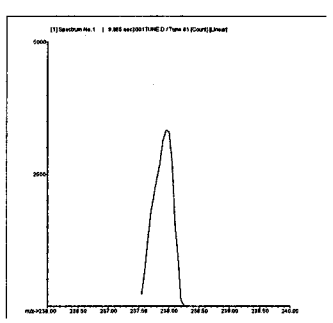
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\002CALB.D\002CALB.D#
Date Acquired: Nov 7 2009 03:07 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

9/6/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	130	55.47
52	Cr	72	1	2920	1.23
55	Mn	72	1	487	11.32
59	Co	72	1	43	35.25
60	Ni	72	1	67	56.79
63	Cu	72	1	247	16.39
66	Zn	72	1	177	1.72
75	As	72	1	38	36.84
78	Se	72	1	290	18.25
95	Mo	72	1	17	69.28
107	Ag	115	1	17	91.65
111	Cd	115	1	6	90.67
118	Sn	115	1	120	25.00
121	Sb	115	1	7	0.00
137	Ba	115	1	11	17.32
205	Tl	165	1	53	12.50
208	Pb	165	1	250	7.42
232	Th	165	1	93	59.01
238	U	165	1	83	36.66

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	450969	0.62
45	Sc	1	1353461	1.72
72	Ge	1	599452	0.37
115	In	1	1813996	0.92
165	Ho	1	3291682	1.21

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#
Date Acquired: Nov 7 2009 03:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	107	14.32
52	Cr	72	1	2804	3.71
55	Mn	72	1	517	15.52
59	Co	72	1	27	21.65
60	Ni	72	1	90	0.00
63	Cu	72	1	277	2.09
66	Zn	72	1	301	6.45
75	As	72	1	36	30.93
78	Se	72	1	263	32.30
95	Mo	72	1	20	50.00
107	Ag	115	1	10	100.00
111	Cd	115	1	-7	207.08
118	Sn	115	1	510	8.55
121	Sb	115	1	13	43.30
137	Ba	115	1	76	40.99
205	Tl	165	1	24	34.32
208	Pb	165	1	256	8.68
232	Th	165	1	100	62.45
238	U	165	1	27	57.28

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	455621	1.61
45	Sc	1	1356727	0.85
72	Ge	1	598490	0.65
115	In	1	1797032	1.18
165	Ho	1	3253654	1.35

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 7 2009 03:12 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:10 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52398	1.41
51	V	72	1	764367	2.20
52	Cr	72	1	771475	1.19
55	Mn	72	1	912002	1.09
59	Co	72	1	914930	2.11
60	Ni	72	1	193364	2.37
63	Cu	72	1	465989	1.20
66	Zn	72	1	112029	1.18
75	As	72	1	90135	1.29
78	Se	72	1	18683	1.97
95	Mo	72	1	260394	0.61
107	Ag	115	1	765784	1.36
111	Cd	115	1	157700	1.34
118	Sn	115	1	441054	2.17
121	Sb	115	1	510967	1.02
137	Ba	115	1	213858	1.06
205	Tl	165	1	1838240	1.05
208	Pb	165	1	2519619	0.58
232	Th	165	1	2643067	0.57
238	U	165	1	2792671	0.69

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	449267	0.99	455621	98.6	30 - 120	
45	Sc	1	1332198	2.77	1356727	98.2	30 - 120	
72	Ge	1	575467	1.00	598490	96.2	30 - 120	
115	In	1	1781328	1.07	1797032	99.1	30 - 120	
165	Ho	1	3275522	1.43	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 7 2009 03:15 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.37	ppb	1.43	40	100.9	90 - 110	
51 V	72	1	38.46	ppb	0.46	40	96.2	90 - 110	
52 Cr	72	1	39.20	ppb	1.19	40	98.0	90 - 110	
55 Mn	72	1	39.82	ppb	0.12	40	99.6	90 - 110	
59 Co	72	1	38.88	ppb	0.70	40	97.2	90 - 110	
60 Ni	72	1	40.10	ppb	0.16	40	100.3	90 - 110	
63 Cu	72	1	39.43	ppb	0.82	40	98.6	90 - 110	
66 Zn	72	1	40.09	ppb	0.20	40	100.2	90 - 110	
75 As	72	1	39.44	ppb	0.27	40	98.6	90 - 110	
78 Se	72	1	38.96	ppb	4.82	40	97.4	90 - 110	
95 Mo	72	1	39.50	ppb	0.72	40	98.8	90 - 110	
107 Ag	115	1	38.87	ppb	1.47	40	97.2	90 - 110	
111 Cd	115	1	39.30	ppb	0.98	40	98.3	90 - 110	
118 Sn	115	1	39.04	ppb	1.08	40	97.6	90 - 110	
121 Sb	115	1	39.64	ppb	1.29	40	99.1	90 - 110	
137 Ba	115	1	38.76	ppb	1.35	40	96.9	90 - 110	
205 Tl	165	1	39.29	ppb	2.05	40	98.2	90 - 110	
208 Pb	165	1	40.72	ppb	2.07	40	101.8	90 - 110	
232 Th	165	1	41.00	ppb	0.86	40	102.5	90 - 110	
238 U	165	1	40.29	ppb	1.06	40	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448116	0.63	455621	98.4	30 - 120	
45 Sc	1	1362171	0.61	1356727	100.4	30 - 120	
72 Ge	1	576140	0.97	598490	96.3	30 - 120	
115 In	1	1802991	1.36	1797032	100.3	30 - 120	
165 Ho	1	3291704	0.83	3253654	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\006WASH.D\006WASH.D#
Date Acquired: Nov 7 2009 03:18 pm
Operator: TEL
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.014 ppb	15.49	1.30	
51 V	72	1	4.659 ppb	1.34	6.50	
52 Cr	72	1	1.891 ppb	2.95	2.60	
55 Mn	72	1	1.009 ppb	5.61	1.30	
59 Co	72	1	0.959 ppb	4.52	1.30	
60 Ni	72	1	2.093 ppb	8.35	2.60	
63 Cu	72	1	1.903 ppb	3.09	2.60	
66 Zn	72	1	9.821 ppb	1.82	13.00	
75 As	72	1	4.879 ppb	0.84	6.50	
78 Se	72	1	4.897 ppb	10.67	6.50	
95 Mo	72	1	2.003 ppb	7.36	2.60	
107 Ag	115	1	4.951 ppb	3.27	6.50	
111 Cd	115	1	1.010 ppb	5.23	1.30	
118 Sn	115	1	10.070 ppb	2.63	13.00	
121 Sb	115	1	2.216 ppb	0.33	2.60	
137 Ba	115	1	0.996 ppb	4.86	1.30	
205 Tl	165	1	1.209 ppb	0.85	1.30	
208 Pb	165	1	1.032 ppb	2.04	1.30	
232 Th	165	1	2.207 ppb	1.51	2.60	
238 U	165	1	1.091 ppb	3.35	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	450702	0.54	455621	98.9	30 - 120	
45 Sc	1	1340626	0.89	1356727	98.8	30 - 120	
72 Ge	1	589280	0.55	598490	98.5	30 - 120	
115 In	1	1800289	1.54	1797032	100.2	30 - 120	
165 Ho	1	3280239	1.67	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 7 2009 03:20 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	0.01	ppb	78.95	1.00	
52 Cr	72	1	0.00	ppb	801.07	1.00	
55 Mn	72	1	0.00	ppb	167.97	1.00	
59 Co	72	1	0.00	ppb	88.12	1.00	
60 Ni	72	1	0.00	ppb	330.87	1.00	
63 Cu	72	1	-0.02	ppb	18.87	1.00	
66 Zn	72	1	-0.08	ppb	16.28	1.00	
75 As	72	1	0.00	ppb	320.71	1.00	
78 Se	72	1	-0.34	ppb	104.80	1.00	
95 Mo	72	1	0.03	ppb	28.62	1.00	
107 Ag	115	1	0.01	ppb	75.43	1.00	
111 Cd	115	1	0.01	ppb	156.14	1.00	
118 Sn	115	1	0.05	ppb	28.25	1.00	
121 Sb	115	1	0.08	ppb	20.91	1.00	
137 Ba	115	1	-0.02	ppb	26.22	1.00	
205 Tl	165	1	0.04	ppb	12.74	1.00	
208 Pb	165	1	0.00	ppb	28.23	1.00	
232 Th	165	1	0.02	ppb	38.30	1.00	
238 U	165	1	0.00	ppb	35.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453788	0.69	455621	99.6	30 - 120	
45 Sc	1	1334714	1.17	1356727	98.4	30 - 120	
72 Ge	1	592403	0.34	598490	99.0	30 - 120	
115 In	1	1792165	0.66	1797032	99.7	30 - 120	
165 Ho	1	3254324	0.30	3253654	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\008RLST.D\008RLST.D#
Date Acquired: Nov 7 2009 03:23 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1.03 ppb	7.07	1	102.9	50 - 150	
51 V	72	1	0.95 ppb	2.40	1	94.6	50 - 150	
52 Cr	72	1	0.95 ppb	9.15	1	94.9	50 - 150	
55 Mn	72	1	0.98 ppb	3.40	1	97.8	50 - 150	
59 Co	72	1	0.99 ppb	1.20	1	99.3	50 - 150	
60 Ni	72	1	0.99 ppb	1.44	1	98.7	50 - 150	
63 Cu	72	1	0.97 ppb	3.25	1	96.6	50 - 150	
66 Zn	72	1	9.84 ppb	1.62	10	98.4	50 - 150	
75 As	72	1	1.01 ppb	1.47	1	100.9	50 - 150	
78 Se	72	1	0.85 ppb	29.55	1	85.1	50 - 150	
95 Mo	72	1	0.98 ppb	3.69	1	98.3	50 - 150	
107 Ag	115	1	0.98 ppb	6.91	1	98.4	50 - 150	
111 Cd	115	1	0.98 ppb	2.94	1	97.7	50 - 150	
118 Sn	115	1	9.90 ppb	3.50	10	99.0	50 - 150	
121 Sb	115	1	1.06 ppb	2.89	1	105.8	50 - 150	
137 Ba	115	1	0.93 ppb	4.92	1	92.9	50 - 150	
205 Tl	165	1	1.05 ppb	1.24	1	104.9	50 - 150	
208 Pb	165	1	1.05 ppb	0.65	1	104.5	50 - 150	
232 Th	165	1	1.07 ppb	0.78	1	106.6	50 - 150	
238 U	165	1	1.09 ppb	0.98	1	109.3	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	452942	1.17	455621	99.4	30 - 120	
45 Sc	1	1350845	0.67	1356727	99.6	30 - 120	
72 Ge	1	590050	0.39	598490	98.6	30 - 120	
115 In	1	1791700	1.48	1797032	99.7	30 - 120	
165 Ho	1	3276677	0.55	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 7 2009 03:26 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.18	ppb	4.87	0	85.7	80 - 120	
51 V	72	1	0.19	ppb	1.60	0	98.1	80 - 120	
52 Cr	72	1	0.17	ppb	19.24	0	88.9	80 - 120	
55 Mn	72	1	0.24	ppb	0.90	0	122.4	80 - 120	
59 Co	72	1	0.21	ppb	2.54	0	105.0	80 - 120	
60 Ni	72	1	0.19	ppb	33.14	0	95.0	80 - 120	
63 Cu	72	1	0.19	ppb	26.00	0	96.8	80 - 120	
66 Zn	72	1	1.99	ppb	0.59	2	101.2	80 - 120	
75 As	72	1	0.22	ppb	3.49	0	111.1	80 - 120	
78 Se	72	1	-0.03	ppb	493.20	0	-19.4	80 - 120	
95 Mo	72	1	0.20	ppb	10.11	0	102.9	80 - 120	
107 Ag	115	1	0.19	ppb	9.51	0	98.0	80 - 120	
111 Cd	115	1	0.20	ppb	6.38	0	102.8	80 - 120	
118 Sn	115	1	1.96	ppb	1.89	2	99.1	80 - 120	
121 Sb	115	1	0.22	ppb	4.04	0	104.0	80 - 120	
137 Ba	115	1	0.19	ppb	4.99	0	101.2	80 - 120	
205 Tl	165	1	0.21	ppb	2.78	0	101.1	80 - 120	
208 Pb	165	1	0.21	ppb	2.60	0	100.1	80 - 120	
232 Th	165	1	0.21	ppb	3.95	0	98.4	80 - 120	
238 U	165	1	0.21	ppb	3.63	0	98.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453567	1.29	455621	99.5	30 - 120	
45 Sc	1	1337172	0.83	1356727	98.6	30 - 120	
72 Ge	1	590407	0.86	598490	98.6	30 - 120	
115 In	1	1781901	0.99	1797032	99.2	30 - 120	
165 Ho	1	3288568	1.80	3253654	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 7 2009 03:29 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	0.00	0.00	ppb	62.04	3600	
52 Cr	72	1	0.00	0.00	ppb	1081.40	3600	
55 Mn	72	1	0.00	0.00	ppb	140.46	3600	
59 Co	72	1	0.00	0.00	ppb	189.04	3600	
60 Ni	72	1	0.00	0.00	ppb	522.21	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.36	3600	
66 Zn	72	1	0.05	0.05	ppb	55.06	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	2.16	2.16	ppb	11.88	3600	
95 Mo	72	1	0.00	0.00	ppb	222.57	3600	
107 Ag	115	1	0.01	0.01	ppb	10.07	3600	
111 Cd	115	1	0.00	0.00	ppb	89.77	3600	
118 Sn	115	1	0.00	0.00	ppb	293.54	3600	
121 Sb	115	1	0.02	0.02	ppb	23.95	3600	
137 Ba	115	1	-0.02	-0.02	ppb	16.61	3600	
205 Tl	165	1	0.01	0.01	ppb	2.14	3600	
208 Pb	165	1	0.00	0.00	ppb	39.67	3600	
232 Th	165	1	0.00	0.00	ppb	17.19	1000	
238 U	165	1	0.00	0.00	ppb	388.10	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453890	1.30	455621	99.6	30 - 120	
45 Sc	1	1357795	0.37	1356727	100.1	30 - 120	
72 Ge	1	592423	0.94	598490	99.0	30 - 120	
115 In	1	1792023	1.18	1797032	99.7	30 - 120	
165 Ho	1	3279675	0.39	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 7 2009 03:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.45 ppb	8.60	1.00	
52 Cr	72	1	1.86 ppb	3.80	1.00	
55 Mn	72	1	3.11 ppb	0.88	1.00	
59 Co	72	1	0.12 ppb	10.19	1.00	
60 Ni	72	1	1.23 ppb	9.98	1.00	
63 Cu	72	1	0.56 ppb	5.58	1.00	
66 Zn	72	1	4.20 ppb	1.79	10.00	
75 As	72	1	0.35 ppb	13.35	1.00	
78 Se	72	1	0.47 ppb	67.55	1.00	
95 Mo	72	1	2055.00 ppb	1.11	2000.00	
107 Ag	115	1	0.03 ppb	8.56	1.00	
111 Cd	115	1	0.40 ppb	30.97	1.00	
118 Sn	115	1	0.93 ppb	18.89	10.00	
121 Sb	115	1	0.95 ppb	3.56	1.00	
137 Ba	115	1	0.00 ppb	326.02	1.00	
205 Tl	165	1	0.04 ppb	20.03	1.00	
208 Pb	165	1	1.04 ppb	2.03	1.00	
232 Th	165	1	0.02 ppb	5.48	1.00	
238 U	165	1	0.00 ppb	14.89	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	297281	2.41	455621	65.2	30 - 120	
45 Sc	1	939322	1.85	1356727	69.2	30 - 120	
72 Ge	1	429449	0.82	598490	71.8	30 - 120	
115 In	1	1325081	0.92	1797032	73.7	30 - 120	
165 Ho	1	2485688	0.47	3253654	76.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 7 2009 03:34 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	108.90	0.75	100	108.9	80 - 120	
51 V	72	1	92.27	0.38	100	92.3	80 - 120	
52 Cr	72	1	90.40	0.96	100	90.4	80 - 120	
55 Mn	72	1	92.59	1.18	100	92.6	80 - 120	
59 Co	72	1	88.85	0.30	100	88.9	80 - 120	
60 Ni	72	1	89.72	0.28	100	89.7	80 - 120	
63 Cu	72	1	85.14	0.90	100	85.1	80 - 120	
66 Zn	72	1	95.65	0.49	100	95.7	80 - 120	
75 As	72	1	99.50	0.47	100	99.5	80 - 120	
78 Se	72	1	105.90	0.80	100	105.9	80 - 120	
95 Mo	72	1	2149.00	1.99	2100	102.3	80 - 120	
107 Ag	115	1	84.00	7.96	100	84.0	80 - 120	
111 Cd	115	1	93.62	2.89	100	93.6	80 - 120	
118 Sn	115	1	96.78	1.78	100	96.8	80 - 120	
121 Sb	115	1	100.10	2.32	100	100.1	80 - 120	
137 Ba	115	1	96.82	2.12	100	96.8	80 - 120	
205 Tl	165	1	94.83	0.67	100	94.8	80 - 120	
208 Pb	165	1	93.97	0.82	100	94.0	80 - 120	
232 Th	165	1	101.90	0.67	100	101.9	80 - 120	
238 U	165	1	100.20	0.45	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272241	2.18	455621	59.8	30 - 120	
45 Sc	1	935334	1.15	1356727	68.9	30 - 120	
72 Ge	1	419509	1.32	598490	70.1	30 - 120	
115 In	1	1327038	1.55	1797032	73.8	30 - 120	
165 Ho	1	2524289	0.15	3253654	77.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 7 2009 03:37 pm
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0	0.0	80 - 120	
51 V	72	1	0.06	ppb	15.15	0	29.2	80 - 120	
52 Cr	72	1	0.00	ppb	941.54	0	-2.5	80 - 120	
55 Mn	72	1	0.00	ppb	87.90	0	-2.5	80 - 120	
59 Co	72	1	0.00	ppb	138.19	0	-0.5	80 - 120	
60 Ni	72	1	-0.01	ppb	79.76	0	-6.6	80 - 120	
63 Cu	72	1	-0.02	ppb	11.32	0	-10.3	80 - 120	
66 Zn	72	1	-0.12	ppb	4.66	2	-6.1	80 - 120	
75 As	72	1	0.00	ppb	172.97	0	2.3	80 - 120	
78 Se	72	1	0.18	ppb	157.63	0	105.8	80 - 120	
95 Mo	72	1	0.92	ppb	26.25	0	470.1	80 - 120	
107 Ag	115	1	0.01	ppb	38.83	0	5.1	80 - 120	
111 Cd	115	1	0.00	ppb	268.01	0	2.2	80 - 120	
118 Sn	115	1	-0.03	ppb	57.94	2	-1.3	80 - 120	
121 Sb	115	1	0.13	ppb	22.58	0	60.8	80 - 120	
137 Ba	115	1	-0.03	ppb	10.98	0	-13.6	80 - 120	
205 Tl	165	1	0.00	ppb	35.28	0	1.1	80 - 120	
208 Pb	165	1	0.00	ppb	109.50	0	-0.7	80 - 120	
232 Th	165	1	0.03	ppb	14.09	0	14.5	80 - 120	
238 U	165	1	0.02	ppb	14.78	0	7.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	392251	1.40	455621	86.1	30 - 120	
45 Sc	1	1236871	2.21	1356727	91.2	30 - 120	
72 Ge	1	563469	0.48	598490	94.1	30 - 120	
115 In	1	1720438	0.38	1797032	95.7	30 - 120	
165 Ho	1	3228952	0.84	3253654	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\014 LR.D\014 LR.D#
Date Acquired: Nov 7 2009 03:40 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1021.00 ppb	0.96	1000	102.1	90 - 110	
51 V	72	1	925.30 ppb	0.26	1000	92.5	90 - 110	
52 Cr	72	1	921.80 ppb	1.18	1000	92.2	90 - 110	
55 Mn	72	1	929.00 ppb	0.53	1000	92.9	90 - 110	
59 Co	72	1	937.60 ppb	0.95	1000	93.8	90 - 110	
60 Ni	72	1	990.00 ppb	1.83	1000	99.0	90 - 110	
63 Cu	72	1	941.00 ppb	0.34	1000	94.1	90 - 110	
66 Zn	72	1	1002.00 ppb	1.56	1000	100.2	90 - 110	
75 As	72	1	1025.00 ppb	1.12	1000	102.5	90 - 110	
78 Se	72	1	1031.00 ppb	0.90	1000	103.1	90 - 110	
95 Mo	72	1	1009.00 ppb	0.81	1000	100.9	90 - 110	
107 Ag	115	1	955.40 ppb	0.47	1000	95.5	90 - 110	
111 Cd	115	1	993.10 ppb	0.32	1000	99.3	90 - 110	
118 Sn	115	1	954.10 ppb	1.58	1000	95.4	90 - 110	
121 Sb	115	1	963.20 ppb	0.99	1000	96.3	90 - 110	
137 Ba	115	1	967.40 ppb	1.98	1000	96.7	90 - 110	
205 Tl	165	1	966.90 ppb	1.78	1000	96.7	90 - 110	
208 Pb	165	1	947.60 ppb	1.76	1000	94.8	90 - 110	
232 Th	165	1	989.70 ppb	1.92	1000	99.0	90 - 110	
238 U	165	1	989.00 ppb	1.57	1000	98.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	400820	0.66	455621	88.0	30 - 120	
45 Sc	1	1229119	1.48	1356727	90.6	30 - 120	
72 Ge	1	547741	0.96	598490	91.5	30 - 120	
115 In	1	1703051	0.61	1797032	94.8	30 - 120	
165 Ho	1	3245351	1.45	3253654	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 7 2009 03:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.22	3600	
51 V	72	1	0.03	0.03	ppb	5.05	3600	
52 Cr	72	1	-0.02	-0.02	ppb	115.91	3600	
55 Mn	72	1	0.00	0.00	ppb	108.03	3600	
59 Co	72	1	0.00	0.00	ppb	73.71	3600	
60 Ni	72	1	-0.01	-0.01	ppb	98.85	3600	
63 Cu	72	1	-0.01	-0.01	ppb	57.10	3600	
66 Zn	72	1	-0.10	-0.10	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	18.58	3600	
78 Se	72	1	0.26	0.26	ppb	60.51	3600	
95 Mo	72	1	0.62	0.62	ppb	25.89	3600	
107 Ag	115	1	0.03	0.03	ppb	13.50	3600	
111 Cd	115	1	0.01	0.01	ppb	106.57	3600	
118 Sn	115	1	1.01	1.01	ppb	28.84	3600	
121 Sb	115	1	1.39	1.39	ppb	19.23	3600	
137 Ba	115	1	-0.02	-0.02	ppb	4.07	3600	
205 Tl	165	1	0.06	0.06	ppb	11.15	3600	
208 Pb	165	1	0.01	0.01	ppb	28.34	3600	
232 Th	165	1	0.12	0.12	ppb	15.82	1000	
238 U	165	1	0.14	0.14	ppb	23.45	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	416465	0.36	455621	91.4	30 - 120	
45 Sc	1	1277469	0.68	1356727	94.2	30 - 120	
72 Ge	1	579692	0.72	598490	96.9	30 - 120	
115 In	1	1790861	0.65	1797032	99.7	30 - 120	
165 Ho	1	3297951	1.06	3253654	101.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 7 2009 03:45 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	0.98	50	101.6	90 - 110	
51 V	72	1	47.69	ppb	0.85	50	95.4	90 - 110	
52 Cr	72	1	47.81	ppb	0.72	50	95.6	90 - 110	
55 Mn	72	1	47.91	ppb	0.63	50	95.8	90 - 110	
59 Co	72	1	48.31	ppb	1.05	50	96.6	90 - 110	
60 Ni	72	1	49.87	ppb	0.51	50	99.7	90 - 110	
63 Cu	72	1	48.27	ppb	0.97	50	96.5	90 - 110	
66 Zn	72	1	49.24	ppb	0.51	50	98.5	90 - 110	
75 As	72	1	49.61	ppb	0.57	50	99.2	90 - 110	
78 Se	72	1	51.34	ppb	3.01	50	102.7	90 - 110	
95 Mo	72	1	49.43	ppb	1.34	50	98.9	90 - 110	
107 Ag	115	1	48.77	ppb	0.60	50	97.5	90 - 110	
111 Cd	115	1	49.46	ppb	1.05	50	98.9	90 - 110	
118 Sn	115	1	49.42	ppb	0.94	50	98.8	90 - 110	
121 Sb	115	1	49.48	ppb	0.82	50	99.0	90 - 110	
137 Ba	115	1	48.65	ppb	1.08	50	97.3	90 - 110	
205 Tl	165	1	49.98	ppb	1.20	50	100.0	90 - 110	
208 Pb	165	1	50.63	ppb	2.15	50	101.3	90 - 110	
232 Th	165	1	50.61	ppb	1.41	50	101.2	90 - 110	
238 U	165	1	50.58	ppb	0.97	50	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	424171	1.07	455621	93.1	30 - 120	
45 Sc	1	1298607	1.88	1356727	95.7	30 - 120	
72 Ge	1	570018	0.80	598490	95.2	30 - 120	
115 In	1	1777686	0.76	1797032	98.9	30 - 120	
165 Ho	1	3306431	1.43	3253654	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 7 2009 03:48 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	0.018	ppb	26.29	1.00	
52 Cr	72	1	0.021	ppb	89.72	1.00	
55 Mn	72	1	-0.002	ppb	258.47	1.00	
59 Co	72	1	0.000	ppb	7.74	1.00	
60 Ni	72	1	-0.003	ppb	365.53	1.00	
63 Cu	72	1	-0.006	ppb	212.36	1.00	
66 Zn	72	1	-0.070	ppb	18.30	1.00	
75 As	72	1	0.022	ppb	32.72	1.00	
78 Se	72	1	0.156	ppb	92.00	1.00	
95 Mo	72	1	0.115	ppb	30.30	1.00	
107 Ag	115	1	0.011	ppb	38.12	1.00	
111 Cd	115	1	0.002	ppb	113.82	1.00	
118 Sn	115	1	0.224	ppb	27.67	1.00	
121 Sb	115	1	0.348	ppb	18.44	1.00	
137 Ba	115	1	-0.026	ppb	8.86	1.00	
205 Tl	165	1	0.021	ppb	16.25	1.00	
208 Pb	165	1	0.000	ppb	463.86	1.00	
232 Th	165	1	0.056	ppb	20.03	1.00	
238 U	165	1	0.020	ppb	23.07	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	432937	1.72	455621	95.0	30 - 120	
45 Sc	1	1320709	0.75	1356727	97.3	30 - 120	
72 Ge	1	592471	0.93	598490	99.0	30 - 120	
115 In	1	1824111	0.70	1797032	101.5	30 - 120	
165 Ho	1	3304082	2.00	3253654	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\018WASH.D\018WASH.D#
Date Acquired: Nov 7 2009 03:50 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.089 ppb	20.89	1.30	
51 V	72	1	4.721 ppb	1.02	6.50	
52 Cr	72	1	1.919 ppb	1.17	2.60	
55 Mn	72	1	0.984 ppb	3.79	1.30	
59 Co	72	1	0.988 ppb	7.05	1.30	
60 Ni	72	1	1.975 ppb	5.09	2.60	
63 Cu	72	1	1.890 ppb	1.03	2.60	
66 Zn	72	1	9.815 ppb	1.05	13.00	
75 As	72	1	4.945 ppb	0.93	6.50	
78 Se	72	1	5.017 ppb	5.41	6.50	
95 Mo	72	1	2.030 ppb	4.90	2.60	
107 Ag	115	1	5.119 ppb	1.83	6.50	
111 Cd	115	1	0.998 ppb	8.12	1.30	
118 Sn	115	1	10.310 ppb	2.66	13.00	
121 Sb	115	1	2.181 ppb	2.54	2.60	
137 Ba	115	1	0.995 ppb	2.40	1.30	
205 Tl	165	1	1.063 ppb	1.61	1.30	
208 Pb	165	1	1.038 ppb	1.89	1.30	
232 Th	165	1	2.164 ppb	2.13	2.60	
238 U	165	1	1.100 ppb	1.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	443603	0.24	455621	97.4	30 - 120	
45 Sc	1	1335995	1.35	1356727	98.5	30 - 120	
72 Ge	1	596206	0.64	598490	99.6	30 - 120	
115 In	1	1804793	1.75	1797032	100.4	30 - 120	
165 Ho	1	3324168	1.02	3253654	102.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\095 CCV.D\095 CCV.D#
Date Acquired: Nov 7 2009 07:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.00	ppb	3.68	50	100.0	90 - 110	
51 V	72	1	49.46	ppb	0.96	50	98.9	90 - 110	
52 Cr	72	1	49.13	ppb	0.63	50	98.3	90 - 110	
55 Mn	72	1	48.00	ppb	0.58	50	96.0	90 - 110	
59 Co	72	1	49.88	ppb	1.19	50	99.8	90 - 110	
60 Ni	72	1	52.70	ppb	0.96	50	105.4	90 - 110	
63 Cu	72	1	50.75	ppb	0.19	50	101.5	90 - 110	
66 Zn	72	1	48.83	ppb	0.18	50	97.7	90 - 110	
75 As	72	1	50.85	ppb	1.33	50	101.7	90 - 110	
78 Se	72	1	50.97	ppb	2.08	50	101.9	90 - 110	
95 Mo	72	1	49.28	ppb	0.59	50	98.6	90 - 110	
107 Ag	115	1	48.69	ppb	1.80	50	97.4	90 - 110	
111 Cd	115	1	48.20	ppb	1.31	50	96.4	90 - 110	
118 Sn	115	1	47.65	ppb	1.87	50	95.3	90 - 110	
121 Sb	115	1	47.61	ppb	2.17	50	95.2	90 - 110	
137 Ba	115	1	48.23	ppb	1.87	50	96.5	90 - 110	
205 Tl	165	1	49.17	ppb	1.01	50	98.3	90 - 110	
208 Pb	165	1	50.08	ppb	1.74	50	100.2	90 - 110	
232 Th	165	1	49.66	ppb	0.53	50	99.3	90 - 110	
238 U	165	1	49.60	ppb	0.64	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	431764	0.94	455621	94.8	30 - 120	
45 Sc	1	1275635	0.72	1356727	94.0	30 - 120	
72 Ge	1	557000	0.87	598490	93.1	30 - 120	
115 In	1	1717369	0.76	1797032	95.6	30 - 120	
165 Ho	1	3017615	0.61	3253654	92.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\096 CCB.D\096 CCB.D#
Date Acquired: Nov 7 2009 07:28 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.006	ppb	24.61	1.00	
52 Cr	72	1	0.005	ppb	16.13	1.00	
55 Mn	72	1	0.012	ppb	40.48	1.00	
59 Co	72	1	0.003	ppb	90.18	1.00	
60 Ni	72	1	0.005	ppb	115.47	1.00	
63 Cu	72	1	-0.001	ppb	1434.90	1.00	
66 Zn	72	1	0.040	ppb	39.82	1.00	
75 As	72	1	-0.001	ppb	689.47	1.00	
78 Se	72	1	0.203	ppb	119.68	1.00	
95 Mo	72	1	0.030	ppb	15.19	1.00	
107 Ag	115	1	0.009	ppb	17.39	1.00	
111 Cd	115	1	0.008	ppb	214.98	1.00	
118 Sn	115	1	0.033	ppb	87.07	1.00	
121 Sb	115	1	0.133	ppb	16.18	1.00	
137 Ba	115	1	-0.005	ppb	66.27	1.00	
205 Tl	165	1	0.010	ppb	5.85	1.00	
208 Pb	165	1	0.007	ppb	10.03	1.00	
232 Th	165	1	0.031	ppb	21.92	1.00	
238 U	165	1	0.010	ppb	23.45	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	442577	1.12	455621	97.1	30 - 120	
45 Sc	1	1308803	1.31	1356727	96.5	30 - 120	
72 Ge	1	575158	0.41	598490	96.1	30 - 120	
115 In	1	1692957	0.78	1797032	94.2	30 - 120	
165 Ho	1	3023523	0.70	3253654	92.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\097WASH.D\097WASH.D#
Date Acquired:	Nov 7 2009 07:30 pm
Operator:	TEL
Sample Name:	RLCV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Nov 07 2009 03:13 pm
Sample Type:	WASH
Total Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.033 ppb	16.46	1.30	
51 V	72	1	4.891 ppb	1.41	6.50	
52 Cr	72	1	2.023 ppb	4.58	2.60	
55 Mn	72	1	0.940 ppb	0.94	1.30	
59 Co	72	1	1.033 ppb	0.60	1.30	
60 Ni	72	1	2.129 ppb	10.31	2.60	
63 Cu	72	1	2.031 ppb	2.60	2.60	
66 Zn	72	1	10.080 ppb	0.14	13.00	
75 As	72	1	5.048 ppb	1.66	6.50	
78 Se	72	1	5.042 ppb	13.65	6.50	
95 Mo	72	1	2.050 ppb	1.88	2.60	
107 Ag	115	1	5.260 ppb	2.15	6.50	
111 Cd	115	1	0.998 ppb	4.13	1.30	
118 Sn	115	1	9.995 ppb	1.00	13.00	
121 Sb	115	1	2.042 ppb	0.94	2.60	
137 Ba	115	1	1.003 ppb	6.96	1.30	
205 Tl	165	1	1.017 ppb	1.09	1.30	
208 Pb	165	1	1.046 ppb	1.73	1.30	
232 Th	165	1	2.137 ppb	1.47	2.60	
238 U	165	1	1.065 ppb	1.95	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448328	0.34	455621	98.4	30 - 120	
45 Sc	1	1294487	0.37	1356727	95.4	30 - 120	
72 Ge	1	577791	0.38	598490	96.5	30 - 120	
115 In	1	1706897	0.23	1797032	95.0	30 - 120	
165 Ho	1	3033777	0.64	3253654	93.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\098ICSA.D\098ICSA.D#
Date Acquired: Nov 7 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.01 ppb	173.15	1.00	
51 V	72	1	2.34 ppb	2.35	1.00	
52 Cr	72	1	1.89 ppb	3.80	1.00	
55 Mn	72	1	3.08 ppb	1.35	1.00	
59 Co	72	1	0.13 ppb	9.32	1.00	
60 Ni	72	1	1.54 ppb	6.59	1.00	
63 Cu	72	1	0.62 ppb	13.41	1.00	
66 Zn	72	1	4.36 ppb	1.67	10.00	
75 As	72	1	0.31 ppb	11.37	1.00	
78 Se	72	1	-0.18 ppb	17.27	1.00	
95 Mo	72	1	2024.00 ppb	0.75	2000.00	
107 Ag	115	1	0.04 ppb	30.78	1.00	
111 Cd	115	1	0.44 ppb	34.74	1.00	
118 Sn	115	1	0.41 ppb	9.39	10.00	
121 Sb	115	1	0.94 ppb	2.45	1.00	
137 Ba	115	1	0.02 ppb	61.87	1.00	
205 Tl	165	1	0.04 ppb	26.87	1.00	
208 Pb	165	1	1.05 ppb	0.68	1.00	
232 Th	165	1	0.02 ppb	35.17	1.00	
238 U	165	1	0.01 ppb	14.16	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	316325	1.25	455621	69.4	30 - 120	
45 Sc	1	945462	1.56	1356727	69.7	30 - 120	
72 Ge	1	429131	0.94	598490	71.7	30 - 120	
115 In	1	1251973	0.62	1797032	69.7	30 - 120	
165 Ho	1	2302241	0.67	3253654	70.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\099ICSB.D\099ICSB.D#
Date Acquired: Nov 7 2009 07:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.10	0.81	100	101.1	80 - 120	
51 V	72	1	96.26	0.64	100	96.3	80 - 120	
52 Cr	72	1	92.97	0.53	100	93.0	80 - 120	
55 Mn	72	1	92.78	0.33	100	92.8	80 - 120	
59 Co	72	1	90.72	0.50	100	90.7	80 - 120	
60 Ni	72	1	92.71	0.31	100	92.7	80 - 120	
63 Cu	72	1	87.81	1.07	100	87.8	80 - 120	
66 Zn	72	1	94.31	0.22	100	94.3	80 - 120	
75 As	72	1	101.10	0.38	100	101.1	80 - 120	
78 Se	72	1	105.10	1.94	100	105.1	80 - 120	
95 Mo	72	1	2106.00	1.43	2100	100.3	80 - 120	
107 Ag	115	1	85.35	1.62	100	85.4	80 - 120	
111 Cd	115	1	91.55	1.47	100	91.6	80 - 120	
118 Sn	115	1	96.95	1.86	100	97.0	80 - 120	
121 Sb	115	1	101.90	1.14	100	101.9	80 - 120	
137 Ba	115	1	97.10	2.05	100	97.1	80 - 120	
205 Tl	165	1	93.31	1.80	100	93.3	80 - 120	
208 Pb	165	1	92.31	0.40	100	92.3	80 - 120	
232 Th	165	1	98.27	1.03	100	98.3	80 - 120	
238 U	165	1	97.38	0.98	100	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298307	2.13	455621	65.5	30 - 120	
45 Sc	1	951400	0.73	1356727	70.1	30 - 120	
72 Ge	1	417924	0.89	598490	69.8	30 - 120	
115 In	1	1269948	0.83	1797032	70.7	30 - 120	
165 Ho	1	2339416	0.71	3253654	71.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\100WASH.D\100WASH.D#
Date Acquired: Nov 7 2009 07:39 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	1.30	
51 V	72	1	0.142 ppb	7.89	6.50	
52 Cr	72	1	0.005 ppb	257.91	2.60	
55 Mn	72	1	0.007 ppb	90.77	1.30	
59 Co	72	1	0.000 ppb	202.05	1.30	
60 Ni	72	1	0.093 ppb	12.92	2.60	
63 Cu	72	1	-0.001 ppb	1876.80	2.60	
66 Zn	72	1	0.085 ppb	20.36	13.00	
75 As	72	1	0.006 ppb	156.23	6.50	
78 Se	72	1	-0.186 ppb	140.52	6.50	
95 Mo	72	1	0.818 ppb	23.12	2.60	
107 Ag	115	1	0.010 ppb	12.80	6.50	
111 Cd	115	1	0.005 ppb	231.49	1.30	
118 Sn	115	1	-0.010 ppb	165.88	13.00	
121 Sb	115	1	0.032 ppb	29.89	2.60	
137 Ba	115	1	-0.014 ppb	32.29	1.30	
205 Tl	165	1	0.003 ppb	28.88	1.30	
208 Pb	165	1	0.004 ppb	10.63	1.30	
232 Th	165	1	0.024 ppb	19.02	2.60	
238 U	165	1	0.016 ppb	20.26	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	387692	1.32	455621	85.1	30 - 120	
45 Sc	1	1182675	0.32	1356727	87.2	30 - 120	
72 Ge	1	534827	0.26	598490	89.4	30 - 120	
115 In	1	1606789	1.96	1797032	89.4	30 - 120	
165 Ho	1	2912559	0.89	3253654	89.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\101 CCV.D\101 CCV.D#
Date Acquired: Nov 7 2009 07:41 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.02	ppb	3.60	50	102.0	90 - 110	
51 V	72	1	49.10	ppb	0.68	50	98.2	90 - 110	
52 Cr	72	1	48.80	ppb	0.79	50	97.6	90 - 110	
55 Mn	72	1	48.00	ppb	0.60	50	96.0	90 - 110	
59 Co	72	1	49.55	ppb	0.61	50	99.1	90 - 110	
60 Ni	72	1	52.06	ppb	1.46	50	104.1	90 - 110	
63 Cu	72	1	50.22	ppb	0.56	50	100.4	90 - 110	
66 Zn	72	1	48.51	ppb	1.13	50	97.0	90 - 110	
75 As	72	1	50.95	ppb	0.50	50	101.9	90 - 110	
78 Se	72	1	49.38	ppb	4.19	50	98.8	90 - 110	
95 Mo	72	1	50.11	ppb	1.38	50	100.2	90 - 110	
107 Ag	115	1	49.66	ppb	0.85	50	99.3	90 - 110	
111 Cd	115	1	49.01	ppb	1.42	50	98.0	90 - 110	
118 Sn	115	1	48.68	ppb	1.81	50	97.4	90 - 110	
121 Sb	115	1	48.87	ppb	1.17	50	97.7	90 - 110	
137 Ba	115	1	49.35	ppb	1.09	50	98.7	90 - 110	
205 Tl	165	1	49.79	ppb	1.41	50	99.6	90 - 110	
208 Pb	165	1	49.95	ppb	1.13	50	99.9	90 - 110	
232 Th	165	1	49.72	ppb	0.91	50	99.4	90 - 110	
238 U	165	1	49.59	ppb	1.94	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398557	1.14	455621	87.5	30 - 120	
45 Sc	1	1252262	1.05	1356727	92.3	30 - 120	
72 Ge	1	546607	0.97	598490	91.3	30 - 120	
115 In	1	1673358	0.50	1797032	93.1	30 - 120	
165 Ho	1	3013021	0.51	3253654	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\102 CCB.D\102 CCB.D#
Date Acquired: Nov 7 2009 07:44 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.18	1.00	
51 V	72	1	0.072	ppb	11.11	1.00	
52 Cr	72	1	0.002	ppb	1427.90	1.00	
55 Mn	72	1	-0.002	ppb	998.74	1.00	
59 Co	72	1	0.004	ppb	62.33	1.00	
60 Ni	72	1	0.095	ppb	21.31	1.00	
63 Cu	72	1	0.001	ppb	1376.50	1.00	
66 Zn	72	1	0.050	ppb	67.37	1.00	
75 As	72	1	0.009	ppb	154.12	1.00	
78 Se	72	1	0.133	ppb	315.07	1.00	
95 Mo	72	1	0.099	ppb	50.63	1.00	
107 Ag	115	1	0.009	ppb	39.54	1.00	
111 Cd	115	1	0.005	ppb	103.50	1.00	
118 Sn	115	1	0.062	ppb	107.54	1.00	
121 Sb	115	1	0.138	ppb	16.19	1.00	
137 Ba	115	1	-0.017	ppb	52.66	1.00	
205 Tl	165	1	0.016	ppb	15.17	1.00	
208 Pb	165	1	0.005	ppb	21.11	1.00	
232 Th	165	1	0.033	ppb	24.50	1.00	
238 U	165	1	0.010	ppb	34.21	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422194	1.15	455621	92.7	30 - 120	
45 Sc	1	1291748	1.74	1356727	95.2	30 - 120	
72 Ge	1	580761	0.52	598490	97.0	30 - 120	
115 In	1	1717581	0.13	1797032	95.6	30 - 120	
165 Ho	1	3049966	0.69	3253654	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\103WASH.D\103WASH.D#
Date Acquired: Nov 7 2009 07:47 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.046 ppb	12.02	1.30	
51 V	72	1	4.990 ppb	4.96	6.50	
52 Cr	72	1	1.987 ppb	0.39	2.60	
55 Mn	72	1	0.984 ppb	3.75	1.30	
59 Co	72	1	0.995 ppb	2.96	1.30	
60 Ni	72	1	2.088 ppb	2.52	2.60	
63 Cu	72	1	1.963 ppb	3.31	2.60	
66 Zn	72	1	10.010 ppb	1.27	13.00	
75 As	72	1	5.172 ppb	1.14	6.50	
78 Se	72	1	5.100 ppb	6.11	6.50	
95 Mo	72	1	2.120 ppb	2.97	2.60	
107 Ag	115	1	5.166 ppb	1.31	6.50	
111 Cd	115	1	1.008 ppb	8.01	1.30	
118 Sn	115	1	10.170 ppb	2.75	13.00	
121 Sb	115	1	2.047 ppb	1.41	2.60	
137 Ba	115	1	1.038 ppb	2.48	1.30	
205 Tl	165	1	1.010 ppb	2.74	1.30	
208 Pb	165	1	1.022 ppb	1.36	1.30	
232 Th	165	1	2.079 ppb	0.26	2.60	
238 U	165	1	1.053 ppb	0.29	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	429072	0.78	455621	94.2	30 - 120	
45 Sc	1	1319350	0.97	1356727	97.2	30 - 120	
72 Ge	1	590123	0.79	598490	98.6	30 - 120	
115 In	1	1750317	1.57	1797032	97.4	30 - 120	
165 Ho	1	3092496	0.17	3253654	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/09

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#
Date Acquired:	Nov 7 2009 08:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 07 2009 08:45 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1013	6.79
52	Cr	72	1	2664	5.06
55	Mn	72	1	580	4.28
59	Co	72	1	50	19.75
60	Ni	72	1	80	25.27
63	Cu	72	1	293	22.51
66	Zn	72	1	673	6.79
75	As	72	1	36	27.55
78	Se	72	1	257	13.42
95	Mo	72	1	170	5.64
107	Ag	115	1	33	16.66
111	Cd	115	1	17	83.01
118	Sn	115	1	497	10.06
121	Sb	115	1	144	3.89
137	Ba	115	1	74	17.43
205	Tl	165	1	49	39.41
208	Pb	165	1	258	3.04
232	Th	165	1	170	44.95
238	U	165	1	24	20.55

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	398155	0.17
45	Sc	1	1273788	1.37
72	Ge	1	577640	0.30
115	In	1	1726730	0.64
165	Ho	1	3039108	1.07

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\126ICAL.D\126ICAL.D#
Date Acquired: Nov 7 2009 08:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 08:48 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	47883	0.67
51	V	72	1	747976	1.49
52	Cr	72	1	754628	1.13
55	Mn	72	1	865964	0.71
59	Co	72	1	889724	1.22
60	Ni	72	1	191586	1.40
63	Cu	72	1	456036	0.95
66	Zn	72	1	106780	0.65
75	As	72	1	89192	0.61
78	Se	72	1	18229	1.26
95	Mo	72	1	254493	1.19
107	Ag	115	1	752402	0.75
111	Cd	115	1	150239	1.10
118	Sn	115	1	420016	0.73
121	Sb	115	1	483973	0.74
137	Ba	115	1	204383	0.51
205	Tl	165	1	1701616	0.60
208	Pb	165	1	2338107	2.25
232	Th	165	1	2413552	1.92
238	U	165	1	2559276	1.77

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	398883	0.56	398155	100.2	30 - 120	
45	Sc	1	1260434	1.10	1273788	99.0	30 - 120	
72	Ge	1	556836	0.86	577640	96.4	30 - 120	
115	In	1	1704167	0.61	1726730	98.7	30 - 120	
165	Ho	1	3052265	1.25	3039108	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\127 CCV.D\127 CCV.D#
Date Acquired: Nov 7 2009 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.43	ppb	3.83	50	100.9	90 - 110	
51 V	72	1	48.44	ppb	0.77	50	96.9	90 - 110	
52 Cr	72	1	48.00	ppb	0.40	50	96.0	90 - 110	
55 Mn	72	1	48.98	ppb	0.83	50	98.0	90 - 110	
59 Co	72	1	49.19	ppb	0.88	50	98.4	90 - 110	
60 Ni	72	1	51.00	ppb	2.25	50	102.0	90 - 110	
63 Cu	72	1	50.40	ppb	1.04	50	100.8	90 - 110	
66 Zn	72	1	49.66	ppb	0.82	50	99.3	90 - 110	
75 As	72	1	49.96	ppb	1.36	50	99.9	90 - 110	
78 Se	72	1	50.40	ppb	4.89	50	100.8	90 - 110	
95 Mo	72	1	49.49	ppb	0.61	50	99.0	90 - 110	
107 Ag	115	1	48.04	ppb	0.50	50	96.1	90 - 110	
111 Cd	115	1	48.84	ppb	0.25	50	97.7	90 - 110	
118 Sn	115	1	48.90	ppb	0.50	50	97.8	90 - 110	
121 Sb	115	1	49.44	ppb	0.72	50	98.9	90 - 110	
137 Ba	115	1	49.58	ppb	0.98	50	99.2	90 - 110	
205 Tl	165	1	50.08	ppb	0.23	50	100.2	90 - 110	
208 Pb	165	1	49.87	ppb	2.65	50	99.7	90 - 110	
232 Th	165	1	50.94	ppb	1.78	50	101.9	90 - 110	
238 U	165	1	50.49	ppb	2.18	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401327	1.29	398155	100.8	30 - 120	
45 Sc	1	1286634	0.38	1273788	101.0	30 - 120	
72 Ge	1	558660	0.70	577640	96.7	30 - 120	
115 In	1	1725819	0.46	1726730	99.9	30 - 120	
165 Ho	1	3087824	1.47	3039108	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\128 CCB.D\128 CCB.D#
Date Acquired: Nov 7 2009 08:56 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.14	1.00	
51 V	72	1	-0.043	ppb	23.48	1.00	
52 Cr	72	1	0.013	ppb	34.25	1.00	
55 Mn	72	1	0.004	ppb	271.40	1.00	
59 Co	72	1	0.003	ppb	58.98	1.00	
60 Ni	72	1	0.013	ppb	122.65	1.00	
63 Cu	72	1	-0.010	ppb	116.03	1.00	
66 Zn	72	1	-0.311	ppb	3.85	1.00	
75 As	72	1	0.007	ppb	208.78	1.00	
78 Se	72	1	0.060	ppb	542.70	1.00	
95 Mo	72	1	0.010	ppb	195.90	1.00	
107 Ag	115	1	0.008	ppb	34.15	1.00	
111 Cd	115	1	-0.003	ppb	158.97	1.00	
118 Sn	115	1	0.071	ppb	72.17	1.00	
121 Sb	115	1	0.186	ppb	24.43	1.00	
137 Ba	115	1	-0.019	ppb	41.26	1.00	
205 Tl	165	1	0.019	ppb	3.88	1.00	
208 Pb	165	1	0.007	ppb	24.82	1.00	
232 Th	165	1	0.050	ppb	27.19	1.00	
238 U	165	1	0.014	ppb	24.25	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	411177	0.79	398155	103.3	30 - 120	
45 Sc	1	1305310	1.03	1273788	102.5	30 - 120	
72 Ge	1	581950	0.43	577640	100.7	30 - 120	
115 In	1	1731683	0.78	1726730	100.3	30 - 120	
165 Ho	1	3093323	0.73	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\129WASH.D\129WASH.D#
Date Acquired: Nov 7 2009 08:58 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.958 ppb	18.19	1.30	
51 V	72	1	4.710 ppb	2.17	6.50	
52 Cr	72	1	1.943 ppb	1.74	2.60	
55 Mn	72	1	0.998 ppb	3.15	1.30	
59 Co	72	1	0.952 ppb	3.16	1.30	
60 Ni	72	1	2.004 ppb	2.33	2.60	
63 Cu	72	1	1.937 ppb	4.73	2.60	
66 Zn	72	1	9.953 ppb	1.74	13.00	
75 As	72	1	4.981 ppb	2.08	6.50	
78 Se	72	1	5.557 ppb	13.16	6.50	
95 Mo	72	1	2.076 ppb	4.26	2.60	
107 Ag	115	1	5.018 ppb	2.22	6.50	
111 Cd	115	1	1.021 ppb	8.96	1.30	
118 Sn	115	1	10.330 ppb	1.36	13.00	
121 Sb	115	1	2.063 ppb	0.86	2.60	
137 Ba	115	1	1.033 ppb	9.68	1.30	
205 Tl	165	1	1.037 ppb	1.68	1.30	
208 Pb	165	1	1.033 ppb	2.31	1.30	
232 Th	165	1	2.176 ppb	3.62	2.60	
238 U	165	1	1.072 ppb	1.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	417105	1.00	398155	104.8	30 - 120	
45 Sc	1	1297902	0.97	1273788	101.9	30 - 120	
72 Ge	1	579634	1.13	577640	100.3	30 - 120	
115 In	1	1734765	0.59	1726730	100.5	30 - 120	
165 Ho	1	3094755	1.05	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#
Date Acquired: Nov 7 2009 11:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:42 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1073	15.01
52	Cr	72	1	2617	8.78
55	Mn	72	1	867	12.42
59	Co	72	1	87	35.66
60	Ni	72	1	110	27.47
63	Cu	72	1	480	6.51
66	Zn	72	1	677	4.34
75	As	72	1	47	6.82
78	Se	72	1	303	21.28
95	Mo	72	1	213	24.37
107	Ag	115	1	40	65.92
111	Cd	115	1	2	917.60
118	Sn	115	1	410	22.77
121	Sb	115	1	161	7.01
137	Ba	115	1	137	14.12
205	Tl	165	1	107	32.25
208	Pb	165	1	403	9.15
232	Th	165	1	173	13.01
238	U	165	1	122	7.26

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	401411	0.88
45	Sc	1	1190683	1.29
72	Ge	1	533218	0.44
115	In	1	1552104	0.57
165	Ho	1	2681412	0.51

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\190ICAL.D\190ICAL.D#
Date Acquired: Nov 7 2009 11:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:45 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	45518	1.54
51	V	72	1	700879	1.29
52	Cr	72	1	693042	2.18
55	Mn	72	1	795858	1.60
59	Co	72	1	850264	1.89
60	Ni	72	1	181428	0.41
63	Cu	72	1	431089	0.73
66	Zn	72	1	95751	0.48
75	As	72	1	84617	1.05
78	Se	72	1	17278	1.91
95	Mo	72	1	230286	0.80
107	Ag	115	1	661266	1.42
111	Cd	115	1	131853	1.14
118	Sn	115	1	371875	2.20
121	Sb	115	1	432362	1.85
137	Ba	115	1	187475	1.78
205	Tl	165	1	1498644	1.03
208	Pb	165	1	2042776	1.12
232	Th	165	1	2142976	0.23
238	U	165	1	2200342	0.40

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	389965	0.80	401411	97.1	30 - 120	
45	Sc	1	1171540	0.60	1190683	98.4	30 - 120	
72	Ge	1	507906	1.25	533218	95.3	30 - 120	
115	In	1	1532161	1.02	1552104	98.7	30 - 120	
165	Ho	1	2672323	0.90	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\191 CCV.D\191 CCV.D#
Date Acquired: Nov 7 2009 11:50 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.23	ppb	3.26	50	98.5	90 - 110	
51 V	72	1	48.52	ppb	1.74	50	97.0	90 - 110	
52 Cr	72	1	48.49	ppb	0.29	50	97.0	90 - 110	
55 Mn	72	1	48.47	ppb	1.24	50	96.9	90 - 110	
59 Co	72	1	48.02	ppb	0.67	50	96.0	90 - 110	
60 Ni	72	1	49.69	ppb	1.50	50	99.4	90 - 110	
63 Cu	72	1	49.62	ppb	0.90	50	99.2	90 - 110	
66 Zn	72	1	48.96	ppb	1.42	50	97.9	90 - 110	
75 As	72	1	49.10	ppb	0.76	50	98.2	90 - 110	
78 Se	72	1	48.52	ppb	4.63	50	97.0	90 - 110	
95 Mo	72	1	49.23	ppb	0.82	50	98.5	90 - 110	
107 Ag	115	1	49.55	ppb	1.37	50	99.1	90 - 110	
111 Cd	115	1	49.69	ppb	1.93	50	99.4	90 - 110	
118 Sn	115	1	49.87	ppb	1.50	50	99.7	90 - 110	
121 Sb	115	1	49.85	ppb	1.58	50	99.7	90 - 110	
137 Ba	115	1	49.38	ppb	1.63	50	98.8	90 - 110	
205 Tl	165	1	50.07	ppb	0.63	50	100.1	90 - 110	
208 Pb	165	1	50.67	ppb	1.87	50	101.3	90 - 110	
232 Th	165	1	50.33	ppb	1.25	50	100.7	90 - 110	
238 U	165	1	51.37	ppb	0.78	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	391774	1.28	401411	97.6	30 - 120	
45 Sc	1	1173327	0.14	1190683	98.5	30 - 120	
72 Ge	1	511730	0.36	533218	96.0	30 - 120	
115 In	1	1536232	0.41	1552104	99.0	30 - 120	
165 Ho	1	2663987	0.61	2681412	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\192 CCB.D\192 CCB.D#
Date Acquired: Nov 7 2009 11:52 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.021	ppb	99.86	1.00	
51 V	72	1	-0.024	ppb	36.47	1.00	
52 Cr	72	1	0.015	ppb	57.14	1.00	
55 Mn	72	1	0.032	ppb	9.94	1.00	
59 Co	72	1	0.000	ppb	241.41	1.00	
60 Ni	72	1	-0.008	ppb	160.82	1.00	
63 Cu	72	1	-0.035	ppb	57.76	1.00	
66 Zn	72	1	-0.363	ppb	4.76	1.00	
75 As	72	1	0.004	ppb	177.30	1.00	
78 Se	72	1	0.169	ppb	283.55	1.00	
95 Mo	72	1	-0.009	ppb	169.70	1.00	
107 Ag	115	1	0.008	ppb	60.74	1.00	
111 Cd	115	1	0.009	ppb	130.00	1.00	
118 Sn	115	1	0.105	ppb	79.70	1.00	
121 Sb	115	1	0.172	ppb	19.79	1.00	
137 Ba	115	1	-0.007	ppb	70.67	1.00	
205 Tl	165	1	0.024	ppb	16.62	1.00	
208 Pb	165	1	0.009	ppb	31.16	1.00	
232 Th	165	1	0.066	ppb	21.79	1.00	
238 U	165	1	0.019	ppb	10.85	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398355	0.67	401411	99.2	30 - 120	
45 Sc	1	1182289	0.51	1190683	99.3	30 - 120	
72 Ge	1	527088	0.39	533218	98.9	30 - 120	
115 In	1	1549776	0.77	1552104	99.8	30 - 120	
165 Ho	1	2689530	0.71	2681412	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\193WASH.D\193WASH.D#
Date Acquired: Nov 7 2009 11:55 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.091 ppb	4.11	1.30	
51 V	72	1	4.811 ppb	1.97	6.50	
52 Cr	72	1	1.975 ppb	0.98	2.60	
55 Mn	72	1	1.025 ppb	2.63	1.30	
59 Co	72	1	0.940 ppb	2.79	1.30	
60 Ni	72	1	2.047 ppb	4.84	2.60	
63 Cu	72	1	1.979 ppb	2.92	2.60	
66 Zn	72	1	9.930 ppb	1.74	13.00	
75 As	72	1	4.933 ppb	2.85	6.50	
78 Se	72	1	4.816 ppb	29.67	6.50	
95 Mo	72	1	1.981 ppb	4.92	2.60	
107 Ag	115	1	5.175 ppb	3.70	6.50	
111 Cd	115	1	0.978 ppb	1.91	1.30	
118 Sn	115	1	10.300 ppb	2.13	13.00	
121 Sb	115	1	2.097 ppb	1.97	2.60	
137 Ba	115	1	0.975 ppb	2.19	1.30	
205 Tl	165	1	1.046 ppb	3.18	1.30	
208 Pb	165	1	1.053 ppb	2.27	1.30	
232 Th	165	1	2.155 ppb	2.03	2.60	
238 U	165	1	1.095 ppb	4.14	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	397871	0.78	401411	99.1	30 - 120	
45 Sc	1	1191820	1.19	1190683	100.1	30 - 120	
72 Ge	1	527413	0.74	533218	98.9	30 - 120	
115 In	1	1527888	0.75	1552104	98.4	30 - 120	
165 Ho	1	2673393	1.59	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#
Date Acquired: Nov 8 2009 02:25 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:23 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	620	12.63
52	Cr	72	1	2680	1.78
55	Mn	72	1	813	8.79
59	Co	72	1	67	30.95
60	Ni	72	1	113	13.08
63	Cu	72	1	490	11.82
66	Zn	72	1	656	6.46
75	As	72	1	45	17.63
78	Se	72	1	333	20.05
95	Mo	72	1	257	16.03
107	Ag	115	1	40	74.94
111	Cd	115	1	11	116.88
118	Sn	115	1	477	0.80
121	Sb	115	1	156	24.28
137	Ba	115	1	152	14.20
205	Tl	165	1	96	21.83
208	Pb	165	1	372	9.02
232	Th	165	1	160	32.65
238	U	165	1	140	10.99

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	376079	0.79
45	Sc	1	1186897	1.34
72	Ge	1	539567	0.45
115	In	1	1576174	1.52
165	Ho	1	2717767	0.30

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\248ICAL.D\248ICAL.D#
Date Acquired: Nov 8 2009 02:28 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:26 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42446	1.21
51	V	72	1	684937	3.17
52	Cr	72	1	670667	0.81
55	Mn	72	1	787843	0.97
59	Co	72	1	839400	0.67
60	Ni	72	1	178958	0.70
63	Cu	72	1	424705	0.79
66	Zn	72	1	94491	0.73
75	As	72	1	84032	1.05
78	Se	72	1	16841	1.85
95	Mo	72	1	231498	1.15
107	Ag	115	1	664263	0.80
111	Cd	115	1	132542	1.42
118	Sn	115	1	376743	0.98
121	Sb	115	1	435060	0.49
137	Ba	115	1	188704	0.74
205	Tl	165	1	1479617	0.97
208	Pb	165	1	2033413	0.75
232	Th	165	1	2126721	0.55
238	U	165	1	2198988	0.53

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	364624	0.78	376079	97.0	30 - 120	
45	Sc	1	1151280	0.55	1186897	97.0	30 - 120	
72	Ge	1	510601	1.68	539567	94.6	30 - 120	
115	In	1	1555316	0.82	1576174	98.7	30 - 120	
165	Ho	1	2687981	0.46	2717767	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\249 CCV.D\249 CCV.D#
Date Acquired: Nov 8 2009 02:31 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.21	ppb	0.59	50	100.4	90 - 110	
51 V	72	1	49.66	ppb	0.22	50	99.3	90 - 110	
52 Cr	72	1	50.51	ppb	0.78	50	101.0	90 - 110	
55 Mn	72	1	49.52	ppb	0.42	50	99.0	90 - 110	
59 Co	72	1	48.78	ppb	0.64	50	97.6	90 - 110	
60 Ni	72	1	50.96	ppb	0.39	50	101.9	90 - 110	
63 Cu	72	1	50.45	ppb	0.98	50	100.9	90 - 110	
66 Zn	72	1	51.04	ppb	1.32	50	102.1	90 - 110	
75 As	72	1	50.22	ppb	0.79	50	100.4	90 - 110	
78 Se	72	1	52.93	ppb	2.64	50	105.9	90 - 110	
95 Mo	72	1	50.88	ppb	0.45	50	101.8	90 - 110	
107 Ag	115	1	50.92	ppb	2.20	50	101.8	90 - 110	
111 Cd	115	1	51.72	ppb	2.62	50	103.4	90 - 110	
118 Sn	115	1	51.06	ppb	2.41	50	102.1	90 - 110	
121 Sb	115	1	51.12	ppb	1.48	50	102.2	90 - 110	
137 Ba	115	1	50.77	ppb	1.68	50	101.5	90 - 110	
205 Tl	165	1	51.85	ppb	1.16	50	103.7	90 - 110	
208 Pb	165	1	51.54	ppb	2.32	50	103.1	90 - 110	
232 Th	165	1	51.27	ppb	1.18	50	102.5	90 - 110	
238 U	165	1	51.61	ppb	0.90	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360601	1.23	376079	95.9	30 - 120	
45 Sc	1	1152210	0.10	1186897	97.1	30 - 120	
72 Ge	1	506331	0.64	539567	93.8	30 - 120	
115 In	1	1532589	0.89	1576174	97.2	30 - 120	
165 Ho	1	2667156	1.17	2717767	98.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\250 CCB.D\250 CCB.D#
Date Acquired: Nov 8 2009 02:33 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	147.29	1.00	
51 V	72	1	-0.021	ppb	31.34	1.00	
52 Cr	72	1	0.037	ppb	45.39	1.00	
55 Mn	72	1	-0.003	ppb	461.47	1.00	
59 Co	72	1	0.004	ppb	46.27	1.00	
60 Ni	72	1	-0.025	ppb	13.04	1.00	
63 Cu	72	1	-0.035	ppb	22.37	1.00	
66 Zn	72	1	-0.398	ppb	5.33	1.00	
75 As	72	1	0.015	ppb	70.97	1.00	
78 Se	72	1	-0.320	ppb	40.38	1.00	
95 Mo	72	1	-0.054	ppb	35.32	1.00	
107 Ag	115	1	0.008	ppb	9.23	1.00	
111 Cd	115	1	0.005	ppb	52.43	1.00	
118 Sn	115	1	0.107	ppb	31.44	1.00	
121 Sb	115	1	0.188	ppb	20.19	1.00	
137 Ba	115	1	-0.042	ppb	4.94	1.00	
205 Tl	165	1	0.020	ppb	20.00	1.00	
208 Pb	165	1	-0.001	ppb	65.74	1.00	
232 Th	165	1	0.055	ppb	6.90	1.00	
238 U	165	1	0.016	ppb	10.74	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366061	0.27	376079	97.3	30 - 120	
45 Sc	1	1155485	0.15	1186897	97.4	30 - 120	
72 Ge	1	519106	0.69	539567	96.2	30 - 120	
115 In	1	1540332	1.11	1576174	97.7	30 - 120	
165 Ho	1	2657124	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\251WASH.D\251WASH.D#
Date Acquired: Nov 8 2009 02:36 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.182 ppb	14.87	1.30	
51 V	72	1	4.893 ppb	1.96	6.50	
52 Cr	72	1	2.065 ppb	5.46	2.60	
55 Mn	72	1	1.011 ppb	1.63	1.30	
59 Co	72	1	0.945 ppb	4.66	1.30	
60 Ni	72	1	1.991 ppb	4.27	2.60	
63 Cu	72	1	1.920 ppb	3.33	2.60	
66 Zn	72	1	9.756 ppb	2.19	13.00	
75 As	72	1	5.100 ppb	2.23	6.50	
78 Se	72	1	5.391 ppb	16.99	6.50	
95 Mo	72	1	2.008 ppb	7.03	2.60	
107 Ag	115	1	5.374 ppb	2.29	6.50	
111 Cd	115	1	1.096 ppb	8.86	1.30	
118 Sn	115	1	10.340 ppb	1.46	13.00	
121 Sb	115	1	2.090 ppb	3.04	2.60	
137 Ba	115	1	1.046 ppb	6.76	1.30	
205 Tl	165	1	1.069 ppb	2.14	1.30	
208 Pb	165	1	1.064 ppb	1.63	1.30	
232 Th	165	1	2.171 ppb	1.98	2.60	
238 U	165	1	1.109 ppb	2.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368083	0.81	376079	97.9	30 - 120	
45 Sc	1	1152236	1.34	1186897	97.1	30 - 120	
72 Ge	1	519228	0.64	539567	96.2	30 - 120	
115 In	1	1550740	0.66	1576174	98.4	30 - 120	
165 Ho	1	2657605	1.00	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\252 BLK.D\252 BLK.D#
Date Acquired: Nov 8 2009 02:39 am
Operator: TEL
Sample Name: LNJNVB
Misc Info: BLANK 9303185 6020
Vial Number: 4402
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	4060.10	2.00	
51 V	72	1	-0.023 ppb	51.25	2.00	
52 Cr	72	1	0.146 ppb	18.63	2.00	
55 Mn	72	1	0.029 ppb	14.35	2.00	
59 Co	72	1	-0.002 ppb	130.67	2.00	
60 Ni	72	1	0.009 ppb	200.76	2.00	
63 Cu	72	1	0.048 ppb	17.11	2.00	
66 Zn	72	1	0.350 ppb	15.65	2.00	
75 As	72	1	0.002 ppb	591.35	2.00	
78 Se	72	1	-0.304 ppb	77.33	2.00	
95 Mo	72	1	-0.059 ppb	27.75	2.00	
107 Ag	115	1	0.003 ppb	141.04	2.00	
111 Cd	115	1	0.004 ppb	198.21	2.00	
118 Sn	115	1	0.129 ppb	35.95	2.00	
121 Sb	115	1	0.037 ppb	34.11	2.00	
137 Ba	115	1	-0.021 ppb	145.57	2.00	
205 Tl	165	1	0.012 ppb	15.96	2.00	
208 Pb	165	1	0.006 ppb	18.89	2.00	
232 Th	165	1	0.019 ppb	29.60	2.00	
238 U	165	1	0.002 ppb	114.88	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364912	0.52	376079	97.0	30 - 120	
45 Sc	1	1141984	0.82	1186897	96.2	30 - 120	
72 Ge	1	513818	0.75	539567	95.2	30 - 120	
115 In	1	1528677	1.58	1576174	97.0	30 - 120	
165 Ho	1	2647917	1.14	2717767	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\253 LCS.D\253 LCS.D#
Date Acquired: Nov 8 2009 02:42 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJNVC
Misc Info: LCS
Vial Number: 4403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	35.70	1.01	40	89.3	80 - 120	
51 V	72	1	35.52	0.20	40	88.8	80 - 120	
52 Cr	72	1	36.08	0.50	40	90.2	80 - 120	
55 Mn	72	1	35.14	0.07	40	87.9	80 - 120	
59 Co	72	1	34.82	0.49	40	87.1	80 - 120	
60 Ni	72	1	36.40	0.69	40	91.0	80 - 120	
63 Cu	72	1	35.92	0.24	40	89.8	80 - 120	
66 Zn	72	1	35.76	1.51	40	89.4	80 - 120	
75 As	72	1	34.71	0.72	40	86.8	80 - 120	
78 Se	72	1	35.62	2.21	40	89.1	80 - 120	
95 Mo	72	1	32.10	0.70	40	80.3	80 - 120	
107 Ag	115	1	35.79	2.12	40	89.5	80 - 120	
111 Cd	115	1	35.37	1.53	40	88.4	80 - 120	
118 Sn	115	1	0.02	168.39	40	0.0	80 - 120	
121 Sb	115	1	32.20	2.07	40	80.5	80 - 120	
137 Ba	115	1	35.77	2.20	40	89.4	80 - 120	
205 Tl	165	1	36.57	2.09	40	91.4	80 - 120	
208 Pb	165	1	36.87	2.16	40	92.2	80 - 120	
232 Th	165	1	36.61	1.54	40	91.5	80 - 120	
238 U	165	1	36.97	1.94	40	92.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358195	0.31	376079	95.2	30 - 120	
45 Sc	1	1130666	0.47	1186897	95.3	30 - 120	
72 Ge	1	497032	0.74	539567	92.1	30 - 120	
115 In	1	1523173	1.15	1576174	96.6	30 - 120	
165 Ho	1	2638001	1.37	2717767	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#
Date Acquired: Nov 8 2009 02:44 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7F 5X
Misc Info: D9J270261
Vial Number: 4404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: AllRef
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.02	ppb	140.55	3600	
51 V	72	1	58.25	11.65	ppb	0.99	3600	
52 Cr	72	1	96.60	19.32	ppb	0.56	3600	
55 Mn	72	1	20.01	4.00	ppb	1.83	3600	
59 Co	72	1	0.41	0.08	ppb	18.64	3600	
60 Ni	72	1	2.50	0.50	ppb	10.52	3600	
63 Cu	72	1	0.61	0.12	ppb	13.42	3600	
66 Zn	72	1	18.56	3.71	ppb	2.43	3600	
75 As	72	1	190.75	38.15	ppb	0.69	3600	
78 Se	72	1	1.93	0.39	ppb	57.06	3600	
95 Mo	72	1	26.48	5.30	ppb	2.72	3600	
107 Ag	115	1	0.03	0.01	ppb	125.97	3600	
111 Cd	115	1	0.02	0.00	ppb	229.82	3600	
118 Sn	115	1	0.25	0.05	ppb	45.32	3600	
121 Sb	115	1	0.30	0.06	ppb	29.45	3600	
137 Ba	115	1	23.70	4.74	ppb	1.34	3600	
205 Tl	165	1	0.23	0.05	ppb	17.38	3600	
208 Pb	165	1	0.18	0.04	ppb	14.05	3600	
232 Th	165	1	0.24	0.05	ppb	4.71	1000	
238 U	165	1	13.31	2.66	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	333341	1.09	376079	88.6	30 - 120	
45 Sc	1	1062523	0.59	1186897	89.5	30 - 120	
72 Ge	1	462502	0.27	539567	85.7	30 - 120	
115 In	1	1375002	1.04	1576174	87.2	30 - 120	
165 Ho	1	2471361	0.80	2717767	90.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\255SDIL.D\255SDIL.D#
Date Acquired: Nov 8 2009 02:47 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FP25
Misc Info: SERIAL DILUTION
Vial Number: 4405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	0.57	0.00	458.7	90 - 110	
51 V	72	1	2.26	ppb	2.18	2.33	97.2	90 - 110	
52 Cr	72	1	3.94	ppb	1.55	3.86	101.9	90 - 110	
55 Mn	72	1	0.83	ppb	10.87	0.80	103.6	90 - 110	
59 Co	72	1	0.02	ppb	18.64	0.02	109.5	90 - 110	
60 Ni	72	1	0.11	ppb	52.76	0.10	106.7	90 - 110	
63 Cu	72	1	0.01	ppb	230.36	0.02	26.5	90 - 110	
66 Zn	72	1	0.47	ppb	7.87	0.74	62.8	90 - 110	
75 As	72	1	7.52	ppb	0.96	7.63	98.5	90 - 110	
78 Se	72	1	-0.04	ppb	1143.50	0.08	-52.9	90 - 110	
95 Mo	72	1	0.94	ppb	9.86	1.06	88.3	90 - 110	
107 Ag	115	1	0.00	ppb	99.28	0.00	-232.5	90 - 110	
111 Cd	115	1	-0.01	ppb	100.17	0.00	-679.0	90 - 110	
118 Sn	115	1	0.09	ppb	4.94	0.01	892.4	90 - 110	
121 Sb	115	1	0.01	ppb	131.02	0.01	58.5	90 - 110	
137 Ba	115	1	0.94	ppb	4.03	0.95	99.3	90 - 110	
205 Tl	165	1	0.01	ppb	8.96	0.01	141.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.12	0.01	165.2	90 - 110	
232 Th	165	1	0.01	ppb	22.37	0.01	123.4	90 - 110	
238 U	165	1	0.53	ppb	1.52	0.53	100.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355060	0.39	376079	94.4	30 - 120	
45 Sc	1	1125653	0.19	1186897	94.8	30 - 120	
72 Ge	1	502164	0.65	539567	93.1	30 - 120	
115 In	1	1479317	0.60	1576174	93.9	30 - 120	
165 Ho	1	2614578	1.08	2717767	96.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:46

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNC7FP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG110709 # 255 | Method 6020_
Acquired: 11/08/2009 02:47:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	10	0.41625	0.09076	359		*	
7440-62-2	Vanadium	51	15823	56.600	58.240	2.82		*	
7440-47-3	Chromium	52	28379	98.450	96.590	1.93		*	
7439-96-5	Manganese	55	7172	20.725	20.010	3.57		*	
7440-48-4	Cobalt	59	210	0.44850	0.40970	9.47		*	
7440-02-0	Nickel	60	293	2.6645	2.4980	6.67		*	
7440-50-8	Copper	63	483	0.16105	0.60710	73.5		*	
7440-66-6	Zinc	66	1041	11.650	18.550	37.2		*	
7440-38-2	Arsenic	75	6250	187.85	190.70	1.49	0.21	1.5	☑
7782-49-2	Selenium	78	303	-1.0210	1.9300	153	0.70	NC	☑
7439-98-7	Molybdenum	95	2367	23.385	26.470	11.7		*	
7440-22-4	Silver	107	20	-0.06975	0.02999	333		*	
7440-43-9	Cadmium	111	3	-0.14365	0.02116	779		*	
7440-31-5	Tin	118	770	2.2540	0.25260	792		*	
7440-36-0	Antimony	121	176	0.17570	0.30050	41.5		*	
7440-39-3	Barium	137	1831	23.535	23.690	0.654		*	
7440-28-0	Thallium	205	281	0.32890	0.23210	41.7		*	
7439-92-1	Lead	208	597	0.30195	0.18290	65.1		*	
7440-61-1	Uranium	238	11545	13.340	13.300	0.301		*	
7440-29-1	Thorium	232	403	0.30120	0.24410	23.4		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\256PDS.D\256PDS.D#
Date Acquired: Nov 8 2009 02:50 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 4406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	198.50	0.02	ppb	0.67	200	99.2	75 - 125	
51 V	72	1	208.00	11.65	ppb	2.08	200	98.3	75 - 125	
52 Cr	72	1	214.70	19.32	ppb	2.35	200	97.9	75 - 125	
55 Mn	72	1	195.40	4.00	ppb	1.86	200	95.8	75 - 125	
59 Co	72	1	183.60	0.08	ppb	1.60	200	91.8	75 - 125	
60 Ni	72	1	182.50	0.50	ppb	0.31	200	91.0	75 - 125	
63 Cu	72	1	178.40	0.12	ppb	0.81	200	89.1	75 - 125	
66 Zn	72	1	197.00	3.71	ppb	0.21	200	96.7	75 - 125	
75 As	72	1	232.30	38.15	ppb	0.67	200	97.5	75 - 125	
78 Se	72	1	204.20	0.39	ppb	2.34	200	101.9	75 - 125	
95 Mo	72	1	205.90	5.30	ppb	0.26	200	100.3	75 - 125	
107 Ag	115	1	41.50	0.01	ppb	1.74	50	83.0	75 - 125	
111 Cd	115	1	191.50	0.00	ppb	1.67	200	95.7	75 - 125	
118 Sn	115	1	177.60	0.05	ppb	1.20	200	88.8	75 - 125	
121 Sb	115	1	198.30	0.06	ppb	1.40	200	99.1	75 - 125	
137 Ba	115	1	196.40	4.74	ppb	1.33	200	95.9	75 - 125	
205 Tl	165	1	183.20	0.05	ppb	0.81	200	91.6	75 - 125	
208 Pb	165	1	182.30	0.04	ppb	0.75	200	91.1	75 - 125	
232 Th	165	1	0.04	0.05	ppb	6.86	200	0.0	75 - 125	
238 U	165	1	193.60	2.66	ppb	1.34	200	95.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328783	0.12	376079	87.4	30 - 120	
45 Sc	1	1063276	1.17	1186897	89.6	30 - 120	
72 Ge	1	452940	1.07	539567	83.9	30 - 120	
115 In	1	1385133	0.59	1576174	87.9	30 - 120	
165 Ho	1	2473070	1.04	2717767	91.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:49

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNC7FZ** Spike Dilution: **1.00** Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG110709 # 256
Acquired: 11/08/2009 02:50:00
Calibrated: 11/08/2009 02:25:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75977	198.50	0.01815	99.2	200		☐
7440-62-2	Vanadium	51	1263250	208.00	11.648	98.2	200		☑
7440-47-3	Chromium	52	1274690	214.70	19.318	97.7	200		☑
7439-96-5	Manganese	55	1365200	195.40	4.0020	95.7	200		☑
7440-48-4	Cobalt	59	1366970	183.60	0.08194	91.8	200		☐
7440-02-0	Nickel	60	289636	182.50	0.49960	91.0	200		☑
7440-50-8	Copper	63	671724	178.40	0.12142	89.1	200		☑
7440-66-6	Zinc	66	164629	197.00	3.7100	96.6	200		☑
7440-38-2	Arsenic	75	173144	232.30	38.140	97.1	200		☑
7782-49-2	Selenium	78	30217	204.20	0.38600	102	200		☑
7439-98-7	Molybdenum	95	422659	205.90	5.2940	100	200		☐
7440-22-4	Silver	107	245476	41.500	0.00600	83.0	50.0		☐
7440-43-9	Cadmium	111	225972	191.50	0.00423	95.7	200		☑
7440-31-5	Tin	118	595460	177.60	0.05052	88.8	200		☑
7440-36-0	Antimony	121	768070	198.30	0.06010	99.1	200		☑
7440-39-3	Barium	137	329990	196.40	4.7380	95.8	200		☑
7440-28-0	Thallium	205	2493600	183.20	0.04642	91.6	200		☑
7439-92-1	Lead	208	3410220	182.30	0.03658	91.1	200		☑
7440-61-1	Uranium	238	3915870	193.60	2.6600	95.5	200		☐
7440-29-1	Thorium	232	963	0.04179	0.04882				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\257_MS.D\257_MS.D#
Date Acquired: Nov 8 2009 02:53 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FS 5X
Misc Info: MATRIX SPIKE
Vial Number: 4407
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MS
Prep Dil. Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	7.56	0.02	ppb	3.41	40	18.9	50 - 150	
51 V	72	1	19.50	11.65	ppb	0.31	40	37.8	50 - 150	
52 Cr	72	1	27.55	19.32	ppb	1.08	40	46.4	50 - 150	
55 Mn	72	1	11.53	4.00	ppb	1.57	40	26.2	50 - 150	
59 Co	72	1	6.92	0.08	ppb	2.08	40	17.3	50 - 150	
60 Ni	72	1	7.47	0.50	ppb	3.08	40	18.4	50 - 150	
63 Cu	72	1	6.92	0.12	ppb	1.37	40	17.2	50 - 150	
66 Zn	72	1	12.20	3.71	ppb	0.22	40	27.9	50 - 150	
75 As	72	1	47.40	38.15	ppb	0.47	40	60.7	50 - 150	
78 Se	72	1	8.21	0.39	ppb	9.17	40	20.3	50 - 150	
95 Mo	72	1	12.33	5.30	ppb	1.48	40	27.2	50 - 150	
107 Ag	115	1	6.98	0.01	ppb	1.82	40	17.5	50 - 150	
111 Cd	115	1	7.47	0.00	ppb	3.17	40	18.7	50 - 150	
118 Sn	115	1	0.39	0.05	ppb	33.82	40	1.0	50 - 150	
121 Sb	115	1	6.89	0.06	ppb	1.31	40	17.2	50 - 150	
137 Ba	115	1	12.69	4.74	ppb	1.37	40	28.4	50 - 150	
205 Tl	165	1	7.17	0.05	ppb	1.41	40	17.9	50 - 150	
208 Pb	165	1	7.25	0.04	ppb	1.49	40	18.1	50 - 150	
232 Th	165	1	7.88	0.05	ppb	1.73	40	19.7	50 - 150	
238 U	165	1	10.53	2.66	ppb	1.84	40	24.7	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	332623	0.65	376079	88.4	30 - 120	
45 Sc	1	1062418	1.11	1186897	89.5	30 - 120	
72 Ge	1	462138	0.38	539567	85.6	30 - 120	
115 In	1	1389102	1.17	1576174	88.1	30 - 120	
165 Ho	1	2485285	0.80	2717767	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\258 CCV.D\258 CCV.D#
Date Acquired: Nov 8 2009 02:56 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.17	ppb	1.68	50	102.3	90 - 110	
51 V	72	1	49.76	ppb	0.58	50	99.5	90 - 110	
52 Cr	72	1	50.23	ppb	0.59	50	100.5	90 - 110	
55 Mn	72	1	49.80	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	48.86	ppb	0.97	50	97.7	90 - 110	
60 Ni	72	1	51.09	ppb	0.38	50	102.2	90 - 110	
63 Cu	72	1	50.55	ppb	1.39	50	101.1	90 - 110	
66 Zn	72	1	51.57	ppb	0.26	50	103.1	90 - 110	
75 As	72	1	50.59	ppb	0.46	50	101.2	90 - 110	
78 Se	72	1	51.92	ppb	0.28	50	103.8	90 - 110	
95 Mo	72	1	50.29	ppb	1.00	50	100.6	90 - 110	
107 Ag	115	1	51.22	ppb	2.07	50	102.4	90 - 110	
111 Cd	115	1	51.60	ppb	0.81	50	103.2	90 - 110	
118 Sn	115	1	50.56	ppb	0.85	50	101.1	90 - 110	
121 Sb	115	1	51.03	ppb	1.10	50	102.1	90 - 110	
137 Ba	115	1	50.92	ppb	1.12	50	101.8	90 - 110	
205 Tl	165	1	52.43	ppb	1.68	50	104.9	90 - 110	
208 Pb	165	1	52.24	ppb	2.12	50	104.5	90 - 110	
232 Th	165	1	51.78	ppb	2.94	50	103.6	90 - 110	
238 U	165	1	52.22	ppb	2.20	50	104.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366110	0.29	376079	97.3	30 - 120	
45 Sc	1	1169831	1.16	1186897	98.6	30 - 120	
72 Ge	1	507682	1.25	539567	94.1	30 - 120	
115 In	1	1542474	0.57	1576174	97.9	30 - 120	
165 Ho	1	2664119	1.36	2717767	98.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\259 CCB.D\259 CCB.D#
Date Acquired: Nov 8 2009 02:58 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	31.75	1.00	
52 Cr	72	1	0.015	ppb	240.08	1.00	
55 Mn	72	1	-0.003	ppb	454.38	1.00	
59 Co	72	1	0.007	ppb	19.00	1.00	
60 Ni	72	1	-0.021	ppb	92.00	1.00	
63 Cu	72	1	-0.023	ppb	91.13	1.00	
66 Zn	72	1	-0.387	ppb	12.46	1.00	
75 As	72	1	0.025	ppb	95.41	1.00	
78 Se	72	1	-0.065	ppb	394.03	1.00	
95 Mo	72	1	-0.040	ppb	70.76	1.00	
107 Ag	115	1	0.007	ppb	79.32	1.00	
111 Cd	115	1	0.012	ppb	73.39	1.00	
118 Sn	115	1	0.112	ppb	71.47	1.00	
121 Sb	115	1	0.150	ppb	17.00	1.00	
137 Ba	115	1	-0.041	ppb	5.14	1.00	
205 Tl	165	1	0.021	ppb	28.23	1.00	
208 Pb	165	1	0.003	ppb	8.31	1.00	
232 Th	165	1	0.048	ppb	25.86	1.00	
238 U	165	1	0.018	ppb	13.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367818	0.80	376079	97.8	30 - 120	
45 Sc	1	1153232	0.32	1186897	97.2	30 - 120	
72 Ge	1	519534	0.26	539567	96.3	30 - 120	
115 In	1	1546385	0.40	1576174	98.1	30 - 120	
165 Ho	1	2700530	0.45	2717767	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\260WASH.D\260WASH.D#
Date Acquired: Nov 8 2009 03:01 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.019 ppb	27.17	1.30	
51 V	72	1	4.885 ppb	1.68	6.50	
52 Cr	72	1	2.082 ppb	0.83	2.60	
55 Mn	72	1	1.036 ppb	7.67	1.30	
59 Co	72	1	0.946 ppb	2.04	1.30	
60 Ni	72	1	1.988 ppb	1.59	2.60	
63 Cu	72	1	1.986 ppb	0.32	2.60	
66 Zn	72	1	9.700 ppb	2.08	13.00	
75 As	72	1	4.976 ppb	1.71	6.50	
78 Se	72	1	5.005 ppb	25.32	6.50	
95 Mo	72	1	1.940 ppb	1.93	2.60	
107 Ag	115	1	5.369 ppb	0.73	6.50	
111 Cd	115	1	1.082 ppb	5.90	1.30	
118 Sn	115	1	10.260 ppb	0.06	13.00	
121 Sb	115	1	2.114 ppb	1.71	2.60	
137 Ba	115	1	0.981 ppb	3.28	1.30	
205 Tl	165	1	1.051 ppb	2.60	1.30	
208 Pb	165	1	1.037 ppb	1.65	1.30	
232 Th	165	1	2.110 ppb	1.80	2.60	
238 U	165	1	1.105 ppb	2.71	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367841	0.83	376079	97.8	30 - 120	
45 Sc	1	1154162	0.97	1186897	97.2	30 - 120	
72 Ge	1	516753	0.66	539567	95.8	30 - 120	
115 In	1	1524519	0.33	1576174	96.7	30 - 120	
165 Ho	1	2680772	0.38	2717767	98.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\261 MSD.D\261 MSD.D#
Date Acquired: Nov 8 2009 03:04 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MSD
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\257 MS.D\257 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.15	ppb	4.97	7.56	5.64	20	
51 V	72	1	19.44	ppb	0.87	19.50	0.31	20	
52 Cr	72	1	27.63	ppb	0.44	27.55	0.29	20	
55 Mn	72	1	11.89	ppb	0.71	11.53	3.07	20	
59 Co	72	1	6.96	ppb	0.22	6.92	0.55	20	
60 Ni	72	1	7.63	ppb	4.71	7.47	2.13	20	
63 Cu	72	1	6.96	ppb	2.26	6.92	0.55	20	
66 Zn	72	1	11.24	ppb	0.91	12.20	8.19	20	
75 As	72	1	47.18	ppb	1.02	47.40	0.47	20	
78 Se	72	1	8.49	ppb	8.60	8.21	3.34	20	
95 Mo	72	1	12.08	ppb	2.93	12.33	2.05	20	
107 Ag	115	1	6.86	ppb	1.67	6.98	1.81	20	
111 Cd	115	1	7.38	ppb	2.12	7.47	1.12	20	
118 Sn	115	1	0.11	ppb	30.03	0.39	111.83	20	
121 Sb	115	1	6.82	ppb	2.78	6.89	1.02	20	
137 Ba	115	1	12.78	ppb	1.44	12.69	0.71	20	
205 Tl	165	1	7.29	ppb	1.19	7.17	1.61	20	
208 Pb	165	1	7.29	ppb	2.38	7.25	0.51	20	
232 Th	165	1	7.89	ppb	2.55	7.88	0.08	20	
238 U	165	1	10.55	ppb	1.44	10.53	0.19	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329103	0.78	376079	87.5	30 - 120	
45 Sc	1	1057955	1.12	1186897	89.1	30 - 120	
72 Ge	1	456662	0.47	539567	84.6	30 - 120	
115 In	1	1365390	0.56	1576174	86.6	30 - 120	
165 Ho	1	2474617	1.07	2717767	91.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\262SMPL.D\262SMPL.D#
Date Acquired: Nov 8 2009 03:07 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7L 5X
Misc Info: D9J270263
Vial Number: 4409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	157.59	3600	
51 V	72	1	46.85	9.37	ppb	1.89	3600	
52 Cr	72	1	12.39	2.48	ppb	5.61	3600	
55 Mn	72	1	171.35	34.27	ppb	1.07	3600	
59 Co	72	1	264.35	52.87	ppb	1.02	3600	
60 Ni	72	1	102.35	20.47	ppb	3.34	3600	
63 Cu	72	1	53.95	10.79	ppb	1.03	3600	
66 Zn	72	1	17.02	3.40	ppb	3.85	3600	
75 As	72	1	69.40	13.88	ppb	0.45	3600	
78 Se	72	1	3.99	0.80	ppb	47.95	3600	
95 Mo	72	1	6.46	1.29	ppb	6.25	3600	
107 Ag	115	1	0.02	0.00	ppb	159.25	3600	
111 Cd	115	1	0.13	0.03	ppb	54.73	3600	
118 Sn	115	1	0.20	0.04	ppb	29.32	3600	
121 Sb	115	1	0.23	0.05	ppb	27.91	3600	
137 Ba	115	1	43.61	8.72	ppb	1.89	3600	
205 Tl	165	1	0.08	0.02	ppb	8.14	3600	
208 Pb	165	1	1.84	0.37	ppb	5.27	3600	
232 Th	165	1	0.14	0.03	ppb	17.77	1000	
238 U	165	1	38.02	7.60	ppb	1.66	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343401	0.74	376079	91.3	30 - 120	
45 Sc	1	1089536	0.75	1186897	91.8	30 - 120	
72 Ge	1	479909	1.11	539567	88.9	30 - 120	
115 In	1	1451981	1.22	1576174	92.1	30 - 120	
165 Ho	1	2546093	0.95	2717767	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\263SMPL.D\263SMPL.D#
Date Acquired: Nov 8 2009 03:09 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFGD 5X
Misc Info: D9J280280
Vial Number: 4410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.02	ppb	241.44	3600	
51 V	72	1	54.75	10.95	ppb	1.40	3600	
52 Cr	72	1	88.30	17.66	ppb	0.52	3600	
55 Mn	72	1	36.34	7.27	ppb	0.95	3600	
59 Co	72	1	0.85	0.17	ppb	10.77	3600	
60 Ni	72	1	4.50	0.90	ppb	6.77	3600	
63 Cu	72	1	1.33	0.27	ppb	18.06	3600	
66 Zn	72	1	7.36	1.47	ppb	5.00	3600	
75 As	72	1	275.25	55.05	ppb	1.01	3600	
78 Se	72	1	8.96	1.79	ppb	43.45	3600	
95 Mo	72	1	14.49	2.90	ppb	3.73	3600	
107 Ag	115	1	0.03	0.01	ppb	18.83	3600	
111 Cd	115	1	0.09	0.02	ppb	136.04	3600	
118 Sn	115	1	0.02	0.00	ppb	387.10	3600	
121 Sb	115	1	0.10	0.02	ppb	24.58	3600	
137 Ba	115	1	40.38	8.08	ppb	3.21	3600	
205 Tl	165	1	0.13	0.03	ppb	5.33	3600	
208 Pb	165	1	0.86	0.17	ppb	3.75	3600	
232 Th	165	1	0.77	0.15	ppb	2.79	1000	
238 U	165	1	23.16	4.63	ppb	1.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	321308	0.11	376079	85.4	30 - 120	
45 Sc	1	1048585	0.63	1186897	88.3	30 - 120	
72 Ge	1	451006	0.46	539567	83.6	30 - 120	
115 In	1	1344838	0.54	1576174	85.3	30 - 120	
165 Ho	1	2446552	0.31	2717767	90.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\264SMPL.D\264SMPL.D#
Date Acquired: Nov 8 2009 03:12 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFG2 5X
Misc Info: D9J280283
Vial Number: 4411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	85.35	17.07	ppb	2.36	3600	
52 Cr	72	1	57.90	11.58	ppb	0.78	3600	
55 Mn	72	1	3.89	0.78	ppb	2.20	3600	
59 Co	72	1	0.62	0.12	ppb	8.11	3600	
60 Ni	72	1	3.33	0.67	ppb	9.62	3600	
63 Cu	72	1	0.28	0.06	ppb	57.58	3600	
66 Zn	72	1	12.63	2.53	ppb	2.86	3600	
75 As	72	1	208.15	41.63	ppb	0.43	3600	
78 Se	72	1	3.45	0.69	ppb	57.20	3600	
95 Mo	72	1	15.54	3.11	ppb	4.05	3600	
107 Ag	115	1	0.00	0.00	ppb	548.29	3600	
111 Cd	115	1	0.00	0.00	ppb	1744.50	3600	
118 Sn	115	1	0.74	0.15	ppb	40.17	3600	
121 Sb	115	1	0.12	0.02	ppb	20.77	3600	
137 Ba	115	1	43.12	8.62	ppb	2.46	3600	
205 Tl	165	1	0.08	0.02	ppb	18.16	3600	
208 Pb	165	1	0.09	0.02	ppb	0.87	3600	
232 Th	165	1	0.06	0.01	ppb	45.22	1000	
238 U	165	1	42.88	8.58	ppb	2.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326264	0.73	376079	86.8	30 - 120	
45 Sc	1	1072928	0.34	1186897	90.4	30 - 120	
72 Ge	1	463601	0.73	539567	85.9	30 - 120	
115 In	1	1385017	0.88	1576174	87.9	30 - 120	
165 Ho	1	2507716	1.26	2717767	92.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\265SMPL.D\265SMPL.D#
Date Acquired: Nov 8 2009 03:15 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2J 5X
Misc Info: D9J290310
Vial Number: 4412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	309.81	3600	
51 V	72	1	48.61	9.72	ppb	1.22	3600	
52 Cr	72	1	57.70	11.54	ppb	0.94	3600	
55 Mn	72	1	53.90	10.78	ppb	1.00	3600	
59 Co	72	1	0.55	0.11	ppb	6.70	3600	
60 Ni	72	1	3.54	0.71	ppb	8.58	3600	
63 Cu	72	1	0.41	0.08	ppb	3.58	3600	
66 Zn	72	1	14.51	2.90	ppb	6.49	3600	
75 As	72	1	347.90	69.58	ppb	0.62	3600	
78 Se	72	1	2.80	0.56	ppb	43.90	3600	
95 Mo	72	1	35.21	7.04	ppb	2.31	3600	
107 Ag	115	1	0.00	0.00	ppb	348.44	3600	
111 Cd	115	1	0.01	0.00	ppb	1737.40	3600	
118 Sn	115	1	0.09	0.02	ppb	257.92	3600	
121 Sb	115	1	0.10	0.02	ppb	32.62	3600	
137 Ba	115	1	27.88	5.58	ppb	4.08	3600	
205 Tl	165	1	0.07	0.01	ppb	9.45	3600	
208 Pb	165	1	0.24	0.05	ppb	12.24	3600	
232 Th	165	1	0.20	0.04	ppb	2.64	1000	
238 U	165	1	67.45	13.49	ppb	1.58	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335558	0.24	376079	89.2	30 - 120	
45 Sc	1	1081740	0.75	1186897	91.1	30 - 120	
72 Ge	1	467673	0.66	539567	86.7	30 - 120	
115 In	1	1401937	0.62	1576174	88.9	30 - 120	
165 Ho	1	2517760	0.48	2717767	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\266SMPL.D\266SMPL.D#
Date Acquired: Nov 8 2009 03:18 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2K 5X
Misc Info: D9J290310
Vial Number: 4501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	48.25	9.65	ppb	1.58	3600	
52 Cr	72	1	57.55	11.51	ppb	1.78	3600	
55 Mn	72	1	53.60	10.72	ppb	0.45	3600	
59 Co	72	1	0.70	0.14	ppb	10.31	3600	
60 Ni	72	1	4.12	0.82	ppb	7.90	3600	
63 Cu	72	1	0.61	0.12	ppb	18.78	3600	
66 Zn	72	1	14.52	2.90	ppb	5.26	3600	
75 As	72	1	343.30	68.66	ppb	0.80	3600	
78 Se	72	1	0.28	0.06	ppb	532.16	3600	
95 Mo	72	1	34.43	6.89	ppb	3.09	3600	
107 Ag	115	1	0.03	0.01	ppb	118.50	3600	
111 Cd	115	1	0.06	0.01	ppb	110.88	3600	
118 Sn	115	1	0.20	0.04	ppb	15.50	3600	
121 Sb	115	1	0.06	0.01	ppb	80.38	3600	
137 Ba	115	1	30.09	6.02	ppb	1.47	3600	
205 Tl	165	1	0.06	0.01	ppb	4.80	3600	
208 Pb	165	1	0.28	0.06	ppb	1.80	3600	
232 Th	165	1	0.20	0.04	ppb	29.47	1000	
238 U	165	1	67.55	13.51	ppb	1.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329739	0.51	376079	87.7	30 - 120	
45 Sc	1	1074128	1.38	1186897	90.5	30 - 120	
72 Ge	1	466433	0.80	539567	86.4	30 - 120	
115 In	1	1385476	1.23	1576174	87.9	30 - 120	
165 Ho	1	2494439	1.00	2717767	91.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\267 CCV.D\267 CCV.D#
Date Acquired: Nov 8 2009 03:21 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.22	ppb	2.08	50	102.4	90 - 110	
51 V	72	1	49.65	ppb	0.54	50	99.3	90 - 110	
52 Cr	72	1	50.22	ppb	0.76	50	100.4	90 - 110	
55 Mn	72	1	49.57	ppb	0.78	50	99.1	90 - 110	
59 Co	72	1	48.62	ppb	0.28	50	97.2	90 - 110	
60 Ni	72	1	50.60	ppb	1.48	50	101.2	90 - 110	
63 Cu	72	1	50.08	ppb	0.86	50	100.2	90 - 110	
66 Zn	72	1	52.09	ppb	0.68	50	104.2	90 - 110	
75 As	72	1	50.33	ppb	0.35	50	100.7	90 - 110	
78 Se	72	1	50.70	ppb	1.91	50	101.4	90 - 110	
95 Mo	72	1	50.34	ppb	1.97	50	100.7	90 - 110	
107 Ag	115	1	50.13	ppb	2.37	50	100.3	90 - 110	
111 Cd	115	1	50.15	ppb	1.77	50	100.3	90 - 110	
118 Sn	115	1	49.99	ppb	1.62	50	100.0	90 - 110	
121 Sb	115	1	50.52	ppb	2.60	50	101.0	90 - 110	
137 Ba	115	1	50.62	ppb	1.41	50	101.2	90 - 110	
205 Tl	165	1	51.11	ppb	0.42	50	102.2	90 - 110	
208 Pb	165	1	51.54	ppb	1.74	50	103.1	90 - 110	
232 Th	165	1	51.26	ppb	1.28	50	102.5	90 - 110	
238 U	165	1	51.53	ppb	0.94	50	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360685	1.10	376079	95.9	30 - 120	
45 Sc	1	1157595	0.85	1186897	97.5	30 - 120	
72 Ge	1	507944	1.20	539567	94.1	30 - 120	
115 In	1	1559749	0.93	1576174	99.0	30 - 120	
165 Ho	1	2711611	1.14	2717767	99.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\268 CCB.D\268 CCB.D#
Date Acquired: Nov 8 2009 03:23 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	19.15	1.00	
52 Cr	72	1	-0.002	ppb	789.67	1.00	
55 Mn	72	1	-0.001	ppb	1184.70	1.00	
59 Co	72	1	0.000	ppb	707.73	1.00	
60 Ni	72	1	-0.014	ppb	130.22	1.00	
63 Cu	72	1	-0.051	ppb	28.29	1.00	
66 Zn	72	1	-0.413	ppb	3.98	1.00	
75 As	72	1	0.005	ppb	390.64	1.00	
78 Se	72	1	0.068	ppb	260.94	1.00	
95 Mo	72	1	-0.051	ppb	12.59	1.00	
107 Ag	115	1	0.003	ppb	126.88	1.00	
111 Cd	115	1	0.000	ppb	7618.50	1.00	
118 Sn	115	1	0.047	ppb	150.30	1.00	
121 Sb	115	1	0.138	ppb	23.66	1.00	
137 Ba	115	1	-0.038	ppb	11.83	1.00	
205 Tl	165	1	0.021	ppb	17.52	1.00	
208 Pb	165	1	0.003	ppb	111.74	1.00	
232 Th	165	1	0.051	ppb	16.07	1.00	
238 U	165	1	0.016	ppb	14.92	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365082	0.17	376079	97.1	30 - 120	
45 Sc	1	1142137	0.98	1186897	96.2	30 - 120	
72 Ge	1	516032	0.47	539567	95.6	30 - 120	
115 In	1	1530746	0.77	1576174	97.1	30 - 120	
165 Ho	1	2669057	1.87	2717767	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\269WASH.D\269WASH.D#
Date Acquired: Nov 8 2009 03:26 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.901 ppb	17.96	1.30	
51 V	72	1	4.935 ppb	2.34	6.50	
52 Cr	72	1	2.001 ppb	2.44	2.60	
55 Mn	72	1	1.030 ppb	4.04	1.30	
59 Co	72	1	0.990 ppb	2.41	1.30	
60 Ni	72	1	2.129 ppb	7.48	2.60	
63 Cu	72	1	1.903 ppb	4.00	2.60	
66 Zn	72	1	9.748 ppb	0.16	13.00	
75 As	72	1	4.893 ppb	4.12	6.50	
78 Se	72	1	5.130 ppb	8.01	6.50	
95 Mo	72	1	1.974 ppb	8.49	2.60	
107 Ag	115	1	5.301 ppb	1.96	6.50	
111 Cd	115	1	1.056 ppb	7.93	1.30	
118 Sn	115	1	10.460 ppb	2.46	13.00	
121 Sb	115	1	2.083 ppb	0.79	2.60	
137 Ba	115	1	1.029 ppb	5.53	1.30	
205 Tl	165	1	1.089 ppb	0.37	1.30	
208 Pb	165	1	1.075 ppb	0.39	1.30	
232 Th	165	1	2.216 ppb	0.39	2.60	
238 U	165	1	1.111 ppb	0.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	359039	1.01	376079	95.5	30 - 120	
45 Sc	1	1142332	0.80	1186897	96.2	30 - 120	
72 Ge	1	512301	0.61	539567	94.9	30 - 120	
115 In	1	1537362	0.42	1576174	97.5	30 - 120	
165 Ho	1	2658916	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J280283

Client: Northgate Environmental

Batch(es) #: 9303185

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 11/9/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J280283	1	SE	LNFG21AC	20091108	6020TOTA	9303185	AG110709	024
D9J280283	1	AS	LNFG21AA	20091108	6020TOTA	9303185	AG110709	024

METALS PREPARATION LOGS ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9303185**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/2/09 ~~10/30/09~~ JRW

Due Date: 11/09/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJNV**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJNV**	C	Due Date: SDG:	50 mL
D9J270261 Water	**LNC7F** Total		Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	S	Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	D	Due Date: 11/09/09 SDG:	50 mL
D9J270263 Water	**LNC7L** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280280 Water	**LNFGD** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280283 Water	**LNFG2** Total		Due Date: 11/09/09 SDG:	50 mL
D9J290310 Water	**LNH2J** Total		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2K** Total		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9303185	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4082 Block & Cup # : 4/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1430	95	1845	95
HNO3	1900	95	1930	93
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

TestAmerica Denver

Standards Preparation Logbook Record

Nov-09-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6836-09, ICP-MS BLANK

Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-07-2009
Date Expires(1): 05-07-2010 (6 Months)
Date Expires(2): 05-07-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6835-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6837-09, ICP-MS HIGH CAL STD

Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	10.000
Ca	2,000.0	10.000
Fe	2,000.0	10.000
K	2,000.0	10.000
Mg	2,000.0	10.000
Na	2,000.0	10.000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6838-09, ICP-MS HIGH CCV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500
Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	5.0000
Ca	2,000.0	5.0000
Fe	2,000.0	5.0000
K	2,000.0	5.0000
Mg	2,000.0	5.0000

Na	2,000.0	5.0000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6839-09, ICP-MS HIGH RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6837-09, ICP-MS HIGH CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010
Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010
Al	10.000	0.1000
Ca	10.000	0.1000
Fe	10.000	0.1000
K	10.000	0.1000
Mg	10.000	0.1000
Na	10.000	0.1000

Nb	0.2000	0.0020
Pd	0.1000	0.0010
Pt	0.1000	0.0010
W	0.1000	0.0010

STD6840-09, ICP-MS HIGH AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000

Date Prep./Opened: 11-07-2009

Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6839-09, ICP-MS HIGH RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002
Al	0.1000	0.0200
Ca	0.1000	0.0200
Fe	0.1000	0.0200
K	0.1000	0.0200
Mg	0.1000	0.0200
Na	0.1000	0.0200
Nb	0.0020	0.0004
Pd	0.0010	0.0002
Pt	0.0010	0.0002
W	0.0010	0.0002
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018

STD6841-09, ICP-MS HIGH ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	100.00
Ca	2,000.0	100.00
Fe	2,000.0	100.00
K	2,000.0	100.00
Mg	2,000.0	100.00
Na	2,000.0	100.00

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	2.0000
Pd	20.000	1.0000
Pt	20.000	1.0000

W	20.000	1.0000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6842-09, ICP-MS HIGH LR STD1 — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000
Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6843-09, ICP-MS HIGH ICV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

Parent Std No.: STD3115-09, ICP-MS TA ICV Alt Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	4.0000
Ca	2,000.0	4.0000
Fe	2,000.0	4.0000
K	2,000.0	4.0000
Mg	2,000.0	4.0000
Na	2,000.0	4.0000

Parent Std No.: STD3116-09, ICP-MS TA ICV BRC Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.0800
Pd	20.000	0.0400
Pt	20.000	0.0400

W	20.000	0.0400

STD6844-09, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6855-09, LLCCV/RLICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD3106-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000
Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD3107-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

Parent Std No.: STD3108-09, ICP-MS BRC LLCCV 1 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Nb	4.0000	40.000
Pd	0.1000	1.0000
Pt	0.1000	1.0000
W	0.5000	5.0000

Reviewed By: 11/9/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/07/09 15:09		☐
4	100 ppb				1.0	11/07/09 15:12		☐
5	ICV				1.0	11/07/09 15:15		☐
6	RLIV				1.0	11/07/09 15:18		☐
7	ICB				1.0	11/07/09 15:20		☐
8	RL STD				1.0	11/07/09 15:23		☐
9	AFCEE RL				1.0	11/07/09 15:26		☐
10	ALTSe				1.0	11/07/09 15:29		☐
11	ICSA				1.0	11/07/09 15:31		☐
12	ICSAB				1.0	11/07/09 15:34		☐
13	RINSE				1.0	11/07/09 15:37		☐
14	LR1				1.0	11/07/09 15:40		☐
15	RINSE				1.0	11/07/09 15:42		☐
16	CCV				1.0	11/07/09 15:45		☐
17	CCB				1.0	11/07/09 15:48		☐
18	RLCV				1.0	11/07/09 15:50		☐
19	LNDMKB	D9J280000	9301081	46	1.0	11/07/09 15:53		☐
20	LNDMKC	D9J280000	9301081	46	1.0	11/07/09 15:56		☐
21	LM9FJ	D9J240188-1	9301081	46	1.0	11/07/09 15:59		☐
22	LM9FJP5	D9J240188	9301081		5.0	11/07/09 16:01		☐
23	LM9FJZ	D9J240188-1	9301081		1.0	11/07/09 16:04		☐
24	LM9FJS	D9J240188-1	9301081	46	1.0	11/07/09 16:07		☐
25	LM9FJD	D9J240188-1	9301081	46	1.0	11/07/09 16:09		☐
26	LM9FK	D9J240188-2	9301081	46	1.0	11/07/09 16:12		☐
27	CCV				1.0	11/07/09 16:15		☐
28	CCB				1.0	11/07/09 16:18		☐
29	RLCV				1.0	11/07/09 16:20		☐
30	LNJT4B	D9J300000	9303213	MS	1.0	11/07/09 16:23		☐
31	LNJT4C	D9J300000	9303213	MS	1.0	11/07/09 16:26		☐
32	LM8A7	D9J230367-1	9303213	MS	1.0	11/07/09 16:29		☐
33	LM8CG	D9J230367-2	9303213	MS	1.0	11/07/09 16:32		☐
34	LM8CV	D9J230367-3	9303213	MS	1.0	11/07/09 16:34		☐
35	LM8C1	D9J230367-4	9303213	MS	1.0	11/07/09 16:37		☐
36	LM8C1P5	D9J230367	9303213		5.0	11/07/09 16:40		☐
37	LM8C1Z	D9J230367-4	9303213		1.0	11/07/09 16:43		☐
38	LM8C1S	D9J230367-4	9303213	MS	1.0	11/07/09 16:45		☐
39	LM8C1D	D9J230367-4	9303213	MS	1.0	11/07/09 16:48		☐
40	CCV				1.0	11/07/09 16:51		☐
41	CCB				1.0	11/07/09 16:53		☐
42	RLCV				1.0	11/07/09 16:57		☐
43	LNDMTB	D9J280000	9301086	46	1.0	11/07/09 17:00		☐
44	LNDMTC	D9J280000	9301086	46	1.0	11/07/09 17:02		☐
45	LM8E2	D9J230373-1	9301086	46	1.0	11/07/09 17:05		☐
46	LM8E2P5	D9J230373	9301086		5.0	11/07/09 17:08		☐
47	LM8E2Z	D9J230373-1	9301086		1.0	11/07/09 17:11		☐
48	LM8E2S	D9J230373-1	9301086	46	1.0	11/07/09 17:13		☐

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RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM8E2D	D9J230373-1	9301086	46	1.0	11/07/09 17:16		☐
50	LM8E6	D9J230373-2	9301086	46	1.0	11/07/09 17:19		☐
51	CCV				1.0	11/07/09 17:22		☐
52	CCB				1.0	11/07/09 17:24		☐
53	RLCV				1.0	11/07/09 17:27		☐
54	LM8E7	D9J230373-3	9301086	46	1.0	11/07/09 17:30		☐
55	LM8E9	D9J230373-4	9301086	46	1.0	11/07/09 17:33		☐
56	LM8FA	D9J230373-5	9301086	46	1.0	11/07/09 17:35		☐
57	LM8FC	D9J230373-6	9301086	46	1.0	11/07/09 17:38		☐
58	LM8FD	D9J230373-7	9301086	46	1.0	11/07/09 17:41		☐
59	LM8FE	D9J230373-8	9301086	46	1.0	11/07/09 17:44		☐
60	LM8FF	D9J230373-9	9301086	46	1.0	11/07/09 17:47		☐
61	LM8FG	D9J230373-10	9301086	46	1.0	11/07/09 17:51		☐
62	LM8FH	D9J230373-11	9301086	46	1.0	11/07/09 17:53		☐
63	CCV				1.0	11/07/09 17:56		☐
64	CCB				1.0	11/07/09 17:59		☐
65	RLCV				1.0	11/07/09 18:02		☐
66	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 18:04~~	VT 11/9/09 Did not use.	☐
67	LNDMPB	D9J280000	9301083	46	1.0	11/07/09 18:07		☐
68	LNDMPC	D9J280000	9301083	46	1.0	11/07/09 18:10		☐
69	LM8CT	D9J230370-1	9301083	46	1.0	11/07/09 18:13		☐
70	LM8CTP5	D9J230370	9301083		5.0	11/07/09 18:16		☐
71	LM8CTZ	D9J230370-1	9301083		1.0	11/07/09 18:18		☐
72	LM8CTS	D9J230370-1	9301083	46	1.0	11/07/09 18:21		☐
73	LM8CTD	D9J230370-1	9301083	46	1.0	11/07/09 18:24		☐
74	CCV				1.0	11/07/09 18:27		☐
75	CCB				1.0	11/07/09 18:29		☐
76	RLCV				1.0	11/07/09 18:32		☐
77	LM8C5	D9J230370-2	9301083	46	1.0	11/07/09 18:35		☐
78	LM8C8	D9J230370-3	9301083	46	1.0	11/07/09 18:38		☐
79	LM8C9	D9J230370-4	9301083	46	1.0	11/07/09 18:40		☐
80	LM8DA	D9J230370-5	9301083	46	1.0	11/07/09 18:43		☐
81	LM8DC	D9J230370-6	9301083	46	1.0	11/07/09 18:46		☐
82	LM8DF	D9J230370-7	9301083	46	1.0	11/07/09 18:49		☐
83	LM8DG	D9J230370-8	9301083	46	1.0	11/07/09 18:51		☐
84	CCV				1.0	11/07/09 18:54		☐
85	CCB				1.0	11/07/09 18:57		☐
86	RLCV				1.0	11/07/09 19:00		☐
87	LM8DH	D9J230370-9	9301083	46	1.0	11/07/09 19:03		☐
88	LM8DK	D9J230370-10	9301083	46	1.0	11/07/09 19:05		☐
89	LM8DL	D9J230370-11	9301083	46	1.0	11/07/09 19:08		☐
90	LM8DN	D9J230370-12	9301083	46	1.0	11/07/09 19:11		☐
91	LM8DQ	D9J230370-13	9301083	46	1.0	11/07/09 19:14		☐
92	LM8DT	D9J230370-14	9301083	46	1.0	11/07/09 19:17		☐
93	LM8DV	D9J230370-15	9301083	46	1.0	11/07/09 19:19		☐
94	LM8D4	D9J230370-16	9301083	46	1.0	11/07/09 19:22		☐

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RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
95	CCV				1.0	11/07/09 19:25		
96	CCB				1.0	11/07/09 19:28		
97	RLCV				1.0	11/07/09 19:30		
98	ICSA				1.0	11/07/09 19:33		
99	ICSAB				1.0	11/07/09 19:36		
100	WASH				1.0	11/07/09 19:39		
101	CCV				1.0	11/07/09 19:41		
102	CCB				1.0	11/07/09 19:44		
103	RLCV				1.0	11/07/09 19:47		
104	LNPKXBQ	D9K030000	9307099	U1	1.0	11/07/09 19:50		
105	LNPKXCQ	D9K030000	9307099	U1	1.0	11/07/09 19:52		
106	LNN4FQ	D9K020448-1	9307099	U1	1.0	11/07/09 19:55		
107	LNN4FP5Q	D9K020448	9307099		5.0	11/07/09 19:58		
108	LNN4FZQ	D9K020448-1	9307099		1.0	11/07/09 20:01		
109	LNN4FSQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:03		
110	LNN4FDQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:06		
111	CCV				1.0	11/07/09 20:09		
112	CCB				1.0	11/07/09 20:12		
113	RLCV				1.0	11/07/09 20:14		
114	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 20:17~~		
115	LNNVDC	D9K020000	9306332	04	2.5	11/07/09 20:20		
116	LNKT9	D9J300258-1	9306332	04	2.5	11/07/09 20:23		
117	LNKT9S	D9J300258-1	9306332	04	2.5	11/07/09 20:25		
118	LNKT9D	D9J300258-1	9306332	04	2.5	11/07/09 20:28		
119	CCV				1.0	11/07/09 20:31		
120	CCB				1.0	11/07/09 20:34		
121	RLCV				1.0	11/07/09 20:36		
122	RINSE				1.0	11/07/09 20:39		
123	RINSE				1.0	11/07/09 20:42		
124	~~Cal Blank~~				~~1.0~~	~~11/07/09 20:45~~	KF 11/9/09 Did not use.	
125	Cal Blank				1.0	11/07/09 20:47		
126	100 ppb				1.0	11/07/09 20:50		
127	CCV				1.0	11/07/09 20:53		
128	CCB				1.0	11/07/09 20:56		
129	RLCV				1.0	11/07/09 20:58		
130	~~LNNQ5BF~~	~~D9K020000~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:01~~		
131	LNNQ5CF	D9K020000	9306285	MD	1.0	11/07/09 21:04		
132	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/07/09 21:07		
133	LNLG3F	D9J300326-2	9306285	MD	1.0	11/07/09 21:10		
134	LNLG4F	D9J300326-3	9306285	MD	1.0	11/07/09 21:12		
135	LNLHHF	D9J300329-1	9306285	MD	1.0	11/07/09 21:15		
136	LNLHMF	D9J300329-2	9306285	MD	1.0	11/07/09 21:18		
137	CCV				1.0	11/07/09 21:21		
138	CCB				1.0	11/07/09 21:23		
139	RLCV				1.0	11/07/09 21:26		
140	~~LNLHPF~~	~~D9J300329-3~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:29~~	KF 11/9/09 Did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
141	~~LNLJJF~~	~~D9J300340-1~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:32~~		☐
142	LNLJJP5F	D9J300340	9306285		5.0	11/07/09 21:35		☐
143	LNLJJZF	D9J300340-1	9306285		1.0	11/07/09 21:37		☐
144	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/07/09 21:40		☐
145	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/07/09 21:43		☐
146	~~LNLJME~~	~~D9J300340-2~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:45~~	RE 11/9/09 Did not use.	☐
147	CCV				1.0	11/07/09 21:48		☐
148	CCB				1.0	11/07/09 21:51		☐
149	RLCV				1.0	11/07/09 21:54		☐
150	LNJXTB	D9J300000	9303237	04	1.0	11/07/09 21:57		☐
151	LNJXTC	D9J300000	9303237	04	1.0	11/07/09 21:59		☐
152	LNG33	D9J290197-1	9303237	04	1.0	11/07/09 22:02		☐
153	LNG4H	D9J290197-2	9303237	04	1.0	11/07/09 22:05		☐
154	LNG4L	D9J290197-3	9303237	04	1.0	11/07/09 22:08		☐
155	LNG4LP5	D9J290197	9303237		5.0	11/07/09 22:10		☐
156	LNG4LZ	D9J290197-3	9303237		1.0	11/07/09 22:13		☐
157	LNG4LS	D9J290197-3	9303237	04	1.0	11/07/09 22:16		☐
158	LNG4LD	D9J290197-3	9303237	04	1.0	11/07/09 22:19		☐
159	CCV				1.0	11/07/09 22:21		☐
160	CCB				1.0	11/07/09 22:24		☐
161	RLCV				1.0	11/07/09 22:27		☐
162	LNG4N	D9J290197-4	9303237	04	1.0	11/07/09 22:30		☐
163	LNG4R	D9J290197-5	9303237	04	1.0	11/07/09 22:32		☐
164	LNG4W	D9J290197-6	9303237	04	1.0	11/07/09 22:35		☐
165	LNG4X	D9J290197-7	9303237	04	1.0	11/07/09 22:38		☐
166	LNG41	D9J290197-8	9303237	04	1.0	11/07/09 22:41		☐
167	LNG42	D9J290197-9	9303237	04	1.0	11/07/09 22:43		☐
168	LNG44	D9J290197-10	9303237	04	1.0	11/07/09 22:46		☐
169	LNG46	D9J290197-11	9303237	04	1.0	11/07/09 22:49		☐
170	CCV				1.0	11/07/09 22:52		☐
171	CCB				1.0	11/07/09 22:54		☐
172	RLCV				1.0	11/07/09 22:57		☐
173	LNWCQB	D9K050000	9309120	04	2.5	11/07/09 23:00		☐
174	LNWCQC	D9K050000	9309120	04	2.5	11/07/09 23:03		☐
175	LNTEH	D9K040465-33	9309120	04	2.5	11/07/09 23:06		☐
176	LNTEQ	D9K040465-35	9309120	04	2.5	11/07/09 23:08		☐
177	LNTET	D9K040465-37	9309120	04	2.5	11/07/09 23:11		☐
178	LNTE0	D9K040465-39	9309120	04	2.5	11/07/09 23:14		☐
179	LNTE5	D9K040465-41	9309120	04	2.5	11/07/09 23:17		☐
180	LNTE5S	D9K040465-41	9309120	04	2.5	11/07/09 23:19		☐
181	LNTE5D	D9K040465-41	9309120	04	2.5	11/07/09 23:22		☐
182	LNTFA	D9K040465-43	9309120	04	2.5	11/07/09 23:25		☐
183	CCV				1.0	11/07/09 23:28		☐
184	CCB				1.0	11/07/09 23:30		☐
185	RLCV				1.0	11/07/09 23:33		☐
186	RINSE				1.0	11/07/09 23:36		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
187	~~RINSE~~				~~1.0~~	~~11/07/09 23:39~~		
188	~~Cal Blank~~				~~1.0~~	~~11/07/09 23:41~~	VL 11/9/09 Did not use.	
189	Cal Blank				1.0	11/07/09 23:44		
190	100 ppb				1.0	11/07/09 23:47		
191	CCV				1.0	11/07/09 23:50		
192	CCB				1.0	11/07/09 23:52		
193	RLCV				1.0	11/07/09 23:55		
194	LNEMRZF	D9J280200-5	9302146		1.0	11/07/09 23:58		
195	LNEMRSF	D9J280200-5	9302146	MD	1.0	11/08/09 00:01		
196	LNEMRDF	D9J280200-5	9302146	MD	1.0	11/08/09 00:03		
197	LNEMWF	D9J280200-6	9302146	MD	1.0	11/08/09 00:06		
198	LNEM0F	D9J280200-7	9302146	MD	1.0	11/08/09 00:09		
199	LNEM3F	D9J280200-8	9302146	MD	1.0	11/08/09 00:12		
200	LNEM4F	D9J280200-9	9302146	MD	1.0	11/08/09 00:15		
201	LNEM7F	D9J280200-10	9302146	MD	1.0	11/08/09 00:17		
202	CCV				1.0	11/08/09 00:20		
203	CCB				1.0	11/08/09 00:23		
204	RLCV				1.0	11/08/09 00:26		
205	LN0N2B	D9K060000	9310060	04	2.5	11/08/09 00:28		
206	LN0N2C	D9K060000	9310060	04	2.5	11/08/09 00:31		
207	LNW5P	D9K050485-2	9310060	04	2.5	11/08/09 00:34		
208	LNW55	D9K050485-4	9310060	04	2.5	11/08/09 00:37		
209	LNW6E	D9K050485-6	9310060	04	2.5	11/08/09 00:40		
210	LNW6ES	D9K050485-6	9310060	04	2.5	11/08/09 00:42		
211	LNW6ED	D9K050485-6	9310060	04	2.5	11/08/09 00:45		
212	CCV				1.0	11/08/09 00:48		
213	CCB				1.0	11/08/09 00:51		
214	RLCV				1.0	11/08/09 00:53		
215	LNF42B	D9J290000	9302121	MS	1.0	11/08/09 00:56		
216	LNF42C	D9J290000	9302121	MS	1.0	11/08/09 00:59		
217	LNE4T	D9J280246-1	9302121	MS	1.0	11/08/09 01:02		
218	LNE40 10X	D9J280246-2	9302121	MS	10.0	11/08/09 01:05		
219	LNE41 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:07		
220	LNE41P25	D9J280246	9302121		25.0	11/08/09 01:10		
221	CCV				1.0	11/08/09 01:13		
222	CCB				1.0	11/08/09 01:16		
223	RLCV				1.0	11/08/09 01:19		
224	LNE41Z	D9J280246-3	9302121		1.0	11/08/09 01:21		
225	LNE41S 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:24		
226	LNE41D 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:27		
227	LNE44 5X	D9J280246-4	9302121	MS	5.0	11/08/09 01:30		
228	LNE47 2X	D9J280246-5	9302121	MS	2.0	11/08/09 01:32		
229	LNE5A 2X	D9J280246-6	9302121	MS	2.0	11/08/09 01:35		
230	CCV				1.0	11/08/09 01:38		
231	CCB				1.0	11/08/09 01:41		
232	RLCV				1.0	11/08/09 01:44		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
233	LNJN5BF	D9J300000	9303187	MD	1.0	11/08/09 01:46		☐
234	LNJN5CF	D9J300000	9303187	MD	1.0	11/08/09 01:49		☐
235	LNH2LF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 01:52		☐
236	LNH2LP10F	D9J290310	9303187		10.0	11/08/09 01:55		☐
237	LNH2LZF	D9J290310-3	9303187		1.0	11/08/09 01:58		☐
238	LNH2LSF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:00		☐
239	LNH2LDF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:03		☐
240	LNH2NF 2X	D9J290310-4	9303187	MD	2.0	11/08/09 02:06		☐
241	CCV				1.0	11/08/09 02:09		☐
242	CCB				1.0	11/08/09 02:11		☐
243	RLCV				1.0	11/08/09 02:14		☐
244	~~RINSE~~				~~1.0~~	~~11/08/09 02:17~~		☐
245	RINSE				1.0	11/08/09 02:20		☐
246	~~Cal Blank~~				~~1.0~~	~~11/08/09 02:22~~	KF 11/9/09 did not use	☐
247	Cal Blank				1.0	11/08/09 02:25		☐
248	100 ppb				1.0	11/08/09 02:28		☐
249	CCV				1.0	11/08/09 02:31		☐
250	CCB				1.0	11/08/09 02:33		☐
251	RLCV				1.0	11/08/09 02:36		☐
252	LNJNVB	D9J300000	9303185	MS	1.0	11/08/09 02:39		☐
253	LNJNVC	D9J300000	9303185	MS	1.0	11/08/09 02:42		☐
254	LNC7F 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:44		☐
255	LNC7FP25	D9J270261	9303185		25.0	11/08/09 02:47		☐
256	LNC7FZ	D9J270261-1	9303185		1.0	11/08/09 02:50		☐
257	LNC7FS 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:53		☐
258	CCV				1.0	11/08/09 02:56		☐
259	CCB				1.0	11/08/09 02:58		☐
260	RLCV				1.0	11/08/09 03:01		☐
261	LNC7FD 5X	D9J270261-1	9303185	MS	5.0	11/08/09 03:04		☐
262	LNC7L 5X	D9J270263-1	9303185	MS	5.0	11/08/09 03:07		☐
263	LNFGD 5X	D9J280280-1	9303185	MS	5.0	11/08/09 03:09		☐
264	LNFG2 5X	D9J280283-1	9303185	MS	5.0	11/08/09 03:12		☐
265	LNH2J 5X	D9J290310-1	9303185	MS	5.0	11/08/09 03:15		☐
266	LNH2K 5X	D9J290310-2	9303185	MS	5.0	11/08/09 03:18		☐
267	CCV				1.0	11/08/09 03:21		☐
268	CCB				1.0	11/08/09 03:23		☐
269	RLCV				1.0	11/08/09 03:26		☐
270	LNJ8HB	D9J300000	9303310	04	1.0	11/08/09 03:29		☐
271	LNJ8HC	D9J300000	9303310	04	1.0	11/08/09 03:32		☐
272	LNHRC	D9J290285-1	9303310	04	1.0	11/08/09 03:34		☐
273	LNHRK	D9J290285-2	9303310	04	1.0	11/08/09 03:37		☐
274	LNHRN	D9J290285-3	9303310	04	1.0	11/08/09 03:40		☐
275	LNHRP	D9J290285-4	9303310	04	1.0	11/08/09 03:43		☐
276	LNHRR	D9J290285-5	9303310	04	1.0	11/08/09 03:46		☐
277	CCV				1.0	11/08/09 03:48		☐
278	CCB				1.0	11/08/09 03:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
279	RLCV				1.0	11/08/09 03:54		☐
280	LNHRT	D9J290285-6	9303310	04	1.0	11/08/09 03:57		☐
281	LNHRTP5	D9J290285	9303310		5.0	11/08/09 03:59		☐
282	LNHRTZ	D9J290285-6	9303310		1.0	11/08/09 04:02		☐
283	LNHRTS	D9J290285-6	9303310	04	1.0	11/08/09 04:05		☐
284	LNHRTD	D9J290285-6	9303310	04	1.0	11/08/09 04:08		☐
285	LNHRV	D9J290285-7	9303310	04	1.0	11/08/09 04:10		☐
286	LNHRW	D9J290285-8	9303310	04	1.0	11/08/09 04:13		☐
287	LNHRX	D9J290285-9	9303310	04	1.0	11/08/09 04:16		☐
288	LNHR0	D9J290285-10	9303310	04	1.0	11/08/09 04:19		☐
289	CCV				1.0	11/08/09 04:21		☐
290	CCB				1.0	11/08/09 04:24		☐
291	RLCV				1.0	11/08/09 04:27		☐
292	~~Cal Blank~~				1.0	11/08/09 04:30	KF 11/9/09 Did not use.	☐
293	Cal Blank				1.0	11/08/09 04:32		☐
294	100 ppb				1.0	11/08/09 04:35		☐
295	CCV				1.0	11/08/09 04:38		☐
296	CCB				1.0	11/08/09 04:41		☐
297	RLCV				1.0	11/08/09 04:43		☐
298	LM7XN 10X	D9J230319-2	9299274	04	1.0	11/08/09 04:46		☐
299	CCV				1.0	11/08/09 04:49		☐
300	CCB				1.0	11/08/09 04:52		☐
301	RLCV				1.0	11/08/09 04:54		☐
302	~~LNNV0B~~	~~D9K020000~~	~~9306340~~	~~04~~	~~1.0~~	~~11/08/09 04:57~~		☐
303	LNNV0C	D9K020000	9306340	04	1.0	11/08/09 05:00		☐
304	LNLGN 5X	D9J300319-1	9306340	04	5.0	11/08/09 05:03		☐
305	LNJ05	D9J300168-1	9306340	04	1.0	11/08/09 05:05		☐
306	LNJ1A	D9J300168-2	9306340	04	1.0	11/08/09 05:08		☐
307	LNJ1C	D9J300168-3	9306340	04	1.0	11/08/09 05:11		☐
308	LNJ1D	D9J300168-4	9306340	04	1.0	11/08/09 05:14		☐
309	LNJ1F	D9J300168-5	9306340	04	1.0	11/08/09 05:16		☐
310	CCV				1.0	11/08/09 05:19		☐
311	CCB				1.0	11/08/09 05:22		☐
312	RLCV				1.0	11/08/09 05:25		☐
313	LNJ41	D9J300188-1	9306340	04	1.0	11/08/09 05:27		☐
314	LNJ43	D9J300188-2	9306340	04	1.0	11/08/09 05:30		☐
315	LNJ44	D9J300188-3	9306340	04	1.0	11/08/09 05:33		☐
316	LNJ45	D9J300188-4	9306340	04	1.0	11/08/09 05:36		☐
317	LNMA5 5X	D9J310124-1	9306340	04	5.0	11/08/09 05:38		☐
318	LNMCH	D9J310127-1	9306340	04	1.0	11/08/09 05:41		☐
319	CCV				1.0	11/08/09 05:44		☐
320	CCB				1.0	11/08/09 05:47		☐
321	RLCV				1.0	11/08/09 05:49		☐
322	LNMCN	D9J310127-2	9306340	04	1.0	11/08/09 05:52		☐
323	LNMCNP5	D9J310127	9306340		5.0	11/08/09 05:55		☐
324	~~LNMCNZ~~	~~D9J310127-2~~	~~9306340~~		~~1.0~~	~~11/08/09 05:58~~	KF 11/9/09 Did not use.	☐

Denver

RUN SUMMARY

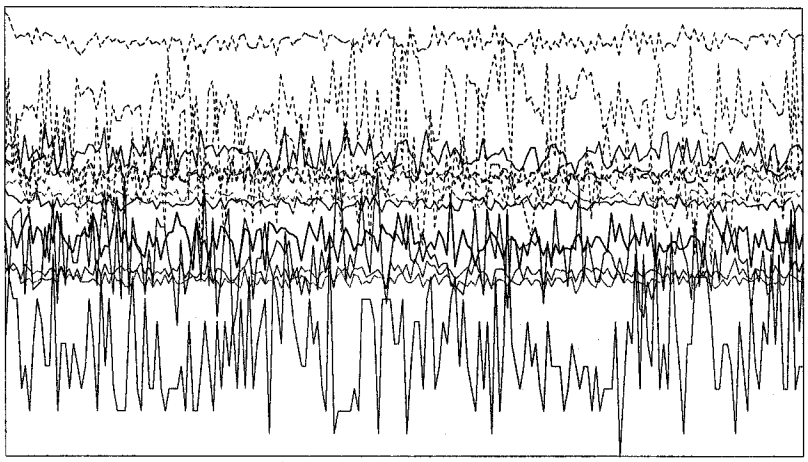
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
325	~~LNMCNS~~	D9J310127-2	9306340	04	1.0	~~11/08/09 06:00~~		☐
326	LNMCND	D9J310127-2	9306340	04	1.0	~~11/08/09~~ 06:03		☐
327	LNMCP	D9J310127-3	9306340	04	1.0	11/08/09 06:06		☐
328	LNMCQ	D9J310127-4	9306340	04	1.0	11/08/09 06:09		☐
329	CCV				1.0	11/08/09 06:11		☐
330	CCB				1.0	11/08/09 06:14		☐
331	~~BLCV~~				~~1.0~~	~~11/08/09 06:17~~	VF 11/9/09 Did not use.	☐

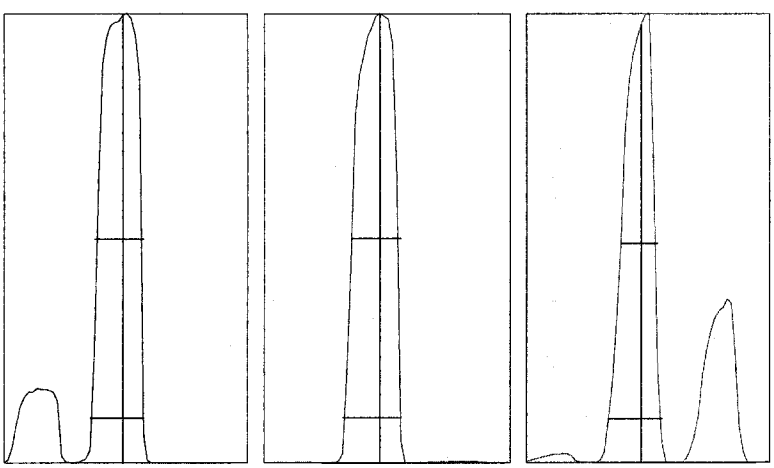
Tune Report

Tune File : NORM.U
Comment : AG110709



Integration Time: 0.1000 sec
Sampling Period: 1.5300 sec
n: 200
Oxide: 156/140 1.612%
Doubly Charged: 70/140 1.671%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	3382.0	3366.1	3.56	0.90
7	50,000	21859.0	20537.5	3.14	0.60
59	50,000	19576.0	19580.9	2.84	0.60
63	100	45.0	44.7	15.57	1.00
70	1,000	496.0	483.0	6.13	0.40
75	20	4.0	4.7	47.83	0.70
78	200	148.0	156.0	8.38	1.00
89	50,000	31217.0	31239.5	2.30	1.00
115	50,000	29852.0	29031.4	2.15	1.60
118	100	66.0	62.9	12.89	1.40
137	5,000	3148.0	3148.6	2.66	1.90
205	20,000	18784.0	18500.3	1.84	2.60
238	50,000	27256.0	28130.6	1.67	2.70
156/140	5	1.542%	1.636%	6.62	
70/140	5	1.747%	1.698%	6.33	



m/z:	7	89	205
Height:	20,610	31,605	18,257
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:09

Tune Report

Tune File : NORM.U
Comment : AG110709

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:12

P/A Factor Tuning Report

Acquired:Nov 7 2009 02:18 pm

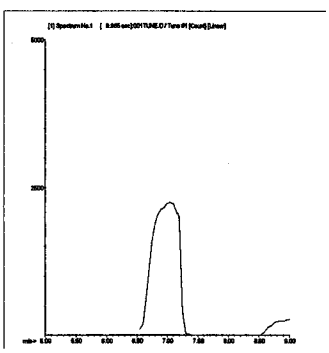
Mass[amu]	Element	P/A Factor
6	Li	0.054257
7	(Li)	Sensitivity too low
9	Be	0.059350
23	Na	0.063944
24	Mg	0.064875
27	Al	0.065819
39	K	0.066026
43	Ca	Sensitivity too low
45	Sc	0.066849
51	V	0.067403
52	Cr	0.068152
53	(Cr)	Sensitivity too low
55	Mn	0.068773
57	Fe	Sensitivity too low
59	Co	0.069652
60	Ni	Sensitivity too low
63	Cu	0.069964
66	Zn	0.070153
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.072052
98	(Mo)	0.071277
99	(Mo)	Sensitivity too low
105	Pd	0.071221
106	(Cd)	0.070815
107	Ag	Sensitivity too low
108	(Cd)	0.071381
111	Cd	0.070975
115	In	0.070220
118	Sn	0.070317
121	Sb	0.070422
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071611
206	(Pb)	0.070464
207	(Pb)	0.070565
208	Pb	0.069648
232	Th	0.069671
238	U	0.069782

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

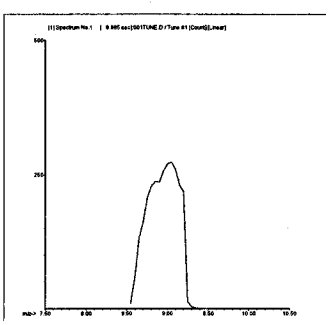
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D
Date Acquired: Nov 7 2009 03:04 pm
Acq. Method: tun_isis.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	23098	23358	23173	22978	22919	23063	0.75	5.00	
9 Be	2804	2779	2831	2892	2712	2807	2.36	5.00	
24 Mg	13819	13879	13741	14010	13810	13653	0.98	5.00	
59 Co	53596	53850	53962	53966	52908	53294	0.88	5.00	
115 In	1005351	1004408	1002826	1008799	1004052	1006672	0.24	5.00	
208 Pb	62719	64001	62223	62327	62711	62333	1.18	5.00	
238 U	130895	133955	130889	130170	131168	128294	1.56	5.00	

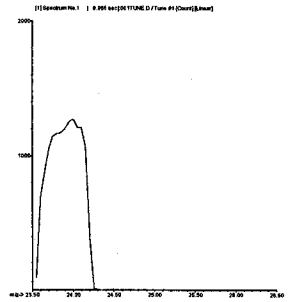


7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D



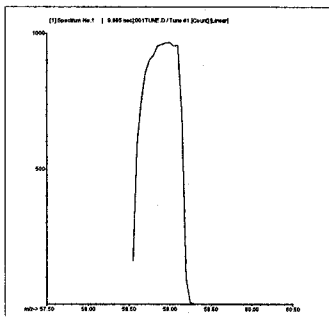
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



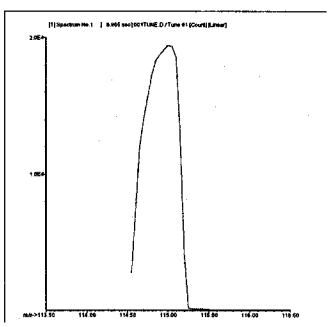
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



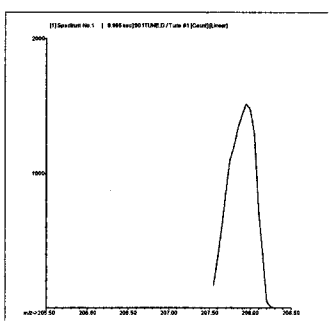
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



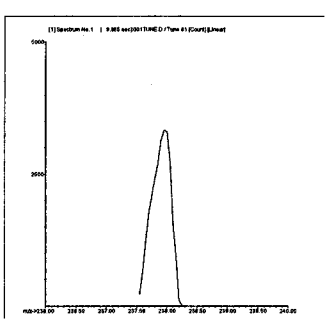
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\002CALB.D\002CALB.D#
Date Acquired: Nov 7 2009 03:07 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

11/6/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	130	55.47
52	Cr	72	1	2920	1.23
55	Mn	72	1	487	11.32
59	Co	72	1	43	35.25
60	Ni	72	1	67	56.79
63	Cu	72	1	247	16.39
66	Zn	72	1	177	1.72
75	As	72	1	38	36.84
78	Se	72	1	290	18.25
95	Mo	72	1	17	69.28
107	Ag	115	1	17	91.65
111	Cd	115	1	6	90.67
118	Sn	115	1	120	25.00
121	Sb	115	1	7	0.00
137	Ba	115	1	11	17.32
205	Tl	165	1	53	12.50
208	Pb	165	1	250	7.42
232	Th	165	1	93	59.01
238	U	165	1	83	36.66

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	450969	0.62
45	Sc	1	1353461	1.72
72	Ge	1	599452	0.37
115	In	1	1813996	0.92
165	Ho	1	3291682	1.21

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#
Date Acquired: Nov 7 2009 03:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	107	14.32
52	Cr	72	1	2804	3.71
55	Mn	72	1	517	15.52
59	Co	72	1	27	21.65
60	Ni	72	1	90	0.00
63	Cu	72	1	277	2.09
66	Zn	72	1	301	6.45
75	As	72	1	36	30.93
78	Se	72	1	263	32.30
95	Mo	72	1	20	50.00
107	Ag	115	1	10	100.00
111	Cd	115	1	-7	207.08
118	Sn	115	1	510	8.55
121	Sb	115	1	13	43.30
137	Ba	115	1	76	40.99
205	Tl	165	1	24	34.32
208	Pb	165	1	256	8.68
232	Th	165	1	100	62.45
238	U	165	1	27	57.28

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	455621	1.61
45	Sc	1	1356727	0.85
72	Ge	1	598490	0.65
115	In	1	1797032	1.18
165	Ho	1	3253654	1.35

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 7 2009 03:12 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:10 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52398	1.41
51	V	72	1	764367	2.20
52	Cr	72	1	771475	1.19
55	Mn	72	1	912002	1.09
59	Co	72	1	914930	2.11
60	Ni	72	1	193364	2.37
63	Cu	72	1	465989	1.20
66	Zn	72	1	112029	1.18
75	As	72	1	90135	1.29
78	Se	72	1	18683	1.97
95	Mo	72	1	260394	0.61
107	Ag	115	1	765784	1.36
111	Cd	115	1	157700	1.34
118	Sn	115	1	441054	2.17
121	Sb	115	1	510967	1.02
137	Ba	115	1	213858	1.06
205	Tl	165	1	1838240	1.05
208	Pb	165	1	2519619	0.58
232	Th	165	1	2643067	0.57
238	U	165	1	2792671	0.69

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	449267	0.99	455621	98.6	30 - 120	
45	Sc	1	1332198	2.77	1356727	98.2	30 - 120	
72	Ge	1	575467	1.00	598490	96.2	30 - 120	
115	In	1	1781328	1.07	1797032	99.1	30 - 120	
165	Ho	1	3275522	1.43	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 7 2009 03:15 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.37	ppb	1.43	40	100.9	90 - 110	
51 V	72	1	38.46	ppb	0.46	40	96.2	90 - 110	
52 Cr	72	1	39.20	ppb	1.19	40	98.0	90 - 110	
55 Mn	72	1	39.82	ppb	0.12	40	99.6	90 - 110	
59 Co	72	1	38.88	ppb	0.70	40	97.2	90 - 110	
60 Ni	72	1	40.10	ppb	0.16	40	100.3	90 - 110	
63 Cu	72	1	39.43	ppb	0.82	40	98.6	90 - 110	
66 Zn	72	1	40.09	ppb	0.20	40	100.2	90 - 110	
75 As	72	1	39.44	ppb	0.27	40	98.6	90 - 110	
78 Se	72	1	38.96	ppb	4.82	40	97.4	90 - 110	
95 Mo	72	1	39.50	ppb	0.72	40	98.8	90 - 110	
107 Ag	115	1	38.87	ppb	1.47	40	97.2	90 - 110	
111 Cd	115	1	39.30	ppb	0.98	40	98.3	90 - 110	
118 Sn	115	1	39.04	ppb	1.08	40	97.6	90 - 110	
121 Sb	115	1	39.64	ppb	1.29	40	99.1	90 - 110	
137 Ba	115	1	38.76	ppb	1.35	40	96.9	90 - 110	
205 Tl	165	1	39.29	ppb	2.05	40	98.2	90 - 110	
208 Pb	165	1	40.72	ppb	2.07	40	101.8	90 - 110	
232 Th	165	1	41.00	ppb	0.86	40	102.5	90 - 110	
238 U	165	1	40.29	ppb	1.06	40	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448116	0.63	455621	98.4	30 - 120	
45 Sc	1	1362171	0.61	1356727	100.4	30 - 120	
72 Ge	1	576140	0.97	598490	96.3	30 - 120	
115 In	1	1802991	1.36	1797032	100.3	30 - 120	
165 Ho	1	3291704	0.83	3253654	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\006WASH.D\006WASH.D#
Date Acquired: Nov 7 2009 03:18 pm
Operator: TEL
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.014 ppb	15.49	1.30	
51 V	72	1	4.659 ppb	1.34	6.50	
52 Cr	72	1	1.891 ppb	2.95	2.60	
55 Mn	72	1	1.009 ppb	5.61	1.30	
59 Co	72	1	0.959 ppb	4.52	1.30	
60 Ni	72	1	2.093 ppb	8.35	2.60	
63 Cu	72	1	1.903 ppb	3.09	2.60	
66 Zn	72	1	9.821 ppb	1.82	13.00	
75 As	72	1	4.879 ppb	0.84	6.50	
78 Se	72	1	4.897 ppb	10.67	6.50	
95 Mo	72	1	2.003 ppb	7.36	2.60	
107 Ag	115	1	4.951 ppb	3.27	6.50	
111 Cd	115	1	1.010 ppb	5.23	1.30	
118 Sn	115	1	10.070 ppb	2.63	13.00	
121 Sb	115	1	2.216 ppb	0.33	2.60	
137 Ba	115	1	0.996 ppb	4.86	1.30	
205 Tl	165	1	1.209 ppb	0.85	1.30	
208 Pb	165	1	1.032 ppb	2.04	1.30	
232 Th	165	1	2.207 ppb	1.51	2.60	
238 U	165	1	1.091 ppb	3.35	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	450702	0.54	455621	98.9	30 - 120	
45 Sc	1	1340626	0.89	1356727	98.8	30 - 120	
72 Ge	1	589280	0.55	598490	98.5	30 - 120	
115 In	1	1800289	1.54	1797032	100.2	30 - 120	
165 Ho	1	3280239	1.67	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 7 2009 03:20 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	0.01	ppb	78.95	1.00	
52 Cr	72	1	0.00	ppb	801.07	1.00	
55 Mn	72	1	0.00	ppb	167.97	1.00	
59 Co	72	1	0.00	ppb	88.12	1.00	
60 Ni	72	1	0.00	ppb	330.87	1.00	
63 Cu	72	1	-0.02	ppb	18.87	1.00	
66 Zn	72	1	-0.08	ppb	16.28	1.00	
75 As	72	1	0.00	ppb	320.71	1.00	
78 Se	72	1	-0.34	ppb	104.80	1.00	
95 Mo	72	1	0.03	ppb	28.62	1.00	
107 Ag	115	1	0.01	ppb	75.43	1.00	
111 Cd	115	1	0.01	ppb	156.14	1.00	
118 Sn	115	1	0.05	ppb	28.25	1.00	
121 Sb	115	1	0.08	ppb	20.91	1.00	
137 Ba	115	1	-0.02	ppb	26.22	1.00	
205 Tl	165	1	0.04	ppb	12.74	1.00	
208 Pb	165	1	0.00	ppb	28.23	1.00	
232 Th	165	1	0.02	ppb	38.30	1.00	
238 U	165	1	0.00	ppb	35.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453788	0.69	455621	99.6	30 - 120	
45 Sc	1	1334714	1.17	1356727	98.4	30 - 120	
72 Ge	1	592403	0.34	598490	99.0	30 - 120	
115 In	1	1792165	0.66	1797032	99.7	30 - 120	
165 Ho	1	3254324	0.30	3253654	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\008RLST.D\008RLST.D#
Date Acquired: Nov 7 2009 03:23 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1.03	ppb	7.07	1	102.9	50 - 150	
51 V	72	1	0.95	ppb	2.40	1	94.6	50 - 150	
52 Cr	72	1	0.95	ppb	9.15	1	94.9	50 - 150	
55 Mn	72	1	0.98	ppb	3.40	1	97.8	50 - 150	
59 Co	72	1	0.99	ppb	1.20	1	99.3	50 - 150	
60 Ni	72	1	0.99	ppb	1.44	1	98.7	50 - 150	
63 Cu	72	1	0.97	ppb	3.25	1	96.6	50 - 150	
66 Zn	72	1	9.84	ppb	1.62	10	98.4	50 - 150	
75 As	72	1	1.01	ppb	1.47	1	100.9	50 - 150	
78 Se	72	1	0.85	ppb	29.55	1	85.1	50 - 150	
95 Mo	72	1	0.98	ppb	3.69	1	98.3	50 - 150	
107 Ag	115	1	0.98	ppb	6.91	1	98.4	50 - 150	
111 Cd	115	1	0.98	ppb	2.94	1	97.7	50 - 150	
118 Sn	115	1	9.90	ppb	3.50	10	99.0	50 - 150	
121 Sb	115	1	1.06	ppb	2.89	1	105.8	50 - 150	
137 Ba	115	1	0.93	ppb	4.92	1	92.9	50 - 150	
205 Tl	165	1	1.05	ppb	1.24	1	104.9	50 - 150	
208 Pb	165	1	1.05	ppb	0.65	1	104.5	50 - 150	
232 Th	165	1	1.07	ppb	0.78	1	106.6	50 - 150	
238 U	165	1	1.09	ppb	0.98	1	109.3	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	452942	1.17	455621	99.4	30 - 120	
45 Sc	1	1350845	0.67	1356727	99.6	30 - 120	
72 Ge	1	590050	0.39	598490	98.6	30 - 120	
115 In	1	1791700	1.48	1797032	99.7	30 - 120	
165 Ho	1	3276677	0.55	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 7 2009 03:26 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.18	ppb	4.87	0	85.7	80 - 120	
51 V	72	1	0.19	ppb	1.60	0	98.1	80 - 120	
52 Cr	72	1	0.17	ppb	19.24	0	88.9	80 - 120	
55 Mn	72	1	0.24	ppb	0.90	0	122.4	80 - 120	
59 Co	72	1	0.21	ppb	2.54	0	105.0	80 - 120	
60 Ni	72	1	0.19	ppb	33.14	0	95.0	80 - 120	
63 Cu	72	1	0.19	ppb	26.00	0	96.8	80 - 120	
66 Zn	72	1	1.99	ppb	0.59	2	101.2	80 - 120	
75 As	72	1	0.22	ppb	3.49	0	111.1	80 - 120	
78 Se	72	1	-0.03	ppb	493.20	0	-19.4	80 - 120	
95 Mo	72	1	0.20	ppb	10.11	0	102.9	80 - 120	
107 Ag	115	1	0.19	ppb	9.51	0	98.0	80 - 120	
111 Cd	115	1	0.20	ppb	6.38	0	102.8	80 - 120	
118 Sn	115	1	1.96	ppb	1.89	2	99.1	80 - 120	
121 Sb	115	1	0.22	ppb	4.04	0	104.0	80 - 120	
137 Ba	115	1	0.19	ppb	4.99	0	101.2	80 - 120	
205 Tl	165	1	0.21	ppb	2.78	0	101.1	80 - 120	
208 Pb	165	1	0.21	ppb	2.60	0	100.1	80 - 120	
232 Th	165	1	0.21	ppb	3.95	0	98.4	80 - 120	
238 U	165	1	0.21	ppb	3.63	0	98.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453567	1.29	455621	99.5	30 - 120	
45 Sc	1	1337172	0.83	1356727	98.6	30 - 120	
72 Ge	1	590407	0.86	598490	98.6	30 - 120	
115 In	1	1781901	0.99	1797032	99.2	30 - 120	
165 Ho	1	3288568	1.80	3253654	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 7 2009 03:29 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	0.00	0.00	ppb	62.04	3600	
52 Cr	72	1	0.00	0.00	ppb	1081.40	3600	
55 Mn	72	1	0.00	0.00	ppb	140.46	3600	
59 Co	72	1	0.00	0.00	ppb	189.04	3600	
60 Ni	72	1	0.00	0.00	ppb	522.21	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.36	3600	
66 Zn	72	1	0.05	0.05	ppb	55.06	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	2.16	2.16	ppb	11.88	3600	
95 Mo	72	1	0.00	0.00	ppb	222.57	3600	
107 Ag	115	1	0.01	0.01	ppb	10.07	3600	
111 Cd	115	1	0.00	0.00	ppb	89.77	3600	
118 Sn	115	1	0.00	0.00	ppb	293.54	3600	
121 Sb	115	1	0.02	0.02	ppb	23.95	3600	
137 Ba	115	1	-0.02	-0.02	ppb	16.61	3600	
205 Tl	165	1	0.01	0.01	ppb	2.14	3600	
208 Pb	165	1	0.00	0.00	ppb	39.67	3600	
232 Th	165	1	0.00	0.00	ppb	17.19	1000	
238 U	165	1	0.00	0.00	ppb	388.10	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453890	1.30	455621	99.6	30 - 120	
45 Sc	1	1357795	0.37	1356727	100.1	30 - 120	
72 Ge	1	592423	0.94	598490	99.0	30 - 120	
115 In	1	1792023	1.18	1797032	99.7	30 - 120	
165 Ho	1	3279675	0.39	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 7 2009 03:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.45 ppb	8.60	1.00	
52 Cr	72	1	1.86 ppb	3.80	1.00	
55 Mn	72	1	3.11 ppb	0.88	1.00	
59 Co	72	1	0.12 ppb	10.19	1.00	
60 Ni	72	1	1.23 ppb	9.98	1.00	
63 Cu	72	1	0.56 ppb	5.58	1.00	
66 Zn	72	1	4.20 ppb	1.79	10.00	
75 As	72	1	0.35 ppb	13.35	1.00	
78 Se	72	1	0.47 ppb	67.55	1.00	
95 Mo	72	1	2055.00 ppb	1.11	2000.00	
107 Ag	115	1	0.03 ppb	8.56	1.00	
111 Cd	115	1	0.40 ppb	30.97	1.00	
118 Sn	115	1	0.93 ppb	18.89	10.00	
121 Sb	115	1	0.95 ppb	3.56	1.00	
137 Ba	115	1	0.00 ppb	326.02	1.00	
205 Tl	165	1	0.04 ppb	20.03	1.00	
208 Pb	165	1	1.04 ppb	2.03	1.00	
232 Th	165	1	0.02 ppb	5.48	1.00	
238 U	165	1	0.00 ppb	14.89	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	297281	2.41	455621	65.2	30 - 120	
45 Sc	1	939322	1.85	1356727	69.2	30 - 120	
72 Ge	1	429449	0.82	598490	71.8	30 - 120	
115 In	1	1325081	0.92	1797032	73.7	30 - 120	
165 Ho	1	2485688	0.47	3253654	76.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 7 2009 03:34 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	108.90	0.75	100	108.9	80 - 120	
51 V	72	1	92.27	0.38	100	92.3	80 - 120	
52 Cr	72	1	90.40	0.96	100	90.4	80 - 120	
55 Mn	72	1	92.59	1.18	100	92.6	80 - 120	
59 Co	72	1	88.85	0.30	100	88.9	80 - 120	
60 Ni	72	1	89.72	0.28	100	89.7	80 - 120	
63 Cu	72	1	85.14	0.90	100	85.1	80 - 120	
66 Zn	72	1	95.65	0.49	100	95.7	80 - 120	
75 As	72	1	99.50	0.47	100	99.5	80 - 120	
78 Se	72	1	105.90	0.80	100	105.9	80 - 120	
95 Mo	72	1	2149.00	1.99	2100	102.3	80 - 120	
107 Ag	115	1	84.00	7.96	100	84.0	80 - 120	
111 Cd	115	1	93.62	2.89	100	93.6	80 - 120	
118 Sn	115	1	96.78	1.78	100	96.8	80 - 120	
121 Sb	115	1	100.10	2.32	100	100.1	80 - 120	
137 Ba	115	1	96.82	2.12	100	96.8	80 - 120	
205 Tl	165	1	94.83	0.67	100	94.8	80 - 120	
208 Pb	165	1	93.97	0.82	100	94.0	80 - 120	
232 Th	165	1	101.90	0.67	100	101.9	80 - 120	
238 U	165	1	100.20	0.45	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272241	2.18	455621	59.8	30 - 120	
45 Sc	1	935334	1.15	1356727	68.9	30 - 120	
72 Ge	1	419509	1.32	598490	70.1	30 - 120	
115 In	1	1327038	1.55	1797032	73.8	30 - 120	
165 Ho	1	2524289	0.15	3253654	77.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 7 2009 03:37 pm
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0	0.0	80 - 120	
51 V	72	1	0.06	ppb	15.15	0	29.2	80 - 120	
52 Cr	72	1	0.00	ppb	941.54	0	-2.5	80 - 120	
55 Mn	72	1	0.00	ppb	87.90	0	-2.5	80 - 120	
59 Co	72	1	0.00	ppb	138.19	0	-0.5	80 - 120	
60 Ni	72	1	-0.01	ppb	79.76	0	-6.6	80 - 120	
63 Cu	72	1	-0.02	ppb	11.32	0	-10.3	80 - 120	
66 Zn	72	1	-0.12	ppb	4.66	2	-6.1	80 - 120	
75 As	72	1	0.00	ppb	172.97	0	2.3	80 - 120	
78 Se	72	1	0.18	ppb	157.63	0	105.8	80 - 120	
95 Mo	72	1	0.92	ppb	26.25	0	470.1	80 - 120	
107 Ag	115	1	0.01	ppb	38.83	0	5.1	80 - 120	
111 Cd	115	1	0.00	ppb	268.01	0	2.2	80 - 120	
118 Sn	115	1	-0.03	ppb	57.94	2	-1.3	80 - 120	
121 Sb	115	1	0.13	ppb	22.58	0	60.8	80 - 120	
137 Ba	115	1	-0.03	ppb	10.98	0	-13.6	80 - 120	
205 Tl	165	1	0.00	ppb	35.28	0	1.1	80 - 120	
208 Pb	165	1	0.00	ppb	109.50	0	-0.7	80 - 120	
232 Th	165	1	0.03	ppb	14.09	0	14.5	80 - 120	
238 U	165	1	0.02	ppb	14.78	0	7.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	392251	1.40	455621	86.1	30 - 120	
45 Sc	1	1236871	2.21	1356727	91.2	30 - 120	
72 Ge	1	563469	0.48	598490	94.1	30 - 120	
115 In	1	1720438	0.38	1797032	95.7	30 - 120	
165 Ho	1	3228952	0.84	3253654	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\014 LR.D\014 LR.D#
Date Acquired: Nov 7 2009 03:40 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1021.00 ppb	0.96	1000	102.1	90 - 110	
51 V	72	1	925.30 ppb	0.26	1000	92.5	90 - 110	
52 Cr	72	1	921.80 ppb	1.18	1000	92.2	90 - 110	
55 Mn	72	1	929.00 ppb	0.53	1000	92.9	90 - 110	
59 Co	72	1	937.60 ppb	0.95	1000	93.8	90 - 110	
60 Ni	72	1	990.00 ppb	1.83	1000	99.0	90 - 110	
63 Cu	72	1	941.00 ppb	0.34	1000	94.1	90 - 110	
66 Zn	72	1	1002.00 ppb	1.56	1000	100.2	90 - 110	
75 As	72	1	1025.00 ppb	1.12	1000	102.5	90 - 110	
78 Se	72	1	1031.00 ppb	0.90	1000	103.1	90 - 110	
95 Mo	72	1	1009.00 ppb	0.81	1000	100.9	90 - 110	
107 Ag	115	1	955.40 ppb	0.47	1000	95.5	90 - 110	
111 Cd	115	1	993.10 ppb	0.32	1000	99.3	90 - 110	
118 Sn	115	1	954.10 ppb	1.58	1000	95.4	90 - 110	
121 Sb	115	1	963.20 ppb	0.99	1000	96.3	90 - 110	
137 Ba	115	1	967.40 ppb	1.98	1000	96.7	90 - 110	
205 Tl	165	1	966.90 ppb	1.78	1000	96.7	90 - 110	
208 Pb	165	1	947.60 ppb	1.76	1000	94.8	90 - 110	
232 Th	165	1	989.70 ppb	1.92	1000	99.0	90 - 110	
238 U	165	1	989.00 ppb	1.57	1000	98.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	400820	0.66	455621	88.0	30 - 120	
45 Sc	1	1229119	1.48	1356727	90.6	30 - 120	
72 Ge	1	547741	0.96	598490	91.5	30 - 120	
115 In	1	1703051	0.61	1797032	94.8	30 - 120	
165 Ho	1	3245351	1.45	3253654	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 7 2009 03:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.22	3600	
51 V	72	1	0.03	0.03	ppb	5.05	3600	
52 Cr	72	1	-0.02	-0.02	ppb	115.91	3600	
55 Mn	72	1	0.00	0.00	ppb	108.03	3600	
59 Co	72	1	0.00	0.00	ppb	73.71	3600	
60 Ni	72	1	-0.01	-0.01	ppb	98.85	3600	
63 Cu	72	1	-0.01	-0.01	ppb	57.10	3600	
66 Zn	72	1	-0.10	-0.10	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	18.58	3600	
78 Se	72	1	0.26	0.26	ppb	60.51	3600	
95 Mo	72	1	0.62	0.62	ppb	25.89	3600	
107 Ag	115	1	0.03	0.03	ppb	13.50	3600	
111 Cd	115	1	0.01	0.01	ppb	106.57	3600	
118 Sn	115	1	1.01	1.01	ppb	28.84	3600	
121 Sb	115	1	1.39	1.39	ppb	19.23	3600	
137 Ba	115	1	-0.02	-0.02	ppb	4.07	3600	
205 Tl	165	1	0.06	0.06	ppb	11.15	3600	
208 Pb	165	1	0.01	0.01	ppb	28.34	3600	
232 Th	165	1	0.12	0.12	ppb	15.82	1000	
238 U	165	1	0.14	0.14	ppb	23.45	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	416465	0.36	455621	91.4	30 - 120	
45 Sc	1	1277469	0.68	1356727	94.2	30 - 120	
72 Ge	1	579692	0.72	598490	96.9	30 - 120	
115 In	1	1790861	0.65	1797032	99.7	30 - 120	
165 Ho	1	3297951	1.06	3253654	101.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 7 2009 03:45 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	0.98	50	101.6	90 - 110	
51 V	72	1	47.69	ppb	0.85	50	95.4	90 - 110	
52 Cr	72	1	47.81	ppb	0.72	50	95.6	90 - 110	
55 Mn	72	1	47.91	ppb	0.63	50	95.8	90 - 110	
59 Co	72	1	48.31	ppb	1.05	50	96.6	90 - 110	
60 Ni	72	1	49.87	ppb	0.51	50	99.7	90 - 110	
63 Cu	72	1	48.27	ppb	0.97	50	96.5	90 - 110	
66 Zn	72	1	49.24	ppb	0.51	50	98.5	90 - 110	
75 As	72	1	49.61	ppb	0.57	50	99.2	90 - 110	
78 Se	72	1	51.34	ppb	3.01	50	102.7	90 - 110	
95 Mo	72	1	49.43	ppb	1.34	50	98.9	90 - 110	
107 Ag	115	1	48.77	ppb	0.60	50	97.5	90 - 110	
111 Cd	115	1	49.46	ppb	1.05	50	98.9	90 - 110	
118 Sn	115	1	49.42	ppb	0.94	50	98.8	90 - 110	
121 Sb	115	1	49.48	ppb	0.82	50	99.0	90 - 110	
137 Ba	115	1	48.65	ppb	1.08	50	97.3	90 - 110	
205 Tl	165	1	49.98	ppb	1.20	50	100.0	90 - 110	
208 Pb	165	1	50.63	ppb	2.15	50	101.3	90 - 110	
232 Th	165	1	50.61	ppb	1.41	50	101.2	90 - 110	
238 U	165	1	50.58	ppb	0.97	50	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	424171	1.07	455621	93.1	30 - 120	
45 Sc	1	1298607	1.88	1356727	95.7	30 - 120	
72 Ge	1	570018	0.80	598490	95.2	30 - 120	
115 In	1	1777686	0.76	1797032	98.9	30 - 120	
165 Ho	1	3306431	1.43	3253654	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 7 2009 03:48 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	0.018	ppb	26.29	1.00	
52 Cr	72	1	0.021	ppb	89.72	1.00	
55 Mn	72	1	-0.002	ppb	258.47	1.00	
59 Co	72	1	0.000	ppb	7.74	1.00	
60 Ni	72	1	-0.003	ppb	365.53	1.00	
63 Cu	72	1	-0.006	ppb	212.36	1.00	
66 Zn	72	1	-0.070	ppb	18.30	1.00	
75 As	72	1	0.022	ppb	32.72	1.00	
78 Se	72	1	0.156	ppb	92.00	1.00	
95 Mo	72	1	0.115	ppb	30.30	1.00	
107 Ag	115	1	0.011	ppb	38.12	1.00	
111 Cd	115	1	0.002	ppb	113.82	1.00	
118 Sn	115	1	0.224	ppb	27.67	1.00	
121 Sb	115	1	0.348	ppb	18.44	1.00	
137 Ba	115	1	-0.026	ppb	8.86	1.00	
205 Tl	165	1	0.021	ppb	16.25	1.00	
208 Pb	165	1	0.000	ppb	463.86	1.00	
232 Th	165	1	0.056	ppb	20.03	1.00	
238 U	165	1	0.020	ppb	23.07	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	432937	1.72	455621	95.0	30 - 120	
45 Sc	1	1320709	0.75	1356727	97.3	30 - 120	
72 Ge	1	592471	0.93	598490	99.0	30 - 120	
115 In	1	1824111	0.70	1797032	101.5	30 - 120	
165 Ho	1	3304082	2.00	3253654	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\018WASH.D\018WASH.D#
Date Acquired: Nov 7 2009 03:50 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.089 ppb	20.89	1.30	
51 V	72	1	4.721 ppb	1.02	6.50	
52 Cr	72	1	1.919 ppb	1.17	2.60	
55 Mn	72	1	0.984 ppb	3.79	1.30	
59 Co	72	1	0.988 ppb	7.05	1.30	
60 Ni	72	1	1.975 ppb	5.09	2.60	
63 Cu	72	1	1.890 ppb	1.03	2.60	
66 Zn	72	1	9.815 ppb	1.05	13.00	
75 As	72	1	4.945 ppb	0.93	6.50	
78 Se	72	1	5.017 ppb	5.41	6.50	
95 Mo	72	1	2.030 ppb	4.90	2.60	
107 Ag	115	1	5.119 ppb	1.83	6.50	
111 Cd	115	1	0.998 ppb	8.12	1.30	
118 Sn	115	1	10.310 ppb	2.66	13.00	
121 Sb	115	1	2.181 ppb	2.54	2.60	
137 Ba	115	1	0.995 ppb	2.40	1.30	
205 Tl	165	1	1.063 ppb	1.61	1.30	
208 Pb	165	1	1.038 ppb	1.89	1.30	
232 Th	165	1	2.164 ppb	2.13	2.60	
238 U	165	1	1.100 ppb	1.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	443603	0.24	455621	97.4	30 - 120	
45 Sc	1	1335995	1.35	1356727	98.5	30 - 120	
72 Ge	1	596206	0.64	598490	99.6	30 - 120	
115 In	1	1804793	1.75	1797032	100.4	30 - 120	
165 Ho	1	3324168	1.02	3253654	102.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\095 CCV.D\095 CCV.D#
Date Acquired: Nov 7 2009 07:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.00	ppb	3.68	50	100.0	90 - 110	
51 V	72	1	49.46	ppb	0.96	50	98.9	90 - 110	
52 Cr	72	1	49.13	ppb	0.63	50	98.3	90 - 110	
55 Mn	72	1	48.00	ppb	0.58	50	96.0	90 - 110	
59 Co	72	1	49.88	ppb	1.19	50	99.8	90 - 110	
60 Ni	72	1	52.70	ppb	0.96	50	105.4	90 - 110	
63 Cu	72	1	50.75	ppb	0.19	50	101.5	90 - 110	
66 Zn	72	1	48.83	ppb	0.18	50	97.7	90 - 110	
75 As	72	1	50.85	ppb	1.33	50	101.7	90 - 110	
78 Se	72	1	50.97	ppb	2.08	50	101.9	90 - 110	
95 Mo	72	1	49.28	ppb	0.59	50	98.6	90 - 110	
107 Ag	115	1	48.69	ppb	1.80	50	97.4	90 - 110	
111 Cd	115	1	48.20	ppb	1.31	50	96.4	90 - 110	
118 Sn	115	1	47.65	ppb	1.87	50	95.3	90 - 110	
121 Sb	115	1	47.61	ppb	2.17	50	95.2	90 - 110	
137 Ba	115	1	48.23	ppb	1.87	50	96.5	90 - 110	
205 Tl	165	1	49.17	ppb	1.01	50	98.3	90 - 110	
208 Pb	165	1	50.08	ppb	1.74	50	100.2	90 - 110	
232 Th	165	1	49.66	ppb	0.53	50	99.3	90 - 110	
238 U	165	1	49.60	ppb	0.64	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	431764	0.94	455621	94.8	30 - 120	
45 Sc	1	1275635	0.72	1356727	94.0	30 - 120	
72 Ge	1	557000	0.87	598490	93.1	30 - 120	
115 In	1	1717369	0.76	1797032	95.6	30 - 120	
165 Ho	1	3017615	0.61	3253654	92.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\096 CCB.D\096 CCB.D#
Date Acquired: Nov 7 2009 07:28 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.006	ppb	24.61	1.00	
52 Cr	72	1	0.005	ppb	16.13	1.00	
55 Mn	72	1	0.012	ppb	40.48	1.00	
59 Co	72	1	0.003	ppb	90.18	1.00	
60 Ni	72	1	0.005	ppb	115.47	1.00	
63 Cu	72	1	-0.001	ppb	1434.90	1.00	
66 Zn	72	1	0.040	ppb	39.82	1.00	
75 As	72	1	-0.001	ppb	689.47	1.00	
78 Se	72	1	0.203	ppb	119.68	1.00	
95 Mo	72	1	0.030	ppb	15.19	1.00	
107 Ag	115	1	0.009	ppb	17.39	1.00	
111 Cd	115	1	0.008	ppb	214.98	1.00	
118 Sn	115	1	0.033	ppb	87.07	1.00	
121 Sb	115	1	0.133	ppb	16.18	1.00	
137 Ba	115	1	-0.005	ppb	66.27	1.00	
205 Tl	165	1	0.010	ppb	5.85	1.00	
208 Pb	165	1	0.007	ppb	10.03	1.00	
232 Th	165	1	0.031	ppb	21.92	1.00	
238 U	165	1	0.010	ppb	23.45	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	442577	1.12	455621	97.1	30 - 120	
45 Sc	1	1308803	1.31	1356727	96.5	30 - 120	
72 Ge	1	575158	0.41	598490	96.1	30 - 120	
115 In	1	1692957	0.78	1797032	94.2	30 - 120	
165 Ho	1	3023523	0.70	3253654	92.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\097WASH.D\097WASH.D#
Date Acquired: Nov 7 2009 07:30 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.033 ppb	16.46	1.30	
51 V	72	1	4.891 ppb	1.41	6.50	
52 Cr	72	1	2.023 ppb	4.58	2.60	
55 Mn	72	1	0.940 ppb	0.94	1.30	
59 Co	72	1	1.033 ppb	0.60	1.30	
60 Ni	72	1	2.129 ppb	10.31	2.60	
63 Cu	72	1	2.031 ppb	2.60	2.60	
66 Zn	72	1	10.080 ppb	0.14	13.00	
75 As	72	1	5.048 ppb	1.66	6.50	
78 Se	72	1	5.042 ppb	13.65	6.50	
95 Mo	72	1	2.050 ppb	1.88	2.60	
107 Ag	115	1	5.260 ppb	2.15	6.50	
111 Cd	115	1	0.998 ppb	4.13	1.30	
118 Sn	115	1	9.995 ppb	1.00	13.00	
121 Sb	115	1	2.042 ppb	0.94	2.60	
137 Ba	115	1	1.003 ppb	6.96	1.30	
205 Tl	165	1	1.017 ppb	1.09	1.30	
208 Pb	165	1	1.046 ppb	1.73	1.30	
232 Th	165	1	2.137 ppb	1.47	2.60	
238 U	165	1	1.065 ppb	1.95	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448328	0.34	455621	98.4	30 - 120	
45 Sc	1	1294487	0.37	1356727	95.4	30 - 120	
72 Ge	1	577791	0.38	598490	96.5	30 - 120	
115 In	1	1706897	0.23	1797032	95.0	30 - 120	
165 Ho	1	3033777	0.64	3253654	93.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\098ICSA.D\098ICSA.D#
Date Acquired: Nov 7 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.01 ppb	173.15	1.00	
51 V	72	1	2.34 ppb	2.35	1.00	
52 Cr	72	1	1.89 ppb	3.80	1.00	
55 Mn	72	1	3.08 ppb	1.35	1.00	
59 Co	72	1	0.13 ppb	9.32	1.00	
60 Ni	72	1	1.54 ppb	6.59	1.00	
63 Cu	72	1	0.62 ppb	13.41	1.00	
66 Zn	72	1	4.36 ppb	1.67	10.00	
75 As	72	1	0.31 ppb	11.37	1.00	
78 Se	72	1	-0.18 ppb	17.27	1.00	
95 Mo	72	1	2024.00 ppb	0.75	2000.00	
107 Ag	115	1	0.04 ppb	30.78	1.00	
111 Cd	115	1	0.44 ppb	34.74	1.00	
118 Sn	115	1	0.41 ppb	9.39	10.00	
121 Sb	115	1	0.94 ppb	2.45	1.00	
137 Ba	115	1	0.02 ppb	61.87	1.00	
205 Tl	165	1	0.04 ppb	26.87	1.00	
208 Pb	165	1	1.05 ppb	0.68	1.00	
232 Th	165	1	0.02 ppb	35.17	1.00	
238 U	165	1	0.01 ppb	14.16	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	316325	1.25	455621	69.4	30 - 120	
45 Sc	1	945462	1.56	1356727	69.7	30 - 120	
72 Ge	1	429131	0.94	598490	71.7	30 - 120	
115 In	1	1251973	0.62	1797032	69.7	30 - 120	
165 Ho	1	2302241	0.67	3253654	70.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\099ICSB.D\099ICSB.D#
Date Acquired: Nov 7 2009 07:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.10	0.81	100	101.1	80 - 120	
51 V	72	1	96.26	0.64	100	96.3	80 - 120	
52 Cr	72	1	92.97	0.53	100	93.0	80 - 120	
55 Mn	72	1	92.78	0.33	100	92.8	80 - 120	
59 Co	72	1	90.72	0.50	100	90.7	80 - 120	
60 Ni	72	1	92.71	0.31	100	92.7	80 - 120	
63 Cu	72	1	87.81	1.07	100	87.8	80 - 120	
66 Zn	72	1	94.31	0.22	100	94.3	80 - 120	
75 As	72	1	101.10	0.38	100	101.1	80 - 120	
78 Se	72	1	105.10	1.94	100	105.1	80 - 120	
95 Mo	72	1	2106.00	1.43	2100	100.3	80 - 120	
107 Ag	115	1	85.35	1.62	100	85.4	80 - 120	
111 Cd	115	1	91.55	1.47	100	91.6	80 - 120	
118 Sn	115	1	96.95	1.86	100	97.0	80 - 120	
121 Sb	115	1	101.90	1.14	100	101.9	80 - 120	
137 Ba	115	1	97.10	2.05	100	97.1	80 - 120	
205 Tl	165	1	93.31	1.80	100	93.3	80 - 120	
208 Pb	165	1	92.31	0.40	100	92.3	80 - 120	
232 Th	165	1	98.27	1.03	100	98.3	80 - 120	
238 U	165	1	97.38	0.98	100	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298307	2.13	455621	65.5	30 - 120	
45 Sc	1	951400	0.73	1356727	70.1	30 - 120	
72 Ge	1	417924	0.89	598490	69.8	30 - 120	
115 In	1	1269948	0.83	1797032	70.7	30 - 120	
165 Ho	1	2339416	0.71	3253654	71.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\100WASH.D\100WASH.D#
Date Acquired: Nov 7 2009 07:39 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	1.30	
51 V	72	1	0.142 ppb	7.89	6.50	
52 Cr	72	1	0.005 ppb	257.91	2.60	
55 Mn	72	1	0.007 ppb	90.77	1.30	
59 Co	72	1	0.000 ppb	202.05	1.30	
60 Ni	72	1	0.093 ppb	12.92	2.60	
63 Cu	72	1	-0.001 ppb	1876.80	2.60	
66 Zn	72	1	0.085 ppb	20.36	13.00	
75 As	72	1	0.006 ppb	156.23	6.50	
78 Se	72	1	-0.186 ppb	140.52	6.50	
95 Mo	72	1	0.818 ppb	23.12	2.60	
107 Ag	115	1	0.010 ppb	12.80	6.50	
111 Cd	115	1	0.005 ppb	231.49	1.30	
118 Sn	115	1	-0.010 ppb	165.88	13.00	
121 Sb	115	1	0.032 ppb	29.89	2.60	
137 Ba	115	1	-0.014 ppb	32.29	1.30	
205 Tl	165	1	0.003 ppb	28.88	1.30	
208 Pb	165	1	0.004 ppb	10.63	1.30	
232 Th	165	1	0.024 ppb	19.02	2.60	
238 U	165	1	0.016 ppb	20.26	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	387692	1.32	455621	85.1	30 - 120	
45 Sc	1	1182675	0.32	1356727	87.2	30 - 120	
72 Ge	1	534827	0.26	598490	89.4	30 - 120	
115 In	1	1606789	1.96	1797032	89.4	30 - 120	
165 Ho	1	2912559	0.89	3253654	89.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\101 CCV.D\101 CCV.D#
Date Acquired: Nov 7 2009 07:41 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.02	ppb	3.60	50	102.0	90 - 110	
51 V	72	1	49.10	ppb	0.68	50	98.2	90 - 110	
52 Cr	72	1	48.80	ppb	0.79	50	97.6	90 - 110	
55 Mn	72	1	48.00	ppb	0.60	50	96.0	90 - 110	
59 Co	72	1	49.55	ppb	0.61	50	99.1	90 - 110	
60 Ni	72	1	52.06	ppb	1.46	50	104.1	90 - 110	
63 Cu	72	1	50.22	ppb	0.56	50	100.4	90 - 110	
66 Zn	72	1	48.51	ppb	1.13	50	97.0	90 - 110	
75 As	72	1	50.95	ppb	0.50	50	101.9	90 - 110	
78 Se	72	1	49.38	ppb	4.19	50	98.8	90 - 110	
95 Mo	72	1	50.11	ppb	1.38	50	100.2	90 - 110	
107 Ag	115	1	49.66	ppb	0.85	50	99.3	90 - 110	
111 Cd	115	1	49.01	ppb	1.42	50	98.0	90 - 110	
118 Sn	115	1	48.68	ppb	1.81	50	97.4	90 - 110	
121 Sb	115	1	48.87	ppb	1.17	50	97.7	90 - 110	
137 Ba	115	1	49.35	ppb	1.09	50	98.7	90 - 110	
205 Tl	165	1	49.79	ppb	1.41	50	99.6	90 - 110	
208 Pb	165	1	49.95	ppb	1.13	50	99.9	90 - 110	
232 Th	165	1	49.72	ppb	0.91	50	99.4	90 - 110	
238 U	165	1	49.59	ppb	1.94	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398557	1.14	455621	87.5	30 - 120	
45 Sc	1	1252262	1.05	1356727	92.3	30 - 120	
72 Ge	1	546607	0.97	598490	91.3	30 - 120	
115 In	1	1673358	0.50	1797032	93.1	30 - 120	
165 Ho	1	3013021	0.51	3253654	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\102 CCB.D\102 CCB.D#
Date Acquired: Nov 7 2009 07:44 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.18	1.00	
51 V	72	1	0.072	ppb	11.11	1.00	
52 Cr	72	1	0.002	ppb	1427.90	1.00	
55 Mn	72	1	-0.002	ppb	998.74	1.00	
59 Co	72	1	0.004	ppb	62.33	1.00	
60 Ni	72	1	0.095	ppb	21.31	1.00	
63 Cu	72	1	0.001	ppb	1376.50	1.00	
66 Zn	72	1	0.050	ppb	67.37	1.00	
75 As	72	1	0.009	ppb	154.12	1.00	
78 Se	72	1	0.133	ppb	315.07	1.00	
95 Mo	72	1	0.099	ppb	50.63	1.00	
107 Ag	115	1	0.009	ppb	39.54	1.00	
111 Cd	115	1	0.005	ppb	103.50	1.00	
118 Sn	115	1	0.062	ppb	107.54	1.00	
121 Sb	115	1	0.138	ppb	16.19	1.00	
137 Ba	115	1	-0.017	ppb	52.66	1.00	
205 Tl	165	1	0.016	ppb	15.17	1.00	
208 Pb	165	1	0.005	ppb	21.11	1.00	
232 Th	165	1	0.033	ppb	24.50	1.00	
238 U	165	1	0.010	ppb	34.21	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422194	1.15	455621	92.7	30 - 120	
45 Sc	1	1291748	1.74	1356727	95.2	30 - 120	
72 Ge	1	580761	0.52	598490	97.0	30 - 120	
115 In	1	1717581	0.13	1797032	95.6	30 - 120	
165 Ho	1	3049966	0.69	3253654	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\103WASH.D\103WASH.D#
Date Acquired: Nov 7 2009 07:47 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.046 ppb	12.02	1.30	
51 V	72	1	4.990 ppb	4.96	6.50	
52 Cr	72	1	1.987 ppb	0.39	2.60	
55 Mn	72	1	0.984 ppb	3.75	1.30	
59 Co	72	1	0.995 ppb	2.96	1.30	
60 Ni	72	1	2.088 ppb	2.52	2.60	
63 Cu	72	1	1.963 ppb	3.31	2.60	
66 Zn	72	1	10.010 ppb	1.27	13.00	
75 As	72	1	5.172 ppb	1.14	6.50	
78 Se	72	1	5.100 ppb	6.11	6.50	
95 Mo	72	1	2.120 ppb	2.97	2.60	
107 Ag	115	1	5.166 ppb	1.31	6.50	
111 Cd	115	1	1.008 ppb	8.01	1.30	
118 Sn	115	1	10.170 ppb	2.75	13.00	
121 Sb	115	1	2.047 ppb	1.41	2.60	
137 Ba	115	1	1.038 ppb	2.48	1.30	
205 Tl	165	1	1.010 ppb	2.74	1.30	
208 Pb	165	1	1.022 ppb	1.36	1.30	
232 Th	165	1	2.079 ppb	0.26	2.60	
238 U	165	1	1.053 ppb	0.29	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	429072	0.78	455621	94.2	30 - 120	
45 Sc	1	1319350	0.97	1356727	97.2	30 - 120	
72 Ge	1	590123	0.79	598490	98.6	30 - 120	
115 In	1	1750317	1.57	1797032	97.4	30 - 120	
165 Ho	1	3092496	0.17	3253654	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/09

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#
Date Acquired:	Nov 7 2009 08:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 07 2009 08:45 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1013	6.79
52	Cr	72	1	2664	5.06
55	Mn	72	1	580	4.28
59	Co	72	1	50	19.75
60	Ni	72	1	80	25.27
63	Cu	72	1	293	22.51
66	Zn	72	1	673	6.79
75	As	72	1	36	27.55
78	Se	72	1	257	13.42
95	Mo	72	1	170	5.64
107	Ag	115	1	33	16.66
111	Cd	115	1	17	83.01
118	Sn	115	1	497	10.06
121	Sb	115	1	144	3.89
137	Ba	115	1	74	17.43
205	Tl	165	1	49	39.41
208	Pb	165	1	258	3.04
232	Th	165	1	170	44.95
238	U	165	1	24	20.55

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	398155	0.17
45	Sc	1	1273788	1.37
72	Ge	1	577640	0.30
115	In	1	1726730	0.64
165	Ho	1	3039108	1.07

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\126ICAL.D\126ICAL.D#
Date Acquired: Nov 7 2009 08:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 08:48 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	47883	0.67
51	V	72	1	747976	1.49
52	Cr	72	1	754628	1.13
55	Mn	72	1	865964	0.71
59	Co	72	1	889724	1.22
60	Ni	72	1	191586	1.40
63	Cu	72	1	456036	0.95
66	Zn	72	1	106780	0.65
75	As	72	1	89192	0.61
78	Se	72	1	18229	1.26
95	Mo	72	1	254493	1.19
107	Ag	115	1	752402	0.75
111	Cd	115	1	150239	1.10
118	Sn	115	1	420016	0.73
121	Sb	115	1	483973	0.74
137	Ba	115	1	204383	0.51
205	Tl	165	1	1701616	0.60
208	Pb	165	1	2338107	2.25
232	Th	165	1	2413552	1.92
238	U	165	1	2559276	1.77

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	398883	0.56	398155	100.2	30 - 120	
45	Sc	1	1260434	1.10	1273788	99.0	30 - 120	
72	Ge	1	556836	0.86	577640	96.4	30 - 120	
115	In	1	1704167	0.61	1726730	98.7	30 - 120	
165	Ho	1	3052265	1.25	3039108	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\127 CCV.D\127 CCV.D#
Date Acquired: Nov 7 2009 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.43	ppb	3.83	50	100.9	90 - 110	
51 V	72	1	48.44	ppb	0.77	50	96.9	90 - 110	
52 Cr	72	1	48.00	ppb	0.40	50	96.0	90 - 110	
55 Mn	72	1	48.98	ppb	0.83	50	98.0	90 - 110	
59 Co	72	1	49.19	ppb	0.88	50	98.4	90 - 110	
60 Ni	72	1	51.00	ppb	2.25	50	102.0	90 - 110	
63 Cu	72	1	50.40	ppb	1.04	50	100.8	90 - 110	
66 Zn	72	1	49.66	ppb	0.82	50	99.3	90 - 110	
75 As	72	1	49.96	ppb	1.36	50	99.9	90 - 110	
78 Se	72	1	50.40	ppb	4.89	50	100.8	90 - 110	
95 Mo	72	1	49.49	ppb	0.61	50	99.0	90 - 110	
107 Ag	115	1	48.04	ppb	0.50	50	96.1	90 - 110	
111 Cd	115	1	48.84	ppb	0.25	50	97.7	90 - 110	
118 Sn	115	1	48.90	ppb	0.50	50	97.8	90 - 110	
121 Sb	115	1	49.44	ppb	0.72	50	98.9	90 - 110	
137 Ba	115	1	49.58	ppb	0.98	50	99.2	90 - 110	
205 Tl	165	1	50.08	ppb	0.23	50	100.2	90 - 110	
208 Pb	165	1	49.87	ppb	2.65	50	99.7	90 - 110	
232 Th	165	1	50.94	ppb	1.78	50	101.9	90 - 110	
238 U	165	1	50.49	ppb	2.18	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401327	1.29	398155	100.8	30 - 120	
45 Sc	1	1286634	0.38	1273788	101.0	30 - 120	
72 Ge	1	558660	0.70	577640	96.7	30 - 120	
115 In	1	1725819	0.46	1726730	99.9	30 - 120	
165 Ho	1	3087824	1.47	3039108	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\128 CCB.D\128 CCB.D#
Date Acquired: Nov 7 2009 08:56 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.14	1.00	
51 V	72	1	-0.043	ppb	23.48	1.00	
52 Cr	72	1	0.013	ppb	34.25	1.00	
55 Mn	72	1	0.004	ppb	271.40	1.00	
59 Co	72	1	0.003	ppb	58.98	1.00	
60 Ni	72	1	0.013	ppb	122.65	1.00	
63 Cu	72	1	-0.010	ppb	116.03	1.00	
66 Zn	72	1	-0.311	ppb	3.85	1.00	
75 As	72	1	0.007	ppb	208.78	1.00	
78 Se	72	1	0.060	ppb	542.70	1.00	
95 Mo	72	1	0.010	ppb	195.90	1.00	
107 Ag	115	1	0.008	ppb	34.15	1.00	
111 Cd	115	1	-0.003	ppb	158.97	1.00	
118 Sn	115	1	0.071	ppb	72.17	1.00	
121 Sb	115	1	0.186	ppb	24.43	1.00	
137 Ba	115	1	-0.019	ppb	41.26	1.00	
205 Tl	165	1	0.019	ppb	3.88	1.00	
208 Pb	165	1	0.007	ppb	24.82	1.00	
232 Th	165	1	0.050	ppb	27.19	1.00	
238 U	165	1	0.014	ppb	24.25	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	411177	0.79	398155	103.3	30 - 120	
45 Sc	1	1305310	1.03	1273788	102.5	30 - 120	
72 Ge	1	581950	0.43	577640	100.7	30 - 120	
115 In	1	1731683	0.78	1726730	100.3	30 - 120	
165 Ho	1	3093323	0.73	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\129WASH.D\129WASH.D#
Date Acquired: Nov 7 2009 08:58 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.958 ppb	18.19	1.30	
51 V	72	1	4.710 ppb	2.17	6.50	
52 Cr	72	1	1.943 ppb	1.74	2.60	
55 Mn	72	1	0.998 ppb	3.15	1.30	
59 Co	72	1	0.952 ppb	3.16	1.30	
60 Ni	72	1	2.004 ppb	2.33	2.60	
63 Cu	72	1	1.937 ppb	4.73	2.60	
66 Zn	72	1	9.953 ppb	1.74	13.00	
75 As	72	1	4.981 ppb	2.08	6.50	
78 Se	72	1	5.557 ppb	13.16	6.50	
95 Mo	72	1	2.076 ppb	4.26	2.60	
107 Ag	115	1	5.018 ppb	2.22	6.50	
111 Cd	115	1	1.021 ppb	8.96	1.30	
118 Sn	115	1	10.330 ppb	1.36	13.00	
121 Sb	115	1	2.063 ppb	0.86	2.60	
137 Ba	115	1	1.033 ppb	9.68	1.30	
205 Tl	165	1	1.037 ppb	1.68	1.30	
208 Pb	165	1	1.033 ppb	2.31	1.30	
232 Th	165	1	2.176 ppb	3.62	2.60	
238 U	165	1	1.072 ppb	1.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	417105	1.00	398155	104.8	30 - 120	
45 Sc	1	1297902	0.97	1273788	101.9	30 - 120	
72 Ge	1	579634	1.13	577640	100.3	30 - 120	
115 In	1	1734765	0.59	1726730	100.5	30 - 120	
165 Ho	1	3094755	1.05	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#
Date Acquired: Nov 7 2009 11:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:42 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1073	15.01
52	Cr	72	1	2617	8.78
55	Mn	72	1	867	12.42
59	Co	72	1	87	35.66
60	Ni	72	1	110	27.47
63	Cu	72	1	480	6.51
66	Zn	72	1	677	4.34
75	As	72	1	47	6.82
78	Se	72	1	303	21.28
95	Mo	72	1	213	24.37
107	Ag	115	1	40	65.92
111	Cd	115	1	2	917.60
118	Sn	115	1	410	22.77
121	Sb	115	1	161	7.01
137	Ba	115	1	137	14.12
205	Tl	165	1	107	32.25
208	Pb	165	1	403	9.15
232	Th	165	1	173	13.01
238	U	165	1	122	7.26

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	401411	0.88
45	Sc	1	1190683	1.29
72	Ge	1	533218	0.44
115	In	1	1552104	0.57
165	Ho	1	2681412	0.51

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\190ICAL.D\190ICAL.D#
Date Acquired: Nov 7 2009 11:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:45 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	45518	1.54
51	V	72	1	700879	1.29
52	Cr	72	1	693042	2.18
55	Mn	72	1	795858	1.60
59	Co	72	1	850264	1.89
60	Ni	72	1	181428	0.41
63	Cu	72	1	431089	0.73
66	Zn	72	1	95751	0.48
75	As	72	1	84617	1.05
78	Se	72	1	17278	1.91
95	Mo	72	1	230286	0.80
107	Ag	115	1	661266	1.42
111	Cd	115	1	131853	1.14
118	Sn	115	1	371875	2.20
121	Sb	115	1	432362	1.85
137	Ba	115	1	187475	1.78
205	Tl	165	1	1498644	1.03
208	Pb	165	1	2042776	1.12
232	Th	165	1	2142976	0.23
238	U	165	1	2200342	0.40

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	389965	0.80	401411	97.1	30 - 120	
45	Sc	1	1171540	0.60	1190683	98.4	30 - 120	
72	Ge	1	507906	1.25	533218	95.3	30 - 120	
115	In	1	1532161	1.02	1552104	98.7	30 - 120	
165	Ho	1	2672323	0.90	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\191 CCV.D\191 CCV.D#
Date Acquired: Nov 7 2009 11:50 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.23	ppb	3.26	50	98.5	90 - 110	
51 V	72	1	48.52	ppb	1.74	50	97.0	90 - 110	
52 Cr	72	1	48.49	ppb	0.29	50	97.0	90 - 110	
55 Mn	72	1	48.47	ppb	1.24	50	96.9	90 - 110	
59 Co	72	1	48.02	ppb	0.67	50	96.0	90 - 110	
60 Ni	72	1	49.69	ppb	1.50	50	99.4	90 - 110	
63 Cu	72	1	49.62	ppb	0.90	50	99.2	90 - 110	
66 Zn	72	1	48.96	ppb	1.42	50	97.9	90 - 110	
75 As	72	1	49.10	ppb	0.76	50	98.2	90 - 110	
78 Se	72	1	48.52	ppb	4.63	50	97.0	90 - 110	
95 Mo	72	1	49.23	ppb	0.82	50	98.5	90 - 110	
107 Ag	115	1	49.55	ppb	1.37	50	99.1	90 - 110	
111 Cd	115	1	49.69	ppb	1.93	50	99.4	90 - 110	
118 Sn	115	1	49.87	ppb	1.50	50	99.7	90 - 110	
121 Sb	115	1	49.85	ppb	1.58	50	99.7	90 - 110	
137 Ba	115	1	49.38	ppb	1.63	50	98.8	90 - 110	
205 Tl	165	1	50.07	ppb	0.63	50	100.1	90 - 110	
208 Pb	165	1	50.67	ppb	1.87	50	101.3	90 - 110	
232 Th	165	1	50.33	ppb	1.25	50	100.7	90 - 110	
238 U	165	1	51.37	ppb	0.78	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	391774	1.28	401411	97.6	30 - 120	
45 Sc	1	1173327	0.14	1190683	98.5	30 - 120	
72 Ge	1	511730	0.36	533218	96.0	30 - 120	
115 In	1	1536232	0.41	1552104	99.0	30 - 120	
165 Ho	1	2663987	0.61	2681412	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\192 CCB.D\192 CCB.D#
Date Acquired: Nov 7 2009 11:52 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.021	ppb	99.86	1.00	
51 V	72	1	-0.024	ppb	36.47	1.00	
52 Cr	72	1	0.015	ppb	57.14	1.00	
55 Mn	72	1	0.032	ppb	9.94	1.00	
59 Co	72	1	0.000	ppb	241.41	1.00	
60 Ni	72	1	-0.008	ppb	160.82	1.00	
63 Cu	72	1	-0.035	ppb	57.76	1.00	
66 Zn	72	1	-0.363	ppb	4.76	1.00	
75 As	72	1	0.004	ppb	177.30	1.00	
78 Se	72	1	0.169	ppb	283.55	1.00	
95 Mo	72	1	-0.009	ppb	169.70	1.00	
107 Ag	115	1	0.008	ppb	60.74	1.00	
111 Cd	115	1	0.009	ppb	130.00	1.00	
118 Sn	115	1	0.105	ppb	79.70	1.00	
121 Sb	115	1	0.172	ppb	19.79	1.00	
137 Ba	115	1	-0.007	ppb	70.67	1.00	
205 Tl	165	1	0.024	ppb	16.62	1.00	
208 Pb	165	1	0.009	ppb	31.16	1.00	
232 Th	165	1	0.066	ppb	21.79	1.00	
238 U	165	1	0.019	ppb	10.85	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398355	0.67	401411	99.2	30 - 120	
45 Sc	1	1182289	0.51	1190683	99.3	30 - 120	
72 Ge	1	527088	0.39	533218	98.9	30 - 120	
115 In	1	1549776	0.77	1552104	99.8	30 - 120	
165 Ho	1	2689530	0.71	2681412	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\193WASH.D\193WASH.D#
Date Acquired: Nov 7 2009 11:55 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.091 ppb	4.11	1.30	
51 V	72	1	4.811 ppb	1.97	6.50	
52 Cr	72	1	1.975 ppb	0.98	2.60	
55 Mn	72	1	1.025 ppb	2.63	1.30	
59 Co	72	1	0.940 ppb	2.79	1.30	
60 Ni	72	1	2.047 ppb	4.84	2.60	
63 Cu	72	1	1.979 ppb	2.92	2.60	
66 Zn	72	1	9.930 ppb	1.74	13.00	
75 As	72	1	4.933 ppb	2.85	6.50	
78 Se	72	1	4.816 ppb	29.67	6.50	
95 Mo	72	1	1.981 ppb	4.92	2.60	
107 Ag	115	1	5.175 ppb	3.70	6.50	
111 Cd	115	1	0.978 ppb	1.91	1.30	
118 Sn	115	1	10.300 ppb	2.13	13.00	
121 Sb	115	1	2.097 ppb	1.97	2.60	
137 Ba	115	1	0.975 ppb	2.19	1.30	
205 Tl	165	1	1.046 ppb	3.18	1.30	
208 Pb	165	1	1.053 ppb	2.27	1.30	
232 Th	165	1	2.155 ppb	2.03	2.60	
238 U	165	1	1.095 ppb	4.14	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	397871	0.78	401411	99.1	30 - 120	
45 Sc	1	1191820	1.19	1190683	100.1	30 - 120	
72 Ge	1	527413	0.74	533218	98.9	30 - 120	
115 In	1	1527888	0.75	1552104	98.4	30 - 120	
165 Ho	1	2673393	1.59	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#
Date Acquired: Nov 8 2009 02:25 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:23 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	620	12.63
52	Cr	72	1	2680	1.78
55	Mn	72	1	813	8.79
59	Co	72	1	67	30.95
60	Ni	72	1	113	13.08
63	Cu	72	1	490	11.82
66	Zn	72	1	656	6.46
75	As	72	1	45	17.63
78	Se	72	1	333	20.05
95	Mo	72	1	257	16.03
107	Ag	115	1	40	74.94
111	Cd	115	1	11	116.88
118	Sn	115	1	477	0.80
121	Sb	115	1	156	24.28
137	Ba	115	1	152	14.20
205	Tl	165	1	96	21.83
208	Pb	165	1	372	9.02
232	Th	165	1	160	32.65
238	U	165	1	140	10.99

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	376079	0.79
45	Sc	1	1186897	1.34
72	Ge	1	539567	0.45
115	In	1	1576174	1.52
165	Ho	1	2717767	0.30

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\248ICAL.D\248ICAL.D#
Date Acquired: Nov 8 2009 02:28 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:26 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42446	1.21
51	V	72	1	684937	3.17
52	Cr	72	1	670667	0.81
55	Mn	72	1	787843	0.97
59	Co	72	1	839400	0.67
60	Ni	72	1	178958	0.70
63	Cu	72	1	424705	0.79
66	Zn	72	1	94491	0.73
75	As	72	1	84032	1.05
78	Se	72	1	16841	1.85
95	Mo	72	1	231498	1.15
107	Ag	115	1	664263	0.80
111	Cd	115	1	132542	1.42
118	Sn	115	1	376743	0.98
121	Sb	115	1	435060	0.49
137	Ba	115	1	188704	0.74
205	Tl	165	1	1479617	0.97
208	Pb	165	1	2033413	0.75
232	Th	165	1	2126721	0.55
238	U	165	1	2198988	0.53

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	364624	0.78	376079	97.0	30 - 120	
45	Sc	1	1151280	0.55	1186897	97.0	30 - 120	
72	Ge	1	510601	1.68	539567	94.6	30 - 120	
115	In	1	1555316	0.82	1576174	98.7	30 - 120	
165	Ho	1	2687981	0.46	2717767	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\249 CCV.D\249 CCV.D#
Date Acquired: Nov 8 2009 02:31 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.21	ppb	0.59	50	100.4	90 - 110	
51 V	72	1	49.66	ppb	0.22	50	99.3	90 - 110	
52 Cr	72	1	50.51	ppb	0.78	50	101.0	90 - 110	
55 Mn	72	1	49.52	ppb	0.42	50	99.0	90 - 110	
59 Co	72	1	48.78	ppb	0.64	50	97.6	90 - 110	
60 Ni	72	1	50.96	ppb	0.39	50	101.9	90 - 110	
63 Cu	72	1	50.45	ppb	0.98	50	100.9	90 - 110	
66 Zn	72	1	51.04	ppb	1.32	50	102.1	90 - 110	
75 As	72	1	50.22	ppb	0.79	50	100.4	90 - 110	
78 Se	72	1	52.93	ppb	2.64	50	105.9	90 - 110	
95 Mo	72	1	50.88	ppb	0.45	50	101.8	90 - 110	
107 Ag	115	1	50.92	ppb	2.20	50	101.8	90 - 110	
111 Cd	115	1	51.72	ppb	2.62	50	103.4	90 - 110	
118 Sn	115	1	51.06	ppb	2.41	50	102.1	90 - 110	
121 Sb	115	1	51.12	ppb	1.48	50	102.2	90 - 110	
137 Ba	115	1	50.77	ppb	1.68	50	101.5	90 - 110	
205 Tl	165	1	51.85	ppb	1.16	50	103.7	90 - 110	
208 Pb	165	1	51.54	ppb	2.32	50	103.1	90 - 110	
232 Th	165	1	51.27	ppb	1.18	50	102.5	90 - 110	
238 U	165	1	51.61	ppb	0.90	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360601	1.23	376079	95.9	30 - 120	
45 Sc	1	1152210	0.10	1186897	97.1	30 - 120	
72 Ge	1	506331	0.64	539567	93.8	30 - 120	
115 In	1	1532589	0.89	1576174	97.2	30 - 120	
165 Ho	1	2667156	1.17	2717767	98.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\250 CCB.D\250 CCB.D#
Date Acquired: Nov 8 2009 02:33 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	147.29	1.00	
51 V	72	1	-0.021	ppb	31.34	1.00	
52 Cr	72	1	0.037	ppb	45.39	1.00	
55 Mn	72	1	-0.003	ppb	461.47	1.00	
59 Co	72	1	0.004	ppb	46.27	1.00	
60 Ni	72	1	-0.025	ppb	13.04	1.00	
63 Cu	72	1	-0.035	ppb	22.37	1.00	
66 Zn	72	1	-0.398	ppb	5.33	1.00	
75 As	72	1	0.015	ppb	70.97	1.00	
78 Se	72	1	-0.320	ppb	40.38	1.00	
95 Mo	72	1	-0.054	ppb	35.32	1.00	
107 Ag	115	1	0.008	ppb	9.23	1.00	
111 Cd	115	1	0.005	ppb	52.43	1.00	
118 Sn	115	1	0.107	ppb	31.44	1.00	
121 Sb	115	1	0.188	ppb	20.19	1.00	
137 Ba	115	1	-0.042	ppb	4.94	1.00	
205 Tl	165	1	0.020	ppb	20.00	1.00	
208 Pb	165	1	-0.001	ppb	65.74	1.00	
232 Th	165	1	0.055	ppb	6.90	1.00	
238 U	165	1	0.016	ppb	10.74	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366061	0.27	376079	97.3	30 - 120	
45 Sc	1	1155485	0.15	1186897	97.4	30 - 120	
72 Ge	1	519106	0.69	539567	96.2	30 - 120	
115 In	1	1540332	1.11	1576174	97.7	30 - 120	
165 Ho	1	2657124	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\251WASH.D\251WASH.D#
Date Acquired: Nov 8 2009 02:36 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.182 ppb	14.87	1.30	
51 V	72	1	4.893 ppb	1.96	6.50	
52 Cr	72	1	2.065 ppb	5.46	2.60	
55 Mn	72	1	1.011 ppb	1.63	1.30	
59 Co	72	1	0.945 ppb	4.66	1.30	
60 Ni	72	1	1.991 ppb	4.27	2.60	
63 Cu	72	1	1.920 ppb	3.33	2.60	
66 Zn	72	1	9.756 ppb	2.19	13.00	
75 As	72	1	5.100 ppb	2.23	6.50	
78 Se	72	1	5.391 ppb	16.99	6.50	
95 Mo	72	1	2.008 ppb	7.03	2.60	
107 Ag	115	1	5.374 ppb	2.29	6.50	
111 Cd	115	1	1.096 ppb	8.86	1.30	
118 Sn	115	1	10.340 ppb	1.46	13.00	
121 Sb	115	1	2.090 ppb	3.04	2.60	
137 Ba	115	1	1.046 ppb	6.76	1.30	
205 Tl	165	1	1.069 ppb	2.14	1.30	
208 Pb	165	1	1.064 ppb	1.63	1.30	
232 Th	165	1	2.171 ppb	1.98	2.60	
238 U	165	1	1.109 ppb	2.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368083	0.81	376079	97.9	30 - 120	
45 Sc	1	1152236	1.34	1186897	97.1	30 - 120	
72 Ge	1	519228	0.64	539567	96.2	30 - 120	
115 In	1	1550740	0.66	1576174	98.4	30 - 120	
165 Ho	1	2657605	1.00	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\252 BLK.D\252 BLK.D#
Date Acquired: Nov 8 2009 02:39 am
Operator: TEL
Sample Name: LNJNVB
Misc Info: BLANK 9303185 6020
Vial Number: 4402
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	4060.10	2.00	
51 V	72	1	-0.023 ppb	51.25	2.00	
52 Cr	72	1	0.146 ppb	18.63	2.00	
55 Mn	72	1	0.029 ppb	14.35	2.00	
59 Co	72	1	-0.002 ppb	130.67	2.00	
60 Ni	72	1	0.009 ppb	200.76	2.00	
63 Cu	72	1	0.048 ppb	17.11	2.00	
66 Zn	72	1	0.350 ppb	15.65	2.00	
75 As	72	1	0.002 ppb	591.35	2.00	
78 Se	72	1	-0.304 ppb	77.33	2.00	
95 Mo	72	1	-0.059 ppb	27.75	2.00	
107 Ag	115	1	0.003 ppb	141.04	2.00	
111 Cd	115	1	0.004 ppb	198.21	2.00	
118 Sn	115	1	0.129 ppb	35.95	2.00	
121 Sb	115	1	0.037 ppb	34.11	2.00	
137 Ba	115	1	-0.021 ppb	145.57	2.00	
205 Tl	165	1	0.012 ppb	15.96	2.00	
208 Pb	165	1	0.006 ppb	18.89	2.00	
232 Th	165	1	0.019 ppb	29.60	2.00	
238 U	165	1	0.002 ppb	114.88	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364912	0.52	376079	97.0	30 - 120	
45 Sc	1	1141984	0.82	1186897	96.2	30 - 120	
72 Ge	1	513818	0.75	539567	95.2	30 - 120	
115 In	1	1528677	1.58	1576174	97.0	30 - 120	
165 Ho	1	2647917	1.14	2717767	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\253 LCS.D\253 LCS.D#
Date Acquired: Nov 8 2009 02:42 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJNVC
Misc Info: LCS
Vial Number: 4403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	35.70	1.01	40	89.3	80 - 120	
51 V	72	1	35.52	0.20	40	88.8	80 - 120	
52 Cr	72	1	36.08	0.50	40	90.2	80 - 120	
55 Mn	72	1	35.14	0.07	40	87.9	80 - 120	
59 Co	72	1	34.82	0.49	40	87.1	80 - 120	
60 Ni	72	1	36.40	0.69	40	91.0	80 - 120	
63 Cu	72	1	35.92	0.24	40	89.8	80 - 120	
66 Zn	72	1	35.76	1.51	40	89.4	80 - 120	
75 As	72	1	34.71	0.72	40	86.8	80 - 120	
78 Se	72	1	35.62	2.21	40	89.1	80 - 120	
95 Mo	72	1	32.10	0.70	40	80.3	80 - 120	
107 Ag	115	1	35.79	2.12	40	89.5	80 - 120	
111 Cd	115	1	35.37	1.53	40	88.4	80 - 120	
118 Sn	115	1	0.02	168.39	40	0.0	80 - 120	
121 Sb	115	1	32.20	2.07	40	80.5	80 - 120	
137 Ba	115	1	35.77	2.20	40	89.4	80 - 120	
205 Tl	165	1	36.57	2.09	40	91.4	80 - 120	
208 Pb	165	1	36.87	2.16	40	92.2	80 - 120	
232 Th	165	1	36.61	1.54	40	91.5	80 - 120	
238 U	165	1	36.97	1.94	40	92.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358195	0.31	376079	95.2	30 - 120	
45 Sc	1	1130666	0.47	1186897	95.3	30 - 120	
72 Ge	1	497032	0.74	539567	92.1	30 - 120	
115 In	1	1523173	1.15	1576174	96.6	30 - 120	
165 Ho	1	2638001	1.37	2717767	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#
Date Acquired: Nov 8 2009 02:44 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7F 5X
Misc Info: D9J270261
Vial Number: 4404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: AllRef
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.02	ppb	140.55	3600	
51 V	72	1	58.25	11.65	ppb	0.99	3600	
52 Cr	72	1	96.60	19.32	ppb	0.56	3600	
55 Mn	72	1	20.01	4.00	ppb	1.83	3600	
59 Co	72	1	0.41	0.08	ppb	18.64	3600	
60 Ni	72	1	2.50	0.50	ppb	10.52	3600	
63 Cu	72	1	0.61	0.12	ppb	13.42	3600	
66 Zn	72	1	18.56	3.71	ppb	2.43	3600	
75 As	72	1	190.75	38.15	ppb	0.69	3600	
78 Se	72	1	1.93	0.39	ppb	57.06	3600	
95 Mo	72	1	26.48	5.30	ppb	2.72	3600	
107 Ag	115	1	0.03	0.01	ppb	125.97	3600	
111 Cd	115	1	0.02	0.00	ppb	229.82	3600	
118 Sn	115	1	0.25	0.05	ppb	45.32	3600	
121 Sb	115	1	0.30	0.06	ppb	29.45	3600	
137 Ba	115	1	23.70	4.74	ppb	1.34	3600	
205 Tl	165	1	0.23	0.05	ppb	17.38	3600	
208 Pb	165	1	0.18	0.04	ppb	14.05	3600	
232 Th	165	1	0.24	0.05	ppb	4.71	1000	
238 U	165	1	13.31	2.66	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	333341	1.09	376079	88.6	30 - 120	
45 Sc	1	1062523	0.59	1186897	89.5	30 - 120	
72 Ge	1	462502	0.27	539567	85.7	30 - 120	
115 In	1	1375002	1.04	1576174	87.2	30 - 120	
165 Ho	1	2471361	0.80	2717767	90.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\255SDIL.D\255SDIL.D#
Date Acquired: Nov 8 2009 02:47 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FP25
Misc Info: SERIAL DILUTION
Vial Number: 4405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	0.57	0.00	458.7	90 - 110	
51 V	72	1	2.26	ppb	2.18	2.33	97.2	90 - 110	
52 Cr	72	1	3.94	ppb	1.55	3.86	101.9	90 - 110	
55 Mn	72	1	0.83	ppb	10.87	0.80	103.6	90 - 110	
59 Co	72	1	0.02	ppb	18.64	0.02	109.5	90 - 110	
60 Ni	72	1	0.11	ppb	52.76	0.10	106.7	90 - 110	
63 Cu	72	1	0.01	ppb	230.36	0.02	26.5	90 - 110	
66 Zn	72	1	0.47	ppb	7.87	0.74	62.8	90 - 110	
75 As	72	1	7.52	ppb	0.96	7.63	98.5	90 - 110	
78 Se	72	1	-0.04	ppb	1143.50	0.08	-52.9	90 - 110	
95 Mo	72	1	0.94	ppb	9.86	1.06	88.3	90 - 110	
107 Ag	115	1	0.00	ppb	99.28	0.00	-232.5	90 - 110	
111 Cd	115	1	-0.01	ppb	100.17	0.00	-679.0	90 - 110	
118 Sn	115	1	0.09	ppb	4.94	0.01	892.4	90 - 110	
121 Sb	115	1	0.01	ppb	131.02	0.01	58.5	90 - 110	
137 Ba	115	1	0.94	ppb	4.03	0.95	99.3	90 - 110	
205 Tl	165	1	0.01	ppb	8.96	0.01	141.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.12	0.01	165.2	90 - 110	
232 Th	165	1	0.01	ppb	22.37	0.01	123.4	90 - 110	
238 U	165	1	0.53	ppb	1.52	0.53	100.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355060	0.39	376079	94.4	30 - 120	
45 Sc	1	1125653	0.19	1186897	94.8	30 - 120	
72 Ge	1	502164	0.65	539567	93.1	30 - 120	
115 In	1	1479317	0.60	1576174	93.9	30 - 120	
165 Ho	1	2614578	1.08	2717767	96.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:46

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNC7FP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG110709 # 255 | Method 6020_
Acquired: 11/08/2009 02:47:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	10	0.41625	0.09076	359		*	
7440-62-2	Vanadium	51	15823	56.600	58.240	2.82		*	
7440-47-3	Chromium	52	28379	98.450	96.590	1.93		*	
7439-96-5	Manganese	55	7172	20.725	20.010	3.57		*	
7440-48-4	Cobalt	59	210	0.44850	0.40970	9.47		*	
7440-02-0	Nickel	60	293	2.6645	2.4980	6.67		*	
7440-50-8	Copper	63	483	0.16105	0.60710	73.5		*	
7440-66-6	Zinc	66	1041	11.650	18.550	37.2		*	
7440-38-2	Arsenic	75	6250	187.85	190.70	1.49	0.21	1.5	☑
7782-49-2	Selenium	78	303	-1.0210	1.9300	153	0.70	NC	☑
7439-98-7	Molybdenum	95	2367	23.385	26.470	11.7		*	
7440-22-4	Silver	107	20	-0.06975	0.02999	333		*	
7440-43-9	Cadmium	111	3	-0.14365	0.02116	779		*	
7440-31-5	Tin	118	770	2.2540	0.25260	792		*	
7440-36-0	Antimony	121	176	0.17570	0.30050	41.5		*	
7440-39-3	Barium	137	1831	23.535	23.690	0.654		*	
7440-28-0	Thallium	205	281	0.32890	0.23210	41.7		*	
7439-92-1	Lead	208	597	0.30195	0.18290	65.1		*	
7440-61-1	Uranium	238	11545	13.340	13.300	0.301		*	
7440-29-1	Thorium	232	403	0.30120	0.24410	23.4		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\256PDS.D\256PDS.D#
Date Acquired: Nov 8 2009 02:50 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 4406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	198.50	0.02	ppb	0.67	200	99.2	75 - 125	
51 V	72	1	208.00	11.65	ppb	2.08	200	98.3	75 - 125	
52 Cr	72	1	214.70	19.32	ppb	2.35	200	97.9	75 - 125	
55 Mn	72	1	195.40	4.00	ppb	1.86	200	95.8	75 - 125	
59 Co	72	1	183.60	0.08	ppb	1.60	200	91.8	75 - 125	
60 Ni	72	1	182.50	0.50	ppb	0.31	200	91.0	75 - 125	
63 Cu	72	1	178.40	0.12	ppb	0.81	200	89.1	75 - 125	
66 Zn	72	1	197.00	3.71	ppb	0.21	200	96.7	75 - 125	
75 As	72	1	232.30	38.15	ppb	0.67	200	97.5	75 - 125	
78 Se	72	1	204.20	0.39	ppb	2.34	200	101.9	75 - 125	
95 Mo	72	1	205.90	5.30	ppb	0.26	200	100.3	75 - 125	
107 Ag	115	1	41.50	0.01	ppb	1.74	50	83.0	75 - 125	
111 Cd	115	1	191.50	0.00	ppb	1.67	200	95.7	75 - 125	
118 Sn	115	1	177.60	0.05	ppb	1.20	200	88.8	75 - 125	
121 Sb	115	1	198.30	0.06	ppb	1.40	200	99.1	75 - 125	
137 Ba	115	1	196.40	4.74	ppb	1.33	200	95.9	75 - 125	
205 Tl	165	1	183.20	0.05	ppb	0.81	200	91.6	75 - 125	
208 Pb	165	1	182.30	0.04	ppb	0.75	200	91.1	75 - 125	
232 Th	165	1	0.04	0.05	ppb	6.86	200	0.0	75 - 125	
238 U	165	1	193.60	2.66	ppb	1.34	200	95.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328783	0.12	376079	87.4	30 - 120	
45 Sc	1	1063276	1.17	1186897	89.6	30 - 120	
72 Ge	1	452940	1.07	539567	83.9	30 - 120	
115 In	1	1385133	0.59	1576174	87.9	30 - 120	
165 Ho	1	2473070	1.04	2717767	91.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:49

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNC7FZ** Spike Dilution: **1.00** Sample Dilution: **5.00**

Instrument: **Agilent7500** Channel 272
File: AG110709 # 256 Method 6020_
Acquired: 11/08/2009 02:50:00 ICPMS_024 Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75977	198.50	0.01815	99.2	200		☐
7440-62-2	Vanadium	51	1263250	208.00	11.648	98.2	200		☑
7440-47-3	Chromium	52	1274690	214.70	19.318	97.7	200		☑
7439-96-5	Manganese	55	1365200	195.40	4.0020	95.7	200		☑
7440-48-4	Cobalt	59	1366970	183.60	0.08194	91.8	200		☐
7440-02-0	Nickel	60	289636	182.50	0.49960	91.0	200		☑
7440-50-8	Copper	63	671724	178.40	0.12142	89.1	200		☑
7440-66-6	Zinc	66	164629	197.00	3.7100	96.6	200		☑
7440-38-2	Arsenic	75	173144	232.30	38.140	97.1	200		☑
7782-49-2	Selenium	78	30217	204.20	0.38600	102	200		☑
7439-98-7	Molybdenum	95	422659	205.90	5.2940	100	200		☐
7440-22-4	Silver	107	245476	41.500	0.00600	83.0	50.0		☐
7440-43-9	Cadmium	111	225972	191.50	0.00423	95.7	200		☑
7440-31-5	Tin	118	595460	177.60	0.05052	88.8	200		☑
7440-36-0	Antimony	121	768070	198.30	0.06010	99.1	200		☑
7440-39-3	Barium	137	329990	196.40	4.7380	95.8	200		☑
7440-28-0	Thallium	205	2493600	183.20	0.04642	91.6	200		☑
7439-92-1	Lead	208	3410220	182.30	0.03658	91.1	200		☑
7440-61-1	Uranium	238	3915870	193.60	2.6600	95.5	200		☐
7440-29-1	Thorium	232	963	0.04179	0.04882				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\257_MS.D\257_MS.D#
Date Acquired: Nov 8 2009 02:53 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FS 5X
Misc Info: MATRIX SPIKE
Vial Number: 4407
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MS
Prep Dil. Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	7.56	0.02	ppb	3.41	40	18.9	50 - 150	
51 V	72	1	19.50	11.65	ppb	0.31	40	37.8	50 - 150	
52 Cr	72	1	27.55	19.32	ppb	1.08	40	46.4	50 - 150	
55 Mn	72	1	11.53	4.00	ppb	1.57	40	26.2	50 - 150	
59 Co	72	1	6.92	0.08	ppb	2.08	40	17.3	50 - 150	
60 Ni	72	1	7.47	0.50	ppb	3.08	40	18.4	50 - 150	
63 Cu	72	1	6.92	0.12	ppb	1.37	40	17.2	50 - 150	
66 Zn	72	1	12.20	3.71	ppb	0.22	40	27.9	50 - 150	
75 As	72	1	47.40	38.15	ppb	0.47	40	60.7	50 - 150	
78 Se	72	1	8.21	0.39	ppb	9.17	40	20.3	50 - 150	
95 Mo	72	1	12.33	5.30	ppb	1.48	40	27.2	50 - 150	
107 Ag	115	1	6.98	0.01	ppb	1.82	40	17.5	50 - 150	
111 Cd	115	1	7.47	0.00	ppb	3.17	40	18.7	50 - 150	
118 Sn	115	1	0.39	0.05	ppb	33.82	40	1.0	50 - 150	
121 Sb	115	1	6.89	0.06	ppb	1.31	40	17.2	50 - 150	
137 Ba	115	1	12.69	4.74	ppb	1.37	40	28.4	50 - 150	
205 Tl	165	1	7.17	0.05	ppb	1.41	40	17.9	50 - 150	
208 Pb	165	1	7.25	0.04	ppb	1.49	40	18.1	50 - 150	
232 Th	165	1	7.88	0.05	ppb	1.73	40	19.7	50 - 150	
238 U	165	1	10.53	2.66	ppb	1.84	40	24.7	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	332623	0.65	376079	88.4	30 - 120	
45 Sc	1	1062418	1.11	1186897	89.5	30 - 120	
72 Ge	1	462138	0.38	539567	85.6	30 - 120	
115 In	1	1389102	1.17	1576174	88.1	30 - 120	
165 Ho	1	2485285	0.80	2717767	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\258 CCV.D\258 CCV.D#
Date Acquired: Nov 8 2009 02:56 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.17	ppb	1.68	50	102.3	90 - 110	
51 V	72	1	49.76	ppb	0.58	50	99.5	90 - 110	
52 Cr	72	1	50.23	ppb	0.59	50	100.5	90 - 110	
55 Mn	72	1	49.80	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	48.86	ppb	0.97	50	97.7	90 - 110	
60 Ni	72	1	51.09	ppb	0.38	50	102.2	90 - 110	
63 Cu	72	1	50.55	ppb	1.39	50	101.1	90 - 110	
66 Zn	72	1	51.57	ppb	0.26	50	103.1	90 - 110	
75 As	72	1	50.59	ppb	0.46	50	101.2	90 - 110	
78 Se	72	1	51.92	ppb	0.28	50	103.8	90 - 110	
95 Mo	72	1	50.29	ppb	1.00	50	100.6	90 - 110	
107 Ag	115	1	51.22	ppb	2.07	50	102.4	90 - 110	
111 Cd	115	1	51.60	ppb	0.81	50	103.2	90 - 110	
118 Sn	115	1	50.56	ppb	0.85	50	101.1	90 - 110	
121 Sb	115	1	51.03	ppb	1.10	50	102.1	90 - 110	
137 Ba	115	1	50.92	ppb	1.12	50	101.8	90 - 110	
205 Tl	165	1	52.43	ppb	1.68	50	104.9	90 - 110	
208 Pb	165	1	52.24	ppb	2.12	50	104.5	90 - 110	
232 Th	165	1	51.78	ppb	2.94	50	103.6	90 - 110	
238 U	165	1	52.22	ppb	2.20	50	104.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366110	0.29	376079	97.3	30 - 120	
45 Sc	1	1169831	1.16	1186897	98.6	30 - 120	
72 Ge	1	507682	1.25	539567	94.1	30 - 120	
115 In	1	1542474	0.57	1576174	97.9	30 - 120	
165 Ho	1	2664119	1.36	2717767	98.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\259 CCB.D\259 CCB.D#
Date Acquired: Nov 8 2009 02:58 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	31.75	1.00	
52 Cr	72	1	0.015	ppb	240.08	1.00	
55 Mn	72	1	-0.003	ppb	454.38	1.00	
59 Co	72	1	0.007	ppb	19.00	1.00	
60 Ni	72	1	-0.021	ppb	92.00	1.00	
63 Cu	72	1	-0.023	ppb	91.13	1.00	
66 Zn	72	1	-0.387	ppb	12.46	1.00	
75 As	72	1	0.025	ppb	95.41	1.00	
78 Se	72	1	-0.065	ppb	394.03	1.00	
95 Mo	72	1	-0.040	ppb	70.76	1.00	
107 Ag	115	1	0.007	ppb	79.32	1.00	
111 Cd	115	1	0.012	ppb	73.39	1.00	
118 Sn	115	1	0.112	ppb	71.47	1.00	
121 Sb	115	1	0.150	ppb	17.00	1.00	
137 Ba	115	1	-0.041	ppb	5.14	1.00	
205 Tl	165	1	0.021	ppb	28.23	1.00	
208 Pb	165	1	0.003	ppb	8.31	1.00	
232 Th	165	1	0.048	ppb	25.86	1.00	
238 U	165	1	0.018	ppb	13.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367818	0.80	376079	97.8	30 - 120	
45 Sc	1	1153232	0.32	1186897	97.2	30 - 120	
72 Ge	1	519534	0.26	539567	96.3	30 - 120	
115 In	1	1546385	0.40	1576174	98.1	30 - 120	
165 Ho	1	2700530	0.45	2717767	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\260WASH.D\260WASH.D#
Date Acquired: Nov 8 2009 03:01 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.019 ppb	27.17	1.30	
51 V	72	1	4.885 ppb	1.68	6.50	
52 Cr	72	1	2.082 ppb	0.83	2.60	
55 Mn	72	1	1.036 ppb	7.67	1.30	
59 Co	72	1	0.946 ppb	2.04	1.30	
60 Ni	72	1	1.988 ppb	1.59	2.60	
63 Cu	72	1	1.986 ppb	0.32	2.60	
66 Zn	72	1	9.700 ppb	2.08	13.00	
75 As	72	1	4.976 ppb	1.71	6.50	
78 Se	72	1	5.005 ppb	25.32	6.50	
95 Mo	72	1	1.940 ppb	1.93	2.60	
107 Ag	115	1	5.369 ppb	0.73	6.50	
111 Cd	115	1	1.082 ppb	5.90	1.30	
118 Sn	115	1	10.260 ppb	0.06	13.00	
121 Sb	115	1	2.114 ppb	1.71	2.60	
137 Ba	115	1	0.981 ppb	3.28	1.30	
205 Tl	165	1	1.051 ppb	2.60	1.30	
208 Pb	165	1	1.037 ppb	1.65	1.30	
232 Th	165	1	2.110 ppb	1.80	2.60	
238 U	165	1	1.105 ppb	2.71	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367841	0.83	376079	97.8	30 - 120	
45 Sc	1	1154162	0.97	1186897	97.2	30 - 120	
72 Ge	1	516753	0.66	539567	95.8	30 - 120	
115 In	1	1524519	0.33	1576174	96.7	30 - 120	
165 Ho	1	2680772	0.38	2717767	98.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\261 MSD.D\261 MSD.D#
Date Acquired: Nov 8 2009 03:04 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MSD
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\257 MS.D\257 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.15	ppb	4.97	7.56	5.64	20	
51 V	72	1	19.44	ppb	0.87	19.50	0.31	20	
52 Cr	72	1	27.63	ppb	0.44	27.55	0.29	20	
55 Mn	72	1	11.89	ppb	0.71	11.53	3.07	20	
59 Co	72	1	6.96	ppb	0.22	6.92	0.55	20	
60 Ni	72	1	7.63	ppb	4.71	7.47	2.13	20	
63 Cu	72	1	6.96	ppb	2.26	6.92	0.55	20	
66 Zn	72	1	11.24	ppb	0.91	12.20	8.19	20	
75 As	72	1	47.18	ppb	1.02	47.40	0.47	20	
78 Se	72	1	8.49	ppb	8.60	8.21	3.34	20	
95 Mo	72	1	12.08	ppb	2.93	12.33	2.05	20	
107 Ag	115	1	6.86	ppb	1.67	6.98	1.81	20	
111 Cd	115	1	7.38	ppb	2.12	7.47	1.12	20	
118 Sn	115	1	0.11	ppb	30.03	0.39	111.83	20	
121 Sb	115	1	6.82	ppb	2.78	6.89	1.02	20	
137 Ba	115	1	12.78	ppb	1.44	12.69	0.71	20	
205 Tl	165	1	7.29	ppb	1.19	7.17	1.61	20	
208 Pb	165	1	7.29	ppb	2.38	7.25	0.51	20	
232 Th	165	1	7.89	ppb	2.55	7.88	0.08	20	
238 U	165	1	10.55	ppb	1.44	10.53	0.19	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329103	0.78	376079	87.5	30 - 120	
45 Sc	1	1057955	1.12	1186897	89.1	30 - 120	
72 Ge	1	456662	0.47	539567	84.6	30 - 120	
115 In	1	1365390	0.56	1576174	86.6	30 - 120	
165 Ho	1	2474617	1.07	2717767	91.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\262SMPL.D\262SMPL.D#
Date Acquired: Nov 8 2009 03:07 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7L 5X
Misc Info: D9J270263
Vial Number: 4409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	157.59	3600	
51 V	72	1	46.85	9.37	ppb	1.89	3600	
52 Cr	72	1	12.39	2.48	ppb	5.61	3600	
55 Mn	72	1	171.35	34.27	ppb	1.07	3600	
59 Co	72	1	264.35	52.87	ppb	1.02	3600	
60 Ni	72	1	102.35	20.47	ppb	3.34	3600	
63 Cu	72	1	53.95	10.79	ppb	1.03	3600	
66 Zn	72	1	17.02	3.40	ppb	3.85	3600	
75 As	72	1	69.40	13.88	ppb	0.45	3600	
78 Se	72	1	3.99	0.80	ppb	47.95	3600	
95 Mo	72	1	6.46	1.29	ppb	6.25	3600	
107 Ag	115	1	0.02	0.00	ppb	159.25	3600	
111 Cd	115	1	0.13	0.03	ppb	54.73	3600	
118 Sn	115	1	0.20	0.04	ppb	29.32	3600	
121 Sb	115	1	0.23	0.05	ppb	27.91	3600	
137 Ba	115	1	43.61	8.72	ppb	1.89	3600	
205 Tl	165	1	0.08	0.02	ppb	8.14	3600	
208 Pb	165	1	1.84	0.37	ppb	5.27	3600	
232 Th	165	1	0.14	0.03	ppb	17.77	1000	
238 U	165	1	38.02	7.60	ppb	1.66	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343401	0.74	376079	91.3	30 - 120	
45 Sc	1	1089536	0.75	1186897	91.8	30 - 120	
72 Ge	1	479909	1.11	539567	88.9	30 - 120	
115 In	1	1451981	1.22	1576174	92.1	30 - 120	
165 Ho	1	2546093	0.95	2717767	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\263SMPL.D\263SMPL.D#
Date Acquired: Nov 8 2009 03:09 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFGD 5X
Misc Info: D9J280280
Vial Number: 4410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.02	ppb	241.44	3600	
51 V	72	1	54.75	10.95	ppb	1.40	3600	
52 Cr	72	1	88.30	17.66	ppb	0.52	3600	
55 Mn	72	1	36.34	7.27	ppb	0.95	3600	
59 Co	72	1	0.85	0.17	ppb	10.77	3600	
60 Ni	72	1	4.50	0.90	ppb	6.77	3600	
63 Cu	72	1	1.33	0.27	ppb	18.06	3600	
66 Zn	72	1	7.36	1.47	ppb	5.00	3600	
75 As	72	1	275.25	55.05	ppb	1.01	3600	
78 Se	72	1	8.96	1.79	ppb	43.45	3600	
95 Mo	72	1	14.49	2.90	ppb	3.73	3600	
107 Ag	115	1	0.03	0.01	ppb	18.83	3600	
111 Cd	115	1	0.09	0.02	ppb	136.04	3600	
118 Sn	115	1	0.02	0.00	ppb	387.10	3600	
121 Sb	115	1	0.10	0.02	ppb	24.58	3600	
137 Ba	115	1	40.38	8.08	ppb	3.21	3600	
205 Tl	165	1	0.13	0.03	ppb	5.33	3600	
208 Pb	165	1	0.86	0.17	ppb	3.75	3600	
232 Th	165	1	0.77	0.15	ppb	2.79	1000	
238 U	165	1	23.16	4.63	ppb	1.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	321308	0.11	376079	85.4	30 - 120	
45 Sc	1	1048585	0.63	1186897	88.3	30 - 120	
72 Ge	1	451006	0.46	539567	83.6	30 - 120	
115 In	1	1344838	0.54	1576174	85.3	30 - 120	
165 Ho	1	2446552	0.31	2717767	90.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\264SMPL.D\264SMPL.D#
Date Acquired: Nov 8 2009 03:12 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFG2 5X
Misc Info: D9J280283
Vial Number: 4411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	85.35	17.07	ppb	2.36	3600	
52 Cr	72	1	57.90	11.58	ppb	0.78	3600	
55 Mn	72	1	3.89	0.78	ppb	2.20	3600	
59 Co	72	1	0.62	0.12	ppb	8.11	3600	
60 Ni	72	1	3.33	0.67	ppb	9.62	3600	
63 Cu	72	1	0.28	0.06	ppb	57.58	3600	
66 Zn	72	1	12.63	2.53	ppb	2.86	3600	
75 As	72	1	208.15	41.63	ppb	0.43	3600	
78 Se	72	1	3.45	0.69	ppb	57.20	3600	
95 Mo	72	1	15.54	3.11	ppb	4.05	3600	
107 Ag	115	1	0.00	0.00	ppb	548.29	3600	
111 Cd	115	1	0.00	0.00	ppb	1744.50	3600	
118 Sn	115	1	0.74	0.15	ppb	40.17	3600	
121 Sb	115	1	0.12	0.02	ppb	20.77	3600	
137 Ba	115	1	43.12	8.62	ppb	2.46	3600	
205 Tl	165	1	0.08	0.02	ppb	18.16	3600	
208 Pb	165	1	0.09	0.02	ppb	0.87	3600	
232 Th	165	1	0.06	0.01	ppb	45.22	1000	
238 U	165	1	42.88	8.58	ppb	2.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326264	0.73	376079	86.8	30 - 120	
45 Sc	1	1072928	0.34	1186897	90.4	30 - 120	
72 Ge	1	463601	0.73	539567	85.9	30 - 120	
115 In	1	1385017	0.88	1576174	87.9	30 - 120	
165 Ho	1	2507716	1.26	2717767	92.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\265SMPL.D\265SMPL.D#
Date Acquired: Nov 8 2009 03:15 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2J 5X
Misc Info: D9J290310
Vial Number: 4412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	309.81	3600	
51 V	72	1	48.61	9.72	ppb	1.22	3600	
52 Cr	72	1	57.70	11.54	ppb	0.94	3600	
55 Mn	72	1	53.90	10.78	ppb	1.00	3600	
59 Co	72	1	0.55	0.11	ppb	6.70	3600	
60 Ni	72	1	3.54	0.71	ppb	8.58	3600	
63 Cu	72	1	0.41	0.08	ppb	3.58	3600	
66 Zn	72	1	14.51	2.90	ppb	6.49	3600	
75 As	72	1	347.90	69.58	ppb	0.62	3600	
78 Se	72	1	2.80	0.56	ppb	43.90	3600	
95 Mo	72	1	35.21	7.04	ppb	2.31	3600	
107 Ag	115	1	0.00	0.00	ppb	348.44	3600	
111 Cd	115	1	0.01	0.00	ppb	1737.40	3600	
118 Sn	115	1	0.09	0.02	ppb	257.92	3600	
121 Sb	115	1	0.10	0.02	ppb	32.62	3600	
137 Ba	115	1	27.88	5.58	ppb	4.08	3600	
205 Tl	165	1	0.07	0.01	ppb	9.45	3600	
208 Pb	165	1	0.24	0.05	ppb	12.24	3600	
232 Th	165	1	0.20	0.04	ppb	2.64	1000	
238 U	165	1	67.45	13.49	ppb	1.58	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335558	0.24	376079	89.2	30 - 120	
45 Sc	1	1081740	0.75	1186897	91.1	30 - 120	
72 Ge	1	467673	0.66	539567	86.7	30 - 120	
115 In	1	1401937	0.62	1576174	88.9	30 - 120	
165 Ho	1	2517760	0.48	2717767	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\266SMPL.D\266SMPL.D#
Date Acquired: Nov 8 2009 03:18 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2K 5X
Misc Info: D9J290310
Vial Number: 4501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	48.25	9.65	ppb	1.58	3600	
52 Cr	72	1	57.55	11.51	ppb	1.78	3600	
55 Mn	72	1	53.60	10.72	ppb	0.45	3600	
59 Co	72	1	0.70	0.14	ppb	10.31	3600	
60 Ni	72	1	4.12	0.82	ppb	7.90	3600	
63 Cu	72	1	0.61	0.12	ppb	18.78	3600	
66 Zn	72	1	14.52	2.90	ppb	5.26	3600	
75 As	72	1	343.30	68.66	ppb	0.80	3600	
78 Se	72	1	0.28	0.06	ppb	532.16	3600	
95 Mo	72	1	34.43	6.89	ppb	3.09	3600	
107 Ag	115	1	0.03	0.01	ppb	118.50	3600	
111 Cd	115	1	0.06	0.01	ppb	110.88	3600	
118 Sn	115	1	0.20	0.04	ppb	15.50	3600	
121 Sb	115	1	0.06	0.01	ppb	80.38	3600	
137 Ba	115	1	30.09	6.02	ppb	1.47	3600	
205 Tl	165	1	0.06	0.01	ppb	4.80	3600	
208 Pb	165	1	0.28	0.06	ppb	1.80	3600	
232 Th	165	1	0.20	0.04	ppb	29.47	1000	
238 U	165	1	67.55	13.51	ppb	1.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329739	0.51	376079	87.7	30 - 120	
45 Sc	1	1074128	1.38	1186897	90.5	30 - 120	
72 Ge	1	466433	0.80	539567	86.4	30 - 120	
115 In	1	1385476	1.23	1576174	87.9	30 - 120	
165 Ho	1	2494439	1.00	2717767	91.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\267 CCV.D\267 CCV.D#
Date Acquired: Nov 8 2009 03:21 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.22	ppb	2.08	50	102.4	90 - 110	
51 V	72	1	49.65	ppb	0.54	50	99.3	90 - 110	
52 Cr	72	1	50.22	ppb	0.76	50	100.4	90 - 110	
55 Mn	72	1	49.57	ppb	0.78	50	99.1	90 - 110	
59 Co	72	1	48.62	ppb	0.28	50	97.2	90 - 110	
60 Ni	72	1	50.60	ppb	1.48	50	101.2	90 - 110	
63 Cu	72	1	50.08	ppb	0.86	50	100.2	90 - 110	
66 Zn	72	1	52.09	ppb	0.68	50	104.2	90 - 110	
75 As	72	1	50.33	ppb	0.35	50	100.7	90 - 110	
78 Se	72	1	50.70	ppb	1.91	50	101.4	90 - 110	
95 Mo	72	1	50.34	ppb	1.97	50	100.7	90 - 110	
107 Ag	115	1	50.13	ppb	2.37	50	100.3	90 - 110	
111 Cd	115	1	50.15	ppb	1.77	50	100.3	90 - 110	
118 Sn	115	1	49.99	ppb	1.62	50	100.0	90 - 110	
121 Sb	115	1	50.52	ppb	2.60	50	101.0	90 - 110	
137 Ba	115	1	50.62	ppb	1.41	50	101.2	90 - 110	
205 Tl	165	1	51.11	ppb	0.42	50	102.2	90 - 110	
208 Pb	165	1	51.54	ppb	1.74	50	103.1	90 - 110	
232 Th	165	1	51.26	ppb	1.28	50	102.5	90 - 110	
238 U	165	1	51.53	ppb	0.94	50	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360685	1.10	376079	95.9	30 - 120	
45 Sc	1	1157595	0.85	1186897	97.5	30 - 120	
72 Ge	1	507944	1.20	539567	94.1	30 - 120	
115 In	1	1559749	0.93	1576174	99.0	30 - 120	
165 Ho	1	2711611	1.14	2717767	99.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\268 CCB.D\268 CCB.D#
Date Acquired: Nov 8 2009 03:23 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	19.15	1.00	
52 Cr	72	1	-0.002	ppb	789.67	1.00	
55 Mn	72	1	-0.001	ppb	1184.70	1.00	
59 Co	72	1	0.000	ppb	707.73	1.00	
60 Ni	72	1	-0.014	ppb	130.22	1.00	
63 Cu	72	1	-0.051	ppb	28.29	1.00	
66 Zn	72	1	-0.413	ppb	3.98	1.00	
75 As	72	1	0.005	ppb	390.64	1.00	
78 Se	72	1	0.068	ppb	260.94	1.00	
95 Mo	72	1	-0.051	ppb	12.59	1.00	
107 Ag	115	1	0.003	ppb	126.88	1.00	
111 Cd	115	1	0.000	ppb	7618.50	1.00	
118 Sn	115	1	0.047	ppb	150.30	1.00	
121 Sb	115	1	0.138	ppb	23.66	1.00	
137 Ba	115	1	-0.038	ppb	11.83	1.00	
205 Tl	165	1	0.021	ppb	17.52	1.00	
208 Pb	165	1	0.003	ppb	111.74	1.00	
232 Th	165	1	0.051	ppb	16.07	1.00	
238 U	165	1	0.016	ppb	14.92	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365082	0.17	376079	97.1	30 - 120	
45 Sc	1	1142137	0.98	1186897	96.2	30 - 120	
72 Ge	1	516032	0.47	539567	95.6	30 - 120	
115 In	1	1530746	0.77	1576174	97.1	30 - 120	
165 Ho	1	2669057	1.87	2717767	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\269WASH.D\269WASH.D#
Date Acquired: Nov 8 2009 03:26 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.901 ppb	17.96	1.30	
51 V	72	1	4.935 ppb	2.34	6.50	
52 Cr	72	1	2.001 ppb	2.44	2.60	
55 Mn	72	1	1.030 ppb	4.04	1.30	
59 Co	72	1	0.990 ppb	2.41	1.30	
60 Ni	72	1	2.129 ppb	7.48	2.60	
63 Cu	72	1	1.903 ppb	4.00	2.60	
66 Zn	72	1	9.748 ppb	0.16	13.00	
75 As	72	1	4.893 ppb	4.12	6.50	
78 Se	72	1	5.130 ppb	8.01	6.50	
95 Mo	72	1	1.974 ppb	8.49	2.60	
107 Ag	115	1	5.301 ppb	1.96	6.50	
111 Cd	115	1	1.056 ppb	7.93	1.30	
118 Sn	115	1	10.460 ppb	2.46	13.00	
121 Sb	115	1	2.083 ppb	0.79	2.60	
137 Ba	115	1	1.029 ppb	5.53	1.30	
205 Tl	165	1	1.089 ppb	0.37	1.30	
208 Pb	165	1	1.075 ppb	0.39	1.30	
232 Th	165	1	2.216 ppb	0.39	2.60	
238 U	165	1	1.111 ppb	0.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	359039	1.01	376079	95.5	30 - 120	
45 Sc	1	1142332	0.80	1186897	96.2	30 - 120	
72 Ge	1	512301	0.61	539567	94.9	30 - 120	
115 In	1	1537362	0.42	1576174	97.5	30 - 120	
165 Ho	1	2658916	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J290310

Client: Northgate Environmental

Batch(es) #: 9303187, 9303185

Associated Samples: 1-4

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 11/9/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J290310	1	SE	LNH2J1AC	20091108	6020TOTA	9303185	AG110709	024
D9J290310	1	AS	LNH2J1AA	20091108	6020TOTA	9303185	AG110709	024
D9J290310	2	SE	LNH2K1AC	20091108	6020TOTA	9303185	AG110709	024
D9J290310	2	AS	LNH2K1AA	20091108	6020TOTA	9303185	AG110709	024
D9J290310	3 D	SE	LNH2L1AG	20091108	6020DSVD	9303187	AG110709	024
D9J290310	3 S	SE	LNH2L1AF	20091108	6020DSVD	9303187	AG110709	024
D9J290310	3 D	AS	LNH2L1AE	20091108	6020DSVD	9303187	AG110709	024
D9J290310	3 S	AS	LNH2L1AD	20091108	6020DSVD	9303187	AG110709	024
D9J290310	3	SE	LNH2L1AC	20091108	6020DSVD	9303187	AG110709	024
D9J290310	3	AS	LNH2L1AA	20091108	6020DSVD	9303187	AG110709	024
D9J290310	4	SE	LNH2N1AC	20091108	6020DSVD	9303187	AG110709	024
D9J290310	4	AS	LNH2N1AA	20091108	6020DSVD	9303187	AG110709	024

METALS PREPARATION LOGS ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9303187**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: SKW

Prep Date: 11/2/09 ~~10/30/09~~ SKW

Due Date: 11/10/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJN5**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJN5**	C	Due Date: SDG:	50 mL
D9J290310 Water	**LNH2L** Dissolved		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2L** Dissolved	S	Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2L** Dissolved	D	Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2N** Dissolved		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

DISSOLVED WATER DIGESTION FOR ICPMS (Prep code MD)

BATCH #	9303187	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

Were samples filtered in the lab? ☐ Yes ☒ No

If "yes", then the method blank and the LCS were filtered prior to digestion.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	2

TEMPERATURE CYCLES

Thermometer ID: 14371 Block & Cup # : 11/27

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3/HCl	1430	96	1930	96

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

Batch Number: **9303185**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/2/09 ~~10/30/09~~ JRW

Due Date: 11/09/09

Lot	Work Order			Initial Weight/Volume
D9J300000 Water	**LNJNV**	B	Due Date: SDG:	50 mL
D9J300000 Water	**LNJNV**	C	Due Date: SDG:	50 mL
D9J270261 Water	**LNC7F** Total		Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	S	Due Date: 11/09/09 SDG:	50 mL
D9J270261 Water	**LNC7F** Total	D	Due Date: 11/09/09 SDG:	50 mL
D9J270263 Water	**LNC7L** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280280 Water	**LNFGD** Total		Due Date: 11/09/09 SDG:	50 mL
D9J280283 Water	**LNFG2** Total		Due Date: 11/09/09 SDG:	50 mL
D9J290310 Water	**LNH2J** Total		Due Date: 11/10/09 SDG:	50 mL
D9J290310 Water	**LNH2K** Total		Due Date: 11/10/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

Checked 11/7/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9303185	**ALLIQUOTTED BY:**	KS
PREP DATE:	11/2/2009	**DIGESTED BY:**	JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4082 Block & Cup # : 4/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1430	95	1845	95
HNO3	1900	95	1930	93
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: JRW ***Date:*** 11/2/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

TestAmerica Denver

Standards Preparation Logbook Record

Nov-09-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6836-09, ICP-MS BLANK

Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-07-2009
Date Expires(1): 05-07-2010 (6 Months)
Date Expires(2): 05-07-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6835-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6837-09, ICP-MS HIGH CAL STD

Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	10.000
Ca	2,000.0	10.000
Fe	2,000.0	10.000
K	2,000.0	10.000
Mg	2,000.0	10.000
Na	2,000.0	10.000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6838-09, ICP-MS HIGH CCV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500
Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	5.0000
Ca	2,000.0	5.0000
Fe	2,000.0	5.0000
K	2,000.0	5.0000
Mg	2,000.0	5.0000

Na	2,000.0	5.0000

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.2000
Pd	20.000	0.1000
Pt	20.000	0.1000
W	20.000	0.1000

STD6839-09, ICP-MS HIGH RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6837-09, ICP-MS HIGH CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010
Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010
Al	10.000	0.1000
Ca	10.000	0.1000
Fe	10.000	0.1000
K	10.000	0.1000
Mg	10.000	0.1000
Na	10.000	0.1000

Nb	0.2000	0.0020
Pd	0.1000	0.0010
Pt	0.1000	0.0010
W	0.1000	0.0010

STD6840-09, ICP-MS HIGH AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000

Date Prep./Opened: 11-07-2009

Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD6839-09, ICP-MS HIGH RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002
Al	0.1000	0.0200
Ca	0.1000	0.0200
Fe	0.1000	0.0200
K	0.1000	0.0200
Mg	0.1000	0.0200
Na	0.1000	0.0200
Nb	0.0020	0.0004
Pd	0.0010	0.0002
Pt	0.0010	0.0002
W	0.0010	0.0002
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018

STD6841-09, ICP-MS HIGH ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD3111-09, ICP-MS CALSTD 3 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	100.00
Ca	2,000.0	100.00
Fe	2,000.0	100.00
K	2,000.0	100.00
Mg	2,000.0	100.00
Na	2,000.0	100.00

Parent Std No.: STD3112-09, ICP-MS BRC CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	2.0000
Pd	20.000	1.0000
Pt	20.000	1.0000

W	20.000	1.0000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6842-09, ICP-MS HIGH LR STD1 — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000
Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6843-09, ICP-MS HIGH ICV STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

Parent Std No.: STD3115-09, ICP-MS TA ICV Alt Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Al	2,000.0	4.0000
Ca	2,000.0	4.0000
Fe	2,000.0	4.0000
K	2,000.0	4.0000
Mg	2,000.0	4.0000
Na	2,000.0	4.0000

Parent Std No.: STD3116-09, ICP-MS TA ICV BRC Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Nb	40.000	0.0800
Pd	20.000	0.0400
Pt	20.000	0.0400

W	20.000	0.0400

STD6844-09, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6855-09, LLCCV/RLICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-07-2009
Date Expires(1): 11-08-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD3106-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000
Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD3107-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

Parent Std No.: STD3108-09, ICP-MS BRC LLCCV 1 Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Nb	4.0000	40.000
Pd	0.1000	1.0000
Pt	0.1000	1.0000
W	0.5000	5.0000

Reviewed By: 11/9/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/07/09 15:09		☐
4	100 ppb				1.0	11/07/09 15:12		☐
5	ICV				1.0	11/07/09 15:15		☐
6	RLIV				1.0	11/07/09 15:18		☐
7	ICB				1.0	11/07/09 15:20		☐
8	RL STD				1.0	11/07/09 15:23		☐
9	AFCEE RL				1.0	11/07/09 15:26		☐
10	ALTSe				1.0	11/07/09 15:29		☐
11	ICSA				1.0	11/07/09 15:31		☐
12	ICSAB				1.0	11/07/09 15:34		☐
13	RINSE				1.0	11/07/09 15:37		☐
14	LR1				1.0	11/07/09 15:40		☐
15	RINSE				1.0	11/07/09 15:42		☐
16	CCV				1.0	11/07/09 15:45		☐
17	CCB				1.0	11/07/09 15:48		☐
18	RLCV				1.0	11/07/09 15:50		☐
19	LNDMKB	D9J280000	9301081	46	1.0	11/07/09 15:53		☐
20	LNDMKC	D9J280000	9301081	46	1.0	11/07/09 15:56		☐
21	LM9FJ	D9J240188-1	9301081	46	1.0	11/07/09 15:59		☐
22	LM9FJP5	D9J240188	9301081		5.0	11/07/09 16:01		☐
23	LM9FJZ	D9J240188-1	9301081		1.0	11/07/09 16:04		☐
24	LM9FJS	D9J240188-1	9301081	46	1.0	11/07/09 16:07		☐
25	LM9FJD	D9J240188-1	9301081	46	1.0	11/07/09 16:09		☐
26	LM9FK	D9J240188-2	9301081	46	1.0	11/07/09 16:12		☐
27	CCV				1.0	11/07/09 16:15		☐
28	CCB				1.0	11/07/09 16:18		☐
29	RLCV				1.0	11/07/09 16:20		☐
30	LNJT4B	D9J300000	9303213	MS	1.0	11/07/09 16:23		☐
31	LNJT4C	D9J300000	9303213	MS	1.0	11/07/09 16:26		☐
32	LM8A7	D9J230367-1	9303213	MS	1.0	11/07/09 16:29		☐
33	LM8CG	D9J230367-2	9303213	MS	1.0	11/07/09 16:32		☐
34	LM8CV	D9J230367-3	9303213	MS	1.0	11/07/09 16:34		☐
35	LM8C1	D9J230367-4	9303213	MS	1.0	11/07/09 16:37		☐
36	LM8C1P5	D9J230367	9303213		5.0	11/07/09 16:40		☐
37	LM8C1Z	D9J230367-4	9303213		1.0	11/07/09 16:43		☐
38	LM8C1S	D9J230367-4	9303213	MS	1.0	11/07/09 16:45		☐
39	LM8C1D	D9J230367-4	9303213	MS	1.0	11/07/09 16:48		☐
40	CCV				1.0	11/07/09 16:51		☐
41	CCB				1.0	11/07/09 16:53		☐
42	RLCV				1.0	11/07/09 16:57		☐
43	LNDMTB	D9J280000	9301086	46	1.0	11/07/09 17:00		☐
44	LNDMTC	D9J280000	9301086	46	1.0	11/07/09 17:02		☐
45	LM8E2	D9J230373-1	9301086	46	1.0	11/07/09 17:05		☐
46	LM8E2P5	D9J230373	9301086		5.0	11/07/09 17:08		☐
47	LM8E2Z	D9J230373-1	9301086		1.0	11/07/09 17:11		☐
48	LM8E2S	D9J230373-1	9301086	46	1.0	11/07/09 17:13		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM8E2D	D9J230373-1	9301086	46	1.0	11/07/09 17:16		☐
50	LM8E6	D9J230373-2	9301086	46	1.0	11/07/09 17:19		☐
51	CCV				1.0	11/07/09 17:22		☐
52	CCB				1.0	11/07/09 17:24		☐
53	RLCV				1.0	11/07/09 17:27		☐
54	LM8E7	D9J230373-3	9301086	46	1.0	11/07/09 17:30		☐
55	LM8E9	D9J230373-4	9301086	46	1.0	11/07/09 17:33		☐
56	LM8FA	D9J230373-5	9301086	46	1.0	11/07/09 17:35		☐
57	LM8FC	D9J230373-6	9301086	46	1.0	11/07/09 17:38		☐
58	LM8FD	D9J230373-7	9301086	46	1.0	11/07/09 17:41		☐
59	LM8FE	D9J230373-8	9301086	46	1.0	11/07/09 17:44		☐
60	LM8FF	D9J230373-9	9301086	46	1.0	11/07/09 17:47		☐
61	LM8FG	D9J230373-10	9301086	46	1.0	11/07/09 17:51		☐
62	LM8FH	D9J230373-11	9301086	46	1.0	11/07/09 17:53		☐
63	CCV				1.0	11/07/09 17:56		☐
64	CCB				1.0	11/07/09 17:59		☐
65	RLCV				1.0	11/07/09 18:02		☐
66	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 18:04~~	VT 11/9/09 Did not use.	☐
67	LNDMPB	D9J280000	9301083	46	1.0	11/07/09 18:07		☐
68	LNDMPC	D9J280000	9301083	46	1.0	11/07/09 18:10		☐
69	LM8CT	D9J230370-1	9301083	46	1.0	11/07/09 18:13		☐
70	LM8CTP5	D9J230370	9301083		5.0	11/07/09 18:16		☐
71	LM8CTZ	D9J230370-1	9301083		1.0	11/07/09 18:18		☐
72	LM8CTS	D9J230370-1	9301083	46	1.0	11/07/09 18:21		☐
73	LM8CTD	D9J230370-1	9301083	46	1.0	11/07/09 18:24		☐
74	CCV				1.0	11/07/09 18:27		☐
75	CCB				1.0	11/07/09 18:29		☐
76	RLCV				1.0	11/07/09 18:32		☐
77	LM8C5	D9J230370-2	9301083	46	1.0	11/07/09 18:35		☐
78	LM8C8	D9J230370-3	9301083	46	1.0	11/07/09 18:38		☐
79	LM8C9	D9J230370-4	9301083	46	1.0	11/07/09 18:40		☐
80	LM8DA	D9J230370-5	9301083	46	1.0	11/07/09 18:43		☐
81	LM8DC	D9J230370-6	9301083	46	1.0	11/07/09 18:46		☐
82	LM8DF	D9J230370-7	9301083	46	1.0	11/07/09 18:49		☐
83	LM8DG	D9J230370-8	9301083	46	1.0	11/07/09 18:51		☐
84	CCV				1.0	11/07/09 18:54		☐
85	CCB				1.0	11/07/09 18:57		☐
86	RLCV				1.0	11/07/09 19:00		☐
87	LM8DH	D9J230370-9	9301083	46	1.0	11/07/09 19:03		☐
88	LM8DK	D9J230370-10	9301083	46	1.0	11/07/09 19:05		☐
89	LM8DL	D9J230370-11	9301083	46	1.0	11/07/09 19:08		☐
90	LM8DN	D9J230370-12	9301083	46	1.0	11/07/09 19:11		☐
91	LM8DQ	D9J230370-13	9301083	46	1.0	11/07/09 19:14		☐
92	LM8DT	D9J230370-14	9301083	46	1.0	11/07/09 19:17		☐
93	LM8DV	D9J230370-15	9301083	46	1.0	11/07/09 19:19		☐
94	LM8D4	D9J230370-16	9301083	46	1.0	11/07/09 19:22		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
95	CCV				1.0	11/07/09 19:25		
96	CCB				1.0	11/07/09 19:28		
97	RLCV				1.0	11/07/09 19:30		
98	ICSA				1.0	11/07/09 19:33		
99	ICSAB				1.0	11/07/09 19:36		
100	WASH				1.0	11/07/09 19:39		
101	CCV				1.0	11/07/09 19:41		
102	CCB				1.0	11/07/09 19:44		
103	RLCV				1.0	11/07/09 19:47		
104	LNPKXBQ	D9K030000	9307099	U1	1.0	11/07/09 19:50		
105	LNPKXCQ	D9K030000	9307099	U1	1.0	11/07/09 19:52		
106	LNN4FQ	D9K020448-1	9307099	U1	1.0	11/07/09 19:55		
107	LNN4FP5Q	D9K020448	9307099		5.0	11/07/09 19:58		
108	LNN4FZQ	D9K020448-1	9307099		1.0	11/07/09 20:01		
109	LNN4FSQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:03		
110	LNN4FDQ	D9K020448-1	9307099	U1	1.0	11/07/09 20:06		
111	CCV				1.0	11/07/09 20:09		
112	CCB				1.0	11/07/09 20:12		
113	RLCV				1.0	11/07/09 20:14		
114	~~LNNVDB~~	~~D9K020000~~	~~9306332~~	~~04~~	~~2.5~~	~~11/07/09 20:17~~		
115	LNNVDC	D9K020000	9306332	04	2.5	11/07/09 20:20		
116	LNKT9	D9J300258-1	9306332	04	2.5	11/07/09 20:23		
117	LNKT9S	D9J300258-1	9306332	04	2.5	11/07/09 20:25		
118	LNKT9D	D9J300258-1	9306332	04	2.5	11/07/09 20:28		
119	CCV				1.0	11/07/09 20:31		
120	CCB				1.0	11/07/09 20:34		
121	RLCV				1.0	11/07/09 20:36		
122	RINSE				1.0	11/07/09 20:39		
123	RINSE				1.0	11/07/09 20:42		
124	~~Cal Blank~~				~~1.0~~	~~11/07/09 20:45~~	KF 11/9/09 Did not use.	
125	Cal Blank				1.0	11/07/09 20:47		
126	100 ppb				1.0	11/07/09 20:50		
127	CCV				1.0	11/07/09 20:53		
128	CCB				1.0	11/07/09 20:56		
129	RLCV				1.0	11/07/09 20:58		
130	~~LNNQ5BF~~	~~D9K020000~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:01~~		
131	LNNQ5CF	D9K020000	9306285	MD	1.0	11/07/09 21:04		
132	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/07/09 21:07		
133	LNLG3F	D9J300326-2	9306285	MD	1.0	11/07/09 21:10		
134	LNLG4F	D9J300326-3	9306285	MD	1.0	11/07/09 21:12		
135	LNLHHF	D9J300329-1	9306285	MD	1.0	11/07/09 21:15		
136	LNLHMF	D9J300329-2	9306285	MD	1.0	11/07/09 21:18		
137	CCV				1.0	11/07/09 21:21		
138	CCB				1.0	11/07/09 21:23		
139	RLCV				1.0	11/07/09 21:26		
140	~~LNLHPF~~	~~D9J300329-3~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:29~~	KF 11/9/09 Did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
141	~~LNLJJF~~	~~D9J300340-1~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:32~~		☐
142	LNLJJP5F	D9J300340	9306285		5.0	11/07/09 21:35		☐
143	LNLJJZF	D9J300340-1	9306285		1.0	11/07/09 21:37		☐
144	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/07/09 21:40		☐
145	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/07/09 21:43		☐
146	~~LNLJME~~	~~D9J300340-2~~	~~9306285~~	~~MD~~	~~1.0~~	~~11/07/09 21:45~~	RT 11/9/09 Did not use.	☐
147	CCV				1.0	11/07/09 21:48		☐
148	CCB				1.0	11/07/09 21:51		☐
149	RLCV				1.0	11/07/09 21:54		☐
150	LNJXTB	D9J300000	9303237	04	1.0	11/07/09 21:57		☐
151	LNJXTC	D9J300000	9303237	04	1.0	11/07/09 21:59		☐
152	LNG33	D9J290197-1	9303237	04	1.0	11/07/09 22:02		☐
153	LNG4H	D9J290197-2	9303237	04	1.0	11/07/09 22:05		☐
154	LNG4L	D9J290197-3	9303237	04	1.0	11/07/09 22:08		☐
155	LNG4LP5	D9J290197	9303237		5.0	11/07/09 22:10		☐
156	LNG4LZ	D9J290197-3	9303237		1.0	11/07/09 22:13		☐
157	LNG4LS	D9J290197-3	9303237	04	1.0	11/07/09 22:16		☐
158	LNG4LD	D9J290197-3	9303237	04	1.0	11/07/09 22:19		☐
159	CCV				1.0	11/07/09 22:21		☐
160	CCB				1.0	11/07/09 22:24		☐
161	RLCV				1.0	11/07/09 22:27		☐
162	LNG4N	D9J290197-4	9303237	04	1.0	11/07/09 22:30		☐
163	LNG4R	D9J290197-5	9303237	04	1.0	11/07/09 22:32		☐
164	LNG4W	D9J290197-6	9303237	04	1.0	11/07/09 22:35		☐
165	LNG4X	D9J290197-7	9303237	04	1.0	11/07/09 22:38		☐
166	LNG41	D9J290197-8	9303237	04	1.0	11/07/09 22:41		☐
167	LNG42	D9J290197-9	9303237	04	1.0	11/07/09 22:43		☐
168	LNG44	D9J290197-10	9303237	04	1.0	11/07/09 22:46		☐
169	LNG46	D9J290197-11	9303237	04	1.0	11/07/09 22:49		☐
170	CCV				1.0	11/07/09 22:52		☐
171	CCB				1.0	11/07/09 22:54		☐
172	RLCV				1.0	11/07/09 22:57		☐
173	LNWCQB	D9K050000	9309120	04	2.5	11/07/09 23:00		☐
174	LNWCQC	D9K050000	9309120	04	2.5	11/07/09 23:03		☐
175	LNTEH	D9K040465-33	9309120	04	2.5	11/07/09 23:06		☐
176	LNTEQ	D9K040465-35	9309120	04	2.5	11/07/09 23:08		☐
177	LNTET	D9K040465-37	9309120	04	2.5	11/07/09 23:11		☐
178	LNTE0	D9K040465-39	9309120	04	2.5	11/07/09 23:14		☐
179	LNTE5	D9K040465-41	9309120	04	2.5	11/07/09 23:17		☐
180	LNTE5S	D9K040465-41	9309120	04	2.5	11/07/09 23:19		☐
181	LNTE5D	D9K040465-41	9309120	04	2.5	11/07/09 23:22		☐
182	LNTFA	D9K040465-43	9309120	04	2.5	11/07/09 23:25		☐
183	CCV				1.0	11/07/09 23:28		☐
184	CCB				1.0	11/07/09 23:30		☐
185	RLCV				1.0	11/07/09 23:33		☐
186	RINSE				1.0	11/07/09 23:36		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
187	~~RINSE~~				~~1.0~~	~~11/07/09 23:39~~		
188	~~Cal Blank~~				~~1.0~~	~~11/07/09 23:41~~	VL 11/9/09 Did not use.	
189	Cal Blank				1.0	11/07/09 23:44		
190	100 ppb				1.0	11/07/09 23:47		
191	CCV				1.0	11/07/09 23:50		
192	CCB				1.0	11/07/09 23:52		
193	RLCV				1.0	11/07/09 23:55		
194	LNEMRZF	D9J280200-5	9302146		1.0	11/07/09 23:58		
195	LNEMRSF	D9J280200-5	9302146	MD	1.0	11/08/09 00:01		
196	LNEMRDF	D9J280200-5	9302146	MD	1.0	11/08/09 00:03		
197	LNEMWF	D9J280200-6	9302146	MD	1.0	11/08/09 00:06		
198	LNEM0F	D9J280200-7	9302146	MD	1.0	11/08/09 00:09		
199	LNEM3F	D9J280200-8	9302146	MD	1.0	11/08/09 00:12		
200	LNEM4F	D9J280200-9	9302146	MD	1.0	11/08/09 00:15		
201	LNEM7F	D9J280200-10	9302146	MD	1.0	11/08/09 00:17		
202	CCV				1.0	11/08/09 00:20		
203	CCB				1.0	11/08/09 00:23		
204	RLCV				1.0	11/08/09 00:26		
205	LN0N2B	D9K060000	9310060	04	2.5	11/08/09 00:28		
206	LN0N2C	D9K060000	9310060	04	2.5	11/08/09 00:31		
207	LNW5P	D9K050485-2	9310060	04	2.5	11/08/09 00:34		
208	LNW55	D9K050485-4	9310060	04	2.5	11/08/09 00:37		
209	LNW6E	D9K050485-6	9310060	04	2.5	11/08/09 00:40		
210	LNW6ES	D9K050485-6	9310060	04	2.5	11/08/09 00:42		
211	LNW6ED	D9K050485-6	9310060	04	2.5	11/08/09 00:45		
212	CCV				1.0	11/08/09 00:48		
213	CCB				1.0	11/08/09 00:51		
214	RLCV				1.0	11/08/09 00:53		
215	LNF42B	D9J290000	9302121	MS	1.0	11/08/09 00:56		
216	LNF42C	D9J290000	9302121	MS	1.0	11/08/09 00:59		
217	LNE4T	D9J280246-1	9302121	MS	1.0	11/08/09 01:02		
218	LNE40 10X	D9J280246-2	9302121	MS	10.0	11/08/09 01:05		
219	LNE41 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:07		
220	LNE41P25	D9J280246	9302121		25.0	11/08/09 01:10		
221	CCV				1.0	11/08/09 01:13		
222	CCB				1.0	11/08/09 01:16		
223	RLCV				1.0	11/08/09 01:19		
224	LNE41Z	D9J280246-3	9302121		1.0	11/08/09 01:21		
225	LNE41S 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:24		
226	LNE41D 5X	D9J280246-3	9302121	MS	5.0	11/08/09 01:27		
227	LNE44 5X	D9J280246-4	9302121	MS	5.0	11/08/09 01:30		
228	LNE47 2X	D9J280246-5	9302121	MS	2.0	11/08/09 01:32		
229	LNE5A 2X	D9J280246-6	9302121	MS	2.0	11/08/09 01:35		
230	CCV				1.0	11/08/09 01:38		
231	CCB				1.0	11/08/09 01:41		
232	RLCV				1.0	11/08/09 01:44		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
233	LNJN5BF	D9J300000	9303187	MD	1.0	11/08/09 01:46		☐
234	LNJN5CF	D9J300000	9303187	MD	1.0	11/08/09 01:49		☐
235	LNH2LF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 01:52		☐
236	LNH2LP10F	D9J290310	9303187		10.0	11/08/09 01:55		☐
237	LNH2LZF	D9J290310-3	9303187		1.0	11/08/09 01:58		☐
238	LNH2LSF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:00		☐
239	LNH2LDF 2X	D9J290310-3	9303187	MD	2.0	11/08/09 02:03		☐
240	LNH2NF 2X	D9J290310-4	9303187	MD	2.0	11/08/09 02:06		☐
241	CCV				1.0	11/08/09 02:09		☐
242	CCB				1.0	11/08/09 02:11		☐
243	RLCV				1.0	11/08/09 02:14		☐
244	~~RINSE~~				~~1.0~~	~~11/08/09 02:17~~		☐
245	RINSE				1.0	11/08/09 02:20		☐
246	~~Cal Blank~~				~~1.0~~	~~11/08/09 02:22~~	KF 11/9/09 did not use	☐
247	Cal Blank				1.0	11/08/09 02:25		☐
248	100 ppb				1.0	11/08/09 02:28		☐
249	CCV				1.0	11/08/09 02:31		☐
250	CCB				1.0	11/08/09 02:33		☐
251	RLCV				1.0	11/08/09 02:36		☐
252	LNJNVB	D9J300000	9303185	MS	1.0	11/08/09 02:39		☐
253	LNJNVC	D9J300000	9303185	MS	1.0	11/08/09 02:42		☐
254	LNC7F 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:44		☐
255	LNC7FP25	D9J270261	9303185		25.0	11/08/09 02:47		☐
256	LNC7FZ	D9J270261-1	9303185		1.0	11/08/09 02:50		☐
257	LNC7FS 5X	D9J270261-1	9303185	MS	5.0	11/08/09 02:53		☐
258	CCV				1.0	11/08/09 02:56		☐
259	CCB				1.0	11/08/09 02:58		☐
260	RLCV				1.0	11/08/09 03:01		☐
261	LNC7FD 5X	D9J270261-1	9303185	MS	5.0	11/08/09 03:04		☐
262	LNC7L 5X	D9J270263-1	9303185	MS	5.0	11/08/09 03:07		☐
263	LNFGD 5X	D9J280280-1	9303185	MS	5.0	11/08/09 03:09		☐
264	LNFG2 5X	D9J280283-1	9303185	MS	5.0	11/08/09 03:12		☐
265	LNH2J 5X	D9J290310-1	9303185	MS	5.0	11/08/09 03:15		☐
266	LNH2K 5X	D9J290310-2	9303185	MS	5.0	11/08/09 03:18		☐
267	CCV				1.0	11/08/09 03:21		☐
268	CCB				1.0	11/08/09 03:23		☐
269	RLCV				1.0	11/08/09 03:26		☐
270	LNJ8HB	D9J300000	9303310	04	1.0	11/08/09 03:29		☐
271	LNJ8HC	D9J300000	9303310	04	1.0	11/08/09 03:32		☐
272	LNHRC	D9J290285-1	9303310	04	1.0	11/08/09 03:34		☐
273	LNHRK	D9J290285-2	9303310	04	1.0	11/08/09 03:37		☐
274	LNHRN	D9J290285-3	9303310	04	1.0	11/08/09 03:40		☐
275	LNHRP	D9J290285-4	9303310	04	1.0	11/08/09 03:43		☐
276	LNHRR	D9J290285-5	9303310	04	1.0	11/08/09 03:46		☐
277	CCV				1.0	11/08/09 03:48		☐
278	CCB				1.0	11/08/09 03:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
279	RLCV				1.0	11/08/09 03:54		☐
280	LNHRT	D9J290285-6	9303310	04	1.0	11/08/09 03:57		☐
281	LNHRTP5	D9J290285	9303310		5.0	11/08/09 03:59		☐
282	LNHRTZ	D9J290285-6	9303310		1.0	11/08/09 04:02		☐
283	LNHRTS	D9J290285-6	9303310	04	1.0	11/08/09 04:05		☐
284	LNHRTD	D9J290285-6	9303310	04	1.0	11/08/09 04:08		☐
285	LNHRV	D9J290285-7	9303310	04	1.0	11/08/09 04:10		☐
286	LNHRW	D9J290285-8	9303310	04	1.0	11/08/09 04:13		☐
287	LNHRX	D9J290285-9	9303310	04	1.0	11/08/09 04:16		☐
288	LNHR0	D9J290285-10	9303310	04	1.0	11/08/09 04:19		☐
289	CCV				1.0	11/08/09 04:21		☐
290	CCB				1.0	11/08/09 04:24		☐
291	RLCV				1.0	11/08/09 04:27		☐
292	~~Cal Blank~~				1.0	11/08/09 04:30	KF 11/9/09 Did not use.	☐
293	Cal Blank				1.0	11/08/09 04:32		☐
294	100 ppb				1.0	11/08/09 04:35		☐
295	CCV				1.0	11/08/09 04:38		☐
296	CCB				1.0	11/08/09 04:41		☐
297	RLCV				1.0	11/08/09 04:43		☐
298	LM7XN 10X	D9J230319-2	9299274	04	1.0	11/08/09 04:46		☐
299	CCV				1.0	11/08/09 04:49		☐
300	CCB				1.0	11/08/09 04:52		☐
301	RLCV				1.0	11/08/09 04:54		☐
302	~~LNNV0B~~	~~D9K020000~~	~~9306340~~	~~04~~	~~1.0~~	~~11/08/09 04:57~~		☐
303	LNNV0C	D9K020000	9306340	04	1.0	11/08/09 05:00		☐
304	LNLGN 5X	D9J300319-1	9306340	04	5.0	11/08/09 05:03		☐
305	LNJ05	D9J300168-1	9306340	04	1.0	11/08/09 05:05		☐
306	LNJ1A	D9J300168-2	9306340	04	1.0	11/08/09 05:08		☐
307	LNJ1C	D9J300168-3	9306340	04	1.0	11/08/09 05:11		☐
308	LNJ1D	D9J300168-4	9306340	04	1.0	11/08/09 05:14		☐
309	LNJ1F	D9J300168-5	9306340	04	1.0	11/08/09 05:16		☐
310	CCV				1.0	11/08/09 05:19		☐
311	CCB				1.0	11/08/09 05:22		☐
312	RLCV				1.0	11/08/09 05:25		☐
313	LNJ41	D9J300188-1	9306340	04	1.0	11/08/09 05:27		☐
314	LNJ43	D9J300188-2	9306340	04	1.0	11/08/09 05:30		☐
315	LNJ44	D9J300188-3	9306340	04	1.0	11/08/09 05:33		☐
316	LNJ45	D9J300188-4	9306340	04	1.0	11/08/09 05:36		☐
317	LNMA5 5X	D9J310124-1	9306340	04	5.0	11/08/09 05:38		☐
318	LNMCH	D9J310127-1	9306340	04	1.0	11/08/09 05:41		☐
319	CCV				1.0	11/08/09 05:44		☐
320	CCB				1.0	11/08/09 05:47		☐
321	RLCV				1.0	11/08/09 05:49		☐
322	LNMCN	D9J310127-2	9306340	04	1.0	11/08/09 05:52		☐
323	LNMCNP5	D9J310127	9306340		5.0	11/08/09 05:55		☐
324	~~LNMCNZ~~	~~D9J310127-2~~	~~9306340~~		~~1.0~~	~~11/08/09 05:58~~	KF 11/9/09 Did not use.	☐

Denver

RUN SUMMARY

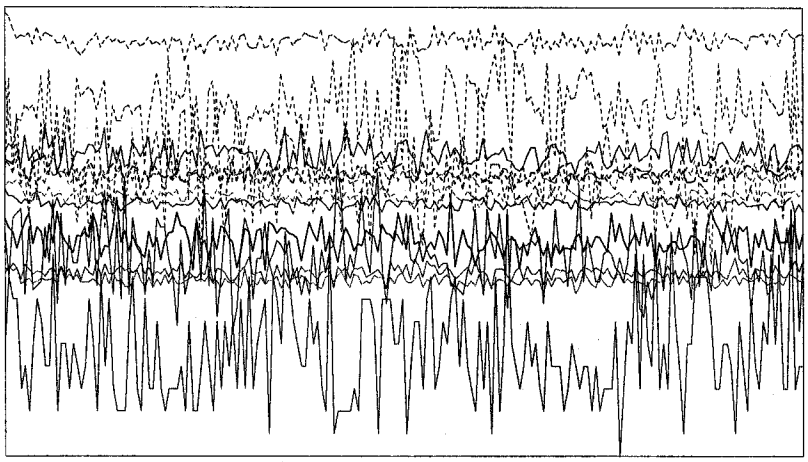
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/09/09 10:00:55

File ID: AG110709 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
325	~~LNMCNS~~	D9J310127-2	9306340	04	1.0	~~11/08/09 06:00~~		☐
326	LNMCND	D9J310127-2	9306340	04	1.0	~~11/08/09~~ 06:03		☐
327	LNMCP	D9J310127-3	9306340	04	1.0	11/08/09 06:06		☐
328	LNMCQ	D9J310127-4	9306340	04	1.0	11/08/09 06:09		☐
329	CCV				1.0	11/08/09 06:11		☐
330	CCB				1.0	11/08/09 06:14		☐
331	~~BLCV~~				~~1.0~~	~~11/08/09 06:17~~	VF 11/9/09 Did not use.	☐

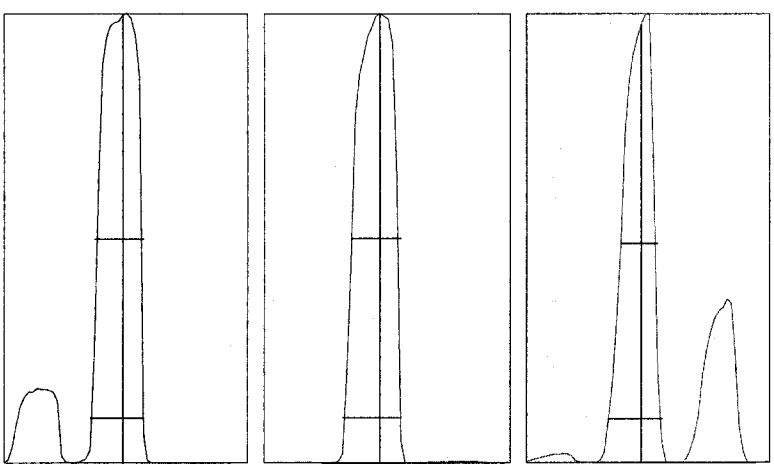
Tune Report

Tune File : NORM.U
Comment : AG110709



Integration Time: 0.1000 sec
Sampling Period: 1.5300 sec
n: 200
Oxide: 156/140 1.612%
Doubly Charged: 70/140 1.671%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	3382.0	3366.1	3.56	0.90
7	50,000	21859.0	20537.5	3.14	0.60
59	50,000	19576.0	19580.9	2.84	0.60
63	100	45.0	44.7	15.57	1.00
70	1,000	496.0	483.0	6.13	0.40
75	20	4.0	4.7	47.83	0.70
78	200	148.0	156.0	8.38	1.00
89	50,000	31217.0	31239.5	2.30	1.00
115	50,000	29852.0	29031.4	2.15	1.60
118	100	66.0	62.9	12.89	1.40
137	5,000	3148.0	3148.6	2.66	1.90
205	20,000	18784.0	18500.3	1.84	2.60
238	50,000	27256.0	28130.6	1.67	2.70
156/140	5	1.542%	1.636%	6.62	
70/140	5	1.747%	1.698%	6.33	



m/z:	7	89	205
Height:	20,610	31,605	18,257
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:09

Tune Report

Tune File : NORM.U
Comment : AG110709

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 07, 2009 14:09:07
Printed : Nov 07, 2009 14:09:12

P/A Factor Tuning Report

Acquired:Nov 7 2009 02:18 pm

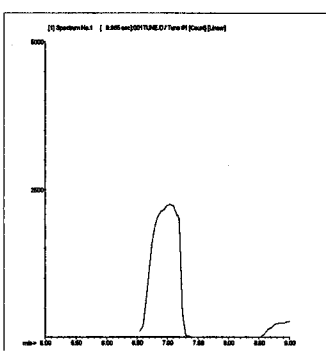
Mass[amu]	Element	P/A Factor
6	Li	0.054257
7	(Li)	Sensitivity too low
9	Be	0.059350
23	Na	0.063944
24	Mg	0.064875
27	Al	0.065819
39	K	0.066026
43	Ca	Sensitivity too low
45	Sc	0.066849
51	V	0.067403
52	Cr	0.068152
53	(Cr)	Sensitivity too low
55	Mn	0.068773
57	Fe	Sensitivity too low
59	Co	0.069652
60	Ni	Sensitivity too low
63	Cu	0.069964
66	Zn	0.070153
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.072052
98	(Mo)	0.071277
99	(Mo)	Sensitivity too low
105	Pd	0.071221
106	(Cd)	0.070815
107	Ag	Sensitivity too low
108	(Cd)	0.071381
111	Cd	0.070975
115	In	0.070220
118	Sn	0.070317
121	Sb	0.070422
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071611
206	(Pb)	0.070464
207	(Pb)	0.070565
208	Pb	0.069648
232	Th	0.069671
238	U	0.069782

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

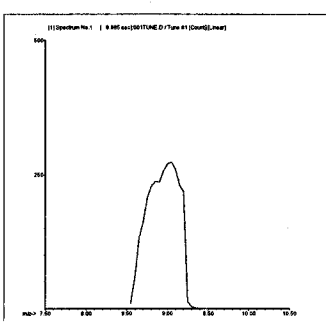
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D
Date Acquired: Nov 7 2009 03:04 pm
Acq. Method: tun_isis.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	23098	23358	23173	22978	22919	23063	0.75	5.00	
9 Be	2804	2779	2831	2892	2712	2807	2.36	5.00	
24 Mg	13819	13879	13741	14010	13810	13653	0.98	5.00	
59 Co	53596	53850	53962	53966	52908	53294	0.88	5.00	
115 In	1005351	1004408	1002826	1008799	1004052	1006672	0.24	5.00	
208 Pb	62719	64001	62223	62327	62711	62333	1.18	5.00	
238 U	130895	133955	130889	130170	131168	128294	1.56	5.00	

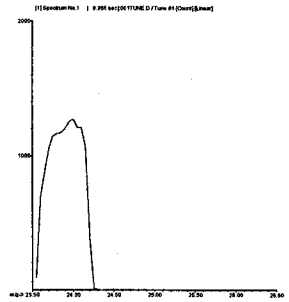


7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG110709.B\001TUNE.D



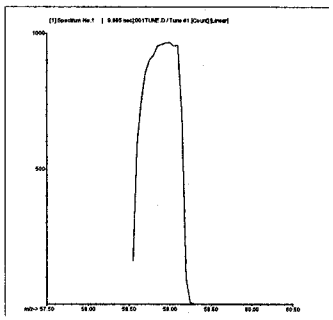
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



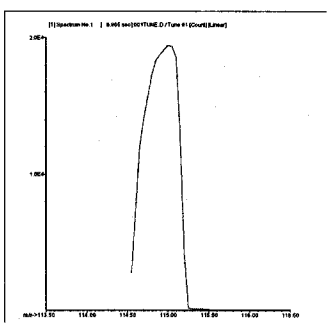
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



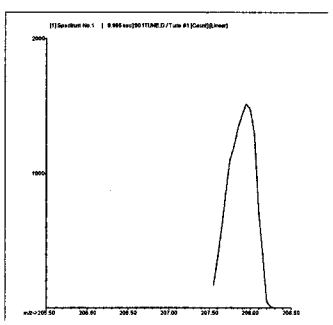
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



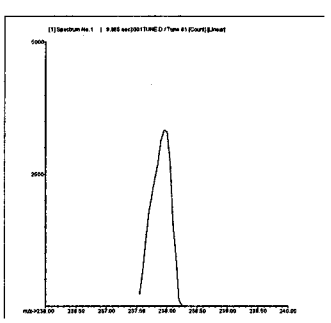
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\002CALB.D\002CALB.D#
Date Acquired: Nov 7 2009 03:07 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

9/6/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	130	55.47
52	Cr	72	1	2920	1.23
55	Mn	72	1	487	11.32
59	Co	72	1	43	35.25
60	Ni	72	1	67	56.79
63	Cu	72	1	247	16.39
66	Zn	72	1	177	1.72
75	As	72	1	38	36.84
78	Se	72	1	290	18.25
95	Mo	72	1	17	69.28
107	Ag	115	1	17	91.65
111	Cd	115	1	6	90.67
118	Sn	115	1	120	25.00
121	Sb	115	1	7	0.00
137	Ba	115	1	11	17.32
205	Tl	165	1	53	12.50
208	Pb	165	1	250	7.42
232	Th	165	1	93	59.01
238	U	165	1	83	36.66

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	450969	0.62
45	Sc	1	1353461	1.72
72	Ge	1	599452	0.37
115	In	1	1813996	0.92
165	Ho	1	3291682	1.21

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#
Date Acquired: Nov 7 2009 03:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:07 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	107	14.32
52	Cr	72	1	2804	3.71
55	Mn	72	1	517	15.52
59	Co	72	1	27	21.65
60	Ni	72	1	90	0.00
63	Cu	72	1	277	2.09
66	Zn	72	1	301	6.45
75	As	72	1	36	30.93
78	Se	72	1	263	32.30
95	Mo	72	1	20	50.00
107	Ag	115	1	10	100.00
111	Cd	115	1	-7	207.08
118	Sn	115	1	510	8.55
121	Sb	115	1	13	43.30
137	Ba	115	1	76	40.99
205	Tl	165	1	24	34.32
208	Pb	165	1	256	8.68
232	Th	165	1	100	62.45
238	U	165	1	27	57.28

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	455621	1.61
45	Sc	1	1356727	0.85
72	Ge	1	598490	0.65
115	In	1	1797032	1.18
165	Ho	1	3253654	1.35

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 7 2009 03:12 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:10 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52398	1.41
51	V	72	1	764367	2.20
52	Cr	72	1	771475	1.19
55	Mn	72	1	912002	1.09
59	Co	72	1	914930	2.11
60	Ni	72	1	193364	2.37
63	Cu	72	1	465989	1.20
66	Zn	72	1	112029	1.18
75	As	72	1	90135	1.29
78	Se	72	1	18683	1.97
95	Mo	72	1	260394	0.61
107	Ag	115	1	765784	1.36
111	Cd	115	1	157700	1.34
118	Sn	115	1	441054	2.17
121	Sb	115	1	510967	1.02
137	Ba	115	1	213858	1.06
205	Tl	165	1	1838240	1.05
208	Pb	165	1	2519619	0.58
232	Th	165	1	2643067	0.57
238	U	165	1	2792671	0.69

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	449267	0.99	455621	98.6	30 - 120	
45	Sc	1	1332198	2.77	1356727	98.2	30 - 120	
72	Ge	1	575467	1.00	598490	96.2	30 - 120	
115	In	1	1781328	1.07	1797032	99.1	30 - 120	
165	Ho	1	3275522	1.43	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 7 2009 03:15 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.37	ppb	1.43	40	100.9	90 - 110	
51 V	72	1	38.46	ppb	0.46	40	96.2	90 - 110	
52 Cr	72	1	39.20	ppb	1.19	40	98.0	90 - 110	
55 Mn	72	1	39.82	ppb	0.12	40	99.6	90 - 110	
59 Co	72	1	38.88	ppb	0.70	40	97.2	90 - 110	
60 Ni	72	1	40.10	ppb	0.16	40	100.3	90 - 110	
63 Cu	72	1	39.43	ppb	0.82	40	98.6	90 - 110	
66 Zn	72	1	40.09	ppb	0.20	40	100.2	90 - 110	
75 As	72	1	39.44	ppb	0.27	40	98.6	90 - 110	
78 Se	72	1	38.96	ppb	4.82	40	97.4	90 - 110	
95 Mo	72	1	39.50	ppb	0.72	40	98.8	90 - 110	
107 Ag	115	1	38.87	ppb	1.47	40	97.2	90 - 110	
111 Cd	115	1	39.30	ppb	0.98	40	98.3	90 - 110	
118 Sn	115	1	39.04	ppb	1.08	40	97.6	90 - 110	
121 Sb	115	1	39.64	ppb	1.29	40	99.1	90 - 110	
137 Ba	115	1	38.76	ppb	1.35	40	96.9	90 - 110	
205 Tl	165	1	39.29	ppb	2.05	40	98.2	90 - 110	
208 Pb	165	1	40.72	ppb	2.07	40	101.8	90 - 110	
232 Th	165	1	41.00	ppb	0.86	40	102.5	90 - 110	
238 U	165	1	40.29	ppb	1.06	40	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448116	0.63	455621	98.4	30 - 120	
45 Sc	1	1362171	0.61	1356727	100.4	30 - 120	
72 Ge	1	576140	0.97	598490	96.3	30 - 120	
115 In	1	1802991	1.36	1797032	100.3	30 - 120	
165 Ho	1	3291704	0.83	3253654	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\006WASH.D\006WASH.D#
Date Acquired: Nov 7 2009 03:18 pm
Operator: TEL
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.014 ppb	15.49	1.30	
51 V	72	1	4.659 ppb	1.34	6.50	
52 Cr	72	1	1.891 ppb	2.95	2.60	
55 Mn	72	1	1.009 ppb	5.61	1.30	
59 Co	72	1	0.959 ppb	4.52	1.30	
60 Ni	72	1	2.093 ppb	8.35	2.60	
63 Cu	72	1	1.903 ppb	3.09	2.60	
66 Zn	72	1	9.821 ppb	1.82	13.00	
75 As	72	1	4.879 ppb	0.84	6.50	
78 Se	72	1	4.897 ppb	10.67	6.50	
95 Mo	72	1	2.003 ppb	7.36	2.60	
107 Ag	115	1	4.951 ppb	3.27	6.50	
111 Cd	115	1	1.010 ppb	5.23	1.30	
118 Sn	115	1	10.070 ppb	2.63	13.00	
121 Sb	115	1	2.216 ppb	0.33	2.60	
137 Ba	115	1	0.996 ppb	4.86	1.30	
205 Tl	165	1	1.209 ppb	0.85	1.30	
208 Pb	165	1	1.032 ppb	2.04	1.30	
232 Th	165	1	2.207 ppb	1.51	2.60	
238 U	165	1	1.091 ppb	3.35	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	450702	0.54	455621	98.9	30 - 120	
45 Sc	1	1340626	0.89	1356727	98.8	30 - 120	
72 Ge	1	589280	0.55	598490	98.5	30 - 120	
115 In	1	1800289	1.54	1797032	100.2	30 - 120	
165 Ho	1	3280239	1.67	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 7 2009 03:20 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	0.01	ppb	78.95	1.00	
52 Cr	72	1	0.00	ppb	801.07	1.00	
55 Mn	72	1	0.00	ppb	167.97	1.00	
59 Co	72	1	0.00	ppb	88.12	1.00	
60 Ni	72	1	0.00	ppb	330.87	1.00	
63 Cu	72	1	-0.02	ppb	18.87	1.00	
66 Zn	72	1	-0.08	ppb	16.28	1.00	
75 As	72	1	0.00	ppb	320.71	1.00	
78 Se	72	1	-0.34	ppb	104.80	1.00	
95 Mo	72	1	0.03	ppb	28.62	1.00	
107 Ag	115	1	0.01	ppb	75.43	1.00	
111 Cd	115	1	0.01	ppb	156.14	1.00	
118 Sn	115	1	0.05	ppb	28.25	1.00	
121 Sb	115	1	0.08	ppb	20.91	1.00	
137 Ba	115	1	-0.02	ppb	26.22	1.00	
205 Tl	165	1	0.04	ppb	12.74	1.00	
208 Pb	165	1	0.00	ppb	28.23	1.00	
232 Th	165	1	0.02	ppb	38.30	1.00	
238 U	165	1	0.00	ppb	35.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453788	0.69	455621	99.6	30 - 120	
45 Sc	1	1334714	1.17	1356727	98.4	30 - 120	
72 Ge	1	592403	0.34	598490	99.0	30 - 120	
115 In	1	1792165	0.66	1797032	99.7	30 - 120	
165 Ho	1	3254324	0.30	3253654	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\008RLST.D\008RLST.D#
Date Acquired: Nov 7 2009 03:23 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1.03 ppb	7.07	1	102.9	50 - 150	
51 V	72	1	0.95 ppb	2.40	1	94.6	50 - 150	
52 Cr	72	1	0.95 ppb	9.15	1	94.9	50 - 150	
55 Mn	72	1	0.98 ppb	3.40	1	97.8	50 - 150	
59 Co	72	1	0.99 ppb	1.20	1	99.3	50 - 150	
60 Ni	72	1	0.99 ppb	1.44	1	98.7	50 - 150	
63 Cu	72	1	0.97 ppb	3.25	1	96.6	50 - 150	
66 Zn	72	1	9.84 ppb	1.62	10	98.4	50 - 150	
75 As	72	1	1.01 ppb	1.47	1	100.9	50 - 150	
78 Se	72	1	0.85 ppb	29.55	1	85.1	50 - 150	
95 Mo	72	1	0.98 ppb	3.69	1	98.3	50 - 150	
107 Ag	115	1	0.98 ppb	6.91	1	98.4	50 - 150	
111 Cd	115	1	0.98 ppb	2.94	1	97.7	50 - 150	
118 Sn	115	1	9.90 ppb	3.50	10	99.0	50 - 150	
121 Sb	115	1	1.06 ppb	2.89	1	105.8	50 - 150	
137 Ba	115	1	0.93 ppb	4.92	1	92.9	50 - 150	
205 Tl	165	1	1.05 ppb	1.24	1	104.9	50 - 150	
208 Pb	165	1	1.05 ppb	0.65	1	104.5	50 - 150	
232 Th	165	1	1.07 ppb	0.78	1	106.6	50 - 150	
238 U	165	1	1.09 ppb	0.98	1	109.3	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	452942	1.17	455621	99.4	30 - 120	
45 Sc	1	1350845	0.67	1356727	99.6	30 - 120	
72 Ge	1	590050	0.39	598490	98.6	30 - 120	
115 In	1	1791700	1.48	1797032	99.7	30 - 120	
165 Ho	1	3276677	0.55	3253654	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 7 2009 03:26 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.18	ppb	4.87	0	85.7	80 - 120	
51 V	72	1	0.19	ppb	1.60	0	98.1	80 - 120	
52 Cr	72	1	0.17	ppb	19.24	0	88.9	80 - 120	
55 Mn	72	1	0.24	ppb	0.90	0	122.4	80 - 120	
59 Co	72	1	0.21	ppb	2.54	0	105.0	80 - 120	
60 Ni	72	1	0.19	ppb	33.14	0	95.0	80 - 120	
63 Cu	72	1	0.19	ppb	26.00	0	96.8	80 - 120	
66 Zn	72	1	1.99	ppb	0.59	2	101.2	80 - 120	
75 As	72	1	0.22	ppb	3.49	0	111.1	80 - 120	
78 Se	72	1	-0.03	ppb	493.20	0	-19.4	80 - 120	
95 Mo	72	1	0.20	ppb	10.11	0	102.9	80 - 120	
107 Ag	115	1	0.19	ppb	9.51	0	98.0	80 - 120	
111 Cd	115	1	0.20	ppb	6.38	0	102.8	80 - 120	
118 Sn	115	1	1.96	ppb	1.89	2	99.1	80 - 120	
121 Sb	115	1	0.22	ppb	4.04	0	104.0	80 - 120	
137 Ba	115	1	0.19	ppb	4.99	0	101.2	80 - 120	
205 Tl	165	1	0.21	ppb	2.78	0	101.1	80 - 120	
208 Pb	165	1	0.21	ppb	2.60	0	100.1	80 - 120	
232 Th	165	1	0.21	ppb	3.95	0	98.4	80 - 120	
238 U	165	1	0.21	ppb	3.63	0	98.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453567	1.29	455621	99.5	30 - 120	
45 Sc	1	1337172	0.83	1356727	98.6	30 - 120	
72 Ge	1	590407	0.86	598490	98.6	30 - 120	
115 In	1	1781901	0.99	1797032	99.2	30 - 120	
165 Ho	1	3288568	1.80	3253654	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 7 2009 03:29 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	0.00	0.00	ppb	62.04	3600	
52 Cr	72	1	0.00	0.00	ppb	1081.40	3600	
55 Mn	72	1	0.00	0.00	ppb	140.46	3600	
59 Co	72	1	0.00	0.00	ppb	189.04	3600	
60 Ni	72	1	0.00	0.00	ppb	522.21	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.36	3600	
66 Zn	72	1	0.05	0.05	ppb	55.06	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	2.16	2.16	ppb	11.88	3600	
95 Mo	72	1	0.00	0.00	ppb	222.57	3600	
107 Ag	115	1	0.01	0.01	ppb	10.07	3600	
111 Cd	115	1	0.00	0.00	ppb	89.77	3600	
118 Sn	115	1	0.00	0.00	ppb	293.54	3600	
121 Sb	115	1	0.02	0.02	ppb	23.95	3600	
137 Ba	115	1	-0.02	-0.02	ppb	16.61	3600	
205 Tl	165	1	0.01	0.01	ppb	2.14	3600	
208 Pb	165	1	0.00	0.00	ppb	39.67	3600	
232 Th	165	1	0.00	0.00	ppb	17.19	1000	
238 U	165	1	0.00	0.00	ppb	388.10	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	453890	1.30	455621	99.6	30 - 120	
45 Sc	1	1357795	0.37	1356727	100.1	30 - 120	
72 Ge	1	592423	0.94	598490	99.0	30 - 120	
115 In	1	1792023	1.18	1797032	99.7	30 - 120	
165 Ho	1	3279675	0.39	3253654	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 7 2009 03:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.45 ppb	8.60	1.00	
52 Cr	72	1	1.86 ppb	3.80	1.00	
55 Mn	72	1	3.11 ppb	0.88	1.00	
59 Co	72	1	0.12 ppb	10.19	1.00	
60 Ni	72	1	1.23 ppb	9.98	1.00	
63 Cu	72	1	0.56 ppb	5.58	1.00	
66 Zn	72	1	4.20 ppb	1.79	10.00	
75 As	72	1	0.35 ppb	13.35	1.00	
78 Se	72	1	0.47 ppb	67.55	1.00	
95 Mo	72	1	2055.00 ppb	1.11	2000.00	
107 Ag	115	1	0.03 ppb	8.56	1.00	
111 Cd	115	1	0.40 ppb	30.97	1.00	
118 Sn	115	1	0.93 ppb	18.89	10.00	
121 Sb	115	1	0.95 ppb	3.56	1.00	
137 Ba	115	1	0.00 ppb	326.02	1.00	
205 Tl	165	1	0.04 ppb	20.03	1.00	
208 Pb	165	1	1.04 ppb	2.03	1.00	
232 Th	165	1	0.02 ppb	5.48	1.00	
238 U	165	1	0.00 ppb	14.89	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	297281	2.41	455621	65.2	30 - 120	
45 Sc	1	939322	1.85	1356727	69.2	30 - 120	
72 Ge	1	429449	0.82	598490	71.8	30 - 120	
115 In	1	1325081	0.92	1797032	73.7	30 - 120	
165 Ho	1	2485688	0.47	3253654	76.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 7 2009 03:34 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	108.90	0.75	100	108.9	80 - 120	
51 V	72	1	92.27	0.38	100	92.3	80 - 120	
52 Cr	72	1	90.40	0.96	100	90.4	80 - 120	
55 Mn	72	1	92.59	1.18	100	92.6	80 - 120	
59 Co	72	1	88.85	0.30	100	88.9	80 - 120	
60 Ni	72	1	89.72	0.28	100	89.7	80 - 120	
63 Cu	72	1	85.14	0.90	100	85.1	80 - 120	
66 Zn	72	1	95.65	0.49	100	95.7	80 - 120	
75 As	72	1	99.50	0.47	100	99.5	80 - 120	
78 Se	72	1	105.90	0.80	100	105.9	80 - 120	
95 Mo	72	1	2149.00	1.99	2100	102.3	80 - 120	
107 Ag	115	1	84.00	7.96	100	84.0	80 - 120	
111 Cd	115	1	93.62	2.89	100	93.6	80 - 120	
118 Sn	115	1	96.78	1.78	100	96.8	80 - 120	
121 Sb	115	1	100.10	2.32	100	100.1	80 - 120	
137 Ba	115	1	96.82	2.12	100	96.8	80 - 120	
205 Tl	165	1	94.83	0.67	100	94.8	80 - 120	
208 Pb	165	1	93.97	0.82	100	94.0	80 - 120	
232 Th	165	1	101.90	0.67	100	101.9	80 - 120	
238 U	165	1	100.20	0.45	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272241	2.18	455621	59.8	30 - 120	
45 Sc	1	935334	1.15	1356727	68.9	30 - 120	
72 Ge	1	419509	1.32	598490	70.1	30 - 120	
115 In	1	1327038	1.55	1797032	73.8	30 - 120	
165 Ho	1	2524289	0.15	3253654	77.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 7 2009 03:37 pm
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0	0.0	80 - 120	
51 V	72	1	0.06	ppb	15.15	0	29.2	80 - 120	
52 Cr	72	1	0.00	ppb	941.54	0	-2.5	80 - 120	
55 Mn	72	1	0.00	ppb	87.90	0	-2.5	80 - 120	
59 Co	72	1	0.00	ppb	138.19	0	-0.5	80 - 120	
60 Ni	72	1	-0.01	ppb	79.76	0	-6.6	80 - 120	
63 Cu	72	1	-0.02	ppb	11.32	0	-10.3	80 - 120	
66 Zn	72	1	-0.12	ppb	4.66	2	-6.1	80 - 120	
75 As	72	1	0.00	ppb	172.97	0	2.3	80 - 120	
78 Se	72	1	0.18	ppb	157.63	0	105.8	80 - 120	
95 Mo	72	1	0.92	ppb	26.25	0	470.1	80 - 120	
107 Ag	115	1	0.01	ppb	38.83	0	5.1	80 - 120	
111 Cd	115	1	0.00	ppb	268.01	0	2.2	80 - 120	
118 Sn	115	1	-0.03	ppb	57.94	2	-1.3	80 - 120	
121 Sb	115	1	0.13	ppb	22.58	0	60.8	80 - 120	
137 Ba	115	1	-0.03	ppb	10.98	0	-13.6	80 - 120	
205 Tl	165	1	0.00	ppb	35.28	0	1.1	80 - 120	
208 Pb	165	1	0.00	ppb	109.50	0	-0.7	80 - 120	
232 Th	165	1	0.03	ppb	14.09	0	14.5	80 - 120	
238 U	165	1	0.02	ppb	14.78	0	7.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	392251	1.40	455621	86.1	30 - 120	
45 Sc	1	1236871	2.21	1356727	91.2	30 - 120	
72 Ge	1	563469	0.48	598490	94.1	30 - 120	
115 In	1	1720438	0.38	1797032	95.7	30 - 120	
165 Ho	1	3228952	0.84	3253654	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\014 LR.D\014 LR.D#
Date Acquired: Nov 7 2009 03:40 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	1021.00 ppb	0.96	1000	102.1	90 - 110	
51 V	72	1	925.30 ppb	0.26	1000	92.5	90 - 110	
52 Cr	72	1	921.80 ppb	1.18	1000	92.2	90 - 110	
55 Mn	72	1	929.00 ppb	0.53	1000	92.9	90 - 110	
59 Co	72	1	937.60 ppb	0.95	1000	93.8	90 - 110	
60 Ni	72	1	990.00 ppb	1.83	1000	99.0	90 - 110	
63 Cu	72	1	941.00 ppb	0.34	1000	94.1	90 - 110	
66 Zn	72	1	1002.00 ppb	1.56	1000	100.2	90 - 110	
75 As	72	1	1025.00 ppb	1.12	1000	102.5	90 - 110	
78 Se	72	1	1031.00 ppb	0.90	1000	103.1	90 - 110	
95 Mo	72	1	1009.00 ppb	0.81	1000	100.9	90 - 110	
107 Ag	115	1	955.40 ppb	0.47	1000	95.5	90 - 110	
111 Cd	115	1	993.10 ppb	0.32	1000	99.3	90 - 110	
118 Sn	115	1	954.10 ppb	1.58	1000	95.4	90 - 110	
121 Sb	115	1	963.20 ppb	0.99	1000	96.3	90 - 110	
137 Ba	115	1	967.40 ppb	1.98	1000	96.7	90 - 110	
205 Tl	165	1	966.90 ppb	1.78	1000	96.7	90 - 110	
208 Pb	165	1	947.60 ppb	1.76	1000	94.8	90 - 110	
232 Th	165	1	989.70 ppb	1.92	1000	99.0	90 - 110	
238 U	165	1	989.00 ppb	1.57	1000	98.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	400820	0.66	455621	88.0	30 - 120	
45 Sc	1	1229119	1.48	1356727	90.6	30 - 120	
72 Ge	1	547741	0.96	598490	91.5	30 - 120	
115 In	1	1703051	0.61	1797032	94.8	30 - 120	
165 Ho	1	3245351	1.45	3253654	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 7 2009 03:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.22	3600	
51 V	72	1	0.03	0.03	ppb	5.05	3600	
52 Cr	72	1	-0.02	-0.02	ppb	115.91	3600	
55 Mn	72	1	0.00	0.00	ppb	108.03	3600	
59 Co	72	1	0.00	0.00	ppb	73.71	3600	
60 Ni	72	1	-0.01	-0.01	ppb	98.85	3600	
63 Cu	72	1	-0.01	-0.01	ppb	57.10	3600	
66 Zn	72	1	-0.10	-0.10	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	18.58	3600	
78 Se	72	1	0.26	0.26	ppb	60.51	3600	
95 Mo	72	1	0.62	0.62	ppb	25.89	3600	
107 Ag	115	1	0.03	0.03	ppb	13.50	3600	
111 Cd	115	1	0.01	0.01	ppb	106.57	3600	
118 Sn	115	1	1.01	1.01	ppb	28.84	3600	
121 Sb	115	1	1.39	1.39	ppb	19.23	3600	
137 Ba	115	1	-0.02	-0.02	ppb	4.07	3600	
205 Tl	165	1	0.06	0.06	ppb	11.15	3600	
208 Pb	165	1	0.01	0.01	ppb	28.34	3600	
232 Th	165	1	0.12	0.12	ppb	15.82	1000	
238 U	165	1	0.14	0.14	ppb	23.45	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	416465	0.36	455621	91.4	30 - 120	
45 Sc	1	1277469	0.68	1356727	94.2	30 - 120	
72 Ge	1	579692	0.72	598490	96.9	30 - 120	
115 In	1	1790861	0.65	1797032	99.7	30 - 120	
165 Ho	1	3297951	1.06	3253654	101.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 7 2009 03:45 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	0.98	50	101.6	90 - 110	
51 V	72	1	47.69	ppb	0.85	50	95.4	90 - 110	
52 Cr	72	1	47.81	ppb	0.72	50	95.6	90 - 110	
55 Mn	72	1	47.91	ppb	0.63	50	95.8	90 - 110	
59 Co	72	1	48.31	ppb	1.05	50	96.6	90 - 110	
60 Ni	72	1	49.87	ppb	0.51	50	99.7	90 - 110	
63 Cu	72	1	48.27	ppb	0.97	50	96.5	90 - 110	
66 Zn	72	1	49.24	ppb	0.51	50	98.5	90 - 110	
75 As	72	1	49.61	ppb	0.57	50	99.2	90 - 110	
78 Se	72	1	51.34	ppb	3.01	50	102.7	90 - 110	
95 Mo	72	1	49.43	ppb	1.34	50	98.9	90 - 110	
107 Ag	115	1	48.77	ppb	0.60	50	97.5	90 - 110	
111 Cd	115	1	49.46	ppb	1.05	50	98.9	90 - 110	
118 Sn	115	1	49.42	ppb	0.94	50	98.8	90 - 110	
121 Sb	115	1	49.48	ppb	0.82	50	99.0	90 - 110	
137 Ba	115	1	48.65	ppb	1.08	50	97.3	90 - 110	
205 Tl	165	1	49.98	ppb	1.20	50	100.0	90 - 110	
208 Pb	165	1	50.63	ppb	2.15	50	101.3	90 - 110	
232 Th	165	1	50.61	ppb	1.41	50	101.2	90 - 110	
238 U	165	1	50.58	ppb	0.97	50	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	424171	1.07	455621	93.1	30 - 120	
45 Sc	1	1298607	1.88	1356727	95.7	30 - 120	
72 Ge	1	570018	0.80	598490	95.2	30 - 120	
115 In	1	1777686	0.76	1797032	98.9	30 - 120	
165 Ho	1	3306431	1.43	3253654	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 7 2009 03:48 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	0.018	ppb	26.29	1.00	
52 Cr	72	1	0.021	ppb	89.72	1.00	
55 Mn	72	1	-0.002	ppb	258.47	1.00	
59 Co	72	1	0.000	ppb	7.74	1.00	
60 Ni	72	1	-0.003	ppb	365.53	1.00	
63 Cu	72	1	-0.006	ppb	212.36	1.00	
66 Zn	72	1	-0.070	ppb	18.30	1.00	
75 As	72	1	0.022	ppb	32.72	1.00	
78 Se	72	1	0.156	ppb	92.00	1.00	
95 Mo	72	1	0.115	ppb	30.30	1.00	
107 Ag	115	1	0.011	ppb	38.12	1.00	
111 Cd	115	1	0.002	ppb	113.82	1.00	
118 Sn	115	1	0.224	ppb	27.67	1.00	
121 Sb	115	1	0.348	ppb	18.44	1.00	
137 Ba	115	1	-0.026	ppb	8.86	1.00	
205 Tl	165	1	0.021	ppb	16.25	1.00	
208 Pb	165	1	0.000	ppb	463.86	1.00	
232 Th	165	1	0.056	ppb	20.03	1.00	
238 U	165	1	0.020	ppb	23.07	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	432937	1.72	455621	95.0	30 - 120	
45 Sc	1	1320709	0.75	1356727	97.3	30 - 120	
72 Ge	1	592471	0.93	598490	99.0	30 - 120	
115 In	1	1824111	0.70	1797032	101.5	30 - 120	
165 Ho	1	3304082	2.00	3253654	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\018WASH.D\018WASH.D#
Date Acquired: Nov 7 2009 03:50 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.089 ppb	20.89	1.30	
51 V	72	1	4.721 ppb	1.02	6.50	
52 Cr	72	1	1.919 ppb	1.17	2.60	
55 Mn	72	1	0.984 ppb	3.79	1.30	
59 Co	72	1	0.988 ppb	7.05	1.30	
60 Ni	72	1	1.975 ppb	5.09	2.60	
63 Cu	72	1	1.890 ppb	1.03	2.60	
66 Zn	72	1	9.815 ppb	1.05	13.00	
75 As	72	1	4.945 ppb	0.93	6.50	
78 Se	72	1	5.017 ppb	5.41	6.50	
95 Mo	72	1	2.030 ppb	4.90	2.60	
107 Ag	115	1	5.119 ppb	1.83	6.50	
111 Cd	115	1	0.998 ppb	8.12	1.30	
118 Sn	115	1	10.310 ppb	2.66	13.00	
121 Sb	115	1	2.181 ppb	2.54	2.60	
137 Ba	115	1	0.995 ppb	2.40	1.30	
205 Tl	165	1	1.063 ppb	1.61	1.30	
208 Pb	165	1	1.038 ppb	1.89	1.30	
232 Th	165	1	2.164 ppb	2.13	2.60	
238 U	165	1	1.100 ppb	1.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	443603	0.24	455621	97.4	30 - 120	
45 Sc	1	1335995	1.35	1356727	98.5	30 - 120	
72 Ge	1	596206	0.64	598490	99.6	30 - 120	
115 In	1	1804793	1.75	1797032	100.4	30 - 120	
165 Ho	1	3324168	1.02	3253654	102.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\095 CCV.D\095 CCV.D#
Date Acquired: Nov 7 2009 07:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.00	ppb	3.68	50	100.0	90 - 110	
51 V	72	1	49.46	ppb	0.96	50	98.9	90 - 110	
52 Cr	72	1	49.13	ppb	0.63	50	98.3	90 - 110	
55 Mn	72	1	48.00	ppb	0.58	50	96.0	90 - 110	
59 Co	72	1	49.88	ppb	1.19	50	99.8	90 - 110	
60 Ni	72	1	52.70	ppb	0.96	50	105.4	90 - 110	
63 Cu	72	1	50.75	ppb	0.19	50	101.5	90 - 110	
66 Zn	72	1	48.83	ppb	0.18	50	97.7	90 - 110	
75 As	72	1	50.85	ppb	1.33	50	101.7	90 - 110	
78 Se	72	1	50.97	ppb	2.08	50	101.9	90 - 110	
95 Mo	72	1	49.28	ppb	0.59	50	98.6	90 - 110	
107 Ag	115	1	48.69	ppb	1.80	50	97.4	90 - 110	
111 Cd	115	1	48.20	ppb	1.31	50	96.4	90 - 110	
118 Sn	115	1	47.65	ppb	1.87	50	95.3	90 - 110	
121 Sb	115	1	47.61	ppb	2.17	50	95.2	90 - 110	
137 Ba	115	1	48.23	ppb	1.87	50	96.5	90 - 110	
205 Tl	165	1	49.17	ppb	1.01	50	98.3	90 - 110	
208 Pb	165	1	50.08	ppb	1.74	50	100.2	90 - 110	
232 Th	165	1	49.66	ppb	0.53	50	99.3	90 - 110	
238 U	165	1	49.60	ppb	0.64	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	431764	0.94	455621	94.8	30 - 120	
45 Sc	1	1275635	0.72	1356727	94.0	30 - 120	
72 Ge	1	557000	0.87	598490	93.1	30 - 120	
115 In	1	1717369	0.76	1797032	95.6	30 - 120	
165 Ho	1	3017615	0.61	3253654	92.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\096 CCB.D\096 CCB.D#
Date Acquired: Nov 7 2009 07:28 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.006	ppb	24.61	1.00	
52 Cr	72	1	0.005	ppb	16.13	1.00	
55 Mn	72	1	0.012	ppb	40.48	1.00	
59 Co	72	1	0.003	ppb	90.18	1.00	
60 Ni	72	1	0.005	ppb	115.47	1.00	
63 Cu	72	1	-0.001	ppb	1434.90	1.00	
66 Zn	72	1	0.040	ppb	39.82	1.00	
75 As	72	1	-0.001	ppb	689.47	1.00	
78 Se	72	1	0.203	ppb	119.68	1.00	
95 Mo	72	1	0.030	ppb	15.19	1.00	
107 Ag	115	1	0.009	ppb	17.39	1.00	
111 Cd	115	1	0.008	ppb	214.98	1.00	
118 Sn	115	1	0.033	ppb	87.07	1.00	
121 Sb	115	1	0.133	ppb	16.18	1.00	
137 Ba	115	1	-0.005	ppb	66.27	1.00	
205 Tl	165	1	0.010	ppb	5.85	1.00	
208 Pb	165	1	0.007	ppb	10.03	1.00	
232 Th	165	1	0.031	ppb	21.92	1.00	
238 U	165	1	0.010	ppb	23.45	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	442577	1.12	455621	97.1	30 - 120	
45 Sc	1	1308803	1.31	1356727	96.5	30 - 120	
72 Ge	1	575158	0.41	598490	96.1	30 - 120	
115 In	1	1692957	0.78	1797032	94.2	30 - 120	
165 Ho	1	3023523	0.70	3253654	92.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\097WASH.D\097WASH.D#
Date Acquired:	Nov 7 2009 07:30 pm
Operator:	TEL
Sample Name:	RLCV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Nov 07 2009 03:13 pm
Sample Type:	WASH
Total Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.033 ppb	16.46	1.30	
51 V	72	1	4.891 ppb	1.41	6.50	
52 Cr	72	1	2.023 ppb	4.58	2.60	
55 Mn	72	1	0.940 ppb	0.94	1.30	
59 Co	72	1	1.033 ppb	0.60	1.30	
60 Ni	72	1	2.129 ppb	10.31	2.60	
63 Cu	72	1	2.031 ppb	2.60	2.60	
66 Zn	72	1	10.080 ppb	0.14	13.00	
75 As	72	1	5.048 ppb	1.66	6.50	
78 Se	72	1	5.042 ppb	13.65	6.50	
95 Mo	72	1	2.050 ppb	1.88	2.60	
107 Ag	115	1	5.260 ppb	2.15	6.50	
111 Cd	115	1	0.998 ppb	4.13	1.30	
118 Sn	115	1	9.995 ppb	1.00	13.00	
121 Sb	115	1	2.042 ppb	0.94	2.60	
137 Ba	115	1	1.003 ppb	6.96	1.30	
205 Tl	165	1	1.017 ppb	1.09	1.30	
208 Pb	165	1	1.046 ppb	1.73	1.30	
232 Th	165	1	2.137 ppb	1.47	2.60	
238 U	165	1	1.065 ppb	1.95	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	448328	0.34	455621	98.4	30 - 120	
45 Sc	1	1294487	0.37	1356727	95.4	30 - 120	
72 Ge	1	577791	0.38	598490	96.5	30 - 120	
115 In	1	1706897	0.23	1797032	95.0	30 - 120	
165 Ho	1	3033777	0.64	3253654	93.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\098ICSA.D\098ICSA.D#
Date Acquired: Nov 7 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.01 ppb	173.15	1.00	
51 V	72	1	2.34 ppb	2.35	1.00	
52 Cr	72	1	1.89 ppb	3.80	1.00	
55 Mn	72	1	3.08 ppb	1.35	1.00	
59 Co	72	1	0.13 ppb	9.32	1.00	
60 Ni	72	1	1.54 ppb	6.59	1.00	
63 Cu	72	1	0.62 ppb	13.41	1.00	
66 Zn	72	1	4.36 ppb	1.67	10.00	
75 As	72	1	0.31 ppb	11.37	1.00	
78 Se	72	1	-0.18 ppb	17.27	1.00	
95 Mo	72	1	2024.00 ppb	0.75	2000.00	
107 Ag	115	1	0.04 ppb	30.78	1.00	
111 Cd	115	1	0.44 ppb	34.74	1.00	
118 Sn	115	1	0.41 ppb	9.39	10.00	
121 Sb	115	1	0.94 ppb	2.45	1.00	
137 Ba	115	1	0.02 ppb	61.87	1.00	
205 Tl	165	1	0.04 ppb	26.87	1.00	
208 Pb	165	1	1.05 ppb	0.68	1.00	
232 Th	165	1	0.02 ppb	35.17	1.00	
238 U	165	1	0.01 ppb	14.16	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	316325	1.25	455621	69.4	30 - 120	
45 Sc	1	945462	1.56	1356727	69.7	30 - 120	
72 Ge	1	429131	0.94	598490	71.7	30 - 120	
115 In	1	1251973	0.62	1797032	69.7	30 - 120	
165 Ho	1	2302241	0.67	3253654	70.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\099ICSB.D\099ICSB.D#
Date Acquired: Nov 7 2009 07:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 03:13 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.10	0.81	100	101.1	80 - 120	
51 V	72	1	96.26	0.64	100	96.3	80 - 120	
52 Cr	72	1	92.97	0.53	100	93.0	80 - 120	
55 Mn	72	1	92.78	0.33	100	92.8	80 - 120	
59 Co	72	1	90.72	0.50	100	90.7	80 - 120	
60 Ni	72	1	92.71	0.31	100	92.7	80 - 120	
63 Cu	72	1	87.81	1.07	100	87.8	80 - 120	
66 Zn	72	1	94.31	0.22	100	94.3	80 - 120	
75 As	72	1	101.10	0.38	100	101.1	80 - 120	
78 Se	72	1	105.10	1.94	100	105.1	80 - 120	
95 Mo	72	1	2106.00	1.43	2100	100.3	80 - 120	
107 Ag	115	1	85.35	1.62	100	85.4	80 - 120	
111 Cd	115	1	91.55	1.47	100	91.6	80 - 120	
118 Sn	115	1	96.95	1.86	100	97.0	80 - 120	
121 Sb	115	1	101.90	1.14	100	101.9	80 - 120	
137 Ba	115	1	97.10	2.05	100	97.1	80 - 120	
205 Tl	165	1	93.31	1.80	100	93.3	80 - 120	
208 Pb	165	1	92.31	0.40	100	92.3	80 - 120	
232 Th	165	1	98.27	1.03	100	98.3	80 - 120	
238 U	165	1	97.38	0.98	100	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298307	2.13	455621	65.5	30 - 120	
45 Sc	1	951400	0.73	1356727	70.1	30 - 120	
72 Ge	1	417924	0.89	598490	69.8	30 - 120	
115 In	1	1269948	0.83	1797032	70.7	30 - 120	
165 Ho	1	2339416	0.71	3253654	71.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\100WASH.D\100WASH.D#
Date Acquired: Nov 7 2009 07:39 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	1.30	
51 V	72	1	0.142 ppb	7.89	6.50	
52 Cr	72	1	0.005 ppb	257.91	2.60	
55 Mn	72	1	0.007 ppb	90.77	1.30	
59 Co	72	1	0.000 ppb	202.05	1.30	
60 Ni	72	1	0.093 ppb	12.92	2.60	
63 Cu	72	1	-0.001 ppb	1876.80	2.60	
66 Zn	72	1	0.085 ppb	20.36	13.00	
75 As	72	1	0.006 ppb	156.23	6.50	
78 Se	72	1	-0.186 ppb	140.52	6.50	
95 Mo	72	1	0.818 ppb	23.12	2.60	
107 Ag	115	1	0.010 ppb	12.80	6.50	
111 Cd	115	1	0.005 ppb	231.49	1.30	
118 Sn	115	1	-0.010 ppb	165.88	13.00	
121 Sb	115	1	0.032 ppb	29.89	2.60	
137 Ba	115	1	-0.014 ppb	32.29	1.30	
205 Tl	165	1	0.003 ppb	28.88	1.30	
208 Pb	165	1	0.004 ppb	10.63	1.30	
232 Th	165	1	0.024 ppb	19.02	2.60	
238 U	165	1	0.016 ppb	20.26	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	387692	1.32	455621	85.1	30 - 120	
45 Sc	1	1182675	0.32	1356727	87.2	30 - 120	
72 Ge	1	534827	0.26	598490	89.4	30 - 120	
115 In	1	1606789	1.96	1797032	89.4	30 - 120	
165 Ho	1	2912559	0.89	3253654	89.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\101 CCV.D\101 CCV.D#
Date Acquired: Nov 7 2009 07:41 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.02	ppb	3.60	50	102.0	90 - 110	
51 V	72	1	49.10	ppb	0.68	50	98.2	90 - 110	
52 Cr	72	1	48.80	ppb	0.79	50	97.6	90 - 110	
55 Mn	72	1	48.00	ppb	0.60	50	96.0	90 - 110	
59 Co	72	1	49.55	ppb	0.61	50	99.1	90 - 110	
60 Ni	72	1	52.06	ppb	1.46	50	104.1	90 - 110	
63 Cu	72	1	50.22	ppb	0.56	50	100.4	90 - 110	
66 Zn	72	1	48.51	ppb	1.13	50	97.0	90 - 110	
75 As	72	1	50.95	ppb	0.50	50	101.9	90 - 110	
78 Se	72	1	49.38	ppb	4.19	50	98.8	90 - 110	
95 Mo	72	1	50.11	ppb	1.38	50	100.2	90 - 110	
107 Ag	115	1	49.66	ppb	0.85	50	99.3	90 - 110	
111 Cd	115	1	49.01	ppb	1.42	50	98.0	90 - 110	
118 Sn	115	1	48.68	ppb	1.81	50	97.4	90 - 110	
121 Sb	115	1	48.87	ppb	1.17	50	97.7	90 - 110	
137 Ba	115	1	49.35	ppb	1.09	50	98.7	90 - 110	
205 Tl	165	1	49.79	ppb	1.41	50	99.6	90 - 110	
208 Pb	165	1	49.95	ppb	1.13	50	99.9	90 - 110	
232 Th	165	1	49.72	ppb	0.91	50	99.4	90 - 110	
238 U	165	1	49.59	ppb	1.94	50	99.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398557	1.14	455621	87.5	30 - 120	
45 Sc	1	1252262	1.05	1356727	92.3	30 - 120	
72 Ge	1	546607	0.97	598490	91.3	30 - 120	
115 In	1	1673358	0.50	1797032	93.1	30 - 120	
165 Ho	1	3013021	0.51	3253654	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\102 CCB.D\102 CCB.D#
Date Acquired: Nov 7 2009 07:44 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.18	1.00	
51 V	72	1	0.072	ppb	11.11	1.00	
52 Cr	72	1	0.002	ppb	1427.90	1.00	
55 Mn	72	1	-0.002	ppb	998.74	1.00	
59 Co	72	1	0.004	ppb	62.33	1.00	
60 Ni	72	1	0.095	ppb	21.31	1.00	
63 Cu	72	1	0.001	ppb	1376.50	1.00	
66 Zn	72	1	0.050	ppb	67.37	1.00	
75 As	72	1	0.009	ppb	154.12	1.00	
78 Se	72	1	0.133	ppb	315.07	1.00	
95 Mo	72	1	0.099	ppb	50.63	1.00	
107 Ag	115	1	0.009	ppb	39.54	1.00	
111 Cd	115	1	0.005	ppb	103.50	1.00	
118 Sn	115	1	0.062	ppb	107.54	1.00	
121 Sb	115	1	0.138	ppb	16.19	1.00	
137 Ba	115	1	-0.017	ppb	52.66	1.00	
205 Tl	165	1	0.016	ppb	15.17	1.00	
208 Pb	165	1	0.005	ppb	21.11	1.00	
232 Th	165	1	0.033	ppb	24.50	1.00	
238 U	165	1	0.010	ppb	34.21	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422194	1.15	455621	92.7	30 - 120	
45 Sc	1	1291748	1.74	1356727	95.2	30 - 120	
72 Ge	1	580761	0.52	598490	97.0	30 - 120	
115 In	1	1717581	0.13	1797032	95.6	30 - 120	
165 Ho	1	3049966	0.69	3253654	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\103WASH.D\103WASH.D#
Date Acquired: Nov 7 2009 07:47 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 03:13 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.046 ppb	12.02	1.30	
51 V	72	1	4.990 ppb	4.96	6.50	
52 Cr	72	1	1.987 ppb	0.39	2.60	
55 Mn	72	1	0.984 ppb	3.75	1.30	
59 Co	72	1	0.995 ppb	2.96	1.30	
60 Ni	72	1	2.088 ppb	2.52	2.60	
63 Cu	72	1	1.963 ppb	3.31	2.60	
66 Zn	72	1	10.010 ppb	1.27	13.00	
75 As	72	1	5.172 ppb	1.14	6.50	
78 Se	72	1	5.100 ppb	6.11	6.50	
95 Mo	72	1	2.120 ppb	2.97	2.60	
107 Ag	115	1	5.166 ppb	1.31	6.50	
111 Cd	115	1	1.008 ppb	8.01	1.30	
118 Sn	115	1	10.170 ppb	2.75	13.00	
121 Sb	115	1	2.047 ppb	1.41	2.60	
137 Ba	115	1	1.038 ppb	2.48	1.30	
205 Tl	165	1	1.010 ppb	2.74	1.30	
208 Pb	165	1	1.022 ppb	1.36	1.30	
232 Th	165	1	2.079 ppb	0.26	2.60	
238 U	165	1	1.053 ppb	0.29	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	429072	0.78	455621	94.2	30 - 120	
45 Sc	1	1319350	0.97	1356727	97.2	30 - 120	
72 Ge	1	590123	0.79	598490	98.6	30 - 120	
115 In	1	1750317	1.57	1797032	97.4	30 - 120	
165 Ho	1	3092496	0.17	3253654	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/09

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#
Date Acquired:	Nov 7 2009 08:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 07 2009 08:45 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1013	6.79
52	Cr	72	1	2664	5.06
55	Mn	72	1	580	4.28
59	Co	72	1	50	19.75
60	Ni	72	1	80	25.27
63	Cu	72	1	293	22.51
66	Zn	72	1	673	6.79
75	As	72	1	36	27.55
78	Se	72	1	257	13.42
95	Mo	72	1	170	5.64
107	Ag	115	1	33	16.66
111	Cd	115	1	17	83.01
118	Sn	115	1	497	10.06
121	Sb	115	1	144	3.89
137	Ba	115	1	74	17.43
205	Tl	165	1	49	39.41
208	Pb	165	1	258	3.04
232	Th	165	1	170	44.95
238	U	165	1	24	20.55

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	398155	0.17
45	Sc	1	1273788	1.37
72	Ge	1	577640	0.30
115	In	1	1726730	0.64
165	Ho	1	3039108	1.07

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\126ICAL.D\126ICAL.D#
Date Acquired: Nov 7 2009 08:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 08:48 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	47883	0.67
51	V	72	1	747976	1.49
52	Cr	72	1	754628	1.13
55	Mn	72	1	865964	0.71
59	Co	72	1	889724	1.22
60	Ni	72	1	191586	1.40
63	Cu	72	1	456036	0.95
66	Zn	72	1	106780	0.65
75	As	72	1	89192	0.61
78	Se	72	1	18229	1.26
95	Mo	72	1	254493	1.19
107	Ag	115	1	752402	0.75
111	Cd	115	1	150239	1.10
118	Sn	115	1	420016	0.73
121	Sb	115	1	483973	0.74
137	Ba	115	1	204383	0.51
205	Tl	165	1	1701616	0.60
208	Pb	165	1	2338107	2.25
232	Th	165	1	2413552	1.92
238	U	165	1	2559276	1.77

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	398883	0.56	398155	100.2	30 - 120	
45	Sc	1	1260434	1.10	1273788	99.0	30 - 120	
72	Ge	1	556836	0.86	577640	96.4	30 - 120	
115	In	1	1704167	0.61	1726730	98.7	30 - 120	
165	Ho	1	3052265	1.25	3039108	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\127 CCV.D\127 CCV.D#
Date Acquired: Nov 7 2009 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.43	ppb	3.83	50	100.9	90 - 110	
51 V	72	1	48.44	ppb	0.77	50	96.9	90 - 110	
52 Cr	72	1	48.00	ppb	0.40	50	96.0	90 - 110	
55 Mn	72	1	48.98	ppb	0.83	50	98.0	90 - 110	
59 Co	72	1	49.19	ppb	0.88	50	98.4	90 - 110	
60 Ni	72	1	51.00	ppb	2.25	50	102.0	90 - 110	
63 Cu	72	1	50.40	ppb	1.04	50	100.8	90 - 110	
66 Zn	72	1	49.66	ppb	0.82	50	99.3	90 - 110	
75 As	72	1	49.96	ppb	1.36	50	99.9	90 - 110	
78 Se	72	1	50.40	ppb	4.89	50	100.8	90 - 110	
95 Mo	72	1	49.49	ppb	0.61	50	99.0	90 - 110	
107 Ag	115	1	48.04	ppb	0.50	50	96.1	90 - 110	
111 Cd	115	1	48.84	ppb	0.25	50	97.7	90 - 110	
118 Sn	115	1	48.90	ppb	0.50	50	97.8	90 - 110	
121 Sb	115	1	49.44	ppb	0.72	50	98.9	90 - 110	
137 Ba	115	1	49.58	ppb	0.98	50	99.2	90 - 110	
205 Tl	165	1	50.08	ppb	0.23	50	100.2	90 - 110	
208 Pb	165	1	49.87	ppb	2.65	50	99.7	90 - 110	
232 Th	165	1	50.94	ppb	1.78	50	101.9	90 - 110	
238 U	165	1	50.49	ppb	2.18	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401327	1.29	398155	100.8	30 - 120	
45 Sc	1	1286634	0.38	1273788	101.0	30 - 120	
72 Ge	1	558660	0.70	577640	96.7	30 - 120	
115 In	1	1725819	0.46	1726730	99.9	30 - 120	
165 Ho	1	3087824	1.47	3039108	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\128 CCB.D\128 CCB.D#
Date Acquired: Nov 7 2009 08:56 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.14	1.00	
51 V	72	1	-0.043	ppb	23.48	1.00	
52 Cr	72	1	0.013	ppb	34.25	1.00	
55 Mn	72	1	0.004	ppb	271.40	1.00	
59 Co	72	1	0.003	ppb	58.98	1.00	
60 Ni	72	1	0.013	ppb	122.65	1.00	
63 Cu	72	1	-0.010	ppb	116.03	1.00	
66 Zn	72	1	-0.311	ppb	3.85	1.00	
75 As	72	1	0.007	ppb	208.78	1.00	
78 Se	72	1	0.060	ppb	542.70	1.00	
95 Mo	72	1	0.010	ppb	195.90	1.00	
107 Ag	115	1	0.008	ppb	34.15	1.00	
111 Cd	115	1	-0.003	ppb	158.97	1.00	
118 Sn	115	1	0.071	ppb	72.17	1.00	
121 Sb	115	1	0.186	ppb	24.43	1.00	
137 Ba	115	1	-0.019	ppb	41.26	1.00	
205 Tl	165	1	0.019	ppb	3.88	1.00	
208 Pb	165	1	0.007	ppb	24.82	1.00	
232 Th	165	1	0.050	ppb	27.19	1.00	
238 U	165	1	0.014	ppb	24.25	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	411177	0.79	398155	103.3	30 - 120	
45 Sc	1	1305310	1.03	1273788	102.5	30 - 120	
72 Ge	1	581950	0.43	577640	100.7	30 - 120	
115 In	1	1731683	0.78	1726730	100.3	30 - 120	
165 Ho	1	3093323	0.73	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\129WASH.D\129WASH.D#
Date Acquired: Nov 7 2009 08:58 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 08:51 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.958 ppb	18.19	1.30	
51 V	72	1	4.710 ppb	2.17	6.50	
52 Cr	72	1	1.943 ppb	1.74	2.60	
55 Mn	72	1	0.998 ppb	3.15	1.30	
59 Co	72	1	0.952 ppb	3.16	1.30	
60 Ni	72	1	2.004 ppb	2.33	2.60	
63 Cu	72	1	1.937 ppb	4.73	2.60	
66 Zn	72	1	9.953 ppb	1.74	13.00	
75 As	72	1	4.981 ppb	2.08	6.50	
78 Se	72	1	5.557 ppb	13.16	6.50	
95 Mo	72	1	2.076 ppb	4.26	2.60	
107 Ag	115	1	5.018 ppb	2.22	6.50	
111 Cd	115	1	1.021 ppb	8.96	1.30	
118 Sn	115	1	10.330 ppb	1.36	13.00	
121 Sb	115	1	2.063 ppb	0.86	2.60	
137 Ba	115	1	1.033 ppb	9.68	1.30	
205 Tl	165	1	1.037 ppb	1.68	1.30	
208 Pb	165	1	1.033 ppb	2.31	1.30	
232 Th	165	1	2.176 ppb	3.62	2.60	
238 U	165	1	1.072 ppb	1.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	417105	1.00	398155	104.8	30 - 120	
45 Sc	1	1297902	0.97	1273788	101.9	30 - 120	
72 Ge	1	579634	1.13	577640	100.3	30 - 120	
115 In	1	1734765	0.59	1726730	100.5	30 - 120	
165 Ho	1	3094755	1.05	3039108	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\125CALB.D\125CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

..."During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#
Date Acquired: Nov 7 2009 11:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:42 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	1073	15.01
52	Cr	72	1	2617	8.78
55	Mn	72	1	867	12.42
59	Co	72	1	87	35.66
60	Ni	72	1	110	27.47
63	Cu	72	1	480	6.51
66	Zn	72	1	677	4.34
75	As	72	1	47	6.82
78	Se	72	1	303	21.28
95	Mo	72	1	213	24.37
107	Ag	115	1	40	65.92
111	Cd	115	1	2	917.60
118	Sn	115	1	410	22.77
121	Sb	115	1	161	7.01
137	Ba	115	1	137	14.12
205	Tl	165	1	107	32.25
208	Pb	165	1	403	9.15
232	Th	165	1	173	13.01
238	U	165	1	122	7.26

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	401411	0.88
45	Sc	1	1190683	1.29
72	Ge	1	533218	0.44
115	In	1	1552104	0.57
165	Ho	1	2681412	0.51

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\190ICAL.D\190ICAL.D#
Date Acquired: Nov 7 2009 11:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:45 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	45518	1.54
51	V	72	1	700879	1.29
52	Cr	72	1	693042	2.18
55	Mn	72	1	795858	1.60
59	Co	72	1	850264	1.89
60	Ni	72	1	181428	0.41
63	Cu	72	1	431089	0.73
66	Zn	72	1	95751	0.48
75	As	72	1	84617	1.05
78	Se	72	1	17278	1.91
95	Mo	72	1	230286	0.80
107	Ag	115	1	661266	1.42
111	Cd	115	1	131853	1.14
118	Sn	115	1	371875	2.20
121	Sb	115	1	432362	1.85
137	Ba	115	1	187475	1.78
205	Tl	165	1	1498644	1.03
208	Pb	165	1	2042776	1.12
232	Th	165	1	2142976	0.23
238	U	165	1	2200342	0.40

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	389965	0.80	401411	97.1	30 - 120	
45	Sc	1	1171540	0.60	1190683	98.4	30 - 120	
72	Ge	1	507906	1.25	533218	95.3	30 - 120	
115	In	1	1532161	1.02	1552104	98.7	30 - 120	
165	Ho	1	2672323	0.90	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\191 CCV.D\191 CCV.D#
Date Acquired: Nov 7 2009 11:50 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.23	ppb	3.26	50	98.5	90 - 110	
51 V	72	1	48.52	ppb	1.74	50	97.0	90 - 110	
52 Cr	72	1	48.49	ppb	0.29	50	97.0	90 - 110	
55 Mn	72	1	48.47	ppb	1.24	50	96.9	90 - 110	
59 Co	72	1	48.02	ppb	0.67	50	96.0	90 - 110	
60 Ni	72	1	49.69	ppb	1.50	50	99.4	90 - 110	
63 Cu	72	1	49.62	ppb	0.90	50	99.2	90 - 110	
66 Zn	72	1	48.96	ppb	1.42	50	97.9	90 - 110	
75 As	72	1	49.10	ppb	0.76	50	98.2	90 - 110	
78 Se	72	1	48.52	ppb	4.63	50	97.0	90 - 110	
95 Mo	72	1	49.23	ppb	0.82	50	98.5	90 - 110	
107 Ag	115	1	49.55	ppb	1.37	50	99.1	90 - 110	
111 Cd	115	1	49.69	ppb	1.93	50	99.4	90 - 110	
118 Sn	115	1	49.87	ppb	1.50	50	99.7	90 - 110	
121 Sb	115	1	49.85	ppb	1.58	50	99.7	90 - 110	
137 Ba	115	1	49.38	ppb	1.63	50	98.8	90 - 110	
205 Tl	165	1	50.07	ppb	0.63	50	100.1	90 - 110	
208 Pb	165	1	50.67	ppb	1.87	50	101.3	90 - 110	
232 Th	165	1	50.33	ppb	1.25	50	100.7	90 - 110	
238 U	165	1	51.37	ppb	0.78	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	391774	1.28	401411	97.6	30 - 120	
45 Sc	1	1173327	0.14	1190683	98.5	30 - 120	
72 Ge	1	511730	0.36	533218	96.0	30 - 120	
115 In	1	1536232	0.41	1552104	99.0	30 - 120	
165 Ho	1	2663987	0.61	2681412	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\192 CCB.D\192 CCB.D#
Date Acquired: Nov 7 2009 11:52 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.021	ppb	99.86	1.00	
51 V	72	1	-0.024	ppb	36.47	1.00	
52 Cr	72	1	0.015	ppb	57.14	1.00	
55 Mn	72	1	0.032	ppb	9.94	1.00	
59 Co	72	1	0.000	ppb	241.41	1.00	
60 Ni	72	1	-0.008	ppb	160.82	1.00	
63 Cu	72	1	-0.035	ppb	57.76	1.00	
66 Zn	72	1	-0.363	ppb	4.76	1.00	
75 As	72	1	0.004	ppb	177.30	1.00	
78 Se	72	1	0.169	ppb	283.55	1.00	
95 Mo	72	1	-0.009	ppb	169.70	1.00	
107 Ag	115	1	0.008	ppb	60.74	1.00	
111 Cd	115	1	0.009	ppb	130.00	1.00	
118 Sn	115	1	0.105	ppb	79.70	1.00	
121 Sb	115	1	0.172	ppb	19.79	1.00	
137 Ba	115	1	-0.007	ppb	70.67	1.00	
205 Tl	165	1	0.024	ppb	16.62	1.00	
208 Pb	165	1	0.009	ppb	31.16	1.00	
232 Th	165	1	0.066	ppb	21.79	1.00	
238 U	165	1	0.019	ppb	10.85	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	398355	0.67	401411	99.2	30 - 120	
45 Sc	1	1182289	0.51	1190683	99.3	30 - 120	
72 Ge	1	527088	0.39	533218	98.9	30 - 120	
115 In	1	1549776	0.77	1552104	99.8	30 - 120	
165 Ho	1	2689530	0.71	2681412	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\193WASH.D\193WASH.D#
Date Acquired: Nov 7 2009 11:55 pm
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.091 ppb	4.11	1.30	
51 V	72	1	4.811 ppb	1.97	6.50	
52 Cr	72	1	1.975 ppb	0.98	2.60	
55 Mn	72	1	1.025 ppb	2.63	1.30	
59 Co	72	1	0.940 ppb	2.79	1.30	
60 Ni	72	1	2.047 ppb	4.84	2.60	
63 Cu	72	1	1.979 ppb	2.92	2.60	
66 Zn	72	1	9.930 ppb	1.74	13.00	
75 As	72	1	4.933 ppb	2.85	6.50	
78 Se	72	1	4.816 ppb	29.67	6.50	
95 Mo	72	1	1.981 ppb	4.92	2.60	
107 Ag	115	1	5.175 ppb	3.70	6.50	
111 Cd	115	1	0.978 ppb	1.91	1.30	
118 Sn	115	1	10.300 ppb	2.13	13.00	
121 Sb	115	1	2.097 ppb	1.97	2.60	
137 Ba	115	1	0.975 ppb	2.19	1.30	
205 Tl	165	1	1.046 ppb	3.18	1.30	
208 Pb	165	1	1.053 ppb	2.27	1.30	
232 Th	165	1	2.155 ppb	2.03	2.60	
238 U	165	1	1.095 ppb	4.14	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	397871	0.78	401411	99.1	30 - 120	
45 Sc	1	1191820	1.19	1190683	100.1	30 - 120	
72 Ge	1	527413	0.74	533218	98.9	30 - 120	
115 In	1	1527888	0.75	1552104	98.4	30 - 120	
165 Ho	1	2673393	1.59	2681412	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\230 CCV.D\230 CCV.D#
Date Acquired: Nov 8 2009 01:38 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.70	ppb	2.70	50	99.4	90 - 110	
51 V	72	1	48.20	ppb	0.95	50	96.4	90 - 110	
52 Cr	72	1	48.39	ppb	0.96	50	96.8	90 - 110	
55 Mn	72	1	48.37	ppb	0.38	50	96.7	90 - 110	
59 Co	72	1	48.02	ppb	0.70	50	96.0	90 - 110	
60 Ni	72	1	51.10	ppb	1.64	50	102.2	90 - 110	
63 Cu	72	1	49.68	ppb	1.53	50	99.4	90 - 110	
66 Zn	72	1	50.56	ppb	0.98	50	101.1	90 - 110	
75 As	72	1	49.69	ppb	0.54	50	99.4	90 - 110	
78 Se	72	1	49.01	ppb	2.43	50	98.0	90 - 110	
95 Mo	72	1	50.23	ppb	0.82	50	100.5	90 - 110	
107 Ag	115	1	50.57	ppb	2.02	50	101.1	90 - 110	
111 Cd	115	1	50.42	ppb	1.61	50	100.8	90 - 110	
118 Sn	115	1	50.97	ppb	1.50	50	101.9	90 - 110	
121 Sb	115	1	50.46	ppb	2.42	50	100.9	90 - 110	
137 Ba	115	1	50.36	ppb	1.62	50	100.7	90 - 110	
205 Tl	165	1	50.21	ppb	0.85	50	100.4	90 - 110	
208 Pb	165	1	50.45	ppb	0.80	50	100.9	90 - 110	
232 Th	165	1	49.82	ppb	0.60	50	99.6	90 - 110	
238 U	165	1	50.01	ppb	0.60	50	100.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	389998	0.52	401411	97.2	30 - 120	
45 Sc	1	1270621	0.46	1190683	106.7	30 - 120	
72 Ge	1	552643	0.66	533218	103.6	30 - 120	
115 In	1	1641062	0.89	1552104	105.7	30 - 120	
165 Ho	1	2838916	0.73	2681412	105.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\231 CCB.D\231 CCB.D#
Date Acquired: Nov 8 2009 01:41 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.022	ppb	100.14	1.00	
51 V	72	1	-0.067	ppb	17.38	1.00	
52 Cr	72	1	0.025	ppb	148.37	1.00	
55 Mn	72	1	0.009	ppb	272.12	1.00	
59 Co	72	1	-0.002	ppb	114.31	1.00	
60 Ni	72	1	-0.005	ppb	54.17	1.00	
63 Cu	72	1	-0.021	ppb	82.10	1.00	
66 Zn	72	1	-0.419	ppb	9.26	1.00	
75 As	72	1	-0.006	ppb	64.58	1.00	
78 Se	72	1	-0.026	ppb	971.31	1.00	
95 Mo	72	1	-0.026	ppb	80.18	1.00	
107 Ag	115	1	0.005	ppb	95.65	1.00	
111 Cd	115	1	0.004	ppb	103.00	1.00	
118 Sn	115	1	0.059	ppb	60.64	1.00	
121 Sb	115	1	0.120	ppb	9.22	1.00	
137 Ba	115	1	-0.028	ppb	31.52	1.00	
205 Tl	165	1	0.014	ppb	23.03	1.00	
208 Pb	165	1	0.000	ppb	784.86	1.00	
232 Th	165	1	0.045	ppb	17.75	1.00	
238 U	165	1	0.012	ppb	5.01	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	396110	0.33	401411	98.7	30 - 120	
45 Sc	1	1264300	0.88	1190683	106.2	30 - 120	
72 Ge	1	564899	0.51	533218	105.9	30 - 120	
115 In	1	1671529	0.37	1552104	107.7	30 - 120	
165 Ho	1	2805835	0.68	2681412	104.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\232WASH.D\232WASH.D#
Date Acquired: Nov 8 2009 01:44 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.962 ppb	4.95	1.30	
51 V	72	1	4.827 ppb	2.79	6.50	
52 Cr	72	1	1.910 ppb	1.76	2.60	
55 Mn	72	1	0.988 ppb	1.73	1.30	
59 Co	72	1	0.945 ppb	5.10	1.30	
60 Ni	72	1	2.045 ppb	4.03	2.60	
63 Cu	72	1	1.967 ppb	5.02	2.60	
66 Zn	72	1	9.621 ppb	2.15	13.00	
75 As	72	1	4.984 ppb	0.85	6.50	
78 Se	72	1	5.176 ppb	9.44	6.50	
95 Mo	72	1	1.883 ppb	5.05	2.60	
107 Ag	115	1	5.198 ppb	2.57	6.50	
111 Cd	115	1	1.070 ppb	8.91	1.30	
118 Sn	115	1	10.150 ppb	1.47	13.00	
121 Sb	115	1	2.051 ppb	2.03	2.60	
137 Ba	115	1	1.019 ppb	2.16	1.30	
205 Tl	165	1	1.045 ppb	1.07	1.30	
208 Pb	165	1	1.034 ppb	1.92	1.30	
232 Th	165	1	2.119 ppb	1.23	2.60	
238 U	165	1	1.099 ppb	1.43	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	395033	1.52	401411	98.4	30 - 120	
45 Sc	1	1238804	0.67	1190683	104.0	30 - 120	
72 Ge	1	557592	1.04	533218	104.6	30 - 120	
115 In	1	1643595	1.17	1552104	105.9	30 - 120	
165 Ho	1	2798401	0.27	2681412	104.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\233 BLK.D\233 BLK.D#
Date Acquired: Nov 8 2009 01:46 am
Operator: TEL
Sample Name: LNJN5BF
Misc Info: BLANK 9303187 6020 DISS
Vial Number: 4306
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	2.00	
51 V	72	1	-0.070 ppb	11.31	2.00	
52 Cr	72	1	-0.019 ppb	22.42	2.00	
55 Mn	72	1	-0.001 ppb	477.51	2.00	
59 Co	72	1	-0.004 ppb	59.97	2.00	
60 Ni	72	1	-0.018 ppb	28.75	2.00	
63 Cu	72	1	0.047 ppb	43.25	2.00	
66 Zn	72	1	0.054 ppb	24.74	2.00	
75 As	72	1	-0.007 ppb	406.57	2.00	
78 Se	72	1	0.058 ppb	91.29	2.00	
95 Mo	72	1	-0.068 ppb	18.22	2.00	
107 Ag	115	1	0.001 ppb	723.68	2.00	
111 Cd	115	1	0.007 ppb	139.69	2.00	
118 Sn	115	1	0.101 ppb	21.29	2.00	
121 Sb	115	1	-0.001 ppb	113.16	2.00	
137 Ba	115	1	-0.014 ppb	17.21	2.00	
205 Tl	165	1	0.006 ppb	32.27	2.00	
208 Pb	165	1	0.001 ppb	571.92	2.00	
232 Th	165	1	0.007 ppb	28.28	2.00	
238 U	165	1	0.002 ppb	18.84	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	395407	0.87	401411	98.5	30 - 120	
45 Sc	1	1258118	0.43	1190683	105.7	30 - 120	
72 Ge	1	566204	0.79	533218	106.2	30 - 120	
115 In	1	1641180	0.32	1552104	105.7	30 - 120	
165 Ho	1	2813337	1.06	2681412	104.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\234 LCS.D\234 LCS.D#
Date Acquired: Nov 8 2009 01:49 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJN5CF
Misc Info: LCS
Vial Number: 4307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	36.86	0.90	40	92.2	80 - 120	
51 V	72	1	33.76	0.84	40	84.4	80 - 120	
52 Cr	72	1	33.98	1.31	40	85.0	80 - 120	
55 Mn	72	1	34.42	1.35	40	86.1	80 - 120	
59 Co	72	1	33.82	0.66	40	84.6	80 - 120	
60 Ni	72	1	34.87	1.64	40	87.2	80 - 120	
63 Cu	72	1	35.19	1.03	40	88.0	80 - 120	
66 Zn	72	1	36.68	0.39	40	91.7	80 - 120	
75 As	72	1	35.91	0.44	40	89.8	80 - 120	
78 Se	72	1	34.00	9.65	40	85.0	80 - 120	
95 Mo	72	1	70.62	1.41	40	176.6	80 - 120	
107 Ag	115	1	35.74	0.71	40	89.4	80 - 120	
111 Cd	115	1	20.78	37.94	40	52.0	80 - 120	
118 Sn	115	1	40.76	0.55	40	101.9	80 - 120	
121 Sb	115	1	73.37	1.07	40	183.4	80 - 120	
137 Ba	115	1	35.78	0.57	40	89.5	80 - 120	
205 Tl	165	1	35.77	2.06	40	89.4	80 - 120	
208 Pb	165	1	36.46	2.29	40	91.2	80 - 120	
232 Th	165	1	36.19	1.31	40	90.5	80 - 120	
238 U	165	1	36.86	0.33	40	92.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	381777	1.01	401411	95.1	30 - 120	
45 Sc	1	1188226	0.70	1190683	99.8	30 - 120	
72 Ge	1	528496	1.56	533218	99.1	30 - 120	
115 In	1	1588542	1.05	1552104	102.3	30 - 120	
165 Ho	1	2753018	0.51	2681412	102.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\235AREF.D\235AREF.D#
Date Acquired: Nov 8 2009 01:52 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2LF 2X
Misc Info: D9J290310
Vial Number: 4308
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: AllRef
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.05	ppb	100.62	3600	
51 V	72	1	45.62	22.81	ppb	0.34	3600	
52 Cr	72	1	53.46	26.73	ppb	1.96	3600	
55 Mn	72	1	44.76	22.38	ppb	0.41	3600	
59 Co	72	1	0.49	0.25	ppb	5.57	3600	
60 Ni	72	1	2.45	1.22	ppb	3.88	3600	
63 Cu	72	1	0.25	0.13	ppb	25.22	3600	
66 Zn	72	1	16.53	8.27	ppb	1.55	3600	
75 As	72	1	336.60	168.30	ppb	0.24	3600	
78 Se	72	1	2.42	1.21	ppb	10.19	3600	
95 Mo	72	1	34.10	17.05	ppb	1.54	3600	
107 Ag	115	1	0.01	0.01	ppb	99.35	3600	
111 Cd	115	1	-0.04	-0.02	ppb	133.65	3600	
118 Sn	115	1	0.28	0.14	ppb	30.16	3600	
121 Sb	115	1	0.16	0.08	ppb	3.67	3600	
137 Ba	115	1	24.08	12.04	ppb	2.84	3600	
205 Tl	165	1	0.08	0.04	ppb	14.04	3600	
208 Pb	165	1	0.08	0.04	ppb	2.70	3600	
232 Th	165	1	0.04	0.02	ppb	21.52	1000	
238 U	165	1	63.00	31.50	ppb	1.37	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331195	0.96	401411	82.5	30 - 120	
45 Sc	1	1079672	0.69	1190683	90.7	30 - 120	
72 Ge	1	448195	0.53	533218	84.1	30 - 120	
115 In	1	1327808	1.07	1552104	85.5	30 - 120	
165 Ho	1	2380357	0.50	2681412	88.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\236SDIL.D\236SDIL.D#
Date Acquired: Nov 8 2009 01:55 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2LP10F
Misc Info: SERIAL DILUTION
Vial Number: 4309
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: SDIL
Dilution Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\235AREF.D\235AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	86.62	0.01	150.7	90 - 110	
51 V	72	1	4.43	ppb	0.70	4.56	97.1	90 - 110	
52 Cr	72	1	5.32	ppb	2.32	5.35	99.6	90 - 110	
55 Mn	72	1	4.49	ppb	1.27	4.48	100.4	90 - 110	
59 Co	72	1	0.06	ppb	26.71	0.05	112.7	90 - 110	
60 Ni	72	1	0.30	ppb	11.27	0.24	124.3	90 - 110	
63 Cu	72	1	0.02	ppb	129.66	0.03	94.8	90 - 110	
66 Zn	72	1	1.75	ppb	6.21	1.65	105.6	90 - 110	
75 As	72	1	32.33	ppb	0.84	33.66	96.0	90 - 110	
78 Se	72	1	0.25	ppb	105.68	0.24	103.1	90 - 110	
95 Mo	72	1	3.27	ppb	4.98	3.41	95.9	90 - 110	
107 Ag	115	1	0.00	ppb	133.46	0.00	-157.0	90 - 110	
111 Cd	115	1	0.01	ppb	196.68	0.00	-259.2	90 - 110	
118 Sn	115	1	0.08	ppb	18.79	0.03	294.3	90 - 110	
121 Sb	115	1	0.00	ppb	125.05	0.02	25.8	90 - 110	
137 Ba	115	1	2.46	ppb	5.07	2.41	102.0	90 - 110	
205 Tl	165	1	0.01	ppb	23.62	0.01	98.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.50	0.01	145.5	90 - 110	
232 Th	165	1	0.01	ppb	29.02	0.00	120.6	90 - 110	
238 U	165	1	6.45	ppb	0.15	6.30	102.4	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365358	0.32	401411	91.0	30 - 120	
45 Sc	1	1139056	0.80	1190683	95.7	30 - 120	
72 Ge	1	505687	0.95	533218	94.8	30 - 120	
115 In	1	1480695	0.09	1552104	95.4	30 - 120	
165 Ho	1	2655457	0.80	2681412	99.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:35

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNH2LP10F** Serial Dilution: **10.00** Sample Dilution: **2.00**

Instrument: **Agilent7500** Channel 272
File: AG110709 # 236 Method 6020_
Acquired: 11/08/2009 01:55:00 ICPMS_024 Matrix: AQUEOUS
Calibrated: 11/07/2009 23:44:00 Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	7	0.15620	0.10360	50.8		*	
7440-62-2	Vanadium	51	31893	44.310	45.620	2.87		*	
7440-47-3	Chromium	52	39091	53.250	53.450	0.374		*	
7439-96-5	Manganese	55	36381	44.920	44.750	0.380		*	
7440-48-4	Cobalt	59	550	0.55300	0.49060	12.7		*	
7440-02-0	Nickel	60	653	3.0425	2.4470	24.3		*	
7440-50-8	Copper	63	557	0.23775	0.25080	5.20		*	
7440-66-6	Zinc	66	2294	17.450	16.530	5.57		*	
7440-38-2	Arsenic	75	27268	323.30	336.50	3.92	0.21	3.9	☑
7782-49-2	Selenium	78	330	2.4985	2.4210	3.20	0.70	NC	☑
7439-98-7	Molybdenum	95	7692	32.700	34.100	4.11		*	
7440-22-4	Silver	107	27	-0.01790	0.01140	257		*	
7440-43-9	Cadmium	111	16	0.11435	-0.04411			*	
7440-31-5	Tin	118	690	0.83200	0.28270	194		*	
7440-36-0	Antimony	121	171	0.04163	0.16130	74.2		*	
7440-39-3	Barium	137	4579	24.565	24.090	1.97		*	
7440-28-0	Thallium	205	229	0.08260	0.08372	1.34		*	
7439-92-1	Lead	208	624	0.11095	0.07620	45.6		*	
7440-61-1	Uranium	238	141214	64.550	63.010	2.44		*	
7440-29-1	Thorium	232	283	0.05255	0.04358	20.6		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\237PDS.D\237PDS.D#
Date Acquired: Nov 8 2009 01:58 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2LZF
Misc Info: POST DIGESTION SPIKE
Vial Number: 4310
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	196.30	0.05	ppb	1.01	200	98.1	75 - 125	
51 V	72	1	216.40	22.81	ppb	0.46	200	97.1	75 - 125	
52 Cr	72	1	216.40	26.73	ppb	1.11	200	95.4	75 - 125	
55 Mn	72	1	211.40	22.38	ppb	1.03	200	95.1	75 - 125	
59 Co	72	1	182.20	0.25	ppb	2.12	200	91.0	75 - 125	
60 Ni	72	1	177.30	1.22	ppb	0.52	200	88.1	75 - 125	
63 Cu	72	1	172.00	0.13	ppb	0.37	200	85.9	75 - 125	
66 Zn	72	1	198.50	8.27	ppb	0.84	200	95.3	75 - 125	
75 As	72	1	363.40	168.30	ppb	0.62	200	98.7	75 - 125	
78 Se	72	1	213.90	1.21	ppb	1.28	200	106.3	75 - 125	
95 Mo	72	1	221.20	17.05	ppb	0.45	200	101.9	75 - 125	
107 Ag	115	1	41.81	0.01	ppb	1.16	50	83.6	75 - 125	
111 Cd	115	1	185.90	-0.02	ppb	0.77	200	93.0	75 - 125	
118 Sn	115	1	176.80	0.14	ppb	1.69	200	88.3	75 - 125	
121 Sb	115	1	199.30	0.08	ppb	1.32	200	99.6	75 - 125	
137 Ba	115	1	202.40	12.04	ppb	1.26	200	95.5	75 - 125	
205 Tl	165	1	174.10	0.04	ppb	0.87	200	87.0	75 - 125	
208 Pb	165	1	173.20	0.04	ppb	1.11	200	86.6	75 - 125	
232 Th	165	1	0.02	0.02	ppb	8.71	200	0.0	75 - 125	
238 U	165	1	211.50	31.50	ppb	0.71	200	91.4	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328890	0.59	401411	81.9	30 - 120	
45 Sc	1	1096896	0.20	1190683	92.1	30 - 120	
72 Ge	1	444057	0.71	533218	83.3	30 - 120	
115 In	1	1344591	0.84	1552104	86.6	30 - 120	
165 Ho	1	2417501	0.37	2681412	90.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:40

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNH2LZF** | Spike Dilution: **1.00** | Sample Dilution: **2.00**

Instrument: **Agilent7500**
File: AG110709 # 237
Acquired: 11/08/2009 01:58:00
Calibrated: 11/07/2009 23:44:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75371	196.30	0.05180	98.1	200		☐
7440-62-2	Vanadium	51	1324970	216.40	22.810	96.8	200		☑
7440-47-3	Chromium	52	1308980	216.40	26.725	94.8	200		☑
7439-96-5	Manganese	55	1470570	211.40	22.375	94.5	200		☑
7440-48-4	Cobalt	59	1354670	182.20	0.24530	91.0	200		☐
7440-02-0	Nickel	60	281194	177.30	1.2235	88.0	200		☑
7440-50-8	Copper	63	648082	172.00	0.12540	85.9	200		☑
7440-66-6	Zinc	66	165641	198.50	8.2650	95.1	200		☑
7440-38-2	Arsenic	75	268778	363.40	168.25	97.6	200		☑
7782-49-2	Selenium	78	32027	213.90	1.2105	106	200		☑
7439-98-7	Molybdenum	95	445150	221.20	17.050	102	200		☐
7440-22-4	Silver	107	242635	41.810	0.00570	83.6	50.0		☐
7440-43-9	Cadmium	111	215059	185.90	-0.02206	92.9	200		☑
7440-31-5	Tin	118	576697	176.80	0.14135	88.3	200		☑
7440-36-0	Antimony	121	756242	199.30	0.08065	99.6	200		☑
7440-39-3	Barium	137	332927	202.40	12.045	95.2	200		☑
7440-28-0	Thallium	205	2360130	174.10	0.04186	87.0	200		☑
7439-92-1	Lead	208	3200670	173.20	0.03810	86.6	200		☑
7440-61-1	Uranium	238	4210060	211.50	31.505	90.0	200		☐
7440-29-1	Thorium	232	567	0.02117	0.02179				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: | Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\238_MS.D\238_MS.D#
Date Acquired: Nov 8 2009 02:00 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2LSF 2X
Misc Info: MATRIX SPIKE
Vial Number: 4311
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: MS
Prep Dil. Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	17.66	0.05	ppb	3.33	40	44.1	50 - 150	
51 V	72	1	40.31	22.81	ppb	0.93	40	64.2	50 - 150	
52 Cr	72	1	43.43	26.73	ppb	0.69	40	65.1	50 - 150	
55 Mn	72	1	39.24	22.38	ppb	0.77	40	62.9	50 - 150	
59 Co	72	1	16.45	0.25	ppb	0.74	40	40.9	50 - 150	
60 Ni	72	1	17.43	1.22	ppb	1.57	40	42.3	50 - 150	
63 Cu	72	1	16.14	0.13	ppb	0.60	40	40.2	50 - 150	
66 Zn	72	1	25.23	8.27	ppb	0.44	40	52.3	50 - 150	
75 As	72	1	187.20	168.30	ppb	0.18	40	89.9	50 - 150	
78 Se	72	1	19.90	1.21	ppb	7.23	40	48.3	50 - 150	
95 Mo	72	1	54.27	17.05	ppb	0.89	40	95.1	50 - 150	
107 Ag	115	1	16.08	0.01	ppb	0.93	40	40.2	50 - 150	
111 Cd	115	1	-0.07	-0.02	ppb	######	40	-0.2	50 - 150	
118 Sn	115	1	20.54	0.14	ppb	0.75	40	51.2	50 - 150	
121 Sb	115	1	37.45	0.08	ppb	1.22	40	93.4	50 - 150	
137 Ba	115	1	29.68	12.04	ppb	0.44	40	57.0	50 - 150	
205 Tl	165	1	16.18	0.04	ppb	1.28	40	40.4	50 - 150	
208 Pb	165	1	16.33	0.04	ppb	0.81	40	40.8	50 - 150	
232 Th	165	1	17.97	0.02	ppb	0.73	40	44.9	50 - 150	
238 U	165	1	47.24	31.50	ppb	0.42	40	66.1	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	329448	0.61	401411	82.1	30 - 120	
45 Sc	1	1100522	1.88	1190683	92.4	30 - 120	
72 Ge	1	454048	0.49	533218	85.2	30 - 120	
115 In	1	1348934	0.18	1552104	86.9	30 - 120	
165 Ho	1	2427384	0.23	2681412	90.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\239 MSD.D\239 MSD.D#
Date Acquired: Nov 8 2009 02:03 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2LDF 2X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4312
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: MSD
Dilution Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\238 MS.D\238 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	17.61	ppb	2.63	17.66	0.28	20	
51 V	72	1	40.19	ppb	0.56	40.31	0.30	20	
52 Cr	72	1	44.52	ppb	0.42	43.43	2.48	20	
55 Mn	72	1	39.76	ppb	0.26	39.24	1.32	20	
59 Co	72	1	16.80	ppb	0.20	16.45	2.11	20	
60 Ni	72	1	17.81	ppb	1.99	17.43	2.16	20	
63 Cu	72	1	16.31	ppb	1.09	16.14	1.05	20	
66 Zn	72	1	25.94	ppb	0.79	25.23	2.78	20	
75 As	72	1	188.60	ppb	0.80	187.20	0.75	20	
78 Se	72	1	20.72	ppb	3.34	19.90	4.04	20	
95 Mo	72	1	55.45	ppb	1.10	54.27	2.15	20	
107 Ag	115	1	16.30	ppb	2.66	16.08	1.36	20	
111 Cd	115	1	-0.23	ppb	275.75	-0.07	-102.08	20	
118 Sn	115	1	21.22	ppb	0.18	20.54	3.26	20	
121 Sb	115	1	38.50	ppb	2.09	37.45	2.76	20	
137 Ba	115	1	30.34	ppb	1.78	29.68	2.20	20	
205 Tl	165	1	16.56	ppb	2.35	16.18	2.32	20	
208 Pb	165	1	16.63	ppb	2.64	16.33	1.82	20	
232 Th	165	1	18.27	ppb	2.42	17.97	1.66	20	
238 U	165	1	47.77	ppb	1.79	47.24	1.12	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328826	0.78	401411	81.9	30 - 120	
45 Sc	1	1092484	0.63	1190683	91.8	30 - 120	
72 Ge	1	456011	0.55	533218	85.5	30 - 120	
115 In	1	1349691	1.13	1552104	87.0	30 - 120	
165 Ho	1	2423429	1.34	2681412	90.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\240SMPL.D\240SMPL.D#
Date Acquired: Nov 8 2009 02:06 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2NF 2X
Misc Info: D9J290310
Vial Number: 4401
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.14	0.07	ppb	22.55	3600	
51 V	72	1	44.48	22.24	ppb	0.72	3600	
52 Cr	72	1	53.02	26.51	ppb	0.86	3600	
55 Mn	72	1	44.72	22.36	ppb	0.16	3600	
59 Co	72	1	0.48	0.24	ppb	5.28	3600	
60 Ni	72	1	2.52	1.26	ppb	3.26	3600	
63 Cu	72	1	0.28	0.14	ppb	13.97	3600	
66 Zn	72	1	15.21	7.61	ppb	1.48	3600	
75 As	72	1	330.60	165.30	ppb	0.67	3600	
78 Se	72	1	2.42	1.21	ppb	50.30	3600	
95 Mo	72	1	33.70	16.85	ppb	3.76	3600	
107 Ag	115	1	0.01	0.01	ppb	78.22	3600	
111 Cd	115	1	0.03	0.02	ppb	118.11	3600	
118 Sn	115	1	0.46	0.23	ppb	22.08	3600	
121 Sb	115	1	0.15	0.07	ppb	20.23	3600	
137 Ba	115	1	24.02	12.01	ppb	0.68	3600	
205 Tl	165	1	0.05	0.03	ppb	3.27	3600	
208 Pb	165	1	0.03	0.01	ppb	16.81	3600	
232 Th	165	1	0.03	0.02	ppb	21.89	1000	
238 U	165	1	60.92	30.46	ppb	2.50	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329364	1.25	401411	82.1	30 - 120	
45 Sc	1	1100934	1.78	1190683	92.5	30 - 120	
72 Ge	1	461442	0.58	533218	86.5	30 - 120	
115 In	1	1360263	0.82	1552104	87.6	30 - 120	
165 Ho	1	2451442	1.11	2681412	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\241 CCV.D\241 CCV.D#
Date Acquired: Nov 8 2009 02:09 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.01	ppb	0.56	50	100.0	90 - 110	
51 V	72	1	48.33	ppb	1.58	50	96.7	90 - 110	
52 Cr	72	1	48.49	ppb	0.60	50	97.0	90 - 110	
55 Mn	72	1	49.00	ppb	0.87	50	98.0	90 - 110	
59 Co	72	1	48.03	ppb	0.46	50	96.1	90 - 110	
60 Ni	72	1	49.79	ppb	0.60	50	99.6	90 - 110	
63 Cu	72	1	49.72	ppb	0.57	50	99.4	90 - 110	
66 Zn	72	1	50.42	ppb	0.53	50	100.8	90 - 110	
75 As	72	1	49.80	ppb	1.09	50	99.6	90 - 110	
78 Se	72	1	49.62	ppb	4.24	50	99.2	90 - 110	
95 Mo	72	1	50.31	ppb	1.15	50	100.6	90 - 110	
107 Ag	115	1	50.96	ppb	1.77	50	101.9	90 - 110	
111 Cd	115	1	50.62	ppb	1.64	50	101.2	90 - 110	
118 Sn	115	1	50.25	ppb	1.69	50	100.5	90 - 110	
121 Sb	115	1	50.40	ppb	1.16	50	100.8	90 - 110	
137 Ba	115	1	50.16	ppb	1.14	50	100.3	90 - 110	
205 Tl	165	1	50.21	ppb	0.88	50	100.4	90 - 110	
208 Pb	165	1	50.49	ppb	1.18	50	101.0	90 - 110	
232 Th	165	1	50.04	ppb	0.76	50	100.1	90 - 110	
238 U	165	1	50.29	ppb	0.56	50	100.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	385065	0.65	401411	95.9	30 - 120	
45 Sc	1	1247536	0.69	1190683	104.8	30 - 120	
72 Ge	1	546192	1.35	533218	102.4	30 - 120	
115 In	1	1634027	0.75	1552104	105.3	30 - 120	
165 Ho	1	2814121	0.68	2681412	104.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\242 CCB.D\242 CCB.D#
Date Acquired: Nov 8 2009 02:11 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.022	ppb	173.22	1.00	
51 V	72	1	-0.087	ppb	10.36	1.00	
52 Cr	72	1	0.014	ppb	184.30	1.00	
55 Mn	72	1	0.014	ppb	8.00	1.00	
59 Co	72	1	0.004	ppb	69.44	1.00	
60 Ni	72	1	-0.007	ppb	142.20	1.00	
63 Cu	72	1	-0.008	ppb	140.15	1.00	
66 Zn	72	1	-0.415	ppb	4.35	1.00	
75 As	72	1	0.005	ppb	110.23	1.00	
78 Se	72	1	0.018	ppb	1242.10	1.00	
95 Mo	72	1	-0.028	ppb	13.11	1.00	
107 Ag	115	1	0.004	ppb	46.09	1.00	
111 Cd	115	1	0.013	ppb	40.03	1.00	
118 Sn	115	1	0.063	ppb	55.50	1.00	
121 Sb	115	1	0.113	ppb	31.55	1.00	
137 Ba	115	1	-0.029	ppb	28.79	1.00	
205 Tl	165	1	0.018	ppb	22.96	1.00	
208 Pb	165	1	0.000	ppb	5554.40	1.00	
232 Th	165	1	0.048	ppb	21.37	1.00	
238 U	165	1	0.017	ppb	16.86	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	384926	1.14	401411	95.9	30 - 120	
45 Sc	1	1232197	1.54	1190683	103.5	30 - 120	
72 Ge	1	550643	0.59	533218	103.3	30 - 120	
115 In	1	1626425	1.25	1552104	104.8	30 - 120	
165 Ho	1	2817508	0.31	2681412	105.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\243WASH.D\243WASH.D#
Date Acquired: Nov 8 2009 02:14 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 07 2009 11:48 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.018 ppb	6.70	1.30	
51 V	72	1	4.687 ppb	1.11	6.50	
52 Cr	72	1	1.969 ppb	3.26	2.60	
55 Mn	72	1	0.968 ppb	6.58	1.30	
59 Co	72	1	0.962 ppb	3.44	1.30	
60 Ni	72	1	2.019 ppb	7.92	2.60	
63 Cu	72	1	1.898 ppb	2.07	2.60	
66 Zn	72	1	9.632 ppb	0.59	13.00	
75 As	72	1	4.920 ppb	2.08	6.50	
78 Se	72	1	4.198 ppb	11.78	6.50	
95 Mo	72	1	2.020 ppb	1.39	2.60	
107 Ag	115	1	5.260 ppb	2.09	6.50	
111 Cd	115	1	1.038 ppb	5.01	1.30	
118 Sn	115	1	10.400 ppb	0.81	13.00	
121 Sb	115	1	2.106 ppb	4.12	2.60	
137 Ba	115	1	1.026 ppb	1.81	1.30	
205 Tl	165	1	1.039 ppb	3.13	1.30	
208 Pb	165	1	1.044 ppb	2.08	1.30	
232 Th	165	1	2.144 ppb	1.47	2.60	
238 U	165	1	1.107 ppb	1.83	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	378596	0.38	401411	94.3	30 - 120	
45 Sc	1	1215861	0.22	1190683	102.1	30 - 120	
72 Ge	1	540702	0.70	533218	101.4	30 - 120	
115 In	1	1596042	0.42	1552104	102.8	30 - 120	
165 Ho	1	2774388	0.30	2681412	103.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\244SMPL.D\244SMPL.D#
Date Acquired: Nov 8 2009 02:17 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

DNU (RJ) 11/18/09

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	17.90	17.90	ppb	2.45	3600	
51 V	72	1	19.94	19.94	ppb	0.71	3600	
52 Cr	72	1	17.85	17.85	ppb	1.26	3600	
55 Mn	72	1	19.07	19.07	ppb	0.21	3600	
59 Co	72	1	15.53	15.53	ppb	0.55	3600	
60 Ni	72	1	17.43	17.43	ppb	3.08	3600	
63 Cu	72	1	15.58	15.58	ppb	2.08	3600	
66 Zn	72	1	20.93	20.93	ppb	0.69	3600	
75 As	72	1	17.38	17.38	ppb	1.70	3600	
78 Se	72	1	16.72	16.72	ppb	8.04	3600	
95 Mo	72	1	2,039.00	2039.00	ppb	1.25	3600	
107 Ag	115	1	14.55	14.55	ppb	2.20	3600	
111 Cd	115	1	-1.46	-1.46	ppb	85.14	3600	
118 Sn	115	1	31.52	31.52	ppb	1.20	3600	
121 Sb	115	1	32.69	32.69	ppb	2.09	3600	
137 Ba	115	1	17.86	17.86	ppb	1.80	3600	
205 Tl	165	1	16.43	16.43	ppb	1.39	3600	
208 Pb	165	1	17.44	17.44	ppb	1.35	3600	
232 Th	165	1	18.12	18.12	ppb	1.87	1000	
238 U	165	1	18.11	18.11	ppb	2.00	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	310139	1.39	401411	77.3	30 - 120	
45 Sc	1	1008876	0.12	1190683	84.7	30 - 120	
72 Ge	1	442635	0.64	533218	83.0	30 - 120	
115 In	1	1273415	0.81	1552104	82.0	30 - 120	
165 Ho	1	2246965	0.51	2681412	83.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\245SMPL.D\245SMPL.D#
Date Acquired: Nov 8 2009 02:20 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

DNW (RD 11/8/09

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.00	0.00	ppb	0.00	3600	
51 V	72	1	-0.01	-0.01	ppb	183.00	3600	
52 Cr	72	1	0.03	0.03	ppb	108.74	3600	
55 Mn	72	1	0.00	0.00	ppb	357.61	3600	
59 Co	72	1	0.00	0.00	ppb	123.51	3600	
60 Ni	72	1	0.08	0.08	ppb	30.32	3600	
63 Cu	72	1	-0.03	-0.03	ppb	22.56	3600	
66 Zn	72	1	-0.24	-0.24	ppb	12.08	3600	
75 As	72	1	0.00	0.00	ppb	1812.70	3600	
78 Se	72	1	0.07	0.07	ppb	54.62	3600	
95 Mo	72	1	0.66	0.66	ppb	27.20	3600	
107 Ag	115	1	0.01	0.01	ppb	96.79	3600	
111 Cd	115	1	0.02	0.02	ppb	2.26	3600	
118 Sn	115	1	0.02	0.02	ppb	105.12	3600	
121 Sb	115	1	0.01	0.01	ppb	108.13	3600	
137 Ba	115	1	-0.01	-0.01	ppb	57.34	3600	
205 Tl	165	1	0.00	0.00	ppb	51.33	3600	
208 Pb	165	1	0.00	0.00	ppb	396.03	3600	
232 Th	165	1	0.01	0.01	ppb	75.61	1000	
238 U	165	1	0.01	0.01	ppb	15.72	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	371677	0.32	401411	92.6	30 - 120	
45 Sc	1	1181717	1.34	1190683	99.2	30 - 120	
72 Ge	1	532981	0.53	533218	100.0	30 - 120	
115 In	1	1571905	0.51	1552104	101.3	30 - 120	
165 Ho	1	2710618	0.66	2681412	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\189CALB.D\189CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\246CALB.D\246CALB.D#
Date Acquired: Nov 8 2009 02:22 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 07 2009 11:48 pm
Sample Type: CalBlk

DNV LRD 11/8/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.18
51	V	72	1	810	15.38
52	Cr	72	1	2794	5.01
55	Mn	72	1	753	18.58
59	Co	72	1	83	6.78
60	Ni	72	1	243	15.62
63	Cu	72	1	380	12.31
66	Zn	72	1	461	2.64
75	As	72	1	39	30.26
78	Se	72	1	367	11.95
95	Mo	72	1	577	25.82
107	Ag	115	1	33	46.51
111	Cd	115	1	6	129.86
118	Sn	115	1	250	33.16
121	Sb	115	1	103	17.48
137	Ba	115	1	97	10.91
205	Tl	165	1	118	9.24
208	Pb	165	1	377	5.20
232	Th	165	1	253	21.03
238	U	165	1	191	22.56

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	374176	0.96
45	Sc	1	1183323	1.31
72	Ge	1	537439	0.85
115	In	1	1580964	1.03
165	Ho	1	2723622	0.86

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/08/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#
Date Acquired: Nov 8 2009 02:25 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:23 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	620	12.63
52	Cr	72	1	2680	1.78
55	Mn	72	1	813	8.79
59	Co	72	1	67	30.95
60	Ni	72	1	113	13.08
63	Cu	72	1	490	11.82
66	Zn	72	1	656	6.46
75	As	72	1	45	17.63
78	Se	72	1	333	20.05
95	Mo	72	1	257	16.03
107	Ag	115	1	40	74.94
111	Cd	115	1	11	116.88
118	Sn	115	1	477	0.80
121	Sb	115	1	156	24.28
137	Ba	115	1	152	14.20
205	Tl	165	1	96	21.83
208	Pb	165	1	372	9.02
232	Th	165	1	160	32.65
238	U	165	1	140	10.99

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	376079	0.79
45	Sc	1	1186897	1.34
72	Ge	1	539567	0.45
115	In	1	1576174	1.52
165	Ho	1	2717767	0.30

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\248ICAL.D\248ICAL.D#
Date Acquired: Nov 8 2009 02:28 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:26 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42446	1.21
51	V	72	1	684937	3.17
52	Cr	72	1	670667	0.81
55	Mn	72	1	787843	0.97
59	Co	72	1	839400	0.67
60	Ni	72	1	178958	0.70
63	Cu	72	1	424705	0.79
66	Zn	72	1	94491	0.73
75	As	72	1	84032	1.05
78	Se	72	1	16841	1.85
95	Mo	72	1	231498	1.15
107	Ag	115	1	664263	0.80
111	Cd	115	1	132542	1.42
118	Sn	115	1	376743	0.98
121	Sb	115	1	435060	0.49
137	Ba	115	1	188704	0.74
205	Tl	165	1	1479617	0.97
208	Pb	165	1	2033413	0.75
232	Th	165	1	2126721	0.55
238	U	165	1	2198988	0.53

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	364624	0.78	376079	97.0	30 - 120	
45	Sc	1	1151280	0.55	1186897	97.0	30 - 120	
72	Ge	1	510601	1.68	539567	94.6	30 - 120	
115	In	1	1555316	0.82	1576174	98.7	30 - 120	
165	Ho	1	2687981	0.46	2717767	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\249 CCV.D\249 CCV.D#
Date Acquired: Nov 8 2009 02:31 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.21	ppb	0.59	50	100.4	90 - 110	
51 V	72	1	49.66	ppb	0.22	50	99.3	90 - 110	
52 Cr	72	1	50.51	ppb	0.78	50	101.0	90 - 110	
55 Mn	72	1	49.52	ppb	0.42	50	99.0	90 - 110	
59 Co	72	1	48.78	ppb	0.64	50	97.6	90 - 110	
60 Ni	72	1	50.96	ppb	0.39	50	101.9	90 - 110	
63 Cu	72	1	50.45	ppb	0.98	50	100.9	90 - 110	
66 Zn	72	1	51.04	ppb	1.32	50	102.1	90 - 110	
75 As	72	1	50.22	ppb	0.79	50	100.4	90 - 110	
78 Se	72	1	52.93	ppb	2.64	50	105.9	90 - 110	
95 Mo	72	1	50.88	ppb	0.45	50	101.8	90 - 110	
107 Ag	115	1	50.92	ppb	2.20	50	101.8	90 - 110	
111 Cd	115	1	51.72	ppb	2.62	50	103.4	90 - 110	
118 Sn	115	1	51.06	ppb	2.41	50	102.1	90 - 110	
121 Sb	115	1	51.12	ppb	1.48	50	102.2	90 - 110	
137 Ba	115	1	50.77	ppb	1.68	50	101.5	90 - 110	
205 Tl	165	1	51.85	ppb	1.16	50	103.7	90 - 110	
208 Pb	165	1	51.54	ppb	2.32	50	103.1	90 - 110	
232 Th	165	1	51.27	ppb	1.18	50	102.5	90 - 110	
238 U	165	1	51.61	ppb	0.90	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360601	1.23	376079	95.9	30 - 120	
45 Sc	1	1152210	0.10	1186897	97.1	30 - 120	
72 Ge	1	506331	0.64	539567	93.8	30 - 120	
115 In	1	1532589	0.89	1576174	97.2	30 - 120	
165 Ho	1	2667156	1.17	2717767	98.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\250 CCB.D\250 CCB.D#
Date Acquired: Nov 8 2009 02:33 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	147.29	1.00	
51 V	72	1	-0.021	ppb	31.34	1.00	
52 Cr	72	1	0.037	ppb	45.39	1.00	
55 Mn	72	1	-0.003	ppb	461.47	1.00	
59 Co	72	1	0.004	ppb	46.27	1.00	
60 Ni	72	1	-0.025	ppb	13.04	1.00	
63 Cu	72	1	-0.035	ppb	22.37	1.00	
66 Zn	72	1	-0.398	ppb	5.33	1.00	
75 As	72	1	0.015	ppb	70.97	1.00	
78 Se	72	1	-0.320	ppb	40.38	1.00	
95 Mo	72	1	-0.054	ppb	35.32	1.00	
107 Ag	115	1	0.008	ppb	9.23	1.00	
111 Cd	115	1	0.005	ppb	52.43	1.00	
118 Sn	115	1	0.107	ppb	31.44	1.00	
121 Sb	115	1	0.188	ppb	20.19	1.00	
137 Ba	115	1	-0.042	ppb	4.94	1.00	
205 Tl	165	1	0.020	ppb	20.00	1.00	
208 Pb	165	1	-0.001	ppb	65.74	1.00	
232 Th	165	1	0.055	ppb	6.90	1.00	
238 U	165	1	0.016	ppb	10.74	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366061	0.27	376079	97.3	30 - 120	
45 Sc	1	1155485	0.15	1186897	97.4	30 - 120	
72 Ge	1	519106	0.69	539567	96.2	30 - 120	
115 In	1	1540332	1.11	1576174	97.7	30 - 120	
165 Ho	1	2657124	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\251WASH.D\251WASH.D#
Date Acquired: Nov 8 2009 02:36 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.182 ppb	14.87	1.30	
51 V	72	1	4.893 ppb	1.96	6.50	
52 Cr	72	1	2.065 ppb	5.46	2.60	
55 Mn	72	1	1.011 ppb	1.63	1.30	
59 Co	72	1	0.945 ppb	4.66	1.30	
60 Ni	72	1	1.991 ppb	4.27	2.60	
63 Cu	72	1	1.920 ppb	3.33	2.60	
66 Zn	72	1	9.756 ppb	2.19	13.00	
75 As	72	1	5.100 ppb	2.23	6.50	
78 Se	72	1	5.391 ppb	16.99	6.50	
95 Mo	72	1	2.008 ppb	7.03	2.60	
107 Ag	115	1	5.374 ppb	2.29	6.50	
111 Cd	115	1	1.096 ppb	8.86	1.30	
118 Sn	115	1	10.340 ppb	1.46	13.00	
121 Sb	115	1	2.090 ppb	3.04	2.60	
137 Ba	115	1	1.046 ppb	6.76	1.30	
205 Tl	165	1	1.069 ppb	2.14	1.30	
208 Pb	165	1	1.064 ppb	1.63	1.30	
232 Th	165	1	2.171 ppb	1.98	2.60	
238 U	165	1	1.109 ppb	2.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368083	0.81	376079	97.9	30 - 120	
45 Sc	1	1152236	1.34	1186897	97.1	30 - 120	
72 Ge	1	519228	0.64	539567	96.2	30 - 120	
115 In	1	1550740	0.66	1576174	98.4	30 - 120	
165 Ho	1	2657605	1.00	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110709.B\252 BLK.D\252 BLK.D#
Date Acquired:	Nov 8 2009 02:39 am
Operator:	TEL
Sample Name:	LNJNVB
Misc Info:	BLANK 9303185 6020
Vial Number:	4402
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Nov 08 2009 02:28 am
Sample Type:	BLK
Total Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	4060.10	2.00	
51 V	72	1	-0.023 ppb	51.25	2.00	
52 Cr	72	1	0.146 ppb	18.63	2.00	
55 Mn	72	1	0.029 ppb	14.35	2.00	
59 Co	72	1	-0.002 ppb	130.67	2.00	
60 Ni	72	1	0.009 ppb	200.76	2.00	
63 Cu	72	1	0.048 ppb	17.11	2.00	
66 Zn	72	1	0.350 ppb	15.65	2.00	
75 As	72	1	0.002 ppb	591.35	2.00	
78 Se	72	1	-0.304 ppb	77.33	2.00	
95 Mo	72	1	-0.059 ppb	27.75	2.00	
107 Ag	115	1	0.003 ppb	141.04	2.00	
111 Cd	115	1	0.004 ppb	198.21	2.00	
118 Sn	115	1	0.129 ppb	35.95	2.00	
121 Sb	115	1	0.037 ppb	34.11	2.00	
137 Ba	115	1	-0.021 ppb	145.57	2.00	
205 Tl	165	1	0.012 ppb	15.96	2.00	
208 Pb	165	1	0.006 ppb	18.89	2.00	
232 Th	165	1	0.019 ppb	29.60	2.00	
238 U	165	1	0.002 ppb	114.88	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364912	0.52	376079	97.0	30 - 120	
45 Sc	1	1141984	0.82	1186897	96.2	30 - 120	
72 Ge	1	513818	0.75	539567	95.2	30 - 120	
115 In	1	1528677	1.58	1576174	97.0	30 - 120	
165 Ho	1	2647917	1.14	2717767	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\253 LCS.D\253 LCS.D#
Date Acquired: Nov 8 2009 02:42 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNJNVC
Misc Info: LCS
Vial Number: 4403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	35.70	1.01	40	89.3	80 - 120	
51 V	72	1	35.52	0.20	40	88.8	80 - 120	
52 Cr	72	1	36.08	0.50	40	90.2	80 - 120	
55 Mn	72	1	35.14	0.07	40	87.9	80 - 120	
59 Co	72	1	34.82	0.49	40	87.1	80 - 120	
60 Ni	72	1	36.40	0.69	40	91.0	80 - 120	
63 Cu	72	1	35.92	0.24	40	89.8	80 - 120	
66 Zn	72	1	35.76	1.51	40	89.4	80 - 120	
75 As	72	1	34.71	0.72	40	86.8	80 - 120	
78 Se	72	1	35.62	2.21	40	89.1	80 - 120	
95 Mo	72	1	32.10	0.70	40	80.3	80 - 120	
107 Ag	115	1	35.79	2.12	40	89.5	80 - 120	
111 Cd	115	1	35.37	1.53	40	88.4	80 - 120	
118 Sn	115	1	0.02	168.39	40	0.0	80 - 120	
121 Sb	115	1	32.20	2.07	40	80.5	80 - 120	
137 Ba	115	1	35.77	2.20	40	89.4	80 - 120	
205 Tl	165	1	36.57	2.09	40	91.4	80 - 120	
208 Pb	165	1	36.87	2.16	40	92.2	80 - 120	
232 Th	165	1	36.61	1.54	40	91.5	80 - 120	
238 U	165	1	36.97	1.94	40	92.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358195	0.31	376079	95.2	30 - 120	
45 Sc	1	1130666	0.47	1186897	95.3	30 - 120	
72 Ge	1	497032	0.74	539567	92.1	30 - 120	
115 In	1	1523173	1.15	1576174	96.6	30 - 120	
165 Ho	1	2638001	1.37	2717767	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#
Date Acquired: Nov 8 2009 02:44 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7F 5X
Misc Info: D9J270261
Vial Number: 4404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: AllRef
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.02	ppb	140.55	3600	
51 V	72	1	58.25	11.65	ppb	0.99	3600	
52 Cr	72	1	96.60	19.32	ppb	0.56	3600	
55 Mn	72	1	20.01	4.00	ppb	1.83	3600	
59 Co	72	1	0.41	0.08	ppb	18.64	3600	
60 Ni	72	1	2.50	0.50	ppb	10.52	3600	
63 Cu	72	1	0.61	0.12	ppb	13.42	3600	
66 Zn	72	1	18.56	3.71	ppb	2.43	3600	
75 As	72	1	190.75	38.15	ppb	0.69	3600	
78 Se	72	1	1.93	0.39	ppb	57.06	3600	
95 Mo	72	1	26.48	5.30	ppb	2.72	3600	
107 Ag	115	1	0.03	0.01	ppb	125.97	3600	
111 Cd	115	1	0.02	0.00	ppb	229.82	3600	
118 Sn	115	1	0.25	0.05	ppb	45.32	3600	
121 Sb	115	1	0.30	0.06	ppb	29.45	3600	
137 Ba	115	1	23.70	4.74	ppb	1.34	3600	
205 Tl	165	1	0.23	0.05	ppb	17.38	3600	
208 Pb	165	1	0.18	0.04	ppb	14.05	3600	
232 Th	165	1	0.24	0.05	ppb	4.71	1000	
238 U	165	1	13.31	2.66	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	333341	1.09	376079	88.6	30 - 120	
45 Sc	1	1062523	0.59	1186897	89.5	30 - 120	
72 Ge	1	462502	0.27	539567	85.7	30 - 120	
115 In	1	1375002	1.04	1576174	87.2	30 - 120	
165 Ho	1	2471361	0.80	2717767	90.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\255SDIL.D\255SDIL.D#
Date Acquired: Nov 8 2009 02:47 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FP25
Misc Info: SERIAL DILUTION
Vial Number: 4405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110709.B\254AREF.D\254AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.02	ppb	0.57	0.00	458.7	90 - 110	
51 V	72	1	2.26	ppb	2.18	2.33	97.2	90 - 110	
52 Cr	72	1	3.94	ppb	1.55	3.86	101.9	90 - 110	
55 Mn	72	1	0.83	ppb	10.87	0.80	103.6	90 - 110	
59 Co	72	1	0.02	ppb	18.64	0.02	109.5	90 - 110	
60 Ni	72	1	0.11	ppb	52.76	0.10	106.7	90 - 110	
63 Cu	72	1	0.01	ppb	230.36	0.02	26.5	90 - 110	
66 Zn	72	1	0.47	ppb	7.87	0.74	62.8	90 - 110	
75 As	72	1	7.52	ppb	0.96	7.63	98.5	90 - 110	
78 Se	72	1	-0.04	ppb	1143.50	0.08	-52.9	90 - 110	
95 Mo	72	1	0.94	ppb	9.86	1.06	88.3	90 - 110	
107 Ag	115	1	0.00	ppb	99.28	0.00	-232.5	90 - 110	
111 Cd	115	1	-0.01	ppb	100.17	0.00	-679.0	90 - 110	
118 Sn	115	1	0.09	ppb	4.94	0.01	892.4	90 - 110	
121 Sb	115	1	0.01	ppb	131.02	0.01	58.5	90 - 110	
137 Ba	115	1	0.94	ppb	4.03	0.95	99.3	90 - 110	
205 Tl	165	1	0.01	ppb	8.96	0.01	141.7	90 - 110	
208 Pb	165	1	0.01	ppb	18.12	0.01	165.2	90 - 110	
232 Th	165	1	0.01	ppb	22.37	0.01	123.4	90 - 110	
238 U	165	1	0.53	ppb	1.52	0.53	100.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355060	0.39	376079	94.4	30 - 120	
45 Sc	1	1125653	0.19	1186897	94.8	30 - 120	
72 Ge	1	502164	0.65	539567	93.1	30 - 120	
115 In	1	1479317	0.60	1576174	93.9	30 - 120	
165 Ho	1	2614578	1.08	2717767	96.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:46

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNC7FP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG110709 # 255 | Method 6020_
Acquired: 11/08/2009 02:47:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 11/08/2009 02:25:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	10	0.41625	0.09076	359		*	
7440-62-2	Vanadium	51	15823	56.600	58.240	2.82		*	
7440-47-3	Chromium	52	28379	98.450	96.590	1.93		*	
7439-96-5	Manganese	55	7172	20.725	20.010	3.57		*	
7440-48-4	Cobalt	59	210	0.44850	0.40970	9.47		*	
7440-02-0	Nickel	60	293	2.6645	2.4980	6.67		*	
7440-50-8	Copper	63	483	0.16105	0.60710	73.5		*	
7440-66-6	Zinc	66	1041	11.650	18.550	37.2		*	
7440-38-2	Arsenic	75	6250	187.85	190.70	1.49	0.21	1.5	☑
7782-49-2	Selenium	78	303	-1.0210	1.9300	153	0.70	NC	☑
7439-98-7	Molybdenum	95	2367	23.385	26.470	11.7		*	
7440-22-4	Silver	107	20	-0.06975	0.02999	333		*	
7440-43-9	Cadmium	111	3	-0.14365	0.02116	779		*	
7440-31-5	Tin	118	770	2.2540	0.25260	792		*	
7440-36-0	Antimony	121	176	0.17570	0.30050	41.5		*	
7440-39-3	Barium	137	1831	23.535	23.690	0.654		*	
7440-28-0	Thallium	205	281	0.32890	0.23210	41.7		*	
7439-92-1	Lead	208	597	0.30195	0.18290	65.1		*	
7440-61-1	Uranium	238	11545	13.340	13.300	0.301		*	
7440-29-1	Thorium	232	403	0.30120	0.24410	23.4		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Date:

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\256PDS.D\256PDS.D#
Date Acquired: Nov 8 2009 02:50 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 4406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	198.50	0.02	ppb	0.67	200	99.2	75 - 125	
51 V	72	1	208.00	11.65	ppb	2.08	200	98.3	75 - 125	
52 Cr	72	1	214.70	19.32	ppb	2.35	200	97.9	75 - 125	
55 Mn	72	1	195.40	4.00	ppb	1.86	200	95.8	75 - 125	
59 Co	72	1	183.60	0.08	ppb	1.60	200	91.8	75 - 125	
60 Ni	72	1	182.50	0.50	ppb	0.31	200	91.0	75 - 125	
63 Cu	72	1	178.40	0.12	ppb	0.81	200	89.1	75 - 125	
66 Zn	72	1	197.00	3.71	ppb	0.21	200	96.7	75 - 125	
75 As	72	1	232.30	38.15	ppb	0.67	200	97.5	75 - 125	
78 Se	72	1	204.20	0.39	ppb	2.34	200	101.9	75 - 125	
95 Mo	72	1	205.90	5.30	ppb	0.26	200	100.3	75 - 125	
107 Ag	115	1	41.50	0.01	ppb	1.74	50	83.0	75 - 125	
111 Cd	115	1	191.50	0.00	ppb	1.67	200	95.7	75 - 125	
118 Sn	115	1	177.60	0.05	ppb	1.20	200	88.8	75 - 125	
121 Sb	115	1	198.30	0.06	ppb	1.40	200	99.1	75 - 125	
137 Ba	115	1	196.40	4.74	ppb	1.33	200	95.9	75 - 125	
205 Tl	165	1	183.20	0.05	ppb	0.81	200	91.6	75 - 125	
208 Pb	165	1	182.30	0.04	ppb	0.75	200	91.1	75 - 125	
232 Th	165	1	0.04	0.05	ppb	6.86	200	0.0	75 - 125	
238 U	165	1	193.60	2.66	ppb	1.34	200	95.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	328783	0.12	376079	87.4	30 - 120	
45 Sc	1	1063276	1.17	1186897	89.6	30 - 120	
72 Ge	1	452940	1.07	539567	83.9	30 - 120	
115 In	1	1385133	0.59	1576174	87.9	30 - 120	
165 Ho	1	2473070	1.04	2717767	91.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/09/09 10:02:49

Department: 090 (Metals) Source: Spreadsheet

Sample: **LNC7FZ** Spike Dilution: **1.00** Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG110709 # 256
Acquired: 11/08/2009 02:50:00
Calibrated: 11/08/2009 02:25:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	75977	198.50	0.01815	99.2	200		☐
7440-62-2	Vanadium	51	1263250	208.00	11.648	98.2	200		☑
7440-47-3	Chromium	52	1274690	214.70	19.318	97.7	200		☑
7439-96-5	Manganese	55	1365200	195.40	4.0020	95.7	200		☑
7440-48-4	Cobalt	59	1366970	183.60	0.08194	91.8	200		☐
7440-02-0	Nickel	60	289636	182.50	0.49960	91.0	200		☑
7440-50-8	Copper	63	671724	178.40	0.12142	89.1	200		☑
7440-66-6	Zinc	66	164629	197.00	3.7100	96.6	200		☑
7440-38-2	Arsenic	75	173144	232.30	38.140	97.1	200		☑
7782-49-2	Selenium	78	30217	204.20	0.38600	102	200		☑
7439-98-7	Molybdenum	95	422659	205.90	5.2940	100	200		☐
7440-22-4	Silver	107	245476	41.500	0.00600	83.0	50.0		☐
7440-43-9	Cadmium	111	225972	191.50	0.00423	95.7	200		☑
7440-31-5	Tin	118	595460	177.60	0.05052	88.8	200		☑
7440-36-0	Antimony	121	768070	198.30	0.06010	99.1	200		☑
7440-39-3	Barium	137	329990	196.40	4.7380	95.8	200		☑
7440-28-0	Thallium	205	2493600	183.20	0.04642	91.6	200		☑
7439-92-1	Lead	208	3410220	182.30	0.03658	91.1	200		☑
7440-61-1	Uranium	238	3915870	193.60	2.6600	95.5	200		☐
7440-29-1	Thorium	232	963	0.04179	0.04882				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: Date:

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\257_MS.D\257_MS.D#
Date Acquired: Nov 8 2009 02:53 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FS 5X
Misc Info: MATRIX SPIKE
Vial Number: 4407
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MS
Prep Dil. Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	7.56	0.02	ppb	3.41	40	18.9	50 - 150	
51 V	72	1	19.50	11.65	ppb	0.31	40	37.8	50 - 150	
52 Cr	72	1	27.55	19.32	ppb	1.08	40	46.4	50 - 150	
55 Mn	72	1	11.53	4.00	ppb	1.57	40	26.2	50 - 150	
59 Co	72	1	6.92	0.08	ppb	2.08	40	17.3	50 - 150	
60 Ni	72	1	7.47	0.50	ppb	3.08	40	18.4	50 - 150	
63 Cu	72	1	6.92	0.12	ppb	1.37	40	17.2	50 - 150	
66 Zn	72	1	12.20	3.71	ppb	0.22	40	27.9	50 - 150	
75 As	72	1	47.40	38.15	ppb	0.47	40	60.7	50 - 150	
78 Se	72	1	8.21	0.39	ppb	9.17	40	20.3	50 - 150	
95 Mo	72	1	12.33	5.30	ppb	1.48	40	27.2	50 - 150	
107 Ag	115	1	6.98	0.01	ppb	1.82	40	17.5	50 - 150	
111 Cd	115	1	7.47	0.00	ppb	3.17	40	18.7	50 - 150	
118 Sn	115	1	0.39	0.05	ppb	33.82	40	1.0	50 - 150	
121 Sb	115	1	6.89	0.06	ppb	1.31	40	17.2	50 - 150	
137 Ba	115	1	12.69	4.74	ppb	1.37	40	28.4	50 - 150	
205 Tl	165	1	7.17	0.05	ppb	1.41	40	17.9	50 - 150	
208 Pb	165	1	7.25	0.04	ppb	1.49	40	18.1	50 - 150	
232 Th	165	1	7.88	0.05	ppb	1.73	40	19.7	50 - 150	
238 U	165	1	10.53	2.66	ppb	1.84	40	24.7	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	332623	0.65	376079	88.4	30 - 120	
45 Sc	1	1062418	1.11	1186897	89.5	30 - 120	
72 Ge	1	462138	0.38	539567	85.6	30 - 120	
115 In	1	1389102	1.17	1576174	88.1	30 - 120	
165 Ho	1	2485285	0.80	2717767	91.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\258 CCV.D\258 CCV.D#
Date Acquired: Nov 8 2009 02:56 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.17	ppb	1.68	50	102.3	90 - 110	
51 V	72	1	49.76	ppb	0.58	50	99.5	90 - 110	
52 Cr	72	1	50.23	ppb	0.59	50	100.5	90 - 110	
55 Mn	72	1	49.80	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	48.86	ppb	0.97	50	97.7	90 - 110	
60 Ni	72	1	51.09	ppb	0.38	50	102.2	90 - 110	
63 Cu	72	1	50.55	ppb	1.39	50	101.1	90 - 110	
66 Zn	72	1	51.57	ppb	0.26	50	103.1	90 - 110	
75 As	72	1	50.59	ppb	0.46	50	101.2	90 - 110	
78 Se	72	1	51.92	ppb	0.28	50	103.8	90 - 110	
95 Mo	72	1	50.29	ppb	1.00	50	100.6	90 - 110	
107 Ag	115	1	51.22	ppb	2.07	50	102.4	90 - 110	
111 Cd	115	1	51.60	ppb	0.81	50	103.2	90 - 110	
118 Sn	115	1	50.56	ppb	0.85	50	101.1	90 - 110	
121 Sb	115	1	51.03	ppb	1.10	50	102.1	90 - 110	
137 Ba	115	1	50.92	ppb	1.12	50	101.8	90 - 110	
205 Tl	165	1	52.43	ppb	1.68	50	104.9	90 - 110	
208 Pb	165	1	52.24	ppb	2.12	50	104.5	90 - 110	
232 Th	165	1	51.78	ppb	2.94	50	103.6	90 - 110	
238 U	165	1	52.22	ppb	2.20	50	104.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	366110	0.29	376079	97.3	30 - 120	
45 Sc	1	1169831	1.16	1186897	98.6	30 - 120	
72 Ge	1	507682	1.25	539567	94.1	30 - 120	
115 In	1	1542474	0.57	1576174	97.9	30 - 120	
165 Ho	1	2664119	1.36	2717767	98.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\259 CCB.D\259 CCB.D#
Date Acquired: Nov 8 2009 02:58 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	31.75	1.00	
52 Cr	72	1	0.015	ppb	240.08	1.00	
55 Mn	72	1	-0.003	ppb	454.38	1.00	
59 Co	72	1	0.007	ppb	19.00	1.00	
60 Ni	72	1	-0.021	ppb	92.00	1.00	
63 Cu	72	1	-0.023	ppb	91.13	1.00	
66 Zn	72	1	-0.387	ppb	12.46	1.00	
75 As	72	1	0.025	ppb	95.41	1.00	
78 Se	72	1	-0.065	ppb	394.03	1.00	
95 Mo	72	1	-0.040	ppb	70.76	1.00	
107 Ag	115	1	0.007	ppb	79.32	1.00	
111 Cd	115	1	0.012	ppb	73.39	1.00	
118 Sn	115	1	0.112	ppb	71.47	1.00	
121 Sb	115	1	0.150	ppb	17.00	1.00	
137 Ba	115	1	-0.041	ppb	5.14	1.00	
205 Tl	165	1	0.021	ppb	28.23	1.00	
208 Pb	165	1	0.003	ppb	8.31	1.00	
232 Th	165	1	0.048	ppb	25.86	1.00	
238 U	165	1	0.018	ppb	13.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367818	0.80	376079	97.8	30 - 120	
45 Sc	1	1153232	0.32	1186897	97.2	30 - 120	
72 Ge	1	519534	0.26	539567	96.3	30 - 120	
115 In	1	1546385	0.40	1576174	98.1	30 - 120	
165 Ho	1	2700530	0.45	2717767	99.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\260WASH.D\260WASH.D#
Date Acquired: Nov 8 2009 03:01 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.019 ppb	27.17	1.30	
51 V	72	1	4.885 ppb	1.68	6.50	
52 Cr	72	1	2.082 ppb	0.83	2.60	
55 Mn	72	1	1.036 ppb	7.67	1.30	
59 Co	72	1	0.946 ppb	2.04	1.30	
60 Ni	72	1	1.988 ppb	1.59	2.60	
63 Cu	72	1	1.986 ppb	0.32	2.60	
66 Zn	72	1	9.700 ppb	2.08	13.00	
75 As	72	1	4.976 ppb	1.71	6.50	
78 Se	72	1	5.005 ppb	25.32	6.50	
95 Mo	72	1	1.940 ppb	1.93	2.60	
107 Ag	115	1	5.369 ppb	0.73	6.50	
111 Cd	115	1	1.082 ppb	5.90	1.30	
118 Sn	115	1	10.260 ppb	0.06	13.00	
121 Sb	115	1	2.114 ppb	1.71	2.60	
137 Ba	115	1	0.981 ppb	3.28	1.30	
205 Tl	165	1	1.051 ppb	2.60	1.30	
208 Pb	165	1	1.037 ppb	1.65	1.30	
232 Th	165	1	2.110 ppb	1.80	2.60	
238 U	165	1	1.105 ppb	2.71	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367841	0.83	376079	97.8	30 - 120	
45 Sc	1	1154162	0.97	1186897	97.2	30 - 120	
72 Ge	1	516753	0.66	539567	95.8	30 - 120	
115 In	1	1524519	0.33	1576174	96.7	30 - 120	
165 Ho	1	2680772	0.38	2717767	98.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\261 MSD.D\261 MSD.D#
Date Acquired: Nov 8 2009 03:04 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7FD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 4408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: MSD
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110709.B\257 MS.D\257 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.15	ppb	4.97	7.56	5.64	20	
51 V	72	1	19.44	ppb	0.87	19.50	0.31	20	
52 Cr	72	1	27.63	ppb	0.44	27.55	0.29	20	
55 Mn	72	1	11.89	ppb	0.71	11.53	3.07	20	
59 Co	72	1	6.96	ppb	0.22	6.92	0.55	20	
60 Ni	72	1	7.63	ppb	4.71	7.47	2.13	20	
63 Cu	72	1	6.96	ppb	2.26	6.92	0.55	20	
66 Zn	72	1	11.24	ppb	0.91	12.20	8.19	20	
75 As	72	1	47.18	ppb	1.02	47.40	0.47	20	
78 Se	72	1	8.49	ppb	8.60	8.21	3.34	20	
95 Mo	72	1	12.08	ppb	2.93	12.33	2.05	20	
107 Ag	115	1	6.86	ppb	1.67	6.98	1.81	20	
111 Cd	115	1	7.38	ppb	2.12	7.47	1.12	20	
118 Sn	115	1	0.11	ppb	30.03	0.39	111.83	20	
121 Sb	115	1	6.82	ppb	2.78	6.89	1.02	20	
137 Ba	115	1	12.78	ppb	1.44	12.69	0.71	20	
205 Tl	165	1	7.29	ppb	1.19	7.17	1.61	20	
208 Pb	165	1	7.29	ppb	2.38	7.25	0.51	20	
232 Th	165	1	7.89	ppb	2.55	7.88	0.08	20	
238 U	165	1	10.55	ppb	1.44	10.53	0.19	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329103	0.78	376079	87.5	30 - 120	
45 Sc	1	1057955	1.12	1186897	89.1	30 - 120	
72 Ge	1	456662	0.47	539567	84.6	30 - 120	
115 In	1	1365390	0.56	1576174	86.6	30 - 120	
165 Ho	1	2474617	1.07	2717767	91.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\262SMPL.D\262SMPL.D#
Date Acquired: Nov 8 2009 03:07 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNC7L 5X
Misc Info: D9J270263
Vial Number: 4409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	157.59	3600	
51 V	72	1	46.85	9.37	ppb	1.89	3600	
52 Cr	72	1	12.39	2.48	ppb	5.61	3600	
55 Mn	72	1	171.35	34.27	ppb	1.07	3600	
59 Co	72	1	264.35	52.87	ppb	1.02	3600	
60 Ni	72	1	102.35	20.47	ppb	3.34	3600	
63 Cu	72	1	53.95	10.79	ppb	1.03	3600	
66 Zn	72	1	17.02	3.40	ppb	3.85	3600	
75 As	72	1	69.40	13.88	ppb	0.45	3600	
78 Se	72	1	3.99	0.80	ppb	47.95	3600	
95 Mo	72	1	6.46	1.29	ppb	6.25	3600	
107 Ag	115	1	0.02	0.00	ppb	159.25	3600	
111 Cd	115	1	0.13	0.03	ppb	54.73	3600	
118 Sn	115	1	0.20	0.04	ppb	29.32	3600	
121 Sb	115	1	0.23	0.05	ppb	27.91	3600	
137 Ba	115	1	43.61	8.72	ppb	1.89	3600	
205 Tl	165	1	0.08	0.02	ppb	8.14	3600	
208 Pb	165	1	1.84	0.37	ppb	5.27	3600	
232 Th	165	1	0.14	0.03	ppb	17.77	1000	
238 U	165	1	38.02	7.60	ppb	1.66	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343401	0.74	376079	91.3	30 - 120	
45 Sc	1	1089536	0.75	1186897	91.8	30 - 120	
72 Ge	1	479909	1.11	539567	88.9	30 - 120	
115 In	1	1451981	1.22	1576174	92.1	30 - 120	
165 Ho	1	2546093	0.95	2717767	93.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\263SMPL.D\263SMPL.D#
Date Acquired: Nov 8 2009 03:09 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFGD 5X
Misc Info: D9J280280
Vial Number: 4410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.10	0.02	ppb	241.44	3600	
51 V	72	1	54.75	10.95	ppb	1.40	3600	
52 Cr	72	1	88.30	17.66	ppb	0.52	3600	
55 Mn	72	1	36.34	7.27	ppb	0.95	3600	
59 Co	72	1	0.85	0.17	ppb	10.77	3600	
60 Ni	72	1	4.50	0.90	ppb	6.77	3600	
63 Cu	72	1	1.33	0.27	ppb	18.06	3600	
66 Zn	72	1	7.36	1.47	ppb	5.00	3600	
75 As	72	1	275.25	55.05	ppb	1.01	3600	
78 Se	72	1	8.96	1.79	ppb	43.45	3600	
95 Mo	72	1	14.49	2.90	ppb	3.73	3600	
107 Ag	115	1	0.03	0.01	ppb	18.83	3600	
111 Cd	115	1	0.09	0.02	ppb	136.04	3600	
118 Sn	115	1	0.02	0.00	ppb	387.10	3600	
121 Sb	115	1	0.10	0.02	ppb	24.58	3600	
137 Ba	115	1	40.38	8.08	ppb	3.21	3600	
205 Tl	165	1	0.13	0.03	ppb	5.33	3600	
208 Pb	165	1	0.86	0.17	ppb	3.75	3600	
232 Th	165	1	0.77	0.15	ppb	2.79	1000	
238 U	165	1	23.16	4.63	ppb	1.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	321308	0.11	376079	85.4	30 - 120	
45 Sc	1	1048585	0.63	1186897	88.3	30 - 120	
72 Ge	1	451006	0.46	539567	83.6	30 - 120	
115 In	1	1344838	0.54	1576174	85.3	30 - 120	
165 Ho	1	2446552	0.31	2717767	90.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\264SMPL.D\264SMPL.D#
Date Acquired: Nov 8 2009 03:12 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNFG2 5X
Misc Info: D9J280283
Vial Number: 4411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	85.35	17.07	ppb	2.36	3600	
52 Cr	72	1	57.90	11.58	ppb	0.78	3600	
55 Mn	72	1	3.89	0.78	ppb	2.20	3600	
59 Co	72	1	0.62	0.12	ppb	8.11	3600	
60 Ni	72	1	3.33	0.67	ppb	9.62	3600	
63 Cu	72	1	0.28	0.06	ppb	57.58	3600	
66 Zn	72	1	12.63	2.53	ppb	2.86	3600	
75 As	72	1	208.15	41.63	ppb	0.43	3600	
78 Se	72	1	3.45	0.69	ppb	57.20	3600	
95 Mo	72	1	15.54	3.11	ppb	4.05	3600	
107 Ag	115	1	0.00	0.00	ppb	548.29	3600	
111 Cd	115	1	0.00	0.00	ppb	1744.50	3600	
118 Sn	115	1	0.74	0.15	ppb	40.17	3600	
121 Sb	115	1	0.12	0.02	ppb	20.77	3600	
137 Ba	115	1	43.12	8.62	ppb	2.46	3600	
205 Tl	165	1	0.08	0.02	ppb	18.16	3600	
208 Pb	165	1	0.09	0.02	ppb	0.87	3600	
232 Th	165	1	0.06	0.01	ppb	45.22	1000	
238 U	165	1	42.88	8.58	ppb	2.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326264	0.73	376079	86.8	30 - 120	
45 Sc	1	1072928	0.34	1186897	90.4	30 - 120	
72 Ge	1	463601	0.73	539567	85.9	30 - 120	
115 In	1	1385017	0.88	1576174	87.9	30 - 120	
165 Ho	1	2507716	1.26	2717767	92.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\265SMPL.D\265SMPL.D#
Date Acquired: Nov 8 2009 03:15 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2J 5X
Misc Info: D9J290310
Vial Number: 4412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.05	0.01	ppb	309.81	3600	
51 V	72	1	48.61	9.72	ppb	1.22	3600	
52 Cr	72	1	57.70	11.54	ppb	0.94	3600	
55 Mn	72	1	53.90	10.78	ppb	1.00	3600	
59 Co	72	1	0.55	0.11	ppb	6.70	3600	
60 Ni	72	1	3.54	0.71	ppb	8.58	3600	
63 Cu	72	1	0.41	0.08	ppb	3.58	3600	
66 Zn	72	1	14.51	2.90	ppb	6.49	3600	
75 As	72	1	347.90	69.58	ppb	0.62	3600	
78 Se	72	1	2.80	0.56	ppb	43.90	3600	
95 Mo	72	1	35.21	7.04	ppb	2.31	3600	
107 Ag	115	1	0.00	0.00	ppb	348.44	3600	
111 Cd	115	1	0.01	0.00	ppb	1737.40	3600	
118 Sn	115	1	0.09	0.02	ppb	257.92	3600	
121 Sb	115	1	0.10	0.02	ppb	32.62	3600	
137 Ba	115	1	27.88	5.58	ppb	4.08	3600	
205 Tl	165	1	0.07	0.01	ppb	9.45	3600	
208 Pb	165	1	0.24	0.05	ppb	12.24	3600	
232 Th	165	1	0.20	0.04	ppb	2.64	1000	
238 U	165	1	67.45	13.49	ppb	1.58	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335558	0.24	376079	89.2	30 - 120	
45 Sc	1	1081740	0.75	1186897	91.1	30 - 120	
72 Ge	1	467673	0.66	539567	86.7	30 - 120	
115 In	1	1401937	0.62	1576174	88.9	30 - 120	
165 Ho	1	2517760	0.48	2717767	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\266SMPL.D\266SMPL.D#
Date Acquired: Nov 8 2009 03:18 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LNH2K 5X
Misc Info: D9J290310
Vial Number: 4501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 08 2009 02:28 am
Sample Type: SA
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.04	-0.01	ppb	0.00	3600	
51 V	72	1	48.25	9.65	ppb	1.58	3600	
52 Cr	72	1	57.55	11.51	ppb	1.78	3600	
55 Mn	72	1	53.60	10.72	ppb	0.45	3600	
59 Co	72	1	0.70	0.14	ppb	10.31	3600	
60 Ni	72	1	4.12	0.82	ppb	7.90	3600	
63 Cu	72	1	0.61	0.12	ppb	18.78	3600	
66 Zn	72	1	14.52	2.90	ppb	5.26	3600	
75 As	72	1	343.30	68.66	ppb	0.80	3600	
78 Se	72	1	0.28	0.06	ppb	532.16	3600	
95 Mo	72	1	34.43	6.89	ppb	3.09	3600	
107 Ag	115	1	0.03	0.01	ppb	118.50	3600	
111 Cd	115	1	0.06	0.01	ppb	110.88	3600	
118 Sn	115	1	0.20	0.04	ppb	15.50	3600	
121 Sb	115	1	0.06	0.01	ppb	80.38	3600	
137 Ba	115	1	30.09	6.02	ppb	1.47	3600	
205 Tl	165	1	0.06	0.01	ppb	4.80	3600	
208 Pb	165	1	0.28	0.06	ppb	1.80	3600	
232 Th	165	1	0.20	0.04	ppb	29.47	1000	
238 U	165	1	67.55	13.51	ppb	1.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	329739	0.51	376079	87.7	30 - 120	
45 Sc	1	1074128	1.38	1186897	90.5	30 - 120	
72 Ge	1	466433	0.80	539567	86.4	30 - 120	
115 In	1	1385476	1.23	1576174	87.9	30 - 120	
165 Ho	1	2494439	1.00	2717767	91.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\267 CCV.D\267 CCV.D#
Date Acquired: Nov 8 2009 03:21 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.22	ppb	2.08	50	102.4	90 - 110	
51 V	72	1	49.65	ppb	0.54	50	99.3	90 - 110	
52 Cr	72	1	50.22	ppb	0.76	50	100.4	90 - 110	
55 Mn	72	1	49.57	ppb	0.78	50	99.1	90 - 110	
59 Co	72	1	48.62	ppb	0.28	50	97.2	90 - 110	
60 Ni	72	1	50.60	ppb	1.48	50	101.2	90 - 110	
63 Cu	72	1	50.08	ppb	0.86	50	100.2	90 - 110	
66 Zn	72	1	52.09	ppb	0.68	50	104.2	90 - 110	
75 As	72	1	50.33	ppb	0.35	50	100.7	90 - 110	
78 Se	72	1	50.70	ppb	1.91	50	101.4	90 - 110	
95 Mo	72	1	50.34	ppb	1.97	50	100.7	90 - 110	
107 Ag	115	1	50.13	ppb	2.37	50	100.3	90 - 110	
111 Cd	115	1	50.15	ppb	1.77	50	100.3	90 - 110	
118 Sn	115	1	49.99	ppb	1.62	50	100.0	90 - 110	
121 Sb	115	1	50.52	ppb	2.60	50	101.0	90 - 110	
137 Ba	115	1	50.62	ppb	1.41	50	101.2	90 - 110	
205 Tl	165	1	51.11	ppb	0.42	50	102.2	90 - 110	
208 Pb	165	1	51.54	ppb	1.74	50	103.1	90 - 110	
232 Th	165	1	51.26	ppb	1.28	50	102.5	90 - 110	
238 U	165	1	51.53	ppb	0.94	50	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360685	1.10	376079	95.9	30 - 120	
45 Sc	1	1157595	0.85	1186897	97.5	30 - 120	
72 Ge	1	507944	1.20	539567	94.1	30 - 120	
115 In	1	1559749	0.93	1576174	99.0	30 - 120	
165 Ho	1	2711611	1.14	2717767	99.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\268 CCB.D\268 CCB.D#
Date Acquired: Nov 8 2009 03:23 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.008	ppb	0.00	1.00	
51 V	72	1	-0.025	ppb	19.15	1.00	
52 Cr	72	1	-0.002	ppb	789.67	1.00	
55 Mn	72	1	-0.001	ppb	1184.70	1.00	
59 Co	72	1	0.000	ppb	707.73	1.00	
60 Ni	72	1	-0.014	ppb	130.22	1.00	
63 Cu	72	1	-0.051	ppb	28.29	1.00	
66 Zn	72	1	-0.413	ppb	3.98	1.00	
75 As	72	1	0.005	ppb	390.64	1.00	
78 Se	72	1	0.068	ppb	260.94	1.00	
95 Mo	72	1	-0.051	ppb	12.59	1.00	
107 Ag	115	1	0.003	ppb	126.88	1.00	
111 Cd	115	1	0.000	ppb	7618.50	1.00	
118 Sn	115	1	0.047	ppb	150.30	1.00	
121 Sb	115	1	0.138	ppb	23.66	1.00	
137 Ba	115	1	-0.038	ppb	11.83	1.00	
205 Tl	165	1	0.021	ppb	17.52	1.00	
208 Pb	165	1	0.003	ppb	111.74	1.00	
232 Th	165	1	0.051	ppb	16.07	1.00	
238 U	165	1	0.016	ppb	14.92	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365082	0.17	376079	97.1	30 - 120	
45 Sc	1	1142137	0.98	1186897	96.2	30 - 120	
72 Ge	1	516032	0.47	539567	95.6	30 - 120	
115 In	1	1530746	0.77	1576174	97.1	30 - 120	
165 Ho	1	2669057	1.87	2717767	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110709.B\269WASH.D\269WASH.D#
Date Acquired: Nov 8 2009 03:26 am
Operator: TEL
Sample Name: RLCV
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 08 2009 02:28 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.901 ppb	17.96	1.30	
51 V	72	1	4.935 ppb	2.34	6.50	
52 Cr	72	1	2.001 ppb	2.44	2.60	
55 Mn	72	1	1.030 ppb	4.04	1.30	
59 Co	72	1	0.990 ppb	2.41	1.30	
60 Ni	72	1	2.129 ppb	7.48	2.60	
63 Cu	72	1	1.903 ppb	4.00	2.60	
66 Zn	72	1	9.748 ppb	0.16	13.00	
75 As	72	1	4.893 ppb	4.12	6.50	
78 Se	72	1	5.130 ppb	8.01	6.50	
95 Mo	72	1	1.974 ppb	8.49	2.60	
107 Ag	115	1	5.301 ppb	1.96	6.50	
111 Cd	115	1	1.056 ppb	7.93	1.30	
118 Sn	115	1	10.460 ppb	2.46	13.00	
121 Sb	115	1	2.083 ppb	0.79	2.60	
137 Ba	115	1	1.029 ppb	5.53	1.30	
205 Tl	165	1	1.089 ppb	0.37	1.30	
208 Pb	165	1	1.075 ppb	0.39	1.30	
232 Th	165	1	2.216 ppb	0.39	2.60	
238 U	165	1	1.111 ppb	0.42	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	359039	1.01	376079	95.5	30 - 120	
45 Sc	1	1142332	0.80	1186897	96.2	30 - 120	
72 Ge	1	512301	0.61	539567	94.9	30 - 120	
115 In	1	1537362	0.42	1576174	97.5	30 - 120	
165 Ho	1	2658916	0.29	2717767	97.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110709.B\247CALB.D\247CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J300353

Client: Northgate Envir.

Batch(es) #: 9306276, 9306272

Associated Samples: 1-2

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: LRD 11/10/2009

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J300353	1	SE	LNLN91AC	20091109	6020TOTA	9306276	AG110909A	024
D9J300353	1	AS	LNLN91AA	20091109	6020TOTA	9306276	AG110909A	024
D9J300353	2 D	SE	LNLPF1AH	20091110	6020DSVD	9306272	AG110909A	024
D9J300353	2 S	SE	LNLPF1AG	20091110	6020DSVD	9306272	AG110909A	024
D9J300353	2 D	AS	LNLPF1AF	20091110	6020DSVD	9306272	AG110909A	024
D9J300353	2 S	AS	LNLPF1AE	20091110	6020DSVD	9306272	AG110909A	024
D9J300353	2	SE	LNLPF1AC	20091110	6020DSVD	9306272	AG110909A	024
D9J300353	2	AS	LNLPF1AA	20091110	6020DSVD	9306272	AG110909A	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9306276**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/3/09 ~~11/02/09~~ JRW

Due Date: 11/11/09

Lot	Work Order			Initial Weight/Volume
D9K020000 Water	**LNNP6**	B	Due Date: SDG:	50 mL
D9K020000 Water	**LNNP6**	C	Due Date: SDG:	50 mL
D9J300353 Water	**LNLN9** Total		Due Date: 11/11/09 SDG:	50 mL
D9J300356 Water	**LNLR4** Total		Due Date: 11/11/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total		Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	S	Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	D	Due Date: 11/12/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

UPD 11/10/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 9306276 **ALLIQUOTTED BY:** KS
PREP DATE: 11/3/2009 **DIGESTED BY:** JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1400	95	1815	96
HNO3	1830	96	1920	96
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: [signature] ***Date:*** 11/3/09

LRD 11/10/09

Batch Number: **9306272**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JNV

Prep Date: ~~11/02/09~~ JNV 11/9/09 DG 11/11/09

Due Date: 11/11/09

Lot	Work Order			Initial Weight/Volume
D9K020000 Water	**LNNPL**	B	Due Date: SDG:	50 mL
D9K020000 Water	**LNNPL**	C	Due Date: SDG:	50 mL
D9J300353 Water	**LNLPF** Dissolved		Due Date: 11/11/09 SDG:	50 mL
D9J300353 Water	**LNLPF** Dissolved	S	Due Date: 11/11/09 SDG:	50 mL
D9J300353 Water	**LNLPF** Dissolved	D	Due Date: 11/11/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

VT-checked 11/6/09

LRD 11/10/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

DISSOLVED WATER DIGESTION FOR ICPMS (Prep code MD)

BATCH # 9306272 **ALLIQUOTTED BY:** KS
PREP DATE: 11/9/2009 **DIGESTED BY:** JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

Were samples filtered in the lab? ☐ Yes ☑ No

If "yes", then the method blank and the LCS were filtered prior to digestion.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6473-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	2

TEMPERATURE CYCLES

Thermometer ID: 3718 Block & Cup # : 10/10

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3/HCl	1900	96	1900	96

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

URD 11/10/09

I certify that all information above is correct and complete.

Signature: *JRW* ***Date:*** 11/4/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/09/09 20:32		☐
4	100 ppb				1.0	11/09/09 20:35		☐
5	ICV				1.0	11/09/09 20:37		☐
6	RLIV				1.0	11/09/09 20:40		☐
7	ICB				1.0	11/09/09 20:43		☐
8	RL STD				1.0	11/09/09 20:46		☐
9	AFCEE RL				1.0	11/09/09 20:48		☐
10	ALTSe				1.0	11/09/09 20:51		☐
11	ICSA				1.0	11/09/09 20:54		☐
12	ICSAB				1.0	11/09/09 20:57		☐
13	RINSE				1.0	11/09/09 20:59		☐
14	LR1				1.0	11/09/09 21:02		☐
15	RINSE				1.0	11/09/09 21:05		☐
16	CCV				1.0	11/09/09 21:08		☐
17	CCB				1.0	11/09/09 21:10		☐
18	RLCV				1.0	11/09/09 21:13		☐
19	LNNP6B	D9K020000	9306276	MS	1.0	11/09/09 21:16		☐
20	LNNP6C	D9K020000	9306276	MS	1.0	11/09/09 21:19		☐
21	LNLN9 2X	D9J300353-1	9306276	MS	2.0	11/09/09 21:21		☐
22	LNLR4 2X	D9J300356-1	9306276	MS	2.0	11/09/09 21:24		☐
23	LNME4	D9J310138-1	9306276	MS	1.0	11/09/09 21:27		☐
24	LNME4P5	D9J310138	9306276		5.0	11/09/09 21:30		☐
25	LNME4Z	D9J310138-1	9306276		1.0	11/09/09 21:32		☐
26	LNME4S	D9J310138-1	9306276	MS	1.0	11/09/09 21:35		☐
27	LNME4D	D9J310138-1	9306276	MS	1.0	11/09/09 21:38		☐
28	CCV				1.0	11/09/09 21:41		☐
29	CCB				1.0	11/09/09 21:43		☐
30	RLCV				1.0	11/09/09 21:50		☐
31	LM900B	D9J260000	9299244	MS	1.0	11/09/09 21:52		☐
32	LM900C	D9J260000	9299244	MS	1.0	11/09/09 21:55		☐
33	LM900L	D9J260000	9299244	MS	1.0	11/09/09 21:58		☐
34	LM9J9	D9J240206-1	9299244	MS	1.0	11/09/09 22:01		☐
35	~~LM9KA 2X~~	~~D9J240206-2~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:03~~		☐
36	~~LM9KC 2X~~	~~D9J240206-3~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:06~~	DNU LRD 11-10-09	☐
37	LM9KD	D9J240206-4	9299244	MS	1.0	11/09/09 22:09		☐
38	~~LM9KE 2X~~	~~D9J240206-5~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:12~~		☐
39	~~LM9KF 2X~~	~~D9J240206-6~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:14~~		☐
40	LM9KG	D9J240206-7	9299244	MS	1.0	11/09/09 22:17		☐
41	CCV				1.0	11/09/09 22:20		☐
42	CCB				1.0	11/09/09 22:23		☐
43	RLCV				1.0	11/09/09 22:26		☐
44	LM9KH	D9J240206-8	9299244	MS	1.0	11/09/09 22:28		☐
45	LM9KJ	D9J240206-9	9299244	MS	1.0	11/09/09 22:31		☐
46	LM9KK	D9J240206-10	9299244	MS	1.0	11/09/09 22:34		☐
47	LM9KL	D9J240206-11	9299244	MS	1.0	11/09/09 22:37		☐
48	LM9KP	D9J240206-13	9299244	MS	1.0	11/09/09 22:39		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM9KPP5	D9J240206	9299244		5.0	11/09/09 22:42		☐
50	LM9KPZ	D9J240206-13	9299244		1.0	11/09/09 22:45		☐
51	LM9KPS	D9J240206-13	9299244	MS	1.0	11/09/09 22:48		☐
52	LM9KPD	D9J240206-13	9299244	MS	1.0	11/09/09 22:50		☐
53	CCV				1.0	11/09/09 22:53		☐
54	CCB				1.0	11/09/09 22:56		☐
55	RLCV				1.0	11/09/09 22:59		☐
56	LM9KA	D9J240206-2	9299244	MS	1.0	11/09/09 23:01		☐
57	LM9KC	D9J240206-3	9299244	MS	1.0	11/09/09 23:04		☐
58	LM9KE	D9J240206-5	9299244	MS	1.0	11/09/09 23:07		☐
59	LM9KF	D9J240206-6	9299244	MS	1.0	11/09/09 23:10		☐
60	CCV				1.0	11/09/09 23:12		☐
61	CCB				1.0	11/09/09 23:15		☐
62	RLCV				1.0	11/09/09 23:18		☐
64	Cal Blank				1.0	11/09/09 23:23		☐
65	100 ppb				1.0	11/09/09 23:26		☐
66	CCV				1.0	11/09/09 23:29		☐
67	CCB				1.0	11/09/09 23:32		☐
68	RLCV				1.0	11/09/09 23:34		☐
69	ICSA				1.0	11/09/09 23:37		☐
70	ICSAB				1.0	11/09/09 23:40		☐
71	WASH				1.0	11/09/09 23:43		☐
72	CCV				1.0	11/09/09 23:45		☐
73	CCB				1.0	11/09/09 23:48		☐
74	RLCV				1.0	11/09/09 23:51		☐
75	LN04NB	D9K060000	9310238	04	1.0	11/09/09 23:54		☐
76	LN04NC	D9K060000	9310238	04	1.0	11/09/09 23:57		☐
77	LNEA7	D9J280172-1	9310238	04	1.0	11/10/09 00:00		☐
78	LNEA7P5	D9J280172	9310238		5.0	11/10/09 00:02		☐
79	LNEA7Z	D9J280172-1	9310238		1.0	11/10/09 00:05		☐
80	LNEA7S	D9J280172-1	9310238	04	1.0	11/10/09 00:08		☐
81	LNEA7D	D9J280172-1	9310238	04	1.0	11/10/09 00:11		☐
82	LNECN	D9J280172-2	9310238	04	1.0	11/10/09 00:13		☐
83	CCV				1.0	11/10/09 00:16		☐
84	CCB				1.0	11/10/09 00:20		☐
85	RLCV				1.0	11/10/09 00:22		☐
86	LNECV	D9J280172-3	9310238	04	1.0	11/10/09 00:25		☐
87	LNECX	D9J280172-4	9310238	04	1.0	11/10/09 00:28		☐
88	LNEC0	D9J280172-5	9310238	04	1.0	11/10/09 00:31		☐
89	LNEC1	D9J280172-6	9310238	04	1.0	11/10/09 00:34		☐
90	LNEC3	D9J280172-7	9310238	04	1.0	11/10/09 00:36		☐
91	LNEC5	D9J280172-8	9310238	04	1.0	11/10/09 00:39		☐
92	CCV				1.0	11/10/09 00:42		☐
93	CCB				1.0	11/10/09 00:45		☐
94	RLCV				1.0	11/10/09 00:48		☐
95	LNKFHB	D9J300000	9303368	04	1.0	11/10/09 00:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: **AG110909A** **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
96	LNKFHC	D9J300000	9303368	04	1.0	11/10/09 00:53		☐
97	LNC5C	D9J270250-1	9303368	04	1.0	11/10/09 00:56		☐
98	LNC5E	D9J270250-2	9303368	04	1.0	11/10/09 00:59		☐
99	LNC5F	D9J270250-3	9303368	04	1.0	11/10/09 01:02		☐
100	LNEHJ	D9J280192-1	9303368	04	1.0	11/10/09 01:05		☐
101	LNEHJP5	D9J280192	9303368		5.0	11/10/09 01:07		☐
102	LNEHJZ	D9J280192-1	9303368		1.0	11/10/09 01:10		☐
103	LNEHJS	D9J280192-1	9303368	04	1.0	11/10/09 01:13		☐
104	CCV				1.0	11/10/09 01:16		☐
105	CCB				1.0	11/10/09 01:18		☐
106	RLCV				1.0	11/10/09 01:21		☐
107	LNEHJD	D9J280192-1	9303368	04	1.0	11/10/09 01:24		☐
108	LNGXD 5X	D9J290182-1	9303368	04	5.0	11/10/09 01:27		☐
109	LNGXG 5X	D9J290182-2	9303368	04	5.0	11/10/09 01:29		☐
110	LNG17	D9J290192-1	9303368	04	1.0	11/10/09 01:32		☐
111	LNG2D	D9J290192-2	9303368	04	1.0	11/10/09 01:35		☐
112	~~LNH27 2X~~	~~D9J290314-1~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:38~~	DNU LRD 11/10/09	☐
113	~~LNH29 2X~~	~~D9J290314-2~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:40~~		☐
114	LNH3A	D9J290314-3	9303368	04	1.0	11/10/09 01:43		☐
115	CCV				1.0	11/10/09 01:46		☐
116	CCB				1.0	11/10/09 01:49		☐
117	RLCV				1.0	11/10/09 01:52		☐
118	RINSE				1.0	11/10/09 01:54		☐
119	RINSE				1.0	11/10/09 01:57		☐
121	Cal Blank				1.0	11/10/09 02:03		☐
122	100 ppb				1.0	11/10/09 02:05		☐
123	CCV				1.0	11/10/09 02:08		☐
124	CCB				1.0	11/10/09 02:11		☐
125	RLCV				1.0	11/10/09 02:14		☐
126	LNNPLBF	D9K020000	9306272	MD	1.0	11/10/09 02:16		☐
127	LNNPLCF	D9K020000	9306272	MD	1.0	11/10/09 02:19		☐
128	LNLPFF	D9J300353-2	9306272	MD	1.0	11/10/09 02:22		☐
129	LNLPFP5F	D9J300353	9306272		5.0	11/10/09 02:25		☐
130	LNLPFZF	D9J300353-2	9306272		1.0	11/10/09 02:27		☐
131	LNLPFSF	D9J300353-2	9306272	MD	1.0	11/10/09 02:30		☐
132	LNLPFDF	D9J300353-2	9306272	MD	1.0	11/10/09 02:33		☐
133	CCV				1.0	11/10/09 02:36		☐
134	CCB				1.0	11/10/09 02:38		☐
135	RLCV				1.0	11/10/09 02:41		☐
136	LNNQ5BF	D9K020000	9306285	MD	1.0	11/10/09 02:44		☐
137	LNNQ5CF	D9K020000	9306285	MD	1.0	11/10/09 02:47		☐
138	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/10/09 02:50		☐
139	LNLG3F	D9J300326-2	9306285	MD	1.0	11/10/09 02:52		☐
140	LNLG4F	D9J300326-3	9306285	MD	1.0	11/10/09 02:55		☐
141	LNLHHF	D9J300329-1	9306285	MD	1.0	11/10/09 02:58		☐
142	LNLHMF	D9J300329-2	9306285	MD	1.0	11/10/09 03:01		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
143	CCV				1.0	11/10/09 03:03		☐
144	CCB				1.0	11/10/09 03:06		☐
145	RLCV				1.0	11/10/09 03:09		☐
146	LNLHPF	D9J300329-3	9306285	MD	1.0	11/10/09 03:12		☐
147	LNLJJF	D9J300340-1	9306285	MD	1.0	11/10/09 03:15		☐
148	LNLJJP5F	D9J300340	9306285		5.0	11/10/09 03:17		☐
149	LNLJJZF	D9J300340-1	9306285		1.0	11/10/09 03:20		☐
150	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/10/09 03:23		☐
151	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/10/09 03:25		☐
152	LNLJMF	D9J300340-2	9306285	MD	1.0	11/10/09 03:28		☐
153	CCV				1.0	11/10/09 03:31		☐
154	CCB				1.0	11/10/09 03:34		☐
155	RLCV				1.0	11/10/09 03:37		☐
156	LN0Q4BF	D9K060000	9310095	MD	1.0	11/10/09 03:39		☐
157	LN0Q4CF	D9K060000	9310095	MD	1.0	11/10/09 03:42		☐
158	LN0Q4LF	D9K060000	9310095	MD	1.0	11/10/09 03:45		☐
159	LNR5CF	D9K040450-3	9310095	MD	1.0	11/10/09 03:48		☐
160	LNR5CP5F	D9K040450	9310095		5.0	11/10/09 03:50		☐
161	LNR5CZF	D9K040450-3	9310095		1.0	11/10/09 03:53		☐
162	CCV				1.0	11/10/09 03:56		☐
163	CCB				1.0	11/10/09 03:59		☐
164	RLCV				1.0	11/10/09 04:01		☐
165	RINSE				1.0	11/10/09 04:04		☐
166	RINSE				1.0	11/10/09 04:07		☐
168	Cal Blank				1.0	11/10/09 04:12		☐
169	100 ppb				1.0	11/10/09 04:15		☐
170	CCV				1.0	11/10/09 04:18		☐
171	CCB				1.0	11/10/09 04:21		☐
172	RLCV				1.0	11/10/09 04:23		☐
173	LN16EB	D9K060000	9310417	04	2.5	11/10/09 04:26		☐
174	LN16EC	D9K060000	9310417	04	2.5	11/10/09 04:29		☐
175	LN1FW	D9K060478-7	9310417	04	2.5	11/10/09 04:32		☐
176	LN1LX	D9K060478-17	9310417	04	2.5	11/10/09 04:35		☐
177	LN1MD	D9K060478-19	9310417	04	2.5	11/10/09 04:37		☐
178	LN1MH	D9K060478-21	9310417	04	2.5	11/10/09 04:40		☐
179	LN1MHS	D9K060478-21	9310417	04	2.5	11/10/09 04:43		☐
180	LN1MHD	D9K060478-21	9310417	04	2.5	11/10/09 04:46		☐
181	CCV				1.0	11/10/09 04:48		☐
182	CCB				1.0	11/10/09 04:51		☐
183	RLCV				1.0	11/10/09 04:54		☐
184	LN1T6BF	D9K060000	9310368	87	2.5	11/10/09 04:57		☐
185	LN1T6CF	D9K060000	9310368	87	2.5	11/10/09 05:00		☐
186	LNVQWF	D9K040610-1	9310368	87	2.5	11/10/09 05:02		☐
187	LNVRHF	D9K040610-3	9310368	87	2.5	11/10/09 05:05		☐
188	LNVRLF	D9K040610-5	9310368	87	2.5	11/10/09 05:08		☐
189	LNVRLSF	D9K040610-5	9310368	87	2.5	11/10/09 05:11		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst:** LRD

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
190	LNVRLDF	D9K040610-5	9310368	87	2.5	11/10/09 05:14		
191	LNX48F	D9K050627-2	9310368	87	2.5	11/10/09 05:16		
192	LNX5JF	D9K050627-6	9310368	87	2.5	11/10/09 05:19		
193	CCV				1.0	11/10/09 05:22		
194	CCB				1.0	11/10/09 05:25		
195	RLCV				1.0	11/10/09 05:27		
196	LN4QNB	D9K090000	9313106	04	2.5	11/10/09 05:30		
197	LN4QNC	D9K090000	9313106	04	2.5	11/10/09 05:33		
198	LN314	D9K070460-2	9313106	04	2.5	11/10/09 05:36		
199	LN3L7 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:39		
200	LN3L7S 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:41		
201	LN3L7D 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:44		
202	CCV				1.0	11/10/09 05:47		
203	CCB				1.0	11/10/09 05:50		
204	RLCV				1.0	11/10/09 05:52		
205	LN0PDBF	D9K060000	9310068	PD	2.5	11/10/09 05:55		
206	LN0PDCF	D9K060000	9310068	PD	2.5	11/10/09 05:58		
207	LNT1RF	D9K040539-2	9310068	PD	2.5	11/10/09 06:01		
208	LNT15F	D9K040539-3	9310068	PD	2.5	11/10/09 06:04	DNU	
209	LNT15SF	D9K040539-3	9310068	PD	2.5	11/10/09 06:06		
210	LNT15DF	D9K040539-3	9310068	PD	2.5	11/10/09 06:09	LRD	
211	LNT2CF	D9K040539-4	9310068	PD	2.5	11/10/09 06:12	11-10-2009	
212	LNPC2F	D9K020476-1	9310068	PD	2.5	11/10/09 06:15		
213	LNPC4F	D9K020476-2	9310068	PD	2.5	11/10/09 06:18		
214	CCV				1.0	11/10/09 06:20		
215	CCB				1.0	11/10/09 06:23		
216	RLCV				1.0	11/10/09 06:26		
217	RINSE				1.0	11/10/09 06:29		
218	RINSE				1.0	11/10/09 06:31		
220	Cal Blank				1.0	11/10/09 06:37		
221	100 ppb				1.0	11/10/09 06:40		
222	CCV				1.0	11/10/09 06:42		
223	CCB				1.0	11/10/09 06:45		
224	RLCV				1.0	11/10/09 06:48		
225	LNW1QB	D9K050000	9309222	MS	1.0	11/10/09 06:51		
226	LNW1QC	D9K050000	9309222	MS	1.0	11/10/09 06:53		
227	LNR42	D9K040449-1	9309222	MS	1.0	11/10/09 06:56		
228	LNR42P5	D9K040449	9309222		5.0	11/10/09 06:59		
229	LNR42Z	D9K040449-1	9309222		1.0	11/10/09 07:02		
230	LNR42S	D9K040449-1	9309222	MS	1.0	11/10/09 07:04		
231	LNR42D	D9K040449-1	9309222	MS	1.0	11/10/09 07:07		
232	CCV				1.0	11/10/09 07:10		
233	CCB				1.0	11/10/09 07:13		
234	RLCV				1.0	11/10/09 07:16		
235	LNR48	D9K040449-2	9309222	MS	1.0	11/10/09 07:18		
236	LNR5E	D9K040449-3	9309222	MS	1.0	11/10/09 07:21		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
237	LNR5G	D9K040449-4	9309222	MS	1.0	11/10/09 07:24		☐
238	LNP8M	D9K030460-1	9309222	MS	1.0	11/10/09 07:27		☐
239	LNP8X	D9K030460-2	9309222	MS	1.0	11/10/09 07:30		☐
240	LNP81	D9K030460-3	9309222	MS	1.0	11/10/09 07:32		☐
241	CCV				1.0	11/10/09 07:35		☐
242	CCB				1.0	11/10/09 07:38		☐
243	RLCV				1.0	11/10/09 07:41		☐
244	LNN6NB	D9K020000	9306426	MS	1.0	11/10/09 07:44		☐
245	LNN6NC	D9K020000	9306426	MS	1.0	11/10/09 07:46		☐
246	LNN6NL	D9K020000	9306426	MS	1.0	11/10/09 07:49		☐
247	LNM4D	D9J310189-1	9306426	MS	1.0	11/10/09 07:52		☐
248	LNM4DP5	D9J310189	9306426		5.0	11/10/09 07:55		☐
249	LNM4DZ	D9J310189-1	9306426		1.0	11/10/09 07:58		☐
250	LNM4E	D9J310189-2	9306426	MS	1.0	11/10/09 08:00		☐
251	LNM5E	D9J310191-14	9306426	MS	1.0	11/10/09 08:03		☐
252	CCV				1.0	11/10/09 08:06		☐
253	CCB				1.0	11/10/09 08:09		☐
254	RLCV				1.0	11/10/09 08:11		☐
255	LNRQVB	D9K040000	9308149	MS	1.0	11/10/09 08:14		☐
256	LNRQVC	D9K040000	9308149	MS	1.0	11/10/09 08:17		☐
257	LNQ0L	D9K030552-1	9308149	MS	1.0	11/10/09 08:20		☐
258	LNQ0LP5	D9K030552	9308149		5.0	11/10/09 08:22		☐
259	LNQ0LZ	D9K030552-1	9308149		1.0	11/10/09 08:25		☐
260	LNQ0LS	D9K030552-1	9308149	MS	1.0	11/10/09 08:28		☐
261	LNQ0LD	D9K030552-1	9308149	MS	1.0	11/10/09 08:30		☐
262	LNQ0R	D9K030554-1	9308149	MS	1.0	11/10/09 08:33		☐
263	LNQ0T	D9K030554-2	9308149	MS	1.0	11/10/09 08:36		☐
264	CCV				1.0	11/10/09 08:39		☐
265	CCB				1.0	11/10/09 08:41		☐
266	RLCV				1.0	11/10/09 08:44		☐
267	LNWG5BF	D9K050000	9309184	87	2.5	11/10/09 08:47		☐
268	LNWG5CF	D9K050000	9309184	87	2.5	11/10/09 08:50		☐
269	LNT4AF	D9K040553-1	9309184	87	2.5	11/10/09 08:52		☐
270	LNT42F	D9K040553-2	9309184	87	2.5	11/10/09 08:55		☐
271	LNT42SF	D9K040553-2	9309184	87	2.5	11/10/09 08:58		☐
272	LNT42DF	D9K040553-2	9309184	87	2.5	11/10/09 09:01		☐
273	LNT5HF	D9K040553-3	9309184	87	2.5	11/10/09 09:03		☐
274	CCV				1.0	11/10/09 09:06		☐
275	CCB				1.0	11/10/09 09:09		☐
276	RLCV				1.0	11/10/09 09:12		☐
277	LNT5LF	D9K040553-4	9309184	87	2.5	11/10/09 09:14		☐
278	LNT5VF	D9K040553-5	9309184	87	2.5	11/10/09 09:17		☐
279	LNT51F	D9K040553-6	9309184	87	2.5	11/10/09 09:20		☐
280	LNT55F	D9K040553-7	9309184	87	2.5	11/10/09 09:23		☐
281	LNT57F	D9K040553-8	9309184	87	2.5	11/10/09 09:26		☐
282	LNT58F	D9K040553-9	9309184	87	2.5	11/10/09 09:28		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
283	LNT59F	D9K040553-10	9309184	87	2.5	11/10/09 09:31		☐
284	CCV				1.0	11/10/09 09:34		☐
285	CCB				1.0	11/10/09 09:37		☐
286	RLCV				1.0	11/10/09 09:39		☐
287	D9J270274-0				1.0	11/10/09 09:42		☐
288	CCV				1.0	11/10/09 09:45		☐
289	CCB				1.0	11/10/09 09:48		☐
290	RLCV				1.0	11/10/09 09:50		☐

TestAmerica Denver

Standards Preparation Logbook Record

Nov-10-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6858-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-09-2009
Date Expires(1): 05-09-2010 (6 Months)
Date Expires(2): 05-09-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6857-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6859-09, ICP-MS CAL STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

STD6860-09, ICP-MS CCV STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500

Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

STD6861-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6859-09, ICP-MS CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010

Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010

STD6862-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6861-09, ICP-MS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002

STD6863-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000

As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6864-09, ICP-MS LR STD Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000

Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6865-09, ICP-MS ICV STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

STD6866-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6867-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD6469-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000

Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD6470-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

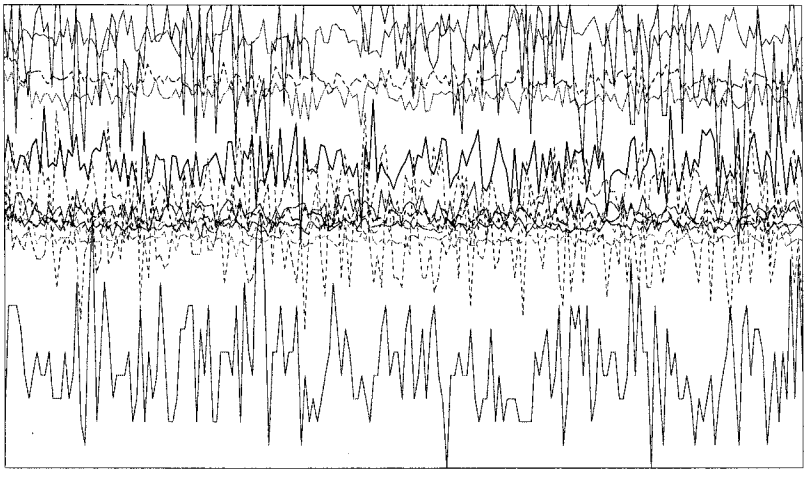
Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

File AG1109094

Reviewed By: LRD 11/10/2009

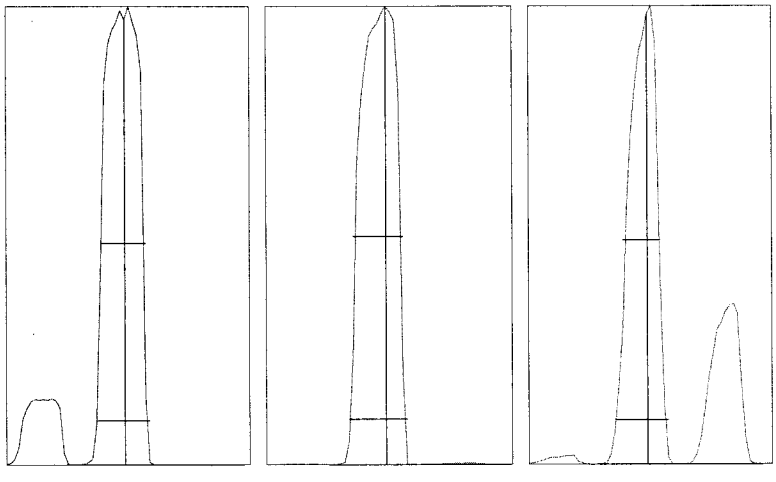
Tune Report

Tune File : NORM.U
Comment : AG110909



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.475%
Doubly Charged:	70/140	1.275%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2614.0	2789.3	3.67	0.80
7	20,000	18632.0	18633.8	3.00	0.50
59	20,000	15677.0	16033.1	2.87	1.00
63	50	35.0	45.6	15.88	0.70
70	500	313.0	327.1	7.08	0.40
75	20	4.0	4.4	46.88	0.60
78	200	109.0	120.3	9.42	0.60
89	50,000	26589.0	26185.6	2.22	1.00
115	50,000	24518.0	24639.8	1.99	1.10
118	100	33.0	48.4	15.31	0.80
137	5,000	2637.0	2712.3	2.91	1.20
205	20,000	16431.0	16723.1	2.17	1.70
238	50,000	25920.0	26106.3	1.87	2.50
156/140	2	1.499%	1.485%	7.38	
70/140	2	1.311%	1.332%	7.11	



m/z:	7	89	205
Height:	18,699	26,853	17,221
Axis:	7.00	89.00	205.00
W-50%:	0.55	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:15

Tune Report

Tune File : NORM.U
Comment : AG110909

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	1600	W	Extract 1	0	V	AMU Gain	134	
RF Matching	1.7	V	Extract 2	-170	V	AMU Offset	125	
Smpl Depth	8	mm	Omega Bias-ce	-30	V	Axis Gain	1.0007	
Torch-H	-0.8	mm	Omega Lens-ce	1.4	V	Axis Offset	-0.03	
Torch-V	-0.3	mm	Cell Entrance	-30	V	QP Bias	-3	V
Carrier Gas	0.81	L/min	QP Focus	7	V			
Makeup Gas	0.23	L/min	Cell Exit	-30	V	===Detector Parameters===		
Optional Gas	---	%				Discriminator	8	mV
Nebulizer Pump	0.1	rps	===Octopole Parameters===			Analog HV	1770	V
Sample Pump	---	rps	OctP RF	180	V	Pulse HV	1480	V
S/C Temp	2	degC	OctP Bias	-18	V			

===Reaction Cell===

Reaction Mode	OFF							
H2 Gas	0	mL/min	He Gas	0	mL/min	Optional Gas	---	%

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:18

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:15 pm

Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055201
9	Be	0.058738
23	Na	0.063579
24	Mg	0.064637
27	Al	0.065724
39	K	0.065936
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066938
52	Cr	0.068029
53	(Cr)	Sensitivity too low
55	Mn	0.069052
57	Fe	Sensitivity too low
59	Co	0.070056
60	Ni	Sensitivity too low
63	Cu	Sensitivity too low
66	Zn	Sensitivity too low
72	Ge	0.069902
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	Sensitivity too low
98	(Mo)	0.071630
99	(Mo)	Sensitivity too low
105	Pd	Sensitivity too low
106	(Cd)	0.071534
107	Ag	Sensitivity too low
108	(Cd)	0.071984
111	Cd	Sensitivity too low
115	In	0.068812
118	Sn	0.070115
121	Sb	0.070721
137	Ba	Sensitivity too low
165	Ho	0.069269
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071349
206	(Pb)	0.070737
207	(Pb)	0.071002
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:21 pm

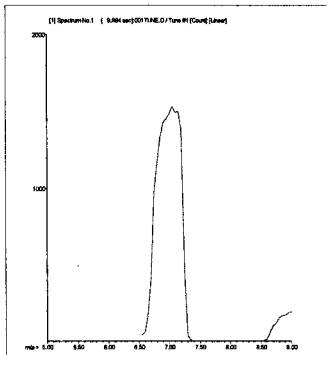
Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055259
9	Be	0.058421
23	Na	0.062917
24	Mg	0.063700
27	Al	0.064930
39	K	0.065662
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066016
52	Cr	0.066969
53	(Cr)	Sensitivity too low
55	Mn	0.067116
57	Fe	Sensitivity too low
59	Co	0.068255
60	Ni	0.068756
63	Cu	0.069073
66	Zn	0.068997
72	Ge	0.068697
75	As	0.069000
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.071094
98	(Mo)	0.069583
99	(Mo)	0.069992
105	Pd	0.069782
106	(Cd)	0.069206
107	Ag	Sensitivity too low
108	(Cd)	0.069821
111	Cd	0.069450
115	In	0.068812
118	Sn	0.068484
121	Sb	0.068561
137	Ba	0.070024
165	Ho	0.068599
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.068219
206	(Pb)	0.067897
207	(Pb)	0.068227
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

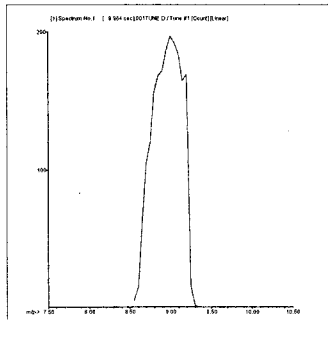
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\001TUNE.D
Date Acquired: Nov 9 2009 08:26 pm
Acq. Method: tun_isis.M
Operator: LRD
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	14906	14929	14975	14838	14916	14868	**0.36**	5.00	
9 Be	1915	1908	1914	1983	1809	1957	**3.47**	5.00	RSDfail Pass LRD 11-04-09
24 Mg	8679	8669	8688	8662	8744	8633	**0.48**	5.00	
59 Co	35756	36567	35777	35985	34517	35933	**2.11**	5.00	
115 In	692825	688204	694293	692146	693236	696245	**0.43**	5.00	
208 Pb	51450	52572	50561	51250	51590	51275	**1.42**	5.00	
238 U	109376	111991	110522	109499	107788	107079	**1.83**	5.00	



7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:

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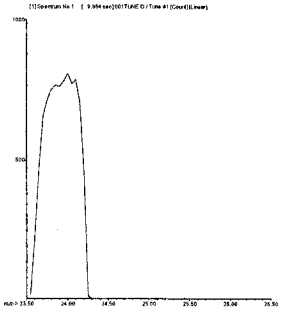
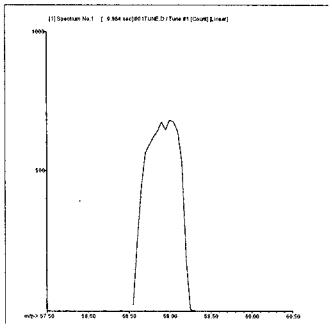
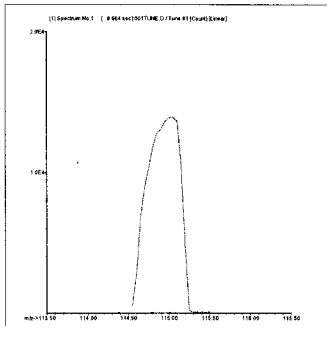


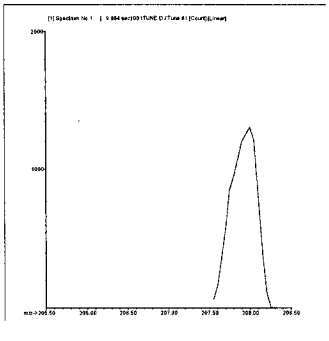
24 Mg
Mass Calib.
Actual: 24.00
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



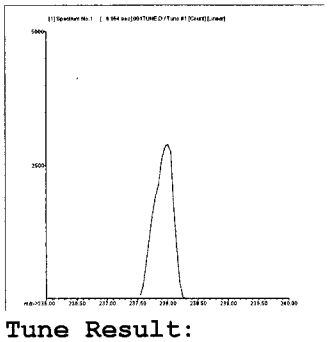
59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



208 Pb
Mass Calib.
Actual: 207.95
Required: 207.90 - 208.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:



238 U
Mass Calib.
Actual: 237.95
Required: 237.90 - 238.10
Flag:
Peak Width
Actual: 0.50
Required: 0.90
Flag:

Tune Result: ~~Fail~~ Pass

LRD 11/09/09

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\002CALB.D\002CALB.D#
Date Acquired: Nov 9 2009 08:29 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

D6/11/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	577	3.61
52	Cr	72	1	1697	4.80
55	Mn	72	1	263	10.96
59	Co	72	1	17	34.64
60	Ni	72	1	63	32.87
63	Cu	72	1	100	43.59
66	Zn	72	1	131	19.98
75	As	72	1	31	32.13
78	Se	72	1	153	20.97
95	Mo	72	1	23	24.74
107	Ag	115	1	7	86.60
111	Cd	115	1	-4	15.03
118	Sn	115	1	123	26.06
121	Sb	115	1	43	42.83
137	Ba	115	1	10	33.33
205	Tl	165	1	341	20.90
208	Pb	165	1	206	7.66
232	Th	165	1	130	26.65
238	U	165	1	97	23.89

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	307725	0.62
45	Sc	1	863740	1.75
72	Ge	1	419764	0.40
115	In	1	1321877	2.10
165	Ho	1	2596118	0.41

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#
Date Acquired: Nov 9 2009 08:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	513	5.95
52	Cr	72	1	1570	2.30
55	Mn	72	1	337	11.25
59	Co	72	1	20	50.00
60	Ni	72	1	63	48.24
63	Cu	72	1	120	44.10
66	Zn	72	1	137	9.29
75	As	72	1	35	18.20
78	Se	72	1	97	23.89
95	Mo	72	1	20	50.00
107	Ag	115	1	3	173.21
111	Cd	115	1	-4	393.57
118	Sn	115	1	297	22.95
121	Sb	115	1	39	26.19
137	Ba	115	1	12	41.66
205	Tl	165	1	221	20.47
208	Pb	165	1	199	12.35
232	Th	165	1	113	22.21
238	U	165	1	77	26.09

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	316659	2.14
45	Sc	1	888972	0.50
72	Ge	1	425816	0.47
115	In	1	1335258	0.87
165	Ho	1	2617754	0.65

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 9 2009 08:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:33 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	38609	1.25
51	V	72	1	510366	0.88
52	Cr	72	1	524956	1.26
55	Mn	72	1	613525	1.41
59	Co	72	1	633231	0.83
60	Ni	72	1	140397	0.74
63	Cu	72	1	332088	1.69
66	Zn	72	1	83275	0.84
75	As	72	1	64491	1.06
78	Se	72	1	13670	3.37
95	Mo	72	1	194872	1.16
107	Ag	115	1	568219	1.98
111	Cd	115	1	121298	1.44
118	Sn	115	1	331811	1.14
121	Sb	115	1	398020	0.91
137	Ba	115	1	158724	1.91
205	Tl	165	1	1472389	1.01
208	Pb	165	1	2154560	0.36
232	Th	165	1	2284596	1.76
238	U	165	1	2432923	0.19

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	317523	0.04	316659	100.3	30 - 120	
45	Sc	1	902480	1.79	888972	101.5	30 - 120	
72	Ge	1	417361	1.39	425816	98.0	30 - 120	
115	In	1	1332995	0.81	1335258	99.8	30 - 120	
165	Ho	1	2606293	0.43	2617754	99.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 9 2009 08:37 pm
Operator: LRD
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	39.82	ppb	0.59	40	99.6	90 - 110	
51 V	72	1	40.01	ppb	0.57	40	100.0	90 - 110	
52 Cr	72	1	40.10	ppb	1.04	40	100.3	90 - 110	
55 Mn	72	1	40.83	ppb	1.35	40	102.1	90 - 110	
59 Co	72	1	39.98	ppb	2.35	40	100.0	90 - 110	
60 Ni	72	1	39.48	ppb	1.75	40	98.7	90 - 110	
63 Cu	72	1	39.44	ppb	0.71	40	98.6	90 - 110	
66 Zn	72	1	40.87	ppb	1.27	40	102.2	90 - 110	
75 As	72	1	40.05	ppb	0.47	40	100.1	90 - 110	
78 Se	72	1	40.20	ppb	7.43	40	100.5	90 - 110	
95 Mo	72	1	39.50	ppb	1.39	40	98.8	90 - 110	
107 Ag	115	1	40.28	ppb	1.09	40	100.7	90 - 110	
111 Cd	115	1	40.39	ppb	2.54	40	101.0	90 - 110	
118 Sn	115	1	39.95	ppb	2.27	40	99.9	90 - 110	
121 Sb	115	1	40.57	ppb	2.67	40	101.4	90 - 110	
137 Ba	115	1	40.04	ppb	2.19	40	100.1	90 - 110	
205 Tl	165	1	40.86	ppb	1.20	40	102.2	90 - 110	
208 Pb	165	1	40.91	ppb	0.95	40	102.3	90 - 110	
232 Th	165	1	41.04	ppb	0.97	40	102.6	90 - 110	
238 U	165	1	40.74	ppb	0.82	40	101.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	320321	1.05	316659	101.2	30 - 120	
45 Sc	1	893394	1.16	888972	100.5	30 - 120	
72 Ge	1	421619	1.04	425816	99.0	30 - 120	
115 In	1	1339730	1.68	1335258	100.3	30 - 120	
165 Ho	1	2633489	0.36	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\006WASH.D\006WASH.D#
Date Acquired: Nov 9 2009 08:40 pm
Operator: LRD
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.977 ppb	23.08	1.30	
51 V	72	1	5.088 ppb	3.63	6.50	
52 Cr	72	1	2.010 ppb	2.80	2.60	
55 Mn	72	1	1.052 ppb	2.54	1.30	
59 Co	72	1	1.026 ppb	2.82	1.30	
60 Ni	72	1	2.053 ppb	3.73	2.60	
63 Cu	72	1	1.949 ppb	1.86	2.60	
66 Zn	72	1	10.200 ppb	0.76	13.00	
75 As	72	1	4.975 ppb	1.56	6.50	
78 Se	72	1	5.397 ppb	12.87	6.50	
95 Mo	72	1	2.077 ppb	3.08	2.60	
107 Ag	115	1	5.417 ppb	1.62	6.50	
111 Cd	115	1	0.994 ppb	8.21	1.30	
118 Sn	115	1	10.400 ppb	2.50	13.00	
121 Sb	115	1	2.182 ppb	1.55	2.60	
137 Ba	115	1	1.043 ppb	2.05	1.30	
205 Tl	165	1	1.340 ppb	3.63	1.30	
208 Pb	165	1	1.058 ppb	2.34	1.30	
232 Th	165	1	2.228 ppb	2.96	2.60	
238 U	165	1	1.119 ppb	1.48	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	327943	1.12	316659	103.6	30 - 120	
45 Sc	1	927967	1.66	888972	104.4	30 - 120	
72 Ge	1	437192	0.23	425816	102.7	30 - 120	
115 In	1	1360935	0.96	1335258	101.9	30 - 120	
165 Ho	1	2638135	1.11	2617754	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 9 2009 08:43 pm
Operator: LRD
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	-0.03	ppb	24.58	1.00	
52 Cr	72	1	0.01	ppb	375.24	1.00	
55 Mn	72	1	0.01	ppb	99.37	1.00	
59 Co	72	1	0.00	ppb	102.49	1.00	
60 Ni	72	1	0.06	ppb	11.55	1.00	
63 Cu	72	1	0.03	ppb	95.69	1.00	
66 Zn	72	1	0.75	ppb	6.06	1.00	
75 As	72	1	-0.01	ppb	401.95	1.00	
78 Se	72	1	0.14	ppb	223.63	1.00	
95 Mo	72	1	0.01	ppb	53.61	1.00	
107 Ag	115	1	0.01	ppb	41.41	1.00	
111 Cd	115	1	0.01	ppb	115.64	1.00	
118 Sn	115	1	0.25	ppb	23.38	1.00	
121 Sb	115	1	0.07	ppb	21.20	1.00	
137 Ba	115	1	0.06	ppb	14.45	1.00	
205 Tl	165	1	0.04	ppb	19.24	1.00	
208 Pb	165	1	0.01	ppb	22.30	1.00	
232 Th	165	1	0.02	ppb	1.72	1.00	
238 U	165	1	0.00	ppb	21.71	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331180	1.57	316659	104.6	30 - 120	
45 Sc	1	905311	1.15	888972	101.8	30 - 120	
72 Ge	1	441723	1.46	425816	103.7	30 - 120	
115 In	1	1364402	1.70	1335258	102.2	30 - 120	
165 Ho	1	2652248	1.61	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\008RLST.D\008RLST.D#
Date Acquired: Nov 9 2009 08:46 pm
Operator: LRD
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.99	ppb	9.34	1	99.0	50 - 150	
51 V	72	1	0.92	ppb	9.25	1	91.9	50 - 150	
52 Cr	72	1	1.00	ppb	9.84	1	99.9	50 - 150	
55 Mn	72	1	1.01	ppb	0.70	1	100.8	50 - 150	
59 Co	72	1	0.98	ppb	2.45	1	97.7	50 - 150	
60 Ni	72	1	1.03	ppb	5.51	1	103.0	50 - 150	
63 Cu	72	1	1.05	ppb	5.54	1	104.6	50 - 150	
66 Zn	72	1	10.39	ppb	0.48	10	103.9	50 - 150	
75 As	72	1	1.05	ppb	4.38	1	105.1	50 - 150	
78 Se	72	1	1.23	ppb	32.18	1	123.2	50 - 150	
95 Mo	72	1	1.01	ppb	7.94	1	101.0	50 - 150	
107 Ag	115	1	1.01	ppb	4.94	1	101.1	50 - 150	
111 Cd	115	1	1.05	ppb	5.12	1	104.5	50 - 150	
118 Sn	115	1	10.46	ppb	2.14	10	104.6	50 - 150	
121 Sb	115	1	1.03	ppb	4.27	1	103.4	50 - 150	
137 Ba	115	1	1.04	ppb	2.63	1	104.3	50 - 150	
205 Tl	165	1	1.11	ppb	1.97	1	110.8	50 - 150	
208 Pb	165	1	1.05	ppb	1.92	1	105.4	50 - 150	
232 Th	165	1	1.04	ppb	1.88	1	103.6	50 - 150	
238 U	165	1	1.07	ppb	2.22	1	107.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	332529	1.31	316659	105.0	30 - 120	
45 Sc	1	924723	1.34	888972	104.0	30 - 120	
72 Ge	1	440304	0.81	425816	103.4	30 - 120	
115 In	1	1361149	0.37	1335258	101.9	30 - 120	
165 Ho	1	2647952	0.34	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 9 2009 08:48 pm
Operator: LRD
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.16	ppb	9.52	0	82.7	80 - 120	
51 V	72	1	0.15	ppb	12.92	0	84.2	80 - 120	
52 Cr	72	1	0.17	ppb	11.54	0	87.5	80 - 120	
55 Mn	72	1	0.19	ppb	4.01	0	92.3	80 - 120	
59 Co	72	1	0.20	ppb	10.00	0	101.6	80 - 120	
60 Ni	72	1	0.17	ppb	39.79	0	82.5	80 - 120	
63 Cu	72	1	0.21	ppb	8.40	0	98.5	80 - 120	
66 Zn	72	1	1.88	ppb	3.20	2	90.5	80 - 120	
75 As	72	1	0.18	ppb	4.43	0	84.9	80 - 120	
78 Se	72	1	0.34	ppb	52.18	0	137.7	80 - 120	
95 Mo	72	1	0.20	ppb	20.48	0	97.8	80 - 120	
107 Ag	115	1	0.19	ppb	11.02	0	95.4	80 - 120	
111 Cd	115	1	0.18	ppb	8.60	0	87.8	80 - 120	
118 Sn	115	1	2.07	ppb	1.60	2	98.7	80 - 120	
121 Sb	115	1	0.24	ppb	8.81	0	117.2	80 - 120	
137 Ba	115	1	0.17	ppb	15.49	0	82.0	80 - 120	
205 Tl	165	1	0.21	ppb	3.14	0	95.1	80 - 120	
208 Pb	165	1	0.21	ppb	4.91	0	97.5	80 - 120	
232 Th	165	1	0.21	ppb	2.80	0	102.7	80 - 120	
238 U	165	1	0.21	ppb	1.79	0	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334891	0.91	316659	105.8	30 - 120	
45 Sc	1	926450	1.15	888972	104.2	30 - 120	
72 Ge	1	444347	1.22	425816	104.4	30 - 120	
115 In	1	1347595	1.10	1335258	100.9	30 - 120	
165 Ho	1	2645674	1.06	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 9 2009 08:51 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.18	3600	
51 V	72	1	-0.05	-0.05	ppb	4.45	3600	
52 Cr	72	1	0.03	0.03	ppb	21.71	3600	
55 Mn	72	1	-0.01	-0.01	ppb	107.83	3600	
59 Co	72	1	0.00	0.00	ppb	91.53	3600	
60 Ni	72	1	-0.01	-0.01	ppb	120.90	3600	
63 Cu	72	1	0.00	0.00	ppb	249.88	3600	
66 Zn	72	1	0.21	0.21	ppb	4.91	3600	
75 As	72	1	-0.01	-0.01	ppb	276.53	3600	
78 Se	72	1	2.30	2.30	ppb	3.47	3600	
95 Mo	72	1	0.00	0.00	ppb	270.91	3600	
107 Ag	115	1	0.01	0.01	ppb	12.59	3600	
111 Cd	115	1	0.01	0.01	ppb	40.90	3600	
118 Sn	115	1	0.03	0.03	ppb	42.36	3600	
121 Sb	115	1	0.02	0.02	ppb	52.41	3600	
137 Ba	115	1	0.00	0.00	ppb	159.45	3600	
205 Tl	165	1	0.00	0.00	ppb	223.71	3600	
208 Pb	165	1	0.00	0.00	ppb	93.52	3600	
232 Th	165	1	0.01	0.01	ppb	41.10	1000	
238 U	165	1	0.00	0.00	ppb	39.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336598	0.66	316659	106.3	30 - 120	
45 Sc	1	916084	0.54	888972	103.0	30 - 120	
72 Ge	1	444955	0.00	425816	104.5	30 - 120	
115 In	1	1367875	0.83	1335258	102.4	30 - 120	
165 Ho	1	2646991	0.40	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 9 2009 08:54 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.09 ppb	3.15	1.00	
52 Cr	72	1	1.97 ppb	9.78	1.00	
55 Mn	72	1	2.81 ppb	1.66	1.00	
59 Co	72	1	0.10 ppb	6.63	1.00	
60 Ni	72	1	1.02 ppb	13.74	1.00	
63 Cu	72	1	0.53 ppb	7.97	1.00	
66 Zn	72	1	3.94 ppb	2.38	10.00	
75 As	72	1	0.28 ppb	11.27	1.00	
78 Se	72	1	0.38 ppb	63.23	1.00	
95 Mo	72	1	1936.00 ppb	0.91	2000.00	
107 Ag	115	1	0.03 ppb	12.20	1.00	
111 Cd	115	1	0.30 ppb	66.71	1.00	
118 Sn	115	1	0.12 ppb	33.50	10.00	
121 Sb	115	1	0.92 ppb	2.59	1.00	
137 Ba	115	1	0.03 ppb	33.26	1.00	
205 Tl	165	1	0.03 ppb	11.11	1.00	
208 Pb	165	1	1.00 ppb	2.07	1.00	
232 Th	165	1	0.02 ppb	12.13	1.00	
238 U	165	1	0.00 ppb	5.79	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	239339	0.28	316659	75.6	30 - 120	
45 Sc	1	700629	1.42	888972	78.8	30 - 120	
72 Ge	1	343237	0.37	425816	80.6	30 - 120	
115 In	1	1048448	1.55	1335258	78.5	30 - 120	
165 Ho	1	2104424	0.97	2617754	80.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 9 2009 08:57 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	109.40	3.64	100	109.4	80 - 120	
51 V	72	1	99.64	0.20	100	99.6	80 - 120	
52 Cr	72	1	97.24	0.93	100	97.2	80 - 120	
55 Mn	72	1	98.22	0.64	100	98.2	80 - 120	
59 Co	72	1	92.77	2.10	100	92.8	80 - 120	
60 Ni	72	1	89.04	1.65	100	89.0	80 - 120	
63 Cu	72	1	86.53	0.30	100	86.5	80 - 120	
66 Zn	72	1	96.58	0.54	100	96.6	80 - 120	
75 As	72	1	101.00	1.32	100	101.0	80 - 120	
78 Se	72	1	100.00	0.62	100	100.0	80 - 120	
95 Mo	72	1	2093.00	0.96	2100	99.7	80 - 120	
107 Ag	115	1	89.66	3.28	100	89.7	80 - 120	
111 Cd	115	1	95.05	1.99	100	95.1	80 - 120	
118 Sn	115	1	100.40	1.69	100	100.4	80 - 120	
121 Sb	115	1	103.00	1.30	100	103.0	80 - 120	
137 Ba	115	1	101.30	1.03	100	101.3	80 - 120	
205 Tl	165	1	94.31	0.93	100	94.3	80 - 120	
208 Pb	165	1	93.76	0.89	100	93.8	80 - 120	
232 Th	165	1	101.30	1.54	100	101.3	80 - 120	
238 U	165	1	99.94	0.63	100	99.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	233202	3.01	316659	73.6	30 - 120	
45 Sc	1	711798	0.20	888972	80.1	30 - 120	
72 Ge	1	338298	0.97	425816	79.4	30 - 120	
115 In	1	1075320	0.68	1335258	80.5	30 - 120	
165 Ho	1	2161438	0.51	2617754	82.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 9 2009 08:59 pm
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.01	ppb	173.15	0	4.2	80 - 120	
51 V	72	1	0.02	ppb	35.98	0	10.9	80 - 120	
52 Cr	72	1	0.03	ppb	89.50	0	13.7	80 - 120	
55 Mn	72	1	-0.01	ppb	113.19	0	-3.4	80 - 120	
59 Co	72	1	0.00	ppb	1352.30	0	-0.1	80 - 120	
60 Ni	72	1	-0.02	ppb	102.45	0	-9.9	80 - 120	
63 Cu	72	1	0.00	ppb	649.06	0	0.6	80 - 120	
66 Zn	72	1	0.04	ppb	63.69	2	1.7	80 - 120	
75 As	72	1	-0.01	ppb	61.99	0	-3.9	80 - 120	
78 Se	72	1	0.39	ppb	99.84	0	156.3	80 - 120	
95 Mo	72	1	0.80	ppb	31.54	0	396.5	80 - 120	
107 Ag	115	1	0.01	ppb	53.68	0	3.6	80 - 120	
111 Cd	115	1	0.00	ppb	41.35	0	1.7	80 - 120	
118 Sn	115	1	0.00	ppb	#######	2	0.0	80 - 120	
121 Sb	115	1	0.11	ppb	20.17	0	52.7	80 - 120	
137 Ba	115	1	0.00	ppb	105.76	0	-0.5	80 - 120	
205 Tl	165	1	-0.01	ppb	3.09	0	-2.6	80 - 120	
208 Pb	165	1	0.00	ppb	49.94	0	0.7	80 - 120	
232 Th	165	1	0.03	ppb	6.82	0	13.2	80 - 120	
238 U	165	1	0.01	ppb	15.94	0	6.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331840	0.43	316659	104.8	30 - 120	
45 Sc	1	927075	1.00	888972	104.3	30 - 120	
72 Ge	1	454961	0.83	425816	106.8	30 - 120	
115 In	1	1407675	0.48	1335258	105.4	30 - 120	
165 Ho	1	2715373	0.43	2617754	103.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\014 LR.D\014 LR.D#
Date Acquired: Nov 9 2009 09:02 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	989.70 ppb	1.24	1000	99.0	90 - 110	
51 V	72	1	962.50 ppb	1.62	1000	96.3	90 - 110	
52 Cr	72	1	955.40 ppb	1.40	1000	95.5	90 - 110	
55 Mn	72	1	950.30 ppb	1.50	1000	95.0	90 - 110	
59 Co	72	1	955.50 ppb	1.19	1000	95.6	90 - 110	
60 Ni	72	1	979.40 ppb	1.79	1000	97.9	90 - 110	
63 Cu	72	1	966.20 ppb	0.98	1000	96.6	90 - 110	
66 Zn	72	1	974.60 ppb	0.75	1000	97.5	90 - 110	
75 As	72	1	1009.00 ppb	0.73	1000	100.9	90 - 110	
78 Se	72	1	988.90 ppb	0.77	1000	98.9	90 - 110	
95 Mo	72	1	987.40 ppb	1.52	1000	98.7	90 - 110	
107 Ag	115	1	932.40 ppb	1.41	1000	93.2	90 - 110	
111 Cd	115	1	967.10 ppb	0.44	1000	96.7	90 - 110	
118 Sn	115	1	933.80 ppb	0.50	1000	93.4	90 - 110	
121 Sb	115	1	927.90 ppb	0.18	1000	92.8	90 - 110	
137 Ba	115	1	972.50 ppb	0.87	1000	97.3	90 - 110	
205 Tl	165	1	947.60 ppb	0.99	1000	94.8	90 - 110	
208 Pb	165	1	915.00 ppb	0.94	1000	91.5	90 - 110	
232 Th	165	1	966.60 ppb	0.64	1000	96.7	90 - 110	
238 U	165	1	963.20 ppb	1.88	1000	96.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328068	1.06	316659	103.6	30 - 120	
45 Sc	1	922726	2.01	888972	103.8	30 - 120	
72 Ge	1	430093	1.37	425816	101.0	30 - 120	
115 In	1	1364755	0.41	1335258	102.2	30 - 120	
165 Ho	1	2644039	0.70	2617754	101.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 9 2009 09:05 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.02	ppb	173.25	3600	
51 V	72	1	-0.02	-0.02	ppb	88.49	3600	
52 Cr	72	1	0.05	0.05	ppb	36.35	3600	
55 Mn	72	1	-0.01	-0.01	ppb	183.98	3600	
59 Co	72	1	0.01	0.01	ppb	88.77	3600	
60 Ni	72	1	0.02	0.02	ppb	167.72	3600	
63 Cu	72	1	0.03	0.03	ppb	35.08	3600	
66 Zn	72	1	0.05	0.05	ppb	19.57	3600	
75 As	72	1	0.02	0.02	ppb	85.94	3600	
78 Se	72	1	0.69	0.69	ppb	46.45	3600	
95 Mo	72	1	0.53	0.53	ppb	26.09	3600	
107 Ag	115	1	0.03	0.03	ppb	35.34	3600	
111 Cd	115	1	0.02	0.02	ppb	21.52	3600	
118 Sn	115	1	1.11	1.11	ppb	27.74	3600	
121 Sb	115	1	1.31	1.31	ppb	17.77	3600	
137 Ba	115	1	0.02	0.02	ppb	70.23	3600	
205 Tl	165	1	0.06	0.06	ppb	21.10	3600	
208 Pb	165	1	0.02	0.02	ppb	25.81	3600	
232 Th	165	1	0.13	0.13	ppb	10.54	1000	
238 U	165	1	0.13	0.13	ppb	15.65	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	341210	2.06	316659	107.8	30 - 120	
45 Sc	1	953002	0.82	888972	107.2	30 - 120	
72 Ge	1	451794	0.58	425816	106.1	30 - 120	
115 In	1	1384812	1.01	1335258	103.7	30 - 120	
165 Ho	1	2634408	0.76	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 9 2009 09:08 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.36	ppb	2.54	50	98.7	90 - 110	
51 V	72	1	50.77	ppb	1.34	50	101.5	90 - 110	
52 Cr	72	1	50.82	ppb	0.60	50	101.6	90 - 110	
55 Mn	72	1	50.95	ppb	1.41	50	101.9	90 - 110	
59 Co	72	1	50.68	ppb	1.40	50	101.4	90 - 110	
60 Ni	72	1	49.56	ppb	1.57	50	99.1	90 - 110	
63 Cu	72	1	49.68	ppb	0.10	50	99.4	90 - 110	
66 Zn	72	1	49.76	ppb	0.33	50	99.5	90 - 110	
75 As	72	1	50.93	ppb	0.82	50	101.9	90 - 110	
78 Se	72	1	51.94	ppb	5.89	50	103.9	90 - 110	
95 Mo	72	1	48.88	ppb	1.24	50	97.8	90 - 110	
107 Ag	115	1	50.11	ppb	0.43	50	100.2	90 - 110	
111 Cd	115	1	50.35	ppb	0.26	50	100.7	90 - 110	
118 Sn	115	1	50.40	ppb	1.11	50	100.8	90 - 110	
121 Sb	115	1	50.58	ppb	0.97	50	101.2	90 - 110	
137 Ba	115	1	50.03	ppb	0.58	50	100.1	90 - 110	
205 Tl	165	1	50.31	ppb	0.12	50	100.6	90 - 110	
208 Pb	165	1	50.77	ppb	1.01	50	101.5	90 - 110	
232 Th	165	1	50.58	ppb	2.06	50	101.2	90 - 110	
238 U	165	1	50.76	ppb	2.06	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	339265	1.56	316659	107.1	30 - 120	
45 Sc	1	947544	0.15	888972	106.6	30 - 120	
72 Ge	1	441263	0.72	425816	103.6	30 - 120	
115 In	1	1386188	0.72	1335258	103.8	30 - 120	
165 Ho	1	2649982	0.75	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 9 2009 09:10 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ppb	173.22	1.00	
51 V	72	1	-0.046	ppb	29.01	1.00	
52 Cr	72	1	0.000	ppb	12322.00	1.00	
55 Mn	72	1	-0.007	ppb	43.73	1.00	
59 Co	72	1	0.001	ppb	393.70	1.00	
60 Ni	72	1	-0.005	ppb	329.15	1.00	
63 Cu	72	1	0.007	ppb	98.78	1.00	
66 Zn	72	1	0.040	ppb	14.37	1.00	
75 As	72	1	-0.008	ppb	123.42	1.00	
78 Se	72	1	0.405	ppb	68.29	1.00	
95 Mo	72	1	0.105	ppb	49.03	1.00	
107 Ag	115	1	0.009	ppb	76.77	1.00	
111 Cd	115	1	0.002	ppb	275.78	1.00	
118 Sn	115	1	0.252	ppb	28.94	1.00	
121 Sb	115	1	0.323	ppb	22.12	1.00	
137 Ba	115	1	0.000	ppb	357.00	1.00	
205 Tl	165	1	0.012	ppb	22.43	1.00	
208 Pb	165	1	0.003	ppb	36.91	1.00	
232 Th	165	1	0.060	ppb	22.01	1.00	
238 U	165	1	0.020	ppb	26.01	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	347509	1.01	316659	109.7	30 - 120	
45 Sc	1	955495	2.12	888972	107.5	30 - 120	
72 Ge	1	455532	0.79	425816	107.0	30 - 120	
115 In	1	1386791	1.63	1335258	103.9	30 - 120	
165 Ho	1	2651802	0.80	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\018WASH.D\018WASH.D#
Date Acquired: Nov 9 2009 09:13 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.024 ppb	7.78	1.30	
51 V	72	1	5.126 ppb	1.88	6.50	
52 Cr	72	1	2.083 ppb	6.13	2.60	
55 Mn	72	1	1.010 ppb	2.87	1.30	
59 Co	72	1	1.062 ppb	1.70	1.30	
60 Ni	72	1	2.095 ppb	2.27	2.60	
63 Cu	72	1	2.060 ppb	2.82	2.60	
66 Zn	72	1	10.130 ppb	1.17	13.00	
75 As	72	1	5.125 ppb	4.68	6.50	
78 Se	72	1	5.045 ppb	5.92	6.50	
95 Mo	72	1	1.951 ppb	3.60	2.60	
107 Ag	115	1	5.311 ppb	0.48	6.50	
111 Cd	115	1	1.030 ppb	11.33	1.30	
118 Sn	115	1	10.360 ppb	1.60	13.00	
121 Sb	115	1	2.190 ppb	4.18	2.60	
137 Ba	115	1	1.055 ppb	3.38	1.30	
205 Tl	165	1	1.095 ppb	1.41	1.30	
208 Pb	165	1	1.069 ppb	0.47	1.30	
232 Th	165	1	2.172 ppb	3.24	2.60	
238 U	165	1	1.103 ppb	1.52	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350643	0.28	316659	110.7	30 - 120	
45 Sc	1	970129	1.19	888972	109.1	30 - 120	
72 Ge	1	456907	0.32	425816	107.3	30 - 120	
115 In	1	1395760	1.56	1335258	104.5	30 - 120	
165 Ho	1	2660739	0.79	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\019 BLK.D\019 BLK.D#
Date Acquired: Nov 9 2009 09:16 pm
Operator: LRD
Sample Name: LNNP6B
Misc Info: BLANK 9306276 6020
Vial Number: 2201
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	2.00	
51 V	72	1	-0.018 ppb	41.70	2.00	
52 Cr	72	1	0.292 ppb	16.50	2.00	
55 Mn	72	1	0.185 ppb	7.72	2.00	
59 Co	72	1	0.011 ppb	24.75	2.00	
60 Ni	72	1	0.036 ppb	53.39	2.00	
63 Cu	72	1	0.169 ppb	20.87	2.00	
66 Zn	72	1	0.849 ppb	7.65	2.00	
75 As	72	1	0.010 ppb	67.79	2.00	
78 Se	72	1	0.510 ppb	48.19	2.00	
95 Mo	72	1	0.057 ppb	19.51	2.00	
107 Ag	115	1	0.010 ppb	26.04	2.00	
111 Cd	115	1	0.003 ppb	113.49	2.00	
118 Sn	115	1	0.208 ppb	18.28	2.00	
121 Sb	115	1	0.174 ppb	15.89	2.00	
137 Ba	115	1	0.038 ppb	22.70	2.00	
205 Tl	165	1	0.040 ppb	22.91	2.00	
208 Pb	165	1	0.011 ppb	12.89	2.00	
232 Th	165	1	0.031 ppb	18.41	2.00	
238 U	165	1	0.007 ppb	24.76	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355955	0.99	316659	112.4	30 - 120	
45 Sc	1	972462	1.01	888972	109.4	30 - 120	
72 Ge	1	458206	0.62	425816	107.6	30 - 120	
115 In	1	1400110	0.71	1335258	104.9	30 - 120	
165 Ho	1	2668336	0.83	2617754	101.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110909A.B\020 LCS.D\020 LCS.D#
Date Acquired:	Nov 9 2009 09:19 pm
Acq. Method:	NormISIS.M
Operator:	LRD
Sample Name:	LNNP6C
Misc Info:	LCS
Vial Number:	2202
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 09 2009 08:35 pm
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.76	2.19	40	101.9	80 - 120	
51 V	72	1	43.16	0.76	40	107.9	80 - 120	
52 Cr	72	1	43.22	1.05	40	108.1	80 - 120	
55 Mn	72	1	43.24	0.21	40	108.1	80 - 120	
59 Co	72	1	42.64	0.71	40	106.6	80 - 120	
60 Ni	72	1	42.34	0.56	40	105.9	80 - 120	
63 Cu	72	1	42.72	0.89	40	106.8	80 - 120	
66 Zn	72	1	45.64	0.61	40	114.1	80 - 120	
75 As	72	1	40.76	0.70	40	101.9	80 - 120	
78 Se	72	1	38.19	2.28	40	95.5	80 - 120	
95 Mo	72	1	35.78	2.03	40	89.5	80 - 120	
107 Ag	115	1	41.49	2.15	40	103.7	80 - 120	
111 Cd	115	1	40.17	0.57	40	100.4	80 - 120	
118 Sn	115	1	0.12	28.26	40	0.3	80 - 120	
121 Sb	115	1	35.81	0.84	40	89.5	80 - 120	
137 Ba	115	1	41.49	1.53	40	103.7	80 - 120	
205 Tl	165	1	43.86	2.13	40	109.7	80 - 120	
208 Pb	165	1	41.85	1.84	40	104.6	80 - 120	
232 Th	165	1	41.91	2.25	40	104.8	80 - 120	
238 U	165	1	41.55	2.69	40	103.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350822	0.51	316659	110.8	30 - 120	
45 Sc	1	980963	1.16	888972	110.3	30 - 120	
72 Ge	1	444654	1.31	425816	104.4	30 - 120	
115 In	1	1399733	0.66	1335258	104.8	30 - 120	
165 Ho	1	2665542	1.69	2617754	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\021SMPL.D\021SMPL.D#
Date Acquired: Nov 9 2009 09:21 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLN9 2X
Misc Info: D9J300353
Vial Number: 2203
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.05	ppb	92.24	3600	
51 V	72	1	37.96	18.98	ppb	1.34	3600	
52 Cr	72	1	114.94	57.47	ppb	0.72	3600	
55 Mn	72	1	36.50	18.25	ppb	2.00	3600	
59 Co	72	1	0.69	0.34	ppb	2.76	3600	
60 Ni	72	1	3.14	1.57	ppb	8.45	3600	
63 Cu	72	1	1.64	0.82	ppb	6.02	3600	
66 Zn	72	1	11.13	5.57	ppb	1.82	3600	
75 As	72	1	202.00	101.00	ppb	0.43	3600	
78 Se	72	1	3.22	1.61	ppb	48.25	3600	
95 Mo	72	1	18.83	9.42	ppb	0.68	3600	
107 Ag	115	1	0.17	0.08	ppb	17.24	3600	
111 Cd	115	1	0.10	0.05	ppb	51.39	3600	
118 Sn	115	1	0.28	0.14	ppb	42.81	3600	
121 Sb	115	1	0.34	0.17	ppb	20.62	3600	
137 Ba	115	1	37.72	18.86	ppb	0.70	3600	
205 Tl	165	1	0.13	0.06	ppb	19.45	3600	
208 Pb	165	1	0.71	0.35	ppb	3.38	3600	
232 Th	165	1	0.72	0.36	ppb	1.63	1000	
238 U	165	1	53.74	26.87	ppb	1.72	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298847	1.22	316659	94.4	30 - 120	
45 Sc	1	845797	1.37	888972	95.1	30 - 120	
72 Ge	1	386800	0.60	425816	90.8	30 - 120	
115 In	1	1191341	0.83	1335258	89.2	30 - 120	
165 Ho	1	2413317	1.23	2617754	92.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\022SMPL.D\022SMPL.D#
Date Acquired: Nov 9 2009 09:24 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLR4 2X
Misc Info: D9J300356
Vial Number: 2204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.01	ppb	173.27	3600	
51 V	72	1	78.42	39.21	ppb	1.83	3600	
52 Cr	72	1	24.86	12.43	ppb	1.31	3600	
55 Mn	72	1	2,930.00	1465.00	ppb	2.13	3600	
59 Co	72	1	42.42	21.21	ppb	0.61	3600	
60 Ni	72	1	20.92	10.46	ppb	3.31	3600	
63 Cu	72	1	0.75	0.37	ppb	5.97	3600	
66 Zn	72	1	18.97	9.49	ppb	2.01	3600	
75 As	72	1	114.66	57.33	ppb	0.89	3600	
78 Se	72	1	6.57	3.28	ppb	20.64	3600	
95 Mo	72	1	26.74	13.37	ppb	0.88	3600	
107 Ag	115	1	0.11	0.05	ppb	25.16	3600	
111 Cd	115	1	0.42	0.21	ppb	16.72	3600	
118 Sn	115	1	0.13	0.06	ppb	44.87	3600	
121 Sb	115	1	0.27	0.13	ppb	7.83	3600	
137 Ba	115	1	27.28	13.64	ppb	2.04	3600	
205 Tl	165	1	0.19	0.10	ppb	3.70	3600	
208 Pb	165	1	0.11	0.06	ppb	1.85	3600	
232 Th	165	1	0.08	0.04	ppb	8.56	1000	
238 U	165	1	69.92	34.96	ppb	2.03	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	274893	1.24	316659	86.8	30 - 120	
45 Sc	1	779549	2.32	888972	87.7	30 - 120	
72 Ge	1	352268	1.67	425816	82.7	30 - 120	
115 In	1	1127758	1.03	1335258	84.5	30 - 120	
165 Ho	1	2240638	0.13	2617754	85.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#
Date Acquired: Nov 9 2009 09:27 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4
Misc Info: D9J310138
Vial Number: 2205
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: AllRef
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.27	3600	
51 V	72	1	0.05	0.05	ppb	6.94	3600	
52 Cr	72	1	0.48	0.48	ppb	5.57	3600	
55 Mn	72	1	1.67	1.67	ppb	3.29	3600	
59 Co	72	1	0.03	0.03	ppb	17.85	3600	
60 Ni	72	1	0.16	0.16	ppb	28.53	3600	
63 Cu	72	1	0.43	0.43	ppb	6.97	3600	
66 Zn	72	1	8.86	8.86	ppb	0.90	3600	
75 As	72	1	0.01	0.01	ppb	328.51	3600	
78 Se	72	1	0.28	0.28	ppb	90.12	3600	
95 Mo	72	1	0.17	0.17	ppb	26.75	3600	
107 Ag	115	1	0.01	0.01	ppb	26.64	3600	
111 Cd	115	1	0.00	0.00	ppb	536.64	3600	
118 Sn	115	1	0.20	0.20	ppb	7.53	3600	
121 Sb	115	1	0.09	0.09	ppb	15.50	3600	
137 Ba	115	1	0.66	0.66	ppb	1.78	3600	
205 Tl	165	1	-0.01	-0.01	ppb	11.38	3600	
208 Pb	165	1	0.12	0.12	ppb	1.87	3600	
232 Th	165	1	0.01	0.01	ppb	21.46	1000	
238 U	165	1	0.01	0.01	ppb	24.76	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	373380	0.19	316659	117.9	30 - 120	
45 Sc	1	1006941	1.04	888972	113.3	30 - 120	
72 Ge	1	462649	0.57	425816	108.6	30 - 120	
115 In	1	1397361	0.27	1335258	104.7	30 - 120	
165 Ho	1	2660327	0.25	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\024SDIL.D\024SDIL.D#
Date Acquired: Nov 9 2009 09:30 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4P5
Misc Info: SERIAL DILUTION
Vial Number: 2206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SDIL
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0.00	0.0	90 - 110	
51 V	72	1	-0.03	ppb	5.81	0.01	-342.2	90 - 110	
52 Cr	72	1	0.20	ppb	10.88	0.10	213.8	90 - 110	
55 Mn	72	1	0.34	ppb	10.16	0.33	103.1	90 - 110	
59 Co	72	1	0.01	ppb	47.19	0.01	96.0	90 - 110	
60 Ni	72	1	0.04	ppb	33.75	0.03	122.1	90 - 110	
63 Cu	72	1	0.10	ppb	5.61	0.09	114.0	90 - 110	
66 Zn	72	1	1.80	ppb	5.52	1.77	101.3	90 - 110	
75 As	72	1	-0.02	ppb	9.36	0.00	-1343.0	90 - 110	
78 Se	72	1	0.23	ppb	2.28	0.06	422.9	90 - 110	
95 Mo	72	1	0.04	ppb	19.93	0.03	118.9	90 - 110	
107 Ag	115	1	0.00	ppb	24.25	0.00	272.6	90 - 110	
111 Cd	115	1	0.02	ppb	89.75	0.00	2944.9	90 - 110	
118 Sn	115	1	0.12	ppb	5.20	0.04	296.9	90 - 110	
121 Sb	115	1	0.03	ppb	17.47	0.02	168.6	90 - 110	
137 Ba	115	1	0.14	ppb	19.11	0.13	109.3	90 - 110	
205 Tl	165	1	-0.01	ppb	30.49	0.00	501.4	90 - 110	
208 Pb	165	1	0.02	ppb	8.37	0.02	88.0	90 - 110	
232 Th	165	1	0.00	ppb	50.10	0.00	202.3	90 - 110	
238 U	165	1	0.00	ppb	87.66	0.00	61.5	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368778	0.88	316659	116.5	30 - 120	
45 Sc	1	979811	0.26	888972	110.2	30 - 120	
72 Ge	1	461996	0.57	425816	108.5	30 - 120	
115 In	1	1378236	0.67	1335258	103.2	30 - 120	
165 Ho	1	2636939	1.04	2617754	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:12

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNME4P5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 24
Acquired: 11/09/2009 21:30:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9		0	0.01470	100		*	
7440-62-2	Vanadium	51	380	-0.15675	0.04580	442		*	
7440-47-3	Chromium	52	2890	1.0235	0.47880	114		*	
7439-96-5	Manganese	55	2697	1.7180	1.6670	3.06		*	
7440-48-4	Cobalt	59	67	0.03211	0.03347	4.05		*	
7440-02-0	Nickel	60	130	0.19735	0.16160	22.1		*	
7440-50-8	Copper	63	490	0.48945	0.42930	14.0		*	
7440-66-6	Zinc	66	1801	8.9800	8.8630	1.32		*	
7440-38-2	Arsenic	75	27	-0.08160	0.00608	1440	0.21	NC	☑
7782-49-2	Selenium	78	140	1.1680	0.27620	323	0.70	NC	☑
7439-98-7	Molybdenum	95	110	0.20470	0.17210	18.9		*	
7440-22-4	Silver	107	27	0.01977	0.00725	173		*	
7440-43-9	Cadmium	111	17	0.08440	0.00287	2840		*	
7440-31-5	Tin	118	720	0.60300	0.20310	197		*	
7440-36-0	Antimony	121	164	0.15100	0.08954	68.6		*	
7440-39-3	Barium	137	248	0.71700	0.65610	9.28		*	
7440-28-0	Thallium	205	96	-0.04272	-0.00852			*	
7439-92-1	Lead	208	659	0.10510	0.11940	12.0		*	
7440-61-1	Uranium	238	111	0.00685	0.01113	38.5		*	
7440-29-1	Thorium	232	210	0.02068	0.01022	102		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: LRD Date: 11/10/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\025PDS.D\025PDS.D#
Date Acquired: Nov 9 2009 09:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4Z
Misc Info: POST DIGESTION SPIKE
Vial Number: 2207
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	185.00	0.01	ppb	1.86	200	92.5	75 - 125	
51 V	72	1	202.50	0.05	ppb	2.78	200	101.2	75 - 125	
52 Cr	72	1	203.90	0.48	ppb	2.06	200	101.7	75 - 125	
55 Mn	72	1	201.00	1.67	ppb	3.35	200	99.7	75 - 125	
59 Co	72	1	196.80	0.03	ppb	1.85	200	98.4	75 - 125	
60 Ni	72	1	194.90	0.16	ppb	1.47	200	97.4	75 - 125	
63 Cu	72	1	196.10	0.43	ppb	0.50	200	97.8	75 - 125	
66 Zn	72	1	196.80	8.86	ppb	0.36	200	94.2	75 - 125	
75 As	72	1	190.30	0.01	ppb	0.61	200	95.1	75 - 125	
78 Se	72	1	185.70	0.28	ppb	2.73	200	92.7	75 - 125	
95 Mo	72	1	192.00	0.17	ppb	0.97	200	95.9	75 - 125	
107 Ag	115	1	48.92	0.01	ppb	2.06	50	97.8	75 - 125	
111 Cd	115	1	188.70	0.00	ppb	1.65	200	94.3	75 - 125	
118 Sn	115	1	176.90	0.20	ppb	1.43	200	88.4	75 - 125	
121 Sb	115	1	184.30	0.09	ppb	1.52	200	92.1	75 - 125	
137 Ba	115	1	195.10	0.66	ppb	1.67	200	97.2	75 - 125	
205 Tl	165	1	191.80	-0.01	ppb	0.94	200	95.9	75 - 125	
208 Pb	165	1	186.80	0.12	ppb	0.48	200	93.3	75 - 125	
232 Th	165	1	0.03	0.01	ppb	13.35	200	0.0	75 - 125	
238 U	165	1	190.70	0.01	ppb	1.54	200	95.3	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	354551	1.15	316659	112.0	30 - 120	
45 Sc	1	950915	0.92	888972	107.0	30 - 120	
72 Ge	1	426378	1.56	425816	100.1	30 - 120	
115 In	1	1327967	0.75	1335258	99.5	30 - 120	
165 Ho	1	2548646	0.61	2617754	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:22

Department: 090 (Metals)

Source: Spreadsheet

Sample: **LNME4Z**

Spike Dilution: **1.00**

Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 25
Acquired: 11/09/2009 21:32:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	79764	185.00	0.01470	92.5	200		☐
7440-62-2	Vanadium	51	1055210	202.50	0.04580	101	200		☐
7440-47-3	Chromium	52	1091770	203.90	0.47880	102	200		☐
7439-96-5	Manganese	55	1258890	201.00	1.6670	99.7	200		☐
7440-48-4	Cobalt	59	1273250	196.80	0.03347	98.4	200		☐
7440-02-0	Nickel	60	279436	194.90	0.16160	97.4	200		☐
7440-50-8	Copper	63	665031	196.10	0.42930	97.8	200		☐
7440-66-6	Zinc	66	167299	196.80	8.8630	94.0	200		☐
7440-38-2	Arsenic	75	125313	190.30	0.00608	95.1	200		☑
7782-49-2	Selenium	78	25838	185.70	0.27620	92.7	200		☑
7439-98-7	Molybdenum	95	382233	192.00	0.17210	95.9	200		☐
7440-22-4	Silver	107	276951	48.920	0.00725	97.8	50.0		☐
7440-43-9	Cadmium	111	227986	188.70	0.00287	94.3	200		☐
7440-31-5	Tin	118	584583	176.90	0.20310	88.3	200		☐
7440-36-0	Antimony	121	730873	184.30	0.08954	92.1	200		☐
7440-39-3	Barium	137	308452	195.10	0.65610	97.2	200		☐
7440-28-0	Thallium	205	2761530	191.80	-0.00852	95.9	200		☐
7439-92-1	Lead	208	3935420	186.80	0.11940	93.3	200		☐
7440-61-1	Uranium	238	4535860	190.70	0.01113	95.3	200		☐
7440-29-1	Thorium	232	747	0.02849	0.01022				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: LRD Date: 11/10/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\026_MS.D\026_MS.D#
Date Acquired: Nov 9 2009 09:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4S
Misc Info: MATRIX SPIKE
Vial Number: 2208
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	38.95	0.01	ppb	4.02	40	97.3	50 - 150	
51 V	72	1	42.14	0.05	ppb	0.45	40	105.2	50 - 150	
52 Cr	72	1	41.88	0.48	ppb	0.82	40	103.5	50 - 150	
55 Mn	72	1	44.00	1.67	ppb	0.81	40	105.6	50 - 150	
59 Co	72	1	41.74	0.03	ppb	0.31	40	104.3	50 - 150	
60 Ni	72	1	41.29	0.16	ppb	1.68	40	102.8	50 - 150	
63 Cu	72	1	41.14	0.43	ppb	0.55	40	101.8	50 - 150	
66 Zn	72	1	40.89	8.86	ppb	1.02	40	83.7	50 - 150	
75 As	72	1	39.70	0.01	ppb	1.91	40	99.2	50 - 150	
78 Se	72	1	37.66	0.28	ppb	2.21	40	93.5	50 - 150	
95 Mo	72	1	35.56	0.17	ppb	1.29	40	88.5	50 - 150	
107 Ag	115	1	40.57	0.01	ppb	0.75	40	101.4	50 - 150	
111 Cd	115	1	38.88	0.00	ppb	0.89	40	97.2	50 - 150	
118 Sn	115	1	0.26	0.20	ppb	7.26	40	0.7	50 - 150	
121 Sb	115	1	35.78	0.09	ppb	0.84	40	89.3	50 - 150	
137 Ba	115	1	40.55	0.66	ppb	1.52	40	99.7	50 - 150	
205 Tl	165	1	42.66	-0.01	ppb	1.13	40	106.7	50 - 150	
208 Pb	165	1	40.84	0.12	ppb	0.87	40	101.8	50 - 150	
232 Th	165	1	40.88	0.01	ppb	1.61	40	102.2	50 - 150	
238 U	165	1	40.76	0.01	ppb	1.03	40	101.9	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	358353	0.80	316659	113.2	30 - 120	
45 Sc	1	939200	0.60	888972	105.7	30 - 120	
72 Ge	1	422553	0.76	425816	99.2	30 - 120	
115 In	1	1328078	0.75	1335258	99.5	30 - 120	
165 Ho	1	2539000	0.43	2617754	97.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\027 MSD.D\027 MSD.D#
Date Acquired: Nov 9 2009 09:38 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4D
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2209
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MSD
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\026 MS.D\026 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	38.17	ppb	2.44	38.95	2.02	20	
51 V	72	1	42.54	ppb	0.57	42.14	0.94	20	
52 Cr	72	1	42.55	ppb	0.81	41.88	1.59	20	
55 Mn	72	1	43.44	ppb	1.18	44.00	1.28	20	
59 Co	72	1	41.86	ppb	0.99	41.74	0.29	20	
60 Ni	72	1	41.95	ppb	1.55	41.29	1.59	20	
63 Cu	72	1	41.52	ppb	0.70	41.14	0.92	20	
66 Zn	72	1	40.14	ppb	0.44	40.89	1.85	20	
75 As	72	1	39.63	ppb	0.29	39.70	0.18	20	
78 Se	72	1	37.06	ppb	3.10	37.66	1.61	20	
95 Mo	72	1	35.66	ppb	0.62	35.56	0.28	20	
107 Ag	115	1	40.93	ppb	2.04	40.57	0.88	20	
111 Cd	115	1	39.64	ppb	0.46	38.88	1.94	20	
118 Sn	115	1	0.12	ppb	27.87	0.26	76.84	20	
121 Sb	115	1	35.83	ppb	0.62	35.78	0.14	20	
137 Ba	115	1	41.37	ppb	0.68	40.55	2.00	20	
205 Tl	165	1	42.77	ppb	1.75	42.66	0.26	20	
208 Pb	165	1	40.90	ppb	1.73	40.84	0.15	20	
232 Th	165	1	41.06	ppb	0.63	40.88	0.44	20	
238 U	165	1	40.94	ppb	0.83	40.76	0.44	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355186	0.16	316659	112.2	30 - 120	
45 Sc	1	936988	0.78	888972	105.4	30 - 120	
72 Ge	1	422235	0.79	425816	99.2	30 - 120	
115 In	1	1312991	0.53	1335258	98.3	30 - 120	
165 Ho	1	2541733	0.77	2617754	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\028 CCV.D\028 CCV.D#
Date Acquired: Nov 9 2009 09:41 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	48.28	ppb	1.89	50	96.6	90 - 110	
51 V	72	1	51.66	ppb	1.31	50	103.3	90 - 110	
52 Cr	72	1	51.41	ppb	0.42	50	102.8	90 - 110	
55 Mn	72	1	50.80	ppb	0.70	50	101.6	90 - 110	
59 Co	72	1	50.98	ppb	1.52	50	102.0	90 - 110	
60 Ni	72	1	50.44	ppb	1.14	50	100.9	90 - 110	
63 Cu	72	1	50.68	ppb	0.38	50	101.4	90 - 110	
66 Zn	72	1	49.73	ppb	0.43	50	99.5	90 - 110	
75 As	72	1	51.43	ppb	1.43	50	102.9	90 - 110	
78 Se	72	1	50.58	ppb	4.06	50	101.2	90 - 110	
95 Mo	72	1	49.14	ppb	0.63	50	98.3	90 - 110	
107 Ag	115	1	49.88	ppb	1.55	50	99.8	90 - 110	
111 Cd	115	1	49.46	ppb	0.97	50	98.9	90 - 110	
118 Sn	115	1	49.89	ppb	2.37	50	99.8	90 - 110	
121 Sb	115	1	49.59	ppb	1.76	50	99.2	90 - 110	
137 Ba	115	1	50.39	ppb	1.52	50	100.8	90 - 110	
205 Tl	165	1	49.99	ppb	0.81	50	100.0	90 - 110	
208 Pb	165	1	50.66	ppb	1.69	50	101.3	90 - 110	
232 Th	165	1	50.62	ppb	1.15	50	101.2	90 - 110	
238 U	165	1	50.54	ppb	0.29	50	101.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	351524	0.93	316659	111.0	30 - 120	
45 Sc	1	927694	1.28	888972	104.4	30 - 120	
72 Ge	1	421606	1.09	425816	99.0	30 - 120	
115 In	1	1310979	0.71	1335258	98.2	30 - 120	
165 Ho	1	2522093	0.90	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\029 CCB.D\029 CCB.D#
Date Acquired: Nov 9 2009 09:43 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.036	ppb	44.55	1.00	
52 Cr	72	1	0.019	ppb	63.89	1.00	
55 Mn	72	1	0.000	ppb	2382.10	1.00	
59 Co	72	1	0.002	ppb	93.07	1.00	
60 Ni	72	1	-0.010	ppb	1.82	1.00	
63 Cu	72	1	-0.002	ppb	211.49	1.00	
66 Zn	72	1	0.038	ppb	50.08	1.00	
75 As	72	1	-0.017	ppb	26.71	1.00	
78 Se	72	1	0.225	ppb	111.94	1.00	
95 Mo	72	1	0.046	ppb	45.40	1.00	
107 Ag	115	1	0.012	ppb	29.52	1.00	
111 Cd	115	1	0.002	ppb	311.75	1.00	
118 Sn	115	1	0.080	ppb	40.12	1.00	
121 Sb	115	1	0.165	ppb	24.61	1.00	
137 Ba	115	1	0.004	ppb	88.07	1.00	
205 Tl	165	1	0.004	ppb	78.72	1.00	
208 Pb	165	1	0.002	ppb	56.03	1.00	
232 Th	165	1	0.061	ppb	14.74	1.00	
238 U	165	1	0.013	ppb	31.22	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	354787	1.32	316659	112.0	30 - 120	
45 Sc	1	923814	1.00	888972	103.9	30 - 120	
72 Ge	1	432478	0.52	425816	101.6	30 - 120	
115 In	1	1308981	0.63	1335258	98.0	30 - 120	
165 Ho	1	2520572	0.23	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\030WASH.D\030WASH.D#
Date Acquired: Nov 9 2009 09:50 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.009 ppb	18.75	1.30	
51 V	72	1	5.177 ppb	1.19	6.50	
52 Cr	72	1	2.111 ppb	3.52	2.60	
55 Mn	72	1	1.107 ppb	2.74	1.30	
59 Co	72	1	1.028 ppb	3.93	1.30	
60 Ni	72	1	2.108 ppb	1.73	2.60	
63 Cu	72	1	2.068 ppb	1.44	2.60	
66 Zn	72	1	9.967 ppb	0.46	13.00	
75 As	72	1	5.161 ppb	1.92	6.50	
78 Se	72	1	5.825 ppb	10.45	6.50	
95 Mo	72	1	1.986 ppb	5.92	2.60	
107 Ag	115	1	5.462 ppb	1.89	6.50	
111 Cd	115	1	1.025 ppb	1.41	1.30	
118 Sn	115	1	10.590 ppb	0.75	13.00	
121 Sb	115	1	2.089 ppb	2.01	2.60	
137 Ba	115	1	1.011 ppb	0.65	1.30	
205 Tl	165	1	1.109 ppb	3.60	1.30	
208 Pb	165	1	1.060 ppb	1.36	1.30	
232 Th	165	1	2.209 ppb	0.66	2.60	
238 U	165	1	1.106 ppb	2.50	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358611	0.21	316659	113.2	30 - 120	
45 Sc	1	931630	1.00	888972	104.8	30 - 120	
72 Ge	1	428811	1.09	425816	100.7	30 - 120	
115 In	1	1287825	1.17	1335258	96.4	30 - 120	
165 Ho	1	2504436	0.55	2617754	95.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\060 CCV.D\060 CCV.D#
Date Acquired: Nov 9 2009 11:12 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	47.76	ppb	2.01	50	95.5	90 - 110	
51 V	72	1	53.33	ppb	0.36	50	106.7	90 - 110	
52 Cr	72	1	52.02	ppb	0.91	50	104.0	90 - 110	
55 Mn	72	1	50.55	ppb	1.03	50	101.1	90 - 110	
59 Co	72	1	51.60	ppb	1.26	50	103.2	90 - 110	
60 Ni	72	1	51.77	ppb	1.81	50	103.5	90 - 110	
63 Cu	72	1	51.63	ppb	0.61	50	103.3	90 - 110	
66 Zn	72	1	48.55	ppb	1.53	50	97.1	90 - 110	
75 As	72	1	52.15	ppb	0.82	50	104.3	90 - 110	
78 Se	72	1	49.57	ppb	2.57	50	99.1	90 - 110	
95 Mo	72	1	47.79	ppb	1.06	50	95.6	90 - 110	
107 Ag	115	1	50.33	ppb	2.15	50	100.7	90 - 110	
111 Cd	115	1	48.29	ppb	2.01	50	96.6	90 - 110	
118 Sn	115	1	48.91	ppb	3.81	50	97.8	90 - 110	
121 Sb	115	1	48.67	ppb	1.99	50	97.3	90 - 110	
137 Ba	115	1	50.76	ppb	0.77	50	101.5	90 - 110	
205 Tl	165	1	51.23	ppb	4.59	50	102.5	90 - 110	
208 Pb	165	1	49.88	ppb	2.00	50	99.8	90 - 110	
232 Th	165	1	49.71	ppb	2.61	50	99.4	90 - 110	
238 U	165	1	49.08	ppb	0.86	50	98.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	371239	0.44	316659	117.2	30 - 120	
45 Sc	1	996118	0.60	888972	112.1	30 - 120	
72 Ge	1	449415	1.43	425816	105.5	30 - 120	
115 In	1	1358249	0.76	1335258	101.7	30 - 120	
165 Ho	1	2424776	0.66	2617754	92.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\061 CCB.D\061 CCB.D#
Date Acquired: Nov 9 2009 11:15 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ppb	173.25	1.00	
51 V	72	1	-0.033	ppb	15.18	1.00	
52 Cr	72	1	0.027	ppb	19.92	1.00	
55 Mn	72	1	0.057	ppb	24.29	1.00	
59 Co	72	1	0.002	ppb	40.00	1.00	
60 Ni	72	1	-0.008	ppb	174.20	1.00	
63 Cu	72	1	0.033	ppb	81.15	1.00	
66 Zn	72	1	0.057	ppb	34.92	1.00	
75 As	72	1	-0.012	ppb	116.84	1.00	
78 Se	72	1	0.544	ppb	106.14	1.00	
95 Mo	72	1	0.025	ppb	55.86	1.00	
107 Ag	115	1	0.006	ppb	0.78	1.00	
111 Cd	115	1	0.011	ppb	84.87	1.00	
118 Sn	115	1	0.063	ppb	27.95	1.00	
121 Sb	115	1	0.170	ppb	15.64	1.00	
137 Ba	115	1	0.021	ppb	35.77	1.00	
205 Tl	165	1	0.004	ppb	85.40	1.00	
208 Pb	165	1	0.006	ppb	13.99	1.00	
232 Th	165	1	0.047	ppb	18.57	1.00	
238 U	165	1	0.010	ppb	26.90	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	375737	0.86	316659	118.7	30 - 120	
45 Sc	1	1005396	1.10	888972	113.1	30 - 120	
72 Ge	1	462662	0.61	425816	108.7	30 - 120	
115 In	1	1347936	0.72	1335258	100.9	30 - 120	
165 Ho	1	2437556	0.89	2617754	93.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\062WASH.D\062WASH.D#
Date Acquired: Nov 9 2009 11:18 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.988 ppb	13.49	1.30	
51 V	72	1	5.317 ppb	1.85	6.50	
52 Cr	72	1	2.215 ppb	1.75	2.60	
55 Mn	72	1	1.081 ppb	2.43	1.30	
59 Co	72	1	1.073 ppb	4.20	1.30	
60 Ni	72	1	2.102 ppb	1.66	2.60	
63 Cu	72	1	2.102 ppb	1.56	2.60	
66 Zn	72	1	10.000 ppb	2.32	13.00	
75 As	72	1	5.122 ppb	1.19	6.50	
78 Se	72	1	5.883 ppb	5.54	6.50	
95 Mo	72	1	1.969 ppb	1.32	2.60	
107 Ag	115	1	5.324 ppb	0.46	6.50	
111 Cd	115	1	0.960 ppb	12.77	1.30	
118 Sn	115	1	10.230 ppb	2.10	13.00	
121 Sb	115	1	2.053 ppb	1.15	2.60	
137 Ba	115	1	1.068 ppb	9.25	1.30	
205 Tl	165	1	1.085 ppb	2.24	1.30	
208 Pb	165	1	1.017 ppb	0.46	1.30	
232 Th	165	1	2.117 ppb	2.07	2.60	
238 U	165	1	1.040 ppb	1.77	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	377304	1.01	316659	119.2	30 - 120	
45 Sc	1	1005985	1.51	888972	113.2	30 - 120	
72 Ge	1	461018	0.47	425816	108.3	30 - 120	
115 In	1	1347706	0.37	1335258	100.9	30 - 120	
165 Ho	1	2446876	0.21	2617754	93.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\063CALB.D\063CALB.D#
Date Acquired: Nov 9 2009 11:21 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: CalBlk

DNW
LRD
11/09/2009

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.23
51	V	72	1	377	2.88
52	Cr	72	1	1847	11.91
55	Mn	72	1	490	7.02
59	Co	72	1	27	43.08
60	Ni	72	1	90	38.28
63	Cu	72	1	207	26.41
66	Zn	72	1	224	7.60
75	As	72	1	37	2.96
78	Se	72	1	180	14.95
95	Mo	72	1	70	0.37
107	Ag	115	1	37	102.75
111	Cd	115	1	1	1018.80
118	Sn	115	1	230	7.23
121	Sb	115	1	168	17.49
137	Ba	115	1	30	19.55
205	Tl	165	1	118	2.17
208	Pb	165	1	187	13.74
232	Th	165	1	340	3.31
238	U	165	1	107	28.05

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	381407	0.74
45	Sc	1	1012136	1.26
72	Ge	1	467118	0.37
115	In	1	1351742	0.80
165	Ho	1	2415684	0.57

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/09/2009

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#
Date Acquired: Nov 9 2009 11:23 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:21 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	330	13.77
52	Cr	72	1	2014	3.51
55	Mn	72	1	663	10.90
59	Co	72	1	33	75.74
60	Ni	72	1	80	50.41
63	Cu	72	1	197	11.45
66	Zn	72	1	343	6.91
75	As	72	1	34	14.74
78	Se	72	1	173	12.49
95	Mo	72	1	40	49.31
107	Ag	115	1	10	99.72
111	Cd	115	1	5	690.53
118	Sn	115	1	340	20.42
121	Sb	115	1	100	28.11
137	Ba	115	1	23	24.93
205	Tl	165	1	98	12.19
208	Pb	165	1	236	9.19
232	Th	165	1	170	15.62
238	U	165	1	78	28.11

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	380157	0.54
45	Sc	1	1002329	1.13
72	Ge	1	466393	0.79
115	In	1	1358080	0.44
165	Ho	1	2422153	0.33

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\065ICAL.D\065ICAL.D#
Date Acquired: Nov 9 2009 11:26 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:24 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	43479	0.71
51	V	72	1	576998	0.10
52	Cr	72	1	580585	0.35
55	Mn	72	1	647521	2.20
59	Co	72	1	696629	1.39
60	Ni	72	1	153810	1.14
63	Cu	72	1	367490	0.55
66	Zn	72	1	85809	0.55
75	As	72	1	71337	0.80
78	Se	72	1	14168	2.89
95	Mo	72	1	198709	1.88
107	Ag	115	1	570960	1.47
111	Cd	115	1	117474	1.83
118	Sn	115	1	325069	1.28
121	Sb	115	1	387694	1.11
137	Ba	115	1	161998	1.24
205	Tl	165	1	1342275	1.10
208	Pb	165	1	1942480	0.67
232	Th	165	1	2057394	0.68
238	U	165	1	2166904	0.49

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	365465	0.26	380157	96.1	30 - 120	
45	Sc	1	986653	1.27	1002329	98.4	30 - 120	
72	Ge	1	442828	1.10	466393	94.9	30 - 120	
115	In	1	1328586	0.28	1358080	97.8	30 - 120	
165	Ho	1	2432710	0.17	2422153	100.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\066 CCV.D\066 CCV.D#
Date Acquired: Nov 9 2009 11:29 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	46.93	ppb	3.91	50	93.9	90 - 110	
51 V	72	1	49.96	ppb	0.87	50	99.9	90 - 110	
52 Cr	72	1	49.84	ppb	0.96	50	99.7	90 - 110	
55 Mn	72	1	51.01	ppb	0.50	50	102.0	90 - 110	
59 Co	72	1	50.30	ppb	0.45	50	100.6	90 - 110	
60 Ni	72	1	50.29	ppb	1.97	50	100.6	90 - 110	
63 Cu	72	1	49.99	ppb	0.18	50	100.0	90 - 110	
66 Zn	72	1	50.01	ppb	0.68	50	100.0	90 - 110	
75 As	72	1	50.48	ppb	0.16	50	101.0	90 - 110	
78 Se	72	1	49.48	ppb	2.05	50	99.0	90 - 110	
95 Mo	72	1	49.81	ppb	0.18	50	99.6	90 - 110	
107 Ag	115	1	49.81	ppb	2.30	50	99.6	90 - 110	
111 Cd	115	1	50.05	ppb	1.51	50	100.1	90 - 110	
118 Sn	115	1	50.31	ppb	2.81	50	100.6	90 - 110	
121 Sb	115	1	50.29	ppb	2.80	50	100.6	90 - 110	
137 Ba	115	1	49.63	ppb	3.25	50	99.3	90 - 110	
205 Tl	165	1	52.26	ppb	4.30	50	104.5	90 - 110	
208 Pb	165	1	51.13	ppb	1.50	50	102.3	90 - 110	
232 Th	165	1	51.46	ppb	0.54	50	102.9	90 - 110	
238 U	165	1	51.98	ppb	0.56	50	104.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	367332	1.49	380157	96.6	30 - 120	
45 Sc	1	986000	0.43	1002329	98.4	30 - 120	
72 Ge	1	439576	1.54	466393	94.3	30 - 120	
115 In	1	1323940	1.40	1358080	97.5	30 - 120	
165 Ho	1	2412483	0.54	2422153	99.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\067 CCB.D\067 CCB.D#
Date Acquired: Nov 9 2009 11:32 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	7714.50	1.00	
51 V	72	1	0.007	ppb	88.19	1.00	
52 Cr	72	1	-0.013	ppb	132.92	1.00	
55 Mn	72	1	0.016	ppb	41.75	1.00	
59 Co	72	1	-0.002	ppb	220.37	1.00	
60 Ni	72	1	-0.013	ppb	101.75	1.00	
63 Cu	72	1	0.005	ppb	237.12	1.00	
66 Zn	72	1	-0.125	ppb	6.55	1.00	
75 As	72	1	-0.003	ppb	254.46	1.00	
78 Se	72	1	0.068	ppb	820.68	1.00	
95 Mo	72	1	0.036	ppb	12.78	1.00	
107 Ag	115	1	0.013	ppb	34.78	1.00	
111 Cd	115	1	-0.004	ppb	335.65	1.00	
118 Sn	115	1	0.114	ppb	40.09	1.00	
121 Sb	115	1	0.218	ppb	17.21	1.00	
137 Ba	115	1	0.020	ppb	38.49	1.00	
205 Tl	165	1	0.017	ppb	13.22	1.00	
208 Pb	165	1	0.004	ppb	41.00	1.00	
232 Th	165	1	0.058	ppb	8.27	1.00	
238 U	165	1	0.015	ppb	19.36	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	370403	0.21	380157	97.4	30 - 120	
45 Sc	1	986390	1.51	1002329	98.4	30 - 120	
72 Ge	1	448979	0.79	466393	96.3	30 - 120	
115 In	1	1330065	0.95	1358080	97.9	30 - 120	
165 Ho	1	2397227	1.01	2422153	99.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\068WASH.D\068WASH.D#
Date Acquired: Nov 9 2009 11:34 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.846 ppb	15.54	1.30	
51 V	72	1	5.105 ppb	1.52	6.50	
52 Cr	72	1	1.946 ppb	5.53	2.60	
55 Mn	72	1	1.034 ppb	8.27	1.30	
59 Co	72	1	1.006 ppb	1.60	1.30	
60 Ni	72	1	2.032 ppb	5.86	2.60	
63 Cu	72	1	2.022 ppb	3.80	2.60	
66 Zn	72	1	10.060 ppb	2.89	13.00	
75 As	72	1	5.074 ppb	1.10	6.50	
78 Se	72	1	5.789 ppb	19.52	6.50	
95 Mo	72	1	2.059 ppb	3.74	2.60	
107 Ag	115	1	5.439 ppb	1.68	6.50	
111 Cd	115	1	1.029 ppb	3.65	1.30	
118 Sn	115	1	10.700 ppb	3.27	13.00	
121 Sb	115	1	2.106 ppb	1.70	2.60	
137 Ba	115	1	1.052 ppb	6.93	1.30	
205 Tl	165	1	1.129 ppb	1.04	1.30	
208 Pb	165	1	1.059 ppb	0.98	1.30	
232 Th	165	1	2.213 ppb	1.62	2.60	
238 U	165	1	1.097 ppb	1.65	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	371066	0.42	380157	97.6	30 - 120	
45 Sc	1	964688	0.29	1002329	96.2	30 - 120	
72 Ge	1	445105	0.41	466393	95.4	30 - 120	
115 In	1	1302898	1.20	1358080	95.9	30 - 120	
165 Ho	1	2377516	0.60	2422153	98.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\069ICSA.D\069ICSA.D#
Date Acquired: Nov 9 2009 11:37 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:27 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	-0.01 ppb	0.00	1.00	
51 V	72	1	3.14 ppb	3.11	1.00	
52 Cr	72	1	1.87 ppb	2.39	1.00	
55 Mn	72	1	3.00 ppb	3.46	1.00	
59 Co	72	1	0.12 ppb	14.06	1.00	
60 Ni	72	1	1.18 ppb	6.20	1.00	
63 Cu	72	1	0.57 ppb	5.88	1.00	
66 Zn	72	1	4.08 ppb	4.97	10.00	
75 As	72	1	0.40 ppb	5.91	1.00	
78 Se	72	1	0.25 ppb	58.42	1.00	
95 Mo	72	1	1968.00 ppb	1.40	2000.00	
107 Ag	115	1	0.05 ppb	11.35	1.00	
111 Cd	115	1	0.47 ppb	58.03	1.00	
118 Sn	115	1	0.17 ppb	23.23	10.00	
121 Sb	115	1	0.97 ppb	1.38	1.00	
137 Ba	115	1	0.04 ppb	20.16	1.00	
205 Tl	165	1	0.04 ppb	30.89	1.00	
208 Pb	165	1	1.00 ppb	1.65	1.00	
232 Th	165	1	0.03 ppb	24.22	1.00	
238 U	165	1	0.01 ppb	11.29	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	291637	0.61	380157	76.7	30 - 120	
45 Sc	1	784216	1.43	1002329	78.2	30 - 120	
72 Ge	1	362840	1.19	466393	77.8	30 - 120	
115 In	1	1050065	1.20	1358080	77.3	30 - 120	
165 Ho	1	2003482	0.67	2422153	82.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\070ICSB.D\070ICSB.D#
Date Acquired: Nov 9 2009 11:40 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:27 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS	Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6		1	98.69	0.29	100	98.7	80 - 120	
51 V	72		1	100.10	0.51	100	100.1	80 - 120	
52 Cr	72		1	96.39	1.13	100	96.4	80 - 120	
55 Mn	72		1	100.10	0.37	100	100.1	80 - 120	
59 Co	72		1	92.34	0.82	100	92.3	80 - 120	
60 Ni	72		1	90.79	1.30	100	90.8	80 - 120	
63 Cu	72		1	86.68	0.74	100	86.7	80 - 120	
66 Zn	72		1	97.33	0.89	100	97.3	80 - 120	
75 As	72		1	98.23	0.81	100	98.2	80 - 120	
78 Se	72		1	104.70	2.41	100	104.7	80 - 120	
95 Mo	72		1	2087.00	0.34	2100	99.4	80 - 120	
107 Ag	115		1	85.94	0.48	100	85.9	80 - 120	
111 Cd	115		1	94.98	1.32	100	95.0	80 - 120	
118 Sn	115		1	99.84	0.78	100	99.8	80 - 120	
121 Sb	115		1	102.50	0.96	100	102.5	80 - 120	
137 Ba	115		1	99.50	0.68	100	99.5	80 - 120	
205 Tl	165		1	94.70	0.86	100	94.7	80 - 120	
208 Pb	165		1	94.59	1.37	100	94.6	80 - 120	
232 Th	165		1	101.60	1.79	100	101.6	80 - 120	
238 U	165		1	101.00	1.69	100	101.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	284581	0.95	380157	74.9	30 - 120	
45 Sc	1	773360	0.68	1002329	77.2	30 - 120	
72 Ge	1	354105	0.59	466393	75.9	30 - 120	
115 In	1	1057991	0.87	1358080	77.9	30 - 120	
165 Ho	1	2026193	0.86	2422153	83.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\071WASH.D\071WASH.D#
Date Acquired: Nov 9 2009 11:43 pm
Operator: LRD
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	-0.007 ppb	0.00	1.30	
51 V	72	1	0.175 ppb	10.68	6.50	
52 Cr	72	1	-0.015 ppb	224.26	2.60	
55 Mn	72	1	-0.011 ppb	101.02	1.30	
59 Co	72	1	0.002 ppb	273.67	1.30	
60 Ni	72	1	-0.002 ppb	1290.40	2.60	
63 Cu	72	1	0.012 ppb	163.09	2.60	
66 Zn	72	1	-0.119 ppb	10.41	13.00	
75 As	72	1	0.016 ppb	84.22	6.50	
78 Se	72	1	0.333 ppb	141.71	6.50	
95 Mo	72	1	0.839 ppb	19.14	2.60	
107 Ag	115	1	0.007 ppb	41.41	6.50	
111 Cd	115	1	0.003 ppb	77.60	1.30	
118 Sn	115	1	0.020 ppb	132.11	13.00	
121 Sb	115	1	0.104 ppb	5.43	2.60	
137 Ba	115	1	0.013 ppb	14.03	1.30	
205 Tl	165	1	0.006 ppb	22.65	1.30	
208 Pb	165	1	0.002 ppb	44.35	1.30	
232 Th	165	1	0.032 ppb	26.02	2.60	
238 U	165	1	0.022 ppb	3.15	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	346070	0.78	380157	91.0	30 - 120	
45 Sc	1	934865	1.04	1002329	93.3	30 - 120	
72 Ge	1	440586	0.16	466393	94.5	30 - 120	
115 In	1	1292185	0.88	1358080	95.1	30 - 120	
165 Ho	1	2424319	0.81	2422153	100.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\072 CCV.D\072 CCV.D#
Date Acquired: Nov 9 2009 11:45 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.64	ppb	0.29	50	99.3	90 - 110	
51 V	72	1	49.05	ppb	0.51	50	98.1	90 - 110	
52 Cr	72	1	49.17	ppb	1.20	50	98.3	90 - 110	
55 Mn	72	1	50.37	ppb	0.69	50	100.7	90 - 110	
59 Co	72	1	49.63	ppb	1.02	50	99.3	90 - 110	
60 Ni	72	1	50.09	ppb	0.34	50	100.2	90 - 110	
63 Cu	72	1	49.59	ppb	0.85	50	99.2	90 - 110	
66 Zn	72	1	49.99	ppb	1.41	50	100.0	90 - 110	
75 As	72	1	49.85	ppb	0.63	50	99.7	90 - 110	
78 Se	72	1	50.96	ppb	3.57	50	101.9	90 - 110	
95 Mo	72	1	50.33	ppb	1.11	50	100.7	90 - 110	
107 Ag	115	1	49.87	ppb	2.11	50	99.7	90 - 110	
111 Cd	115	1	49.47	ppb	1.27	50	98.9	90 - 110	
118 Sn	115	1	49.40	ppb	0.99	50	98.8	90 - 110	
121 Sb	115	1	49.90	ppb	1.97	50	99.8	90 - 110	
137 Ba	115	1	49.24	ppb	1.59	50	98.5	90 - 110	
205 Tl	165	1	52.17	ppb	4.22	50	104.3	90 - 110	
208 Pb	165	1	51.29	ppb	1.50	50	102.6	90 - 110	
232 Th	165	1	51.54	ppb	0.75	50	103.1	90 - 110	
238 U	165	1	51.49	ppb	1.24	50	103.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	344840	0.36	380157	90.7	30 - 120	
45 Sc	1	960040	0.97	1002329	95.8	30 - 120	
72 Ge	1	435616	0.46	466393	93.4	30 - 120	
115 In	1	1327656	0.92	1358080	97.8	30 - 120	
165 Ho	1	2430200	0.49	2422153	100.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\073 CCB.D\073 CCB.D#
Date Acquired: Nov 9 2009 11:48 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.001	ppb	2466.00	1.00	
51 V	72	1	0.058	ppb	15.57	1.00	
52 Cr	72	1	-0.012	ppb	231.32	1.00	
55 Mn	72	1	0.017	ppb	109.77	1.00	
59 Co	72	1	0.003	ppb	86.96	1.00	
60 Ni	72	1	-0.007	ppb	180.98	1.00	
63 Cu	72	1	-0.002	ppb	619.28	1.00	
66 Zn	72	1	-0.062	ppb	46.64	1.00	
75 As	72	1	0.009	ppb	16.14	1.00	
78 Se	72	1	0.083	ppb	474.84	1.00	
95 Mo	72	1	0.119	ppb	13.01	1.00	
107 Ag	115	1	0.012	ppb	51.78	1.00	
111 Cd	115	1	0.015	ppb	63.58	1.00	
118 Sn	115	1	0.055	ppb	78.86	1.00	
121 Sb	115	1	0.163	ppb	17.84	1.00	
137 Ba	115	1	0.017	ppb	13.64	1.00	
205 Tl	165	1	0.018	ppb	11.16	1.00	
208 Pb	165	1	0.005	ppb	21.07	1.00	
232 Th	165	1	0.054	ppb	24.52	1.00	
238 U	165	1	0.015	ppb	17.65	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	354004	0.85	380157	93.1	30 - 120	
45 Sc	1	982510	1.03	1002329	98.0	30 - 120	
72 Ge	1	452984	0.53	466393	97.1	30 - 120	
115 In	1	1333424	0.83	1358080	98.2	30 - 120	
165 Ho	1	2422993	0.32	2422153	100.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\074WASH.D\074WASH.D#
Date Acquired: Nov 9 2009 11:51 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.952 ppb	11.71	1.30	
51 V	72	1	4.966 ppb	1.97	6.50	
52 Cr	72	1	1.993 ppb	3.95	2.60	
55 Mn	72	1	1.097 ppb	4.84	1.30	
59 Co	72	1	1.021 ppb	2.48	1.30	
60 Ni	72	1	2.009 ppb	4.37	2.60	
63 Cu	72	1	2.060 ppb	6.37	2.60	
66 Zn	72	1	11.960 ppb	1.85	13.00	
75 As	72	1	4.930 ppb	2.64	6.50	
78 Se	72	1	5.436 ppb	4.49	6.50	
95 Mo	72	1	2.193 ppb	2.61	2.60	
107 Ag	115	1	5.282 ppb	1.22	6.50	
111 Cd	115	1	0.986 ppb	2.05	1.30	
118 Sn	115	1	10.340 ppb	1.29	13.00	
121 Sb	115	1	2.115 ppb	3.91	2.60	
137 Ba	115	1	1.056 ppb	4.52	1.30	
205 Tl	165	1	1.119 ppb	1.07	1.30	
208 Pb	165	1	1.065 ppb	1.09	1.30	
232 Th	165	1	2.185 ppb	3.45	2.60	
238 U	165	1	1.104 ppb	0.87	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	356450	1.14	380157	93.8	30 - 120	
45 Sc	1	964047	0.67	1002329	96.2	30 - 120	
72 Ge	1	452729	0.90	466393	97.1	30 - 120	
115 In	1	1319982	1.15	1358080	97.2	30 - 120	
165 Ho	1	2426292	0.34	2422153	100.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\115 CCV.D\115 CCV.D#
Date Acquired: Nov 10 2009 01:46 am
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.47	ppb	2.23	50	98.9	90 - 110	
51 V	72	1	50.56	ppb	0.37	50	101.1	90 - 110	
52 Cr	72	1	50.65	ppb	0.47	50	101.3	90 - 110	
55 Mn	72	1	50.77	ppb	1.14	50	101.5	90 - 110	
59 Co	72	1	50.40	ppb	0.87	50	100.8	90 - 110	
60 Ni	72	1	49.84	ppb	0.41	50	99.7	90 - 110	
63 Cu	72	1	50.51	ppb	0.76	50	101.0	90 - 110	
66 Zn	72	1	49.77	ppb	0.09	50	99.5	90 - 110	
75 As	72	1	50.26	ppb	0.16	50	100.5	90 - 110	
78 Se	72	1	49.87	ppb	2.78	50	99.7	90 - 110	
95 Mo	72	1	49.39	ppb	0.94	50	98.8	90 - 110	
107 Ag	115	1	50.12	ppb	2.41	50	100.2	90 - 110	
111 Cd	115	1	49.40	ppb	2.86	50	98.8	90 - 110	
118 Sn	115	1	49.66	ppb	2.32	50	99.3	90 - 110	
121 Sb	115	1	49.95	ppb	2.09	50	99.9	90 - 110	
137 Ba	115	1	49.37	ppb	3.54	50	98.7	90 - 110	
205 Tl	165	1	52.74	ppb	1.97	50	105.5	90 - 110	
208 Pb	165	1	51.04	ppb	1.99	50	102.1	90 - 110	
232 Th	165	1	50.20	ppb	0.81	50	100.4	90 - 110	
238 U	165	1	50.45	ppb	0.19	50	100.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	369807	1.50	380157	97.3	30 - 120	
45 Sc	1	1018477	0.34	1002329	101.6	30 - 120	
72 Ge	1	453154	1.41	466393	97.2	30 - 120	
115 In	1	1349823	1.36	1358080	99.4	30 - 120	
165 Ho	1	2413896	0.92	2422153	99.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\116 CCB.D\116 CCB.D#
Date Acquired: Nov 10 2009 01:49 am
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ppb	169.87	1.00	
51 V	72	1	0.084	ppb	16.99	1.00	
52 Cr	72	1	-0.004	ppb	232.14	1.00	
55 Mn	72	1	-0.012	ppb	86.50	1.00	
59 Co	72	1	0.002	ppb	114.75	1.00	
60 Ni	72	1	0.010	ppb	269.98	1.00	
63 Cu	72	1	0.021	ppb	60.58	1.00	
66 Zn	72	1	0.020	ppb	111.79	1.00	
75 As	72	1	0.011	ppb	110.07	1.00	
78 Se	72	1	-0.018	ppb	805.68	1.00	
95 Mo	72	1	0.019	ppb	66.39	1.00	
107 Ag	115	1	0.013	ppb	61.58	1.00	
111 Cd	115	1	-0.003	ppb	256.84	1.00	
118 Sn	115	1	0.069	ppb	66.41	1.00	
121 Sb	115	1	0.152	ppb	15.07	1.00	
137 Ba	115	1	0.009	ppb	26.07	1.00	
205 Tl	165	1	0.013	ppb	9.99	1.00	
208 Pb	165	1	0.002	ppb	100.06	1.00	
232 Th	165	1	0.053	ppb	19.40	1.00	
238 U	165	1	0.012	ppb	14.27	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	372110	0.64	380157	97.9	30 - 120	
45 Sc	1	1022224	0.42	1002329	102.0	30 - 120	
72 Ge	1	464891	0.56	466393	99.7	30 - 120	
115 In	1	1352890	0.37	1358080	99.6	30 - 120	
165 Ho	1	2419064	1.22	2422153	99.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\117WASH.D\117WASH.D#
Date Acquired: Nov 10 2009 01:52 am
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 11:27 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.035 ppb	2.74	1.30	
51 V	72	1	5.187 ppb	0.57	6.50	
52 Cr	72	1	2.031 ppb	0.75	2.60	
55 Mn	72	1	1.067 ppb	2.38	1.30	
59 Co	72	1	0.970 ppb	1.63	1.30	
60 Ni	72	1	2.058 ppb	2.00	2.60	
63 Cu	72	1	2.068 ppb	3.91	2.60	
66 Zn	72	1	11.900 ppb	1.49	13.00	
75 As	72	1	5.068 ppb	3.34	6.50	
78 Se	72	1	5.362 ppb	14.08	6.50	
95 Mo	72	1	2.047 ppb	1.20	2.60	
107 Ag	115	1	5.331 ppb	2.52	6.50	
111 Cd	115	1	1.046 ppb	1.94	1.30	
118 Sn	115	1	10.310 ppb	1.17	13.00	
121 Sb	115	1	2.073 ppb	0.88	2.60	
137 Ba	115	1	1.049 ppb	2.40	1.30	
205 Tl	165	1	1.100 ppb	1.48	1.30	
208 Pb	165	1	1.054 ppb	0.90	1.30	
232 Th	165	1	2.156 ppb	2.05	2.60	
238 U	165	1	1.079 ppb	1.97	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368170	0.68	380157	96.8	30 - 120	
45 Sc	1	1000230	0.23	1002329	99.8	30 - 120	
72 Ge	1	456074	0.97	466393	97.8	30 - 120	
115 In	1	1327112	0.29	1358080	97.7	30 - 120	
165 Ho	1	2402449	0.69	2422153	99.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\118SMPL.D\118SMPL.D#
Date Acquired: Nov 10 2009 01:54 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:27 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

DNW LRD 11/10/09

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	18.76	18.76	ppb	0.54	3600	
51 V	72	1	23.38	23.38	ppb	1.45	3600	
52 Cr	72	1	20.11	20.11	ppb	1.09	3600	
55 Mn	72	1	22.39	22.39	ppb	1.28	3600	
59 Co	72	1	18.57	18.57	ppb	0.84	3600	
60 Ni	72	1	18.78	18.78	ppb	3.80	3600	
63 Cu	72	1	17.78	17.78	ppb	1.66	3600	
66 Zn	72	1	22.05	22.05	ppb	1.64	3600	
75 As	72	1	19.60	19.60	ppb	1.50	3600	
78 Se	72	1	20.84	20.84	ppb	12.31	3600	
95 Mo	72	1	2,115.00	2115.00	ppb	0.39	3600	
107 Ag	115	1	16.62	16.62	ppb	3.07	3600	
111 Cd	115	1	16.24	16.24	ppb	1.06	3600	
118 Sn	115	1	40.85	40.85	ppb	1.86	3600	
121 Sb	115	1	42.03	42.03	ppb	1.54	3600	
137 Ba	115	1	19.75	19.75	ppb	1.56	3600	
205 Tl	165	1	19.50	19.50	ppb	2.07	3600	
208 Pb	165	1	19.31	19.31	ppb	2.03	3600	
232 Th	165	1	20.35	20.35	ppb	1.43	1000	
238 U	165	1	20.19	20.19	ppb	1.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	285150	0.98	380157	75.0	30 - 120	
45 Sc	1	779494	1.35	1002329	77.8	30 - 120	
72 Ge	1	350892	0.50	466393	75.2	30 - 120	
115 In	1	1024662	0.55	1358080	75.4	30 - 120	
165 Ho	1	1912062	0.40	2422153	78.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\119SMPL.D\119SMPL.D#
Date Acquired: Nov 10 2009 01:57 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:27 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

JNW (RD) 11/10/09

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	313.89	3600	
51 V	72	1	0.16	0.16	ppb	20.44	3600	
52 Cr	72	1	0.00	0.00	ppb	701.08	3600	
55 Mn	72	1	-0.03	-0.03	ppb	34.36	3600	
59 Co	72	1	0.00	0.00	ppb	2064.30	3600	
60 Ni	72	1	-0.02	-0.02	ppb	39.77	3600	
63 Cu	72	1	-0.01	-0.01	ppb	79.63	3600	
66 Zn	72	1	0.10	0.10	ppb	21.02	3600	
75 As	72	1	-0.01	-0.01	ppb	155.04	3600	
78 Se	72	1	0.58	0.58	ppb	54.66	3600	
95 Mo	72	1	0.71	0.71	ppb	20.97	3600	
107 Ag	115	1	0.01	0.01	ppb	34.30	3600	
111 Cd	115	1	0.00	0.00	ppb	292.93	3600	
118 Sn	115	1	-0.03	-0.03	ppb	81.68	3600	
121 Sb	115	1	0.01	0.01	ppb	74.05	3600	
137 Ba	115	1	0.00	0.00	ppb	64.23	3600	
205 Tl	165	1	0.00	0.00	ppb	52.33	3600	
208 Pb	165	1	0.00	0.00	ppb	34.79	3600	
232 Th	165	1	0.01	0.01	ppb	12.23	1000	
238 U	165	1	0.00	0.00	ppb	63.73	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	339194	1.35	380157	89.2	30 - 120	
45 Sc	1	935735	0.87	1002329	93.4	30 - 120	
72 Ge	1	437417	0.42	466393	93.8	30 - 120	
115 In	1	1299039	0.24	1358080	95.7	30 - 120	
165 Ho	1	2306804	0.65	2422153	95.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\064CALB.D\064CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\120CALB.D\120CALB.D#
Date Acquired: Nov 10 2009 02:00 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 11:27 pm
Sample Type: CalBlk

DNO
LRD
11-10-09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	897	5.64
52	Cr	72	1	1794	15.11
55	Mn	72	1	377	11.82
59	Co	72	1	27	78.54
60	Ni	72	1	60	33.98
63	Cu	72	1	160	5.50
66	Zn	72	1	389	5.28
75	As	72	1	38	9.69
78	Se	72	1	183	14.07
95	Mo	72	1	390	15.00
107	Ag	115	1	23	89.28
111	Cd	115	1	9	30.03
118	Sn	115	1	200	52.50
121	Sb	115	1	96	23.66
137	Ba	115	1	22	52.67
205	Tl	165	1	41	13.17
208	Pb	165	1	174	3.68
232	Th	165	1	167	27.85
238	U	165	1	68	20.50

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	346465	1.01
45	Sc	1	965226	0.47
72	Ge	1	449173	0.78
115	In	1	1321554	0.64
165	Ho	1	2347213	0.78

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 11/10/2025

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#
Date Acquired: Nov 10 2009 02:03 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:01 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	730	18.51
52	Cr	72	1	1797	5.23
55	Mn	72	1	380	20.15
59	Co	72	1	23	65.65
60	Ni	72	1	80	12.92
63	Cu	72	1	177	12.30
66	Zn	72	1	295	3.34
75	As	72	1	29	28.60
78	Se	72	1	180	31.25
95	Mo	72	1	177	34.62
107	Ag	115	1	10	100.23
111	Cd	115	1	2	77.88
118	Sn	115	1	250	7.37
121	Sb	115	1	63	13.14
137	Ba	115	1	26	26.02
205	Tl	165	1	46	23.48
208	Pb	165	1	193	5.70
232	Th	165	1	160	44.04
238	U	165	1	51	14.32

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	350699	0.51
45	Sc	1	975170	1.39
72	Ge	1	456352	0.62
115	In	1	1314315	1.31
165	Ho	1	2357107	0.71

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\122ICAL.D\122ICAL.D#
Date Acquired: Nov 10 2009 02:05 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:03 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	40216	1.15
51	V	72	1	565936	0.42
52	Cr	72	1	564690	0.33
55	Mn	72	1	641392	0.30
59	Co	72	1	668817	1.09
60	Ni	72	1	151107	0.73
63	Cu	72	1	358263	0.61
66	Zn	72	1	82902	0.25
75	As	72	1	70507	0.36
78	Se	72	1	14505	2.61
95	Mo	72	1	194487	0.27
107	Ag	115	1	559008	2.42
111	Cd	115	1	115153	2.20
118	Sn	115	1	321843	1.50
121	Sb	115	1	379416	1.53
137	Ba	115	1	159256	1.48
205	Tl	165	1	1303983	2.38
208	Pb	165	1	1889337	1.40
232	Th	165	1	2003367	1.08
238	U	165	1	2096675	0.62

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	338335	1.13	350699	96.5	30 - 120	
45	Sc	1	958735	1.30	975170	98.3	30 - 120	
72	Ge	1	428707	1.21	456352	93.9	30 - 120	
115	In	1	1296877	0.96	1314315	98.7	30 - 120	
165	Ho	1	2326407	0.76	2357107	98.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\123 CCV.D\123 CCV.D#
Date Acquired: Nov 10 2009 02:08 am
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.91	ppb	2.75	50	99.8	90 - 110	
51 V	72	1	49.24	ppb	0.23	50	98.5	90 - 110	
52 Cr	72	1	49.45	ppb	0.29	50	98.9	90 - 110	
55 Mn	72	1	49.86	ppb	0.27	50	99.7	90 - 110	
59 Co	72	1	50.04	ppb	0.73	50	100.1	90 - 110	
60 Ni	72	1	49.40	ppb	1.02	50	98.8	90 - 110	
63 Cu	72	1	49.26	ppb	0.55	50	98.5	90 - 110	
66 Zn	72	1	49.37	ppb	0.57	50	98.7	90 - 110	
75 As	72	1	49.47	ppb	0.63	50	98.9	90 - 110	
78 Se	72	1	47.86	ppb	3.12	50	95.7	90 - 110	
95 Mo	72	1	49.27	ppb	1.81	50	98.5	90 - 110	
107 Ag	115	1	49.54	ppb	2.30	50	99.1	90 - 110	
111 Cd	115	1	49.21	ppb	1.38	50	98.4	90 - 110	
118 Sn	115	1	48.98	ppb	1.17	50	98.0	90 - 110	
121 Sb	115	1	49.67	ppb	0.57	50	99.3	90 - 110	
137 Ba	115	1	49.45	ppb	0.45	50	98.9	90 - 110	
205 Tl	165	1	52.26	ppb	1.95	50	104.5	90 - 110	
208 Pb	165	1	50.46	ppb	2.07	50	100.9	90 - 110	
232 Th	165	1	51.10	ppb	1.01	50	102.2	90 - 110	
238 U	165	1	50.56	ppb	2.70	50	101.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	339355	0.90	350699	96.8	30 - 120	
45 Sc	1	953700	0.62	975170	97.8	30 - 120	
72 Ge	1	425622	0.78	456352	93.3	30 - 120	
115 In	1	1290326	0.89	1314315	98.2	30 - 120	
165 Ho	1	2316506	0.95	2357107	98.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\124 CCB.D\124 CCB.D#
Date Acquired: Nov 10 2009 02:11 am
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.043	ppb	3.53	1.00	
52 Cr	72	1	0.018	ppb	155.75	1.00	
55 Mn	72	1	0.020	ppb	32.27	1.00	
59 Co	72	1	0.006	ppb	60.80	1.00	
60 Ni	72	1	-0.011	ppb	58.90	1.00	
63 Cu	72	1	-0.008	ppb	59.29	1.00	
66 Zn	72	1	0.060	ppb	53.66	1.00	
75 As	72	1	0.016	ppb	150.06	1.00	
78 Se	72	1	-0.177	ppb	77.78	1.00	
95 Mo	72	1	-0.001	ppb	3159.70	1.00	
107 Ag	115	1	0.011	ppb	29.33	1.00	
111 Cd	115	1	0.017	ppb	45.14	1.00	
118 Sn	115	1	0.139	ppb	49.06	1.00	
121 Sb	115	1	0.222	ppb	11.27	1.00	
137 Ba	115	1	0.004	ppb	98.08	1.00	
205 Tl	165	1	0.025	ppb	20.85	1.00	
208 Pb	165	1	0.005	ppb	19.31	1.00	
232 Th	165	1	0.066	ppb	20.41	1.00	
238 U	165	1	0.016	ppb	18.15	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	344141	0.34	350699	98.1	30 - 120	
45 Sc	1	943043	0.60	975170	96.7	30 - 120	
72 Ge	1	437268	0.59	456352	95.8	30 - 120	
115 In	1	1299591	0.93	1314315	98.9	30 - 120	
165 Ho	1	2322442	0.24	2357107	98.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\125WASH.D\125WASH.D#
Date Acquired: Nov 10 2009 02:14 am
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.915 ppb	26.94	1.30	
51 V	72	1	4.853 ppb	1.04	6.50	
52 Cr	72	1	2.109 ppb	4.44	2.60	
55 Mn	72	1	0.986 ppb	3.94	1.30	
59 Co	72	1	1.067 ppb	3.16	1.30	
60 Ni	72	1	2.030 ppb	2.53	2.60	
63 Cu	72	1	2.033 ppb	2.52	2.60	
66 Zn	72	1	11.810 ppb	0.98	13.00	
75 As	72	1	5.019 ppb	1.79	6.50	
78 Se	72	1	5.516 ppb	15.59	6.50	
95 Mo	72	1	1.978 ppb	4.60	2.60	
107 Ag	115	1	5.258 ppb	1.36	6.50	
111 Cd	115	1	1.018 ppb	4.53	1.30	
118 Sn	115	1	10.530 ppb	2.41	13.00	
121 Sb	115	1	2.096 ppb	2.55	2.60	
137 Ba	115	1	1.042 ppb	4.12	1.30	
205 Tl	165	1	1.095 ppb	0.66	1.30	
208 Pb	165	1	1.059 ppb	2.54	1.30	
232 Th	165	1	2.173 ppb	2.30	2.60	
238 U	165	1	1.093 ppb	2.96	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	343734	1.06	350699	98.0	30 - 120	
45 Sc	1	947887	0.88	975170	97.2	30 - 120	
72 Ge	1	434228	1.12	456352	95.2	30 - 120	
115 In	1	1279175	0.95	1314315	97.3	30 - 120	
165 Ho	1	2318596	0.84	2357107	98.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\126 BLK.D\126 BLK.D#
Date Acquired: Nov 10 2009 02:16 am
Operator: LRD
Sample Name: LNNPLBF
Misc Info: BLANK 9306272 6020
Vial Number: 3209
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	2.00	
51 V	72	1	-0.044 ppb	10.66	2.00	
52 Cr	72	1	0.015 ppb	322.40	2.00	
55 Mn	72	1	0.014 ppb	64.37	2.00	
59 Co	72	1	-0.001 ppb	62.65	2.00	
60 Ni	72	1	0.006 ppb	175.60	2.00	
63 Cu	72	1	0.026 ppb	7.95	2.00	
66 Zn	72	1	0.611 ppb	14.90	2.00	
75 As	72	1	0.005 ppb	203.55	2.00	
78 Se	72	1	0.348 ppb	61.24	2.00	
95 Mo	72	1	-0.049 ppb	32.97	2.00	
107 Ag	115	1	0.008 ppb	53.28	2.00	
111 Cd	115	1	0.003 ppb	121.88	2.00	
118 Sn	115	1	0.058 ppb	43.50	2.00	
121 Sb	115	1	0.038 ppb	17.73	2.00	
137 Ba	115	1	0.006 ppb	106.39	2.00	
205 Tl	165	1	0.011 ppb	13.90	2.00	
208 Pb	165	1	0.004 ppb	43.46	2.00	
232 Th	165	1	0.006 ppb	36.94	2.00	
238 U	165	1	0.001 ppb	143.60	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	346963	0.13	350699	98.9	30 - 120	
45 Sc	1	951585	1.34	975170	97.6	30 - 120	
72 Ge	1	443386	0.68	456352	97.2	30 - 120	
115 In	1	1307444	0.59	1314315	99.5	30 - 120	
165 Ho	1	2346896	0.83	2357107	99.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\127 LCS.D\127 LCS.D#
Date Acquired: Nov 10 2009 02:19 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNNPLCF
Misc Info: LCS
Vial Number: 3210
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	41.81	3.42	40	104.5	80 - 120	
51 V	72	1	39.88	0.32	40	99.7	80 - 120	
52 Cr	72	1	40.14	0.83	40	100.4	80 - 120	
55 Mn	72	1	40.18	0.90	40	100.5	80 - 120	
59 Co	72	1	41.13	0.04	40	102.8	80 - 120	
60 Ni	72	1	39.91	1.84	40	99.8	80 - 120	
63 Cu	72	1	40.25	1.79	40	100.6	80 - 120	
66 Zn	72	1	41.36	0.99	40	103.4	80 - 120	
75 As	72	1	40.90	0.30	40	102.3	80 - 120	
78 Se	72	1	37.94	1.38	40	94.9	80 - 120	
95 Mo	72	1	40.38	0.63	40	101.0	80 - 120	
107 Ag	115	1	40.53	1.12	40	101.3	80 - 120	
111 Cd	115	1	39.89	2.28	40	99.7	80 - 120	
118 Sn	115	1	0.05	32.95	40	0.1	80 - 120	
121 Sb	115	1	40.96	2.24	40	102.4	80 - 120	
137 Ba	115	1	40.53	1.17	40	101.3	80 - 120	
205 Tl	165	1	42.97	2.90	40	107.4	80 - 120	
208 Pb	165	1	41.26	2.67	40	103.2	80 - 120	
232 Th	165	1	40.71	2.12	40	101.8	80 - 120	
238 U	165	1	40.95	2.09	40	102.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	340888	0.87	350699	97.2	30 - 120	
45 Sc	1	951495	0.57	975170	97.6	30 - 120	
72 Ge	1	426874	0.91	456352	93.5	30 - 120	
115 In	1	1295292	0.62	1314315	98.6	30 - 120	
165 Ho	1	2330700	1.20	2357107	98.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\128AREF.D\128AREF.D#
Date Acquired: Nov 10 2009 02:22 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLPFF
Misc Info: D9J300353
Vial Number: 3211
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: AllRef
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.03	0.03	ppb	99.86	3600	
51 V	72	1	34.25	34.25	ppb	1.07	3600	
52 Cr	72	1	110.00	110.00	ppb	0.22	3600	
55 Mn	72	1	11.49	11.49	ppb	1.50	3600	
59 Co	72	1	0.46	0.46	ppb	2.80	3600	
60 Ni	72	1	1.55	1.55	ppb	7.05	3600	
63 Cu	72	1	0.30	0.30	ppb	12.66	3600	
66 Zn	72	1	5.27	5.27	ppb	0.46	3600	
75 As	72	1	193.00	193.00	ppb	0.37	3600	
78 Se	72	1	2.23	2.23	ppb	31.94	3600	
95 Mo	72	1	20.17	20.17	ppb	3.64	3600	
107 Ag	115	1	0.05	0.05	ppb	21.37	3600	
111 Cd	115	1	-0.02	-0.02	ppb	40.78	3600	
118 Sn	115	1	0.06	0.06	ppb	26.67	3600	
121 Sb	115	1	0.19	0.19	ppb	12.22	3600	
137 Ba	115	1	29.52	29.52	ppb	2.85	3600	
205 Tl	165	1	0.08	0.08	ppb	9.28	3600	
208 Pb	165	1	0.04	0.04	ppb	36.93	3600	
232 Th	165	1	0.07	0.07	ppb	19.57	1000	
238 U	165	1	48.03	48.03	ppb	1.11	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	289357	0.40	350699	82.5	30 - 120	
45 Sc	1	836531	0.72	975170	85.8	30 - 120	
72 Ge	1	353830	0.41	456352	77.5	30 - 120	
115 In	1	1052250	2.02	1314315	80.1	30 - 120	
165 Ho	1	1999926	0.66	2357107	84.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\129SDIL.D\129SDIL.D#
Date Acquired: Nov 10 2009 02:25 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLPFP5F
Misc Info: SERIAL DILUTION
Vial Number: 3212
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: SDIL
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\128AREF.D\128AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.01	ppb	173.25	0.01	148.9	90 - 110	
51 V	72	1	6.90	ppb	1.30	6.85	100.8	90 - 110	
52 Cr	72	1	22.03	ppb	0.64	22.00	100.1	90 - 110	
55 Mn	72	1	2.28	ppb	2.22	2.30	99.0	90 - 110	
59 Co	72	1	0.09	ppb	17.97	0.09	99.6	90 - 110	
60 Ni	72	1	0.30	ppb	15.94	0.31	95.8	90 - 110	
63 Cu	72	1	0.06	ppb	12.54	0.06	99.8	90 - 110	
66 Zn	72	1	1.06	ppb	10.16	1.05	100.9	90 - 110	
75 As	72	1	37.81	ppb	0.56	38.60	98.0	90 - 110	
78 Se	72	1	0.76	ppb	71.63	0.45	171.2	90 - 110	
95 Mo	72	1	3.99	ppb	2.84	4.03	98.9	90 - 110	
107 Ag	115	1	0.01	ppb	42.77	0.01	110.6	90 - 110	
111 Cd	115	1	0.01	ppb	99.86	0.00	-154.7	90 - 110	
118 Sn	115	1	0.05	ppb	41.04	0.01	391.8	90 - 110	
121 Sb	115	1	0.04	ppb	14.05	0.04	109.6	90 - 110	
137 Ba	115	1	5.99	ppb	0.43	5.90	101.5	90 - 110	
205 Tl	165	1	0.02	ppb	20.14	0.02	98.3	90 - 110	
208 Pb	165	1	0.00	ppb	22.52	0.01	70.4	90 - 110	
232 Th	165	1	0.01	ppb	30.40	0.01	99.3	90 - 110	
238 U	165	1	10.60	ppb	1.65	9.61	110.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	323515	0.30	350699	92.2	30 - 120	
45 Sc	1	897309	1.04	975170	92.0	30 - 120	
72 Ge	1	404701	0.58	456352	88.7	30 - 120	
115 In	1	1198504	0.76	1314315	91.2	30 - 120	
165 Ho	1	2239209	0.44	2357107	95.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:11:35

Department: 090 (Metals)

Source: Spreadsheet

Sample: **LNLPFP5F**

Serial Dilution: **5.00**

Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 129
Acquired: 11/10/2009 02:25:00
Calibrated: 11/10/2009 02:03:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	3	0.04332	0.02910	48.9		*	
7440-62-2	Vanadium	51	37477	34.510	34.250	0.759		*	
7440-47-3	Chromium	52	118663	110.15	110.00	0.136		*	
7439-96-5	Manganese	55	14107	11.380	11.490	0.957		*	
7440-48-4	Cobalt	59	593	0.45385	0.45570	0.406		*	
7440-02-0	Nickel	60	493	1.4815	1.5470	4.23		*	
7440-50-8	Copper	63	360	0.30060	0.30110	0.166		*	
7440-66-6	Zinc	66	1090	5.3150	5.2660	0.930		*	
7440-38-2	Arsenic	75	25179	189.05	193.00	2.05	0.21	2.0	☑
7782-49-2	Selenium	78	263	3.8185	2.2300	71.2	0.70	NC	☑
7439-98-7	Molybdenum	95	7472	19.940	20.170	1.14		*	
7440-22-4	Silver	107	63	0.05255	0.04750	10.6		*	
7440-43-9	Cadmium	111	9	0.03275	-0.02117			*	
7440-31-5	Tin	118	373	0.24465	0.06244	292		*	
7440-36-0	Antimony	121	201	0.20460	0.18670	9.59		*	
7440-39-3	Barium	137	8843	29.965	29.520	1.51		*	
7440-28-0	Thallium	205	252	0.08330	0.08470	1.65		*	
7439-92-1	Lead	208	274	0.02493	0.03542	29.6		*	
7440-61-1	Uranium	238	213883	53.000	48.030	10.3		*	
7440-29-1	Thorium	232	413	0.06765	0.06813	0.705		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: LRD Date: 11/10/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\130PDS.D\130PDS.D#
Date Acquired: Nov 10 2009 02:27 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLPFZF
Misc Info: POST DIGESTION SPIKE
Vial Number: 3301
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	195.60	0.03	ppb	2.10	200	97.8	75 - 125	
51 V	72	1	232.10	34.25	ppb	1.43	200	99.1	75 - 125	
52 Cr	72	1	301.20	110.00	ppb	0.45	200	97.2	75 - 125	
55 Mn	72	1	206.10	11.49	ppb	1.50	200	97.5	75 - 125	
59 Co	72	1	188.30	0.46	ppb	0.58	200	93.9	75 - 125	
60 Ni	72	1	173.40	1.55	ppb	1.12	200	86.0	75 - 125	
63 Cu	72	1	169.40	0.30	ppb	0.32	200	84.6	75 - 125	
66 Zn	72	1	191.40	5.27	ppb	0.70	200	93.2	75 - 125	
75 As	72	1	382.30	193.00	ppb	0.41	200	97.3	75 - 125	
78 Se	72	1	213.20	2.23	ppb	3.06	200	105.4	75 - 125	
95 Mo	72	1	220.50	20.17	ppb	0.77	200	100.1	75 - 125	
107 Ag	115	1	42.23	0.05	ppb	2.46	50	84.4	75 - 125	
111 Cd	115	1	182.90	-0.02	ppb	2.38	200	91.5	75 - 125	
118 Sn	115	1	174.80	0.06	ppb	2.35	200	87.4	75 - 125	
121 Sb	115	1	197.00	0.19	ppb	2.14	200	98.4	75 - 125	
137 Ba	115	1	222.10	29.52	ppb	2.19	200	96.8	75 - 125	
205 Tl	165	1	175.00	0.08	ppb	1.85	200	87.5	75 - 125	
208 Pb	165	1	171.30	0.04	ppb	1.07	200	85.6	75 - 125	
232 Th	165	1	0.02	0.07	ppb	29.01	200	0.0	75 - 125	
238 U	165	1	229.40	48.03	ppb	0.35	200	92.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	282205	1.65	350699	80.5	30 - 120	
45 Sc	1	826929	1.35	975170	84.8	30 - 120	
72 Ge	1	345026	0.74	456352	75.6	30 - 120	
115 In	1	1060151	1.59	1314315	80.7	30 - 120	
165 Ho	1	2026385	1.11	2357107	86.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:11:44

Department: 090 (Metals)

Source: Spreadsheet

Sample: **LNLPFZF**

Spike Dilution: **1.00** Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 130
Acquired: 11/10/2009 02:27:00
Calibrated: 11/10/2009 02:03:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	65594	195.60	0.02910	97.8	200		☑
7440-62-2	Vanadium	51	1056370	232.10	34.250	98.9	200		☑
7440-47-3	Chromium	52	1366090	301.20	110.00	95.6	200		☐
7439-96-5	Manganese	55	1063370	206.10	11.490	97.3	200		☐
7440-48-4	Cobalt	59	1013750	188.30	0.45570	93.9	200		☐
7440-02-0	Nickel	60	210849	173.40	1.5470	85.9	200		☐
7440-50-8	Copper	63	488211	169.40	0.30110	84.5	200		☐
7440-66-6	Zinc	66	127521	191.40	5.2660	93.1	200		☐
7440-38-2	Arsenic	75	216887	382.30	193.00	94.7	200		☑
7782-49-2	Selenium	78	24729	213.20	2.2300	105	200		☑
7439-98-7	Molybdenum	95	345057	220.50	20.170	100	200		☐
7440-22-4	Silver	107	192966	42.230	0.04750	84.4	50.0		☐
7440-43-9	Cadmium	111	172106	182.90	-0.02117	91.4	200		☐
7440-31-5	Tin	118	459555	174.80	0.06244	87.4	200		☐
7440-36-0	Antimony	121	610833	197.00	0.18670	98.4	200		☑
7440-39-3	Barium	137	289039	222.10	29.520	96.3	200		☐
7440-28-0	Thallium	205	1988070	175.00	0.08470	87.5	200		☑
7439-92-1	Lead	208	2819610	171.30	0.03542	85.6	200		☐
7440-61-1	Uranium	238	4189290	229.40	48.030	90.7	200		☐
7440-29-1	Thorium	232	523	0.02212	0.06813				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: LRD Date: 11/10/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\131_MS.D\131_MS.D#
Date Acquired: Nov 10 2009 02:30 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLPFSF
Misc Info: MATRIX SPIKE
Vial Number: 3302
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: MS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	40.51	0.03	ppb	3.27	40	101.2	50 - 150	
51 V	72	1	75.39	34.25	ppb	0.49	40	101.5	50 - 150	
52 Cr	72	1	149.40	110.00	ppb	0.12	40	99.6	50 - 150	
55 Mn	72	1	51.52	11.49	ppb	0.97	40	100.1	50 - 150	
59 Co	72	1	39.33	0.46	ppb	0.61	40	97.2	50 - 150	
60 Ni	72	1	38.37	1.55	ppb	1.01	40	92.4	50 - 150	
63 Cu	72	1	36.03	0.30	ppb	1.55	40	89.4	50 - 150	
66 Zn	72	1	44.88	5.27	ppb	0.42	40	99.1	50 - 150	
75 As	72	1	235.40	193.00	ppb	0.54	40	101.0	50 - 150	
78 Se	72	1	47.11	2.23	ppb	3.63	40	111.6	50 - 150	
95 Mo	72	1	62.80	20.17	ppb	0.36	40	104.4	50 - 150	
107 Ag	115	1	36.00	0.05	ppb	0.30	40	89.9	50 - 150	
111 Cd	115	1	38.34	-0.02	ppb	1.53	40	95.9	50 - 150	
118 Sn	115	1	0.35	0.06	ppb	35.85	40	0.9	50 - 150	
121 Sb	115	1	42.07	0.19	ppb	1.10	40	104.7	50 - 150	
137 Ba	115	1	69.60	29.52	ppb	0.74	40	100.1	50 - 150	
205 Tl	165	1	39.18	0.08	ppb	1.36	40	97.7	50 - 150	
208 Pb	165	1	37.37	0.04	ppb	1.21	40	93.3	50 - 150	
232 Th	165	1	40.11	0.07	ppb	1.37	40	100.1	50 - 150	
238 U	165	1	86.79	48.03	ppb	1.41	40	98.6	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	280713	0.10	350699	80.0	30 - 120	
45 Sc	1	827834	1.10	975170	84.9	30 - 120	
72 Ge	1	347291	0.49	456352	76.1	30 - 120	
115 In	1	1068961	0.12	1314315	81.3	30 - 120	
165 Ho	1	2030469	0.74	2357107	86.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\132 MSD.D\132 MSD.D#
Date Acquired: Nov 10 2009 02:33 am
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLPFDF
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 3303
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 10 2009 02:06 am
Sample Type: MSD
Dilution Factor: 1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\131 MS.D\131 MS.D#

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	40.90	ppb	3.48	40.51	0.96	20	
51 V	72	1	75.26	ppb	0.56	75.39	0.17	20	
52 Cr	72	1	147.40	ppb	0.61	149.40	1.35	20	
55 Mn	72	1	51.41	ppb	0.38	51.52	0.21	20	
59 Co	72	1	39.21	ppb	0.62	39.33	0.31	20	
60 Ni	72	1	38.33	ppb	1.67	38.37	0.10	20	
63 Cu	72	1	35.92	ppb	0.80	36.03	0.31	20	
66 Zn	72	1	43.45	ppb	1.30	44.88	3.24	20	
75 As	72	1	235.10	ppb	0.28	235.40	0.13	20	
78 Se	72	1	45.50	ppb	1.13	47.11	3.48	20	
95 Mo	72	1	62.23	ppb	1.00	62.80	0.91	20	
107 Ag	115	1	35.73	ppb	0.68	36.00	0.75	20	
111 Cd	115	1	38.65	ppb	0.32	38.34	0.81	20	
118 Sn	115	1	0.12	ppb	52.37	0.35	96.83	20	
121 Sb	115	1	42.23	ppb	1.10	42.07	0.38	20	
137 Ba	115	1	70.22	ppb	0.76	69.60	0.89	20	
205 Tl	165	1	38.89	ppb	0.66	39.18	0.74	20	
208 Pb	165	1	37.01	ppb	1.13	37.37	0.97	20	
232 Th	165	1	40.22	ppb	0.34	40.11	0.27	20	
238 U	165	1	86.99	ppb	0.51	86.79	0.23	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272006	1.70	350699	77.6	30 - 120	
45 Sc	1	827095	0.29	975170	84.8	30 - 120	
72 Ge	1	348133	0.48	456352	76.3	30 - 120	
115 In	1	1071353	1.22	1314315	81.5	30 - 120	
165 Ho	1	2053912	0.58	2357107	87.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\133 CCV.D\133 CCV.D#
Date Acquired: Nov 10 2009 02:36 am
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.28	ppb	2.38	50	100.6	90 - 110	
51 V	72	1	48.96	ppb	0.30	50	97.9	90 - 110	
52 Cr	72	1	49.12	ppb	0.17	50	98.2	90 - 110	
55 Mn	72	1	49.62	ppb	0.45	50	99.2	90 - 110	
59 Co	72	1	50.08	ppb	0.94	50	100.2	90 - 110	
60 Ni	72	1	49.56	ppb	1.80	50	99.1	90 - 110	
63 Cu	72	1	48.84	ppb	0.28	50	97.7	90 - 110	
66 Zn	72	1	49.37	ppb	0.25	50	98.7	90 - 110	
75 As	72	1	49.28	ppb	0.71	50	98.6	90 - 110	
78 Se	72	1	48.24	ppb	4.46	50	96.5	90 - 110	
95 Mo	72	1	49.87	ppb	0.48	50	99.7	90 - 110	
107 Ag	115	1	50.07	ppb	3.00	50	100.1	90 - 110	
111 Cd	115	1	49.67	ppb	1.99	50	99.3	90 - 110	
118 Sn	115	1	49.62	ppb	2.42	50	99.2	90 - 110	
121 Sb	115	1	49.81	ppb	1.98	50	99.6	90 - 110	
137 Ba	115	1	49.23	ppb	2.16	50	98.5	90 - 110	
205 Tl	165	1	50.35	ppb	2.32	50	100.7	90 - 110	
208 Pb	165	1	49.83	ppb	1.40	50	99.7	90 - 110	
232 Th	165	1	50.00	ppb	0.93	50	100.0	90 - 110	
238 U	165	1	50.10	ppb	1.03	50	100.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	347177	1.04	350699	99.0	30 - 120	
45 Sc	1	979990	1.26	975170	100.5	30 - 120	
72 Ge	1	443155	0.97	456352	97.1	30 - 120	
115 In	1	1346824	0.94	1314315	102.5	30 - 120	
165 Ho	1	2437526	0.34	2357107	103.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\134 CCB.D\134 CCB.D#
Date Acquired: Nov 10 2009 02:38 am
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.016	ppb	86.57	1.00	
51 V	72	1	-0.070	ppb	9.46	1.00	
52 Cr	72	1	0.035	ppb	125.03	1.00	
55 Mn	72	1	0.013	ppb	91.60	1.00	
59 Co	72	1	0.002	ppb	210.58	1.00	
60 Ni	72	1	0.003	ppb	931.20	1.00	
63 Cu	72	1	0.010	ppb	89.16	1.00	
66 Zn	72	1	0.049	ppb	99.14	1.00	
75 As	72	1	0.012	ppb	129.24	1.00	
78 Se	72	1	0.151	ppb	183.62	1.00	
95 Mo	72	1	-0.025	ppb	123.56	1.00	
107 Ag	115	1	0.006	ppb	68.99	1.00	
111 Cd	115	1	0.003	ppb	176.80	1.00	
118 Sn	115	1	0.089	ppb	28.29	1.00	
121 Sb	115	1	0.166	ppb	19.22	1.00	
137 Ba	115	1	0.009	ppb	167.28	1.00	
205 Tl	165	1	0.024	ppb	7.37	1.00	
208 Pb	165	1	0.008	ppb	9.92	1.00	
232 Th	165	1	0.060	ppb	12.69	1.00	
238 U	165	1	0.022	ppb	19.67	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	346622	0.31	350699	98.8	30 - 120	
45 Sc	1	975725	0.87	975170	100.1	30 - 120	
72 Ge	1	449852	1.00	456352	98.6	30 - 120	
115 In	1	1336701	0.73	1314315	101.7	30 - 120	
165 Ho	1	2391832	0.48	2357107	101.5	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\135WASH.D\135WASH.D#
Date Acquired: Nov 10 2009 02:41 am
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 10 2009 02:06 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.092 ppb	8.59	1.30	
51 V	72	1	4.885 ppb	2.42	6.50	
52 Cr	72	1	2.003 ppb	4.27	2.60	
55 Mn	72	1	0.968 ppb	3.96	1.30	
59 Co	72	1	1.004 ppb	4.24	1.30	
60 Ni	72	1	2.034 ppb	7.09	2.60	
63 Cu	72	1	2.052 ppb	0.86	2.60	
66 Zn	72	1	11.880 ppb	1.17	13.00	
75 As	72	1	5.004 ppb	0.86	6.50	
78 Se	72	1	4.648 ppb	15.88	6.50	
95 Mo	72	1	2.011 ppb	3.95	2.60	
107 Ag	115	1	5.236 ppb	3.11	6.50	
111 Cd	115	1	0.996 ppb	7.24	1.30	
118 Sn	115	1	10.400 ppb	2.63	13.00	
121 Sb	115	1	2.094 ppb	1.25	2.60	
137 Ba	115	1	1.064 ppb	5.87	1.30	
205 Tl	165	1	1.106 ppb	2.01	1.30	
208 Pb	165	1	1.059 ppb	0.95	1.30	
232 Th	165	1	2.142 ppb	2.42	2.60	
238 U	165	1	1.089 ppb	1.55	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	341628	0.56	350699	97.4	30 - 120	
45 Sc	1	959675	0.78	975170	98.4	30 - 120	
72 Ge	1	440992	0.96	456352	96.6	30 - 120	
115 In	1	1309315	1.56	1314315	99.6	30 - 120	
165 Ho	1	2382062	0.58	2357107	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\121CALB.D\121CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J300356

Client: Northgate Env.

Batch(es) #: 9306276

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: LRD 11/10/2009

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J300356	1	SE	LNLR41AC	20091109	6020TOTA	9306276	AG110909A	024
D9J300356	1	AS	LNLR41AA	20091109	6020TOTA	9306276	AG110909A	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9306276**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/3/09 ~~11/02/09~~ JRW

Due Date: 11/11/09

Lot	Work Order			Initial Weight/Volume
D9K020000 Water	**LNNP6**	B	Due Date: SDG:	50 mL
D9K020000 Water	**LNNP6**	C	Due Date: SDG:	50 mL
D9J300353 Water	**LNLN9** Total		Due Date: 11/11/09 SDG:	50 mL
D9J300356 Water	**LNLR4** Total		Due Date: 11/11/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total		Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	S	Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	D	Due Date: 11/12/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

UPD 11/10/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 9306276 **ALLIQUOTTED BY:** KS
PREP DATE: 11/3/2009 **DIGESTED BY:** JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1400	95	1815	96
HNO3	1830	96	1920	96
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: [signature] ***Date:*** 11/3/09

LRD 11/10/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification

ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/09/09 20:32		☐
4	100 ppb				1.0	11/09/09 20:35		☐
5	ICV				1.0	11/09/09 20:37		☐
6	RLIV				1.0	11/09/09 20:40		☐
7	ICB				1.0	11/09/09 20:43		☐
8	RL STD				1.0	11/09/09 20:46		☐
9	AFCEE RL				1.0	11/09/09 20:48		☐
10	ALTSe				1.0	11/09/09 20:51		☐
11	ICSA				1.0	11/09/09 20:54		☐
12	ICSAB				1.0	11/09/09 20:57		☐
13	RINSE				1.0	11/09/09 20:59		☐
14	LR1				1.0	11/09/09 21:02		☐
15	RINSE				1.0	11/09/09 21:05		☐
16	CCV				1.0	11/09/09 21:08		☐
17	CCB				1.0	11/09/09 21:10		☐
18	RLCV				1.0	11/09/09 21:13		☐
19	LNNP6B	D9K020000	9306276	MS	1.0	11/09/09 21:16		☐
20	LNNP6C	D9K020000	9306276	MS	1.0	11/09/09 21:19		☐
21	LNLN9 2X	D9J300353-1	9306276	MS	2.0	11/09/09 21:21		☐
22	LNLR4 2X	D9J300356-1	9306276	MS	2.0	11/09/09 21:24		☐
23	LNME4	D9J310138-1	9306276	MS	1.0	11/09/09 21:27		☐
24	LNME4P5	D9J310138	9306276		5.0	11/09/09 21:30		☐
25	LNME4Z	D9J310138-1	9306276		1.0	11/09/09 21:32		☐
26	LNME4S	D9J310138-1	9306276	MS	1.0	11/09/09 21:35		☐
27	LNME4D	D9J310138-1	9306276	MS	1.0	11/09/09 21:38		☐
28	CCV				1.0	11/09/09 21:41		☐
29	CCB				1.0	11/09/09 21:43		☐
30	RLCV				1.0	11/09/09 21:50		☐
31	LM900B	D9J260000	9299244	MS	1.0	11/09/09 21:52		☐
32	LM900C	D9J260000	9299244	MS	1.0	11/09/09 21:55		☐
33	LM900L	D9J260000	9299244	MS	1.0	11/09/09 21:58		☐
34	LM9J9	D9J240206-1	9299244	MS	1.0	11/09/09 22:01		☐
35	~~LM9KA 2X~~	~~D9J240206-2~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:03~~		☐
36	~~LM9KC 2X~~	~~D9J240206-3~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:06~~	DNU	☐
37	LM9KD	D9J240206-4	9299244	MS	1.0	11/09/09 22:09	LRD	☐
38	~~LM9KE 2X~~	~~D9J240206-5~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:12~~	11-10-09	☐
39	~~LM9KF 2X~~	~~D9J240206-6~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:14~~		☐
40	LM9KG	D9J240206-7	9299244	MS	1.0	11/09/09 22:17		☐
41	CCV				1.0	11/09/09 22:20		☐
42	CCB				1.0	11/09/09 22:23		☐
43	RLCV				1.0	11/09/09 22:26		☐
44	LM9KH	D9J240206-8	9299244	MS	1.0	11/09/09 22:28		☐
45	LM9KJ	D9J240206-9	9299244	MS	1.0	11/09/09 22:31		☐
46	LM9KK	D9J240206-10	9299244	MS	1.0	11/09/09 22:34		☐
47	LM9KL	D9J240206-11	9299244	MS	1.0	11/09/09 22:37		☐
48	LM9KP	D9J240206-13	9299244	MS	1.0	11/09/09 22:39		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM9KPP5	D9J240206	9299244		5.0	11/09/09 22:42		☐
50	LM9KPZ	D9J240206-13	9299244		1.0	11/09/09 22:45		☐
51	LM9KPS	D9J240206-13	9299244	MS	1.0	11/09/09 22:48		☐
52	LM9KPD	D9J240206-13	9299244	MS	1.0	11/09/09 22:50		☐
53	CCV				1.0	11/09/09 22:53		☐
54	CCB				1.0	11/09/09 22:56		☐
55	RLCV				1.0	11/09/09 22:59		☐
56	LM9KA	D9J240206-2	9299244	MS	1.0	11/09/09 23:01		☐
57	LM9KC	D9J240206-3	9299244	MS	1.0	11/09/09 23:04		☐
58	LM9KE	D9J240206-5	9299244	MS	1.0	11/09/09 23:07		☐
59	LM9KF	D9J240206-6	9299244	MS	1.0	11/09/09 23:10		☐
60	CCV				1.0	11/09/09 23:12		☐
61	CCB				1.0	11/09/09 23:15		☐
62	RLCV				1.0	11/09/09 23:18		☐
64	Cal Blank				1.0	11/09/09 23:23		☐
65	100 ppb				1.0	11/09/09 23:26		☐
66	CCV				1.0	11/09/09 23:29		☐
67	CCB				1.0	11/09/09 23:32		☐
68	RLCV				1.0	11/09/09 23:34		☐
69	ICSA				1.0	11/09/09 23:37		☐
70	ICSAB				1.0	11/09/09 23:40		☐
71	WASH				1.0	11/09/09 23:43		☐
72	CCV				1.0	11/09/09 23:45		☐
73	CCB				1.0	11/09/09 23:48		☐
74	RLCV				1.0	11/09/09 23:51		☐
75	LN04NB	D9K060000	9310238	04	1.0	11/09/09 23:54		☐
76	LN04NC	D9K060000	9310238	04	1.0	11/09/09 23:57		☐
77	LNEA7	D9J280172-1	9310238	04	1.0	11/10/09 00:00		☐
78	LNEA7P5	D9J280172	9310238		5.0	11/10/09 00:02		☐
79	LNEA7Z	D9J280172-1	9310238		1.0	11/10/09 00:05		☐
80	LNEA7S	D9J280172-1	9310238	04	1.0	11/10/09 00:08		☐
81	LNEA7D	D9J280172-1	9310238	04	1.0	11/10/09 00:11		☐
82	LNECN	D9J280172-2	9310238	04	1.0	11/10/09 00:13		☐
83	CCV				1.0	11/10/09 00:16		☐
84	CCB				1.0	11/10/09 00:20		☐
85	RLCV				1.0	11/10/09 00:22		☐
86	LNECV	D9J280172-3	9310238	04	1.0	11/10/09 00:25		☐
87	LNECX	D9J280172-4	9310238	04	1.0	11/10/09 00:28		☐
88	LNEC0	D9J280172-5	9310238	04	1.0	11/10/09 00:31		☐
89	LNEC1	D9J280172-6	9310238	04	1.0	11/10/09 00:34		☐
90	LNEC3	D9J280172-7	9310238	04	1.0	11/10/09 00:36		☐
91	LNEC5	D9J280172-8	9310238	04	1.0	11/10/09 00:39		☐
92	CCV				1.0	11/10/09 00:42		☐
93	CCB				1.0	11/10/09 00:45		☐
94	RLCV				1.0	11/10/09 00:48		☐
95	LNKFHB	D9J300000	9303368	04	1.0	11/10/09 00:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: **AG110909A** **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
96	LNKFHC	D9J300000	9303368	04	1.0	11/10/09 00:53		☐
97	LNC5C	D9J270250-1	9303368	04	1.0	11/10/09 00:56		☐
98	LNC5E	D9J270250-2	9303368	04	1.0	11/10/09 00:59		☐
99	LNC5F	D9J270250-3	9303368	04	1.0	11/10/09 01:02		☐
100	LNEHJ	D9J280192-1	9303368	04	1.0	11/10/09 01:05		☐
101	LNEHJP5	D9J280192	9303368		5.0	11/10/09 01:07		☐
102	LNEHJZ	D9J280192-1	9303368		1.0	11/10/09 01:10		☐
103	LNEHJS	D9J280192-1	9303368	04	1.0	11/10/09 01:13		☐
104	CCV				1.0	11/10/09 01:16		☐
105	CCB				1.0	11/10/09 01:18		☐
106	RLCV				1.0	11/10/09 01:21		☐
107	LNEHJD	D9J280192-1	9303368	04	1.0	11/10/09 01:24		☐
108	LNGXD 5X	D9J290182-1	9303368	04	5.0	11/10/09 01:27		☐
109	LNGXG 5X	D9J290182-2	9303368	04	5.0	11/10/09 01:29		☐
110	LNG17	D9J290192-1	9303368	04	1.0	11/10/09 01:32		☐
111	LNG2D	D9J290192-2	9303368	04	1.0	11/10/09 01:35		☐
112	~~LNH27 2X~~	~~D9J290314-1~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:38~~	DNU LRD 11/10/09	☐
113	~~LNH29 2X~~	~~D9J290314-2~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:40~~		☐
114	LNH3A	D9J290314-3	9303368	04	1.0	11/10/09 01:43		☐
115	CCV				1.0	11/10/09 01:46		☐
116	CCB				1.0	11/10/09 01:49		☐
117	RLCV				1.0	11/10/09 01:52		☐
118	RINSE				1.0	11/10/09 01:54		☐
119	RINSE				1.0	11/10/09 01:57		☐
121	Cal Blank				1.0	11/10/09 02:03		☐
122	100 ppb				1.0	11/10/09 02:05		☐
123	CCV				1.0	11/10/09 02:08		☐
124	CCB				1.0	11/10/09 02:11		☐
125	RLCV				1.0	11/10/09 02:14		☐
126	LNNPLBF	D9K020000	9306272	MD	1.0	11/10/09 02:16		☐
127	LNNPLCF	D9K020000	9306272	MD	1.0	11/10/09 02:19		☐
128	LNLPFF	D9J300353-2	9306272	MD	1.0	11/10/09 02:22		☐
129	LNLPFP5F	D9J300353	9306272		5.0	11/10/09 02:25		☐
130	LNLPFZF	D9J300353-2	9306272		1.0	11/10/09 02:27		☐
131	LNLPFSF	D9J300353-2	9306272	MD	1.0	11/10/09 02:30		☐
132	LNLPFDF	D9J300353-2	9306272	MD	1.0	11/10/09 02:33		☐
133	CCV				1.0	11/10/09 02:36		☐
134	CCB				1.0	11/10/09 02:38		☐
135	RLCV				1.0	11/10/09 02:41		☐
136	LNNQ5BF	D9K020000	9306285	MD	1.0	11/10/09 02:44		☐
137	LNNQ5CF	D9K020000	9306285	MD	1.0	11/10/09 02:47		☐
138	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/10/09 02:50		☐
139	LNLG3F	D9J300326-2	9306285	MD	1.0	11/10/09 02:52		☐
140	LNLG4F	D9J300326-3	9306285	MD	1.0	11/10/09 02:55		☐
141	LNLHHF	D9J300329-1	9306285	MD	1.0	11/10/09 02:58		☐
142	LNLHMF	D9J300329-2	9306285	MD	1.0	11/10/09 03:01		☐

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RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
143	CCV				1.0	11/10/09 03:03		
144	CCB				1.0	11/10/09 03:06		
145	RLCV				1.0	11/10/09 03:09		
146	LNLHPF	D9J300329-3	9306285	MD	1.0	11/10/09 03:12		
147	LNLJJF	D9J300340-1	9306285	MD	1.0	11/10/09 03:15		
148	LNLJJP5F	D9J300340	9306285		5.0	11/10/09 03:17		
149	LNLJJZF	D9J300340-1	9306285		1.0	11/10/09 03:20		
150	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/10/09 03:23		
151	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/10/09 03:25		
152	LNLJMF	D9J300340-2	9306285	MD	1.0	11/10/09 03:28		
153	CCV				1.0	11/10/09 03:31		
154	CCB				1.0	11/10/09 03:34		
155	RLCV				1.0	11/10/09 03:37		
156	LN0Q4BF	D9K060000	9310095	MD	1.0	11/10/09 03:39		
157	LN0Q4CF	D9K060000	9310095	MD	1.0	11/10/09 03:42		
158	LN0Q4LF	D9K060000	9310095	MD	1.0	11/10/09 03:45		
159	LNR5CF	D9K040450-3	9310095	MD	1.0	11/10/09 03:48		
160	LNR5CP5F	D9K040450	9310095		5.0	11/10/09 03:50		
161	LNR5CZF	D9K040450-3	9310095		1.0	11/10/09 03:53		
162	CCV				1.0	11/10/09 03:56		
163	CCB				1.0	11/10/09 03:59		
164	RLCV				1.0	11/10/09 04:01		
165	RINSE				1.0	11/10/09 04:04		
166	RINSE				1.0	11/10/09 04:07		
168	Cal Blank				1.0	11/10/09 04:12		
169	100 ppb				1.0	11/10/09 04:15		
170	CCV				1.0	11/10/09 04:18		
171	CCB				1.0	11/10/09 04:21		
172	RLCV				1.0	11/10/09 04:23		
173	LN16EB	D9K060000	9310417	04	2.5	11/10/09 04:26		
174	LN16EC	D9K060000	9310417	04	2.5	11/10/09 04:29		
175	LN1FW	D9K060478-7	9310417	04	2.5	11/10/09 04:32		
176	LN1LX	D9K060478-17	9310417	04	2.5	11/10/09 04:35		
177	LN1MD	D9K060478-19	9310417	04	2.5	11/10/09 04:37		
178	LN1MH	D9K060478-21	9310417	04	2.5	11/10/09 04:40		
179	LN1MHS	D9K060478-21	9310417	04	2.5	11/10/09 04:43		
180	LN1MHD	D9K060478-21	9310417	04	2.5	11/10/09 04:46		
181	CCV				1.0	11/10/09 04:48		
182	CCB				1.0	11/10/09 04:51		
183	RLCV				1.0	11/10/09 04:54		
184	LN1T6BF	D9K060000	9310368	87	2.5	11/10/09 04:57		
185	LN1T6CF	D9K060000	9310368	87	2.5	11/10/09 05:00		
186	LNVQWF	D9K040610-1	9310368	87	2.5	11/10/09 05:02		
187	LNVRHF	D9K040610-3	9310368	87	2.5	11/10/09 05:05		
188	LNVRLF	D9K040610-5	9310368	87	2.5	11/10/09 05:08		
189	LNVRLSF	D9K040610-5	9310368	87	2.5	11/10/09 05:11		

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RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst:** LRD

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
190	LNVRLDF	D9K040610-5	9310368	87	2.5	11/10/09 05:14		
191	LNX48F	D9K050627-2	9310368	87	2.5	11/10/09 05:16		
192	LNX5JF	D9K050627-6	9310368	87	2.5	11/10/09 05:19		
193	CCV				1.0	11/10/09 05:22		
194	CCB				1.0	11/10/09 05:25		
195	RLCV				1.0	11/10/09 05:27		
196	LN4QNB	D9K090000	9313106	04	2.5	11/10/09 05:30		
197	LN4QNC	D9K090000	9313106	04	2.5	11/10/09 05:33		
198	LN314	D9K070460-2	9313106	04	2.5	11/10/09 05:36		
199	LN3L7 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:39		
200	LN3L7S 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:41		
201	LN3L7D 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:44		
202	CCV				1.0	11/10/09 05:47		
203	CCB				1.0	11/10/09 05:50		
204	RLCV				1.0	11/10/09 05:52		
205	LN0PDBF	D9K060000	9310068	PD	2.5	11/10/09 05:55		
206	LN0PDCF	D9K060000	9310068	PD	2.5	11/10/09 05:58		
207	LNT1RF	D9K040539-2	9310068	PD	2.5	11/10/09 06:01		
208	LNT15F	D9K040539-3	9310068	PD	2.5	11/10/09 06:04	DNU	
209	LNT15SF	D9K040539-3	9310068	PD	2.5	11/10/09 06:06		
210	LNT15DF	D9K040539-3	9310068	PD	2.5	11/10/09 06:09	LRD	
211	LNT2CF	D9K040539-4	9310068	PD	2.5	11/10/09 06:12	11-10-2009	
212	LNPC2F	D9K020476-1	9310068	PD	2.5	11/10/09 06:15		
213	LNPC4F	D9K020476-2	9310068	PD	2.5	11/10/09 06:18		
214	CCV				1.0	11/10/09 06:20		
215	CCB				1.0	11/10/09 06:23		
216	RLCV				1.0	11/10/09 06:26		
217	RINSE				1.0	11/10/09 06:29		
218	RINSE				1.0	11/10/09 06:31		
220	Cal Blank				1.0	11/10/09 06:37		
221	100 ppb				1.0	11/10/09 06:40		
222	CCV				1.0	11/10/09 06:42		
223	CCB				1.0	11/10/09 06:45		
224	RLCV				1.0	11/10/09 06:48		
225	LNW1QB	D9K050000	9309222	MS	1.0	11/10/09 06:51		
226	LNW1QC	D9K050000	9309222	MS	1.0	11/10/09 06:53		
227	LNR42	D9K040449-1	9309222	MS	1.0	11/10/09 06:56		
228	LNR42P5	D9K040449	9309222		5.0	11/10/09 06:59		
229	LNR42Z	D9K040449-1	9309222		1.0	11/10/09 07:02		
230	LNR42S	D9K040449-1	9309222	MS	1.0	11/10/09 07:04		
231	LNR42D	D9K040449-1	9309222	MS	1.0	11/10/09 07:07		
232	CCV				1.0	11/10/09 07:10		
233	CCB				1.0	11/10/09 07:13		
234	RLCV				1.0	11/10/09 07:16		
235	LNR48	D9K040449-2	9309222	MS	1.0	11/10/09 07:18		
236	LNR5E	D9K040449-3	9309222	MS	1.0	11/10/09 07:21		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
237	LNR5G	D9K040449-4	9309222	MS	1.0	11/10/09 07:24		☐
238	LNP8M	D9K030460-1	9309222	MS	1.0	11/10/09 07:27		☐
239	LNP8X	D9K030460-2	9309222	MS	1.0	11/10/09 07:30		☐
240	LNP81	D9K030460-3	9309222	MS	1.0	11/10/09 07:32		☐
241	CCV				1.0	11/10/09 07:35		☐
242	CCB				1.0	11/10/09 07:38		☐
243	RLCV				1.0	11/10/09 07:41		☐
244	LNN6NB	D9K020000	9306426	MS	1.0	11/10/09 07:44		☐
245	LNN6NC	D9K020000	9306426	MS	1.0	11/10/09 07:46		☐
246	LNN6NL	D9K020000	9306426	MS	1.0	11/10/09 07:49		☐
247	LNM4D	D9J310189-1	9306426	MS	1.0	11/10/09 07:52		☐
248	LNM4DP5	D9J310189	9306426		5.0	11/10/09 07:55		☐
249	LNM4DZ	D9J310189-1	9306426		1.0	11/10/09 07:58		☐
250	LNM4E	D9J310189-2	9306426	MS	1.0	11/10/09 08:00		☐
251	LNM5E	D9J310191-14	9306426	MS	1.0	11/10/09 08:03		☐
252	CCV				1.0	11/10/09 08:06		☐
253	CCB				1.0	11/10/09 08:09		☐
254	RLCV				1.0	11/10/09 08:11		☐
255	LNRQVB	D9K040000	9308149	MS	1.0	11/10/09 08:14		☐
256	LNRQVC	D9K040000	9308149	MS	1.0	11/10/09 08:17		☐
257	LNQ0L	D9K030552-1	9308149	MS	1.0	11/10/09 08:20		☐
258	LNQ0LP5	D9K030552	9308149		5.0	11/10/09 08:22		☐
259	LNQ0LZ	D9K030552-1	9308149		1.0	11/10/09 08:25		☐
260	LNQ0LS	D9K030552-1	9308149	MS	1.0	11/10/09 08:28		☐
261	LNQ0LD	D9K030552-1	9308149	MS	1.0	11/10/09 08:30		☐
262	LNQ0R	D9K030554-1	9308149	MS	1.0	11/10/09 08:33		☐
263	LNQ0T	D9K030554-2	9308149	MS	1.0	11/10/09 08:36		☐
264	CCV				1.0	11/10/09 08:39		☐
265	CCB				1.0	11/10/09 08:41		☐
266	RLCV				1.0	11/10/09 08:44		☐
267	LNWG5BF	D9K050000	9309184	87	2.5	11/10/09 08:47		☐
268	LNWG5CF	D9K050000	9309184	87	2.5	11/10/09 08:50		☐
269	LNT4AF	D9K040553-1	9309184	87	2.5	11/10/09 08:52		☐
270	LNT42F	D9K040553-2	9309184	87	2.5	11/10/09 08:55		☐
271	LNT42SF	D9K040553-2	9309184	87	2.5	11/10/09 08:58		☐
272	LNT42DF	D9K040553-2	9309184	87	2.5	11/10/09 09:01		☐
273	LNT5HF	D9K040553-3	9309184	87	2.5	11/10/09 09:03		☐
274	CCV				1.0	11/10/09 09:06		☐
275	CCB				1.0	11/10/09 09:09		☐
276	RLCV				1.0	11/10/09 09:12		☐
277	LNT5LF	D9K040553-4	9309184	87	2.5	11/10/09 09:14		☐
278	LNT5VF	D9K040553-5	9309184	87	2.5	11/10/09 09:17		☐
279	LNT51F	D9K040553-6	9309184	87	2.5	11/10/09 09:20		☐
280	LNT55F	D9K040553-7	9309184	87	2.5	11/10/09 09:23		☐
281	LNT57F	D9K040553-8	9309184	87	2.5	11/10/09 09:26		☐
282	LNT58F	D9K040553-9	9309184	87	2.5	11/10/09 09:28		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
283	LNT59F	D9K040553-10	9309184	87	2.5	11/10/09 09:31		☐
284	CCV				1.0	11/10/09 09:34		☐
285	CCB				1.0	11/10/09 09:37		☐
286	RLCV				1.0	11/10/09 09:39		☐
287	D9J270274-0				1.0	11/10/09 09:42		☐
288	CCV				1.0	11/10/09 09:45		☐
289	CCB				1.0	11/10/09 09:48		☐
290	RLCV				1.0	11/10/09 09:50		☐

TestAmerica Denver

Standards Preparation Logbook Record

Nov-10-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6858-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-09-2009
Date Expires(1): 05-09-2010 (6 Months)
Date Expires(2): 05-09-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6857-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6859-09, ICP-MS CAL STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

STD6860-09, ICP-MS CCV STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500

Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

STD6861-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6859-09, ICP-MS CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010

Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010

STD6862-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6861-09, ICP-MS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002

STD6863-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000

As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6864-09, ICP-MS LR STD Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000

Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6865-09, ICP-MS ICV STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

STD6866-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6867-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD6469-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000

Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD6470-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

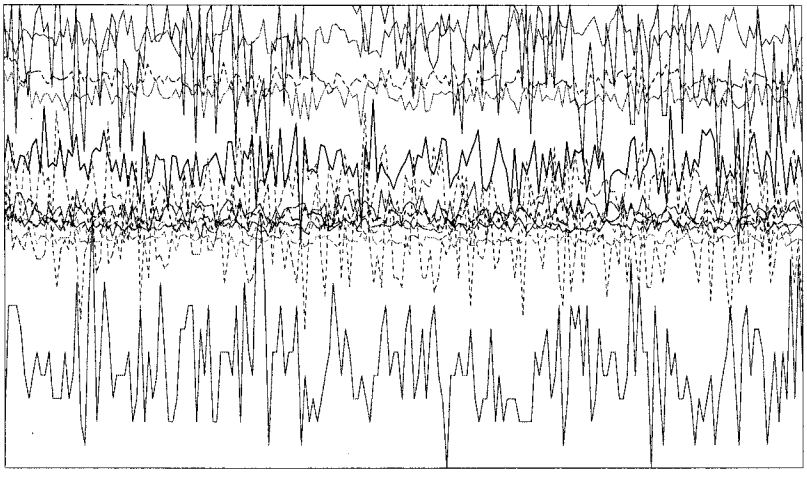
Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

File AG1109094

Reviewed By: LRD 11/10/2009

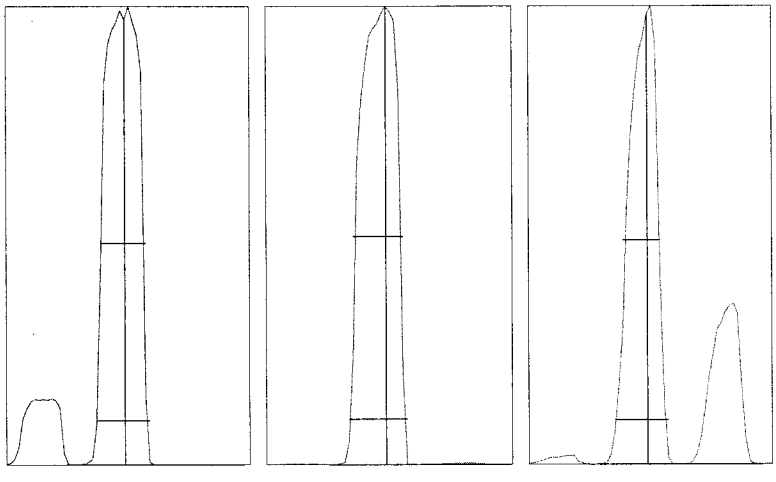
Tune Report

Tune File : NORM.U
Comment : AG110909



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.475%
Doubly Charged:	70/140	1.275%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2614.0	2789.3	3.67	0.80
7	20,000	18632.0	18633.8	3.00	0.50
59	20,000	15677.0	16033.1	2.87	1.00
63	50	35.0	45.6	15.88	0.70
70	500	313.0	327.1	7.08	0.40
75	20	4.0	4.4	46.88	0.60
78	200	109.0	120.3	9.42	0.60
89	50,000	26589.0	26185.6	2.22	1.00
115	50,000	24518.0	24639.8	1.99	1.10
118	100	33.0	48.4	15.31	0.80
137	5,000	2637.0	2712.3	2.91	1.20
205	20,000	16431.0	16723.1	2.17	1.70
238	50,000	25920.0	26106.3	1.87	2.50
156/140	2	1.499%	1.485%	7.38	
70/140	2	1.311%	1.332%	7.11	



m/z:	7	89	205
Height:	18,699	26,853	17,221
Axis:	7.00	89.00	205.00
W-50%:	0.55	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:15

Tune Report

Tune File : NORM.U
Comment : AG110909

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:18

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:15 pm

Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055201
9	Be	0.058738
23	Na	0.063579
24	Mg	0.064637
27	Al	0.065724
39	K	0.065936
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066938
52	Cr	0.068029
53	(Cr)	Sensitivity too low
55	Mn	0.069052
57	Fe	Sensitivity too low
59	Co	0.070056
60	Ni	Sensitivity too low
63	Cu	Sensitivity too low
66	Zn	Sensitivity too low
72	Ge	0.069902
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	Sensitivity too low
98	(Mo)	0.071630
99	(Mo)	Sensitivity too low
105	Pd	Sensitivity too low
106	(Cd)	0.071534
107	Ag	Sensitivity too low
108	(Cd)	0.071984
111	Cd	Sensitivity too low
115	In	0.068812
118	Sn	0.070115
121	Sb	0.070721
137	Ba	Sensitivity too low
165	Ho	0.069269
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071349
206	(Pb)	0.070737
207	(Pb)	0.071002
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:21 pm

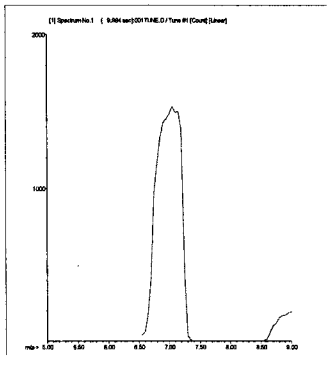
Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055259
9	Be	0.058421
23	Na	0.062917
24	Mg	0.063700
27	Al	0.064930
39	K	0.065662
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066016
52	Cr	0.066969
53	(Cr)	Sensitivity too low
55	Mn	0.067116
57	Fe	Sensitivity too low
59	Co	0.068255
60	Ni	0.068756
63	Cu	0.069073
66	Zn	0.068997
72	Ge	0.068697
75	As	0.069000
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.071094
98	(Mo)	0.069583
99	(Mo)	0.069992
105	Pd	0.069782
106	(Cd)	0.069206
107	Ag	Sensitivity too low
108	(Cd)	0.069821
111	Cd	0.069450
115	In	0.068812
118	Sn	0.068484
121	Sb	0.068561
137	Ba	0.070024
165	Ho	0.068599
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.068219
206	(Pb)	0.067897
207	(Pb)	0.068227
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

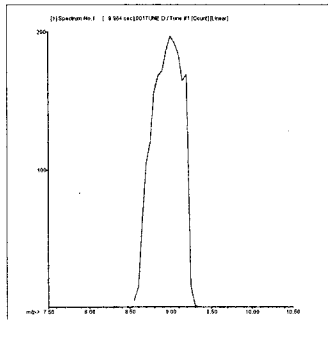
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\001TUNE.D
Date Acquired: Nov 9 2009 08:26 pm
Acq. Method: tun_isis.M
Operator: LRD
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	14906	14929	14975	14838	14916	14868	**0.36**	5.00	
9 Be	1915	1908	1914	1983	1809	1957	**3.47**	5.00	RSDfail Pass LRD 11-04-09
24 Mg	8679	8669	8688	8662	8744	8633	**0.48**	5.00	
59 Co	35756	36567	35777	35985	34517	35933	**2.11**	5.00	
115 In	692825	688204	694293	692146	693236	696245	**0.43**	5.00	
208 Pb	51450	52572	50561	51250	51590	51275	**1.42**	5.00	
238 U	109376	111991	110522	109499	107788	107079	**1.83**	5.00	

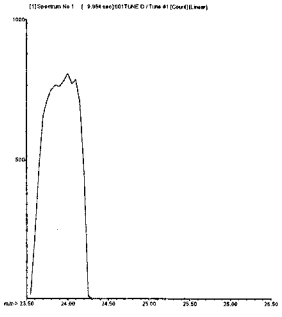


7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

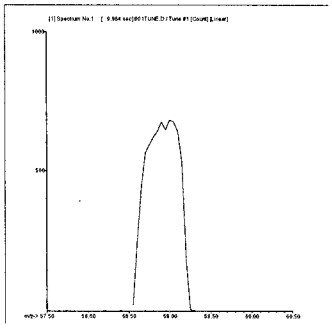


9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:

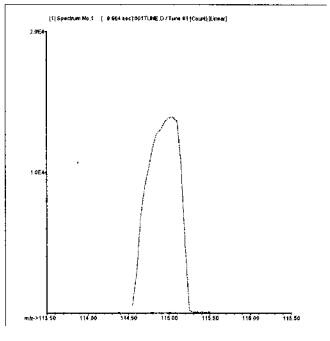
C:\ICPCHEM\1\DATA\AG110909A.B\001TUNE.D



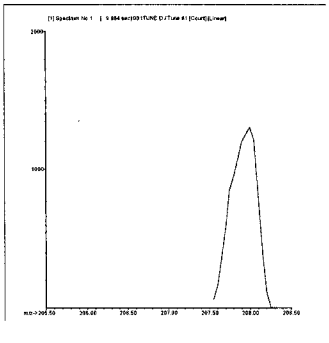
24 Mg
Mass Calib.
Actual: 24.00
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



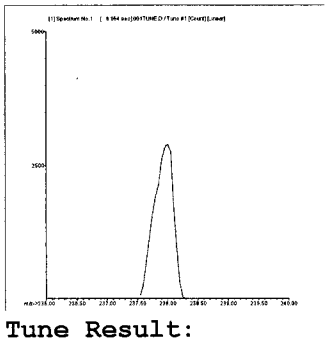
59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



208 Pb
Mass Calib.
Actual: 207.95
Required: 207.90 - 208.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:



238 U
Mass Calib.
Actual: 237.95
Required: 237.90 - 238.10
Flag:
Peak Width
Actual: 0.50
Required: 0.90
Flag:

Tune Result: ~~Fail~~ Pass

LRD 11/09/09

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\002CALB.D\002CALB.D#
Date Acquired: Nov 9 2009 08:29 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

D6/11/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	577	3.61
52	Cr	72	1	1697	4.80
55	Mn	72	1	263	10.96
59	Co	72	1	17	34.64
60	Ni	72	1	63	32.87
63	Cu	72	1	100	43.59
66	Zn	72	1	131	19.98
75	As	72	1	31	32.13
78	Se	72	1	153	20.97
95	Mo	72	1	23	24.74
107	Ag	115	1	7	86.60
111	Cd	115	1	-4	15.03
118	Sn	115	1	123	26.06
121	Sb	115	1	43	42.83
137	Ba	115	1	10	33.33
205	Tl	165	1	341	20.90
208	Pb	165	1	206	7.66
232	Th	165	1	130	26.65
238	U	165	1	97	23.89

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	307725	0.62
45	Sc	1	863740	1.75
72	Ge	1	419764	0.40
115	In	1	1321877	2.10
165	Ho	1	2596118	0.41

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#
Date Acquired: Nov 9 2009 08:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	513	5.95
52	Cr	72	1	1570	2.30
55	Mn	72	1	337	11.25
59	Co	72	1	20	50.00
60	Ni	72	1	63	48.24
63	Cu	72	1	120	44.10
66	Zn	72	1	137	9.29
75	As	72	1	35	18.20
78	Se	72	1	97	23.89
95	Mo	72	1	20	50.00
107	Ag	115	1	3	173.21
111	Cd	115	1	-4	393.57
118	Sn	115	1	297	22.95
121	Sb	115	1	39	26.19
137	Ba	115	1	12	41.66
205	Tl	165	1	221	20.47
208	Pb	165	1	199	12.35
232	Th	165	1	113	22.21
238	U	165	1	77	26.09

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	316659	2.14
45	Sc	1	888972	0.50
72	Ge	1	425816	0.47
115	In	1	1335258	0.87
165	Ho	1	2617754	0.65

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 9 2009 08:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:33 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	38609	1.25
51	V	72	1	510366	0.88
52	Cr	72	1	524956	1.26
55	Mn	72	1	613525	1.41
59	Co	72	1	633231	0.83
60	Ni	72	1	140397	0.74
63	Cu	72	1	332088	1.69
66	Zn	72	1	83275	0.84
75	As	72	1	64491	1.06
78	Se	72	1	13670	3.37
95	Mo	72	1	194872	1.16
107	Ag	115	1	568219	1.98
111	Cd	115	1	121298	1.44
118	Sn	115	1	331811	1.14
121	Sb	115	1	398020	0.91
137	Ba	115	1	158724	1.91
205	Tl	165	1	1472389	1.01
208	Pb	165	1	2154560	0.36
232	Th	165	1	2284596	1.76
238	U	165	1	2432923	0.19

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	317523	0.04	316659	100.3	30 - 120	
45	Sc	1	902480	1.79	888972	101.5	30 - 120	
72	Ge	1	417361	1.39	425816	98.0	30 - 120	
115	In	1	1332995	0.81	1335258	99.8	30 - 120	
165	Ho	1	2606293	0.43	2617754	99.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 9 2009 08:37 pm
Operator: LRD
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	39.82	ppb	0.59	40	99.6	90 - 110	
51 V	72	1	40.01	ppb	0.57	40	100.0	90 - 110	
52 Cr	72	1	40.10	ppb	1.04	40	100.3	90 - 110	
55 Mn	72	1	40.83	ppb	1.35	40	102.1	90 - 110	
59 Co	72	1	39.98	ppb	2.35	40	100.0	90 - 110	
60 Ni	72	1	39.48	ppb	1.75	40	98.7	90 - 110	
63 Cu	72	1	39.44	ppb	0.71	40	98.6	90 - 110	
66 Zn	72	1	40.87	ppb	1.27	40	102.2	90 - 110	
75 As	72	1	40.05	ppb	0.47	40	100.1	90 - 110	
78 Se	72	1	40.20	ppb	7.43	40	100.5	90 - 110	
95 Mo	72	1	39.50	ppb	1.39	40	98.8	90 - 110	
107 Ag	115	1	40.28	ppb	1.09	40	100.7	90 - 110	
111 Cd	115	1	40.39	ppb	2.54	40	101.0	90 - 110	
118 Sn	115	1	39.95	ppb	2.27	40	99.9	90 - 110	
121 Sb	115	1	40.57	ppb	2.67	40	101.4	90 - 110	
137 Ba	115	1	40.04	ppb	2.19	40	100.1	90 - 110	
205 Tl	165	1	40.86	ppb	1.20	40	102.2	90 - 110	
208 Pb	165	1	40.91	ppb	0.95	40	102.3	90 - 110	
232 Th	165	1	41.04	ppb	0.97	40	102.6	90 - 110	
238 U	165	1	40.74	ppb	0.82	40	101.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	320321	1.05	316659	101.2	30 - 120	
45 Sc	1	893394	1.16	888972	100.5	30 - 120	
72 Ge	1	421619	1.04	425816	99.0	30 - 120	
115 In	1	1339730	1.68	1335258	100.3	30 - 120	
165 Ho	1	2633489	0.36	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\006WASH.D\006WASH.D#
Date Acquired: Nov 9 2009 08:40 pm
Operator: LRD
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.977 ppb	23.08	1.30	
51 V	72	1	5.088 ppb	3.63	6.50	
52 Cr	72	1	2.010 ppb	2.80	2.60	
55 Mn	72	1	1.052 ppb	2.54	1.30	
59 Co	72	1	1.026 ppb	2.82	1.30	
60 Ni	72	1	2.053 ppb	3.73	2.60	
63 Cu	72	1	1.949 ppb	1.86	2.60	
66 Zn	72	1	10.200 ppb	0.76	13.00	
75 As	72	1	4.975 ppb	1.56	6.50	
78 Se	72	1	5.397 ppb	12.87	6.50	
95 Mo	72	1	2.077 ppb	3.08	2.60	
107 Ag	115	1	5.417 ppb	1.62	6.50	
111 Cd	115	1	0.994 ppb	8.21	1.30	
118 Sn	115	1	10.400 ppb	2.50	13.00	
121 Sb	115	1	2.182 ppb	1.55	2.60	
137 Ba	115	1	1.043 ppb	2.05	1.30	
205 Tl	165	1	1.340 ppb	3.63	1.30	
208 Pb	165	1	1.058 ppb	2.34	1.30	
232 Th	165	1	2.228 ppb	2.96	2.60	
238 U	165	1	1.119 ppb	1.48	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	327943	1.12	316659	103.6	30 - 120	
45 Sc	1	927967	1.66	888972	104.4	30 - 120	
72 Ge	1	437192	0.23	425816	102.7	30 - 120	
115 In	1	1360935	0.96	1335258	101.9	30 - 120	
165 Ho	1	2638135	1.11	2617754	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 9 2009 08:43 pm
Operator: LRD
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	-0.03	ppb	24.58	1.00	
52 Cr	72	1	0.01	ppb	375.24	1.00	
55 Mn	72	1	0.01	ppb	99.37	1.00	
59 Co	72	1	0.00	ppb	102.49	1.00	
60 Ni	72	1	0.06	ppb	11.55	1.00	
63 Cu	72	1	0.03	ppb	95.69	1.00	
66 Zn	72	1	0.75	ppb	6.06	1.00	
75 As	72	1	-0.01	ppb	401.95	1.00	
78 Se	72	1	0.14	ppb	223.63	1.00	
95 Mo	72	1	0.01	ppb	53.61	1.00	
107 Ag	115	1	0.01	ppb	41.41	1.00	
111 Cd	115	1	0.01	ppb	115.64	1.00	
118 Sn	115	1	0.25	ppb	23.38	1.00	
121 Sb	115	1	0.07	ppb	21.20	1.00	
137 Ba	115	1	0.06	ppb	14.45	1.00	
205 Tl	165	1	0.04	ppb	19.24	1.00	
208 Pb	165	1	0.01	ppb	22.30	1.00	
232 Th	165	1	0.02	ppb	1.72	1.00	
238 U	165	1	0.00	ppb	21.71	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331180	1.57	316659	104.6	30 - 120	
45 Sc	1	905311	1.15	888972	101.8	30 - 120	
72 Ge	1	441723	1.46	425816	103.7	30 - 120	
115 In	1	1364402	1.70	1335258	102.2	30 - 120	
165 Ho	1	2652248	1.61	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\008RLST.D\008RLST.D#
Date Acquired: Nov 9 2009 08:46 pm
Operator: LRD
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.99	ppb	9.34	1	99.0	50 - 150	
51 V	72	1	0.92	ppb	9.25	1	91.9	50 - 150	
52 Cr	72	1	1.00	ppb	9.84	1	99.9	50 - 150	
55 Mn	72	1	1.01	ppb	0.70	1	100.8	50 - 150	
59 Co	72	1	0.98	ppb	2.45	1	97.7	50 - 150	
60 Ni	72	1	1.03	ppb	5.51	1	103.0	50 - 150	
63 Cu	72	1	1.05	ppb	5.54	1	104.6	50 - 150	
66 Zn	72	1	10.39	ppb	0.48	10	103.9	50 - 150	
75 As	72	1	1.05	ppb	4.38	1	105.1	50 - 150	
78 Se	72	1	1.23	ppb	32.18	1	123.2	50 - 150	
95 Mo	72	1	1.01	ppb	7.94	1	101.0	50 - 150	
107 Ag	115	1	1.01	ppb	4.94	1	101.1	50 - 150	
111 Cd	115	1	1.05	ppb	5.12	1	104.5	50 - 150	
118 Sn	115	1	10.46	ppb	2.14	10	104.6	50 - 150	
121 Sb	115	1	1.03	ppb	4.27	1	103.4	50 - 150	
137 Ba	115	1	1.04	ppb	2.63	1	104.3	50 - 150	
205 Tl	165	1	1.11	ppb	1.97	1	110.8	50 - 150	
208 Pb	165	1	1.05	ppb	1.92	1	105.4	50 - 150	
232 Th	165	1	1.04	ppb	1.88	1	103.6	50 - 150	
238 U	165	1	1.07	ppb	2.22	1	107.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	332529	1.31	316659	105.0	30 - 120	
45 Sc	1	924723	1.34	888972	104.0	30 - 120	
72 Ge	1	440304	0.81	425816	103.4	30 - 120	
115 In	1	1361149	0.37	1335258	101.9	30 - 120	
165 Ho	1	2647952	0.34	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 9 2009 08:48 pm
Operator: LRD
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.16	ppb	9.52	0	82.7	80 - 120	
51 V	72	1	0.15	ppb	12.92	0	84.2	80 - 120	
52 Cr	72	1	0.17	ppb	11.54	0	87.5	80 - 120	
55 Mn	72	1	0.19	ppb	4.01	0	92.3	80 - 120	
59 Co	72	1	0.20	ppb	10.00	0	101.6	80 - 120	
60 Ni	72	1	0.17	ppb	39.79	0	82.5	80 - 120	
63 Cu	72	1	0.21	ppb	8.40	0	98.5	80 - 120	
66 Zn	72	1	1.88	ppb	3.20	2	90.5	80 - 120	
75 As	72	1	0.18	ppb	4.43	0	84.9	80 - 120	
78 Se	72	1	0.34	ppb	52.18	0	137.7	80 - 120	
95 Mo	72	1	0.20	ppb	20.48	0	97.8	80 - 120	
107 Ag	115	1	0.19	ppb	11.02	0	95.4	80 - 120	
111 Cd	115	1	0.18	ppb	8.60	0	87.8	80 - 120	
118 Sn	115	1	2.07	ppb	1.60	2	98.7	80 - 120	
121 Sb	115	1	0.24	ppb	8.81	0	117.2	80 - 120	
137 Ba	115	1	0.17	ppb	15.49	0	82.0	80 - 120	
205 Tl	165	1	0.21	ppb	3.14	0	95.1	80 - 120	
208 Pb	165	1	0.21	ppb	4.91	0	97.5	80 - 120	
232 Th	165	1	0.21	ppb	2.80	0	102.7	80 - 120	
238 U	165	1	0.21	ppb	1.79	0	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334891	0.91	316659	105.8	30 - 120	
45 Sc	1	926450	1.15	888972	104.2	30 - 120	
72 Ge	1	444347	1.22	425816	104.4	30 - 120	
115 In	1	1347595	1.10	1335258	100.9	30 - 120	
165 Ho	1	2645674	1.06	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 9 2009 08:51 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.18	3600	
51 V	72	1	-0.05	-0.05	ppb	4.45	3600	
52 Cr	72	1	0.03	0.03	ppb	21.71	3600	
55 Mn	72	1	-0.01	-0.01	ppb	107.83	3600	
59 Co	72	1	0.00	0.00	ppb	91.53	3600	
60 Ni	72	1	-0.01	-0.01	ppb	120.90	3600	
63 Cu	72	1	0.00	0.00	ppb	249.88	3600	
66 Zn	72	1	0.21	0.21	ppb	4.91	3600	
75 As	72	1	-0.01	-0.01	ppb	276.53	3600	
78 Se	72	1	2.30	2.30	ppb	3.47	3600	
95 Mo	72	1	0.00	0.00	ppb	270.91	3600	
107 Ag	115	1	0.01	0.01	ppb	12.59	3600	
111 Cd	115	1	0.01	0.01	ppb	40.90	3600	
118 Sn	115	1	0.03	0.03	ppb	42.36	3600	
121 Sb	115	1	0.02	0.02	ppb	52.41	3600	
137 Ba	115	1	0.00	0.00	ppb	159.45	3600	
205 Tl	165	1	0.00	0.00	ppb	223.71	3600	
208 Pb	165	1	0.00	0.00	ppb	93.52	3600	
232 Th	165	1	0.01	0.01	ppb	41.10	1000	
238 U	165	1	0.00	0.00	ppb	39.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336598	0.66	316659	106.3	30 - 120	
45 Sc	1	916084	0.54	888972	103.0	30 - 120	
72 Ge	1	444955	0.00	425816	104.5	30 - 120	
115 In	1	1367875	0.83	1335258	102.4	30 - 120	
165 Ho	1	2646991	0.40	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 9 2009 08:54 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.09 ppb	3.15	1.00	
52 Cr	72	1	1.97 ppb	9.78	1.00	
55 Mn	72	1	2.81 ppb	1.66	1.00	
59 Co	72	1	0.10 ppb	6.63	1.00	
60 Ni	72	1	1.02 ppb	13.74	1.00	
63 Cu	72	1	0.53 ppb	7.97	1.00	
66 Zn	72	1	3.94 ppb	2.38	10.00	
75 As	72	1	0.28 ppb	11.27	1.00	
78 Se	72	1	0.38 ppb	63.23	1.00	
95 Mo	72	1	1936.00 ppb	0.91	2000.00	
107 Ag	115	1	0.03 ppb	12.20	1.00	
111 Cd	115	1	0.30 ppb	66.71	1.00	
118 Sn	115	1	0.12 ppb	33.50	10.00	
121 Sb	115	1	0.92 ppb	2.59	1.00	
137 Ba	115	1	0.03 ppb	33.26	1.00	
205 Tl	165	1	0.03 ppb	11.11	1.00	
208 Pb	165	1	1.00 ppb	2.07	1.00	
232 Th	165	1	0.02 ppb	12.13	1.00	
238 U	165	1	0.00 ppb	5.79	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	239339	0.28	316659	75.6	30 - 120	
45 Sc	1	700629	1.42	888972	78.8	30 - 120	
72 Ge	1	343237	0.37	425816	80.6	30 - 120	
115 In	1	1048448	1.55	1335258	78.5	30 - 120	
165 Ho	1	2104424	0.97	2617754	80.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 9 2009 08:57 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	109.40	3.64	100	109.4	80 - 120	
51 V	72	1	99.64	0.20	100	99.6	80 - 120	
52 Cr	72	1	97.24	0.93	100	97.2	80 - 120	
55 Mn	72	1	98.22	0.64	100	98.2	80 - 120	
59 Co	72	1	92.77	2.10	100	92.8	80 - 120	
60 Ni	72	1	89.04	1.65	100	89.0	80 - 120	
63 Cu	72	1	86.53	0.30	100	86.5	80 - 120	
66 Zn	72	1	96.58	0.54	100	96.6	80 - 120	
75 As	72	1	101.00	1.32	100	101.0	80 - 120	
78 Se	72	1	100.00	0.62	100	100.0	80 - 120	
95 Mo	72	1	2093.00	0.96	2100	99.7	80 - 120	
107 Ag	115	1	89.66	3.28	100	89.7	80 - 120	
111 Cd	115	1	95.05	1.99	100	95.1	80 - 120	
118 Sn	115	1	100.40	1.69	100	100.4	80 - 120	
121 Sb	115	1	103.00	1.30	100	103.0	80 - 120	
137 Ba	115	1	101.30	1.03	100	101.3	80 - 120	
205 Tl	165	1	94.31	0.93	100	94.3	80 - 120	
208 Pb	165	1	93.76	0.89	100	93.8	80 - 120	
232 Th	165	1	101.30	1.54	100	101.3	80 - 120	
238 U	165	1	99.94	0.63	100	99.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	233202	3.01	316659	73.6	30 - 120	
45 Sc	1	711798	0.20	888972	80.1	30 - 120	
72 Ge	1	338298	0.97	425816	79.4	30 - 120	
115 In	1	1075320	0.68	1335258	80.5	30 - 120	
165 Ho	1	2161438	0.51	2617754	82.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 9 2009 08:59 pm
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.01	ppb	173.15	0	4.2	80 - 120	
51 V	72	1	0.02	ppb	35.98	0	10.9	80 - 120	
52 Cr	72	1	0.03	ppb	89.50	0	13.7	80 - 120	
55 Mn	72	1	-0.01	ppb	113.19	0	-3.4	80 - 120	
59 Co	72	1	0.00	ppb	1352.30	0	-0.1	80 - 120	
60 Ni	72	1	-0.02	ppb	102.45	0	-9.9	80 - 120	
63 Cu	72	1	0.00	ppb	649.06	0	0.6	80 - 120	
66 Zn	72	1	0.04	ppb	63.69	2	1.7	80 - 120	
75 As	72	1	-0.01	ppb	61.99	0	-3.9	80 - 120	
78 Se	72	1	0.39	ppb	99.84	0	156.3	80 - 120	
95 Mo	72	1	0.80	ppb	31.54	0	396.5	80 - 120	
107 Ag	115	1	0.01	ppb	53.68	0	3.6	80 - 120	
111 Cd	115	1	0.00	ppb	41.35	0	1.7	80 - 120	
118 Sn	115	1	0.00	ppb	#######	2	0.0	80 - 120	
121 Sb	115	1	0.11	ppb	20.17	0	52.7	80 - 120	
137 Ba	115	1	0.00	ppb	105.76	0	-0.5	80 - 120	
205 Tl	165	1	-0.01	ppb	3.09	0	-2.6	80 - 120	
208 Pb	165	1	0.00	ppb	49.94	0	0.7	80 - 120	
232 Th	165	1	0.03	ppb	6.82	0	13.2	80 - 120	
238 U	165	1	0.01	ppb	15.94	0	6.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331840	0.43	316659	104.8	30 - 120	
45 Sc	1	927075	1.00	888972	104.3	30 - 120	
72 Ge	1	454961	0.83	425816	106.8	30 - 120	
115 In	1	1407675	0.48	1335258	105.4	30 - 120	
165 Ho	1	2715373	0.43	2617754	103.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\014 LR.D\014 LR.D#
Date Acquired: Nov 9 2009 09:02 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	989.70 ppb	1.24	1000	99.0	90 - 110	
51 V	72	1	962.50 ppb	1.62	1000	96.3	90 - 110	
52 Cr	72	1	955.40 ppb	1.40	1000	95.5	90 - 110	
55 Mn	72	1	950.30 ppb	1.50	1000	95.0	90 - 110	
59 Co	72	1	955.50 ppb	1.19	1000	95.6	90 - 110	
60 Ni	72	1	979.40 ppb	1.79	1000	97.9	90 - 110	
63 Cu	72	1	966.20 ppb	0.98	1000	96.6	90 - 110	
66 Zn	72	1	974.60 ppb	0.75	1000	97.5	90 - 110	
75 As	72	1	1009.00 ppb	0.73	1000	100.9	90 - 110	
78 Se	72	1	988.90 ppb	0.77	1000	98.9	90 - 110	
95 Mo	72	1	987.40 ppb	1.52	1000	98.7	90 - 110	
107 Ag	115	1	932.40 ppb	1.41	1000	93.2	90 - 110	
111 Cd	115	1	967.10 ppb	0.44	1000	96.7	90 - 110	
118 Sn	115	1	933.80 ppb	0.50	1000	93.4	90 - 110	
121 Sb	115	1	927.90 ppb	0.18	1000	92.8	90 - 110	
137 Ba	115	1	972.50 ppb	0.87	1000	97.3	90 - 110	
205 Tl	165	1	947.60 ppb	0.99	1000	94.8	90 - 110	
208 Pb	165	1	915.00 ppb	0.94	1000	91.5	90 - 110	
232 Th	165	1	966.60 ppb	0.64	1000	96.7	90 - 110	
238 U	165	1	963.20 ppb	1.88	1000	96.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328068	1.06	316659	103.6	30 - 120	
45 Sc	1	922726	2.01	888972	103.8	30 - 120	
72 Ge	1	430093	1.37	425816	101.0	30 - 120	
115 In	1	1364755	0.41	1335258	102.2	30 - 120	
165 Ho	1	2644039	0.70	2617754	101.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 9 2009 09:05 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.02	ppb	173.25	3600	
51 V	72	1	-0.02	-0.02	ppb	88.49	3600	
52 Cr	72	1	0.05	0.05	ppb	36.35	3600	
55 Mn	72	1	-0.01	-0.01	ppb	183.98	3600	
59 Co	72	1	0.01	0.01	ppb	88.77	3600	
60 Ni	72	1	0.02	0.02	ppb	167.72	3600	
63 Cu	72	1	0.03	0.03	ppb	35.08	3600	
66 Zn	72	1	0.05	0.05	ppb	19.57	3600	
75 As	72	1	0.02	0.02	ppb	85.94	3600	
78 Se	72	1	0.69	0.69	ppb	46.45	3600	
95 Mo	72	1	0.53	0.53	ppb	26.09	3600	
107 Ag	115	1	0.03	0.03	ppb	35.34	3600	
111 Cd	115	1	0.02	0.02	ppb	21.52	3600	
118 Sn	115	1	1.11	1.11	ppb	27.74	3600	
121 Sb	115	1	1.31	1.31	ppb	17.77	3600	
137 Ba	115	1	0.02	0.02	ppb	70.23	3600	
205 Tl	165	1	0.06	0.06	ppb	21.10	3600	
208 Pb	165	1	0.02	0.02	ppb	25.81	3600	
232 Th	165	1	0.13	0.13	ppb	10.54	1000	
238 U	165	1	0.13	0.13	ppb	15.65	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	341210	2.06	316659	107.8	30 - 120	
45 Sc	1	953002	0.82	888972	107.2	30 - 120	
72 Ge	1	451794	0.58	425816	106.1	30 - 120	
115 In	1	1384812	1.01	1335258	103.7	30 - 120	
165 Ho	1	2634408	0.76	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 9 2009 09:08 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.36	ppb	2.54	50	98.7	90 - 110	
51 V	72	1	50.77	ppb	1.34	50	101.5	90 - 110	
52 Cr	72	1	50.82	ppb	0.60	50	101.6	90 - 110	
55 Mn	72	1	50.95	ppb	1.41	50	101.9	90 - 110	
59 Co	72	1	50.68	ppb	1.40	50	101.4	90 - 110	
60 Ni	72	1	49.56	ppb	1.57	50	99.1	90 - 110	
63 Cu	72	1	49.68	ppb	0.10	50	99.4	90 - 110	
66 Zn	72	1	49.76	ppb	0.33	50	99.5	90 - 110	
75 As	72	1	50.93	ppb	0.82	50	101.9	90 - 110	
78 Se	72	1	51.94	ppb	5.89	50	103.9	90 - 110	
95 Mo	72	1	48.88	ppb	1.24	50	97.8	90 - 110	
107 Ag	115	1	50.11	ppb	0.43	50	100.2	90 - 110	
111 Cd	115	1	50.35	ppb	0.26	50	100.7	90 - 110	
118 Sn	115	1	50.40	ppb	1.11	50	100.8	90 - 110	
121 Sb	115	1	50.58	ppb	0.97	50	101.2	90 - 110	
137 Ba	115	1	50.03	ppb	0.58	50	100.1	90 - 110	
205 Tl	165	1	50.31	ppb	0.12	50	100.6	90 - 110	
208 Pb	165	1	50.77	ppb	1.01	50	101.5	90 - 110	
232 Th	165	1	50.58	ppb	2.06	50	101.2	90 - 110	
238 U	165	1	50.76	ppb	2.06	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	339265	1.56	316659	107.1	30 - 120	
45 Sc	1	947544	0.15	888972	106.6	30 - 120	
72 Ge	1	441263	0.72	425816	103.6	30 - 120	
115 In	1	1386188	0.72	1335258	103.8	30 - 120	
165 Ho	1	2649982	0.75	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 9 2009 09:10 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ppb	173.22	1.00	
51 V	72	1	-0.046	ppb	29.01	1.00	
52 Cr	72	1	0.000	ppb	12322.00	1.00	
55 Mn	72	1	-0.007	ppb	43.73	1.00	
59 Co	72	1	0.001	ppb	393.70	1.00	
60 Ni	72	1	-0.005	ppb	329.15	1.00	
63 Cu	72	1	0.007	ppb	98.78	1.00	
66 Zn	72	1	0.040	ppb	14.37	1.00	
75 As	72	1	-0.008	ppb	123.42	1.00	
78 Se	72	1	0.405	ppb	68.29	1.00	
95 Mo	72	1	0.105	ppb	49.03	1.00	
107 Ag	115	1	0.009	ppb	76.77	1.00	
111 Cd	115	1	0.002	ppb	275.78	1.00	
118 Sn	115	1	0.252	ppb	28.94	1.00	
121 Sb	115	1	0.323	ppb	22.12	1.00	
137 Ba	115	1	0.000	ppb	357.00	1.00	
205 Tl	165	1	0.012	ppb	22.43	1.00	
208 Pb	165	1	0.003	ppb	36.91	1.00	
232 Th	165	1	0.060	ppb	22.01	1.00	
238 U	165	1	0.020	ppb	26.01	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	347509	1.01	316659	109.7	30 - 120	
45 Sc	1	955495	2.12	888972	107.5	30 - 120	
72 Ge	1	455532	0.79	425816	107.0	30 - 120	
115 In	1	1386791	1.63	1335258	103.9	30 - 120	
165 Ho	1	2651802	0.80	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\018WASH.D\018WASH.D#
Date Acquired: Nov 9 2009 09:13 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.024 ppb	7.78	1.30	
51 V	72	1	5.126 ppb	1.88	6.50	
52 Cr	72	1	2.083 ppb	6.13	2.60	
55 Mn	72	1	1.010 ppb	2.87	1.30	
59 Co	72	1	1.062 ppb	1.70	1.30	
60 Ni	72	1	2.095 ppb	2.27	2.60	
63 Cu	72	1	2.060 ppb	2.82	2.60	
66 Zn	72	1	10.130 ppb	1.17	13.00	
75 As	72	1	5.125 ppb	4.68	6.50	
78 Se	72	1	5.045 ppb	5.92	6.50	
95 Mo	72	1	1.951 ppb	3.60	2.60	
107 Ag	115	1	5.311 ppb	0.48	6.50	
111 Cd	115	1	1.030 ppb	11.33	1.30	
118 Sn	115	1	10.360 ppb	1.60	13.00	
121 Sb	115	1	2.190 ppb	4.18	2.60	
137 Ba	115	1	1.055 ppb	3.38	1.30	
205 Tl	165	1	1.095 ppb	1.41	1.30	
208 Pb	165	1	1.069 ppb	0.47	1.30	
232 Th	165	1	2.172 ppb	3.24	2.60	
238 U	165	1	1.103 ppb	1.52	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350643	0.28	316659	110.7	30 - 120	
45 Sc	1	970129	1.19	888972	109.1	30 - 120	
72 Ge	1	456907	0.32	425816	107.3	30 - 120	
115 In	1	1395760	1.56	1335258	104.5	30 - 120	
165 Ho	1	2660739	0.79	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\019 BLK.D\019 BLK.D#
Date Acquired: Nov 9 2009 09:16 pm
Operator: LRD
Sample Name: LNNP6B
Misc Info: BLANK 9306276 6020
Vial Number: 2201
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	2.00	
51 V	72	1	-0.018 ppb	41.70	2.00	
52 Cr	72	1	0.292 ppb	16.50	2.00	
55 Mn	72	1	0.185 ppb	7.72	2.00	
59 Co	72	1	0.011 ppb	24.75	2.00	
60 Ni	72	1	0.036 ppb	53.39	2.00	
63 Cu	72	1	0.169 ppb	20.87	2.00	
66 Zn	72	1	0.849 ppb	7.65	2.00	
75 As	72	1	0.010 ppb	67.79	2.00	
78 Se	72	1	0.510 ppb	48.19	2.00	
95 Mo	72	1	0.057 ppb	19.51	2.00	
107 Ag	115	1	0.010 ppb	26.04	2.00	
111 Cd	115	1	0.003 ppb	113.49	2.00	
118 Sn	115	1	0.208 ppb	18.28	2.00	
121 Sb	115	1	0.174 ppb	15.89	2.00	
137 Ba	115	1	0.038 ppb	22.70	2.00	
205 Tl	165	1	0.040 ppb	22.91	2.00	
208 Pb	165	1	0.011 ppb	12.89	2.00	
232 Th	165	1	0.031 ppb	18.41	2.00	
238 U	165	1	0.007 ppb	24.76	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355955	0.99	316659	112.4	30 - 120	
45 Sc	1	972462	1.01	888972	109.4	30 - 120	
72 Ge	1	458206	0.62	425816	107.6	30 - 120	
115 In	1	1400110	0.71	1335258	104.9	30 - 120	
165 Ho	1	2668336	0.83	2617754	101.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110909A.B\020 LCS.D\020 LCS.D#
Date Acquired:	Nov 9 2009 09:19 pm
Acq. Method:	NormISIS.M
Operator:	LRD
Sample Name:	LNNP6C
Misc Info:	LCS
Vial Number:	2202
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 09 2009 08:35 pm
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.76	2.19	40	101.9	80 - 120	
51 V	72	1	43.16	0.76	40	107.9	80 - 120	
52 Cr	72	1	43.22	1.05	40	108.1	80 - 120	
55 Mn	72	1	43.24	0.21	40	108.1	80 - 120	
59 Co	72	1	42.64	0.71	40	106.6	80 - 120	
60 Ni	72	1	42.34	0.56	40	105.9	80 - 120	
63 Cu	72	1	42.72	0.89	40	106.8	80 - 120	
66 Zn	72	1	45.64	0.61	40	114.1	80 - 120	
75 As	72	1	40.76	0.70	40	101.9	80 - 120	
78 Se	72	1	38.19	2.28	40	95.5	80 - 120	
95 Mo	72	1	35.78	2.03	40	89.5	80 - 120	
107 Ag	115	1	41.49	2.15	40	103.7	80 - 120	
111 Cd	115	1	40.17	0.57	40	100.4	80 - 120	
118 Sn	115	1	0.12	28.26	40	0.3	80 - 120	
121 Sb	115	1	35.81	0.84	40	89.5	80 - 120	
137 Ba	115	1	41.49	1.53	40	103.7	80 - 120	
205 Tl	165	1	43.86	2.13	40	109.7	80 - 120	
208 Pb	165	1	41.85	1.84	40	104.6	80 - 120	
232 Th	165	1	41.91	2.25	40	104.8	80 - 120	
238 U	165	1	41.55	2.69	40	103.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350822	0.51	316659	110.8	30 - 120	
45 Sc	1	980963	1.16	888972	110.3	30 - 120	
72 Ge	1	444654	1.31	425816	104.4	30 - 120	
115 In	1	1399733	0.66	1335258	104.8	30 - 120	
165 Ho	1	2665542	1.69	2617754	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\021SMPL.D\021SMPL.D#
Date Acquired: Nov 9 2009 09:21 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLN9 2X
Misc Info: D9J300353
Vial Number: 2203
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.05	ppb	92.24	3600	
51 V	72	1	37.96	18.98	ppb	1.34	3600	
52 Cr	72	1	114.94	57.47	ppb	0.72	3600	
55 Mn	72	1	36.50	18.25	ppb	2.00	3600	
59 Co	72	1	0.69	0.34	ppb	2.76	3600	
60 Ni	72	1	3.14	1.57	ppb	8.45	3600	
63 Cu	72	1	1.64	0.82	ppb	6.02	3600	
66 Zn	72	1	11.13	5.57	ppb	1.82	3600	
75 As	72	1	202.00	101.00	ppb	0.43	3600	
78 Se	72	1	3.22	1.61	ppb	48.25	3600	
95 Mo	72	1	18.83	9.42	ppb	0.68	3600	
107 Ag	115	1	0.17	0.08	ppb	17.24	3600	
111 Cd	115	1	0.10	0.05	ppb	51.39	3600	
118 Sn	115	1	0.28	0.14	ppb	42.81	3600	
121 Sb	115	1	0.34	0.17	ppb	20.62	3600	
137 Ba	115	1	37.72	18.86	ppb	0.70	3600	
205 Tl	165	1	0.13	0.06	ppb	19.45	3600	
208 Pb	165	1	0.71	0.35	ppb	3.38	3600	
232 Th	165	1	0.72	0.36	ppb	1.63	1000	
238 U	165	1	53.74	26.87	ppb	1.72	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298847	1.22	316659	94.4	30 - 120	
45 Sc	1	845797	1.37	888972	95.1	30 - 120	
72 Ge	1	386800	0.60	425816	90.8	30 - 120	
115 In	1	1191341	0.83	1335258	89.2	30 - 120	
165 Ho	1	2413317	1.23	2617754	92.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\022SMPL.D\022SMPL.D#
Date Acquired: Nov 9 2009 09:24 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLR4 2X
Misc Info: D9J300356
Vial Number: 2204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.01	ppb	173.27	3600	
51 V	72	1	78.42	39.21	ppb	1.83	3600	
52 Cr	72	1	24.86	12.43	ppb	1.31	3600	
55 Mn	72	1	2,930.00	1465.00	ppb	2.13	3600	
59 Co	72	1	42.42	21.21	ppb	0.61	3600	
60 Ni	72	1	20.92	10.46	ppb	3.31	3600	
63 Cu	72	1	0.75	0.37	ppb	5.97	3600	
66 Zn	72	1	18.97	9.49	ppb	2.01	3600	
75 As	72	1	114.66	57.33	ppb	0.89	3600	
78 Se	72	1	6.57	3.28	ppb	20.64	3600	
95 Mo	72	1	26.74	13.37	ppb	0.88	3600	
107 Ag	115	1	0.11	0.05	ppb	25.16	3600	
111 Cd	115	1	0.42	0.21	ppb	16.72	3600	
118 Sn	115	1	0.13	0.06	ppb	44.87	3600	
121 Sb	115	1	0.27	0.13	ppb	7.83	3600	
137 Ba	115	1	27.28	13.64	ppb	2.04	3600	
205 Tl	165	1	0.19	0.10	ppb	3.70	3600	
208 Pb	165	1	0.11	0.06	ppb	1.85	3600	
232 Th	165	1	0.08	0.04	ppb	8.56	1000	
238 U	165	1	69.92	34.96	ppb	2.03	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	274893	1.24	316659	86.8	30 - 120	
45 Sc	1	779549	2.32	888972	87.7	30 - 120	
72 Ge	1	352268	1.67	425816	82.7	30 - 120	
115 In	1	1127758	1.03	1335258	84.5	30 - 120	
165 Ho	1	2240638	0.13	2617754	85.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#
Date Acquired: Nov 9 2009 09:27 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4
Misc Info: D9J310138
Vial Number: 2205
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: AllRef
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.27	3600	
51 V	72	1	0.05	0.05	ppb	6.94	3600	
52 Cr	72	1	0.48	0.48	ppb	5.57	3600	
55 Mn	72	1	1.67	1.67	ppb	3.29	3600	
59 Co	72	1	0.03	0.03	ppb	17.85	3600	
60 Ni	72	1	0.16	0.16	ppb	28.53	3600	
63 Cu	72	1	0.43	0.43	ppb	6.97	3600	
66 Zn	72	1	8.86	8.86	ppb	0.90	3600	
75 As	72	1	0.01	0.01	ppb	328.51	3600	
78 Se	72	1	0.28	0.28	ppb	90.12	3600	
95 Mo	72	1	0.17	0.17	ppb	26.75	3600	
107 Ag	115	1	0.01	0.01	ppb	26.64	3600	
111 Cd	115	1	0.00	0.00	ppb	536.64	3600	
118 Sn	115	1	0.20	0.20	ppb	7.53	3600	
121 Sb	115	1	0.09	0.09	ppb	15.50	3600	
137 Ba	115	1	0.66	0.66	ppb	1.78	3600	
205 Tl	165	1	-0.01	-0.01	ppb	11.38	3600	
208 Pb	165	1	0.12	0.12	ppb	1.87	3600	
232 Th	165	1	0.01	0.01	ppb	21.46	1000	
238 U	165	1	0.01	0.01	ppb	24.76	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	373380	0.19	316659	117.9	30 - 120	
45 Sc	1	1006941	1.04	888972	113.3	30 - 120	
72 Ge	1	462649	0.57	425816	108.6	30 - 120	
115 In	1	1397361	0.27	1335258	104.7	30 - 120	
165 Ho	1	2660327	0.25	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\024SDIL.D\024SDIL.D#
Date Acquired: Nov 9 2009 09:30 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4P5
Misc Info: SERIAL DILUTION
Vial Number: 2206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SDIL
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0.00	0.0	90 - 110	
51 V	72	1	-0.03	ppb	5.81	0.01	-342.2	90 - 110	
52 Cr	72	1	0.20	ppb	10.88	0.10	213.8	90 - 110	
55 Mn	72	1	0.34	ppb	10.16	0.33	103.1	90 - 110	
59 Co	72	1	0.01	ppb	47.19	0.01	96.0	90 - 110	
60 Ni	72	1	0.04	ppb	33.75	0.03	122.1	90 - 110	
63 Cu	72	1	0.10	ppb	5.61	0.09	114.0	90 - 110	
66 Zn	72	1	1.80	ppb	5.52	1.77	101.3	90 - 110	
75 As	72	1	-0.02	ppb	9.36	0.00	-1343.0	90 - 110	
78 Se	72	1	0.23	ppb	2.28	0.06	422.9	90 - 110	
95 Mo	72	1	0.04	ppb	19.93	0.03	118.9	90 - 110	
107 Ag	115	1	0.00	ppb	24.25	0.00	272.6	90 - 110	
111 Cd	115	1	0.02	ppb	89.75	0.00	2944.9	90 - 110	
118 Sn	115	1	0.12	ppb	5.20	0.04	296.9	90 - 110	
121 Sb	115	1	0.03	ppb	17.47	0.02	168.6	90 - 110	
137 Ba	115	1	0.14	ppb	19.11	0.13	109.3	90 - 110	
205 Tl	165	1	-0.01	ppb	30.49	0.00	501.4	90 - 110	
208 Pb	165	1	0.02	ppb	8.37	0.02	88.0	90 - 110	
232 Th	165	1	0.00	ppb	50.10	0.00	202.3	90 - 110	
238 U	165	1	0.00	ppb	87.66	0.00	61.5	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368778	0.88	316659	116.5	30 - 120	
45 Sc	1	979811	0.26	888972	110.2	30 - 120	
72 Ge	1	461996	0.57	425816	108.5	30 - 120	
115 In	1	1378236	0.67	1335258	103.2	30 - 120	
165 Ho	1	2636939	1.04	2617754	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:12

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNME4P5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 24
Acquired: 11/09/2009 21:30:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9		0	0.01470	100		*	
7440-62-2	Vanadium	51	380	-0.15675	0.04580	442		*	
7440-47-3	Chromium	52	2890	1.0235	0.47880	114		*	
7439-96-5	Manganese	55	2697	1.7180	1.6670	3.06		*	
7440-48-4	Cobalt	59	67	0.03211	0.03347	4.05		*	
7440-02-0	Nickel	60	130	0.19735	0.16160	22.1		*	
7440-50-8	Copper	63	490	0.48945	0.42930	14.0		*	
7440-66-6	Zinc	66	1801	8.9800	8.8630	1.32		*	
7440-38-2	Arsenic	75	27	-0.08160	0.00608	1440	0.21	NC	☑
7782-49-2	Selenium	78	140	1.1680	0.27620	323	0.70	NC	☑
7439-98-7	Molybdenum	95	110	0.20470	0.17210	18.9		*	
7440-22-4	Silver	107	27	0.01977	0.00725	173		*	
7440-43-9	Cadmium	111	17	0.08440	0.00287	2840		*	
7440-31-5	Tin	118	720	0.60300	0.20310	197		*	
7440-36-0	Antimony	121	164	0.15100	0.08954	68.6		*	
7440-39-3	Barium	137	248	0.71700	0.65610	9.28		*	
7440-28-0	Thallium	205	96	-0.04272	-0.00852			*	
7439-92-1	Lead	208	659	0.10510	0.11940	12.0		*	
7440-61-1	Uranium	238	111	0.00685	0.01113	38.5		*	
7440-29-1	Thorium	232	210	0.02068	0.01022	102		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: LRD Date: 11/10/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\025PDS.D\025PDS.D#
Date Acquired: Nov 9 2009 09:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4Z
Misc Info: POST DIGESTION SPIKE
Vial Number: 2207
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	185.00	0.01	ppb	1.86	200	92.5	75 - 125	
51 V	72	1	202.50	0.05	ppb	2.78	200	101.2	75 - 125	
52 Cr	72	1	203.90	0.48	ppb	2.06	200	101.7	75 - 125	
55 Mn	72	1	201.00	1.67	ppb	3.35	200	99.7	75 - 125	
59 Co	72	1	196.80	0.03	ppb	1.85	200	98.4	75 - 125	
60 Ni	72	1	194.90	0.16	ppb	1.47	200	97.4	75 - 125	
63 Cu	72	1	196.10	0.43	ppb	0.50	200	97.8	75 - 125	
66 Zn	72	1	196.80	8.86	ppb	0.36	200	94.2	75 - 125	
75 As	72	1	190.30	0.01	ppb	0.61	200	95.1	75 - 125	
78 Se	72	1	185.70	0.28	ppb	2.73	200	92.7	75 - 125	
95 Mo	72	1	192.00	0.17	ppb	0.97	200	95.9	75 - 125	
107 Ag	115	1	48.92	0.01	ppb	2.06	50	97.8	75 - 125	
111 Cd	115	1	188.70	0.00	ppb	1.65	200	94.3	75 - 125	
118 Sn	115	1	176.90	0.20	ppb	1.43	200	88.4	75 - 125	
121 Sb	115	1	184.30	0.09	ppb	1.52	200	92.1	75 - 125	
137 Ba	115	1	195.10	0.66	ppb	1.67	200	97.2	75 - 125	
205 Tl	165	1	191.80	-0.01	ppb	0.94	200	95.9	75 - 125	
208 Pb	165	1	186.80	0.12	ppb	0.48	200	93.3	75 - 125	
232 Th	165	1	0.03	0.01	ppb	13.35	200	0.0	75 - 125	
238 U	165	1	190.70	0.01	ppb	1.54	200	95.3	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	354551	1.15	316659	112.0	30 - 120	
45 Sc	1	950915	0.92	888972	107.0	30 - 120	
72 Ge	1	426378	1.56	425816	100.1	30 - 120	
115 In	1	1327967	0.75	1335258	99.5	30 - 120	
165 Ho	1	2548646	0.61	2617754	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:22

Department: 090 (Metals)

Source: Spreadsheet

Sample: **LNME4Z**

Spike Dilution: **1.00**

Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 25
Acquired: 11/09/2009 21:32:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	79764	185.00	0.01470	92.5	200		☐
7440-62-2	Vanadium	51	1055210	202.50	0.04580	101	200		☐
7440-47-3	Chromium	52	1091770	203.90	0.47880	102	200		☐
7439-96-5	Manganese	55	1258890	201.00	1.6670	99.7	200		☐
7440-48-4	Cobalt	59	1273250	196.80	0.03347	98.4	200		☐
7440-02-0	Nickel	60	279436	194.90	0.16160	97.4	200		☐
7440-50-8	Copper	63	665031	196.10	0.42930	97.8	200		☐
7440-66-6	Zinc	66	167299	196.80	8.8630	94.0	200		☐
7440-38-2	Arsenic	75	125313	190.30	0.00608	95.1	200		☑
7782-49-2	Selenium	78	25838	185.70	0.27620	92.7	200		☑
7439-98-7	Molybdenum	95	382233	192.00	0.17210	95.9	200		☐
7440-22-4	Silver	107	276951	48.920	0.00725	97.8	50.0		☐
7440-43-9	Cadmium	111	227986	188.70	0.00287	94.3	200		☐
7440-31-5	Tin	118	584583	176.90	0.20310	88.3	200		☐
7440-36-0	Antimony	121	730873	184.30	0.08954	92.1	200		☐
7440-39-3	Barium	137	308452	195.10	0.65610	97.2	200		☐
7440-28-0	Thallium	205	2761530	191.80	-0.00852	95.9	200		☐
7439-92-1	Lead	208	3935420	186.80	0.11940	93.3	200		☐
7440-61-1	Uranium	238	4535860	190.70	0.01113	95.3	200		☐
7440-29-1	Thorium	232	747	0.02849	0.01022				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: LRD Date: 11/10/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\026_MS.D\026_MS.D#
Date Acquired: Nov 9 2009 09:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4S
Misc Info: MATRIX SPIKE
Vial Number: 2208
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	38.95	0.01	ppb	4.02	40	97.3	50 - 150	
51 V	72	1	42.14	0.05	ppb	0.45	40	105.2	50 - 150	
52 Cr	72	1	41.88	0.48	ppb	0.82	40	103.5	50 - 150	
55 Mn	72	1	44.00	1.67	ppb	0.81	40	105.6	50 - 150	
59 Co	72	1	41.74	0.03	ppb	0.31	40	104.3	50 - 150	
60 Ni	72	1	41.29	0.16	ppb	1.68	40	102.8	50 - 150	
63 Cu	72	1	41.14	0.43	ppb	0.55	40	101.8	50 - 150	
66 Zn	72	1	40.89	8.86	ppb	1.02	40	83.7	50 - 150	
75 As	72	1	39.70	0.01	ppb	1.91	40	99.2	50 - 150	
78 Se	72	1	37.66	0.28	ppb	2.21	40	93.5	50 - 150	
95 Mo	72	1	35.56	0.17	ppb	1.29	40	88.5	50 - 150	
107 Ag	115	1	40.57	0.01	ppb	0.75	40	101.4	50 - 150	
111 Cd	115	1	38.88	0.00	ppb	0.89	40	97.2	50 - 150	
118 Sn	115	1	0.26	0.20	ppb	7.26	40	0.7	50 - 150	
121 Sb	115	1	35.78	0.09	ppb	0.84	40	89.3	50 - 150	
137 Ba	115	1	40.55	0.66	ppb	1.52	40	99.7	50 - 150	
205 Tl	165	1	42.66	-0.01	ppb	1.13	40	106.7	50 - 150	
208 Pb	165	1	40.84	0.12	ppb	0.87	40	101.8	50 - 150	
232 Th	165	1	40.88	0.01	ppb	1.61	40	102.2	50 - 150	
238 U	165	1	40.76	0.01	ppb	1.03	40	101.9	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	358353	0.80	316659	113.2	30 - 120	
45 Sc	1	939200	0.60	888972	105.7	30 - 120	
72 Ge	1	422553	0.76	425816	99.2	30 - 120	
115 In	1	1328078	0.75	1335258	99.5	30 - 120	
165 Ho	1	2539000	0.43	2617754	97.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\027 MSD.D\027 MSD.D#
Date Acquired: Nov 9 2009 09:38 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4D
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2209
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MSD
Dilution Factor: 1.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\026 MS.D\026 MS.D#

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	38.17	ppb	2.44	38.95	2.02	20	
51 V	72	1	42.54	ppb	0.57	42.14	0.94	20	
52 Cr	72	1	42.55	ppb	0.81	41.88	1.59	20	
55 Mn	72	1	43.44	ppb	1.18	44.00	1.28	20	
59 Co	72	1	41.86	ppb	0.99	41.74	0.29	20	
60 Ni	72	1	41.95	ppb	1.55	41.29	1.59	20	
63 Cu	72	1	41.52	ppb	0.70	41.14	0.92	20	
66 Zn	72	1	40.14	ppb	0.44	40.89	1.85	20	
75 As	72	1	39.63	ppb	0.29	39.70	0.18	20	
78 Se	72	1	37.06	ppb	3.10	37.66	1.61	20	
95 Mo	72	1	35.66	ppb	0.62	35.56	0.28	20	
107 Ag	115	1	40.93	ppb	2.04	40.57	0.88	20	
111 Cd	115	1	39.64	ppb	0.46	38.88	1.94	20	
118 Sn	115	1	0.12	ppb	27.87	0.26	76.84	20	
121 Sb	115	1	35.83	ppb	0.62	35.78	0.14	20	
137 Ba	115	1	41.37	ppb	0.68	40.55	2.00	20	
205 Tl	165	1	42.77	ppb	1.75	42.66	0.26	20	
208 Pb	165	1	40.90	ppb	1.73	40.84	0.15	20	
232 Th	165	1	41.06	ppb	0.63	40.88	0.44	20	
238 U	165	1	40.94	ppb	0.83	40.76	0.44	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355186	0.16	316659	112.2	30 - 120	
45 Sc	1	936988	0.78	888972	105.4	30 - 120	
72 Ge	1	422235	0.79	425816	99.2	30 - 120	
115 In	1	1312991	0.53	1335258	98.3	30 - 120	
165 Ho	1	2541733	0.77	2617754	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\028 CCV.D\028 CCV.D#
Date Acquired: Nov 9 2009 09:41 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	48.28	ppb	1.89	50	96.6	90 - 110	
51 V	72	1	51.66	ppb	1.31	50	103.3	90 - 110	
52 Cr	72	1	51.41	ppb	0.42	50	102.8	90 - 110	
55 Mn	72	1	50.80	ppb	0.70	50	101.6	90 - 110	
59 Co	72	1	50.98	ppb	1.52	50	102.0	90 - 110	
60 Ni	72	1	50.44	ppb	1.14	50	100.9	90 - 110	
63 Cu	72	1	50.68	ppb	0.38	50	101.4	90 - 110	
66 Zn	72	1	49.73	ppb	0.43	50	99.5	90 - 110	
75 As	72	1	51.43	ppb	1.43	50	102.9	90 - 110	
78 Se	72	1	50.58	ppb	4.06	50	101.2	90 - 110	
95 Mo	72	1	49.14	ppb	0.63	50	98.3	90 - 110	
107 Ag	115	1	49.88	ppb	1.55	50	99.8	90 - 110	
111 Cd	115	1	49.46	ppb	0.97	50	98.9	90 - 110	
118 Sn	115	1	49.89	ppb	2.37	50	99.8	90 - 110	
121 Sb	115	1	49.59	ppb	1.76	50	99.2	90 - 110	
137 Ba	115	1	50.39	ppb	1.52	50	100.8	90 - 110	
205 Tl	165	1	49.99	ppb	0.81	50	100.0	90 - 110	
208 Pb	165	1	50.66	ppb	1.69	50	101.3	90 - 110	
232 Th	165	1	50.62	ppb	1.15	50	101.2	90 - 110	
238 U	165	1	50.54	ppb	0.29	50	101.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	351524	0.93	316659	111.0	30 - 120	
45 Sc	1	927694	1.28	888972	104.4	30 - 120	
72 Ge	1	421606	1.09	425816	99.0	30 - 120	
115 In	1	1310979	0.71	1335258	98.2	30 - 120	
165 Ho	1	2522093	0.90	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\029 CCB.D\029 CCB.D#
Date Acquired: Nov 9 2009 09:43 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.036	ppb	44.55	1.00	
52 Cr	72	1	0.019	ppb	63.89	1.00	
55 Mn	72	1	0.000	ppb	2382.10	1.00	
59 Co	72	1	0.002	ppb	93.07	1.00	
60 Ni	72	1	-0.010	ppb	1.82	1.00	
63 Cu	72	1	-0.002	ppb	211.49	1.00	
66 Zn	72	1	0.038	ppb	50.08	1.00	
75 As	72	1	-0.017	ppb	26.71	1.00	
78 Se	72	1	0.225	ppb	111.94	1.00	
95 Mo	72	1	0.046	ppb	45.40	1.00	
107 Ag	115	1	0.012	ppb	29.52	1.00	
111 Cd	115	1	0.002	ppb	311.75	1.00	
118 Sn	115	1	0.080	ppb	40.12	1.00	
121 Sb	115	1	0.165	ppb	24.61	1.00	
137 Ba	115	1	0.004	ppb	88.07	1.00	
205 Tl	165	1	0.004	ppb	78.72	1.00	
208 Pb	165	1	0.002	ppb	56.03	1.00	
232 Th	165	1	0.061	ppb	14.74	1.00	
238 U	165	1	0.013	ppb	31.22	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	354787	1.32	316659	112.0	30 - 120	
45 Sc	1	923814	1.00	888972	103.9	30 - 120	
72 Ge	1	432478	0.52	425816	101.6	30 - 120	
115 In	1	1308981	0.63	1335258	98.0	30 - 120	
165 Ho	1	2520572	0.23	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\030WASH.D\030WASH.D#
Date Acquired: Nov 9 2009 09:50 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.009 ppb	18.75	1.30	
51 V	72	1	5.177 ppb	1.19	6.50	
52 Cr	72	1	2.111 ppb	3.52	2.60	
55 Mn	72	1	1.107 ppb	2.74	1.30	
59 Co	72	1	1.028 ppb	3.93	1.30	
60 Ni	72	1	2.108 ppb	1.73	2.60	
63 Cu	72	1	2.068 ppb	1.44	2.60	
66 Zn	72	1	9.967 ppb	0.46	13.00	
75 As	72	1	5.161 ppb	1.92	6.50	
78 Se	72	1	5.825 ppb	10.45	6.50	
95 Mo	72	1	1.986 ppb	5.92	2.60	
107 Ag	115	1	5.462 ppb	1.89	6.50	
111 Cd	115	1	1.025 ppb	1.41	1.30	
118 Sn	115	1	10.590 ppb	0.75	13.00	
121 Sb	115	1	2.089 ppb	2.01	2.60	
137 Ba	115	1	1.011 ppb	0.65	1.30	
205 Tl	165	1	1.109 ppb	3.60	1.30	
208 Pb	165	1	1.060 ppb	1.36	1.30	
232 Th	165	1	2.209 ppb	0.66	2.60	
238 U	165	1	1.106 ppb	2.50	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358611	0.21	316659	113.2	30 - 120	
45 Sc	1	931630	1.00	888972	104.8	30 - 120	
72 Ge	1	428811	1.09	425816	100.7	30 - 120	
115 In	1	1287825	1.17	1335258	96.4	30 - 120	
165 Ho	1	2504436	0.55	2617754	95.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J310138

Client: Northgate Env

Batch(es) #: 9306276

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: LRD 11/10/2009

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J310138	1 D	SE	LNME41AH	20091109	6020TOTA	9306276	AG110909A	024
D9J310138	1 S	SE	LNME41AG	20091109	6020TOTA	9306276	AG110909A	024
D9J310138	1 D	AS	LNME41AF	20091109	6020TOTA	9306276	AG110909A	024
D9J310138	1 S	AS	LNME41AE	20091109	6020TOTA	9306276	AG110909A	024
D9J310138	1	SE	LNME41AC	20091109	6020TOTA	9306276	AG110909A	024
D9J310138	1	AS	LNME41AA	20091109	6020TOTA	9306276	AG110909A	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9306276**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JRW

Prep Date: 11/3/09 ~~11/02/09~~ JRW

Due Date: 11/11/09

Lot	Work Order			Initial Weight/Volume
D9K020000 Water	**LNNP6**	B	Due Date: SDG:	50 mL
D9K020000 Water	**LNNP6**	C	Due Date: SDG:	50 mL
D9J300353 Water	**LNLN9** Total		Due Date: 11/11/09 SDG:	50 mL
D9J300356 Water	**LNLR4** Total		Due Date: 11/11/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total		Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	S	Due Date: 11/12/09 SDG:	50 mL
D9J310138 Water	**LNME4** Total	D	Due Date: 11/12/09 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

AS SE

LRD 11/10/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 9306276 **ALLIQUOTTED BY:** KS
PREP DATE: 11/3/2009 **DIGESTED BY:** JRW

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS268

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☑ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-6471-09	11/1/10	100uL	15
2008Cal-2	STD-5356-09	1/10/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H14024	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3/2

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	1400	95	1815	96
HNO3	1830	96	1920	96
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: [signature] ***Date:*** 11/3/09

LRD 11/10/09

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Cal. Std. 100 ppb	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50	100,000 Aluminum	--	40	40	200
Antimony	100	40	50	100,000 Calcium	100	40	40	200
Arsenic	100	40	50	100,000 Iron	100	40	40	200
Barium	100	40	50	100,000 Magnesium	100	40	40	200
Beryllium	100	40	50	100,000 Sodium	100	40	40	200
Cadmium	100	40	50	100,000 Phosphorus	100	40	40	200
Chromium	100	40	50	100,000 Potassium	100	40	40	200
Cobalt	100	40	50	100,000 Sulfur	100	40	40	200
Copper	100	40	50	200,000 Carbon	100	40	40	200
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	50
Thallium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

ICV = Initial Calibration Verification (Second Source)
CCV = Continuing Calibration Verification
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
3	Cal Blank				1.0	11/09/09 20:32		☐
4	100 ppb				1.0	11/09/09 20:35		☐
5	ICV				1.0	11/09/09 20:37		☐
6	RLIV				1.0	11/09/09 20:40		☐
7	ICB				1.0	11/09/09 20:43		☐
8	RL STD				1.0	11/09/09 20:46		☐
9	AFCEE RL				1.0	11/09/09 20:48		☐
10	ALTSe				1.0	11/09/09 20:51		☐
11	ICSA				1.0	11/09/09 20:54		☐
12	ICSAB				1.0	11/09/09 20:57		☐
13	RINSE				1.0	11/09/09 20:59		☐
14	LR1				1.0	11/09/09 21:02		☐
15	RINSE				1.0	11/09/09 21:05		☐
16	CCV				1.0	11/09/09 21:08		☐
17	CCB				1.0	11/09/09 21:10		☐
18	RLCV				1.0	11/09/09 21:13		☐
19	LNNP6B	D9K020000	9306276	MS	1.0	11/09/09 21:16		☐
20	LNNP6C	D9K020000	9306276	MS	1.0	11/09/09 21:19		☐
21	LNLN9 2X	D9J300353-1	9306276	MS	2.0	11/09/09 21:21		☐
22	LNLR4 2X	D9J300356-1	9306276	MS	2.0	11/09/09 21:24		☐
23	LNME4	D9J310138-1	9306276	MS	1.0	11/09/09 21:27		☐
24	LNME4P5	D9J310138	9306276		5.0	11/09/09 21:30		☐
25	LNME4Z	D9J310138-1	9306276		1.0	11/09/09 21:32		☐
26	LNME4S	D9J310138-1	9306276	MS	1.0	11/09/09 21:35		☐
27	LNME4D	D9J310138-1	9306276	MS	1.0	11/09/09 21:38		☐
28	CCV				1.0	11/09/09 21:41		☐
29	CCB				1.0	11/09/09 21:43		☐
30	RLCV				1.0	11/09/09 21:50		☐
31	LM900B	D9J260000	9299244	MS	1.0	11/09/09 21:52		☐
32	LM900C	D9J260000	9299244	MS	1.0	11/09/09 21:55		☐
33	LM900L	D9J260000	9299244	MS	1.0	11/09/09 21:58		☐
34	LM9J9	D9J240206-1	9299244	MS	1.0	11/09/09 22:01		☐
35	~~LM9KA 2X~~	~~D9J240206-2~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:03~~		☐
36	~~LM9KC 2X~~	~~D9J240206-3~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:06~~	DNU LRD 11-10-09	☐
37	LM9KD	D9J240206-4	9299244	MS	1.0	11/09/09 22:09		☐
38	~~LM9KE 2X~~	~~D9J240206-5~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:12~~		☐
39	~~LM9KF 2X~~	~~D9J240206-6~~	~~9299244~~	~~MS~~	~~2.0~~	~~11/09/09 22:14~~		☐
40	LM9KG	D9J240206-7	9299244	MS	1.0	11/09/09 22:17		☐
41	CCV				1.0	11/09/09 22:20		☐
42	CCB				1.0	11/09/09 22:23		☐
43	RLCV				1.0	11/09/09 22:26		☐
44	LM9KH	D9J240206-8	9299244	MS	1.0	11/09/09 22:28		☐
45	LM9KJ	D9J240206-9	9299244	MS	1.0	11/09/09 22:31		☐
46	LM9KK	D9J240206-10	9299244	MS	1.0	11/09/09 22:34		☐
47	LM9KL	D9J240206-11	9299244	MS	1.0	11/09/09 22:37		☐
48	LM9KP	D9J240206-13	9299244	MS	1.0	11/09/09 22:39		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
49	LM9KPP5	D9J240206	9299244		5.0	11/09/09 22:42		☐
50	LM9KPZ	D9J240206-13	9299244		1.0	11/09/09 22:45		☐
51	LM9KPS	D9J240206-13	9299244	MS	1.0	11/09/09 22:48		☐
52	LM9KPD	D9J240206-13	9299244	MS	1.0	11/09/09 22:50		☐
53	CCV				1.0	11/09/09 22:53		☐
54	CCB				1.0	11/09/09 22:56		☐
55	RLCV				1.0	11/09/09 22:59		☐
56	LM9KA	D9J240206-2	9299244	MS	1.0	11/09/09 23:01		☐
57	LM9KC	D9J240206-3	9299244	MS	1.0	11/09/09 23:04		☐
58	LM9KE	D9J240206-5	9299244	MS	1.0	11/09/09 23:07		☐
59	LM9KF	D9J240206-6	9299244	MS	1.0	11/09/09 23:10		☐
60	CCV				1.0	11/09/09 23:12		☐
61	CCB				1.0	11/09/09 23:15		☐
62	RLCV				1.0	11/09/09 23:18		☐
64	Cal Blank				1.0	11/09/09 23:23		☐
65	100 ppb				1.0	11/09/09 23:26		☐
66	CCV				1.0	11/09/09 23:29		☐
67	CCB				1.0	11/09/09 23:32		☐
68	RLCV				1.0	11/09/09 23:34		☐
69	ICSA				1.0	11/09/09 23:37		☐
70	ICSAB				1.0	11/09/09 23:40		☐
71	WASH				1.0	11/09/09 23:43		☐
72	CCV				1.0	11/09/09 23:45		☐
73	CCB				1.0	11/09/09 23:48		☐
74	RLCV				1.0	11/09/09 23:51		☐
75	LN04NB	D9K060000	9310238	04	1.0	11/09/09 23:54		☐
76	LN04NC	D9K060000	9310238	04	1.0	11/09/09 23:57		☐
77	LNEA7	D9J280172-1	9310238	04	1.0	11/10/09 00:00		☐
78	LNEA7P5	D9J280172	9310238		5.0	11/10/09 00:02		☐
79	LNEA7Z	D9J280172-1	9310238		1.0	11/10/09 00:05		☐
80	LNEA7S	D9J280172-1	9310238	04	1.0	11/10/09 00:08		☐
81	LNEA7D	D9J280172-1	9310238	04	1.0	11/10/09 00:11		☐
82	LNECN	D9J280172-2	9310238	04	1.0	11/10/09 00:13		☐
83	CCV				1.0	11/10/09 00:16		☐
84	CCB				1.0	11/10/09 00:20		☐
85	RLCV				1.0	11/10/09 00:22		☐
86	LNECV	D9J280172-3	9310238	04	1.0	11/10/09 00:25		☐
87	LNECX	D9J280172-4	9310238	04	1.0	11/10/09 00:28		☐
88	LNEC0	D9J280172-5	9310238	04	1.0	11/10/09 00:31		☐
89	LNEC1	D9J280172-6	9310238	04	1.0	11/10/09 00:34		☐
90	LNEC3	D9J280172-7	9310238	04	1.0	11/10/09 00:36		☐
91	LNEC5	D9J280172-8	9310238	04	1.0	11/10/09 00:39		☐
92	CCV				1.0	11/10/09 00:42		☐
93	CCB				1.0	11/10/09 00:45		☐
94	RLCV				1.0	11/10/09 00:48		☐
95	LNKFHB	D9J300000	9303368	04	1.0	11/10/09 00:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
96	LNKFHC	D9J300000	9303368	04	1.0	11/10/09 00:53		☐
97	LNC5C	D9J270250-1	9303368	04	1.0	11/10/09 00:56		☐
98	LNC5E	D9J270250-2	9303368	04	1.0	11/10/09 00:59		☐
99	LNC5F	D9J270250-3	9303368	04	1.0	11/10/09 01:02		☐
100	LNEHJ	D9J280192-1	9303368	04	1.0	11/10/09 01:05		☐
101	LNEHJP5	D9J280192	9303368		5.0	11/10/09 01:07		☐
102	LNEHJZ	D9J280192-1	9303368		1.0	11/10/09 01:10		☐
103	LNEHJS	D9J280192-1	9303368	04	1.0	11/10/09 01:13		☐
104	CCV				1.0	11/10/09 01:16		☐
105	CCB				1.0	11/10/09 01:18		☐
106	RLCV				1.0	11/10/09 01:21		☐
107	LNEHJD	D9J280192-1	9303368	04	1.0	11/10/09 01:24		☐
108	LNGXD 5X	D9J290182-1	9303368	04	5.0	11/10/09 01:27		☐
109	LNGXG 5X	D9J290182-2	9303368	04	5.0	11/10/09 01:29		☐
110	LNG17	D9J290192-1	9303368	04	1.0	11/10/09 01:32		☐
111	LNG2D	D9J290192-2	9303368	04	1.0	11/10/09 01:35		☐
112	~~LNH27 2X~~	~~D9J290314-1~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:38~~	DNU LRD 11/10/09	☐
113	~~LNH29 2X~~	~~D9J290314-2~~	~~9303368~~	~~04~~	~~2.0~~	~~11/10/09 01:40~~		☐
114	LNH3A	D9J290314-3	9303368	04	1.0	11/10/09 01:43		☐
115	CCV				1.0	11/10/09 01:46		☐
116	CCB				1.0	11/10/09 01:49		☐
117	RLCV				1.0	11/10/09 01:52		☐
118	RINSE				1.0	11/10/09 01:54		☐
119	RINSE				1.0	11/10/09 01:57		☐
121	Cal Blank				1.0	11/10/09 02:03		☐
122	100 ppb				1.0	11/10/09 02:05		☐
123	CCV				1.0	11/10/09 02:08		☐
124	CCB				1.0	11/10/09 02:11		☐
125	RLCV				1.0	11/10/09 02:14		☐
126	LNNPLBF	D9K020000	9306272	MD	1.0	11/10/09 02:16		☐
127	LNNPLCF	D9K020000	9306272	MD	1.0	11/10/09 02:19		☐
128	LNLPFF	D9J300353-2	9306272	MD	1.0	11/10/09 02:22		☐
129	LNLPFP5F	D9J300353	9306272		5.0	11/10/09 02:25		☐
130	LNLPFZF	D9J300353-2	9306272		1.0	11/10/09 02:27		☐
131	LNLPFSF	D9J300353-2	9306272	MD	1.0	11/10/09 02:30		☐
132	LNLPFDF	D9J300353-2	9306272	MD	1.0	11/10/09 02:33		☐
133	CCV				1.0	11/10/09 02:36		☐
134	CCB				1.0	11/10/09 02:38		☐
135	RLCV				1.0	11/10/09 02:41		☐
136	LNNQ5BF	D9K020000	9306285	MD	1.0	11/10/09 02:44		☐
137	LNNQ5CF	D9K020000	9306285	MD	1.0	11/10/09 02:47		☐
138	LNLGXF 2X	D9J300326-1	9306285	MD	2.0	11/10/09 02:50		☐
139	LNLG3F	D9J300326-2	9306285	MD	1.0	11/10/09 02:52		☐
140	LNLG4F	D9J300326-3	9306285	MD	1.0	11/10/09 02:55		☐
141	LNLHHF	D9J300329-1	9306285	MD	1.0	11/10/09 02:58		☐
142	LNLHMF	D9J300329-2	9306285	MD	1.0	11/10/09 03:01		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: **AG110909A** **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
143	CCV				1.0	11/10/09 03:03		☐
144	CCB				1.0	11/10/09 03:06		☐
145	RLCV				1.0	11/10/09 03:09		☐
146	LNLHPF	D9J300329-3	9306285	MD	1.0	11/10/09 03:12		☐
147	LNLJJF	D9J300340-1	9306285	MD	1.0	11/10/09 03:15		☐
148	LNLJJP5F	D9J300340	9306285		5.0	11/10/09 03:17		☐
149	LNLJJZF	D9J300340-1	9306285		1.0	11/10/09 03:20		☐
150	LNLJJSF	D9J300340-1	9306285	MD	1.0	11/10/09 03:23		☐
151	LNLJJDF	D9J300340-1	9306285	MD	1.0	11/10/09 03:25		☐
152	LNLJMF	D9J300340-2	9306285	MD	1.0	11/10/09 03:28		☐
153	CCV				1.0	11/10/09 03:31		☐
154	CCB				1.0	11/10/09 03:34		☐
155	RLCV				1.0	11/10/09 03:37		☐
156	LN0Q4BF	D9K060000	9310095	MD	1.0	11/10/09 03:39		☐
157	LN0Q4CF	D9K060000	9310095	MD	1.0	11/10/09 03:42		☐
158	LN0Q4LF	D9K060000	9310095	MD	1.0	11/10/09 03:45		☐
159	LNR5CF	D9K040450-3	9310095	MD	1.0	11/10/09 03:48		☐
160	LNR5CP5F	D9K040450	9310095		5.0	11/10/09 03:50		☐
161	LNR5CZF	D9K040450-3	9310095		1.0	11/10/09 03:53		☐
162	CCV				1.0	11/10/09 03:56		☐
163	CCB				1.0	11/10/09 03:59		☐
164	RLCV				1.0	11/10/09 04:01		☐
165	RINSE				1.0	11/10/09 04:04		☐
166	RINSE				1.0	11/10/09 04:07		☐
168	Cal Blank				1.0	11/10/09 04:12		☐
169	100 ppb				1.0	11/10/09 04:15		☐
170	CCV				1.0	11/10/09 04:18		☐
171	CCB				1.0	11/10/09 04:21		☐
172	RLCV				1.0	11/10/09 04:23		☐
173	LN16EB	D9K060000	9310417	04	2.5	11/10/09 04:26		☐
174	LN16EC	D9K060000	9310417	04	2.5	11/10/09 04:29		☐
175	LN1FW	D9K060478-7	9310417	04	2.5	11/10/09 04:32		☐
176	LN1LX	D9K060478-17	9310417	04	2.5	11/10/09 04:35		☐
177	LN1MD	D9K060478-19	9310417	04	2.5	11/10/09 04:37		☐
178	LN1MH	D9K060478-21	9310417	04	2.5	11/10/09 04:40		☐
179	LN1MHS	D9K060478-21	9310417	04	2.5	11/10/09 04:43		☐
180	LN1MHD	D9K060478-21	9310417	04	2.5	11/10/09 04:46		☐
181	CCV				1.0	11/10/09 04:48		☐
182	CCB				1.0	11/10/09 04:51		☐
183	RLCV				1.0	11/10/09 04:54		☐
184	LN1T6BF	D9K060000	9310368	87	2.5	11/10/09 04:57		☐
185	LN1T6CF	D9K060000	9310368	87	2.5	11/10/09 05:00		☐
186	LNVQWF	D9K040610-1	9310368	87	2.5	11/10/09 05:02		☐
187	LNVRHF	D9K040610-3	9310368	87	2.5	11/10/09 05:05		☐
188	LNVRLF	D9K040610-5	9310368	87	2.5	11/10/09 05:08		☐
189	LNVRLSF	D9K040610-5	9310368	87	2.5	11/10/09 05:11		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst:** LRD

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
190	LNVRLDF	D9K040610-5	9310368	87	2.5	11/10/09 05:14		
191	LNX48F	D9K050627-2	9310368	87	2.5	11/10/09 05:16		
192	LNX5JF	D9K050627-6	9310368	87	2.5	11/10/09 05:19		
193	CCV				1.0	11/10/09 05:22		
194	CCB				1.0	11/10/09 05:25		
195	RLCV				1.0	11/10/09 05:27		
196	LN4QNB	D9K090000	9313106	04	2.5	11/10/09 05:30		
197	LN4QNC	D9K090000	9313106	04	2.5	11/10/09 05:33		
198	LN314	D9K070460-2	9313106	04	2.5	11/10/09 05:36		
199	LN3L7 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:39		
200	LN3L7S 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:41		
201	LN3L7D 2X	D9K070423-1	9313106	04	5.0	11/10/09 05:44		
202	CCV				1.0	11/10/09 05:47		
203	CCB				1.0	11/10/09 05:50		
204	RLCV				1.0	11/10/09 05:52		
205	LN0PDBF	D9K060000	9310068	PD	2.5	11/10/09 05:55		
206	LN0PDCF	D9K060000	9310068	PD	2.5	11/10/09 05:58		
207	LNT1RF	D9K040539-2	9310068	PD	2.5	11/10/09 06:01		
208	LNT15F	D9K040539-3	9310068	PD	2.5	11/10/09 06:04	DNU	
209	LNT15SF	D9K040539-3	9310068	PD	2.5	11/10/09 06:06		
210	LNT15DF	D9K040539-3	9310068	PD	2.5	11/10/09 06:09	LRD	
211	LNT2CF	D9K040539-4	9310068	PD	2.5	11/10/09 06:12	11-10-2009	
212	LNPC2F	D9K020476-1	9310068	PD	2.5	11/10/09 06:15		
213	LNPC4F	D9K020476-2	9310068	PD	2.5	11/10/09 06:18		
214	CCV				1.0	11/10/09 06:20		
215	CCB				1.0	11/10/09 06:23		
216	RLCV				1.0	11/10/09 06:26		
217	RINSE				1.0	11/10/09 06:29		
218	RINSE				1.0	11/10/09 06:31		
220	Cal Blank				1.0	11/10/09 06:37		
221	100 ppb				1.0	11/10/09 06:40		
222	CCV				1.0	11/10/09 06:42		
223	CCB				1.0	11/10/09 06:45		
224	RLCV				1.0	11/10/09 06:48		
225	LNW1QB	D9K050000	9309222	MS	1.0	11/10/09 06:51		
226	LNW1QC	D9K050000	9309222	MS	1.0	11/10/09 06:53		
227	LNR42	D9K040449-1	9309222	MS	1.0	11/10/09 06:56		
228	LNR42P5	D9K040449	9309222		5.0	11/10/09 06:59		
229	LNR42Z	D9K040449-1	9309222		1.0	11/10/09 07:02		
230	LNR42S	D9K040449-1	9309222	MS	1.0	11/10/09 07:04		
231	LNR42D	D9K040449-1	9309222	MS	1.0	11/10/09 07:07		
232	CCV				1.0	11/10/09 07:10		
233	CCB				1.0	11/10/09 07:13		
234	RLCV				1.0	11/10/09 07:16		
235	LNR48	D9K040449-2	9309222	MS	1.0	11/10/09 07:18		
236	LNR5E	D9K040449-3	9309222	MS	1.0	11/10/09 07:21		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
237	LNR5G	D9K040449-4	9309222	MS	1.0	11/10/09 07:24		☐
238	LNP8M	D9K030460-1	9309222	MS	1.0	11/10/09 07:27		☐
239	LNP8X	D9K030460-2	9309222	MS	1.0	11/10/09 07:30		☐
240	LNP81	D9K030460-3	9309222	MS	1.0	11/10/09 07:32		☐
241	CCV				1.0	11/10/09 07:35		☐
242	CCB				1.0	11/10/09 07:38		☐
243	RLCV				1.0	11/10/09 07:41		☐
244	LNN6NB	D9K020000	9306426	MS	1.0	11/10/09 07:44		☐
245	LNN6NC	D9K020000	9306426	MS	1.0	11/10/09 07:46		☐
246	LNN6NL	D9K020000	9306426	MS	1.0	11/10/09 07:49		☐
247	LNM4D	D9J310189-1	9306426	MS	1.0	11/10/09 07:52		☐
248	LNM4DP5	D9J310189	9306426		5.0	11/10/09 07:55		☐
249	LNM4DZ	D9J310189-1	9306426		1.0	11/10/09 07:58		☐
250	LNM4E	D9J310189-2	9306426	MS	1.0	11/10/09 08:00		☐
251	LNM5E	D9J310191-14	9306426	MS	1.0	11/10/09 08:03		☐
252	CCV				1.0	11/10/09 08:06		☐
253	CCB				1.0	11/10/09 08:09		☐
254	RLCV				1.0	11/10/09 08:11		☐
255	LNRQVB	D9K040000	9308149	MS	1.0	11/10/09 08:14		☐
256	LNRQVC	D9K040000	9308149	MS	1.0	11/10/09 08:17		☐
257	LNQ0L	D9K030552-1	9308149	MS	1.0	11/10/09 08:20		☐
258	LNQ0LP5	D9K030552	9308149		5.0	11/10/09 08:22		☐
259	LNQ0LZ	D9K030552-1	9308149		1.0	11/10/09 08:25		☐
260	LNQ0LS	D9K030552-1	9308149	MS	1.0	11/10/09 08:28		☐
261	LNQ0LD	D9K030552-1	9308149	MS	1.0	11/10/09 08:30		☐
262	LNQ0R	D9K030554-1	9308149	MS	1.0	11/10/09 08:33		☐
263	LNQ0T	D9K030554-2	9308149	MS	1.0	11/10/09 08:36		☐
264	CCV				1.0	11/10/09 08:39		☐
265	CCB				1.0	11/10/09 08:41		☐
266	RLCV				1.0	11/10/09 08:44		☐
267	LNWG5BF	D9K050000	9309184	87	2.5	11/10/09 08:47		☐
268	LNWG5CF	D9K050000	9309184	87	2.5	11/10/09 08:50		☐
269	LNT4AF	D9K040553-1	9309184	87	2.5	11/10/09 08:52		☐
270	LNT42F	D9K040553-2	9309184	87	2.5	11/10/09 08:55		☐
271	LNT42SF	D9K040553-2	9309184	87	2.5	11/10/09 08:58		☐
272	LNT42DF	D9K040553-2	9309184	87	2.5	11/10/09 09:01		☐
273	LNT5HF	D9K040553-3	9309184	87	2.5	11/10/09 09:03		☐
274	CCV				1.0	11/10/09 09:06		☐
275	CCB				1.0	11/10/09 09:09		☐
276	RLCV				1.0	11/10/09 09:12		☐
277	LNT5LF	D9K040553-4	9309184	87	2.5	11/10/09 09:14		☐
278	LNT5VF	D9K040553-5	9309184	87	2.5	11/10/09 09:17		☐
279	LNT51F	D9K040553-6	9309184	87	2.5	11/10/09 09:20		☐
280	LNT55F	D9K040553-7	9309184	87	2.5	11/10/09 09:23		☐
281	LNT57F	D9K040553-8	9309184	87	2.5	11/10/09 09:26		☐
282	LNT58F	D9K040553-9	9309184	87	2.5	11/10/09 09:28		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 11/10/09 12:39:51

File ID: AG110909A **Analyst: LRD**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
283	LNT59F	D9K040553-10	9309184	87	2.5	11/10/09 09:31		☐
284	CCV				1.0	11/10/09 09:34		☐
285	CCB				1.0	11/10/09 09:37		☐
286	RLCV				1.0	11/10/09 09:39		☐
287	D9J270274-0				1.0	11/10/09 09:42		☐
288	CCV				1.0	11/10/09 09:45		☐
289	CCB				1.0	11/10/09 09:48		☐
290	RLCV				1.0	11/10/09 09:50		☐

TestAmerica Denver

Standards Preparation Logbook Record

Nov-10-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD6653-08, 1000 Se

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SE02003 Vendor's Expiration Date: 12-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 11-25-2008 Date Received: 11-25-2008
Date Expires(1): 12-01-2009 (None)
Date Expires(2): 12-01-2009 (None)
(METALS)-Inventory ID: 803

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD1198-09, 1000 mg/L Sn

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-SN02016 Vendor's Expiration Date: 03-01-2010
Solvent: 1% HNO3
Date Prep./Opened: 03-02-2009 Date Received: 03-02-2009
Date Expires(1): 03-01-2010 (None)
Date Expires(2): 03-01-2010 (None)
(METALS)-Inventory ID: 833

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD1853-09, 1 mg/l Se

Analyst: DIAZL

Solvent: 5% HN03 Lot No.: H02026 Volume (ml): 100.00
Date Prep./Opened: 04-01-2009
Date Expires(1): 12-01-2009 (1 Year)
pipette: Met 21

Parent Std No.: STD6653-08, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 12-01-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD2483-09, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: C2-ZN02051 Vendor's Expiration Date: 05-01-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-28-2009 Date Received: 04-28-2009
Date Expires(1): 05-01-2010 (None)
Date Expires(2): 05-01-2010 (None)
(METALS)-Inventory ID: 856

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD6662-09, ICP-MS (024) INT STD BRC

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 250.00
Date Prep./Opened: 10-30-2009
Date Expires(1): 03-16-2010 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 03-16-2010 Parent Date Expires(2): 04-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD1972-09, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD1973-09, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 04-07-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD6531-09, Scandium stock Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	2,000.0

Parent Std No.: STD6532-09, Holmium stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 10-26-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD6674-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 10-31-2009
Date Expires(1): 03-01-2010 (1 Year)
Date Expires(2): 03-01-2010 (None)

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

Parent Std No.: STD2483-09, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD6795-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-05-2009
Date Expires(1): 12-05-2009 (1 Month)
Date Expires(2): 11-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD6475-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-23-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
Cl	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD6858-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 11-09-2009
Date Expires(1): 05-09-2010 (6 Months)
Date Expires(2): 05-09-2010 (6 Months)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6857-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD6859-09, ICP-MS CAL STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000
As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 — Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

STD6860-09, ICP-MS CCV STD

Analyst: DIAZL

Solvent: 5% HNO3 — Lot No.: H14024 — Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0500
As	20.000	0.0500

Ba	20.000	0.0500
Be	20.000	0.0500
Cd	20.000	0.0500
Co	20.000	0.0500
Cr	20.000	0.0500
Cu	20.000	0.0500
Mn	20.000	0.0500
Ni	20.000	0.0500
Pb	20.000	0.0500
Se	20.000	0.0500
Th	20.000	0.0500
Tl	20.000	0.0500
U	20.000	0.0500
V	20.000	0.0500
Zn	20.000	0.0500

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.0500
Sb	20.000	0.0500
Sn	20.000	0.0500

STD6861-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6674-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD6859-09, ICP-MS CAL STD Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	0.1000	0.0010
As	0.1000	0.0010
Ba	0.1000	0.0010
Be	0.1000	0.0010
Cd	0.1000	0.0010
Co	0.1000	0.0010
Cr	0.1000	0.0010
Cu	0.1000	0.0010
Mn	0.1000	0.0010
Ni	0.1000	0.0010
Pb	0.1000	0.0010
Se	0.1000	0.0010
Th	0.1000	0.0010

Tl	0.1000	0.0010
U	0.1000	0.0010
V	0.1000	0.0010
Zn	0.1000	0.0010
Mo	0.1000	0.0010
Sb	0.1000	0.0010
Sn	0.1000	0.0010

STD6862-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD6861-09, ICP-MS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	0.0090	0.0018
1000 Zn	0.0090	0.0018
Ag	0.0010	0.0002
As	0.0010	0.0002
Ba	0.0010	0.0002
Be	0.0010	0.0002
Cd	0.0010	0.0002
Co	0.0010	0.0002
Cr	0.0010	0.0002
Cu	0.0010	0.0002
Mn	0.0010	0.0002
Ni	0.0010	0.0002
Pb	0.0010	0.0002
Se	0.0010	0.0002
Th	0.0010	0.0002
Tl	0.0010	0.0002
U	0.0010	0.0002
V	0.0010	0.0002
Zn	0.0010	0.0002
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Sn	0.0010	0.0002

STD6863-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.1000

As	20.000	0.1000
Ba	20.000	0.1000
Be	20.000	0.1000
Cd	20.000	0.1000
Co	20.000	0.1000
Cr	20.000	0.1000
Cu	20.000	0.1000
Mn	20.000	0.1000
Ni	20.000	0.1000
Pb	20.000	0.1000
Se	20.000	0.1000
Th	20.000	0.1000
Tl	20.000	0.1000
U	20.000	0.1000
V	20.000	0.1000
Zn	20.000	0.1000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	0.1000
Sb	20.000	0.1000
Sn	20.000	0.1000

Parent Std No.: STD4542-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-31-2010 Parent Date Expires(2): 08-01-2010

Component	Initial Conc (ug/ml)	Final Conc (mg/L)
Al	1,000.0	100.00
C	2,000.0	200.00
Ca	1,000.0	100.00
Cl	10,000	1,000.0
Fe	1,000.0	100.00
K	1,000.0	100.00
Mg	1,000.0	100.00
Mo	20.000	2.0000
Na	1,000.0	100.00
P	1,000.0	100.00
S	1,000.0	100.00
Ti	20.000	2.0000

STD6864-09, ICP-MS LR STD Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 10.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3109-09, ICP-MS CALSTD 1 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	1.0000
As	20.000	1.0000

Ba	20.000	1.0000
Be	20.000	1.0000
Cd	20.000	1.0000
Co	20.000	1.0000
Cr	20.000	1.0000
Cu	20.000	1.0000
Mn	20.000	1.0000
Ni	20.000	1.0000
Pb	20.000	1.0000
Se	20.000	1.0000
Th	20.000	1.0000
Tl	20.000	1.0000
U	20.000	1.0000
V	20.000	1.0000
Zn	20.000	1.0000

Parent Std No.: STD3110-09, ICP-MS CALSTD 2 Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Mo	20.000	1.0000
Sb	20.000	1.0000
Sn	20.000	1.0000

STD6865-09, ICP-MS ICV STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)

Parent Std No.: STD3113-09, ICP-MS TA ICV A Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
As	20.000	0.0400
Ba	20.000	0.0400
Be	20.000	0.0400
Cd	20.000	0.0400
Co	20.000	0.0400
Cr	20.000	0.0400
Cu	20.000	0.0400
Mn	20.000	0.0400
Ni	20.000	0.0400
Pb	20.000	0.0400
Se	20.000	0.0400
Th	20.000	0.0400
Tl	20.000	0.0400
U	20.000	0.0400
V	20.000	0.0400
Zn	20.000	0.0400

Parent Std No.: STD3114-09, ICP-MS TA ICV B Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-21-2010 Parent Date Expires(2): 04-21-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Ag	20.000	0.0400
Mo	20.000	0.0400
Sb	20.000	0.0400
Sn	20.000	0.0400

STD6866-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 50.000
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD1853-09, 1 mg/l Se Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0020

STD6867-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H14024 Volume (ml): 100.00
Date Prep./Opened: 11-09-2009
Date Expires(1): 11-10-2009 (1 Day)
pipettes: Met 20

Parent Std No.: STD6469-09, ICP-MS LLCCV 1 Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	0.5000	5.0000
Al	3.0000	30.000
As	0.5000	5.0000
Ba	0.1000	1.0000
Be	0.1000	1.0000
Ca	5.0000	50.000
Cd	0.1000	1.0000
Co	0.1000	1.0000
Cr	0.2000	2.0000
Cu	0.2000	2.0000
Fe	5.0000	50.000
K	10.000	100.00
Mg	5.0000	50.000
Mn	0.1000	1.0000
Na	5.0000	50.000
Ni	0.2000	2.0000
Pb	0.1000	1.0000
Se	0.5000	5.0000
Th	0.2000	2.0000

Tl	0.1000	1.0000
U	0.1000	1.0000
V	0.5000	5.0000
Zn	1.0000	10.000

Parent Std No.: STD6470-09, ICP-MS LLCCV 2 Aliquot Amount (ml): 1.0000

Parent Date Expires(1): 10-20-2010 Parent Date Expires(2): 11-01-2010

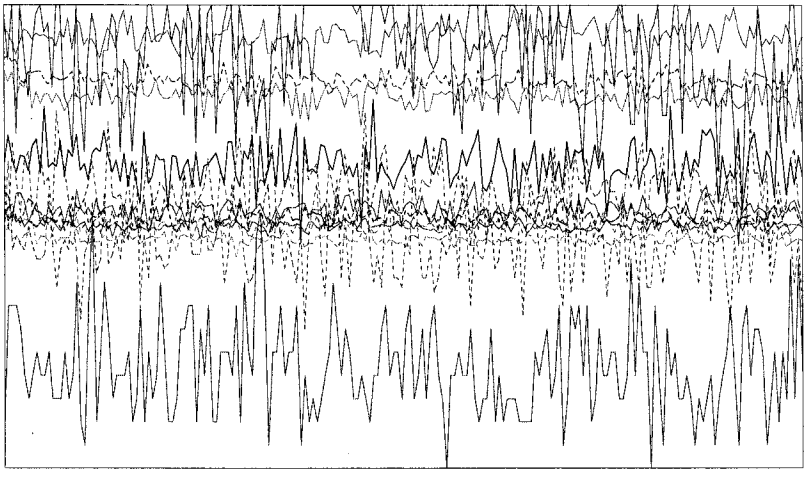
Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	0.2000	2.0000
Sb	0.2000	2.0000
Sn	1.0000	10.000

File AG1109094

Reviewed By: LRD 11/10/2009

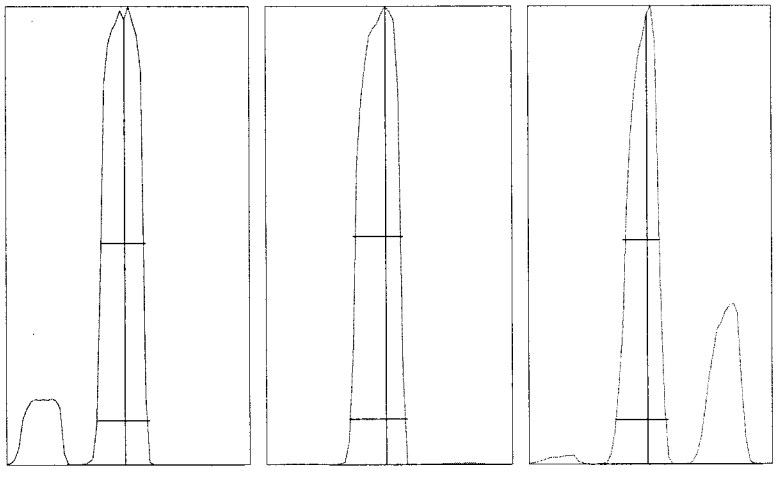
Tune Report

Tune File : NORM.U
Comment : AG110909



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.475%
Doubly Charged:	70/140	1.275%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2614.0	2789.3	3.67	0.80
7	20,000	18632.0	18633.8	3.00	0.50
59	20,000	15677.0	16033.1	2.87	1.00
63	50	35.0	45.6	15.88	0.70
70	500	313.0	327.1	7.08	0.40
75	20	4.0	4.4	46.88	0.60
78	200	109.0	120.3	9.42	0.60
89	50,000	26589.0	26185.6	2.22	1.00
115	50,000	24518.0	24639.8	1.99	1.10
118	100	33.0	48.4	15.31	0.80
137	5,000	2637.0	2712.3	2.91	1.20
205	20,000	16431.0	16723.1	2.17	1.70
238	50,000	25920.0	26106.3	1.87	2.50
156/140	2	1.499%	1.485%	7.38	
70/140	2	1.311%	1.332%	7.11	



m/z:	7	89	205
Height:	18,699	26,853	17,221
Axis:	7.00	89.00	205.00
W-50%:	0.55	0.60	0.45
W-10%:	0.6500	0.700	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:15

Tune Report

Tune File : NORM.U
Comment : AG110909

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	134
RF Matching	:	1.7 V	Extract 2	:	-170 V	AMU Offset	:	125
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.8 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.03
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.81 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1770 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1480 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

Generated : Nov 09, 2009 18:55:12
Printed : Nov 09, 2009 18:55:18

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:15 pm

Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055201
9	Be	0.058738
23	Na	0.063579
24	Mg	0.064637
27	Al	0.065724
39	K	0.065936
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066938
52	Cr	0.068029
53	(Cr)	Sensitivity too low
55	Mn	0.069052
57	Fe	Sensitivity too low
59	Co	0.070056
60	Ni	Sensitivity too low
63	Cu	Sensitivity too low
66	Zn	Sensitivity too low
72	Ge	0.069902
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	Sensitivity too low
98	(Mo)	0.071630
99	(Mo)	Sensitivity too low
105	Pd	Sensitivity too low
106	(Cd)	0.071534
107	Ag	Sensitivity too low
108	(Cd)	0.071984
111	Cd	Sensitivity too low
115	In	0.068812
118	Sn	0.070115
121	Sb	0.070721
137	Ba	Sensitivity too low
165	Ho	0.069269
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.071349
206	(Pb)	0.070737
207	(Pb)	0.071002
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

P/A Factor Tuning Report

Acquired:Nov 9 2009 08:21 pm

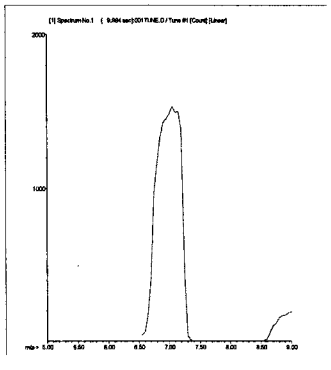
Mass[amu]	Element	P/A Factor
6	Li	Sensitivity too high
7	(Li)	0.055259
9	Be	0.058421
23	Na	0.062917
24	Mg	0.063700
27	Al	0.064930
39	K	0.065662
43	Ca	Sensitivity too low
45	Sc	0.065581
51	V	0.066016
52	Cr	0.066969
53	(Cr)	Sensitivity too low
55	Mn	0.067116
57	Fe	Sensitivity too low
59	Co	0.068255
60	Ni	0.068756
63	Cu	0.069073
66	Zn	0.068997
72	Ge	0.068697
75	As	0.069000
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
93	Nb	Sensitivity too low
95	Mo	0.071094
98	(Mo)	0.069583
99	(Mo)	0.069992
105	Pd	0.069782
106	(Cd)	0.069206
107	Ag	Sensitivity too low
108	(Cd)	0.069821
111	Cd	0.069450
115	In	0.068812
118	Sn	0.068484
121	Sb	0.068561
137	Ba	0.070024
165	Ho	0.068599
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.068219
206	(Pb)	0.067897
207	(Pb)	0.068227
208	Pb	0.070189
232	Th	0.070155
238	U	0.070301

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1770 V
Pulse HV: 1480 V

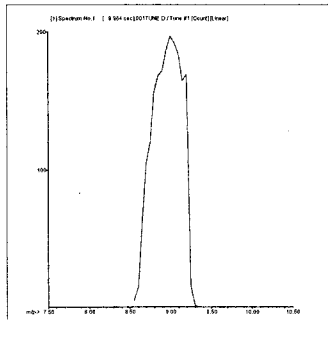
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\001TUNE.D
Date Acquired: Nov 9 2009 08:26 pm
Acq. Method: tun_isis.M
Operator: LRD
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: C:\ICPCHEM\1\METHODS\tun_isis.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	14906	14929	14975	14838	14916	14868	**0.36**	5.00	
9 Be	1915	1908	1914	1983	1809	1957	**3.47**	5.00	RSDfail Pass LRD 11-04-09
24 Mg	8679	8669	8688	8662	8744	8633	**0.48**	5.00	
59 Co	35756	36567	35777	35985	34517	35933	**2.11**	5.00	
115 In	692825	688204	694293	692146	693236	696245	**0.43**	5.00	
208 Pb	51450	52572	50561	51250	51590	51275	**1.42**	5.00	
238 U	109376	111991	110522	109499	107788	107079	**1.83**	5.00	



7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.00
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:

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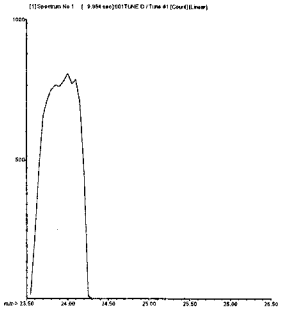


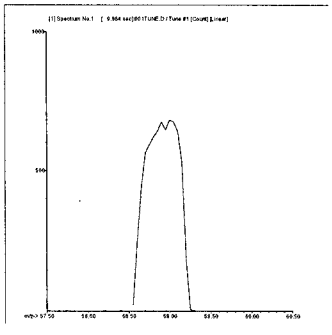
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



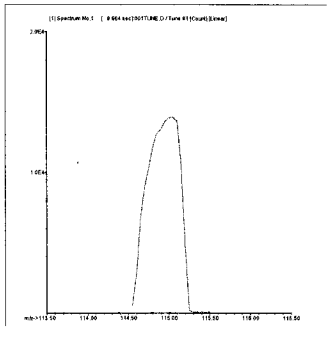
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



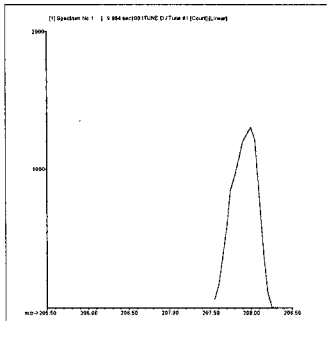
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



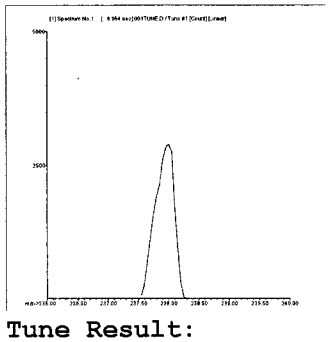
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	237.95		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.50		
Required:	0.90		
Flag:			

Tune Result: ~~Fail~~ Pass

LRD 11/09/09

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\002CALB.D\002CALB.D#
Date Acquired: Nov 9 2009 08:29 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

D6/11/11/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	577	3.61
52	Cr	72	1	1697	4.80
55	Mn	72	1	263	10.96
59	Co	72	1	17	34.64
60	Ni	72	1	63	32.87
63	Cu	72	1	100	43.59
66	Zn	72	1	131	19.98
75	As	72	1	31	32.13
78	Se	72	1	153	20.97
95	Mo	72	1	23	24.74
107	Ag	115	1	7	86.60
111	Cd	115	1	-4	15.03
118	Sn	115	1	123	26.06
121	Sb	115	1	43	42.83
137	Ba	115	1	10	33.33
205	Tl	165	1	341	20.90
208	Pb	165	1	206	7.66
232	Th	165	1	130	26.65
238	U	165	1	97	23.89

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	307725	0.62
45	Sc	1	863740	1.75
72	Ge	1	419764	0.40
115	In	1	1321877	2.10
165	Ho	1	2596118	0.41

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#
Date Acquired: Nov 9 2009 08:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:30 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	513	5.95
52	Cr	72	1	1570	2.30
55	Mn	72	1	337	11.25
59	Co	72	1	20	50.00
60	Ni	72	1	63	48.24
63	Cu	72	1	120	44.10
66	Zn	72	1	137	9.29
75	As	72	1	35	18.20
78	Se	72	1	97	23.89
95	Mo	72	1	20	50.00
107	Ag	115	1	3	173.21
111	Cd	115	1	-4	393.57
118	Sn	115	1	297	22.95
121	Sb	115	1	39	26.19
137	Ba	115	1	12	41.66
205	Tl	165	1	221	20.47
208	Pb	165	1	199	12.35
232	Th	165	1	113	22.21
238	U	165	1	77	26.09

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	316659	2.14
45	Sc	1	888972	0.50
72	Ge	1	425816	0.47
115	In	1	1335258	0.87
165	Ho	1	2617754	0.65

Tune File#	1	c:\icpchem\1\7500\he.u
Tune File#	2	C:\ICPCHEM\1\7500\
Tune File#	3	C:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\004ICAL.D\004ICAL.D#
Date Acquired: Nov 9 2009 08:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:33 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	38609	1.25
51	V	72	1	510366	0.88
52	Cr	72	1	524956	1.26
55	Mn	72	1	613525	1.41
59	Co	72	1	633231	0.83
60	Ni	72	1	140397	0.74
63	Cu	72	1	332088	1.69
66	Zn	72	1	83275	0.84
75	As	72	1	64491	1.06
78	Se	72	1	13670	3.37
95	Mo	72	1	194872	1.16
107	Ag	115	1	568219	1.98
111	Cd	115	1	121298	1.44
118	Sn	115	1	331811	1.14
121	Sb	115	1	398020	0.91
137	Ba	115	1	158724	1.91
205	Tl	165	1	1472389	1.01
208	Pb	165	1	2154560	0.36
232	Th	165	1	2284596	1.76
238	U	165	1	2432923	0.19

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	317523	0.04	316659	100.3	30 - 120	
45	Sc	1	902480	1.79	888972	101.5	30 - 120	
72	Ge	1	417361	1.39	425816	98.0	30 - 120	
115	In	1	1332995	0.81	1335258	99.8	30 - 120	
165	Ho	1	2606293	0.43	2617754	99.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\005 ICV.D\005 ICV.D#
Date Acquired: Nov 9 2009 08:37 pm
Operator: LRD
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	39.82	ppb	0.59	40	99.6	90 - 110	
51 V	72	1	40.01	ppb	0.57	40	100.0	90 - 110	
52 Cr	72	1	40.10	ppb	1.04	40	100.3	90 - 110	
55 Mn	72	1	40.83	ppb	1.35	40	102.1	90 - 110	
59 Co	72	1	39.98	ppb	2.35	40	100.0	90 - 110	
60 Ni	72	1	39.48	ppb	1.75	40	98.7	90 - 110	
63 Cu	72	1	39.44	ppb	0.71	40	98.6	90 - 110	
66 Zn	72	1	40.87	ppb	1.27	40	102.2	90 - 110	
75 As	72	1	40.05	ppb	0.47	40	100.1	90 - 110	
78 Se	72	1	40.20	ppb	7.43	40	100.5	90 - 110	
95 Mo	72	1	39.50	ppb	1.39	40	98.8	90 - 110	
107 Ag	115	1	40.28	ppb	1.09	40	100.7	90 - 110	
111 Cd	115	1	40.39	ppb	2.54	40	101.0	90 - 110	
118 Sn	115	1	39.95	ppb	2.27	40	99.9	90 - 110	
121 Sb	115	1	40.57	ppb	2.67	40	101.4	90 - 110	
137 Ba	115	1	40.04	ppb	2.19	40	100.1	90 - 110	
205 Tl	165	1	40.86	ppb	1.20	40	102.2	90 - 110	
208 Pb	165	1	40.91	ppb	0.95	40	102.3	90 - 110	
232 Th	165	1	41.04	ppb	0.97	40	102.6	90 - 110	
238 U	165	1	40.74	ppb	0.82	40	101.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	320321	1.05	316659	101.2	30 - 120	
45 Sc	1	893394	1.16	888972	100.5	30 - 120	
72 Ge	1	421619	1.04	425816	99.0	30 - 120	
115 In	1	1339730	1.68	1335258	100.3	30 - 120	
165 Ho	1	2633489	0.36	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\006WASH.D\006WASH.D#
Date Acquired: Nov 9 2009 08:40 pm
Operator: LRD
Sample Name: RLIV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.977 ppb	23.08	1.30	
51 V	72	1	5.088 ppb	3.63	6.50	
52 Cr	72	1	2.010 ppb	2.80	2.60	
55 Mn	72	1	1.052 ppb	2.54	1.30	
59 Co	72	1	1.026 ppb	2.82	1.30	
60 Ni	72	1	2.053 ppb	3.73	2.60	
63 Cu	72	1	1.949 ppb	1.86	2.60	
66 Zn	72	1	10.200 ppb	0.76	13.00	
75 As	72	1	4.975 ppb	1.56	6.50	
78 Se	72	1	5.397 ppb	12.87	6.50	
95 Mo	72	1	2.077 ppb	3.08	2.60	
107 Ag	115	1	5.417 ppb	1.62	6.50	
111 Cd	115	1	0.994 ppb	8.21	1.30	
118 Sn	115	1	10.400 ppb	2.50	13.00	
121 Sb	115	1	2.182 ppb	1.55	2.60	
137 Ba	115	1	1.043 ppb	2.05	1.30	
205 Tl	165	1	1.340 ppb	3.63	1.30	
208 Pb	165	1	1.058 ppb	2.34	1.30	
232 Th	165	1	2.228 ppb	2.96	2.60	
238 U	165	1	1.119 ppb	1.48	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	327943	1.12	316659	103.6	30 - 120	
45 Sc	1	927967	1.66	888972	104.4	30 - 120	
72 Ge	1	437192	0.23	425816	102.7	30 - 120	
115 In	1	1360935	0.96	1335258	101.9	30 - 120	
165 Ho	1	2638135	1.11	2617754	100.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\007 ICB.D\007 ICB.D#
Date Acquired: Nov 9 2009 08:43 pm
Operator: LRD
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.00	ppb	0.00	1.00	
51 V	72	1	-0.03	ppb	24.58	1.00	
52 Cr	72	1	0.01	ppb	375.24	1.00	
55 Mn	72	1	0.01	ppb	99.37	1.00	
59 Co	72	1	0.00	ppb	102.49	1.00	
60 Ni	72	1	0.06	ppb	11.55	1.00	
63 Cu	72	1	0.03	ppb	95.69	1.00	
66 Zn	72	1	0.75	ppb	6.06	1.00	
75 As	72	1	-0.01	ppb	401.95	1.00	
78 Se	72	1	0.14	ppb	223.63	1.00	
95 Mo	72	1	0.01	ppb	53.61	1.00	
107 Ag	115	1	0.01	ppb	41.41	1.00	
111 Cd	115	1	0.01	ppb	115.64	1.00	
118 Sn	115	1	0.25	ppb	23.38	1.00	
121 Sb	115	1	0.07	ppb	21.20	1.00	
137 Ba	115	1	0.06	ppb	14.45	1.00	
205 Tl	165	1	0.04	ppb	19.24	1.00	
208 Pb	165	1	0.01	ppb	22.30	1.00	
232 Th	165	1	0.02	ppb	1.72	1.00	
238 U	165	1	0.00	ppb	21.71	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331180	1.57	316659	104.6	30 - 120	
45 Sc	1	905311	1.15	888972	101.8	30 - 120	
72 Ge	1	441723	1.46	425816	103.7	30 - 120	
115 In	1	1364402	1.70	1335258	102.2	30 - 120	
165 Ho	1	2652248	1.61	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\008RLST.D\008RLST.D#
Date Acquired: Nov 9 2009 08:46 pm
Operator: LRD
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.99	ppb	9.34	1	99.0	50 - 150	
51 V	72	1	0.92	ppb	9.25	1	91.9	50 - 150	
52 Cr	72	1	1.00	ppb	9.84	1	99.9	50 - 150	
55 Mn	72	1	1.01	ppb	0.70	1	100.8	50 - 150	
59 Co	72	1	0.98	ppb	2.45	1	97.7	50 - 150	
60 Ni	72	1	1.03	ppb	5.51	1	103.0	50 - 150	
63 Cu	72	1	1.05	ppb	5.54	1	104.6	50 - 150	
66 Zn	72	1	10.39	ppb	0.48	10	103.9	50 - 150	
75 As	72	1	1.05	ppb	4.38	1	105.1	50 - 150	
78 Se	72	1	1.23	ppb	32.18	1	123.2	50 - 150	
95 Mo	72	1	1.01	ppb	7.94	1	101.0	50 - 150	
107 Ag	115	1	1.01	ppb	4.94	1	101.1	50 - 150	
111 Cd	115	1	1.05	ppb	5.12	1	104.5	50 - 150	
118 Sn	115	1	10.46	ppb	2.14	10	104.6	50 - 150	
121 Sb	115	1	1.03	ppb	4.27	1	103.4	50 - 150	
137 Ba	115	1	1.04	ppb	2.63	1	104.3	50 - 150	
205 Tl	165	1	1.11	ppb	1.97	1	110.8	50 - 150	
208 Pb	165	1	1.05	ppb	1.92	1	105.4	50 - 150	
232 Th	165	1	1.04	ppb	1.88	1	103.6	50 - 150	
238 U	165	1	1.07	ppb	2.22	1	107.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	332529	1.31	316659	105.0	30 - 120	
45 Sc	1	924723	1.34	888972	104.0	30 - 120	
72 Ge	1	440304	0.81	425816	103.4	30 - 120	
115 In	1	1361149	0.37	1335258	101.9	30 - 120	
165 Ho	1	2647952	0.34	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\009AFCE.D\009AFCE.D#
Date Acquired: Nov 9 2009 08:48 pm
Operator: LRD
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.16	ppb	9.52	0	82.7	80 - 120	
51 V	72	1	0.15	ppb	12.92	0	84.2	80 - 120	
52 Cr	72	1	0.17	ppb	11.54	0	87.5	80 - 120	
55 Mn	72	1	0.19	ppb	4.01	0	92.3	80 - 120	
59 Co	72	1	0.20	ppb	10.00	0	101.6	80 - 120	
60 Ni	72	1	0.17	ppb	39.79	0	82.5	80 - 120	
63 Cu	72	1	0.21	ppb	8.40	0	98.5	80 - 120	
66 Zn	72	1	1.88	ppb	3.20	2	90.5	80 - 120	
75 As	72	1	0.18	ppb	4.43	0	84.9	80 - 120	
78 Se	72	1	0.34	ppb	52.18	0	137.7	80 - 120	
95 Mo	72	1	0.20	ppb	20.48	0	97.8	80 - 120	
107 Ag	115	1	0.19	ppb	11.02	0	95.4	80 - 120	
111 Cd	115	1	0.18	ppb	8.60	0	87.8	80 - 120	
118 Sn	115	1	2.07	ppb	1.60	2	98.7	80 - 120	
121 Sb	115	1	0.24	ppb	8.81	0	117.2	80 - 120	
137 Ba	115	1	0.17	ppb	15.49	0	82.0	80 - 120	
205 Tl	165	1	0.21	ppb	3.14	0	95.1	80 - 120	
208 Pb	165	1	0.21	ppb	4.91	0	97.5	80 - 120	
232 Th	165	1	0.21	ppb	2.80	0	102.7	80 - 120	
238 U	165	1	0.21	ppb	1.79	0	97.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334891	0.91	316659	105.8	30 - 120	
45 Sc	1	926450	1.15	888972	104.2	30 - 120	
72 Ge	1	444347	1.22	425816	104.4	30 - 120	
115 In	1	1347595	1.10	1335258	100.9	30 - 120	
165 Ho	1	2645674	1.06	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\010SMPL.D\010SMPL.D#
Date Acquired: Nov 9 2009 08:51 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ALTSe
Misc Info: 2 ppb
Vial Number: 2107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.18	3600	
51 V	72	1	-0.05	-0.05	ppb	4.45	3600	
52 Cr	72	1	0.03	0.03	ppb	21.71	3600	
55 Mn	72	1	-0.01	-0.01	ppb	107.83	3600	
59 Co	72	1	0.00	0.00	ppb	91.53	3600	
60 Ni	72	1	-0.01	-0.01	ppb	120.90	3600	
63 Cu	72	1	0.00	0.00	ppb	249.88	3600	
66 Zn	72	1	0.21	0.21	ppb	4.91	3600	
75 As	72	1	-0.01	-0.01	ppb	276.53	3600	
78 Se	72	1	2.30	2.30	ppb	3.47	3600	
95 Mo	72	1	0.00	0.00	ppb	270.91	3600	
107 Ag	115	1	0.01	0.01	ppb	12.59	3600	
111 Cd	115	1	0.01	0.01	ppb	40.90	3600	
118 Sn	115	1	0.03	0.03	ppb	42.36	3600	
121 Sb	115	1	0.02	0.02	ppb	52.41	3600	
137 Ba	115	1	0.00	0.00	ppb	159.45	3600	
205 Tl	165	1	0.00	0.00	ppb	223.71	3600	
208 Pb	165	1	0.00	0.00	ppb	93.52	3600	
232 Th	165	1	0.01	0.01	ppb	41.10	1000	
238 U	165	1	0.00	0.00	ppb	39.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336598	0.66	316659	106.3	30 - 120	
45 Sc	1	916084	0.54	888972	103.0	30 - 120	
72 Ge	1	444955	0.00	425816	104.5	30 - 120	
115 In	1	1367875	0.83	1335258	102.4	30 - 120	
165 Ho	1	2646991	0.40	2617754	101.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\011ICSA.D\011ICSA.D#
Date Acquired: Nov 9 2009 08:54 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.00 ppb	0.00	1.00	
51 V	72	1	2.09 ppb	3.15	1.00	
52 Cr	72	1	1.97 ppb	9.78	1.00	
55 Mn	72	1	2.81 ppb	1.66	1.00	
59 Co	72	1	0.10 ppb	6.63	1.00	
60 Ni	72	1	1.02 ppb	13.74	1.00	
63 Cu	72	1	0.53 ppb	7.97	1.00	
66 Zn	72	1	3.94 ppb	2.38	10.00	
75 As	72	1	0.28 ppb	11.27	1.00	
78 Se	72	1	0.38 ppb	63.23	1.00	
95 Mo	72	1	1936.00 ppb	0.91	2000.00	
107 Ag	115	1	0.03 ppb	12.20	1.00	
111 Cd	115	1	0.30 ppb	66.71	1.00	
118 Sn	115	1	0.12 ppb	33.50	10.00	
121 Sb	115	1	0.92 ppb	2.59	1.00	
137 Ba	115	1	0.03 ppb	33.26	1.00	
205 Tl	165	1	0.03 ppb	11.11	1.00	
208 Pb	165	1	1.00 ppb	2.07	1.00	
232 Th	165	1	0.02 ppb	12.13	1.00	
238 U	165	1	0.00 ppb	5.79	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	239339	0.28	316659	75.6	30 - 120	
45 Sc	1	700629	1.42	888972	78.8	30 - 120	
72 Ge	1	343237	0.37	425816	80.6	30 - 120	
115 In	1	1048448	1.55	1335258	78.5	30 - 120	
165 Ho	1	2104424	0.97	2617754	80.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\012ICSB.D\012ICSB.D#
Date Acquired: Nov 9 2009 08:57 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	109.40	3.64	100	109.4	80 - 120	
51 V	72	1	99.64	0.20	100	99.6	80 - 120	
52 Cr	72	1	97.24	0.93	100	97.2	80 - 120	
55 Mn	72	1	98.22	0.64	100	98.2	80 - 120	
59 Co	72	1	92.77	2.10	100	92.8	80 - 120	
60 Ni	72	1	89.04	1.65	100	89.0	80 - 120	
63 Cu	72	1	86.53	0.30	100	86.5	80 - 120	
66 Zn	72	1	96.58	0.54	100	96.6	80 - 120	
75 As	72	1	101.00	1.32	100	101.0	80 - 120	
78 Se	72	1	100.00	0.62	100	100.0	80 - 120	
95 Mo	72	1	2093.00	0.96	2100	99.7	80 - 120	
107 Ag	115	1	89.66	3.28	100	89.7	80 - 120	
111 Cd	115	1	95.05	1.99	100	95.1	80 - 120	
118 Sn	115	1	100.40	1.69	100	100.4	80 - 120	
121 Sb	115	1	103.00	1.30	100	103.0	80 - 120	
137 Ba	115	1	101.30	1.03	100	101.3	80 - 120	
205 Tl	165	1	94.31	0.93	100	94.3	80 - 120	
208 Pb	165	1	93.76	0.89	100	93.8	80 - 120	
232 Th	165	1	101.30	1.54	100	101.3	80 - 120	
238 U	165	1	99.94	0.63	100	99.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	233202	3.01	316659	73.6	30 - 120	
45 Sc	1	711798	0.20	888972	80.1	30 - 120	
72 Ge	1	338298	0.97	425816	79.4	30 - 120	
115 In	1	1075320	0.68	1335258	80.5	30 - 120	
165 Ho	1	2161438	0.51	2617754	82.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\013AFCE.D\013AFCE.D#
Date Acquired: Nov 9 2009 08:59 pm
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.01	ppb	173.15	0	4.2	80 - 120	
51 V	72	1	0.02	ppb	35.98	0	10.9	80 - 120	
52 Cr	72	1	0.03	ppb	89.50	0	13.7	80 - 120	
55 Mn	72	1	-0.01	ppb	113.19	0	-3.4	80 - 120	
59 Co	72	1	0.00	ppb	1352.30	0	-0.1	80 - 120	
60 Ni	72	1	-0.02	ppb	102.45	0	-9.9	80 - 120	
63 Cu	72	1	0.00	ppb	649.06	0	0.6	80 - 120	
66 Zn	72	1	0.04	ppb	63.69	2	1.7	80 - 120	
75 As	72	1	-0.01	ppb	61.99	0	-3.9	80 - 120	
78 Se	72	1	0.39	ppb	99.84	0	156.3	80 - 120	
95 Mo	72	1	0.80	ppb	31.54	0	396.5	80 - 120	
107 Ag	115	1	0.01	ppb	53.68	0	3.6	80 - 120	
111 Cd	115	1	0.00	ppb	41.35	0	1.7	80 - 120	
118 Sn	115	1	0.00	ppb	#######	2	0.0	80 - 120	
121 Sb	115	1	0.11	ppb	20.17	0	52.7	80 - 120	
137 Ba	115	1	0.00	ppb	105.76	0	-0.5	80 - 120	
205 Tl	165	1	-0.01	ppb	3.09	0	-2.6	80 - 120	
208 Pb	165	1	0.00	ppb	49.94	0	0.7	80 - 120	
232 Th	165	1	0.03	ppb	6.82	0	13.2	80 - 120	
238 U	165	1	0.01	ppb	15.94	0	6.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331840	0.43	316659	104.8	30 - 120	
45 Sc	1	927075	1.00	888972	104.3	30 - 120	
72 Ge	1	454961	0.83	425816	106.8	30 - 120	
115 In	1	1407675	0.48	1335258	105.4	30 - 120	
165 Ho	1	2715373	0.43	2617754	103.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\014 LR.D\014 LR.D#
Date Acquired: Nov 9 2009 09:02 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LR1
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	989.70 ppb	1.24	1000	99.0	90 - 110	
51 V	72	1	962.50 ppb	1.62	1000	96.3	90 - 110	
52 Cr	72	1	955.40 ppb	1.40	1000	95.5	90 - 110	
55 Mn	72	1	950.30 ppb	1.50	1000	95.0	90 - 110	
59 Co	72	1	955.50 ppb	1.19	1000	95.6	90 - 110	
60 Ni	72	1	979.40 ppb	1.79	1000	97.9	90 - 110	
63 Cu	72	1	966.20 ppb	0.98	1000	96.6	90 - 110	
66 Zn	72	1	974.60 ppb	0.75	1000	97.5	90 - 110	
75 As	72	1	1009.00 ppb	0.73	1000	100.9	90 - 110	
78 Se	72	1	988.90 ppb	0.77	1000	98.9	90 - 110	
95 Mo	72	1	987.40 ppb	1.52	1000	98.7	90 - 110	
107 Ag	115	1	932.40 ppb	1.41	1000	93.2	90 - 110	
111 Cd	115	1	967.10 ppb	0.44	1000	96.7	90 - 110	
118 Sn	115	1	933.80 ppb	0.50	1000	93.4	90 - 110	
121 Sb	115	1	927.90 ppb	0.18	1000	92.8	90 - 110	
137 Ba	115	1	972.50 ppb	0.87	1000	97.3	90 - 110	
205 Tl	165	1	947.60 ppb	0.99	1000	94.8	90 - 110	
208 Pb	165	1	915.00 ppb	0.94	1000	91.5	90 - 110	
232 Th	165	1	966.60 ppb	0.64	1000	96.7	90 - 110	
238 U	165	1	963.20 ppb	1.88	1000	96.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328068	1.06	316659	103.6	30 - 120	
45 Sc	1	922726	2.01	888972	103.8	30 - 120	
72 Ge	1	430093	1.37	425816	101.0	30 - 120	
115 In	1	1364755	0.41	1335258	102.2	30 - 120	
165 Ho	1	2644039	0.70	2617754	101.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\015SMPL.D\015SMPL.D#
Date Acquired: Nov 9 2009 09:05 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: RINSE
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.02	ppb	173.25	3600	
51 V	72	1	-0.02	-0.02	ppb	88.49	3600	
52 Cr	72	1	0.05	0.05	ppb	36.35	3600	
55 Mn	72	1	-0.01	-0.01	ppb	183.98	3600	
59 Co	72	1	0.01	0.01	ppb	88.77	3600	
60 Ni	72	1	0.02	0.02	ppb	167.72	3600	
63 Cu	72	1	0.03	0.03	ppb	35.08	3600	
66 Zn	72	1	0.05	0.05	ppb	19.57	3600	
75 As	72	1	0.02	0.02	ppb	85.94	3600	
78 Se	72	1	0.69	0.69	ppb	46.45	3600	
95 Mo	72	1	0.53	0.53	ppb	26.09	3600	
107 Ag	115	1	0.03	0.03	ppb	35.34	3600	
111 Cd	115	1	0.02	0.02	ppb	21.52	3600	
118 Sn	115	1	1.11	1.11	ppb	27.74	3600	
121 Sb	115	1	1.31	1.31	ppb	17.77	3600	
137 Ba	115	1	0.02	0.02	ppb	70.23	3600	
205 Tl	165	1	0.06	0.06	ppb	21.10	3600	
208 Pb	165	1	0.02	0.02	ppb	25.81	3600	
232 Th	165	1	0.13	0.13	ppb	10.54	1000	
238 U	165	1	0.13	0.13	ppb	15.65	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	341210	2.06	316659	107.8	30 - 120	
45 Sc	1	953002	0.82	888972	107.2	30 - 120	
72 Ge	1	451794	0.58	425816	106.1	30 - 120	
115 In	1	1384812	1.01	1335258	103.7	30 - 120	
165 Ho	1	2634408	0.76	2617754	100.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\016 CCV.D\016 CCV.D#
Date Acquired: Nov 9 2009 09:08 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.36	ppb	2.54	50	98.7	90 - 110	
51 V	72	1	50.77	ppb	1.34	50	101.5	90 - 110	
52 Cr	72	1	50.82	ppb	0.60	50	101.6	90 - 110	
55 Mn	72	1	50.95	ppb	1.41	50	101.9	90 - 110	
59 Co	72	1	50.68	ppb	1.40	50	101.4	90 - 110	
60 Ni	72	1	49.56	ppb	1.57	50	99.1	90 - 110	
63 Cu	72	1	49.68	ppb	0.10	50	99.4	90 - 110	
66 Zn	72	1	49.76	ppb	0.33	50	99.5	90 - 110	
75 As	72	1	50.93	ppb	0.82	50	101.9	90 - 110	
78 Se	72	1	51.94	ppb	5.89	50	103.9	90 - 110	
95 Mo	72	1	48.88	ppb	1.24	50	97.8	90 - 110	
107 Ag	115	1	50.11	ppb	0.43	50	100.2	90 - 110	
111 Cd	115	1	50.35	ppb	0.26	50	100.7	90 - 110	
118 Sn	115	1	50.40	ppb	1.11	50	100.8	90 - 110	
121 Sb	115	1	50.58	ppb	0.97	50	101.2	90 - 110	
137 Ba	115	1	50.03	ppb	0.58	50	100.1	90 - 110	
205 Tl	165	1	50.31	ppb	0.12	50	100.6	90 - 110	
208 Pb	165	1	50.77	ppb	1.01	50	101.5	90 - 110	
232 Th	165	1	50.58	ppb	2.06	50	101.2	90 - 110	
238 U	165	1	50.76	ppb	2.06	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	339265	1.56	316659	107.1	30 - 120	
45 Sc	1	947544	0.15	888972	106.6	30 - 120	
72 Ge	1	441263	0.72	425816	103.6	30 - 120	
115 In	1	1386188	0.72	1335258	103.8	30 - 120	
165 Ho	1	2649982	0.75	2617754	101.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\017 CCB.D\017 CCB.D#
Date Acquired: Nov 9 2009 09:10 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ppb	173.22	1.00	
51 V	72	1	-0.046	ppb	29.01	1.00	
52 Cr	72	1	0.000	ppb	12322.00	1.00	
55 Mn	72	1	-0.007	ppb	43.73	1.00	
59 Co	72	1	0.001	ppb	393.70	1.00	
60 Ni	72	1	-0.005	ppb	329.15	1.00	
63 Cu	72	1	0.007	ppb	98.78	1.00	
66 Zn	72	1	0.040	ppb	14.37	1.00	
75 As	72	1	-0.008	ppb	123.42	1.00	
78 Se	72	1	0.405	ppb	68.29	1.00	
95 Mo	72	1	0.105	ppb	49.03	1.00	
107 Ag	115	1	0.009	ppb	76.77	1.00	
111 Cd	115	1	0.002	ppb	275.78	1.00	
118 Sn	115	1	0.252	ppb	28.94	1.00	
121 Sb	115	1	0.323	ppb	22.12	1.00	
137 Ba	115	1	0.000	ppb	357.00	1.00	
205 Tl	165	1	0.012	ppb	22.43	1.00	
208 Pb	165	1	0.003	ppb	36.91	1.00	
232 Th	165	1	0.060	ppb	22.01	1.00	
238 U	165	1	0.020	ppb	26.01	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	347509	1.01	316659	109.7	30 - 120	
45 Sc	1	955495	2.12	888972	107.5	30 - 120	
72 Ge	1	455532	0.79	425816	107.0	30 - 120	
115 In	1	1386791	1.63	1335258	103.9	30 - 120	
165 Ho	1	2651802	0.80	2617754	101.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\018WASH.D\018WASH.D#
Date Acquired: Nov 9 2009 09:13 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.024 ppb	7.78	1.30	
51 V	72	1	5.126 ppb	1.88	6.50	
52 Cr	72	1	2.083 ppb	6.13	2.60	
55 Mn	72	1	1.010 ppb	2.87	1.30	
59 Co	72	1	1.062 ppb	1.70	1.30	
60 Ni	72	1	2.095 ppb	2.27	2.60	
63 Cu	72	1	2.060 ppb	2.82	2.60	
66 Zn	72	1	10.130 ppb	1.17	13.00	
75 As	72	1	5.125 ppb	4.68	6.50	
78 Se	72	1	5.045 ppb	5.92	6.50	
95 Mo	72	1	1.951 ppb	3.60	2.60	
107 Ag	115	1	5.311 ppb	0.48	6.50	
111 Cd	115	1	1.030 ppb	11.33	1.30	
118 Sn	115	1	10.360 ppb	1.60	13.00	
121 Sb	115	1	2.190 ppb	4.18	2.60	
137 Ba	115	1	1.055 ppb	3.38	1.30	
205 Tl	165	1	1.095 ppb	1.41	1.30	
208 Pb	165	1	1.069 ppb	0.47	1.30	
232 Th	165	1	2.172 ppb	3.24	2.60	
238 U	165	1	1.103 ppb	1.52	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350643	0.28	316659	110.7	30 - 120	
45 Sc	1	970129	1.19	888972	109.1	30 - 120	
72 Ge	1	456907	0.32	425816	107.3	30 - 120	
115 In	1	1395760	1.56	1335258	104.5	30 - 120	
165 Ho	1	2660739	0.79	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\019 BLK.D\019 BLK.D#
Date Acquired: Nov 9 2009 09:16 pm
Operator: LRD
Sample Name: LNNP6B
Misc Info: BLANK 9306276 6020
Vial Number: 2201
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ppb	0.00	2.00	
51 V	72	1	-0.018 ppb	41.70	2.00	
52 Cr	72	1	0.292 ppb	16.50	2.00	
55 Mn	72	1	0.185 ppb	7.72	2.00	
59 Co	72	1	0.011 ppb	24.75	2.00	
60 Ni	72	1	0.036 ppb	53.39	2.00	
63 Cu	72	1	0.169 ppb	20.87	2.00	
66 Zn	72	1	0.849 ppb	7.65	2.00	
75 As	72	1	0.010 ppb	67.79	2.00	
78 Se	72	1	0.510 ppb	48.19	2.00	
95 Mo	72	1	0.057 ppb	19.51	2.00	
107 Ag	115	1	0.010 ppb	26.04	2.00	
111 Cd	115	1	0.003 ppb	113.49	2.00	
118 Sn	115	1	0.208 ppb	18.28	2.00	
121 Sb	115	1	0.174 ppb	15.89	2.00	
137 Ba	115	1	0.038 ppb	22.70	2.00	
205 Tl	165	1	0.040 ppb	22.91	2.00	
208 Pb	165	1	0.011 ppb	12.89	2.00	
232 Th	165	1	0.031 ppb	18.41	2.00	
238 U	165	1	0.007 ppb	24.76	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355955	0.99	316659	112.4	30 - 120	
45 Sc	1	972462	1.01	888972	109.4	30 - 120	
72 Ge	1	458206	0.62	425816	107.6	30 - 120	
115 In	1	1400110	0.71	1335258	104.9	30 - 120	
165 Ho	1	2668336	0.83	2617754	101.9	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG110909A.B\020 LCS.D\020 LCS.D#
Date Acquired:	Nov 9 2009 09:19 pm
Acq. Method:	NormISIS.M
Operator:	LRD
Sample Name:	LNNP6C
Misc Info:	LCS
Vial Number:	2202
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Nov 09 2009 08:35 pm
Sample Type:	LCS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.76	2.19	40	101.9	80 - 120	
51 V	72	1	43.16	0.76	40	107.9	80 - 120	
52 Cr	72	1	43.22	1.05	40	108.1	80 - 120	
55 Mn	72	1	43.24	0.21	40	108.1	80 - 120	
59 Co	72	1	42.64	0.71	40	106.6	80 - 120	
60 Ni	72	1	42.34	0.56	40	105.9	80 - 120	
63 Cu	72	1	42.72	0.89	40	106.8	80 - 120	
66 Zn	72	1	45.64	0.61	40	114.1	80 - 120	
75 As	72	1	40.76	0.70	40	101.9	80 - 120	
78 Se	72	1	38.19	2.28	40	95.5	80 - 120	
95 Mo	72	1	35.78	2.03	40	89.5	80 - 120	
107 Ag	115	1	41.49	2.15	40	103.7	80 - 120	
111 Cd	115	1	40.17	0.57	40	100.4	80 - 120	
118 Sn	115	1	0.12	28.26	40	0.3	80 - 120	
121 Sb	115	1	35.81	0.84	40	89.5	80 - 120	
137 Ba	115	1	41.49	1.53	40	103.7	80 - 120	
205 Tl	165	1	43.86	2.13	40	109.7	80 - 120	
208 Pb	165	1	41.85	1.84	40	104.6	80 - 120	
232 Th	165	1	41.91	2.25	40	104.8	80 - 120	
238 U	165	1	41.55	2.69	40	103.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	350822	0.51	316659	110.8	30 - 120	
45 Sc	1	980963	1.16	888972	110.3	30 - 120	
72 Ge	1	444654	1.31	425816	104.4	30 - 120	
115 In	1	1399733	0.66	1335258	104.8	30 - 120	
165 Ho	1	2665542	1.69	2617754	101.8	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\021SMPL.D\021SMPL.D#
Date Acquired: Nov 9 2009 09:21 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLN9 2X
Misc Info: D9J300353
Vial Number: 2203
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.09	0.05	ppb	92.24	3600	
51 V	72	1	37.96	18.98	ppb	1.34	3600	
52 Cr	72	1	114.94	57.47	ppb	0.72	3600	
55 Mn	72	1	36.50	18.25	ppb	2.00	3600	
59 Co	72	1	0.69	0.34	ppb	2.76	3600	
60 Ni	72	1	3.14	1.57	ppb	8.45	3600	
63 Cu	72	1	1.64	0.82	ppb	6.02	3600	
66 Zn	72	1	11.13	5.57	ppb	1.82	3600	
75 As	72	1	202.00	101.00	ppb	0.43	3600	
78 Se	72	1	3.22	1.61	ppb	48.25	3600	
95 Mo	72	1	18.83	9.42	ppb	0.68	3600	
107 Ag	115	1	0.17	0.08	ppb	17.24	3600	
111 Cd	115	1	0.10	0.05	ppb	51.39	3600	
118 Sn	115	1	0.28	0.14	ppb	42.81	3600	
121 Sb	115	1	0.34	0.17	ppb	20.62	3600	
137 Ba	115	1	37.72	18.86	ppb	0.70	3600	
205 Tl	165	1	0.13	0.06	ppb	19.45	3600	
208 Pb	165	1	0.71	0.35	ppb	3.38	3600	
232 Th	165	1	0.72	0.36	ppb	1.63	1000	
238 U	165	1	53.74	26.87	ppb	1.72	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	298847	1.22	316659	94.4	30 - 120	
45 Sc	1	845797	1.37	888972	95.1	30 - 120	
72 Ge	1	386800	0.60	425816	90.8	30 - 120	
115 In	1	1191341	0.83	1335258	89.2	30 - 120	
165 Ho	1	2413317	1.23	2617754	92.2	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\022SMPL.D\022SMPL.D#
Date Acquired: Nov 9 2009 09:24 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNLR4 2X
Misc Info: D9J300356
Vial Number: 2204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SA
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.02	0.01	ppb	173.27	3600	
51 V	72	1	78.42	39.21	ppb	1.83	3600	
52 Cr	72	1	24.86	12.43	ppb	1.31	3600	
55 Mn	72	1	2,930.00	1465.00	ppb	2.13	3600	
59 Co	72	1	42.42	21.21	ppb	0.61	3600	
60 Ni	72	1	20.92	10.46	ppb	3.31	3600	
63 Cu	72	1	0.75	0.37	ppb	5.97	3600	
66 Zn	72	1	18.97	9.49	ppb	2.01	3600	
75 As	72	1	114.66	57.33	ppb	0.89	3600	
78 Se	72	1	6.57	3.28	ppb	20.64	3600	
95 Mo	72	1	26.74	13.37	ppb	0.88	3600	
107 Ag	115	1	0.11	0.05	ppb	25.16	3600	
111 Cd	115	1	0.42	0.21	ppb	16.72	3600	
118 Sn	115	1	0.13	0.06	ppb	44.87	3600	
121 Sb	115	1	0.27	0.13	ppb	7.83	3600	
137 Ba	115	1	27.28	13.64	ppb	2.04	3600	
205 Tl	165	1	0.19	0.10	ppb	3.70	3600	
208 Pb	165	1	0.11	0.06	ppb	1.85	3600	
232 Th	165	1	0.08	0.04	ppb	8.56	1000	
238 U	165	1	69.92	34.96	ppb	2.03	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	274893	1.24	316659	86.8	30 - 120	
45 Sc	1	779549	2.32	888972	87.7	30 - 120	
72 Ge	1	352268	1.67	425816	82.7	30 - 120	
115 In	1	1127758	1.03	1335258	84.5	30 - 120	
165 Ho	1	2240638	0.13	2617754	85.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#
Date Acquired: Nov 9 2009 09:27 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4
Misc Info: D9J310138
Vial Number: 2205
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: AllRef
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.01	0.01	ppb	173.27	3600	
51 V	72	1	0.05	0.05	ppb	6.94	3600	
52 Cr	72	1	0.48	0.48	ppb	5.57	3600	
55 Mn	72	1	1.67	1.67	ppb	3.29	3600	
59 Co	72	1	0.03	0.03	ppb	17.85	3600	
60 Ni	72	1	0.16	0.16	ppb	28.53	3600	
63 Cu	72	1	0.43	0.43	ppb	6.97	3600	
66 Zn	72	1	8.86	8.86	ppb	0.90	3600	
75 As	72	1	0.01	0.01	ppb	328.51	3600	
78 Se	72	1	0.28	0.28	ppb	90.12	3600	
95 Mo	72	1	0.17	0.17	ppb	26.75	3600	
107 Ag	115	1	0.01	0.01	ppb	26.64	3600	
111 Cd	115	1	0.00	0.00	ppb	536.64	3600	
118 Sn	115	1	0.20	0.20	ppb	7.53	3600	
121 Sb	115	1	0.09	0.09	ppb	15.50	3600	
137 Ba	115	1	0.66	0.66	ppb	1.78	3600	
205 Tl	165	1	-0.01	-0.01	ppb	11.38	3600	
208 Pb	165	1	0.12	0.12	ppb	1.87	3600	
232 Th	165	1	0.01	0.01	ppb	21.46	1000	
238 U	165	1	0.01	0.01	ppb	24.76	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	373380	0.19	316659	117.9	30 - 120	
45 Sc	1	1006941	1.04	888972	113.3	30 - 120	
72 Ge	1	462649	0.57	425816	108.6	30 - 120	
115 In	1	1397361	0.27	1335258	104.7	30 - 120	
165 Ho	1	2660327	0.25	2617754	101.6	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\024SDIL.D\024SDIL.D#
Date Acquired: Nov 9 2009 09:30 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4P5
Misc Info: SERIAL DILUTION
Vial Number: 2206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: SDIL
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\023AREF.D\023AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	0.00	0.00	0.0	90 - 110	
51 V	72	1	-0.03	ppb	5.81	0.01	-342.2	90 - 110	
52 Cr	72	1	0.20	ppb	10.88	0.10	213.8	90 - 110	
55 Mn	72	1	0.34	ppb	10.16	0.33	103.1	90 - 110	
59 Co	72	1	0.01	ppb	47.19	0.01	96.0	90 - 110	
60 Ni	72	1	0.04	ppb	33.75	0.03	122.1	90 - 110	
63 Cu	72	1	0.10	ppb	5.61	0.09	114.0	90 - 110	
66 Zn	72	1	1.80	ppb	5.52	1.77	101.3	90 - 110	
75 As	72	1	-0.02	ppb	9.36	0.00	-1343.0	90 - 110	
78 Se	72	1	0.23	ppb	2.28	0.06	422.9	90 - 110	
95 Mo	72	1	0.04	ppb	19.93	0.03	118.9	90 - 110	
107 Ag	115	1	0.00	ppb	24.25	0.00	272.6	90 - 110	
111 Cd	115	1	0.02	ppb	89.75	0.00	2944.9	90 - 110	
118 Sn	115	1	0.12	ppb	5.20	0.04	296.9	90 - 110	
121 Sb	115	1	0.03	ppb	17.47	0.02	168.6	90 - 110	
137 Ba	115	1	0.14	ppb	19.11	0.13	109.3	90 - 110	
205 Tl	165	1	-0.01	ppb	30.49	0.00	501.4	90 - 110	
208 Pb	165	1	0.02	ppb	8.37	0.02	88.0	90 - 110	
232 Th	165	1	0.00	ppb	50.10	0.00	202.3	90 - 110	
238 U	165	1	0.00	ppb	87.66	0.00	61.5	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	368778	0.88	316659	116.5	30 - 120	
45 Sc	1	979811	0.26	888972	110.2	30 - 120	
72 Ge	1	461996	0.57	425816	108.5	30 - 120	
115 In	1	1378236	0.67	1335258	103.2	30 - 120	
165 Ho	1	2636939	1.04	2617754	100.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:12

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LNME4P5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 24
Acquired: 11/09/2009 21:30:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9		0	0.01470	100		*	
7440-62-2	Vanadium	51	380	-0.15675	0.04580	442		*	
7440-47-3	Chromium	52	2890	1.0235	0.47880	114		*	
7439-96-5	Manganese	55	2697	1.7180	1.6670	3.06		*	
7440-48-4	Cobalt	59	67	0.03211	0.03347	4.05		*	
7440-02-0	Nickel	60	130	0.19735	0.16160	22.1		*	
7440-50-8	Copper	63	490	0.48945	0.42930	14.0		*	
7440-66-6	Zinc	66	1801	8.9800	8.8630	1.32		*	
7440-38-2	Arsenic	75	27	-0.08160	0.00608	1440	0.21	NC	☑
7782-49-2	Selenium	78	140	1.1680	0.27620	323	0.70	NC	☑
7439-98-7	Molybdenum	95	110	0.20470	0.17210	18.9		*	
7440-22-4	Silver	107	27	0.01977	0.00725	173		*	
7440-43-9	Cadmium	111	17	0.08440	0.00287	2840		*	
7440-31-5	Tin	118	720	0.60300	0.20310	197		*	
7440-36-0	Antimony	121	164	0.15100	0.08954	68.6		*	
7440-39-3	Barium	137	248	0.71700	0.65610	9.28		*	
7440-28-0	Thallium	205	96	-0.04272	-0.00852			*	
7439-92-1	Lead	208	659	0.10510	0.11940	12.0		*	
7440-61-1	Uranium	238	111	0.00685	0.01113	38.5		*	
7440-29-1	Thorium	232	210	0.02068	0.01022	102		*	
7439-93-2	Lithium	6			0			*	
7440-20-2	Scandium	45			0			*	
7440-74-6	Indium	115			0			*	
7440-56-4	Germanium	72			0			*	
7440-60-0	Holmium	165			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: LRD Date: 11/10/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\025PDS.D\025PDS.D#
Date Acquired: Nov 9 2009 09:32 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4Z
Misc Info: POST DIGESTION SPIKE
Vial Number: 2207
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	185.00	0.01	ppb	1.86	200	92.5	75 - 125	
51 V	72	1	202.50	0.05	ppb	2.78	200	101.2	75 - 125	
52 Cr	72	1	203.90	0.48	ppb	2.06	200	101.7	75 - 125	
55 Mn	72	1	201.00	1.67	ppb	3.35	200	99.7	75 - 125	
59 Co	72	1	196.80	0.03	ppb	1.85	200	98.4	75 - 125	
60 Ni	72	1	194.90	0.16	ppb	1.47	200	97.4	75 - 125	
63 Cu	72	1	196.10	0.43	ppb	0.50	200	97.8	75 - 125	
66 Zn	72	1	196.80	8.86	ppb	0.36	200	94.2	75 - 125	
75 As	72	1	190.30	0.01	ppb	0.61	200	95.1	75 - 125	
78 Se	72	1	185.70	0.28	ppb	2.73	200	92.7	75 - 125	
95 Mo	72	1	192.00	0.17	ppb	0.97	200	95.9	75 - 125	
107 Ag	115	1	48.92	0.01	ppb	2.06	50	97.8	75 - 125	
111 Cd	115	1	188.70	0.00	ppb	1.65	200	94.3	75 - 125	
118 Sn	115	1	176.90	0.20	ppb	1.43	200	88.4	75 - 125	
121 Sb	115	1	184.30	0.09	ppb	1.52	200	92.1	75 - 125	
137 Ba	115	1	195.10	0.66	ppb	1.67	200	97.2	75 - 125	
205 Tl	165	1	191.80	-0.01	ppb	0.94	200	95.9	75 - 125	
208 Pb	165	1	186.80	0.12	ppb	0.48	200	93.3	75 - 125	
232 Th	165	1	0.03	0.01	ppb	13.35	200	0.0	75 - 125	
238 U	165	1	190.70	0.01	ppb	1.54	200	95.3	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	354551	1.15	316659	112.0	30 - 120	
45 Sc	1	950915	0.92	888972	107.0	30 - 120	
72 Ge	1	426378	1.56	425816	100.1	30 - 120	
115 In	1	1327967	0.75	1335258	99.5	30 - 120	
165 Ho	1	2548646	0.61	2617754	97.4	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 11/10/09 21:10:22

Department: 090 (Metals)

Source: Spreadsheet

Sample: **LNME4Z**

Spike Dilution: **1.00**

Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG110909A # 25
Acquired: 11/09/2009 21:32:00
Calibrated: 11/09/2009 20:32:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	79764	185.00	0.01470	92.5	200		☐
7440-62-2	Vanadium	51	1055210	202.50	0.04580	101	200		☐
7440-47-3	Chromium	52	1091770	203.90	0.47880	102	200		☐
7439-96-5	Manganese	55	1258890	201.00	1.6670	99.7	200		☐
7440-48-4	Cobalt	59	1273250	196.80	0.03347	98.4	200		☐
7440-02-0	Nickel	60	279436	194.90	0.16160	97.4	200		☐
7440-50-8	Copper	63	665031	196.10	0.42930	97.8	200		☐
7440-66-6	Zinc	66	167299	196.80	8.8630	94.0	200		☐
7440-38-2	Arsenic	75	125313	190.30	0.00608	95.1	200		☑
7782-49-2	Selenium	78	25838	185.70	0.27620	92.7	200		☑
7439-98-7	Molybdenum	95	382233	192.00	0.17210	95.9	200		☐
7440-22-4	Silver	107	276951	48.920	0.00725	97.8	50.0		☐
7440-43-9	Cadmium	111	227986	188.70	0.00287	94.3	200		☐
7440-31-5	Tin	118	584583	176.90	0.20310	88.3	200		☐
7440-36-0	Antimony	121	730873	184.30	0.08954	92.1	200		☐
7440-39-3	Barium	137	308452	195.10	0.65610	97.2	200		☐
7440-28-0	Thallium	205	2761530	191.80	-0.00852	95.9	200		☐
7439-92-1	Lead	208	3935420	186.80	0.11940	93.3	200		☐
7440-61-1	Uranium	238	4535860	190.70	0.01113	95.3	200		☐
7440-29-1	Thorium	232	747	0.02849	0.01022				
7439-93-2	Lithium	6			0				
7440-20-2	Scandium	45			0				
7440-74-6	Indium	115			0				
7440-56-4	Germanium	72			0				
7440-60-0	Holmium	165			0				

Reviewed by: LRD Date: 11/10/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\026_MS.D\026_MS.D#
Date Acquired: Nov 9 2009 09:35 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4S
Misc Info: MATRIX SPIKE
Vial Number: 2208
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Spike Ref. File: ---

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	38.95	0.01	ppb	4.02	40	97.3	50 - 150	
51 V	72	1	42.14	0.05	ppb	0.45	40	105.2	50 - 150	
52 Cr	72	1	41.88	0.48	ppb	0.82	40	103.5	50 - 150	
55 Mn	72	1	44.00	1.67	ppb	0.81	40	105.6	50 - 150	
59 Co	72	1	41.74	0.03	ppb	0.31	40	104.3	50 - 150	
60 Ni	72	1	41.29	0.16	ppb	1.68	40	102.8	50 - 150	
63 Cu	72	1	41.14	0.43	ppb	0.55	40	101.8	50 - 150	
66 Zn	72	1	40.89	8.86	ppb	1.02	40	83.7	50 - 150	
75 As	72	1	39.70	0.01	ppb	1.91	40	99.2	50 - 150	
78 Se	72	1	37.66	0.28	ppb	2.21	40	93.5	50 - 150	
95 Mo	72	1	35.56	0.17	ppb	1.29	40	88.5	50 - 150	
107 Ag	115	1	40.57	0.01	ppb	0.75	40	101.4	50 - 150	
111 Cd	115	1	38.88	0.00	ppb	0.89	40	97.2	50 - 150	
118 Sn	115	1	0.26	0.20	ppb	7.26	40	0.7	50 - 150	
121 Sb	115	1	35.78	0.09	ppb	0.84	40	89.3	50 - 150	
137 Ba	115	1	40.55	0.66	ppb	1.52	40	99.7	50 - 150	
205 Tl	165	1	42.66	-0.01	ppb	1.13	40	106.7	50 - 150	
208 Pb	165	1	40.84	0.12	ppb	0.87	40	101.8	50 - 150	
232 Th	165	1	40.88	0.01	ppb	1.61	40	102.2	50 - 150	
238 U	165	1	40.76	0.01	ppb	1.03	40	101.9	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	358353	0.80	316659	113.2	30 - 120	
45 Sc	1	939200	0.60	888972	105.7	30 - 120	
72 Ge	1	422553	0.76	425816	99.2	30 - 120	
115 In	1	1328078	0.75	1335258	99.5	30 - 120	
165 Ho	1	2539000	0.43	2617754	97.0	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\027 MSD.D\027 MSD.D#
Date Acquired: Nov 9 2009 09:38 pm
Acq. Method: NormISIS.M
Operator: LRD
Sample Name: LNME4D
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2209
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Nov 09 2009 08:35 pm
Sample Type: MSD
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG110909A.B\026 MS.D\026 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	38.17	ppb	2.44	38.95	2.02	20	
51 V	72	1	42.54	ppb	0.57	42.14	0.94	20	
52 Cr	72	1	42.55	ppb	0.81	41.88	1.59	20	
55 Mn	72	1	43.44	ppb	1.18	44.00	1.28	20	
59 Co	72	1	41.86	ppb	0.99	41.74	0.29	20	
60 Ni	72	1	41.95	ppb	1.55	41.29	1.59	20	
63 Cu	72	1	41.52	ppb	0.70	41.14	0.92	20	
66 Zn	72	1	40.14	ppb	0.44	40.89	1.85	20	
75 As	72	1	39.63	ppb	0.29	39.70	0.18	20	
78 Se	72	1	37.06	ppb	3.10	37.66	1.61	20	
95 Mo	72	1	35.66	ppb	0.62	35.56	0.28	20	
107 Ag	115	1	40.93	ppb	2.04	40.57	0.88	20	
111 Cd	115	1	39.64	ppb	0.46	38.88	1.94	20	
118 Sn	115	1	0.12	ppb	27.87	0.26	76.84	20	
121 Sb	115	1	35.83	ppb	0.62	35.78	0.14	20	
137 Ba	115	1	41.37	ppb	0.68	40.55	2.00	20	
205 Tl	165	1	42.77	ppb	1.75	42.66	0.26	20	
208 Pb	165	1	40.90	ppb	1.73	40.84	0.15	20	
232 Th	165	1	41.06	ppb	0.63	40.88	0.44	20	
238 U	165	1	40.94	ppb	0.83	40.76	0.44	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	355186	0.16	316659	112.2	30 - 120	
45 Sc	1	936988	0.78	888972	105.4	30 - 120	
72 Ge	1	422235	0.79	425816	99.2	30 - 120	
115 In	1	1312991	0.53	1335258	98.3	30 - 120	
165 Ho	1	2541733	0.77	2617754	97.1	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref. File :C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\028 CCV.D\028 CCV.D#
Date Acquired: Nov 9 2009 09:41 pm
Operator: LRD
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	48.28	ppb	1.89	50	96.6	90 - 110	
51 V	72	1	51.66	ppb	1.31	50	103.3	90 - 110	
52 Cr	72	1	51.41	ppb	0.42	50	102.8	90 - 110	
55 Mn	72	1	50.80	ppb	0.70	50	101.6	90 - 110	
59 Co	72	1	50.98	ppb	1.52	50	102.0	90 - 110	
60 Ni	72	1	50.44	ppb	1.14	50	100.9	90 - 110	
63 Cu	72	1	50.68	ppb	0.38	50	101.4	90 - 110	
66 Zn	72	1	49.73	ppb	0.43	50	99.5	90 - 110	
75 As	72	1	51.43	ppb	1.43	50	102.9	90 - 110	
78 Se	72	1	50.58	ppb	4.06	50	101.2	90 - 110	
95 Mo	72	1	49.14	ppb	0.63	50	98.3	90 - 110	
107 Ag	115	1	49.88	ppb	1.55	50	99.8	90 - 110	
111 Cd	115	1	49.46	ppb	0.97	50	98.9	90 - 110	
118 Sn	115	1	49.89	ppb	2.37	50	99.8	90 - 110	
121 Sb	115	1	49.59	ppb	1.76	50	99.2	90 - 110	
137 Ba	115	1	50.39	ppb	1.52	50	100.8	90 - 110	
205 Tl	165	1	49.99	ppb	0.81	50	100.0	90 - 110	
208 Pb	165	1	50.66	ppb	1.69	50	101.3	90 - 110	
232 Th	165	1	50.62	ppb	1.15	50	101.2	90 - 110	
238 U	165	1	50.54	ppb	0.29	50	101.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	351524	0.93	316659	111.0	30 - 120	
45 Sc	1	927694	1.28	888972	104.4	30 - 120	
72 Ge	1	421606	1.09	425816	99.0	30 - 120	
115 In	1	1310979	0.71	1335258	98.2	30 - 120	
165 Ho	1	2522093	0.90	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\029 CCB.D\029 CCB.D#
Date Acquired: Nov 9 2009 09:43 pm
Operator: LRD
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ppb	0.00	1.00	
51 V	72	1	-0.036	ppb	44.55	1.00	
52 Cr	72	1	0.019	ppb	63.89	1.00	
55 Mn	72	1	0.000	ppb	2382.10	1.00	
59 Co	72	1	0.002	ppb	93.07	1.00	
60 Ni	72	1	-0.010	ppb	1.82	1.00	
63 Cu	72	1	-0.002	ppb	211.49	1.00	
66 Zn	72	1	0.038	ppb	50.08	1.00	
75 As	72	1	-0.017	ppb	26.71	1.00	
78 Se	72	1	0.225	ppb	111.94	1.00	
95 Mo	72	1	0.046	ppb	45.40	1.00	
107 Ag	115	1	0.012	ppb	29.52	1.00	
111 Cd	115	1	0.002	ppb	311.75	1.00	
118 Sn	115	1	0.080	ppb	40.12	1.00	
121 Sb	115	1	0.165	ppb	24.61	1.00	
137 Ba	115	1	0.004	ppb	88.07	1.00	
205 Tl	165	1	0.004	ppb	78.72	1.00	
208 Pb	165	1	0.002	ppb	56.03	1.00	
232 Th	165	1	0.061	ppb	14.74	1.00	
238 U	165	1	0.013	ppb	31.22	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	354787	1.32	316659	112.0	30 - 120	
45 Sc	1	923814	1.00	888972	103.9	30 - 120	
72 Ge	1	432478	0.52	425816	101.6	30 - 120	
115 In	1	1308981	0.63	1335258	98.0	30 - 120	
165 Ho	1	2520572	0.23	2617754	96.3	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: C:\ICPCHEM\1\DATA\AG110909A.B\030WASH.D\030WASH.D#
Date Acquired: Nov 9 2009 09:50 pm
Operator: LRD
Sample Name: RLCV
Misc Info:
Vial Number: 1204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Nov 09 2009 08:35 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	1.009 ppb	18.75	1.30	
51 V	72	1	5.177 ppb	1.19	6.50	
52 Cr	72	1	2.111 ppb	3.52	2.60	
55 Mn	72	1	1.107 ppb	2.74	1.30	
59 Co	72	1	1.028 ppb	3.93	1.30	
60 Ni	72	1	2.108 ppb	1.73	2.60	
63 Cu	72	1	2.068 ppb	1.44	2.60	
66 Zn	72	1	9.967 ppb	0.46	13.00	
75 As	72	1	5.161 ppb	1.92	6.50	
78 Se	72	1	5.825 ppb	10.45	6.50	
95 Mo	72	1	1.986 ppb	5.92	2.60	
107 Ag	115	1	5.462 ppb	1.89	6.50	
111 Cd	115	1	1.025 ppb	1.41	1.30	
118 Sn	115	1	10.590 ppb	0.75	13.00	
121 Sb	115	1	2.089 ppb	2.01	2.60	
137 Ba	115	1	1.011 ppb	0.65	1.30	
205 Tl	165	1	1.109 ppb	3.60	1.30	
208 Pb	165	1	1.060 ppb	1.36	1.30	
232 Th	165	1	2.209 ppb	0.66	2.60	
238 U	165	1	1.106 ppb	2.50	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	358611	0.21	316659	113.2	30 - 120	
45 Sc	1	931630	1.00	888972	104.8	30 - 120	
72 Ge	1	428811	1.09	425816	100.7	30 - 120	
115 In	1	1287825	1.17	1335258	96.4	30 - 120	
165 Ho	1	2504436	0.55	2617754	95.7	30 - 120	

Tune File# 1 c:\icpchem\1\7500\he.u
Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG110909A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed