SDG # 8304614

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Tronox LLC, Henderson

SDG: 8304614
Lot #s: D9G150224, D9G160231, D9G160235, D9G170255, and D9G180154

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Project Manager

July 31, 2009

Case Narrative
SDG 8304614

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

Two samples were received under chain of custody at a temperature of 4.3°C on July 15, 2009, and were logged under lot D9G150224. One sample was received under chain of custody at a temperature of 3.4°C on July 16, 2009, and was logged under lot D9G160231. One sample was received under chain of custody at a temperature of 3.4°C on July 16, 2009, and was logged under lot D9G160235. Two samples including MS/MSDs were received under chain of custody at a temperature of 0.3°C on July 17, 2009, and were logged under lot D9G170255. One sample was received under chain of custody at a temperature of 4.3°C on July 18, 2009, and was logged under lot D9G180154. Both one liter ambers associated with sample D9G180154-001 (M-97B) were received broken, and as a result no volume was available for the requested Organophosphorus Pesticide analysis by SW846 Method 8141A. The client was notified via email on July 20, 2009. These lots are reported here under SDG 8304614.

GC Semivolatiles / Organophosphorus Pesticides – SW846 Method 8141A

The method required MS/MSD could not be performed for QC batch 9198202 due to insufficient sample volume; however, method precision and accuracy were demonstrated with acceptable LCS/LCSD data.

The Continuing Calibration Verification (CCV) standard(s) associated with the samples in QC batch 9198202 exhibited %Difference values out of range for several compounds. The overall mean %Differences were within control limits; therefore, method criteria were met and corrective action was deemed unnecessary. In addition, none of these compounds were detected in the associated samples.

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 analyzed for Total Arsenic, Total Selenium, Dissolved Arsenic or Dissolved Selenium were diluted by a factor of 5X or 10X 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 9197220 using sample D9G150224-001 (H-11B) and all results were in control.

The method required MS/MSD was performed for Total Metals QC batch 9198162 using sample D9G160231-001 (TR-8B) and all results were in control.

The method required MS/MSD was performed for Total Metals QC batch 9201150 using sample D9G170255-001 (M-92B) and all results were in control.

The method required MS/MSD was performed for Dissolved Metals QC batch 9197227 using sample D9G150224-002 (H-11BDISS) and all results were in control.

The method required MS/MSD was performed for Dissolved Metals QC batch 9201157 using sample D9G170255-002 (M-92BDISS) and all results were in control.

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

8304614 : D9G160231

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
TR-8B 07/14/09 11:45 001				
Arsenic	75	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304614 : D9G160235

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
TR-10B 07/14/09 09:00 001				
Arsenic	65	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304614 : D9G170255

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-92B 07/15/09 09:00 001				
Arsenic	93	25	ug/L	SW846 6020
M-92BDISS 07/15/09 09:00 002				
Arsenic - DISSOLVED	100	25	ug/L	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

8304614 : D9G180154

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
M-97B 07/16/09 08:45 001				
Arsenic	190	25	ug/L	SW846 6020
Selenium	5.4 B	25	ug/L	SW846 6020

METHODS SUMMARY

8304614

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
ICP-MS (6020)	SW846 6020	SW846 3005A
ICP-MS (6020)	SW846 6020	SW846 3020A
Organophosphorous Compounds by GC	SW846 8141A	SW846 3510

References:

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

METHOD / ANALYST SUMMARY

8304614

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6020	Thomas Lill	006929
SW846 8141A	Teresa L. Williams	002510

References:

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

SAMPLE SUMMARY

8304614 : D9G150224

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGH2F	001	H-11B	07/13/09	09:00
LGH2H	002	H-11BDISS	07/13/09	09:00

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

8304614 : D9G160231

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGLFG	001	TR-8B	07/14/09	11:45

NOTE(S):

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- 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

8304614 : D9G160235

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGLGF	001	TR-10B	07/14/09	09:00

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

8304614 : D9G170255

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGNJH	001	M-92B	07/15/09	09:00
LGNJJ	002	M-92BDISS	07/15/09	09:00

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

8304614 : D9G180154

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGPGA	001	M-97B	07/16/09	08:45

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.

QC DATA ASSOCIATION SUMMARY

D9G150224

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6020		9197220	9197133
002	WATER	SW846 6020		9197227	9197139

QC DATA ASSOCIATION SUMMARY

D9G160231

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6020		9198162	9198138
	WATER	SW846 8141A		9198202	

QC DATA ASSOCIATION SUMMARY

D9G160235

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6020		9198162	9198138

QC DATA ASSOCIATION SUMMARY

D9G170255

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6020		9201150	9201089
002	WATER	SW846 6020		9201157	9201093

QC DATA ASSOCIATION SUMMARY

D9G180154

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6020		9201150	9201089

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9G150224

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9G150224

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

SOW No.: _____

Sample ID.	Lab Sample No.
H-11B	D9G150224-001
H-11B MS	D9G150224-001S
H-11B MSD	D9G150224-001SD

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: 7/23/09 Title: Metals Analyst

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Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	H-11B
Lot/SDG Number:	D9G150224	**Lab Sample ID:**	D9G150224-001
Matrix:	WATER	**Lab WorkOrder:**	LGH2F
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197220	**Date/Time Analyzed:**	07/21/09 23:49
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	10		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	2.1	2.1	50	U
7782-49-2	Selenium	7.0	7.0	50	U

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	40.0	100.0	50.0	49.2	98.4	48.7	97.4	M
Selenium	40.0	40.9	102.2	50.0	50.0	100.0	50.1	100.2	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.: D9G150224

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	49.4	98.8			M
Selenium				50.0	51.0	102.0			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.: D9G150224

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	1.063	106.3		
Selenium				1.00	1.263	126.3		

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:	D9G150224	**Lab Sample ID:**	D9G160000-220B
Matrix:	WATER	**Lab WorkOrder:**	LGKQD
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197220	**Date/Time Analyzed:**	07/21/09 23:43
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.: D9G150224

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

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ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	0.45	100.60	100.6			
Selenium	0.0	100.0	0.46	108.40	108.4			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	H-11B
Lot/SDG Number:	D9G150224	**MS Lab Sample ID:**	D9G150224-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LGH2F
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197220	**Date/Time Analyzed:**	07/21/09 23:57
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	10		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	2.1	U	42.3		104		85 - 117
Selenium	40.0	7.0	U	43.0		107		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	H-11B
Lot/SDG Number:	D9G150224	**MSD Lab Sample ID:**	D9G150224-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGH2F
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197220	**Date/Time Analyzed:**	07/22/09 00:00
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	10		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	2.1	U	42.4		105		0.33		85 - 117	20
Selenium	40.0	7.0	U	40.2		101		6.6		77 - 122	20

TestAmerica

Total Metals Analvsis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: H-11B PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	194.800		0.210	U	200.00	97.4		M
Selenium	75 - 125	201.300		0.700	U	200.00	100.6		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:	D9G150224	**Lab Sample ID:**	D9G160000-220C
Matrix:	WATER	**Lab WorkOrder:**	LGKQD
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197220	**Date/Time Analyzed:**	07/21/09 23:46
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	39.1	98		85 - 117
Selenium	40.0	40.4	101		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

H-11B SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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.: D9G150224

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.: D9G150224

ICP ID Number: Agilent 7500 Date: 7/7/2009

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 Analvsis

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PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
H-11B	7/20/2009	50.0	50.0
H-11B MS	7/20/2009	50.0	50.0
H-11B MSD	7/20/2009	50.0	50.0
MB9197220	7/20/2009	50.0	50.0
Check Sample	7/20/2009	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.: D9G150224

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/21/2009 End Date: 7/22/2009

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	22:41				X															X						
100 PPB	1.00	22:43				X															X						
ICV	1.00	22:46				X															X						
ICB	1.00	22:51				X															X						
RL STD	1.00	22:54				X															X						
ICSA	1.00	23:02				X															X						
ICSAB	1.00	23:05				X															X						
RINSE	1.00	23:08				X															X						
LR	1.00	23:13				X															X						
RINSE	1.00	23:16				X															X						
CCV	1.00	23:19				X															X						
CCB	1.00	23:21				X															X						
CCV	1.00	23:35				X															X						
CCB	1.00	23:38				X															X						
MB9197220	1.00	23:43				X															X						
Check Sample	1.00	23:46				X															X						
H-11B	10.00	23:49				X															X						
H-11B SER	50.00	23:52				X															X						
H-11B PDS	1.00	23:54				X															X						
H-11B MS	10.00	23:57				X															X						
H-11B MSD	10.00	00:00				X															X						
CCV	1.00	00:03				X															X						
CCB	1.00	00:05				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: D9G150224

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.: D9G150224

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

SOW No.: _____

Sample ID.	Lab Sample No.
H-11BDISS	D9G150224-002
H-11BDISS MS	D9G150224-002S
H-11BDISS MSD	D9G150224-002SD

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: 7/23/09 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:**	H-11BDISS
Lot/SDG Number:	D9G150224	**Lab Sample ID:**	D9G150224-002
Matrix:	WATER	**Lab WorkOrder:**	LGH2H
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197227	**Date/Time Analyzed:**	07/21/09 20:58
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	10		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	2.1	2.1	50	U
7782-49-2	Selenium	7.0	7.0	50	U

TestAmerica

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	50.2	100.4	51.0	102.0	M
Selenium	40.0	41.7	104.2	50.0	50.2	100.4	51.6	103.2	M

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

TestAmerica

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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			M
Selenium				50.0	51.4	102.8			M

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

TestAmerica

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G150224

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	1.038	103.8		
Selenium				1.00	0.816	81.6		

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:	D9G150224	**Lab Sample ID:**	D9G160000-227B
Matrix:	WATER	**Lab WorkOrder:**	LGKQW
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197227	**Date/Time Analyzed:**	07/21/09 20:52
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.: D9G150224

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

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	0.41	100.30	100.3			
Selenium	0.0	100.0	0.21	108.70	108.7			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	H-11BDISS
Lot/SDG Number:	D9G150224	**MS Lab Sample ID:**	D9G150224-002S
Matrix:	WATER	**MS Lab WorkOrder:**	LGH2H
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197227	**Date/Time Analyzed:**	07/21/09 21:06
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	10		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Arsenic	40.0	2.1	U	44.4		111		85 - 117
Selenium	40.0	7.0	U	45.0		108		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	H-11BDISS
Lot/SDG Number:	D9G150224	**MSD Lab Sample ID:**	D9G150224-002D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGH2H
% Moisture:	N/A	**Date/Time Collected:**	07/13/09 09:00
Basis:	Wet	**Date/Time Received:**	07/15/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197227	**Date/Time Analyzed:**	07/21/09 21:09
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	10		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Arsenic	40.0	2.1	U	44.0		110		1.0		85 - 117	20
Selenium	40.0	7.0	U	43.5		105		3.2		77 - 122	20

Dissolved Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: H-11BDISS PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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	205.500		0.210	U	200.00	102.8		M
Selenium	75 - 125	203.000		0.700	U	200.00	101.5		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:	D9G150224	**Lab Sample ID:**	D9G160000-227C
Matrix:	WATER	**Lab WorkOrder:**	LGKQW
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/20/09 07:30
QC Batch ID:	9197227	**Date/Time Analyzed:**	07/21/09 20:55
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	43.8	110		85 - 117
Selenium	40.0	44.8	112		77 - 122

Dissolved Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

H-11BDISS SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

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: _____

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

ICP ID Number: Agilent 7500 Date: 7/7/2009

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

Comments: _____

Form XII - IN

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G150224

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
H-11BDISS	7/20/2009	50.0	50.0
H-11BDISS MS	7/20/2009	50.0	50.0
H-11BDISS MSD	7/20/2009	50.0	50.0
MB9197227	7/20/2009	50.0	50.0
Check Sample	7/20/2009	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.: D9G150224

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/21/2009 End Date: 7/21/2009

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	17:28				X															X						
100 PPB	1.00	17:31				X															X						
ICV	1.00	17:33				X															X						
ICB	1.00	17:39				X															X						
RL STD	1.00	17:42				X															X						
ICSA	1.00	17:50				X															X						
ICSAB	1.00	17:53				X															X						
RINSE	1.00	17:55				X															X						
LR	1.00	17:58				X															X						
RINSE	1.00	18:00				X															X						
CCV	1.00	18:03				X															X						
CCB	1.00	18:06				X															X						
CCV	1.00	20:44				X															X						
CCB	1.00	20:47				X															X						
MB9197227	1.00	20:52				X															X						
Check Sample	1.00	20:55				X															X						
H-11BDISS	10.00	20:58				X															X						
H-11BDISS SER	50.00	21:01				X															X						
H-11BDISS PDS	1.00	21:03				X															X						
H-11BDISS MS	10.00	21:06				X															X						
H-11BDISS MSD	10.00	21:09				X															X						
CCV	1.00	21:12				X															X						
CCB	1.00	21:14				X															X						

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

TestAmerica

Semivolatile GC

CLP-Like Forms

Lot ID: D9G160213

Client: Northgate/Tronox

Method: SW846 8141A

Associated Sample: 001

Batch: 9198202

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	TR-8B
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G160231-001
Matrix:	WATER	**Lab WorkOrder:**	LGLFG1AA
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 23:02
Sample Aliquot:	1052 mL	**Instrument ID:**	D2
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
86-50-0	Azinphos-methyl	0.17	0.17	2.5	U
35400-43-2	Bolstar	0.31	0.31	1.0	U
2921-88-2	Chlorpyrifos	0.36	0.36	1.0	U
56-72-4	Coumaphos	0.14	0.14	1.0	U
298-03-3	Demeton-O	0.14	0.14	1.0	U
126-75-0	Demeton-S	0.069	0.069	1.0	U
333-41-5	Diazinon	0.15	0.15	1.0	U
62-73-7	Dichlorvos	0.16	0.16	1.0	U
60-51-5	Dimethoate	0.45	0.45	1.5	U
298-04-4	Disulfoton	0.32	0.32	1.0	U
2104-64-5	EPN	0.15	0.15	1.2	U
13194-48-4	Ethoprop	0.18	0.18	0.50	U
56-38-2	Ethyl parathion	0.14	0.14	1.0	U
52-85-7	Famphur	0.18	0.18	1.0	U
115-90-2	Fensulfothion	0.54	0.54	2.5	U
55-38-9	Fenthion	0.15	0.15	2.5	U
121-75-5	Malathion	0.13	0.13	1.2	U
150-50-5	Merphos	0.17	0.17	5.0	U
298-00-0	Methyl parathion	0.14	0.14	4.0	U
7786-34-7	Mevinphos	0.46	0.46	6.2	U
300-76-5	Naled	0.25	0.25	1.0	U
298-02-2	Phorate	0.15	0.15	1.2	U
299-84-3	Ronnel	0.12	0.12	10	U
3689-24-5	Sulfotepp	0.17	0.17	1.5	U
961-11-5	Tetrachlorvinphos (Stirophos)	0.12	0.12	3.5	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	TR-8B
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G160231-001
Matrix:	WATER	**Lab WorkOrder:**	LGLFG1AA
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 23:02
Sample Aliquot:	1052 mL	**Instrument ID:**	D2
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
297-97-2	Thionazin	0.31	0.31	1.0	U
34643-46-4	Tokuthion	0.12	0.12	1.6	U
327-98-0	Trichloronate	0.24	0.24	1.0	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
115-86-6	Triphenyl phosphate	67	60	154	
24934-91-6	Chlormefos	49	49	171	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G170000-202B
Matrix:	WATER	**Lab WorkOrder:**	LGMN01AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 21:12
Sample Aliquot:	1000 mL	**Instrument ID:**	D2
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
62-73-7	Dichlorvos	0.16	0.16	1.0	U
297-97-2	Thionazin	0.31	0.31	1.0	U
60-51-5	Dimethoate	0.45	0.45	1.5	U
298-04-4	Disulfoton	0.32	0.32	1.0	U
2104-64-5	EPN	0.15	0.15	1.2	U
13194-48-4	Ethoprop	0.18	0.18	0.50	U
52-85-7	Famphur	0.18	0.18	1.0	U
115-90-2	Fensulfothion	0.54	0.54	2.5	U
55-38-9	Fenthion	0.15	0.15	2.5	U
121-75-5	Malathion	0.13	0.13	1.2	U
150-50-5	Merphos	0.17	0.17	5.0	U
298-00-0	Methyl parathion	0.14	0.14	4.0	U
86-50-0	Azinphos-methyl	0.17	0.17	2.5	U
7786-34-7	Mevinphos	0.46	0.46	6.2	U
300-76-5	Naled	0.25	0.25	1.0	U
56-38-2	Ethyl parathion	0.14	0.14	1.0	U
298-02-2	Phorate	0.15	0.15	1.2	U
299-84-3	Ronnel	0.12	0.12	10	U
3689-24-5	Sulfotepp	0.17	0.17	1.5	U
34643-46-4	Tokuthion	0.12	0.12	1.6	U
327-98-0	Trichloronate	0.24	0.24	1.0	U
35400-43-2	Bolstar	0.31	0.31	1.0	U
961-11-5	Tetrachlorvinphos (Stirophos)	0.12	0.12	3.5	U
2921-88-2	Chlorpyrifos	0.36	0.36	1.0	U
56-72-4	Coumaphos	0.14	0.14	1.0	U
298-03-3	Demeton-O	0.14	0.14	1.0	U
126-75-0	Demeton-S	0.069	0.069	1.0	U
333-41-5	Diazinon	0.15	0.15	1.0	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G170000-202B
Matrix:	WATER	**Lab WorkOrder:**	LGMN01AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 21:12
Sample Aliquot:	1000 mL	**Instrument ID:**	D2
Dilution Factor:	1		

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
115-86-6	Triphenyl phosphate	72	60	154	
24934-91-6	Chlormefos	55	49	171	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Surrogate Recovery Summary

Lab Name: TESTAMERICA DENVER
Extraction I09P29H
Lot/SDG Number: 8304614
QC Batch ID: 9198202

Client ID	Work Order	SRG1	SRG2	SRG3	SRG4	SRG5	SRG6	SRG7	SRG8	TOT OUT
TR-8B	LGLFG1AA	49	67							0
INTRA-LAB BLANK	LGMN01AA	55	72							0
CHECK SAMPLE	LGMN01AC	86	85							0
DUPLICATE CHECK	LGMN01AD	82	80							0

Surrogate Number	Surrogate Name	Lower Control Limit	Upper Control Limit
SRG 1	Chlormefos	49	171
SRG 2	Triphenyl phosphate	60	154

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G170000-202C
Matrix:	WATER	**Lab WorkOrder:**	LGMN01AC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 21:40
Sample Aliquot:	1000 mL	**Instrument ID:**	D2
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Dichlorvos	4.00	3.56	89		40 - 193
Thionazin	4.00	3.17	79		39 - 180
Dimethoate	4.00	2.89	72		33 - 139
Disulfoton	4.00	2.85	71		44 - 139
Ethoprop	4.00	3.71	93		43 - 165
Famphur	8.00	6.66	83		51 - 131
Fensulfothion	4.00	3.80	95		46 - 115
Fenthion	4.00	3.00	75		63 - 128
Malathion	4.00	2.87	72		53 - 137
Methyl parathion	4.00	3.47	87		55 - 131
Azinphos-methyl	4.00	3.19	80		42 - 125
Mevinphos	4.00	2.85	71		39 - 175
Ethyl parathion	4.00	3.17	79		47 - 142
Phorate	4.00	2.62	65		46 - 142
Ronnel	4.00	3.34	83		43 - 115
Sulfotepp	4.00	2.92	73		29 - 166
Trichloronate	4.00	3.04	76		60 - 115
Chlorpyrifos	4.00	3.28	82		60 - 120
Coumaphos	4.00	3.47	87		61 - 115
Diazinon	4.00	3.27	82		47 - 149

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
115-86-6	Triphenyl phosphate	85	60	154	
24934-91-6	Chlormefos	86	49	171	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G170000-202L
Matrix:	WATER	**Lab WorkOrder:**	LGMN01AD
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8141A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/17/09 01:20
QC Batch ID:	9198202	**Date/Time Analyzed:**	07/21/09 22:07
Sample Aliquot:	1000 mL	**Instrument ID:**	D2
Dilution Factor:	1		

Analyte	True	Found	C	% Rec	Q	RPD	Q	QC Limits	
								% Rec	RPD
Dichlorvos	4.00	3.22		81		9.8		40 - 193	49
Thionazin	4.00	2.97		74		6.6		39 - 180	40
Dimethoate	4.00	2.59		65		11		33 - 139	50
Disulfoton	4.00	2.68		67		6.2		44 - 139	40
Ethoprop	4.00	3.33		83		11		43 - 165	36
Famphur	8.00	6.31		79		5.4		51 - 131	88
Fensulfothion	4.00	3.21		80		17		46 - 115	62
Fenthion	4.00	2.87		72		4.5		63 - 128	41
Malathion	4.00	2.66		67		7.5		53 - 137	28
Methyl parathion	4.00	3.31		83		4.8		55 - 131	30
Azinphos-methyl	4.00	3.04		76		4.9		42 - 125	36
Mevinphos	4.00	2.58		65		9.9		39 - 175	40
Ethyl parathion	4.00	2.97		74		6.6		47 - 142	40
Phorate	4.00	2.59		65		1.0		46 - 142	40
Ronnel	4.00	3.04		76		9.3		43 - 115	39
Sulfotepp	4.00	2.77		69		5.2		29 - 166	40
Trichloronate	4.00	2.80		70		8.5		60 - 115	38
Chlorpyrifos	4.00	3.11		78		5.3		60 - 120	34
Coumaphos	4.00	3.27		82		5.9		61 - 115	43
Diazinon	4.00	3.02		76		7.8		47 - 149	40

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
115-86-6	Triphenyl phosphate	80	60	154	
24934-91-6	Chlormefos	82	49	171	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	023F2301.
Lot/SDG Number:	8304614	**Lab Sample ID:**	D9G170000-202B
Matrix:	WATER	**Lab Work Order:**	LGMN01AA
Analysis Method:	8141A	**Date/Time Extracted:**	07/17/09 01:20
Extraction Method:	I09P29H	**Date/Time Analyzed:**	07/21/09 21:12
QC Batch ID:	9198202	**Instrument ID:**	D2

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
TR-8B	LGLFG1AA	023F2301.	07/21/09	23:02
CHECK SAMPLE	LGMN01AC C	020F2001.	07/21/09	21:40
DUPLICATE CHECK	LGMN01AD L	021F2101.	07/21/09	22:07

Report Date : 30-Jun-2009 12:45 Page 1

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Calibration File Names:
Level 1: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\009F0901.D
Level 2: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\008F0801.D
Level 3: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Level 4: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
Level 5: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Level 6: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Level 7: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D

SEE CALIBRATION HISTORY

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
1 o,o,o-TEPT	3.11591	2.63737	2.67945	2.89676	2.71623	2.90430					
	2.77446						AVRG		2.81778		5.91149
2 Dichlorvos	2.01706	1.62225	1.58545	1.76366	1.71981	1.74982					
	1.79032						AVRG		1.74977		7.99554
3 Mevinphos	1.01774	0.91295	0.90158	1.01760	0.95159	0.98250					
	0.94429						AVRG		0.96118		4.85992
5 Thionazin	2.12707	1.94606	1.94866	2.08214	1.96051	2.00095					
	1.93224						AVRG		1.99966		3.79706

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TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	5.0000 Level 7											
6 Demeton-O	9836	17553	30145	62341	96004	113108						1/x
	165003						WLINR	-0.01288	1.85831		0.99594	
7 Ethoprop	1.93480	1.70823	1.62324	1.73203	1.74110	1.78272						
	1.74432						AVRG		1.75235		5.38512	
8 Naled	1992	6103	15042	36940	67594	90892						1/x r=0.995
	121152						WLINR	0.09632	0.47378		0.98961	<-
10 Sulfotepp	34658	70885	131347	259970	393078	486417						1/x
	609341						WLINR	-0.03469	2.43674		0.99856	
11 Phorate	2.02801	1.82946	1.73796	1.82370	1.76374	1.79146						
	1.72902						AVRG		1.81476		5.60901	
12 Dimethoate	1.89561	1.76866	2.07434	2.25696	2.23554	2.30994						
	2.21598						AVRG		2.10815		9.72697	
13 Demeton-S	1.49306	1.46224	1.49173	1.58543	1.55216	1.58919						
	1.52702						AVRG		1.52869		3.21407	

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INITIAL CALIBRATION DATA

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Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
14 Simazine	4819	16248	29382	64611	115426	147784						1/x2
	190219						WLINR	0.03988	0.73140		0.99336	
15 Atrazine	0.70185	0.76532	0.75073	0.84628	0.85434	0.90844						
	0.89508						AVRG		0.81743		9.61085	
16 propazine	0.73887	0.70136	0.69239	0.78178	0.75651	0.81417						
	0.79462						AVRG		0.75424		6.13423	
17 Disulfoton	15404	33208	61920	127893	193050	247845						1/x
	290419						WLINR	-0.01928	1.20917		0.99576	
18 Diazinon	2.20234	1.83553	1.83772	2.01856	1.98676	1.84115						
	1.92388						AVRG		1.94942		6.88114	
19 Methyl Parathion	1.22644	1.10389	1.13741	1.32395	1.30344	1.29686						
	1.26213						AVRG		1.23630		6.92144	
20 Ronnel	1.42863	1.23369	1.21320	1.29342	1.24446	1.34650						
	1.18584						AVRG		1.27796		6.65504	

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INITIAL CALIBRATION DATA

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Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
21 Malathion	15443	30581	57103	119836	186013	228260					
	283462						WLINR	-0.02066	1.14436		0.99783
22 Fenthion	1.46442	1.18458	1.16481	1.29096	1.25584	1.25506					
	1.18151						AVRG		1.25674		8.19381
23 Parathion	1.42438	1.25387	1.23322	1.38998	1.36308	1.38514					
	1.31279						AVRG		1.33749		5.43501
24 Chlorpyrifos	1.85614	1.56747	1.47379	1.62915	1.61527	1.62330					
	1.56216						AVRG		1.61818		7.28314
25 Trichloronate	1.44751	1.42551	1.34762	1.48171	1.46256	1.52450					
	1.43428						AVRG		1.44624		3.78186
26 Anilazine	1493	2095	5311	12790	19893	29375					
	+++++						QUAD	0.02107	9.16488	-8.66056	0.99476
27 Merphos-A (Merphos)	1.24844	1.15527	1.15966	1.23989	1.21263	1.24409					
	1.18648						AVRG		1.20664		3.30523

1/x

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INITIAL CALIBRATION DATA

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Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	5.0000 Level 7											
28 Tetrachlorvinphos (Stirophos)	0.76814	0.74606	0.73464	0.83451	0.85233	0.85150						
	0.82648						AVRG		0.80195		6.32809	
29 Tokuthion	1.50295	1.28283	1.29501	1.44234	1.39452	1.40891						
	1.37817						AVRG		1.38639		5.62055	
30 Merphos-B (Merphos Oxone)	3884	7933	11676	34113	50056	65974						NTC
	79809						WLINR	0.01044	0.32634		0.98820	<-See Merphos
31 Carbophenothion-methyl	14924	30542	55023	105577	167145	206137						1/x
	266724						WLINR	-0.03349	1.03813		0.99979	
32 Fensulfothion	8319	23000	51304	104440	185778	229856						1/x
	295978						WLINR	0.04728	1.18751		0.99821	
33 Bolstar / Famphur	1.54988	1.27794	1.32328	1.33835	1.27633	1.28540						
	1.23307						AVRG		1.32632		7.86825	
34 Carbophenothion	1.57916	1.19992	1.27687	1.32336	1.26122	1.41398						
	1.25966						AVRG		1.33059		9.63398	

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TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

	Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
		5.0000 Level 7											
	36 Phosmet	1.22087	1.01385	1.11032	1.20586	1.12340	1.16129						
		1.13672						AVRG		1.13890		6.04111	
	37 EPN	9525	23196	48705	111165	171283	220388						$1/x^2$
		294020						WLINR	0.02456	1.11450		0.99317	
	38 Azinphos-methyl	1.19565	1.13516	1.16767	1.28235	1.23551	1.26700						
		1.21185						AVRG		1.21360		4.33999	
	40 Azinphos-ethyl	23154	43578	74071	134607	209971	253982						$1/x^2$
		318459						WLINR	-0.07409	1.26388		0.99928	
	41 Coumaphos	1.00140	0.89806	0.92250	1.01947	1.01017	1.01013						
		0.99015						AVRG		0.97884		4.92558	
S	42 Merphos	1.61523	1.45962	1.38820	1.59026	1.52873	1.58626						
		1.49925						AVRG		1.52393		5.34513	
M	43 Total Demeton	1.94415	1.66775	1.60440	1.71838	1.66174	1.66727						
		1.68503						AVRG		1.70696		6.44185	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
$ 4 Chlormefos	2.28223	2.03679	2.00000	2.26084	2.35620	2.24671					
	2.15521						AVRG		2.19114		6.04132
$ 35 Triphenyl phosphate	1.09980	0.99217	0.96977	1.05450	0.99627	1.00900					
	0.95665						AVRG		1.01117		4.94580

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TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Report Date: 30-Jun-2009 12:45

Calibration History

Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Start Cal Date: 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.20000		
26-JUN-2009 21:13	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\009F0901.D
Cal Level: 2 , Cal Amount: 0.50000		
26-JUN-2009 20:45	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\008F0801.D
Cal Level: 3 , Cal Amount: 1.00000		
26-JUN-2009 20:18	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Cal Level: 4 , Cal Amount: 2.00000		
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
Cal Level: 5 , Cal Amount: 3.00000		
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Cal Level: 6 , Cal Amount: 4.00000		
26-JUN-2009 18:55	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Cal Level: 7 , Cal Amount: 5.00000		
26-JUN-2009 18:28	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

26-JUN-2009 21:40	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\010F1001.D
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D

Report Date : 30-Jun-2009 12:58 Page 1

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Calibration File Names:
Level 1: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\009F0901.D
Level 2: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Level 3: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\007F0701.D
Level 4: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
Level 5: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D SEE CALIBRATION HISTORY
Level 6: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\004F0401.D
Level 7: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\003F0301.D

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
1 o,o,o-TEPT	2.92648	2.44243	2.35582	2.65851	2.57132	2.61478					
	2.53900						AVRG		2.58691		7.02274
2 Dichlorvos	1.96421	1.82228	1.84036	2.17503	2.12732	2.04712					
	2.16332						AVRG		2.01995		7.32345
4 Mevinphos	1.44354	1.24995	1.21811	1.44363	1.32123	1.40873					
	1.43954						AVRG		1.36067		7.12634
5 Demeton-O	1.19821	1.29971	1.18493	1.34261	1.38930	1.37760					
	1.28370						AVRG		1.29658		6.26552

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1 / 5.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
6 Thionazin	2.15838 / 2.03673	1.84195	1.93751	1.98059	2.08762	2.20076	AVRG		2.03479		6.19054	
7 Ethoprop	1.70034 / 1.46268	1.41105	1.44674	1.51565	1.56615	1.54046	AVRG		1.52044		6.33190	
8 Phorate	1.89356 / 1.74661	1.60276	1.58391	1.69691	1.82591	1.99241	AVRG		1.76315		8.53946	
9 Naled	94.00000 / 78857	1666	10859	28010	46004	58330	WLINR	0.13436	0.49080		0.99248	1/X
10 Sulfotepp	2.79835 / 2.57687	2.53605	2.59328	2.75080	2.67397	2.68532	AVRG		2.65923		3.59851	
12 Simazine	0.36415 / 0.41001	0.34683	0.35351	0.38559	0.39087	0.41510	AVRG		0.38086		7.05346	
13 Diazinon	12067 / 228810	15923	49407	98649	155648	181790	WLINR	0.01456	1.44446		0.99190	1/X

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	5.0000 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
14 Atrazine	5427	1231	21316	49088	85997	98759	128612	LINR	0.11621	0.83396		0.99221	
15 Propazine	4880	8102	20907	43235	72628	85745	110050	WLINR	0.02910	0.68050		0.99492	1/x
16 Disulfoton	1.39584	1.32983	1.36835	1.41433	1.46581	1.46415	1.37843	AVRG		1.40239		3.56764	
17 Demeton-S	667	15766	33785	70921	121463	157195	175573	WLINR	0.05954	1.76807		0.99272	1/x
18 Dimethoate	1.93513	1.88284	1.72920	1.81890	1.98388	1.88204	1.92489	AVRG		1.87955		4.46888	
19 Ronnel	1.49381	1.09752	1.14631	1.23377	1.29336	1.31702	1.27410	AVRG		1.26513		10.15653	
20 Merphos-A (Merphos)	0.73714	0.72841	0.76463	0.71117	0.75339	0.75359	0.62474	AVRG		0.72472		6.56840	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	5.0000 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
21 Chlorpyrifos	1.28253	1.15885	1.24944	1.20702	1.32365	1.38773	1.37311	AVRG		1.28319		6.60140
22 Fenthion	1.20874	1.15890	1.17283	1.16181	1.25398	1.18816	1.18668	AVRG		1.19016		2.76871
23 Trichloronate	6944	26053	49357	106326	170976	208762	296442	WLINR	0.05263	1.73863		0.99738
24 Anilazine	1634	2256	3581	6899	11039	13112	19108	LINR	-0.00058	0.10979		0.99085
25 Methyl Parathion	1.21391	1.12059	1.22102	1.33829	1.35198	1.32937	1.41908	AVRG		1.28489		8.00353
26 Malathion	1.23986	1.19694	1.15056	1.17724	1.17540	1.20726	1.27856	AVRG		1.20369		3.60449
27 Tokuthion	1.50291	1.31056	1.35261	1.35076	1.45106	1.48916	1.40826	AVRG		1.40933		5.28420

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
28 Parathion	1.27111	1.15628	1.24872	1.23420	1.30817	1.35972					
	1.28450						AVRG		1.26610		5.02432
29 Merphos-B (Merphos Oxone)	3793	6271	15065	23458	40683	62127					
	65080						WLINR	-0.05169	0.21659		0.96366
30 Tetrachlorvinphos (stirophos)	0.86036	0.73114	0.73243	0.80291	0.86664	0.87311					
	0.86651						AVRG		0.81902		7.82425
31 Carbophenothion methyl	1.16513	1.02032	1.04699	1.17159	1.27808	1.26831					
	1.26700						AVRG		1.17392		9.08251
32 Bolstar	1.33280	1.22387	1.19075	1.20601	1.27262	1.22830					
	1.20152						AVRG		1.23655		4.05030
33 Carbophenothion	1.18442	1.13595	1.15332	1.18001	1.34689	1.22912					
	1.28180						AVRG		1.21593		6.21486
35 Fensulfothion	0.88346	0.80409	0.88036	0.97346	0.94597	1.00424					
	0.92148						AVRG		0.91615		7.30438

<- NTC, see merphos

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TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

	Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
		5.0000 Level 7											
	37 Phosmet / EPN	19707	35826	68186	146012	207459	263604						
		330448						WLINR	-0.04262	1.00518		0.99785	1/x
	38 Famphur	1.45536	1.20800	1.18770	1.39816	1.20947	1.39569						
		1.32805						AVRG		1.31178		8.35158	
	39 Azinphos-methyl	1.25589	1.08970	1.07858	1.30240	1.20427	1.27709						
		1.19199						AVRG		1.19999		7.33978	
	40 Azinphos-ethyl	1.14013	1.11628	1.12015	1.18786	1.16269	1.14594						
		1.12699						AVRG		1.14286		2.23350	
	41 Coumaphos	0.78930	0.81655	0.85887	0.90448	0.89897	0.94628						
		0.93653						AVRG		0.87871		6.77030	
S	42 Merphos	1.56460	1.43887	1.64263	1.66880	1.73437	1.91569						
		1.70275						AVRG		1.66682		8.85773	
M	43 Total Demeton	3533	23328	47171	100663	168375	213468						
		244812						WLINR	0.06780	1.63923		0.99469	1/x

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
$ 3 Chlormefos	2.19506	1.83698	1.78322	2.03418	2.29040	2.05386					
	2.04016						AVRG		2.03341		8.83890
$ 34 Triphenyl phosphate	1.10969	0.86972	0.91132	1.07710	1.01080	0.99885					
	1.00703						AVRG		0.99779		8.47904

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TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response
Wt Linear	Amt = b + Rsp/ml	Response

Report Date: 30-Jun-2009 12:58

Calibration History

Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Start Cal Date: 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.20000		
26-JUN-2009 21:13	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\009F0901.D
Cal Level: 2 , Cal Amount: 0.50000		
26-JUN-2009 20:45	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Cal Level: 3 , Cal Amount: 1.00000		
26-JUN-2009 20:18	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\007F0701.D
Cal Level: 4 , Cal Amount: 2.00000		
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
Cal Level: 5 , Cal Amount: 3.00000		
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D
Cal Level: 6 , Cal Amount: 4.00000		
26-JUN-2009 18:55	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\004F0401.D
Cal Level: 7 , Cal Amount: 5.00000		
26-JUN-2009 18:28	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\003F0301.D

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

26-JUN-2009 21:40	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\010F1001.D
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Analysis Type: NONE

Injection Date: 26-JUN-2009 21:40
Lab Sample ID: OPP SS GSV0633
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.0000	2.0577	2.9	15.0	
2	Dichlorvos	2.0000	1.9061	4.7	15.0	
3	Mevinphos	2.0000	1.6977	15.1	15.0	<- ok
4	Chlormefos	2.0000	1.7808	11.0	15.0	
5	Thionazin	2.0000	1.9740	1.3	15.0	
6	Demeton-O	0.6500	1.8707	187.8	15.0	<- ok, see total demeton
7	Ethoprop	2.0000	2.0536	2.7	15.0	
8	Naled	2.0000	1.1983	40.1	15.0	<-
9	Sulfotepp	2.0000	1.7932	10.3	15.0	
10	Phorate	2.0000	2.0180	0.9	15.0	
11	Dimethoate	2.0000	2.0859	4.3	15.0	
12	Demeton-S	1.3600	0.2313	83.0	15.0	<- ok, see total demeton
13	Simazine	2.0000	2.6218	31.1	15.0	<-
14	Atrazine	2.0000	1.9566	2.2	15.0	
15	propazine	2.0000	1.9127	4.4	15.0	
17	Disulfoton	2.0000	1.5890	20.6	15.0	<-
16	Diazinon	2.0000	2.1583	7.9	15.0	
18	Methyl Parathion	2.0000	2.0404	2.0	15.0	
19	Ronnel	2.0000	2.1513	7.6	15.0	
20	Malathion	2.0000	1.6248	18.8	15.0	<-
21	Fenthion	2.0000	1.8840	5.8	15.0	
22	Parathion	2.0000	1.9436	2.8	15.0	
23	Chlorpyrifos	2.0000	1.9720	1.4	15.0	
24	Trichloronate	2.0000	1.8619	6.9	15.0	
25	Anilazine	2.0000	1.0151	49.2	15.0	<-
148	Merphos-A (Merphos)	2.0000	0.4078	79.6	999.0	
26	Tetrachlorvinphos (Stirophos)	2.0000	2.0880	4.4	15.0	
28	Tokuthion	2.0000	2.0254	1.3	15.0	
149	Merphos-B (Merphos Oxone)	2.0000	6.6232	231.2	999.0	
29	Carbophenothion-methyl	2.0000	1.3536	32.3	15.0	<-
29	Fensulfothion	2.0000	1.9235	3.8	15.0	
30	Bolstar / Famphur	4.0000	4.0636	1.6	15.0	
32	Carbophenothion	2.0000	1.8639	6.8	15.0	
31	Triphenyl phosphate	2.0000	1.7170	14.2	15.0	
34	Phosmet	2.0000	1.6471	17.6	15.0	<-
32	EPN	2.0000	1.7931	10.3	15.0	
33	Azinphos-methyl	2.0000	1.9226	3.9	15.0	
35	Azinphos-ethyl	2.0000	1.8331	8.3	15.0	
36	Coumaphos	2.0000	2.0063	0.3	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Injection Date: 26-JUN-2009 21:40
Lab File ID: 010F1001.D
Lab Sample ID: OPP SS GSV0633
Analysis Type: NONE
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
27 Merphos	2.0000	1.7215	13.9	15.0
40 Total Demeton	2.0000	2.1021	5.1	15.0

Average %D = 23.4

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Analysis Type: NONE

Injection Date: 26-JUN-2009 21:40
Lab Sample ID: OPP SS GSV0633
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.0000	2.0069	0.3	15.0	
2	Dichlorvos	2.0000	1.7707	11.5	15.0	
3	Chlormefos	2.0000	1.6957	15.2	15.0	<- ok
4	Mevinphos	2.0000	1.8364	8.2	15.0	
5	Demeton-O	0.6500	2.0472	215.0	15.0	<- ok, see total demeton
6	Thionazin	2.0000	1.8758	6.2	15.0	
7	Ethoprop	2.0000	1.8962	5.2	15.0	
8	Phorate	2.0000	1.9509	2.5	15.0	
10	Naled	2.0000	1.0486	47.6	15.0	<-
146	Sulfotepp	2.0000	1.7143	14.3	15.0	
10	Simazine	2.0000	3.6013	80.1	15.0	<-
12	Diazinon	2.0000	2.0803	4.0	15.0	
150	Atrazine	2.0000	1.9693	1.5	15.0	
13	Propazine	2.0000	1.8742	6.3	15.0	
14	Disulfoton	2.0000	1.6970	15.1	15.0	<- ok
15	Demeton-S	1.3600	0.2011	85.2	15.0	<- ok, see total demeton
16	Dimethoate	2.0000	1.8701	6.5	15.0	
17	Ronnel	2.0000	2.0112	0.6	15.0	
148	Merphos-A (Merphos)	2.0000	0.5348	73.3	999.0	
18	Chlorpyrifos	2.0000	2.1084	5.4	15.0	
19	Fenthion	2.0000	2.0634	3.2	15.0	
20	Trichloronate	2.0000	1.8617	6.9	15.0	
21	Anilazine	2.0000	1.2425	37.9	15.0	<-
23	Methyl Parathion	2.0000	2.0228	1.1	15.0	
24	Malathion	2.0000	1.5362	23.2	15.0	<-
25	Tokuthion	2.0000	1.8925	5.4	15.0	
26	Parathion	2.0000	2.1337	6.7	15.0	
149	Merphos-B (Merphos Oxone)	2.0000	5.0080	150.4	999.0	
27	Tetrachlorvinphos (stirophos)	2.0000	2.0814	4.1	15.0	
28	Carbophenothion methyl	2.0000	1.2466	37.7	15.0	<-
28	Bolstar	2.0000	2.0778	3.9	15.0	
30	Carbophenothion	2.0000	1.7496	12.5	15.0	
29	Triphenyl phosphate	2.0000	1.7275	13.6	15.0	
30	Fensulfothion	2.0000	2.0824	4.1	15.0	
35	Phosmet / EPN	4.0000	3.4695	13.3	15.0	
33	Famphur	2.0000	1.7579	12.1	15.0	
34	Azinphos-methyl	2.0000	1.8108	9.5	15.0	
35	Azinphos-ethyl	2.0000	1.7982	10.1	15.0	
36	Coumaphos	2.0000	1.9588	2.1	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Analysis Type: NONE

Injection Date: 26-JUN-2009 21:40
Lab Sample ID: OPP SS GSV0633
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
22 Merphos	2.0000	1.6146	19.3	15.0	<-
40 Total Demeton	2.0000	2.2483	12.4	15.0	

Average %D = 24.2

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i Injection Date: 21-JUL-2009 20:45
Lab File ID: 018F1801.D Lab Sample ID: OPP CCV GSV0827
Analysis Type: NONE Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.1935	12.3	15.0	
2	Dichlorvos	2.5000	2.5340	1.4	15.0	
3	Mevinphos	2.5000	2.3055	7.8	15.0	
4	Chlormefos	2.5000	2.3704	5.2	15.0	
5	Thionazin	2.5000	2.2009	12.0	15.0	
6	Demeton-O	0.8125	0.6919	14.8	15.0	
7	Ethoprop	2.5000	2.3797	4.8	15.0	
8	Naled	2.5000	2.1490	14.0	15.0	
9	Sulfotepp	2.5000	2.3740	5.0	15.0	
10	Phorate	2.5000	2.3783	4.9	15.0	
11	Dimethoate	2.5000	2.4406	2.4	15.0	
12	Demeton-S	1.7000	1.6615	2.3	15.0	
13	Simazine	2.5000	2.3250	7.0	15.0	
14	Atrazine	2.5000	2.1855	12.6	15.0	
15	propazine	2.5000	2.1046	15.8	15.0	<-
17	Disulfoton	2.5000	2.2368	10.5	15.0	
16	Diazinon	2.5000	2.2667	9.3	15.0	
18	Methyl Parathion	2.5000	2.4435	2.3	15.0	
19	Ronnel	2.5000	2.2206	11.2	15.0	
20	Malathion	2.5000	2.2781	8.9	15.0	
21	Fenthion	2.5000	2.1957	12.2	15.0	
22	Parathion	2.5000	2.1959	12.2	15.0	
23	Chlorpyrifos	2.5000	2.2698	9.2	15.0	
24	Trichloronate	2.5000	2.1767	12.9	15.0	
25	Anilazine	2.5000	1.7165	31.3	15.0	<-
148	Merphos-A (Merphos)	2.5000	2.2130	11.5	999.0	
26	Tetrachlorvinphos (Stirophos)	2.5000	2.1563	13.7	15.0	
28	Tokuthion	2.5000	2.1447	14.2	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	1.3272	46.9	999.0	
29	Carbophenothion-methyl	2.5000	2.3001	8.0	15.0	
29	Fensulfothion	2.5000	2.3911	4.4	15.0	
30	Bolstar / Famphur	5.0000	4.5089	9.8	15.0	
32	Carbophenothion	2.5000	2.4902	0.4	15.0	
31	Triphenyl phosphate	2.5000	2.3333	6.7	15.0	
34	Phosmet	2.5000	2.2465	10.1	15.0	
32	EPN	2.5000	2.3815	4.7	15.0	
33	Azinphos-methyl	2.5000	2.1790	12.8	15.0	
35	Azinphos-ethyl	2.5000	2.2705	9.2	15.0	
36	Coumaphos	2.5000	2.2683	9.3	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i Injection Date: 21-JUL-2009 20:45
Lab File ID: 018F1801.D Lab Sample ID: OPP CCV GSV0827
Analysis Type: NONE Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
27 Merphos	2.5000	2.0319	18.7	15.0	<-
40 Total Demeton	2.5000	2.3534	5.9	15.0	

Average %D = 10.4

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1 o,o,o-TEPT	2.5000	2.5161	0.6	15.0	
2 Dichlorvos	2.5000	2.6391	5.6	15.0	
3 Chlormefos	2.5000	2.4353	2.6	15.0	
4 Mevinphos	2.5000	2.4925	0.3	15.0	
5 Demeton-O	0.8125	0.8285	2.0	15.0	
6 Thionazin	2.5000	2.3478	6.1	15.0	
7 Ethoprop	2.5000	2.1588	13.6	15.0	
8 Phorate	2.5000	2.4548	1.8	15.0	
10 Naled	2.5000	2.1103	15.6	15.0	<-
146 Sulfotepp	2.5000	2.4158	3.4	15.0	
10 Simazine	2.5000	2.6247	5.0	15.0	
12 Diazinon	2.5000	2.3809	4.8	15.0	
150 Atrazine	2.5000	2.4010	4.0	15.0	
13 Propazine	2.5000	2.1710	13.2	15.0	
14 Disulfoton	2.5000	2.3231	7.1	15.0	
15 Demeton-S	1.7000	1.7047	0.3	15.0	
16 Dimethoate	2.5000	2.3431	6.3	15.0	
17 Ronnel	2.5000	2.3306	6.8	15.0	
148 Merphos-A (Merphos)	2.5000	2.0231	19.1	999.0	
18 Chlorpyrifos	2.5000	2.4329	2.7	15.0	
19 Fenthion	2.5000	2.2736	9.1	15.0	
20 Trichloronate	2.5000	2.4113	3.5	15.0	
21 Anilazine	2.5000	0.9743	61.0	15.0	<-
23 Methyl Parathion	2.5000	2.4273	2.9	15.0	
24 Malathion	2.5000	2.2620	9.5	15.0	
25 Tokuthion	2.5000	2.2269	10.9	15.0	
26 Parathion	2.5000	2.4088	3.6	15.0	
149 Merphos-B (Merphos Oxone)	2.5000	2.6477	5.9	999.0	
27 Tetrachlorvinphos (stirophos)	2.5000	2.2170	11.3	15.0	
28 Carbophenothion methyl	2.5000	2.4021	3.9	15.0	
28 Bolstar	2.5000	2.2664	9.3	15.0	
30 Carbophenothion	2.5000	2.6483	5.9	15.0	
29 Triphenyl phosphate	2.5000	2.5247	1.0	15.0	
30 Fensulfothion	2.5000	2.4061	3.8	15.0	
35 Phosmet / EPN	5.0000	4.6146	7.7	15.0	
33 Famphur	2.5000	2.3838	4.6	15.0	
34 Azinphos-methyl	2.5000	2.1861	12.6	15.0	
35 Azinphos-ethyl	2.5000	2.5567	2.3	15.0	
36 Coumaphos	2.5000	2.3762	5.0	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
22 Merphos	2.5000	2.6546	6.2	15.0
40 Total Demeton	2.5000	2.5333	1.3	15.0

Average %D = 7.37

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Injection Date: 22-JUL-2009 01:18
Lab File ID: 028F2801.D
Lab Sample ID: OPP CCV GSV0827
Analysis Type: NONE
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.1064	15.7	15.0	<-
2	Dichlorvos	2.5000	2.4259	3.0	15.0	
3	Mevinphos	2.5000	2.2703	9.2	15.0	
4	Chlormefos	2.5000	2.1987	12.1	15.0	
5	Thionazin	2.5000	2.1492	14.0	15.0	
6	Demeton-O	0.8125	0.7759	4.5	15.0	
7	Ethoprop	2.5000	2.2343	10.6	15.0	
8	Naled	2.5000	2.0227	19.1	15.0	<-
9	Sulfotepp	2.5000	2.2967	8.1	15.0	
10	Phorate	2.5000	2.3193	7.2	15.0	
11	Dimethoate	2.5000	2.4017	3.9	15.0	
12	Demeton-S	1.7000	1.6541	2.7	15.0	
13	Simazine	2.5000	2.3561	5.8	15.0	
14	Atrazine	2.5000	2.1956	12.2	15.0	
15	propazine	2.5000	2.1042	15.8	15.0	<-
17	Disulfoton	2.5000	2.1672	13.3	15.0	
16	Diazinon	2.5000	2.2989	8.0	15.0	
18	Methyl Parathion	2.5000	2.3905	4.4	15.0	
19	Ronnel	2.5000	2.3165	7.3	15.0	
20	Malathion	2.5000	2.1626	13.5	15.0	
21	Fenthion	2.5000	2.0331	18.7	15.0	<-
22	Parathion	2.5000	2.1251	15.0	15.0	
23	Chlorpyrifos	2.5000	2.1355	14.6	15.0	
24	Trichloronate	2.5000	2.1516	13.9	15.0	
25	Anilazine	2.5000	1.7787	28.9	15.0	<-
148	Merphos-A (Merphos)	2.5000	2.1481	14.1	999.0	
26	Tetrachlorvinphos (Stirophos)	2.5000	2.1527	13.9	15.0	
28	Tokuthion	2.5000	2.1684	13.3	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	2.6148	4.6	999.0	
29	Carbophenothion-methyl	2.5000	2.2399	10.4	15.0	
29	Fensulfothion	2.5000	2.4755	1.0	15.0	
30	Bolstar / Famphur	5.0000	4.3072	13.9	15.0	
32	Carbophenothion	2.5000	2.2286	10.9	15.0	
31	Triphenyl phosphate	2.5000	2.1720	13.1	15.0	
34	Phosmet	2.5000	2.1865	12.5	15.0	
32	EPN	2.5000	2.3220	7.1	15.0	
33	Azinphos-methyl	2.5000	2.1237	15.1	15.0	<-
35	Azinphos-ethyl	2.5000	2.1956	12.2	15.0	
36	Coumaphos	2.5000	2.2438	10.2	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Analysis Type: NONE

Injection Date: 22-JUL-2009 01:18
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
27 Merphos	2.5000	2.2563	9.7	15.0
40 Total Demeton	2.5000	2.4300	2.8	15.0

Average %D = 10.9

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i Injection Date: 22-JUL-2009 01:18
Lab File ID: 028F2801.D Lab Sample ID: OPP CCV GSV0827
Analysis Type: NONE Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1 o,o,o-TEPT	2.5000	2.4358	2.6	15.0	
2 Dichlorvos	2.5000	2.4473	2.1	15.0	
3 Chlormefos	2.5000	2.3777	4.9	15.0	
4 Mevinphos	2.5000	2.4401	2.4	15.0	
5 Demeton-O	0.8125	0.8039	1.1	15.0	
6 Thionazin	2.5000	2.3223	7.1	15.0	
7 Ethoprop	2.5000	2.0073	19.7	15.0	<-
8 Phorate	2.5000	2.5470	1.9	15.0	
10 Naled	2.5000	1.8641	25.4	15.0	<-
146 Sulfotepp	2.5000	2.2888	8.4	15.0	
10 Simazine	2.5000	2.5426	1.7	15.0	
12 Diazinon	2.5000	2.2603	9.6	15.0	
150 Atrazine	2.5000	2.2854	8.6	15.0	
13 Propazine	2.5000	2.1467	14.1	15.0	
14 Disulfoton	2.5000	2.2079	11.7	15.0	
15 Demeton-S	1.7000	1.6342	3.9	15.0	
16 Dimethoate	2.5000	2.2505	10.0	15.0	
17 Ronnel	2.5000	2.1822	12.7	15.0	
148 Merphos-A (Merphos)	2.5000	2.1922	12.3	999.0	
18 Chlorpyrifos	2.5000	2.1966	12.1	15.0	
19 Fenthion	2.5000	2.1941	12.2	15.0	
20 Trichloronate	2.5000	2.3159	7.4	15.0	
21 Anilazine	2.5000	1.7238	31.0	15.0	<-
23 Methyl Parathion	2.5000	2.3255	7.0	15.0	
24 Malathion	2.5000	2.2444	10.2	15.0	
25 Tokuthion	2.5000	2.1436	14.3	15.0	
26 Parathion	2.5000	2.3173	7.3	15.0	
149 Merphos-B (Merphos Oxone)	2.5000	3.1688	26.8	999.0	
27 Tetrachlorvinphos (stirophos)	2.5000	2.1062	15.8	15.0	<-
28 Carbophenothion methyl	2.5000	2.3813	4.7	15.0	
28 Bolstar	2.5000	2.1837	12.7	15.0	
30 Carbophenothion	2.5000	2.4427	2.3	15.0	
29 Triphenyl phosphate	2.5000	2.3529	5.9	15.0	
30 Fensulfothion	2.5000	2.4575	1.7	15.0	
35 Phosmet / EPN	5.0000	4.5171	9.7	15.0	
33 Famphur	2.5000	2.2995	8.0	15.0	
34 Azinphos-methyl	2.5000	2.0916	16.3	15.0	<-
35 Azinphos-ethyl	2.5000	2.3638	5.4	15.0	
36 Coumaphos	2.5000	2.3789	4.8	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i Injection Date: 22-JUL-2009 01:18
Lab File ID: 028F2801.D Lab Sample ID: OPP CCV GSV0827
Analysis Type: NONE Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\07

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
22 Merphos	2.5000	2.6423	5.7	15.0
40 Total Demeton	2.5000	2.4381	2.5	15.0

Average %D = 9.36

Sequence: C:\HPCHEM\1\SEQUENCE\062609.S

Sequence Table (Front Injector):

Quantification Part:

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	Vial 1	PRIMER				
2	Vial 2	HEXANE				
3	Vial 3	OPP L7 GSV0634				
4	Vial 4	OPP L6 GSV0637				
5	Vial 5	OPP L5 GSV0635				
6	Vial 6	OPP L4 GSV0638				
7	Vial 7	OPP L3 GSV0639				
8	Vial 8	OPP L2 GSV0640				
9	Vial 9	OPP L1 GSV0641				
10	Vial 10	OPP SS GSV0633				
11	Vial 11	GSV075309 SPK				
12	Vial 12	LE2931AA,MB				
13	Vial 13	LE2931AC,LCS				
14	Vial 14	LE2931AD,LCSD				
15	Vial 15	LEQA91AC,222-15				10
16	Vial 16	LEQA91AC,222-15				3
17	Vial 17	LEQCQ1AC,222-18				2
18	Vial 18	LERD61AD,377-1				
19	Vial 19	LERD81AH,377-3				
20	Vial 20	LERN71AF,115-1				
21	Vial 21	LERPQ1AF,115-2				
22	Vial 22	LERPX1AF,115-3				
23	Vial 23	LE1F91AJ,138-1				
24	Vial 24	OPP L5 GSV0635				
25	Vial 25	LE29M1AA,MB				
26	Vial 26	LE29M1AC,LCS				
27	Vial 27	LE29M1AD,LCSD				
28	Vial 28	LEQA91AA,222-15				10
29	Vial 29	LEQA91AA,222-15				3
30	Vial 30	LEQCQ1AA,222-18				2
31	Vial 31	LFARC1AA,MB				
32	Vial 32	LFARC1AC,LCS				
33	Vial 33	LFARC1AD,LCSD				
34	Vial 34	LEKL02AA,185-1				
35	Vial 35	LE29L1AA,MB				
36	Vial 36	LE29L1AC,LCS				
37	Vial 37	LE29L1AD,LCSD				
38	Vial 38	LERCV1AA,370-1				
39	Vial 39	LEWJG1AA,143-1				
40	Vial 40	OPP L5 GSV0635				
41	Vial 41	LE5PX1AA,MB				
42	Vial 42	LE5PX1AC,LCS				
43	Vial 43	LE5PX1AD,LCSD				
44	Vial 44	LE39F1AA,179-1				
45	Vial 45	LE3PF1AA,179-2				
46	Vial 46	LE39L1AA,179-3				
47	Vial 47	LFARL1AA,MB				
48	Vial 48	LFARL1AC,LCS				
49	Vial 49	LFARL1AD,LCSD				
50	Vial 50	LEKLE2AE,180-2				
51	Vial 51	LEKLF2AE,180-3				
52	Vial 52	LEKLL2AE,180-4				
53	Vial 53	LEKLQ2AE,180-5				
54	Vial 54	LENR72AD,322-1				
55	Vial 55	LEPG32AJ,161-1				
56	Vial 56	OPP L5 GSV0635				
57	Vial 57	LFD4N1AA,MB				
58	Vial 58	LFD4N1AC,LCS				

9/16/09 11:59:30 AM MPK/TLW

Sequence: C:\HPCHEM\1\SEQUENCE\062609.S

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
59	Vial 59	LFD4N1AD,LCSD				
60	Vial 60	LE3041AJ,158-1				
61	Vial 61	LFD4W1AA,MB				
62	Vial 62	LFD4W1AC,LCS				
63	Vial 63	LFD4W1AD,LCSD				
64	Vial 64	LE7EE1AA,266-2				
65	Vial 65	LE9Q61AA,216-2				
66	Vial 66	LE9RA1AA,216-3				
67	Vial 67	LFC4Q1AD,199-2				
68	Vial 68	OPP L5 GSV0635				
69	Vial 69	LFAN01AA,MB				
70	Vial 70	LFAN01AC,LCS				
71	Vial 71	LFAN01AD,LCSD				
72	Vial 72	LE4291AA,273-1				
73	Vial 73	LE4291AD,273-1S				
74	Vial 74	LE4291AE,273-1D				
75	Vial 75	LE9PJ1AA,215-1				
76	Vial 76	OPP L5 GSV0635				
77	Vial 77	OPP L1 GSV0641				
78	Vial 100	HEXANE/ACETONE				

Sequence Table (Back Injector):

No entries - empty table!

Sequence: C:\HPCHEM\1\SEQUENCE\072109.S

Sequence Table (Front Injector):

Quantification Part:

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	Vial 1	PRIMER				
2	Vial 2	HEXANE				
3	Vial 3	OPP CCV GSV0827				
4	Vial 4	LGMP21AA,MB				
5	Vial 5	LGMP21AC,LCS				
6	Vial 6	LGMP21AD,LCSD				
7	Vial 7	LGF531AF,177-5				
8	Vial 8	LGF531AX,177-5S				
9	Vial 9	LGF531A0,177-5D				
10	Vial 10	LGH8Q1AJ,243-7				
11	Vial 11	LGH9K1AJ,243-10				
12	Vial 12	LGH961AJ,243-13				
13	Vial 13	LGMQK1AA,MB				
14	Vial 14	LGMQK1AC,LCS				
15	Vial 15	LGMQK1AD,LCSD				
16	Vial 16	LGLP91AA,287-1				
17	Vial 17	LGLQC1AA,287-2				
18	Vial 18	OPP CCV GSV0827				
19	Vial 19	LGMN01AA,MB				
20	Vial 20	LGMN01AC,LCS				
21	Vial 21	LGMN01AD,LCSD				
22	Vial 22	LGDJT1AA,151-1				
23	Vial 23	LGLFG1AA,231-1				
24	Vial 24	LGLGR1AA,237-1				
25	Vial 25	LGLGV1AA,237-2				
26	Vial 26	LGLGW1AA,237-3				
27	Vial 27	LGLGX1AA,237-4				
28	Vial 28	OPP CCV GSV0827				
29	Vial 29	LGN1R1AA,MB				
30	Vial 30	LGN1R1AC,LCS				
31	Vial 31	LGN1R1AD,LCSD				
32	Vial 32	LGDGT2AA,147-1				
33	Vial 33	LGDGV2AA,147-2				
34	Vial 34	LGDH42AA,149-1				
35	Vial 35	LGDH72AA,149-2				
36	Vial 36	LGDH82AA,149-3				
37	Vial 37	LGDJD2AA,150-1				
38	Vial 38	OPP CCV GSV0827				
39	Vial 39	OPP L1 GSV				
40	Vial 40	LGN3D1AA,MB				
41	Vial 41	LGN3D1AC,LCS				
42	Vial 42	LGN3D1AD,LCSD				
43	Vial 43	LGH011AA,215-1				
44	Vial 44	LGH011AD,215-1S				
45	Vial 45	LGH011AE,215-1D				
46	Vial 46	LGH061AA,215-2				
47	Vial 47	LGH081AA,215-3				
48	Vial 48	LGH1H1AA,220-1				
49	Vial 49	OPP CCV GSV0827				
50	Vial 50	OPP L1 GSV				

Sequence Table (Back Injector):

No entries - empty table!

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D9G160231

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 001

TestAmerica

Total Metals

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9G160231

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

SOW No.: _____

Sample ID.	Lab Sample No.
TR-8B	D9G160231-001
TR-8B MS	D9G160231-001S
TR-8B MSD	D9G160231-001SD

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: Yongming Ding Name: Yongming Ding

Date: 7/28/2009 Title: Analyst V

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	TR-8B
Lot/SDG Number:	D9G160231	**Lab Sample ID:**	D9G160231-001
Matrix:	WATER	**Lab WorkOrder:**	LGLFG
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:38
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**75**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

Total Metals

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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	39.8	99.5	50.0	49.5	99.0	49.0	98.0	M
Selenium	40.0	39.4	98.5	50.0	49.8	99.6	49.2	98.4	M

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

TestAmerica

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G160231

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	1.034	103.4		
Selenium				2.00			1.997	99.8

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:	D9G160231	**Lab Sample ID:**	D9G170000-162B
Matrix:	WATER	**Lab WorkOrder:**	LGMKF
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:33
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

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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	-1.689	B			0.70	U	M

Comments:

Total Metals

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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	0.54	99.24	99.2			
Selenium	0.0	100.0	0.84	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:**	TR-8B
Lot/SDG Number:	D9G160231	**MS Lab Sample ID:**	D9G160231-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LGLFG
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:47
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	75		120		113		85 - 117
Selenium	40.0	3.5	U	36.7		91		77 - 122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	TR-8B
Lot/SDG Number:	D9G160231	**MSD Lab Sample ID:**	D9G160231-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGLFG
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:49
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	75		120		111		0.66		85 - 117	20
Selenium	40.0	3.5	U	42.7		106		15		77 - 122	20

Total Metals
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: TR-8B PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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	215.400		15.022		200.00	100.2		M
Selenium	75 - 125	203.000		0.700	U	200.00	101.5		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:	D9G160231	**Lab Sample ID:**	D9G170000-162C
Matrix:	WATER	**Lab WorkOrder:**	LGMKF
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:36
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	39.5	99		85 - 117
Selenium	40.0	37.7	94		77 - 122

Total Metals

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

TR-8B SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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	15.022		15.030	B	0.1		M
Selenium	0.140	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

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
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

ICP ID Number: Agilent 7500 Date: 4/7/2009

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

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160231

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
TR-8B	7/21/2009	50.0	50.0
TR-8B MS	7/21/2009	50.0	50.0
TR-8B MSD	7/21/2009	50.0	50.0
MB9198162	7/21/2009	50.0	50.0
Check Sample	7/21/2009	50.0	50.0

Comments:

Total Metals

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G160231

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/23/2009 End Date: 7/23/2009

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	20:47				X															X						
100 PPB	1.00	20:50				X															X						
ICV	1.00	20:52				X															X						
ZZZZZZ	1.00	20:55																									
ICB	1.00	20:58				X															X						
RL STD	1.00	21:00				X																					
ZZZZZZ	1.00	21:03																									
ZZZZZZ	1.00	21:06																									
ICSA	1.00	21:09				X															X						
ICSAB	1.00	21:11				X															X						
ZZZZZZ	1.00	21:14																									
ALTSE	1.00	21:17																			X						
LR	1.00	21:20				X															X						
ZZZZZZ	1.00	21:22																									
CCV	1.00	21:25				X															X						
CCB	1.00	21:28				X															X						
ZZZZZZ	1.00	21:30																									
MB9198162	1.00	21:33				X															X						
Check Sample	1.00	21:36				X															X						
TR-8B	5.00	21:38				X															X						
TR-8B SER	25.00	21:41				X															X						
TR-8B PDS	1.00	21:44				X															X						
TR-8B MS	5.00	21:47				X															X						
TR-8B MSD	5.00	21:49				X															X						
ZZZZZZ	1.00	21:52																									
CCV	1.00	21:55				X															X						
CCB	1.00	21:58				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: D9G160235

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 001

TestAmerica

Total Metals
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9G160235

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

SOW No.: _____

Sample ID.	Lab Sample No.
TR-10B	D9G160235-001

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: Yongming Ding Name: Yongming Ding

Date: 7/28/2009 Title: Analyst V

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	TR-10B
Lot/SDG Number:	D9G160235	**Lab Sample ID:**	D9G160235-001
Matrix:	WATER	**Lab WorkOrder:**	LGLGF
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 09:00
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:52
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**65**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

Total Metals
-2A-
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

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	39.8	99.5	50.0	49.5	99.0	49.0	98.0	M
Selenium	40.0	39.4	98.5	50.0	49.8	99.6	49.2	98.4	M

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

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G160235

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	1.034	103.4		
Selenium				2.00			1.997	99.8

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:	D9G160235	**Lab Sample ID:**	D9G170000-162B
Matrix:	WATER	**Lab WorkOrder:**	LGMKF
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:33
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

-3-

BLANKS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

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	-1.689	B			0.70	U	M

Comments:

TestAmerica

Total Metals

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

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	0.54	99.24	99.2			
Selenium	0.0	100.0	0.84	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:	D9G160235	**MS Lab Sample ID:**	D9G160231-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LGLFG
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:47
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	75		120		113		85 - 117
Selenium	40.0	3.5	U	36.7		91		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:	D9G160235	**MSD Lab Sample ID:**	D9G160231-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGLFG
% Moisture:	N/A	**Date/Time Collected:**	07/14/09 11:45
Basis:	Wet	**Date/Time Received:**	07/16/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:49
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	75		120		111		0.66		85 - 117	20
Selenium	40.0	3.5	U	42.7		106		15		77 - 122	20

TestAmerica

Total Metals
-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.: D9G160235

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	215.400		15.022		200.00	100.2		M
Selenium	75 - 125	203.000		0.700	U	200.00	101.5		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:	D9G160235	**Lab Sample ID:**	D9G170000-162C
Matrix:	WATER	**Lab WorkOrder:**	LGMKF
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/09 08:00
QC Batch ID:	9198162	**Date/Time Analyzed:**	07/23/09 21:36
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	39.5	99		85 - 117
Selenium	40.0	37.7	94		77 - 122

Total Metals

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

INTRA-LAB QC SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

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	15.022		15.030	B	0.1		M
Selenium	0.140	U	3.500	U			M

Comments: _____

TestAmerica

Total Metals

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

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
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

ICP ID Number: Agilent 7500 Date: 4/7/2009

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

Comments: _____

Form XII - IN

Total Metals

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G160235

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	7/21/2009	50.0	50.0
LAB MS	7/21/2009	50.0	50.0
LAB MSD	7/21/2009	50.0	50.0
TR-10B	7/21/2009	50.0	50.0
MB9198162	7/21/2009	50.0	50.0
Check Sample	7/21/2009	50.0	50.0

Comments:

Total Metals

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G160235

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/23/2009 End Date: 7/23/2009

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	20:47				X															X						
100 PPB	1.00	20:50				X															X						
ICV	1.00	20:52				X															X						
ZZZZZZ	1.00	20:55																									
ICB	1.00	20:58				X															X						
RL STD	1.00	21:00				X																					
ZZZZZZ	1.00	21:03																									
ZZZZZZ	1.00	21:06																									
ICSA	1.00	21:09				X															X						
ICSAB	1.00	21:11				X															X						
ZZZZZZ	1.00	21:14																									
ALTSE	1.00	21:17																			X						
LR	1.00	21:20				X															X						
ZZZZZZ	1.00	21:22																									
CCV	1.00	21:25				X															X						
CCB	1.00	21:28				X															X						
ZZZZZZ	1.00	21:30																									
MB9198162	1.00	21:33				X															X						
Check Sample	1.00	21:36				X															X						
INTRA-LAB QC	5.00	21:38				X															X						
INTRA-LAB QC SER	25.00	21:41				X															X						
INTRA-LAB QC PDS	1.00	21:44				X															X						
LAB MS	5.00	21:47				X															X						
LAB MSD	5.00	21:49				X															X						
TR-10B	5.00	21:52				X															X						
CCV	1.00	21:55				X															X						
CCB	1.00	21:58				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: D9G170255

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9G170255

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

SOW No.: _____

Sample ID.	Lab Sample No.
M-92B	D9G170255-001
M-92BMS MS	D9G170255-001S
M-92BMSD MSD	D9G170255-001SD

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: 7/30/09 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-92B
Lot/SDG Number:	D9G170255	**Lab Sample ID:**	D9G170255-001
Matrix:	WATER	**Lab WorkOrder:**	LGNJH
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:41
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**93**	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.: D9G170255

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	39.6	99.0	50.0	49.8	99.6	49.9	99.8	M
Selenium	40.0	40.1	100.2	50.0	50.9	101.8	52.0	104.0	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.: D9G170255

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	50.5	101.0	50.6	101.2	M
Selenium				50.0	49.0	98.0	49.5	99.0	M

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

TestAmerica

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	50.4	100.8	50.7	101.4	M
Selenium				50.0	50.7	101.4	50.5	101.0	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.: D9G170255

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				1.00	0.979	97.9		
Selenium				1.00	0.938	93.8		

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:	D9G170255	**Lab Sample ID:**	D9G200000-150B
Matrix:	WATER	**Lab WorkOrder:**	LGP0Q
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:36
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.: D9G170255

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.: D9G170255

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.: D9G170255

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	0.49	96.03	96.0	0.51	99.17	99.2
Selenium	0.0	100.0	0.16	96.83	96.8	0.21	98.62	98.6

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-92BMS
Lot/SDG Number:	D9G170255	**MS Lab Sample ID:**	D9G170255-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LGNJH
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:50
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	93		137		110		85 - 117
Selenium	40.0	3.5	U	45.7		109		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-92BMSD
Lot/SDG Number:	D9G170255	**MSD Lab Sample ID:**	D9G170255-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGNJH
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:52
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	93		136		107		0.87		85 - 117	20
Selenium	40.0	3.5	U	37.6		89		19		77 - 122	20

TestAmerica

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: M-92B PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	210.800		18.624		200.00	96.1		M
Selenium	75 - 125	191.900		0.700	U	200.00	96.0		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:	D9G170255	**Lab Sample ID:**	D9G200000-150C
Matrix:	WATER	**Lab WorkOrder:**	LGP0Q
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	39.2	98		85 - 117
Selenium	40.0	34.0	85		77 - 122

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.: M-92B SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	18.624		18.710	B	0.5		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.: D9G170255

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.: D9G170255

ICP ID Number: Agilent 7500 Date: 7/7/2009

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.: D9G170255

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-92B	7/22/2009	50.0	50.0
M-92BMS MS	7/22/2009	50.0	50.0
M-92BMSD MSD	7/22/2009	50.0	50.0
MB9201150	7/22/2009	50.0	50.0
Check Sample	7/22/2009	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.: D9G170255

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	16:29				X															X						
100 PPB	1.00	16:32				X															X						
ICV	1.00	16:34				X															X						
ICB	1.00	16:40				X															X						
RL STD	1.00	16:42				X															X						
ICSA	1.00	16:51				X															X						
ICSAB	1.00	16:53				X															X						
RINSE	1.00	16:56				X															X						
LR	1.00	16:59				X															X						
RINSE	1.00	17:01				X															X						
CCV	1.00	17:04				X															X						
CCB	1.00	17:07				X															X						
CAL BLANK	1.00	18:56				X															X						
100 PPB	1.00	18:59				X															X						
CCV	1.00	19:02				X															X						
CCB	1.00	19:05				X															X						
CCV	1.00	20:10				X															X						
CCB	1.00	20:13				X															X						
ICSA	1.00	20:18				X															X						
ICSAB	1.00	20:21				X															X						
WASH	1.00	20:24				X															X						
CCV	1.00	20:27				X															X						
CCB	1.00	20:29				X															X						
CCV	1.00	21:27				X															X						
CCB	1.00	21:30				X															X						
MB9201150	1.00	21:36				X															X						
Check Sample	1.00	21:39				X															X						
M-92B	5.00	21:41				X															X						
M-92B SER	25.00	21:44				X															X						
M-92B PDS	1.00	21:47				X															X						
M-92BMS MS	5.00	21:50				X															X						
M-92BMSD MSD	5.00	21:52				X															X						
CCV	1.00	21:59				X															X						

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

Total Metals Analvsis

-14-

ANALYSIS RUN LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9G170255

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	22:01				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: D9G170255

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.: D9G170255

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

SOW No.: _____

Sample ID.	Lab Sample No.
M-92BDISS	D9G170255-002
M-92BDISSMS MS	D9G170255-002S
M-92BDISSMSD MSD	D9G170255-002SD

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: 7/30/09 Title: Metals Analyst

COVER PAGE - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-92BDISS
Lot/SDG Number:	D9G170255	**Lab Sample ID:**	D9G170255-002
Matrix:	WATER	**Lab WorkOrder:**	LGNJJ
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201157	**Date/Time Analyzed:**	07/28/09 21:14
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	5		

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-38-2	Arsenic	**100**	1.0	25	
7782-49-2	Selenium	3.5	3.5	25	U

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	39.6	99.0	50.0	49.8	99.6	49.9	99.8	M
Selenium	40.0	40.1	100.2	50.0	50.9	101.8	52.0	104.0	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.: D9G170255

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	50.5	101.0	50.6	101.2	M
Selenium				50.0	49.0	98.0	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.: D9G170255

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	50.5	101.0	50.4	100.8	M
Selenium				50.0	47.8	95.6	50.7	101.4	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.: D9G170255

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	0.979	97.9		
Selenium				1.00	0.938	93.8		

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:	D9G170255	**Lab Sample ID:**	D9G200000-157B
Matrix:	WATER	**Lab WorkOrder:**	LGP0W
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201157	**Date/Time Analyzed:**	07/28/09 21:08
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.: D9G170255

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.: D9G170255

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:

Dissolved Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	0.49	96.03	96.0	0.51	99.17	99.2
Selenium	0.0	100.0	0.16	96.83	96.8	0.21	98.62	98.6

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Northgate Environmental Management, Inc.

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	M-92BDISSMS
Lot/SDG Number:	D9G170255	**MS Lab Sample ID:**	D9G170255-002S
Matrix:	WATER	**MS Lab WorkOrder:**	LGNJJ
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201157	**Date/Time Analyzed:**	07/28/09 21:22
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	100		145		102		85 - 117
Selenium	40.0	3.5	U	44.2		102		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-92BDISSMSD
Lot/SDG Number:	D9G170255	**MSD Lab Sample ID:**	D9G170255-002D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGNJJ
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201157	**Date/Time Analyzed:**	07/28/09 21:25
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	100		139		86		4.4		85 - 117	20
Selenium	40.0	3.5	U	41.0		94		7.6		77 - 122	20

TestAmerica

Dissolved Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: M-92BDISS PDS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	215.200		20.960		200.00	97.1		M
Selenium	75 - 125	191.400		0.700	U	200.00	95.7		M

Comments: _____

Form V (PART 2) - IN

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:	D9G170255	**Lab Sample ID:**	D9G200000-157C
Matrix:	WATER	**Lab WorkOrder:**	LGP0W
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201157	**Date/Time Analyzed:**	07/28/09 21:11
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	40.4	101		85 - 117
Selenium	40.0	40.8	102		77 - 122

Dissolved Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

M-92BDISS SER

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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	20.960		20.930	B	0.1		M
Selenium	0.700	U	3.500	U			M

Comments: _____

TestAmerica

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

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: _____

Form X - IN

TestAmerica

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

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

ICP ID Number: Agilent 7500 Date: 7/7/2009

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

Comments: _____

Form XII - IN

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: Northgate Environmental Management, Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9G170255

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
M-92BDISS	7/22/2009	50.0	50.0
M-92BDISSMS MS	7/22/2009	50.0	50.0
M-92BDISSMSD MSD	7/22/2009	50.0	50.0
MB9201157	7/22/2009	50.0	50.0
Check Sample	7/22/2009	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.: D9G170255

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	16:29				X															X						
100 PPB	1.00	16:32				X															X						
ICV	1.00	16:34				X															X						
ICB	1.00	16:40				X															X						
RL STD	1.00	16:42				X															X						
ICSA	1.00	16:51				X															X						
ICSAB	1.00	16:53				X															X						
RINSE	1.00	16:56				X															X						
LR	1.00	16:59				X															X						
RINSE	1.00	17:01				X															X						
CCV	1.00	17:04				X															X						
CCB	1.00	17:07				X															X						
CAL BLANK	1.00	18:56				X															X						
100 PPB	1.00	18:59				X															X						
CCV	1.00	19:02				X															X						
CCB	1.00	19:05				X															X						
CCV	1.00	20:10				X															X						
CCB	1.00	20:13				X															X						
ICSA	1.00	20:18				X															X						
ICSAB	1.00	20:21				X															X						
WASH	1.00	20:24				X															X						
CCV	1.00	20:27				X															X						
CCB	1.00	20:29				X															X						
CCV	1.00	21:00				X															X						
CCB	1.00	21:03				X															X						
MB9201157	1.00	21:08				X															X						
Check Sample	1.00	21:11				X															X						
M-92BDISS	5.00	21:14				X															X						
M-92BDISS SER	25.00	21:16				X															X						
M-92BDISS PDS	1.00	21:19				X															X						
M-92BDISSMS MS	5.00	21:22				X															X						
M-92BDISSMSD MSD	5.00	21:25				X															X						
CCV	1.00	21:27				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.: D9G170255

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	21:30				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: D9G180154

Client: Northgate/Tronox

Method: SW846 6020/Collision Cell

Associated Sample: 001

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Northgate Environmental Management, Inc. SDG No.: D9G180154

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

SOW No.: _____

Sample ID.	Lab Sample No.
M-97B	D9G180154-001

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: 7/30109 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-97B
Lot/SDG Number:	D9G180154	**Lab Sample ID:**	D9G180154-001
Matrix:	WATER	**Lab WorkOrder:**	LGPGA
% Moisture:	N/A	**Date/Time Collected:**	07/16/09 08:45
Basis:	Wet	**Date/Time Received:**	07/18/09 08:25
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:56
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	**5.4**	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.: D9G180154

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	39.6	99.0	50.0	49.8	99.6	49.9	99.8	M
Selenium	40.0	40.1	100.2	50.0	50.9	101.8	52.0	104.0	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.: D9G180154

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	50.5	101.0	50.6	101.2	M
Selenium				50.0	49.0	98.0	49.5	99.0	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.: D9G180154

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	50.4	100.8	50.7	101.4	M
Selenium				50.0	50.7	101.4	50.5	101.0	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.: D9G180154

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	0.979	97.9		
Selenium				1.00	0.938	93.8		

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:	D9G180154	**Lab Sample ID:**	D9G200000-150B
Matrix:	WATER	**Lab WorkOrder:**	LGP0Q
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:36
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.: D9G180154

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.: D9G180154

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.: D9G180154

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	0.49	96.03	96.0	0.51	99.17	99.2
Selenium	0.0	100.0	0.16	96.83	96.8	0.21	98.62	98.6

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:	D9G180154	**MS Lab Sample ID:**	D9G170255-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LGNJH
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:50
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	93		137		110		85 - 117
Selenium	40.0	3.5	U	45.7		109		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:	D9G180154	**MSD Lab Sample ID:**	D9G170255-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LGNJH
% Moisture:	N/A	**Date/Time Collected:**	07/15/09 09:00
Basis:	Wet	**Date/Time Received:**	07/17/09 08:45
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:52
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	93		136		107		0.87		85 - 117	20
Selenium	40.0	3.5	U	37.6		89		19		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.: D9G180154

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	210.800		18.624		200.00	96.1		M
Selenium	75 - 125	191.900		0.700	U	200.00	96.0		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:	D9G180154	**Lab Sample ID:**	D9G200000-150C
Matrix:	WATER	**Lab WorkOrder:**	LGP0Q
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/22/09 07:00
QC Batch ID:	9201150	**Date/Time Analyzed:**	07/28/09 21:39
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Arsenic	40.0	39.2	98		85 - 117
Selenium	40.0	34.0	85		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.: D9G180154

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	18.624		18.710	B	0.5		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.: D9G180154

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.: D9G180154

ICP ID Number: Agilent 7500 Date: 7/7/2009

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.: D9G180154

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	7/22/2009	50.0	50.0
LAB MS/MSD MS	7/22/2009	50.0	50.0
LAB MS/MSD MSD	7/22/2009	50.0	50.0
M-97B	7/22/2009	50.0	50.0
MB9201150	7/22/2009	50.0	50.0
Check Sample	7/22/2009	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.: D9G180154

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	16:29				X															X						
100 PPB	1.00	16:32				X															X						
ICV	1.00	16:34				X															X						
ICB	1.00	16:40				X															X						
RL STD	1.00	16:42				X															X						
ICSA	1.00	16:51				X															X						
ICSAB	1.00	16:53				X															X						
RINSE	1.00	16:56				X															X						
LR	1.00	16:59				X															X						
RINSE	1.00	17:01				X															X						
CCV	1.00	17:04				X															X						
CCB	1.00	17:07				X															X						
CAL BLANK	1.00	18:56				X															X						
100 PPB	1.00	18:59				X															X						
CCV	1.00	19:02				X															X						
CCB	1.00	19:05				X															X						
CCV	1.00	20:10				X															X						
CCB	1.00	20:13				X															X						
ICSA	1.00	20:18				X															X						
ICSAB	1.00	20:21				X															X						
WASH	1.00	20:24				X															X						
CCV	1.00	20:27				X															X						
CCB	1.00	20:29				X															X						
CCV	1.00	21:27				X															X						
CCB	1.00	21:30				X															X						
MB9201150	1.00	21:36				X															X						
Check Sample	1.00	21:39				X															X						
INTRA-LAB QC	5.00	21:41				X															X						
INTRA-LAB QC SER	25.00	21:44				X															X						
INTRA-LAB QC PDS	1.00	21:47				X															X						
LAB MS/MSD MS	5.00	21:50				X															X						
LAB MS/MSD MSD	5.00	21:52				X															X						
M-97B	1.00	21:56				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.: D9G180154

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/28/2009 End Date: 7/28/2009

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	21:59				X															X						
CCB	1.00	22:01				X															X						

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

4.3°C
IR1 7/13/09

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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. 2027.001.00247
Page: 1 of 1
Cooler # 1 of 1

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?	
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		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	OIL RINSEATE	WH
OIL	SW	OTHER	OT
WIPE	AA	ANIMAL TISSUE	TA
AMBIENT AIR	AE		
SVE AIR	GS		
SOIL GAS			

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/Collison Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	H-11B	WG	G	7/13/2009	9:00 AM	1	N			X						X		500 ml Plastic
2	H-11BDISS	WG	G	7/13/2009	9:00 AM	1	Y			X						X		500 ml Plastic
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10	DRB 7-13-09																	
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
	7-13	14:30	GES	7/13	1430
GES	7/13	1600	GES	7/13/09	1600
GES	7/14/09			7/14/09	1110
	7/14/09	1100	FedEx	7/15/09	0845

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Dana Brown
SIGNATURE of SAMPLER:
DATE Signed: 7-13-09 Time: 14:30

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 #: D9G150224 Date/Time Received: 7/15/9 0845

Company Name & Sampling Site: TRONOX - NorThgate

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): 4.3 _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
❑	☑	❑	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	CHC
	☑	❑	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 # D96150224

Login Checks:

Initials AG

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 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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3.4 °C [initials]
7/16/09 [initials]

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. 2027.001.00264
Page: 1 of 1
Cooler # 1 of 1

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 WW; FREE PRODUCT LF; SOIL SO; OIL SW; WIPE AA; AMBIENT AIR AE; SVE AIR GS; SOIL GAS — WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; OIL 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)	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	EPA 6020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	TR-8B	WG	G	7/14/2009	11:45 AM	1	N			X						X		500 ml Plastic
2	TR-8B	WG	G	7/14/2009	11:45 AM	2	N										X	2-1L Amber Glass
3																		
4																		
5																		
6																		
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
[signature]	7/14	14:00	[signature] GES	7/14	1400
[signature] GES	7/14	1600	[signature]	7/14	1600
[signature]	7/15	1140	[signature]	7/15/09	1140
[signature]	7/15/09	1140	[signature] TAD	7/15/09	0845

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Dana Brown
SIGNATURE of SAMPLER: [signature]
DATE Signed: 7/14/09 Time: 14:00

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

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G1W0231 Date/Time Received: 7/16/09 0845

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): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 3.4 vc _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	LL
	☑	☐	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 # D9G160231

Login Checks:

Initials LM

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).

3.4°C ZC
7/16/09 IR1

205

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. 2027.001.00248
Page: 1 of 1
Cooler # 1 of 1

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

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

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	TR-10B	WG	G	7/14/2009	9:00 AM	1	N			X						X		500 ml Plastic
2																		
3																		
4																		
5																		
6																		
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
	7/14	14:00	GES	7/14	1400
	7/14	1600		7/14	1600
	7/15	1140		7/16/09	1140
	7/15/09	1620		7/16/09	0845

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Dana Brown
SIGNATURE of SAMPLER:
DATE Signed 7/14/09 Time: 14:00

Sample Receipt Conditions

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

Test America

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TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G1L0235 Date/Time Received: 7/16/09 0845

Company Name & Sampling Site: Northgate - TRONOX

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): 3.4 °C

N/A	*Yes*	*No*		*Initials*
❑	☒	❑	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	LC
	☒	❑	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 # D9G160235

Login Checks:

Initials JM

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 KC

☒	☐	☐	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).

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. 2027.001.00268
Page: 1 of 1
Cooler # 1 of 1

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?	
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 (WW), FREE PRODUCT (LF), SOIL (SO), OIL (OL), WIPE (SL), AMBIENT AIR (SW), SVE AIR (AA), SOIL GAS (AE), 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-92B	WG	G	7/15/2009	9:00	1	N			X						X		500 ml Plastic
2	M-92BDISS	WG	G	7/15/2009	9:00	1	Y			X						X		500 ml Plastic
3	M-92BMS	WG	G	7/15/2009	9:00	1	N			X						X		500 ml Plastic
4	M-92BMSDISS	WG	G	7/15/2009	9:00	1	Y			X						X		500 ml Plastic
5	M-92BMSD	WG	G	7/15/2009	9:00	1	N			X						X		500 ml Plastic
6	M-92BMSDDISS	WG	G	7/15/2009	9:00	1	Y			X						X		500 ml Plastic
7																		
8																		
9	ORB 7-15-09																	
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
Dana R. Brown, NGEM	15-Jul	13:35	GES	7/15	1335
GES	7/15	1600	TGES	7/15	1600
	7/16	1105		7/16/09	11 05
	7/16		TAD	7/17/09	0845

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

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Dana R. Brown
SIGNATURE of SAMPLER: ORB 7/15
DATE Signed: 7/15/2009 Time: 13:35

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?

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G170255 Date/Time Received: 7/17/09 0845

Company Name & Sampling Site: Northgate - Tronox

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

Quote #: 830460

Special Instructions:

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

Unpacking Checks:

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

Temperatures (°C): 0.3 _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
❑	☒	❑	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	JM
	☒	❑	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 # D9G170255

Login Checks:

N/A	Yes	No		Initials: LM.
	☒	☐	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: AC
☒	☐	☐	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).

Table of Contents

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. 2027.001.00296
Page: 1 of 1
Cooler # 1 of 1

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		

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER LF; FREE PRODUCT OL; SOIL SW; OIL AA; WIPE AE; AMBIENT AIR; SVE AIR; SOIL GAS. 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)	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	EPA 6020/Collision Cell	EPA 8141A OPP Pest	Comments/Lab Sample I.D.
1	M-97B	WG	G	7/16/2009	8:45	1	N			X						X		500 ml Plastic
2	M-97B	WG	G	7/16/2009	8:45	2	N										X	2-1L Amber Glass
3																		
4																		
5																		
6	DRB																	
7	7-16-09																	
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	Temp in 0C	Samples on Ice?	Sample intact?	Trip Blank?
Dana Brown, NGEM	16-Jul	13:35	GES	7/16	1335		Y/N	Y/N	Y/N
GES	7/16	1600	GES	7/16	1600		Y/N	Y/N	Y/N
GES	7/17	1235		7/17/09	1235		Y/N	Y/N	Y/N
	7/17/09	1600	FedX	7/18/9	0825		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 R. Brown
SIGNATURE of SAMPLER: [signature] DATE Signed 7/16/2009 Time: 13:35

4°C A6 JRL 7/18/9

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G180154 Date/Time Received: 7/18/9 0825

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): 4.3

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.	
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☑	❑	❑	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.	
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	☑	❑	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 # D9G180154

Login Checks:

Initials AC

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 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?
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☑	☐	☐	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).

Phillips, Michael

From: Cindy Arnold [carnold@ngem.com]
Sent: Monday, July 20, 2009 9:55 AM
To: Middleditch, Eric; Phillips, Michael
Cc: cindy.arnold@ngem.com; frank.hagar@ngem.com; derrick.willis@ngem.com
Subject: RE: SCR for D9G180154 - Tronox Henderson

Frank - can we please interrupt the scheduled sampling que and recollect the OPPest today or tomorrow? Thanks, Cindy

------- Original Message ------- On 7/20/2009 3:47 PM Middleditch, Eric wrote:
SCR for D9G180154 - Tronox Henderson

<>

RECEIPT DISCREPANCIES: Both 1L amber bottles for sample D9G180154-001 (M-97B) arrived broken. The laboratory is unable to perform the requested 8141 OPP Pest analysis.

Please see the attached file.

Thanks,
ERIC MIDDLEDITCH
Project Management Assistant
Tes tAmerica
THE LEADER IN ENVIRONMENTAL TESTING
4955 Yarrow Street
Arvada, CO 80002
Tel 303.736.0100 ext. 165
www.testamericainc.com

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9G150224

Client: Northgate Environmental

Batch(es) #: 9197227

Associated Samples: 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: 7/22/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G150224	2 D	SE	LGH2H1AG	20090721	6020DSVD	9197227	AG072109	024
D9G150224	2 S	SE	LGH2H1AF	20090721	6020DSVD	9197227	AG072109	024
D9G150224	2 D	AS	LGH2H1AE	20090721	6020DSVD	9197227	AG072109	024
D9G150224	2 S	AS	LGH2H1AD	20090721	6020DSVD	9197227	AG072109	024
D9G150224	2	SE	LGH2H1AC	20090721	6020DSVD	9197227	AG072109	024
D9G150224	2	AS	LGH2H1AA	20090721	6020DSVD	9197227	AG072109	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9197227**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: KS

Prep Date: ~~07/16/09~~ 7.20.09
Due Date: 07/27/09

Lot	Work Order			Initial Weight/Volume
D9G160000 Water	**LGKQW**	B	Due Date: SDG:	50 mL
D9G160000 Water	**LGKQW**	C	Due Date: SDG:	50 mL
D9G150224 Water	**LGH2H** Dissolved		Due Date: 07/27/09 SDG:	50 mL
D9G150224 Water	**LGH2H** Dissolved	S	Due Date: 07/27/09 SDG:	50 mL
D9G150224 Water	**LGH2H** Dissolved	D	Due Date: 07/27/09 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 7/21/09

7/22/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

DISSOLVED WATER DIGESTION FOR ICPMS (Prep code MD)

BATCH # 9197227 **ALLIQUOTTED BY:** JRW
PREP DATE: 7.20.2009 **DIGESTED BY:** KS

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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: KS

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	2

TEMPERATURE CYCLES

Thermometer ID: 7038 Block & Cup #: 6, 29

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3/HCl	7:30	91	12:30	92

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Katie [signature] ***Date:*** 7.20.09

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

Jul-21-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures | Lot No.: B2-ZN02045 | Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 | Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn
Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn
Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4008-09, ICP-MS (024) INT STD BRC-HIGH

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 250.00
Date Prep./Opened: 07-02-2009
Date Expires(1): 11-10-2009 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock
Aliquot Amount (ml): 1.2000
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	4,800.0

Parent Std No.: STD1972-09, Lithium 6 Stock
Aliquot Amount (ml): 1.5000
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	6,000.0

Parent Std No.: STD1973-09, Indium Stock
Aliquot Amount (ml): 0.4000
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	1,600.0

Parent Std No.: STD6317-08, Scandium Stock
Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	1,600.0

Parent Std No.: STD6318-08, Holmium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,600.0

STD4289-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-20-2009
Date Expires(1): 08-20-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard — Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4309-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 07-21-2009
Date Expires(1): 08-21-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4308-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4310-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.1000
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	10.000

STD4311-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00

Sb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4312-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	50.000
Zn	20.000	50.000
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)

Fe	1,000.0	2,500.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4313-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn — Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4311-09, ICP-MS 100 ppb cal — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 07-22-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
V	100.00	0.0010
Zn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010
Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
Mo	100.00	0.0010
Sb	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010

STD4314-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (2 Days)
pipettes: Met 20 and Met 8

Parent Std No.: STD4313-09, 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
V	0.0010	0.0002
Zn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Fe	0.0500	0.0100
Sn	0.0010	0.0002

STD4315-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 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 (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4316-09, ICPMS LR STD 1000 ppb Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	1,000.0
Zn	20.000	1,000.0
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4317-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000

Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4318-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (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

STD4319-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: LRD 07/21/2009

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/22/09 11:30:44

File ID: **AG072109** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/21/09 17:25		☐
3	Cal Blank				1.0	07/21/09 17:28		☐
4	100 ppb				1.0	07/21/09 17:31		☐
5	ICV				1.0	07/21/09 17:33		☐
6	RLIV				1.0	07/21/09 17:36		☐
7	ICB				1.0	07/21/09 17:39		☐
8	RL STD				1.0	07/21/09 17:42		☐
9	AFCEE RL				1.0	07/21/09 17:44		☐
10	ALTSe				1.0	07/21/09 17:47		☐
11	ICSA				1.0	07/21/09 17:50		☐
12	ICSAB				1.0	07/21/09 17:53		☐
13	RINSE				1.0	07/21/09 17:55		☐
14	LR				1.0	07/21/09 17:58		☐
15	RINSE				1.0	07/21/09 18:00		☐
16	CCV				1.0	07/21/09 18:03		☐
17	CCB				1.0	07/21/09 18:06		☐
18	RLCV				1.0	07/21/09 18:09		☐
19	LGEE4BF	D9G130000	9194274	MD	1.0	07/21/09 18:11		☐
20	LGEE4CF	D9G130000	9194274	MD	1.0	07/21/09 18:14		☐
21	LGDJWF 10X	D9G110152-2	9194274	MD	10.0	07/21/09 18:17		☐
22	LGDJWP50F	D9G110152	9194274		50.0	07/21/09 18:20		☐
23	LGDJWZF	D9G110152-2	9194274		1.0	07/21/09 18:22		☐
24	LGDJWSF 10	D9G110152-2	9194274	MD	10.0	07/21/09 18:25		☐
25	LGDJWDF 10	D9G110152-2	9194274	MD	10.0	07/21/09 18:28		☐
26	CCV				1.0	07/21/09 18:30		☐
27	CCB				1.0	07/21/09 18:33		☐
28	RLCV				1.0	07/21/09 18:36		☐
29	LGEERB	D9G130000	9194272	MS	1.0	07/21/09 18:39		☐
30	LGEERC	D9G130000	9194272	MS	1.0	07/21/09 18:41		☐
31	LGCN3 10X	D9G100272-1	9194272	MS	10.0	07/21/09 18:44		☐
32	LGCN3P50	D9G100272	9194272		50.0	07/21/09 18:47		☐
33	LGCN3Z	D9G100272-1	9194272		1.0	07/21/09 18:50		☐
34	LGCN3S 10X	D9G100272-1	9194272	MS	10.0	07/21/09 18:52		☐
35	CCV				1.0	07/21/09 18:55		☐
36	CCB				1.0	07/21/09 18:58		☐
37	RLCV				1.0	07/21/09 19:01		☐
38	LGCN3D 10X	D9G100272-1	9194272	MS	10.0	07/21/09 19:03		☐
39	LGCQK 10X	D9G100274-1	9194272	MS	10.0	07/21/09 19:06		☐
40	LGDJV 10X	D9G110152-1	9194272	MS	10.0	07/21/09 19:09		☐
41	LGDJ3 10X	D9G110155-1	9194272	MS	10.0	07/21/09 19:11		☐
42	LGDKR 10X	D9G110159-1	9194272	MS	10.0	07/21/09 19:14		☐
43	CCV				1.0	07/21/09 19:17		☐
44	CCB				1.0	07/21/09 19:20		☐
45	RLCV				1.0	07/21/09 19:22		☐
46	LGFC2B	D9G140000	9195077	46	1.0	07/21/09 19:25		☐
47	LGFC2C	D9G140000	9195077	46	1.0	07/21/09 19:28		☐

Denver

RUN SUMMARY

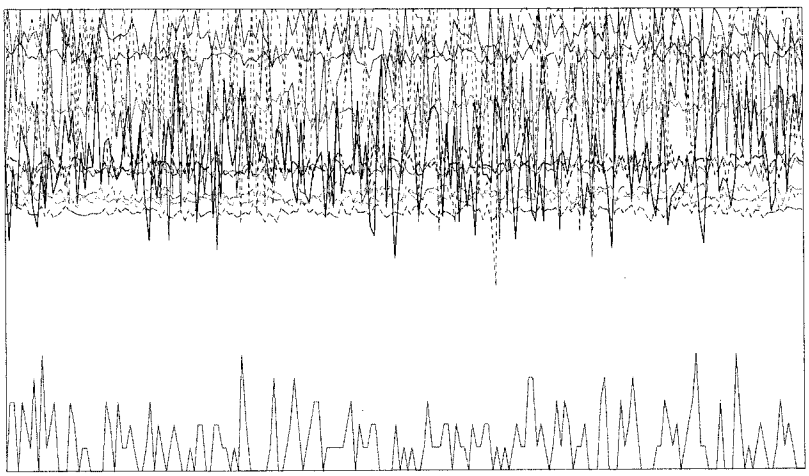
Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 07/22/09 11:30:44

File ID: **AG072109** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	LGEAD	D9G130118-1	9195077	U1	1.0	07/21/09 19:31		☐
49	LGEAR	D9G130118-2	9195077	U1	1.0	07/21/09 19:33		☐
50	LGEAX	D9G130118-3	9195077	U1	1.0	07/21/09 19:36		☐
51	LGEA0	D9G130118-4	9195077	U1	1.0	07/21/09 19:39		☐
52	LGEA2	D9G130118-5	9195077	U1	1.0	07/21/09 19:42		☐
53	LGEA3	D9G130118-6	9195077	U1	1.0	07/21/09 19:44		☐
54	CCV				1.0	07/21/09 19:47		☐
55	CCB				1.0	07/21/09 19:50		☐
56	RLCV				1.0	07/21/09 19:53		☐
57	LGEA4	D9G130118-7	9195077	U1	1.0	07/21/09 19:55		☐
58	LGEFC	D9G130118-8	9195077	U1	1.0	07/21/09 19:58		☐
59	LGEFF	D9G130118-9	9195077	U1	1.0	07/21/09 20:01		☐
60	LGEFH	D9G130118-10	9195077	U1	1.0	07/21/09 20:03		☐
61	LGEFL	D9G130118-11	9195077	U1	1.0	07/21/09 20:06		☐
62	LGEFLP5	D9G130118	9195077		5.0	07/21/09 20:09		☐
63	LGEFLZ	D9G130118-11	9195077		1.0	07/21/09 20:11		☐
64	LGEFLS	D9G130118-11	9195077	U1	1.0	07/21/09 20:14		☐
65	CCV				1.0	07/21/09 20:17		☐
66	CCB				1.0	07/21/09 20:20		☐
67	RLCV				1.0	07/21/09 20:22		☐
68	LGEFLD	D9G130118-11	9195077	U1	1.0	07/21/09 20:25		☐
69	LGEFT	D9G130118-12	9195077	U1	1.0	07/21/09 20:28		☐
70	LGEFX	D9G130118-13	9195077	U1	1.0	07/21/09 20:30		☐
71	LGEF3	D9G130118-14	9195077	U1	1.0	07/21/09 20:33		☐
72	LGEF4	D9G130118-15	9195077	U1	1.0	07/21/09 20:36		☐
73	LGEF6	D9G130118-16	9195077	U1	1.0	07/21/09 20:39		☐
74	LGEF8	D9G130118-17	9195077	U1	1.0	07/21/09 20:41		☐
75	CCV				1.0	07/21/09 20:44		☐
76	CCB				1.0	07/21/09 20:47		☐
77	RLCV				1.0	07/21/09 20:50		☐
78	LGKQWBF	D9G160000	9197227	MD	1.0	07/21/09 20:52		☐
79	LGKQWCF	D9G160000	9197227	MD	1.0	07/21/09 20:55		☐
80	LGH2HF 10X	D9G150224-2	9197227	MD	10.0	07/21/09 20:58		☐
81	LGH2HP50F	D9G150224	9197227		50.0	07/21/09 21:01		☐
82	LGH2HZF	D9G150224-2	9197227		1.0	07/21/09 21:03		☐
83	LGH2HSF 10	D9G150224-2	9197227	MD	10.0	07/21/09 21:06		☐
84	LGH2HDF 10	D9G150224-2	9197227	MD	10.0	07/21/09 21:09		☐
85	CCV				1.0	07/21/09 21:12		☐
86	CCB				1.0	07/21/09 21:14		☐
87	RLCV				1.0	07/21/09 21:17		☐
88	~~LGKQDB~~	~~D9G160000~~	~~9197220~~	~~MS~~	~~1.0~~	~~07/21/09 21:20~~		☐
89	LGKQDC	D9G160000	9197220	MS	1.0	07/21/09 21:23		☐
90	LGH2F 10X	D9G150224-1	~~9197220~~	MS	10.0	07/21/09 21:25	DWL 7/22/09	☐
91	LGH2FP50	~~D9G150224~~	9197220		50.0	07/21/09 21:28		☐
92	~~LGH2FZ~~	~~D9G150224-1~~	9197220		1.0	07/21/09 21:31		☐

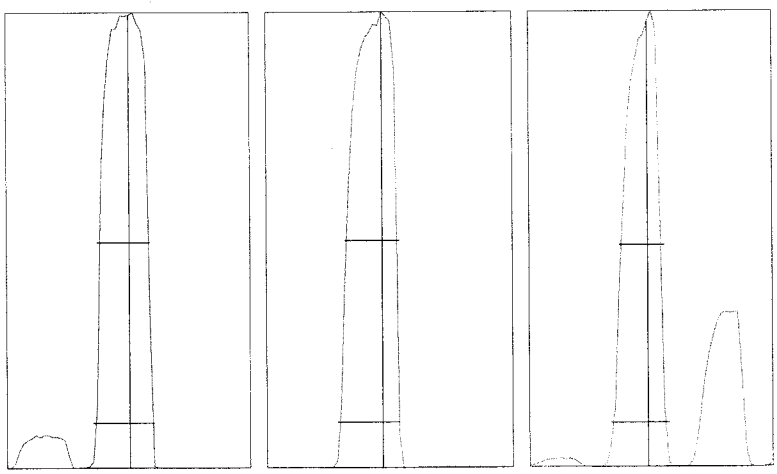
Tune Report

Tune File : NORM.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.281%
Doubly Charged:	70/140	0.506%

m/z	Range	Count	Mean	RSD%	Background
6	1,000	891.0	940.8	3.63	0.70
7	20,000	13129.0	13059.6	1.91	0.60
59	10,000	7602.0	7856.2	2.40	0.50
63	50	42.0	39.4	16.38	0.30
70	100	78.0	67.2	13.40	0.50
75	20	0.0	1.2	102.35	0.80
78	50	43.0	48.7	14.56	0.50
89	20,000	12125.0	12029.4	1.86	1.00
115	20,000	11842.0	11739.1	1.63	0.80
118	50	34.0	39.7	21.11	1.30
137	2,000	1330.0	1323.1	2.85	1.10
205	20,000	11244.0	11223.5	1.66	1.80
238	20,000	17300.0	17931.0	1.60	2.40
156/140	2	1.192%	1.337%	8.61	
70/140	2	0.664%	0.568%	13.49	



m/z:	7	89	205
Height:	13,051	12,146	11,336
Axis:	7.05	88.95	205.00
W-50%:	0.65	0.65	0.55
W-10%:	0.7500	0.7500	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 21, 2009 16:29:27
Printed : Jul 21, 2009 16:29:30

Tune Report

Tune File : NORM.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1550 W	Extract 1	:	0 V	AMU Gain	:	133
RF Matching	:	1.7 V	Extract 2	:	-160 V	AMU Offset	:	122
Smpl Depth	:	7.5 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0005
Torch-H	:	-0.8 mm	Omega Lens-ce	:	0 V	Axis Offset	:	-0.02
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	0 V
Carrier Gas	:	0.83 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.2 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1390 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 : Jul 21, 2009 16:29:27
Printed : Jul 21, 2009 16:29:33

P/A Factor Tuning Report

Acquired:Jul 21 2009 04:50 pm

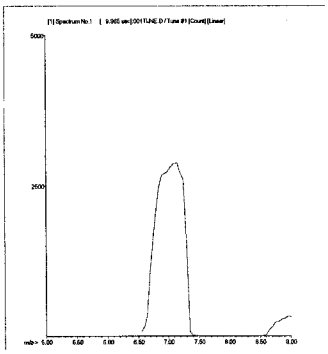
Mass[amu]	Element	P/A Factor
6	Li	0.061203
7	(Li)	Sensitivity too low
9	Be	0.068907
45	Sc	0.083389
51	V	0.086007
52	Cr	0.088320
53	(Cr)	Sensitivity too low
55	Mn	0.090395
59	Co	0.093203
60	Ni	Sensitivity too low
63	Cu	Sensitivity too low
66	Zn	0.096924
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
95	Mo	0.096067
98	(Mo)	0.096151
99	(Mo)	Sensitivity too low
106	(Cd)	0.101305
107	Ag	Sensitivity too low
108	(Cd)	0.101769
111	Cd	0.102139
114	Cd	0.102089
115	In	0.101222
118	Sn	0.101067
121	Sb	0.100944
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.109272
206	(Pb)	0.108216
207	(Pb)	0.108287
208	Pb	0.107820
232	Th	0.106452
238	U	0.106481

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1390 V

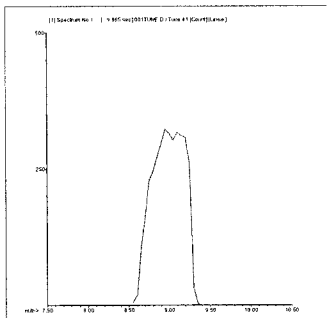
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\001TUNE.D
Date Acquired: Jul 21 2009 05:22 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	31515	31705	31773	31422	31500	31173	0.76	5.00	
9 Be	3503	3538	3524	3507	3428	3516	1.23	5.00	
24 Mg	22462	22829	22575	22353	22572	21980	1.41	5.00	
59 Co	93114	93607	93864	90894	94187	93020	1.41	5.00	
115 In	1915406	1918606	1914965	1924578	1915696	1903185	0.41	5.00	
208 Pb	92064	92990	92149	91680	92260	91243	0.71	5.00	
238 U	187429	191379	187170	188068	186178	184351	1.39	5.00	

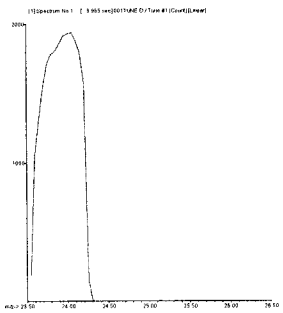


7 Li
Mass Calib.
Actual: 7.10
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.05
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG072109.B\001TUNE.D



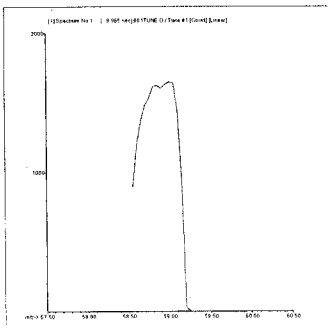
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



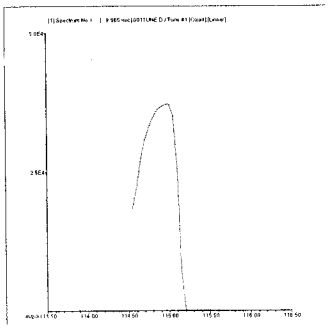
59 Co

Mass Calib.

Actual:	58.95		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



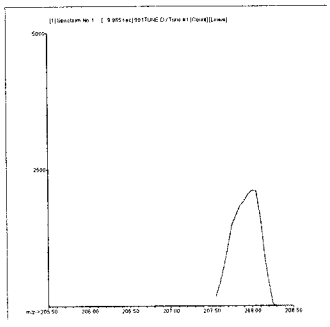
115 In

Mass Calib.

Actual:	114.95		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



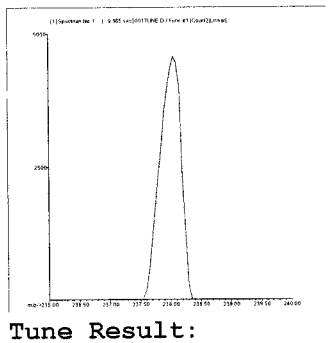
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.05		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\002CALB.D\002CALB.D#
Date Acquired: Jul 21 2009 05:25 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: Jul 21 2009 05:26 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	31	3276.40
52	Cr	72	1	2800	9.18
55	Mn	72	1	1283	9.62
59	Co	72	1	87	67.61
60	Ni	72	1	67	17.32
63	Cu	72	1	503	6.39
66	Zn	72	1	251	8.30
75	As	72	1	105	7.67
78	Se	72	1	513	6.26
95	Mo	72	1	73	15.75
107	Ag	115	1	7	86.60
111	Cd	115	1	9	188.13
118	Sn	115	1	2750	17.56
121	Sb	115	1	19	50.94
137	Ba	115	1	49	3.94
205	Tl	165	1	263	12.21
208	Pb	165	1	323	8.05
232	Th	165	1	220	25.31
238	U	165	1	96	8.06

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	576535	0.69
45	Sc	1	2595280	0.11
72	Ge	1	1228451	0.87
115	In	1	3471486	1.12
165	Ho	1	5707578	1.58

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\AG072109.B\003CALB.D\003CALB.D#
Date Acquired: Jul 21 2009 05:28 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: Jul 21 2009 05:26 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	84	380.78
52	Cr	72	1	3224	4.61
55	Mn	72	1	1180	18.88
59	Co	72	1	67	31.23
60	Ni	72	1	77	39.85
63	Cu	72	1	673	17.84
66	Zn	72	1	341	12.93
75	As	72	1	105	1.10
78	Se	72	1	570	15.79
95	Mo	72	1	90	19.25
107	Ag	115	1	10	100.00
111	Cd	115	1	6	183.92
118	Sn	115	1	4558	14.33
121	Sb	115	1	23	37.80
137	Ba	115	1	41	44.66
205	Tl	165	1	229	12.72
208	Pb	165	1	279	7.30
232	Th	165	1	273	29.57
238	U	165	1	22	43.30

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	581797	1.92
45	Sc	1	2574983	0.83
72	Ge	1	1211627	0.38
115	In	1	3426576	0.51
165	Ho	1	5647086	0.49

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\AG072109.B\004ICAL.D\004ICAL.D#
Date Acquired: Jul 21 2009 05:31 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: Jul 21 2009 05:29 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	59445	1.77
51	V	72	1	1239197	0.92
52	Cr	72	1	1240930	1.80
55	Mn	72	1	1500976	1.14
59	Co	72	1	1532853	1.14
60	Ni	72	1	335568	1.43
63	Cu	72	1	783637	0.77
66	Zn	72	1	184990	0.36
75	As	72	1	150136	1.32
78	Se	72	1	29896	1.27
95	Mo	72	1	401051	0.94
107	Ag	115	1	1170362	0.20
111	Cd	115	1	241527	0.35
118	Sn	115	1	706295	0.47
121	Sb	115	1	813196	0.45
137	Ba	115	1	335210	0.52
205	Tl	165	1	2698247	0.32
208	Pb	165	1	3677704	0.96
232	Th	165	1	3297948	2.01
238	U	165	1	3849572	0.35

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	565258	0.19	581797	97.2	30 - 120	
45	Sc	1	2567639	0.66	2574983	99.7	30 - 120	
72	Ge	1	1211730	1.09	1211627	100.0	30 - 120	
115	In	1	3431729	1.40	3426576	100.2	30 - 120	
165	Ho	1	5634252	0.67	5647086	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\AG072109.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\AG072109.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 21 2009 05:33 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: Jul 21 2009 05:31 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	39.64 ppb	0.79	40	99.1	90 - 110	
51 V	72	1	38.95 ppb	0.13	40	97.4	90 - 110	
52 Cr	72	1	39.22 ppb	0.44	40	98.1	90 - 110	
55 Mn	72	1	39.68 ppb	0.45	40	99.2	90 - 110	
59 Co	72	1	39.53 ppb	0.70	40	98.8	90 - 110	
60 Ni	72	1	40.23 ppb	0.53	40	100.6	90 - 110	
63 Cu	72	1	40.61 ppb	0.32	40	101.5	90 - 110	
66 Zn	72	1	40.51 ppb	1.02	40	101.3	90 - 110	
75 As	72	1	40.08 ppb	0.64	40	100.2	90 - 110	
78 Se	72	1	41.67 ppb	1.69	40	104.2	90 - 110	
95 Mo	72	1	39.87 ppb	0.41	40	99.7	90 - 110	
107 Ag	115	1	40.34 ppb	1.30	40	100.9	90 - 110	
111 Cd	115	1	41.12 ppb	0.91	40	102.8	90 - 110	
118 Sn	115	1	38.88 ppb	0.90	40	97.2	90 - 110	
121 Sb	115	1	38.65 ppb	1.11	40	96.6	90 - 110	
137 Ba	115	1	39.89 ppb	0.94	40	99.7	90 - 110	
205 Tl	165	1	40.05 ppb	1.21	40	100.1	90 - 110	
208 Pb	165	1	40.43 ppb	0.85	40	101.1	90 - 110	
232 Th	165	1	44.22 ppb	2.85	40	110.6	90 - 110	Fail NR
238 U	165	1	40.19 ppb	1.06	40	100.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	561236	0.19	581797	96.5	30 - 120	
45 Sc	1	2582771	1.09	2574983	100.3	30 - 120	
72 Ge	1	1213066	0.25	1211627	100.1	30 - 120	
115 In	1	3417703	1.00	3426576	99.7	30 - 120	
165 Ho	1	5664293	1.10	5647086	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\AG072109.B\003CALB.D\003CALB.D#

1 :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\AG072109.B\006WASH.D\006WASH.D#
Date Acquired: Jul 21 2009 05:36 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: Jul 21 2009 05:31 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	1.123 ppb	10.30	1.30	
51 V	72	1	4.905 ppb	4.36	6.50	
52 Cr	72	1	2.008 ppb	1.94	2.60	
55 Mn	72	1	1.040 ppb	1.71	1.30	
59 Co	72	1	1.042 ppb	3.30	1.30	
60 Ni	72	1	2.082 ppb	1.95	2.60	
63 Cu	72	1	2.043 ppb	4.81	2.60	
66 Zn	72	1	10.290 ppb	0.55	13.00	
75 As	72	1	5.041 ppb	1.23	6.50	
78 Se	72	1	5.606 ppb	11.10	6.50	
95 Mo	72	1	2.125 ppb	3.10	2.60	
107 Ag	115	1	5.269 ppb	0.93	6.50	
111 Cd	115	1	0.985 ppb	1.12	1.30	
118 Sn	115	1	10.060 ppb	1.78	13.00	
121 Sb	115	1	2.181 ppb	4.53	2.60	
137 Ba	115	1	1.073 ppb	3.26	1.30	
205 Tl	165	1	1.130 ppb	0.27	1.30	
208 Pb	165	1	1.039 ppb	0.95	1.30	
232 Th	165	1	2.777 ppb	3.32	2.60	
238 U	165	1	1.064 ppb	0.97	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	561585	0.30	581797	96.5	30 - 120	
45 Sc	1	2567497	0.65	2574983	99.7	30 - 120	
72 Ge	1	1227558	0.55	1211627	101.3	30 - 120	
115 In	1	3427742	1.01	3426576	100.0	30 - 120	
165 Ho	1	5710214	1.06	5647086	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\AG072109.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\AG072109.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 21 2009 05:39 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: Jul 21 2009 05:31 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	107.86	1.00	
52 Cr	72	1	-0.02	ppb	42.01	1.00	
55 Mn	72	1	0.00	ppb	111.67	1.00	
59 Co	72	1	0.00	ppb	96.89	1.00	
60 Ni	72	1	0.00	ppb	233.62	1.00	
63 Cu	72	1	-0.01	ppb	109.12	1.00	
66 Zn	72	1	0.05	ppb	42.84	1.00	
75 As	72	1	-0.01	ppb	44.09	1.00	
78 Se	72	1	0.34	ppb	46.02	1.00	
95 Mo	72	1	0.01	ppb	40.98	1.00	
107 Ag	115	1	0.01	ppb	15.65	1.00	
111 Cd	115	1	0.00	ppb	432.82	1.00	
118 Sn	115	1	0.13	ppb	28.49	1.00	
121 Sb	115	1	0.08	ppb	2.06	1.00	
137 Ba	115	1	0.00	ppb	38.09	1.00	
205 Tl	165	1	0.03	ppb	5.05	1.00	
208 Pb	165	1	0.00	ppb	1255.10	1.00	
232 Th	165	1	0.16	ppb	5.89	1.00	
238 U	165	1	0.00	ppb	21.84	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	565985	1.59	581797	97.3	30 - 120	
45 Sc	1	2566622	0.99	2574983	99.7	30 - 120	
72 Ge	1	1225621	1.10	1211627	101.2	30 - 120	
115 In	1	3452773	0.47	3426576	100.8	30 - 120	
165 Ho	1	5650371	0.62	5647086	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\AG072109.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\008RLST.D\008RLST.D#
Date Acquired: Jul 21 2009 05:42 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: Jul 21 2009 05:31 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	1.05	ppb	12.11	1	104.7	50 - 150	
51 V	72	1	0.93	ppb	7.33	1	93.2	50 - 150	
52 Cr	72	1	0.97	ppb	3.56	1	97.0	50 - 150	
55 Mn	72	1	1.00	ppb	2.49	1	100.4	50 - 150	
59 Co	72	1	1.01	ppb	4.08	1	101.3	50 - 150	
60 Ni	72	1	1.00	ppb	6.56	1	100.0	50 - 150	
63 Cu	72	1	1.04	ppb	7.10	1	104.2	50 - 150	
66 Zn	72	1	10.76	ppb	1.35	10	107.6	50 - 150	
75 As	72	1	1.04	ppb	3.34	1	103.8	50 - 150	
78 Se	72	1	0.82	ppb	33.53	1	81.6	50 - 150	
95 Mo	72	1	1.01	ppb	7.76	1	101.0	50 - 150	
107 Ag	115	1	1.02	ppb	2.10	1	101.5	50 - 150	
111 Cd	115	1	1.10	ppb	3.31	1	109.6	50 - 150	
118 Sn	115	1	10.23	ppb	1.35	10	102.3	50 - 150	
121 Sb	115	1	1.05	ppb	1.23	1	104.8	50 - 150	
137 Ba	115	1	1.05	ppb	4.58	1	104.8	50 - 150	
205 Tl	165	1	1.07	ppb	2.73	1	106.5	50 - 150	
208 Pb	165	1	1.05	ppb	1.07	1	104.7	50 - 150	
232 Th	165	1	1.13	ppb	2.43	1	113.3	50 - 150	
238 U	165	1	1.07	ppb	1.03	1	107.0	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	565978	0.78	581797	97.3	30 - 120	
45 Sc	1	2568028	1.20	2574983	99.7	30 - 120	
72 Ge	1	1217338	0.15	1211627	100.5	30 - 120	
115 In	1	3427497	0.45	3426576	100.0	30 - 120	
165 Ho	1	5631637	1.02	5647086	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\AG072109.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\AG072109.B\009AFCE.D\009AFCE.D#
Date Acquired: Jul 21 2009 05:44 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: Jul 21 2009 05:31 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	41.26	0	86.0	80 - 120	
51 V	72	1	0.12	ppb	39.38	0	67.0	80 - 120	
52 Cr	72	1	0.16	ppb	3.72	0	82.2	80 - 120	
55 Mn	72	1	0.20	ppb	3.24	0	98.6	80 - 120	
59 Co	72	1	0.20	ppb	5.85	0	99.3	80 - 120	
60 Ni	72	1	0.18	ppb	6.47	0	90.0	80 - 120	
63 Cu	72	1	0.32	ppb	10.85	0	155.1	80 - 120	
66 Zn	72	1	2.18	ppb	0.89	2	101.4	80 - 120	
75 As	72	1	0.20	ppb	9.34	0	94.3	80 - 120	
78 Se	72	1	0.27	ppb	16.59	0	168.2	80 - 120	
95 Mo	72	1	0.19	ppb	6.24	0	93.4	80 - 120	
107 Ag	115	1	0.20	ppb	4.78	0	99.7	80 - 120	
111 Cd	115	1	0.21	ppb	11.89	0	96.8	80 - 120	
118 Sn	115	1	1.58	ppb	4.76	2	77.3	80 - 120	
121 Sb	115	1	0.21	ppb	4.92	0	99.2	80 - 120	
137 Ba	115	1	0.22	ppb	2.48	0	102.6	80 - 120	
205 Tl	165	1	0.21	ppb	5.92	0	97.3	80 - 120	
208 Pb	165	1	0.20	ppb	3.45	0	95.3	80 - 120	
232 Th	165	1	0.24	ppb	4.96	0	106.3	80 - 120	
238 U	165	1	0.20	ppb	2.09	0	95.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	562011	1.45	581797	96.6	30 - 120	
45 Sc	1	2589915	1.12	2574983	100.6	30 - 120	
72 Ge	1	1216544	0.44	1211627	100.4	30 - 120	
115 In	1	3446931	1.30	3426576	100.6	30 - 120	
165 Ho	1	5682005	0.45	5647086	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\AG072109.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\AG072109.B\010SMPL.D\010SMPL.D#
Date Acquired:	Jul 21 2009 05:47 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:	Jul 21 2009 05:31 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	-0.04	-0.04	ppb	104.30	3600	
52 Cr	72	1	-0.02	-0.02	ppb	103.76	3600	
55 Mn	72	1	0.02	0.02	ppb	16.79	3600	
59 Co	72	1	0.00	0.00	ppb	621.67	3600	
60 Ni	72	1	0.03	0.03	ppb	16.48	3600	
63 Cu	72	1	0.00	0.00	ppb	932.55	3600	
66 Zn	72	1	0.85	0.85	ppb	6.94	3600	
75 As	72	1	0.00	0.00	ppb	664.54	3600	
78 Se	72	1	2.10	2.10	ppb	12.34	3600	
95 Mo	72	1	-0.01	-0.01	ppb	45.44	3600	
107 Ag	115	1	0.00	0.00	ppb	58.87	3600	
111 Cd	115	1	0.01	0.01	ppb	69.14	3600	
118 Sn	115	1	0.05	0.05	ppb	347.56	3600	
121 Sb	115	1	0.02	0.02	ppb	33.89	3600	
137 Ba	115	1	0.02	0.02	ppb	46.40	3600	
205 Tl	165	1	0.01	0.01	ppb	7.09	3600	
208 Pb	165	1	0.01	0.01	ppb	32.33	3600	
232 Th	165	1	0.02	0.02	ppb	9.94	1000	
238 U	165	1	0.00	0.00	ppb	61.35	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	569704	0.90	581797	97.9	30 - 120	
45 Sc	1	2578530	1.74	2574983	100.1	30 - 120	
72 Ge	1	1225059	0.62	1211627	101.1	30 - 120	
115 In	1	3458256	0.73	3426576	100.9	30 - 120	
165 Ho	1	5659536	0.49	5647086	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\AG072109.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\AG072109.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 21 2009 05:50 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: Jul 21 2009 05:31 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	86.57	1.00	
51 V	72	1	-0.32 ppb	45.77	1.00	
52 Cr	72	1	1.09 ppb	1.54	1.00	
55 Mn	72	1	3.02 ppb	2.13	1.00	
59 Co	72	1	0.14 ppb	6.32	1.00	
60 Ni	72	1	1.14 ppb	8.51	1.00	
63 Cu	72	1	0.52 ppb	6.79	1.00	
66 Zn	72	1	4.12 ppb	0.37	10.00	
75 As	72	1	0.41 ppb	6.37	1.00	
78 Se	72	1	0.21 ppb	202.38	1.00	
95 Mo	72	1	2029.00 ppb	1.48	2000.00	
107 Ag	115	1	0.08 ppb	1.65	1.00	
111 Cd	115	1	0.53 ppb	11.29	1.00	
118 Sn	115	1	6.55 ppb	2.38	10.00	
121 Sb	115	1	0.25 ppb	8.83	1.00	
137 Ba	115	1	1.63 ppb	3.16	1.00	
205 Tl	165	1	0.06 ppb	23.67	1.00	
208 Pb	165	1	0.15 ppb	1.74	1.00	
232 Th	165	1	0.06 ppb	7.65	1.00	
238 U	165	1	0.04 ppb	4.73	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	541828	0.30	581797	93.1	30 - 120	
45 Sc	1	2271867	1.39	2574983	88.2	30 - 120	
72 Ge	1	1037781	0.72	1211627	85.7	30 - 120	
115 In	1	2905629	2.08	3426576	84.8	30 - 120	
165 Ho	1	5091704	1.12	5647086	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\AG072109.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\AG072109.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 21 2009 05:53 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: Jul 21 2009 05:31 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	96.29	1.44	100	96.3	80 - 120	
51 V	72	1	99.52	1.77	100	99.5	80 - 120	
52 Cr	72	1	99.40	1.59	100	99.4	80 - 120	
55 Mn	72	1	101.10	1.41	100	101.1	80 - 120	
59 Co	72	1	95.14	1.75	100	95.1	80 - 120	
60 Ni	72	1	91.22	1.02	100	91.2	80 - 120	
63 Cu	72	1	89.55	0.75	100	89.6	80 - 120	
66 Zn	72	1	100.10	0.77	100	100.1	80 - 120	
75 As	72	1	100.30	0.37	100	100.3	80 - 120	
78 Se	72	1	108.70	2.11	100	108.7	80 - 120	
95 Mo	72	1	2124.00	1.34	2100	101.1	80 - 120	
107 Ag	115	1	88.04	3.50	100	88.0	80 - 120	
111 Cd	115	1	97.50	1.62	100	97.5	80 - 120	
118 Sn	115	1	101.00	0.92	100	101.0	80 - 120	
121 Sb	115	1	102.40	1.11	100	102.4	80 - 120	
137 Ba	115	1	103.60	1.08	100	103.6	80 - 120	
205 Tl	165	1	96.79	0.86	100	96.8	80 - 120	
208 Pb	165	1	95.41	1.15	100	95.4	80 - 120	
232 Th	165	1	110.10	0.47	100	110.1	80 - 120	
238 U	165	1	103.00	0.22	100	103.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	551523	0.54	581797	94.8	30 - 120	
45 Sc	1	2262338	0.74	2574983	87.9	30 - 120	
72 Ge	1	1036947	1.75	1211627	85.6	30 - 120	
115 In	1	2927339	0.38	3426576	85.4	30 - 120	
165 Ho	1	5153065	0.14	5647086	91.3	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\013SMPL.D\013SMPL.D#
Date Acquired: Jul 21 2009 05:55 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: Jul 21 2009 05:31 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	-0.06	-0.06	ppb	105.43	3600	
52 Cr	72	1	-0.03	-0.03	ppb	42.33	3600	
55 Mn	72	1	-0.01	-0.01	ppb	103.23	3600	
59 Co	72	1	0.00	0.00	ppb	103.31	3600	
60 Ni	72	1	0.00	0.00	ppb	490.13	3600	
63 Cu	72	1	-0.01	-0.01	ppb	55.36	3600	
66 Zn	72	1	0.02	0.02	ppb	39.30	3600	
75 As	72	1	0.01	0.01	ppb	237.74	3600	
78 Se	72	1	0.22	0.22	ppb	124.98	3600	
95 Mo	72	1	1.24	1.24	ppb	2.11	3600	
107 Ag	115	1	0.01	0.01	ppb	32.64	3600	
111 Cd	115	1	-0.01	-0.01	ppb	87.55	3600	
118 Sn	115	1	-0.44	-0.44	ppb	9.84	3600	
121 Sb	115	1	0.04	0.04	ppb	10.44	3600	
137 Ba	115	1	0.00	0.00	ppb	198.65	3600	
205 Tl	165	1	0.00	0.00	ppb	32.40	3600	
208 Pb	165	1	0.00	0.00	ppb	60.85	3600	
232 Th	165	1	0.61	0.61	ppb	14.09	1000	
238 U	165	1	0.01	0.01	ppb	16.27	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	617032	1.01	581797	106.1	30 - 120	
45 Sc	1	2571917	0.32	2574983	99.9	30 - 120	
72 Ge	1	1207363	0.62	1211627	99.6	30 - 120	
115 In	1	3468973	0.41	3426576	101.2	30 - 120	
165 Ho	1	5751339	0.52	5647086	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\AG072109.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\014 LR.D\014 LR.D#
Date Acquired: Jul 21 2009 05:58 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 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	983.10 ppb	1.47	1000	98.3	90 - 110	
51 V	72	1	931.80 ppb	1.87	1000	93.2	90 - 110	
52 Cr	72	1	958.10 ppb	0.33	1000	95.8	90 - 110	
55 Mn	72	1	959.10 ppb	0.74	1000	95.9	90 - 110	
59 Co	72	1	962.90 ppb	0.81	1000	96.3	90 - 110	
60 Ni	72	1	976.00 ppb	1.67	1000	97.6	90 - 110	
63 Cu	72	1	952.70 ppb	0.56	1000	95.3	90 - 110	
66 Zn	72	1	1036.00 ppb	1.42	1000	103.6	90 - 110	
75 As	72	1	1038.00 ppb	0.83	1000	103.8	90 - 110	
78 Se	72	1	1037.00 ppb	0.75	1000	103.7	90 - 110	
95 Mo	72	1	998.50 ppb	1.19	1000	99.9	90 - 110	
107 Ag	115	1	960.60 ppb	0.36	1000	96.1	90 - 110	
111 Cd	115	1	1018.00 ppb	1.94	1000	101.8	90 - 110	
118 Sn	115	1	980.00 ppb	0.99	1000	98.0	90 - 110	
121 Sb	115	1	975.20 ppb	0.25	1000	97.5	90 - 110	
137 Ba	115	1	1014.00 ppb	0.78	1000	101.4	90 - 110	
205 Tl	165	1	970.30 ppb	1.49	1000	97.0	90 - 110	
208 Pb	165	1	959.70 ppb	1.43	1000	96.0	90 - 110	
232 Th	165	1	1070.00 ppb	0.39	1000	107.0	90 - 110	
238 U	165	1	1001.00 ppb	0.48	1000	100.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	602525	1.07	581797	103.6	30 - 120	
45 Sc	1	2585868	0.95	2574983	100.4	30 - 120	
72 Ge	1	1215769	0.81	1211627	100.3	30 - 120	
115 In	1	3432627	0.12	3426576	100.2	30 - 120	
165 Ho	1	5756427	0.96	5647086	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\AG072109.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\AG072109.B\015SMPL.D\015SMPL.D#
Date Acquired: Jul 21 2009 06:00 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: Jul 21 2009 05:31 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	173.21	3600	
51 V	72	1	0.00	0.00	ppb	1096.50	3600	
52 Cr	72	1	-0.02	-0.02	ppb	214.11	3600	
55 Mn	72	1	-0.01	-0.01	ppb	54.41	3600	
59 Co	72	1	0.02	0.02	ppb	17.45	3600	
60 Ni	72	1	0.02	0.02	ppb	36.35	3600	
63 Cu	72	1	0.00	0.00	ppb	3434.80	3600	
66 Zn	72	1	0.04	0.04	ppb	59.09	3600	
75 As	72	1	0.04	0.04	ppb	18.32	3600	
78 Se	72	1	0.56	0.56	ppb	27.17	3600	
95 Mo	72	1	0.75	0.75	ppb	9.81	3600	
107 Ag	115	1	0.03	0.03	ppb	9.09	3600	
111 Cd	115	1	0.01	0.01	ppb	55.86	3600	
118 Sn	115	1	0.58	0.58	ppb	22.30	3600	
121 Sb	115	1	0.43	0.43	ppb	9.45	3600	
137 Ba	115	1	0.02	0.02	ppb	30.56	3600	
205 Tl	165	1	0.10	0.10	ppb	12.56	3600	
208 Pb	165	1	0.02	0.02	ppb	9.09	3600	
232 Th	165	1	3.70	3.70	ppb	19.86	1000	
238 U	165	1	0.09	0.09	ppb	9.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	604269	1.86	581797	103.9	30 - 120	
45 Sc	1	2589065	0.70	2574983	100.5	30 - 120	
72 Ge	1	1243813	0.46	1211627	102.7	30 - 120	
115 In	1	3483172	1.13	3426576	101.7	30 - 120	
165 Ho	1	5709115	0.24	5647086	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\AG072109.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\AG072109.B\016 CCV.D\016 CCV.D#
Date Acquired: Jul 21 2009 06:03 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: Jul 21 2009 05:31 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	49.34	ppb	0.68	50	98.7	90 - 110	
51 V	72	1	49.10	ppb	0.55	50	98.2	90 - 110	
52 Cr	72	1	49.47	ppb	0.91	50	98.9	90 - 110	
55 Mn	72	1	49.47	ppb	1.10	50	98.9	90 - 110	
59 Co	72	1	49.92	ppb	1.17	50	99.8	90 - 110	
60 Ni	72	1	50.75	ppb	0.61	50	101.5	90 - 110	
63 Cu	72	1	50.93	ppb	0.27	50	101.9	90 - 110	
66 Zn	72	1	50.31	ppb	0.73	50	100.6	90 - 110	
75 As	72	1	50.24	ppb	1.12	50	100.5	90 - 110	
78 Se	72	1	50.24	ppb	0.13	50	100.5	90 - 110	
95 Mo	72	1	50.78	ppb	1.42	50	101.6	90 - 110	
107 Ag	115	1	49.22	ppb	2.02	50	98.4	90 - 110	
111 Cd	115	1	49.66	ppb	2.34	50	99.3	90 - 110	
118 Sn	115	1	49.06	ppb	1.65	50	98.1	90 - 110	
121 Sb	115	1	49.30	ppb	1.60	50	98.6	90 - 110	
137 Ba	115	1	49.04	ppb	1.67	50	98.1	90 - 110	
205 Tl	165	1	50.73	ppb	1.09	50	101.5	90 - 110	
208 Pb	165	1	49.84	ppb	1.34	50	99.7	90 - 110	
232 Th	165	1	52.15	ppb	2.07	50	104.3	90 - 110	
238 U	165	1	49.79	ppb	0.38	50	99.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	588145	2.13	581797	101.1	30 - 120	
45 Sc	1	2623883	0.54	2574983	101.9	30 - 120	
72 Ge	1	1228362	0.50	1211627	101.4	30 - 120	
115 In	1	3530300	1.24	3426576	103.0	30 - 120	
165 Ho	1	5768046	0.38	5647086	102.1	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\AG072109.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\AG072109.B\017 CCB.D\017 CCB.D#
Date Acquired: Jul 21 2009 06:06 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: Jul 21 2009 05:31 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	0.005	ppb	173.19	1.00	
51 V	72	1	-0.062	ppb	129.47	1.00	
52 Cr	72	1	-0.026	ppb	83.65	1.00	
55 Mn	72	1	-0.007	ppb	143.47	1.00	
59 Co	72	1	0.002	ppb	146.67	1.00	
60 Ni	72	1	0.009	ppb	171.37	1.00	
63 Cu	72	1	-0.013	ppb	47.42	1.00	
66 Zn	72	1	0.004	ppb	593.06	1.00	
75 As	72	1	0.008	ppb	83.97	1.00	
78 Se	72	1	0.635	ppb	21.48	1.00	
95 Mo	72	1	0.156	ppb	13.82	1.00	
107 Ag	115	1	0.013	ppb	10.04	1.00	
111 Cd	115	1	0.005	ppb	226.51	1.00	
118 Sn	115	1	0.091	ppb	27.58	1.00	
121 Sb	115	1	0.092	ppb	4.85	1.00	
137 Ba	115	1	0.007	ppb	96.12	1.00	
205 Tl	165	1	0.044	ppb	9.42	1.00	
208 Pb	165	1	0.005	ppb	16.13	1.00	
232 Th	165	1	0.846	ppb	15.54	1.00	
238 U	165	1	0.016	ppb	7.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	582937	1.46	581797	100.2	30 - 120	
45 Sc	1	2618279	0.49	2574983	101.7	30 - 120	
72 Ge	1	1228248	0.40	1211627	101.4	30 - 120	
115 In	1	3493471	0.25	3426576	102.0	30 - 120	
165 Ho	1	5729193	0.17	5647086	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\AG072109.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\AG072109.B\018WASH.D\018WASH.D#
Date Acquired: Jul 21 2009 06:09 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: Jul 21 2009 05:31 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	1.506 ppb	66.40	1.30	
51 V	72	1	5.354 ppb	9.73	6.50	
52 Cr	72	1	2.294 ppb	19.68	2.60	
55 Mn	72	1	1.341 ppb	40.40	1.30	
59 Co	72	1	1.372 ppb	41.06	1.30	
60 Ni	72	1	2.353 ppb	23.65	2.60	
63 Cu	72	1	2.412 ppb	17.43	2.60	
66 Zn	72	1	10.710 ppb	7.57	13.00	
75 As	72	1	5.663 ppb	11.90	6.50	
78 Se	72	1	5.717 ppb	11.15	6.50	
95 Mo	72	1	4.400 ppb	84.36	2.60	
107 Ag	115	1	5.364 ppb	3.44	6.50	
111 Cd	115	1	1.442 ppb	41.34	1.30	
118 Sn	115	1	10.180 ppb	5.67	13.00	
121 Sb	115	1	2.278 ppb	21.30	2.60	
137 Ba	115	1	1.364 ppb	42.96	1.30	
205 Tl	165	1	1.415 ppb	39.27	1.30	
208 Pb	165	1	1.446 ppb	47.86	1.30	
232 Th	165	1	2.676 ppb	20.73	2.60	
238 U	165	1	1.427 ppb	40.32	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	598481	1.35	581797	102.9	30 - 120	
45 Sc	1	2642231	1.82	2574983	102.6	30 - 120	
72 Ge	1	1250188	1.58	1211627	103.2	30 - 120	
115 In	1	3540347	1.66	3426576	103.3	30 - 120	
165 Ho	1	5791976	1.24	5647086	102.6	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\AG072109.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\AG072109.B\019 BLK.D\019 BLK.D#
Date Acquired: Jul 21 2009 06:11 pm
Operator: TEL
Sample Name: LGEE4BF
Misc Info: BLANK 9194274 6020
Vial Number: 2201
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 21 2009 05:31 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	0.005 ppb	173.21	2.00	
51 V	72	1	-0.022 ppb	250.34	2.00	
52 Cr	72	1	-0.050 ppb	13.43	2.00	
55 Mn	72	1	0.022 ppb	49.21	2.00	
59 Co	72	1	-0.002 ppb	87.57	2.00	
60 Ni	72	1	0.015 ppb	103.26	2.00	
63 Cu	72	1	-0.001 ppb	1037.50	2.00	
66 Zn	72	1	0.300 ppb	5.04	2.00	
75 As	72	1	-0.009 ppb	159.07	2.00	
78 Se	72	1	0.132 ppb	29.18	2.00	
95 Mo	72	1	0.045 ppb	61.58	2.00	
107 Ag	115	1	0.005 ppb	51.31	2.00	
111 Cd	115	1	0.007 ppb	12.78	2.00	
118 Sn	115	1	-0.313 ppb	19.67	2.00	
121 Sb	115	1	0.045 ppb	6.70	2.00	
137 Ba	115	1	0.073 ppb	7.82	2.00	
205 Tl	165	1	0.034 ppb	12.27	2.00	
208 Pb	165	1	0.005 ppb	30.50	2.00	
232 Th	165	1	0.085 ppb	6.54	2.00	
238 U	165	1	0.002 ppb	36.31	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	597793	1.62	581797	102.7	30 - 120	
45 Sc	1	2649024	0.91	2574983	102.9	30 - 120	
72 Ge	1	1233783	1.49	1211627	101.8	30 - 120	
115 In	1	3497489	0.35	3426576	102.1	30 - 120	
165 Ho	1	5732307	0.97	5647086	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\AG072109.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\AG072109.B\020 LCS.D\020 LCS.D#
Date Acquired: Jul 21 2009 06:14 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEE4CF
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: Jul 21 2009 05:31 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	43.63	1.01	40	109.1	80 - 120	
51 V	72	1	41.90	2.09	40	104.8	80 - 120	
52 Cr	72	1	42.35	1.81	40	105.9	80 - 120	
55 Mn	72	1	42.02	1.19	40	105.1	80 - 120	
59 Co	72	1	42.69	1.61	40	106.7	80 - 120	
60 Ni	72	1	43.78	1.19	40	109.5	80 - 120	
63 Cu	72	1	44.08	0.91	40	110.2	80 - 120	
66 Zn	72	1	44.20	1.11	40	110.5	80 - 120	
75 As	72	1	43.83	1.42	40	109.6	80 - 120	
78 Se	72	1	43.26	1.56	40	108.2	80 - 120	
95 Mo	72	1	42.61	1.90	40	106.5	80 - 120	
107 Ag	115	1	43.68	0.45	40	109.2	80 - 120	
111 Cd	115	1	43.87	0.49	40	109.7	80 - 120	
118 Sn	115	1	-0.37	11.30	40	-0.9	80 - 120	
121 Sb	115	1	42.97	0.37	40	107.4	80 - 120	
137 Ba	115	1	43.06	1.36	40	107.7	80 - 120	
205 Tl	165	1	44.09	1.70	40	110.2	80 - 120	
208 Pb	165	1	43.89	0.28	40	109.7	80 - 120	
232 Th	165	1	43.54	3.28	40	108.9	80 - 120	
238 U	165	1	44.37	1.30	40	110.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	579767	1.74	581797	99.7	30 - 120	
45 Sc	1	2626009	1.26	2574983	102.0	30 - 120	
72 Ge	1	1241912	1.19	1211627	102.5	30 - 120	
115 In	1	3464049	0.75	3426576	101.1	30 - 120	
165 Ho	1	5648231	0.45	5647086	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\AG072109.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\AG072109.B\021AREF.D\021AREF.D#
Date Acquired: Jul 21 2009 06:17 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJWF 10X
Misc Info: D9F110152
Vial Number: 2203
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: AllRef
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	12.20	1.22	ppb	12.46	3600	
52 Cr	72	1	608.90	60.89	ppb	1.02	3600	
55 Mn	72	1	61.08	6.11	ppb	1.60	3600	
59 Co	72	1	0.54	0.05	ppb	9.65	3600	
60 Ni	72	1	3.44	0.34	ppb	3.47	3600	
63 Cu	72	1	0.00	0.00	ppb	1703.70	3600	
66 Zn	72	1	0.88	0.09	ppb	14.09	3600	
75 As	72	1	102.10	10.21	ppb	2.47	3600	
78 Se	72	1	5.68	0.57	ppb	30.54	3600	
95 Mo	72	1	23.98	2.40	ppb	3.87	3600	
107 Ag	115	1	0.08	0.01	ppb	40.24	3600	
111 Cd	115	1	0.06	0.01	ppb	73.22	3600	
118 Sn	115	1	-4.83	-0.48	ppb	7.02	3600	
121 Sb	115	1	0.71	0.07	ppb	16.54	3600	
137 Ba	115	1	19.40	1.94	ppb	2.30	3600	
205 Tl	165	1	0.64	0.06	ppb	36.27	3600	
208 Pb	165	1	0.07	0.01	ppb	27.12	3600	
232 Th	165	1	8.65	0.87	ppb	20.25	1000	
238 U	165	1	7.56	0.76	ppb	2.55	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	590900	1.18	581797	101.6	30 - 120	
45 Sc	1	2533931	0.43	2574983	98.4	30 - 120	
72 Ge	1	1167278	0.63	1211627	96.3	30 - 120	
115 In	1	3238216	0.65	3426576	94.5	30 - 120	
165 Ho	1	5471501	0.80	5647086	96.9	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\AG072109.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\AG072109.B\022SDIL.D\022SDIL.D#
Date Acquired: Jul 21 2009 06:20 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJWP50F
Misc Info: SERIAL DILUTION
Vial Number: 2204
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SDIL
Dilution Factor: 10.00

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072109.B\021AREF.D\021AREF.D#

QC Summary:
Analytes: Pass
ISTD: Pass

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.01	ppb	173.20	0.00	#DIV/0!	90 - 110	
51 V	72	1	0.25	ppb	23.21	0.24	100.5	90 - 110	
52 Cr	72	1	12.58	ppb	0.44	12.18	103.3	90 - 110	
55 Mn	72	1	1.29	ppb	0.26	1.22	105.2	90 - 110	
59 Co	72	1	0.01	ppb	21.77	0.01	112.0	90 - 110	
60 Ni	72	1	0.27	ppb	12.92	0.07	390.9	90 - 110	
63 Cu	72	1	-0.01	ppb	73.18	0.00	20456.2	90 - 110	
66 Zn	72	1	0.04	ppb	35.83	0.02	254.8	90 - 110	
75 As	72	1	2.03	ppb	4.31	2.04	99.3	90 - 110	
78 Se	72	1	0.07	ppb	105.92	0.11	62.6	90 - 110	
95 Mo	72	1	0.45	ppb	2.12	0.48	92.9	90 - 110	
107 Ag	115	1	0.00	ppb	86.03	0.00	105.5	90 - 110	
111 Cd	115	1	-0.01	ppb	108.09	0.00	-493.7	90 - 110	
118 Sn	115	1	-0.48	ppb	2.92	-0.10	499.9	90 - 110	
121 Sb	115	1	0.03	ppb	5.55	0.01	203.3	90 - 110	
137 Ba	115	1	0.41	ppb	1.67	0.39	104.6	90 - 110	
205 Tl	165	1	0.00	ppb	16.96	0.01	37.5	90 - 110	
208 Pb	165	1	0.01	ppb	20.31	0.00	477.0	90 - 110	
232 Th	165	1	0.16	ppb	12.48	0.17	89.6	90 - 110	
238 U	165	1	0.15	ppb	0.28	0.15	100.9	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	601137	1.51	581797	103.3	30 - 120	
45 Sc	1	2582296	1.17	2574983	100.3	30 - 120	
72 Ge	1	1216323	0.20	1211627	100.4	30 - 120	
115 In	1	3395336	0.16	3426576	99.1	30 - 120	
165 Ho	1	5593006	0.76	5647086	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\AG072109.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: 07/22/09 08:07:13

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGDJWP50F** | Serial Dilution: **50.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500** | Channel 272
File: AG072109 # 22 | Method 6020_
Acquired: 07/21/2009 18:20:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 07/21/2009 17:28:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	3	0.26755	0			*	
7440-62-2	Vanadium	51	3135	12.265	12.200	0.533		*	
7440-47-3	Chromium	52	159548	629.00	608.90	3.30		*	
7439-96-5	Manganese	55	20525	64.250	61.080	5.19		*	
7440-48-4	Cobalt	59	253	0.60600	0.54130	12.0		*	
7440-02-0	Nickel	60	983	13.460	3.4430	291		*	
7440-50-8	Copper	63	587	-0.56950	-0.00278			*	
7440-66-6	Zinc	66	425	2.2325	0.87630	155		*	
7440-38-2	Arsenic	75	3160	101.40	102.10	0.686	0.21	NC	☑
7782-49-2	Selenium	78	593	3.5565	5.6840	37.4	0.70	NC	☑
7439-98-7	Molybdenum	95	1884	22.275	23.980	7.11		*	
7440-22-4	Silver	107	30	0.08660	0.08210	5.48		*	
7440-43-9	Cadmium	111	-8	-0.29115	0.05897	594		*	
7440-31-5	Tin	118	1163	-24.150	-4.8310			*	
7440-36-0	Antimony	121	257	1.4510	0.71360	103		*	
7440-39-3	Barium	137	1387	20.295	19.400	4.61		*	
7440-28-0	Thallium	205	354	0.23865	0.63710	62.5		*	
7439-92-1	Lead	208	521	0.33550	0.07033	377		*	
7440-61-1	Uranium	238	5855	7.6300	7.5630	0.886		*	
7440-29-1	Thorium	232	5345	7.7500	8.6540	10.4		*	
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: [signature] Date: 7/22/09

Post Digestion Spiked Sample (PDS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072109.B\023PDS.D\023PDS.D#
Date Acquired:	Jul 21 2009 06:22 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGDJWZF
Misc Info:	POST DIGESTION SPIKE
Vial Number:	2205
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 21 2009 05:31 pm
Sample Type:	PDS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: ---

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	201.80	0.00	ppb	1.48	200	100.9	75 - 125	
51 V	72	1	203.40	1.22	ppb	1.11	200	101.1	75 - 125	
52 Cr	72	1	258.10	60.89	ppb	0.07	200	98.9	75 - 125	
55 Mn	72	1	206.00	6.11	ppb	0.58	200	99.9	75 - 125	
59 Co	72	1	196.20	0.05	ppb	0.64	200	98.1	75 - 125	
60 Ni	72	1	196.50	0.34	ppb	1.01	200	98.1	75 - 125	
63 Cu	72	1	194.20	0.00	ppb	0.73	200	97.1	75 - 125	
66 Zn	72	1	201.80	0.09	ppb	0.46	200	100.9	75 - 125	
75 As	72	1	214.90	10.21	ppb	0.43	200	102.2	75 - 125	
78 Se	72	1	210.20	0.57	ppb	0.66	200	104.8	75 - 125	
95 Mo	72	1	209.00	2.40	ppb	0.79	200	103.3	75 - 125	
107 Ag	115	1	47.07	0.01	ppb	2.00	50	94.1	75 - 125	
111 Cd	115	1	198.70	0.01	ppb	1.84	200	99.3	75 - 125	
118 Sn	115	1	181.20	-0.48	ppb	1.76	200	90.8	75 - 125	
121 Sb	115	1	200.10	0.07	ppb	1.29	200	100.0	75 - 125	
137 Ba	115	1	200.90	1.94	ppb	2.33	200	99.5	75 - 125	
205 Tl	165	1	190.00	0.06	ppb	1.06	200	95.0	75 - 125	
208 Pb	165	1	190.70	0.01	ppb	1.07	200	95.3	75 - 125	
232 Th	165	1	0.08	0.87	ppb	8.47	200	0.0	75 - 125	
238 U	165	1	201.70	0.76	ppb	0.35	200	100.5	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	586526	1.18	581797	100.8	30 - 120	
45 Sc	1	2499229	0.22	2574983	97.1	30 - 120	
72 Ge	1	1133351	0.43	1211627	93.5	30 - 120	
115 In	1	3260173	2.11	3426576	95.1	30 - 120	
165 Ho	1	5470210	0.99	5647086	96.9	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\AG072109.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: 07/22/09 08:07:18

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGDJWZF** | Spike Dilution: **1.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500** | Channel 272
File: AG072109 # 23 | Method 6020_
Acquired: 07/21/2009 18:22:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 07/21/2009 17:28:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	124440	201.80	0	101	200		☐
7440-62-2	Vanadium	51	2357450	203.40	1.2200	101	200		☐
7440-47-3	Chromium	52	2991250	258.10	60.890	98.6	200		☐
7439-96-5	Manganese	55	2890890	206.00	6.1080	99.9	200		☐
7440-48-4	Cobalt	59	2813000	196.20	0.05413	98.1	200		☐
7440-02-0	Nickel	60	616832	196.50	0.34430	98.1	200		☐
7440-50-8	Copper	63	1423140	194.20	-0.00028	97.1	200		☐
7440-66-6	Zinc	66	348907	201.80	0.08763	101	200		☐
7440-38-2	Arsenic	75	301666	214.90	10.210	102	200		☑
7782-49-2	Selenium	78	58189	210.20	0.56840	105	200		☑
7439-98-7	Molybdenum	95	784086	209.00	2.3980	103	200		☐
7440-22-4	Silver	107	523224	47.070	0.00821	94.1	50.0		☐
7440-43-9	Cadmium	111	455895	198.70	0.00590	99.3	200		☐
7440-31-5	Tin	118	1212490	181.20	-0.48310	90.6	200		☐
7440-36-0	Antimony	121	1546000	200.10	0.07136	100	200		☐
7440-39-3	Barium	137	639587	200.90	1.9400	99.5	200		☐
7440-28-0	Thallium	205	4978400	190.00	0.06371	95.0	200		☐
7439-92-1	Lead	208	6809470	190.70	0.00703	95.3	200		☐
7440-61-1	Uranium	238	7539810	201.70	0.75630	100	200		☐
7440-29-1	Thorium	232	2897	0.08223	0.86540				
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: [signature] Date: 7/22/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\024_MS.D\024_MS.D#
Date Acquired: Jul 21 2009 06:25 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJWSF 10X
Misc Info: MATRIX SPIKE
Vial Number: 2206
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MS
Prep Dil. Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	4.35	0.00	ppb	11.89	40	10.9	50 - 150	
51 V	72	1	5.71	1.22	ppb	11.05	40	13.9	50 - 150	
52 Cr	72	1	64.83	60.89	ppb	0.62	40	64.3	50 - 150	
55 Mn	72	1	10.20	6.11	ppb	1.01	40	22.1	50 - 150	
59 Co	72	1	4.32	0.05	ppb	2.71	40	10.8	50 - 150	
60 Ni	72	1	4.52	0.34	ppb	0.40	40	11.2	50 - 150	
63 Cu	72	1	4.22	0.00	ppb	3.29	40	10.6	50 - 150	
66 Zn	72	1	4.52	0.09	ppb	1.66	40	11.3	50 - 150	
75 As	72	1	14.59	10.21	ppb	0.53	40	29.1	50 - 150	
78 Se	72	1	4.28	0.57	ppb	15.35	40	10.5	50 - 150	
95 Mo	72	1	6.79	2.40	ppb	1.68	40	16.0	50 - 150	
107 Ag	115	1	4.14	0.01	ppb	2.23	40	10.3	50 - 150	
111 Cd	115	1	4.40	0.01	ppb	2.44	40	11.0	50 - 150	
118 Sn	115	1	-0.26	-0.48	ppb	16.39	40	-0.7	50 - 150	
121 Sb	115	1	4.50	0.07	ppb	0.39	40	11.2	50 - 150	
137 Ba	115	1	6.37	1.94	ppb	3.54	40	15.2	50 - 150	
205 Tl	165	1	4.24	0.06	ppb	0.40	40	10.6	50 - 150	
208 Pb	165	1	4.22	0.01	ppb	0.76	40	10.5	50 - 150	
232 Th	165	1	4.59	0.87	ppb	2.86	40	11.2	50 - 150	
238 U	165	1	5.30	0.76	ppb	0.58	40	13.0	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	586499	1.28	581797	100.8	30 - 120	
45 Sc	1	2529836	0.34	2574983	98.2	30 - 120	
72 Ge	1	1157511	0.91	1211627	95.5	30 - 120	
115 In	1	3237120	0.67	3426576	94.5	30 - 120	
165 Ho	1	5514160	0.72	5647086	97.6	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\AG072109.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\AG072109.B\025 MSD.D\025 MSD.D#
Date Acquired: Jul 21 2009 06:28 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJWDF 10X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2207
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MSD
Dilution Factor: 10.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072109.B\024 MS.D\024 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	4.40	ppb	7.25	4.35	1.21	20	
51 V	72	1	5.38	ppb	4.90	5.71	5.97	20	
52 Cr	72	1	63.95	ppb	1.12	64.83	1.37	20	
55 Mn	72	1	10.07	ppb	0.75	10.20	1.28	20	
59 Co	72	1	4.15	ppb	1.88	4.32	4.01	20	
60 Ni	72	1	4.42	ppb	3.77	4.52	2.21	20	
63 Cu	72	1	4.15	ppb	0.42	4.22	1.82	20	
66 Zn	72	1	4.32	ppb	0.38	4.52	4.39	20	
75 As	72	1	14.32	ppb	1.11	14.59	1.87	20	
78 Se	72	1	5.00	ppb	11.82	4.28	15.57	20	
95 Mo	72	1	6.57	ppb	2.93	6.79	3.28	20	
107 Ag	115	1	4.02	ppb	0.03	4.14	2.80	20	
111 Cd	115	1	4.32	ppb	2.18	4.40	1.72	20	
118 Sn	115	1	-0.45	ppb	1.69	-0.26	-51.74	20	
121 Sb	115	1	4.36	ppb	2.25	4.49	3.12	20	
137 Ba	115	1	6.19	ppb	1.35	6.37	2.85	20	
205 Tl	165	1	4.26	ppb	0.30	4.24	0.47	20	
208 Pb	165	1	4.21	ppb	1.16	4.22	0.24	20	
232 Th	165	1	4.66	ppb	1.01	4.59	1.64	20	
238 U	165	1	5.31	ppb	0.66	5.30	0.04	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	587799	1.17	581797	101.0	30 - 120	
45 Sc	1	2522948	0.71	2574983	98.0	30 - 120	
72 Ge	1	1171083	0.71	1211627	96.7	30 - 120	
115 In	1	3269570	1.14	3426576	95.4	30 - 120	
165 Ho	1	5497291	0.55	5647086	97.3	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\AG072109.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\AG072109.B\026 CCV.D\026 CCV.D#
Date Acquired: Jul 21 2009 06:30 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: Jul 21 2009 05:31 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	49.60	ppb	3.76	50	99.2	90 - 110	
51 V	72	1	47.46	ppb	0.73	50	94.9	90 - 110	
52 Cr	72	1	48.46	ppb	1.90	50	96.9	90 - 110	
55 Mn	72	1	48.48	ppb	1.62	50	97.0	90 - 110	
59 Co	72	1	48.65	ppb	0.70	50	97.3	90 - 110	
60 Ni	72	1	49.63	ppb	1.26	50	99.3	90 - 110	
63 Cu	72	1	49.48	ppb	1.11	50	99.0	90 - 110	
66 Zn	72	1	49.17	ppb	0.85	50	98.3	90 - 110	
75 As	72	1	49.33	ppb	1.83	50	98.7	90 - 110	
78 Se	72	1	49.43	ppb	3.65	50	98.9	90 - 110	
95 Mo	72	1	49.52	ppb	1.74	50	99.0	90 - 110	
107 Ag	115	1	49.84	ppb	0.95	50	99.7	90 - 110	
111 Cd	115	1	49.79	ppb	0.88	50	99.6	90 - 110	
118 Sn	115	1	49.36	ppb	1.63	50	98.7	90 - 110	
121 Sb	115	1	49.58	ppb	0.60	50	99.2	90 - 110	
137 Ba	115	1	49.59	ppb	0.66	50	99.2	90 - 110	
205 Tl	165	1	50.54	ppb	0.83	50	101.1	90 - 110	
208 Pb	165	1	50.49	ppb	0.37	50	101.0	90 - 110	
232 Th	165	1	51.99	ppb	2.44	50	104.0	90 - 110	
238 U	165	1	51.90	ppb	0.76	50	103.8	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	571014	0.79	581797	98.1	30 - 120	
45 Sc	1	2538915	1.25	2574983	98.6	30 - 120	
72 Ge	1	1213633	1.83	1211627	100.2	30 - 120	
115 In	1	3399341	0.85	3426576	99.2	30 - 120	
165 Ho	1	5600207	0.53	5647086	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\AG072109.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\AG072109.B\027 CCB.D\027 CCB.D#
Date Acquired: Jul 21 2009 06:33 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: Jul 21 2009 05:31 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	0.006	ppb	173.20	1.00	
51 V	72	1	-0.006	ppb	515.80	1.00	
52 Cr	72	1	-0.037	ppb	49.31	1.00	
55 Mn	72	1	-0.018	ppb	70.24	1.00	
59 Co	72	1	0.002	ppb	18.76	1.00	
60 Ni	72	1	0.005	ppb	28.03	1.00	
63 Cu	72	1	-0.039	ppb	12.85	1.00	
66 Zn	72	1	0.010	ppb	155.67	1.00	
75 As	72	1	-0.008	ppb	188.46	1.00	
78 Se	72	1	0.001	ppb	63037.00	1.00	
95 Mo	72	1	0.038	ppb	19.24	1.00	
107 Ag	115	1	0.006	ppb	44.60	1.00	
111 Cd	115	1	0.007	ppb	37.32	1.00	
118 Sn	115	1	-0.057	ppb	99.88	1.00	
121 Sb	115	1	0.059	ppb	8.11	1.00	
137 Ba	115	1	0.003	ppb	62.71	1.00	
205 Tl	165	1	0.021	ppb	14.15	1.00	
208 Pb	165	1	0.004	ppb	24.01	1.00	
232 Th	165	1	0.775	ppb	18.32	1.00	
238 U	165	1	0.010	ppb	13.56	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	568757	0.26	581797	97.8	30 - 120	
45 Sc	1	2523515	0.52	2574983	98.0	30 - 120	
72 Ge	1	1190357	0.87	1211627	98.2	30 - 120	
115 In	1	3393018	0.90	3426576	99.0	30 - 120	
165 Ho	1	5546048	0.69	5647086	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\AG072109.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\AG072109.B\028WASH.D\028WASH.D#
Date Acquired: Jul 21 2009 06:36 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: Jul 21 2009 05:31 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	0.945 ppb	17.37	1.30	
51 V	72	1	5.047 ppb	0.91	6.50	
52 Cr	72	1	2.021 ppb	3.49	2.60	
55 Mn	72	1	1.010 ppb	5.40	1.30	
59 Co	72	1	1.024 ppb	2.85	1.30	
60 Ni	72	1	2.156 ppb	3.13	2.60	
63 Cu	72	1	2.053 ppb	0.90	2.60	
66 Zn	72	1	10.450 ppb	1.17	13.00	
75 As	72	1	5.192 ppb	1.28	6.50	
78 Se	72	1	5.235 ppb	5.22	6.50	
95 Mo	72	1	2.123 ppb	6.02	2.60	
107 Ag	115	1	5.226 ppb	1.25	6.50	
111 Cd	115	1	1.069 ppb	5.99	1.30	
118 Sn	115	1	9.851 ppb	1.45	13.00	
121 Sb	115	1	1.944 ppb	1.32	2.60	
137 Ba	115	1	1.079 ppb	5.58	1.30	
205 Tl	165	1	1.091 ppb	0.56	1.30	
208 Pb	165	1	1.065 ppb	1.02	1.30	
232 Th	165	1	2.329 ppb	1.74	2.60	
238 U	165	1	1.101 ppb	0.77	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	563752	0.35	581797	96.9	30 - 120	
45 Sc	1	2522070	0.50	2574983	97.9	30 - 120	
72 Ge	1	1195071	0.30	1211627	98.6	30 - 120	
115 In	1	3409514	0.82	3426576	99.5	30 - 120	
165 Ho	1	5555873	0.54	5647086	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\AG072109.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\AG072109.B\029 BLK.D\029 BLK.D#
Date Acquired:	Jul 21 2009 06:39 pm
Operator:	TEL
Sample Name:	LGEERB
Misc Info:	BLANK 9194272 6020
Vial Number:	2208
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Jul 21 2009 05:31 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	-0.023 ppb	197.29	2.00	
52 Cr	72	1	0.079 ppb	10.06	2.00	
55 Mn	72	1	0.108 ppb	12.70	2.00	
59 Co	72	1	0.000 ppb	501.93	2.00	
60 Ni	72	1	0.025 ppb	81.97	2.00	
63 Cu	72	1	0.077 ppb	14.50	2.00	
66 Zn	72	1	0.692 ppb	2.78	2.00	
75 As	72	1	-0.001 ppb	1570.10	2.00	
78 Se	72	1	0.138 ppb	271.86	2.00	
95 Mo	72	1	0.012 ppb	30.51	2.00	
107 Ag	115	1	0.005 ppb	43.98	2.00	
111 Cd	115	1	0.003 ppb	153.49	2.00	
118 Sn	115	1	-0.388 ppb	3.06	2.00	
121 Sb	115	1	0.032 ppb	4.02	2.00	
137 Ba	115	1	0.024 ppb	41.42	2.00	
205 Tl	165	1	0.024 ppb	33.52	2.00	
208 Pb	165	1	0.010 ppb	10.00	2.00	
232 Th	165	1	0.149 ppb	18.82	2.00	
238 U	165	1	0.003 ppb	8.64	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	567901	0.49	581797	97.6	30 - 120	
45 Sc	1	2536930	0.98	2574983	98.5	30 - 120	
72 Ge	1	1190052	0.57	1211627	98.2	30 - 120	
115 In	1	3404908	0.81	3426576	99.4	30 - 120	
165 Ho	1	5537384	1.21	5647086	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\AG072109.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\AG072109.B\030 LCS.D\030 LCS.D#
Date Acquired: Jul 21 2009 06:41 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEERC
Misc Info: LCS
Vial Number: 2209
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 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	40.84	2.97	40	102.1	80 - 120	
51 V	72	1	41.46	0.89	40	103.7	80 - 120	
52 Cr	72	1	42.08	1.02	40	105.2	80 - 120	
55 Mn	72	1	42.07	2.68	40	105.2	80 - 120	
59 Co	72	1	42.43	1.84	40	106.1	80 - 120	
60 Ni	72	1	43.29	2.68	40	108.2	80 - 120	
63 Cu	72	1	43.58	2.40	40	109.0	80 - 120	
66 Zn	72	1	41.11	1.13	40	102.8	80 - 120	
75 As	72	1	41.33	1.55	40	103.3	80 - 120	
78 Se	72	1	40.24	3.32	40	100.6	80 - 120	
95 Mo	72	1	43.74	5.12	40	109.4	80 - 120	
107 Ag	115	1	42.07	1.97	40	105.2	80 - 120	
111 Cd	115	1	41.62	1.54	40	104.1	80 - 120	
118 Sn	115	1	-0.06	879.10	40	-0.2	80 - 120	
121 Sb	115	1	40.67	1.75	40	101.7	80 - 120	
137 Ba	115	1	42.32	1.65	40	105.8	80 - 120	
205 Tl	165	1	43.38	1.33	40	108.5	80 - 120	
208 Pb	165	1	43.18	0.66	40	108.0	80 - 120	
232 Th	165	1	46.22	3.01	40	115.6	80 - 120	
238 U	165	1	44.22	0.28	40	110.6	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	572827	4.47	581797	98.5	30 - 120	
45 Sc	1	2536116	1.65	2574983	98.5	30 - 120	
72 Ge	1	1194379	2.43	1211627	98.6	30 - 120	
115 In	1	3408702	2.96	3426576	99.5	30 - 120	
165 Ho	1	5609006	1.65	5647086	99.3	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\AG072109.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\AG072109.B\031AREF.D\031AREF.D#
Date Acquired: Jul 21 2009 06:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCN3 10X
Misc Info: D9G100272
Vial Number: 2210
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: AllRef
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	0.11	0.01	ppb	86.58	3600	
51 V	72	1	21.63	2.16	ppb	7.43	3600	
52 Cr	72	1	6.32	0.63	ppb	7.96	3600	
55 Mn	72	1	5.24	0.52	ppb	6.66	3600	
59 Co	72	1	0.39	0.04	ppb	16.50	3600	
60 Ni	72	1	4.15	0.41	ppb	14.15	3600	
63 Cu	72	1	0.17	0.02	ppb	16.19	3600	
66 Zn	72	1	3.05	0.31	ppb	11.24	3600	
75 As	72	1	198.10	19.81	ppb	2.87	3600	
78 Se	72	1	4.94	0.49	ppb	39.09	3600	
95 Mo	72	1	16.44	1.64	ppb	4.40	3600	
107 Ag	115	1	0.09	0.01	ppb	63.79	3600	
111 Cd	115	1	0.13	0.01	ppb	29.31	3600	
118 Sn	115	1	-5.34	-0.53	ppb	1.82	3600	
121 Sb	115	1	0.48	0.05	ppb	8.21	3600	
137 Ba	115	1	33.07	3.31	ppb	2.19	3600	
205 Tl	165	1	0.27	0.03	ppb	15.00	3600	
208 Pb	165	1	0.16	0.02	ppb	10.80	3600	
232 Th	165	1	6.24	0.62	ppb	18.22	1000	
238 U	165	1	55.05	5.51	ppb	1.19	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	567824	0.66	581797	97.6	30 - 120	
45 Sc	1	2404508	0.72	2574983	93.4	30 - 120	
72 Ge	1	1124528	1.16	1211627	92.8	30 - 120	
115 In	1	3208719	1.35	3426576	93.6	30 - 120	
165 Ho	1	5383143	1.62	5647086	95.3	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\AG072109.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\AG072109.B\032SDIL.D\032SDIL.D#
Date Acquired: Jul 21 2009 06:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCN3P50
Misc Info: SERIAL DILUTION
Vial Number: 2211
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SDIL
Dilution Factor: 10.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072109.B\031AREF.D\031AREF.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	0.43	ppb	23.28	0.43	99.3	90 - 110	
52 Cr	72	1	0.29	ppb	4.37	0.13	229.3	90 - 110	
55 Mn	72	1	0.15	ppb	6.68	0.10	144.4	90 - 110	
59 Co	72	1	0.01	ppb	66.01	0.01	130.9	90 - 110	
60 Ni	72	1	0.26	ppb	15.21	0.08	310.4	90 - 110	
63 Cu	72	1	-0.01	ppb	106.68	0.00	-353.0	90 - 110	
66 Zn	72	1	0.09	ppb	22.23	0.06	148.6	90 - 110	
75 As	72	1	3.90	ppb	0.41	3.96	98.4	90 - 110	
78 Se	72	1	0.05	ppb	1070.40	0.10	46.0	90 - 110	
95 Mo	72	1	0.31	ppb	1.89	0.33	95.3	90 - 110	
107 Ag	115	1	0.00	ppb	66.72	0.00	156.3	90 - 110	
111 Cd	115	1	0.00	ppb	175.62	0.00	145.6	90 - 110	
118 Sn	115	1	-0.53	ppb	3.47	-0.11	493.3	90 - 110	
121 Sb	115	1	0.02	ppb	16.35	0.01	181.6	90 - 110	
137 Ba	115	1	0.66	ppb	2.72	0.66	99.8	90 - 110	
205 Tl	165	1	0.00	ppb	195.50	0.01	21.4	90 - 110	
208 Pb	165	1	0.01	ppb	27.48	0.00	185.7	90 - 110	
232 Th	165	1	0.09	ppb	13.71	0.12	75.2	90 - 110	
238 U	165	1	1.10	ppb	1.87	1.10	100.1	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	565608	0.94	581797	97.2	30 - 120	
45 Sc	1	2460020	0.58	2574983	95.5	30 - 120	
72 Ge	1	1155387	1.16	1211627	95.4	30 - 120	
115 In	1	3303714	1.14	3426576	96.4	30 - 120	
165 Ho	1	5431207	0.86	5647086	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\AG072109.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: 07/22/09 08:07:22

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGCN3P50** | Serial Dilution: **50.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500**
File: AG072109 # 32
Acquired: 07/21/2009 18:47:00
Calibrated: 07/21/2009 17:28:00

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	0.11200	100		*	
7440-62-2	Vanadium	51	5166	21.480	21.630	0.693		*	
7440-47-3	Chromium	52	6495	14.490	6.3200	129		*	
7439-96-5	Manganese	55	3291	7.5700	5.2420	44.4		*	
7440-48-4	Cobalt	59	213	0.51000	0.38970	30.9		*	
7440-02-0	Nickel	60	897	12.880	4.1490	210		*	
7440-50-8	Copper	63	553	-0.59100	0.16740	453		*	
7440-66-6	Zinc	66	485	4.5335	3.0510	48.6		*	
7440-38-2	Arsenic	75	5677	194.90	198.10	1.62	0.21	NC	☑
7782-49-2	Selenium	78	557	2.2740	4.9420	54.0	0.70	NC	☑
7439-98-7	Molybdenum	95	1283	15.660	16.440	4.74		*	
7440-22-4	Silver	107	40	0.13490	0.08632	56.3		*	
7440-43-9	Cadmium	111	15	0.19425	0.13340	45.6		*	
7440-31-5	Tin	118	837	-26.330	-5.3380			*	
7440-36-0	Antimony	121	160	0.87700	0.48280	81.6		*	
7440-39-3	Barium	137	2169	32.995	33.070	0.227		*	
7440-28-0	Thallium	205	250	0.05780	0.26950	78.6		*	
7439-92-1	Lead	208	484	0.30480	0.16410	85.7		*	
7440-61-1	Uranium	238	40915	55.100	55.050	0.0908		*	
7440-29-1	Thorium	232	3247	4.6955	6.2410	24.8		*	
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: 7/22/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\033PDS.D\033PDS.D#
Date Acquired: Jul 21 2009 06:50 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCN3Z
Misc Info: POST DIGESTION SPIKE
Vial Number: 2212
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 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	200.50	0.01	ppb	2.01	200	100.2	75 - 125	
51 V	72	1	199.90	2.16	ppb	1.11	200	98.9	75 - 125	
52 Cr	72	1	201.70	0.63	ppb	1.61	200	100.5	75 - 125	
55 Mn	72	1	198.30	0.52	ppb	1.60	200	98.9	75 - 125	
59 Co	72	1	195.50	0.04	ppb	2.21	200	97.7	75 - 125	
60 Ni	72	1	195.10	0.41	ppb	0.98	200	97.3	75 - 125	
63 Cu	72	1	195.80	0.02	ppb	0.06	200	97.9	75 - 125	
66 Zn	72	1	201.20	0.31	ppb	1.52	200	100.4	75 - 125	
75 As	72	1	221.60	19.81	ppb	1.14	200	100.8	75 - 125	
78 Se	72	1	205.80	0.49	ppb	1.72	200	102.6	75 - 125	
95 Mo	72	1	206.50	1.64	ppb	1.30	200	102.4	75 - 125	
107 Ag	115	1	48.42	0.01	ppb	1.14	50	96.8	75 - 125	
111 Cd	115	1	199.60	0.01	ppb	0.85	200	99.8	75 - 125	
118 Sn	115	1	182.90	-0.53	ppb	0.64	200	91.7	75 - 125	
121 Sb	115	1	200.40	0.05	ppb	0.62	200	100.2	75 - 125	
137 Ba	115	1	204.10	3.31	ppb	0.79	200	100.4	75 - 125	
205 Tl	165	1	196.40	0.03	ppb	0.92	200	98.2	75 - 125	
208 Pb	165	1	194.00	0.02	ppb	0.57	200	97.0	75 - 125	
232 Th	165	1	0.06	0.62	ppb	5.86	200	0.0	75 - 125	
238 U	165	1	208.90	5.51	ppb	1.19	200	101.7	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	552017	0.97	581797	94.9	30 - 120	
45 Sc	1	2393086	1.79	2574983	92.9	30 - 120	
72 Ge	1	1113187	1.37	1211627	91.9	30 - 120	
115 In	1	3182521	0.72	3426576	92.9	30 - 120	
165 Ho	1	5376631	0.55	5647086	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\AG072109.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: 07/22/09 08:07:27

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGCN3Z** | Spike Dilution: **1.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500** | Channel 272
File: AG072109 # 33 | Method 6020_
Acquired: 07/21/2009 18:50:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 07/21/2009 17:28:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	116367	200.50	0.01120	100	200		☐
7440-62-2	Vanadium	51	2276200	199.90	2.1630	98.9	200		☐
7440-47-3	Chromium	52	2295910	201.70	0.63200	101	200		☐
7439-96-5	Manganese	55	2733570	198.30	0.52420	98.9	200		☐
7440-48-4	Cobalt	59	2753080	195.50	0.03897	97.7	200		☐
7440-02-0	Nickel	60	601491	195.10	0.41490	97.3	200		☐
7440-50-8	Copper	63	1409320	195.80	0.01674	97.9	200		☐
7440-66-6	Zinc	66	341573	201.20	0.30510	100	200		☐
7440-38-2	Arsenic	75	305470	221.60	19.810	101	200		☑
7782-49-2	Selenium	78	55960	205.80	0.49420	103	200		☑
7439-98-7	Molybdenum	95	760715	206.50	1.6440	102	200		☐
7440-22-4	Silver	107	525638	48.420	0.00863	96.8	50.0		☐
7440-43-9	Cadmium	111	447213	199.60	0.01334	99.8	200		☐
7440-31-5	Tin	118	1194630	182.90	-0.53380	91.4	200		☐
7440-36-0	Antimony	121	1511700	200.40	0.04828	100	200		☐
7440-39-3	Barium	137	634553	204.10	3.3070	100	200		☐
7440-28-0	Thallium	205	5056800	196.40	0.02695	98.2	200		☐
7439-92-1	Lead	208	6807220	194.00	0.01641	97.0	200		☐
7440-61-1	Uranium	238	7672550	208.90	5.5050	102	200		☐
7440-29-1	Thorium	232	2147	0.05994	0.62410				
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: [signature] Date: 7/22/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\034_MS.D\034_MS.D#
Date Acquired: Jul 21 2009 06:52 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCN3S 10X
Misc Info: MATRIX SPIKE
Vial Number: 2301
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MS
Prep Dil. Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	4.28	0.01	ppb	3.84	40	10.7	50 - 150	
51 V	72	1	6.27	2.16	ppb	1.52	40	14.9	50 - 150	
52 Cr	72	1	4.83	0.63	ppb	4.02	40	11.9	50 - 150	
55 Mn	72	1	4.67	0.52	ppb	0.82	40	11.5	50 - 150	
59 Co	72	1	4.21	0.04	ppb	1.66	40	10.5	50 - 150	
60 Ni	72	1	4.58	0.41	ppb	2.25	40	11.3	50 - 150	
63 Cu	72	1	4.24	0.02	ppb	2.92	40	10.6	50 - 150	
66 Zn	72	1	4.53	0.31	ppb	4.27	40	11.2	50 - 150	
75 As	72	1	23.45	19.81	ppb	0.47	40	39.2	50 - 150	
78 Se	72	1	4.43	0.49	ppb	4.58	40	10.9	50 - 150	
95 Mo	72	1	6.07	1.64	ppb	2.05	40	14.6	50 - 150	
107 Ag	115	1	4.06	0.01	ppb	2.34	40	10.2	50 - 150	
111 Cd	115	1	4.28	0.01	ppb	1.30	40	10.7	50 - 150	
118 Sn	115	1	-0.29	-0.53	ppb	8.52	40	-0.7	50 - 150	
121 Sb	115	1	4.37	0.05	ppb	0.90	40	10.9	50 - 150	
137 Ba	115	1	7.57	3.31	ppb	1.41	40	17.5	50 - 150	
205 Tl	165	1	4.37	0.03	ppb	0.09	40	10.9	50 - 150	
208 Pb	165	1	4.34	0.02	ppb	0.98	40	10.9	50 - 150	
232 Th	165	1	4.70	0.62	ppb	2.44	40	11.6	50 - 150	
238 U	165	1	10.08	5.51	ppb	0.80	40	22.2	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	556944	0.45	581797	95.7	30 - 120	
45 Sc	1	2377843	1.11	2574983	92.3	30 - 120	
72 Ge	1	1122514	1.35	1211627	92.6	30 - 120	
115 In	1	3221254	0.75	3426576	94.0	30 - 120	
165 Ho	1	5362470	0.23	5647086	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\AG072109.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\AG072109.B\035 CCV.D\035 CCV.D#
Date Acquired: Jul 21 2009 06:55 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: Jul 21 2009 05:31 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	49.42	ppb	1.97	50	98.8	90 - 110	
51 V	72	1	48.32	ppb	0.92	50	96.6	90 - 110	
52 Cr	72	1	48.98	ppb	0.92	50	98.0	90 - 110	
55 Mn	72	1	48.41	ppb	0.46	50	96.8	90 - 110	
59 Co	72	1	49.42	ppb	0.37	50	98.8	90 - 110	
60 Ni	72	1	49.85	ppb	0.52	50	99.7	90 - 110	
63 Cu	72	1	50.16	ppb	0.84	50	100.3	90 - 110	
66 Zn	72	1	49.95	ppb	0.90	50	99.9	90 - 110	
75 As	72	1	50.23	ppb	0.25	50	100.5	90 - 110	
78 Se	72	1	50.22	ppb	2.05	50	100.4	90 - 110	
95 Mo	72	1	50.05	ppb	0.52	50	100.1	90 - 110	
107 Ag	115	1	49.31	ppb	0.59	50	98.6	90 - 110	
111 Cd	115	1	49.60	ppb	0.17	50	99.2	90 - 110	
118 Sn	115	1	49.20	ppb	0.37	50	98.4	90 - 110	
121 Sb	115	1	49.37	ppb	0.88	50	98.7	90 - 110	
137 Ba	115	1	49.60	ppb	0.50	50	99.2	90 - 110	
205 Tl	165	1	50.85	ppb	1.38	50	101.7	90 - 110	
208 Pb	165	1	50.56	ppb	0.82	50	101.1	90 - 110	
232 Th	165	1	52.19	ppb	3.26	50	104.4	90 - 110	
238 U	165	1	51.93	ppb	1.69	50	103.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	540158	0.94	581797	92.8	30 - 120	
45 Sc	1	2438139	1.30	2574983	94.7	30 - 120	
72 Ge	1	1153755	0.36	1211627	95.2	30 - 120	
115 In	1	3309113	0.86	3426576	96.6	30 - 120	
165 Ho	1	5464053	0.74	5647086	96.8	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\AG072109.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\AG072109.B\036 CCB.D\036 CCB.D#
Date Acquired: Jul 21 2009 06:58 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: Jul 21 2009 05:31 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	-0.003	ppb	487.71	1.00	
52 Cr	72	1	-0.001	ppb	1245.80	1.00	
55 Mn	72	1	-0.013	ppb	48.53	1.00	
59 Co	72	1	0.000	ppb	382.88	1.00	
60 Ni	72	1	-0.006	ppb	152.58	1.00	
63 Cu	72	1	-0.033	ppb	14.97	1.00	
66 Zn	72	1	0.013	ppb	162.14	1.00	
75 As	72	1	-0.001	ppb	1279.80	1.00	
78 Se	72	1	0.044	ppb	96.85	1.00	
95 Mo	72	1	0.048	ppb	21.21	1.00	
107 Ag	115	1	0.007	ppb	13.19	1.00	
111 Cd	115	1	0.004	ppb	36.72	1.00	
118 Sn	115	1	-0.066	ppb	28.84	1.00	
121 Sb	115	1	0.060	ppb	6.65	1.00	
137 Ba	115	1	0.010	ppb	78.17	1.00	
205 Tl	165	1	0.019	ppb	11.00	1.00	
208 Pb	165	1	0.004	ppb	45.34	1.00	
232 Th	165	1	0.795	ppb	15.81	1.00	
238 U	165	1	0.011	ppb	4.95	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	552374	0.81	581797	94.9	30 - 120	
45 Sc	1	2446795	1.11	2574983	95.0	30 - 120	
72 Ge	1	1178029	1.15	1211627	97.2	30 - 120	
115 In	1	3329395	0.66	3426576	97.2	30 - 120	
165 Ho	1	5475567	0.43	5647086	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\AG072109.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\AG072109.B\037WASH.D\037WASH.D#
Date Acquired: Jul 21 2009 07:01 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: Jul 21 2009 05:31 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	1.001 ppb	9.18	1.30	
51 V	72	1	5.141 ppb	2.55	6.50	
52 Cr	72	1	2.091 ppb	2.49	2.60	
55 Mn	72	1	1.005 ppb	1.26	1.30	
59 Co	72	1	1.028 ppb	5.10	1.30	
60 Ni	72	1	2.103 ppb	0.94	2.60	
63 Cu	72	1	2.128 ppb	2.55	2.60	
66 Zn	72	1	10.560 ppb	2.59	13.00	
75 As	72	1	5.192 ppb	0.09	6.50	
78 Se	72	1	6.309 ppb	1.74	6.50	
95 Mo	72	1	2.070 ppb	2.44	2.60	
107 Ag	115	1	5.185 ppb	1.03	6.50	
111 Cd	115	1	1.087 ppb	10.27	1.30	
118 Sn	115	1	9.916 ppb	0.55	13.00	
121 Sb	115	1	1.957 ppb	2.80	2.60	
137 Ba	115	1	1.051 ppb	2.71	1.30	
205 Tl	165	1	1.091 ppb	2.87	1.30	
208 Pb	165	1	1.075 ppb	0.84	1.30	
232 Th	165	1	2.350 ppb	2.29	2.60	
238 U	165	1	1.116 ppb	0.75	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	550628	0.54	581797	94.6	30 - 120	
45 Sc	1	2456537	0.83	2574983	95.4	30 - 120	
72 Ge	1	1156394	1.08	1211627	95.4	30 - 120	
115 In	1	3321593	0.50	3426576	96.9	30 - 120	
165 Ho	1	5496023	1.28	5647086	97.3	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\038 MSD.D\038 MSD.D#
Date Acquired: Jul 21 2009 07:03 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCN3D 10X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2302
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MSD
Dilution Factor: 10.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072109.B\034 MS.D\034 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	4.06	ppb	5.70	4.28	5.18	20	
51 V	72	1	6.38	ppb	1.64	6.27	1.79	20	
52 Cr	72	1	4.79	ppb	0.59	4.83	0.85	20	
55 Mn	72	1	4.66	ppb	1.04	4.67	0.34	20	
59 Co	72	1	4.26	ppb	3.02	4.21	1.11	20	
60 Ni	72	1	4.59	ppb	3.03	4.58	0.15	20	
63 Cu	72	1	4.29	ppb	0.78	4.24	1.17	20	
66 Zn	72	1	4.59	ppb	2.90	4.53	1.23	20	
75 As	72	1	23.78	ppb	1.59	23.45	1.40	20	
78 Se	72	1	4.84	ppb	10.22	4.43	8.78	20	
95 Mo	72	1	5.96	ppb	2.88	6.07	1.73	20	
107 Ag	115	1	4.19	ppb	3.60	4.06	2.98	20	
111 Cd	115	1	4.27	ppb	1.75	4.28	0.12	20	
118 Sn	115	1	-0.49	ppb	0.60	-0.29	-50.16	20	
121 Sb	115	1	4.30	ppb	1.48	4.37	1.66	20	
137 Ba	115	1	7.66	ppb	3.26	7.57	1.09	20	
205 Tl	165	1	4.33	ppb	1.08	4.37	0.87	20	
208 Pb	165	1	4.32	ppb	0.78	4.34	0.44	20	
232 Th	165	1	4.77	ppb	2.43	4.70	1.33	20	
238 U	165	1	9.96	ppb	0.82	10.08	1.22	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	546064	0.27	581797	93.9	30 - 120	
45 Sc	1	2359431	0.90	2574983	91.6	30 - 120	
72 Ge	1	1104590	0.97	1211627	91.2	30 - 120	
115 In	1	3149159	0.41	3426576	91.9	30 - 120	
165 Ho	1	5369723	0.97	5647086	95.1	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\039SMPL.D\039SMPL.D#
Date Acquired: Jul 21 2009 07:06 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGCQK 10X
Misc Info: D9G100274
Vial Number: 2303
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	23.68	2.37	ppb	1.85	3600	
52 Cr	72	1	12.40	1.24	ppb	2.95	3600	
55 Mn	72	1	2.12	0.21	ppb	8.12	3600	
59 Co	72	1	0.30	0.03	ppb	7.53	3600	
60 Ni	72	1	3.33	0.33	ppb	5.22	3600	
63 Cu	72	1	-0.20	-0.02	ppb	5.61	3600	
66 Zn	72	1	2.60	0.26	ppb	8.14	3600	
75 As	72	1	114.20	11.42	ppb	1.08	3600	
78 Se	72	1	2.84	0.28	ppb	68.00	3600	
95 Mo	72	1	42.30	4.23	ppb	2.35	3600	
107 Ag	115	1	0.07	0.01	ppb	37.85	3600	
111 Cd	115	1	0.07	0.01	ppb	133.86	3600	
118 Sn	115	1	-5.30	-0.53	ppb	2.37	3600	
121 Sb	115	1	0.28	0.03	ppb	5.21	3600	
137 Ba	115	1	34.03	3.40	ppb	4.11	3600	
205 Tl	165	1	0.11	0.01	ppb	30.92	3600	
208 Pb	165	1	0.09	0.01	ppb	19.12	3600	
232 Th	165	1	1.32	0.13	ppb	13.37	1000	
238 U	165	1	6.45	0.64	ppb	0.89	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	551022	0.60	581797	94.7	30 - 120	
45 Sc	1	2336691	0.75	2574983	90.7	30 - 120	
72 Ge	1	1100169	0.92	1211627	90.8	30 - 120	
115 In	1	3126709	0.78	3426576	91.2	30 - 120	
165 Ho	1	5251243	0.64	5647086	93.0	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\AG072109.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\AG072109.B\040SMPL.D\040SMPL.D#
Date Acquired: Jul 21 2009 07:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJV 10X
Misc Info: D9G110152
Vial Number: 2304
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	0.12	0.01	ppb	86.63	3600	
51 V	72	1	16.34	1.63	ppb	14.05	3600	
52 Cr	72	1	858.20	85.82	ppb	0.42	3600	
55 Mn	72	1	62.25	6.23	ppb	0.82	3600	
59 Co	72	1	0.35	0.04	ppb	4.83	3600	
60 Ni	72	1	3.24	0.32	ppb	5.41	3600	
63 Cu	72	1	-0.11	-0.01	ppb	134.88	3600	
66 Zn	72	1	0.97	0.10	ppb	20.21	3600	
75 As	72	1	137.30	13.73	ppb	1.37	3600	
78 Se	72	1	1.53	0.15	ppb	126.27	3600	
95 Mo	72	1	23.17	2.32	ppb	1.07	3600	
107 Ag	115	1	0.03	0.00	ppb	74.34	3600	
111 Cd	115	1	0.05	0.00	ppb	97.57	3600	
118 Sn	115	1	-5.16	-0.52	ppb	3.23	3600	
121 Sb	115	1	0.22	0.02	ppb	2.16	3600	
137 Ba	115	1	20.27	2.03	ppb	4.70	3600	
205 Tl	165	1	0.11	0.01	ppb	13.97	3600	
208 Pb	165	1	0.08	0.01	ppb	23.24	3600	
232 Th	165	1	0.36	0.04	ppb	9.36	1000	
238 U	165	1	7.67	0.77	ppb	2.40	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	549478	0.91	581797	94.4	30 - 120	
45 Sc	1	2376723	1.71	2574983	92.3	30 - 120	
72 Ge	1	1096432	0.47	1211627	90.5	30 - 120	
115 In	1	3124200	0.99	3426576	91.2	30 - 120	
165 Ho	1	5324718	1.58	5647086	94.3	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\041SMPL.D\041SMPL.D#
Date Acquired: Jul 21 2009 07:11 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDJ3 10X
Misc Info: D9G110155
Vial Number: 2305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	0.06	0.01	ppb	173.23	3600	
51 V	72	1	25.99	2.60	ppb	1.41	3600	
52 Cr	72	1	90.81	9.08	ppb	1.84	3600	
55 Mn	72	1	2.28	0.23	ppb	3.91	3600	
59 Co	72	1	0.28	0.03	ppb	8.82	3600	
60 Ni	72	1	3.42	0.34	ppb	10.30	3600	
63 Cu	72	1	-0.03	0.00	ppb	414.27	3600	
66 Zn	72	1	9.09	0.91	ppb	0.15	3600	
75 As	72	1	86.50	8.65	ppb	2.13	3600	
78 Se	72	1	1.59	0.16	ppb	168.68	3600	
95 Mo	72	1	35.52	3.55	ppb	3.38	3600	
107 Ag	115	1	0.02	0.00	ppb	63.47	3600	
111 Cd	115	1	0.11	0.01	ppb	91.74	3600	
118 Sn	115	1	-5.25	-0.52	ppb	1.50	3600	
121 Sb	115	1	0.16	0.02	ppb	27.09	3600	
137 Ba	115	1	26.05	2.61	ppb	2.24	3600	
205 Tl	165	1	0.06	0.01	ppb	15.71	3600	
208 Pb	165	1	0.10	0.01	ppb	12.74	3600	
232 Th	165	1	0.18	0.02	ppb	32.01	1000	
238 U	165	1	8.01	0.80	ppb	0.86	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	558798	0.28	581797	96.0	30 - 120	
45 Sc	1	2360484	0.64	2574983	91.7	30 - 120	
72 Ge	1	1106065	0.59	1211627	91.3	30 - 120	
115 In	1	3160658	0.73	3426576	92.2	30 - 120	
165 Ho	1	5332925	0.28	5647086	94.4	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\AG072109.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\AG072109.B\042SMPL.D\042SMPL.D#
Date Acquired: Jul 21 2009 07:14 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGDKR 10X
Misc Info: D9G110159
Vial Number: 2306
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	30.44	3.04	ppb	4.27	3600	
52 Cr	72	1	17.70	1.77	ppb	1.53	3600	
55 Mn	72	1	3.41	0.34	ppb	1.05	3600	
59 Co	72	1	0.10	0.01	ppb	35.67	3600	
60 Ni	72	1	2.63	0.26	ppb	23.26	3600	
63 Cu	72	1	-0.14	-0.01	ppb	158.27	3600	
66 Zn	72	1	1.23	0.12	ppb	9.20	3600	
75 As	72	1	57.13	5.71	ppb	1.32	3600	
78 Se	72	1	2.47	0.25	ppb	139.38	3600	
95 Mo	72	1	7.30	0.73	ppb	2.20	3600	
107 Ag	115	1	0.01	0.00	ppb	150.52	3600	
111 Cd	115	1	0.05	0.00	ppb	86.56	3600	
118 Sn	115	1	-5.31	-0.53	ppb	1.46	3600	
121 Sb	115	1	0.12	0.01	ppb	36.48	3600	
137 Ba	115	1	22.02	2.20	ppb	2.09	3600	
205 Tl	165	1	0.03	0.00	ppb	69.45	3600	
208 Pb	165	1	0.07	0.01	ppb	7.65	3600	
232 Th	165	1	0.10	0.01	ppb	23.71	1000	
238 U	165	1	2.22	0.22	ppb	2.65	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	564989	0.50	581797	97.1	30 - 120	
45 Sc	1	2392180	0.44	2574983	92.9	30 - 120	
72 Ge	1	1130770	0.41	1211627	93.3	30 - 120	
115 In	1	3228355	1.24	3426576	94.2	30 - 120	
165 Ho	1	5420266	0.22	5647086	96.0	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\AG072109.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\AG072109.B\043 CCV.D\043 CCV.D#
Date Acquired: Jul 21 2009 07:17 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: Jul 21 2009 05:31 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	49.65	ppb	2.08	50	99.3	90 - 110	
51 V	72	1	48.04	ppb	1.47	50	96.1	90 - 110	
52 Cr	72	1	48.72	ppb	2.23	50	97.4	90 - 110	
55 Mn	72	1	48.53	ppb	1.91	50	97.1	90 - 110	
59 Co	72	1	49.19	ppb	1.05	50	98.4	90 - 110	
60 Ni	72	1	50.51	ppb	2.15	50	101.0	90 - 110	
63 Cu	72	1	50.79	ppb	1.69	50	101.6	90 - 110	
66 Zn	72	1	49.91	ppb	2.28	50	99.8	90 - 110	
75 As	72	1	50.09	ppb	1.74	50	100.2	90 - 110	
78 Se	72	1	50.55	ppb	0.24	50	101.1	90 - 110	
95 Mo	72	1	50.44	ppb	2.04	50	100.9	90 - 110	
107 Ag	115	1	49.47	ppb	1.12	50	98.9	90 - 110	
111 Cd	115	1	49.64	ppb	0.86	50	99.3	90 - 110	
118 Sn	115	1	49.52	ppb	0.62	50	99.0	90 - 110	
121 Sb	115	1	49.46	ppb	1.50	50	98.9	90 - 110	
137 Ba	115	1	49.75	ppb	0.64	50	99.5	90 - 110	
205 Tl	165	1	52.25	ppb	1.18	50	104.5	90 - 110	
208 Pb	165	1	51.38	ppb	1.02	50	102.8	90 - 110	
232 Th	165	1	53.11	ppb	2.44	50	106.2	90 - 110	
238 U	165	1	53.01	ppb	0.71	50	106.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	536974	0.53	581797	92.3	30 - 120	
45 Sc	1	2404825	0.90	2574983	93.4	30 - 120	
72 Ge	1	1144216	1.59	1211627	94.4	30 - 120	
115 In	1	3295604	0.45	3426576	96.2	30 - 120	
165 Ho	1	5413800	0.49	5647086	95.9	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\AG072109.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\AG072109.B\044 CCB.D\044 CCB.D#
Date Acquired: Jul 21 2009 07:20 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: Jul 21 2009 05:31 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	0.012	ppb	188.91	1.00	
52 Cr	72	1	-0.022	ppb	45.87	1.00	
55 Mn	72	1	-0.011	ppb	53.82	1.00	
59 Co	72	1	0.002	ppb	121.88	1.00	
60 Ni	72	1	0.007	ppb	120.83	1.00	
63 Cu	72	1	-0.039	ppb	12.93	1.00	
66 Zn	72	1	0.001	ppb	1830.70	1.00	
75 As	72	1	-0.015	ppb	100.54	1.00	
78 Se	72	1	0.063	ppb	454.20	1.00	
95 Mo	72	1	0.016	ppb	20.60	1.00	
107 Ag	115	1	0.010	ppb	21.43	1.00	
111 Cd	115	1	0.005	ppb	76.54	1.00	
118 Sn	115	1	-0.106	ppb	36.09	1.00	
121 Sb	115	1	0.051	ppb	15.99	1.00	
137 Ba	115	1	0.010	ppb	31.85	1.00	
205 Tl	165	1	0.020	ppb	11.21	1.00	
208 Pb	165	1	0.003	ppb	16.50	1.00	
232 Th	165	1	0.824	ppb	16.14	1.00	
238 U	165	1	0.009	ppb	11.26	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	540872	0.73	581797	93.0	30 - 120	
45 Sc	1	2418946	1.22	2574983	93.9	30 - 120	
72 Ge	1	1139717	0.72	1211627	94.1	30 - 120	
115 In	1	3281751	0.37	3426576	95.8	30 - 120	
165 Ho	1	5438318	1.15	5647086	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\AG072109.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\AG072109.B\045WASH.D\045WASH.D#
Date Acquired: Jul 21 2009 07:22 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: Jul 21 2009 05:31 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	1.045 ppb	12.08	1.30	
51 V	72	1	5.035 ppb	1.01	6.50	
52 Cr	72	1	2.023 ppb	2.27	2.60	
55 Mn	72	1	1.007 ppb	2.81	1.30	
59 Co	72	1	1.000 ppb	4.78	1.30	
60 Ni	72	1	2.095 ppb	4.44	2.60	
63 Cu	72	1	2.025 ppb	2.63	2.60	
66 Zn	72	1	10.370 ppb	2.29	13.00	
75 As	72	1	5.157 ppb	1.05	6.50	
78 Se	72	1	4.848 ppb	12.40	6.50	
95 Mo	72	1	2.162 ppb	0.74	2.60	
107 Ag	115	1	5.141 ppb	1.03	6.50	
111 Cd	115	1	1.004 ppb	4.06	1.30	
118 Sn	115	1	9.907 ppb	0.76	13.00	
121 Sb	115	1	1.942 ppb	1.51	2.60	
137 Ba	115	1	1.047 ppb	5.14	1.30	
205 Tl	165	1	1.098 ppb	0.61	1.30	
208 Pb	165	1	1.094 ppb	0.45	1.30	
232 Th	165	1	2.411 ppb	1.64	2.60	
238 U	165	1	1.121 ppb	1.49	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	539872	0.98	581797	92.8	30 - 120	
45 Sc	1	2370772	1.41	2574983	92.1	30 - 120	
72 Ge	1	1136181	1.05	1211627	93.8	30 - 120	
115 In	1	3268605	0.72	3426576	95.4	30 - 120	
165 Ho	1	5404596	1.26	5647086	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\AG072109.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\AG072109.B\046 BLK.D\046 BLK.D#
Date Acquired: Jul 21 2009 07:25 pm
Operator: TEL
Sample Name: LGFC2B
Misc Info: BLANK 9195077 6020
Vial Number: 2307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 21 2009 05:31 pm
Sample Type: BLK
Total Dil Factor: 500.00

QC Summary:
Analytes: Fail
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	0.006 ppb	400.76	2.00	
52 Cr	72	1	0.245 ppb	16.25	2.00	
55 Mn	72	1	0.069 ppb	4.34	2.00	
59 Co	72	1	0.004 ppb	28.03	2.00	
60 Ni	72	1	0.183 ppb	9.32	2.00	
63 Cu	72	1	0.119 ppb	7.88	2.00	
66 Zn	72	1	2.205 ppb	5.05	2.00	Fail NR
75 As	72	1	-0.011 ppb	50.59	2.00	
78 Se	72	1	0.143 ppb	174.93	2.00	
95 Mo	72	1	-0.001 ppb	809.78	2.00	
107 Ag	115	1	0.005 ppb	37.00	2.00	
111 Cd	115	1	0.012 ppb	31.95	2.00	
118 Sn	115	1	-0.487 ppb	4.01	2.00	
121 Sb	115	1	0.027 ppb	9.76	2.00	
137 Ba	115	1	0.220 ppb	10.36	2.00	
205 Tl	165	1	0.010 ppb	17.64	2.00	
208 Pb	165	1	0.017 ppb	20.95	2.00	
232 Th	165	1	0.123 ppb	11.61	2.00	
238 U	165	1	0.002 ppb	20.77	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	549021	1.24	581797	94.4	30 - 120	
45 Sc	1	2396758	1.07	2574983	93.1	30 - 120	
72 Ge	1	1140232	1.30	1211627	94.1	30 - 120	
115 In	1	3276064	0.92	3426576	95.6	30 - 120	
165 Ho	1	5379867	0.64	5647086	95.3	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\AG072109.B\003CALB.D\003CALB.D#

1 :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\AG072109.B\047 LCS.D\047 LCS.D#
Date Acquired: Jul 21 2009 07:28 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGFC2C
Misc Info: LCS
Vial Number: 2308
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: LCS
Prep Dil. Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	37.92	2.53	40	94.8	80 - 120	
51 V	72	1	37.76	1.16	40	94.4	80 - 120	
52 Cr	72	1	38.37	0.77	40	95.9	80 - 120	
55 Mn	72	1	38.12	0.44	40	95.3	80 - 120	
59 Co	72	1	38.46	1.16	40	96.2	80 - 120	
60 Ni	72	1	39.24	1.34	40	98.1	80 - 120	
63 Cu	72	1	39.70	1.29	40	99.3	80 - 120	
66 Zn	72	1	38.72	0.78	40	96.8	80 - 120	
75 As	72	1	38.75	1.34	40	96.9	80 - 120	
78 Se	72	1	38.96	1.46	40	97.4	80 - 120	
95 Mo	72	1	39.03	1.73	40	97.6	80 - 120	
107 Ag	115	1	38.91	0.90	40	97.3	80 - 120	
111 Cd	115	1	38.60	0.42	40	96.5	80 - 120	
118 Sn	115	1	-0.54	2.05	40	-1.3	80 - 120	
121 Sb	115	1	38.31	0.75	40	95.8	80 - 120	
137 Ba	115	1	39.54	0.18	40	98.9	80 - 120	
205 Tl	165	1	40.54	0.93	40	101.4	80 - 120	
208 Pb	165	1	40.57	0.83	40	101.4	80 - 120	
232 Th	165	1	42.43	5.66	40	106.1	80 - 120	
238 U	165	1	41.97	1.18	40	104.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	537347	0.06	581797	92.4	30 - 120	
45 Sc	1	2383047	0.95	2574983	92.5	30 - 120	
72 Ge	1	1144350	0.54	1211627	94.4	30 - 120	
115 In	1	3263368	0.37	3426576	95.2	30 - 120	
165 Ho	1	5389422	0.87	5647086	95.4	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\AG072109.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\AG072109.B\048SMPL.D\048SMPL.D#
Date Acquired: Jul 21 2009 07:31 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEAD
Misc Info: D9G130118
Vial Number: 2309
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 505.10
Autodil Factor: Undiluted
Final Dil Factor: 505.10

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	698.55	1.38	ppb	8.92	3600	
51 V	72	1	42,019.27	83.19	ppb	0.69	3600	
52 Cr	72	1	9,965.62	19.73	ppb	0.37	3600	
55 Mn	72	1	423,728.39	838.90	ppb	1.44	3600	
59 Co	72	1	7,455.28	14.76	ppb	0.75	3600	
60 Ni	72	1	8,712.98	17.25	ppb	1.45	3600	
63 Cu	72	1	23,340.67	46.21	ppb	0.79	3600	
66 Zn	72	1	63,592.09	125.90	ppb	0.47	3600	
75 As	72	1	2,559.85	5.07	ppb	1.68	3600	
78 Se	72	1	493.58	0.98	ppb	28.07	3600	
95 Mo	72	1	323.37	0.64	ppb	5.37	3600	
107 Ag	115	1	153.25	0.30	ppb	2.67	3600	
111 Cd	115	1	640.47	1.27	ppb	2.51	3600	
118 Sn	115	1	-223.66	-0.44	ppb	6.14	3600	
121 Sb	115	1	29.60	0.06	ppb	14.88	3600	
137 Ba	115	1	207,192.02	410.20	ppb	2.23	3600	
205 Tl	165	1	230.33	0.46	ppb	2.44	3600	
208 Pb	165	1	21,653.64	42.87	ppb	1.26	3600	
232 Th	165	1	7,717.93	15.28	ppb	0.22	1000	
238 U	165	1	1,023.33	2.03	ppb	2.35	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	515841	0.18	581797	88.7	30 - 120	
45 Sc	1	2405851	1.21	2574983	93.4	30 - 120	
72 Ge	1	1117448	0.53	1211627	92.2	30 - 120	
115 In	1	3112890	0.51	3426576	90.8	30 - 120	
165 Ho	1	5203697	0.51	5647086	92.1	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\AG072109.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\AG072109.B\049SMPL.D\049SMPL.D#
Date Acquired: Jul 21 2009 07:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEAR
Misc Info: D9G130118
Vial Number: 2310
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

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	769.00	1.54	ppb	7.98	3600	
51 V	72	1	50,800.00	101.60	ppb	1.65	3600	
52 Cr	72	1	14,975.00	29.95	ppb	0.35	3600	
55 Mn	72	1	562,500.00	1125.00	ppb	0.78	3600	
59 Co	72	1	9,440.00	18.88	ppb	0.19	3600	
60 Ni	72	1	11,775.00	23.55	ppb	2.98	3600	
63 Cu	72	1	35,620.00	71.24	ppb	0.64	3600	
66 Zn	72	1	94,200.00	188.40	ppb	0.51	3600	
75 As	72	1	3,977.00	7.95	ppb	1.46	3600	
78 Se	72	1	604.00	1.21	ppb	20.00	3600	
95 Mo	72	1	598.50	1.20	ppb	1.35	3600	
107 Ag	115	1	313.60	0.63	ppb	5.70	3600	
111 Cd	115	1	944.00	1.89	ppb	4.19	3600	
118 Sn	115	1	-209.40	-0.42	ppb	7.43	3600	
121 Sb	115	1	29.03	0.06	ppb	14.85	3600	
137 Ba	115	1	243,850.00	487.70	ppb	1.96	3600	
205 Tl	165	1	291.80	0.58	ppb	2.44	3600	
208 Pb	165	1	29,170.00	58.34	ppb	1.27	3600	
232 Th	165	1	9,325.00	18.65	ppb	0.71	1000	
238 U	165	1	1,224.00	2.45	ppb	1.97	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	523763	0.44	581797	90.0	30 - 120	
45 Sc	1	2457896	0.89	2574983	95.5	30 - 120	
72 Ge	1	1122732	0.31	1211627	92.7	30 - 120	
115 In	1	3124096	1.25	3426576	91.2	30 - 120	
165 Ho	1	5170255	1.06	5647086	91.6	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\AG072109.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\AG072109.B\050SMPL.D\050SMPL.D#
Date Acquired:	Jul 21 2009 07:36 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGEAX
Misc Info:	D9G130118
Vial Number:	2311
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 21 2009 05:31 pm
Sample Type:	SA
Dilution Factor:	515.50
Autodil Factor:	Undiluted
Final Dil Factor:	515.50

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	591.28	1.15	ppb	9.14	3600	
51 V	72	1	64,334.40	124.80	ppb	1.09	3600	
52 Cr	72	1	8,691.33	16.86	ppb	0.89	3600	
55 Mn	72	1	692,316.50	1343.00	ppb	0.70	3600	
59 Co	72	1	9,165.59	17.78	ppb	1.68	3600	
60 Ni	72	1	7,036.58	13.65	ppb	1.29	3600	
63 Cu	72	1	13,057.62	25.33	ppb	1.27	3600	
66 Zn	72	1	61,447.60	119.20	ppb	0.67	3600	
75 As	72	1	916.56	1.78	ppb	5.16	3600	
78 Se	72	1	616.54	1.20	ppb	25.87	3600	
95 Mo	72	1	150.27	0.29	ppb	5.25	3600	
107 Ag	115	1	93.87	0.18	ppb	2.71	3600	
111 Cd	115	1	745.41	1.45	ppb	12.51	3600	
118 Sn	115	1	-234.35	-0.45	ppb	1.45	3600	
121 Sb	115	1	6.08	0.01	ppb	25.52	3600	
137 Ba	115	1	700,049.00	1358.00	ppb	0.53	3600	
205 Tl	165	1	79.95	0.16	ppb	3.83	3600	
208 Pb	165	1	5,866.39	11.38	ppb	1.25	3600	
232 Th	165	1	4,865.29	9.44	ppb	0.79	1000	
238 U	165	1	1,124.31	2.18	ppb	2.13	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	533294	0.24	581797	91.7	30 - 120	
45 Sc	1	2512961	0.95	2574983	97.6	30 - 120	
72 Ge	1	1158149	0.67	1211627	95.6	30 - 120	
115 In	1	3195019	0.57	3426576	93.2	30 - 120	
165 Ho	1	5287953	0.86	5647086	93.6	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\AG072109.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\AG072109.B\051SMPL.D\051SMPL.D#
Date Acquired: Jul 21 2009 07:39 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEA0
Misc Info: D9G130118
Vial Number: 2312
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 515.50
Autodil Factor: Undiluted
Final Dil Factor: 515.50

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	728.92	1.41	ppb	13.43	3600	
51 V	72	1	48,771.46	94.61	ppb	1.04	3600	
52 Cr	72	1	12,021.46	23.32	ppb	0.87	3600	
55 Mn	72	1	496,581.15	963.30	ppb	1.01	3600	
59 Co	72	1	8,495.44	16.48	ppb	1.26	3600	
60 Ni	72	1	10,273.92	19.93	ppb	1.04	3600	
63 Cu	72	1	37,322.20	72.40	ppb	0.84	3600	
66 Zn	72	1	85,418.35	165.70	ppb	1.12	3600	
75 As	72	1	3,890.99	7.55	ppb	0.56	3600	
78 Se	72	1	580.97	1.13	ppb	34.97	3600	
95 Mo	72	1	405.80	0.79	ppb	4.08	3600	
107 Ag	115	1	314.25	0.61	ppb	2.36	3600	
111 Cd	115	1	877.38	1.70	ppb	4.12	3600	
118 Sn	115	1	-235.53	-0.46	ppb	1.73	3600	
121 Sb	115	1	27.14	0.05	ppb	13.35	3600	
137 Ba	115	1	228,572.70	443.40	ppb	1.54	3600	
205 Tl	165	1	259.71	0.50	ppb	1.97	3600	
208 Pb	165	1	29,883.54	57.97	ppb	0.76	3600	
232 Th	165	1	8,284.09	16.07	ppb	0.64	1000	
238 U	165	1	1,197.51	2.32	ppb	1.13	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	524514	0.27	581797	90.2	30 - 120	
45 Sc	1	2470258	0.75	2574983	95.9	30 - 120	
72 Ge	1	1151862	0.73	1211627	95.1	30 - 120	
115 In	1	3181789	0.90	3426576	92.9	30 - 120	
165 Ho	1	5246580	0.71	5647086	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\AG072109.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\AG072109.B\052SMPL.D\052SMPL.D#
Date Acquired: Jul 21 2009 07:42 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEA2
Misc Info: D9G130118
Vial Number: 2401
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 505.10
Autodil Factor: Undiluted
Final Dil Factor: 505.10

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	1,036.47	2.05	ppb	6.70	3600	
51 V	72	1	57,126.81	113.10	ppb	0.46	3600	
52 Cr	72	1	14,844.89	29.39	ppb	0.55	3600	
55 Mn	72	1	583,390.50	1155.00	ppb	1.33	3600	
59 Co	72	1	10,233.33	20.26	ppb	1.24	3600	
60 Ni	72	1	12,385.05	24.52	ppb	2.08	3600	
63 Cu	72	1	36,533.88	72.33	ppb	1.26	3600	
66 Zn	72	1	90,918.00	180.00	ppb	1.10	3600	
75 As	72	1	4,147.38	8.21	ppb	1.62	3600	
78 Se	72	1	878.87	1.74	ppb	21.41	3600	
95 Mo	72	1	488.08	0.97	ppb	4.03	3600	
107 Ag	115	1	257.30	0.51	ppb	3.49	3600	
111 Cd	115	1	1,084.95	2.15	ppb	3.81	3600	
118 Sn	115	1	-218.56	-0.43	ppb	2.19	3600	
121 Sb	115	1	21.81	0.04	ppb	6.15	3600	
137 Ba	115	1	314,273.22	622.20	ppb	0.75	3600	
205 Tl	165	1	300.08	0.59	ppb	2.19	3600	
208 Pb	165	1	30,755.54	60.89	ppb	0.32	3600	
232 Th	165	1	9,470.63	18.75	ppb	0.04	1000	
238 U	165	1	1,227.90	2.43	ppb	1.14	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	525072	0.53	581797	90.3	30 - 120	
45 Sc	1	2514003	0.62	2574983	97.6	30 - 120	
72 Ge	1	1147462	0.61	1211627	94.7	30 - 120	
115 In	1	3186196	0.32	3426576	93.0	30 - 120	
165 Ho	1	5272255	0.51	5647086	93.4	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\AG072109.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\AG072109.B\053SMPL.D\053SMPL.D#
Date Acquired: Jul 21 2009 07:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEA3
Misc Info: D9G130118
Vial Number: 2402
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

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	785.00	1.57	ppb	16.12	3600	
51 V	72	1	56,550.00	113.10	ppb	1.36	3600	
52 Cr	72	1	11,210.00	22.42	ppb	2.49	3600	
55 Mn	72	1	664,500.00	1329.00	ppb	1.28	3600	
59 Co	72	1	11,080.00	22.16	ppb	2.21	3600	
60 Ni	72	1	9,985.00	19.97	ppb	1.27	3600	
63 Cu	72	1	25,470.00	50.94	ppb	1.22	3600	
66 Zn	72	1	62,900.00	125.80	ppb	1.50	3600	
75 As	72	1	2,474.50	4.95	ppb	2.24	3600	
78 Se	72	1	598.00	1.20	ppb	26.62	3600	
95 Mo	72	1	757.00	1.51	ppb	2.49	3600	
107 Ag	115	1	134.10	0.27	ppb	1.83	3600	
111 Cd	115	1	843.00	1.69	ppb	3.24	3600	
118 Sn	115	1	-227.35	-0.45	ppb	2.79	3600	
121 Sb	115	1	8.73	0.02	ppb	8.92	3600	
137 Ba	115	1	274,950.00	549.90	ppb	0.33	3600	
205 Tl	165	1	268.90	0.54	ppb	2.47	3600	
208 Pb	165	1	12,120.00	24.24	ppb	1.35	3600	
232 Th	165	1	8,520.00	17.04	ppb	1.18	1000	
238 U	165	1	1,995.50	3.99	ppb	1.77	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	525076	0.44	581797	90.3	30 - 120	
45 Sc	1	2533667	0.52	2574983	98.4	30 - 120	
72 Ge	1	1161262	1.55	1211627	95.8	30 - 120	
115 In	1	3204297	0.35	3426576	93.5	30 - 120	
165 Ho	1	5264578	0.64	5647086	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\AG072109.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\AG072109.B\054 CCV.D\054 CCV.D#
Date Acquired: Jul 21 2009 07:47 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: Jul 21 2009 05:31 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.93	ppb	2.40	50	99.9	90 - 110	
51 V	72	1	48.64	ppb	0.30	50	97.3	90 - 110	
52 Cr	72	1	48.67	ppb	0.68	50	97.3	90 - 110	
55 Mn	72	1	48.58	ppb	0.25	50	97.2	90 - 110	
59 Co	72	1	49.58	ppb	0.58	50	99.2	90 - 110	
60 Ni	72	1	50.43	ppb	0.14	50	100.9	90 - 110	
63 Cu	72	1	50.86	ppb	1.25	50	101.7	90 - 110	
66 Zn	72	1	49.34	ppb	0.26	50	98.7	90 - 110	
75 As	72	1	50.90	ppb	0.46	50	101.8	90 - 110	
78 Se	72	1	49.72	ppb	3.92	50	99.4	90 - 110	
95 Mo	72	1	50.17	ppb	0.31	50	100.3	90 - 110	
107 Ag	115	1	49.74	ppb	1.70	50	99.5	90 - 110	
111 Cd	115	1	49.04	ppb	1.35	50	98.1	90 - 110	
118 Sn	115	1	48.84	ppb	0.82	50	97.7	90 - 110	
121 Sb	115	1	48.97	ppb	1.21	50	97.9	90 - 110	
137 Ba	115	1	49.57	ppb	1.86	50	99.1	90 - 110	
205 Tl	165	1	50.84	ppb	0.11	50	101.7	90 - 110	
208 Pb	165	1	50.20	ppb	0.72	50	100.4	90 - 110	
232 Th	165	1	55.36	ppb	0.46	50	110.7	90 - 110	Fail
238 U	165	1	51.20	ppb	2.17	50	102.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	556240	0.35	581797	95.6	30 - 120	
45 Sc	1	2520235	1.96	2574983	97.9	30 - 120	
72 Ge	1	1209543	0.47	1211627	99.8	30 - 120	
115 In	1	3437460	0.91	3426576	100.3	30 - 120	
165 Ho	1	5537293	0.48	5647086	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\AG072109.B\003CALB.D\003CALB.D#

1 :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\AG072109.B\055 CCB.D\055 CCB.D#
Date Acquired: Jul 21 2009 07:50 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: Jul 21 2009 05:31 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	0.011	ppb	86.60	1.00	
51 V	72	1	-0.008	ppb	203.47	1.00	
52 Cr	72	1	-0.025	ppb	48.99	1.00	
55 Mn	72	1	-0.008	ppb	19.84	1.00	
59 Co	72	1	0.003	ppb	40.68	1.00	
60 Ni	72	1	0.000	ppb	19173.00	1.00	
63 Cu	72	1	-0.044	ppb	12.10	1.00	
66 Zn	72	1	-0.004	ppb	186.63	1.00	
75 As	72	1	-0.009	ppb	156.84	1.00	
78 Se	72	1	0.088	ppb	502.96	1.00	
95 Mo	72	1	0.041	ppb	22.68	1.00	
107 Ag	115	1	0.012	ppb	37.43	1.00	
111 Cd	115	1	0.027	ppb	30.15	1.00	
118 Sn	115	1	-0.133	ppb	29.80	1.00	
121 Sb	115	1	0.047	ppb	5.13	1.00	
137 Ba	115	1	0.005	ppb	110.58	1.00	
205 Tl	165	1	0.021	ppb	13.87	1.00	
208 Pb	165	1	0.005	ppb	18.08	1.00	
232 Th	165	1	0.122	ppb	17.79	1.00	
238 U	165	1	0.010	ppb	8.48	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	555674	0.92	581797	95.5	30 - 120	
45 Sc	1	2525153	0.93	2574983	98.1	30 - 120	
72 Ge	1	1213419	1.38	1211627	100.1	30 - 120	
115 In	1	3414542	1.44	3426576	99.6	30 - 120	
165 Ho	1	5419276	0.08	5647086	96.0	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\AG072109.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\AG072109.B\056WASH.D\056WASH.D#
Date Acquired:	Jul 21 2009 07:53 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:	Jul 21 2009 05:31 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	1.056 ppb	9.04	1.30	
51 V	72	1	5.088 ppb	0.62	6.50	
52 Cr	72	1	2.005 ppb	2.25	2.60	
55 Mn	72	1	1.017 ppb	3.06	1.30	
59 Co	72	1	1.005 ppb	2.30	1.30	
60 Ni	72	1	2.103 ppb	1.34	2.60	
63 Cu	72	1	2.080 ppb	2.11	2.60	
66 Zn	72	1	10.140 ppb	0.40	13.00	
75 As	72	1	5.278 ppb	0.64	6.50	
78 Se	72	1	5.492 ppb	8.33	6.50	
95 Mo	72	1	2.087 ppb	4.84	2.60	
107 Ag	115	1	5.255 ppb	2.07	6.50	
111 Cd	115	1	1.021 ppb	4.08	1.30	
118 Sn	115	1	9.699 ppb	1.92	13.00	
121 Sb	115	1	1.913 ppb	2.39	2.60	
137 Ba	115	1	1.053 ppb	3.28	1.30	
205 Tl	165	1	1.096 ppb	0.46	1.30	
208 Pb	165	1	1.070 ppb	0.49	1.30	
232 Th	165	1	2.379 ppb	2.15	2.60	
238 U	165	1	1.107 ppb	1.43	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	558468	0.52	581797	96.0	30 - 120	
45 Sc	1	2537205	0.38	2574983	98.5	30 - 120	
72 Ge	1	1211253	0.32	1211627	100.0	30 - 120	
115 In	1	3425563	1.02	3426576	100.0	30 - 120	
165 Ho	1	5501890	0.38	5647086	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\AG072109.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\AG072109.B\057SMPL.D\057SMPL.D#
Date Acquired: Jul 21 2009 07:55 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEA4
Misc Info: D9G130118
Vial Number: 2403
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 490.20
Autodil Factor: Undiluted
Final Dil Factor: 490.20

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	637.26	1.30	ppb	8.13	3600	
51 V	72	1	45,667.03	93.16	ppb	1.77	3600	
52 Cr	72	1	6,308.87	12.87	ppb	0.42	3600	
55 Mn	72	1	477,258.72	973.60	ppb	0.70	3600	
59 Co	72	1	10,308.91	21.03	ppb	0.54	3600	
60 Ni	72	1	5,652.01	11.53	ppb	0.44	3600	
63 Cu	72	1	15,505.03	31.63	ppb	0.62	3600	
66 Zn	72	1	56,716.14	115.70	ppb	0.49	3600	
75 As	72	1	1,017.66	2.08	ppb	4.68	3600	
78 Se	72	1	757.85	1.55	ppb	8.55	3600	
95 Mo	72	1	122.80	0.25	ppb	9.43	3600	
107 Ag	115	1	117.94	0.24	ppb	1.37	3600	
111 Cd	115	1	725.50	1.48	ppb	6.48	3600	
118 Sn	115	1	-214.51	-0.44	ppb	6.23	3600	
121 Sb	115	1	13.31	0.03	ppb	4.27	3600	
137 Ba	115	1	504,415.80	1029.00	ppb	1.05	3600	
205 Tl	165	1	190.83	0.39	ppb	2.95	3600	
208 Pb	165	1	6,710.84	13.69	ppb	1.02	3600	
232 Th	165	1	6,470.64	13.20	ppb	0.84	1000	
238 U	165	1	1,239.72	2.53	ppb	0.89	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	521783	1.15	581797	89.7	30 - 120	
45 Sc	1	2484770	0.80	2574983	96.5	30 - 120	
72 Ge	1	1144581	0.81	1211627	94.5	30 - 120	
115 In	1	3153479	0.43	3426576	92.0	30 - 120	
165 Ho	1	5183186	1.33	5647086	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\058SMPL.D\058SMPL.D#
Date Acquired: Jul 21 2009 07:58 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFC
Misc Info: D9G130118
Vial Number: 2404
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 510.20
Autodil Factor: Undiluted
Final Dil Factor: 510.20

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	673.97	1.32	ppb	3.00	3600	
51 V	72	1	47,014.93	92.15	ppb	0.74	3600	
52 Cr	72	1	7,010.15	13.74	ppb	0.88	3600	
55 Mn	72	1	543,363.00	1065.00	ppb	0.75	3600	
59 Co	72	1	7,622.39	14.94	ppb	0.45	3600	
60 Ni	72	1	5,693.83	11.16	ppb	3.47	3600	
63 Cu	72	1	14,576.41	28.57	ppb	1.75	3600	
66 Zn	72	1	50,632.25	99.24	ppb	1.80	3600	
75 As	72	1	976.01	1.91	ppb	3.63	3600	
78 Se	72	1	652.04	1.28	ppb	27.29	3600	
95 Mo	72	1	123.72	0.24	ppb	8.33	3600	
107 Ag	115	1	97.70	0.19	ppb	3.18	3600	
111 Cd	115	1	722.44	1.42	ppb	4.53	3600	
118 Sn	115	1	-255.87	-0.50	ppb	1.60	3600	
121 Sb	115	1	22.65	0.04	ppb	2.99	3600	
137 Ba	115	1	215,457.46	422.30	ppb	1.74	3600	
205 Tl	165	1	131.73	0.26	ppb	1.61	3600	
208 Pb	165	1	7,188.72	14.09	ppb	0.76	3600	
232 Th	165	1	5,704.04	11.18	ppb	0.76	1000	
238 U	165	1	1,774.99	3.48	ppb	0.99	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	515716	0.63	581797	88.6	30 - 120	
45 Sc	1	2412675	1.22	2574983	93.7	30 - 120	
72 Ge	1	1120843	1.38	1211627	92.5	30 - 120	
115 In	1	3084655	0.73	3426576	90.0	30 - 120	
165 Ho	1	5019122	0.32	5647086	88.9	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\AG072109.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\AG072109.B\059SMPL.D\059SMPL.D#
Date Acquired: Jul 21 2009 08:01 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFF
Misc Info: D9G130118
Vial Number: 2405
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

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	797.00	1.59	ppb	2.64	3600	
51 V	72	1	47,205.00	94.41	ppb	1.19	3600	
52 Cr	72	1	11,670.00	23.34	ppb	3.11	3600	
55 Mn	72	1	260,350.00	520.70	ppb	1.31	3600	
59 Co	72	1	9,015.00	18.03	ppb	2.22	3600	
60 Ni	72	1	9,680.00	19.36	ppb	2.42	3600	
63 Cu	72	1	171,450.00	342.90	ppb	2.11	3600	
66 Zn	72	1	321,400.00	642.80	ppb	1.95	3600	
75 As	72	1	15,970.00	31.94	ppb	2.19	3600	
78 Se	72	1	811.50	1.62	ppb	2.56	3600	
95 Mo	72	1	687.50	1.38	ppb	1.95	3600	
107 Ag	115	1	2,370.00	4.74	ppb	1.69	3600	
111 Cd	115	1	2,141.50	4.28	ppb	3.43	3600	
118 Sn	115	1	-223.05	-0.45	ppb	3.16	3600	
121 Sb	115	1	154.95	0.31	ppb	1.81	3600	
137 Ba	115	1	234,150.00	468.30	ppb	1.74	3600	
205 Tl	165	1	270.75	0.54	ppb	2.03	3600	
208 Pb	165	1	175,650.00	351.30	ppb	0.42	3600	
232 Th	165	1	8,615.00	17.23	ppb	0.51	1000	
238 U	165	1	1,573.50	3.15	ppb	1.05	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	513011	1.20	581797	88.2	30 - 120	
45 Sc	1	2472523	0.51	2574983	96.0	30 - 120	
72 Ge	1	1162120	1.55	1211627	95.9	30 - 120	
115 In	1	3182952	1.92	3426576	92.9	30 - 120	
165 Ho	1	5264455	0.38	5647086	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\060SMPL.D\060SMPL.D#
Date Acquired: Jul 21 2009 08:03 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFH
Misc Info: D9G130118
Vial Number: 2406
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 510.20
Autodil Factor: Undiluted
Final Dil Factor: 510.20

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	564.28	1.11	ppb	9.04	3600	
51 V	72	1	29,392.62	57.61	ppb	1.50	3600	
52 Cr	72	1	11,275.42	22.10	ppb	0.99	3600	
55 Mn	72	1	371,476.62	728.10	ppb	1.62	3600	
59 Co	72	1	5,596.89	10.97	ppb	1.37	3600	
60 Ni	72	1	9,239.72	18.11	ppb	1.84	3600	
63 Cu	72	1	36,249.71	71.05	ppb	1.61	3600	
66 Zn	72	1	89,233.98	174.90	ppb	1.57	3600	
75 As	72	1	2,552.02	5.00	ppb	1.61	3600	
78 Se	72	1	435.56	0.85	ppb	57.92	3600	
95 Mo	72	1	408.62	0.80	ppb	10.91	3600	
107 Ag	115	1	154.03	0.30	ppb	4.82	3600	
111 Cd	115	1	746.93	1.46	ppb	6.51	3600	
118 Sn	115	1	-87.55	-0.17	ppb	20.87	3600	
121 Sb	115	1	45.53	0.09	ppb	9.01	3600	
137 Ba	115	1	130,815.28	256.40	ppb	0.82	3600	
205 Tl	165	1	172.60	0.34	ppb	0.87	3600	
208 Pb	165	1	35,096.66	68.79	ppb	0.97	3600	
232 Th	165	1	7,836.67	15.36	ppb	0.60	1000	
238 U	165	1	982.65	1.93	ppb	0.67	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	512951	0.72	581797	88.2	30 - 120	
45 Sc	1	2454219	0.44	2574983	95.3	30 - 120	
72 Ge	1	1150644	0.94	1211627	95.0	30 - 120	
115 In	1	3202544	0.52	3426576	93.5	30 - 120	
165 Ho	1	5283024	0.41	5647086	93.6	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\AG072109.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\AG072109.B\061AREF.D\061AREF.D#
Date Acquired:	Jul 21 2009 08:06 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGEFL
Misc Info:	D9G130118
Vial Number:	2407
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 21 2009 05:31 pm
Sample Type:	AllRef
Dilution Factor:	500.00
Autodil Factor:	Undiluted
Final Dil Factor:	500.00

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	756.00	1.51	ppb	6.44	3600	
51 V	72	1	46,750.00	93.50	ppb	1.58	3600	
52 Cr	72	1	13,885.00	27.77	ppb	1.06	3600	
55 Mn	72	1	478,550.00	957.10	ppb	0.67	3600	
59 Co	72	1	8,065.00	16.13	ppb	0.81	3600	
60 Ni	72	1	9,395.00	18.79	ppb	1.11	3600	
63 Cu	72	1	79,450.00	158.90	ppb	1.33	3600	
66 Zn	72	1	146,550.00	293.10	ppb	0.67	3600	
75 As	72	1	4,367.00	8.73	ppb	0.50	3600	
78 Se	72	1	653.00	1.31	ppb	29.07	3600	
95 Mo	72	1	630.00	1.26	ppb	6.07	3600	
107 Ag	115	1	425.30	0.85	ppb	6.50	3600	
111 Cd	115	1	1,139.00	2.28	ppb	7.25	3600	
118 Sn	115	1	-173.45	-0.35	ppb	7.85	3600	
121 Sb	115	1	44.04	0.09	ppb	8.53	3600	
137 Ba	115	1	236,850.00	473.70	ppb	0.96	3600	
205 Tl	165	1	224.50	0.45	ppb	5.54	3600	
208 Pb	165	1	42,630.00	85.26	ppb	1.27	3600	
232 Th	165	1	7,230.00	14.46	ppb	0.17	1000	
238 U	165	1	984.00	1.97	ppb	2.09	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	501343	1.61	581797	86.2	30 - 120	
45 Sc	1	2459650	0.92	2574983	95.5	30 - 120	
72 Ge	1	1135559	0.50	1211627	93.7	30 - 120	
115 In	1	3155733	0.47	3426576	92.1	30 - 120	
165 Ho	1	5166681	0.74	5647086	91.5	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\AG072109.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\062SDIL.D\062SDIL.D#
Date Acquired: Jul 21 2009 08:09 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFLP5
Misc Info: SERIAL DILUTION
Vial Number: 2408
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SDIL
Dilution Factor: 500.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072109.B\061AREF.D\061AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.28	ppb	43.81	0.30	93.8	90 - 110	
51 V	72	1	19.03	ppb	1.55	18.70	101.8	90 - 110	
52 Cr	72	1	5.93	ppb	1.76	5.55	106.8	90 - 110	
55 Mn	72	1	201.00	ppb	1.33	191.42	105.0	90 - 110	
59 Co	72	1	3.35	ppb	1.39	3.23	103.7	90 - 110	
60 Ni	72	1	4.00	ppb	3.55	3.76	106.5	90 - 110	
63 Cu	72	1	33.79	ppb	1.68	31.78	106.3	90 - 110	
66 Zn	72	1	62.06	ppb	2.00	58.62	105.9	90 - 110	
75 As	72	1	1.79	ppb	2.01	1.75	102.3	90 - 110	
78 Se	72	1	0.50	ppb	70.85	0.26	191.8	90 - 110	
95 Mo	72	1	0.20	ppb	7.00	0.25	81.2	90 - 110	
107 Ag	115	1	0.19	ppb	9.18	0.17	109.8	90 - 110	
111 Cd	115	1	0.55	ppb	12.86	0.46	120.3	90 - 110	
118 Sn	115	1	-0.52	ppb	2.43	-0.07	743.4	90 - 110	
121 Sb	115	1	0.02	ppb	2.17	0.02	123.6	90 - 110	
137 Ba	115	1	94.61	ppb	0.91	94.74	99.9	90 - 110	
205 Tl	165	1	0.09	ppb	4.18	0.09	99.2	90 - 110	
208 Pb	165	1	18.06	ppb	1.10	17.05	105.9	90 - 110	
232 Th	165	1	2.94	ppb	1.44	2.89	101.8	90 - 110	
238 U	165	1	0.40	ppb	0.42	0.39	101.3	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	525881	0.53	581797	90.4	30 - 120	
45 Sc	1	2482054	1.43	2574983	96.4	30 - 120	
72 Ge	1	1189594	1.20	1211627	98.2	30 - 120	
115 In	1	3291476	0.54	3426576	96.1	30 - 120	
165 Ho	1	5361178	0.37	5647086	94.9	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\AG072109.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: 07/22/09 08:07:33

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGEFLP5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500** | Channel 272
File: AG072109 # 62 | Method 6020_
Acquired: 07/21/2009 20:09:00 | ICPMS_024 | Matrix: SOLID
Calibrated: 07/21/2009 17:28:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	157	1.4190	1.5120	6.15		*	
7440-62-2	Vanadium	51	231535	95.130	93.500	1.74		*	
7440-47-3	Chromium	52	75267	29.670	27.760	6.88		*	
7439-96-5	Manganese	55	2960170	1005.0	957.00	5.02		*	
7440-48-4	Cobalt	59	50401	16.730	16.132	3.71		*	
7440-02-0	Nickel	60	13253	20.010	18.788	6.50		*	
7440-50-8	Copper	63	260392	168.90	158.92	6.28		*	
7440-66-6	Zinc	66	112826	310.30	293.00	5.90		*	
7440-38-2	Arsenic	75	2735	8.9350	8.7340	2.30	0.51	NC	☑
7782-49-2	Selenium	78	703	2.5050	1.3058	91.8		*	
7439-98-7	Molybdenum	95	893	1.0230	1.2604	18.8		*	
7440-22-4	Silver	107	2107	0.93420	0.85060	9.83		*	
7440-43-9	Cadmium	111	1275	2.7400	2.2780	20.3		*	
7440-31-5	Tin	118	907	-2.5790	-0.34680			*	
7440-36-0	Antimony	121	192	0.10880	0.08806	23.6	0.29	NC	☑
7440-39-3	Barium	137	304222	473.00	473.80	0.169		*	
7440-28-0	Thallium	205	2504	0.44530	0.44900	0.824	0.035	NC	☑
7439-92-1	Lead	208	632094	90.280	85.260	5.89		*	
7440-61-1	Uranium	238	14626	1.9940	1.9682	1.31	0.016	1.3	☑
7440-29-1	Thorium	232	92607	14.710	14.462	1.71		*	
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			*	

As. Tl. U only

*** Analyte not requested for this batch, no MDL**

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: [signature] Date: 7/22/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\063PDS.D\063PDS.D#
Date Acquired: Jul 21 2009 08:11 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFLZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 2409
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 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	211.30	1.51	ppb	1.47	200	104.9	75 - 125	
51 V	72	1	282.10	93.50	ppb	0.76	200	96.1	75 - 125	
52 Cr	72	1	223.40	27.77	ppb	0.46	200	98.1	75 - 125	
55 Mn	72	1	1126.00	957.10	ppb	0.45	200	97.3	75 - 125	
59 Co	72	1	209.30	16.13	ppb	0.15	200	96.8	75 - 125	
60 Ni	72	1	212.50	18.79	ppb	1.33	200	97.1	75 - 125	
63 Cu	72	1	342.00	158.90	ppb	0.71	200	95.3	75 - 125	
66 Zn	72	1	474.90	293.10	ppb	1.40	200	96.3	75 - 125	
75 As	72	1	208.00	8.73	ppb	1.27	200	99.6	75 - 125	
78 Se	72	1	202.00	1.31	ppb	1.79	200	100.3	75 - 125	
95 Mo	72	1	205.40	1.26	ppb	1.62	200	102.1	75 - 125	
107 Ag	115	1	50.03	0.85	ppb	1.28	50	98.4	75 - 125	
111 Cd	115	1	201.60	2.28	ppb	1.72	200	99.7	75 - 125	
118 Sn	115	1	186.10	-0.35	ppb	1.03	200	93.2	75 - 125	
121 Sb	115	1	199.70	0.09	ppb	0.53	200	99.8	75 - 125	
137 Ba	115	1	672.70	473.70	ppb	0.97	200	99.9	75 - 125	
205 Tl	165	1	199.70	0.45	ppb	0.73	200	99.6	75 - 125	
208 Pb	165	1	276.30	85.26	ppb	1.10	200	96.9	75 - 125	
232 Th	165	1	13.92	14.46	ppb	0.53	200	6.5	75 - 125	
238 U	165	1	207.90	1.97	ppb	1.42	200	102.9	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	498748	0.79	581797	85.7	30 - 120	
45 Sc	1	2419315	0.74	2574983	94.0	30 - 120	
72 Ge	1	1134576	0.58	1211627	93.6	30 - 120	
115 In	1	3136150	0.71	3426576	91.5	30 - 120	
165 Ho	1	5145038	1.02	5647086	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\AG072109.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: 07/22/09 08:07:38

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGEFLZ** | Spike Dilution: **1.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500** | Channel 272
File: AG072109 # 63 | Method 6020_
Acquired: 07/21/2009 20:11:00 | ICPMS_024 | Matrix: SOLID
Calibrated: 07/21/2009 17:28:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	110852	211.30	1.5120	105	200		☐
7440-62-2	Vanadium	51	3273820	282.10	93.500	94.3	200		☐
7440-47-3	Chromium	52	2591980	223.40	27.760	97.8	200		☐
7439-96-5	Manganese	55	15809200	1126.0	957.00	84.5	200	*	☐
7440-48-4	Cobalt	59	3004690	209.30	16.132	96.6	200		☐
7440-02-0	Nickel	60	667642	212.50	18.788	96.9	200		☐
7440-50-8	Copper	63	2508180	342.00	158.92	91.5	200		☐
7440-66-6	Zinc	66	821499	474.90	293.00	90.9	200		☐
7440-38-2	Arsenic	75	292383	208.00	8.7340	99.6	200		☑
7782-49-2	Selenium	78	55996	202.00	1.3058	100	200		☑
7439-98-7	Molybdenum	95	771100	205.40	1.2604	102	200		☐
7440-22-4	Silver	107	535091	50.030	0.85060	98.4	50.0		☐
7440-43-9	Cadmium	111	444931	201.60	2.2780	99.7	200		☐
7440-31-5	Tin	118	1198090	186.10	-0.34680	93.1	200		☐
7440-36-0	Antimony	121	1484160	199.70	0.08806	99.8	200		☐
7440-39-3	Barium	137	2060790	672.70	473.80	99.5	200		☐
7440-28-0	Thallium	205	4919590	199.70	0.44900	99.6	200		☑
7439-92-1	Lead	208	9276950	276.30	85.260	95.5	200		☐
7440-61-1	Uranium	238	7309150	207.90	1.9682	103	200		☑
7440-29-1	Thorium	232	419501	13.920	14.462				
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: [signature] Date: 7/22/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109.B\064_MS.D\064_MS.D#
Date Acquired: Jul 21 2009 08:14 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFLS
Misc Info: MATRIX SPIKE
Vial Number: 2410
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MS
Prep Dil. Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

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	42.17	1.51	ppb	1.48	40	101.6	50 - 150	
51 V	72	1	133.80	93.50	ppb	2.36	40	100.2	50 - 150	
52 Cr	72	1	67.29	27.77	ppb	1.20	40	99.3	50 - 150	
55 Mn	72	1	953.20	957.10	ppb	1.46	40	95.6	50 - 150	
59 Co	72	1	54.31	16.13	ppb	1.19	40	96.8	50 - 150	
60 Ni	72	1	56.88	18.79	ppb	0.71	40	96.8	50 - 150	
63 Cu	72	1	197.40	158.90	ppb	2.88	40	99.2	50 - 150	
66 Zn	72	1	337.40	293.10	ppb	1.60	40	101.3	50 - 150	
75 As	72	1	47.14	8.73	ppb	1.48	40	96.7	50 - 150	
78 Se	72	1	37.63	1.31	ppb	2.77	40	91.1	50 - 150	
95 Mo	72	1	28.68	1.26	ppb	1.41	40	69.5	50 - 150	
107 Ag	115	1	38.17	0.85	ppb	0.64	40	93.4	50 - 150	
111 Cd	115	1	40.98	2.28	ppb	1.00	40	96.9	50 - 150	
118 Sn	115	1	-0.23	-0.35	ppb	1.87	40	-0.6	50 - 150	
121 Sb	115	1	1.68	0.09	ppb	3.27	40	4.2	50 - 150	
137 Ba	115	1	504.70	473.70	ppb	0.85	40	98.2	50 - 150	
205 Tl	165	1	39.00	0.45	ppb	0.80	40	96.4	50 - 150	
208 Pb	165	1	123.80	85.26	ppb	0.13	40	98.8	50 - 150	
232 Th	165	1	62.03	14.46	ppb	0.79	40	113.9	50 - 150	
238 U	165	1	43.41	1.97	ppb	0.73	40	103.4	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	497953	0.18	581797	85.6	30 - 120	
45 Sc	1	2451098	0.63	2574983	95.2	30 - 120	
72 Ge	1	1135889	1.51	1211627	93.7	30 - 120	
115 In	1	3140809	0.49	3426576	91.7	30 - 120	
165 Ho	1	5159047	0.38	5647086	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\AG072109.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\AG072109.B\065 CCV.D\065 CCV.D#
Date Acquired:	Jul 21 2009 08:17 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:	Jul 21 2009 05:31 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.05 ppb	2.03	50	102.1	90 - 110	
51 V	72	1	47.65 ppb	0.70	50	95.3	90 - 110	
52 Cr	72	1	48.25 ppb	0.58	50	96.5	90 - 110	
55 Mn	72	1	47.38 ppb	0.76	50	94.8	90 - 110	
59 Co	72	1	49.16 ppb	0.47	50	98.3	90 - 110	
60 Ni	72	1	50.59 ppb	0.56	50	101.2	90 - 110	
63 Cu	72	1	50.45 ppb	0.28	50	100.9	90 - 110	
66 Zn	72	1	48.57 ppb	0.20	50	97.1	90 - 110	
75 As	72	1	50.50 ppb	0.70	50	101.0	90 - 110	
78 Se	72	1	50.39 ppb	2.61	50	100.8	90 - 110	
95 Mo	72	1	49.68 ppb	0.88	50	99.4	90 - 110	
107 Ag	115	1	50.38 ppb	1.23	50	100.8	90 - 110	
111 Cd	115	1	49.74 ppb	1.39	50	99.5	90 - 110	
118 Sn	115	1	49.88 ppb	1.47	50	99.8	90 - 110	
121 Sb	115	1	49.69 ppb	1.10	50	99.4	90 - 110	
137 Ba	115	1	50.14 ppb	0.47	50	100.3	90 - 110	
205 Tl	165	1	51.52 ppb	0.34	50	103.0	90 - 110	
208 Pb	165	1	50.24 ppb	0.45	50	100.5	90 - 110	
232 Th	165	1	56.04 ppb	1.33	50	112.1	90 - 110	Fail
238 U	165	1	51.68 ppb	2.26	50	103.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	525479	1.06	581797	90.3	30 - 120	
45 Sc	1	2513364	1.67	2574983	97.6	30 - 120	
72 Ge	1	1220172	0.40	1211627	100.7	30 - 120	
115 In	1	3352528	0.95	3426576	97.8	30 - 120	
165 Ho	1	5421109	0.21	5647086	96.0	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\AG072109.B\003CALB.D\003CALB.D#

1 :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\AG072109.B\066 CCB.D\066 CCB.D#
Date Acquired: Jul 21 2009 08:20 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: Jul 21 2009 05:31 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	0.012	ppb	86.65	1.00	
51 V	72	1	-0.009	ppb	246.50	1.00	
52 Cr	72	1	-0.028	ppb	56.79	1.00	
55 Mn	72	1	-0.018	ppb	16.79	1.00	
59 Co	72	1	0.005	ppb	43.90	1.00	
60 Ni	72	1	0.006	ppb	111.13	1.00	
63 Cu	72	1	-0.040	ppb	14.64	1.00	
66 Zn	72	1	0.009	ppb	199.36	1.00	
75 As	72	1	-0.010	ppb	65.41	1.00	
78 Se	72	1	0.467	ppb	58.06	1.00	
95 Mo	72	1	0.051	ppb	13.82	1.00	
107 Ag	115	1	0.011	ppb	32.31	1.00	
111 Cd	115	1	0.022	ppb	19.10	1.00	
118 Sn	115	1	-0.058	ppb	72.80	1.00	
121 Sb	115	1	0.056	ppb	14.61	1.00	
137 Ba	115	1	0.011	ppb	21.81	1.00	
205 Tl	165	1	0.027	ppb	16.25	1.00	
208 Pb	165	1	0.007	ppb	38.35	1.00	
232 Th	165	1	0.157	ppb	21.50	1.00	
238 U	165	1	0.012	ppb	15.55	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	533112	0.79	581797	91.6	30 - 120	
45 Sc	1	2534590	0.97	2574983	98.4	30 - 120	
72 Ge	1	1222962	0.82	1211627	100.9	30 - 120	
115 In	1	3377456	0.71	3426576	98.6	30 - 120	
165 Ho	1	5340988	0.60	5647086	94.6	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\AG072109.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\AG072109.B\067WASH.D\067WASH.D#
Date Acquired: Jul 21 2009 08:22 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: Jul 21 2009 05:31 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	1.074 ppb	2.49	1.30	
51 V	72	1	5.114 ppb	1.91	6.50	
52 Cr	72	1	2.037 ppb	1.96	2.60	
55 Mn	72	1	0.977 ppb	1.81	1.30	
59 Co	72	1	1.036 ppb	2.25	1.30	
60 Ni	72	1	2.107 ppb	0.38	2.60	
63 Cu	72	1	2.085 ppb	1.96	2.60	
66 Zn	72	1	10.080 ppb	1.55	13.00	
75 As	72	1	5.258 ppb	0.59	6.50	
78 Se	72	1	5.382 ppb	7.63	6.50	
95 Mo	72	1	2.068 ppb	2.51	2.60	
107 Ag	115	1	5.286 ppb	0.91	6.50	
111 Cd	115	1	1.125 ppb	1.83	1.30	
118 Sn	115	1	9.885 ppb	0.31	13.00	
121 Sb	115	1	1.946 ppb	1.96	2.60	
137 Ba	115	1	1.080 ppb	1.09	1.30	
205 Tl	165	1	1.098 ppb	0.77	1.30	
208 Pb	165	1	1.069 ppb	1.31	1.30	
232 Th	165	1	2.417 ppb	2.34	2.60	
238 U	165	1	1.111 ppb	0.82	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	537083	0.95	581797	92.3	30 - 120	
45 Sc	1	2538503	1.29	2574983	98.6	30 - 120	
72 Ge	1	1220301	0.98	1211627	100.7	30 - 120	
115 In	1	3399300	1.03	3426576	99.2	30 - 120	
165 Ho	1	5420220	0.61	5647086	96.0	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\068 MSD.D\068 MSD.D#
Date Acquired: Jul 21 2009 08:25 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFLD
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2411
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: MSD
Dilution Factor: 500.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072109.B\064 MS.D\064 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	44.39	ppb	1.09	42.17	5.13	20	
51 V	72	1	141.70	ppb	1.06	133.80	5.74	20	
52 Cr	72	1	70.86	ppb	0.41	67.29	5.17	20	
55 Mn	72	1	1034.00	ppb	1.02	953.20	8.13	20	
59 Co	72	1	56.90	ppb	1.03	54.31	4.66	20	
60 Ni	72	1	59.39	ppb	0.16	56.88	4.32	20	
63 Cu	72	1	203.60	ppb	0.89	197.40	3.09	20	
66 Zn	72	1	346.50	ppb	0.86	337.40	2.66	20	
75 As	72	1	48.28	ppb	1.13	47.14	2.39	20	
78 Se	72	1	38.74	ppb	3.55	37.63	2.91	20	
95 Mo	72	1	30.13	ppb	0.69	28.68	4.93	20	
107 Ag	115	1	39.50	ppb	1.53	38.17	3.42	20	
111 Cd	115	1	43.00	ppb	1.26	40.98	4.81	20	
118 Sn	115	1	-0.40	ppb	7.21	-0.23	-51.76	20	
121 Sb	115	1	1.72	ppb	2.08	1.68	2.24	20	
137 Ba	115	1	541.70	ppb	1.24	504.70	7.07	20	
205 Tl	165	1	40.72	ppb	1.07	39.00	4.32	20	
208 Pb	165	1	124.30	ppb	0.35	123.80	0.40	20	
232 Th	165	1	61.56	ppb	1.21	62.03	0.76	20	
238 U	165	1	45.29	ppb	1.10	43.41	4.24	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	502344	0.27	581797	86.3	30 - 120	
45 Sc	1	2466639	1.20	2574983	95.8	30 - 120	
72 Ge	1	1137430	0.68	1211627	93.9	30 - 120	
115 In	1	3156843	1.13	3426576	92.1	30 - 120	
165 Ho	1	5193489	0.49	5647086	92.0	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\069SMPL.D\069SMPL.D#
Date Acquired: Jul 21 2009 08:28 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFT
Misc Info: D9G130118
Vial Number: 2412
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 510.20
Autodil Factor: Undiluted
Final Dil Factor: 510.20

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	640.81	1.26	ppb	9.77	3600	
51 V	72	1	53,673.04	105.20	ppb	0.46	3600	
52 Cr	72	1	10,811.14	21.19	ppb	1.08	3600	
55 Mn	72	1	471,271.74	923.70	ppb	0.49	3600	
59 Co	72	1	8,933.60	17.51	ppb	1.47	3600	
60 Ni	72	1	8,346.87	16.36	ppb	0.19	3600	
63 Cu	72	1	24,387.56	47.80	ppb	2.04	3600	
66 Zn	72	1	53,213.86	104.30	ppb	1.21	3600	
75 As	72	1	1,947.43	3.82	ppb	0.96	3600	
78 Se	72	1	489.13	0.96	ppb	21.71	3600	
95 Mo	72	1	509.64	1.00	ppb	15.37	3600	
107 Ag	115	1	136.02	0.27	ppb	20.24	3600	
111 Cd	115	1	757.14	1.48	ppb	8.96	3600	
118 Sn	115	1	-170.87	-0.33	ppb	18.55	3600	
121 Sb	115	1	32.86	0.06	ppb	73.70	3600	
137 Ba	115	1	192,243.36	376.80	ppb	1.17	3600	
205 Tl	165	1	263.88	0.52	ppb	12.07	3600	
208 Pb	165	1	9,607.07	18.83	ppb	1.51	3600	
232 Th	165	1	7,943.81	15.57	ppb	1.34	1000	
238 U	165	1	1,618.35	3.17	ppb	2.41	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	509567	0.37	581797	87.6	30 - 120	
45 Sc	1	2511588	0.51	2574983	97.5	30 - 120	
72 Ge	1	1158049	1.00	1211627	95.6	30 - 120	
115 In	1	3197145	1.03	3426576	93.3	30 - 120	
165 Ho	1	5155930	1.03	5647086	91.3	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\AG072109.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\AG072109.B\070SMPL.D\070SMPL.D#
Date Acquired: Jul 21 2009 08:30 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEFX
Misc Info: D9G130118
Vial Number: 2501
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 510.20
Autodil Factor: Undiluted
Final Dil Factor: 510.20

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	462.19	0.91	ppb	19.85	3600	
51 V	72	1	24,642.66	48.30	ppb	1.00	3600	
52 Cr	72	1	8,780.54	17.21	ppb	1.06	3600	
55 Mn	72	1	297,956.80	584.00	ppb	1.28	3600	
59 Co	72	1	4,208.64	8.25	ppb	0.33	3600	
60 Ni	72	1	7,326.47	14.36	ppb	1.17	3600	
63 Cu	72	1	26,137.55	51.23	ppb	0.34	3600	
66 Zn	72	1	61,121.96	119.80	ppb	0.71	3600	
75 As	72	1	2,500.49	4.90	ppb	1.16	3600	
78 Se	72	1	728.06	1.43	ppb	16.61	3600	
95 Mo	72	1	415.10	0.81	ppb	5.09	3600	
107 Ag	115	1	104.59	0.21	ppb	4.61	3600	
111 Cd	115	1	566.83	1.11	ppb	3.95	3600	
118 Sn	115	1	-140.46	-0.28	ppb	11.49	3600	
121 Sb	115	1	34.35	0.07	ppb	7.24	3600	
137 Ba	115	1	92,142.12	180.60	ppb	1.28	3600	
205 Tl	165	1	154.28	0.30	ppb	3.47	3600	
208 Pb	165	1	21,086.57	41.33	ppb	0.72	3600	
232 Th	165	1	8,454.01	16.57	ppb	0.96	1000	
238 U	165	1	1,047.44	2.05	ppb	0.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	507349	0.05	581797	87.2	30 - 120	
45 Sc	1	2427057	1.39	2574983	94.3	30 - 120	
72 Ge	1	1144303	1.34	1211627	94.4	30 - 120	
115 In	1	3219195	0.29	3426576	93.9	30 - 120	
165 Ho	1	5263857	0.47	5647086	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\AG072109.B\003CALB.D\003CALB.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\AG072109.B\071SMPL.D\071SMPL.D#
Date Acquired: Jul 21 2009 08:33 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEF3
Misc Info: D9G130118
Vial Number: 2502
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

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	719.50	1.44	ppb	3.55	3600	
51 V	72	1	56,550.00	113.10	ppb	1.03	3600	
52 Cr	72	1	7,955.00	15.91	ppb	0.86	3600	
55 Mn	72	1	527,000.00	1054.00	ppb	0.42	3600	
59 Co	72	1	7,745.00	15.49	ppb	0.85	3600	
60 Ni	72	1	5,900.00	11.80	ppb	2.24	3600	
63 Cu	72	1	14,415.00	28.83	ppb	1.01	3600	
66 Zn	72	1	47,865.00	95.73	ppb	1.01	3600	
75 As	72	1	1,008.50	2.02	ppb	3.37	3600	
78 Se	72	1	601.00	1.20	ppb	10.47	3600	
95 Mo	72	1	250.30	0.50	ppb	5.52	3600	
107 Ag	115	1	110.95	0.22	ppb	9.36	3600	
111 Cd	115	1	823.00	1.65	ppb	6.63	3600	
118 Sn	115	1	-229.05	-0.46	ppb	2.23	3600	
121 Sb	115	1	25.85	0.05	ppb	14.59	3600	
137 Ba	115	1	661,000.00	1322.00	ppb	0.81	3600	
205 Tl	165	1	185.80	0.37	ppb	1.46	3600	
208 Pb	165	1	6,105.00	12.21	ppb	0.47	3600	
232 Th	165	1	5,655.00	11.31	ppb	0.45	1000	
238 U	165	1	1,591.00	3.18	ppb	0.80	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	495660	0.06	581797	85.2	30 - 120	
45 Sc	1	2357449	1.92	2574983	91.6	30 - 120	
72 Ge	1	1111594	1.10	1211627	91.7	30 - 120	
115 In	1	3049253	0.22	3426576	89.0	30 - 120	
165 Ho	1	4920577	0.68	5647086	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\AG072109.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\AG072109.B\072SMPL.D\072SMPL.D#
Date Acquired: Jul 21 2009 08:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEF4
Misc Info: D9G130118
Vial Number: 2503
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 505.10
Autodil Factor: Undiluted
Final Dil Factor: 505.10

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	477.32	0.95	ppb	12.72	3600	
51 V	72	1	24,608.47	48.72	ppb	1.25	3600	
52 Cr	72	1	8,844.30	17.51	ppb	1.07	3600	
55 Mn	72	1	319,728.30	633.00	ppb	0.57	3600	
59 Co	72	1	4,116.57	8.15	ppb	1.14	3600	
60 Ni	72	1	7,344.15	14.54	ppb	0.79	3600	
63 Cu	72	1	28,078.51	55.59	ppb	1.84	3600	
66 Zn	72	1	63,188.01	125.10	ppb	1.20	3600	
75 As	72	1	2,542.17	5.03	ppb	0.58	3600	
78 Se	72	1	552.58	1.09	ppb	17.90	3600	
95 Mo	72	1	427.62	0.85	ppb	10.94	3600	
107 Ag	115	1	113.24	0.22	ppb	8.34	3600	
111 Cd	115	1	624.81	1.24	ppb	0.89	3600	
118 Sn	115	1	-91.07	-0.18	ppb	12.57	3600	
121 Sb	115	1	47.55	0.09	ppb	8.04	3600	
137 Ba	115	1	107,485.28	212.80	ppb	0.76	3600	
205 Tl	165	1	159.46	0.32	ppb	2.05	3600	
208 Pb	165	1	32,558.75	64.46	ppb	1.48	3600	
232 Th	165	1	8,369.51	16.57	ppb	0.57	1000	
238 U	165	1	1,150.11	2.28	ppb	2.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	500028	1.43	581797	85.9	30 - 120	
45 Sc	1	2441516	0.54	2574983	94.8	30 - 120	
72 Ge	1	1142143	0.56	1211627	94.3	30 - 120	
115 In	1	3214458	1.23	3426576	93.8	30 - 120	
165 Ho	1	5183411	0.74	5647086	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\AG072109.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\AG072109.B\073SMPL.D\073SMPL.D#
Date Acquired: Jul 21 2009 08:39 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGEF6
Misc Info: D9G130118
Vial Number: 2504
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 05:31 pm
Sample Type: SA
Dilution Factor: 515.50
Autodil Factor: Undiluted
Final Dil Factor: 515.50

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	875.32	1.70	ppb	4.93	3600	
51 V	72	1	58,457.70	113.40	ppb	1.54	3600	
52 Cr	72	1	11,526.58	22.36	ppb	1.42	3600	
55 Mn	72	1	577,875.50	1121.00	ppb	1.11	3600	
59 Co	72	1	11,021.39	21.38	ppb	1.96	3600	
60 Ni	72	1	10,041.94	19.48	ppb	2.59	3600	
63 Cu	72	1	29,275.25	56.79	ppb	1.74	3600	
66 Zn	72	1	60,880.55	118.10	ppb	1.53	3600	
75 As	72	1	2,323.36	4.51	ppb	1.10	3600	
78 Se	72	1	666.54	1.29	ppb	36.14	3600	
95 Mo	72	1	357.09	0.69	ppb	7.91	3600	
107 Ag	115	1	128.88	0.25	ppb	10.92	3600	
111 Cd	115	1	812.94	1.58	ppb	3.44	3600	
118 Sn	115	1	-240.94	-0.47	ppb	2.15	3600	
121 Sb	115	1	60.62	0.12	ppb	5.04	3600	
137 Ba	115	1	244,914.05	475.10	ppb	1.83	3600	
205 Tl	165	1	297.50	0.58	ppb	1.77	3600	
208 Pb	165	1	10,825.50	21.00	ppb	0.98	3600	
232 Th	165	1	8,567.61	16.62	ppb	1.89	1000	
238 U	165	1	1,266.58	2.46	ppb	0.94	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	489176	1.51	581797	84.1	30 - 120	
45 Sc	1	2455376	1.27	2574983	95.4	30 - 120	
72 Ge	1	1124542	1.44	1211627	92.8	30 - 120	
115 In	1	3097767	1.77	3426576	90.4	30 - 120	
165 Ho	1	5078354	0.83	5647086	89.9	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\AG072109.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\AG072109.B\074SMPL.D\074SMPL.D#
Date Acquired:	Jul 21 2009 08:41 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGEF8
Misc Info:	D9G130118
Vial Number:	2505
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 21 2009 05:31 pm
Sample Type:	SA
Dilution Factor:	505.10
Autodil Factor:	Undiluted
Final Dil Factor:	505.10

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	899.08	1.78	ppb	8.76	3600	
51 V	72	1	32,215.28	63.78	ppb	1.48	3600	
52 Cr	72	1	5,859.16	11.60	ppb	2.55	3600	
55 Mn	72	1	700,068.60	1386.00	ppb	1.82	3600	
59 Co	72	1	11,112.20	22.00	ppb	1.58	3600	
60 Ni	72	1	6,000.59	11.88	ppb	1.26	3600	
63 Cu	72	1	22,093.07	43.74	ppb	1.51	3600	
66 Zn	72	1	65,612.49	129.90	ppb	1.36	3600	
75 As	72	1	1,154.15	2.29	ppb	1.63	3600	
78 Se	72	1	761.19	1.51	ppb	10.88	3600	
95 Mo	72	1	186.74	0.37	ppb	4.46	3600	
107 Ag	115	1	91.57	0.18	ppb	14.09	3600	
111 Cd	115	1	799.07	1.58	ppb	8.88	3600	
118 Sn	115	1	-265.48	-0.53	ppb	2.58	3600	
121 Sb	115	1	5.38	0.01	ppb	15.85	3600	
137 Ba	115	1	182,139.06	360.60	ppb	1.09	3600	
205 Tl	165	1	289.52	0.57	ppb	0.77	3600	
208 Pb	165	1	10,046.44	19.89	ppb	1.03	3600	
232 Th	165	1	6,980.48	13.82	ppb	1.12	1000	
238 U	165	1	1,176.88	2.33	ppb	1.99	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	491281	0.62	581797	84.4	30 - 120	
45 Sc	1	2429155	0.96	2574983	94.3	30 - 120	
72 Ge	1	1125069	0.76	1211627	92.9	30 - 120	
115 In	1	3117379	0.64	3426576	91.0	30 - 120	
165 Ho	1	5087034	0.69	5647086	90.1	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\AG072109.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\AG072109.B\075 CCV.D\075 CCV.D#
Date Acquired: Jul 21 2009 08:44 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: Jul 21 2009 05:31 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.82	ppb	3.51	50	101.6	90 - 110	
51 V	72	1	48.35	ppb	1.15	50	96.7	90 - 110	
52 Cr	72	1	48.47	ppb	0.90	50	96.9	90 - 110	
55 Mn	72	1	47.82	ppb	0.61	50	95.6	90 - 110	
59 Co	72	1	49.29	ppb	1.05	50	98.6	90 - 110	
60 Ni	72	1	50.33	ppb	0.80	50	100.7	90 - 110	
63 Cu	72	1	51.17	ppb	0.87	50	102.3	90 - 110	
66 Zn	72	1	48.70	ppb	1.03	50	97.4	90 - 110	
75 As	72	1	50.98	ppb	0.57	50	102.0	90 - 110	
78 Se	72	1	51.60	ppb	3.38	50	103.2	90 - 110	
95 Mo	72	1	49.95	ppb	0.11	50	99.9	90 - 110	
107 Ag	115	1	50.73	ppb	1.44	50	101.5	90 - 110	
111 Cd	115	1	50.26	ppb	1.35	50	100.5	90 - 110	
118 Sn	115	1	49.65	ppb	1.38	50	99.3	90 - 110	
121 Sb	115	1	49.53	ppb	0.74	50	99.1	90 - 110	
137 Ba	115	1	50.60	ppb	0.24	50	101.2	90 - 110	
205 Tl	165	1	50.90	ppb	0.29	50	101.8	90 - 110	
208 Pb	165	1	50.75	ppb	0.27	50	101.5	90 - 110	
232 Th	165	1	56.21	ppb	1.86	50	112.4	90 - 110	Fail
238 U	165	1	51.89	ppb	1.71	50	103.8	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	516442	0.54	581797	88.8	30 - 120	
45 Sc	1	2446727	1.35	2574983	95.0	30 - 120	
72 Ge	1	1194852	0.38	1211627	98.6	30 - 120	
115 In	1	3319649	0.49	3426576	96.9	30 - 120	
165 Ho	1	5294405	0.72	5647086	93.8	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\AG072109.B\003CALB.D\003CALB.D#

1 :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: D9G150224

Client: Northgate Environmental

Batch(es) #: 9197220

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: 7/22/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G150224	1 D	SE	LGH2F1AH	20090722	6020TOTA	9197220	AG072109A	024
D9G150224	1 S	SE	LGH2F1AG	20090721	6020TOTA	9197220	AG072109A	024
D9G150224	1 D	AS	LGH2F1AF	20090722	6020TOTA	9197220	AG072109A	024
D9G150224	1 S	AS	LGH2F1AE	20090721	6020TOTA	9197220	AG072109A	024
D9G150224	1	SE	LGH2F1AC	20090721	6020TOTA	9197220	AG072109A	024
D9G150224	1	AS	LGH2F1AA	20090721	6020TOTA	9197220	AG072109A	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9197220**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: KS

Prep Date: ~~07/16/09~~ 7.20.09 KS

Due Date: 07/27/09

Lot	Work Order			Initial Weight/Volume
D9G160000 Water	**LGKQD**	B	Due Date: SDG:	50 mL
D9G160000 Water	**LGKQD**	C	Due Date: SDG:	50 mL
D9G150224 Water	**LGH2F** Total		Due Date: 07/27/09 SDG:	50 mL
D9G150224 Water	**LGH2F** Total	S	Due Date: 07/27/09 SDG:	50 mL
D9G150224 Water	**LGH2F** Total	D	Due Date: 07/27/09 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 7/21/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH #	9197220	**ALLIQUOTTED BY:**	JRW
PREP DATE:	7.20.2009	**DIGESTED BY:**	KS

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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: ICS

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	3

TEMPERATURE CYCLES

Thermometer ID: 25894 Block & Cup # : 2, 18

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	7:30	92	11:50	93
HNO3	12:00	93	12:30	92
HNO3				

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Katie Dyg ***Date:*** 7.20.09

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

Jul-22-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-ZN02045 Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4008-09, ICP-MS (024) INT STD BRC-HIGH

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 250.00
Date Prep./Opened: 07-02-2009
Date Expires(1): 11-10-2009 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock — Aliquot Amount (ml): 1.2000
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	4,800.0

Parent Std No.: STD1972-09, Lithium 6 Stock — Aliquot Amount (ml): 1.5000
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	6,000.0

Parent Std No.: STD1973-09, Indium Stock — Aliquot Amount (ml): 0.4000
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	1,600.0

Parent Std No.: STD6317-08, Scandium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	1,600.0

Parent Std No.: STD6318-08, Holmium Stock
Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,600.0

STD4289-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 50.000
Date Prep./Opened: 07-20-2009
Date Expires(1): 08-20-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard
Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4307-09, ALTCu

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 100.00
Date Prep./Opened: 07-21-2009
Date Expires(1): 04-01-2010 (1 Year)
1 ppb

Parent Std No.: STD4306-09, Cu 1 mg/l
Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Cu	1.0000	0.0010

STD4309-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water
Volume (ml): 1,000.0
Date Prep./Opened: 07-21-2009
Date Expires(1): 08-21-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4308-09, NITRIC ACID Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4310-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn Aliquot Amount (ml): 0.1000
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	10.000

STD4311-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4312-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	50.000
Zn	20.000	50.000
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000

Sb	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4313-09, ICP-MS RL STD — Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn — Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4311-09, ICP-MS 100 ppb cal — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 07-22-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
V	100.00	0.0010
Zn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010
Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
Mo	100.00	0.0010
Sb	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010

STD4314-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022

Volume (ml): 10.000

Date Prep./Opened: 07-21-2009

Date Expires(1): 07-22-2009 (2 Days)

pipettes: Met 20 and Met 8

Parent Std No.: STD4313-09, 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
V	0.0010	0.0002
Zn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Fe	0.0500	0.0100
Sn	0.0010	0.0002

STD4315-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022

Volume (ml): 10.000

Date Prep./Opened: 07-21-2009

Date Expires(1): 07-22-2009 (1 Day)

Date Verified: 12-31--4714 by - (Verification ID: 0)

pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard

Aliquot Amount (ml): 1.0000

Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 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 (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4316-09, ICPMS LR STD 1000 ppb

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	1,000.0
Zn	20.000	1,000.0
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD4310-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-22-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4317-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000

Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4318-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (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

STD4319-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-21-2009
Date Expires(1): 07-22-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: LRD 07/21/2009

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/22/09 09:53:24

File ID: AG072109A **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/21/09 22:38	RERUN	☐
3	Cal Blank				1.0	07/21/09 22:41		☐
4	100 ppb				1.0	07/21/09 22:43		☐
5	ICV				1.0	07/21/09 22:46		☐
6	RLIV				1.0	07/21/09 22:49		☐
7	ICB				1.0	07/21/09 22:51		☐
8	RL STD				1.0	07/21/09 22:54		☐
9	AFCEE RL				1.0	07/21/09 22:57		☐
10	ALTSe				1.0	07/21/09 23:00		☐
11	ICSA				1.0	07/21/09 23:02		☐
12	ICSAB				1.0	07/21/09 23:05		☐
13	RINSE				1.0	07/21/09 23:08		☐
14	ALTCu				1.0	07/21/09 23:11		☐
15	LR				1.0	07/21/09 23:13		☐
16	RINSE				1.0	07/21/09 23:16		☐
17	CCV				1.0	07/21/09 23:19		☐
18	CCB				1.0	07/21/09 23:21		☐
19	RLCV				1.0	07/21/09 23:24		☐
20	BLANK				1.0	07/21/09 23:27		☐
21	MDLV 1				1.0	07/21/09 23:30		☐
22	MDLV 2				1.0	07/21/09 23:32		☐
23	CCV				1.0	07/21/09 23:35		☐
24	CCB				1.0	07/21/09 23:38		☐
25	RLCV				1.0	07/21/09 23:41		☐
26	LGKQDB	D9G160000	9197220	MS	1.0	07/21/09 23:43		☐
27	LGKQDC	D9G160000	9197220	MS	1.0	07/21/09 23:46		☐
28	LGH2F 10X	D9G150224-1	9197220	MS	10.0	07/21/09 23:49		☐
29	LGH2FP50	D9G150224	9197220		50.0	07/21/09 23:52		☐
30	LGH2FZ	D9G150224-1	9197220		1.0	07/21/09 23:54		☐
31	LGH2FS 10X	D9G150224-1	9197220	MS	10.0	07/21/09 23:57		☐
32	LGH2FD 10X	D9G150224-1	9197220	MS	10.0	07/22/09 00:00		☐
33	CCV				1.0	07/22/09 00:03		☐
34	CCB				1.0	07/22/09 00:05		☐
35	RLCV				1.0	07/22/09 00:08		☐
36	~~Cal Blank~~				~~1.0~~	~~07/22/09 00:11~~	NCF 7/22/09	☐
37	Cal Blank				1.0	07/22/09 00:13		☐
38	100 ppb				1.0	07/22/09 00:16		☐
39	CCV				1.0	07/22/09 00:19		☐
40	CCB				1.0	07/22/09 00:22		☐
41	RLCV				1.0	07/22/09 00:24		☐
42	LGKH2BF	D9G160000	9197118	MD	1.0	07/22/09 00:27		☐
43	LGKH2CF	D9G160000	9197118	MD	1.0	07/22/09 00:30		☐
44	LGH71F	D9G150243-2	9197118	MD	1.0	07/22/09 00:33		☐
45	LGH8DF	D9G150243-5	9197118	MD	1.0	07/22/09 00:35		☐
46	LGH9EF	D9G150243-8	9197118	MD	1.0	07/22/09 00:38		☐
47	LGH9EP5F	D9G150243	9197118		5.0	07/22/09 00:41		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/22/09 09:53:24

File ID: AG072109A **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	LGH9EZF	D9G150243-8	9197118		1.0	07/22/09 00:44		
49	LGH9ESF	D9G150243-8	9197118	MD	1.0	07/22/09 00:46		
50	LGH9EDF	D9G150243-8	9197118	MD	1.0	07/22/09 00:49		
51	LGH93F	D9G150243-11	9197118	MD	1.0	07/22/09 00:52		
52	CCV				1.0	07/22/09 00:55		
53	CCB				1.0	07/22/09 00:57		
54	RLCV				1.0	07/22/09 01:00		
55	LGH9EF	D9G150243-8	9197118	MD	1.0	07/22/09 01:03	For confirmation only. TEL 7/22/09	
56	LGH9ESF	D9G150243-8	9197118	MD	1.0	07/22/09 01:06		
57	LGH9EDF	D9G150243-8	9197118	MD	1.0	07/22/09 01:08		
58	CCV				1.0	07/22/09 01:11		
59	CCB				1.0	07/22/09 01:14		
60	RLCV				1.0	07/22/09 01:17		
61	LGFH0BQ	D9G140000	9195159	U1	1.0	07/22/09 01:19		
62	LGFH0CQ	D9G140000	9195159	U1	1.0	07/22/09 01:22		
63	LGE3QQ	D9G130204-1	9195159	U1	1.0	07/22/09 01:25		
64	LGE3QP5Q	D9G130204	9195159		5.0	07/22/09 01:28		
65	LGE3QZQ	D9G130204-1	9195159		1.0	07/22/09 01:30		
66	LGE3QSQ	D9G130204-1	9195159	U1	1.0	07/22/09 01:33		
67	LGE3QDQ	D9G130204-1	9195159	U1	1.0	07/22/09 01:36		
68	CCV				1.0	07/22/09 01:38		
69	CCB				1.0	07/22/09 01:41		
70	RLCV				1.0	07/22/09 01:44		
71	LGE3VQ	D9G130204-2	9195159	U1	1.0	07/22/09 01:47		
72	LGE3WQ	D9G130204-3	9195159	U1	1.0	07/22/09 01:49		
73	LGE3XQ	D9G130204-4	9195159	U1	1.0	07/22/09 01:52		
74	LGE4AQ	D9G130204-5	9195159	U1	1.0	07/22/09 01:55		
75	LGE4EQ	D9G130204-6	9195159	U1	1.0	07/22/09 01:58		
76	LGE4HQ	D9G130204-7	9195159	U1	1.0	07/22/09 02:00		
77	LGE4JQ	D9G130204-8	9195159	U1	1.0	07/22/09 02:03		
78	CCV				1.0	07/22/09 02:06		
79	CCB				1.0	07/22/09 02:09		
80	RLCV				1.0	07/22/09 02:11		
81	~~RINSE~~				~~1.0~~	~~07/22/09 02:14~~		
82	RINSE				1.0	07/22/09 02:17		
83	RINSE				1.0	07/22/09 02:20		
84	RINSE				1.0	07/22/09 02:22		
85	RINSE				1.0	07/22/09 02:25		
86	RINSE				1.0	07/22/09 02:28		
87	~~Cal Blank~~				~~1.0~~	~~07/22/09 02:31~~	TEL 7/22/09	
88	Cal Blank				1.0	07/22/09 02:33		
89	100 ppb				1.0	07/22/09 02:36		
90	CCV				1.0	07/22/09 02:39		
91	CCB				1.0	07/22/09 02:41		
92	RLCV				1.0	07/22/09 02:44		
93	LGE4KQ	D9G130204-9	9195159	U1	1.0	07/22/09 02:47		

Denver

RUN SUMMARY

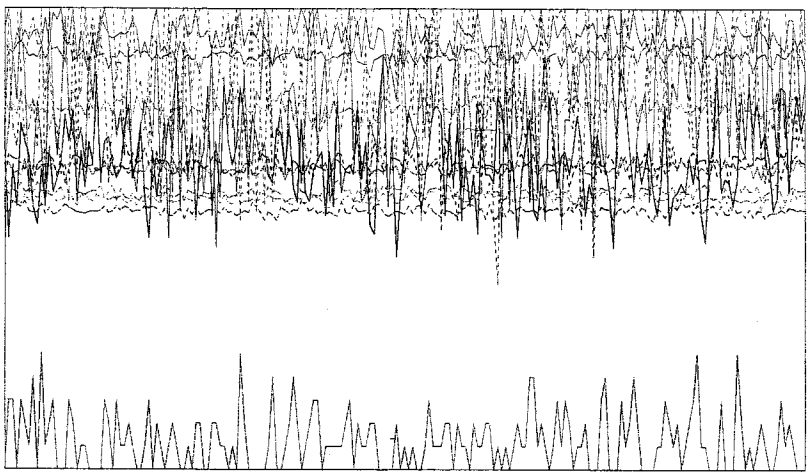
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/22/09 09:53:24

File ID: AG072109A **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	LGE4MQ	D9G130204-10	9195159	U1	1.0	07/22/09 02:50		
95	LGE4NQ	D9G130204-11	9195159	U1	1.0	07/22/09 02:52		
96	LGE4PQ	D9G130204-12	9195159	U1	1.0	07/22/09 02:55		
97	LGE4QQ	D9G130204-13	9195159	U1	1.0	07/22/09 02:58		
98	LGE4RQ	D9G130204-14	9195159	U1	1.0	07/22/09 03:01		
99	LGE4TQ	D9G130204-15	9195159	U1	1.0	07/22/09 03:04		
100	CCV				1.0	07/22/09 03:06		
101	CCB				1.0	07/22/09 03:09		
102	RLCV				1.0	07/22/09 03:12		
103	LGFH7BQ	D9G140000	9195169	U1	1.0	07/22/09 03:15		
104	LGFH7CQ	D9G140000	9195169	U1	1.0	07/22/09 03:17		
105	LGE4VQ	D9G130204-16	9195169	U1	1.0	07/22/09 03:20		
106	LGE4VP5Q	D9G130204	9195169		5.0	07/22/09 03:23		
107	LGE4VZQ	D9G130204-16	9195169		1.0	07/22/09 03:26		
108	LGE4VSQ	D9G130204-16	9195169	U1	1.0	07/22/09 03:28		
109	LGE4VDQ	D9G130204-16	9195169	U1	1.0	07/22/09 03:31		
110	CCV				1.0	07/22/09 03:34		
111	CCB				1.0	07/22/09 03:37		
112	RLCV				1.0	07/22/09 03:39		
113	LGE4WQ	D9G130204-17	9195169	U1	1.0	07/22/09 03:42		
114	LGE4XQ	D9G130204-18	9195169	U1	1.0	07/22/09 03:45		
115	LGE40Q	D9G130204-19	9195169	U1	1.0	07/22/09 03:48		
116	LGE41Q	D9G130204-20	9195169	U1	1.0	07/22/09 03:50		
117	LGE42Q	D9G130204-21	9195169	U1	1.0	07/22/09 03:53		
118	LGE43Q	D9G130204-22	9195169	U1	1.0	07/22/09 03:56		
119	LGE44Q	D9G130204-23	9195169	U1	1.0	07/22/09 03:59		
120	CCV				1.0	07/22/09 04:02		
121	CCB				1.0	07/22/09 04:04		
122	RLCV				1.0	07/22/09 04:07		
123	~~LGE45Q~~	~~D9G130204-24~~	~~9195169~~	~~U1~~	~~1.0~~	~~07/22/09 04:10~~		
124	LGE47Q	D9G130204-25	9195169	U1	1.0	07/22/09 04:13		
125	LGE48Q	D9G130204-26	9195169	U1	1.0	07/22/09 04:15		
126	LGE49Q	D9G130204-27	9195169	U1	1.0	07/22/09 04:18		
127	LGE5AQ	D9G130204-28	9195169	U1	1.0	07/22/09 04:21		
128	LGE5CQ	D9G130204-29	9195169	U1	1.0	07/22/09 04:24		
129	LGE5DQ	D9G130204-30	9195169	U1	1.0	07/22/09 04:27		
130	CCV				1.0	07/22/09 04:29		
131	CCB				1.0	07/22/09 04:32		
132	~~RLCV~~				1.0	07/22/09 04:35	KF 7/22/09 did not use.	

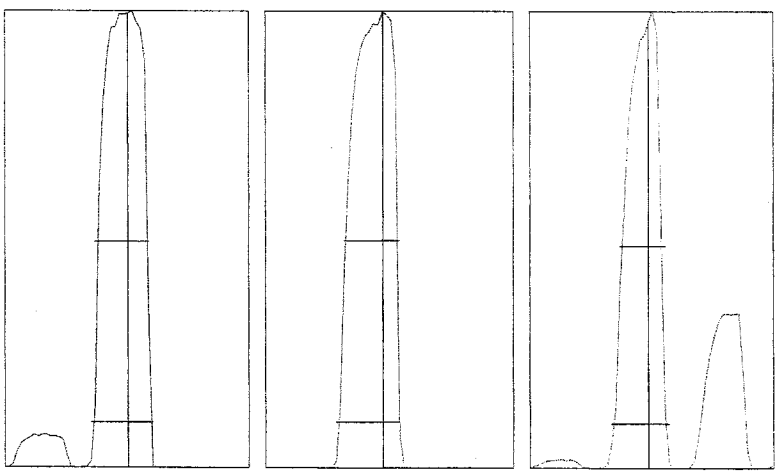
Tune Report

Tune File : NORM.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.281%
Doubly Charged:	70/140	0.506%

m/z	Range	Count	Mean	RSD%	Background
6	1,000	891.0	940.8	3.63	0.70
7	20,000	13129.0	13059.6	1.91	0.60
59	10,000	7602.0	7856.2	2.40	0.50
63	50	42.0	39.4	16.38	0.30
70	100	78.0	67.2	13.40	0.50
75	20	0.0	1.2	102.35	0.80
78	50	43.0	48.7	14.56	0.50
89	20,000	12125.0	12029.4	1.86	1.00
115	20,000	11842.0	11739.1	1.63	0.80
118	50	34.0	39.7	21.11	1.30
137	2,000	1330.0	1323.1	2.85	1.10
205	20,000	11244.0	11223.5	1.66	1.80
238	20,000	17300.0	17931.0	1.60	2.40
156/140	2	1.192%	1.337%	8.61	
70/140	2	0.664%	0.568%	13.49	



m/z:	7	89	205
Height:	13,051	12,146	11,336
Axis:	7.05	88.95	205.00
W-50%:	0.65	0.65	0.55
W-10%:	0.7500	0.7500	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 21, 2009 16:29:27
Printed : Jul 21, 2009 16:29:30

Tune Report

Tune File : NORM.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1550 W	Extract 1	:	0 V	AMU Gain	:	133
RF Matching	:	1.7 V	Extract 2	:	-160 V	AMU Offset	:	122
Smpl Depth	:	7.5 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0005
Torch-H	:	-0.8 mm	Omega Lens-ce	:	0 V	Axis Offset	:	-0.02
Torch-V	:	-0.3 mm	Cell Entrance	:	-30 V	QP Bias	:	0 V
Carrier Gas	:	0.83 L/min	QP Focus	:	7 V			
Makeup Gas	:	0.2 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1390 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	:	--- %

P/A Factor Tuning Report

Acquired:Jul 21 2009 04:50 pm

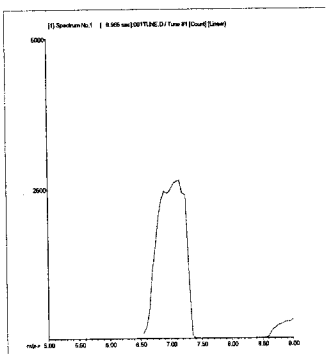
Mass[amu]	Element	P/A Factor
6	Li	0.061203
7	(Li)	Sensitivity too low
9	Be	0.068907
45	Sc	0.083389
51	V	0.086007
52	Cr	0.088320
53	(Cr)	Sensitivity too low
55	Mn	0.090395
59	Co	0.093203
60	Ni	Sensitivity too low
63	Cu	Sensitivity too low
66	Zn	0.096924
72	Ge	Sensitivity too low
75	As	Sensitivity too low
77	(Se)	Sensitivity too low
78	Se	Sensitivity too low
82	(Se)	Sensitivity too low
83	(Se)	Sensitivity too low
95	Mo	0.096067
98	(Mo)	0.096151
99	(Mo)	Sensitivity too low
106	(Cd)	0.101305
107	Ag	Sensitivity too low
108	(Cd)	0.101769
111	Cd	0.102139
114	Cd	0.102089
115	In	0.101222
118	Sn	0.101067
121	Sb	0.100944
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.109272
206	(Pb)	0.108216
207	(Pb)	0.108287
208	Pb	0.107820
232	Th	0.106452
238	U	0.106481

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1390 V

200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072109A.B\001TUNE.D
Date Acquired: Jul 21 2009 10:35 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	28792	28786	28848	28675	28715	28937	0.36	5.00	
9 Be	3287	3266	3403	3326	3238	3201	2.42	5.00	
24 Mg	20465	20601	20572	20570	20293	20291	0.78	5.00	
59 Co	87154	87156	87217	87554	85854	87989	0.92	5.00	
115 In	1784641	1775941	1785621	1790278	1787993	1783371	0.31	5.00	
208 Pb	89308	90883	89644	88281	89245	88488	1.16	5.00	
238 U	182098	184341	182414	182187	181839	179710	0.91	5.00	



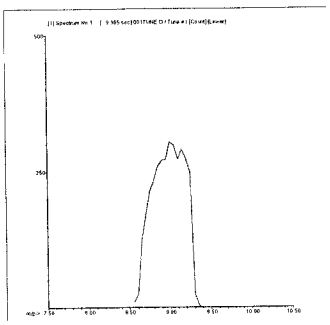
7 Li

Mass Calib.

Actual: 7.10
Required: 6.90 - 7.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



9 Be

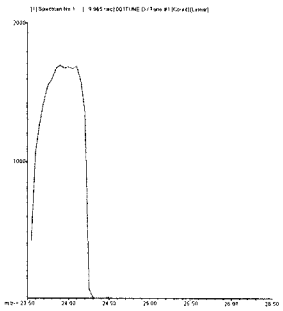
Mass Calib.

Actual: 9.10
Required: 8.90 - 9.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG072109A.B\001TUNE.D



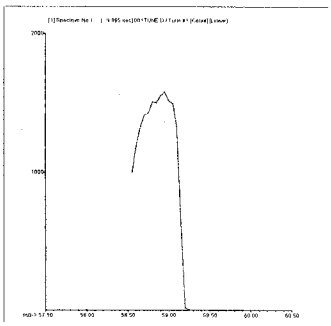
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.65		
Required:	0.90		
Flag:			



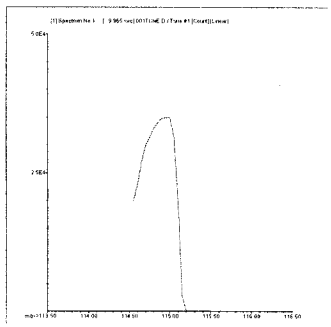
59 Co

Mass Calib.

Actual:	58.90		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



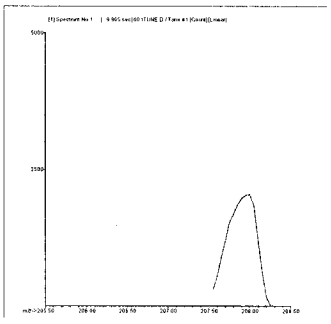
115 In

Mass Calib.

Actual:	114.90		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



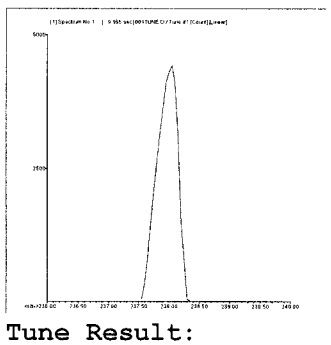
208 Pb

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:	238.00		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG072109A.B\002CALB.D\002CALB.D#
Date Acquired: Jul 21 2009 10:38 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: Jul 21 2009 10:38 pm
Sample Type: CalBlk

Reviewed 7/22/09

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-262	177.94
52	Cr	72	1	2737	4.42
55	Mn	72	1	923	11.48
59	Co	72	1	83	18.33
60	Ni	72	1	87	17.63
63	Cu	72	1	363	10.42
66	Zn	72	1	331	4.29
75	As	72	1	60	11.55
78	Se	72	1	530	13.21
95	Mo	72	1	63	24.12
107	Ag	115	1	23	65.47
111	Cd	115	1	20	174.77
118	Sn	115	1	2054	14.66
121	Sb	115	1	76	5.09
137	Ba	115	1	68	37.24
205	Tl	165	1	251	13.30
208	Pb	165	1	442	4.29
232	Th	165	1	277	11.04
238	U	165	1	222	4.82

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	522383	0.34
45	Sc	1	2357824	0.65
72	Ge	1	1145733	0.31
115	In	1	3203982	1.27
165	Ho	1	5266765	1.68

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\AG072109A.B\003CALB.D\003CALB.D#
Date Acquired:	Jul 21 2009 10:41 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:	Jul 21 2009 10:38 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-71	240.17
52	Cr	72	1	2647	3.15
55	Mn	72	1	833	4.85
59	Co	72	1	63	79.47
60	Ni	72	1	157	18.43
63	Cu	72	1	517	2.23
66	Zn	72	1	486	3.27
75	As	72	1	80	12.99
78	Se	72	1	580	3.45
95	Mo	72	1	33	17.32
107	Ag	115	1	27	78.06
111	Cd	115	1	7	183.39
118	Sn	115	1	4267	6.34
121	Sb	115	1	40	8.33
137	Ba	115	1	51	19.92
205	Tl	165	1	93	16.37
208	Pb	165	1	311	22.59
232	Th	165	1	197	20.55
238	U	165	1	31	22.30

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	524981	0.18
45	Sc	1	2369813	1.09
72	Ge	1	1135454	1.05
115	In	1	3197603	0.62
165	Ho	1	5231125	0.24

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\AG072109A.B\004ICAL.D\004ICAL.D#
Date Acquired: Jul 21 2009 10:43 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: Jul 21 2009 10:41 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	55683	1.48
51	V	72	1	1160147	0.80
52	Cr	72	1	1151611	1.16
55	Mn	72	1	1374396	0.34
59	Co	72	1	1446977	0.93
60	Ni	72	1	340048	0.45
63	Cu	72	1	767889	1.30
66	Zn	72	1	192934	0.39
75	As	72	1	145716	0.37
78	Se	72	1	27932	1.88
95	Mo	72	1	381010	0.45
107	Ag	115	1	1109370	1.57
111	Cd	115	1	225497	0.50
118	Sn	115	1	661706	0.35
121	Sb	115	1	762023	0.42
137	Ba	115	1	331626	0.90
205	Tl	165	1	2572489	0.66
208	Pb	165	1	3520429	0.99
232	Th	165	1	3379908	3.33
238	U	165	1	3775667	1.07

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	511576	0.64	524981	97.4	30 - 120	
45	Sc	1	2359592	1.06	2369813	99.6	30 - 120	
72	Ge	1	1140051	0.52	1135454	100.4	30 - 120	
115	In	1	3199635	0.73	3197603	100.1	30 - 120	
165	Ho	1	5196473	0.36	5231125	99.3	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\AG072109A.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\AG072109A.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 21 2009 10:46 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: Jul 21 2009 10:44 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	39.93	ppb	1.99	40	99.8	90 - 110	
51 V	72	1	39.22	ppb	1.29	40	98.1	90 - 110	
52 Cr	72	1	40.15	ppb	0.94	40	100.4	90 - 110	
55 Mn	72	1	40.47	ppb	1.03	40	101.2	90 - 110	
59 Co	72	1	39.65	ppb	1.21	40	99.1	90 - 110	
60 Ni	72	1	38.12	ppb	1.23	40	95.3	90 - 110	
63 Cu	72	1	39.80	ppb	1.17	40	99.5	90 - 110	
66 Zn	72	1	36.24	ppb	1.54	40	90.6	90 - 110	
75 As	72	1	40.01	ppb	0.69	40	100.0	90 - 110	
78 Se	72	1	40.94	ppb	2.11	40	102.4	90 - 110	
95 Mo	72	1	39.70	ppb	1.13	40	99.3	90 - 110	
107 Ag	115	1	39.19	ppb	1.50	40	98.0	90 - 110	
111 Cd	115	1	40.58	ppb	1.23	40	101.5	90 - 110	
118 Sn	115	1	38.40	ppb	2.15	40	96.0	90 - 110	
121 Sb	115	1	38.07	ppb	0.93	40	95.2	90 - 110	
137 Ba	115	1	37.54	ppb	1.48	40	93.9	90 - 110	
205 Tl	165	1	40.26	ppb	0.61	40	100.7	90 - 110	
208 Pb	165	1	40.45	ppb	0.83	40	101.1	90 - 110	
232 Th	165	1	42.96	ppb	1.27	40	107.4	90 - 110	
238 U	165	1	40.48	ppb	0.60	40	101.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	516112	0.21	524981	98.3	30 - 120	
45 Sc	1	2352076	1.74	2369813	99.3	30 - 120	
72 Ge	1	1141693	0.55	1135454	100.5	30 - 120	
115 In	1	3240796	1.19	3197603	101.4	30 - 120	
165 Ho	1	5233804	0.19	5231125	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\AG072109A.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\AG072109A.B\006WASH.D\006WASH.D#
Date Acquired: Jul 21 2009 10:49 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: Jul 21 2009 10:44 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	0.937 ppb	13.57	1.30	
51 V	72	1	5.036 ppb	2.32	6.50	
52 Cr	72	1	2.098 ppb	1.86	2.60	
55 Mn	72	1	1.090 ppb	4.89	1.30	
59 Co	72	1	0.996 ppb	1.47	1.30	
60 Ni	72	1	1.973 ppb	7.28	2.60	
63 Cu	72	1	1.977 ppb	2.73	2.60	
66 Zn	72	1	9.262 ppb	0.72	13.00	
75 As	72	1	5.079 ppb	2.47	6.50	
78 Se	72	1	5.525 ppb	1.71	6.50	
95 Mo	72	1	2.054 ppb	1.54	2.60	
107 Ag	115	1	5.073 ppb	0.72	6.50	
111 Cd	115	1	1.109 ppb	5.19	1.30	
118 Sn	115	1	9.876 ppb	1.47	13.00	
121 Sb	115	1	2.184 ppb	2.31	2.60	
137 Ba	115	1	1.036 ppb	2.63	1.30	
205 Tl	165	1	1.130 ppb	1.56	1.30	
208 Pb	165	1	1.062 ppb	2.42	1.30	
232 Th	165	1	2.580 ppb	3.42	2.60	
238 U	165	1	1.116 ppb	0.66	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	519722	0.50	524981	99.0	30 - 120	
45 Sc	1	2360154	0.50	2369813	99.6	30 - 120	
72 Ge	1	1158272	0.47	1135454	102.0	30 - 120	
115 In	1	3229636	0.66	3197603	101.0	30 - 120	
165 Ho	1	5192660	0.72	5231125	99.3	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\AG072109A.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\AG072109A.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 21 2009 10:51 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: Jul 21 2009 10:44 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	0.01	ppb	173.10	1.00	
51 V	72	1	0.01	ppb	254.71	1.00	
52 Cr	72	1	-0.01	ppb	133.56	1.00	
55 Mn	72	1	0.02	ppb	20.36	1.00	
59 Co	72	1	0.00	ppb	124.13	1.00	
60 Ni	72	1	-0.02	ppb	52.61	1.00	
63 Cu	72	1	-0.02	ppb	4.10	1.00	
66 Zn	72	1	-0.06	ppb	12.34	1.00	
75 As	72	1	0.00	ppb	66.98	1.00	
78 Se	72	1	0.18	ppb	261.08	1.00	
95 Mo	72	1	0.02	ppb	51.30	1.00	
107 Ag	115	1	0.01	ppb	20.67	1.00	
111 Cd	115	1	0.01	ppb	113.58	1.00	
118 Sn	115	1	-0.23	ppb	6.02	1.00	
121 Sb	115	1	0.09	ppb	14.11	1.00	
137 Ba	115	1	0.03	ppb	19.27	1.00	
205 Tl	165	1	0.03	ppb	4.44	1.00	
208 Pb	165	1	0.00	ppb	86.75	1.00	
232 Th	165	1	0.10	ppb	5.75	1.00	
238 U	165	1	0.00	ppb	30.04	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	522405	0.94	524981	99.5	30 - 120	
45 Sc	1	2359403	0.74	2369813	99.6	30 - 120	
72 Ge	1	1154138	0.79	1135454	101.6	30 - 120	
115 In	1	3212813	1.52	3197603	100.5	30 - 120	
165 Ho	1	5194297	0.69	5231125	99.3	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\AG072109A.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\AG072109A.B\008RLST.D\008RLST.D#
Date Acquired: Jul 21 2009 10:54 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: Jul 21 2009 10:44 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.99	ppb	15.45	1	98.5	50 - 150	
51 V	72	1	1.03	ppb	1.83	1	102.6	50 - 150	
52 Cr	72	1	1.03	ppb	3.95	1	102.8	50 - 150	
55 Mn	72	1	1.09	ppb	1.54	1	108.8	50 - 150	
59 Co	72	1	1.03	ppb	4.22	1	103.2	50 - 150	
60 Ni	72	1	0.96	ppb	4.99	1	95.6	50 - 150	
63 Cu	72	1	2.88	ppb	3.10	1	287.6	50 - 150	Fail
66 Zn	72	1	10.17	ppb	1.50	10	101.7	50 - 150	
75 As	72	1	1.06	ppb	3.02	1	106.3	50 - 150	
78 Se	72	1	1.26	ppb	21.62	1	126.3	50 - 150	
95 Mo	72	1	1.01	ppb	6.84	1	100.6	50 - 150	
107 Ag	115	1	1.04	ppb	3.56	1	104.1	50 - 150	
111 Cd	115	1	1.04	ppb	7.24	1	103.5	50 - 150	
118 Sn	115	1	9.99	ppb	0.41	10	99.9	50 - 150	
121 Sb	115	1	1.05	ppb	2.20	1	104.9	50 - 150	
137 Ba	115	1	0.95	ppb	4.40	1	95.5	50 - 150	
205 Tl	165	1	1.06	ppb	1.10	1	105.5	50 - 150	
208 Pb	165	1	1.04	ppb	1.51	1	104.2	50 - 150	
232 Th	165	1	1.10	ppb	2.79	1	110.2	50 - 150	
238 U	165	1	1.07	ppb	2.74	1	106.8	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	519519	0.55	524981	99.0	30 - 120	
45 Sc	1	2350981	1.47	2369813	99.2	30 - 120	
72 Ge	1	1134886	0.45	1135454	99.9	30 - 120	
115 In	1	3194839	1.26	3197603	99.9	30 - 120	
165 Ho	1	5176805	0.66	5231125	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\AG072109A.B\003CALB.D\003CALB.D#

1 :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\AG072109A.B\009AFCE.D\009AFCE.D#
Date Acquired: Jul 21 2009 10:57 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: Jul 21 2009 10:44 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	0.20	ppb	20.03	0	101.6	80 - 120	
51 V	72	1	0.18	ppb	21.97	0	86.8	80 - 120	
52 Cr	72	1	0.20	ppb	5.20	0	95.0	80 - 120	
55 Mn	72	1	0.21	ppb	3.20	0	96.3	80 - 120	
59 Co	72	1	0.19	ppb	4.37	0	89.7	80 - 120	
60 Ni	72	1	0.17	ppb	23.38	0	90.0	80 - 120	
63 Cu	72	1	0.31	ppb	5.85	1	53.9	80 - 120	
66 Zn	72	1	1.81	ppb	0.82	2	89.0	80 - 120	
75 As	72	1	0.21	ppb	3.64	0	98.8	80 - 120	
78 Se	72	1	-0.19	ppb	162.46	0	-75.9	80 - 120	
95 Mo	72	1	0.17	ppb	12.72	0	85.1	80 - 120	
107 Ag	115	1	0.20	ppb	9.37	0	94.5	80 - 120	
111 Cd	115	1	0.19	ppb	10.15	0	93.4	80 - 120	
118 Sn	115	1	1.56	ppb	5.79	2	78.0	80 - 120	
121 Sb	115	1	0.22	ppb	5.94	0	103.2	80 - 120	
137 Ba	115	1	0.18	ppb	9.21	0	92.4	80 - 120	
205 Tl	165	1	0.20	ppb	2.09	0	96.6	80 - 120	
208 Pb	165	1	0.19	ppb	3.55	0	92.6	80 - 120	
232 Th	165	1	0.22	ppb	5.67	0	98.3	80 - 120	
238 U	165	1	0.21	ppb	1.04	0	96.5	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	519977	0.50	524981	99.0	30 - 120	
45 Sc	1	2391004	0.66	2369813	100.9	30 - 120	
72 Ge	1	1147461	0.65	1135454	101.1	30 - 120	
115 In	1	3208900	0.48	3197603	100.4	30 - 120	
165 Ho	1	5246549	0.42	5231125	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\AG072109A.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\AG072109A.B\010SMPL.D\010SMPL.D#
Date Acquired: Jul 21 2009 11:00 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: Jul 21 2009 10:44 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	0.01	0.01	ppb	606.24	3600	
52 Cr	72	1	-0.02	-0.02	ppb	13.88	3600	
55 Mn	72	1	0.02	0.02	ppb	51.02	3600	
59 Co	72	1	0.00	0.00	ppb	2326.90	3600	
60 Ni	72	1	0.01	0.01	ppb	63.76	3600	
63 Cu	72	1	-0.01	-0.01	ppb	271.35	3600	
66 Zn	72	1	0.67	0.67	ppb	8.18	3600	
75 As	72	1	0.00	0.00	ppb	136.21	3600	
78 Se	72	1	2.15	2.15	ppb	21.97	3600	
95 Mo	72	1	0.00	0.00	ppb	56.26	3600	
107 Ag	115	1	0.00	0.00	ppb	203.42	3600	
111 Cd	115	1	0.01	0.01	ppb	104.16	3600	
118 Sn	115	1	-0.12	-0.12	ppb	34.36	3600	
121 Sb	115	1	0.02	0.02	ppb	19.49	3600	
137 Ba	115	1	0.02	0.02	ppb	7.22	3600	
205 Tl	165	1	0.00	0.00	ppb	41.69	3600	
208 Pb	165	1	0.00	0.00	ppb	21.63	3600	
232 Th	165	1	0.01	0.01	ppb	5.42	1000	
238 U	165	1	0.00	0.00	ppb	38.98	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	521046	0.33	524981	99.3	30 - 120	
45 Sc	1	2399624	0.10	2369813	101.3	30 - 120	
72 Ge	1	1163941	1.83	1135454	102.5	30 - 120	
115 In	1	3221473	0.73	3197603	100.7	30 - 120	
165 Ho	1	5242541	0.97	5231125	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\AG072109A.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\AG072109A.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 21 2009 11:02 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: Jul 21 2009 10:44 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	0.04 ppb	49.61	1.00	
51 V	72	1	-0.40 ppb	25.35	1.00	
52 Cr	72	1	1.13 ppb	0.37	1.00	
55 Mn	72	1	3.42 ppb	1.39	1.00	
59 Co	72	1	0.14 ppb	1.46	1.00	
60 Ni	72	1	1.16 ppb	8.50	1.00	
63 Cu	72	1	0.56 ppb	2.01	1.00	
66 Zn	72	1	3.68 ppb	0.74	10.00	
75 As	72	1	0.45 ppb	3.74	1.00	
78 Se	72	1	0.46 ppb	88.13	1.00	
95 Mo	72	1	2011.00 ppb	1.63	2000.00	
107 Ag	115	1	0.08 ppb	8.67	1.00	
111 Cd	115	1	0.50 ppb	23.99	1.00	
118 Sn	115	1	6.51 ppb	4.93	10.00	
121 Sb	115	1	0.26 ppb	3.62	1.00	
137 Ba	115	1	1.53 ppb	2.64	1.00	
205 Tl	165	1	0.07 ppb	24.45	1.00	
208 Pb	165	1	0.15 ppb	2.12	1.00	
232 Th	165	1	0.04 ppb	6.69	1.00	
238 U	165	1	0.04 ppb	2.58	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	489658	0.49	524981	93.3	30 - 120	
45 Sc	1	2152677	0.75	2369813	90.8	30 - 120	
72 Ge	1	1015944	1.74	1135454	89.5	30 - 120	
115 In	1	2762448	0.95	3197603	86.4	30 - 120	
165 Ho	1	4704759	0.55	5231125	89.9	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\AG072109A.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\AG072109A.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 21 2009 11:05 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: Jul 21 2009 10:44 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	96.48	3.74	100	96.5	80 - 120	
51 V	72	1	99.36	2.13	100	99.4	80 - 120	
52 Cr	72	1	99.44	2.58	100	99.4	80 - 120	
55 Mn	72	1	102.90	1.89	100	102.9	80 - 120	
59 Co	72	1	94.89	2.50	100	94.9	80 - 120	
60 Ni	72	1	85.99	1.69	100	86.0	80 - 120	
63 Cu	72	1	87.30	2.26	100	87.3	80 - 120	
66 Zn	72	1	89.90	2.28	100	89.9	80 - 120	
75 As	72	1	100.60	2.21	100	100.6	80 - 120	
78 Se	72	1	108.40	2.27	100	108.4	80 - 120	
95 Mo	72	1	2081.00	1.35	2100	99.1	80 - 120	
107 Ag	115	1	93.79	10.02	100	93.8	80 - 120	
111 Cd	115	1	97.46	0.49	100	97.5	80 - 120	
118 Sn	115	1	100.80	0.45	100	100.8	80 - 120	
121 Sb	115	1	102.70	0.80	100	102.7	80 - 120	
137 Ba	115	1	98.64	0.80	100	98.6	80 - 120	
205 Tl	165	1	94.66	0.87	100	94.7	80 - 120	
208 Pb	165	1	93.47	0.73	100	93.5	80 - 120	
232 Th	165	1	104.20	1.39	100	104.2	80 - 120	
238 U	165	1	100.00	0.26	100	100.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	499517	1.10	524981	95.1	30 - 120	
45 Sc	1	2140504	0.47	2369813	90.3	30 - 120	
72 Ge	1	1011894	1.35	1135454	89.1	30 - 120	
115 In	1	2776207	0.56	3197603	86.8	30 - 120	
165 Ho	1	4800825	0.86	5231125	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\AG072109A.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\AG072109A.B\013SMPL.D\013SMPL.D#
Date Acquired: Jul 21 2009 11:08 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: Jul 21 2009 10:44 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	99.46	3600	
51 V	72	1	0.04	0.04	ppb	145.51	3600	
52 Cr	72	1	0.00	0.00	ppb	1070.60	3600	
55 Mn	72	1	0.02	0.02	ppb	65.52	3600	
59 Co	72	1	0.01	0.01	ppb	35.47	3600	
60 Ni	72	1	-0.02	-0.02	ppb	73.95	3600	
63 Cu	72	1	0.01	0.01	ppb	63.82	3600	
66 Zn	72	1	-0.08	-0.08	ppb	1.90	3600	
75 As	72	1	0.03	0.03	ppb	39.70	3600	
78 Se	72	1	0.10	0.10	ppb	179.82	3600	
95 Mo	72	1	1.42	1.42	ppb	7.23	3600	
107 Ag	115	1	0.01	0.01	ppb	67.33	3600	
111 Cd	115	1	0.01	0.01	ppb	123.45	3600	
118 Sn	115	1	-0.46	-0.46	ppb	3.98	3600	
121 Sb	115	1	0.03	0.03	ppb	8.56	3600	
137 Ba	115	1	0.01	0.01	ppb	30.69	3600	
205 Tl	165	1	0.02	0.02	ppb	3.14	3600	
208 Pb	165	1	0.01	0.01	ppb	15.40	3600	
232 Th	165	1	0.52	0.52	ppb	19.69	1000	
238 U	165	1	0.02	0.02	ppb	4.75	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	546958	0.79	524981	104.2	30 - 120	
45 Sc	1	2434409	1.01	2369813	102.7	30 - 120	
72 Ge	1	1155459	1.11	1135454	101.8	30 - 120	
115 In	1	3294192	0.81	3197603	103.0	30 - 120	
165 Ho	1	5385195	0.74	5231125	102.9	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\AG072109A.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\AG072109A.B\014SMPL.D\014SMPL.D#
Date Acquired: Jul 21 2009 11:11 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: ALTCu
Misc Info: 1 ppb
Vial Number: 2112
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	173.21	3600	
51 V	72	1	-0.03	-0.03	ppb	214.97	3600	
52 Cr	72	1	-0.01	-0.01	ppb	232.39	3600	
55 Mn	72	1	0.00	0.00	ppb	434.34	3600	
59 Co	72	1	0.00	0.00	ppb	392.55	3600	
60 Ni	72	1	-0.02	-0.02	ppb	61.06	3600	
63 Cu	72	1	1.04	1.04	ppb	6.23	3600	
66 Zn	72	1	0.09	0.09	ppb	48.87	3600	
75 As	72	1	0.01	0.01	ppb	113.37	3600	
78 Se	72	1	0.08	0.08	ppb	189.93	3600	
95 Mo	72	1	0.30	0.30	ppb	8.89	3600	
107 Ag	115	1	0.00	0.00	ppb	52.89	3600	
111 Cd	115	1	0.01	0.01	ppb	83.12	3600	
118 Sn	115	1	-0.42	-0.42	ppb	6.77	3600	
121 Sb	115	1	0.01	0.01	ppb	7.03	3600	
137 Ba	115	1	0.00	0.00	ppb	133.15	3600	
205 Tl	165	1	0.00	0.00	ppb	16.09	3600	
208 Pb	165	1	0.00	0.00	ppb	22.18	3600	
232 Th	165	1	0.07	0.07	ppb	15.34	1000	
238 U	165	1	0.00	0.00	ppb	11.11	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	559873	0.71	524981	106.6	30 - 120	
45 Sc	1	2516419	0.58	2369813	106.2	30 - 120	
72 Ge	1	1215616	1.72	1135454	107.1	30 - 120	
115 In	1	3368019	0.53	3197603	105.3	30 - 120	
165 Ho	1	5436628	0.26	5231125	103.9	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\AG072109A.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\AG072109A.B\015 LR.D\015 LR.D#
Date Acquired: Jul 21 2009 11:13 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	1001.00 ppb	0.95	1000	100.1	90 - 110	
51 V	72	1	920.20 ppb	1.26	1000	92.0	90 - 110	
52 Cr	72	1	951.70 ppb	2.20	1000	95.2	90 - 110	
55 Mn	72	1	969.10 ppb	2.60	1000	96.9	90 - 110	
59 Co	72	1	949.80 ppb	2.01	1000	95.0	90 - 110	
60 Ni	72	1	900.90 ppb	1.15	1000	90.1	90 - 110	
63 Cu	72	1	915.00 ppb	1.05	1000	91.5	90 - 110	
66 Zn	72	1	916.20 ppb	1.44	1000	91.6	90 - 110	
75 As	72	1	1030.00 ppb	1.51	1000	103.0	90 - 110	
78 Se	72	1	1040.00 ppb	1.15	1000	104.0	90 - 110	
95 Mo	72	1	976.10 ppb	0.78	1000	97.6	90 - 110	
107 Ag	115	1	946.30 ppb	0.73	1000	94.6	90 - 110	
111 Cd	115	1	1002.00 ppb	0.32	1000	100.2	90 - 110	
118 Sn	115	1	960.10 ppb	0.70	1000	96.0	90 - 110	
121 Sb	115	1	969.20 ppb	0.13	1000	96.9	90 - 110	
137 Ba	115	1	948.90 ppb	0.49	1000	94.9	90 - 110	
205 Tl	165	1	964.80 ppb	1.29	1000	96.5	90 - 110	
208 Pb	165	1	953.40 ppb	0.89	1000	95.3	90 - 110	
232 Th	165	1	1032.00 ppb	0.94	1000	103.2	90 - 110	
238 U	165	1	976.10 ppb	0.63	1000	97.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	540098	0.64	524981	102.9	30 - 120	
45 Sc	1	2481795	0.64	2369813	104.7	30 - 120	
72 Ge	1	1198130	0.66	1135454	105.5	30 - 120	
115 In	1	3324308	0.30	3197603	104.0	30 - 120	
165 Ho	1	5368681	0.63	5231125	102.6	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\AG072109A.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\AG072109A.B\016SMPL.D\016SMPL.D#
Date Acquired: Jul 21 2009 11:16 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: Jul 21 2009 10:44 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	0.05	0.05	ppb	66.82	3600	
51 V	72	1	0.03	0.03	ppb	12.77	3600	
52 Cr	72	1	0.05	0.05	ppb	34.16	3600	
55 Mn	72	1	0.04	0.04	ppb	42.22	3600	
59 Co	72	1	0.05	0.05	ppb	2.59	3600	
60 Ni	72	1	0.02	0.02	ppb	100.72	3600	
63 Cu	72	1	0.05	0.05	ppb	30.50	3600	
66 Zn	72	1	-0.03	-0.03	ppb	33.13	3600	
75 As	72	1	0.10	0.10	ppb	6.71	3600	
78 Se	72	1	0.26	0.26	ppb	80.42	3600	
95 Mo	72	1	0.80	0.80	ppb	6.20	3600	
107 Ag	115	1	0.05	0.05	ppb	9.35	3600	
111 Cd	115	1	0.05	0.05	ppb	7.10	3600	
118 Sn	115	1	0.62	0.62	ppb	10.09	3600	
121 Sb	115	1	0.52	0.52	ppb	1.70	3600	
137 Ba	115	1	0.05	0.05	ppb	6.48	3600	
205 Tl	165	1	0.15	0.15	ppb	11.35	3600	
208 Pb	165	1	0.06	0.06	ppb	21.80	3600	
232 Th	165	1	3.74	3.74	ppb	23.80	1000	
238 U	165	1	0.12	0.12	ppb	3.79	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	545318	0.37	524981	103.9	30 - 120	
45 Sc	1	2471628	0.67	2369813	104.3	30 - 120	
72 Ge	1	1185970	1.36	1135454	104.4	30 - 120	
115 In	1	3340463	0.64	3197603	104.5	30 - 120	
165 Ho	1	5378533	0.31	5231125	102.8	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\AG072109A.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\AG072109A.B\017 CCV.D\017 CCV.D#
Date Acquired: Jul 21 2009 11:19 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: Jul 21 2009 10:44 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.41	ppb	1.06	50	98.8	90 - 110	
51 V	72	1	48.32	ppb	0.35	50	96.6	90 - 110	
52 Cr	72	1	49.18	ppb	0.82	50	98.4	90 - 110	
55 Mn	72	1	49.43	ppb	1.19	50	98.9	90 - 110	
59 Co	72	1	49.02	ppb	1.43	50	98.0	90 - 110	
60 Ni	72	1	46.63	ppb	1.07	50	93.3	90 - 110	
63 Cu	72	1	48.64	ppb	1.19	50	97.3	90 - 110	
66 Zn	72	1	44.84	ppb	1.65	50	89.7	90 - 110	Fail
75 As	72	1	49.16	ppb	1.22	50	98.3	90 - 110	
78 Se	72	1	50.03	ppb	2.96	50	100.1	90 - 110	
95 Mo	72	1	49.23	ppb	0.98	50	98.5	90 - 110	
107 Ag	115	1	49.29	ppb	1.69	50	98.6	90 - 110	
111 Cd	115	1	49.99	ppb	1.60	50	100.0	90 - 110	
118 Sn	115	1	49.91	ppb	1.41	50	99.8	90 - 110	
121 Sb	115	1	49.85	ppb	2.02	50	99.7	90 - 110	
137 Ba	115	1	47.45	ppb	2.31	50	94.9	90 - 110	
205 Tl	165	1	50.26	ppb	2.06	50	100.5	90 - 110	
208 Pb	165	1	49.28	ppb	1.55	50	98.6	90 - 110	
232 Th	165	1	49.85	ppb	2.33	50	99.7	90 - 110	
238 U	165	1	50.15	ppb	0.45	50	100.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	537530	0.49	524981	102.4	30 - 120	
45 Sc	1	2490546	1.17	2369813	105.1	30 - 120	
72 Ge	1	1209657	0.93	1135454	106.5	30 - 120	
115 In	1	3355264	1.35	3197603	104.9	30 - 120	
165 Ho	1	5463604	1.13	5231125	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\AG072109A.B\003CALB.D\003CALB.D#

1 :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\AG072109A.B\018 CCB.D\018 CCB.D#
Date Acquired: Jul 21 2009 11:21 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: Jul 21 2009 10:44 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	0.006	ppb	173.20	1.00	
51 V	72	1	-0.017	ppb	133.26	1.00	
52 Cr	72	1	0.008	ppb	87.69	1.00	
55 Mn	72	1	0.002	ppb	275.22	1.00	
59 Co	72	1	0.004	ppb	1.44	1.00	
60 Ni	72	1	-0.021	ppb	48.79	1.00	
63 Cu	72	1	-0.018	ppb	29.37	1.00	
66 Zn	72	1	-0.089	ppb	24.99	1.00	
75 As	72	1	0.014	ppb	51.05	1.00	
78 Se	72	1	0.287	ppb	12.18	1.00	
95 Mo	72	1	0.143	ppb	12.56	1.00	
107 Ag	115	1	0.006	ppb	91.65	1.00	
111 Cd	115	1	0.014	ppb	40.40	1.00	
118 Sn	115	1	-0.063	ppb	11.30	1.00	
121 Sb	115	1	0.113	ppb	14.88	1.00	
137 Ba	115	1	0.008	ppb	28.84	1.00	
205 Tl	165	1	0.053	ppb	8.11	1.00	
208 Pb	165	1	0.007	ppb	18.51	1.00	
232 Th	165	1	0.818	ppb	16.91	1.00	
238 U	165	1	0.016	ppb	6.58	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	543598	0.43	524981	103.5	30 - 120	
45 Sc	1	2473290	0.16	2369813	104.4	30 - 120	
72 Ge	1	1178654	0.65	1135454	103.8	30 - 120	
115 In	1	3304160	0.26	3197603	103.3	30 - 120	
165 Ho	1	5360283	0.61	5231125	102.5	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\AG072109A.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\AG072109A.B\019WASH.D\019WASH.D#
Date Acquired: Jul 21 2009 11:24 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: Jul 21 2009 10:44 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	0.986 ppb	3.40	1.30	
51 V	72	1	5.044 ppb	0.78	6.50	
52 Cr	72	1	2.090 ppb	1.63	2.60	
55 Mn	72	1	1.021 ppb	0.23	1.30	
59 Co	72	1	1.036 ppb	2.15	1.30	
60 Ni	72	1	1.982 ppb	3.01	2.60	
63 Cu	72	1	2.059 ppb	1.30	2.60	
66 Zn	72	1	9.234 ppb	0.85	13.00	
75 As	72	1	5.017 ppb	0.75	6.50	
78 Se	72	1	5.938 ppb	1.41	6.50	
95 Mo	72	1	2.160 ppb	4.39	2.60	
107 Ag	115	1	5.165 ppb	0.60	6.50	
111 Cd	115	1	1.051 ppb	2.01	1.30	
118 Sn	115	1	10.090 ppb	1.62	13.00	
121 Sb	115	1	1.964 ppb	1.56	2.60	
137 Ba	115	1	0.981 ppb	3.18	1.30	
205 Tl	165	1	1.100 ppb	2.54	1.30	
208 Pb	165	1	1.053 ppb	1.14	1.30	
232 Th	165	1	2.262 ppb	0.34	2.60	
238 U	165	1	1.089 ppb	0.76	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	540467	0.43	524981	102.9	30 - 120	
45 Sc	1	2453085	2.02	2369813	103.5	30 - 120	
72 Ge	1	1190263	0.37	1135454	104.8	30 - 120	
115 In	1	3315274	0.37	3197603	103.7	30 - 120	
165 Ho	1	5327221	0.82	5231125	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\AG072109A.B\003CALB.D\003CALB.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\AG072109A.B\020SMPL.D\020SMPL.D#
Date Acquired:	Jul 21 2009 11:27 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	BLANK
Misc Info:	HOT SB MDLV BLANK
Vial Number:	3108
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 21 2009 10:44 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	-0.82	-0.82	ppb	16.92	3600	
52 Cr	72	1	1.05	1.05	ppb	4.71	3600	
55 Mn	72	1	0.36	0.36	ppb	3.53	3600	
59 Co	72	1	0.00	0.00	ppb	72.59	3600	
60 Ni	72	1	0.20	0.20	ppb	23.44	3600	
63 Cu	72	1	1.36	1.36	ppb	5.77	3600	
66 Zn	72	1	3.62	3.62	ppb	1.90	3600	
75 As	72	1	0.97	0.97	ppb	6.80	3600	
78 Se	72	1	0.21	0.21	ppb	51.91	3600	
95 Mo	72	1	0.09	0.09	ppb	16.27	3600	
107 Ag	115	1	0.13	0.13	ppb	6.68	3600	
111 Cd	115	1	0.02	0.02	ppb	12.64	3600	
118 Sn	115	1	0.39	0.39	ppb	14.39	3600	
121 Sb	115	1	0.13	0.13	ppb	3.09	3600	
137 Ba	115	1	0.25	0.25	ppb	4.43	3600	
205 Tl	165	1	0.09	0.09	ppb	42.52	3600	
208 Pb	165	1	0.14	0.14	ppb	3.39	3600	
232 Th	165	1	0.13	0.13	ppb	14.13	1000	
238 U	165	1	0.01	0.01	ppb	21.13	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	530998	1.29	524981	101.1	30 - 120	
45 Sc	1	2160267	1.23	2369813	91.2	30 - 120	
72 Ge	1	1037210	0.69	1135454	91.3	30 - 120	
115 In	1	3015489	1.32	3197603	94.3	30 - 120	
165 Ho	1	5160079	0.57	5231125	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\AG072109A.B\003CALB.D\003CALB.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\AG072109A.B\021SMPL.D\021SMPL.D#
Date Acquired: Jul 21 2009 11:30 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: MDLV 1
Misc Info: HOT SB MDLV
Vial Number: 3109
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	-1.33	-1.33	ppb	24.07	3600	
52 Cr	72	1	1.06	1.06	ppb	1.61	3600	
55 Mn	72	1	0.53	0.53	ppb	4.35	3600	
59 Co	72	1	0.01	0.01	ppb	43.42	3600	
60 Ni	72	1	0.24	0.24	ppb	24.00	3600	
63 Cu	72	1	1.31	1.31	ppb	2.15	3600	
66 Zn	72	1	3.40	3.40	ppb	4.88	3600	
75 As	72	1	1.04	1.04	ppb	3.23	3600	
78 Se	72	1	-0.43	-0.43	ppb	23.07	3600	
95 Mo	72	1	0.06	0.06	ppb	33.95	3600	
107 Ag	115	1	0.11	0.11	ppb	9.56	3600	
111 Cd	115	1	-0.01	-0.01	ppb	161.20	3600	
118 Sn	115	1	0.96	0.96	ppb	2.75	3600	
121 Sb	115	1	0.27	0.27	ppb	2.56	3600	
137 Ba	115	1	0.31	0.31	ppb	7.39	3600	
205 Tl	165	1	0.02	0.02	ppb	17.80	3600	
208 Pb	165	1	0.29	0.29	ppb	0.24	3600	
232 Th	165	1	0.05	0.05	ppb	19.64	1000	
238 U	165	1	0.00	0.00	ppb	13.05	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	499978	1.27	524981	95.2	30 - 120	
45 Sc	1	2028049	1.29	2369813	85.6	30 - 120	
72 Ge	1	964218	0.83	1135454	84.9	30 - 120	
115 In	1	2875248	0.47	3197603	89.9	30 - 120	
165 Ho	1	5093086	0.67	5231125	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\AG072109A.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\AG072109A.B\022SMPL.D\022SMPL.D#
Date Acquired: Jul 21 2009 11:32 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: MDLV 2
Misc Info: HOT SB MDLV
Vial Number: 3110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	-1.64	-1.64	ppb	22.09	3600	
52 Cr	72	1	1.10	1.10	ppb	1.86	3600	
55 Mn	72	1	0.61	0.61	ppb	4.73	3600	
59 Co	72	1	0.01	0.01	ppb	9.00	3600	
60 Ni	72	1	0.25	0.25	ppb	12.40	3600	
63 Cu	72	1	1.37	1.37	ppb	2.14	3600	
66 Zn	72	1	3.54	3.54	ppb	1.99	3600	
75 As	72	1	1.17	1.17	ppb	0.13	3600	
78 Se	72	1	-0.34	-0.34	ppb	71.08	3600	
95 Mo	72	1	0.05	0.05	ppb	26.18	3600	
107 Ag	115	1	0.08	0.08	ppb	12.42	3600	
111 Cd	115	1	0.01	0.01	ppb	278.86	3600	
118 Sn	115	1	0.75	0.75	ppb	11.50	3600	
121 Sb	115	1	0.30	0.30	ppb	4.86	3600	
137 Ba	115	1	0.32	0.32	ppb	4.89	3600	
205 Tl	165	1	0.01	0.01	ppb	17.90	3600	
208 Pb	165	1	0.30	0.30	ppb	1.05	3600	
232 Th	165	1	0.03	0.03	ppb	15.57	1000	
238 U	165	1	0.00	0.00	ppb	25.82	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	492773	0.89	524981	93.9	30 - 120	
45 Sc	1	1999213	0.37	2369813	84.4	30 - 120	
72 Ge	1	956589	1.14	1135454	84.2	30 - 120	
115 In	1	2866273	1.42	3197603	89.6	30 - 120	
165 Ho	1	5054755	0.57	5231125	96.6	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\AG072109A.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\AG072109A.B\023 CCV.D\023 CCV.D#
Date Acquired: Jul 21 2009 11:35 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: Jul 21 2009 10:44 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	49.57	ppb	0.89	50	99.1	90 - 110	
51 V	72	1	47.53	ppb	1.17	50	95.1	90 - 110	
52 Cr	72	1	48.99	ppb	1.24	50	98.0	90 - 110	
55 Mn	72	1	49.68	ppb	0.46	50	99.4	90 - 110	
59 Co	72	1	48.69	ppb	1.30	50	97.4	90 - 110	
60 Ni	72	1	46.07	ppb	0.46	50	92.1	90 - 110	
63 Cu	72	1	48.15	ppb	2.15	50	96.3	90 - 110	
66 Zn	72	1	45.76	ppb	0.97	50	91.5	90 - 110	
75 As	72	1	48.71	ppb	0.81	50	97.4	90 - 110	
78 Se	72	1	50.08	ppb	1.76	50	100.2	90 - 110	
95 Mo	72	1	50.57	ppb	1.55	50	101.1	90 - 110	
107 Ag	115	1	49.36	ppb	1.11	50	98.7	90 - 110	
111 Cd	115	1	50.60	ppb	0.75	50	101.2	90 - 110	
118 Sn	115	1	50.01	ppb	1.13	50	100.0	90 - 110	
121 Sb	115	1	50.73	ppb	0.53	50	101.5	90 - 110	
137 Ba	115	1	47.71	ppb	1.26	50	95.4	90 - 110	
205 Tl	165	1	52.02	ppb	0.78	50	104.0	90 - 110	
208 Pb	165	1	51.62	ppb	1.76	50	103.2	90 - 110	
232 Th	165	1	52.57	ppb	2.51	50	105.1	90 - 110	
238 U	165	1	53.48	ppb	0.23	50	107.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	476897	0.83	524981	90.8	30 - 120	
45 Sc	1	2105723	0.78	2369813	88.9	30 - 120	
72 Ge	1	1033548	1.22	1135454	91.0	30 - 120	
115 In	1	2982462	0.68	3197603	93.3	30 - 120	
165 Ho	1	5105980	1.40	5231125	97.6	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\AG072109A.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\AG072109A.B\024 CCB.D\024 CCB.D#
Date Acquired: Jul 21 2009 11:38 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: Jul 21 2009 10:44 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	0.006	ppb	173.27	1.00	
51 V	72	1	-0.060	ppb	61.14	1.00	
52 Cr	72	1	0.017	ppb	33.13	1.00	
55 Mn	72	1	0.046	ppb	3.38	1.00	
59 Co	72	1	0.002	ppb	4.20	1.00	
60 Ni	72	1	-0.025	ppb	31.97	1.00	
63 Cu	72	1	-0.002	ppb	549.67	1.00	
66 Zn	72	1	-0.076	ppb	9.31	1.00	
75 As	72	1	0.047	ppb	21.47	1.00	
78 Se	72	1	-0.021	ppb	757.50	1.00	
95 Mo	72	1	0.047	ppb	4.75	1.00	
107 Ag	115	1	0.011	ppb	40.31	1.00	
111 Cd	115	1	0.009	ppb	37.88	1.00	
118 Sn	115	1	-0.250	ppb	6.67	1.00	
121 Sb	115	1	0.059	ppb	10.04	1.00	
137 Ba	115	1	0.004	ppb	50.21	1.00	
205 Tl	165	1	0.034	ppb	6.23	1.00	
208 Pb	165	1	0.006	ppb	29.40	1.00	
232 Th	165	1	0.740	ppb	21.31	1.00	
238 U	165	1	0.010	ppb	5.64	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	500823	0.79	524981	95.4	30 - 120	
45 Sc	1	2206984	1.23	2369813	93.1	30 - 120	
72 Ge	1	1060457	1.11	1135454	93.4	30 - 120	
115 In	1	3038254	0.82	3197603	95.0	30 - 120	
165 Ho	1	5200737	1.19	5231125	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\AG072109A.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\AG072109A.B\025WASH.D\025WASH.D#
Date Acquired: Jul 21 2009 11:41 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: Jul 21 2009 10:44 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	0.933 ppb	6.20	1.30	
51 V	72	1	4.916 ppb	3.14	6.50	
52 Cr	72	1	2.097 ppb	5.42	2.60	
55 Mn	72	1	1.103 ppb	4.86	1.30	
59 Co	72	1	1.011 ppb	2.28	1.30	
60 Ni	72	1	1.865 ppb	1.49	2.60	
63 Cu	72	1	1.980 ppb	3.88	2.60	
66 Zn	72	1	9.357 ppb	0.76	13.00	
75 As	72	1	5.043 ppb	1.42	6.50	
78 Se	72	1	4.996 ppb	7.57	6.50	
95 Mo	72	1	2.043 ppb	5.97	2.60	
107 Ag	115	1	5.178 ppb	2.63	6.50	
111 Cd	115	1	1.061 ppb	1.49	1.30	
118 Sn	115	1	9.981 ppb	1.46	13.00	
121 Sb	115	1	1.938 ppb	2.07	2.60	
137 Ba	115	1	0.973 ppb	1.86	1.30	
205 Tl	165	1	1.096 ppb	1.82	1.30	
208 Pb	165	1	1.071 ppb	1.73	1.30	
232 Th	165	1	2.262 ppb	1.51	2.60	
238 U	165	1	1.119 ppb	1.82	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	505839	0.61	524981	96.4	30 - 120	
45 Sc	1	2218145	1.82	2369813	93.6	30 - 120	
72 Ge	1	1082552	1.35	1135454	95.3	30 - 120	
115 In	1	3137511	0.61	3197603	98.1	30 - 120	
165 Ho	1	5253188	0.71	5231125	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\AG072109A.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\AG072109A.B\026 BLK.D\026 BLK.D#
Date Acquired:	Jul 21 2009 11:43 pm
Operator:	TEL
Sample Name:	LGKQDB
Misc Info:	BLANK 9197220 6020
Vial Number:	3101
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update:	Jul 21 2009 10:44 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	-0.055 ppb	92.63	2.00	
52 Cr	72	1	0.073 ppb	20.28	2.00	
55 Mn	72	1	0.103 ppb	2.95	2.00	
59 Co	72	1	0.001 ppb	300.87	2.00	
60 Ni	72	1	-0.006 ppb	109.07	2.00	
63 Cu	72	1	0.049 ppb	34.32	2.00	
66 Zn	72	1	0.436 ppb	1.72	2.00	
75 As	72	1	0.032 ppb	16.80	2.00	
78 Se	72	1	-0.012 ppb	4972.50	2.00	
95 Mo	72	1	0.022 ppb	22.04	2.00	
107 Ag	115	1	0.004 ppb	70.20	2.00	
111 Cd	115	1	0.013 ppb	46.90	2.00	
118 Sn	115	1	-0.480 ppb	3.01	2.00	
121 Sb	115	1	0.033 ppb	7.78	2.00	
137 Ba	115	1	0.073 ppb	8.41	2.00	
205 Tl	165	1	0.025 ppb	28.39	2.00	
208 Pb	165	1	0.009 ppb	9.58	2.00	
232 Th	165	1	0.114 ppb	15.11	2.00	
238 U	165	1	0.002 ppb	28.31	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	511080	0.47	524981	97.4	30 - 120	
45 Sc	1	2226242	1.23	2369813	93.9	30 - 120	
72 Ge	1	1075618	0.21	1135454	94.7	30 - 120	
115 In	1	3092622	0.83	3197603	96.7	30 - 120	
165 Ho	1	5244538	0.65	5231125	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\AG072109A.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\AG072109A.B\027 LCS.D\027 LCS.D#
Date Acquired: Jul 21 2009 11:46 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGKQDC
Misc Info: LCS
Vial Number: 3102
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	40.18	2.84	40	100.5	80 - 120	
51 V	72	1	39.87	1.36	40	99.7	80 - 120	
52 Cr	72	1	40.96	0.94	40	102.4	80 - 120	
55 Mn	72	1	41.44	0.67	40	103.6	80 - 120	
59 Co	72	1	40.83	1.31	40	102.1	80 - 120	
60 Ni	72	1	38.37	0.22	40	95.9	80 - 120	
63 Cu	72	1	40.51	0.58	40	101.3	80 - 120	
66 Zn	72	1	36.95	0.85	40	92.4	80 - 120	
75 As	72	1	39.12	0.79	40	97.8	80 - 120	
78 Se	72	1	40.40	1.22	40	101.0	80 - 120	
95 Mo	72	1	40.60	1.62	40	101.5	80 - 120	
107 Ag	115	1	40.33	1.83	40	100.8	80 - 120	
111 Cd	115	1	40.64	2.84	40	101.6	80 - 120	
118 Sn	115	1	-0.37	11.35	40	-0.9	80 - 120	
121 Sb	115	1	39.65	2.04	40	99.1	80 - 120	
137 Ba	115	1	39.28	1.56	40	98.2	80 - 120	
205 Tl	165	1	41.95	0.99	40	104.9	80 - 120	
208 Pb	165	1	41.88	0.97	40	104.7	80 - 120	
232 Th	165	1	43.50	2.59	40	108.8	80 - 120	
238 U	165	1	43.36	0.39	40	108.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	508352	0.61	524981	96.8	30 - 120	
45 Sc	1	2239101	1.50	2369813	94.5	30 - 120	
72 Ge	1	1080901	0.82	1135454	95.2	30 - 120	
115 In	1	3109764	1.56	3197603	97.3	30 - 120	
165 Ho	1	5255434	0.77	5231125	100.5	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\AG072109A.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\AG072109A.B\028AREF.D\028AREF.D#
Date Acquired: Jul 21 2009 11:49 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGH2F 10X
Misc Info: D9G150224
Vial Number: 3103
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 pm
Sample Type: AllRef
Dilution Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	0.18	0.02	ppb	1.28	3600	
51 V	72	1	0.00	0.00	ppb	7714.70	3600	
52 Cr	72	1	2.98	0.30	ppb	3.02	3600	
55 Mn	72	1	2,154.00	215.40	ppb	1.43	3600	
59 Co	72	1	0.26	0.03	ppb	58.30	3600	
60 Ni	72	1	2.20	0.22	ppb	8.49	3600	
63 Cu	72	1	1.12	0.11	ppb	24.11	3600	
66 Zn	72	1	12.08	1.21	ppb	0.94	3600	
75 As	72	1	0.53	0.05	ppb	6.79	3600	
78 Se	72	1	-1.89	-0.19	ppb	228.31	3600	
95 Mo	72	1	0.90	0.09	ppb	63.01	3600	
107 Ag	115	1	0.07	0.01	ppb	34.68	3600	
111 Cd	115	1	0.17	0.02	ppb	103.21	3600	
118 Sn	115	1	-4.99	-0.50	ppb	2.55	3600	
121 Sb	115	1	0.50	0.05	ppb	5.48	3600	
137 Ba	115	1	20.62	2.06	ppb	2.50	3600	
205 Tl	165	1	0.46	0.05	ppb	36.56	3600	
208 Pb	165	1	0.22	0.02	ppb	55.86	3600	
232 Th	165	1	5.71	0.57	ppb	25.31	1000	
238 U	165	1	0.16	0.02	ppb	59.40	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	501092	1.27	524981	95.4	30 - 120	
45 Sc	1	2174732	0.13	2369813	91.8	30 - 120	
72 Ge	1	1062400	1.62	1135454	93.6	30 - 120	
115 In	1	3054990	0.70	3197603	95.5	30 - 120	
165 Ho	1	5138990	0.04	5231125	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\AG072109A.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\AG072109A.B\029SDIL.D\029SDIL.D#
Date Acquired: Jul 21 2009 11:52 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGH2FP50
Misc Info: SERIAL DILUTION
Vial Number: 3104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 pm
Sample Type: SDIL
Dilution Factor: 10.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072109A.B\028AREF.D\028AREF.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	-0.08	ppb	30.47	0.00	107132.0	90 - 110	
52 Cr	72	1	0.28	ppb	4.00	0.06	472.0	90 - 110	
55 Mn	72	1	44.85	ppb	0.66	43.08	104.1	90 - 110	
59 Co	72	1	0.01	ppb	31.71	0.01	200.7	90 - 110	
60 Ni	72	1	0.24	ppb	10.77	0.04	546.6	90 - 110	
63 Cu	72	1	0.01	ppb	254.30	0.02	36.7	90 - 110	
66 Zn	72	1	0.10	ppb	28.92	0.24	40.3	90 - 110	
75 As	72	1	0.02	ppb	82.47	0.01	204.9	90 - 110	
78 Se	72	1	-0.13	ppb	250.15	-0.04	356.0	90 - 110	
95 Mo	72	1	0.02	ppb	18.69	0.02	100.9	90 - 110	
107 Ag	115	1	0.00	ppb	117.85	0.00	122.4	90 - 110	
111 Cd	115	1	0.00	ppb	1069.70	0.00	23.4	90 - 110	
118 Sn	115	1	-0.53	ppb	0.88	-0.10	536.1	90 - 110	
121 Sb	115	1	0.01	ppb	31.00	0.01	130.2	90 - 110	
137 Ba	115	1	0.42	ppb	5.82	0.41	102.5	90 - 110	
205 Tl	165	1	0.01	ppb	17.59	0.01	93.6	90 - 110	
208 Pb	165	1	0.00	ppb	22.44	0.00	50.9	90 - 110	
232 Th	165	1	0.09	ppb	15.72	0.11	78.5	90 - 110	
238 U	165	1	0.00	ppb	38.76	0.00	35.8	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	500295	0.77	524981	95.3	30 - 120	
45 Sc	1	2201567	1.04	2369813	92.9	30 - 120	
72 Ge	1	1071972	1.10	1135454	94.4	30 - 120	
115 In	1	3079018	0.49	3197603	96.3	30 - 120	
165 Ho	1	5148769	0.99	5231125	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\AG072109A.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: 07/22/09 09:53:29

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGH2FP50** | Serial Dilution: **50.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500**
File: AG072109A # 29
Acquired: 07/21/2009 23:52:00
Calibrated: 07/21/2009 22:41:00

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	0.18340	100		*	
7440-62-2	Vanadium	51	-989	-4.2285	-0.00395			*	
7440-47-3	Chromium	52	5541	14.080	2.9830	372		*	
7439-96-5	Manganese	55	580084	2242.5	2154.0	4.11		*	
7440-48-4	Cobalt	59	200	0.51650	0.25730	101		*	
7440-02-0	Nickel	60	917	12.020	2.1990	447		*	
7440-50-8	Copper	63	547	0.40975	1.1160	63.3		*	
7440-66-6	Zinc	66	635	4.8705	12.080	59.7		*	
7440-38-2	Arsenic	75	105	1.0950	0.53440	105	0.21	NC	☑
7782-49-2	Selenium	78	513	-6.7400	-1.8930		0.70	NC	☑
7439-98-7	Molybdenum	95	97	0.91050	0.90240	0.898		*	
7440-22-4	Silver	107	43	0.08205	0.06704	22.4		*	
7440-43-9	Cadmium	111	9	0.03861	0.16500	76.6		*	
7440-31-5	Tin	118	727	-26.730	-4.9860			*	
7440-36-0	Antimony	121	134	0.65350	0.50190	30.2		*	
7440-39-3	Barium	137	1398	21.135	20.620	2.50		*	
7440-28-0	Thallium	205	313	0.43495	0.46450	6.36		*	
7439-92-1	Lead	208	384	0.11215	0.22020	49.1		*	
7440-61-1	Uranium	238	72	0.05550	0.15520	64.2		*	
7440-29-1	Thorium	232	3194	4.4785	5.7060	21.5		*	
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\AG072109A.B\030PDS.D\030PDS.D#
Date Acquired: Jul 21 2009 11:54 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGH2FZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 3105
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 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	196.00	0.02	ppb	0.91	200	98.0	75 - 125	
51 V	72	1	190.80	0.00	ppb	1.41	200	95.4	75 - 125	
52 Cr	72	1	196.80	0.30	ppb	1.31	200	98.3	75 - 125	
55 Mn	72	1	394.40	215.40	ppb	1.10	200	94.9	75 - 125	
59 Co	72	1	190.20	0.03	ppb	0.79	200	95.1	75 - 125	
60 Ni	72	1	178.20	0.22	ppb	1.30	200	89.0	75 - 125	
63 Cu	72	1	185.90	0.11	ppb	1.81	200	92.9	75 - 125	
66 Zn	72	1	180.00	1.21	ppb	1.28	200	89.5	75 - 125	
75 As	72	1	194.80	0.05	ppb	1.48	200	97.4	75 - 125	
78 Se	72	1	201.30	-0.19	ppb	1.78	200	100.7	75 - 125	
95 Mo	72	1	198.40	0.09	ppb	1.45	200	99.2	75 - 125	
107 Ag	115	1	47.40	0.01	ppb	1.60	50	94.8	75 - 125	
111 Cd	115	1	197.30	0.02	ppb	1.46	200	98.6	75 - 125	
118 Sn	115	1	180.50	-0.50	ppb	1.38	200	90.5	75 - 125	
121 Sb	115	1	198.20	0.05	ppb	1.17	200	99.1	75 - 125	
137 Ba	115	1	188.80	2.06	ppb	0.48	200	93.4	75 - 125	
205 Tl	165	1	194.50	0.05	ppb	0.66	200	97.2	75 - 125	
208 Pb	165	1	194.20	0.02	ppb	0.65	200	97.1	75 - 125	
232 Th	165	1	0.04	0.57	ppb	11.62	200	0.0	75 - 125	
238 U	165	1	202.30	0.02	ppb	1.01	200	101.1	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	488390	0.41	524981	93.0	30 - 120	
45 Sc	1	2169912	0.58	2369813	91.6	30 - 120	
72 Ge	1	1060038	0.74	1135454	93.4	30 - 120	
115 In	1	3022655	0.49	3197603	94.5	30 - 120	
165 Ho	1	5119852	0.11	5231125	97.9	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\AG072109A.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: 07/22/09 09:53:33

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGH2FZ** | Spike Dilution: **1.00** | Sample Dilution: **10.00**

Instrument: **Agilent7500**
File: AG072109A # 30
Acquired: 07/21/2009 23:54:00
Calibrated: 07/21/2009 22:41:00

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	104180	196.00	0.01834	98.0	200		☐
7440-62-2	Vanadium	51	2057750	190.80	-0.00039	95.4	200		☐
7440-47-3	Chromium	52	2104840	196.80	0.29830	98.3	200		☐
7439-96-5	Manganese	55	5038000	394.40	215.40	89.5	200		☐
7440-48-4	Cobalt	59	2559260	190.20	0.02573	95.1	200		☐
7440-02-0	Nickel	60	563377	178.20	0.21990	89.0	200		☐
7440-50-8	Copper	63	1327270	185.90	0.11160	92.9	200		☐
7440-66-6	Zinc	66	322535	180.00	1.2080	89.4	200		☐
7440-38-2	Arsenic	75	263794	194.80	0.05344	97.4	200		☑
7782-49-2	Selenium	78	51744	201.30	-0.18930	101	200		☑
7439-98-7	Molybdenum	95	702987	198.40	0.09024	99.2	200		☐
7440-22-4	Silver	107	496727	47.400	0.00670	94.8	50.0		☐
7440-43-9	Cadmium	111	420235	197.30	0.01650	98.6	200		☐
7440-31-5	Tin	118	1125020	180.50	-0.49860	90.2	200		☐
7440-36-0	Antimony	121	1427270	198.20	0.05019	99.1	200		☐
7440-39-3	Barium	137	591461	188.80	2.0620	93.4	200		☐
7440-28-0	Thallium	205	4928960	194.50	0.04645	97.2	200		☐
7439-92-1	Lead	208	6736270	194.20	0.02202	97.1	200		☐
7440-61-1	Uranium	238	7526970	202.30	0.01552	101	200		☐
7440-29-1	Thorium	232	1644	0.04358	0.57060				
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\AG072109A.B\031_MS.D\031_MS.D#
Date Acquired: Jul 21 2009 11:57 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGH2FS 10X
Misc Info: MATRIX SPIKE
Vial Number: 3106
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 pm
Sample Type: MS
Prep Dil. Factor: 10.00
Autodil Factor: Undiluted
Final Dil Factor: 10.00

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	4.12	0.02	ppb	5.97	40	10.3	50 - 150	
51 V	72	1	4.20	0.00	ppb	2.10	40	10.5	50 - 150	
52 Cr	72	1	4.44	0.30	ppb	1.94	40	11.0	50 - 150	
55 Mn	72	1	217.80	215.40	ppb	0.91	40	85.3	50 - 150	
59 Co	72	1	4.16	0.03	ppb	1.64	40	10.4	50 - 150	
60 Ni	72	1	3.93	0.22	ppb	0.94	40	9.8	50 - 150	
63 Cu	72	1	4.03	0.11	ppb	2.48	40	10.0	50 - 150	
66 Zn	72	1	4.21	1.21	ppb	2.97	40	10.2	50 - 150	
75 As	72	1	4.23	0.05	ppb	1.54	40	10.6	50 - 150	
78 Se	72	1	4.30	-0.19	ppb	1.70	40	10.8	50 - 150	
95 Mo	72	1	4.35	0.09	ppb	3.94	40	10.9	50 - 150	
107 Ag	115	1	4.07	0.01	ppb	1.30	40	10.2	50 - 150	
111 Cd	115	1	4.26	0.02	ppb	1.59	40	10.7	50 - 150	
118 Sn	115	1	-0.29	-0.50	ppb	1.72	40	-0.7	50 - 150	
121 Sb	115	1	4.32	0.05	ppb	1.20	40	10.8	50 - 150	
137 Ba	115	1	6.06	2.06	ppb	1.33	40	14.4	50 - 150	
205 Tl	165	1	4.31	0.05	ppb	1.45	40	10.8	50 - 150	
208 Pb	165	1	4.28	0.02	ppb	1.79	40	10.7	50 - 150	
232 Th	165	1	4.38	0.57	ppb	2.81	40	10.8	50 - 150	
238 U	165	1	4.56	0.02	ppb	1.12	40	11.4	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	488805	0.89	524981	93.1	30 - 120	
45 Sc	1	2184875	1.57	2369813	92.2	30 - 120	
72 Ge	1	1048538	0.41	1135454	92.3	30 - 120	
115 In	1	2989702	0.09	3197603	93.5	30 - 120	
165 Ho	1	5045906	1.16	5231125	96.5	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\AG072109A.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\AG072109A.B\032 MSD.D\032 MSD.D#
Date Acquired: Jul 22 2009 12:00 am
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGH2FD 10X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 3107
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 21 2009 10:44 pm
Sample Type: MSD
Dilution Factor: 10.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072109A.B\031 MS.D\031 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	4.50	ppb	5.03	4.12	8.95	20	
51 V	72	1	4.03	ppb	3.11	4.20	4.11	20	
52 Cr	72	1	4.46	ppb	2.07	4.44	0.47	20	
55 Mn	72	1	213.60	ppb	1.57	217.80	1.95	20	
59 Co	72	1	4.11	ppb	1.58	4.16	1.06	20	
60 Ni	72	1	4.31	ppb	1.42	3.93	9.27	20	
63 Cu	72	1	4.06	ppb	1.00	4.03	0.84	20	
66 Zn	72	1	4.47	ppb	1.27	4.21	5.95	20	
75 As	72	1	4.24	ppb	0.26	4.23	0.33	20	
78 Se	72	1	4.02	ppb	3.14	4.30	6.66	20	
95 Mo	72	1	4.17	ppb	0.40	4.35	4.32	20	
107 Ag	115	1	4.14	ppb	0.69	4.07	1.73	20	
111 Cd	115	1	4.26	ppb	2.16	4.26	0.02	20	
118 Sn	115	1	-0.47	ppb	3.61	-0.29	-46.50	20	
121 Sb	115	1	4.31	ppb	1.54	4.32	0.19	20	
137 Ba	115	1	6.19	ppb	1.10	6.06	1.98	20	
205 Tl	165	1	4.35	ppb	1.01	4.31	0.97	20	
208 Pb	165	1	4.32	ppb	1.01	4.28	0.81	20	
232 Th	165	1	4.54	ppb	1.18	4.38	3.58	20	
238 U	165	1	4.59	ppb	0.64	4.56	0.66	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	492903	0.79	524981	93.9	30 - 120	
45 Sc	1	2168239	0.91	2369813	91.5	30 - 120	
72 Ge	1	1063919	1.01	1135454	93.7	30 - 120	
115 In	1	2993253	1.09	3197603	93.6	30 - 120	
165 Ho	1	5061365	0.40	5231125	96.8	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\AG072109A.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\AG072109A.B\033 CCV.D\033 CCV.D#
Date Acquired: Jul 22 2009 12:03 am
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: Jul 21 2009 10:44 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	48.74	ppb	1.01	50	97.5	90 - 110	
51 V	72	1	48.04	ppb	0.65	50	96.1	90 - 110	
52 Cr	72	1	48.86	ppb	0.76	50	97.7	90 - 110	
55 Mn	72	1	49.81	ppb	0.85	50	99.6	90 - 110	
59 Co	72	1	48.81	ppb	1.22	50	97.6	90 - 110	
60 Ni	72	1	46.05	ppb	2.03	50	92.1	90 - 110	
63 Cu	72	1	47.82	ppb	0.53	50	95.6	90 - 110	
66 Zn	72	1	45.44	ppb	1.24	50	90.9	90 - 110	
75 As	72	1	49.38	ppb	0.72	50	98.8	90 - 110	
78 Se	72	1	51.01	ppb	1.50	50	102.0	90 - 110	
95 Mo	72	1	49.82	ppb	0.50	50	99.6	90 - 110	
107 Ag	115	1	49.41	ppb	1.79	50	98.8	90 - 110	
111 Cd	115	1	50.31	ppb	0.65	50	100.6	90 - 110	
118 Sn	115	1	49.81	ppb	0.46	50	99.6	90 - 110	
121 Sb	115	1	50.58	ppb	1.32	50	101.2	90 - 110	
137 Ba	115	1	47.80	ppb	1.12	50	95.6	90 - 110	
205 Tl	165	1	52.01	ppb	2.06	50	104.0	90 - 110	
208 Pb	165	1	50.93	ppb	0.64	50	101.9	90 - 110	
232 Th	165	1	51.75	ppb	3.13	50	103.5	90 - 110	
238 U	165	1	52.04	ppb	1.44	50	104.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	491466	0.29	524981	93.6	30 - 120	
45 Sc	1	2195591	0.47	2369813	92.6	30 - 120	
72 Ge	1	1083996	0.89	1135454	95.5	30 - 120	
115 In	1	3062454	1.24	3197603	95.8	30 - 120	
165 Ho	1	5130750	0.78	5231125	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\AG072109A.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\AG072109A.B\034 CCB.D\034 CCB.D#
Date Acquired: Jul 22 2009 12:05 am
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: Jul 21 2009 10:44 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	-0.028	ppb	313.48	1.00	
52 Cr	72	1	0.005	ppb	448.43	1.00	
55 Mn	72	1	0.010	ppb	125.97	1.00	
59 Co	72	1	0.005	ppb	79.85	1.00	
60 Ni	72	1	-0.019	ppb	81.62	1.00	
63 Cu	72	1	0.022	ppb	45.62	1.00	
66 Zn	72	1	0.151	ppb	29.39	1.00	
75 As	72	1	0.010	ppb	95.45	1.00	
78 Se	72	1	0.033	ppb	978.76	1.00	
95 Mo	72	1	0.061	ppb	28.01	1.00	
107 Ag	115	1	0.007	ppb	26.32	1.00	
111 Cd	115	1	0.006	ppb	67.57	1.00	
118 Sn	115	1	-0.153	ppb	18.12	1.00	
121 Sb	115	1	0.059	ppb	4.81	1.00	
137 Ba	115	1	0.003	ppb	41.46	1.00	
205 Tl	165	1	0.031	ppb	10.79	1.00	
208 Pb	165	1	0.004	ppb	22.05	1.00	
232 Th	165	1	0.789	ppb	19.33	1.00	
238 U	165	1	0.011	ppb	5.94	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	495413	1.09	524981	94.4	30 - 120	
45 Sc	1	2217736	0.65	2369813	93.6	30 - 120	
72 Ge	1	1072553	0.57	1135454	94.5	30 - 120	
115 In	1	3062762	1.88	3197603	95.8	30 - 120	
165 Ho	1	5158653	0.39	5231125	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\AG072109A.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\AG072109A.B\035WASH.D\035WASH.D#
Date Acquired: Jul 22 2009 12:08 am
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: Jul 21 2009 10:44 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	1.078 ppb	17.76	1.30	
51 V	72	1	5.104 ppb	1.16	6.50	
52 Cr	72	1	2.108 ppb	4.01	2.60	
55 Mn	72	1	1.044 ppb	3.20	1.30	
59 Co	72	1	1.019 ppb	1.98	1.30	
60 Ni	72	1	2.014 ppb	3.62	2.60	
63 Cu	72	1	2.026 ppb	1.86	2.60	
66 Zn	72	1	9.479 ppb	1.17	13.00	
75 As	72	1	5.126 ppb	1.22	6.50	
78 Se	72	1	5.537 ppb	11.23	6.50	
95 Mo	72	1	2.178 ppb	5.36	2.60	
107 Ag	115	1	5.170 ppb	0.21	6.50	
111 Cd	115	1	1.039 ppb	2.97	1.30	
118 Sn	115	1	9.791 ppb	1.75	13.00	
121 Sb	115	1	1.947 ppb	3.33	2.60	
137 Ba	115	1	1.000 ppb	0.79	1.30	
205 Tl	165	1	1.101 ppb	3.50	1.30	
208 Pb	165	1	1.071 ppb	1.94	1.30	
232 Th	165	1	2.280 ppb	2.50	2.60	
238 U	165	1	1.129 ppb	1.60	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	499450	0.65	524981	95.1	30 - 120	
45 Sc	1	2206559	1.64	2369813	93.1	30 - 120	
72 Ge	1	1069600	0.35	1135454	94.2	30 - 120	
115 In	1	3100041	0.42	3197603	96.9	30 - 120	
165 Ho	1	5122994	0.85	5231125	97.9	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\AG072109A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Semivolatile GC

Supporting Documentation

Sample Sequence, Chromatograms

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9G160231

Client: Northgate

Method: 8141

Associated Samples: 1

Batch #(s): 9198202

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

Signature/Date: 7/28/09

GC SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/20/09
Time: 21:03:14

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
—	—	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			Y	Y	Anomalies to Extraction Method

— Expanded Deliverable
— COC Completed
— Bench Sheet Copied
— Package Submitted to AnalyticalGroup
— Bench Sheet Copied per COC

Extractionist: 008726 Dane Q. Oberhill
007926 Teegan B. Wheaton

Concentrationist: RAIN C Teegan B. Wheaton
002770 Erma J. Pottruff

Reviewer/Date: POTTRUFE / 7/20/09

****
*** QC BATCH: 9198202 ***
****

PREP DATE: 7/17/09 1:20
COMP DATE: 7/20/09 20:15

Compounds, Organophosphorus (8141A)
LIQ/LIQ, SEP FUNNEL (PAH,P/P,TPH,Dioxin) - Nominal

EXTR EXPR / ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
7/17/09 7/23/09	D9G110151-001 **LGDJT-1-AA**	DR	09	P2	WATER	**1053mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/21/09 7/28/09	D9G160231-001 **LGLFG-1-AA**	DR	09	P2	WATER	**1052mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/21/09 7/31/09	D9G160237-001 **LGLGR-1-AA**		09	P2	WATER	**1061mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/21/09 7/31/09	D9G160237-002 **LGLGV-1-AA**		09	P2	WATER	**1059mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/21/09 7/31/09	D9G160237-003 **LGLGW-1-AA**		09	P2	WATER	**1045mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/21/09 7/31/09	D9G160237-004 **LGLGX-1-AA**		09	P2	WATER	**1053mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														
7/17/09 0/00/00	D9G170000-202 **LGMN0-1-AA**B		09	P2	WATER	**1000mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0675 6-4-09
COMMENTS:														

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/20/09
Time: 21:03:14

QC BATCH: 9198202

PREP DATE: 7/17/09 1:20
COMP DATE: 7/20/09 20:15

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
7/17/09	0/00/00	D9G170000-202 **LGMN0-1-ACC**		09	P2	WATER	**1000mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0753 6-24-09 1ML GSV0675 6-4-09
COMMENTS:															
7/17/09	0/00/00	D9G170000-202 **LGMN0-1-ADL**	R	09	P2	WATER	**1000mL** 2.00mL	7.0	NA	NA	MECL2	180.0	HEXANE	50.0	1ML GSV0753 6-24-09 1ML GSV0675 6-4-09
COMMENTS:															

DV-OP-0006/7 BAL:M27995 MECL2:H22J00 H2O:ELGA+NACL:G47617 NA2SO4:G45627
S/S:DO-E W:AR TW-TRAINEE SHARE QC:9198205/04
TURBO VAP A & B 40C HEXANE H11E04 PIP CON 6 @ 10.0

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 9

Table of Contents

GC SEMIVOLATILE INSTRUMENT LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sequence: C:\HPCHEM\1\SEQUENCE\072109.S

Sequence Table (Front Injector):

Quantification Part:

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	Vial 1	PRIMER				
2	Vial 2	HEXANE				
3	Vial 3	OPP CCV GSV0827				
4	Vial 4	LGMP21AA,MB				
5	Vial 5	LGMP21AC,LCS				
6	Vial 6	LGMP21AD,LCSD				
7	Vial 7	LGF531AF,177-5				
8	Vial 8	LGF531AX,177-5S				
9	Vial 9	LGF531A0,177-5D				
10	Vial 10	LGH8Q1AJ,243-7				
11	Vial 11	LGH9K1AJ,243-10				
12	Vial 12	LGH961AJ,243-13				
13	Vial 13	LGMQK1AA,MB				
14	Vial 14	LGMQK1AC,LCS				
15	Vial 15	LGMQK1AD,LCSD				
16	Vial 16	LGLP91AA,287-1				
17	Vial 17	LGLQC1AA,287-2				
18	Vial 18	OPP CCV GSV0827				
19	Vial 19	LGMN01AA,MB				
20	Vial 20	LGMN01AC,LCS				
21	Vial 21	LGMN01AD,LCSD				
22	Vial 22	LGDJT1AA,151-1				
23	Vial 23	LGLFG1AA,231-1				
24	Vial 24	LGLGR1AA,237-1				
25	Vial 25	LGLGV1AA,237-2				
26	Vial 26	LGLGW1AA,237-3				
27	Vial 27	LGLGX1AA,237-4				
28	Vial 28	OPP CCV GSV0827				
29	Vial 29	LGN1R1AA,MB				
30	Vial 30	LGN1R1AC,LCS				
31	Vial 31	LGN1R1AD,LCSD				
32	Vial 32	LGDGT2AA,147-1				
33	Vial 33	LGDGV2AA,147-2				
34	Vial 34	LGDH42AA,149-1				
35	Vial 35	LGDH72AA,149-2				
36	Vial 36	LGDH82AA,149-3				
37	Vial 37	LGDJD2AA,150-1				
38	Vial 38	OPP CCV GSV0827				
39	Vial 39	OPP L1 GSV				
40	Vial 40	LGN3D1AA,MB				
41	Vial 41	LGN3D1AC,LCS				
42	Vial 42	LGN3D1AD,LCSD				
43	Vial 43	LGH011AA,215-1				
44	Vial 44	LGH011AD,215-1S				
45	Vial 45	LGH011AE,215-1D				
46	Vial 46	LGH061AA,215-2				
47	Vial 47	LGH081AA,215-3				
48	Vial 48	LGH1H1AA,220-1				
49	Vial 49	OPP CCV GSV0827				
50	Vial 50	OPP L1 GSV				

9198204

9198205

9198207

9198504

9198515

Sequence Table (Back Injector):

No entries - empty table!

GC SEMIVOLATILE
CONTINUING CALIBRATION DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.1935	12.3	15.0	
2	Dichlorvos	2.5000	2.5340	1.4	15.0	
3	Mevinphos	2.5000	2.3055	7.8	15.0	
4	Chlormefos	2.5000	2.3704	5.2	15.0	
5	Thionazin	2.5000	2.2009	12.0	15.0	
6	Demeton-O	0.8125	0.6919	14.8	15.0	
7	Ethoprop	2.5000	2.3797	4.8	15.0	
8	Naled	2.5000	2.1490	14.0	15.0	
9	Sulfotepp	2.5000	2.3740	5.0	15.0	
10	Phorate	2.5000	2.3783	4.9	15.0	
11	Dimethoate	2.5000	2.4406	2.4	15.0	
12	Demeton-S	1.7000	1.6615	2.3	15.0	
13	Simazine	2.5000	2.3250	7.0	15.0	
14	Atrazine	2.5000	2.1855	12.6	15.0	
15	propazine	2.5000	2.1046	15.8	15.0	<-
17	Disulfoton	2.5000	2.2368	10.5	15.0	
16	Diazinon	2.5000	2.2667	9.3	15.0	
18	Methyl Parathion	2.5000	2.4435	2.3	15.0	
19	Ronnel	2.5000	2.2206	11.2	15.0	
20	Malathion	2.5000	2.2781	8.9	15.0	
21	Fenthion	2.5000	2.1957	12.2	15.0	
22	Parathion	2.5000	2.1959	12.2	15.0	
23	Chlorpyrifos	2.5000	2.2698	9.2	15.0	
24	Trichloronate	2.5000	2.1767	12.9	15.0	
25	Anilazine	2.5000	1.7165	31.3	15.0	<-
148	Merphos-A (Merphos)	2.5000	2.2130	11.5	999.0	
26	Tetrachlorvinphos (Stirophos)	2.5000	2.1563	13.7	15.0	
28	Tokuthion	2.5000	2.1447	14.2	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	1.3272	46.9	999.0	
29	Carbophenothion-methyl	2.5000	2.3001	8.0	15.0	
29	Fensulfothion	2.5000	2.3911	4.4	15.0	
30	Bolstar / Famphur	5.0000	4.5089	9.8	15.0	
32	Carbophenothion	2.5000	2.4902	0.4	15.0	
31	Triphenyl phosphate	2.5000	2.3333	6.7	15.0	
34	Phosmet	2.5000	2.2465	10.1	15.0	
32	EPN	2.5000	2.3815	4.7	15.0	
33	Azinphos-methyl	2.5000	2.1790	12.8	15.0	
35	Azinphos-ethyl	2.5000	2.2705	9.2	15.0	
36	Coumaphos	2.5000	2.2683	9.3	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
27 Merphos	2.5000	2.0319	18.7	15.0	<-
40 Total Demeton	2.5000	2.3534	5.9	15.0	

Average %D = 10.4

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\018F1801.D
Lab Smp Id: OPP CCV GSV0827 Client Smp ID: OPP CCV GSV0827
Inj Date : 21-JUL-2009 20:45
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP CCV GSV0827
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 14:03 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	3.167	3.163	(0.178)	264449	2.50000	2.193
	2 Dichlorvos	4.004	4.002	(0.225)	189709	2.50000	2.534
	3 Mevinphos	5.662	5.670	(0.319)	94813	2.50000	2.305
$	4 Chlormefos	5.747	5.745	(0.324)	222224	2.50000	2.370
	5 Thionazin	7.409	7.407	(0.417)	188300	2.50000	2.201
	6 Demeton-O	7.544	7.542	(0.425)	57064	0.81250	0.6919
	7 Ethoprop	7.749	7.753	(0.436)	178423	2.50000	2.380
	8 Naled	7.950	7.952	(0.448)	39657	2.50000	2.149
*	9 Tributylphosphate	8.022	8.072	(1.000)	152634	2.00000	
	10 Sulfotepp	8.330	8.327	(0.469)	254746	2.50000	2.374
	11 Phorate	8.419	8.417	(0.474)	184666	2.50000	2.378
	12 Dimethoate	8.549	8.552	(0.481)	220142	2.50000	2.441
	13 Demeton-S	8.732	8.747	(0.492)	108670	1.70000	1.661
	14 Simazine	8.814	8.815	(0.496)	70263	2.50000	2.325
	15 Atrazine	8.982	8.983	(0.506)	76437	2.50000	2.185
	16 propazine	9.125	9.127	(0.514)	67916	2.50000	2.104
	17 Disulfoton	9.745	9.743	(0.549)	117718	2.50000	2.237
	18 Diazinon	9.782	9.782	(0.551)	189058	2.50000	2.267
	19 Methyl Parathion	10.592	10.588	(0.596)	129254	2.50000	2.444
	20 Ronnel	11.110	11.108	(0.625)	121422	2.50000	2.221
	21 Malathion	11.667	11.665	(0.657)	113564	2.50000	2.278
	22 Fenthion	11.795	11.792	(0.664)	118065	2.50000	2.196
	23 Parathion	11.882	11.877	(0.669)	125660	2.50000	2.196
	24 Chlorpyrifos	11.929	11.925	(0.671)	157148	2.50000	2.270
	25 Trichloronate	12.350	12.345	(0.695)	134692	2.50000	2.177
	26 Anilazine	12.667	12.663	(0.713)	8641	2.50000	1.716
	27 Merphos-A (Merphos)	13.042	13.038	(0.734)	114249	2.50000	2.213
	28 Tetrachlorvinphos (Stirophos)	13.665	13.667	(0.769)	73987	2.50000	2.156
	29 Tokuthion	14.282	14.278	(0.804)	127219	2.50000	2.145
	30 Merphos-B (Merphos Oxone)	14.482	14.490	(0.815)	18239	2.50000	1.327
	31 Carbophenothion-methyl	15.062	15.058	(0.848)	105138	2.50000	2.300
	32 Fensulfothion	15.200	15.205	(0.856)	116685	2.50000	2.391
	33 Bolstar / Famphur	15.932	15.930	(0.897)	255871	5.00000	4.509

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34 Carbophenothion	16.080	16.075	(0.905)	141768	2.50000	2.490
$	35 Triphenyl phosphate	16.614	16.615	(0.935)	100947	2.50000	2.333(A)
	36 Phosmet	16.870	16.868	(0.950)	109472	2.50000	2.246
	37 EPN	17.060	17.058	(0.960)	111221	2.50000	2.382
	38 Azinphos-methyl	17.394	17.392	(0.979)	113145	2.50000	2.179
*	39 TOCP	17.765	17.767	(1.000)	85572	2.00000	
	40 Azinphos-ethyl	17.845	17.843	(1.004)	130792	2.50000	2.270
	41 Coumaphos	18.292	18.290	(1.030)	94996	2.50000	2.268
S	42 Merphos				132488	2.50000	2.032
M	43 Total Demeton				165734	2.50000	2.353

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

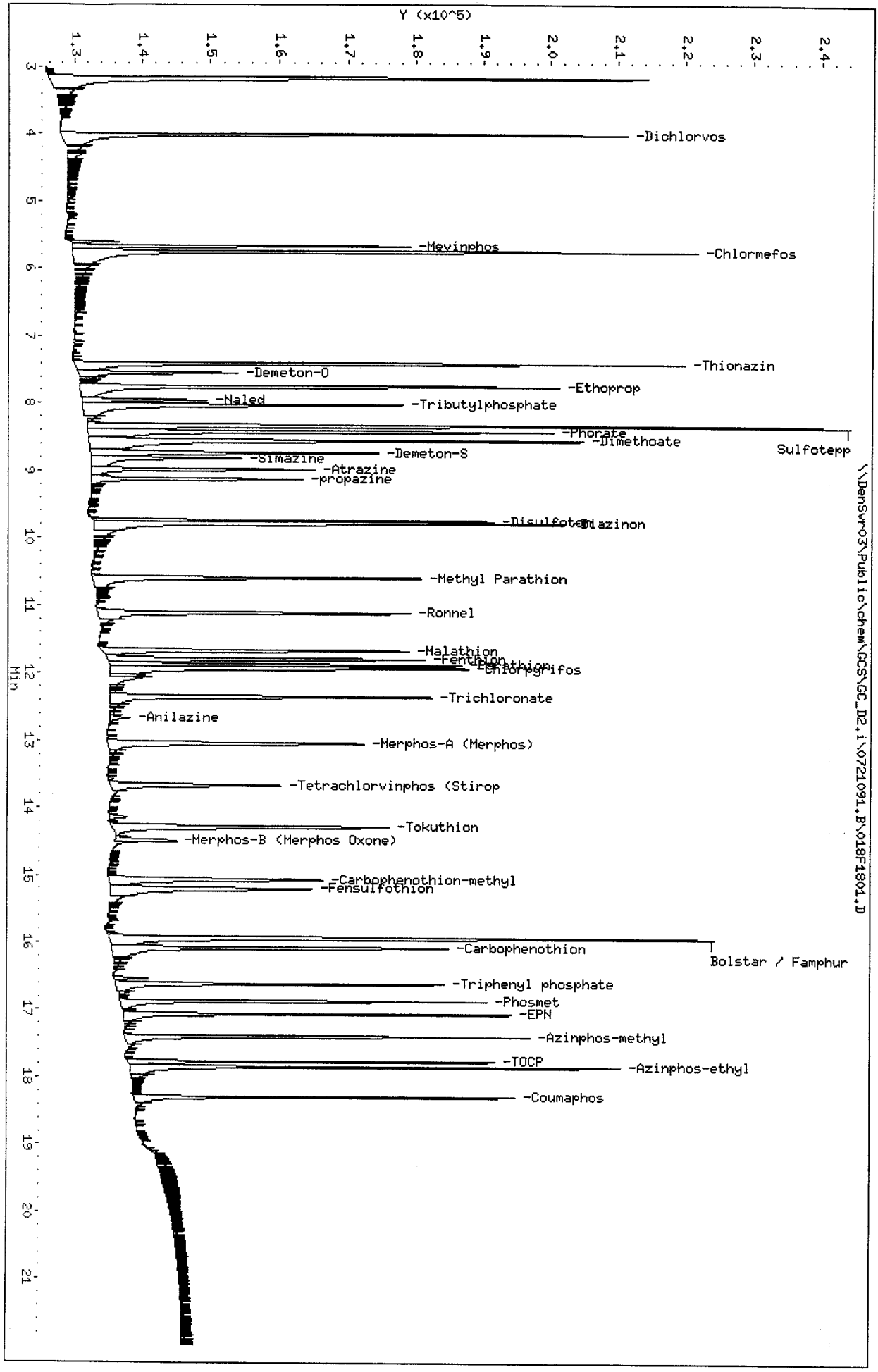
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Lab Smp Id: OPP CCV GSV0827
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Calibration Date: 21-JUL-2009
Calibration Time: 13:55
Client Smp ID: OPP CCV GSV0827
Level:
Sample Type:
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	168800	84400	337600	152634	-9.58
39 TOCP	98477	49239	196954	85572	-13.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.02	7.52	8.52	8.02	-0.00
39 TOCP	17.77	17.27	18.27	17.77	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\018F1801.D
Date : 21-JUL-2009 20:45
Client ID: OPP CCV GSV0827
Sample Info: OPP CCV GSV0827
Column phase: RTx-1MS

Instrument: GC_D2.i
Operator: HPK/TLW
Column diameter: 0.32

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.5161	0.6	15.0	
2	Dichlorvos	2.5000	2.6391	5.6	15.0	
3	Chlormefos	2.5000	2.4353	2.6	15.0	
4	Mevinphos	2.5000	2.4925	0.3	15.0	
5	Demeton-O	0.8125	0.8285	2.0	15.0	
6	Thionazin	2.5000	2.3478	6.1	15.0	
7	Ethoprop	2.5000	2.1588	13.6	15.0	
8	Phorate	2.5000	2.4548	1.8	15.0	
10	Naled	2.5000	2.1103	15.6	15.0	<-
146	Sulfotepp	2.5000	2.4158	3.4	15.0	
10	Simazine	2.5000	2.6247	5.0	15.0	
12	Diazinon	2.5000	2.3809	4.8	15.0	
150	Atrazine	2.5000	2.4010	4.0	15.0	
13	Propazine	2.5000	2.1710	13.2	15.0	
14	Disulfoton	2.5000	2.3231	7.1	15.0	
15	Demeton-S	1.7000	1.7047	0.3	15.0	
16	Dimethoate	2.5000	2.3431	6.3	15.0	
17	Ronnel	2.5000	2.3306	6.8	15.0	
148	Merphos-A (Merphos)	2.5000	2.0231	19.1	999.0	
18	Chlorpyrifos	2.5000	2.4329	2.7	15.0	
19	Fenthion	2.5000	2.2736	9.1	15.0	
20	Trichloronate	2.5000	2.4113	3.5	15.0	
21	Anilazine	2.5000	0.9743	61.0	15.0	<-
23	Methyl Parathion	2.5000	2.4273	2.9	15.0	
24	Malathion	2.5000	2.2620	9.5	15.0	
25	Tokuthion	2.5000	2.2269	10.9	15.0	
26	Parathion	2.5000	2.4088	3.6	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	2.6477	5.9	999.0	
27	Tetrachlorvinphos (stirophos)	2.5000	2.2170	11.3	15.0	
28	Carbophenothion methyl	2.5000	2.4021	3.9	15.0	
28	Bolstar	2.5000	2.2664	9.3	15.0	
30	Carbophenothion	2.5000	2.6483	5.9	15.0	
29	Triphenyl phosphate	2.5000	2.5247	1.0	15.0	
30	Fensulfothion	2.5000	2.4061	3.8	15.0	
35	Phosmet / EPN	5.0000	4.6146	7.7	15.0	
33	Famphur	2.5000	2.3838	4.6	15.0	
34	Azinphos-methyl	2.5000	2.1861	12.6	15.0	
35	Azinphos-ethyl	2.5000	2.5567	2.3	15.0	
36	Coumaphos	2.5000	2.3762	5.0	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/018F1801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Analysis Type: NONE

Injection Date: 21-JUL-2009 20:45
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
22 Merphos	2.5000	2.6546	6.2	15.0
40 Total Demeton	2.5000	2.5333	1.3	15.0

Average %D = 7.37

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\018F1801.D
Lab Smp Id: OPP CCV GSV0827 Client Smp ID: OPP CCV GSV0827
Inj Date : 21-JUL-2009 20:45
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP CCV GSV0827
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 14:03 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.650	4.647	(0.248)	235145	2.50000	2.516
	2 Dichlorvos	6.455	6.452	(0.344)	192586	2.50000	2.639
$	3 Chlormefos	7.284	7.280	(0.389)	178895	2.50000	2.435
	4 Mevinphos	9.122	9.120	(0.487)	122524	2.50000	2.492
	5 Demeton-O	9.614	9.610	(0.513)	38808	0.81250	0.8285
	6 Thionazin	9.864	9.860	(0.526)	172586	2.50000	2.348
	7 Ethoprop	10.377	10.377	(0.554)	118579	2.50000	2.159
	8 Phorate	10.410	10.404	(0.555)	156362	2.50000	2.455
	9 Naled	10.812	10.809	(0.577)	32652	2.50000	2.110
	10 Sulfotepp	10.890	10.885	(0.581)	232080	2.50000	2.416 (A)
*	11 Tributylphosphate	10.997	11.010	(1.000)	155041	2.00000	
	12 Simazine	11.270	11.269	(0.601)	36114	2.50000	2.625 (A)
	13 Diazinon	11.410	11.407	(0.609)	122724	2.50000	2.381
	14 Atrazine	11.450	11.449	(0.611)	65334	2.50000	2.401 (A)
	15 Propazine	11.614	11.612	(0.620)	51941	2.50000	2.171
	16 Disulfoton	11.909	11.904	(0.635)	117694	2.50000	2.323
	17 Demeton-S	11.985	11.989	(0.639)	101283	1.70000	1.705
	18 Dimethoate	13.125	13.122	(0.700)	159098	2.50000	2.343
	19 Ronnel	13.429	13.424	(0.716)	106517	2.50000	2.330
	20 Merphos-A (Merphos)	13.527	13.520	(1.230)	113660	2.50000	2.023 (A)
	21 Chlorpyrifos	14.244	14.239	(0.760)	112784	2.50000	2.433
	22 Fenthion	14.495	14.490	(0.773)	97757	2.50000	2.274
	23 Trichloronate	14.537	14.534	(0.775)	144843	2.50000	2.411
	24 Anilazine	15.040	15.039	(0.802)	3869	2.50000	0.9743
	25 Methyl Parathion	15.362	15.359	(0.819)	112673	2.50000	2.427 (A)
	26 Malathion	15.587	15.584	(0.831)	98364	2.50000	2.262
	27 Tokuthion	16.232	16.229	(0.866)	113380	2.50000	2.227
	28 Parathion	16.384	16.385	(0.874)	110178	2.50000	2.409 (M)
	29 Merphos-B (Merphos Oxone)	16.407	16.406	(1.492)	46191	2.50000	2.648 (AM)
	30 Tetrachlorvinphos (stirophos)	16.882	16.882	(0.901)	65598	2.50000	2.217
	31 Carbophenothion methyl	16.985	16.984	(0.906)	101874	2.50000	2.402
	32 Bolstar	17.354	17.352	(0.926)	101245	2.50000	2.266
	33 Carbophenothion	17.435	17.434	(0.930)	116332	2.50000	2.648 (A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.204	18.202	(0.971)	91005	2.50000	2.525
	35 Fensulfothion	18.484	18.484	(0.986)	79637	2.50000	2.406
*	36 TOCP	18.747	18.747	(1.000)	72253	2.00000	
	37 Phosmet / EPN	18.837	18.839	(1.005)	170669	5.00000	4.615
	38 Famphur	18.940	18.942	(1.010)	112966	2.50000	2.384
	39 Azinphos-methyl	19.075	19.079	(1.018)	94769	2.50000	2.186
	40 Azinphos-ethyl	19.289	19.294	(1.029)	105562	2.50000	2.557
	41 Coumaphos	20.242	20.247	(1.080)	75433	2.50000	2.376
S	42 Merphos				159851	2.50000	2.655(A)
M	43 Total Demeton				140091	2.50000	2.533

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 018F1801.D
Lab Smp Id: OPP CCV GSV0827
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 13:55
Client Smp ID: OPP CCV GSV0827
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	133961	66981	267922	155041	15.74
36 TOCP	65435	32718	130870	72253	10.42

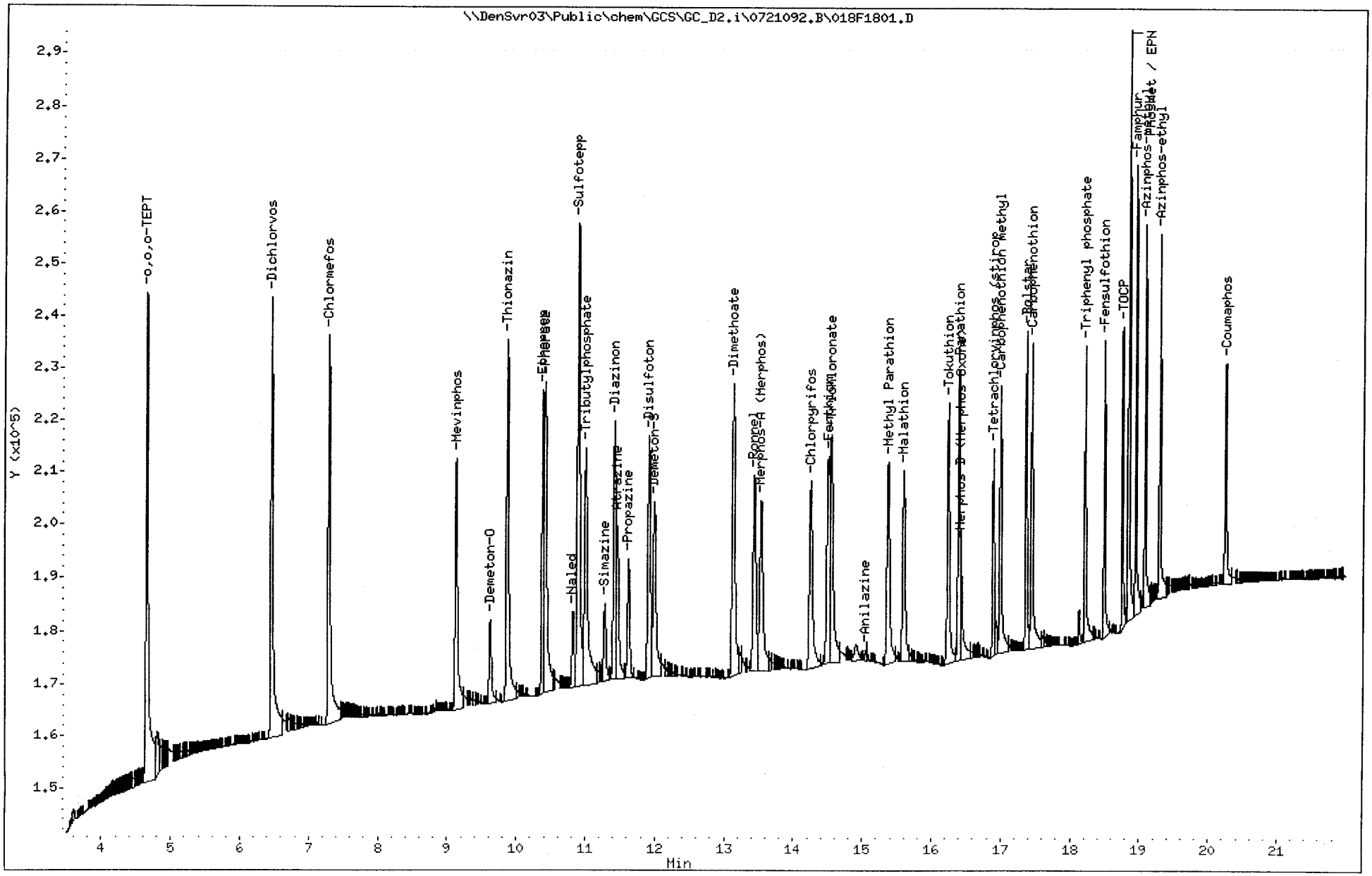
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	-0.00
36 TOCP	18.75	18.25	19.25	18.75	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

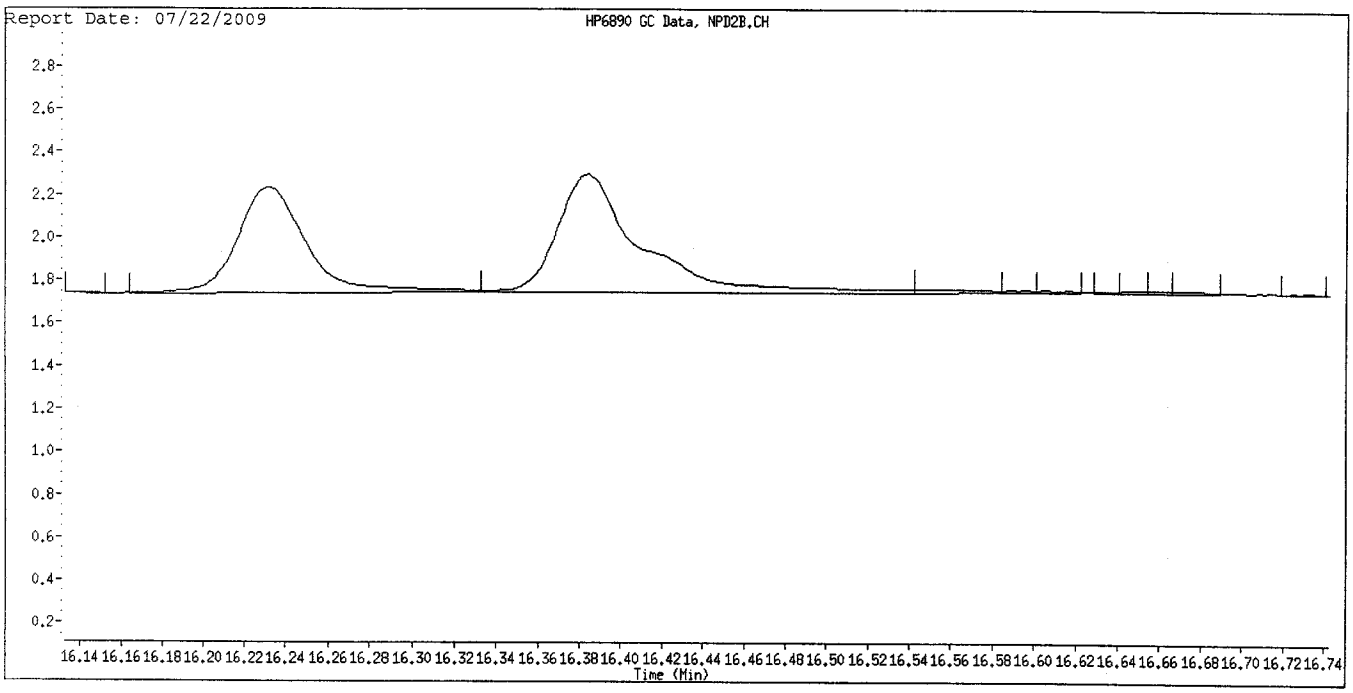
Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\018F1801.D
Date : 21-JUL-2009 20:45
Client ID: OPP CCV GSV0827
Sample Info: OPP CCV GSV0827

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

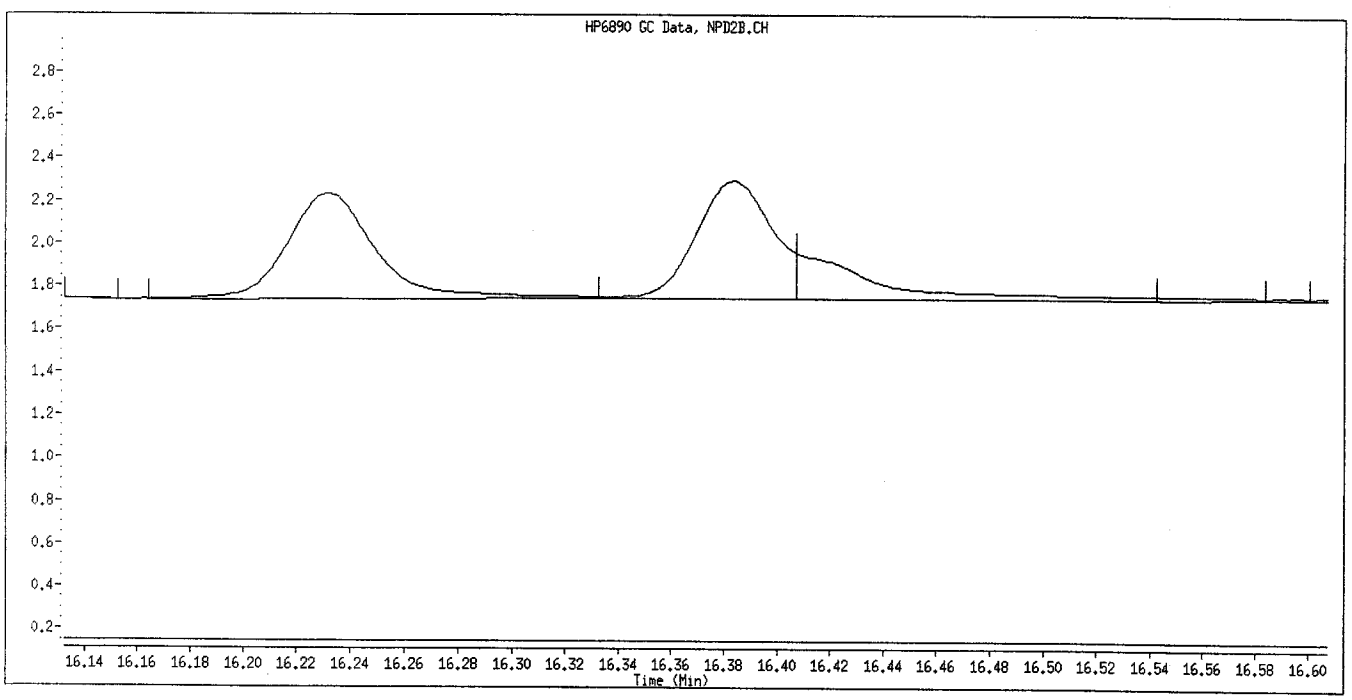
Column phase: RTx-OPPest



Data File Name: 018F1801.D
Inj. Date and Time: 21-JUL-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP CCV GSV0827
Compound Name: Parathion
CAS #:



Original Integration

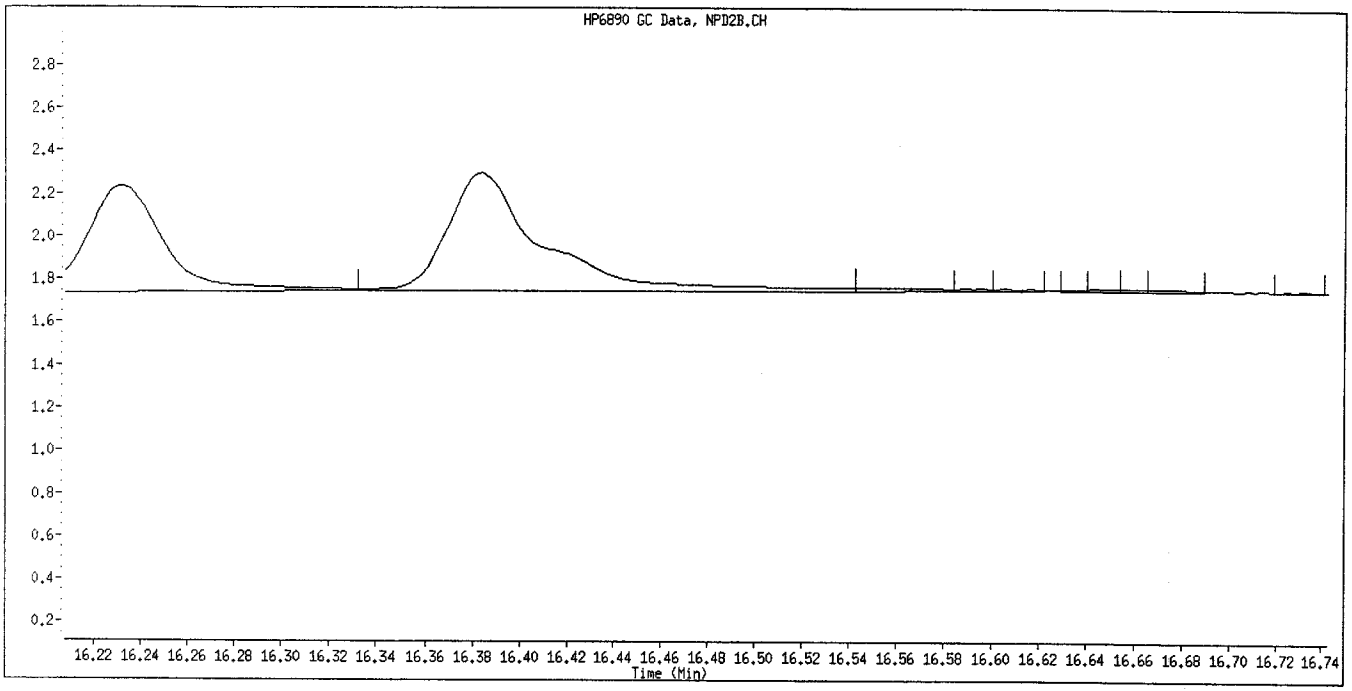


Manual Integration

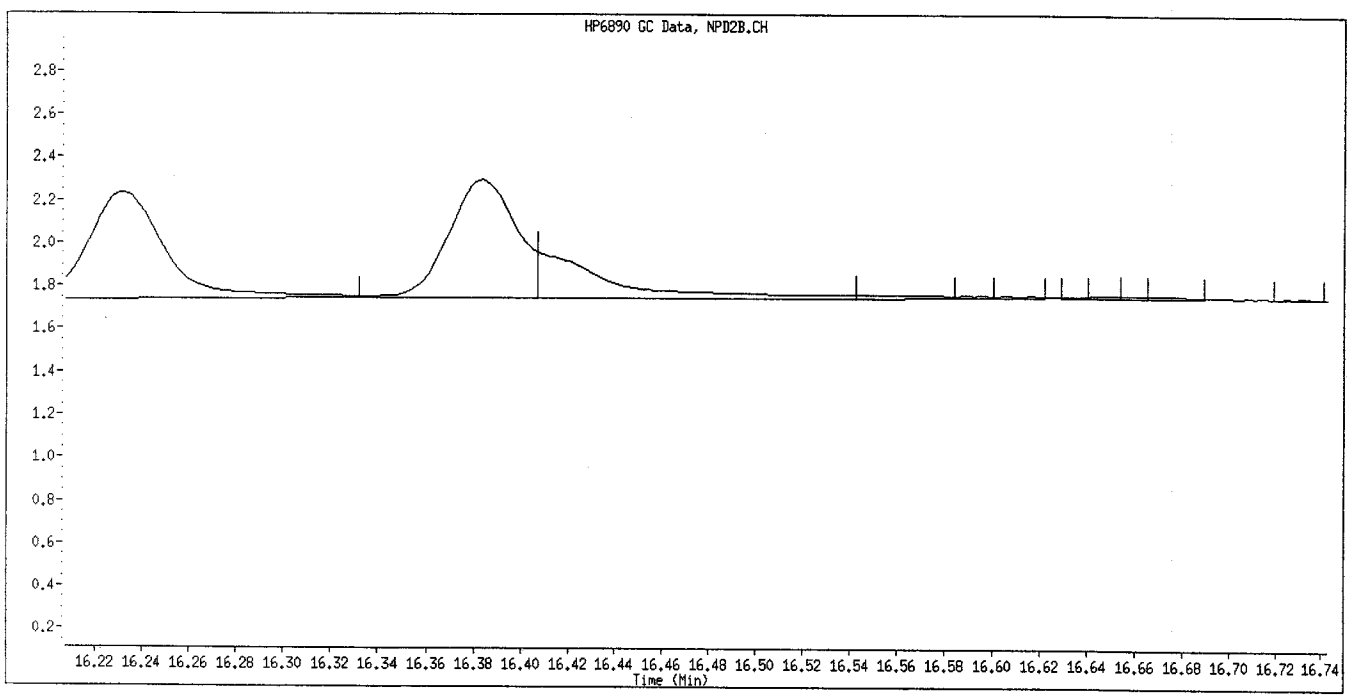
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

7/23/

Data File Name: 018F1801.D
Inj. Date and Time: 21-JUL-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP CCV GSV0827
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 07/22/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

7/23/11

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Analysis Type: NONE

Injection Date: 22-JUL-2009 01:18
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.1064	15.7	15.0	<-
2	Dichlorvos	2.5000	2.4259	3.0	15.0	
3	Mevinphos	2.5000	2.2703	9.2	15.0	
4	Chlormefos	2.5000	2.1987	12.1	15.0	
5	Thionazin	2.5000	2.1492	14.0	15.0	
6	Demeton-O	0.8125	0.7759	4.5	15.0	
7	Ethoprop	2.5000	2.2343	10.6	15.0	
8	Naled	2.5000	2.0227	19.1	15.0	<-
9	Sulfotepp	2.5000	2.2967	8.1	15.0	
10	Phorate	2.5000	2.3193	7.2	15.0	
11	Dimethoate	2.5000	2.4017	3.9	15.0	
12	Demeton-S	1.7000	1.6541	2.7	15.0	
13	Simazine	2.5000	2.3561	5.8	15.0	
14	Atrazine	2.5000	2.1956	12.2	15.0	
15	propazine	2.5000	2.1042	15.8	15.0	<-
17	Disulfoton	2.5000	2.1672	13.3	15.0	
16	Diazinon	2.5000	2.2989	8.0	15.0	
18	Methyl Parathion	2.5000	2.3905	4.4	15.0	
19	Ronnel	2.5000	2.3165	7.3	15.0	
20	Malathion	2.5000	2.1626	13.5	15.0	
21	Fenthion	2.5000	2.0331	18.7	15.0	<-
22	Parathion	2.5000	2.1251	15.0	15.0	
23	Chlorpyrifos	2.5000	2.1355	14.6	15.0	
24	Trichloronate	2.5000	2.1516	13.9	15.0	
25	Anilazine	2.5000	1.7787	28.9	15.0	<-
148	Merphos-A (Merphos)	2.5000	2.1481	14.1	999.0	
26	Tetrachlorvinphos (Stirophos)	2.5000	2.1527	13.9	15.0	
28	Tokuthion	2.5000	2.1684	13.3	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	2.6148	4.6	999.0	
29	Carbophenothion-methyl	2.5000	2.2399	10.4	15.0	
29	Fensulfothion	2.5000	2.4755	1.0	15.0	
30	Bolstar / Famphur	5.0000	4.3072	13.9	15.0	
32	Carbophenothion	2.5000	2.2286	10.9	15.0	
31	Triphenyl phosphate	2.5000	2.1720	13.1	15.0	
34	Phosmet	2.5000	2.1865	12.5	15.0	
32	EPN	2.5000	2.3220	7.1	15.0	
33	Azinphos-methyl	2.5000	2.1237	15.1	15.0	<-
35	Azinphos-ethyl	2.5000	2.1956	12.2	15.0	
36	Coumaphos	2.5000	2.2438	10.2	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Analysis Type: NONE

Injection Date: 22-JUL-2009 01:18
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
27 Merphos	2.5000	2.2563	9.7	15.0
40 Total Demeton	2.5000	2.4300	2.8	15.0

Average %D = 10.9

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\028F2801.D
Lab Smp Id: OPP CCV GSV0827 Client Smp ID: OPP CCV GSV0827
Inj Date : 22-JUL-2009 01:18
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP CCV GSV0827
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 12:19 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	3.168	3.163	(0.178)	273132	2.50000	2.106
	2 Dichlorvos	4.003	4.002	(0.225)	195340	2.50000	2.426
	3 Mevinphos	5.661	5.670	(0.319)	100419	2.50000	2.270
$	4 Chlormefos	5.746	5.745	(0.323)	221698	2.50000	2.199
	5 Thionazin	7.406	7.407	(0.417)	197771	2.50000	2.149
	6 Demeton-O	7.543	7.542	(0.425)	68554	0.81250	0.7759
	7 Ethoprop	7.748	7.753	(0.436)	180178	2.50000	2.234
	8 Naled	7.950	7.952	(0.448)	39899	2.50000	2.023
*	9 Tributylphosphate	Compound Not Detected.					
	10 Sulfotepp	8.330	8.327	(0.469)	265325	2.50000	2.297
	11 Phorate	8.418	8.417	(0.474)	193687	2.50000	2.319
	12 Dimethoate	8.546	8.552	(0.481)	233001	2.50000	2.402
	13 Demeton-S	8.731	8.747	(0.492)	116366	1.70000	1.654
	14 Simazine	8.813	8.815	(0.496)	76618	2.50000	2.356
	15 Atrazine	8.981	8.983	(0.506)	82592	2.50000	2.196
	16 propazine	9.125	9.127	(0.514)	73034	2.50000	2.104
	17 Disulfoton	9.745	9.743	(0.549)	122740	2.50000	2.167
	18 Diazinon	9.781	9.782	(0.551)	206230	2.50000	2.299
	19 Methyl Parathion	10.590	10.588	(0.596)	136001	2.50000	2.390
	20 Ronnel	11.110	11.108	(0.625)	136232	2.50000	2.316
	21 Malathion	11.665	11.665	(0.657)	116063	2.50000	2.163
	22 Fenthion	11.795	11.792	(0.664)	117581	2.50000	2.033
	23 Parathion	11.880	11.877	(0.669)	130796	2.50000	2.125
	24 Chlorpyrifos	11.926	11.925	(0.671)	159021	2.50000	2.135
	25 Trichloronate	12.348	12.345	(0.695)	143200	2.50000	2.152
	26 Anilazine	12.668	12.663	(0.713)	9682	2.50000	1.779
	27 Merphos-A (Merphos)	13.041	13.038	(0.734)	119276	2.50000	2.148
	28 Tetrachlorvinphos (Stirophos)	13.663	13.667	(0.769)	79444	2.50000	2.153
	29 Tokuthion	14.283	14.278	(0.804)	138340	2.50000	2.168
	30 Merphos-B (Merphos Oxone)	14.483	14.490	(0.815)	38954	2.50000	2.615
	31 Carbophenothion-methyl	15.061	15.058	(0.848)	110208	2.50000	2.240
	32 Fensulfothion	15.198	15.205	(0.856)	130114	2.50000	2.476
	33 Bolstar / Famphur	15.930	15.930	(0.897)	262889	5.00000	4.307

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34 Carbophenothion	16.078	16.075	(0.905)	136459	2.50000	2.228
$	35 Triphenyl phosphate	16.615	16.615	(0.935)	101069	2.50000	2.172(A)
	36 Phosmet	16.868	16.868	(0.950)	114596	2.50000	2.186
	37 EPN	17.060	17.058	(0.960)	116571	2.50000	2.322
	38 Azinphos-methyl	17.393	17.392	(0.979)	118606	2.50000	2.124
*	39 TOCP	17.765	17.767	(1.000)	92037	2.00000	
	40 Azinphos-ethyl	17.845	17.843	(1.004)	136318	2.50000	2.196
	41 Coumaphos	18.291	18.290	(1.030)	101070	2.50000	2.244
S	42 Merphos				158230	2.50000	2.256
M	43 Total Demeton				184920	2.50000	2.430

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

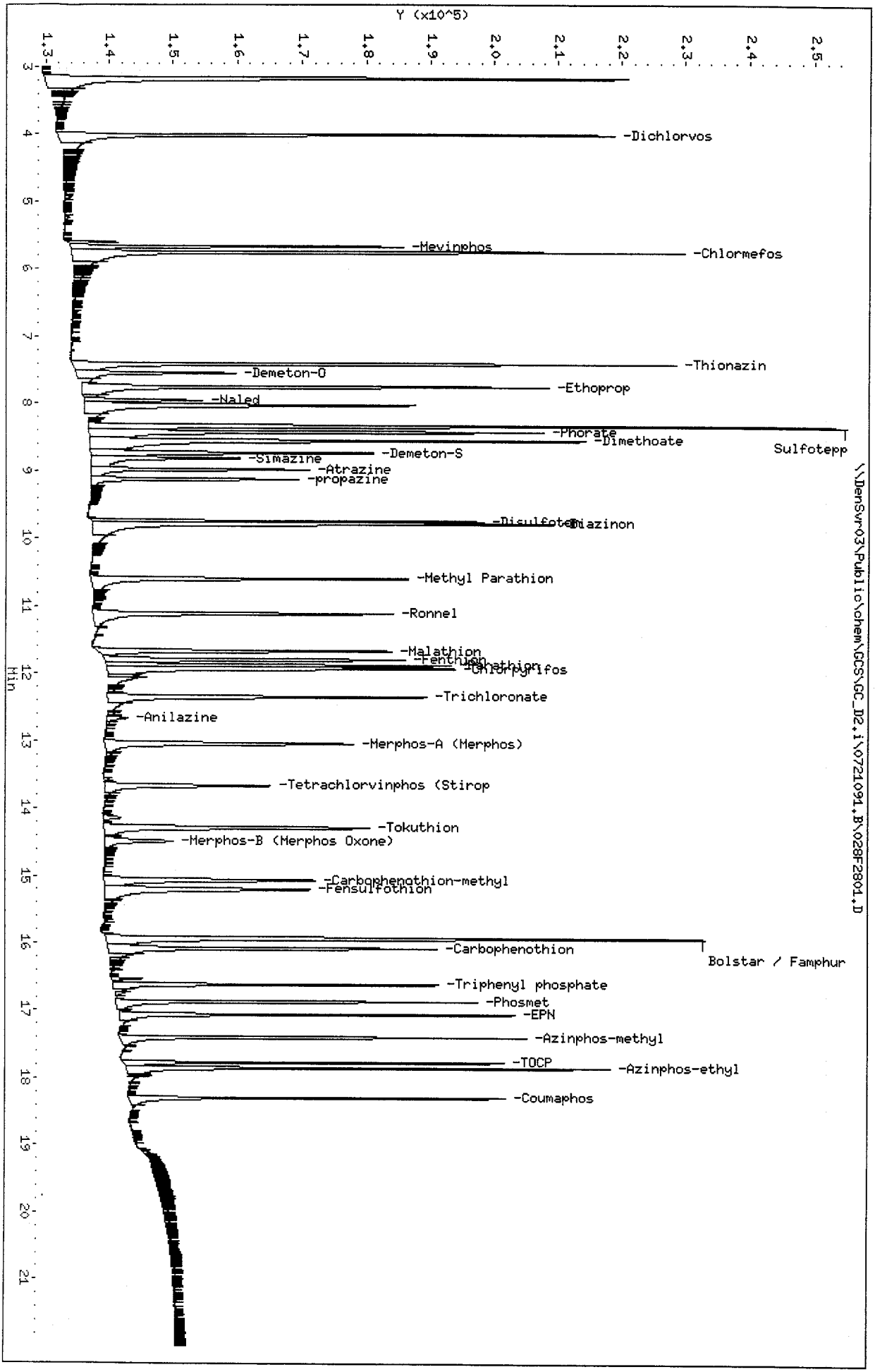
INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Lab Smp Id: OPP CCV GSV0827
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: OPP CCV GSV0827
Level:
Sample Type:
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	190357	95179	380714	0	-100.00
39 TOCP	85572	42786	171144	92037	7.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.07	7.57	8.57	0.00	-100.00
39 TOCP	17.77	17.27	18.27	17.77	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\028F2801.D
Date : 22-JUL-2009 01:18
Client ID: OPP CCV GSV0827
Sample Info: OPP CCV GSV0827
Column phase: RTx-1MS

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Analysis Type: NONE

Injection Date: 22-JUL-2009 01:18
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.5000	2.4358	2.6	15.0	
2	Dichlorvos	2.5000	2.4473	2.1	15.0	
3	Chlormefos	2.5000	2.3777	4.9	15.0	
4	Mevinphos	2.5000	2.4401	2.4	15.0	
5	Demeton-O	0.8125	0.8039	1.1	15.0	
6	Thionazin	2.5000	2.3223	7.1	15.0	
7	Ethoprop	2.5000	2.0073	19.7	15.0	<-
8	Phorate	2.5000	2.5470	1.9	15.0	
10	Naled	2.5000	1.8641	25.4	15.0	<-
146	Sulfotepp	2.5000	2.2888	8.4	15.0	
10	Simazine	2.5000	2.5426	1.7	15.0	
12	Diazinon	2.5000	2.2603	9.6	15.0	
150	Atrazine	2.5000	2.2854	8.6	15.0	
13	Propazine	2.5000	2.1467	14.1	15.0	
14	Disulfoton	2.5000	2.2079	11.7	15.0	
15	Demeton-S	1.7000	1.6342	3.9	15.0	
16	Dimethoate	2.5000	2.2505	10.0	15.0	
17	Ronnel	2.5000	2.1822	12.7	15.0	
148	Merphos-A (Merphos)	2.5000	2.1922	12.3	999.0	
18	Chlorpyrifos	2.5000	2.1966	12.1	15.0	
19	Fenthion	2.5000	2.1941	12.2	15.0	
20	Trichloronate	2.5000	2.3159	7.4	15.0	
21	Anilazine	2.5000	1.7238	31.0	15.0	<-
23	Methyl Parathion	2.5000	2.3255	7.0	15.0	
24	Malathion	2.5000	2.2444	10.2	15.0	
25	Tokuthion	2.5000	2.1436	14.3	15.0	
26	Parathion	2.5000	2.3173	7.3	15.0	
149	Merphos-B (Merphos Oxone)	2.5000	3.1688	26.8	999.0	
27	Tetrachlorvinphos (stirophos)	2.5000	2.1062	15.8	15.0	<-
28	Carbophenothion methyl	2.5000	2.3813	4.7	15.0	
28	Bolstar	2.5000	2.1837	12.7	15.0	
30	Carbophenothion	2.5000	2.4427	2.3	15.0	
29	Triphenyl phosphate	2.5000	2.3529	5.9	15.0	
30	Fensulfothion	2.5000	2.4575	1.7	15.0	
35	Phosmet / EPN	5.0000	4.5171	9.7	15.0	
33	Famphur	2.5000	2.2995	8.0	15.0	
34	Azinphos-methyl	2.5000	2.0916	16.3	15.0	<-
35	Azinphos-ethyl	2.5000	2.3638	5.4	15.0	
36	Coumaphos	2.5000	2.3789	4.8	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B/028F2801.D
Report Date: 07/22/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Analysis Type: NONE

Injection Date: 22-JUL-2009 01:18
Lab Sample ID: OPP CCV GSV0827
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
22 Merphos	2.5000	2.6423	5.7	15.0
40 Total Demeton	2.5000	2.4381	2.5	15.0

Average %D = 9.36

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\028F2801.D
Lab Smp Id: OPP CCV GSV0827 Client Smp ID: OPP CCV GSV0827
Inj Date : 22-JUL-2009 01:18
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP CCV GSV0827
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 12:30 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.651	4.647	(0.248)	252210	2.50000	2.436
	2 Dichlorvos	6.455	6.452	(0.344)	197857	2.50000	2.447
$	3 Chlormefos	7.285	7.280	(0.389)	193515	2.50000	2.378
	4 Mevinphos	9.121	9.120	(0.487)	132891	2.50000	2.440
	5 Demeton-O	9.615	9.610	(0.513)	41720	0.81250	0.8039
	6 Thionazin	9.863	9.860	(0.526)	189134	2.50000	2.322
	7 Ethoprop	10.375	10.377	(0.553)	122155	2.50000	2.007
	8 Phorate	10.410	10.404	(0.555)	179742	2.50000	2.547
	9 Naled	10.811	10.809	(0.577)	31340	2.50000	1.864
	10 Sulfotepp	10.890	10.885	(0.581)	243612	2.50000	2.289(A)
*	11 Tributylphosphate	10.996	11.010	(1.000)	153457	2.00000	
	12 Simazine	11.271	11.269	(0.601)	38759	2.50000	2.542(A)
	13 Diazinon	11.410	11.407	(0.609)	128993	2.50000	2.260
	14 Atrazine	11.450	11.449	(0.611)	68528	2.50000	2.285(A)
	15 Propazine	11.613	11.612	(0.619)	56885	2.50000	2.147
	16 Disulfoton	11.908	11.904	(0.635)	123929	2.50000	2.208
	17 Demeton-S	11.983	11.989	(0.639)	107218	1.70000	1.634
	18 Dimethoate	13.125	13.122	(0.700)	169305	2.50000	2.250
	19 Ronnel	13.428	13.424	(0.716)	110501	2.50000	2.182
	20 Merphos-A (Merphos)	13.526	13.520	(1.230)	121903	2.50000	2.192(A)
	21 Chlorpyrifos	14.243	14.239	(0.760)	112816	2.50000	2.196
	22 Fenthion	14.496	14.490	(0.773)	104517	2.50000	2.194
	23 Trichloronate	14.536	14.534	(0.775)	153837	2.50000	2.316
	24 Anilazine	15.043	15.039	(0.802)	7580	2.50000	1.724
	25 Methyl Parathion	15.360	15.359	(0.819)	119597	2.50000	2.326(A)
	26 Malathion	15.586	15.584	(0.831)	108128	2.50000	2.244
	27 Tokuthion	16.231	16.229	(0.866)	120916	2.50000	2.144
	28 Parathion	16.383	16.385	(0.874)	117430	2.50000	2.317(M)
	29 Merphos-B (Merphos Oxone)	16.406	16.406	(1.492)	54379	2.50000	3.169(AM)
	30 Tetrachlorvinphos (stirophos)	16.881	16.882	(0.901)	69044	2.50000	2.106
	31 Carbophenothion methyl	16.985	16.984	(0.906)	111889	2.50000	2.381
	32 Bolstar	17.353	17.352	(0.926)	108076	2.50000	2.184
	33 Carbophenothion	17.435	17.434	(0.930)	118882	2.50000	2.443(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.203	18.202	(0.971)	93967	2.50000	2.353
	35 Fensulfothion	18.483	18.484	(0.986)	90115	2.50000	2.458
*	36 TOCP	18.746	18.747	(1.000)	80050	2.00000	
	37 Phosmet / EPN	18.836	18.839	(1.005)	185164	5.00000	4.517
	38 Famphur	18.940	18.942	(1.010)	120735	2.50000	2.300
	39 Azinphos-methyl	19.075	19.079	(1.018)	100460	2.50000	2.092
	40 Azinphos-ethyl	19.288	19.294	(1.029)	108129	2.50000	2.364
	41 Coumaphos	20.241	20.247	(1.080)	83666	2.50000	2.379
S	42 Merphos				176282	2.50000	2.642(A)
M	43 Total Demeton				148938	2.50000	2.438

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

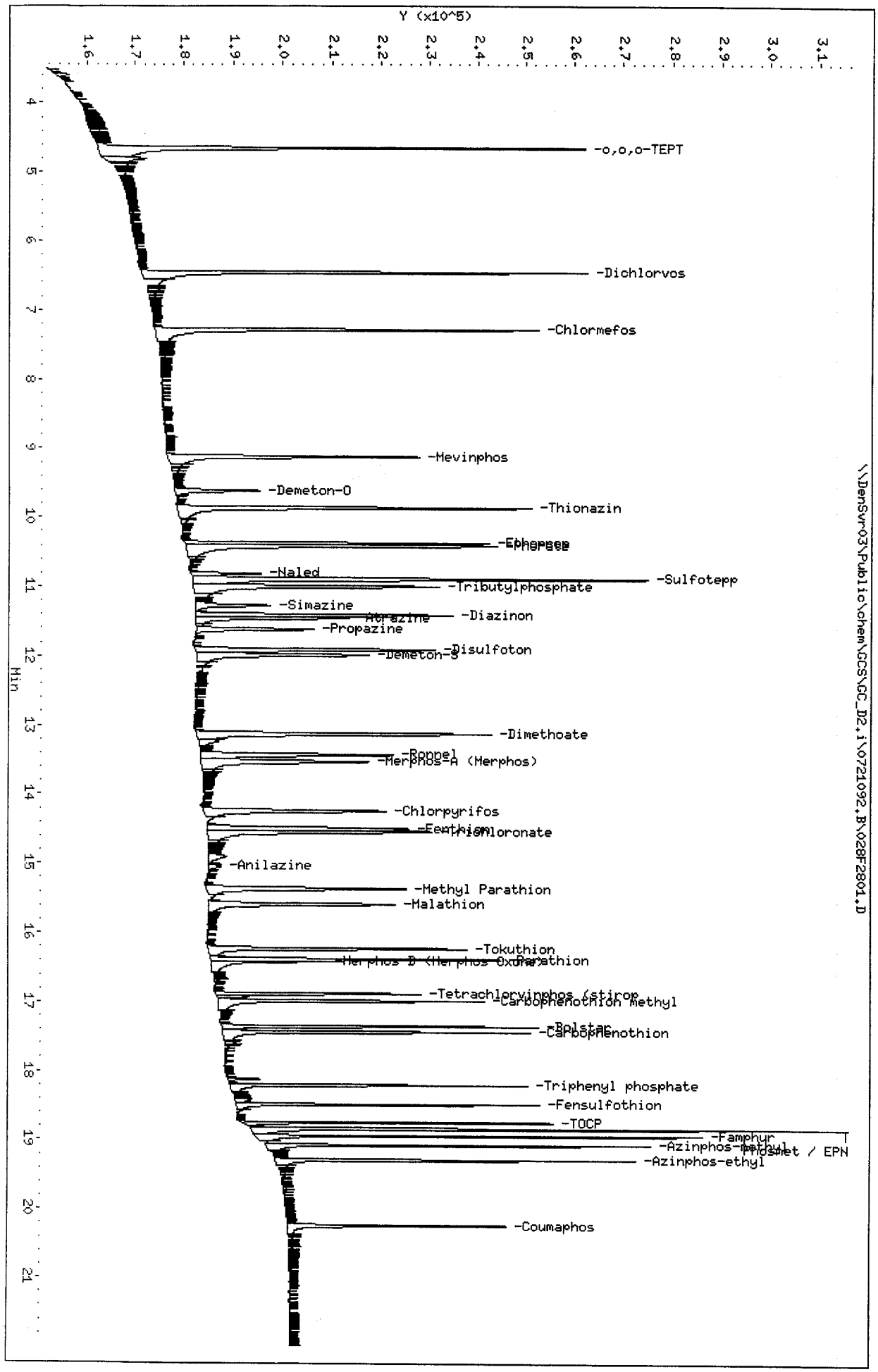
Instrument ID: GC_D2.i
Lab File ID: 028F2801.D
Lab Smp Id: OPP CCV GSV0827
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: OPP CCV GSV0827
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	155041	77521	310082	153457	-1.02
36 TOCP	72253	36127	144506	80050	10.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	-0.01
36 TOCP	18.75	18.25	19.25	18.75	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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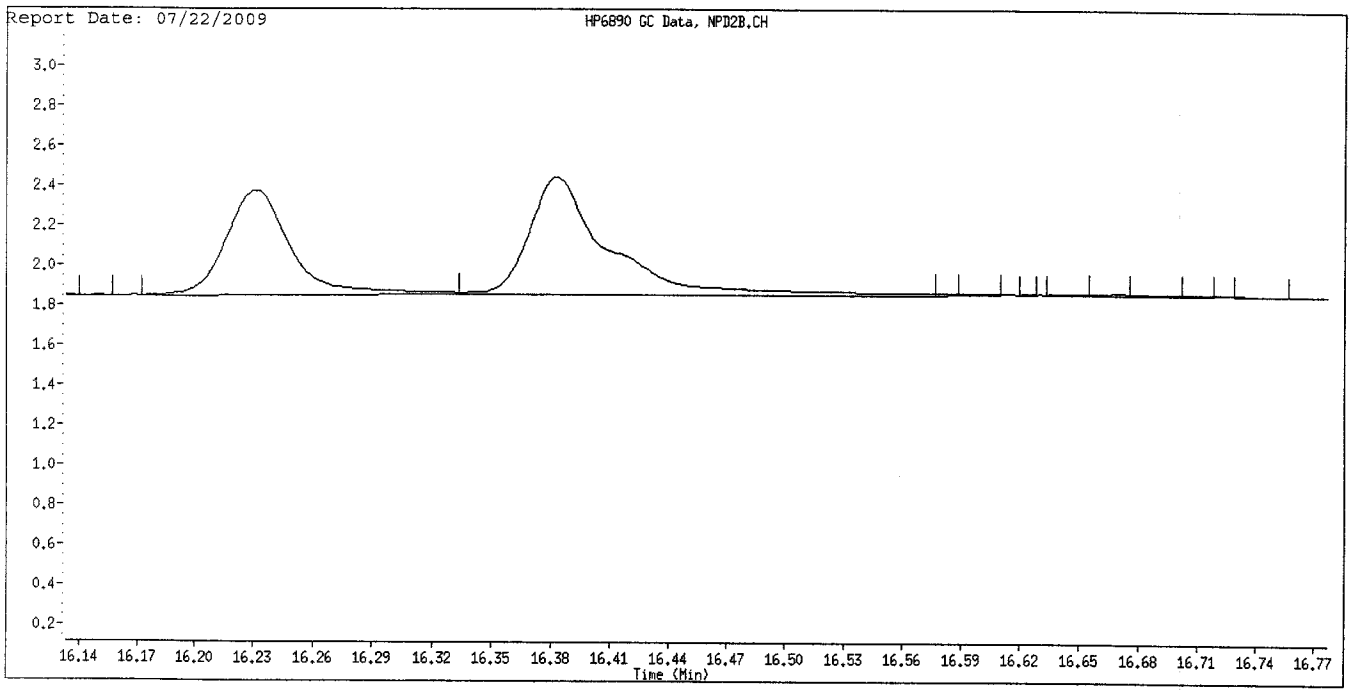
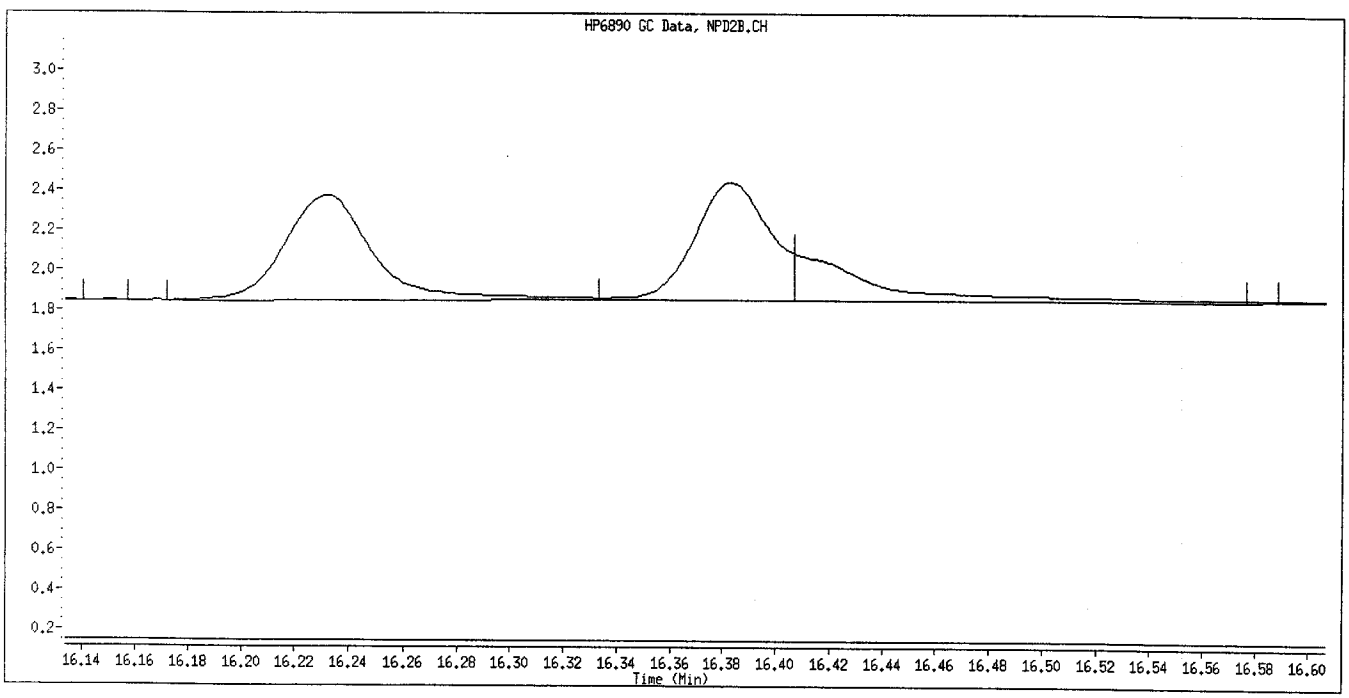
Date : 22-JUL-2009 01:18
Client ID: OPP CCV GSV0827
Sample Info: OPP CCV GSV0827
Column phase: RTx-OPPest

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 028F2801.D
Inj. Date and Time: 22-JUL-2009 01:18
Instrument ID: GC_D2.i
Client ID: OPP CCV GSV0827
Compound Name: Parathion
CAS #:



Original Integration

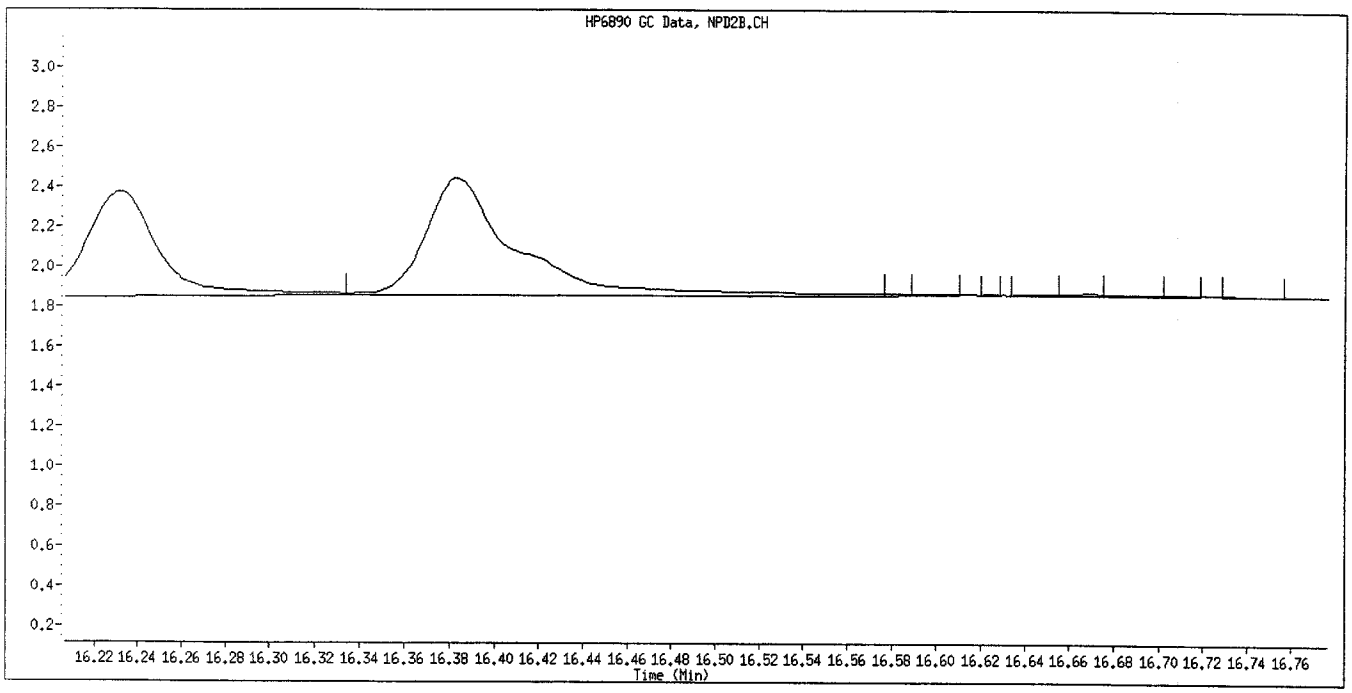


Manual Integration

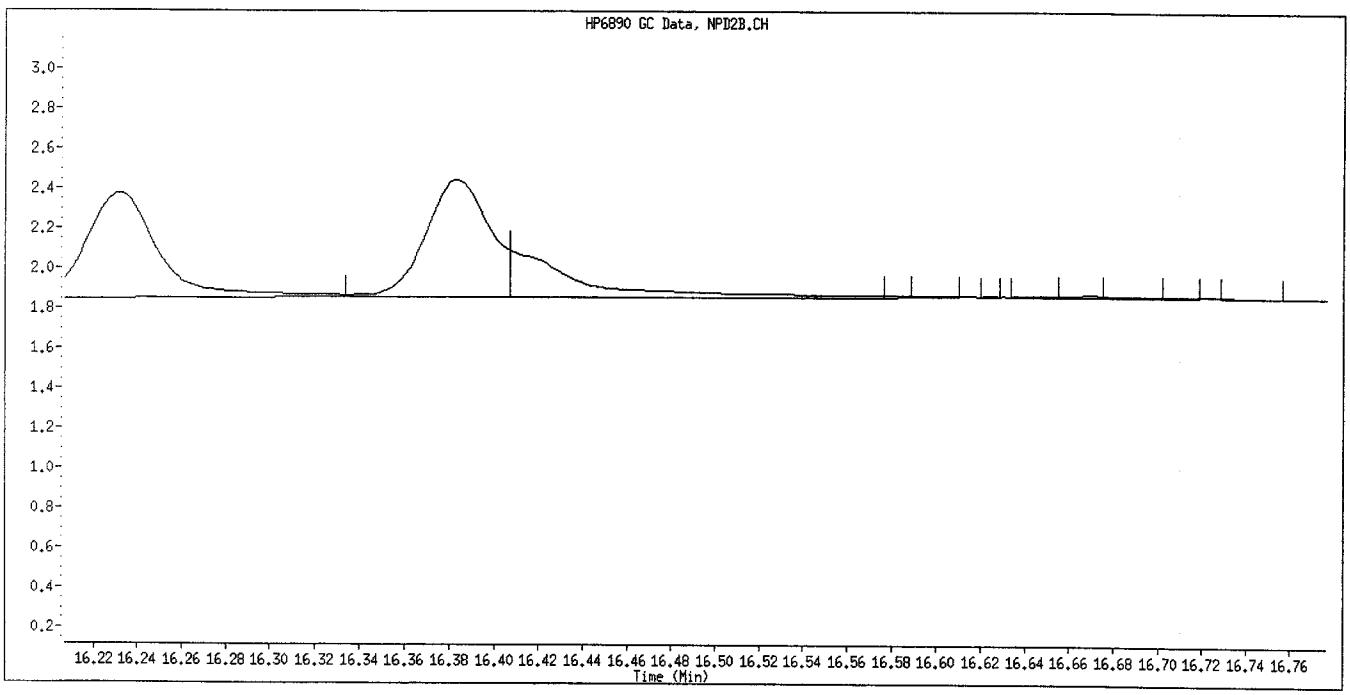
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

NF 7/23/10

Data File Name: 028F2801.D
Inj. Date and Time: 22-JUL-2009 01:18
Instrument ID: GC_D2.i
Client ID: OPP CCV GSV0827
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 07/22/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

IV 7/23/09

GC SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\019F1901.D
Lab Smp Id: LGMN01AA Client Smp ID: BLANK
Inj Date : 21-JUL-2009 21:12
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AA,MB
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 12:19 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 19 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
1	o,o,o-TEPT	Compound Not Detected.					
2	Dichlorvos	Compound Not Detected.					
3	Mevinphos	Compound Not Detected.					
$ 4	Chlormefos	5.748	5.745	(0.324)	66359	0.54950	1.099
5	Thionazin	Compound Not Detected.					
6	Demeton-O	Compound Not Detected.					
7	Ethoprop	Compound Not Detected.					
8	Naled	7.932	7.952	(0.446)	102	0.19656	0.3931 not a peak
* 9	Tributylphosphate	8.028	8.072	(1.000)	148996	2.00000	
10	Sulfotepp	Compound Not Detected.					
11	Phorate	Compound Not Detected.					
12	Dimethoate	Compound Not Detected.					
13	Demeton-S	Compound Not Detected.					
14	Simazine	Compound Not Detected.					
15	Atrazine	Compound Not Detected.					
16	propazine	Compound Not Detected.					
17	Disulfoton	Compound Not Detected.					
18	Diazinon	Compound Not Detected.					
19	Methyl Parathion	Compound Not Detected.					
20	Ronnel	Compound Not Detected.					
21	Malathion	Compound Not Detected.					
22	Fenthion	Compound Not Detected.					

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Parathion	Compound Not Detected.					
	24 Chlorpyrifos	11.933	11.925	(0.672)	59	7e-004	0.001323(a)
	25 Trichloronate	Compound Not Detected.					
	26 Anilazine	Compound Not Detected.					
	27 Merphos-A (Merphos)	13.077	13.038	(0.736)	115	0.00173	0.003458
	28 Tetrachlorvinphos (Stirophos)	13.660	13.667	(0.769)	62	0.00140	0.002806
	29 Tokuthion	Compound Not Detected.					
	30 Merphos-B (Merphos Oxone)	14.487	14.490	(0.815)	158	0.02967	0.05934
	31 Carbophenothion-methyl	Compound Not Detected.					
	32 Fensulfothion	Compound Not Detected.					
	33 Bolstar / Famphur	Compound Not Detected.					
	34 Carbophenothion	Compound Not Detected.					
$	35 Triphenyl phosphate	16.615	16.615	(0.935)	39927	0.71645	1.433
	36 Phosmet	Compound Not Detected.					
	37 EPN	Compound Not Detected.					
	38 Azinphos-methyl	Compound Not Detected.					
*	39 TOCP	17.767	17.767	(1.000)	110227	2.00000	
	40 Azinphos-ethyl	Compound Not Detected.					
	41 Coumaphos	Compound Not Detected.					
S	42 Merphos				273	0.00325	0.006501
M	43 Total Demeton	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 019F1901.D
Lab Smp Id: LGMN01AA
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	152634	76317	305268	148996	-2.38
39 TOCP	85572	42786	171144	110227	28.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.02	7.52	8.52	8.03	0.08
39 TOCP	17.77	17.27	18.27	17.77	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AA Client Smp ID: BLANK
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: BLANK
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

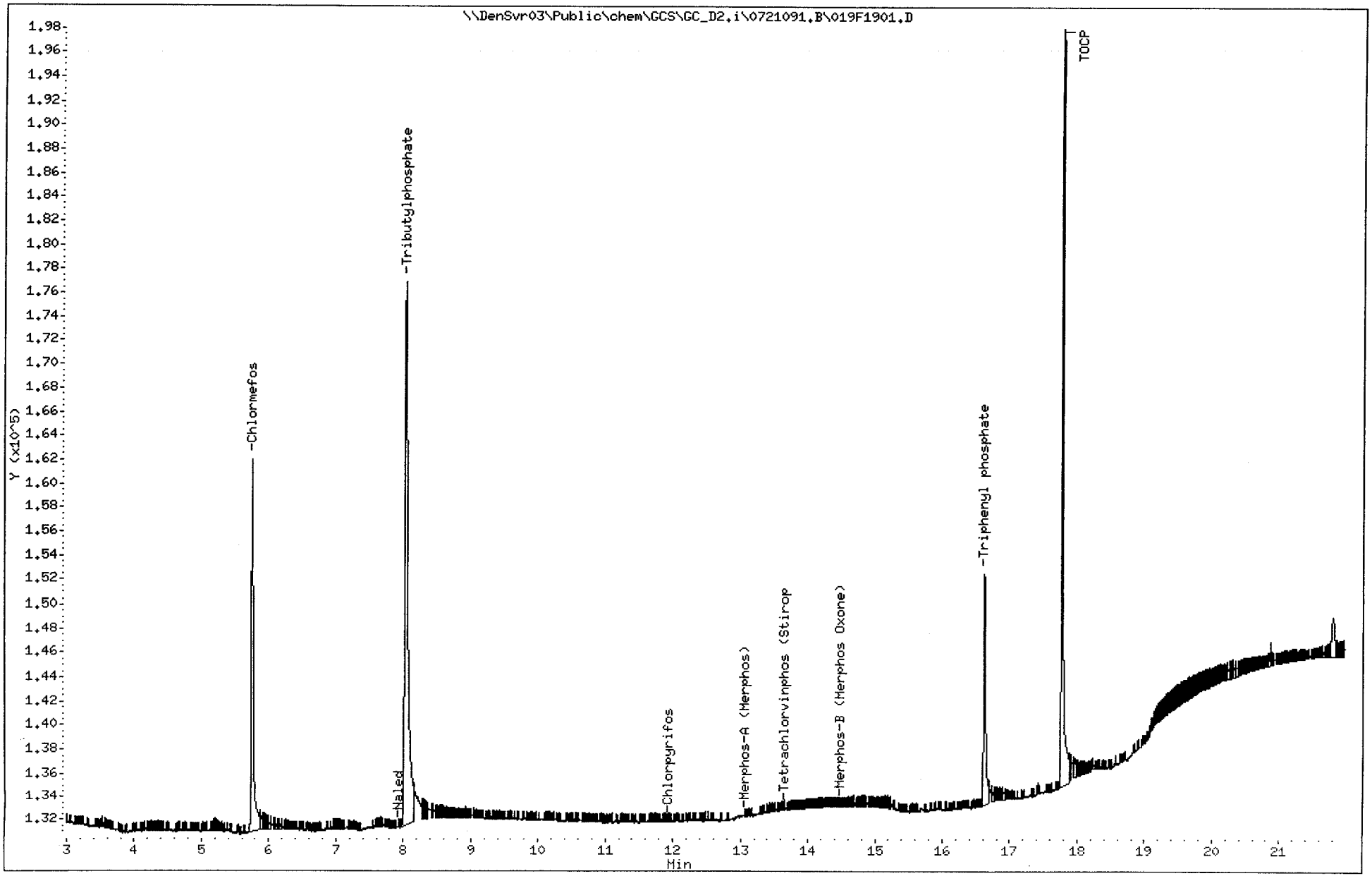
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Chlormefos	2.000	1.099	54.95	48-114
$ 35 Triphenyl phosphat	2.000	1.433	71.65	50-150

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\019F1901.D
Date : 21-JUL-2009 21:12
Client ID: BLANK
Sample Info: LGMN01AA,MB

Instrument: GC_D2.i

Operator: MPK/TLW
Column diameter: 0.32

Column phase: RTx-1MS



TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\019F1901.D
Lab Smp Id: LGMN01AA Client Smp ID: BLANK
Inj Date : 21-JUL-2009 21:12
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AA,MB
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 12:30 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 19 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample Extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
1	o,o,o-TEPT	Compound Not Detected.					
2	Dichlorvos	Compound Not Detected.					
$ 3	Chlormefos	7.285	7.280	(0.389)	58008	0.64239	1.285
4	Mevinphos	Compound Not Detected.					
5	Demeton-O	Compound Not Detected.					
6	Thionazin	Compound Not Detected.					
7	Ethoprop	Compound Not Detected.					
8	Phorate	Compound Not Detected.					
9	Naled	10.787	10.809	(0.575)	66	0.27176	0.5435
10	Sulfotepp	10.890	10.885	(0.581)	182	0.00154	0.003082(aA)
* 11	Tributylphosphate	11.000	11.010	(1.000)	125446	2.00000	
12	Simazine	11.263	11.269	(0.601)	537	0.03175	0.06350(aA)
13	Diazinon	Compound Not Detected.					
14	Atrazine	11.443	11.449	(0.610)	989	0.25912	0.5182(A)
15	Propazine	Compound Not Detected.					
16	Disulfoton	Compound Not Detected.					
17	Demeton-S	12.015	11.989	(0.641)	81	0.12012	0.2402
18	Dimethoate	Compound Not Detected.					
19	Ronnel	Compound Not Detected.					
20	Merphos-A (Merphos)	13.535	13.520	(1.230)	83	0.00183	0.003652(aA)
21	Chlorpyrifos	Compound Not Detected.					
22	Fenthion	Compound Not Detected.					

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Trichloronate	14.520	14.534	(0.775)	63	0.10607	0.2121
	24 Anilazine	Compound Not Detected.					
	25 Methyl Parathion	Compound Not Detected.					
	26 Malathion	15.610	15.584	(0.833)	80	0.00150	0.002993(a)
	27 Tokuthion	Compound Not Detected.					
	28 Parathion	Compound Not Detected.					
	29 Merphos-B (Merphos Oxone)	Compound Not Detected.					
	30 Tetrachlorvinphos (stirophos)	Compound Not Detected.					
	31 Carbophenothion methyl	Compound Not Detected.					
	32 Bolstar	Compound Not Detected.					
	33 Carbophenothion	Compound Not Detected.					
$	34 Triphenyl phosphate	18.203	18.202	(0.971)	36445	0.82251	1.645
	35 Fensulfothion	Compound Not Detected.					
*	36 TOCP	18.747	18.747	(1.000)	88816	2.00000	
	37 Phosmet / EPN	Compound Not Detected.					
	38 Famphur	Compound Not Detected.					
	39 Azinphos-methyl	Compound Not Detected.					
	40 Azinphos-ethyl	Compound Not Detected.					
	41 Coumaphos	Compound Not Detected.					
S	42 Merphos	Compound Not Detected.					
M	43 Total Demeton				81	0.12012	0.2402

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 019F1901.D
Lab Smp Id: LGMN01AA
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	155041	77521	310082	125446	-19.09
36 TOCP	72253	36127	144506	88816	22.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	0.03
36 TOCP	18.75	18.25	19.25	18.75	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AA Client Smp ID: BLANK
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: BLANK
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 Chlormefos	2.000	1.285	64.24	48-114
$ 34 Triphenyl phosphat	2.000	1.645	82.25	50-150

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\019F1901.D

Date : 21-JUL-2009 21:12

Client ID: BLANK

Instrument: GC_D2.i

Sample Info: LGMN01AA,MB

Operator: MPK/TLW

Column phase: RTx-OPPest

Column diameter: 0.32

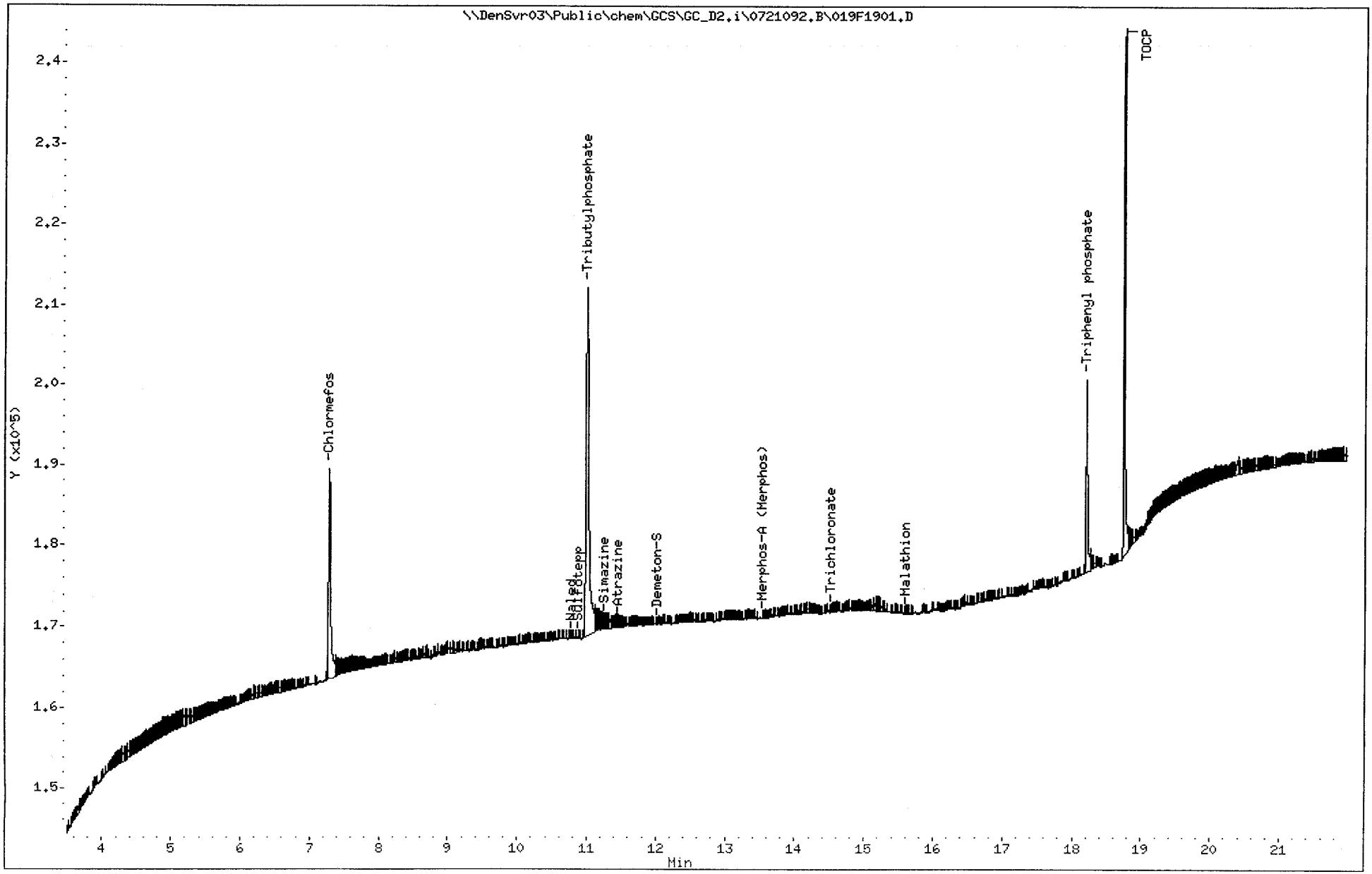


Table of Contents

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\020F2001.D
Lab Smp Id: LGMN01AC Client Smp ID: LCS
Inj Date : 21-JUL-2009 21:40
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AC,LCS
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 12:19 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 20 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	1 o,o,o-TEPT	3.171	3.163	(0.179)	195915	1.53665	3.073
	2 Dichlorvos	4.007	4.002	(0.226)	140822	1.77871	3.557
	3 Mevinphos	5.666	5.670	(0.319)	62049	1.42674	2.853
$	4 Chlormefos	5.749	5.745	(0.324)	85150	0.85887	1.718
	5 Thionazin	7.409	7.407	(0.417)	143413	1.58507	3.170
	6 Demeton-O	7.544	7.542	(0.425)	104242	1.21400	2.428
	7 Ethoprop	7.749	7.753	(0.436)	146976	1.85371	3.707
	8 Naled	7.951	7.952	(0.448)	33354	1.74856	3.497
*	9 Tributylphosphate	8.024	8.072	(1.000)	157954	2.00000	
	10 Sulfotepp	8.331	8.327	(0.469)	168703	1.46076	2.922
	11 Phorate	8.419	8.417	(0.474)	107513	1.30935	2.619
	12 Dimethoate	8.549	8.552	(0.481)	137688	1.44348	2.887
	13 Demeton-S	8.731	8.747	(0.491)	5873	0.08491	0.1698
	14 Simazine	8.814	8.815	(0.496)	48115	1.53367	3.067
	15 Atrazine	8.981	8.983	(0.506)	51221	1.38487	2.770
	16 propazine	9.124	9.127	(0.514)	46972	1.37640	2.753
	17 Disulfoton	9.747	9.743	(0.549)	80089	1.42531	2.851
	18 Diazinon	9.784	9.782	(0.551)	144121	1.63394	3.268
	19 Methyl Parathion	10.591	10.588	(0.596)	97062	1.73516	3.470
	20 Ronnel	11.111	11.108	(0.625)	96476	1.66847	3.337
	21 Malathion	11.666	11.665	(0.657)	76496	1.43605	2.872
	22 Fenthion	11.794	11.792	(0.664)	85363	1.50120	3.002

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Parathion	11.881	11.877	(0.669)	95821	1.58338	3.167
	24 Chlorpyrifos	11.929	11.925	(0.671)	119997	1.63892	3.278
	25 Trichloronate	12.349	12.345	(0.695)	99611	1.52223	3.044
	26 Anilazine	12.671	12.663	(0.713)	9393	1.75812	3.516
	27 Merphos-A (Merphos)	13.032	13.038	(0.734)	302	0.00553	0.01106
	28 Tetrachlorvinphos (Stirophos)	13.664	13.667	(0.769)	62461	1.72138	3.443
	29 Tokuthion	14.282	14.278	(0.804)	103403	1.64840	3.297
	30 Merphos-B (Merphos Oxone)	14.486	14.490	(0.815)	108808	7.38987	14.78(A)
	31 Carbophenothion-methyl	15.061	15.058	(0.848)	80692	1.65091	3.302
	32 Fensulfothion	15.201	15.205	(0.856)	96919	1.89835	3.797
	33 Bolstar / Famphur	15.932	15.930	(0.897)	199941	3.33172	6.663
	34 Carbophenothion	16.079	16.075	(0.905)	98103	1.62949	3.259
$	35 Triphenyl phosphate	16.614	16.615	(0.935)	38687	0.84559	1.691
	36 Phosmet	16.869	16.868	(0.950)	90029	1.74708	3.494
	37 EPN	17.059	17.058	(0.960)	84739	1.72956	3.459
	38 Azinphos-methyl	17.394	17.392	(0.979)	87630	1.59585	3.192
*	39 TOCP	17.766	17.767	(1.000)	90493	2.00000	
	40 Azinphos-ethyl	17.846	17.843	(1.004)	100911	1.61641	3.233
	41 Coumaphos	18.291	18.290	(1.030)	76783	1.73368	3.467
S	42 Merphos				109110	1.58239	3.165
M	43 Total Demeton				110115	1.29891	2.598

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 020F2001.D
Lab Smp Id: LGMN01AC
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: LCS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	152634	76317	305268	157954	3.49
39 TOCP	85572	42786	171144	90493	5.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.02	7.52	8.52	8.02	0.03
39 TOCP	17.77	17.27	18.27	17.77	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name:
Client SDG: D9G170000
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: LGMN01AC
Client Smp ID: LCS
Level: LOW
Operator: MPK/TLW
Data Type: GC DATA
SampleType: LCS
SpikeList File: fullDFCwater.spk
Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

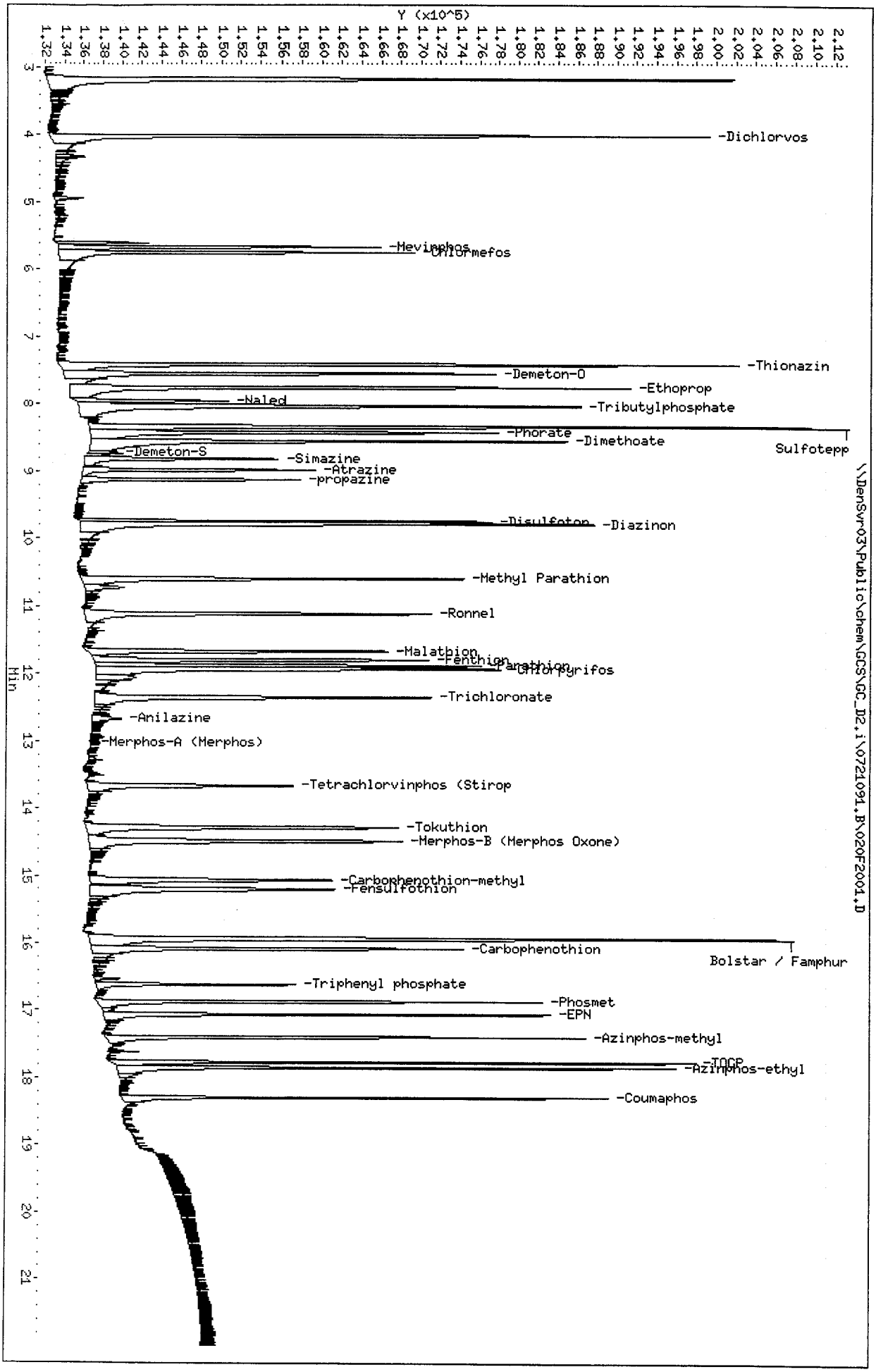
	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	1	o,o,o-TEPT	4.000	3.073	76.83	36-119
	2	Dichlorvos	4.000	3.557	88.94	50-120
	3	Mevinphos	4.000	2.853	71.34	35-108
$	4	Chlormefos	2.000	1.718	85.89	48-114
	5	Thionazin	4.000	3.170	79.25	65-116
	7	Ethoprop	4.000	3.707	92.69	65-108
	8	Naled	4.000	3.497	87.43	36-119
	10	Sulfotepp	4.000	2.922	73.04	69-103
	11	Phorate	4.000	2.619	65.47	62-104
	12	Dimethoate	4.000	2.887	72.17	28-115
	14	Simazine	4.000	3.067	76.68	47-109
	15	Atrazine	4.000	2.770	69.24	36-119
	16	propazine	4.000	2.753	68.82	36-119
	17	Disulfoton	4.000	2.851	71.27	36-119
	18	Diazinon	4.000	3.268	81.70	36-119
	19	Methyl Parathion	4.000	3.470	86.76	68-119
	20	Ronnel	4.000	3.337	83.42	62-115
	21	Malathion	4.000	2.872	71.80	67-115
	22	Fenthion	4.000	3.002	75.06	36-119
	23	Parathion	4.000	3.167	79.17	36-119
	24	Chlorpyrifos	4.000	3.278	81.95	36-119
	25	Trichloronate	4.000	3.044	76.11	36-119
	26	Anilazine	4.000	3.516	87.91	47-115
	28	Tetrachlorvinphos	4.000	3.443	86.07	36-119
	29	Tokuthion	4.000	3.297	82.42	36-119
	31	Carbophenothion-me	4.000	3.302	82.55	36-119
	32	Fensulfothion	4.000	3.797	94.92	61-115
	33	Bolstar / Famphur	8.000	6.663	83.29	36-119
	34	Carbophenothion	4.000	3.259	81.47	36-119
$	35	Triphenyl phosphat	2.000	1.691	84.56	50-150
	36	Phosmet	4.000	3.494	87.35	36-119
	37	EPN	4.000	3.459	86.48	36-119
	38	Azinphos-methyl	4.000	3.192	79.79	55-115
	40	Azinphos-ethyl	4.000	3.233	80.82	36-119
	41	Coumaphos	4.000	3.467	86.68	62-115
S	42	Merphos	4.000	3.165	79.12	36-119
M	43	Total Demeton	4.000	2.598	64.95	47-115

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AC Client Smp ID: LCS
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCS
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Chlormefos	2.000	1.718	85.89	48-114
$ 35 Triphenyl phosphat	2.000	1.691	84.56	50-150



Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0721091,B\020F2004,D
Date : 21-JUL-2009 21:40
Client ID: LCS
Sample Info: LGHN01AC,LCS
Column phase: RTx-1MS
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\020F2001.D
Lab Smp Id: LGMN01AC Client Smp ID: LCS
Inj Date : 21-JUL-2009 21:40
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AC,LCS
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 12:30 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 20 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample Extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	1 o,o,o-TEPT	4.651	4.647	(0.248)	173916	1.67688	3.354
	2 Dichlorvos	6.456	6.452	(0.344)	151983	1.87671	3.753
$	3 Chlormefos	7.284	7.280	(0.389)	61207	0.75079	1.502
	4 Mevinphos	9.122	9.120	(0.487)	81059	1.48590	2.972
	5 Demeton-O	9.616	9.610	(0.513)	75800	1.45818	2.916
	6 Thionazin	9.862	9.860	(0.526)	125269	1.53556	3.071
	7 Ethoprop	10.377	10.377	(0.554)	100767	1.65307	3.306
	8 Phorate	10.409	10.404	(0.555)	91276	1.29125	2.582
	9 Naled	10.812	10.809	(0.577)	24822	1.53019	3.060
	10 Sulfotepp	10.889	10.885	(0.581)	154114	1.44553	2.891(A)
*	11 Tributylphosphate	10.997	11.010	(1.000)	139588	2.00000	
	12 Simazine	11.271	11.269	(0.601)	37983	2.48749	4.975(AR)
	13 Diazinon	11.409	11.407	(0.609)	90131	1.58547	3.171
	14 Atrazine	11.449	11.449	(0.611)	46621	1.62679	3.254(A)
	15 Propazine	11.614	11.612	(0.620)	37191	1.42139	2.843
	16 Disulfoton	11.907	11.904	(0.635)	88843	1.58014	3.160
	17 Demeton-S	11.981	11.989	(0.639)	8910	0.24478	0.4896
	18 Dimethoate	13.126	13.122	(0.700)	103958	1.37958	2.759
	19 Ronnel	13.429	13.424	(0.716)	90706	1.78832	3.577
	20 Merphos-A (Merphos)	Compound Not Detected.					
	21 Chlorpyrifos	14.244	14.239	(0.760)	85684	1.66552	3.331
	22 Fenthion	14.496	14.490	(0.773)	69820	1.46325	2.926

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Trichloronate	14.537	14.534	(0.776)	100577	1.54815	3.096
	24 Anilazine	15.044	15.039	(0.803)	4048	0.91849	1.837
	25 Methyl Parathion	15.361	15.359	(0.819)	88928	1.72629	3.452
	26 Malathion	15.587	15.584	(0.832)	66804	1.38430	2.768
	27 Tokuthion	16.231	16.229	(0.866)	83343	1.47502	2.950
	28 Parathion	16.382	16.385	(0.874)	78068	1.53797	3.076
	29 Merphos-B (Merphos Oxone)	16.416	16.406	(1.493)	95028	6.18291	12.36(A)
	30 Tetrachlorvinphos (stirophos)	16.881	16.882	(0.901)	57630	1.75509	3.510
	31 Carbophenothion methyl	16.984	16.984	(0.906)	75208	1.59797	3.196
	32 Bolstar	17.352	17.352	(0.926)	79963	1.61294	3.226
	33 Carbophenothion	17.434	17.434	(0.930)	81659	1.67509	3.350(A)
$	34 Triphenyl phosphate	18.202	18.202	(0.971)	35575	0.88930	1.779
	35 Fensulfothion	18.482	18.484	(0.986)	66647	1.81449	3.629
*	36 TOCP	18.746	18.747	(1.000)	80184	2.00000	
	37 Phosmet / EPN	18.836	18.839	(1.005)	144712	3.50567	7.011
	38 Famphur	18.939	18.942	(1.010)	88778	1.68806	3.376
	39 Azinphos-methyl	19.074	19.079	(1.018)	72156	1.49981	3.000
	40 Azinphos-ethyl	19.287	19.294	(1.029)	76045	1.65966	3.319
	41 Coumaphos	20.241	20.247	(1.080)	61566	1.74758	3.495
S	42 Merphos				95028	1.42202	2.844
M	43 Total Demeton				84710	1.70296	3.406

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 020F2001.D
Lab Smp Id: LGMN01AC
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: LCS
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	155041	77521	310082	139588	-9.97
36 TOCP	72253	36127	144506	80184	10.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	0.00
36 TOCP	18.75	18.25	19.25	18.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AC Client Smp ID: LCS
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCS
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

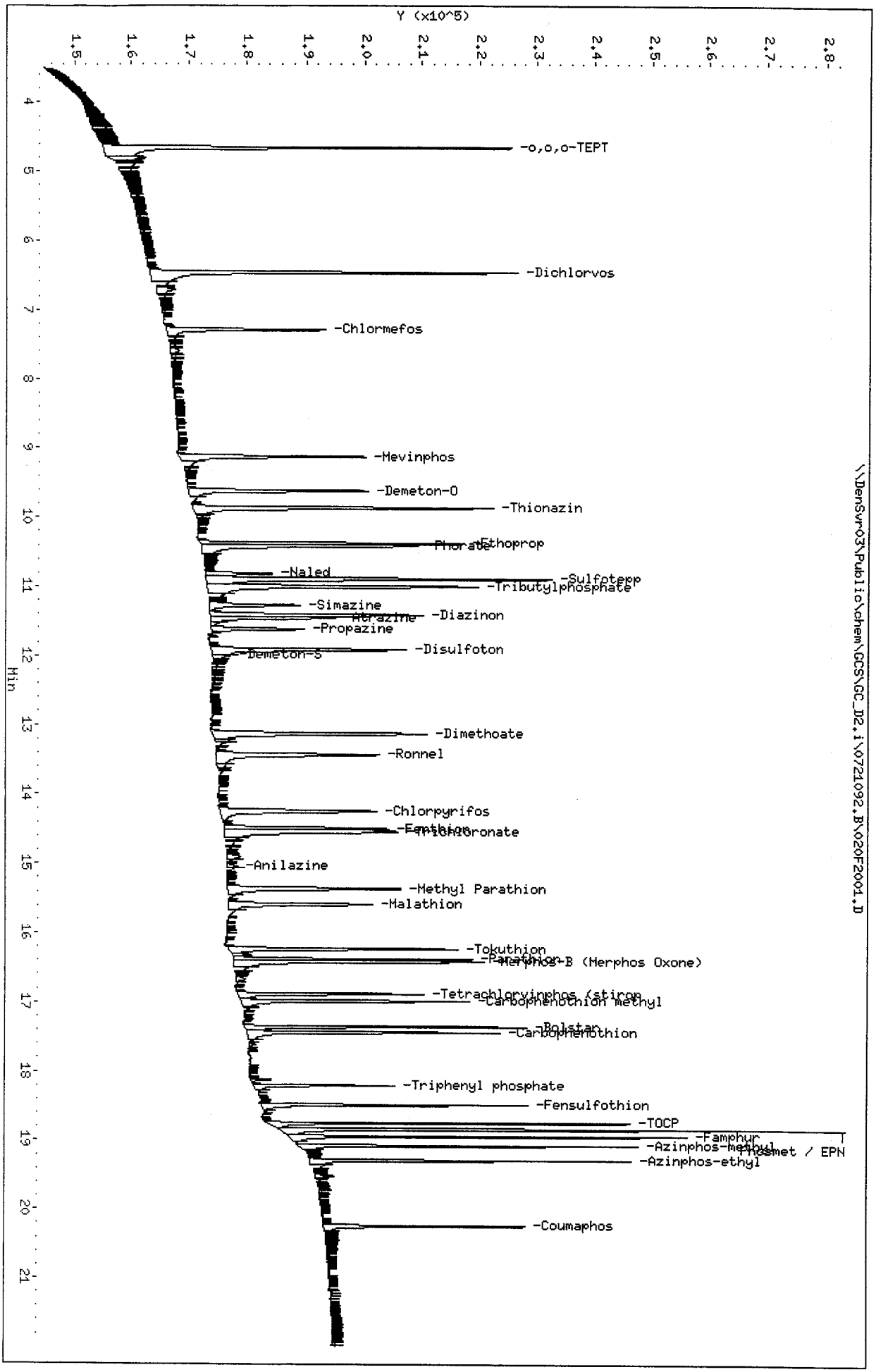
	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	1	o,o,o-TEPT	4.000	3.354	83.84	36-119
	2	Dichlorvos	4.000	3.753	93.84	50-120
$	3	Chlormefos	2.000	1.502	75.08	58-114
	4	Mevinphos	4.000	2.972	74.29	35-108
	5	Demeton-O	2.800	2.916	104.16	36-119
	6	Thionazin	4.000	3.071	76.78	65-116
	7	Ethoprop	4.000	3.306	82.65	36-119
	8	Phorate	4.000	2.582	64.56	36-119
	9	Naled	4.000	3.060	76.51	36-119
	10	Sulfotepp	4.000	2.891	72.28	36-119
	12	Simazine	4.000	4.975	124.37*	36-119
	13	Diazinon	4.000	3.171	79.27	36-119
	14	Atrazine	4.000	3.254	81.34	36-119
	15	Propazine	4.000	2.843	71.07	36-119
	16	Disulfoton	4.000	3.160	79.01	61-103
	17	Demeton-S	1.200	0.4896	40.80	36-119
	18	Dimethoate	4.000	2.759	68.98	28-82
	19	Ronnel	4.000	3.577	89.42	62-99
	21	Chlorpyrifos	4.000	3.331	83.28	66-101
	22	Fenthion	4.000	2.926	73.16	36-119
	23	Trichloronate	4.000	3.096	77.41	36-119
	24	Anilazine	4.000	1.837	45.92	36-119
	25	Methyl Parathion	4.000	3.452	86.31	36-119
	26	Malathion	4.000	2.768	69.21	36-119
	27	Tokuthion	4.000	2.950	73.75	36-119
	28	Parathion	4.000	3.076	76.90	36-119
	30	Tetrachlorvinphos	4.000	3.510	87.75	36-119
	31	Carbophenothion me	4.000	3.196	79.90	36-119
	32	Bolstar	4.000	3.226	80.65	36-119
	33	Carbophenothion	4.000	3.350	83.75	36-119
$	34	Triphenyl phosphat	2.000	1.779	88.93	36-119
	35	Fensulfothion	4.000	3.629	90.72	20-105
	37	Phosmet / EPN	8.000	7.011	87.64	36-119
	38	Famphur	4.000	3.376	84.40	61-108
	39	Azinphos-methyl	4.000	3.000	74.99	55-103
	40	Azinphos-ethyl	4.000	3.319	82.98	36-119
	41	Coumaphos	4.000	3.495	87.38	36-119
S	42	Merphos	4.000	2.844	71.10	36-119
M	43	Total Demeton	4.000	3.406	85.15	47-100

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AC Client Smp ID: LCS
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCS
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 Chlormefos	2.000	1.502	75.08	48-114
$ 34 Triphenyl phosphat	2.000	1.779	88.93	50-150


Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\020F2001.D
Date : 21-JUL-2009 21:40
Client ID: LCS
Sample Info: LGHN01AC,LCS
Column phase: RTx-OPPest
Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\020F2001.D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Chlormefos
-Mevinphos
-Demeton-O
-Thionazin
-Ethoprop
-Naled
-Sulfotepp
-Tributylphosphate
-Simazine
-Diazinon
-Propazine
-Disulfoton
-Demeton-S
-Dimethoate
-Ronnel
-Chlorpyrifos
-Anilazine
-Methyl Parathion
-Malathion
-Tokuthion
-Merphos-B (Merphos Oxone)
-Carbophenothion methyl
-Carbophenothion
-Triphenyl phosphate
-Fensulfothion
-TOCP
-Famphur
-Azinphos-methyl
-Azinphos-ethyl
-Coumaphos

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\021F2101.D
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Inj Date : 21-JUL-2009 22:07
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AD,LCSD
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 12:19 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 21 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	1 o,o,o-TEPT	3.171	3.163	(0.179)	182811	1.33182	2.664
	2 Dichlorvos	4.008	4.002	(0.226)	137388	1.61183	3.224
	3 Mevinphos	5.666	5.670	(0.319)	60480	1.29169	2.583
$	4 Chlormefos	5.748	5.745	(0.324)	87029	0.81535	1.631
	5 Thionazin	7.409	7.407	(0.417)	144544	1.48386	2.968
	6 Demeton-O	7.544	7.542	(0.425)	104717	1.13101	2.262
	7 Ethoprop	7.749	7.753	(0.436)	142094	1.66458	3.329
	8 Naled	7.951	7.952	(0.448)	33739	1.65451	3.309
*	9 Tributylphosphate	8.023	8.072	(1.000)	166460	2.00000	
	10 Sulfotepp	8.329	8.327	(0.469)	172794	1.38632	2.773
	11 Phorate	8.419	8.417	(0.474)	114554	1.29581	2.592
	12 Dimethoate	8.549	8.552	(0.481)	132840	1.29354	2.587
	13 Demeton-S	8.736	8.747	(0.492)	11344	0.15233	0.3047
	14 Simazine	8.814	8.815	(0.496)	53981	1.59483	3.190
	15 Atrazine	8.981	8.983	(0.506)	54646	1.37232	2.745
	16 propazine	9.124	9.127	(0.514)	48609	1.32299	2.646
	17 Disulfoton	9.744	9.743	(0.548)	81178	1.33961	2.679
	18 Diazinon	9.783	9.782	(0.551)	143424	1.51031	3.021
	19 Methyl Parathion	10.591	10.588	(0.596)	99569	1.65329	3.306
	20 Ronnel	11.111	11.108	(0.625)	94619	1.51989	3.040
	21 Malathion	11.666	11.665	(0.657)	76574	1.33230	2.665(R)
	22 Fenthion	11.794	11.792	(0.664)	87843	1.43487	2.870

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Parathion	11.881	11.877	(0.669)	96607	1.48275	2.966
	24 Chlorpyrifos	11.929	11.925	(0.671)	122539	1.55452	3.109
	25 Trichloronate	12.349	12.345	(0.695)	98463	1.39760	2.795
	26 Anilazine	12.668	12.663	(0.713)	9549	1.67229	3.344
	27 Merphos-A (Merphos)	13.041	13.038	(0.734)	245	0.00417	0.008336
	28 Tetrachlorvinphos (Stirophos)	13.664	13.667	(0.769)	62517	1.60030	3.200
	29 Tokuthion	14.281	14.278	(0.804)	104165	1.54237	3.085
	30 Merphos-B (Merphos Oxone)	14.484	14.490	(0.815)	108119	6.82206	13.64(A)
	31 Carbophenothion-methyl	15.063	15.058	(0.848)	81437	1.54338	3.087
	32 Fensulfothion	15.201	15.205	(0.856)	87388	1.60521	3.210
	33 Bolstar / Famphur	15.931	15.930	(0.897)	203863	3.15530	6.310
	34 Carbophenothion	16.079	16.075	(0.905)	103028	1.58950	3.179
$	35 Triphenyl phosphate	16.614	16.615	(0.935)	39539	0.80270	1.605
	36 Phosmet	16.869	16.868	(0.950)	91276	1.64521	3.290
	37 EPN	17.059	17.058	(0.960)	87785	1.66606	3.332
	38 Azinphos-methyl	17.394	17.392	(0.979)	89821	1.51934	3.039
*	39 TOCP	17.766	17.767	(1.000)	97427	2.00000	
	40 Azinphos-ethyl	17.844	17.843	(1.004)	105815	1.57048	3.141
	41 Coumaphos	18.291	18.290	(1.030)	77901	1.63374	3.267
S	42 Merphos				108364	1.45972	2.919
M	43 Total Demeton				116061	1.28334	2.567

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 021F2101.D
Lab Smp Id: LGMN01AD
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: LCSD
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	152634	76317	305268	166460	9.06
39 TOCP	85572	42786	171144	97427	13.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.02	7.52	8.52	8.02	0.01
39 TOCP	17.77	17.27	18.27	17.77	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCSD
SpikeList File: full1DFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

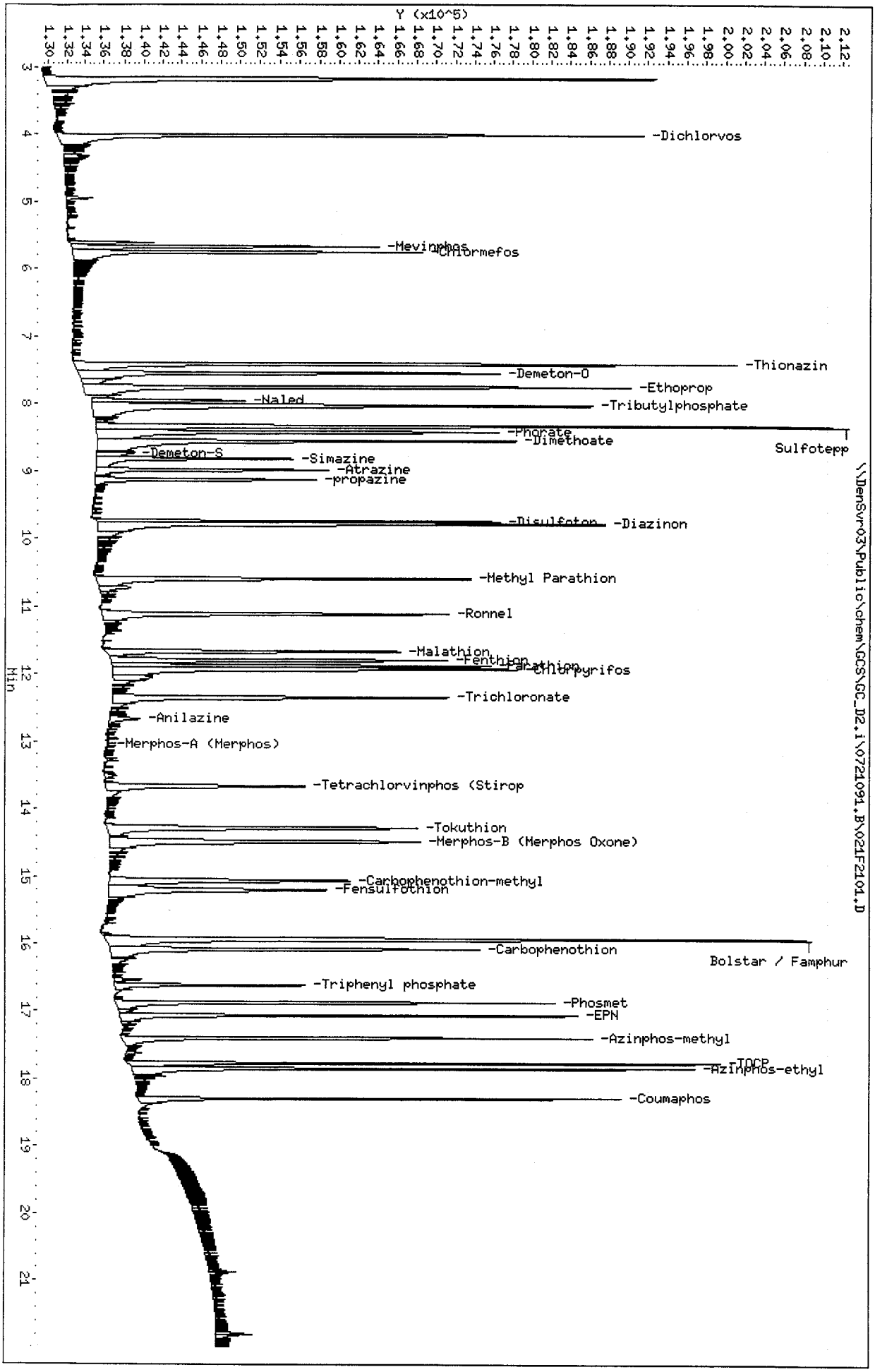
	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	1	o,o,o-TEPT	4.000	2.664	66.59	36-119
	2	Dichlorvos	4.000	3.224	80.59	50-120
	3	Mevinphos	4.000	2.583	64.58	35-108
$	4	Chlormefos	2.000	1.631	81.54	48-114
	5	Thionazin	4.000	2.968	74.19	65-116
	7	Ethoprop	4.000	3.329	83.23	65-108
	8	Naled	4.000	3.309	82.73	36-119
	10	Sulfotepp	4.000	2.773	69.32	69-103
	11	Phorate	4.000	2.592	64.79	62-104
	12	Dimethoate	4.000	2.587	64.68	28-115
	14	Simazine	4.000	3.190	79.74	47-109
	15	Atrazine	4.000	2.745	68.62	36-119
	16	propazine	4.000	2.646	66.15	36-119
	17	Disulfoton	4.000	2.679	66.98	36-119
	18	Diazinon	4.000	3.021	75.52	36-119
	19	Methyl Parathion	4.000	3.306	82.66	68-119
	20	Ronnel	4.000	3.040	75.99	62-115
	21	Malathion	4.000	2.665	66.62*	67-115
	22	Fenthion	4.000	2.870	71.74	36-119
	23	Parathion	4.000	2.966	74.14	36-119
	24	Chlorpyrifos	4.000	3.109	77.73	36-119
	25	Trichloronate	4.000	2.795	69.88	36-119
	26	Anilazine	4.000	3.344	83.61	47-115
	28	Tetrachlorvinphos	4.000	3.200	80.01	36-119
	29	Tokuthion	4.000	3.085	77.12	36-119
	31	Carbophenothion-me	4.000	3.087	77.17	36-119
	32	Fensulfothion	4.000	3.210	80.26	61-115
	33	Bolstar / Famphur	8.000	6.310	78.88	36-119
	34	Carbophenothion	4.000	3.179	79.47	36-119
$	35	Triphenyl phosphat	2.000	1.605	80.27	50-150
	36	Phosmet	4.000	3.290	82.26	36-119
	37	EPN	4.000	3.332	83.30	36-119
	38	Azinphos-methyl	4.000	3.039	75.97	55-115
	40	Azinphos-ethyl	4.000	3.141	78.52	36-119
	41	Coumaphos	4.000	3.267	81.69	62-115
S	42	Merphos	4.000	2.919	72.99	36-119
M	43	Total Demeton	4.000	2.567	64.17	47-115

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCSD
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Chlormefos	2.000	1.631	81.54	48-114
$ 35 Triphenyl phosphat	2.000	1.605	80.27	50-150



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\021F2101.D
Date : 21-JUL-2009 22:07
Client ID: LCSD
Sample Info: LGMN01AD,LCSD
Column phase: RTx-1MS
Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\021F2101.D
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Inj Date : 21-JUL-2009 22:07
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGMN01AD,LCSD
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 12:30 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 21 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1000.000	Volume of Sample Extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	1 o,o,o-TEPT	4.653	4.647	(0.248)	170559	1.56954	3.139
	2 Dichlorvos	6.456	6.452	(0.344)	148449	1.74951	3.499
$	3 Chlormefos	7.284	7.280	(0.389)	64668	0.75708	1.514
	4 Mevinphos	9.121	9.120	(0.487)	82227	1.43859	2.877
	5 Demeton-O	9.614	9.610	(0.513)	78112	1.43416	2.868
	6 Thionazin	9.863	9.860	(0.526)	136164	1.59302	3.186
	7 Ethoprop	10.378	10.377	(0.554)	103332	1.61787	3.236
	8 Phorate	10.409	10.404	(0.555)	96274	1.29986	2.600
	9 Naled	10.811	10.809	(0.577)	26323	1.54549	3.091
	10 Sulfotepp	10.889	10.885	(0.581)	153582	1.37487	2.750(A)
*	11 Tributylphosphate	10.998	11.010	(1.000)	145891	2.00000	
	12 Simazine	11.271	11.269	(0.601)	37638	2.35252	4.705(A)
	13 Diazinon	11.409	11.407	(0.609)	92126	1.54740	3.095
	14 Atrazine	11.451	11.449	(0.611)	48440	1.61515	3.230(A)
	15 Propazine	11.613	11.612	(0.619)	39544	1.44156	2.883
	16 Disulfoton	11.908	11.904	(0.635)	87585	1.48675	2.974
	17 Demeton-S	11.978	11.989	(0.639)	3222	0.16247	0.3249(R)
	18 Dimethoate	13.126	13.122	(0.700)	93459	1.18371	2.367
	19 Ronnel	13.429	13.424	(0.716)	93613	1.76149	3.523
	20 Merphos-A (Merphos)	13.548	13.520	(1.232)	2014	0.03810	0.07619(aA)
	21 Chlorpyrifos	14.243	14.239	(0.760)	88127	1.63492	3.270
	22 Fenthion	14.494	14.490	(0.773)	77260	1.54535	3.091

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23 Trichloronate	14.536	14.534	(0.775)	102438	1.50786	3.016
	24 Anilazine	15.046	15.039	(0.803)	8464	1.83409	3.668
	25 Methyl Parathion	15.361	15.359	(0.819)	90930	1.68469	3.369
	26 Malathion	15.588	15.584	(0.832)	69863	1.38169	2.763
	27 Tokuthion	16.231	16.229	(0.866)	85717	1.44788	2.896
	28 Parathion	16.383	16.385	(0.874)	80143	1.50687	3.014
	29 Merphos-B (Merphos Oxone)	16.416	16.406	(1.493)	104614	6.51806	13.04(A)
	30 Tetrachlorvinphos (stirophos)	16.881	16.882	(0.901)	59221	1.72132	3.443
	31 Carbophenothion methyl	16.986	16.984	(0.906)	76043	1.54206	3.084
	32 Bolstar	17.353	17.352	(0.926)	82666	1.59145	3.183
	33 Carbophenothion	17.434	17.434	(0.930)	86980	1.70290	3.406(A)
$	34 Triphenyl phosphate	18.203	18.202	(0.971)	36179	0.86317	1.726
	35 Fensulfothion	18.483	18.484	(0.986)	60765	1.57893	3.158
*	36 TOCP	18.746	18.747	(1.000)	84014	2.00000	
	37 Phosmet / EPN	18.836	18.839	(1.005)	145433	3.35904	6.718
	38 Famphur	18.939	18.942	(1.010)	90060	1.63437	3.269
	39 Azinphos-methyl	19.074	19.079	(1.018)	76242	1.51250	3.025
	40 Azinphos-ethyl	19.288	19.294	(1.029)	81238	1.69216	3.384
	41 Coumaphos	20.239	20.247	(1.080)	64729	1.75360	3.507
S	42 Merphos				106628	1.52287	3.046
M	43 Total Demeton				81334	1.59662	3.193

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 021F2101.D
Lab Smp Id: LGMN01AD
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: LCSD
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
11 Tributylphosphate	155041	77521	310082	145891	-5.90
36 TOCP	72253	36127	144506	84014	16.28

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	0.01
36 TOCP	18.75	18.25	19.25	18.75	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCSD
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

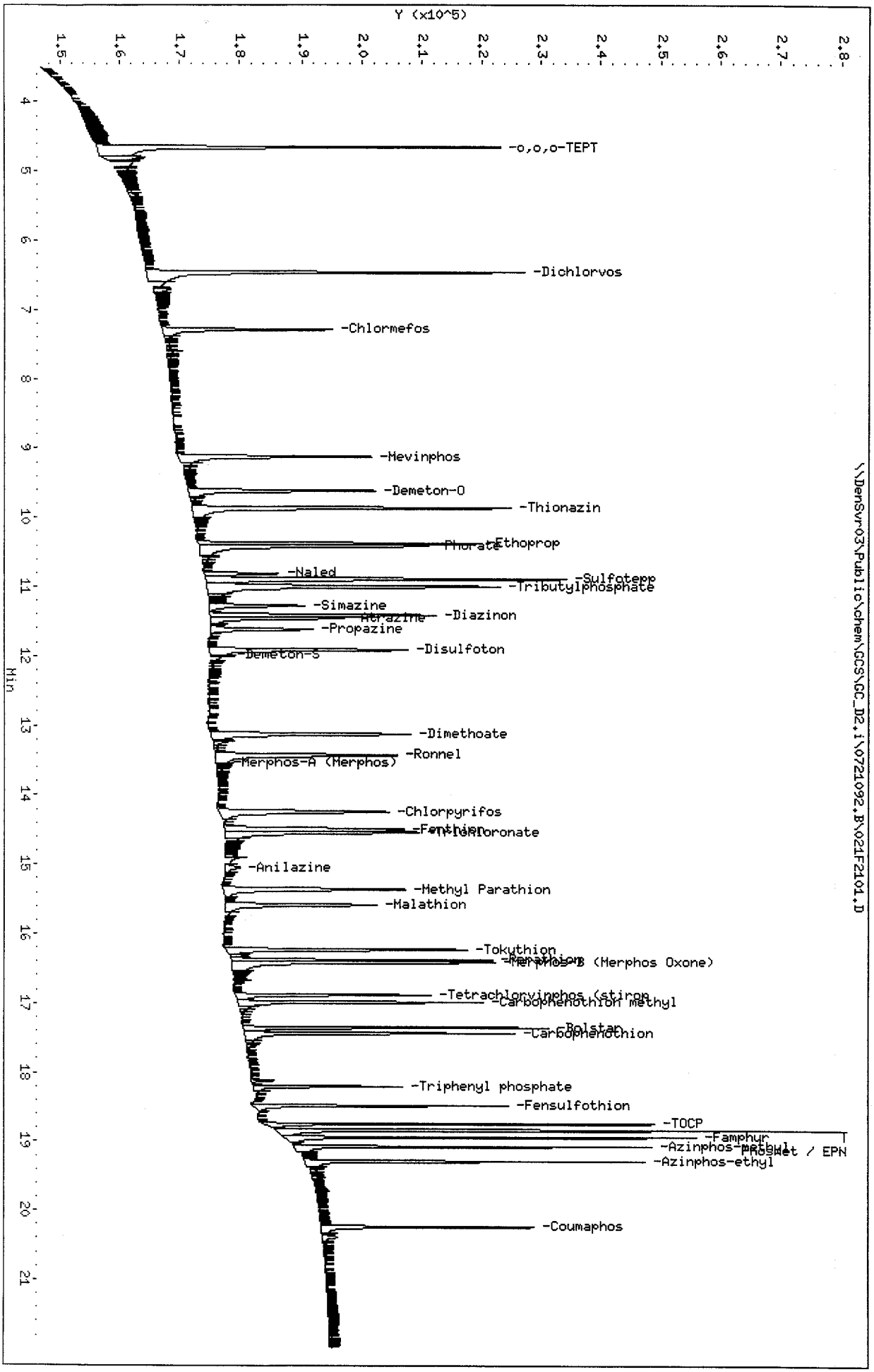
	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	1	o,o,o-TEPT	4.000	3.139	78.48	36-119
	2	Dichlorvos	4.000	3.499	87.48	50-120
$	3	Chlormefos	2.000	1.514	75.71	58-114
	4	Mevinphos	4.000	2.877	71.93	35-108
	5	Demeton-O	2.800	2.868	102.44	36-119
	6	Thionazin	4.000	3.186	79.65	65-116
	7	Ethoprop	4.000	3.236	80.89	36-119
	8	Phorate	4.000	2.600	64.99	36-119
	9	Naled	4.000	3.091	77.27	36-119
	10	Sulfotepp	4.000	2.750	68.74	36-119
	12	Simazine	4.000	4.705	117.63	36-119
	13	Diazinon	4.000	3.095	77.37	36-119
	14	Atrazine	4.000	3.230	80.76	36-119
	15	Propazine	4.000	2.883	72.08	36-119
	16	Disulfoton	4.000	2.974	74.34	61-103
	17	Demeton-S	1.200	0.3249	27.08*	36-119
	18	Dimethoate	4.000	2.367	59.19	28-82
	19	Ronnel	4.000	3.523	88.07	62-99
	21	Chlorpyrifos	4.000	3.270	81.75	66-101
	22	Fenthion	4.000	3.091	77.27	36-119
	23	Trichloronate	4.000	3.016	75.39	36-119
	24	Anilazine	4.000	3.668	91.70	36-119
	25	Methyl Parathion	4.000	3.369	84.23	36-119
	26	Malathion	4.000	2.763	69.08	36-119
	27	Tokuthion	4.000	2.896	72.39	36-119
	28	Parathion	4.000	3.014	75.34	36-119
	30	Tetrachlorvinphos	4.000	3.443	86.07	36-119
	31	Carbophenothion me	4.000	3.084	77.10	36-119
	32	Bolstar	4.000	3.183	79.57	36-119
	33	Carbophenothion	4.000	3.406	85.14	36-119
$	34	Triphenyl phosphat	2.000	1.726	86.32	36-119
	35	Fensulfothion	4.000	3.158	78.95	20-105
	37	Phosmet / EPN	8.000	6.718	83.98	36-119
	38	Famphur	4.000	3.269	81.72	61-108
	39	Azinphos-methyl	4.000	3.025	75.62	55-103
	40	Azinphos-ethyl	4.000	3.384	84.61	36-119
	41	Coumaphos	4.000	3.507	87.68	36-119
S	42	Merphos	4.000	3.046	76.14	36-119
M	43	Total Demeton	4.000	3.193	79.83	47-100

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: D9G170000
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGMN01AD Client Smp ID: LCSD
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: LCSD
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 Chlormefos	2.000	1.514	75.71	48-114
$ 34 Triphenyl phosphat	2.000	1.726	86.32	50-150



Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0721092,B\021F2101.D
Date : 21-JUL-2009 22:07
Client ID: LCSD
Sample Info: LGHN01AD,LCSD
Column phase: RTx-OPPest
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\023F2301.D
Lab Smp Id: LGLFG1AA Client Smp ID: TR-8B
Inj Date : 21-JUL-2009 23:02
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGLFG1AA,231-1
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Meth Date : 22-Jul-2009 12:19 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1052.000	Volume of Sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
1	o,o,o-TEPT	Compound Not Detected.					
2	Dichlorvos	Compound Not Detected.					
3	Mevinphos	Compound Not Detected.					
$ 4	Chlormefos	5.748	5.745	(0.324)	57765	0.49078	0.9330
5	Thionazin	Compound Not Detected.					
6	Demeton-O	Compound Not Detected.					
7	Ethoprop	Compound Not Detected.					
8	Naled	7.915	7.952	(0.445)	58	0.19493	0.3706
* 9	Tributylphosphate	8.026	8.072	(1.000)	156648	2.00000	
10	Sulfotepp	Compound Not Detected.					
11	Phorate	Compound Not Detected.					
12	Dimethoate	Compound Not Detected.					
13	Demeton-S	Compound Not Detected.					
14	Simazine	Compound Not Detected.					
15	Atrazine	Compound Not Detected.					
16	propazine	Compound Not Detected.					
17	Disulfoton	Compound Not Detected.					
18	Diazinon	Compound Not Detected.					
19	Methyl Parathion	Compound Not Detected.					
20	Ronnel	Compound Not Detected.					
21	Malathion	Compound Not Detected.					
22	Fenthion	Compound Not Detected.					

		Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	23	Parathion	Compound Not Detected.					
	24	Chlorpyrifos	11.943	11.925	(0.672)	121	0.00139	0.002646(a)
	25	Trichloronate	Compound Not Detected.					
	26	Anilazine	Compound Not Detected.					
	27	Merphos-A (Merphos)	13.026	13.038	(0.733)	128	0.00197	0.003754
	28	Tetrachlorvinphos (Stirophos)	13.665	13.667	(0.769)	57	0.00132	0.002516
	29	Tokuthion	Compound Not Detected.					
	30	Merphos-B (Merphos Oxone)	14.490	14.490	(0.816)	54	0.02397	0.04556
	31	Carbophenothion-methyl	Compound Not Detected.					
	32	Fensulfothion	Compound Not Detected.					
	33	Bolstar / Famphur	Compound Not Detected.					
	34	Carbophenothion	Compound Not Detected.					
$	35	Triphenyl phosphate	16.615	16.615	(0.935)	36614	0.67409	1.282
	36	Phosmet	Compound Not Detected.					
	37	EPN	Compound Not Detected.					
	38	Azinphos-methyl	Compound Not Detected.					
*	39	TOCP	17.766	17.767	(1.000)	107432	2.00000	
	40	Azinphos-ethyl	Compound Not Detected.					
	41	Coumaphos	Compound Not Detected.					
S	42	Merphos				182	0.00222	0.004227
M	43	Total Demeton	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 023F2301.D
Lab Smp Id: LGLFG1AA
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: TR-8B
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	152634	76317	305268	156648	2.63
39 TOCP	85572	42786	171144	107432	25.55

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.02	7.52	8.52	8.03	0.05
39 TOCP	17.77	17.27	18.27	17.77	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Northgate Environmen16-JUL-2009 00:00 Client SDG: 8304614
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGLFG1AA Client Smp ID: TR-8B
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\8141A-1.m
Misc Info: IS - GSV0633-09

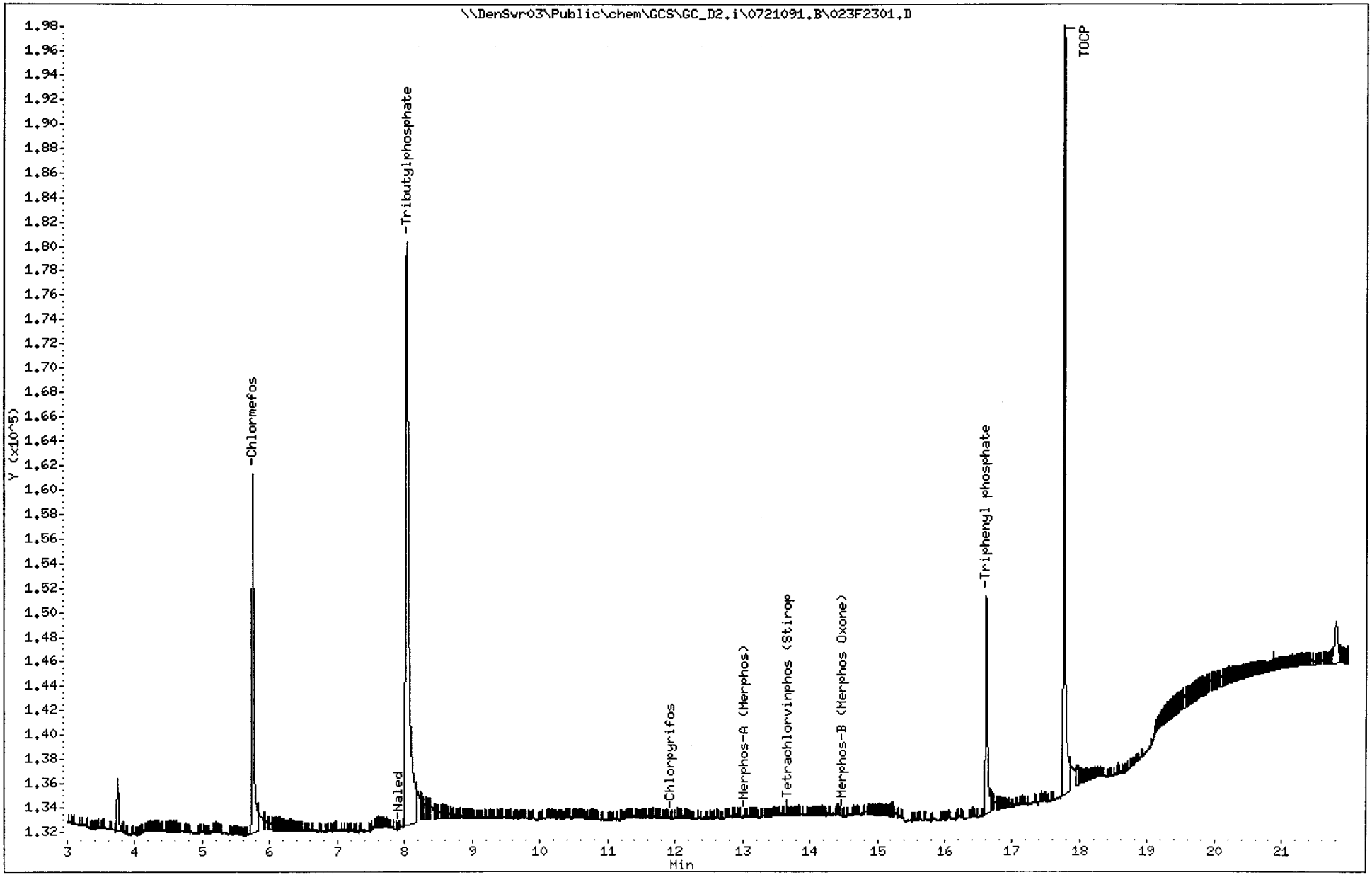
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Chlormefos	1.901	0.9330	49.08	48-114
$ 35 Triphenyl phosphat	1.901	1.282	67.41	50-150

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721091.B\023F2301.D
Date : 21-JUL-2009 23:02
Client ID: TR-8B
Sample Info: LGLFG1AA,231-1

Instrument: GC_D2.i

Operator: MPK/TLW
Column diameter: 0.32

Column phase: RTx-1MS



TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\023F2301.D
Lab Smp Id: LGLFG1AA Client Smp ID: TR-8B
Inj Date : 21-JUL-2009 23:02
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : LGLFG1AA,231-1
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Meth Date : 22-Jul-2009 12:30 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	2000.000	Final Extract Volume (uL)
Vs	1052.000	Volume of Sample Extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
1	o,o,o-TEPT	Compound Not Detected.					
2	Dichlorvos	Compound Not Detected.					
$ 3	Chlormefos	7.285	7.280	(0.389)	52429	0.57039	1.084
4	Mevinphos	Compound Not Detected.					
5	Demeton-O	Compound Not Detected.					
6	Thionazin	Compound Not Detected.					
7	Ethoprop	Compound Not Detected.					
8	Phorate	Compound Not Detected.					
9	Naled	10.806	10.809	(0.576)	153	0.27563	0.5240
10	Sulfotepp	10.915	10.885	(0.582)	58	5e-004	0.0009173(aA)
* 11	Tributylphosphate	11.000	11.010	(1.000)	140143	2.00000	
12	Simazine	11.263	11.269	(0.601)	1743	0.10124	0.1925(aA)
13	Diazinon	Compound Not Detected.					
14	Atrazine	11.456	11.449	(0.611)	1500	0.27220	0.5175(A)
15	Propazine	Compound Not Detected.					
16	Disulfoton	Compound Not Detected.					
17	Demeton-S	11.980	11.989	(0.639)	143	0.12087	0.2298
18	Dimethoate	Compound Not Detected.					
19	Ronnel	Compound Not Detected.					
20	Merphos-A (Merphos)	13.510	13.520	(1.228)	286	0.00563	0.01071(aA)
21	Chlorpyrifos	Compound Not Detected.					
22	Fenthion	Compound Not Detected.					

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/L)
	23 Trichloronate	14.563	14.534	(0.777)	80	0.10628	0.2020
	24 Anilazine	Compound Not Detected.					
	25 Methyl Parathion	Compound Not Detected.					
	26 Malathion	15.588	15.584	(0.832)	56	0.00103	0.001957(a)
	27 Tokuthion	Compound Not Detected.					
	28 Parathion	16.418	16.385	(0.876)	351	0.00613	0.01166(a)
	29 Merphos-B (Merphos Oxone)	Compound Not Detected.					
	30 Tetrachlorvinphos (stirophos)	Compound Not Detected.					
	31 Carbophenothion methyl	Compound Not Detected.					
	32 Bolstar	Compound Not Detected.					
	33 Carbophenothion	Compound Not Detected.					
$	34 Triphenyl phosphate	18.203	18.202	(0.971)	35031	0.77667	1.476
	35 Fensulfothion	Compound Not Detected.					
*	36 TOCP	18.746	18.747	(1.000)	90408	2.00000	
	37 Phosmet / EPN	Compound Not Detected.					
	38 Famphur	Compound Not Detected.					
	39 Azinphos-methyl	Compound Not Detected.					
	40 Azinphos-ethyl	Compound Not Detected.					
	41 Coumaphos	Compound Not Detected.					
S	42 Merphos	Compound Not Detected.					
M	43 Total Demeton				143	0.12087	0.2298

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: GC_D2.i
Lab File ID: 023F2301.D
Lab Smp Id: LGLFG1AA
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

Calibration Date: 21-JUL-2009
Calibration Time: 20:45
Client Smp ID: TR-8B
Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
11 Tributylphosphate	155041	77521	310082	140143	-9.61
36 TOCP	72253	36127	144506	90408	25.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.00	10.50	11.50	11.00	0.02
36 TOCP	18.75	18.25	19.25	18.75	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Northgate Environmen16-JUL-2009 00:00 Client SDG: 8304614
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LGLFG1AA Client Smp ID: TR-8B
Level: LOW Operator: MPK/TLW
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: fullDFCwater.spk Quant Type: ISTD
Sublist File: 8141A.sub
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\8141A-2.m
Misc Info:

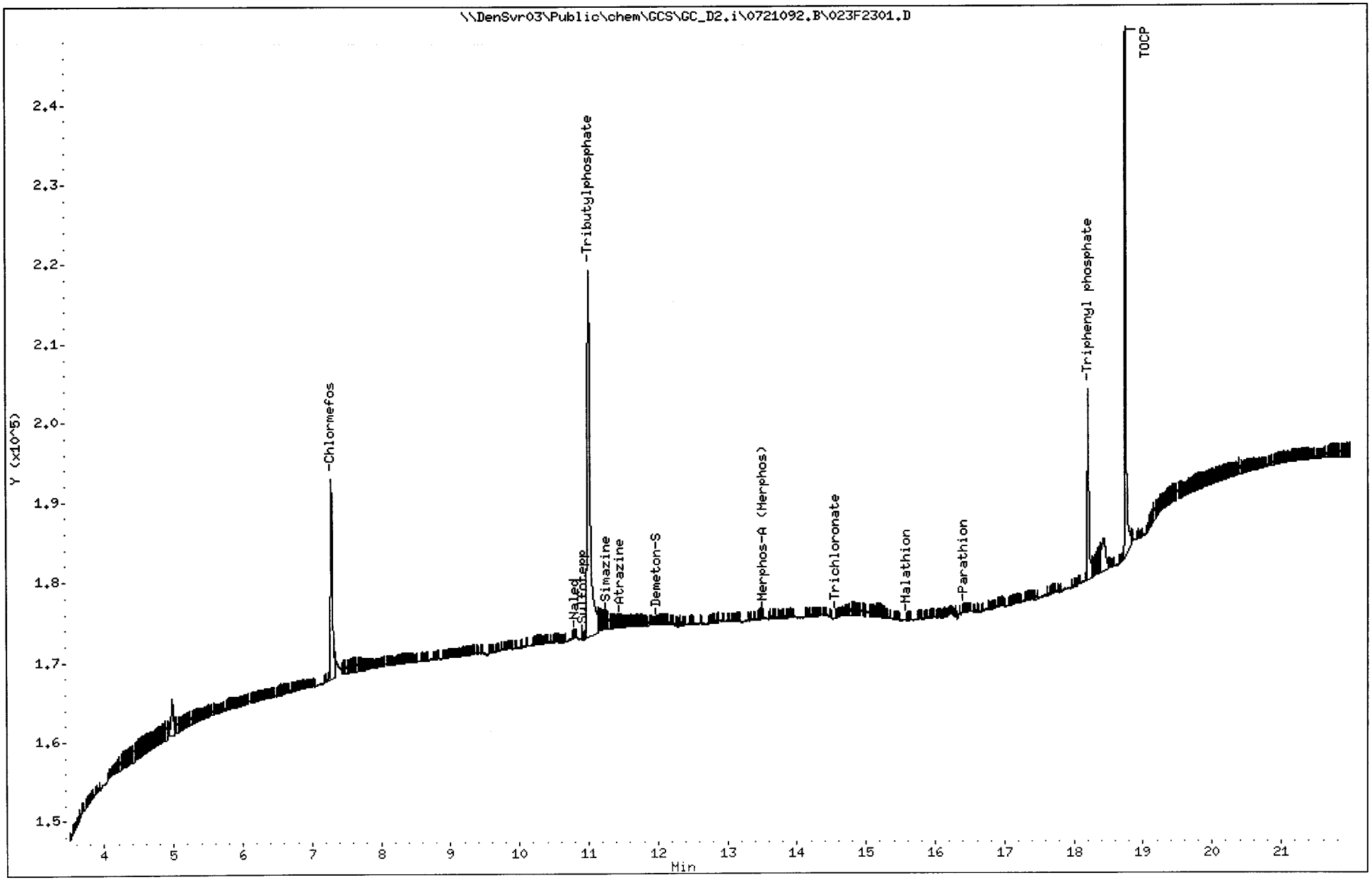
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 Chlormefos	1.901	1.084	57.04	48-114
$ 34 Triphenyl phosphat	1.901	1.476	77.67	50-150

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0721092.B\023F2301.D
Date : 21-JUL-2009 23:02
Client ID: TR-8B
Sample Info: LGLFG1AA,231-1

Instrument: GC_D2.i

Operator: MPK/TLW
Column diameter: 0.32

Column phase: RTx-OPPest



GC SEMIVOLATILE
INITIAL CALIBRATION DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

GC and HPLC ICAL Review Checklist

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

608 8081 8082 8151 (8141)
TPH/DRO Other SV 6014
8310 8330 Other HPLC

601 602 8021 BTEX
TPH/GRO Other Volatile GC

Calibration Date: 062609
Instrument ID: D2

Review Items	--- Level 1 --- Yes	No	N/A	Level 2	Comments
Initial Calibration					
1. Are correct data files used?	✓			✓	
2. Is there a sufficient number of calibration points used?	✓			✓	
3. Are reasons for removal of points documented?	✓			✓	Better linearity
4. Is linearity acceptable, 8000 Series: linear least-squares regression with $r \geq 0.990$, (DOD projects require $r \geq 0.995$) quadratic fit COD $r^2 > 0.990$, or average response factors with RSD ≤ 20%? 600 Series: < 10% RSD or linear regression	✓			✓	
5. Are the correct RT windows applied to the ICAL integration?	✓			✓	
6. Are DDT & Endrin breakdown < 15%?			✓	NA	
7. Is each manual integration completely documented, signed and appropriate?	✓			✓	
8. Is traceability of standards properly documented?	✓			✓	
9. Was second level hand calculation performed? (document analyte checked)	-----	-----	-----	✓	
10. Was second-source ICV performed & recovery 85-115%? 6/30/09	✗	✓		✓	Primary Include %R Naled -40.1%, Simazine +31.1%, Disulfoton -20.6% Malathion -18.8%, Anilazine -49.2%, Carbophenothion-methyl -32.3%, Phosmet -17.6% Secondary Include %R Naled -47.6%, Simazine +80.1%, Anilazine -39.9%, Malathion -23.2%, Carbophenothion-methyl -37.7%, Merphos -19.3%

1st Level Reviewer: [signature] Date: 6/30/09
2nd Level Reviewer: [signature] Date: 6/30/09

quence: C:\HPCHEM\1\SEQUENCE\062609.S

Sequence Table (Front Injector):

Quantification Part:

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	Vial 1	PRIMER				
2	Vial 2	HEXANE				
3	Vial 3	OPP L7 GSV0634				
4	Vial 4	OPP L6 GSV0637				
5	Vial 5	OPP L5 GSV0635				
6	Vial 6	OPP L4 GSV0638				
7	Vial 7	OPP L3 GSV0639				
8	Vial 8	OPP L2 GSV0640				
9	Vial 9	OPP L1 GSV0641				
10	Vial 10	OPP SS GSV0633				
11	Vial 11	GSV075309 SPK				
12	Vial 12	LE2931AA,MB				
13	Vial 13	LE2931AC,LCS				
14	Vial 14	LE2931AD,LCSD				
15	Vial 15	LEQA91AC,222-15				10
16	Vial 16	LEQA91AC,222-15				3
17	Vial 17	LEQCQ1AC,222-18				2
18	Vial 18	LERD61AD,377-1				
19	Vial 19	LERD81AH,377-3				
20	Vial 20	LERN71AF,115-1				
21	Vial 21	LERPQ1AF,115-2				
22	Vial 22	LERPX1AF,115-3				
23	Vial 23	LE1F91AJ,138-1				
24	Vial 24	OPP L5 GSV0635				
25	Vial 25	LE29M1AA,MB				
26	Vial 26	LE29M1AC,LCS				
27	Vial 27	LE29M1AD,LCSD				
28	Vial 28	LEQA91AA,222-15				10
29	Vial 29	LEQA91AA,222-15				3
30	Vial 30	LEQCQ1AA,222-18				2
31	Vial 31	LFARC1AA,MB				
32	Vial 32	LFARC1AC,LCS				
33	Vial 33	LFARC1AD,LCSD				
34	Vial 34	LEKL02AA,185-1				
35	Vial 35	LE29L1AA,MB				
36	Vial 36	LE29L1AC,LCS				
37	Vial 37	LE29L1AD,LCSD				
38	Vial 38	LERCV1AA,370-1				
39	Vial 39	LEWJG1AA,143-1				
40	Vial 40	OPP L5 GSV0635				
41	Vial 41	LE5PX1AA,MB				
42	Vial 42	LE5PX1AC,LCS				
43	Vial 43	LE5PX1AD,LCSD				
44	Vial 44	LE39F1AA,179-1				
45	Vial 45	LE3PF1AA,179-2				
46	Vial 46	LE39L1AA,179-3				
47	Vial 47	LFARL1AA,MB				
48	Vial 48	LFARL1AC,LCS				
49	Vial 49	LFARL1AD,LCSD				
50	Vial 50	LEKLE2AE,180-2				
51	Vial 51	LEKLF2AE,180-3				
52	Vial 52	LEKLL2AE,180-4				
53	Vial 53	LEKLQ2AE,180-5				
54	Vial 54	LENR72AD,322-1				
55	Vial 55	LEPG32AJ,161-1				
56	Vial 56	OPP L5 GSV0635				
57	Vial 57	LFD4N1AA,MB				
58	Vial 58	LFD4N1AC,LCS				

9168144 9168147 9170431 9168145 9168553 9170430 9173102

RR

Sequence: C:\HPCHEM\1\SEQUENCE\062609.S

Line	Location	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
59	Vial 59	LFD4N1AD,LCSD				
60	Vial 60	LE3041AJ,158-1				
61	Vial 61	LFD4W1AA,MB				
62	Vial 62	LFD4W1AC,LCS				
63	Vial 63	LFD4W1AD,LCSD				
64	Vial 64	LE7EE1AA,266-2				
65	Vial 65	LE9Q61AA,216-2				
66	Vial 66	LE9RA1AA,216-3				
67	Vial 67	LFC4Q1AD,199-2				
68	Vial 68	OPP L5 GSV0635				
69	Vial 69	LFAN01AA,MB				
70	Vial 70	LFAN01AC,LCS				
71	Vial 71	LFAN01AD,LCSD				
72	Vial 72	LE4291AA,273-1				
73	Vial 73	LE4291AD,273-1S				
74	Vial 74	LE4291AE,273-1D				
75	Vial 75	LE9PJ1AA,215-1				
76	Vial 76	OPP L5 GSV0635				
77	Vial 77	OPP L1 GSV0641				
78	Vial 100	HEXANE/ACETONE				

Sequence Table (Back Injector):

No entries - empty table!

Report Date : 30-Jun-2009 12:45 Page 1

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Calibration File Names:
Level 1: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\009F0901.D
Level 2: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\008F0801.D
Level 3: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Level 4: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
Level 5: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Level 6: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Level 7: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D

SEE CALIBRATION HISTORY

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
1 o,o,o-TEPT	3.11591	2.63737	2.67945	2.89676	2.71623	2.90430					
	2.77446						AVRG		2.81778		5.91149
2 Dichlorvos	2.01706	1.62225	1.58545	1.76366	1.71981	1.74982					
	1.79032						AVRG		1.74977		7.99554
3 Mevinphos	1.01774	0.91295	0.90158	1.01760	0.95159	0.98250					
	0.94429						AVRG		0.96118		4.85992
5 Thionazin	2.12707	1.94606	1.94866	2.08214	1.96051	2.00095					
	1.93224						AVRG		1.99966		3.79706

Table of Contents

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
6 Demeton-O	9836	17553	30145	62341	96004	113108						1/x
	165003						WLINR	-0.01288	1.85831		0.99594	
7 Ethoprop	1.93480	1.70823	1.62324	1.73203	1.74110	1.78272						
	1.74432						AVRG		1.75235		5.38512	
8 Naled	1992	6103	15042	36940	67594	90892						
	121152						WLINR	0.09632	0.47378		0.98961	<- 1/x r=0.995
10 Sulfotepp	34658	70885	131347	259970	393078	486417						1/x
	609341						WLINR	-0.03469	2.43674		0.99856	
11 Phorate	2.02801	1.82946	1.73796	1.82370	1.76374	1.79146						
	1.72902						AVRG		1.81476		5.60901	
12 Dimethoate	1.89561	1.76866	2.07434	2.25696	2.23554	2.30994						
	2.21598						AVRG		2.10815		9.72697	
13 Demeton-S	1.49306	1.46224	1.49173	1.58543	1.55216	1.58919						
	1.52702						AVRG		1.52869		3.21407	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
14 Simazine	4819	16248	29382	64611	115426	147784						1/x^2
	190219						WLINR	0.03988	0.73140		0.99336	
15 Atrazine	0.70185	0.76532	0.75073	0.84628	0.85434	0.90844						
	0.89508						AVRG		0.81743		9.61085	
16 propazine	0.73887	0.70136	0.69239	0.78178	0.75651	0.81417						
	0.79462						AVRG		0.75424		6.13423	
17 Disulfoton	15404	33208	61920	127893	193050	247845						1/x
	290419						WLINR	-0.01928	1.20917		0.99576	
18 Diazinon	2.20234	1.83553	1.83772	2.01856	1.98676	1.84115						
	1.92388						AVRG		1.94942		6.88114	
19 Methyl Parathion	1.22644	1.10389	1.13741	1.32395	1.30344	1.29686						
	1.26213						AVRG		1.23630		6.92144	
20 Ronnel	1.42863	1.23369	1.21320	1.29342	1.24446	1.34650						
	1.18584						AVRG		1.27796		6.65504	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
21 Malathion	15443	30581	57103	119836	186013	228260					
	283462						WLINR	-0.02066	1.14436		0.99783
22 Fenthion	1.46442	1.18458	1.16481	1.29096	1.25584	1.25506					
	1.18151						AVRG		1.25674		8.19381
23 Parathion	1.42438	1.25387	1.23322	1.38998	1.36308	1.38514					
	1.31279						AVRG		1.33749		5.43501
24 Chlorpyrifos	1.85614	1.56747	1.47379	1.62915	1.61527	1.62330					
	1.56216						AVRG		1.61818		7.28314
25 Trichloronate	1.44751	1.42551	1.34762	1.48171	1.46256	1.52450					
	1.43428						AVRG		1.44624		3.78186
26 Anilazine	1493	2095	5311	12790	19893	29375					
	+++++						QUAD	0.02107	9.16488	-8.66056	0.99476
27 Merphos-A (Merphos)	1.24844	1.15527	1.15966	1.23989	1.21263	1.24409					
	1.18648						AVRG		1.20664		3.30523

1/x

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
28 Tetrachlorvinphos (Stirophos)	0.76814	0.74606	0.73464	0.83451	0.85233	0.85150						
	0.82648						AVRG		0.80195		6.32809	
29 Tokuthion	1.50295	1.28283	1.29501	1.44234	1.39452	1.40891						
	1.37817						AVRG		1.38639		5.62055	
30 Merphos-B (Merphos Oxone)	3884	7933	11676	34113	50056	65974						NTC
	79809						WLINR	0.01044	0.32634		0.98820	<-See Merphos
31 Carbophenothion-methyl	14924	30542	55023	105577	167145	206137						
	266724						WLINR	-0.03349	1.03813		0.99979	1/x
32 Fensulfothion	8319	23000	51304	104440	185778	229856						
	295978						WLINR	0.04728	1.18751		0.99821	1/x
33 Bolstar / Famphur	1.54988	1.27794	1.32328	1.33835	1.27633	1.28540						
	1.23307						AVRG		1.32632		7.86825	
34 Carbophenothion	1.57916	1.19992	1.27687	1.32336	1.26122	1.41398						
	1.25966						AVRG		1.33059		9.63398	

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INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

	Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
		5.0000 Level 7											
	36 Phosmet	1.22087	1.01385	1.11032	1.20586	1.12340	1.16129						
		1.13672						AVRG		1.13890		6.04111	
	37 EPN	9525	23196	48705	111165	171283	220388						$1/x^2$
		294020						WLINR	0.02456	1.11450		0.99317	
	38 Azinphos-methyl	1.19565	1.13516	1.16767	1.28235	1.23551	1.26700						
		1.21185						AVRG		1.21360		4.33999	
	40 Azinphos-ethyl	23154	43578	74071	134607	209971	253982						$1/x^2$
		318459						WLINR	-0.07409	1.26388		0.99928	
	41 Coumaphos	1.00140	0.89806	0.92250	1.01947	1.01017	1.01013						
		0.99015						AVRG		0.97884		4.92558	
S	42 Merphos	1.61523	1.45962	1.38820	1.59026	1.52873	1.58626						
		1.49925						AVRG		1.52393		5.34513	
M	43 Total Demeton	1.94415	1.66775	1.60440	1.71838	1.66174	1.66727						
		1.68503						AVRG		1.70696		6.44185	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	5.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 4 Chlormefos	2.28223	2.03679	2.00000	2.26084	2.35620	2.24671						
	2.15521							AVRG		2.19114		6.04132
$ 35 Triphenyl phosphate	1.09980	0.99217	0.96977	1.05450	0.99627	1.00900						
	0.95665							AVRG		1.01117		4.94580

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Last Edit : 30-Jun-2009 12:45 GC_D2.i

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Report Date: 30-Jun-2009 12:45

Calibration History

Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Start Cal Date: 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.20000		
26-JUN-2009 21:13	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\009F0901.D
Cal Level: 2 , Cal Amount: 0.50000		
26-JUN-2009 20:45	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\008F0801.D
Cal Level: 3 , Cal Amount: 1.00000		
26-JUN-2009 20:18	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Cal Level: 4 , Cal Amount: 2.00000		
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
Cal Level: 5 , Cal Amount: 3.00000		
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Cal Level: 6 , Cal Amount: 4.00000		
26-JUN-2009 18:55	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Cal Level: 7 , Cal Amount: 5.00000		
26-JUN-2009 18:28	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

26-JUN-2009 21:40	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\010F1001.D
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D

Report Date : 30-Jun-2009 12:58 Page 1

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INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Calibration File Names:
Level 1: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\009F0901.D
Level 2: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Level 3: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\007F0701.D
Level 4: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
Level 5: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D SEE CALIBRATION HISTORY
Level 6: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\004F0401.D
Level 7: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\003F0301.D

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	5.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
1 o,o,o-TEPT	2.92648	2.44243	2.35582	2.65851	2.57132	2.61478						
	2.53900							AVRG		2.58691		7.02274
2 Dichlorvos	1.96421	1.82228	1.84036	2.17503	2.12732	2.04712						
	2.16332							AVRG		2.01995		7.32345
4 Mevinphos	1.44354	1.24995	1.21811	1.44363	1.32123	1.40873						
	1.43954							AVRG		1.36067		7.12634
5 Demeton-O	1.19821	1.29971	1.18493	1.34261	1.38930	1.37760						
	1.28370							AVRG		1.29658		6.26552

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INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
6 Thionazin	2.15838	1.84195	1.93751	1.98059	2.08762	2.20076						
	2.03673						AVRG		2.03479		6.19054	
7 Ethoprop	1.70034	1.41105	1.44674	1.51565	1.56615	1.54046						
	1.46268						AVRG		1.52044		6.33190	
8 Phorate	1.89356	1.60276	1.58391	1.69691	1.82591	1.99241						
	1.74661						AVRG		1.76315		8.53946	
9 Naled	94.00000	1666	10859	28010	46004	58330						1/x
	78857						WLINR	0.13436	0.49080		0.99248	
10 Sulfotepp	2.79835	2.53605	2.59328	2.75080	2.67397	2.68532						
	2.57687						AVRG		2.65923		3.59851	
12 Simazine	0.36415	0.34683	0.35351	0.38559	0.39087	0.41510						
	0.41001						AVRG		0.38086		7.05346	
13 Diazinon	12067	15923	49407	98649	155648	181790						1/x
	228810						WLINR	0.01456	1.44446		0.99190	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
14 Atrazine	5427	1231	21316	49088	85997	98759					
	128612						LINR	0.11621	0.83396		0.99221
15 Propazine	4880	8102	20907	43235	72628	85745					
	110050						WLINR	0.02910	0.68050		0.99492
16 Disulfoton	1.39584	1.32983	1.36835	1.41433	1.46581	1.46415					
	1.37843						AVRG		1.40239		3.56764
17 Demeton-S	667	15766	33785	70921	121463	157195					
	175573						WLINR	0.05954	1.76807		0.99272
18 Dimethoate	1.93513	1.88284	1.72920	1.81890	1.98388	1.88204					
	1.92489						AVRG		1.87955		4.46888
19 Ronnel	1.49381	1.09752	1.14631	1.23377	1.29336	1.31702					
	1.27410						AVRG		1.26513		10.15653
20 Merphos-A (Merphos)	0.73714	0.72841	0.76463	0.71117	0.75339	0.75359					
	0.62474						AVRG		0.72472		6.56840

1/x

1/x

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
21 Chlorpyrifos	1.28253	1.15885	1.24944	1.20702	1.32365	1.38773					
	1.37311						AVRG		1.28319		6.60140
22 Fenthion	1.20874	1.15890	1.17283	1.16181	1.25398	1.18816					
	1.18668						AVRG		1.19016		2.76871
23 Trichloronate	6944	26053	49357	106326	170976	208762					
	296442						WLINR	0.05263	1.73863		0.99738
24 Anilazine	1634	2256	3581	6899	11039	13112					
	19108						LINR	-0.00058	0.10979		0.99085
25 Methyl Parathion	1.21391	1.12059	1.22102	1.33829	1.35198	1.32937					
	1.41908						AVRG		1.28489		8.00353
26 Malathion	1.23986	1.19694	1.15056	1.17724	1.17540	1.20726					
	1.27856						AVRG		1.20369		3.60449
27 Tokuthion	1.50291	1.31056	1.35261	1.35076	1.45106	1.48916					
	1.40826						AVRG		1.40933		5.28420

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INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
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Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7											
28 Parathion	1.27111	1.15628	1.24872	1.23420	1.30817	1.35972						
	1.28450						AVRG		1.26610		5.02432	
29 Merphos-B (Merphos Oxone)	3793	6271	15065	23458	40683	62127						
	65080						WLINR	-0.05169	0.21659		0.96366	<- NTC, see merphos
30 Tetrachlorvinphos (stirophos)	0.86036	0.73114	0.73243	0.80291	0.86664	0.87311						
	0.86651						AVRG		0.81902		7.82425	
31 Carbophenothion methyl	1.16513	1.02032	1.04699	1.17159	1.27808	1.26831						
	1.26700						AVRG		1.17392		9.08251	
32 Bolstar	1.33280	1.22387	1.19075	1.20601	1.27262	1.22830						
	1.20152						AVRG		1.23655		4.05030	
33 Carbophenothion	1.18442	1.13595	1.15332	1.18001	1.34689	1.22912						
	1.28180						AVRG		1.21593		6.21486	
35 Fensulfothion	0.88346	0.80409	0.88036	0.97346	0.94597	1.00424						
	0.92148						AVRG		0.91615		7.30438	

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

	Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
		5.0000 Level 7											
	37 Phosmet / EPN	19707	35826	68186	146012	207459	263604						
		330448						WLINR	-0.04262	1.00518		0.99785	1/x
	38 Famphur	1.45536	1.20800	1.18770	1.39816	1.20947	1.39569						
		1.32805						AVRG		1.31178		8.35158	
	39 Azinphos-methyl	1.25589	1.08970	1.07858	1.30240	1.20427	1.27709						
		1.19199						AVRG		1.19999		7.33978	
	40 Azinphos-ethyl	1.14013	1.11628	1.12015	1.18786	1.16269	1.14594						
		1.12699						AVRG		1.14286		2.23350	
	41 Coumaphos	0.78930	0.81655	0.85887	0.90448	0.89897	0.94628						
		0.93653						AVRG		0.87871		6.77030	
S	42 Merphos	1.56460	1.43887	1.64263	1.66880	1.73437	1.91569						
		1.70275						AVRG		1.66682		8.85773	
M	43 Total Demeton	3533	23328	47171	100663	168375	213468						
		244812						WLINR	0.06780	1.63923		0.99469	1/x

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.0000 Level 4	3.0000 Level 5	4.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7										
$ 3 Chlormefos	2.19506	1.83698	1.78322	2.03418	2.29040	2.05386					
	2.04016						AVRG		2.03341		8.83890
$ 34 Triphenyl phosphate	1.10969	0.86972	0.91132	1.07710	1.01080	0.99885					
	1.00703						AVRG		0.99779		8.47904

TestAmerica

INITIAL CALIBRATION DATA

Start Cal Date : 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Quant Method : ISTD
Target Version : 4.14
Integrator : Falcon
Method file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Last Edit : 30-Jun-2009 12:58 GC_D2.i

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response
Wt Linear	Amt = b + Rsp/ml	Response

Report Date: 30-Jun-2009 12:58

Calibration History

Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Start Cal Date: 26-JUN-2009 18:28
End Cal Date : 26-JUN-2009 21:13
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.20000		
26-JUN-2009 21:13	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\009F0901.D
Cal Level: 2 , Cal Amount: 0.50000		
26-JUN-2009 20:45	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Cal Level: 3 , Cal Amount: 1.00000		
26-JUN-2009 20:18	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\007F0701.D
Cal Level: 4 , Cal Amount: 2.00000		
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
Cal Level: 5 , Cal Amount: 3.00000		
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D
Cal Level: 6 , Cal Amount: 4.00000		
26-JUN-2009 18:55	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\004F0401.D
Cal Level: 7 , Cal Amount: 5.00000		
26-JUN-2009 18:28	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\003F0301.D

Continuing Calibration

Ccal Level Mode: GLOBAL LEVEL 4

26-JUN-2009 21:40	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\010F1001.D
26-JUN-2009 19:50	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
26-JUN-2009 19:23	8141A	\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i Injection Date: 26-JUN-2009 21:40
Lab File ID: 010F1001.D Lab Sample ID: OPP SS GSV0633
Analysis Type: NONE Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.0000	2.0577	2.9	15.0	
2	Dichlorvos	2.0000	1.9061	4.7	15.0	
3	Mevinphos	2.0000	1.6977	15.1	15.0	<- ok
4	Chlormefos	2.0000	1.7808	11.0	15.0	
5	Thionazin	2.0000	1.9740	1.3	15.0	
6	Demeton-O	0.6500	1.8707	187.8	15.0	<- ok, see total demeton
7	Ethoprop	2.0000	2.0536	2.7	15.0	
8	Naled	2.0000	1.1983	40.1	15.0	<-
9	Sulfotepp	2.0000	1.7932	10.3	15.0	
10	Phorate	2.0000	2.0180	0.9	15.0	
11	Dimethoate	2.0000	2.0859	4.3	15.0	
12	Demeton-S	1.3600	0.2313	83.0	15.0	<- ok, see total demeton
13	Simazine	2.0000	2.6218	31.1	15.0	<-
14	Atrazine	2.0000	1.9566	2.2	15.0	
15	propazine	2.0000	1.9127	4.4	15.0	
17	Disulfoton	2.0000	1.5890	20.6	15.0	<-
16	Diazinon	2.0000	2.1583	7.9	15.0	
18	Methyl Parathion	2.0000	2.0404	2.0	15.0	
19	Ronnel	2.0000	2.1513	7.6	15.0	
20	Malathion	2.0000	1.6248	18.8	15.0	<-
21	Fenthion	2.0000	1.8840	5.8	15.0	
22	Parathion	2.0000	1.9436	2.8	15.0	
23	Chlorpyrifos	2.0000	1.9720	1.4	15.0	
24	Trichloronate	2.0000	1.8619	6.9	15.0	
25	Anilazine	2.0000	1.0151	49.2	15.0	<-
148	Merphos-A (Merphos)	2.0000	0.4078	79.6	999.0	
26	Tetrachlorvinphos (Stirophos)	2.0000	2.0880	4.4	15.0	
28	Tokuthion	2.0000	2.0254	1.3	15.0	
149	Merphos-B (Merphos Oxone)	2.0000	6.6232	231.2	999.0	
29	Carbophenothion-methyl	2.0000	1.3536	32.3	15.0	<-
29	Fensulfothion	2.0000	1.9235	3.8	15.0	
30	Bolstar / Famphur	4.0000	4.0636	1.6	15.0	
32	Carbophenothion	2.0000	1.8639	6.8	15.0	
31	Triphenyl phosphate	2.0000	1.7170	14.2	15.0	
34	Phosmet	2.0000	1.6471	17.6	15.0	<-
32	EPN	2.0000	1.7931	10.3	15.0	
33	Azinphos-methyl	2.0000	1.9226	3.9	15.0	
35	Azinphos-ethyl	2.0000	1.8331	8.3	15.0	
36	Coumaphos	2.0000	2.0063	0.3	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Analysis Type: NONE

Injection Date: 26-JUN-2009 21:40
Lab Sample ID: OPP SS GSV0633
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
27 Merphos	2.0000	1.7215	13.9	15.0
40 Total Demeton	2.0000	2.1021	5.1	15.0

Average %D = 23.4

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Analysis Type: NONE

Injection Date: 26-JUN-2009 21:40
Lab Sample ID: OPP SS GSV0633
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

	COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
1	o,o,o-TEPT	2.0000	2.0069	0.3	15.0	
2	Dichlorvos	2.0000	1.7707	11.5	15.0	
3	Chlormefos	2.0000	1.6957	15.2	15.0	<- ok
4	Mevinphos	2.0000	1.8364	8.2	15.0	
5	Demeton-O	0.6500	2.0472	215.0	15.0	<- ok, see total demeton
6	Thionazin	2.0000	1.8758	6.2	15.0	
7	Ethoprop	2.0000	1.8962	5.2	15.0	
8	Phorate	2.0000	1.9509	2.5	15.0	
10	Naled	2.0000	1.0486	47.6	15.0	<-
146	Sulfotepp	2.0000	1.7143	14.3	15.0	
10	Simazine	2.0000	3.6013	80.1	15.0	<-
12	Diazinon	2.0000	2.0803	4.0	15.0	
150	Atrazine	2.0000	1.9693	1.5	15.0	
13	Propazine	2.0000	1.8742	6.3	15.0	
14	Disulfoton	2.0000	1.6970	15.1	15.0	<- ok
15	Demeton-S	1.3600	0.2011	85.2	15.0	<- ok, see total demeton
16	Dimethoate	2.0000	1.8701	6.5	15.0	
17	Ronnel	2.0000	2.0112	0.6	15.0	
148	Merphos-A (Merphos)	2.0000	0.5348	73.3	999.0	
18	Chlorpyrifos	2.0000	2.1084	5.4	15.0	
19	Fenthion	2.0000	2.0634	3.2	15.0	
20	Trichloronate	2.0000	1.8617	6.9	15.0	
21	Anilazine	2.0000	1.2425	37.9	15.0	<-
23	Methyl Parathion	2.0000	2.0228	1.1	15.0	
24	Malathion	2.0000	1.5362	23.2	15.0	<-
25	Tokuthion	2.0000	1.8925	5.4	15.0	
26	Parathion	2.0000	2.1337	6.7	15.0	
149	Merphos-B (Merphos Oxone)	2.0000	5.0080	150.4	999.0	
27	Tetrachlorvinphos (stirophos)	2.0000	2.0814	4.1	15.0	
28	Carbophenothion methyl	2.0000	1.2466	37.7	15.0	<-
28	Bolstar	2.0000	2.0778	3.9	15.0	
30	Carbophenothion	2.0000	1.7496	12.5	15.0	
29	Triphenyl phosphate	2.0000	1.7275	13.6	15.0	
30	Fensulfothion	2.0000	2.0824	4.1	15.0	
35	Phosmet / EPN	4.0000	3.4695	13.3	15.0	
33	Famphur	2.0000	1.7579	12.1	15.0	
34	Azinphos-methyl	2.0000	1.8108	9.5	15.0	
35	Azinphos-ethyl	2.0000	1.7982	10.1	15.0	
36	Coumaphos	2.0000	1.9588	2.1	15.0	

Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B/010F1001.D
Report Date: 06/30/2009

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: GC_D2.i
Injection Date: 26-JUN-2009 21:40
Lab File ID: 010F1001.D
Lab Sample ID: OPP SS GSV0633
Analysis Type: NONE
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D	
22 Merphos	2.0000	1.6146	19.3	15.0	<-
40 Total Demeton	2.0000	2.2483	12.4	15.0	

Average %D = 24.2

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D
Lab Smp Id: OPP L7 GSV0634 Client Smp ID: OPP L7 GSV0634
Inj Date : 26-JUN-2009 18:28
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L7 GSV0634
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 20:18 Cal File: 007F0701.D
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	1 o,o,o-TEPT	3.256	3.254	(0.183)	707938	5.00000	4.923
	2 Dichlorvos	4.075	4.074	(0.228)	456822	5.00000	5.116(A)
	3 Mevinphos	5.736	5.739	(0.322)	240948	5.00000	4.912
$	4 Chlormefos	5.835	5.836	(0.327)	549929	5.00000	4.918
	5 Thionazin	7.505	7.507	(0.421)	493034	5.00000	4.831
	6 Demeton-O	7.645	7.649	(0.428)	165003	1.62500	1.714
	7 Ethoprop	7.846	7.852	(0.440)	445084	5.00000	4.977
	8 Naled	8.053	8.057	(0.451)	121152	5.00000	5.203(A)
*	9 Tributylphosphate	8.110	8.135	(1.000)	206876	2.00000	
	10 Sulfotepp	8.440	8.442	(0.473)	609341	5.00000	4.831
	11 Phorate	8.530	8.532	(0.478)	441181	5.00000	4.764
	12 Dimethoate	8.655	8.659	(0.485)	565436	5.00000	5.256(A)
	13 Demeton-S	8.838	8.846	(0.495)	264954	3.40000	3.396
	14 Simazine	8.921	8.924	(0.500)	190219	5.00000	5.176(A)
	15 Atrazine	9.091	9.094	(0.510)	228392	5.00000	5.475(A)
	16 propazine	9.236	9.241	(0.518)	202756	5.00000	5.268(A)
	17 Disulfoton	9.866	9.869	(0.553)	290419	5.00000	4.668
	18 Diazinon	9.900	9.902	(0.555)	490902	5.00000	4.934
	19 Methyl Parathion	10.715	10.717	(0.601)	322048	5.00000	5.104(A)
	20 Ronnel	11.238	11.241	(0.630)	302582	5.00000	4.640
	21 Malathion	11.801	11.804	(0.661)	283462	5.00000	4.812
	22 Fenthion	11.930	11.932	(0.669)	301476	5.00000	4.701
	23 Parathion	12.020	12.019	(0.674)	334974	5.00000	4.908
	24 Chlorpyrifos	12.068	12.067	(0.676)	398604	5.00000	4.827
	25 Trichloronate	12.493	12.496	(0.700)	365975	5.00000	4.959
	26 Anilazine	12.815	12.817	(0.718)	34322	5.00000	4.247
	27 Merphos-A (Merphos)	13.196	13.199	(0.740)	302744	5.00000	4.916
	28 Tetrachlorvinphos (Stirophos)	13.818	13.824	(0.774)	210886	5.00000	5.153(A)
	29 Tokuthion	14.448	14.449	(0.810)	351657	5.00000	4.970
	30 Merphos-B (Merphos Oxone)	14.646	14.651	(0.821)	79809	5.00000	4.813
	31 Carbophenothion-methyl	15.235	15.239	(0.854)	266724	5.00000	4.968
	32 Fensulfothion	15.356	15.361	(0.861)	295978	5.00000	4.978
	33 Bolstar / Famphur	16.053	16.053	(0.900)	629265	10.0000	9.297

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34	Carbophenothion	16.196	16.197	(0.908)	321417	5.00000	4.733
$	35	Triphenyl phosphate	16.710	16.712	(0.936)	244102	5.00000	4.730(A)
	36	Phosmet	16.963	16.963	(0.951)	290049	5.00000	4.990
	37	EPN	17.150	17.151	(0.961)	294020	5.00000	5.219(A)
	38	Azinphos-methyl	17.478	17.480	(0.980)	309219	5.00000	4.993
*	39	TOCP	17.843	17.846	(1.000)	102065	2.00000	
	40	Azinphos-ethyl	17.923	17.926	(1.004)	318459	5.00000	4.789
	41	Coumaphos	18.363	18.366	(1.029)	252650	5.00000	5.058(A)
S	42	Merphos				382553	5.00000	4.876
M	43	Total Demeton				429957	5.00000	5.110

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

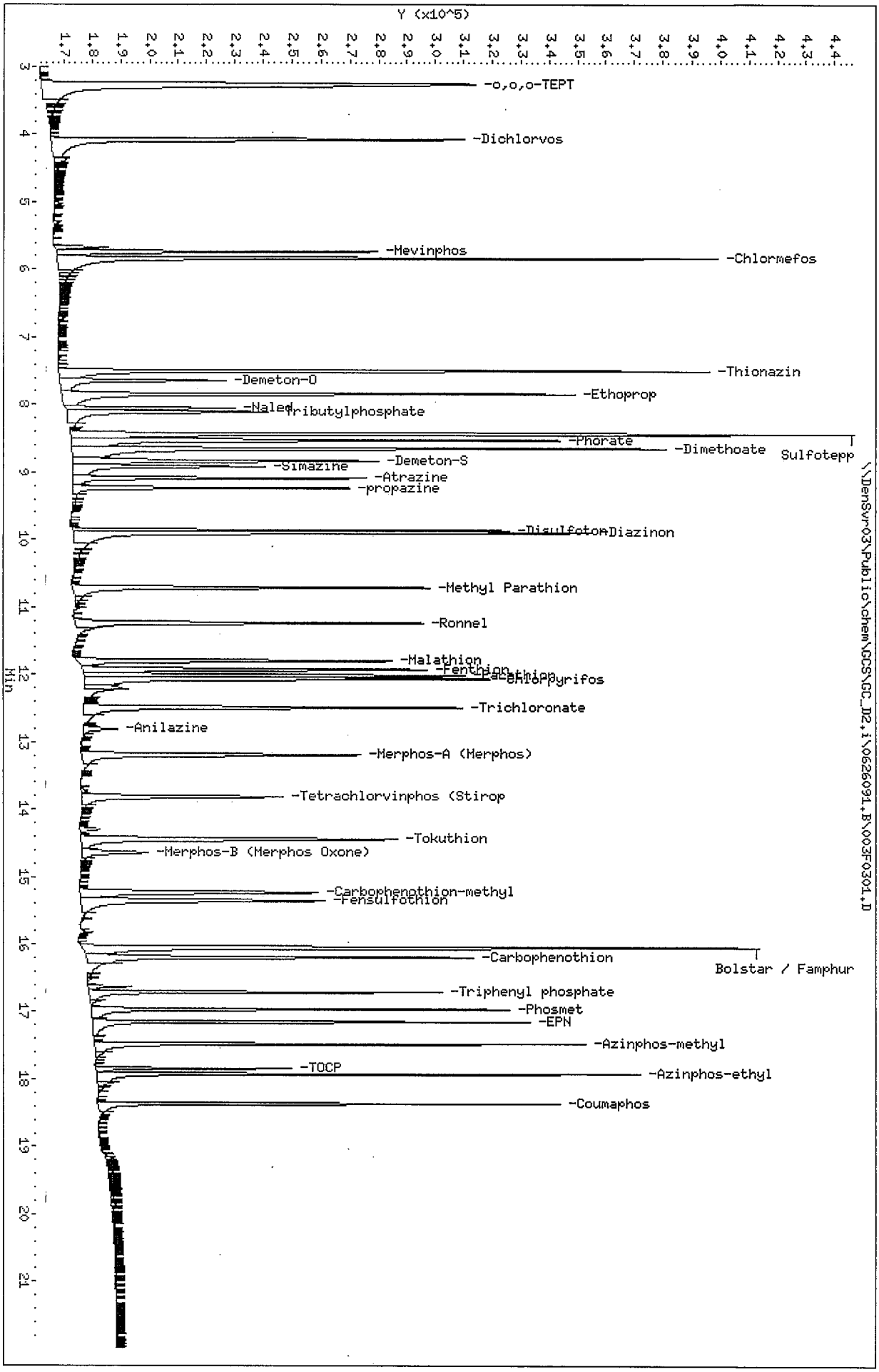
Instrument ID: GC_D2.i
Lab File ID: 003F0301.D
Lab Smp Id: OPP L7 GSV0634
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L7 GSV0634
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	166572	83286	333144	206876	24.20
39 TOCP	99647	49824	199294	102065	2.43

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	-0.03
39 TOCP	17.84	17.34	18.34	17.84	0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\003F0301.D
Date : 26-JUN-2009 18:28
Client ID: OPP L7 GSV0634
Sample Info: OPP L7 GSV0634
Column phase: RTx-1MS

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Lab Smp Id: OPP L6 GSV0637 Client Smp ID: OPP L6 GSV0637
Inj Date : 26-JUN-2009 18:55
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L6 GSV0637
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 18:28 Cal File: 003F0301.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	1 o,o,o-TEPT	3.254	3.254	(0.182)	559984	4.00000	4.123
	2 Dichlorvos	4.074	4.074	(0.228)	337386	4.00000	4.000
	3 Mevinphos	5.736	5.739	(0.321)	189437	4.00000	4.089
$	4 Chlormefos	5.834	5.836	(0.327)	433193	4.00000	4.101
	5 Thionazin	7.504	7.507	(0.421)	385808	4.00000	4.002
	6 Demeton-O	7.646	7.649	(0.429)	113108	1.30000	1.237
	7 Ethoprop	7.848	7.852	(0.440)	343730	4.00000	4.069
	8 Naled	8.054	8.057	(0.451)	90892	4.00000	4.172
*	9 Tributylphosphate	8.111	8.135	(1.000)	190710	2.00000	
	10 Sulfotepp	8.439	8.442	(0.473)	486417	4.00000	4.072
	11 Phorate	8.531	8.532	(0.478)	345415	4.00000	3.949
	12 Dimethoate	8.654	8.659	(0.485)	445385	4.00000	4.383
	13 Demeton-S	8.838	8.846	(0.495)	208362	2.72000	2.828
	14 Simazine	8.919	8.924	(0.500)	147784	4.00000	4.272
	15 Atrazine	9.089	9.094	(0.509)	175159	4.00000	4.445
	16 propazine	9.236	9.241	(0.518)	156982	4.00000	4.318
	17 Disulfoton	9.868	9.869	(0.553)	247845	4.00000	4.214
	18 Diazinon	9.901	9.902	(0.555)	354996	4.00000	3.778
	19 Methyl Parathion	10.714	10.717	(0.601)	250051	4.00000	4.196
	20 Ronnel	11.239	11.241	(0.630)	259621	4.00000	4.214
	21 Malathion	11.799	11.804	(0.661)	228260	4.00000	4.097
	22 Fenthion	11.931	11.932	(0.669)	241990	4.00000	3.995
	23 Parathion	12.018	12.019	(0.674)	267071	4.00000	4.142
	24 Chlorpyrifos	12.066	12.067	(0.676)	312992	4.00000	4.013
	25 Trichloronate	12.493	12.496	(0.700)	293942	4.00000	4.216
	26 Anilazine	12.814	12.817	(0.718)	29375	4.00000	4.019
	27 Merphos-A (Merphos)	13.196	13.199	(0.740)	239875	4.00000	4.124
	28 Tetrachlorvinphos (Stirophos)	13.818	13.824	(0.774)	164180	4.00000	4.247
	29 Tokuthion	14.446	14.449	(0.810)	271654	4.00000	4.065
	30 Merphos-B (Merphos Oxone)	14.648	14.651	(0.821)	65974	4.00000	4.215
	31 Carbophenothion-methyl	15.234	15.239	(0.854)	206137	4.00000	4.052
	32 Fensulfothion	15.358	15.361	(0.861)	229856	4.00000	4.110
	33 Bolstar / Famphur	16.053	16.053	(0.900)	495681	8.00000	7.753

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34	Carbophenothion	16.194	16.197	(0.908)	272632	4.00000	4.251
$	35	Triphenyl phosphate	16.711	16.712	(0.937)	194548	4.00000	3.991(A)
	36	Phosmet	16.963	16.963	(0.951)	223910	4.00000	4.079
	37	EPN	17.148	17.151	(0.961)	220388	4.00000	4.152
	38	Azinphos-methyl	17.478	17.480	(0.980)	244293	4.00000	4.176
*	39	TOCP	17.843	17.846	(1.000)	96406	2.00000	
	40	Azinphos-ethyl	17.923	17.926	(1.004)	253982	4.00000	4.021
	41	Coumaphos	18.363	18.366	(1.029)	194765	4.00000	4.128
S	42	Merphos				305849	4.00000	4.161
M	43	Total Demeton				321470	4.00000	4.064

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

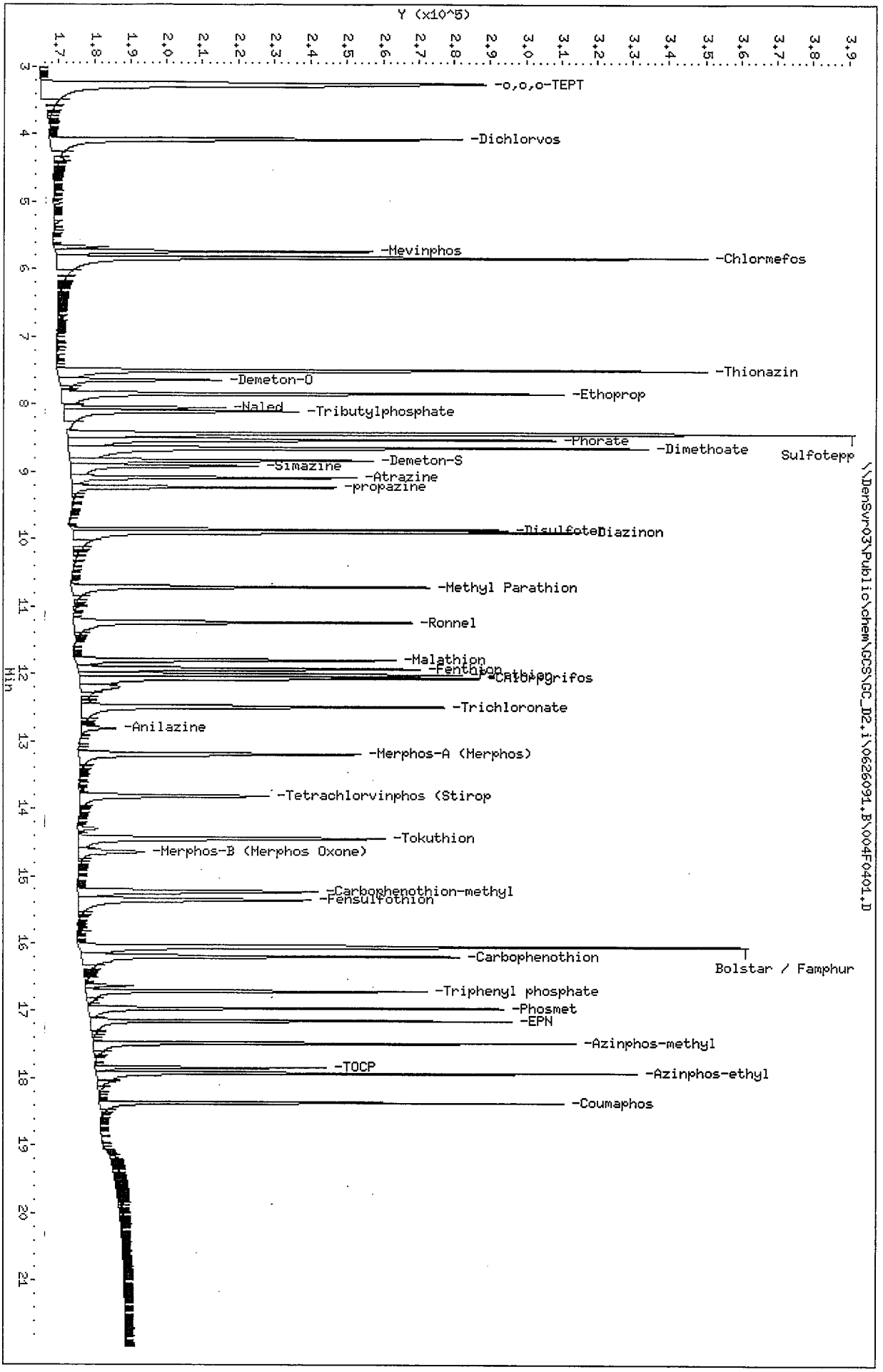
Instrument ID: GC_D2.i
Lab File ID: 004F0401.D
Lab Smp Id: OPP L6 GSV0637
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L6 GSV0637
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	166572	83286	333144	190710	14.49
39 TOCP	99647	49824	199294	96406	-3.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	-0.01
39 TOCP	17.84	17.34	18.34	17.84	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\004F0401.D
Date : 26-JUN-2009 18:55
Client ID: OPP L6 GSV0637
Sample Info: OPP L6 GSV0637
Column phase: RTx-1MS

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Lab Smp Id: OPP L5 GSV0635 Client Smp ID: OPP L5 GSV0635
Inj Date : 26-JUN-2009 19:23
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L5 GSV0635
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 18:55 Cal File: 004F0401.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	1 o,o,o-TEPT	3.254	3.254	(0.182)	430120	3.00000	2.892
	2 Dichlorvos	4.074	4.074	(0.228)	272336	3.00000	2.949
	3 Mevinphos	5.737	5.739	(0.322)	150686	3.00000	2.970
$	4 Chlormefos	5.834	5.836	(0.327)	373109	3.00000	3.226
	5 Thionazin	7.504	7.507	(0.421)	310451	3.00000	2.941
	6 Demeton-O	7.646	7.649	(0.429)	96004	0.97500	0.9530
	7 Ethoprop	7.847	7.852	(0.440)	275706	3.00000	2.981
	8 Naled	8.054	8.057	(0.451)	67594	3.00000	2.896
*	9 Tributylphosphate	8.111	8.135	(1.000)	190357	2.00000	
	10 Sulfotepp	8.439	8.442	(0.473)	393078	3.00000	2.987
	11 Phorate	8.531	8.532	(0.478)	279291	3.00000	2.916
	12 Dimethoate	8.654	8.659	(0.485)	354003	3.00000	3.181
	13 Demeton-S	8.837	8.846	(0.495)	167136	2.04000	2.071
	14 Simazine	8.919	8.924	(0.500)	115426	3.00000	3.070
	15 Atrazine	9.089	9.094	(0.509)	135287	3.00000	3.135
	16 propazine	9.236	9.241	(0.518)	119795	3.00000	3.009
	17 Disulfoton	9.867	9.869	(0.553)	193050	3.00000	2.986
	18 Diazinon	9.901	9.902	(0.555)	314608	3.00000	3.057
	19 Methyl Parathion	10.714	10.717	(0.600)	206402	3.00000	3.163
	20 Ronnel	11.239	11.241	(0.630)	197062	3.00000	2.921
	21 Malathion	11.799	11.804	(0.661)	186013	3.00000	3.038
	22 Fenthion	11.931	11.932	(0.669)	198864	3.00000	2.998
	23 Parathion	12.017	12.019	(0.674)	215846	3.00000	3.057
	24 Chlorpyrifos	12.066	12.067	(0.676)	255782	3.00000	2.995
	25 Trichloronate	12.494	12.496	(0.700)	231599	3.00000	3.034
	26 Anilazine	12.812	12.817	(0.718)	19893	3.00000	2.881
	27 Merphos-A (Merphos)	13.196	13.199	(0.740)	192022	3.00000	3.015
	28 Tetrachlorvinphos (Stirophos)	13.816	13.824	(0.774)	134968	3.00000	3.188
	29 Tokuthion	14.447	14.449	(0.810)	220825	3.00000	3.018
	30 Merphos-B (Merphos Oxone)	14.647	14.651	(0.821)	50056	3.00000	2.927
	31 Carbophenothion-methyl	15.236	15.239	(0.854)	167145	3.00000	2.983
	32 Fensulfothion	15.356	15.361	(0.861)	185778	3.00000	3.058
	33 Bolstar / Famphur	16.051	16.053	(0.900)	404218	6.00000	5.774

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34	Carbophenothion	16.194	16.197	(0.908)	199717	3.00000	2.844
$	35	Triphenyl phosphate	16.711	16.712	(0.937)	157761	3.00000	2.956(A)
	36	Phosmet	16.962	16.963	(0.951)	177892	3.00000	2.959
	37	EPN	17.149	17.151	(0.961)	171283	3.00000	2.961
	38	Azinphos-methyl	17.476	17.480	(0.979)	195645	3.00000	3.054
*	39	TOCP	17.842	17.846	(1.000)	105568	2.00000	
	40	Azinphos-ethyl	17.922	17.926	(1.004)	209971	3.00000	2.999
	41	Coumaphos	18.364	18.366	(1.029)	159962	3.00000	3.096
S	42	Merphos				242078	3.00000	2.978
M	43	Total Demeton				263140	3.00000	3.024

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

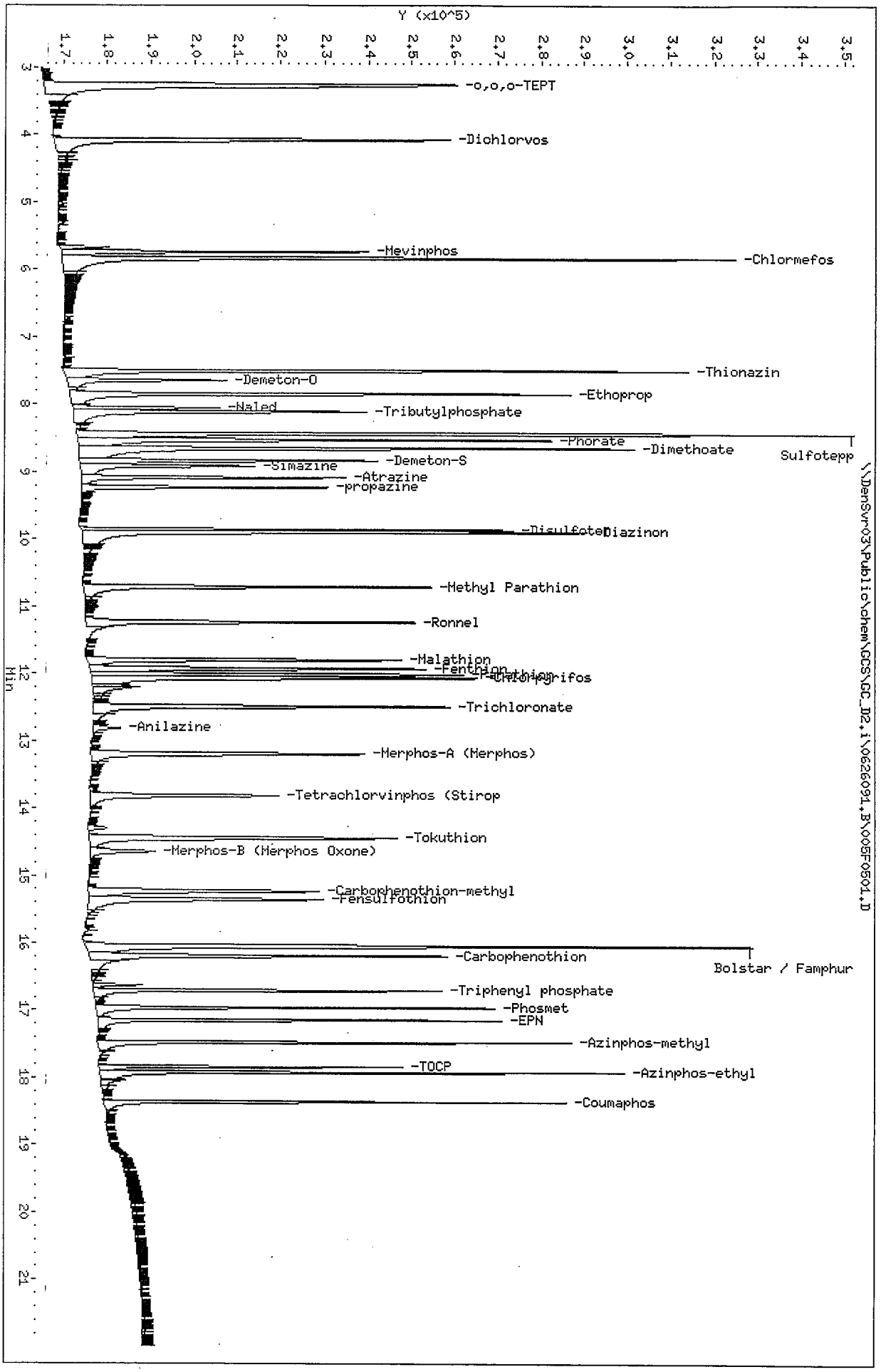
Instrument ID: GC_D2.i
Lab File ID: 005F0501.D
Lab Smp Id: OPP L5 GSV0635
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L5 GSV0635
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	166572	83286	333144	190357	14.28
39 TOCP	99647	49824	199294	105568	5.94

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	-0.02
39 TOCP	17.84	17.34	18.34	17.84	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\005F0501.D
Date : 26-JUN-2009 19:23
Client ID: OPP L5 GSV0635
Sample Info: OPP L5 GSV0635
Column phase: RTx-1HS

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0601.D
Lab Smp Id: OPP L4 GSV0638 Client Smp ID: OPP L4 GSV0638
Inj Date : 26-JUN-2009 19:50
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L4 GSV0638
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 19:23 Cal File: 005F0501.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	1 o,o,o-TEPT	3.255	3.254	(0.182)	282037	2.00000	2.056
	2 Dichlorvos	4.075	4.074	(0.228)	171715	2.00000	2.016
	3 Mevinphos	5.737	5.739	(0.322)	99077	2.00000	2.117
$	4 Chlormefos	5.834	5.836	(0.327)	220122	2.00000	2.064
	5 Thionazin	7.504	7.507	(0.421)	202723	2.00000	2.082
	6 Demeton-O	7.647	7.649	(0.429)	62341	0.65000	0.6633
	7 Ethoprop	7.849	7.852	(0.440)	168636	2.00000	1.977
	8 Naled	8.055	8.057	(0.451)	36940	2.00000	1.794
*	9 Tributylphosphate	8.112	8.135	(1.000)	160310	2.00000	
	10 Sulfotepp	8.439	8.442	(0.473)	259970	2.00000	2.122
	11 Phorate	8.530	8.532	(0.478)	177561	2.00000	2.010
	12 Dimethoate	8.655	8.659	(0.485)	219744	2.00000	2.141
	13 Demeton-S	8.840	8.846	(0.495)	104966	1.36000	1.410
	14 Simazine	8.919	8.924	(0.500)	64611	2.00000	1.894
	15 Atrazine	9.089	9.094	(0.509)	82396	2.00000	2.070
	16 propazine	9.235	9.241	(0.518)	76116	2.00000	2.073
	17 Disulfoton	9.867	9.869	(0.553)	127893	2.00000	2.134
	18 Diazinon	9.902	9.902	(0.555)	196533	2.00000	2.071
	19 Methyl Parathion	10.714	10.717	(0.600)	128904	2.00000	2.142
	20 Ronnel	11.239	11.241	(0.630)	125931	2.00000	2.024
	21 Malathion	11.799	11.804	(0.661)	119836	2.00000	2.110
	22 Fenthion	11.930	11.932	(0.669)	125692	2.00000	2.054
	23 Parathion	12.017	12.019	(0.673)	135333	2.00000	2.078
	24 Chlorpyrifos	12.067	12.067	(0.676)	158619	2.00000	2.014
	25 Trichloronate	12.494	12.496	(0.700)	144264	2.00000	2.049
	26 Anilazine	12.815	12.817	(0.718)	12790	2.00000	2.151
	27 Merphos-A (Merphos)	13.197	13.199	(0.740)	120719	2.00000	2.055
	28 Tetrachlorvinphos (Stirophos)	13.817	13.824	(0.774)	81250	2.00000	2.081
	29 Tokuthion	14.447	14.449	(0.810)	140431	2.00000	2.081
	30 Merphos-B (Merphos Oxone)	14.649	14.651	(0.821)	34113	2.00000	2.168
	31 Carbophenothion-methyl	15.235	15.239	(0.854)	105577	2.00000	2.022
	32 Fensulfothion	15.357	15.361	(0.861)	104440	2.00000	1.901
	33 Bolstar / Famphur	16.052	16.053	(0.900)	260611	4.00000	4.036

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34 Carbophenothion	16.195	16.197	(0.908)	128846	2.00000	1.989
$	35 Triphenyl phosphate	16.710	16.712	(0.936)	102669	2.00000	2.086 (A)
	36 Phosmet	16.962	16.963	(0.951)	117406	2.00000	2.118
	37 EPN	17.149	17.151	(0.961)	111165	2.00000	2.098
	38 Azinphos-methyl	17.477	17.480	(0.979)	124853	2.00000	2.113
*	39 TOCP	17.844	17.846	(1.000)	97363	2.00000	
	40 Azinphos-ethyl	17.924	17.926	(1.004)	134607	2.00000	2.040
	41 Coumaphos	18.364	18.366	(1.029)	99259	2.00000	2.083
S	42 Merphos				154832	2.00000	2.068
M	43 Total Demeton				167307	2.00000	2.074

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

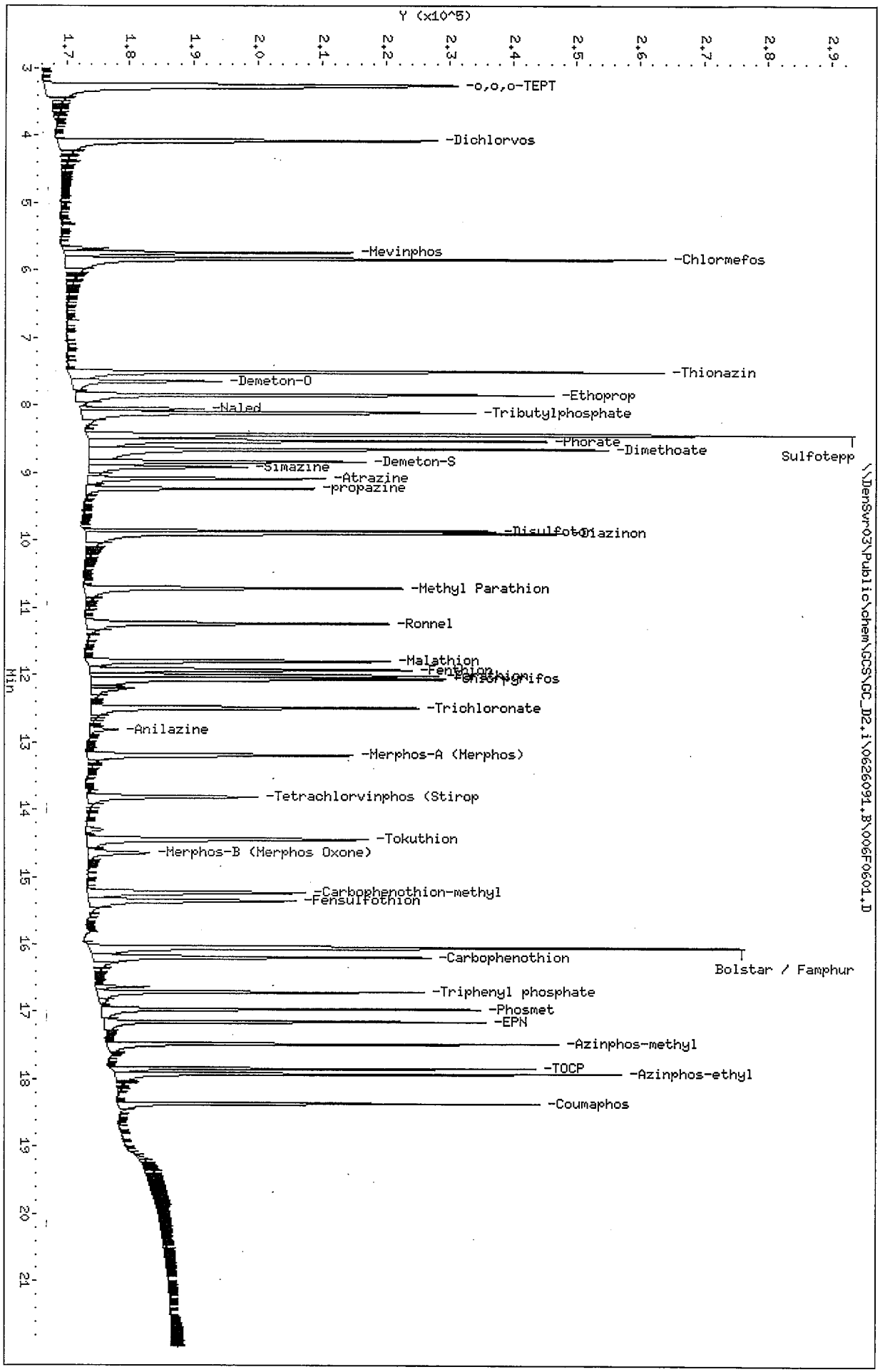
Instrument ID: GC_D2.i
Lab File ID: 006F0601.D
Lab Smp Id: OPP L4 GSV0638
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L4 GSV0638
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	160310	80155	320620	160310	0.00
39 TOCP	97363	48682	194726	97363	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	0.00
39 TOCP	17.84	17.34	18.34	17.84	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\006F0604.D
Date : 26-JUN-2009 19:50
Client ID: OPP L4 GSV0638
Sample Info: OPP L4 GSV0638
Column phase: RTx-1MS

Instrument: GC_D2.i
Operator: HPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Lab Smp Id: OPP L3 GSV0639 Client Smp ID: OPP L3 GSV0639
Inj Date : 26-JUN-2009 20:18
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L3 GSV0639
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 19:50 Cal File: 006F0601.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	3.253	3.254	(0.182)	136897	1.00000	0.9509
	2 Dichlorvos	4.075	4.074	(0.228)	81003	1.00000	0.9061
	3 Mevinphos	5.738	5.739	(0.322)	46063	1.00000	0.9380
$	4 Chlormefos	5.833	5.836	(0.327)	102183	1.00000	0.9128
	5 Thionazin	7.503	7.507	(0.421)	99560	1.00000	0.9745
	6 Demeton-O	7.645	7.649	(0.429)	30145	0.32500	0.2917
	7 Ethoprop	7.850	7.852	(0.440)	82934	1.00000	0.9263
	8 Naled	8.055	8.057	(0.451)	15042	1.00000	0.8141
*	9 Tributylphosphate	8.113	8.135	(1.000)	156624	2.00000	
	10 Sulfotepp	8.438	8.442	(0.473)	131347	1.00000	0.9856
	11 Phorate	8.530	8.532	(0.478)	88795	1.00000	0.9577
	12 Dimethoate	8.657	8.659	(0.485)	105981	1.00000	0.9840
	13 Demeton-S	8.840	8.846	(0.495)	51826	0.68000	0.6636
	14 Simazine	8.918	8.924	(0.500)	29382	1.00000	0.8660
	15 Atrazine	9.088	9.094	(0.509)	38356	1.00000	0.9184
	16 propazine	9.235	9.241	(0.518)	35375	1.00000	0.9180
	17 Disulfoton	9.867	9.869	(0.553)	61920	1.00000	0.9637
	18 Diazinon	9.902	9.902	(0.555)	93892	1.00000	0.9427
	19 Methyl Parathion	10.715	10.717	(0.601)	58112	1.00000	0.9200
	20 Ronnel	11.240	11.241	(0.630)	61984	1.00000	0.9493
	21 Malathion	11.800	11.804	(0.661)	57103	1.00000	0.9353
	22 Fenthion	11.930	11.932	(0.669)	59512	1.00000	0.9268
	23 Parathion	12.017	12.019	(0.674)	63007	1.00000	0.9220
	24 Chlorpyrifos	12.067	12.067	(0.676)	75298	1.00000	0.9108
	25 Trichloronate	12.493	12.496	(0.700)	68852	1.00000	0.9318
	26 Anilazine	12.817	12.817	(0.718)	5311	1.00000	0.9480
	27 Merphos-A (Merphos)	13.198	13.199	(0.740)	59249	1.00000	0.9611
	28 Tetrachlorvinphos (Stirophos)	13.818	13.824	(0.775)	37534	1.00000	0.9161
	29 Tokuthion	14.448	14.449	(0.810)	66164	1.00000	0.9341
	30 Merphos-B (Merphos Oxone)	14.647	14.651	(0.821)	11676	1.00000	0.7212
	31 Carbophenothion-methyl	15.235	15.239	(0.854)	55023	1.00000	0.9704
	32 Fensulfothion	15.360	15.361	(0.861)	51304	1.00000	0.9402
	33 Bolstar / Famphur	16.050	16.053	(0.900)	135217	2.00000	1.995

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34	Carbophenothion	16.193	16.197	(0.908)	65237	1.00000	0.9596
$	35	Triphenyl phosphate	16.708	16.712	(0.936)	49547	1.00000	0.9591
	36	Phosmet	16.962	16.963	(0.951)	56728	1.00000	0.9749
	37	EPN	17.148	17.151	(0.961)	48705	1.00000	0.9045
	38	Azinphos-methyl	17.478	17.480	(0.980)	59658	1.00000	0.9622
*	39	TOCP	17.842	17.846	(1.000)	102183	2.00000	
	40	Azinphos-ethyl	17.923	17.926	(1.005)	74071	1.00000	0.9989
	41	Coumaphos	18.363	18.366	(1.029)	47132	1.00000	0.9424
S	42	Merphos				70925	1.00000	0.8976
M	43	Total Demeton				81971	1.00000	0.9553

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

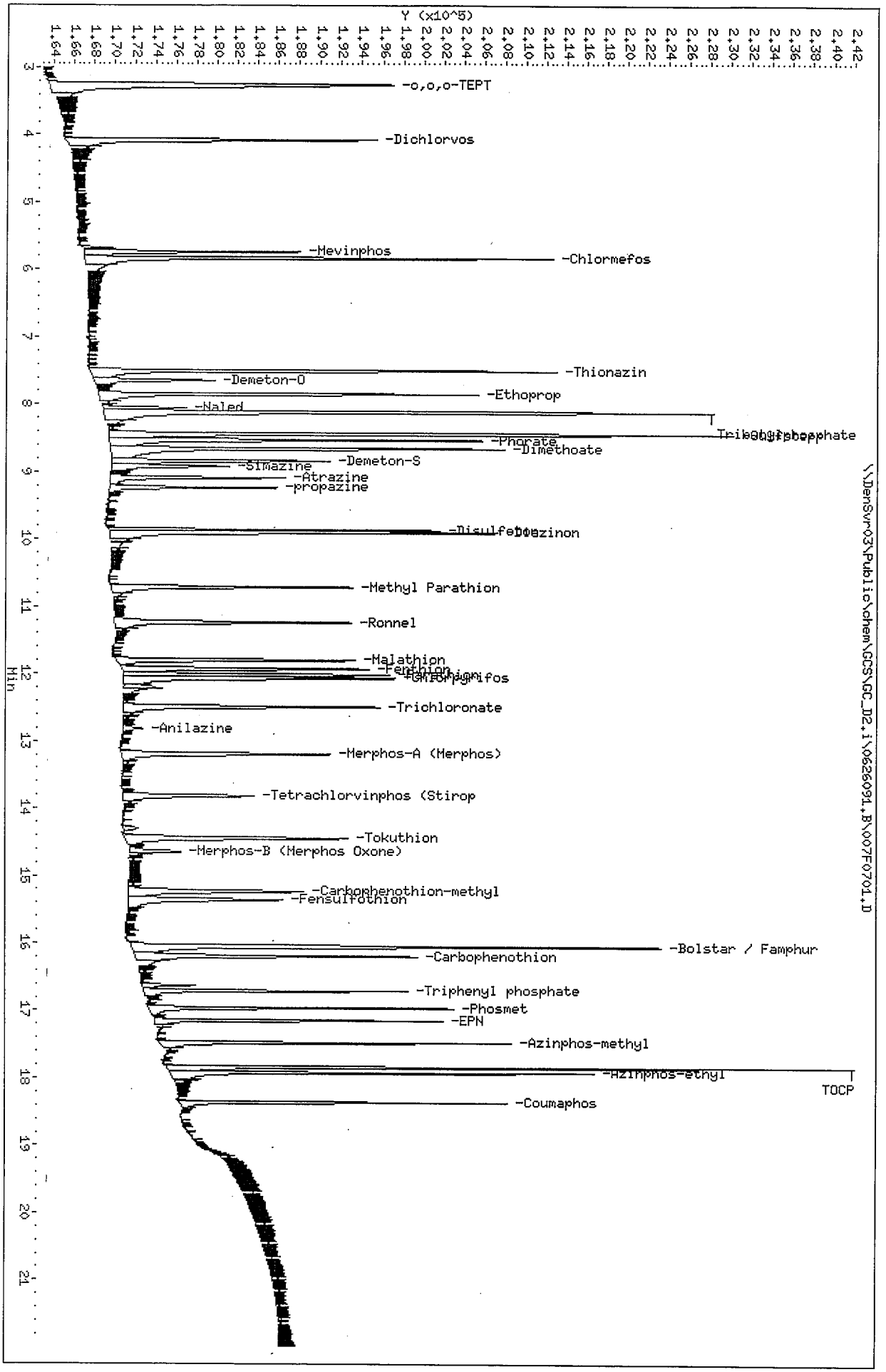
Instrument ID: GC_D2.i
Lab File ID: 007F0701.D
Lab Smp Id: OPP L3 GSV0639
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L3 GSV0639
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	160310	80155	320620	156624	-2.30
39 TOCP	97363	48682	194726	102183	4.95

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	0.02
39 TOCP	17.84	17.34	18.34	17.84	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.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Date : 26-JUN-2009 20:18
Client ID: OPP L3 GSV0639
Sample Info: OPP L3 GSV0639
Column phase: RTx-1MS
Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\007F0701.D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Mevinphos
-Chlormefos
-Thionazin
-Demeton-O
-Ethoprop
-Naled
-Phorate
-Dimethoate
-Simazine
-Demeton-S
-Atrazine
-propazine
-Methyl Parathion
-Ronnel
-Malathion
-Trichloronate
-Anilazine
-Merphos-A (Merphos)
-Tetrachlorvinphos (Stirop
-Tokuthion
-Merphos-B (Merphos Oxone)
-Carbophenothion-methyl
-Fensulfothion
-Bolstar / Famphur
-Carbophenothion
-Triphenyl phosphate
-Phosmet
-EPN
-Azinphos-methyl
-Azinphos-ethyl
TOCP
-Coumaphos

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\008F0801.D
Lab Smp Id: OPP L2 GSV0640 Client Smp ID: OPP L2 GSV0640
Inj Date : 26-JUN-2009 20:45
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L2 GSV0640
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 20:18 Cal File: 007F0701.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	3.255	3.254	(0.182)	68743	0.50000	0.4680
	2 Dichlorvos	4.076	4.074	(0.228)	42284	0.50000	0.4636
	3 Mevinphos	5.738	5.739	(0.322)	23796	0.50000	0.4749
$	4 Chlormefos	5.833	5.836	(0.327)	53089	0.50000	0.4648
	5 Thionazin	7.505	7.507	(0.421)	50724	0.50000	0.4866
	6 Demeton-O	7.646	7.649	(0.429)	17553	0.16250	0.1554
	7 Ethoprop	7.851	7.852	(0.440)	44525	0.50000	0.4874
	8 Naled	8.056	8.057	(0.452)	6103	0.50000	0.4398
*	9 Tributylphosphate	8.113	8.135	(1.000)	165852	2.00000	
	10 Sulfotepp	8.438	8.442	(0.473)	70885	0.50000	0.4886
	11 Phorate	8.530	8.532	(0.478)	47685	0.50000	0.5040
	12 Dimethoate	8.660	8.659	(0.485)	46100	0.50000	0.4195
	13 Demeton-S	8.843	8.846	(0.496)	25917	0.34000	0.3252
	14 Simazine	8.920	8.924	(0.500)	16248	0.50000	0.5059
	15 Atrazine	9.091	9.094	(0.510)	19948	0.50000	0.4681
	16 propazine	9.236	9.241	(0.518)	18281	0.50000	0.4649
	17 Disulfoton	9.866	9.869	(0.553)	33208	0.50000	0.4883
	18 Diazinon	9.903	9.902	(0.555)	47843	0.50000	0.4708
	19 Methyl Parathion	10.715	10.717	(0.601)	28773	0.50000	0.4464
	20 Ronnel	11.240	11.241	(0.630)	32156	0.50000	0.4827
	21 Malathion	11.800	11.804	(0.661)	30581	0.50000	0.4713
	22 Fenthion	11.931	11.932	(0.669)	30876	0.50000	0.4713
	23 Parathion	12.016	12.019	(0.673)	32682	0.50000	0.4687
	24 Chlorpyrifos	12.066	12.067	(0.676)	40856	0.50000	0.4843
	25 Trichloronate	12.493	12.496	(0.700)	37156	0.50000	0.4928
	26 Anilazine	12.820	12.817	(0.718)	2095	0.50000	0.4035 (M)
	27 Merphos-A (Merphos)	13.200	13.199	(0.740)	30112	0.50000	0.4787
	28 Tetrachlorvinphos (Stirophos)	13.818	13.824	(0.774)	19446	0.50000	0.4652
	29 Tokuthion	14.448	14.449	(0.810)	33437	0.50000	0.4626
	30 Merphos-B (Merphos Oxone)	14.651	14.651	(0.821)	7933	0.50000	0.4872 (M)
	31 Carbophenothion-methyl	15.235	15.239	(0.854)	30542	0.50000	0.4974
	32 Fensulfothion	15.360	15.361	(0.861)	23000	0.50000	0.4661
	33 Bolstar / Famphur	16.050	16.053	(0.899)	66619	1.00000	0.9635

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34 Carbophenothion	16.193	16.197	(0.908)	31276	0.50000	0.4509
$	35 Triphenyl phosphate	16.710	16.712	(0.936)	25861	0.50000	0.4906
	36 Phosmet	16.961	16.963	(0.951)	26426	0.50000	0.4451
	37 EPN	17.148	17.151	(0.961)	23196	0.50000	0.4484
	38 Azinphos-methyl	17.478	17.480	(0.980)	29588	0.50000	0.4677
*	39 TOCP	17.843	17.846	(1.000)	104260	2.00000	
	40 Azinphos-ethyl	17.923	17.926	(1.004)	43578	0.50000	0.5132
	41 Coumaphos	18.363	18.366	(1.029)	23408	0.50000	0.4587
S	42 Merphos				38045	0.50000	0.4789
M	43 Total Demeton				43470	0.50000	0.4806

QC Flag Legend

M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

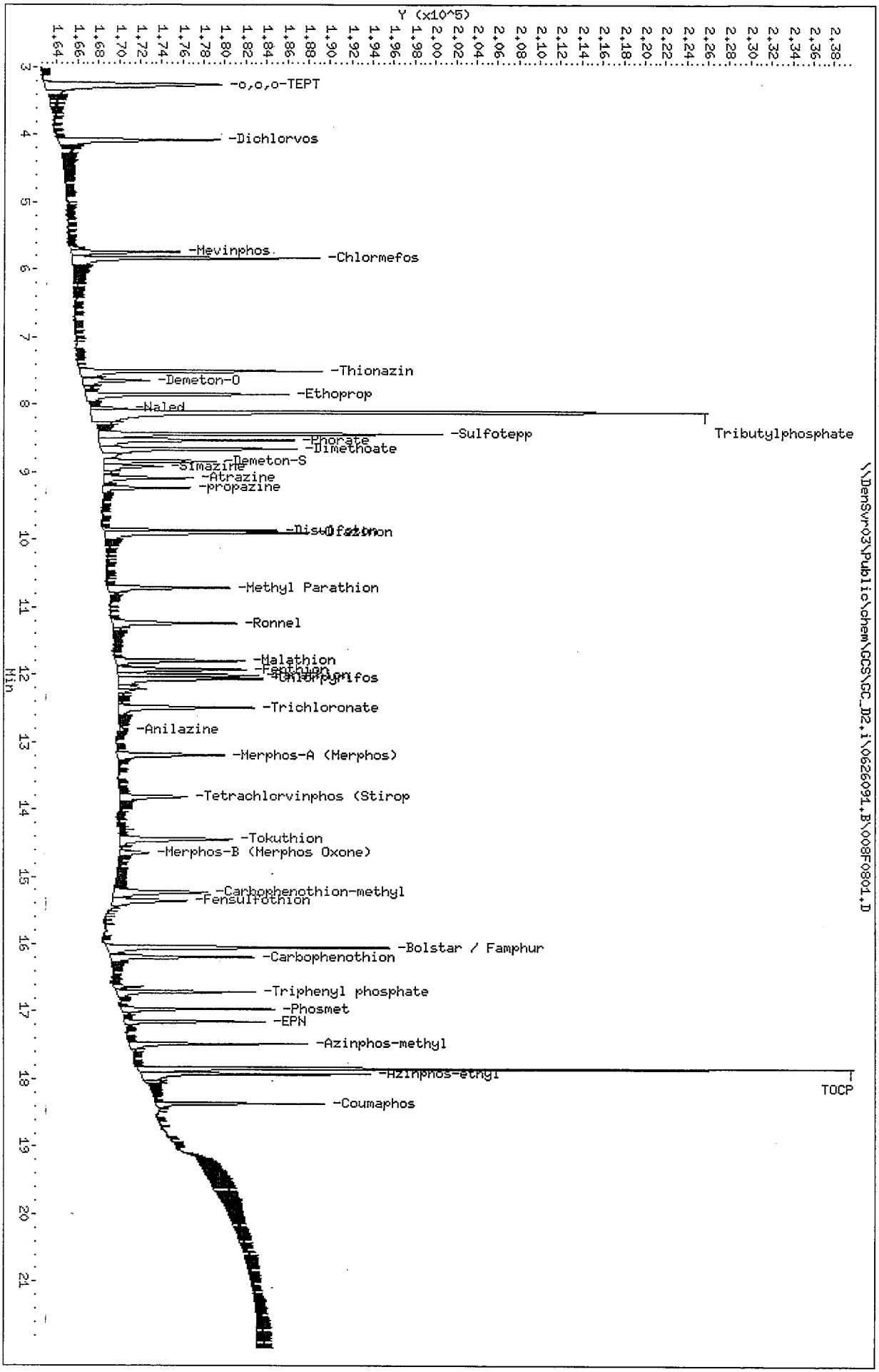
Instrument ID: GC_D2.i
Lab File ID: 008F0801.D
Lab Smp Id: OPP L2 GSV0640
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L2 GSV0640
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	160310	80155	320620	165852	3.46
39 TOCP	97363	48682	194726	104260	7.08

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	0.01
39 TOCP	17.84	17.34	18.34	17.84	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.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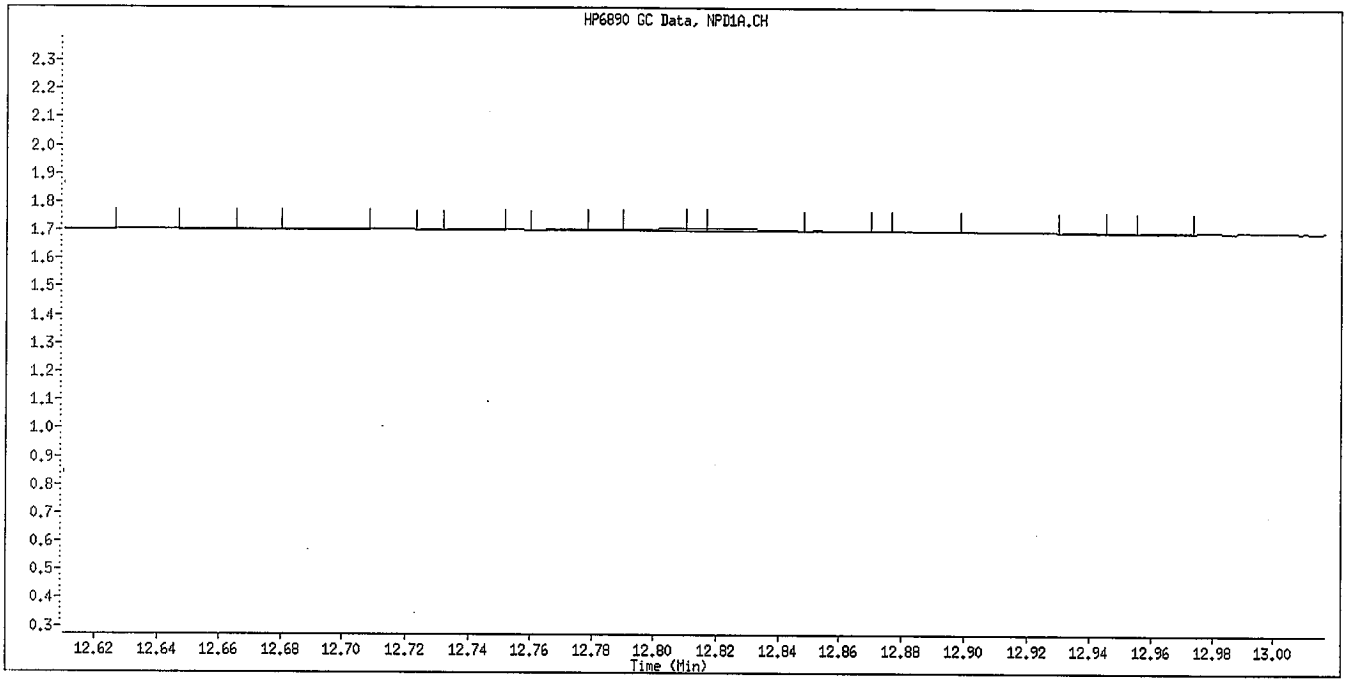
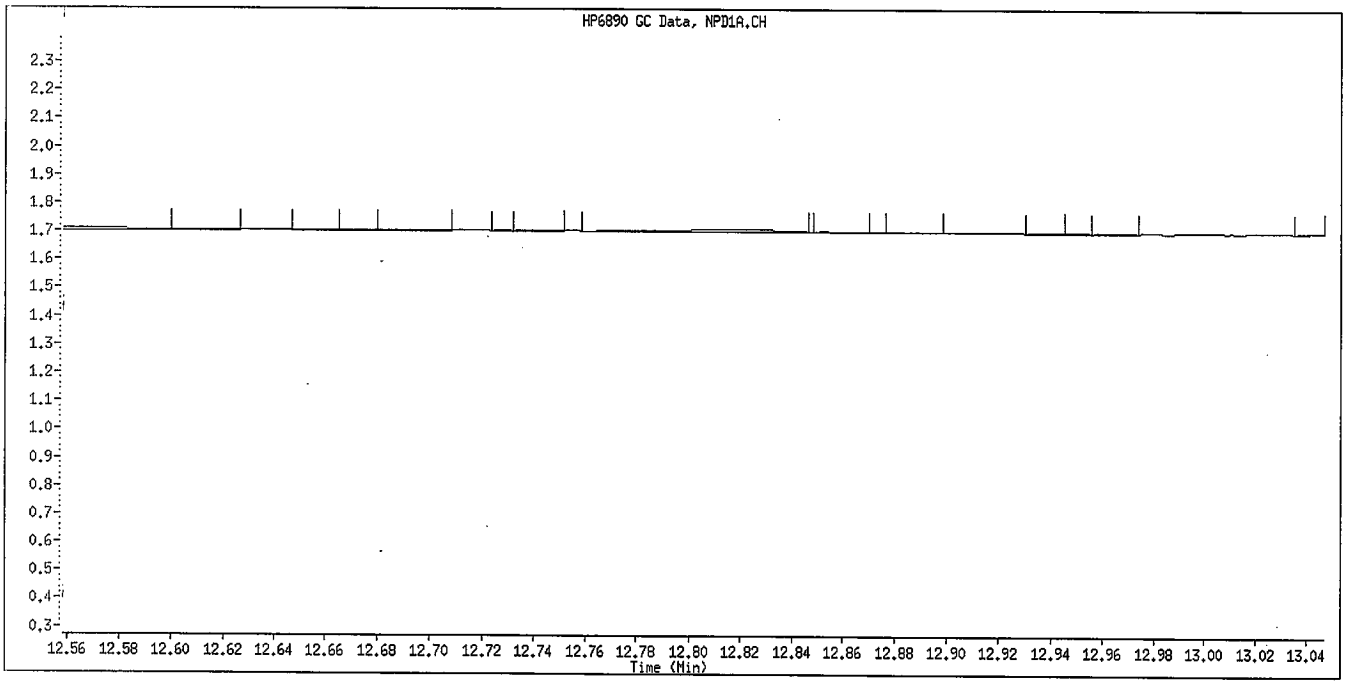
Date : 26-JUN-2009 20:45
Client ID: OPP L2 GSV0640
Sample Info: OPP L2 GSV0640
Column phase: RTx-1MS
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2,i\0626091,B\008F0801,D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Mevinphos
-Chlormefos
-Thionazin
-Demeton-O
-Ethoprop
-Naled
-Sulfotepp
-Phorate
-Dimethoate
-Demeton-S
-Simazine
-Atrazine
-propazine
-Diazinon
-Methyl Parathion
-Ronnel
-Malathion
-Fenthion
-Chlorpyrifos
-Trichloronate
-Anilazine
-Merphos-A (Merphos)
-Tetrachlorvinphos (Stirop
-Tokuthion
-Merphos-B (Merphos Oxone)
-Carbophenothion-methyl
-Fensulfothion
-Bolstar / Famphur
-Carbophenothion
-Triphenyl phosphate
-Phosmet
-EPN
-Azinphos-methyl
-Azinphos-ethyl
-Coumaphos
Tributylphosphate
TOCP

Data File Name: 008F0801.D
Inj. Date and Time: 26-JUN-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP L2 GSV0640
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

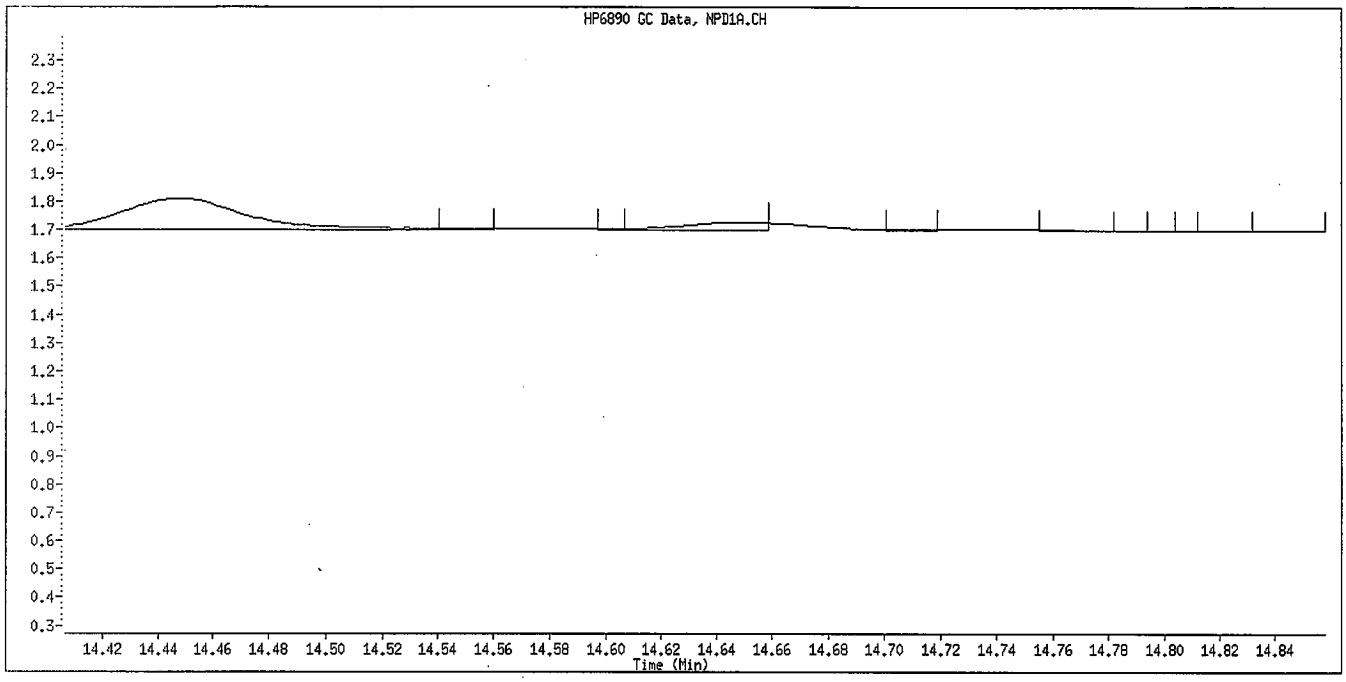


Manual Integration

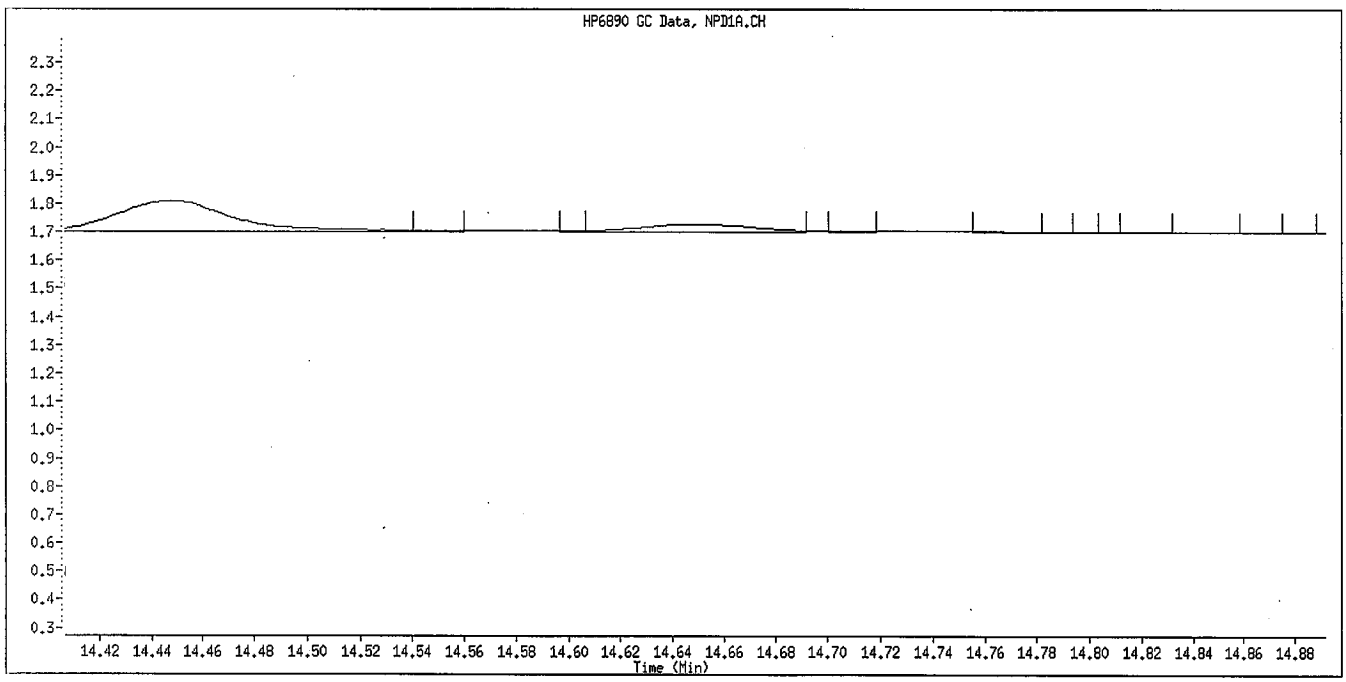
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

7/30/09

Data File Name: 008F0801.D
Inj. Date and Time: 26-JUN-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP L2 GSV0640
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\009F0901.D
Lab Smp Id: OPP L1 GSV0641 Client Smp ID: OPP L1 GSV0641
Inj Date : 26-JUN-2009 21:13
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L1 GSV0641
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 20:45 Cal File: 008F0801.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	1 o,o,o-TEPT	3.258	3.254	(0.183)	32995	0.20000	0.2212
	2 Dichlorvos	4.081	4.074	(0.229)	21359	0.20000	0.2306
	3 Mevinphos	5.743	5.739	(0.322)	10777	0.20000	0.2118
$	4 Chlormefos	5.834	5.836	(0.327)	24167	0.20000	0.2083
	5 Thionazin	7.506	7.507	(0.421)	22524	0.20000	0.2127
	6 Demeton-O	7.646	7.649	(0.429)	9836	0.06500	0.07420
	7 Ethoprop	7.854	7.852	(0.440)	20488	0.20000	0.2208
	8 Naled	8.063	8.057	(0.452)	1992	0.20000	0.2720(M)
*	9 Tributylphosphate	8.114	8.135	(1.000)	165799	2.00000	
	10 Sulfotepp	8.439	8.442	(0.473)	34658	0.20000	0.1992
	11 Phorate	8.531	8.532	(0.478)	21475	0.20000	0.2235
	12 Dimethoate	8.664	8.659	(0.486)	20073	0.20000	0.1798
	13 Demeton-S	8.846	8.846	(0.496)	10751	0.13600	0.1328
	14 Simazine	8.926	8.924	(0.500)	4819	0.20000	0.2042(M)
	15 Atrazine	9.093	9.094	(0.510)	7432	0.20000	0.1717
	16 propazine	9.238	9.241	(0.518)	7824	0.20000	0.1959
	17 Disulfoton	9.868	9.869	(0.553)	15404	0.20000	0.2020
	18 Diazinon	9.904	9.902	(0.555)	23321	0.20000	0.2259
	19 Methyl Parathion	10.716	10.717	(0.601)	12987	0.20000	0.1984
	20 Ronnel	11.239	11.241	(0.630)	15128	0.20000	0.2236
	21 Malathion	11.801	11.804	(0.661)	15443	0.20000	0.2136
	22 Fenthion	11.931	11.932	(0.669)	15507	0.20000	0.2330
	23 Parathion	12.019	12.019	(0.674)	15083	0.20000	0.2130
	24 Chlorpyrifos	12.069	12.067	(0.676)	19655	0.20000	0.2294
	25 Trichloronate	12.494	12.496	(0.700)	15328	0.20000	0.2002
	26 Anilazine	12.824	12.817	(0.719)	1493	0.20000	0.2971(M)
	27 Merphos-A (Merphos)	13.199	13.199	(0.740)	13220	0.20000	0.2069
	28 Tetrachlorvinphos (Stirophos)	13.823	13.824	(0.775)	8134	0.20000	0.1916
	29 Tokuthion	14.448	14.449	(0.810)	15915	0.20000	0.2168
	30 Merphos-B (Merphos Oxone)	14.656	14.651	(0.821)	3884	0.20000	0.2457(M)
	31 Carbophenothion-methyl	15.238	15.239	(0.854)	14924	0.20000	0.2045
	32 Fensulfothion	15.364	15.361	(0.861)	8319	0.20000	0.2269
	33 Bolstar / Famphur	16.049	16.053	(0.899)	32824	0.40000	0.4674

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34 Carbophenothion	16.193	16.197	(0.908)	16722	0.20000	0.2374
$	35 Triphenyl phosphate	16.709	16.712	(0.936)	11646	0.20000	0.2175
	36 Phosmet	16.963	16.963	(0.951)	12928	0.20000	0.2144
	37 EPN	17.148	17.151	(0.961)	9525	0.20000	0.2105
	38 Azinphos-methyl	17.478	17.480	(0.980)	12661	0.20000	0.1970
*	39 TOCP	17.843	17.846	(1.000)	105892	2.00000	
	40 Azinphos-ethyl	17.923	17.926	(1.004)	23154	0.20000	0.1978
	41 Coumaphos	18.364	18.366	(1.029)	10604	0.20000	0.2046
S	42 Merphos				17104	0.20000	0.2120
M	43 Total Demeton				20587	0.20000	0.2070

QC Flag Legend

M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

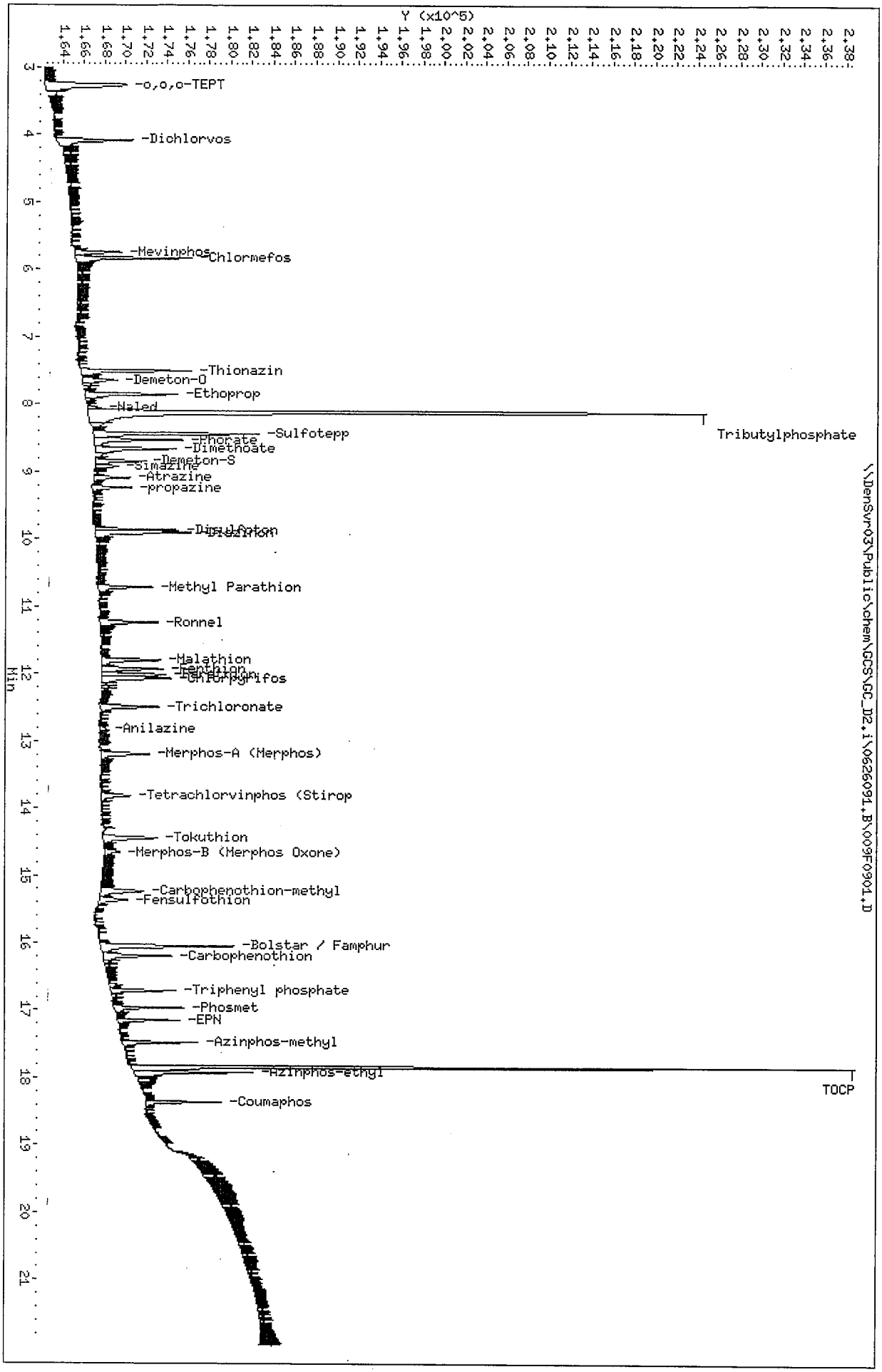
Instrument ID: GC_D2.i
Lab File ID: 009F0901.D
Lab Smp Id: OPP L1 GSV0641
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L1 GSV0641
Level:
Sample Type:

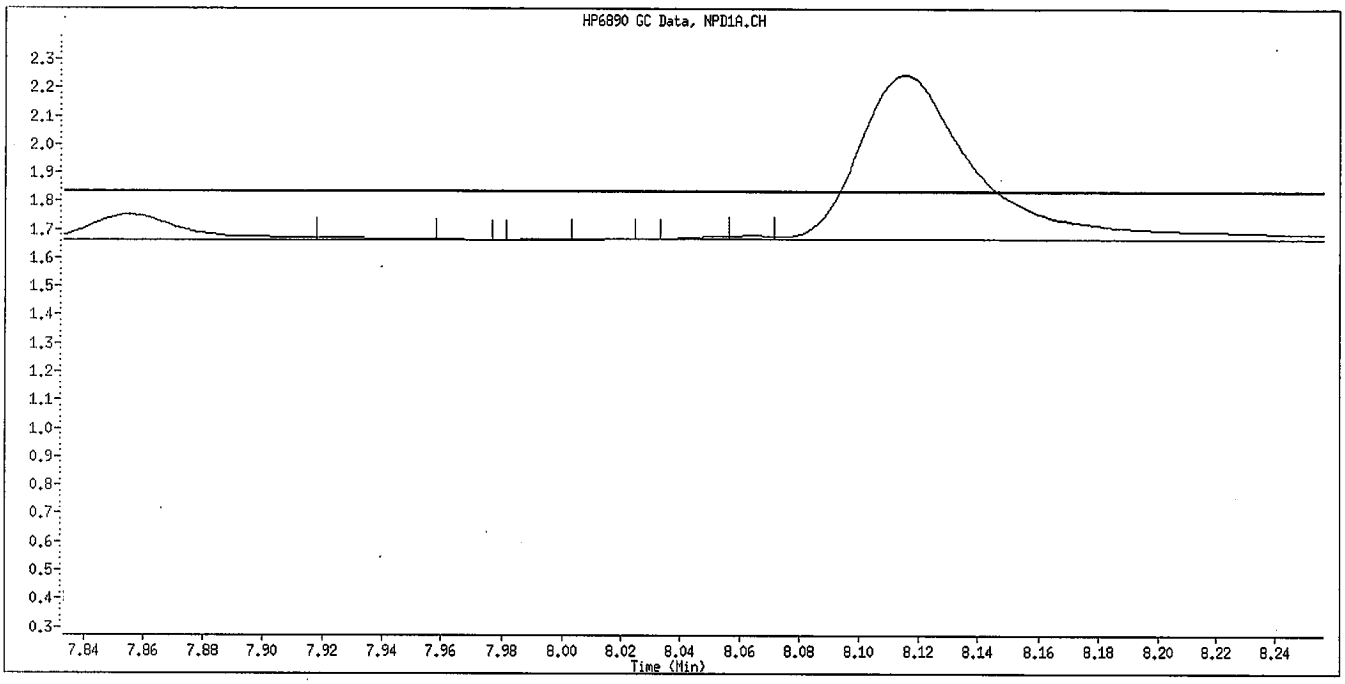
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	160310	80155	320620	165799	3.42
39 TOCP	97363	48682	194726	105892	8.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	0.03
39 TOCP	17.84	17.34	18.34	17.84	-0.01

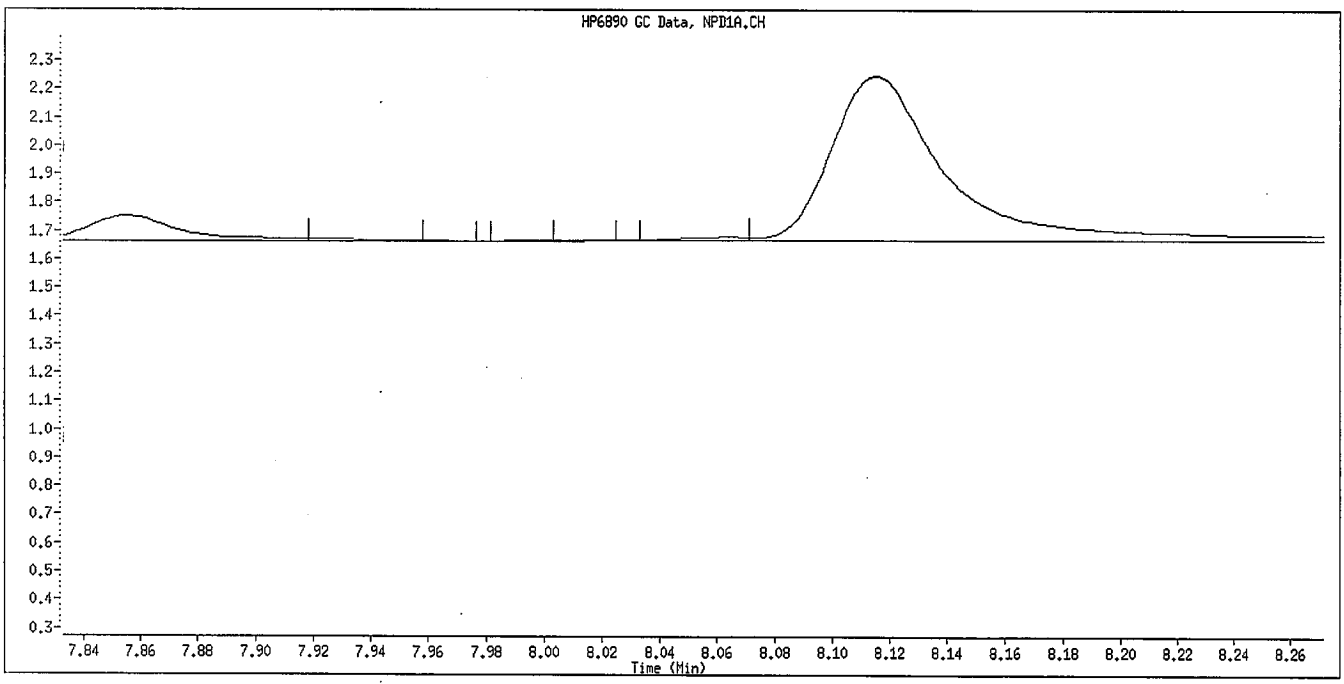
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0626091,B\009F0901.D
Date : 26-JUN-2009 21:13
Client ID: OPP L1 GSV0641
Sample Info: OPP L1 GSV0641
Column phase: RTx-1MS
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Mevinphos
-Chlormefos
-Thionazin
-Demeton-O
-Ethoprop
-Naled
Tributylphosphate
-Sulfotepp
-Phorate
-Dimethoate
-Demeton-S
-Simazine
-Atrazine
-propazine
-Diazinon
-Methyl Parathion
-Ronnel
-Malathion
-Fenthion
-Chlorpyrifos
-Trichloronate
-Anilazine
-Merphos-A (Merphos)
-Tetrachlorvinphos (Stirop
-Tokuthion
-Merphos-B (Merphos Oxone)
-Carbophenothion-methyl
-Fensulfothion
-Bolstar / Famphur
-Carbophenothion
-Triphenyl phosphate
-Phosmet
-EPN
-Azinphos-methyl
-Azinphos-ethyl
TOCP
-Coumaphos
\\DenSvr03\Public\chem\GCS\GC_D2,i\0626091,B\009F0901.D

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Naled
CAS #:
Report Date: 06/30/2009



Original Integration

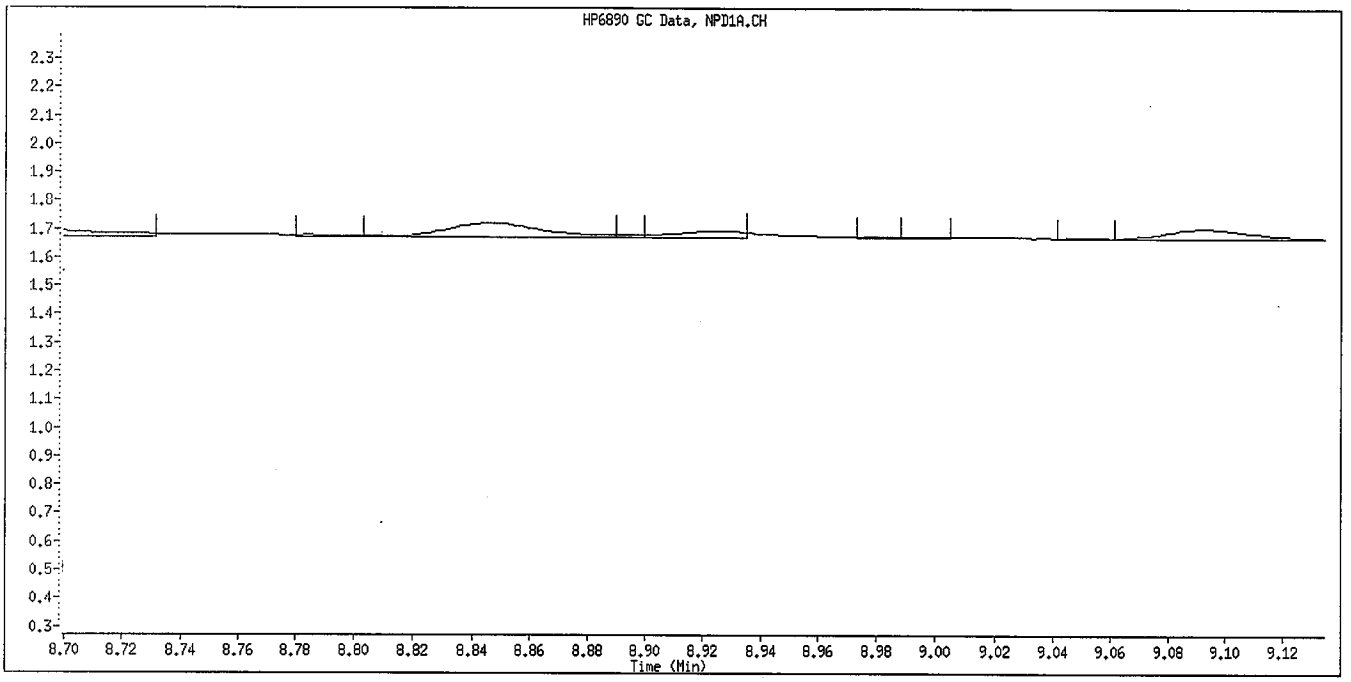


Manual Integration

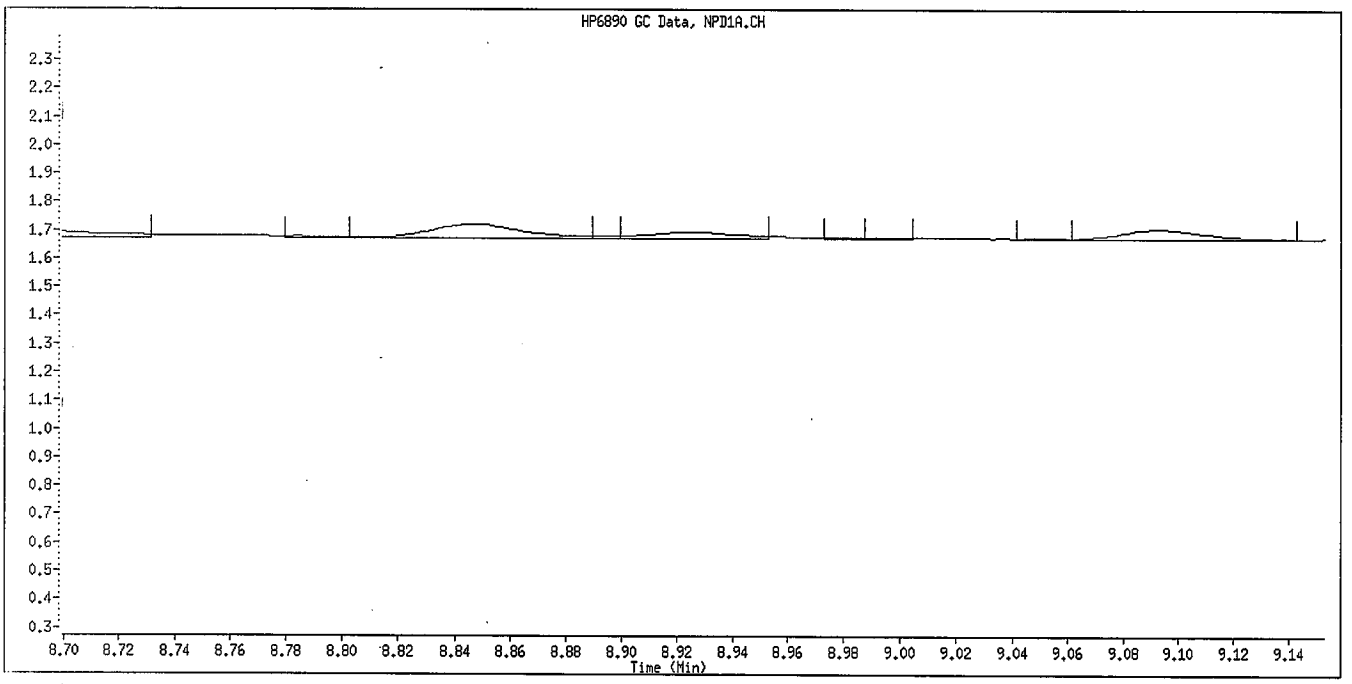
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Simazine
CAS #:
Report Date: 06/30/2009



Original Integration

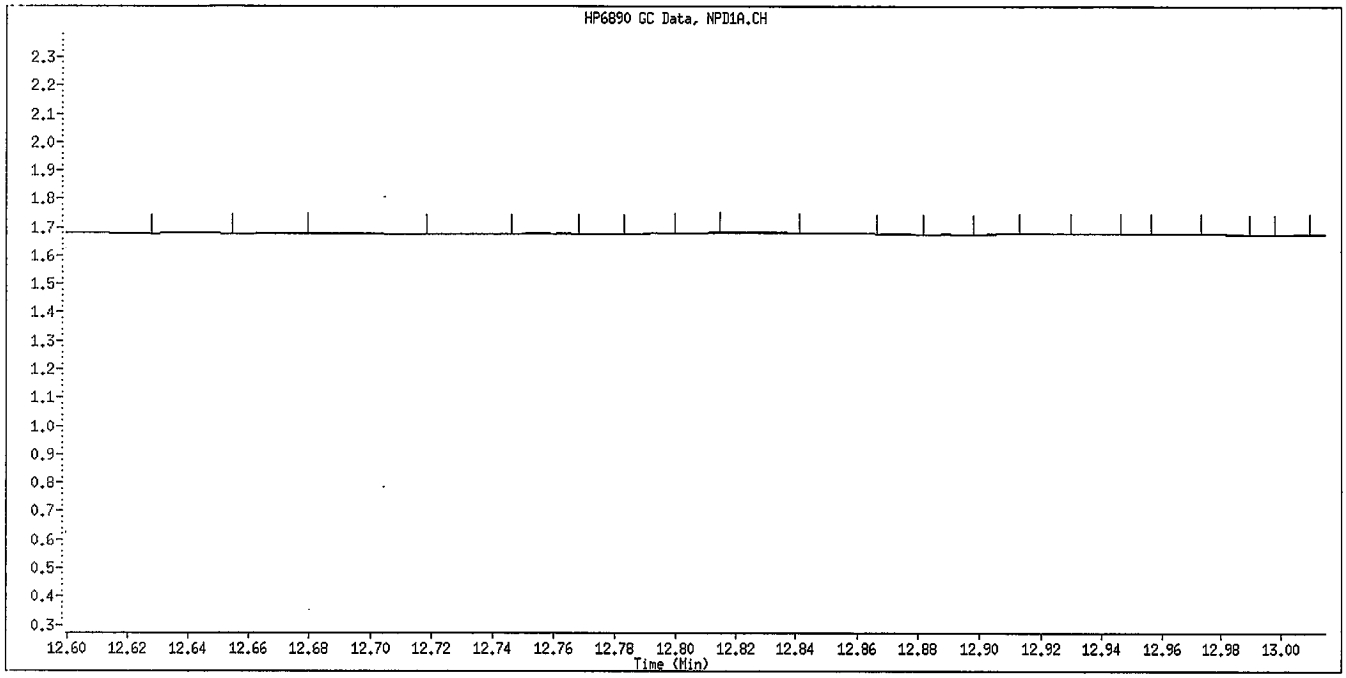


Manual Integration

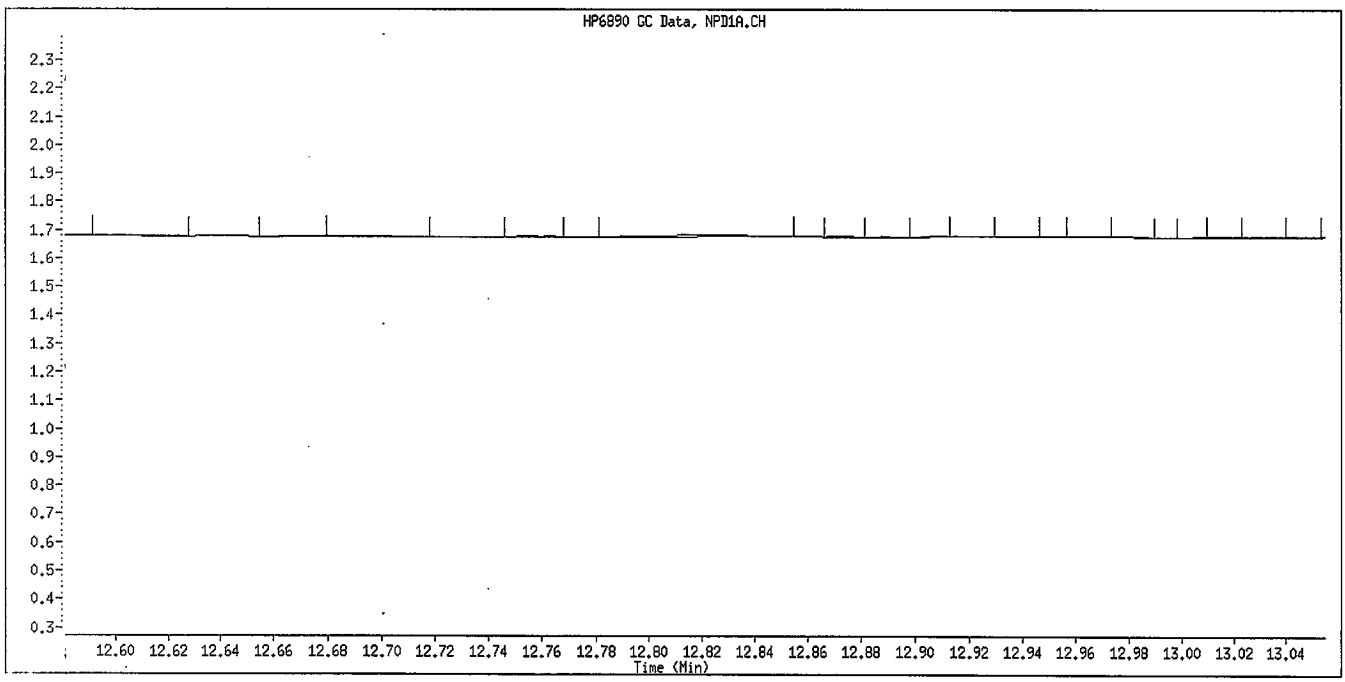
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

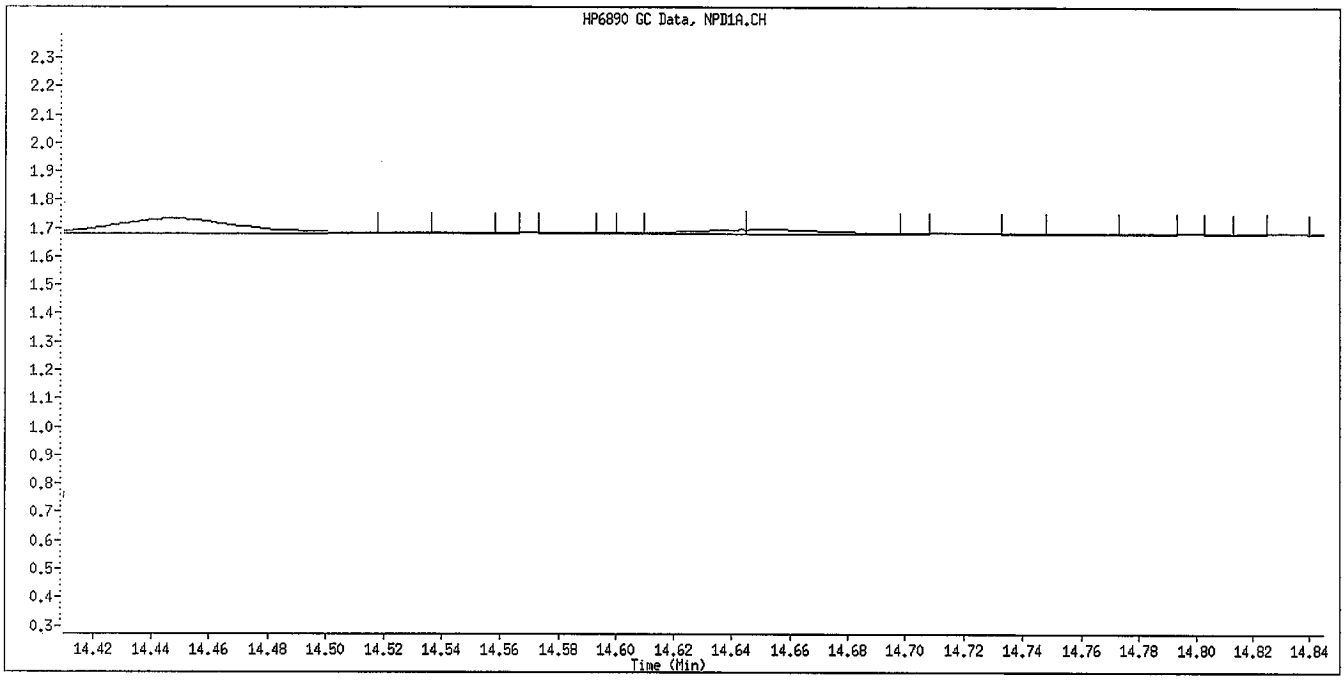


Manual Integration

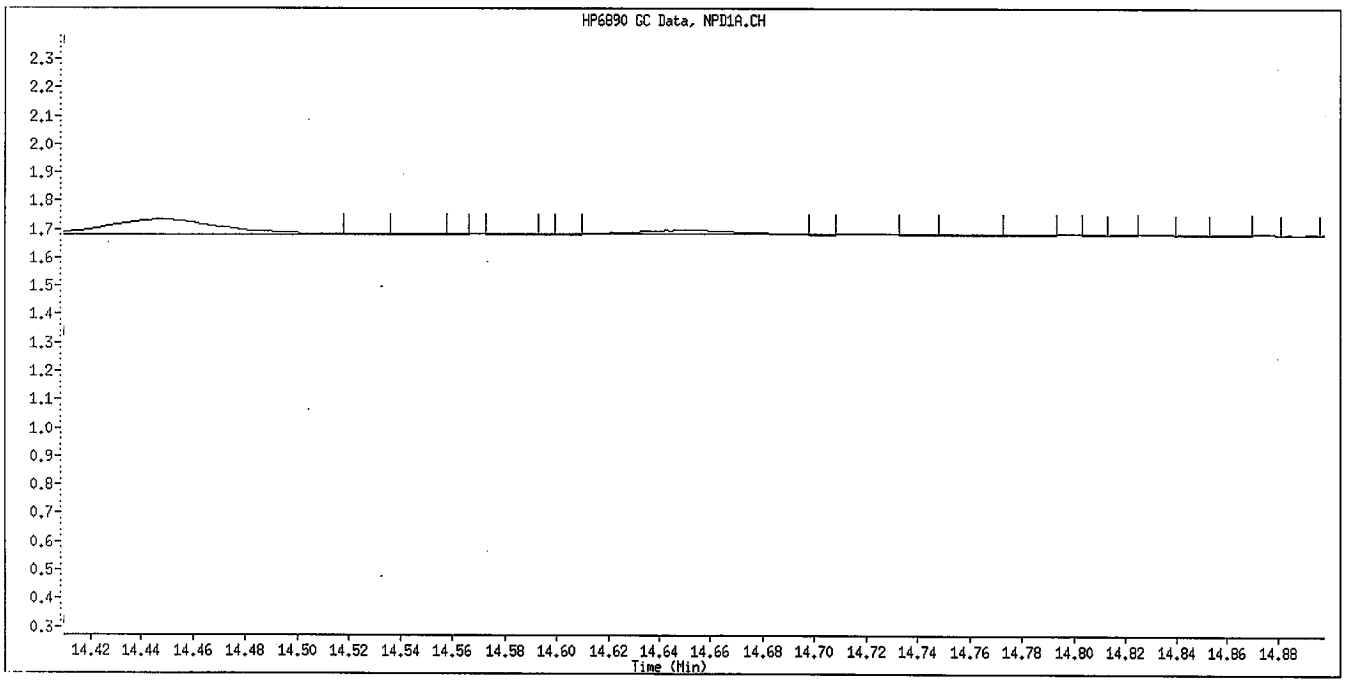
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\010F1001.D
Lab Smp Id: OPP SS GSV0633 Client Smp ID: OPP SS GSV0633
Inj Date : 26-JUN-2009 21:40
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP SS GSV0633
Misc Info : IS - GSV0633-09
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Meth Date : 30-Jun-2009 12:45 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	3.252	3.254	(0.182)	288886	2.00000	2.058
	2 Dichlorvos	4.074	4.074	(0.228)	166172	2.00000	1.906
	3 Mevinphos	5.737	5.739	(0.322)	81302	2.00000	1.698
$	4 Chlormefos	5.834	5.836	(0.327)	194413	2.00000	1.781
	5 Thionazin	7.504	7.507	(0.421)	196672	2.00000	1.974
	6 Demeton-O	7.645	7.649	(0.429)	175593	0.65000	1.871
	7 Ethoprop	7.849	7.852	(0.440)	179292	2.00000	2.054
	8 Naled	8.054	8.057	(0.451)	23739	2.00000	1.198
*	9 Tributylphosphate	8.112	8.135	(1.000)	166572	2.00000	
	10 Sulfotepp	8.437	8.442	(0.473)	226133	2.00000	1.793
	11 Phorate	8.529	8.532	(0.478)	182466	2.00000	2.018
	12 Dimethoate	8.654	8.659	(0.485)	219089	2.00000	2.086
	13 Demeton-S	8.842	8.846	(0.496)	17618	1.36000	0.2313
	14 Simazine	8.919	8.924	(0.500)	92634	2.00000	2.622
	15 Atrazine	9.089	9.094	(0.509)	79689	2.00000	1.957
	16 propazine	9.235	9.241	(0.518)	71876	2.00000	1.913
	17 Disulfoton	9.865	9.869	(0.553)	98052	2.00000	1.589
	18 Diazinon	9.900	9.902	(0.555)	209627	2.00000	2.158
	19 Methyl Parathion	10.714	10.717	(0.600)	125682	2.00000	2.040
	20 Ronnel	11.237	11.241	(0.630)	136977	2.00000	2.151
	21 Malathion	11.799	11.804	(0.661)	94998	2.00000	1.625
	22 Fenthion	11.929	11.932	(0.669)	117968	2.00000	1.884
	23 Parathion	12.017	12.019	(0.674)	129518	2.00000	1.944
	24 Chlorpyrifos	12.067	12.067	(0.676)	158990	2.00000	1.972
	25 Trichloronate	12.492	12.496	(0.700)	134163	2.00000	1.862
	26 Anilazine	12.817	12.817	(0.718)	5585	2.00000	1.015
	27 Merphos-A (Merphos)	13.195	13.199	(0.740)	24516	2.00000	0.4078
	28 Tetrachlorvinphos (Stirophos)	13.817	13.824	(0.774)	83430	2.00000	2.088
	29 Tokuthion	14.444	14.449	(0.810)	139904	2.00000	2.025
	30 Merphos-B (Merphos Oxone)	14.647	14.651	(0.821)	107349	2.00000	6.623(A)
	31 Carbophenothion-methyl	15.234	15.239	(0.854)	73477	2.00000	1.354
	32 Fensulfothion	15.355	15.361	(0.861)	108213	2.00000	1.924
	33 Bolstar / Famphur	16.047	16.053	(0.899)	268528	4.00000	4.064

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	34	Carbophenothion	16.194	16.197	(0.908)	123570	2.00000	1.864
$	35	Triphenyl phosphate	16.709	16.712	(0.936)	86501	2.00000	1.717
	36	Phosmet	16.960	16.963	(0.951)	93465	2.00000	1.647
	37	EPN	17.147	17.151	(0.961)	96842	2.00000	1.793
	38	Azinphos-methyl	17.477	17.480	(0.980)	116249	2.00000	1.922
*	39	TOCP	17.842	17.846	(1.000)	99647	2.00000	
	40	Azinphos-ethyl	17.922	17.926	(1.004)	124764	2.00000	1.833
	41	Coumaphos	18.362	18.366	(1.029)	97846	2.00000	2.006
S	42	Merphos				131865	2.00000	1.737
M	43	Total Demeton				193211	2.00000	2.102

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

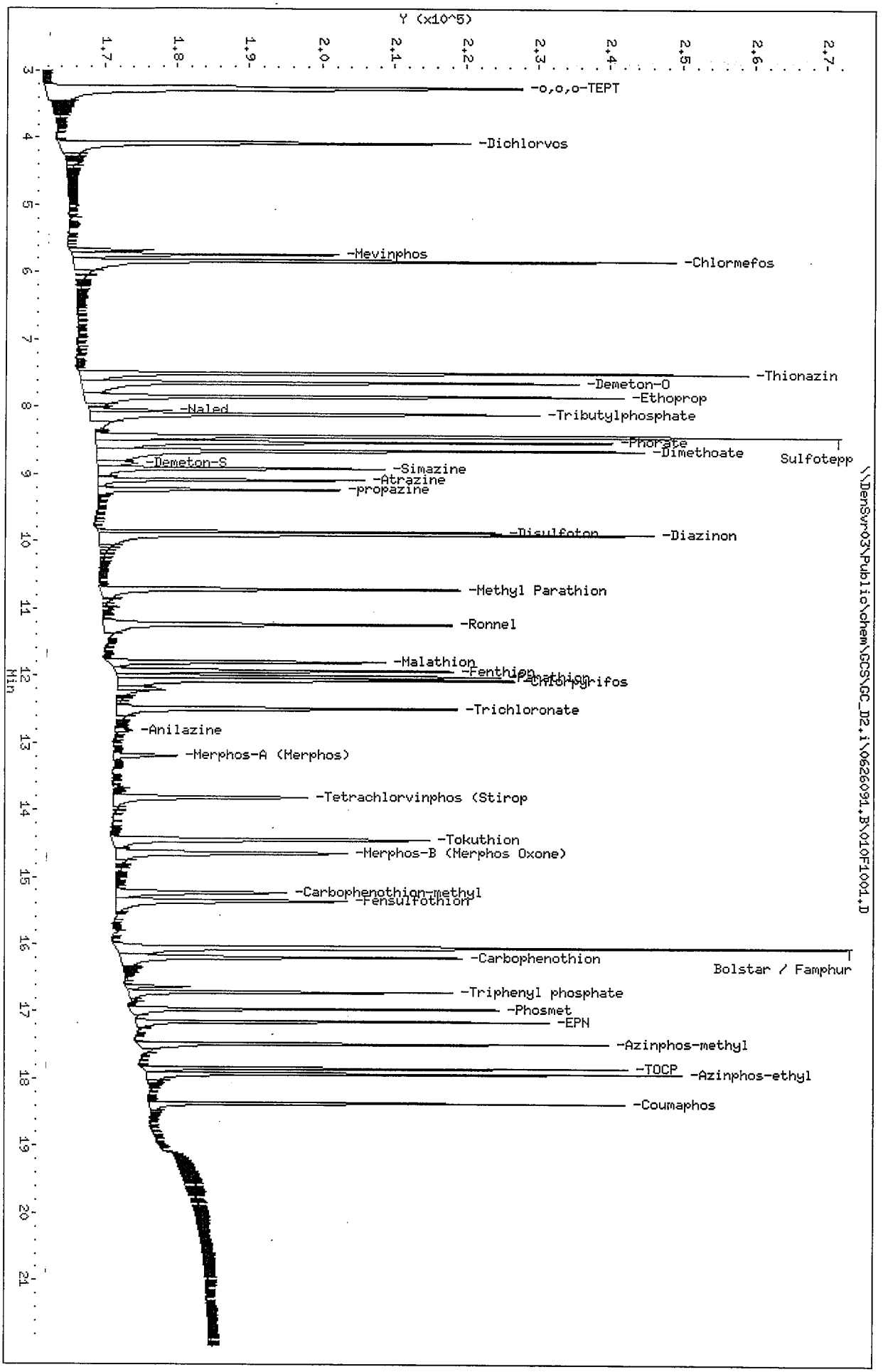
Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Lab Smp Id: OPP SS GSV0633
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626091.B\8141A-1.m
Misc Info: IS - GSV0633-09

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP SS GSV0633
Level:
Sample Type:

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	160310	80155	320620	166572	3.91
39 TOCP	97363	48682	194726	99647	2.35

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
9 Tributylphosphate	8.11	7.61	8.61	8.11	0.00
39 TOCP	17.84	17.34	18.34	17.84	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0626091,B\010F1004,D
Date : 26-JUN-2009 21:40
Client ID: OPP SS GSV0633
Sample Info: OPP SS GSV0633
Column phase: RTx-1MS

Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\003F0301.D
Lab Smp Id: OPP L7 GSV0634 Client Smp ID: OPP L7 GSV0634
Inj Date : 26-JUN-2009 18:28
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L7 GSV0634
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.729	4.731	(0.251)	421372	5.00000	4.907
	2 Dichlorvos	6.546	6.546	(0.348)	359024	5.00000	5.355(A)
$	3 Chlormefos	7.383	7.384	(0.392)	338585	5.00000	5.016(A)
	4 Mevinphos	9.233	9.234	(0.491)	238906	5.00000	5.290(A)
	5 Demeton-O	9.733	9.734	(0.517)	69239	1.62500	1.609
	6 Thionazin	9.984	9.984	(0.531)	338015	5.00000	5.005(A)
	7 Ethoprop	10.499	10.499	(0.558)	242747	5.00000	4.810
	8 Phorate	10.538	10.539	(0.560)	289868	5.00000	4.953
	9 Naled	10.939	10.939	(0.581)	78857	5.00000	5.109(A)
	10 Sulfotepp	11.018	11.017	(0.586)	427657	5.00000	4.845(A)
*	11 Tributylphosphate	11.116	11.116	(1.000)	139264	2.00000	
	12 Simazine	11.401	11.399	(0.606)	68046	5.00000	5.383(A)
	13 Diazinon	11.541	11.541	(0.613)	228810	5.00000	4.801
	14 Atrazine	11.584	11.584	(0.616)	128612	5.00000	4.879(A)
	15 Propazine	11.746	11.747	(0.624)	110050	5.00000	4.930
	16 Disulfoton	12.049	12.049	(0.640)	228764	5.00000	4.914
	17 Demeton-S	12.124	12.124	(0.644)	175573	3.40000	3.111
	18 Dimethoate	13.283	13.282	(0.706)	319454	5.00000	5.120(A)
	19 Ronnel	13.588	13.587	(0.722)	211449	5.00000	5.035(A)
	20 Merphos-A (Merphos)	13.689	13.689	(1.231)	217509	5.00000	4.310(A)
	21 Chlorpyrifos	14.411	14.409	(0.766)	227882	5.00000	5.350(A)
	22 Fenthion	14.663	14.662	(0.779)	196942	5.00000	4.985
	23 Trichloronate	14.711	14.711	(0.782)	296442	5.00000	5.242(A)
	24 Anilazine	15.214	15.216	(0.809)	19108	5.00000	5.242(A)
	25 Methyl Parathion	15.521	15.519	(0.825)	235511	5.00000	5.522(A)
	26 Malathion	15.724	15.724	(0.836)	212190	5.00000	5.311(A)
	27 Tokuthion	16.344	16.344	(0.869)	233715	5.00000	4.996
	28 Parathion	16.493	16.494	(0.877)	213175	5.00000	5.073(AM)
	29 Merphos-B (Merphos Oxone)	16.514	16.517	(1.486)	65080	5.00000	4.212(AM)
	30 Tetrachlorvinphos (stirophos)	16.976	16.977	(0.902)	143806	5.00000	5.290(A)
	31 Carbophenothion methyl	17.081	17.082	(0.908)	210272	5.00000	5.396(A)
	32 Bolstar	17.441	17.440	(0.927)	199405	5.00000	4.858
	33 Carbophenothion	17.523	17.524	(0.931)	212727	5.00000	5.271(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.279	18.281	(0.972)	167127	5.00000	5.046 (A)
	35 Fensulfothion	18.558	18.559	(0.986)	152929	5.00000	5.029 (A)
*	36 TOCP	18.814	18.816	(1.000)	66384	2.00000	
	37 Phosmet / EPN	18.908	18.909	(1.005)	330448	10.0000	9.819 (A)
	38 Famphur	19.011	19.011	(1.010)	220404	5.00000	5.062 (A)
	39 Azinphos-methyl	19.146	19.147	(1.018)	197822	5.00000	4.967
	40 Azinphos-ethyl	19.364	19.366	(1.029)	187035	5.00000	4.930
	41 Coumaphos	20.348	20.347	(1.081)	155426	5.00000	5.329 (A)
S	42 Merphos				282589	5.00000	5.108 (A)
M	43 Total Demeton				244812	5.00000	4.720

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

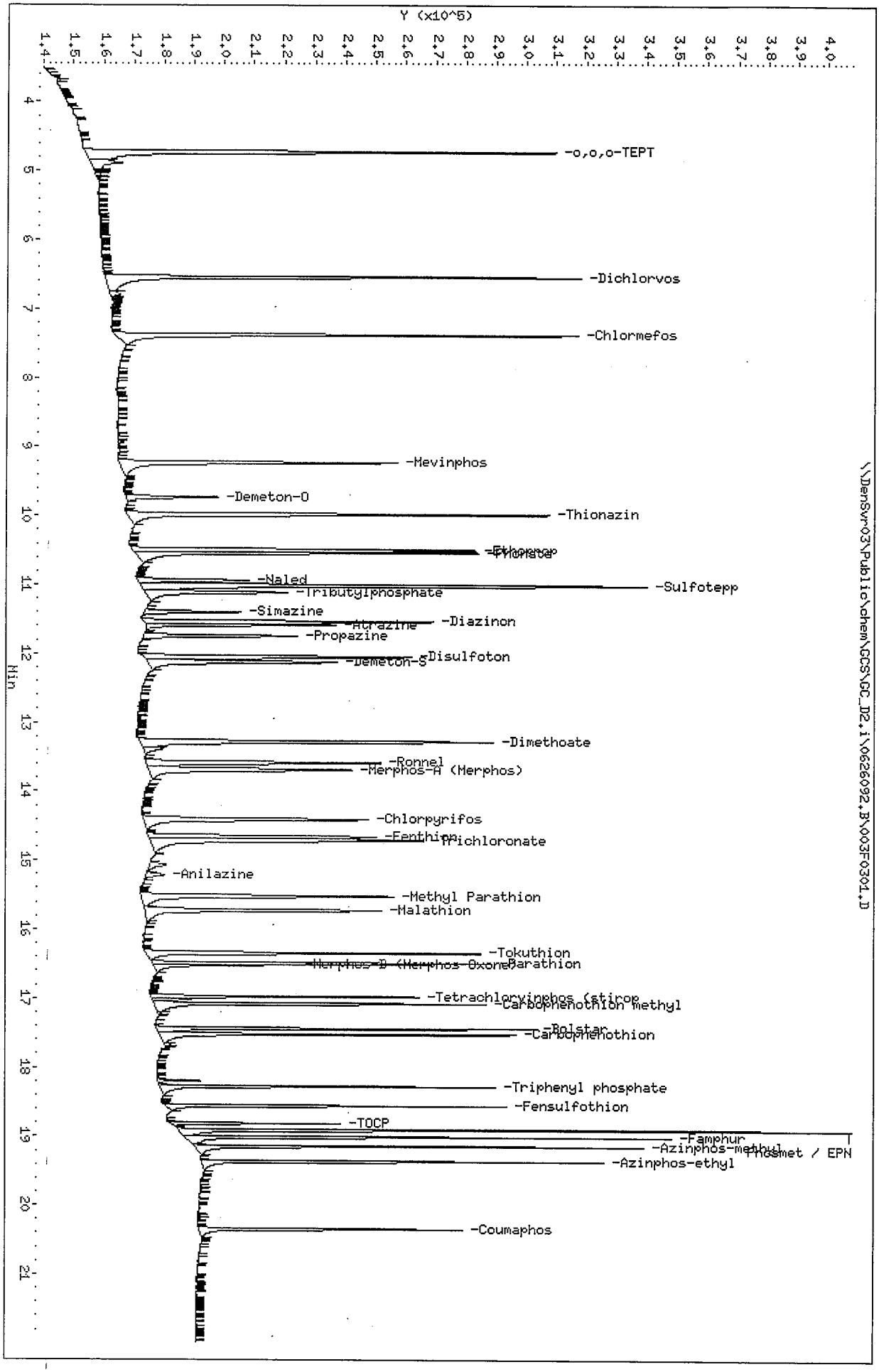
Instrument ID: GC_D2.i
Lab File ID: 003F0301.D
Lab Smp Id: OPP L7 GSV0634
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L7 GSV0634
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	123933	61967	247866	139264	12.37
36 TOCP	68831	34416	137662	66384	-3.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.01
36 TOCP	18.82	18.32	19.32	18.81	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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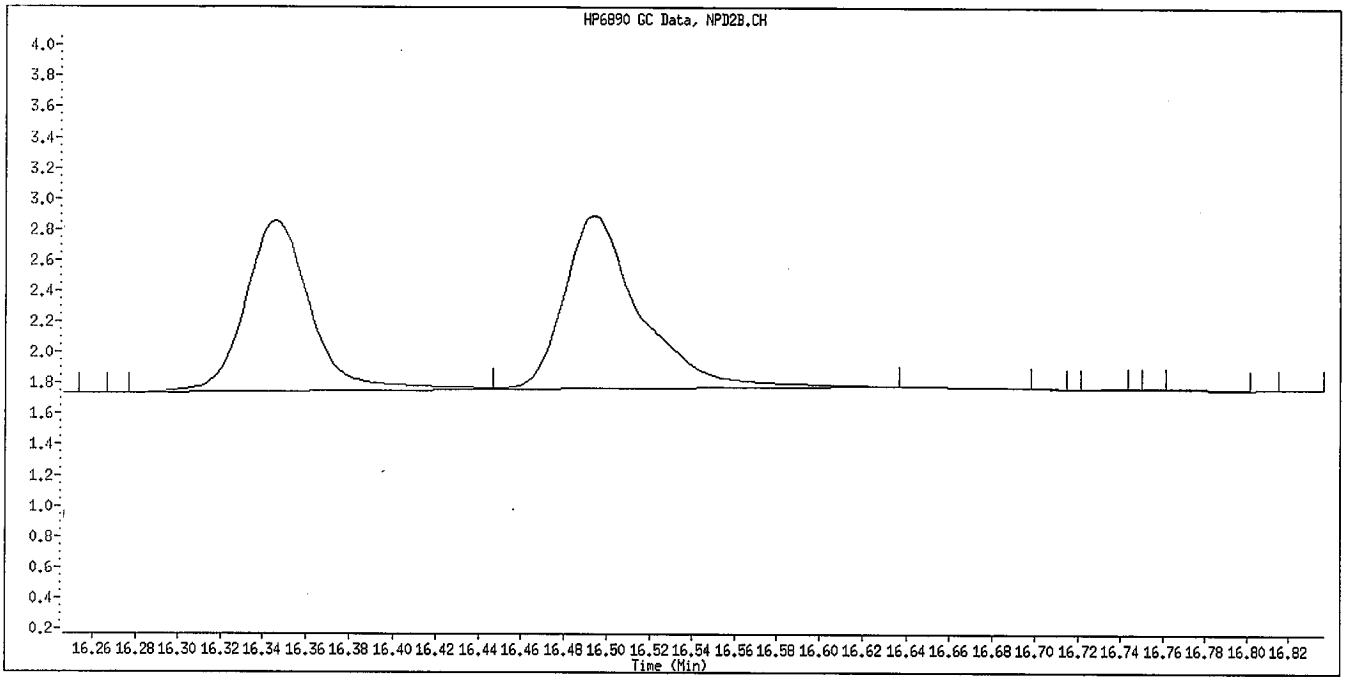
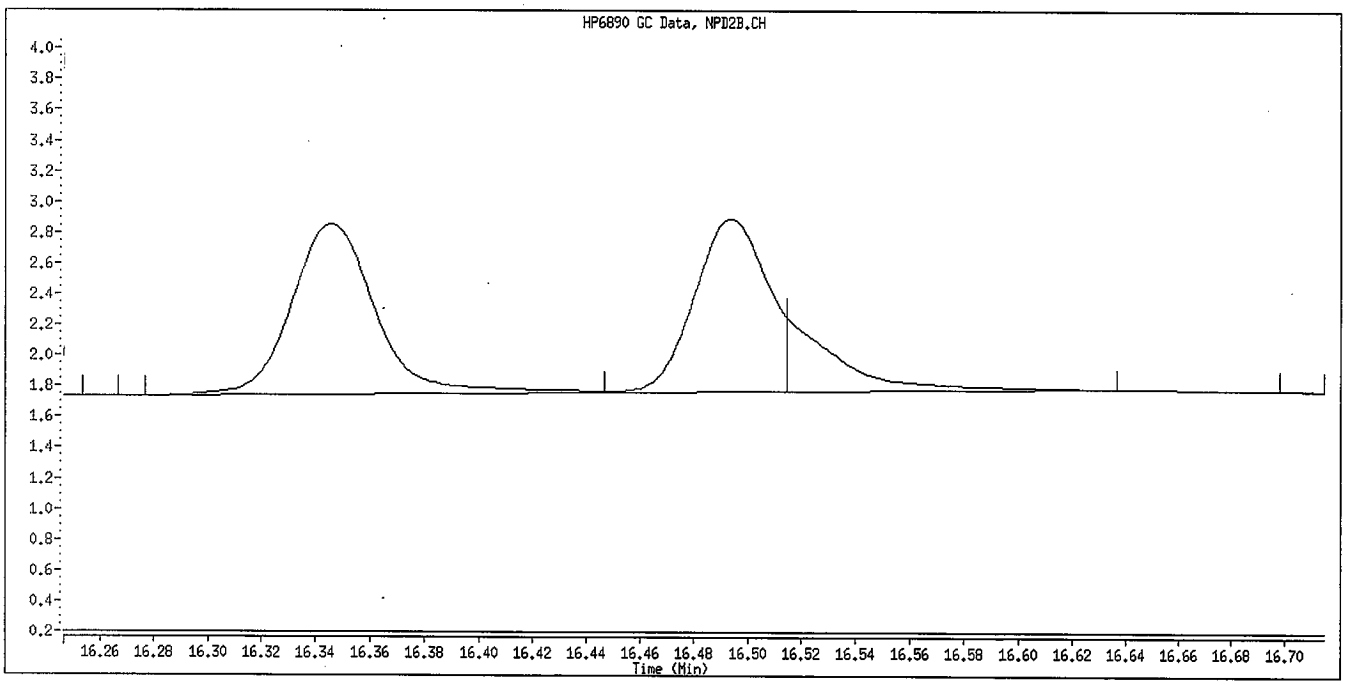
Date : 26-JUN-2009 18:28
Client ID: OPP L7 GSV0634
Sample Info: OPP L7 GSV0634
Column phase: RTx-OPPest

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 003F0301.D
Inj. Date and Time: 26-JUN-2009 18:28
Instrument ID: GC_D2.i
Client ID: OPP L7 GSV0634
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

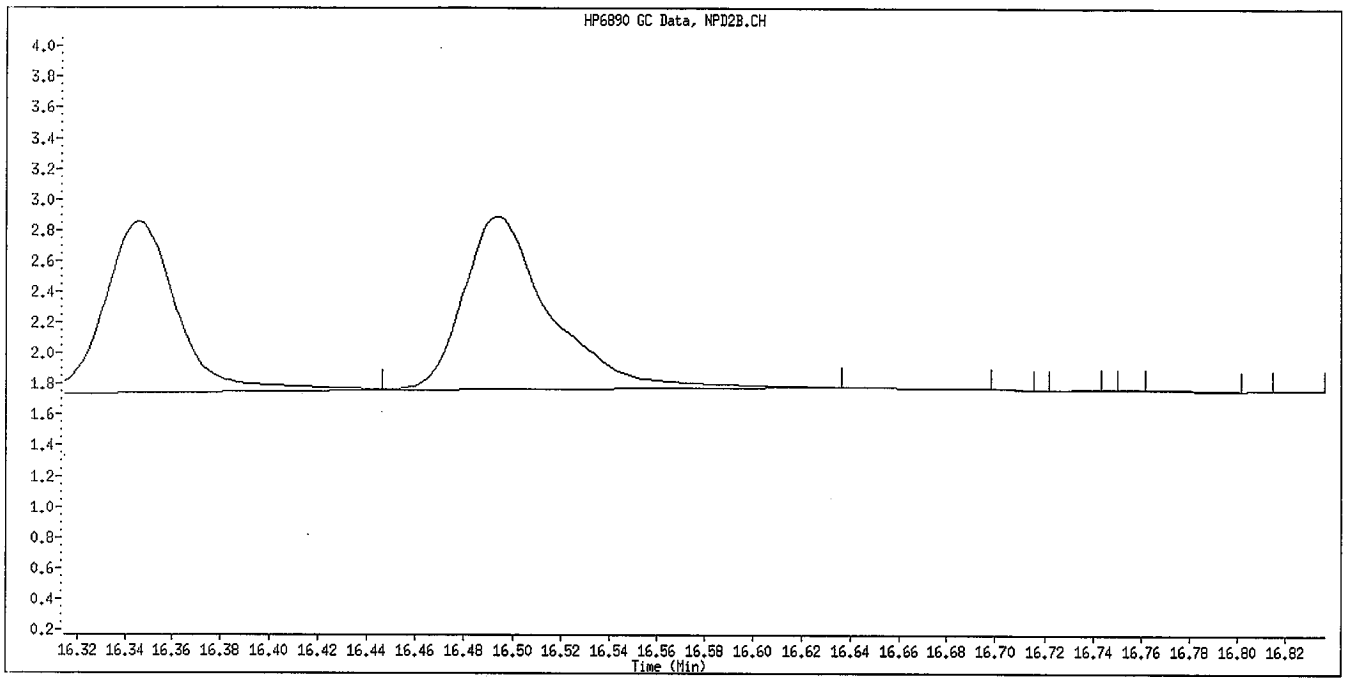


Manual Integration

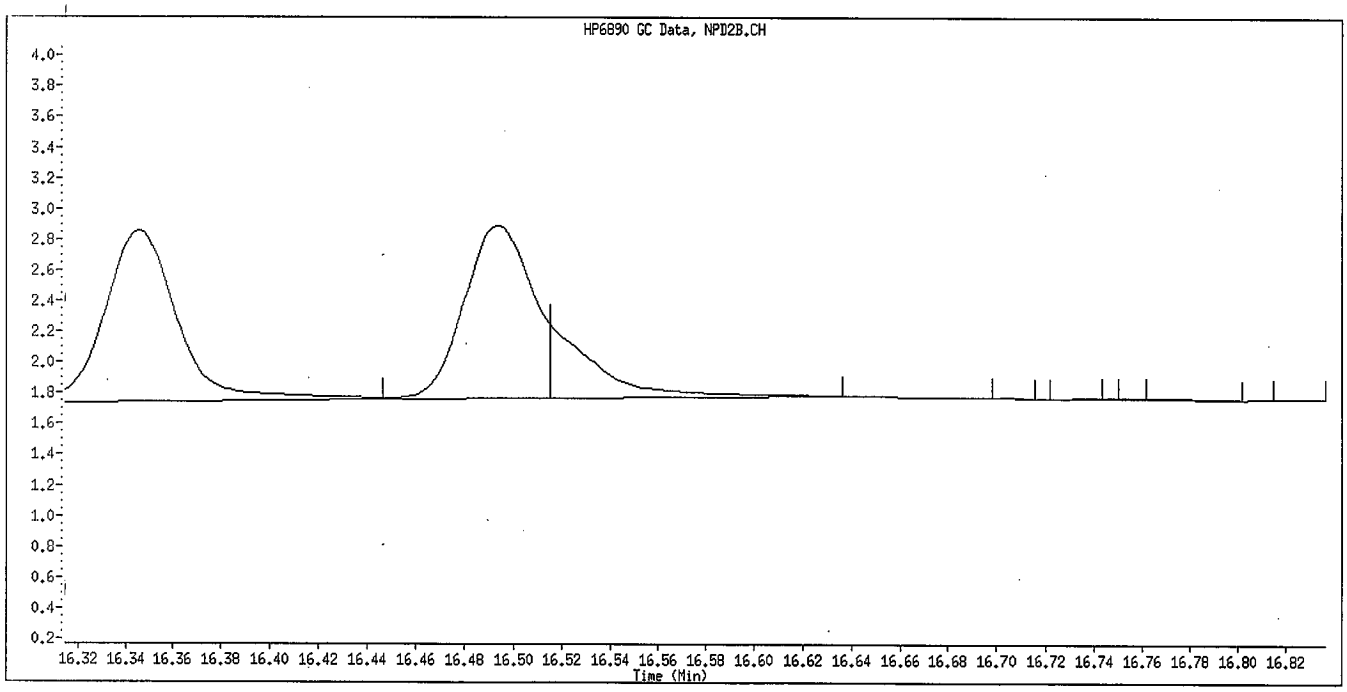
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 003F0301.D
Inj. Date and Time: 26-JUN-2009 18:28
Instrument ID: GC_D2.i
Client ID: OPP L7 GSV0634
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\004F0401.D
Lab Smp Id: OPP L6 GSV0637 Client Smp ID: OPP L6 GSV0637
Inj Date : 26-JUN-2009 18:55
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L6 GSV0637
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 18:28 Cal File: 003F0301.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.729	4.731	(0.251)	328646	4.00000	4.043
	2 Dichlorvos	6.546	6.546	(0.348)	257298	4.00000	4.054
$	3 Chlormefos	7.384	7.384	(0.392)	258146	4.00000	4.040
	4 Mevinphos	9.234	9.234	(0.491)	177060	4.00000	4.141
	5 Demeton-O	9.734	9.734	(0.517)	56273	1.30000	1.381
	6 Thionazin	9.984	9.984	(0.531)	276609	4.00000	4.326
	7 Ethoprop	10.499	10.499	(0.558)	193617	4.00000	4.053
	8 Phorate	10.537	10.539	(0.560)	250422	4.00000	4.520
	9 Naled	10.941	10.939	(0.582)	58330	4.00000	4.051
	10 Sulfotepp	11.017	11.017	(0.586)	337512	4.00000	4.039(A)
*	11 Tributylphosphate	11.116	11.116	(1.000)	118534	2.00000	
	12 Simazine	11.401	11.399	(0.606)	52173	4.00000	4.360(A)
	13 Diazinon	11.541	11.541	(0.613)	181790	4.00000	4.034
	14 Atrazine	11.582	11.584	(0.616)	98759	4.00000	4.001(A)
	15 Propazine	11.746	11.747	(0.624)	85745	4.00000	4.068
	16 Disulfoton	12.049	12.049	(0.640)	184026	4.00000	4.176
	17 Demeton-S	12.124	12.124	(0.644)	157195	2.72000	2.948
	18 Dimethoate	13.282	13.282	(0.706)	236550	4.00000	4.005
	19 Ronnel	13.589	13.587	(0.722)	165534	4.00000	4.164
	20 Merphos-A (Merphos)	13.689	13.689	(1.231)	178652	4.00000	4.159(A)
	21 Chlorpyrifos	14.409	14.409	(0.766)	174421	4.00000	4.326
	22 Fenthion	14.662	14.662	(0.779)	149338	4.00000	3.993
	23 Trichloronate	14.709	14.711	(0.782)	208762	4.00000	3.926
	24 Anilazine	15.216	15.216	(0.809)	13112	4.00000	3.800(M)
	25 Methyl Parathion	15.519	15.519	(0.825)	167086	4.00000	4.138(A)
	26 Malathion	15.724	15.724	(0.836)	151738	4.00000	4.012
	27 Tokuthion	16.346	16.344	(0.869)	187169	4.00000	4.226
	28 Parathion	16.492	16.494	(0.877)	170901	4.00000	4.296(M)
	29 Merphos-B (Merphos Oxone)	16.514	16.517	(1.486)	62127	4.00000	4.736(AM)
	30 Tetrachlorvinphos (stirophos)	16.976	16.977	(0.902)	109740	4.00000	4.264
	31 Carbophenothion methyl	17.081	17.082	(0.908)	159411	4.00000	4.322
	32 Bolstar	17.441	17.440	(0.927)	154382	4.00000	3.973
	33 Carbophenothion	17.522	17.524	(0.931)	154486	4.00000	4.043(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.279	18.281	(0.972)	125543	4.00000	4.004
	35 Fensulfothion	18.557	18.559	(0.986)	126221	4.00000	4.385
*	36 TOCP	18.814	18.816	(1.000)	62844	2.00000	
	37 Phosmet / EPN	18.907	18.909	(1.005)	263604	8.00000	8.261(A)
	38 Famphur	19.009	19.011	(1.010)	175421	4.00000	4.256
	39 Azinphos-methyl	19.144	19.147	(1.018)	160515	4.00000	4.257
	40 Azinphos-ethyl	19.362	19.366	(1.029)	144031	4.00000	4.011
	41 Coumaphos	20.346	20.347	(1.081)	118936	4.00000	4.308
S	42 Merphos				240779	4.00000	4.597(A)
M	43 Total Demeton				213468	4.00000	4.330

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

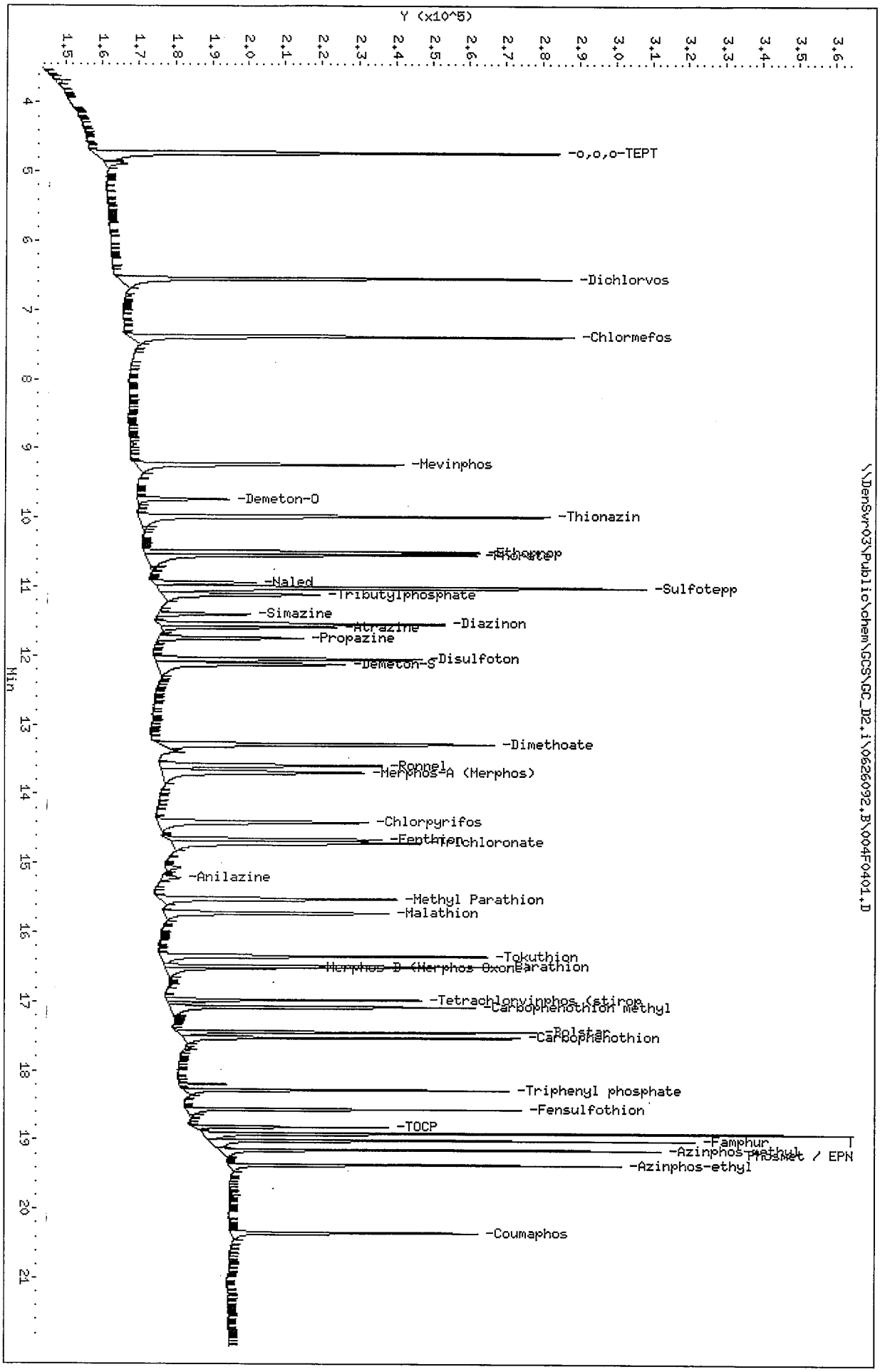
Instrument ID: GC_D2.i
Lab File ID: 004F0401.D
Lab Smp Id: OPP L6 GSV0637
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L6 GSV0637
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	123933	61967	247866	118534	-4.36
36 TOCP	68831	34416	137662	62844	-8.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.01
36 TOCP	18.82	18.32	19.32	18.81	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



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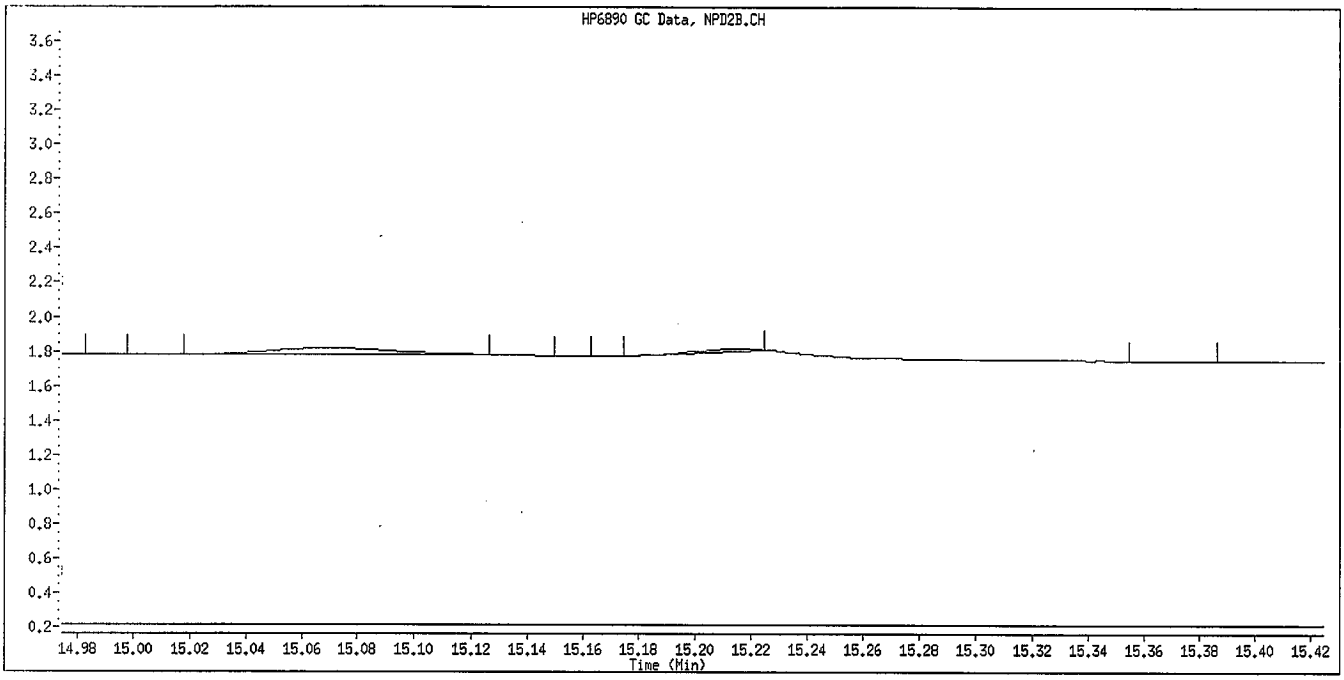
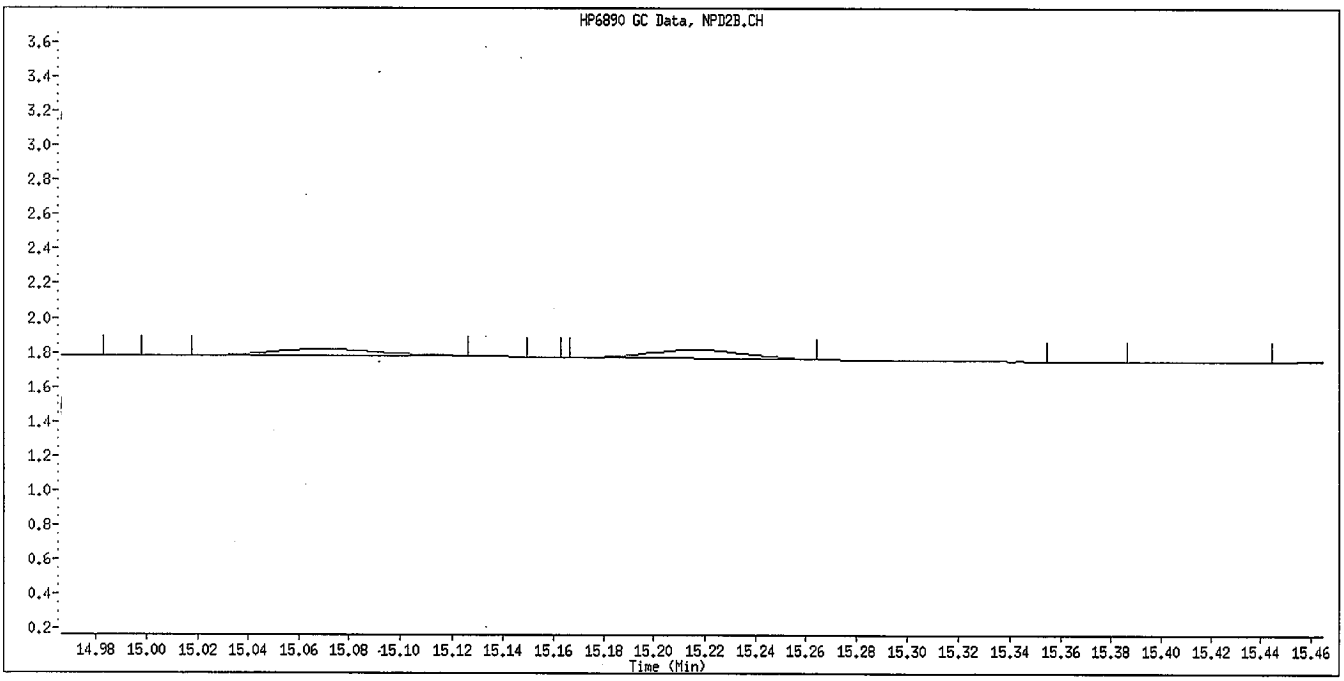
Date : 26-JUN-2009 18:55
Client ID: OPP L6 GSV0637
Sample Info: OPP L6 GSV0637
Column phase: RTx-OPPest

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 004F0401.D
Inj. Date and Time: 26-JUN-2009 18:55
Instrument ID: GC_D2.i
Client ID: OPP L6 GSV0637
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

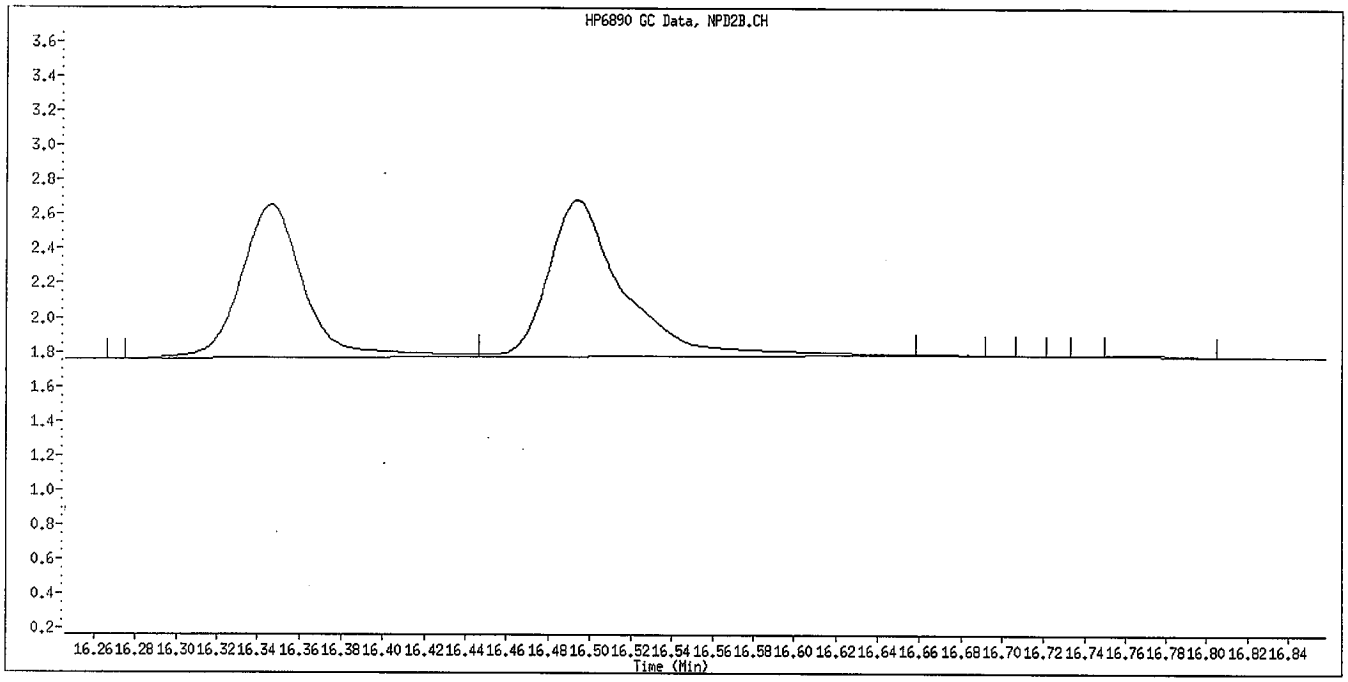


Manual Integration

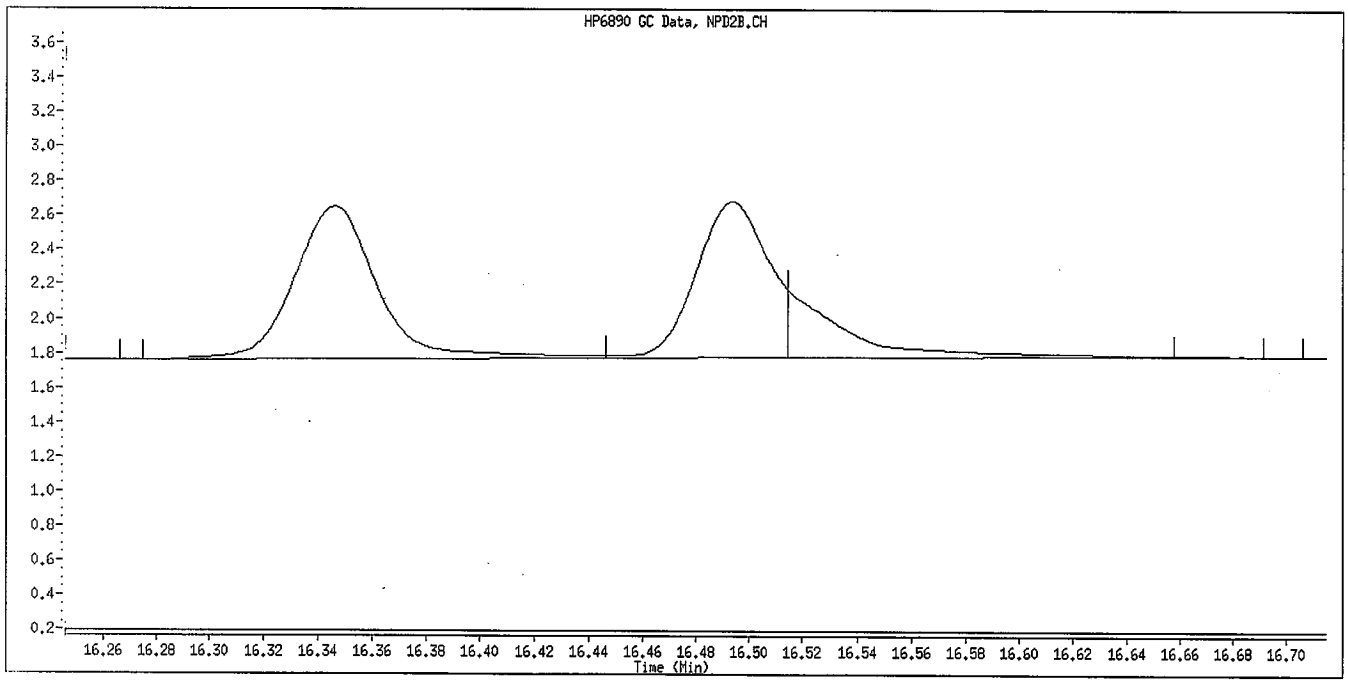
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 004F0401.D
Inj. Date and Time: 26-JUN-2009 18:55
Instrument ID: GC_D2.i
Client ID: OPP L6 GSV0637
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

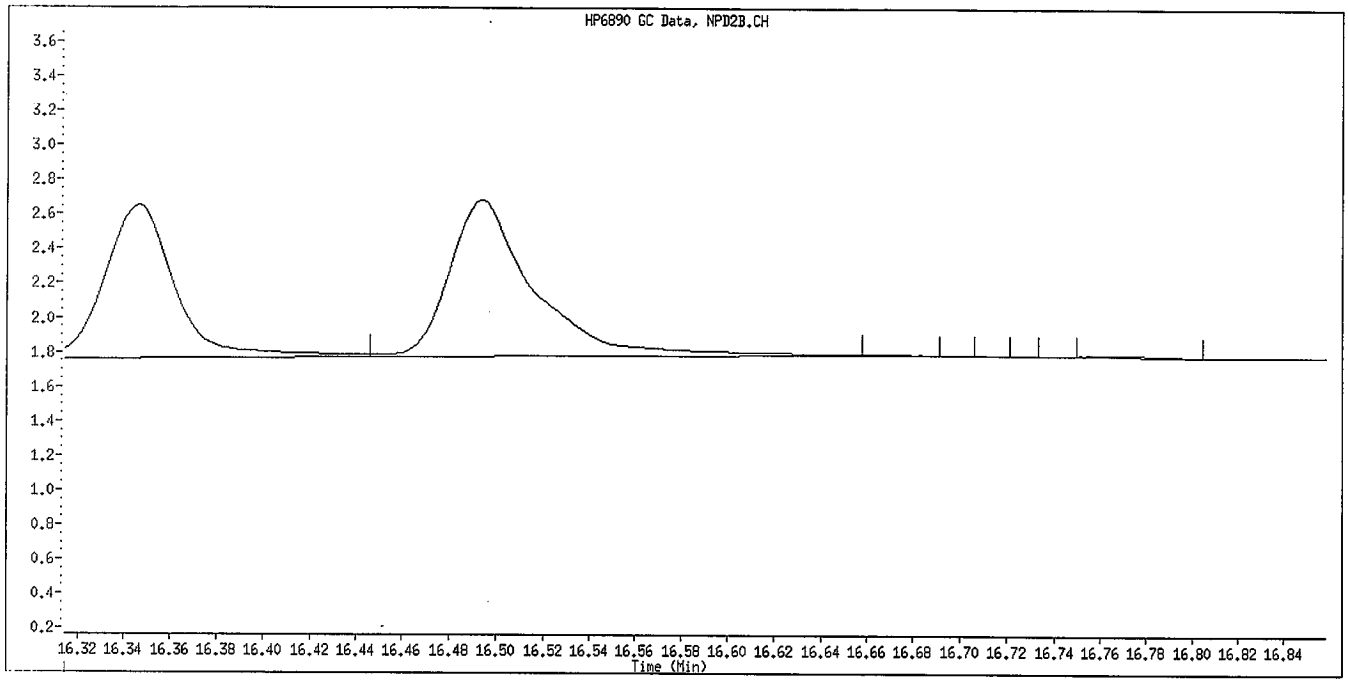


Manual Integration

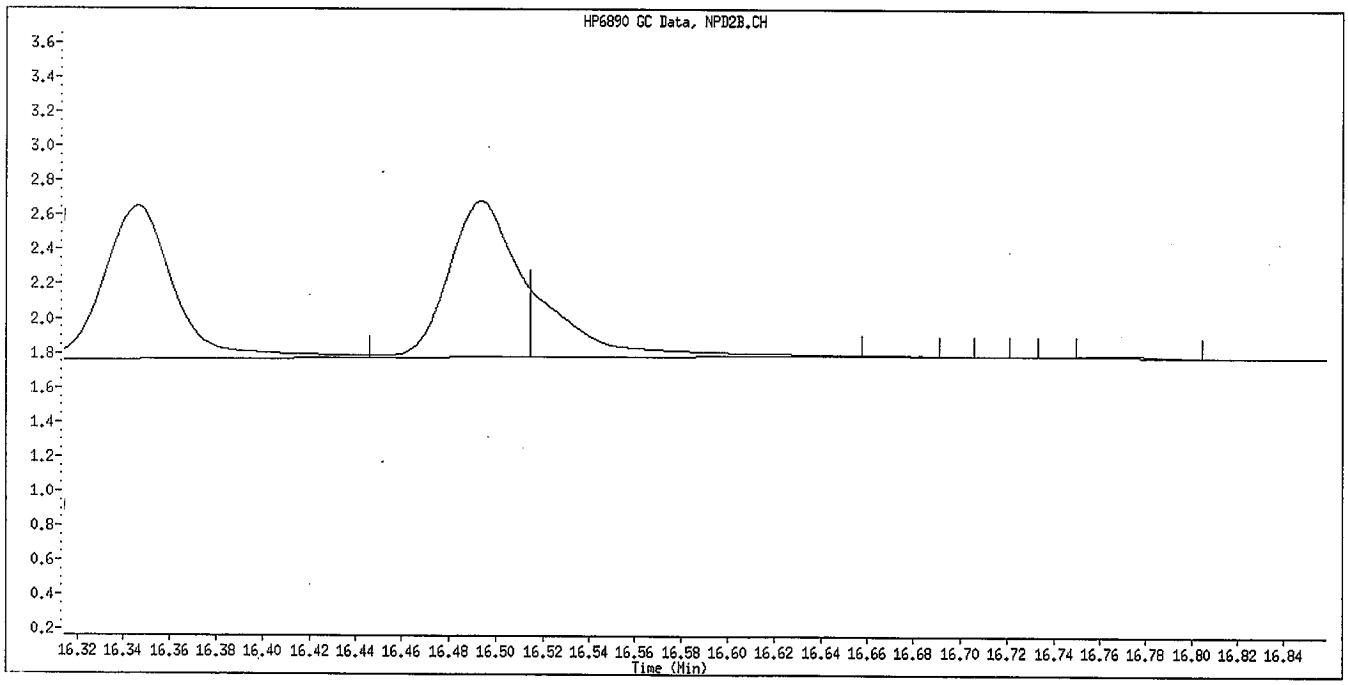
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 004F0401.D
Inj. Date and Time: 26-JUN-2009 18:55
Instrument ID: GC_D2.i
Client ID: OPP L6 GSV0637
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\005F0501.D
Lab Smp Id: OPP L5 GSV0635 Client Smp ID: OPP L5 GSV0635
Inj Date : 26-JUN-2009 19:23
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L5 GSV0635
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 18:55 Cal File: 004F0401.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.730	4.731	(0.251)	267154	3.00000	2.982
	2 Dichlorvos	6.545	6.546	(0.348)	221023	3.00000	3.159
$	3 Chlormefos	7.384	7.384	(0.392)	237967	3.00000	3.379
	4 Mevinphos	9.234	9.234	(0.491)	137272	3.00000	2.913
	5 Demeton-O	9.734	9.734	(0.517)	46912	0.97500	1.045
	6 Thionazin	9.984	9.984	(0.531)	216898	3.00000	3.078
	7 Ethoprop	10.499	10.499	(0.558)	162719	3.00000	3.090
	8 Phorate	10.539	10.539	(0.560)	189707	3.00000	3.107
	9 Naled	10.939	10.939	(0.581)	46004	3.00000	2.975
	10 Sulfotepp	11.017	11.017	(0.586)	277819	3.00000	3.017(A)
*	11 Tributylphosphate	11.115	11.116	(1.000)	123454	2.00000	
	12 Simazine	11.399	11.399	(0.606)	40610	3.00000	3.079(A)
	13 Diazinon	11.540	11.541	(0.613)	155648	3.00000	3.140
	14 Atrazine	11.584	11.584	(0.616)	85997	3.00000	3.210(A)
	15 Propazine	11.747	11.747	(0.624)	72628	3.00000	3.140
	16 Disulfoton	12.049	12.049	(0.640)	152294	3.00000	3.136
	17 Demeton-S	12.124	12.124	(0.644)	121463	2.04000	2.103
	18 Dimethoate	13.282	13.282	(0.706)	206120	3.00000	3.166
	19 Ronnel	13.587	13.587	(0.722)	134377	3.00000	3.067
	20 Merphos-A (Merphos)	13.689	13.689	(1.232)	139514	3.00000	3.119(A)
	21 Chlorpyrifos	14.409	14.409	(0.766)	137524	3.00000	3.094
	22 Fenthion	14.662	14.662	(0.779)	130285	3.00000	3.161
	23 Trichloronate	14.710	14.711	(0.782)	170976	3.00000	2.945
	24 Anilazine	15.215	15.216	(0.809)	11039	3.00000	2.902
	25 Methyl Parathion	15.519	15.519	(0.825)	140467	3.00000	3.157(A)
	26 Malathion	15.724	15.724	(0.836)	122121	3.00000	2.929
	27 Tokuthion	16.344	16.344	(0.869)	150762	3.00000	3.089
	28 Parathion	16.494	16.494	(0.877)	135916	3.00000	3.100(M)
	29 Merphos-B (Merphos Oxone)	16.514	16.517	(1.486)	40683	3.00000	2.940(AM)
	30 Tetrachlorvinphos (stirophos)	16.977	16.977	(0.902)	90042	3.00000	3.174
	31 Carbophenothion methyl	17.082	17.082	(0.908)	132789	3.00000	3.266
	32 Bolstar	17.440	17.440	(0.927)	132222	3.00000	3.088
	33 Carbophenothion	17.524	17.524	(0.931)	139939	3.00000	3.323(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.280	18.281	(0.972)	105020	3.00000	3.039
	35 Fensulfothion	18.559	18.559	(0.986)	98284	3.00000	3.098
*	36 TOCP	18.815	18.816	(1.000)	69265	2.00000	
	37 Phosmet / EPN	18.909	18.909	(1.005)	207459	6.00000	5.874(A)
	38 Famphur	19.010	19.011	(1.010)	125661	3.00000	2.766
	39 Azinphos-methyl	19.147	19.147	(1.018)	125121	3.00000	3.011
	40 Azinphos-ethyl	19.365	19.366	(1.029)	120801	3.00000	3.052
	41 Coumaphos	20.347	20.347	(1.081)	93401	3.00000	3.069
S	42 Merphos				180197	3.00000	3.122(A)
M	43 Total Demeton				168375	3.00000	3.147

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

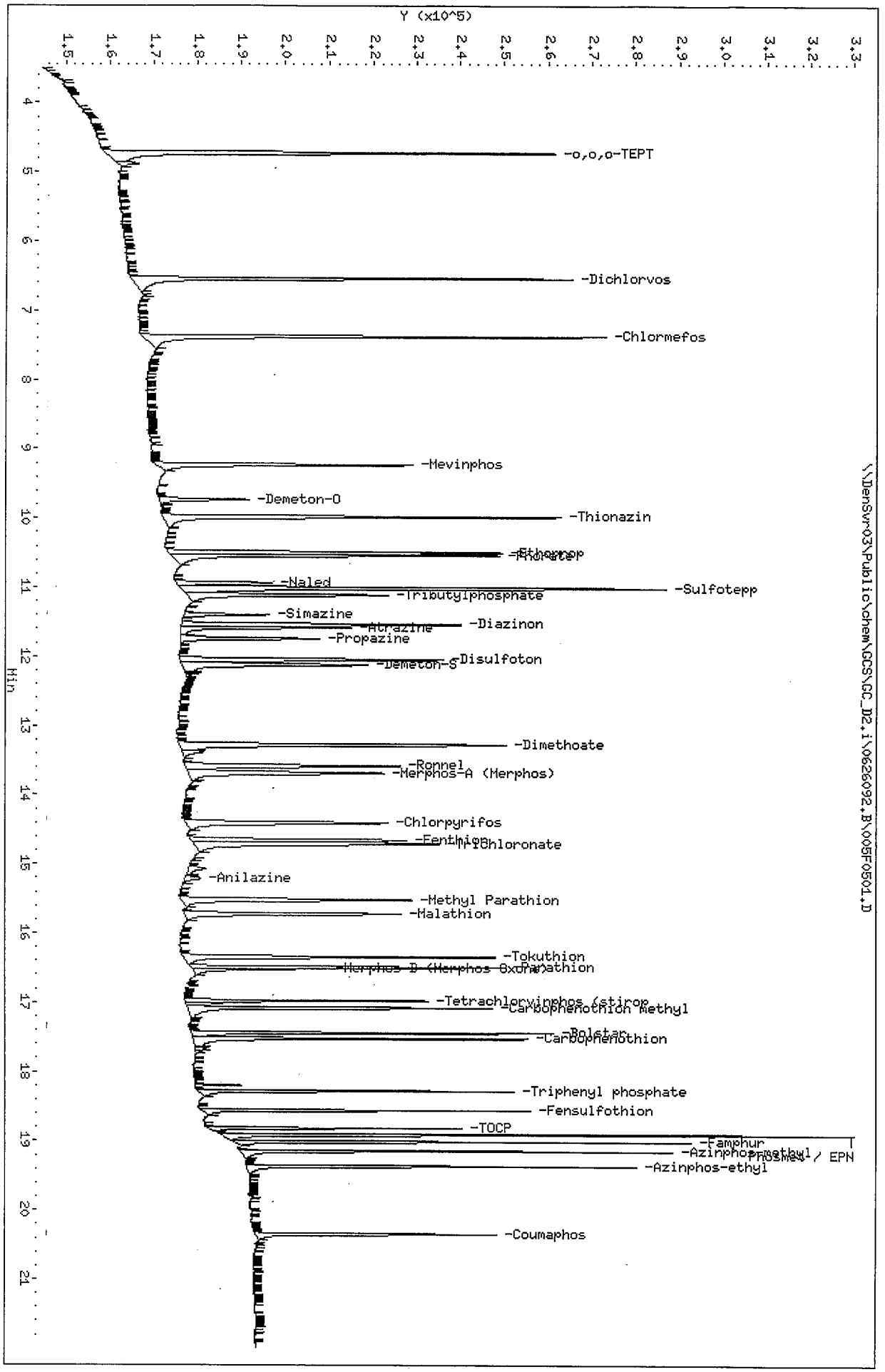
Instrument ID: GC_D2.i
Lab File ID: 005F0501.D
Lab Smp Id: OPP L5 GSV0635
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 21:40
Client Smp ID: OPP L5 GSV0635
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	123933	61967	247866	123454	-0.39
36 TOCP	68831	34416	137662	69265	0.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.00
36 TOCP	18.82	18.32	19.32	18.82	0.00

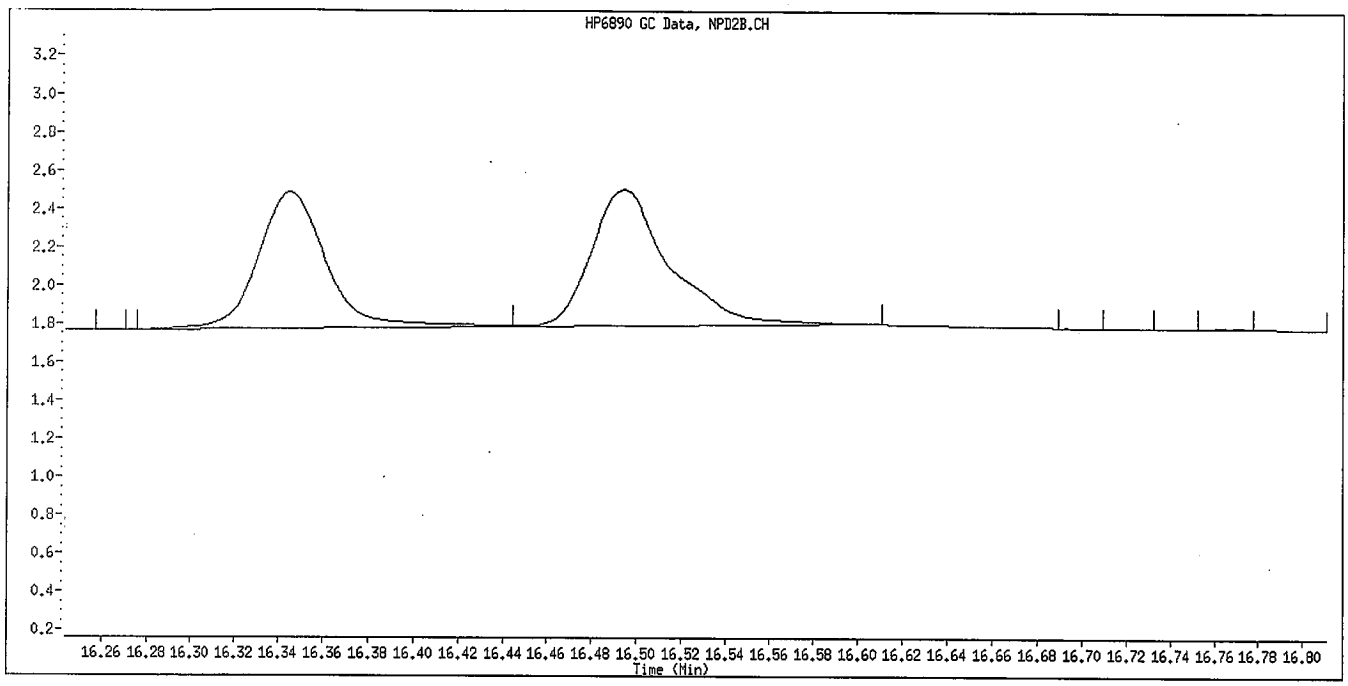
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



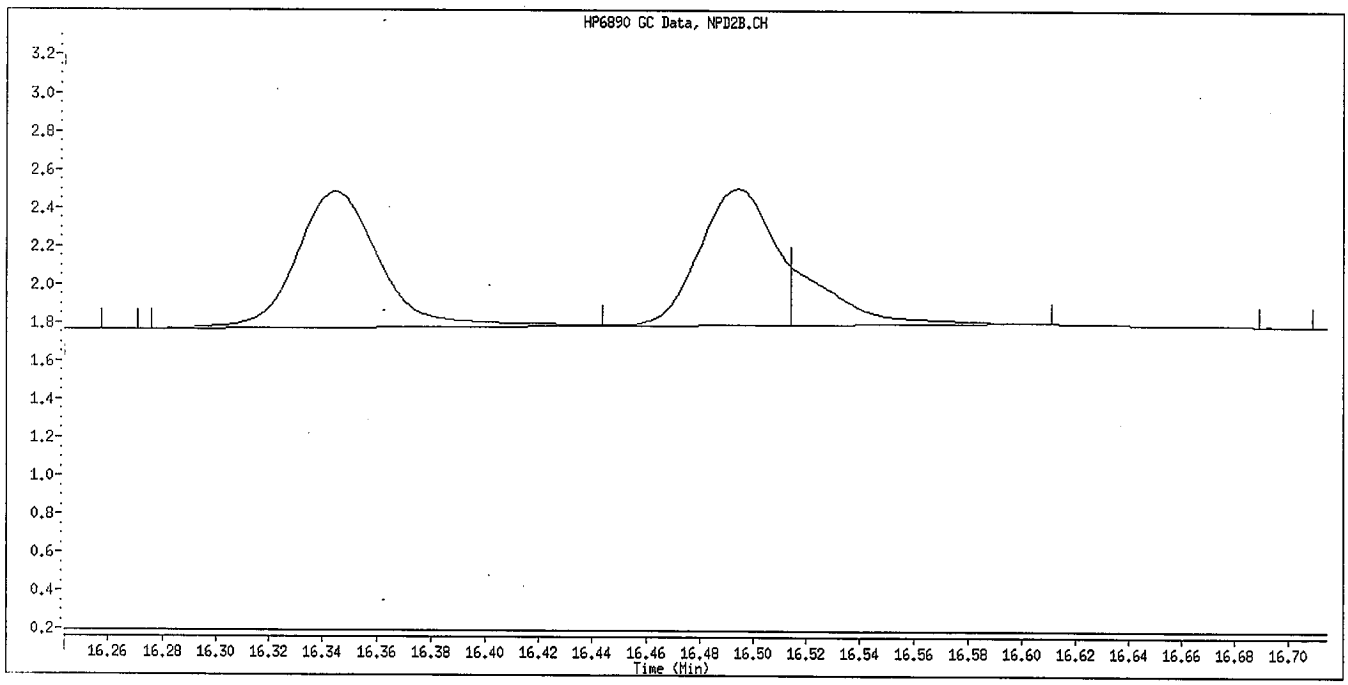
Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0626092,B\005F0501,D
Date : 26-JUN-2009 19:23
Client ID: OPP L5 GSV0635
Sample Info: OPP L5 GSV0635
Column phase: RTx-OPPest

Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 005F0501.D
Inj. Date and Time: 26-JUN-2009 19:23
Instrument ID: GC_D2.i
Client ID: OPP L5 GSV0635
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

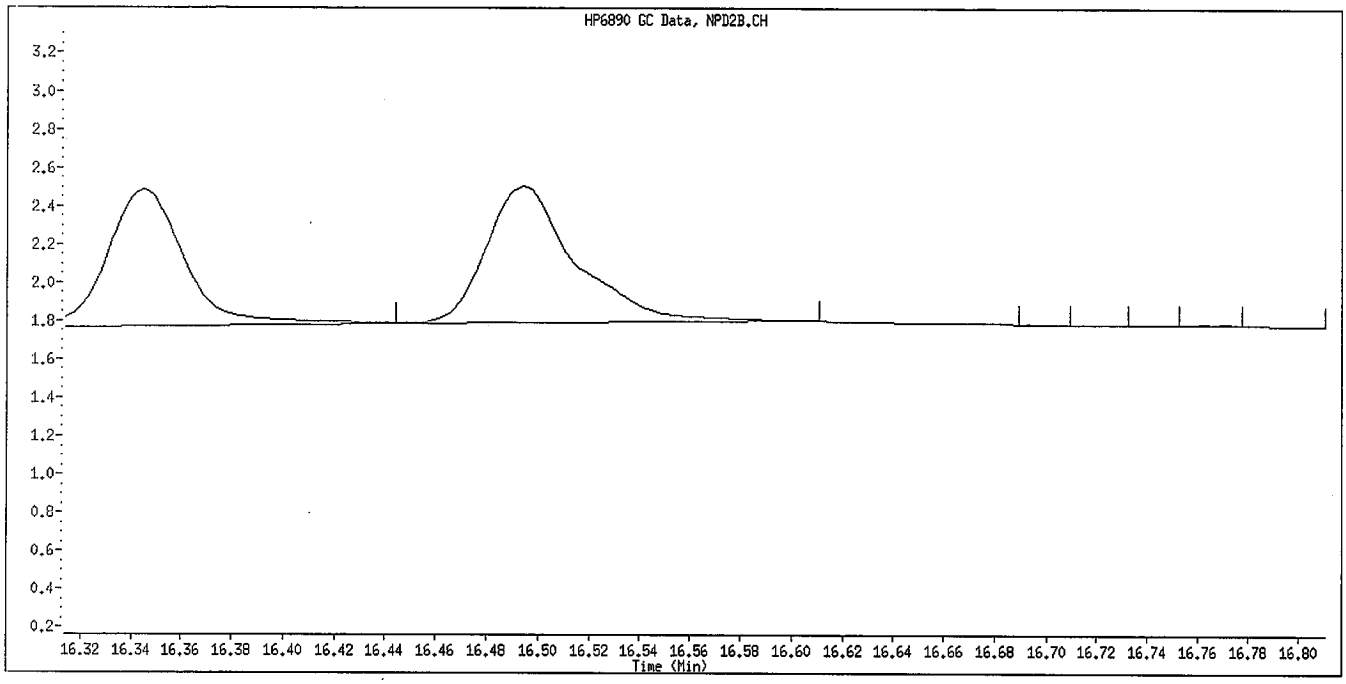


Manual Integration

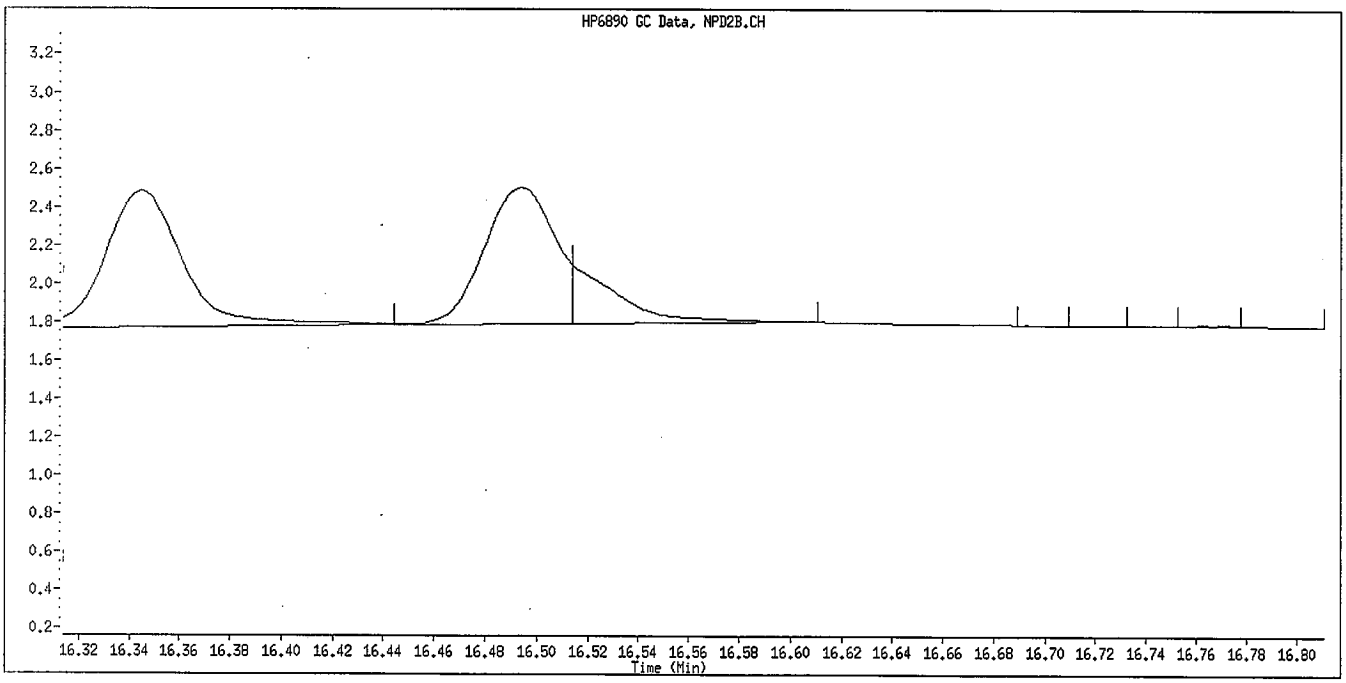
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 005F0501.D
Inj. Date and Time: 26-JUN-2009 19:23
Instrument ID: GC_D2.i
Client ID: OPP L5 GSV0635
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0601.D
Lab Smp Id: OPP L4 GSV0638 Client Smp ID: OPP L4 GSV0638
Inj Date : 26-JUN-2009 19:50
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L4 GSV0638
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 19:23 Cal File: 005F0501.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.730	4.731	(0.251)	181207	2.00000	2.055
	2 Dichlorvos	6.545	6.546	(0.348)	148252	2.00000	2.154
$	3 Chlormefos	7.383	7.384	(0.392)	138652	2.00000	2.001
	4 Mevinphos	9.233	9.234	(0.491)	98399	2.00000	2.122
	5 Demeton-O	9.733	9.734	(0.517)	29742	0.65000	0.6731
	6 Thionazin	9.983	9.984	(0.531)	134999	2.00000	1.947
	7 Ethoprop	10.498	10.499	(0.558)	103308	2.00000	1.994
	8 Phorate	10.537	10.539	(0.560)	115663	2.00000	1.925
	9 Naled	10.940	10.939	(0.581)	28010	2.00000	1.943
	10 Sulfotepp	11.017	11.017	(0.586)	187497	2.00000	2.069(A)
*	11 Tributylphosphate	11.115	11.116	(1.000)	126959	2.00000	
	12 Simazine	11.398	11.399	(0.606)	26282	2.00000	2.025(A)
	13 Diazinon	11.540	11.541	(0.613)	98649	2.00000	2.033
	14 Atrazine	11.582	11.584	(0.616)	49088	2.00000	1.960(A)
	15 Propazine	11.745	11.747	(0.624)	43235	2.00000	1.922
	16 Disulfoton	12.050	12.049	(0.640)	96402	2.00000	2.017
	17 Demeton-S	12.125	12.124	(0.644)	70921	1.36000	1.296
	18 Dimethoate	13.280	13.282	(0.706)	123978	2.00000	1.935
	19 Ronnel	13.588	13.587	(0.722)	84095	2.00000	1.950
	20 Merphos-A (Merphos)	13.690	13.689	(1.232)	90289	2.00000	1.962(A)
	21 Chlorpyrifos	14.408	14.409	(0.766)	82272	2.00000	1.881
	22 Fenthion	14.660	14.662	(0.779)	79190	2.00000	1.952
	23 Trichloronate	14.708	14.711	(0.782)	106326	2.00000	1.900
	24 Anilazine	15.212	15.216	(0.808)	6899	2.00000	1.843
	25 Methyl Parathion	15.520	15.519	(0.825)	91219	2.00000	2.083(A)
	26 Malathion	15.725	15.724	(0.836)	80242	2.00000	1.956
	27 Tokuthion	16.345	16.344	(0.869)	92069	2.00000	1.917
	28 Parathion	16.493	16.494	(0.877)	84124	2.00000	1.950(M)
	29 Merphos-B (Merphos Oxone)	16.513	16.517	(1.486)	23458	2.00000	1.603(AM)
	30 Tetrachlorvinphos (stirophos)	16.977	16.977	(0.902)	54727	2.00000	1.961
	31 Carbophenothion methyl	17.082	17.082	(0.908)	79857	2.00000	1.996
	32 Bolstar	17.440	17.440	(0.927)	82203	2.00000	1.951
	33 Carbophenothion	17.523	17.524	(0.931)	80431	2.00000	1.941(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.280	18.281	(0.972)	73416	2.00000	2.159
	35 Fensulfothion	18.558	18.559	(0.986)	66352	2.00000	2.125
*	36 TOCP	18.815	18.816	(1.000)	68161	2.00000	
	37 Phosmet / EPN	18.908	18.909	(1.005)	146012	4.00000	4.177
	38 Famphur	19.012	19.011	(1.010)	95300	2.00000	2.132
	39 Azinphos-methyl	19.147	19.147	(1.018)	88773	2.00000	2.171
	40 Azinphos-ethyl	19.365	19.366	(1.029)	80966	2.00000	2.079
	41 Coumaphos	20.347	20.347	(1.081)	61650	2.00000	2.059
S	42 Merphos				113747	2.00000	2.002(A)
M	43 Total Demeton				100663	2.00000	1.969

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

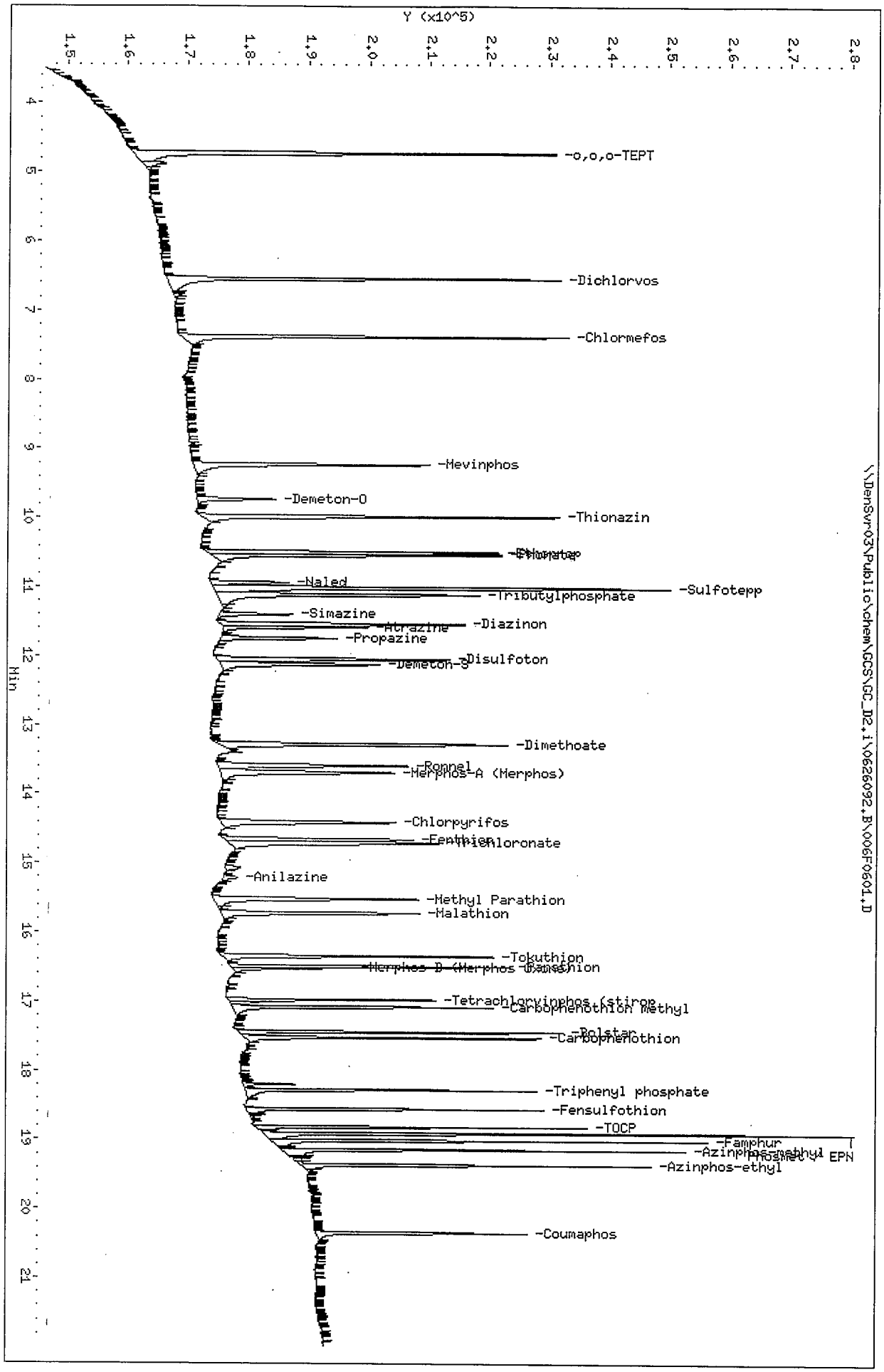
Instrument ID: GC_D2.i
Lab File ID: 006F0601.D
Lab Smp Id: OPP L4 GSV0638
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L4 GSV0638
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	126959	63480	253918	126959	0.00
36 TOCP	68161	34081	136322	68161	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.00
36 TOCP	18.82	18.32	19.32	18.82	0.00

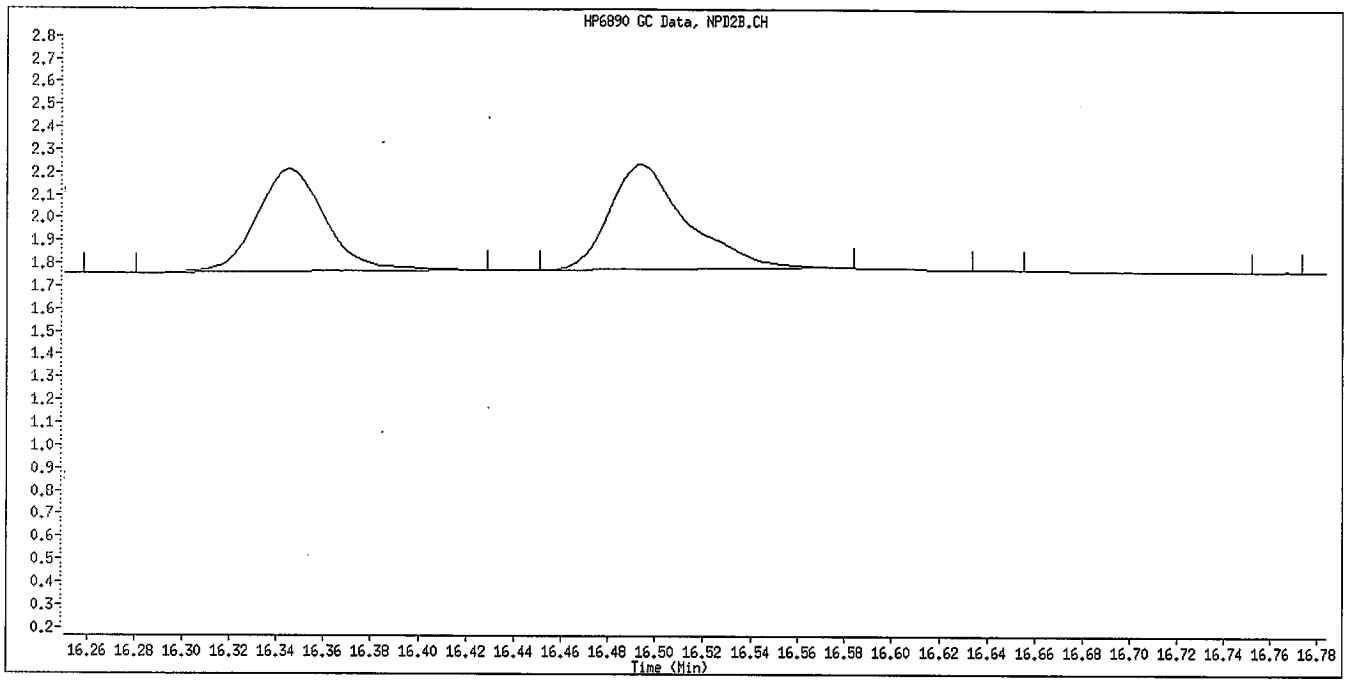
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



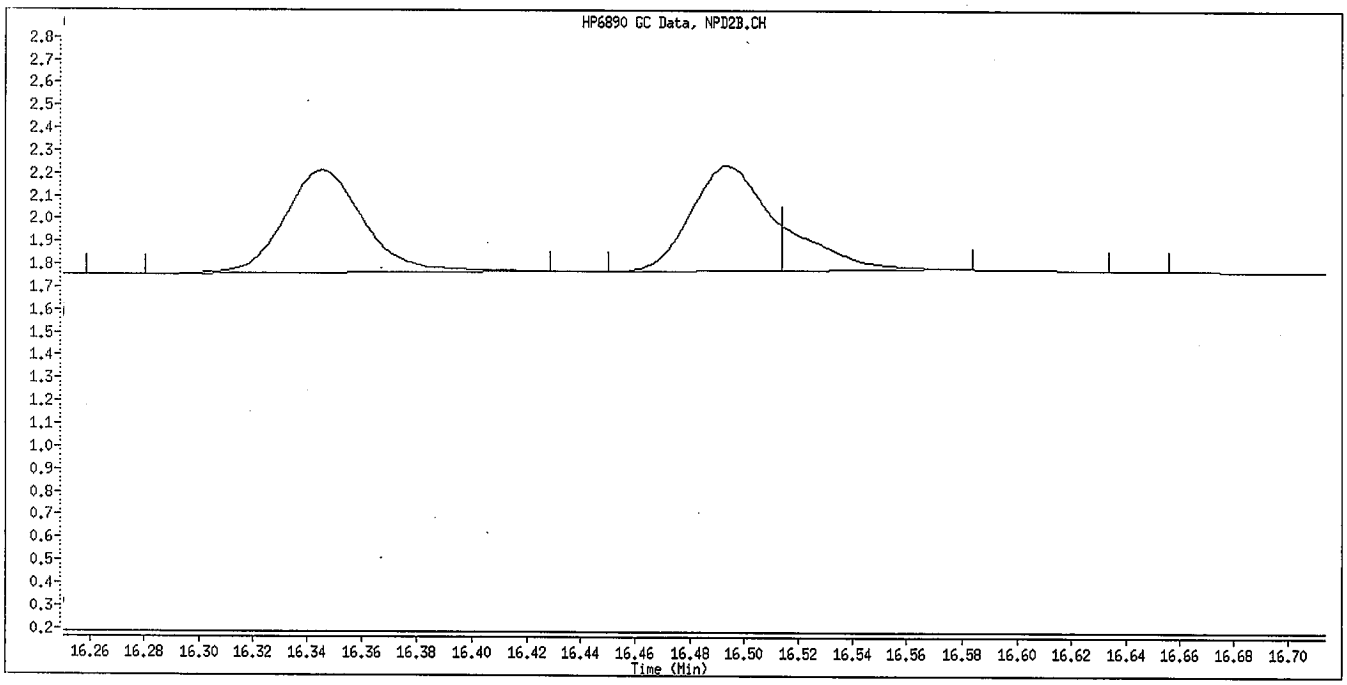
Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\006F0604.D
Date : 26-JUN-2009 19:50
Client ID: OPP L4 GSV0638
Sample Info: OPP L4 GSV0638
Column phase: RTx-OPPest

Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 006F0601.D
Inj. Date and Time: 26-JUN-2009 19:50
Instrument ID: GC_D2.i
Client ID: OPP L4 GSV0638
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

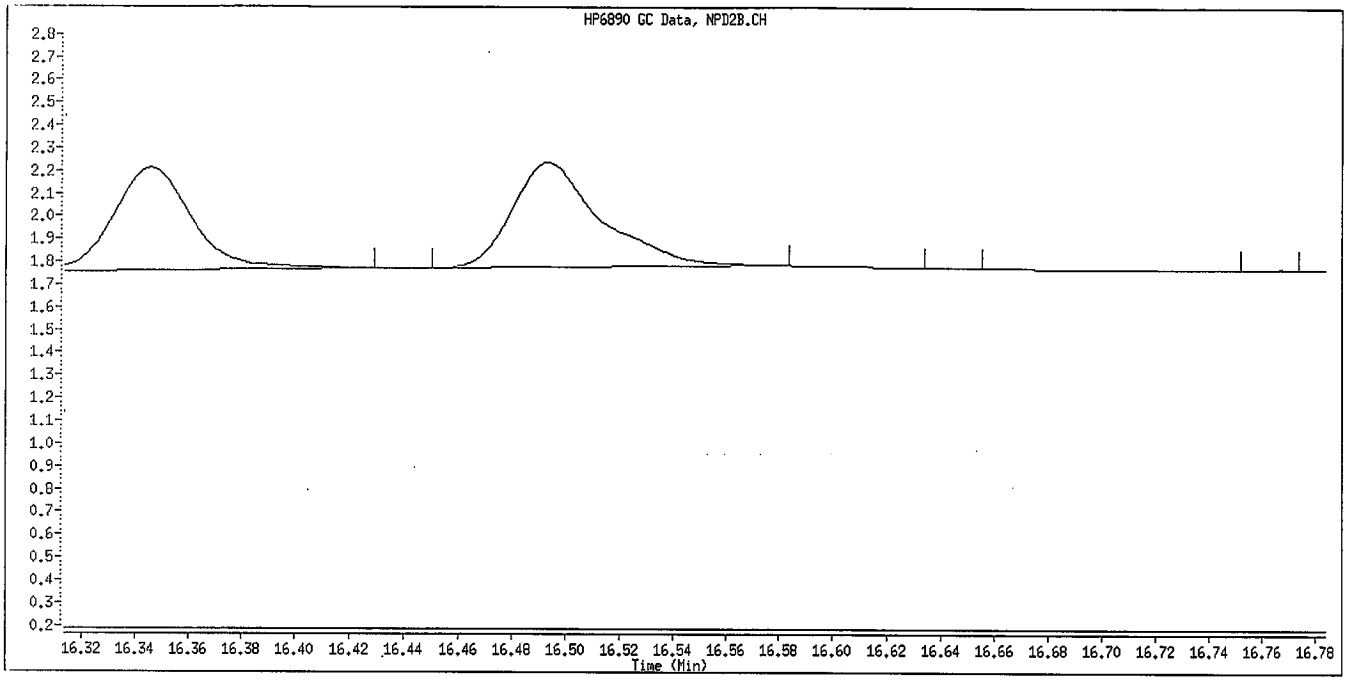


Manual Integration

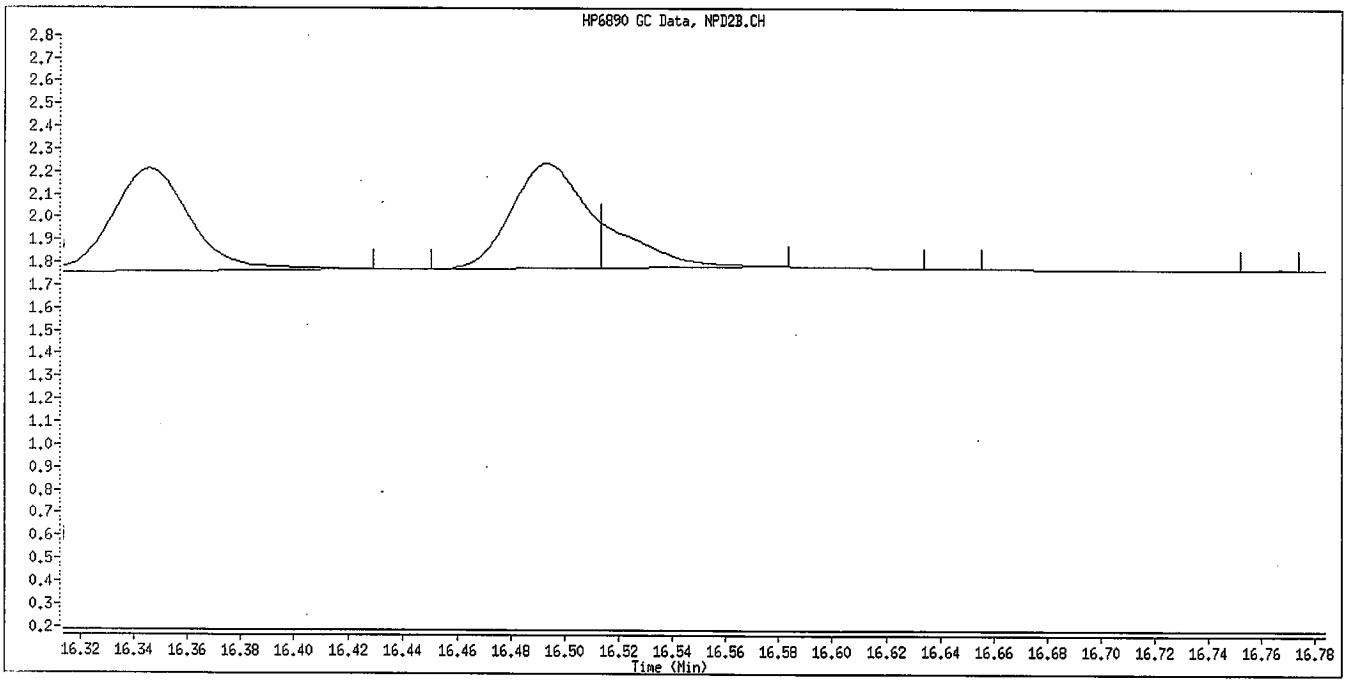
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 006F0601.D
Inj. Date and Time: 26-JUN-2009 19:50
Instrument ID: GC_D2.i
Client ID: OPP L4 GSV0638
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\007F0701.D
Lab Smp Id: OPP L3 GSV0639 Client Smp ID: OPP L3 GSV0639
Inj Date : 26-JUN-2009 20:18
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L3 GSV0639
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 19:50 Cal File: 006F0601.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.728	4.731	(0.251)	81887	1.00000	0.9107
	2 Dichlorvos	6.546	6.546	(0.348)	63970	1.00000	0.9111
$	3 Chlormefos	7.383	7.384	(0.392)	61984	1.00000	0.8770
	4 Mevinphos	9.235	9.234	(0.491)	42341	1.00000	0.8952
	5 Demeton-O	9.733	9.734	(0.517)	13386	0.32500	0.2970
	6 Thionazin	9.985	9.984	(0.531)	67347	1.00000	0.9522
	7 Ethoprop	10.500	10.499	(0.558)	50288	1.00000	0.9515
	8 Phorate	10.536	10.539	(0.560)	55056	1.00000	0.8983
	9 Naled	10.941	10.939	(0.582)	10859	1.00000	0.9052
	10 Sulfotepp	11.016	11.017	(0.586)	90141	1.00000	0.9752(A)
*	11 Tributylphosphate	11.116	11.116	(1.000)	109941	2.00000	
	12 Simazine	11.398	11.399	(0.606)	12288	1.00000	0.9282(A)
	13 Diazinon	11.541	11.541	(0.613)	49407	1.00000	1.013
	14 Atrazine	11.581	11.584	(0.616)	21316	1.00000	0.9678(A)
	15 Propazine	11.746	11.747	(0.624)	20907	1.00000	0.9421
	16 Disulfoton	12.050	12.049	(0.640)	47563	1.00000	0.9757
	17 Demeton-S	12.126	12.124	(0.645)	33785	0.68000	0.6688
	18 Dimethoate	13.283	13.282	(0.706)	60106	1.00000	0.9200
	19 Ronnel	13.588	13.587	(0.722)	39845	1.00000	0.9061
	20 Merphos-A (Merphos)	13.690	13.689	(1.231)	42032	1.00000	1.055(A)
	21 Chlorpyrifos	14.410	14.409	(0.766)	43430	1.00000	0.9737
	22 Fenthion	14.663	14.662	(0.779)	40767	1.00000	0.9854
	23 Trichloronate	14.710	14.711	(0.782)	49357	1.00000	0.9220
	24 Anilazine	15.218	15.216	(0.809)	3581	1.00000	0.9372(M)
	25 Methyl Parathion	15.520	15.519	(0.825)	42442	1.00000	0.9503
	26 Malathion	15.725	15.724	(0.836)	39993	1.00000	0.9559
	27 Tokuthion	16.345	16.344	(0.869)	47016	1.00000	0.9598
	28 Parathion	16.493	16.494	(0.877)	43405	1.00000	0.9863(M)
	29 Merphos-B (Merphos Oxone)	16.515	16.517	(1.486)	15065	1.00000	1.162(AM)
	30 Tetrachlorvinphos (stirophos)	16.976	16.977	(0.902)	25459	1.00000	0.8943
	31 Carbophenothion methyl	17.081	17.082	(0.908)	36393	1.00000	0.8919
	32 Bolstar	17.441	17.440	(0.927)	41390	1.00000	0.9630
	33 Carbophenothion	17.523	17.524	(0.931)	40089	1.00000	0.9485(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.280	18.281	(0.972)	31677	1.00000	0.9133
	35 Fensulfothion	18.558	18.559	(0.986)	30601	1.00000	0.9609
*	36 TOCP	18.815	18.816	(1.000)	69519	2.00000	
	37 Phosmet / EPN	18.908	18.909	(1.005)	68186	2.00000	1.866
	38 Famphur	19.010	19.011	(1.010)	41284	1.00000	0.9054
	39 Azinphos-methyl	19.145	19.147	(1.018)	37491	1.00000	0.8988
	40 Azinphos-ethyl	19.365	19.366	(1.029)	38936	1.00000	0.9801
	41 Coumaphos	20.345	20.347	(1.081)	29854	1.00000	0.9774
S	42 Merphos				57097	1.00000	0.9855
M	43 Total Demeton				47171	1.00000	0.9658

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

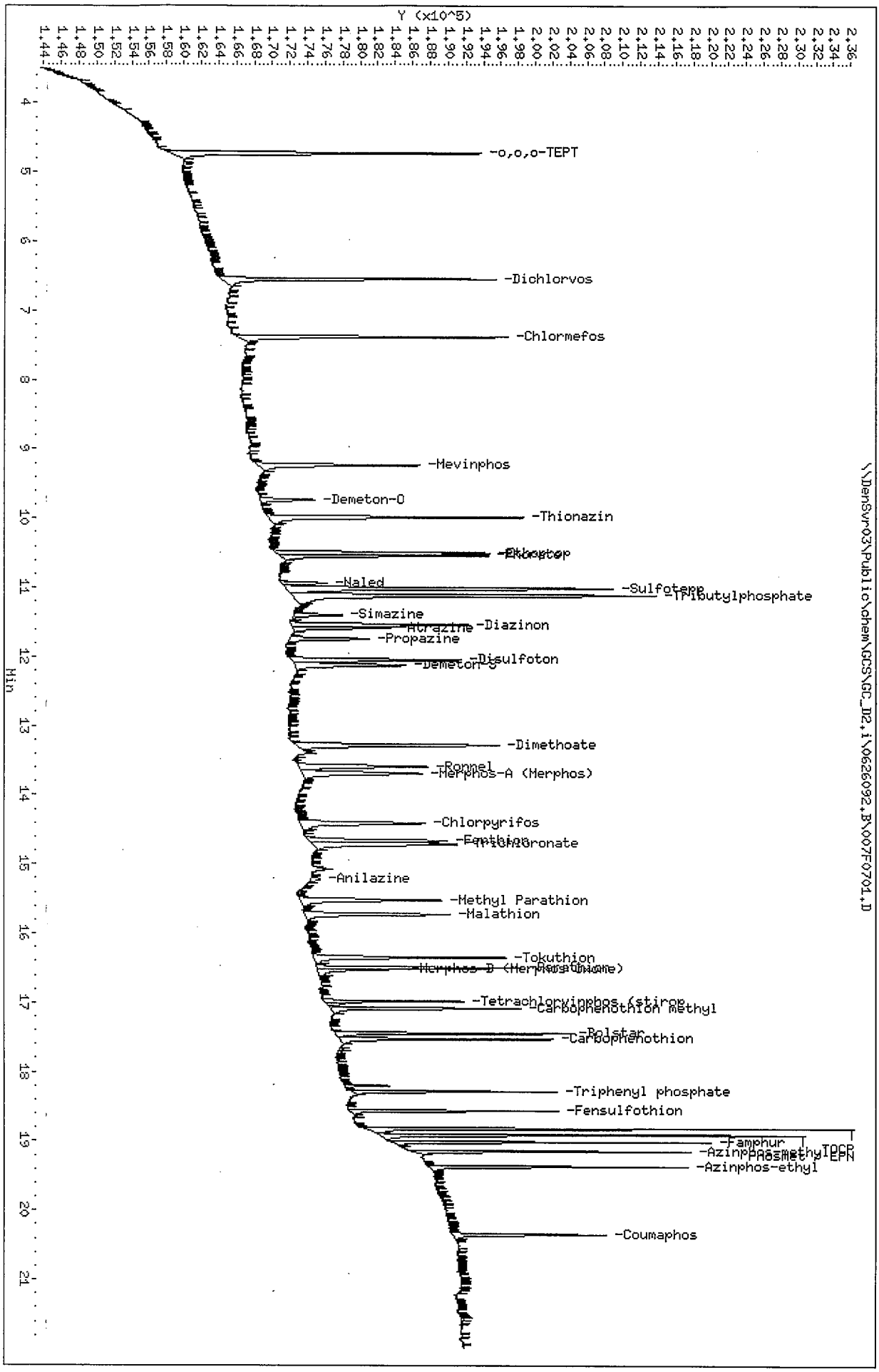
Instrument ID: GC_D2.i
Lab File ID: 007F0701.D
Lab Smp Id: OPP L3 GSV0639
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L3 GSV0639
Level:
Sample Type:

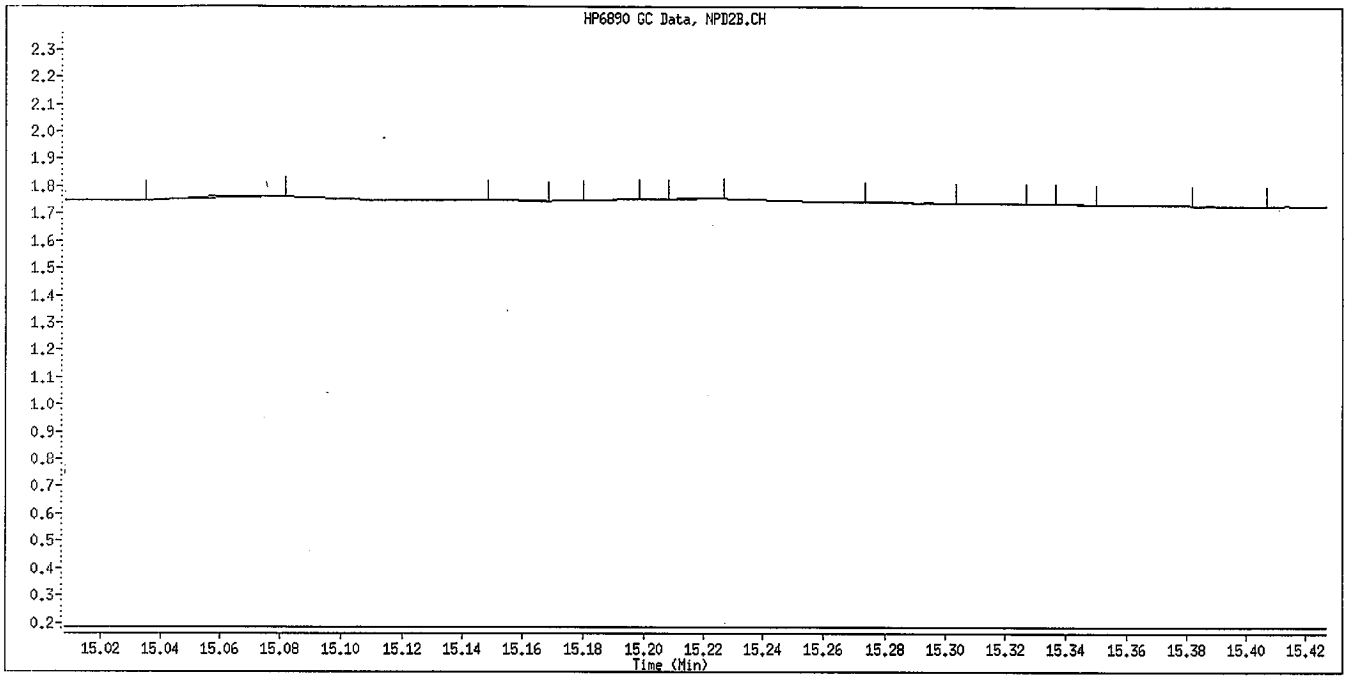
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	126959	63480	253918	109941	-13.40
36 TOCP	68161	34081	136322	69519	1.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.01
36 TOCP	18.82	18.32	19.32	18.82	-0.00

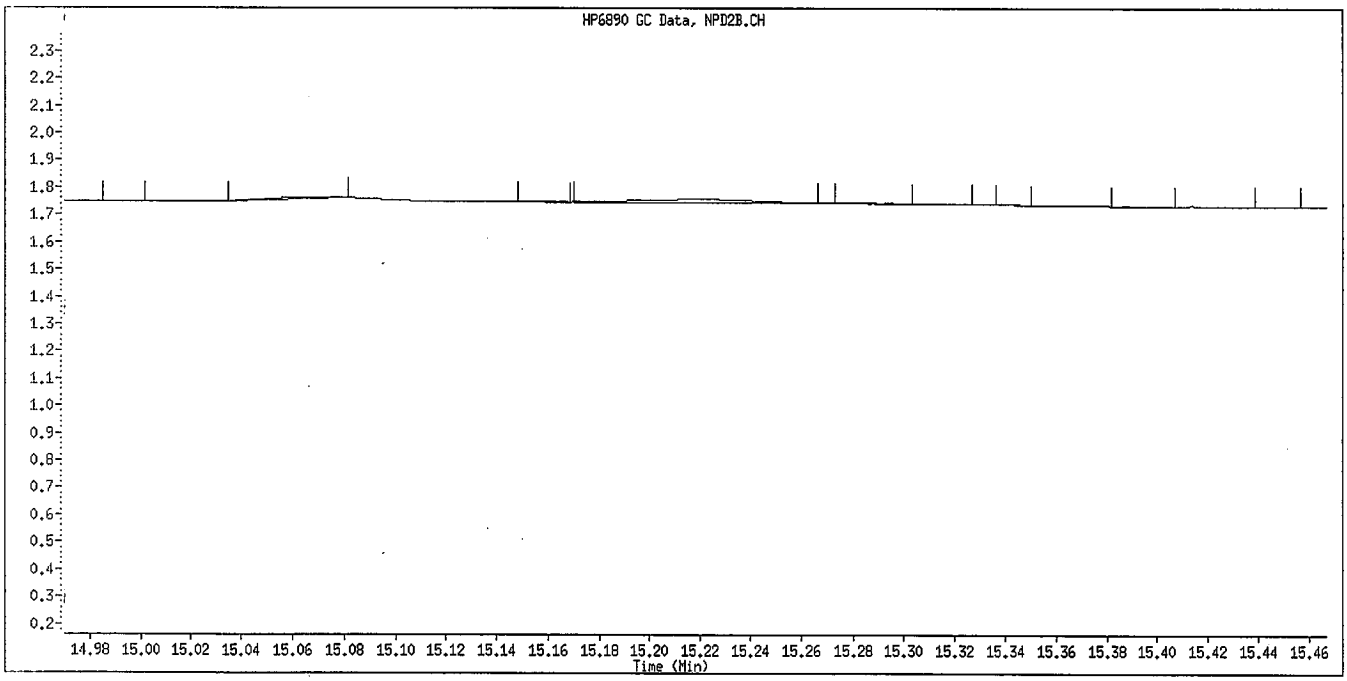
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0626092,B\007F0701.D
Date : 26-JUN-2009 20:18
Client ID: OPP L3 GSV0639
Sample Info: OPP L3 GSV0639
Column phase: RTx-OPPest
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2,i\0626092,B\007F0701.D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Chlormefos
-Mevinphos
-Demeton-O
-Thionazin
-Naled
-Sulfotepp
-Tributylphosphate
-Simazine
-Atrazine
-Diazinon
-Propazine
-Disulfoton
-Dimethoate
-Ronnel
-Merphos-A (Merphos)
-Chlorpyrifos
-Anilazine
-Methyl Parathion
-Malathion
-Tokuthion
-Tetrachlorvinphos (Stirofos)
-Carbophenothion methyl
-Carbophenothion
-Triphenyl phosphate
-Fensulfothion
-Famphur
-Azinphos-methyl
-Azinphos-ethyl
-Coumaphos

Data File Name: 007F0701.D
Inj. Date and Time: 26-JUN-2009 20:18
Instrument ID: GC_D2.i
Client ID: OPP L3 GSV0639
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

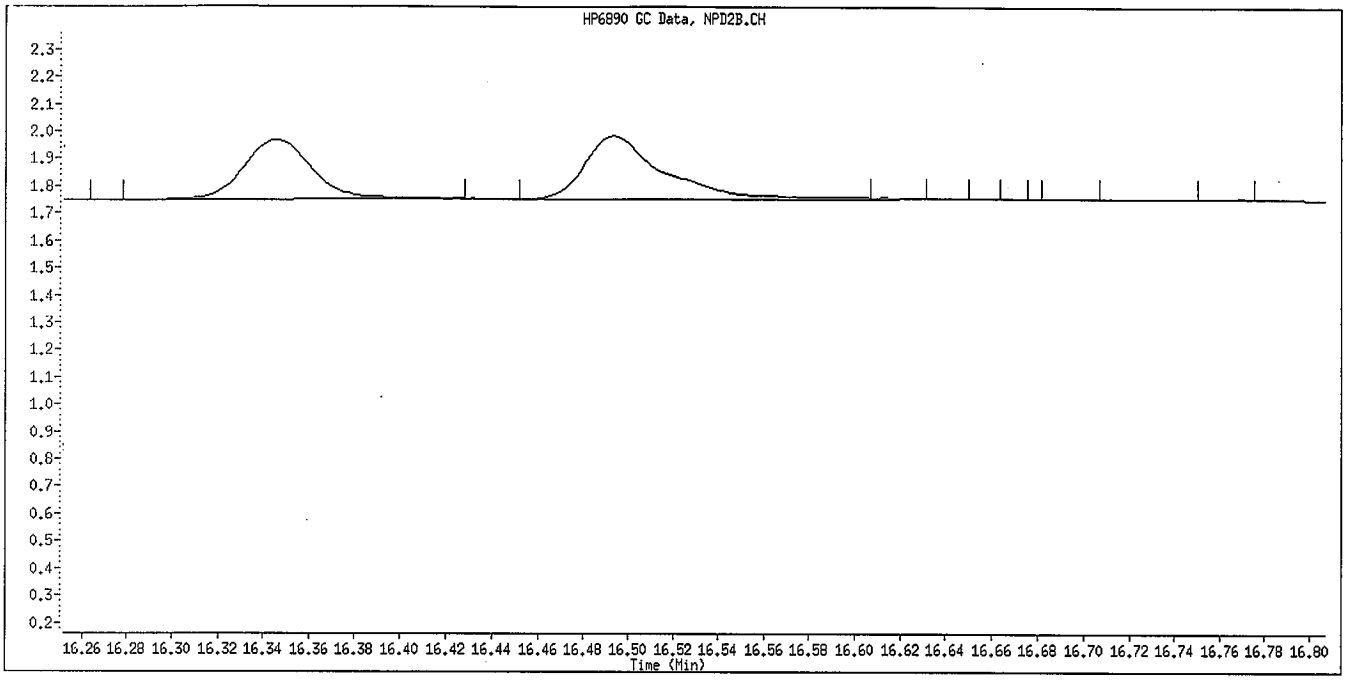


Manual Integration

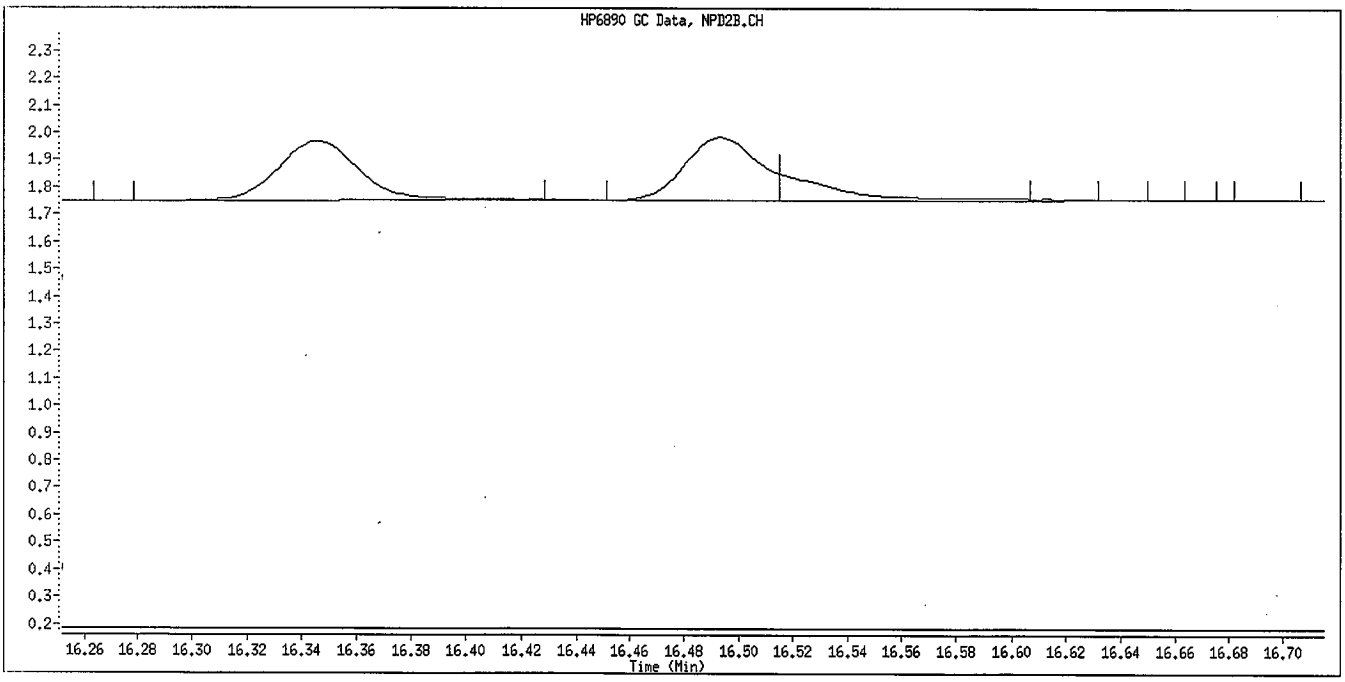
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 007F0701.D
Inj. Date and Time: 26-JUN-2009 20:18
Instrument ID: GC_D2.i
Client ID: OPP L3 GSV0639
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

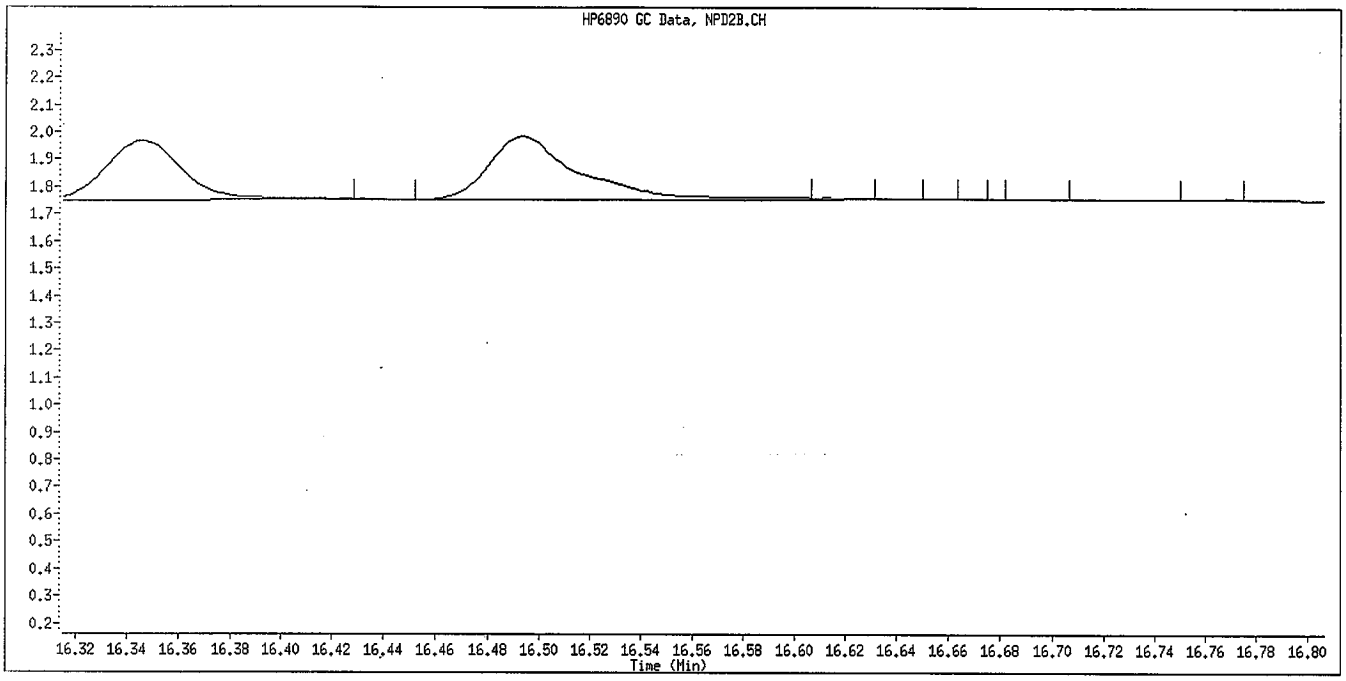


Manual Integration

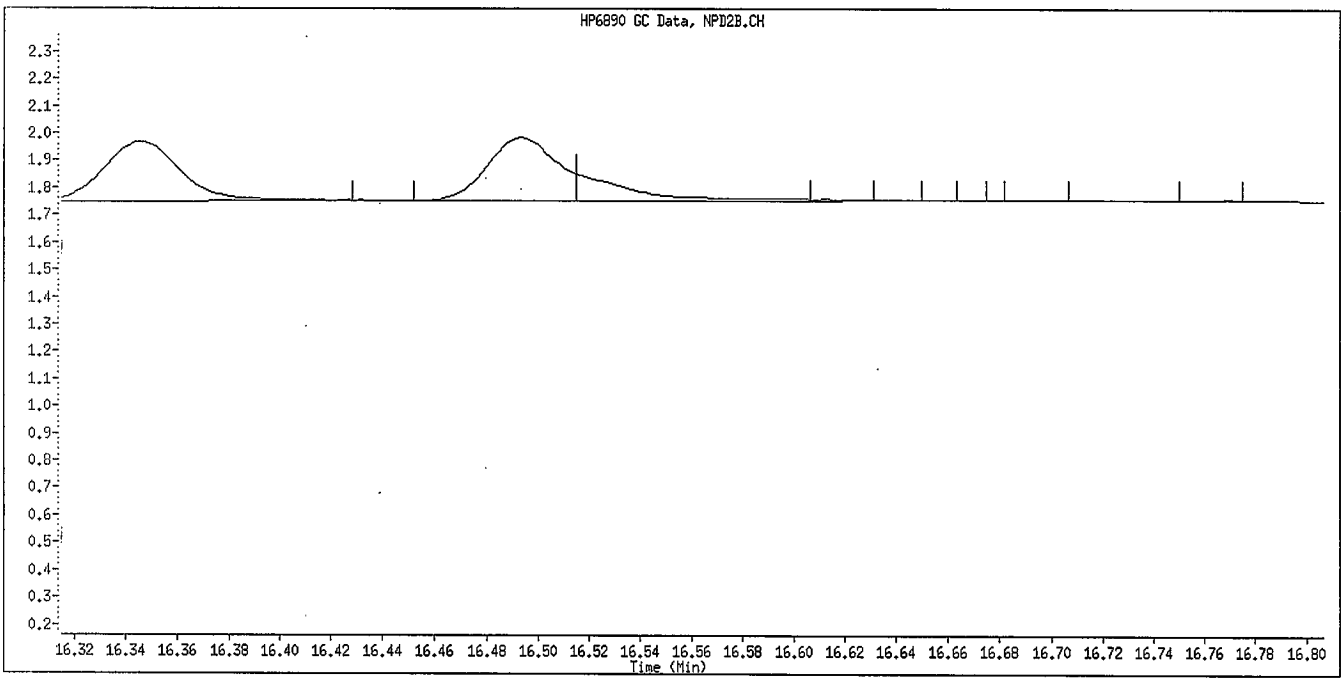
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 007F0701.D
Inj. Date and Time: 26-JUN-2009 20:18
Instrument ID: GC_D2.i
Client ID: OPP L3 GSV0639
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Lab Smp Id: OPP L2 GSV0640 Client Smp ID: OPP L2 GSV0640
Inj Date : 26-JUN-2009 20:45
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L2 GSV0640
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 20:18 Cal File: 007F0701.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1	o,o,o-TEPT	4.729	4.731	(0.251)	43725	0.50000	0.4721
	2	Dichlorvos	6.546	6.546	(0.348)	32623	0.50000	0.4511
$	3	Chlormefos	7.383	7.384	(0.392)	32886	0.50000	0.4517
	4	Mevinphos	9.233	9.234	(0.491)	22377	0.50000	0.4593
	5	Demeton-O	9.734	9.734	(0.517)	7562	0.16250	0.1629
	6	Thionazin	9.983	9.984	(0.531)	32975	0.50000	0.4526
	7	Ethoprop	10.501	10.499	(0.558)	25261	0.50000	0.4640
	8	Phorate	10.538	10.539	(0.560)	28693	0.50000	0.4545
	9	Naled	10.934	10.939	(0.581)	1666	0.50000	0.3635
	10	Sulfotepp	11.018	11.017	(0.586)	45401	0.50000	0.4768(A)
*	11	Tributylphosphate	11.118	11.116	(1.000)	107017	2.00000	
	12	Simazine	11.401	11.399	(0.606)	6209	0.50000	0.4553(A)
	13	Diazinon	11.541	11.541	(0.613)	15923	0.50000	0.3370
	14	Atrazine	11.579	11.584	(0.615)	1231	0.50000	0.2736(A)
	15	Propazine	11.746	11.747	(0.624)	8102	0.50000	0.3907
	16	Disulfoton	12.049	12.049	(0.640)	23807	0.50000	0.4741
	17	Demeton-S	12.124	12.124	(0.644)	15766	0.34000	0.3681
	18	Dimethoate	13.281	13.282	(0.706)	33707	0.50000	0.5009
	19	Ronnel	13.588	13.587	(0.722)	19648	0.50000	0.4338
	20	Merphos-A (Merphos)	13.689	13.689	(1.231)	19488	0.50000	0.5025(A)
	21	Chlorpyrifos	14.409	14.409	(0.766)	20746	0.50000	0.4515
	22	Fenthion	14.661	14.662	(0.779)	20747	0.50000	0.4869
	23	Trichloronate	14.709	14.711	(0.782)	26053	0.50000	0.5238
	24	Anilazine	15.213	15.216	(0.809)	2256	0.50000	0.5727(M)
	25	Methyl Parathion	15.519	15.519	(0.825)	20061	0.50000	0.4361
	26	Malathion	15.724	15.724	(0.836)	21428	0.50000	0.4972
	27	Tokuthion	16.346	16.344	(0.869)	23462	0.50000	0.4650
	28	Parathion	16.493	16.494	(0.877)	20700	0.50000	0.4566(M)
	29	Merphos-B (Merphos Oxone)	16.514	16.517	(1.485)	6271	0.50000	0.4377(AM)
	30	Tetrachlorvinphos (stirophos)	16.976	16.977	(0.902)	13089	0.50000	0.4464
	31	Carbophenothion methyl	17.081	17.082	(0.908)	18266	0.50000	0.4346
	32	Bolstar	17.441	17.440	(0.927)	21910	0.50000	0.4949
	33	Carbophenothion	17.521	17.524	(0.931)	20336	0.50000	0.4671(A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.279	18.281	(0.972)	15570	0.50000	0.4358
	35 Fensulfothion	18.558	18.559	(0.986)	14395	0.50000	0.4388
*	36 TOCP	18.814	18.816	(1.000)	71609	2.00000	
	37 Phosmet / EPN	18.908	18.909	(1.005)	35826	1.00000	0.9102
	38 Famphur	19.009	19.011	(1.010)	21626	0.50000	0.4604
	39 Azinphos-methyl	19.146	19.147	(1.018)	19508	0.50000	0.4540
	40 Azinphos-ethyl	19.364	19.366	(1.029)	19984	0.50000	0.4884
	41 Coumaphos	20.348	20.347	(1.081)	14618	0.50000	0.4646
S	42 Merphos				25759	0.50000	0.4316
M	43 Total Demeton				23328	0.50000	0.5310

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

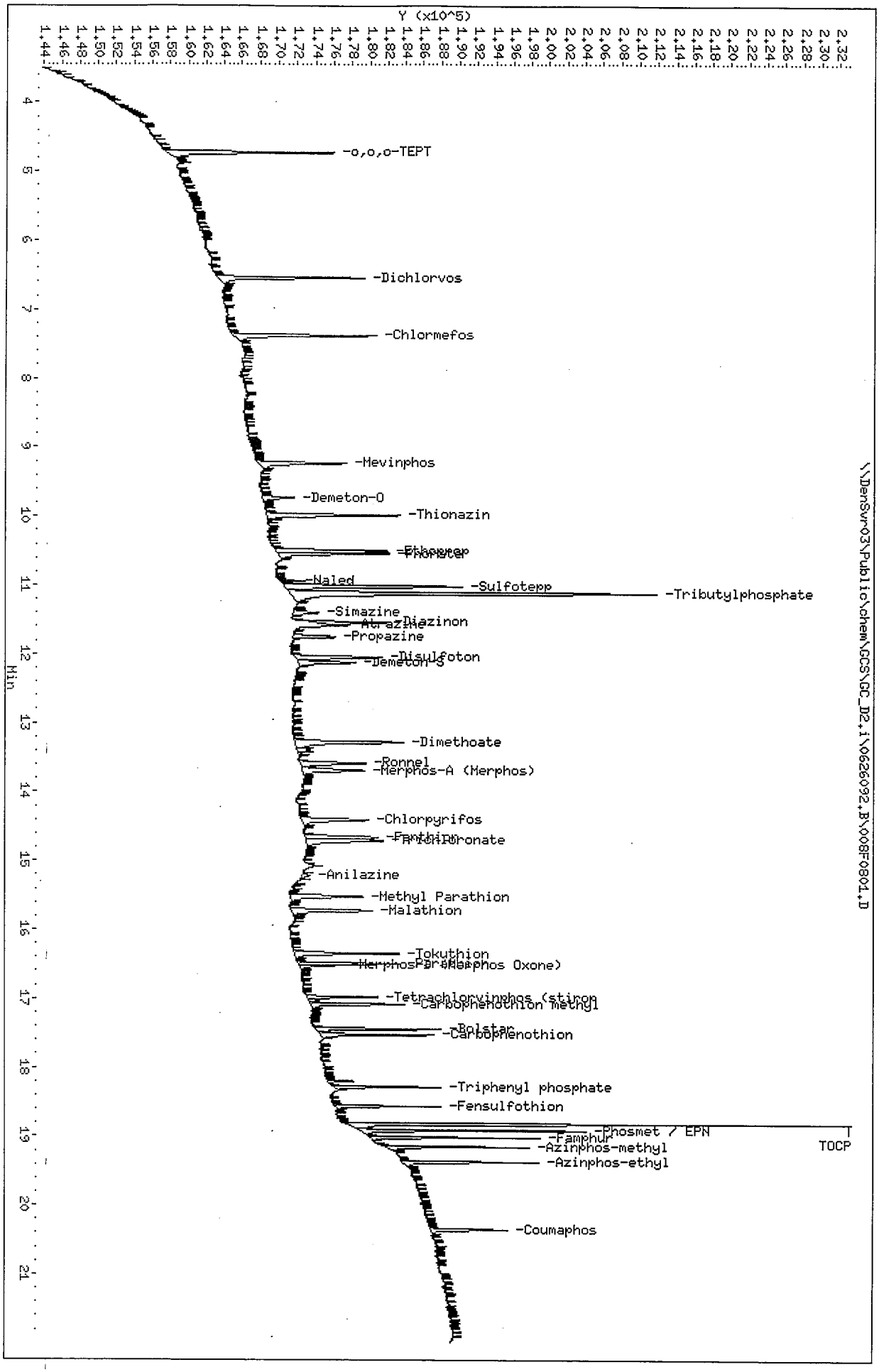
Instrument ID: GC_D2.i
Lab File ID: 008F0801.D
Lab Smp Id: OPP L2 GSV0640
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L2 GSV0640
Level:
Sample Type:

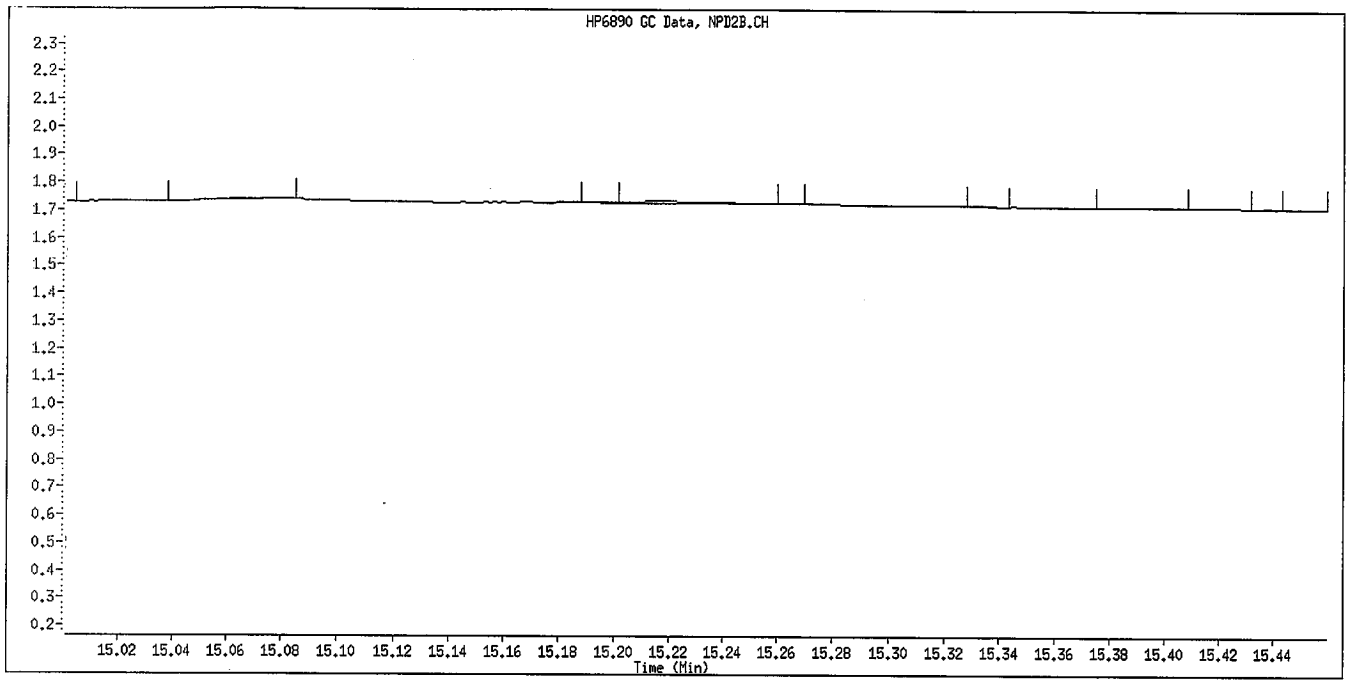
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	126959	63480	253918	107017	-15.71
36 TOCP	68161	34081	136322	71609	5.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.02
36 TOCP	18.82	18.32	19.32	18.81	-0.00

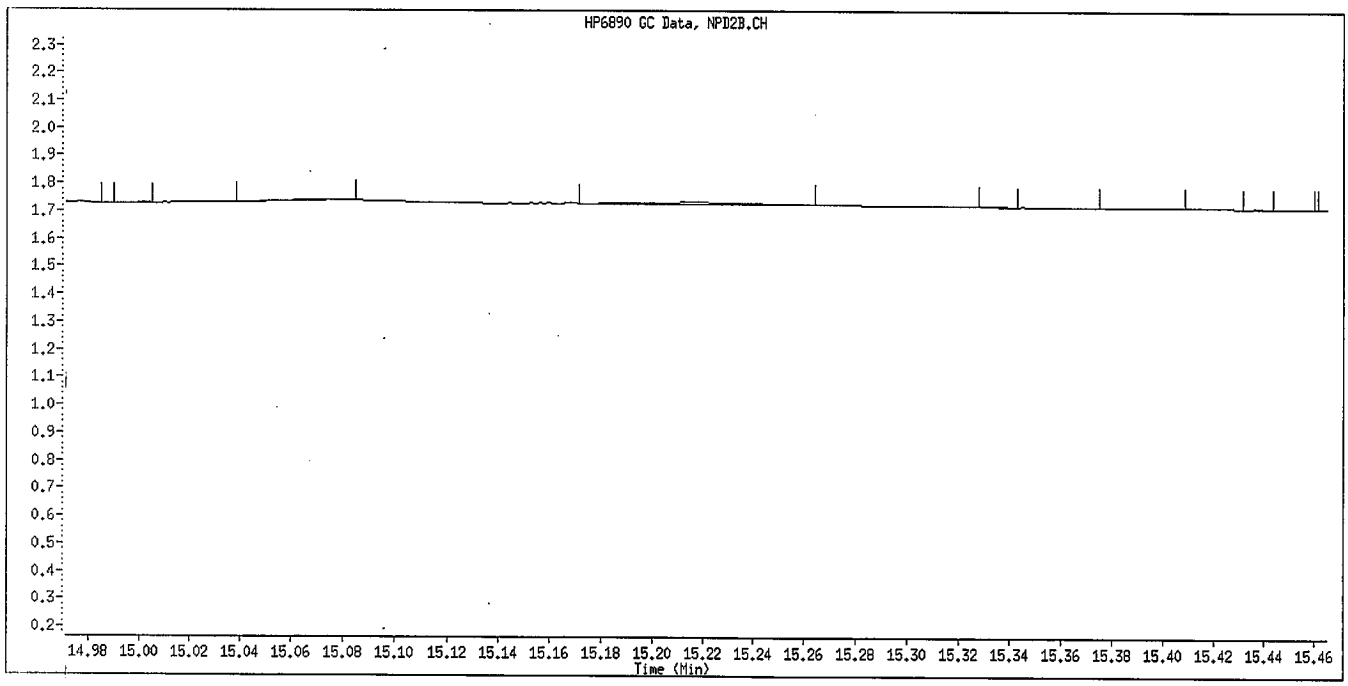
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Date : 26-JUN-2009 20:45
Client ID: OPP L2 GSV0640
Sample Info: OPP L2 GSV0640
Column phase: RTx-OPPest
Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\008F0801.D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Chlormefos
-Mevinphos
-Demeton-O
-Thionazin
-Ethoprop
-Phorate
-Naled
-Sulfotepp
-Tributylphosphate
-Simazine
-Atrazine
-Diazinon
-Propazine
-Disulfoton
-Demeton-S
-Dimethoate
-Ronnel
-Merphos-A (Merphos)
-Chlorpyrifos
-Fenthion
-Trichloronate
-Anilazine
-Methyl Parathion
-Malathion
-Tokuthion
-Merphos-B (Merphos Oxone)
-Tetrachlorvinphos (stirofos)
-Carbophenothion methyl
-Bolstar
-Carbophenothion
-Triphenyl phosphate
-Fensulfothion
-Phosmet / EPN
-Famphur
-Azinphos-methyl
-Azinphos-ethyl
-Coumaphos
TOCP

Data File Name: 008F0801.D
Inj. Date and Time: 26-JUN-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP L2 GSV0640
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

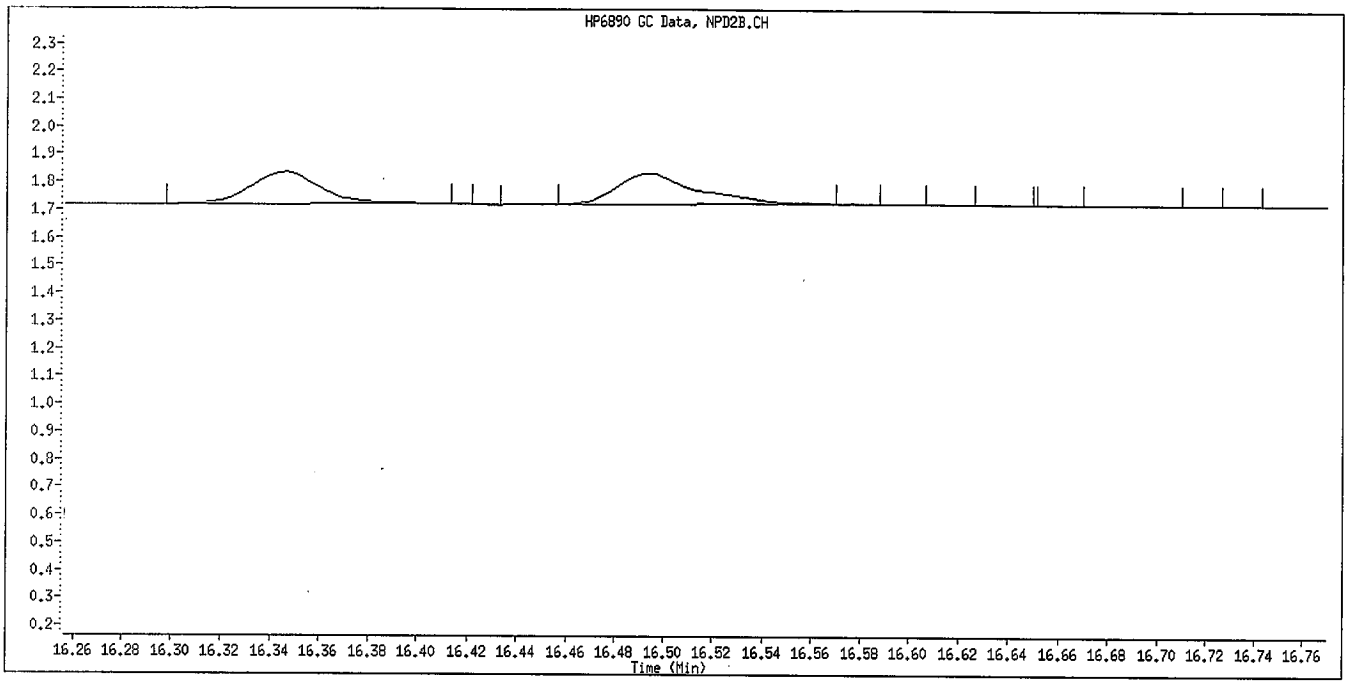


Manual Integration

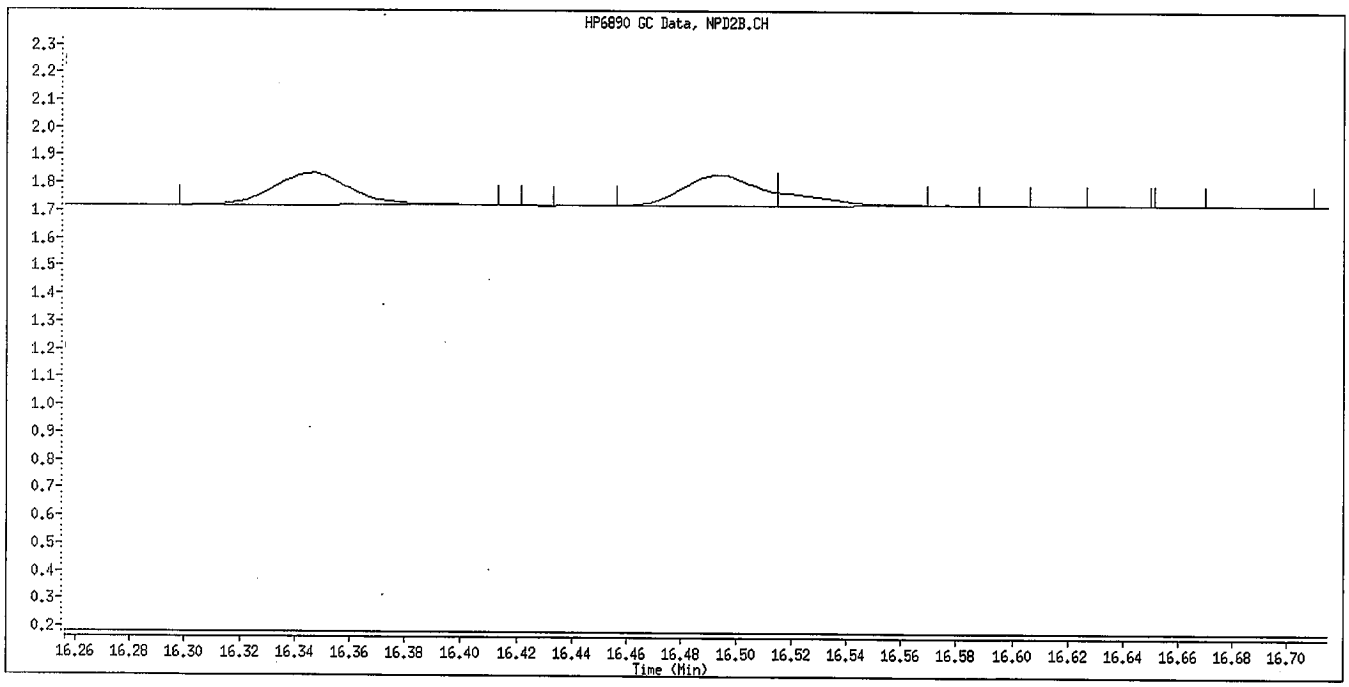
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 008F0801.D
Inj. Date and Time: 26-JUN-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP L2 GSV0640
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

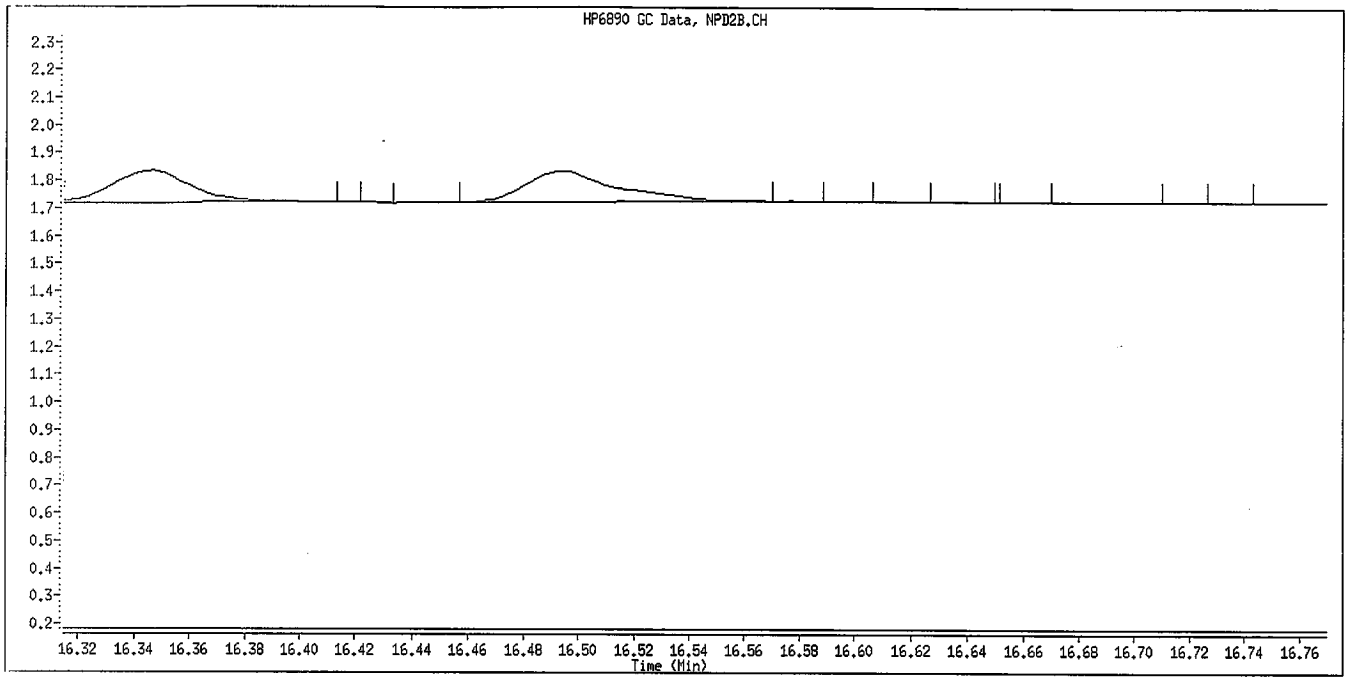


Manual Integration

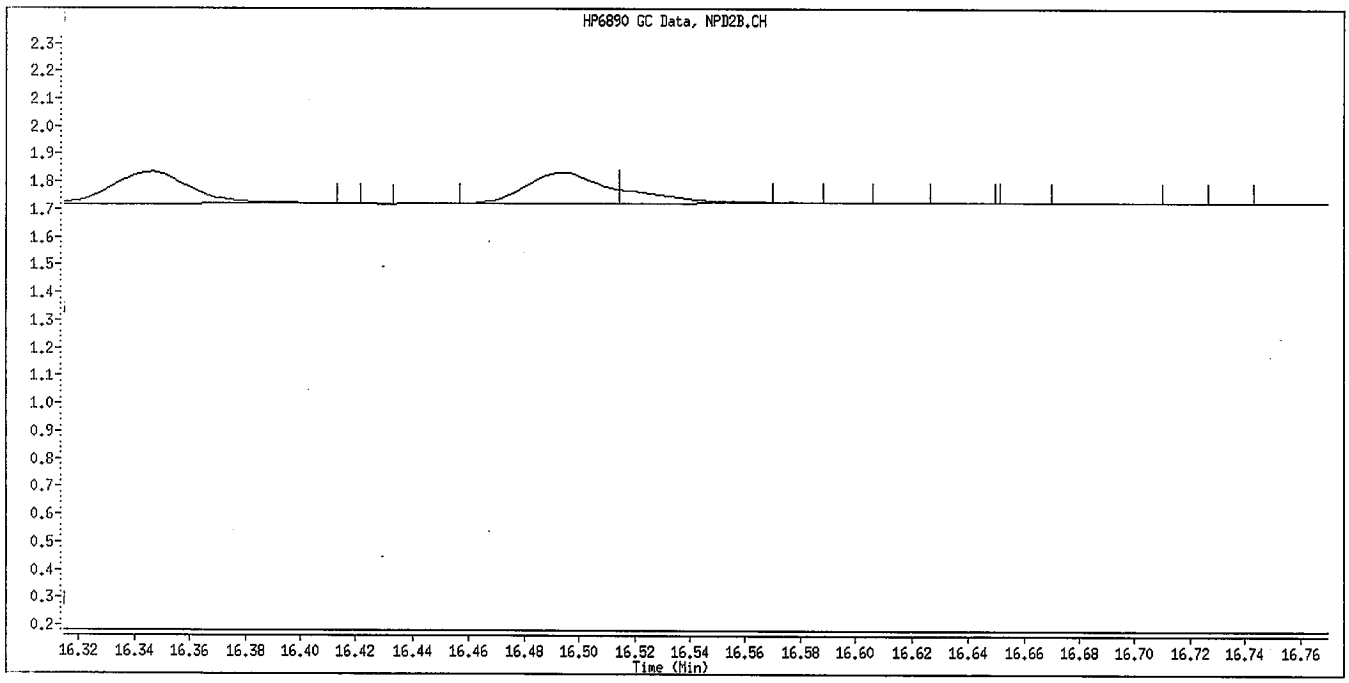
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

JC 6/30/09

Data File Name: 008F0801.D
Inj. Date and Time: 26-JUN-2009 20:45
Instrument ID: GC_D2.i
Client ID: OPP L2 GSV0640
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\009F0901.D
Lab Smp Id: OPP L1 GSV0641 Client Smp ID: OPP L1 GSV0641
Inj Date : 26-JUN-2009 21:13
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP L1 GSV0641
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 12:58 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 20:45 Cal File: 008F0801.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 o,o,o-TEPT	4.731	4.731	(0.251)	21538	0.20000	0.2262
	2 Dichlorvos	6.546	6.546	(0.348)	14456	0.20000	0.1945
$	3 Chlormefos	7.382	7.384	(0.392)	16155	0.20000	0.2159
	4 Mevinphos	9.236	9.234	(0.491)	10624	0.20000	0.2122
	5 Demeton-O	9.737	9.734	(0.518)	2866	0.06500	0.06007
	6 Thionazin	9.986	9.984	(0.531)	15885	0.20000	0.2121
	7 Ethoprop	10.502	10.499	(0.558)	12514	0.20000	0.2237
	8 Phorate	10.537	10.539	(0.560)	13936	0.20000	0.2148
	9 Naled	10.939	10.939	(0.581)	94	0.20000	0.2739
	10 Sulfotepp	11.016	11.017	(0.585)	20595	0.20000	0.2105 (A)
*	11 Tributylphosphate	11.117	11.116	(1.000)	104756	2.00000	
	12 Simazine	11.399	11.399	(0.606)	2680	0.20000	0.1912 (A)
	13 Diazinon	11.541	11.541	(0.613)	12067	0.20000	0.2561
	14 Atrazine	11.581	11.584	(0.615)	5427	0.20000	0.4092 (A)
	15 Propazine	11.746	11.747	(0.624)	4880	0.20000	0.2531
	16 Disulfoton	12.052	12.049	(0.641)	10273	0.20000	0.1991
	17 Demeton-S	12.121	12.124	(0.644)	667	0.13600	0.1293
	18 Dimethoate	13.282	13.282	(0.706)	14242	0.20000	0.2059
	19 Ronnel	13.587	13.587	(0.722)	10994	0.20000	0.2362
	20 Merphos-A (Merphos)	13.689	13.689	(1.231)	7722	0.20000	0.2034 (A)
	21 Chlorpyrifos	14.409	14.409	(0.766)	9439	0.20000	0.1999
	22 Fenthion	14.661	14.662	(0.779)	8896	0.20000	0.2031
	23 Trichloronate	14.709	14.711	(0.782)	6944	0.20000	0.2138
	24 Anilazine	15.217	15.216	(0.809)	1634	0.20000	0.4033 (M)
	25 Methyl Parathion	15.519	15.519	(0.825)	8934	0.20000	0.1890
	26 Malathion	15.724	15.724	(0.836)	9125	0.20000	0.2060
	27 Tokuthion	16.344	16.344	(0.869)	11061	0.20000	0.2133
	28 Parathion	16.494	16.494	(0.877)	9355	0.20000	0.2008 (M)
	29 Merphos-B (Merphos Oxone)	16.512	16.517	(1.485)	3793	0.20000	0.2310 (AM)
	30 Tetrachlorvinphos (stirophos)	16.976	16.977	(0.902)	6332	0.20000	0.2101
	31 Carbophenothion methyl	17.081	17.082	(0.908)	8575	0.20000	0.1985
	32 Bolstar	17.441	17.440	(0.927)	9809	0.20000	0.2156
	33 Carbophenothion	17.522	17.524	(0.931)	8717	0.20000	0.1948 (A)

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34 Triphenyl phosphate	18.281	18.281	(0.972)	8167	0.20000	0.2224
	35 Fensulfothion	18.559	18.559	(0.986)	6502	0.20000	0.1929
*	36 TOCP	18.816	18.816	(1.000)	73597	2.00000	
	37 Phosmet / EPN	18.909	18.909	(1.005)	19707	0.40000	0.4475
	38 Famphur	19.012	19.011	(1.010)	10711	0.20000	0.2219
	39 Azinphos-methyl	19.149	19.147	(1.018)	9243	0.20000	0.2093
	40 Azinphos-ethyl	19.367	19.366	(1.029)	8391	0.20000	0.1995
	41 Coumaphos	20.349	20.347	(1.081)	5809	0.20000	0.1796
S	42 Merphos				11515	0.20000	0.1877
M	43 Total Demeton				3533	0.20000	0.1894

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

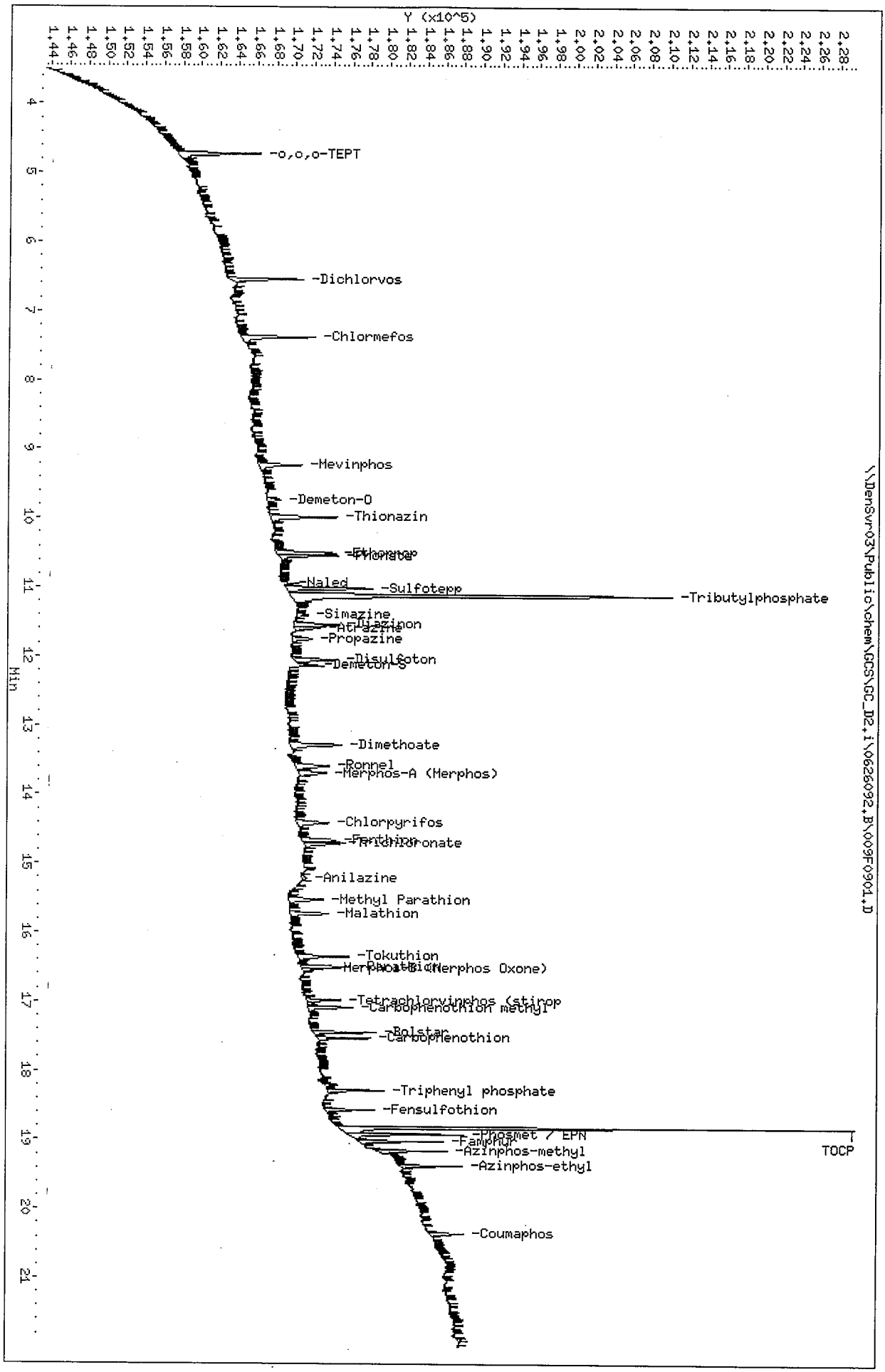
Instrument ID: GC_D2.i
Lab File ID: 009F0901.D
Lab Smp Id: OPP L1 GSV0641
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 26-JUN-2009
Calibration Time: 19:50
Client Smp ID: OPP L1 GSV0641
Level:
Sample Type:

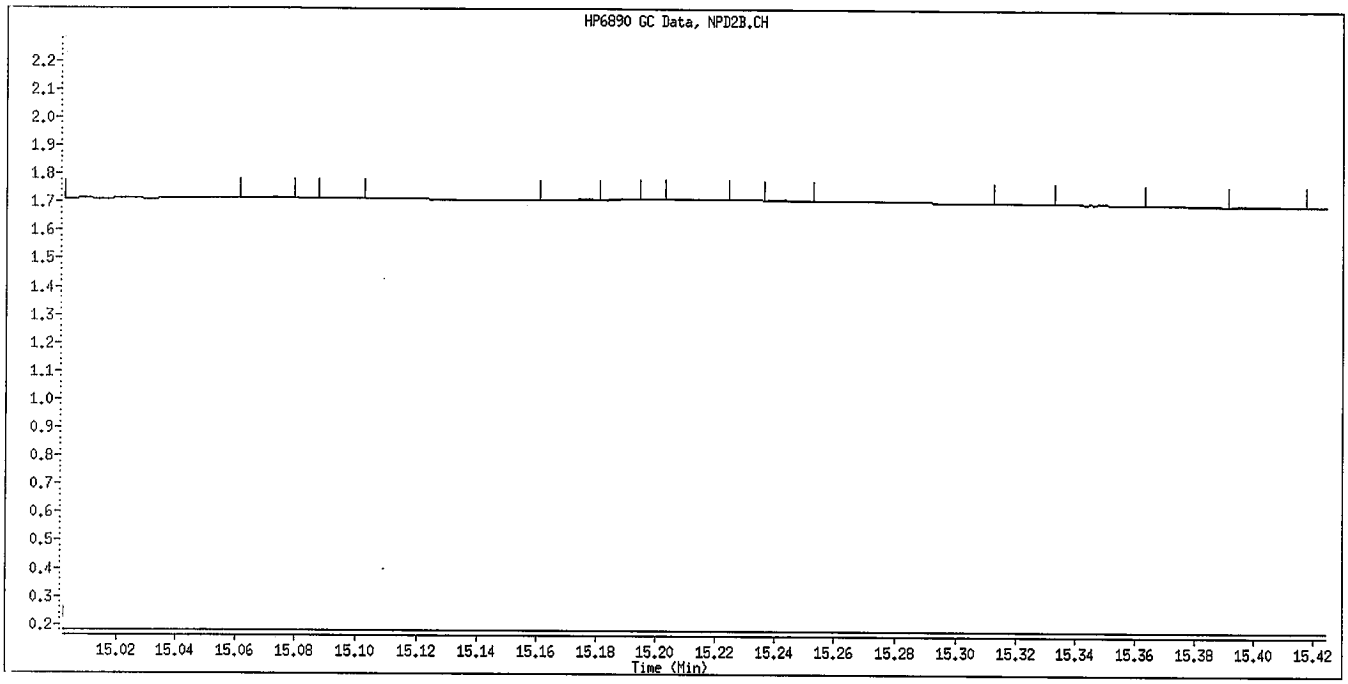
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	126959	63480	253918	104756	-17.49
36 TOCP	68161	34081	136322	73597	7.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	0.02
36 TOCP	18.82	18.32	19.32	18.82	0.00

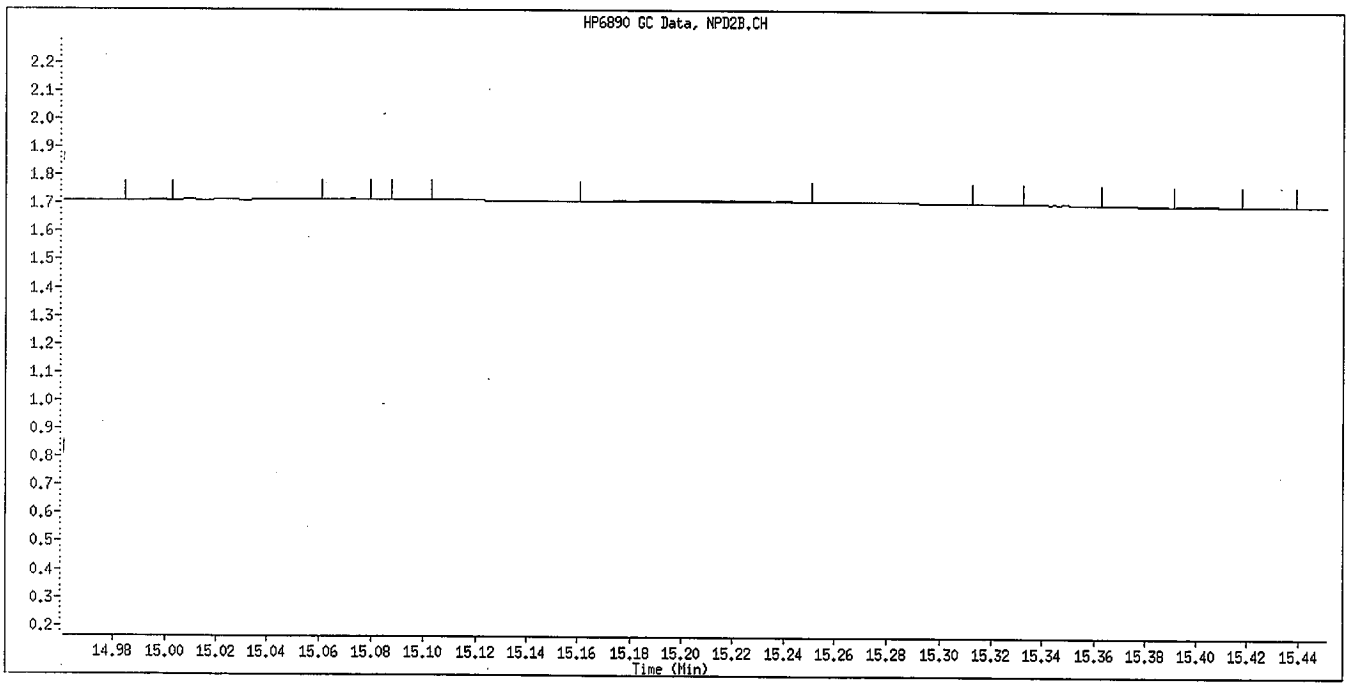
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Data File: \\DenSvr03\Public\chem\GCS\GC_D2,i\0626092,B\009F0901.D
Date : 26-JUN-2009 21:13
Client ID: OPP L1 GSV0641
Sample Info: OPP L1 GSV0641
Column phase: RTx-OPPest
Instrument: GC_D2,i
Operator: MPK/TLW
Column diameter: 0.32
\\DenSvr03\Public\chem\GCS\GC_D2,i\0626092,B\009F0901.D
Y (x10^5)
Min
-o,o,o-TEPT
-Dichlorvos
-Chlormefos
-Mevinphos
-Demeton-O
-Thionazin
-Naled
-Sulfotepp
-Tributylphosphate
-Simazine
-Propazine
-Dimethoate
-Ronnel
-Merphos-A (Merphos)
-Chlorpyrifos
-Anilazine
-Methyl Parathion
-Malathion
-Tokuthion
-Tetrachlorvinphos (stirop
-Carbophenothion methyl
-Carbophenothion
-Triphenyl phosphate
-Fensulfothion
-Phosmet / EPN
-Azinphos-methyl
-Azinphos-ethyl
TOCP
-Coumaphos

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration

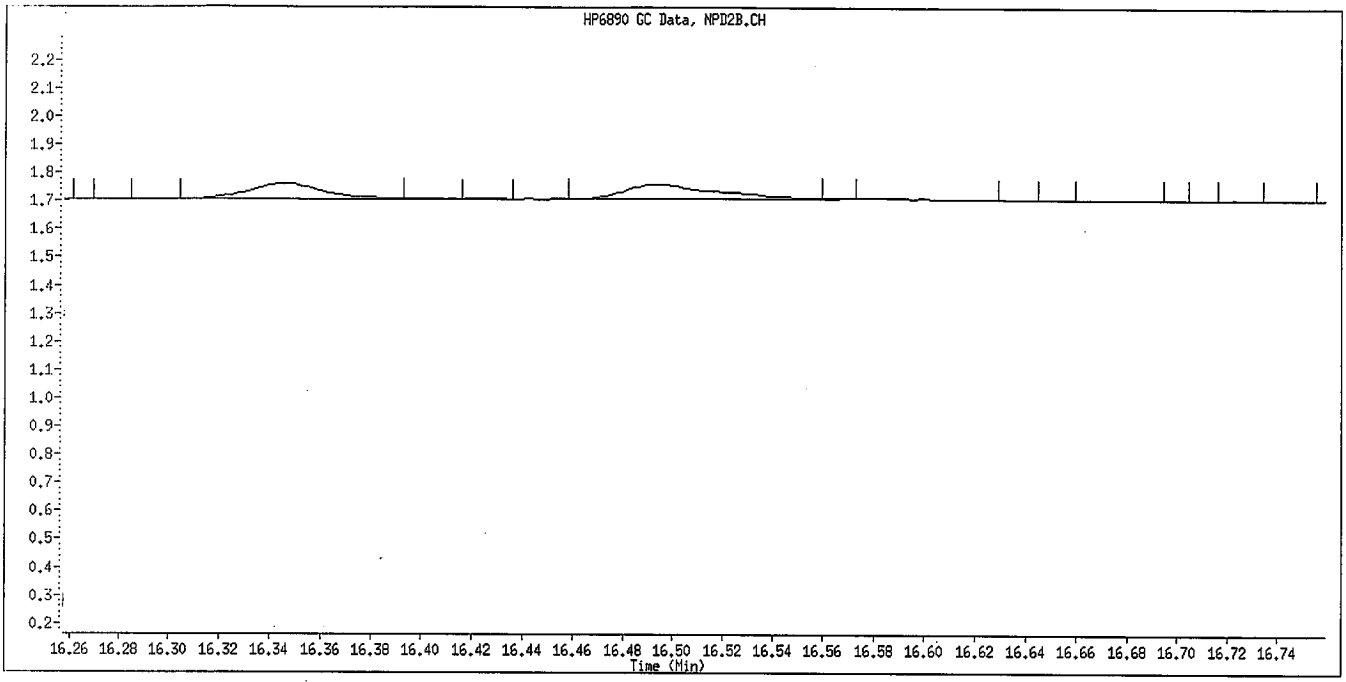


Manual Integration

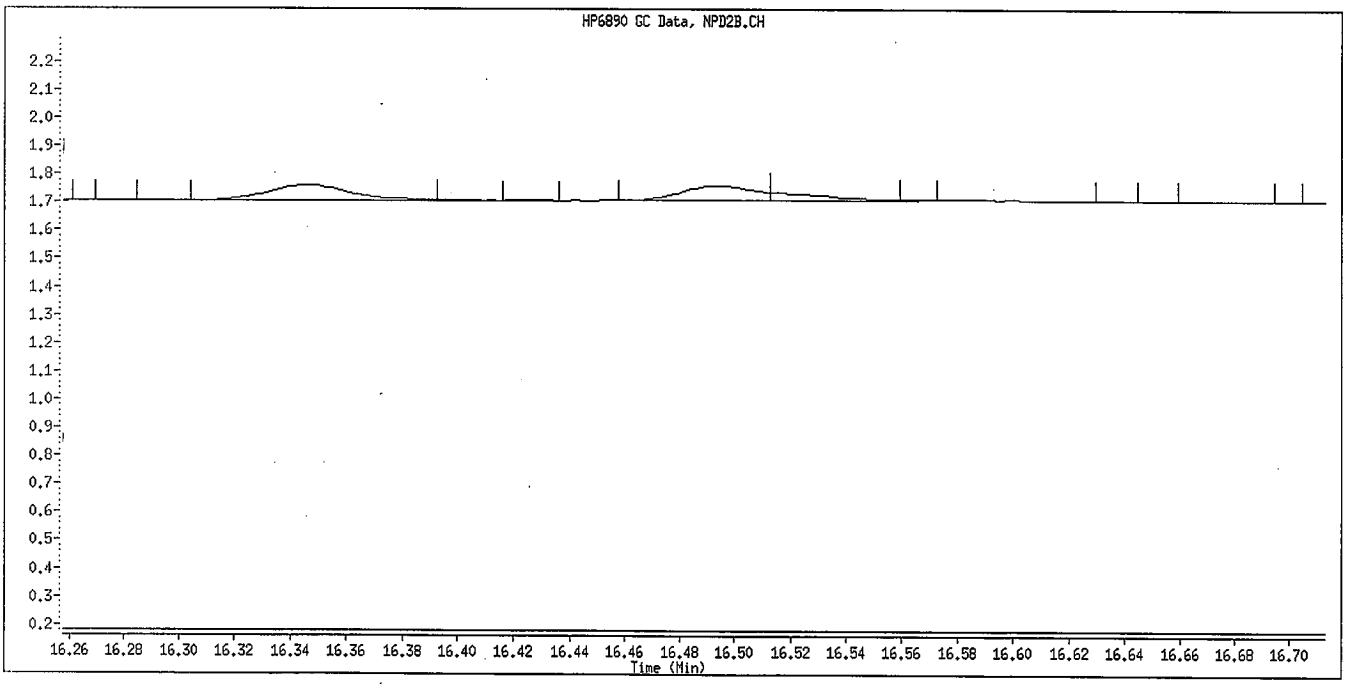
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Parathion
CAS #:
Report Date: 06/30/2009



Original Integration

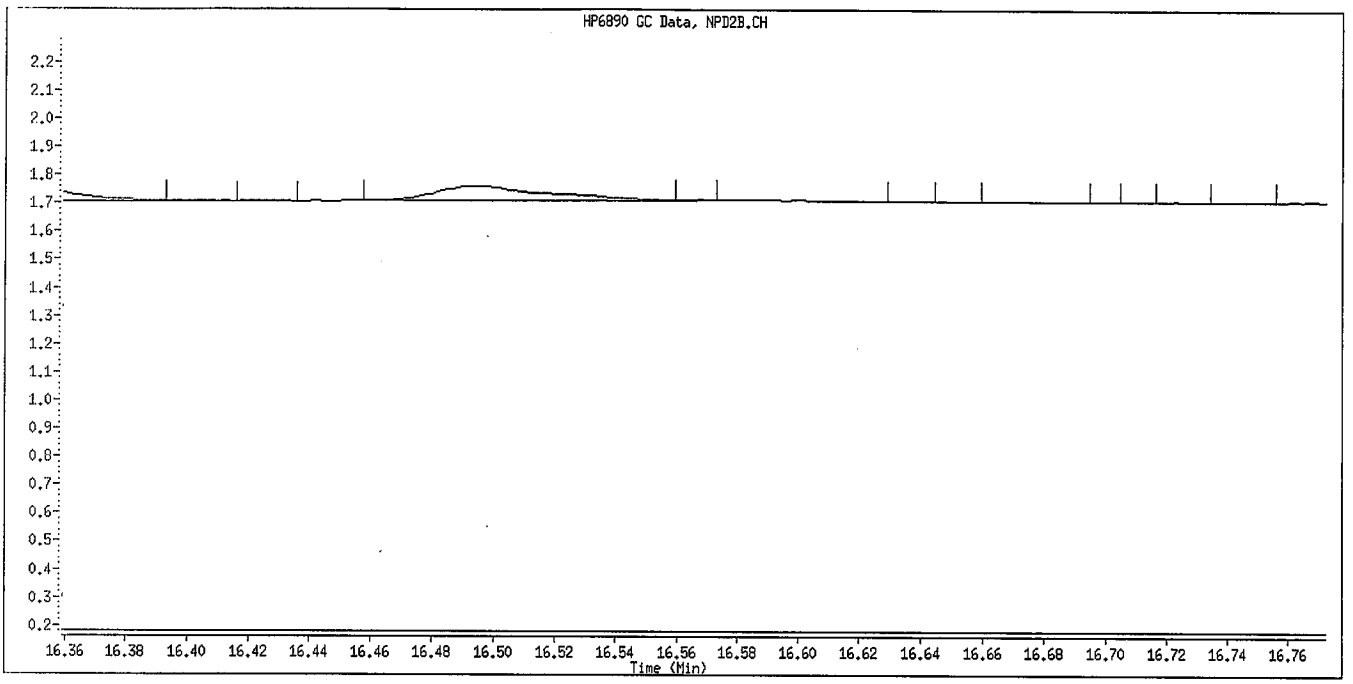


Manual Integration

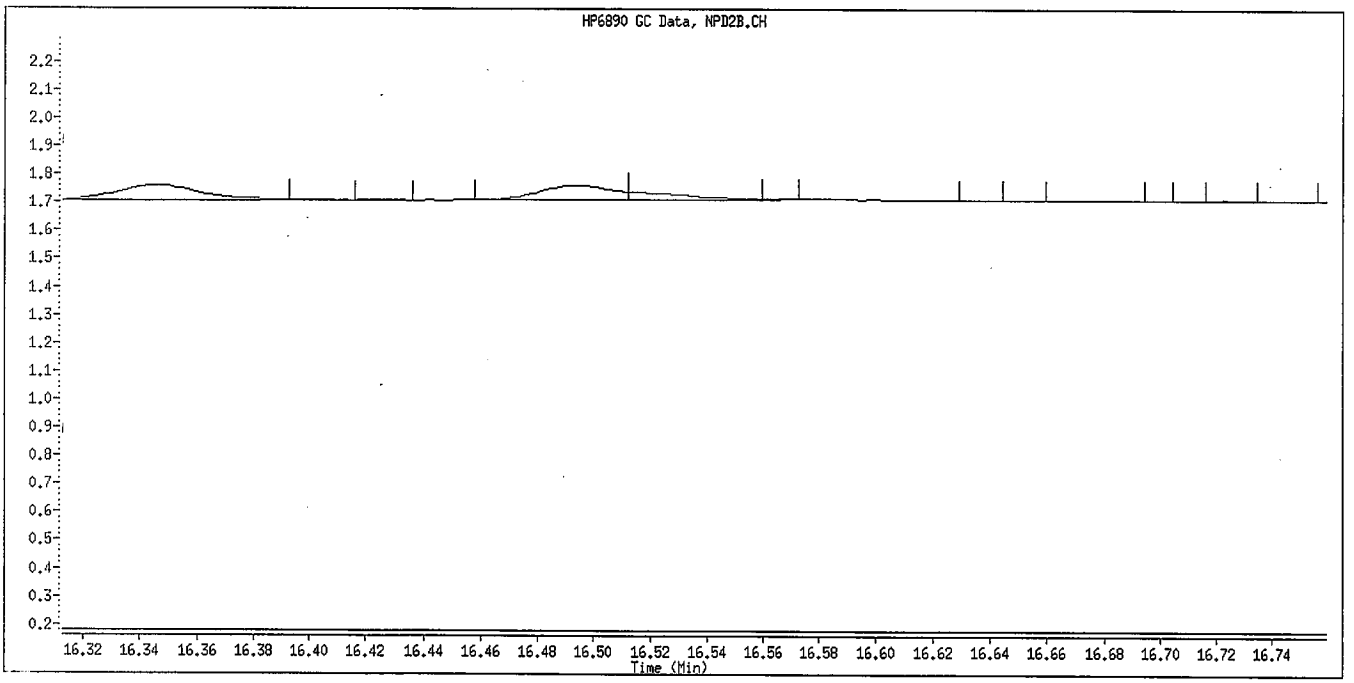
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 009F0901.D
Inj. Date and Time: 26-JUN-2009 21:13
Instrument ID: GC_D2.i
Client ID: OPP L1 GSV0641
Compound Name: Merphos-B (Merphos Oxone)
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

JG 6/30/09

TestAmerica

Data file : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\010F1001.D
Lab Smp Id: OPP SS GSV0633 Client Smp ID: OPP SS GSV0633
Inj Date : 26-JUN-2009 21:40
Operator : MPK/TLW Inst ID: GC_D2.i
Smp Info : OPP SS GSV0633
Misc Info :
Comment :
Method : \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Meth Date : 30-Jun-2009 13:09 GC_D2.i Quant Type: ISTD
Cal Date : 26-JUN-2009 21:13 Cal File: 009F0901.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8141A.sub
Target Version: 4.14
Processing Host: DENPC075

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1	o,o,o-TEPT	4.728	4.731	(0.251)	178670	2.00000	2.007
2	Dichlorvos	6.545	6.546	(0.348)	123097	2.00000	1.771
$ 3	Chlormefos	7.383	7.384	(0.392)	118669	2.00000	1.696
4	Mevinphos	9.232	9.234	(0.491)	85996	2.00000	1.836
5	Demeton-O	9.733	9.734	(0.517)	91352	0.65000	2.047
6	Thionazin	9.983	9.984	(0.531)	131360	2.00000	1.876
7	Ethoprop	10.498	10.499	(0.558)	99220	2.00000	1.896
8	Phorate	10.537	10.539	(0.560)	118380	2.00000	1.951
9	Naled	10.938	10.939	(0.581)	13173	2.00000	1.049
10	Sulfotepp	11.017	11.017	(0.586)	156890	2.00000	1.714(A)
* 11	Tributylphosphate	11.115	11.116	(1.000)	123933	2.00000	
12	Simazine	11.398	11.399	(0.606)	47205	2.00000	3.601(A)
13	Diazinon	11.540	11.541	(0.613)	101968	2.00000	2.080
14	Atrazine	11.580	11.584	(0.615)	49851	2.00000	1.969(A)
15	Propazine	11.745	11.747	(0.624)	42529	2.00000	1.874
16	Disulfoton	12.048	12.049	(0.640)	81906	2.00000	1.697(M)
17	Demeton-S	12.120	12.124	(0.644)	4990	1.36000	0.2011(M)
18	Dimethoate	13.280	13.282	(0.706)	120970	2.00000	1.870
19	Ronnel	13.587	13.587	(0.722)	87569	2.00000	2.011
20	Merphos-A (Merphos)	13.687	13.689	(1.231)	24019	2.00000	0.5348(A)
21	Chlorpyrifos	14.410	14.409	(0.766)	93110	2.00000	2.108
22	Fenthion	14.660	14.662	(0.779)	84515	2.00000	2.063
23	Trichloronate	14.708	14.711	(0.782)	105095	2.00000	1.862
24	Anilazine	15.215	15.216	(0.809)	4699	2.00000	1.242(M)
25	Methyl Parathion	15.517	15.519	(0.825)	89448	2.00000	2.023(A)
26	Malathion	15.723	15.724	(0.836)	63638	2.00000	1.536
27	Tokuthion	16.345	16.344	(0.869)	91793	2.00000	1.892
28	Parathion	16.493	16.494	(0.877)	92973	2.00000	2.134
29	Merphos-B (Merphos Oxone)	16.518	16.517	(1.486)	68602	2.00000	5.008(A)
30	Tetrachlorvinphos (stirophos)	16.975	16.977	(0.902)	58667	2.00000	2.081
31	Carbophenothion methyl	17.080	17.082	(0.908)	50362	2.00000	1.246
32	Bolstar	17.440	17.440	(0.927)	88423	2.00000	2.078
33	Carbophenothion	17.522	17.524	(0.931)	73217	2.00000	1.750(A)

		Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	34	Triphenyl phosphate	18.278	18.281	(0.971)	59320	2.00000	1.727
	35	Fensulfothion	18.558	18.559	(0.986)	65657	2.00000	2.082
*	36	TOCP	18.815	18.816	(1.000)	68831	2.00000	
	37	Phosmet / EPN	18.908	18.909	(1.005)	122970	4.00000	3.469
	38	Famphur	19.010	19.011	(1.010)	79361	2.00000	1.758
	39	Azinphos-methyl	19.145	19.147	(1.018)	74782	2.00000	1.811
	40	Azinphos-ethyl	19.363	19.366	(1.029)	70726	2.00000	1.798
	41	Coumaphos	20.347	20.347	(1.081)	59237	2.00000	1.959
S	42	Merphos				92621	2.00000	1.615
M	43	Total Demeton				96342	2.00000	2.248

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

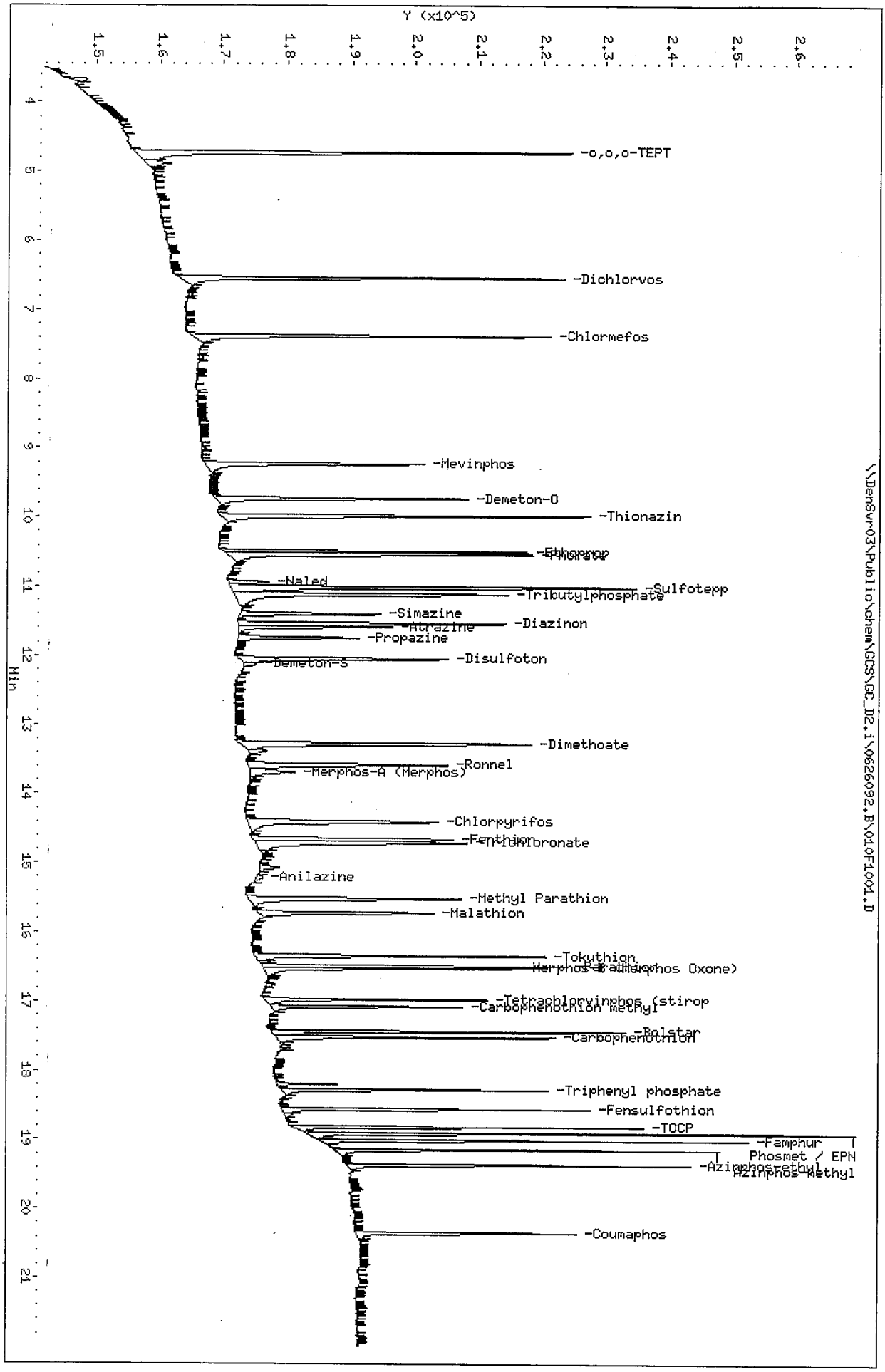
Instrument ID: GC_D2.i
Lab File ID: 010F1001.D
Lab Smp Id: OPP SS GSV0633
Analysis Type: SV
Quant Type: ISTD
Operator: MPK/TLW
Method File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\8141A-2.m
Misc Info:

Calibration Date: 27-JUN-2009
Calibration Time: 04:04
Client Smp ID: OPP SS GSV0633
Level:
Sample Type:

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	143401	71701	286802	123933	-13.58
36 TOCP	69335	34668	138670	68831	-0.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
11 Tributylphosphate	11.12	10.62	11.62	11.12	-0.05
36 TOCP	18.82	18.32	19.32	18.82	-0.01

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.


Y (x10^5)
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1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
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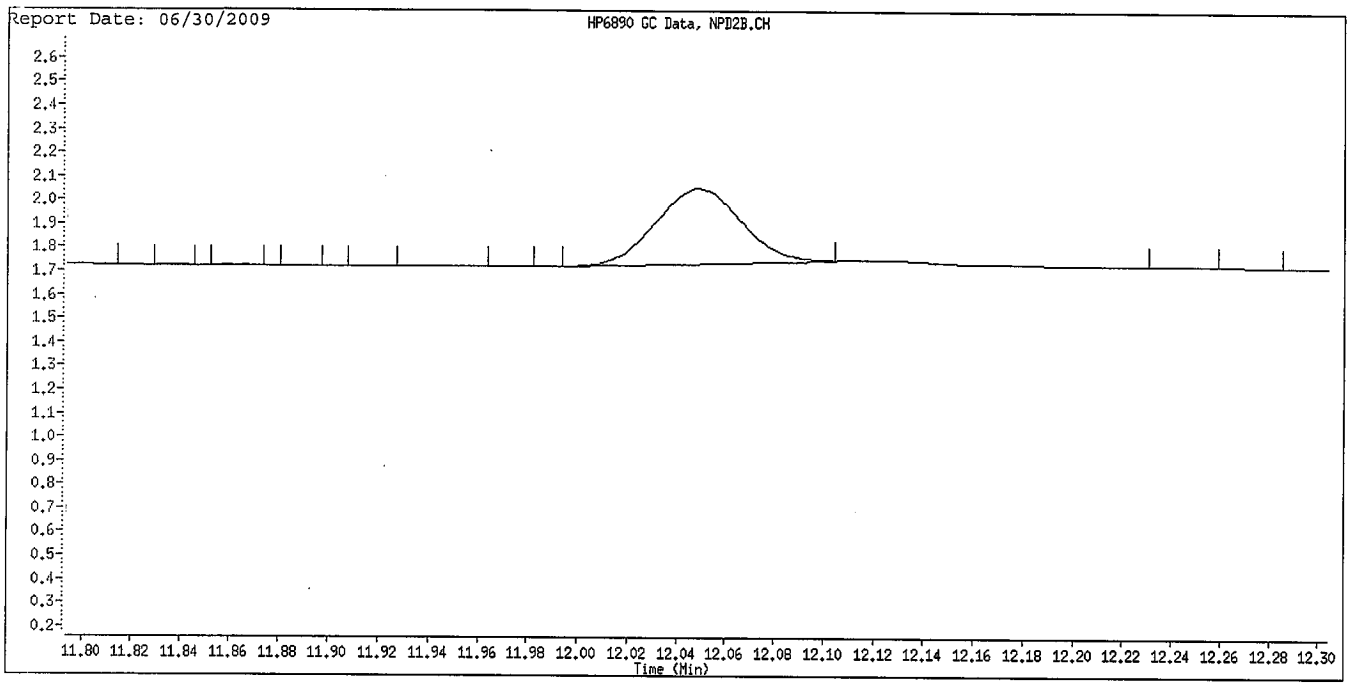
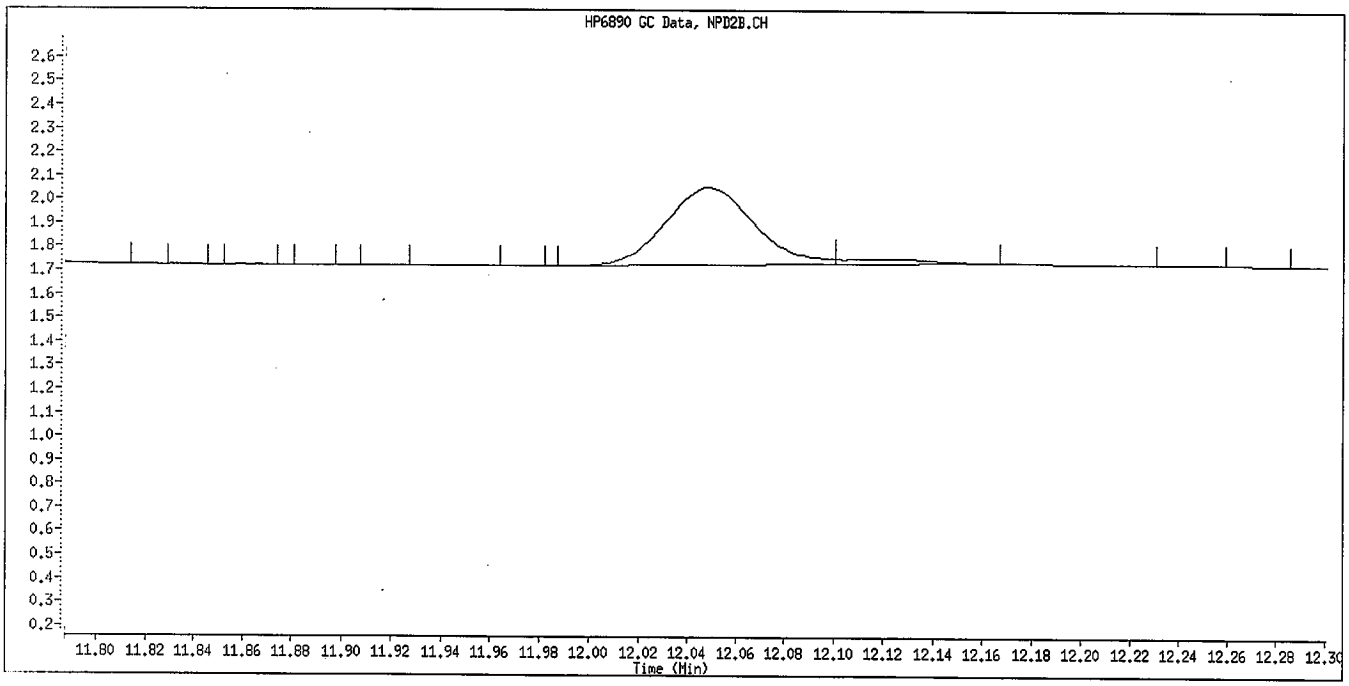
2.6
Min
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
-o,o,o-TEPT
-Dichlorvos
-Chlormefos
-Mevinphos
-Demeton-O
-Thionazin
-Naled
-Sulfotepp
-Tributylphosphate
-Simazine
-Diazinon
-Atrazine
-Propazine
-Disulfoton
-Demeton-S
-Dimethoate
-Ronnel
-Merphos-A (Merphos)
-Chlorpyrifos
-Anilazine
-Methyl Parathion
-Malathion
-Tokuthion
-Carbophenothion
-Triphenyl phosphate
-Fensulfothion
-TOCP
-Famphur
Phosmet / EPN
-Azinphos-methyl
-Coumaphos
\\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\010F1001.D
Data File: \\DenSvr03\Public\chem\GCS\GC_D2.i\0626092.B\010F1001.D
Date : 26-JUN-2009 21:40
Client ID: OPP SS GSV0633
Sample Info: OPP SS GSV0633
Column phase: RTx-OPPest
Instrument: GC_D2.i
Operator: MPK/TLW
Column diameter: 0.32

Data File Name: 010F1001.D
Inj. Date and Time: 26-JUN-2009 21:40
Instrument ID: GC_D2.i
Client ID: OPP SS GSV0633
Compound Name: Disulfoton
CAS #: 298-04-4



Original Integration

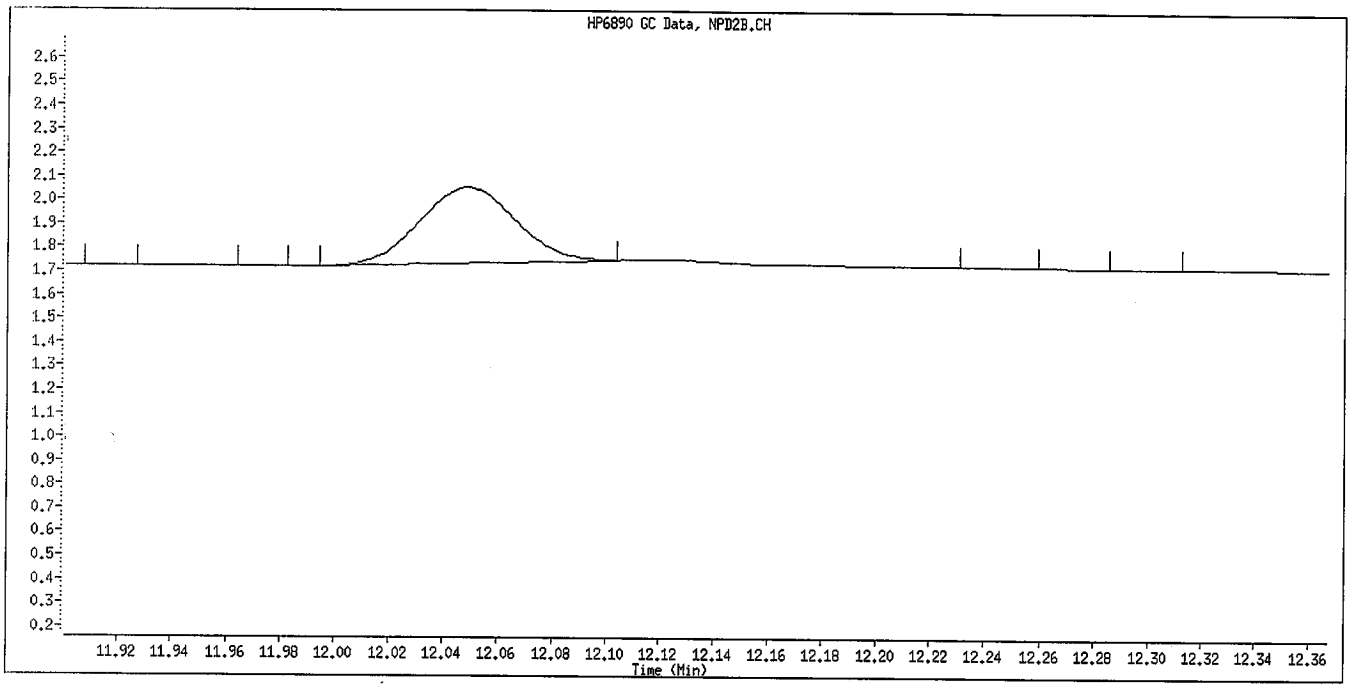


Manual Integration

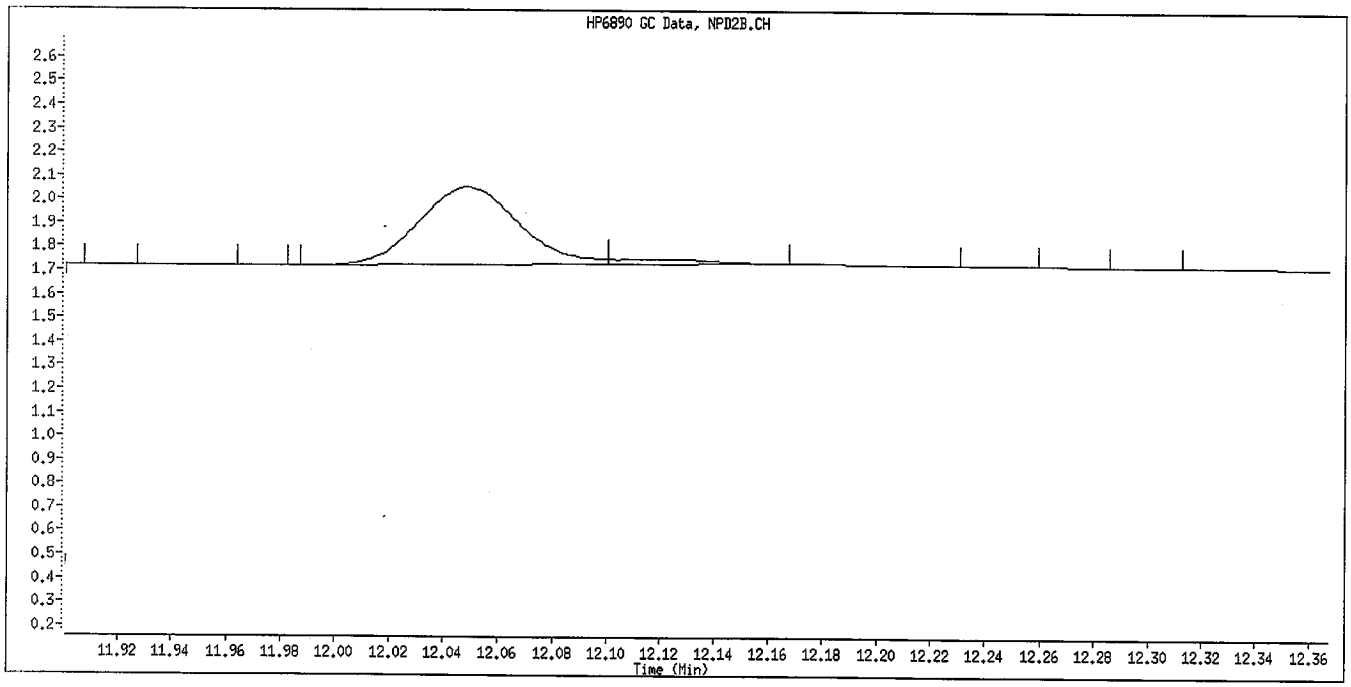
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/07

Data File Name: 010F1001.D
Inj. Date and Time: 26-JUN-2009 21:40
Instrument ID: GC_D2.i
Client ID: OPP SS GSV0633
Compound Name: Demeton-S
CAS #: 126-75-0
Report Date: 06/30/2009



Original Integration

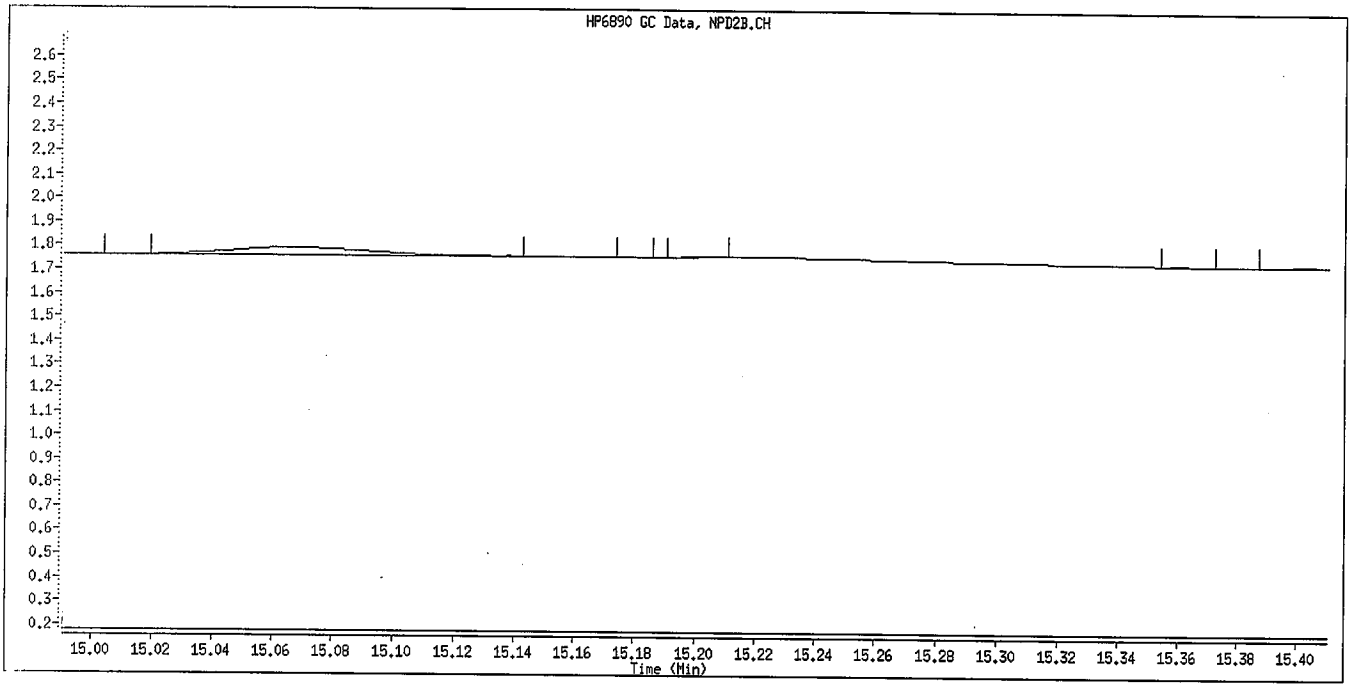


Manual Integration

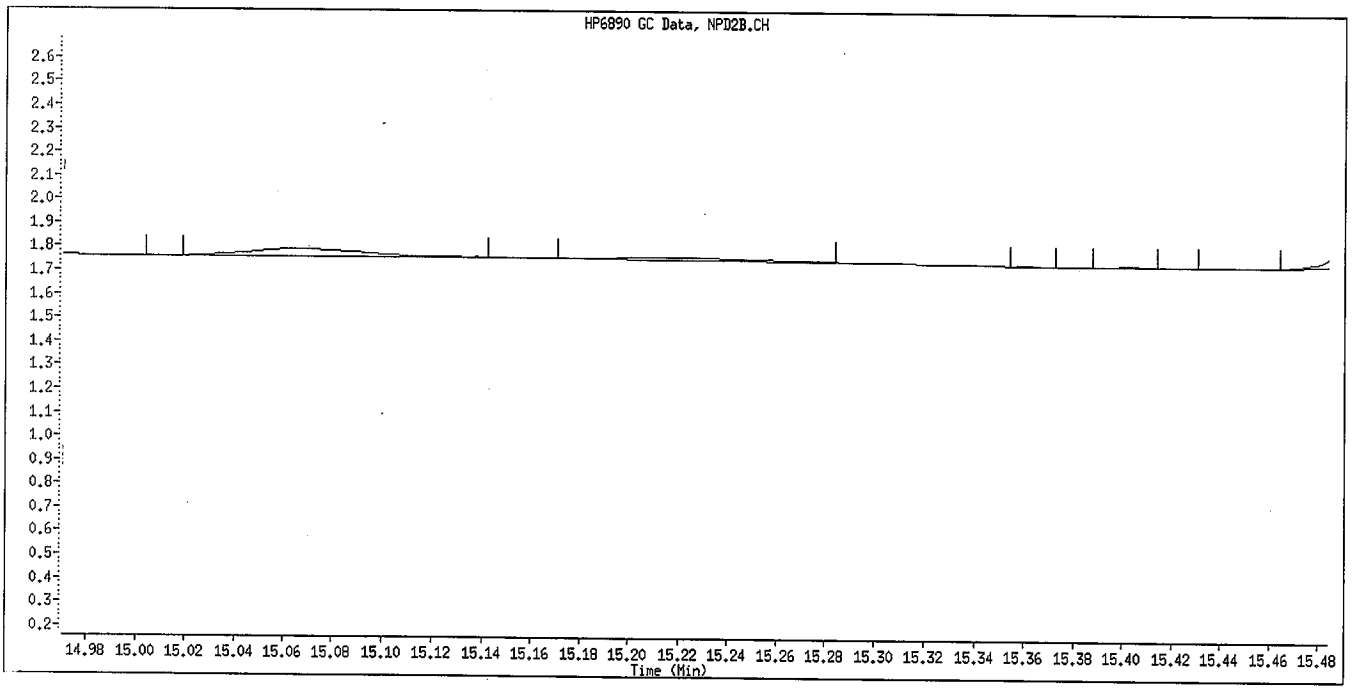
Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Data File Name: 010F1001.D
Inj. Date and Time: 26-JUN-2009 21:40
Instrument ID: GC_D2.i
Client ID: OPP SS GSV0633
Compound Name: Anilazine
CAS #:
Report Date: 06/30/2009



Original Integration



Manual Integration

Manually Integrated By: williamst
Manual Integration Reason: Baseline Event

6/30/09

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9G160231

Client: Northgate Environmental

Batch(es) #: 9198162

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: 7/24/09

Metals Raw Data RoadMap

LotID	*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G160231 1 D	SE	LGLFG1AJ	20090723	6020TOTA	9198162	AG072309C	024
D9G160231 1 S	SE	LGLFG1AH	20090723	6020TOTA	9198162	AG072309C	024
D9G160231 1 D	AS	LGLFG1AG	20090723	6020TOTA	9198162	AG072309C	024
D9G160231 1 S	AS	LGLFG1AF	20090723	6020TOTA	9198162	AG072309C	024
D9G160231 1	SE	LGLFG1AD	20090723	6020TOTA	9198162	AG072309C	024
D9G160231 1	AS	LGLFG1AC	20090723	6020TOTA	9198162	AG072309C	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9198162**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JON HARRE

Prep Date: 07/21/09
Due Date: 07/28/09

Lot	Work Order			Initial Weight/Volume
D9G170000 Water	**LGMKF**	B	Due Date: SDG:	50 mL
D9G170000 Water	**LGMKF**	C	Due Date: SDG:	50 mL
D9G160231 Water	**LGLFG** Total		Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160231 Water	**LGLFG** Total	S	Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160231 Water	**LGLFG** Total	D	Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160235 Water	**LGLGF** Total		Due Date: 07/28/09 SDG: 8304614	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 7/22/09

7/22/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 9198162 **ALLIQUOTTED BY:** KS
PREP DATE: 7/21/2009 **DIGESTED BY:** JKH

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3, 34

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	8:00	90	12:20	91
HNO3	12:30	91	13:00	90
HNO3				

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Kri Ham ***Date:*** 7/21/09

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

Jul-23-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-ZN02045 Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4008-09, ICP-MS (024) INT STD BRC-HIGH

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 250.00
Date Prep./Opened: 07-02-2009
Date Expires(1): 11-10-2009 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock — Aliquot Amount (ml): 1.2000
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	4,800.0

Parent Std No.: STD1972-09, Lithium 6 Stock — Aliquot Amount (ml): 1.5000
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	6,000.0

Parent Std No.: STD1973-09, Indium Stock — Aliquot Amount (ml): 0.4000
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	1,600.0

Parent Std No.: STD6317-08, Scandium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	1,600.0

Parent Std No.: STD6318-08, Holmium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,600.0

STD4383-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water — Volume (ml): 1,000.0
Date Prep./Opened: 07-23-2009
Date Expires(1): 08-23-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4332-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4384-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn — Aliquot Amount (ml): 0.1000
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	10.000

STD4386-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00

Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4387-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	50.000
Zn	20.000	50.000
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000

Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4388-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4386-09, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 07-24-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
V	100.00	0.0010
Zn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010

Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
Mo	100.00	0.0010
Sb	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010

STD4389-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022

Volume (ml): 10.000

Date Prep./Opened: 07-23-2009

Date Expires(1): 07-24-2009 (2 Days)

pipettes: Met 20 and Met 8

Parent Std No.: STD4388-09, 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
V	0.0010	0.0002
Zn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Fe	0.0500	0.0100
Sn	0.0010	0.0002

STD4390-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 08-23-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4391-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 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 (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4392-09, ICPMS LR STD 1000 ppb

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	1,000.0
Zn	20.000	1,000.0
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0

Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4393-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000

Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4394-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (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

STD4395-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: 7/24/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 14:55:21

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/23/09 20:44		☐
3	Cal Blank				1.0	07/23/09 20:47		☐
4	100 ppb				1.0	07/23/09 20:50		☐
5	ICV				1.0	07/23/09 20:52		☐
6	RLIV				1.0	07/23/09 20:55		☐
7	ICB				1.0	07/23/09 20:58		☐
8	RL STD				1.0	07/23/09 21:00		☐
9	AFCEE RL				1.0	07/23/09 21:03		☐
10	~~ALTSe~~				~~1.0~~	~~07/23/09 21:06~~	DNu 2 7/24/09	☐
11	ICSA				1.0	07/23/09 21:09		☐
12	ICSAB				1.0	07/23/09 21:11		☐
13	RINSE				1.0	07/23/09 21:14		☐
14	ALTSe				1.0	07/23/09 21:17		☐
15	LR				1.0	07/23/09 21:20		☐
16	RINSE				1.0	07/23/09 21:22		☐
17	CCV				1.0	07/23/09 21:25		☐
18	CCB				1.0	07/23/09 21:28		☐
19	RLCV				1.0	07/23/09 21:30		☐
20	LGMKFB	D9G170000	9198162	MS	1.0	07/23/09 21:33		☐
21	LGMKFC	D9G170000	9198162	MS	1.0	07/23/09 21:36		☐
22	LGLFG 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:38		☐
23	LGLFGP25	D9G160231	9198162		25.0	07/23/09 21:41		☐
24	LGLFGZ	D9G160231-1	9198162		1.0	07/23/09 21:44		☐
25	LGLFGS 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:47		☐
26	LGLFGD 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:49		☐
27	LGLGF 5X	D9G160235-1	9198162	MS	5.0	07/23/09 21:52		☐
28	CCV				1.0	07/23/09 21:55		☐
29	CCB				1.0	07/23/09 21:58		☐
30	RLCV				1.0	07/23/09 22:00		☐
31	LGMK1B	D9G170000	9198171	MS	1.0	07/23/09 22:03		☐
32	LGMK1C	D9G170000	9198171	MS	1.0	07/23/09 22:06		☐
33	LGLVQ	D9G160310-1	9198171	MS	1.0	07/23/09 22:09		☐
34	LGLVQP5	D9G160310	9198171		5.0	07/23/09 22:11		☐
35	LGLVQZ	D9G160310-1	9198171		1.0	07/23/09 22:14		☐
36	LGLVQS	D9G160310-1	9198171	MS	1.0	07/23/09 22:17		☐
37	LGLVQD	D9G160310-1	9198171	MS	1.0	07/23/09 22:20		☐
38	LGLV4	D9G160310-2	9198171	MS	1.0	07/23/09 22:22		☐
39	LGLV5	D9G160310-3	9198171	MS	1.0	07/23/09 22:25		☐
40	LGLV6	D9G160310-4	9198171	MS	1.0	07/23/09 22:28		☐
41	CCV				1.0	07/23/09 22:31		☐
42	CCB				1.0	07/23/09 22:33		☐
43	RLCV				1.0	07/23/09 22:36		☐
44	LGM6LB	D9G170000	9198282	MS	1.0	07/23/09 22:39		☐
45	LGM6LC	D9G170000	9198282	MS	1.0	07/23/09 22:42		☐
46	LGM6LL	D9G170000	9198282	MS	1.0	07/23/09 22:45		☐
47	LGL5Q	D9G160333-6	9198282	U2	1.0	07/23/09 22:47		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	LGL5QP5	D9G160333	9198282		5.0	07/23/09 22:50		
49	LGL5QZ	D9G160333-6	9198282		1.0	07/23/09 22:53		
50	LGL6M	D9G160333-28	9198282	U2	1.0	07/23/09 22:56		
51	CCV				1.0	07/23/09 22:58		
52	CCB				1.0	07/23/09 23:01		
53	RLCV				1.0	07/23/09 23:04		
54	LGM1CB	D9G170000	9198252	46	1.0	07/23/09 23:07		
55	LGM1CC	D9G170000	9198252	46	1.0	07/23/09 23:09		
56	LGL5C	D9G160333-1	9198252	U1	1.0	07/23/09 23:12		
57	LGL5H	D9G160333-2	9198252	U1	1.0	07/23/09 23:15		
58	LGL5J	D9G160333-3	9198252	U1	1.0	07/23/09 23:18		
59	LGL5JP5	D9G160333	9198252		5.0	07/23/09 23:20		
60	LGL5JZ	D9G160333-3	9198252		1.0	07/23/09 23:23		
61	LGL5JS	D9G160333-3	9198252	U1	1.0	07/23/09 23:26		
62	LGL5JD	D9G160333-3	9198252	U1	1.0	07/23/09 23:28		
63	CCV				1.0	07/23/09 23:31		
64	CCB				1.0	07/23/09 23:34		
65	RLCV				1.0	07/23/09 23:37		
66	~~LGL5P~~	~~D9G160333-5~~	~~9198252~~	~~U1~~	~~1.0~~	~~07/23/09 23:39~~		
67	LGL5X	D9G160333-9	9198252	U1	1.0	07/23/09 23:42		
68	LGL51	D9G160333-10	9198252	U1	1.0	07/23/09 23:45		
69	LGL52	D9G160333-11	9198252	U1	1.0	07/23/09 23:48		
70	LGL53	D9G160333-12	9198252	U1	1.0	07/23/09 23:50		
71	LGL54	D9G160333-13	9198252	U1	1.0	07/23/09 23:53		
72	LGL55	D9G160333-14	9198252	U1	1.0	07/23/09 23:56		
73	LGL56	D9G160333-15	9198252	U1	1.0	07/23/09 23:59		
74	LGL57	D9G160333-16	9198252	U1	1.0	07/24/09 00:01		
75	CCV				1.0	07/24/09 00:04		
76	CCB				1.0	07/24/09 00:07		
77	RLCV				1.0	07/24/09 00:10		
78	LGM2DB	D9G170000	9198253	46	1.0	07/24/09 00:12		
79	LGM2DC	D9G170000	9198253	46	1.0	07/24/09 00:15		
80	LGL5K	D9G160333-4	9198261	U1	1.0	07/24/09 00:18		
81	LGL5KP5	D9G160333	9198261		5.0	07/24/09 00:21		
82	LGL5KZ	D9G160333-4	9198261		1.0	07/24/09 00:23		
83	LGL5KS	D9G160333-4	9198253	U1	1.0	07/24/09 00:26		
84	LGL5KD	D9G160333-4	9198253	U1	1.0	07/24/09 00:29		
85	LGL58	D9G160333-17	9198253	U1	1.0	07/24/09 00:32		
86	LGL59	D9G160333-18	9198253	U1	1.0	07/24/09 00:34		
87	LGL6A	D9G160333-19	9198253	U1	1.0	07/24/09 00:37		
88	CCV				1.0	07/24/09 00:40		
89	CCB				1.0	07/24/09 00:42		
90	RLCV				1.0	07/24/09 00:45		
91	LGL6C	D9G160333-20	9198253	U1	1.0	07/24/09 00:48		
92	LGL6D	D9G160333-21	9198253	U1	1.0	07/24/09 00:51		
93	~~LGL6E~~	~~D9G160333-22~~	~~9198253~~	~~U1~~	~~1.0~~	~~07/24/09 00:53~~	NF 7/24/09 did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	~~LGL6F~~	~~D9G160333-23~~	~~9198253~~	~~U1~~	~~1.0~~	~~07/24/09 00:56~~		
95	LGL6G	D9G160333-24	9198253	U1	1.0	07/24/09 00:59		
96	LGL6H	D9G160333-25	9198253	U1	1.0	07/24/09 01:02		
97	LGL6K	D9G160333-26	9198253	U1	1.0	07/24/09 01:05		
98	LGL6KS	D9G160333-26	9198253	U1	1.0	07/24/09 01:07		
99	LGL6KD	D9G160333-26	9198253	U1	1.0	07/24/09 01:10		
100	CCV				1.0	07/24/09 01:13		
101	CCB				1.0	07/24/09 01:16		
102	RLCV				1.0	07/24/09 01:18		
103	LGP0WBF	D9G200000	9201157	MD	1.0	07/24/09 01:21		
104	LGP0WCF	D9G200000	9201157	MD	1.0	07/24/09 01:24		
105	LGNJJF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:27		
106	LGNJJP25F	D9G170255	9201157		25.0	07/24/09 01:30		
107	LGNJJZF	D9G170255-2	9201157		1.0	07/24/09 01:32		
108	LGNJJSF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:35		
109	LGNJJDF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:38		
110	CCV				1.0	07/24/09 01:41		
111	CCB				1.0	07/24/09 01:43		
112	RLCV				1.0	07/24/09 01:46		
113	LGP0QB	D9G200000	9201150	MS	1.0	07/24/09 01:49		
114	LGP0QC	D9G200000	9201150	MS	1.0	07/24/09 01:52		
115	LGNJH 5X	D9G170255-1	9201150	MS	5.0	07/24/09 01:54		
116	LGNJHP25	D9G170255	9201150		25.0	07/24/09 01:57		
117	LGNJHZ	D9G170255-1	9201150		1.0	07/24/09 02:00		
118	LGNJHS 5X	D9G170255-1	9201150	MS	5.0	07/24/09 02:03		
119	LGNJHD 5X	D9G170255-1	9201150	MS	5.0	07/24/09 02:05		
120	LGPGA 5X	D9G180154-1	9201150	MS	5.0	07/24/09 02:08		
121	CCV				1.0	07/24/09 02:11		
122	CCB				1.0	07/24/09 02:14		
123	RLCV				1.0	07/24/09 02:17		
124	RINSE				1.0	07/24/09 02:19		
125	RINSE				1.0	07/24/09 02:22		
126	RINSE				1.0	07/24/09 02:25		
127	RINSE				1.0	07/24/09 02:28		
128	RINSE				1.0	07/24/09 02:30		
129	RINSE				1.0	07/24/09 02:33		
130	~~Cal Blank~~				~~1.0~~	~~07/24/09 02:36~~	KF 7/24/09 Did not use.	
131	Cal Blank				1.0	07/24/09 02:38		
132	100 ppb				1.0	07/24/09 02:41		
133	CCV				1.0	07/24/09 02:44		
134	CCB				1.0	07/24/09 02:47		
135	RLCV				1.0	07/24/09 02:49		
136	LGP9AB	D9G200000	9201280	MS	1.0	07/24/09 02:52		
137	LGP9AC	D9G200000	9201280	MS	1.0	07/24/09 02:55		
138	LGP9AL	D9G200000	9201280	MS	1.0	07/24/09 02:58		
139	LGN12	D9G170293-19	9201280	U2	1.0	07/24/09 03:01		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	LGN12P5	D9G170293	9201280		5.0	07/24/09 03:03		☐
141	LGN12Z	D9G170293-19	9201280		1.0	07/24/09 03:06		☐
142	LGN14	D9G170293-20	9201280	U2	1.0	07/24/09 03:09		☐
143	CCV				1.0	07/24/09 03:12		☐
144	CCB				1.0	07/24/09 03:14		☐
145	RLCV				1.0	07/24/09 03:17		☐
146	LGP39B	D9G200000	9201216	46	1.0	07/24/09 03:20		☐
147	LGP39C	D9G200000	9201216	46	1.0	07/24/09 03:23		☐
148	LGNQQ	D9G170293-1	9201216	U1	1.0	07/24/09 03:26		☐
149	LGNQT	D9G170293-2	9201216	U1	1.0	07/24/09 03:28		☐
150	LGNQV	D9G170293-3	9201226	U1	1.0	07/24/09 03:31		☐
151	LGNQW	D9G170293-4	9201226	U1	1.0	07/24/09 03:34		☐
152	LGNQX	D9G170293-5	9201216	U1	1.0	07/24/09 03:37		☐
153	LGNQXP5	D9G170293	9201216		5.0	07/24/09 03:39		☐
154	LGNQXZ	D9G170293-5	9201216		1.0	07/24/09 03:42		☐
155	CCV				1.0	07/24/09 03:45		☐
156	CCB				1.0	07/24/09 03:48		☐
157	RLCV				1.0	07/24/09 03:50		☐
158	LGNQXS	D9G170293-5	9201216	U1	1.0	07/24/09 03:53		☐
159	LGNQXD	D9G170293-5	9201216	U1	1.0	07/24/09 03:56		☐
160	LGNQ0	D9G170293-6	9201216	U1	1.0	07/24/09 03:59		☐
161	LGNQ2	D9G170293-7	9201216	U1	1.0	07/24/09 04:01		☐
162	LGNQ5	D9G170293-8	9201226	U1	1.0	07/24/09 04:04		☐
163	LGNQ8	D9G170293-9	9201226	U1	1.0	07/24/09 04:07		☐
164	LGNRC	D9G170293-10	9201216	U1	1.0	07/24/09 04:09		☐
165	LGNRG	D9G170293-11	~~9201226~~	U1	1.0	07/24/09 04:12		☐
166	LGNRJ	D9G170293-12	~~9201226~~	U1	1.0	07/24/09 04:15		☐
167	CCV		7/24/09		1.0	07/24/09 04:18		☐
168	CCB				1.0	07/24/09 04:20		☐
169	RLCV				1.0	07/24/09 04:23		☐
170	LGNRK	D9G170293-13	9201216	U1	1.0	07/24/09 04:26		☐
171	LGNRL	D9G170293-14	9201216	U1	1.0	07/24/09 04:29		☐
172	LGNRM	D9G170293-15	9201216	U1	1.0	07/24/09 04:31		☐
173	LGNRMS	D9G170293-15	9201216	U1	1.0	07/24/09 04:34		☐
174	LGNRMD	D9G170293-15	~~9201226~~	U1	1.0	07/24/09 04:37		☐
175	LGNRP	D9G170293-16	~~9201226~~	U1	1.0	07/24/09 04:39		☐
176	LGNRR	D9G170293-17	~~9201216~~	U1	1.0	07/24/09 04:42		☐
177	LGN15	D9G170293-21	~~9201226~~	U1	1.0	07/24/09 04:45		☐
178	LGN16	D9G170293-22	~~9201226~~	U1	1.0	07/24/09 04:48		☐
179	CCV				1.0	07/24/09 04:50		☐
180	CCB				1.0	07/24/09 04:53		☐
181	RLCV				1.0	07/24/09 04:56		☐
182	~~RINSE~~				~~1.0~~	~~07/24/09 04:59~~		☐
183	RINSE				1.0	~~07/24/09~~ 05:01		☐
184	RINSE				1.0	07/24/09 05:04		☐
185	RINSE				~~1.0~~	~~07/24/09 05:07~~	7/24/09 did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

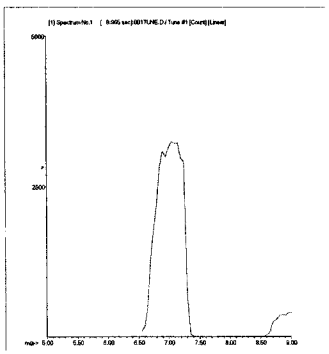
File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	~~RINSE~~				1.0	~~07/24/09 05:10~~		
187	RINSE				1.0	07/24/09 05:12		
188	~~Cal Blank~~				1.0	~~07/24/09 05:15~~	KT 7/24/09	
189	Cal Blank				1.0	07/24/09 05:18		
190	100 ppb				1.0	07/24/09 05:21		
191	CCV				1.0	07/24/09 05:23		
192	CCB				1.0	07/24/09 05:26		
193	RLCV				1.0	07/24/09 05:29		
194	LGM20BQ	D9G170000	9198257	U1	1.0	07/24/09 05:32		
195	LGM20CQ	D9G170000	9198257	U1	1.0	07/24/09 05:34		
196	LGL5CQ	D9G160333-1	9198257	U1	1.0	07/24/09 05:37		
197	LGL5HQ	D9G160333-2	9198257	U1	1.0	07/24/09 05:40		
198	LGL5JQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:43		
199	LGL5JP5Q	D9G160333	9198257		5.0	07/24/09 05:46		
200	LGL5JZQ	D9G160333-3	9198257		1.0	07/24/09 05:48		
201	LGL5JSQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:51		
202	LGL5JDQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:54		
203	CCV				1.0	07/24/09 05:57		
204	CCB				1.0	07/24/09 05:59		
205	RLCV				1.0	07/24/09 06:02		
206	LGL5PQ	D9G160333-5	9198257	U1	1.0	07/24/09 06:05		
207	LGL5XQ	D9G160333-9	9198257	U1	1.0	07/24/09 06:08		
208	LGL51Q	D9G160333-10	9198257	U1	1.0	07/24/09 06:10		
209	LGL52Q	D9G160333-11	9198257	U1	1.0	07/24/09 06:13		
210	LGL53Q	D9G160333-12	9198257	U1	1.0	07/24/09 06:16		
211	LGL54Q	D9G160333-13	9198257	U1	1.0	07/24/09 06:19		
212	LGL55Q	D9G160333-14	9198257	U1	1.0	07/24/09 06:22		
213	LGL56Q	D9G160333-15	9198257	U1	1.0	07/24/09 06:24		
214	LGL57Q	D9G160333-16	9198257	U1	1.0	07/24/09 06:27		
215	CCV				1.0	07/24/09 06:30		
216	CCB				1.0	07/24/09 06:33		
217	RLCV				1.0	07/24/09 06:35		
218	~~LGM3NBQ~~	~~D9G170000~~	~~9198261~~	~~U1~~	~~1.0~~	~~07/24/09 06:38~~		
219	LGM3NCQ	D9G170000	9198261	U1	1.0	07/24/09 06:41		
220	LGL5KQ	D9G160333-4	9198261	U1	1.0	07/24/09 06:44		
221	LGL5KP5Q	D9G160333	9198261		5.0	07/24/09 06:47		
222	LGL5KZQ	D9G160333-4	9198261		1.0	07/24/09 06:49		
223	~~LGL5KSQ~~	~~D9G160333-4~~	~~9198261~~	~~U1~~	~~1.0~~	~~07/24/09 06:52~~	KT 7/24/09 Did not use.	

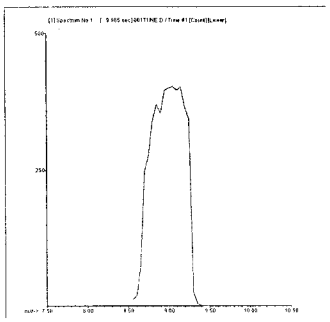
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072309C.B\001TUNE.D
Date Acquired: Jul 23 2009 08:41 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	34431	34827	34208	34362	34720	34038	0.97	5.00	
9 Be	4429	4401	4467	4394	4513	4370	1.34	5.00	
24 Mg	26351	26381	26218	26342	26503	26309	0.40	5.00	
59 Co	96386	97694	95406	97025	96141	95666	0.99	5.00	
115 In	1530814	1526828	1523984	1539561	1534081	1529618	0.40	5.00	
208 Pb	73935	75552	74578	73295	73549	72703	1.53	5.00	
238 U	145664	148897	144827	145175	144841	144582	1.25	5.00	

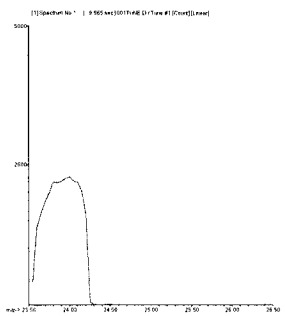


7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.05
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG072309C.B\001TUNE.D



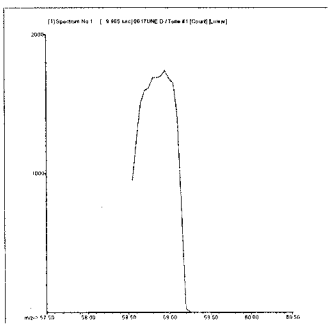
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



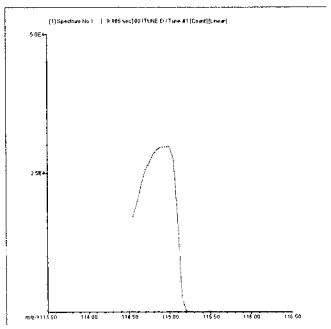
59 Co

Mass Calib.

Actual:	58.90		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



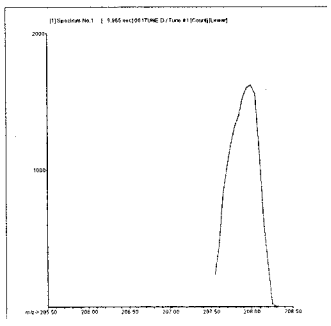
115 In

Mass Calib.

Actual:	114.90		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



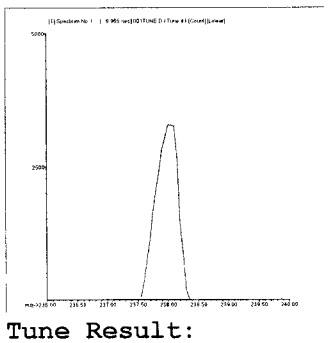
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.00		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072309C.B\002CALB.D\002CALB.D#
Date Acquired:	Jul 23 2009 08:44 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:	Jul 23 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	-201	242.77
52	Cr	72	1	3087	8.11
55	Mn	72	1	1914	4.74
59	Co	72	1	117	13.09
60	Ni	72	1	150	17.64
63	Cu	72	1	28169	3.76
66	Zn	72	1	1953	0.52
75	As	72	1	100	9.17
78	Se	72	1	1990	5.10
95	Mo	72	1	70	14.29
107	Ag	115	1	13	114.56
111	Cd	115	1	15	88.05
118	Sn	115	1	10458	2.46
121	Sb	115	1	42	52.57
137	Ba	115	1	106	13.15
205	Tl	165	1	158	19.17
208	Pb	165	1	411	6.30
232	Th	165	1	67	22.91
238	U	165	1	78	17.32

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	648817	2.77
45	Sc	1	2493640	1.17
72	Ge	1	1074327	0.90
115	In	1	2751462	0.26
165	Ho	1	3967970	0.88

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\AG072309C.B\003CALB.D\003CALB.D#
Date Acquired:	Jul 23 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:	Jul 23 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	-154	123.17
52	Cr	72	1	3334	0.62
55	Mn	72	1	1317	11.07
59	Co	72	1	103	29.57
60	Ni	72	1	290	27.59
63	Cu	72	1	30505	14.18
66	Zn	72	1	314	5.84
75	As	72	1	93	26.19
78	Se	72	1	1824	7.99
95	Mo	72	1	77	49.38
107	Ag	115	1	47	12.37
111	Cd	115	1	9	76.70
118	Sn	115	1	590	19.55
121	Sb	115	1	49	7.87
137	Ba	115	1	14	74.18
205	Tl	165	1	120	15.47
208	Pb	165	1	188	12.47
232	Th	165	1	220	9.09
238	U	165	1	62	16.37

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	648622	0.87
45	Sc	1	2464179	0.48
72	Ge	1	1058296	1.48
115	In	1	2705760	1.08
165	Ho	1	3945088	0.69

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\AG072309C.B\004ICAL.D\004ICAL.D#
Date Acquired:	Jul 23 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:	Jul 23 2009 08:48 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	77345	1.16
51	V	72	1	1313178	0.22
52	Cr	72	1	1266171	0.57
55	Mn	72	1	1501646	1.37
59	Co	72	1	1589896	0.75
60	Ni	72	1	349056	0.93
63	Cu	72	1	849864	1.17
66	Zn	72	1	171430	0.91
75	As	72	1	159254	0.79
78	Se	72	1	31219	2.81
95	Mo	72	1	372210	0.57
107	Ag	115	1	1048650	0.17
111	Cd	115	1	205530	0.82
118	Sn	115	1	601440	1.08
121	Sb	115	1	686162	0.82
137	Ba	115	1	296446	0.37
205	Tl	165	1	2071041	0.79
208	Pb	165	1	2783678	0.49
232	Th	165	1	2586437	2.34
238	U	165	1	2941008	0.32

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	656219	1.15	648622	101.2	30 - 120	
45	Sc	1	2468080	0.96	2464179	100.2	30 - 120	
72	Ge	1	1066183	1.13	1058296	100.7	30 - 120	
115	In	1	2679157	0.29	2705760	99.0	30 - 120	
165	Ho	1	3904288	0.66	3945088	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\AG072309C.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\AG072309C.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 23 2009 08:52 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: Jul 23 2009 08:50 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.24	ppb	1.91	40	100.6	90 - 110	
51 V	72	1	39.27	ppb	1.16	40	98.2	90 - 110	
52 Cr	72	1	39.63	ppb	0.48	40	99.1	90 - 110	
55 Mn	72	1	39.23	ppb	1.10	40	98.1	90 - 110	
59 Co	72	1	38.97	ppb	0.94	40	97.4	90 - 110	
60 Ni	72	1	40.86	ppb	1.91	40	102.2	90 - 110	
63 Cu	72	1	40.59	ppb	2.70	40	101.5	90 - 110	
66 Zn	72	1	40.53	ppb	1.06	40	101.3	90 - 110	
75 As	72	1	39.78	ppb	0.41	40	99.5	90 - 110	
78 Se	72	1	39.41	ppb	3.83	40	98.5	90 - 110	
95 Mo	72	1	40.15	ppb	0.09	40	100.4	90 - 110	
107 Ag	115	1	39.42	ppb	3.16	40	98.6	90 - 110	
111 Cd	115	1	40.42	ppb	2.86	40	101.1	90 - 110	
118 Sn	115	1	39.37	ppb	1.67	40	98.4	90 - 110	
121 Sb	115	1	37.92	ppb	1.07	40	94.8	90 - 110	
137 Ba	115	1	39.26	ppb	2.03	40	98.2	90 - 110	
205 Tl	165	1	39.42	ppb	1.36	40	98.6	90 - 110	
208 Pb	165	1	40.31	ppb	1.10	40	100.8	90 - 110	
232 Th	165	1	44.36	ppb	1.53	40	110.9	90 - 110	Fail
238 U	165	1	40.63	ppb	1.32	40	101.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	656770	1.94	648622	101.3	30 - 120	
45 Sc	1	2455169	0.39	2464179	99.6	30 - 120	
72 Ge	1	1061846	0.91	1058296	100.3	30 - 120	
115 In	1	2694389	1.65	2705760	99.6	30 - 120	
165 Ho	1	3924619	0.57	3945088	99.5	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\006WASH.D\006WASH.D#
Date Acquired: Jul 23 2009 08:55 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: Jul 23 2009 08:50 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	0.921 ppb	10.89	1.30	
51 V	72	1	5.193 ppb	0.52	6.50	
52 Cr	72	1	2.145 ppb	2.98	2.60	
55 Mn	72	1	1.071 ppb	3.58	1.30	
59 Co	72	1	1.036 ppb	3.97	1.30	
60 Ni	72	1	2.100 ppb	1.69	2.60	
63 Cu	72	1	1.852 ppb	19.27	2.60	
66 Zn	72	1	10.530 ppb	2.01	13.00	
75 As	72	1	5.108 ppb	1.12	6.50	
78 Se	72	1	5.303 ppb	8.07	6.50	
95 Mo	72	1	2.213 ppb	3.31	2.60	
107 Ag	115	1	5.284 ppb	2.90	6.50	
111 Cd	115	1	1.066 ppb	4.74	1.30	
118 Sn	115	1	10.380 ppb	1.74	13.00	
121 Sb	115	1	2.149 ppb	1.48	2.60	
137 Ba	115	1	1.051 ppb	1.30	1.30	
205 Tl	165	1	1.120 ppb	1.09	1.30	
208 Pb	165	1	1.057 ppb	1.34	1.30	
232 Th	165	1	3.078 ppb	3.72	2.60	
238 U	165	1	1.100 ppb	1.87	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	660517	0.38	648622	101.8	30 - 120	
45 Sc	1	2448783	1.33	2464179	99.4	30 - 120	
72 Ge	1	1050495	0.89	1058296	99.3	30 - 120	
115 In	1	2703943	0.90	2705760	99.9	30 - 120	
165 Ho	1	3921165	0.97	3945088	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\AG072309C.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\AG072309C.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 23 2009 08:58 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: Jul 23 2009 08:50 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	-0.05	ppb	189.86	1.00	
52 Cr	72	1	0.01	ppb	205.10	1.00	
55 Mn	72	1	0.00	ppb	3886.20	1.00	
59 Co	72	1	0.00	ppb	46.69	1.00	
60 Ni	72	1	-0.02	ppb	35.26	1.00	
63 Cu	72	1	-0.15	ppb	49.61	1.00	
66 Zn	72	1	0.18	ppb	16.54	1.00	
75 As	72	1	0.00	ppb	521.13	1.00	
78 Se	72	1	0.41	ppb	87.73	1.00	
95 Mo	72	1	0.02	ppb	24.76	1.00	
107 Ag	115	1	0.01	ppb	40.27	1.00	
111 Cd	115	1	0.00	ppb	1633.20	1.00	
118 Sn	115	1	0.02	ppb	86.89	1.00	
121 Sb	115	1	0.09	ppb	6.94	1.00	
137 Ba	115	1	0.01	ppb	34.93	1.00	
205 Tl	165	1	0.03	ppb	9.42	1.00	
208 Pb	165	1	0.00	ppb	45.23	1.00	
232 Th	165	1	0.28	ppb	6.37	1.00	
238 U	165	1	0.00	ppb	30.96	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	644894	1.03	648622	99.4	30 - 120	
45 Sc	1	2458677	2.04	2464179	99.8	30 - 120	
72 Ge	1	1051744	1.08	1058296	99.4	30 - 120	
115 In	1	2665988	1.59	2705760	98.5	30 - 120	
165 Ho	1	3945473	0.44	3945088	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\AG072309C.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\AG072309C.B\008RLST.D\008RLST.D#
Date Acquired: Jul 23 2009 09:00 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: Jul 23 2009 08:50 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	0.93	ppb	16.53	1	92.9	50 - 150	
51 V	72	1	0.99	ppb	4.37	1	98.7	50 - 150	
52 Cr	72	1	0.98	ppb	3.55	1	97.8	50 - 150	
55 Mn	72	1	1.01	ppb	3.16	1	100.9	50 - 150	
59 Co	72	1	1.01	ppb	2.52	1	100.5	50 - 150	
60 Ni	72	1	1.02	ppb	4.57	1	102.0	50 - 150	
63 Cu	72	1	0.51	ppb	28.82	1	50.6	50 - 150	
66 Zn	72	1	11.00	ppb	0.96	10	110.0	50 - 150	
75 As	72	1	1.03	ppb	6.41	1	103.4	50 - 150	
78 Se	72	1	0.84	ppb	46.32	1	84.0	50 - 150	
95 Mo	72	1	1.05	ppb	6.76	1	104.7	50 - 150	
107 Ag	115	1	1.01	ppb	1.25	1	100.7	50 - 150	
111 Cd	115	1	0.99	ppb	5.58	1	99.5	50 - 150	
118 Sn	115	1	10.64	ppb	2.85	10	106.4	50 - 150	
121 Sb	115	1	1.06	ppb	2.92	1	105.7	50 - 150	
137 Ba	115	1	1.06	ppb	2.10	1	105.7	50 - 150	
205 Tl	165	1	1.01	ppb	1.07	1	101.2	50 - 150	
208 Pb	165	1	1.04	ppb	1.29	1	104.0	50 - 150	
232 Th	165	1	1.13	ppb	3.88	1	112.8	50 - 150	
238 U	165	1	1.03	ppb	1.96	1	103.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	664634	1.63	648622	102.5	30 - 120	
45 Sc	1	2483721	0.93	2464179	100.8	30 - 120	
72 Ge	1	1055301	0.71	1058296	99.7	30 - 120	
115 In	1	2683360	1.29	2705760	99.2	30 - 120	
165 Ho	1	3923786	0.62	3945088	99.5	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\AG072309C.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\AG072309C.B\009AFCE.D\009AFCE.D#
Date Acquired:	Jul 23 2009 09:03 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:	Jul 23 2009 08:50 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	0.17	ppb	0.42	0	92.4	80 - 120	
51 V	72	1	0.19	ppb	28.18	0	95.7	80 - 120	
52 Cr	72	1	0.18	ppb	8.31	0	90.9	80 - 120	
55 Mn	72	1	0.18	ppb	15.14	0	89.8	80 - 120	
59 Co	72	1	0.19	ppb	2.30	0	95.2	80 - 120	
60 Ni	72	1	0.13	ppb	17.06	0	64.5	80 - 120	
63 Cu	72	1	-0.83	ppb	17.60	0	-822.3	80 - 120	
66 Zn	72	1	2.09	ppb	0.14	2	94.8	80 - 120	
75 As	72	1	0.20	ppb	7.28	0	95.9	80 - 120	
78 Se	72	1	-0.16	ppb	291.52	0	-96.2	80 - 120	
95 Mo	72	1	0.22	ppb	6.91	0	103.9	80 - 120	
107 Ag	115	1	0.20	ppb	11.70	0	97.0	80 - 120	
111 Cd	115	1	0.18	ppb	23.88	0	91.5	80 - 120	
118 Sn	115	1	2.03	ppb	3.65	2	95.4	80 - 120	
121 Sb	115	1	0.22	ppb	8.00	0	103.6	80 - 120	
137 Ba	115	1	0.21	ppb	4.37	0	98.0	80 - 120	
205 Tl	165	1	0.20	ppb	1.71	0	97.8	80 - 120	
208 Pb	165	1	0.20	ppb	1.37	0	95.9	80 - 120	
232 Th	165	1	0.25	ppb	5.43	0	113.0	80 - 120	
238 U	165	1	0.20	ppb	0.05	0	98.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	658846	3.93	648622	101.6	30 - 120	
45 Sc	1	2436953	1.07	2464179	98.9	30 - 120	
72 Ge	1	1045851	0.90	1058296	98.8	30 - 120	
115 In	1	2699550	0.52	2705760	99.8	30 - 120	
165 Ho	1	3916629	1.04	3945088	99.3	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\AG072309C.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\AG072309C.B\010SMPL.D\010SMPL.D#
Date Acquired:	Jul 23 2009 09:06 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:	Jul 23 2009 08:50 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	173.22	3600	
51 V	72	1	-0.01	-0.01	ppb	89.38	3600	
52 Cr	72	1	-0.04	-0.04	ppb	43.34	3600	
55 Mn	72	1	0.00	0.00	ppb	318.86	3600	
59 Co	72	1	0.00	0.00	ppb	31.56	3600	
60 Ni	72	1	-0.07	-0.07	ppb	2.35	3600	
63 Cu	72	1	-1.42	-1.42	ppb	17.15	3600	
66 Zn	72	1	0.04	0.04	ppb	23.03	3600	
75 As	72	1	0.00	0.00	ppb	703.11	3600	
78 Se	72	1	0.84	0.84	ppb	63.33	3600	
95 Mo	72	1	0.00	0.00	ppb	139.03	3600	
107 Ag	115	1	0.00	0.00	ppb	292.92	3600	
111 Cd	115	1	0.01	0.01	ppb	135.69	3600	
118 Sn	115	1	0.05	0.05	ppb	54.50	3600	
121 Sb	115	1	0.01	0.01	ppb	16.53	3600	
137 Ba	115	1	0.00	0.00	ppb	3119.20	3600	
205 Tl	165	1	0.00	0.00	ppb	48.00	3600	
208 Pb	165	1	0.00	0.00	ppb	44.40	3600	
232 Th	165	1	0.04	0.04	ppb	4.98	1000	
238 U	165	1	0.00	0.00	ppb	15.61	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	634672	1.87	648622	97.8	30 - 120	
45 Sc	1	2431982	1.50	2464179	98.7	30 - 120	
72 Ge	1	1038465	1.42	1058296	98.1	30 - 120	
115 In	1	2658554	0.35	2705760	98.3	30 - 120	
165 Ho	1	3909862	0.22	3945088	99.1	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\

NA 7/24/09 Did not use.

ISTD Ref File : C:\ICPCHEM\1\DATA\AG072309C.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\AG072309C.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 23 2009 09:09 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: Jul 23 2009 08:50 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	0.05 ppb	14.80	1.00	
51 V	72	1	-0.57 ppb	20.62	1.00	
52 Cr	72	1	1.20 ppb	1.93	1.00	
55 Mn	72	1	3.62 ppb	1.70	1.00	
59 Co	72	1	0.16 ppb	5.80	1.00	
60 Ni	72	1	1.76 ppb	6.57	1.00	
63 Cu	72	1	1.24 ppb	18.81	1.00	
66 Zn	72	1	4.33 ppb	0.79	10.00	
75 As	72	1	0.54 ppb	6.27	1.00	
78 Se	72	1	0.84 ppb	7.51	1.00	
95 Mo	72	1	2034.00 ppb	1.18	2000.00	
107 Ag	115	1	0.07 ppb	10.50	1.00	
111 Cd	115	1	0.44 ppb	53.68	1.00	
118 Sn	115	1	0.18 ppb	26.35	10.00	
121 Sb	115	1	0.24 ppb	4.25	1.00	
137 Ba	115	1	1.58 ppb	3.20	1.00	
205 Tl	165	1	0.05 ppb	19.96	1.00	
208 Pb	165	1	0.14 ppb	4.85	1.00	
232 Th	165	1	0.07 ppb	10.13	1.00	
238 U	165	1	0.03 ppb	5.62	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	646198	1.87	648622	99.6	30 - 120	
45 Sc	1	2392755	1.16	2464179	97.1	30 - 120	
72 Ge	1	1007909	1.07	1058296	95.2	30 - 120	
115 In	1	2439534	1.11	2705760	90.2	30 - 120	
165 Ho	1	3632671	0.89	3945088	92.1	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\AG072309C.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\AG072309C.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 23 2009 09:11 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: Jul 23 2009 08:50 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	97.08	0.55	100	97.1	80 - 120	
51 V	72	1	103.20	0.44	100	103.2	80 - 120	
52 Cr	72	1	99.60	0.72	100	99.6	80 - 120	
55 Mn	72	1	100.60	2.03	100	100.6	80 - 120	
59 Co	72	1	95.79	0.56	100	95.8	80 - 120	
60 Ni	72	1	93.87	0.68	100	93.9	80 - 120	
63 Cu	72	1	93.73	1.18	100	93.7	80 - 120	
66 Zn	72	1	97.65	0.50	100	97.7	80 - 120	
75 As	72	1	99.24	0.44	100	99.2	80 - 120	
78 Se	72	1	105.10	0.70	100	105.1	80 - 120	
95 Mo	72	1	2108.00	0.74	2100	100.4	80 - 120	
107 Ag	115	1	85.26	1.88	100	85.3	80 - 120	
111 Cd	115	1	95.48	1.11	100	95.5	80 - 120	
118 Sn	115	1	99.08	0.51	100	99.1	80 - 120	
121 Sb	115	1	99.56	0.36	100	99.6	80 - 120	
137 Ba	115	1	101.60	0.68	100	101.6	80 - 120	
205 Tl	165	1	92.40	0.89	100	92.4	80 - 120	
208 Pb	165	1	92.12	1.81	100	92.1	80 - 120	
232 Th	165	1	104.70	0.14	100	104.7	80 - 120	
238 U	165	1	97.71	2.04	100	97.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	657698	1.16	648622	101.4	30 - 120	
45 Sc	1	2403994	0.72	2464179	97.6	30 - 120	
72 Ge	1	1020917	0.37	1058296	96.5	30 - 120	
115 In	1	2470059	0.29	2705760	91.3	30 - 120	
165 Ho	1	3677996	1.38	3945088	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\AG072309C.B\003CALB.D\003CALB.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\AG072309C.B\013SMPL.D\013SMPL.D#
Date Acquired:	Jul 23 2009 09:14 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:	Jul 23 2009 08:50 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	1.27	3600	
51 V	72	1	0.03	0.03	ppb	228.70	3600	
52 Cr	72	1	-0.03	-0.03	ppb	5.73	3600	
55 Mn	72	1	0.02	0.02	ppb	15.69	3600	
59 Co	72	1	0.00	0.00	ppb	146.79	3600	
60 Ni	72	1	-0.03	-0.03	ppb	16.77	3600	
63 Cu	72	1	-1.48	-1.48	ppb	5.94	3600	
66 Zn	72	1	0.97	0.97	ppb	4.75	3600	
75 As	72	1	0.02	0.02	ppb	80.25	3600	
78 Se	72	1	-0.17	-0.17	ppb	213.59	3600	
95 Mo	72	1	1.42	1.42	ppb	2.79	3600	
107 Ag	115	1	0.00	0.00	ppb	77.66	3600	
111 Cd	115	1	0.02	0.02	ppb	60.41	3600	
118 Sn	115	1	1.62	1.62	ppb	1.76	3600	
121 Sb	115	1	0.04	0.04	ppb	5.44	3600	
137 Ba	115	1	0.03	0.03	ppb	17.46	3600	
205 Tl	165	1	0.01	0.01	ppb	20.80	3600	
208 Pb	165	1	0.01	0.01	ppb	4.35	3600	
232 Th	165	1	0.77	0.77	ppb	16.71	1000	
238 U	165	1	0.01	0.01	ppb	21.86	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	677622	1.28	648622	104.5	30 - 120	
45 Sc	1	2505756	1.25	2464179	101.7	30 - 120	
72 Ge	1	1081454	1.36	1058296	102.2	30 - 120	
115 In	1	2769983	0.51	2705760	102.4	30 - 120	
165 Ho	1	3980405	0.79	3945088	100.9	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\AG072309C.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\AG072309C.B\014SMPL.D\014SMPL.D#
Date Acquired: Jul 23 2009 09:17 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: Jul 23 2009 08:50 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	-0.01	-0.01	ppb	288.45	3600	
52 Cr	72	1	-0.02	-0.02	ppb	51.37	3600	
55 Mn	72	1	-0.02	-0.02	ppb	7.72	3600	
59 Co	72	1	0.00	0.00	ppb	89.82	3600	
60 Ni	72	1	-0.07	-0.07	ppb	6.77	3600	
63 Cu	72	1	-1.42	-1.42	ppb	26.85	3600	
66 Zn	72	1	0.04	0.04	ppb	65.02	3600	
75 As	72	1	0.00	0.00	ppb	80.88	3600	
78 Se	72	1	2.00	2.00	ppb	9.72	3600	
95 Mo	72	1	0.33	0.33	ppb	5.10	3600	
107 Ag	115	1	0.00	0.00	ppb	825.74	3600	
111 Cd	115	1	0.01	0.01	ppb	17.33	3600	
118 Sn	115	1	0.04	0.04	ppb	43.07	3600	
121 Sb	115	1	0.01	0.01	ppb	20.05	3600	
137 Ba	115	1	0.00	0.00	ppb	107.18	3600	
205 Tl	165	1	0.00	0.00	ppb	62.16	3600	
208 Pb	165	1	0.00	0.00	ppb	70.50	3600	
232 Th	165	1	0.19	0.19	ppb	12.85	1000	
238 U	165	1	0.00	0.00	ppb	35.28	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	662446	1.21	648622	102.1	30 - 120	
45 Sc	1	2506701	1.13	2464179	101.7	30 - 120	
72 Ge	1	1055233	1.81	1058296	99.7	30 - 120	
115 In	1	2727756	0.74	2705760	100.8	30 - 120	
165 Ho	1	3942752	0.77	3945088	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\AG072309C.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\AG072309C.B\015 LR.D\015 LR.D#
Date Acquired: Jul 23 2009 09:20 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	1011.00 ppb	0.66	1000	101.1	90 - 110	
51 V	72	1	941.40 ppb	1.32	1000	94.1	90 - 110	
52 Cr	72	1	965.70 ppb	1.13	1000	96.6	90 - 110	
55 Mn	72	1	961.10 ppb	1.29	1000	96.1	90 - 110	
59 Co	72	1	958.50 ppb	0.93	1000	95.9	90 - 110	
60 Ni	72	1	993.00 ppb	0.81	1000	99.3	90 - 110	
63 Cu	72	1	964.70 ppb	1.76	1000	96.5	90 - 110	
66 Zn	72	1	1020.00 ppb	1.08	1000	102.0	90 - 110	
75 As	72	1	1014.00 ppb	0.18	1000	101.4	90 - 110	
78 Se	72	1	1013.00 ppb	0.68	1000	101.3	90 - 110	
95 Mo	72	1	1025.00 ppb	0.97	1000	102.5	90 - 110	
107 Ag	115	1	940.40 ppb	1.07	1000	94.0	90 - 110	
111 Cd	115	1	988.40 ppb	0.99	1000	98.8	90 - 110	
118 Sn	115	1	970.60 ppb	1.04	1000	97.1	90 - 110	
121 Sb	115	1	964.20 ppb	0.76	1000	96.4	90 - 110	
137 Ba	115	1	995.80 ppb	1.52	1000	99.6	90 - 110	
205 Tl	165	1	948.20 ppb	0.20	1000	94.8	90 - 110	
208 Pb	165	1	949.30 ppb	0.44	1000	94.9	90 - 110	
232 Th	165	1	1035.00 ppb	1.10	1000	103.5	90 - 110	
238 U	165	1	969.00 ppb	0.70	1000	96.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	659876	0.32	648622	101.7	30 - 120	
45 Sc	1	2438890	0.77	2464179	99.0	30 - 120	
72 Ge	1	1045130	1.09	1058296	98.8	30 - 120	
115 In	1	2678795	1.04	2705760	99.0	30 - 120	
165 Ho	1	3917020	0.17	3945088	99.3	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\AG072309C.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\AG072309C.B\016SMPL.D\016SMPL.D#
Date Acquired:	Jul 23 2009 09:22 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:	Jul 23 2009 08:50 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	0.06	0.06	ppb	32.64	3600	
51 V	72	1	0.04	0.04	ppb	39.01	3600	
52 Cr	72	1	0.00	0.00	ppb	310.31	3600	
55 Mn	72	1	0.05	0.05	ppb	24.01	3600	
59 Co	72	1	0.05	0.05	ppb	20.78	3600	
60 Ni	72	1	-0.01	-0.01	ppb	179.45	3600	
63 Cu	72	1	-1.52	-1.52	ppb	2.43	3600	
66 Zn	72	1	0.99	0.99	ppb	6.67	3600	
75 As	72	1	0.08	0.08	ppb	10.60	3600	
78 Se	72	1	-0.04	-0.04	ppb	1370.80	3600	
95 Mo	72	1	0.81	0.81	ppb	4.71	3600	
107 Ag	115	1	0.06	0.06	ppb	28.78	3600	
111 Cd	115	1	0.03	0.03	ppb	73.38	3600	
118 Sn	115	1	2.64	2.64	ppb	1.03	3600	
121 Sb	115	1	0.47	0.47	ppb	3.93	3600	
137 Ba	115	1	0.08	0.08	ppb	12.82	3600	
205 Tl	165	1	0.14	0.14	ppb	16.42	3600	
208 Pb	165	1	0.06	0.06	ppb	16.47	3600	
232 Th	165	1	5.50	5.50	ppb	19.13	1000	
238 U	165	1	0.12	0.12	ppb	1.36	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	632503	0.32	648622	97.5	30 - 120	
45 Sc	1	2394290	0.62	2464179	97.2	30 - 120	
72 Ge	1	1035384	0.47	1058296	97.8	30 - 120	
115 In	1	2659267	0.48	2705760	98.3	30 - 120	
165 Ho	1	3913099	0.39	3945088	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\AG072309C.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\AG072309C.B\017 CCV.D\017 CCV.D#
Date Acquired: Jul 23 2009 09:25 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: Jul 23 2009 08:50 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	48.51	ppb	1.99	50	97.0	90 - 110	
51 V	72	1	48.77	ppb	0.36	50	97.5	90 - 110	
52 Cr	72	1	49.16	ppb	0.42	50	98.3	90 - 110	
55 Mn	72	1	48.72	ppb	0.98	50	97.4	90 - 110	
59 Co	72	1	48.79	ppb	0.98	50	97.6	90 - 110	
60 Ni	72	1	50.67	ppb	1.21	50	101.3	90 - 110	
63 Cu	72	1	48.49	ppb	0.90	50	97.0	90 - 110	
66 Zn	72	1	50.51	ppb	0.26	50	101.0	90 - 110	
75 As	72	1	49.47	ppb	0.61	50	98.9	90 - 110	
78 Se	72	1	49.82	ppb	4.56	50	99.6	90 - 110	
95 Mo	72	1	50.62	ppb	1.31	50	101.2	90 - 110	
107 Ag	115	1	48.81	ppb	0.32	50	97.6	90 - 110	
111 Cd	115	1	49.18	ppb	0.94	50	98.4	90 - 110	
118 Sn	115	1	49.48	ppb	0.59	50	99.0	90 - 110	
121 Sb	115	1	49.28	ppb	0.29	50	98.6	90 - 110	
137 Ba	115	1	48.99	ppb	0.48	50	98.0	90 - 110	
205 Tl	165	1	48.84	ppb	1.75	50	97.7	90 - 110	
208 Pb	165	1	49.56	ppb	1.59	50	99.1	90 - 110	
232 Th	165	1	50.88	ppb	1.64	50	101.8	90 - 110	
238 U	165	1	50.48	ppb	1.25	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	649646	1.69	648622	100.2	30 - 120	
45 Sc	1	2403352	1.00	2464179	97.5	30 - 120	
72 Ge	1	1030799	0.75	1058296	97.4	30 - 120	
115 In	1	2661447	0.14	2705760	98.4	30 - 120	
165 Ho	1	3881222	0.91	3945088	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\AG072309C.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\AG072309C.B\018 CCB.D\018 CCB.D#
Date Acquired: Jul 23 2009 09:28 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: Jul 23 2009 08:50 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.009	ppb	173.18	1.00	
51 V	72	1	-0.007	ppb	1035.90	1.00	
52 Cr	72	1	-0.028	ppb	64.42	1.00	
55 Mn	72	1	-0.014	ppb	47.25	1.00	
59 Co	72	1	0.007	ppb	26.50	1.00	
60 Ni	72	1	-0.058	ppb	15.62	1.00	
63 Cu	72	1	-1.588	ppb	9.26	1.00	
66 Zn	72	1	-0.022	ppb	80.27	1.00	
75 As	72	1	0.021	ppb	43.20	1.00	
78 Se	72	1	0.026	ppb	1775.70	1.00	
95 Mo	72	1	0.131	ppb	9.23	1.00	
107 Ag	115	1	0.012	ppb	36.63	1.00	
111 Cd	115	1	0.014	ppb	74.14	1.00	
118 Sn	115	1	0.221	ppb	6.71	1.00	
121 Sb	115	1	0.111	ppb	8.40	1.00	
137 Ba	115	1	0.008	ppb	8.05	1.00	
205 Tl	165	1	0.052	ppb	9.16	1.00	
208 Pb	165	1	0.007	ppb	8.84	1.00	
232 Th	165	1	1.539	ppb	19.71	1.00	Fail
238 U	165	1	0.017	ppb	15.97	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	644546	0.82	648622	99.4	30 - 120	
45 Sc	1	2387264	0.30	2464179	96.9	30 - 120	
72 Ge	1	1023082	1.00	1058296	96.7	30 - 120	
115 In	1	2640219	0.25	2705760	97.6	30 - 120	
165 Ho	1	3863304	0.47	3945088	97.9	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\019WASH.D\019WASH.D#
Date Acquired: Jul 23 2009 09:30 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: Jul 23 2009 08:50 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	1.052 ppb	9.22	1.30	
51 V	72	1	5.232 ppb	0.78	6.50	
52 Cr	72	1	2.130 ppb	1.64	2.60	
55 Mn	72	1	1.033 ppb	0.81	1.30	
59 Co	72	1	1.050 ppb	4.69	1.30	
60 Ni	72	1	2.128 ppb	1.92	2.60	
63 Cu	72	1	0.314 ppb	56.75	2.60	
66 Zn	72	1	10.640 ppb	1.14	13.00	
75 As	72	1	5.324 ppb	1.47	6.50	
78 Se	72	1	4.277 ppb	3.12	6.50	
95 Mo	72	1	2.311 ppb	4.66	2.60	
107 Ag	115	1	5.201 ppb	1.06	6.50	
111 Cd	115	1	1.066 ppb	4.36	1.30	
118 Sn	115	1	10.560 ppb	2.25	13.00	
121 Sb	115	1	1.996 ppb	2.63	2.60	
137 Ba	115	1	1.025 ppb	3.39	1.30	
205 Tl	165	1	1.107 ppb	1.57	1.30	
208 Pb	165	1	1.068 ppb	0.70	1.30	
232 Th	165	1	2.580 ppb	1.54	2.60	
238 U	165	1	1.088 ppb	1.72	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	627981	2.31	648622	96.8	30 - 120	
45 Sc	1	2332987	1.05	2464179	94.7	30 - 120	
72 Ge	1	995692	0.66	1058296	94.1	30 - 120	
115 In	1	2612586	0.28	2705760	96.6	30 - 120	
165 Ho	1	3833267	0.22	3945088	97.2	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\AG072309C.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\AG072309C.B\020 BLK.D\020 BLK.D#
Date Acquired: Jul 23 2009 09:33 pm
Operator: TEL
Sample Name: LGMKFB
Misc Info: BLANK 9198162 6020
Vial Number: 2304
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 23 2009 08:50 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	0.005 ppb	173.20	2.00	
51 V	72	1	-0.013 ppb	150.47	2.00	
52 Cr	72	1	0.039 ppb	20.30	2.00	
55 Mn	72	1	0.035 ppb	22.33	2.00	
59 Co	72	1	-0.001 ppb	223.04	2.00	
60 Ni	72	1	-0.031 ppb	76.59	2.00	
63 Cu	72	1	-1.576 ppb	9.95	2.00	
66 Zn	72	1	0.510 ppb	9.12	2.00	
75 As	72	1	-0.010 ppb	99.77	2.00	
78 Se	72	1	-0.755 ppb	37.01	2.00	
95 Mo	72	1	0.058 ppb	9.74	2.00	
107 Ag	115	1	0.003 ppb	141.12	2.00	
111 Cd	115	1	0.011 ppb	113.64	2.00	
118 Sn	115	1	0.105 ppb	27.23	2.00	
121 Sb	115	1	0.057 ppb	6.95	2.00	
137 Ba	115	1	0.043 ppb	19.73	2.00	
205 Tl	165	1	0.027 ppb	19.84	2.00	
208 Pb	165	1	0.038 ppb	7.56	2.00	
232 Th	165	1	0.328 ppb	15.46	2.00	
238 U	165	1	0.003 ppb	14.78	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	610704	0.40	648622	94.2	30 - 120	
45 Sc	1	2325055	1.28	2464179	94.4	30 - 120	
72 Ge	1	984989	0.80	1058296	93.1	30 - 120	
115 In	1	2563045	1.31	2705760	94.7	30 - 120	
165 Ho	1	3816659	0.37	3945088	96.7	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\AG072309C.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\AG072309C.B\021 LCS.D\021 LCS.D#
Date Acquired: Jul 23 2009 09:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGMKFC
Misc Info: LCS
Vial Number: 2305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	38.94	1.92	40	97.4	80 - 120	
51 V	72	1	40.84	0.89	40	102.1	80 - 120	
52 Cr	72	1	40.82	1.20	40	102.1	80 - 120	
55 Mn	72	1	40.45	1.33	40	101.1	80 - 120	
59 Co	72	1	40.28	2.41	40	100.7	80 - 120	
60 Ni	72	1	41.51	1.27	40	103.8	80 - 120	
63 Cu	72	1	39.72	1.50	40	99.3	80 - 120	
66 Zn	72	1	40.51	0.89	40	101.3	80 - 120	
75 As	72	1	39.53	0.64	40	98.8	80 - 120	
78 Se	72	1	37.73	4.76	40	94.3	80 - 120	
95 Mo	72	1	42.38	2.00	40	106.0	80 - 120	
107 Ag	115	1	39.90	1.21	40	99.8	80 - 120	
111 Cd	115	1	39.56	0.92	40	98.9	80 - 120	
118 Sn	115	1	0.02	17.31	40	0.1	80 - 120	
121 Sb	115	1	39.11	1.22	40	97.8	80 - 120	
137 Ba	115	1	40.22	2.10	40	100.6	80 - 120	
205 Tl	165	1	40.83	0.14	40	102.1	80 - 120	
208 Pb	165	1	41.57	0.15	40	103.9	80 - 120	
232 Th	165	1	43.08	4.28	40	107.7	80 - 120	
238 U	165	1	42.01	1.69	40	105.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	625620	2.42	648622	96.5	30 - 120	
45 Sc	1	2314044	0.66	2464179	93.9	30 - 120	
72 Ge	1	980002	0.89	1058296	92.6	30 - 120	
115 In	1	2592797	1.16	2705760	95.8	30 - 120	
165 Ho	1	3767882	0.64	3945088	95.5	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\AG072309C.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\AG072309C.B\022AREF.D\022AREF.D#
Date Acquired: Jul 23 2009 09:38 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFG 5X
Misc Info: D9G160231
Vial Number: 2306
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
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	0.05	0.01	ppb	173.24	3600	
51 V	72	1	31.21	6.24	ppb	3.14	3600	
52 Cr	72	1	14.21	2.84	ppb	3.33	3600	
55 Mn	72	1	0.63	0.13	ppb	6.33	3600	
59 Co	72	1	0.12	0.02	ppb	23.79	3600	
60 Ni	72	1	1.37	0.27	ppb	3.41	3600	
63 Cu	72	1	-8.39	-1.68	ppb	10.55	3600	
66 Zn	72	1	1.19	0.24	ppb	7.05	3600	
75 As	72	1	75.10	15.02	ppb	1.04	3600	
78 Se	72	1	0.15	0.03	ppb	1665.20	3600	
95 Mo	72	1	11.81	2.36	ppb	2.59	3600	
107 Ag	115	1	0.02	0.00	ppb	35.60	3600	
111 Cd	115	1	0.02	0.00	ppb	506.07	3600	
118 Sn	115	1	0.77	0.15	ppb	20.56	3600	
121 Sb	115	1	0.31	0.06	ppb	17.29	3600	
137 Ba	115	1	34.30	6.86	ppb	0.80	3600	
205 Tl	165	1	0.24	0.05	ppb	30.66	3600	
208 Pb	165	1	0.05	0.01	ppb	23.26	3600	
232 Th	165	1	4.28	0.86	ppb	20.02	1000	
238 U	165	1	4.16	0.83	ppb	1.15	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	611219	0.22	648622	94.2	30 - 120	
45 Sc	1	2277543	1.07	2464179	92.4	30 - 120	
72 Ge	1	942766	0.76	1058296	89.1	30 - 120	
115 In	1	2479571	0.87	2705760	91.6	30 - 120	
165 Ho	1	3684953	0.76	3945088	93.4	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\AG072309C.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\AG072309C.B\023SDIL.D\023SDIL.D#
Date Acquired: Jul 23 2009 09:41 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGP25
Misc Info: SERIAL DILUTION
Vial Number: 2307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072309C.B\022AREF.D\022AREF.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	1.29	ppb	1.75	1.25	103.5	90 - 110	
52 Cr	72	1	0.72	ppb	5.63	0.57	127.0	90 - 110	
55 Mn	72	1	0.05	ppb	14.79	0.03	200.3	90 - 110	
59 Co	72	1	0.01	ppb	73.65	0.00	137.4	90 - 110	
60 Ni	72	1	0.11	ppb	19.67	0.05	206.2	90 - 110	
63 Cu	72	1	-1.90	ppb	5.81	-0.34	565.3	90 - 110	
66 Zn	72	1	0.13	ppb	3.22	0.05	282.1	90 - 110	
75 As	72	1	3.01	ppb	1.64	3.00	100.1	90 - 110	
78 Se	72	1	-0.72	ppb	20.27	0.01	-12106.8	90 - 110	
95 Mo	72	1	0.51	ppb	9.67	0.47	108.4	90 - 110	
107 Ag	115	1	0.00	ppb	191.02	0.00	-143.2	90 - 110	
111 Cd	115	1	-0.01	ppb	175.90	0.00	-866.4	90 - 110	
118 Sn	115	1	0.19	ppb	3.25	0.03	615.0	90 - 110	
121 Sb	115	1	0.02	ppb	18.68	0.01	194.5	90 - 110	
137 Ba	115	1	1.41	ppb	2.32	1.37	102.6	90 - 110	
205 Tl	165	1	0.01	ppb	7.88	0.01	84.5	90 - 110	
208 Pb	165	1	0.01	ppb	13.34	0.00	360.3	90 - 110	
232 Th	165	1	0.16	ppb	6.21	0.17	94.7	90 - 110	
238 U	165	1	0.17	ppb	4.59	0.17	101.9	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	621262	1.36	648622	95.8	30 - 120	
45 Sc	1	2296520	0.31	2464179	93.2	30 - 120	
72 Ge	1	978740	0.16	1058296	92.5	30 - 120	
115 In	1	2541926	0.99	2705760	93.9	30 - 120	
165 Ho	1	3760030	0.67	3945088	95.3	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\AG072309C.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: 07/24/09 10:42:03

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGLFGP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072309C # 23
Acquired: 07/23/2009 21:41:00
Calibrated: 07/23/2009 20:47:00

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	0.04615	100		*	
7440-62-2	Vanadium	51	15430	32.290	31.210	3.46		*	
7440-47-3	Chromium	52	11455	18.050	14.210	27.0		*	
7439-96-5	Manganese	55	1907	1.2520	0.62490	100		*	
7440-48-4	Cobalt	59	190	0.16165	0.11760	37.5		*	
7440-02-0	Nickel	60	630	2.8260	1.3700	106		*	
7440-50-8	Copper	63	13984	-47.430	-8.3900			*	
7440-66-6	Zinc	66	501	3.3485	1.1870	182		*	
7440-38-2	Arsenic	75	4479	75.150	75.110	0.0533	0.21	NC	☑
7782-49-2	Selenium	78	1493	-17.970	0.14850	12200	0.70	NC	☑
7439-98-7	Molybdenum	95	1820	12.800	11.810	8.38		*	
7440-22-4	Silver	107	30	-0.03480	0.02431	243		*	
7440-43-9	Cadmium	111	-7	-0.19625	0.02265	966		*	
7440-31-5	Tin	118	1637	4.7470	0.77180	515		*	
7440-36-0	Antimony	121	201	0.59550	0.30610	94.5		*	
7440-39-3	Barium	137	3974	35.210	34.300	2.65		*	
7440-28-0	Thallium	205	274	0.20075	0.23760	15.5		*	
7439-92-1	Lead	208	370	0.17830	0.04949	260		*	
7440-61-1	Uranium	238	4853	4.2320	4.1560	1.83		*	
7440-29-1	Thorium	232	4248	4.0535	4.2770	5.23		*	
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: [signature] Date: 7/24/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072309C.B\024PDS.D\024PDS.D#
Date Acquired: Jul 23 2009 09:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 2308
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	196.40	0.01	ppb	1.34	200	98.2	75 - 125	
51 V	72	1	208.60	6.24	ppb	1.70	200	101.1	75 - 125	
52 Cr	72	1	208.10	2.84	ppb	1.39	200	102.6	75 - 125	
55 Mn	72	1	200.70	0.13	ppb	2.31	200	100.3	75 - 125	
59 Co	72	1	198.90	0.02	ppb	1.46	200	99.4	75 - 125	
60 Ni	72	1	198.10	0.27	ppb	1.15	200	98.9	75 - 125	
63 Cu	72	1	199.60	-1.68	ppb	1.39	200	100.6	75 - 125	
66 Zn	72	1	200.70	0.24	ppb	0.98	200	100.2	75 - 125	
75 As	72	1	215.40	15.02	ppb	0.86	200	100.2	75 - 125	
78 Se	72	1	203.00	0.03	ppb	1.16	200	101.5	75 - 125	
95 Mo	72	1	212.90	2.36	ppb	0.62	200	105.2	75 - 125	
107 Ag	115	1	46.42	0.00	ppb	1.58	50	92.8	75 - 125	
111 Cd	115	1	194.80	0.00	ppb	1.35	200	97.4	75 - 125	
118 Sn	115	1	183.30	0.15	ppb	0.89	200	91.6	75 - 125	
121 Sb	115	1	196.10	0.06	ppb	1.82	200	98.0	75 - 125	
137 Ba	115	1	201.80	6.86	ppb	1.13	200	97.6	75 - 125	
205 Tl	165	1	186.90	0.05	ppb	1.15	200	93.4	75 - 125	
208 Pb	165	1	188.50	0.01	ppb	0.82	200	94.2	75 - 125	
232 Th	165	1	0.12	0.86	ppb	3.07	200	0.1	75 - 125	
238 U	165	1	193.70	0.83	ppb	1.75	200	96.4	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	615385	0.32	648622	94.9	30 - 120	
45 Sc	1	2279147	0.89	2464179	92.5	30 - 120	
72 Ge	1	952223	1.25	1058296	90.0	30 - 120	
115 In	1	2498590	1.14	2705760	92.3	30 - 120	
165 Ho	1	3744413	0.98	3945088	94.9	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\AG072309C.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

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 07/24/09 10:42:09

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGLFGZ** | Spike Dilution: **1.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072309C # 24
Acquired: 07/23/2009 21:44:00
Calibrated: 07/23/2009 20:47:00

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	142469	196.40	0.00923	98.2	200		☐
7440-62-2	Vanadium	51	2446550	208.60	6.2420	101	200		☐
7440-47-3	Chromium	52	2350250	208.10	2.8420	103	200		☐
7439-96-5	Manganese	55	2690480	200.70	0.12498	100	200		☐
7440-48-4	Cobalt	59	2824560	198.90	0.02352	99.4	200		☐
7440-02-0	Nickel	60	617361	198.10	0.27400	98.9	200		☐
7440-50-8	Copper	63	1488080	199.60	-1.6780	99.8	200		☐
7440-66-6	Zinc	66	306976	200.70	0.23740	100	200		☐
7440-38-2	Arsenic	75	306305	215.40	15.022	100	200		☑
7782-49-2	Selenium	78	54919	203.00	0.02970	101	200		☑
7439-98-7	Molybdenum	95	707584	212.90	2.3620	105	200		☐
7440-22-4	Silver	107	453945	46.420	0.00486	92.8	50.0		☐
7440-43-9	Cadmium	111	373459	194.80	0.00453	97.4	200		☐
7440-31-5	Tin	118	1027840	183.30	0.15436	91.6	200		☐
7440-36-0	Antimony	121	1254980	196.10	0.06122	98.0	200		☐
7440-39-3	Barium	137	557784	201.80	6.8600	97.5	200		☐
7440-28-0	Thallium	205	3711340	186.90	0.04752	93.4	200		☐
7439-92-1	Lead	208	5032760	188.50	0.00990	94.2	200		☐
7440-61-1	Uranium	238	5464210	193.70	0.83120	96.4	200		☐
7440-29-1	Thorium	232	3161	0.11900	0.85540				
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				

AS, Se only

Reviewed by: [signature] Date: 7/24/09

Spiked Sample (MS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072309C.B\025_MS.D\025_MS.D#
Date Acquired:	Jul 23 2009 09:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGLFGS 5X
Misc Info:	MATRIX SPIKE
Vial Number:	2309
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 23 2009 08:50 pm
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	8.96	0.01	ppb	2.65	40	22.4	50 - 150	
51 V	72	1	15.03	6.24	ppb	0.92	40	32.5	50 - 150	
52 Cr	72	1	11.33	2.84	ppb	1.12	40	26.4	50 - 150	
55 Mn	72	1	8.45	0.13	ppb	1.62	40	21.1	50 - 150	
59 Co	72	1	8.36	0.02	ppb	1.61	40	20.9	50 - 150	
60 Ni	72	1	8.66	0.27	ppb	0.71	40	21.5	50 - 150	
63 Cu	72	1	6.28	-1.68	ppb	3.78	40	16.4	50 - 150	
66 Zn	72	1	8.60	0.24	ppb	0.90	40	21.4	50 - 150	
75 As	72	1	24.06	15.02	ppb	1.16	40	43.7	50 - 150	
78 Se	72	1	7.33	0.03	ppb	10.90	40	18.3	50 - 150	
95 Mo	72	1	11.19	2.36	ppb	2.59	40	26.4	50 - 150	
107 Ag	115	1	7.56	0.00	ppb	1.18	40	18.9	50 - 150	
111 Cd	115	1	8.31	0.00	ppb	0.38	40	20.8	50 - 150	
118 Sn	115	1	0.33	0.15	ppb	8.45	40	0.8	50 - 150	
121 Sb	115	1	8.46	0.06	ppb	0.84	40	21.1	50 - 150	
137 Ba	115	1	15.72	6.86	ppb	1.02	40	33.5	50 - 150	
205 Tl	165	1	8.09	0.05	ppb	1.18	40	20.2	50 - 150	
208 Pb	165	1	8.18	0.01	ppb	1.40	40	20.5	50 - 150	
232 Th	165	1	8.82	0.86	ppb	0.75	40	21.6	50 - 150	
238 U	165	1	9.52	0.83	ppb	1.49	40	23.3	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	601350	0.25	648622	92.7	30 - 120	
45 Sc	1	2268671	0.57	2464179	92.1	30 - 120	
72 Ge	1	941844	0.56	1058296	89.0	30 - 120	
115 In	1	2456709	0.68	2705760	90.8	30 - 120	
165 Ho	1	3674158	0.70	3945088	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\AG072309C.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\AG072309C.B\026 MSD.D\026 MSD.D#
Date Acquired: Jul 23 2009 09:49 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2310
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
Sample Type: MSD
Dilution Factor: 5.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072309C.B\025 MS.D\025 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	8.52	ppb	2.05	8.96	5.00	20	
51 V	72	1	15.24	ppb	2.49	15.03	1.39	20	
52 Cr	72	1	11.43	ppb	0.89	11.33	0.88	20	
55 Mn	72	1	8.44	ppb	1.13	8.45	0.13	20	
59 Co	72	1	8.38	ppb	0.41	8.36	0.16	20	
60 Ni	72	1	8.75	ppb	1.94	8.66	1.09	20	
63 Cu	72	1	6.36	ppb	2.96	6.28	1.16	20	
66 Zn	72	1	8.61	ppb	2.97	8.60	0.14	20	
75 As	72	1	23.91	ppb	1.39	24.06	0.63	20	
78 Se	72	1	8.55	ppb	4.47	7.33	15.29	20	
95 Mo	72	1	11.49	ppb	3.11	11.19	2.65	20	
107 Ag	115	1	7.66	ppb	0.82	7.55	1.33	20	
111 Cd	115	1	8.26	ppb	1.64	8.31	0.54	20	
118 Sn	115	1	0.18	ppb	13.84	0.33	58.37	20	
121 Sb	115	1	8.42	ppb	0.34	8.46	0.53	20	
137 Ba	115	1	15.53	ppb	1.65	15.72	1.22	20	
205 Tl	165	1	8.10	ppb	0.80	8.09	0.10	20	
208 Pb	165	1	8.16	ppb	0.25	8.18	0.34	20	
232 Th	165	1	8.97	ppb	2.66	8.82	1.69	20	
238 U	165	1	9.43	ppb	0.28	9.52	0.99	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	612317	1.13	648622	94.4	30 - 120	
45 Sc	1	2264544	1.82	2464179	91.9	30 - 120	
72 Ge	1	934883	1.00	1058296	88.3	30 - 120	
115 In	1	2447566	0.51	2705760	90.5	30 - 120	
165 Ho	1	3691061	0.23	3945088	93.6	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\AG072309C.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\AG072309C.B\027SMPL.D\027SMPL.D#
Date Acquired: Jul 23 2009 09:52 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLGF 5X
Misc Info: D9G160235
Vial Number: 2311
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
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	0.00	0.00	ppb	0.00	3600	
51 V	72	1	32.19	6.44	ppb	1.99	3600	
52 Cr	72	1	104.80	20.96	ppb	1.24	3600	
55 Mn	72	1	0.75	0.15	ppb	5.54	3600	
59 Co	72	1	0.25	0.05	ppb	10.70	3600	
60 Ni	72	1	2.02	0.40	ppb	13.39	3600	
63 Cu	72	1	-9.48	-1.90	ppb	12.45	3600	
66 Zn	72	1	0.87	0.17	ppb	8.05	3600	
75 As	72	1	65.45	13.09	ppb	1.86	3600	
78 Se	72	1	-1.39	-0.28	ppb	256.66	3600	
95 Mo	72	1	21.07	4.21	ppb	4.54	3600	
107 Ag	115	1	0.01	0.00	ppb	205.01	3600	
111 Cd	115	1	0.00	0.00	ppb	144870.00	3600	
118 Sn	115	1	0.87	0.17	ppb	18.78	3600	
121 Sb	115	1	0.24	0.05	ppb	23.30	3600	
137 Ba	115	1	38.54	7.71	ppb	2.91	3600	
205 Tl	165	1	0.13	0.03	ppb	2.16	3600	
208 Pb	165	1	0.17	0.03	ppb	2.46	3600	
232 Th	165	1	1.46	0.29	ppb	17.01	1000	
238 U	165	1	4.20	0.84	ppb	0.48	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	609466	1.71	648622	94.0	30 - 120	
45 Sc	1	2251217	0.99	2464179	91.4	30 - 120	
72 Ge	1	931612	1.20	1058296	88.0	30 - 120	
115 In	1	2449723	1.63	2705760	90.5	30 - 120	
165 Ho	1	3647068	0.47	3945088	92.4	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\AG072309C.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\AG072309C.B\028 CCV.D\028 CCV.D#
Date Acquired: Jul 23 2009 09:55 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: Jul 23 2009 08:50 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	48.36	ppb	4.72	50	96.7	90 - 110	
51 V	72	1	48.53	ppb	1.54	50	97.1	90 - 110	
52 Cr	72	1	48.57	ppb	1.26	50	97.1	90 - 110	
55 Mn	72	1	48.34	ppb	0.50	50	96.7	90 - 110	
59 Co	72	1	48.19	ppb	0.57	50	96.4	90 - 110	
60 Ni	72	1	49.42	ppb	0.48	50	98.8	90 - 110	
63 Cu	72	1	46.57	ppb	0.22	50	93.1	90 - 110	
66 Zn	72	1	49.64	ppb	0.58	50	99.3	90 - 110	
75 As	72	1	49.04	ppb	1.31	50	98.1	90 - 110	
78 Se	72	1	49.24	ppb	1.49	50	98.5	90 - 110	
95 Mo	72	1	50.45	ppb	0.93	50	100.9	90 - 110	
107 Ag	115	1	48.00	ppb	1.59	50	96.0	90 - 110	
111 Cd	115	1	48.92	ppb	0.82	50	97.8	90 - 110	
118 Sn	115	1	48.66	ppb	1.18	50	97.3	90 - 110	
121 Sb	115	1	48.39	ppb	0.89	50	96.8	90 - 110	
137 Ba	115	1	48.40	ppb	1.08	50	96.8	90 - 110	
205 Tl	165	1	49.07	ppb	0.74	50	98.1	90 - 110	
208 Pb	165	1	49.85	ppb	0.59	50	99.7	90 - 110	
232 Th	165	1	49.87	ppb	3.01	50	99.7	90 - 110	
238 U	165	1	50.73	ppb	0.63	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	627601	3.31	648622	96.8	30 - 120	
45 Sc	1	2300637	0.71	2464179	93.4	30 - 120	
72 Ge	1	997583	0.98	1058296	94.3	30 - 120	
115 In	1	2605372	0.46	2705760	96.3	30 - 120	
165 Ho	1	3774485	0.93	3945088	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\AG072309C.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\AG072309C.B\029 CCB.D\029 CCB.D#
Date Acquired: Jul 23 2009 09:58 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: Jul 23 2009 08:50 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.005	ppb	173.21	1.00	
51 V	72	1	0.013	ppb	210.72	1.00	
52 Cr	72	1	-0.018	ppb	56.31	1.00	
55 Mn	72	1	-0.018	ppb	34.80	1.00	
59 Co	72	1	0.001	ppb	355.36	1.00	
60 Ni	72	1	-0.062	ppb	0.39	1.00	
63 Cu	72	1	-2.440	ppb	11.26	1.00	
66 Zn	72	1	-0.014	ppb	86.21	1.00	
75 As	72	1	-0.009	ppb	17.77	1.00	
78 Se	72	1	-1.689	ppb	39.67	1.00	
95 Mo	72	1	0.046	ppb	7.23	1.00	
107 Ag	115	1	0.004	ppb	28.07	1.00	
111 Cd	115	1	-0.002	ppb	426.39	1.00	
118 Sn	115	1	0.105	ppb	4.05	1.00	
121 Sb	115	1	0.054	ppb	6.83	1.00	
137 Ba	115	1	0.003	ppb	89.81	1.00	
205 Tl	165	1	0.027	ppb	8.31	1.00	
208 Pb	165	1	0.006	ppb	24.73	1.00	
232 Th	165	1	1.240	ppb	17.77	1.00	Fail
238 U	165	1	0.009	ppb	27.14	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	621731	1.58	648622	95.9	30 - 120	
45 Sc	1	2290192	0.31	2464179	92.9	30 - 120	
72 Ge	1	972445	1.09	1058296	91.9	30 - 120	
115 In	1	2553504	1.06	2705760	94.4	30 - 120	
165 Ho	1	3775976	0.29	3945088	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\030WASH.D\030WASH.D#
Date Acquired: Jul 23 2009 10:00 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: Jul 23 2009 08:50 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	0.948 ppb	1.86	1.30	
51 V	72	1	5.200 ppb	2.06	6.50	
52 Cr	72	1	2.111 ppb	4.26	2.60	
55 Mn	72	1	1.020 ppb	0.92	1.30	
59 Co	72	1	1.037 ppb	1.86	1.30	
60 Ni	72	1	2.111 ppb	4.74	2.60	
63 Cu	72	1	-0.502 ppb	43.27	2.60	
66 Zn	72	1	10.660 ppb	1.77	13.00	
75 As	72	1	5.210 ppb	0.82	6.50	
78 Se	72	1	3.461 ppb	8.29	6.50	
95 Mo	72	1	2.161 ppb	6.59	2.60	
107 Ag	115	1	5.305 ppb	0.45	6.50	
111 Cd	115	1	1.076 ppb	5.12	1.30	
118 Sn	115	1	10.420 ppb	2.38	13.00	
121 Sb	115	1	1.956 ppb	5.25	2.60	
137 Ba	115	1	1.085 ppb	1.17	1.30	
205 Tl	165	1	1.096 ppb	1.35	1.30	
208 Pb	165	1	1.071 ppb	1.33	1.30	
232 Th	165	1	2.431 ppb	0.74	2.60	
238 U	165	1	1.092 ppb	0.47	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	620681	2.48	648622	95.7	30 - 120	
45 Sc	1	2289380	1.10	2464179	92.9	30 - 120	
72 Ge	1	989667	0.95	1058296	93.5	30 - 120	
115 In	1	2568596	1.26	2705760	94.9	30 - 120	
165 Ho	1	3780336	0.15	3945088	95.8	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\AG072309C.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: D9G160235

Client: Northgate Environmental

Batch(es) #: 9198162

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: 7/24/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G160235	1	SE	LGLGF1AC	20090723	6020TOTA	9198162	AG072309C	024
D9G160235	1	AS	LGLGF1AA	20090723	6020TOTA	9198162	AG072309C	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9198162**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JON HARRE

Prep Date: 07/21/09
Due Date: 07/28/09

Lot	Work Order			Initial Weight/Volume
D9G170000 Water	**LGMKF**	B	Due Date: SDG:	50 mL
D9G170000 Water	**LGMKF**	C	Due Date: SDG:	50 mL
D9G160231 Water	**LGLFG** Total		Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160231 Water	**LGLFG** Total	S	Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160231 Water	**LGLFG** Total	D	Due Date: 07/28/09 SDG: 8304614	50 mL
D9G160235 Water	**LGLGF** Total		Due Date: 07/28/09 SDG: 8304614	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 7/22/09

7/22/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 9198162 **ALLIQUOTTED BY:** KS
PREP DATE: 7/21/2009 **DIGESTED BY:** JKH

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3, 34

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	8:00	90	12:20	91
HNO3	12:30	91	13:00	90
HNO3				

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Kris Hamm ***Date:*** 7/21/09

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

Jul-23-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-ZN02045 Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4008-09, ICP-MS (024) INT STD BRC-HIGH

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 250.00
Date Prep./Opened: 07-02-2009
Date Expires(1): 11-10-2009 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1469-09, Germanium Stock — Aliquot Amount (ml): 1.2000
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	4,800.0

Parent Std No.: STD1972-09, Lithium 6 Stock — Aliquot Amount (ml): 1.5000
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	6,000.0

Parent Std No.: STD1973-09, Indium Stock — Aliquot Amount (ml): 0.4000
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	1,600.0

Parent Std No.: STD6317-08, Scandium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sc	1,000.0	1,600.0

Parent Std No.: STD6318-08, Holmium Stock — Aliquot Amount (ml): 0.4000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,600.0

STD4383-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water — Volume (ml): 1,000.0
Date Prep./Opened: 07-23-2009
Date Expires(1): 08-23-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4332-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4384-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn — Aliquot Amount (ml): 0.1000
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	10.000

STD4386-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00

Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4387-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	50.000
Zn	20.000	50.000
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000

Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4388-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4386-09, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 07-24-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
V	100.00	0.0010
Zn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010

Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
Mo	100.00	0.0010
Sb	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010

STD4389-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022

Volume (ml): 10.000

Date Prep./Opened: 07-23-2009

Date Expires(1): 07-24-2009 (2 Days)

pipettes: Met 20 and Met 8

Parent Std No.: STD4388-09, 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
V	0.0010	0.0002
Zn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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
Mo	0.0010	0.0002
Sb	0.0010	0.0002
Fe	0.0500	0.0100
Sn	0.0010	0.0002

STD4390-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 08-23-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4391-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 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 (ug/L)
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4392-09, ICPMS LR STD 1000 ppb

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD2637-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 05-01-2010 Parent Date Expires(2): 05-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
V	20.000	1,000.0
Zn	20.000	1,000.0
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0

Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD4384-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-24-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4393-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000

Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4394-09, ALTSe

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (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

STD4395-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-23-2009
Date Expires(1): 07-24-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: 7/24/09

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 14:55:21

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/23/09 20:44		☐
3	Cal Blank				1.0	07/23/09 20:47		☐
4	100 ppb				1.0	07/23/09 20:50		☐
5	ICV				1.0	07/23/09 20:52		☐
6	RLIV				1.0	07/23/09 20:55		☐
7	ICB				1.0	07/23/09 20:58		☐
8	RL STD				1.0	07/23/09 21:00		☐
9	AFCEE RL				1.0	07/23/09 21:03		☐
10	~~ALTSe~~				~~1.0~~	~~07/23/09 21:06~~	DNu 2 7/24/09	☐
11	ICSA				1.0	07/23/09 21:09		☐
12	ICSAB				1.0	07/23/09 21:11		☐
13	RINSE				1.0	07/23/09 21:14		☐
14	ALTSe				1.0	07/23/09 21:17		☐
15	LR				1.0	07/23/09 21:20		☐
16	RINSE				1.0	07/23/09 21:22		☐
17	CCV				1.0	07/23/09 21:25		☐
18	CCB				1.0	07/23/09 21:28		☐
19	RLCV				1.0	07/23/09 21:30		☐
20	LGMKFB	D9G170000	9198162	MS	1.0	07/23/09 21:33		☐
21	LGMKFC	D9G170000	9198162	MS	1.0	07/23/09 21:36		☐
22	LGLFG 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:38		☐
23	LGLFGP25	D9G160231	9198162		25.0	07/23/09 21:41		☐
24	LGLFGZ	D9G160231-1	9198162		1.0	07/23/09 21:44		☐
25	LGLFGS 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:47		☐
26	LGLFGD 5X	D9G160231-1	9198162	MS	5.0	07/23/09 21:49		☐
27	LGLGF 5X	D9G160235-1	9198162	MS	5.0	07/23/09 21:52		☐
28	CCV				1.0	07/23/09 21:55		☐
29	CCB				1.0	07/23/09 21:58		☐
30	RLCV				1.0	07/23/09 22:00		☐
31	LGMK1B	D9G170000	9198171	MS	1.0	07/23/09 22:03		☐
32	LGMK1C	D9G170000	9198171	MS	1.0	07/23/09 22:06		☐
33	LGLVQ	D9G160310-1	9198171	MS	1.0	07/23/09 22:09		☐
34	LGLVQP5	D9G160310	9198171		5.0	07/23/09 22:11		☐
35	LGLVQZ	D9G160310-1	9198171		1.0	07/23/09 22:14		☐
36	LGLVQS	D9G160310-1	9198171	MS	1.0	07/23/09 22:17		☐
37	LGLVQD	D9G160310-1	9198171	MS	1.0	07/23/09 22:20		☐
38	LGLV4	D9G160310-2	9198171	MS	1.0	07/23/09 22:22		☐
39	LGLV5	D9G160310-3	9198171	MS	1.0	07/23/09 22:25		☐
40	LGLV6	D9G160310-4	9198171	MS	1.0	07/23/09 22:28		☐
41	CCV				1.0	07/23/09 22:31		☐
42	CCB				1.0	07/23/09 22:33		☐
43	RLCV				1.0	07/23/09 22:36		☐
44	LGM6LB	D9G170000	9198282	MS	1.0	07/23/09 22:39		☐
45	LGM6LC	D9G170000	9198282	MS	1.0	07/23/09 22:42		☐
46	LGM6LL	D9G170000	9198282	MS	1.0	07/23/09 22:45		☐
47	LGL5Q	D9G160333-6	9198282	U2	1.0	07/23/09 22:47		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	LGL5QP5	D9G160333	9198282		5.0	07/23/09 22:50		
49	LGL5QZ	D9G160333-6	9198282		1.0	07/23/09 22:53		
50	LGL6M	D9G160333-28	9198282	U2	1.0	07/23/09 22:56		
51	CCV				1.0	07/23/09 22:58		
52	CCB				1.0	07/23/09 23:01		
53	RLCV				1.0	07/23/09 23:04		
54	LGM1CB	D9G170000	9198252	46	1.0	07/23/09 23:07		
55	LGM1CC	D9G170000	9198252	46	1.0	07/23/09 23:09		
56	LGL5C	D9G160333-1	9198252	U1	1.0	07/23/09 23:12		
57	LGL5H	D9G160333-2	9198252	U1	1.0	07/23/09 23:15		
58	LGL5J	D9G160333-3	9198252	U1	1.0	07/23/09 23:18		
59	LGL5JP5	D9G160333	9198252		5.0	07/23/09 23:20		
60	LGL5JZ	D9G160333-3	9198252		1.0	07/23/09 23:23		
61	LGL5JS	D9G160333-3	9198252	U1	1.0	07/23/09 23:26		
62	LGL5JD	D9G160333-3	9198252	U1	1.0	07/23/09 23:28		
63	CCV				1.0	07/23/09 23:31		
64	CCB				1.0	07/23/09 23:34		
65	RLCV				1.0	07/23/09 23:37		
66	~~LGL5P~~	~~D9G160333-5~~	~~9198252~~	~~U1~~	~~1.0~~	~~07/23/09 23:39~~		
67	LGL5X	D9G160333-9	9198252	U1	1.0	07/23/09 23:42		
68	LGL51	D9G160333-10	9198252	U1	1.0	07/23/09 23:45		
69	LGL52	D9G160333-11	9198252	U1	1.0	07/23/09 23:48		
70	LGL53	D9G160333-12	9198252	U1	1.0	07/23/09 23:50		
71	LGL54	D9G160333-13	9198252	U1	1.0	07/23/09 23:53		
72	LGL55	D9G160333-14	9198252	U1	1.0	07/23/09 23:56		
73	LGL56	D9G160333-15	9198252	U1	1.0	07/23/09 23:59		
74	LGL57	D9G160333-16	9198252	U1	1.0	07/24/09 00:01		
75	CCV				1.0	07/24/09 00:04		
76	CCB				1.0	07/24/09 00:07		
77	RLCV				1.0	07/24/09 00:10		
78	LGM2DB	D9G170000	9198253	46	1.0	07/24/09 00:12		
79	LGM2DC	D9G170000	9198253	46	1.0	07/24/09 00:15		
80	LGL5K	D9G160333-4	9198261	U1	1.0	07/24/09 00:18		
81	LGL5KP5	D9G160333	9198261		5.0	07/24/09 00:21		
82	LGL5KZ	D9G160333-4	9198261		1.0	07/24/09 00:23		
83	LGL5KS	D9G160333-4	9198253	U1	1.0	07/24/09 00:26		
84	LGL5KD	D9G160333-4	9198253	U1	1.0	07/24/09 00:29		
85	LGL58	D9G160333-17	9198253	U1	1.0	07/24/09 00:32		
86	LGL59	D9G160333-18	9198253	U1	1.0	07/24/09 00:34		
87	LGL6A	D9G160333-19	9198253	U1	1.0	07/24/09 00:37		
88	CCV				1.0	07/24/09 00:40		
89	CCB				1.0	07/24/09 00:42		
90	RLCV				1.0	07/24/09 00:45		
91	LGL6C	D9G160333-20	9198253	U1	1.0	07/24/09 00:48		
92	LGL6D	D9G160333-21	9198253	U1	1.0	07/24/09 00:51		
93	~~LGL6E~~	~~D9G160333-22~~	~~9198253~~	~~U1~~	~~1.0~~	~~07/24/09 00:53~~	NF 7/24/09 did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	~~LGL6F~~	~~D9G160333-23~~	~~9198253~~	~~U1~~	~~1.0~~	~~07/24/09 00:56~~		☐
95	LGL6G	D9G160333-24	9198253	U1	1.0	07/24/09 00:59		☐
96	LGL6H	D9G160333-25	9198253	U1	1.0	07/24/09 01:02		☐
97	LGL6K	D9G160333-26	9198253	U1	1.0	07/24/09 01:05		☐
98	LGL6KS	D9G160333-26	9198253	U1	1.0	07/24/09 01:07		☐
99	LGL6KD	D9G160333-26	9198253	U1	1.0	07/24/09 01:10		☐
100	CCV				1.0	07/24/09 01:13		☐
101	CCB				1.0	07/24/09 01:16		☐
102	RLCV				1.0	07/24/09 01:18		☐
103	LGP0WBF	D9G200000	9201157	MD	1.0	07/24/09 01:21		☐
104	LGP0WCF	D9G200000	9201157	MD	1.0	07/24/09 01:24		☐
105	LGNJJF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:27		☐
106	LGNJJP25F	D9G170255	9201157		25.0	07/24/09 01:30		☐
107	LGNJJZF	D9G170255-2	9201157		1.0	07/24/09 01:32		☐
108	LGNJJSF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:35		☐
109	LGNJJDF 5X	D9G170255-2	9201157	MD	5.0	07/24/09 01:38		☐
110	CCV				1.0	07/24/09 01:41		☐
111	CCB				1.0	07/24/09 01:43		☐
112	RLCV				1.0	07/24/09 01:46		☐
113	LGP0QB	D9G200000	9201150	MS	1.0	07/24/09 01:49		☐
114	LGP0QC	D9G200000	9201150	MS	1.0	07/24/09 01:52		☐
115	LGNJH 5X	D9G170255-1	9201150	MS	5.0	07/24/09 01:54		☐
116	LGNJHP25	D9G170255	9201150		25.0	07/24/09 01:57		☐
117	LGNJHZ	D9G170255-1	9201150		1.0	07/24/09 02:00		☐
118	LGNJHS 5X	D9G170255-1	9201150	MS	5.0	07/24/09 02:03		☐
119	LGNJHD 5X	D9G170255-1	9201150	MS	5.0	07/24/09 02:05		☐
120	LGPGA 5X	D9G180154-1	9201150	MS	5.0	07/24/09 02:08		☐
121	CCV				1.0	07/24/09 02:11		☐
122	CCB				1.0	07/24/09 02:14		☐
123	RLCV				1.0	07/24/09 02:17		☐
124	RINSE				1.0	07/24/09 02:19		☐
125	RINSE				1.0	07/24/09 02:22		☐
126	RINSE				1.0	07/24/09 02:25		☐
127	RINSE				1.0	07/24/09 02:28		☐
128	RINSE				1.0	07/24/09 02:30		☐
129	RINSE				1.0	07/24/09 02:33		☐
130	~~Cal Blank~~				~~1.0~~	~~07/24/09 02:36~~	KF 7/24/09 Did not use.	☐
131	Cal Blank				1.0	07/24/09 02:38		☐
132	100 ppb				1.0	07/24/09 02:41		☐
133	CCV				1.0	07/24/09 02:44		☐
134	CCB				1.0	07/24/09 02:47		☐
135	RLCV				1.0	07/24/09 02:49		☐
136	LGP9AB	D9G200000	9201280	MS	1.0	07/24/09 02:52		☐
137	LGP9AC	D9G200000	9201280	MS	1.0	07/24/09 02:55		☐
138	LGP9AL	D9G200000	9201280	MS	1.0	07/24/09 02:58		☐
139	LGN12	D9G170293-19	9201280	U2	1.0	07/24/09 03:01		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	LGN12P5	D9G170293	9201280		5.0	07/24/09 03:03		
141	LGN12Z	D9G170293-19	9201280		1.0	07/24/09 03:06		
142	LGN14	D9G170293-20	9201280	U2	1.0	07/24/09 03:09		
143	CCV				1.0	07/24/09 03:12		
144	CCB				1.0	07/24/09 03:14		
145	RLCV				1.0	07/24/09 03:17		
146	LGP39B	D9G200000	9201216	46	1.0	07/24/09 03:20		
147	LGP39C	D9G200000	9201216	46	1.0	07/24/09 03:23		
148	LGNQQ	D9G170293-1	9201216	U1	1.0	07/24/09 03:26		
149	LGNQT	D9G170293-2	9201216	U1	1.0	07/24/09 03:28		
150	LGNQV	D9G170293-3	9201226	U1	1.0	07/24/09 03:31		
151	LGNQW	D9G170293-4	9201226	U1	1.0	07/24/09 03:34		
152	LGNQX	D9G170293-5	9201216	U1	1.0	07/24/09 03:37		
153	LGNQXP5	D9G170293	9201216		5.0	07/24/09 03:39		
154	LGNQXZ	D9G170293-5	9201216		1.0	07/24/09 03:42		
155	CCV				1.0	07/24/09 03:45		
156	CCB				1.0	07/24/09 03:48		
157	RLCV				1.0	07/24/09 03:50		
158	LGNQXS	D9G170293-5	9201216	U1	1.0	07/24/09 03:53		
159	LGNQXD	D9G170293-5	9201216	U1	1.0	07/24/09 03:56		
160	LGNQ0	D9G170293-6	9201216	U1	1.0	07/24/09 03:59		
161	LGNQ2	D9G170293-7	9201216	U1	1.0	07/24/09 04:01		
162	LGNQ5	D9G170293-8	9201226	U1	1.0	07/24/09 04:04		
163	LGNQ8	D9G170293-9	9201226	U1	1.0	07/24/09 04:07		
164	LGNRC	D9G170293-10	9201216	U1	1.0	07/24/09 04:09		
165	LGNRG	D9G170293-11	~~9201226~~	U1	1.0	07/24/09 04:12		
166	LGNRJ	D9G170293-12	~~9201226~~	U1	1.0	07/24/09 04:15		
167	CCV		7/24/09		1.0	07/24/09 04:18		
168	CCB				1.0	07/24/09 04:20		
169	RLCV				1.0	07/24/09 04:23		
170	LGNRK	D9G170293-13	9201216	U1	1.0	07/24/09 04:26		
171	LGNRL	D9G170293-14	9201216	U1	1.0	07/24/09 04:29		
172	LGNRM	D9G170293-15	9201216	U1	1.0	07/24/09 04:31		
173	LGNRMS	D9G170293-15	9201216	U1	1.0	07/24/09 04:34		
174	LGNRMD	D9G170293-15	~~9201226~~	U1	1.0	07/24/09 04:37		
175	LGNRP	D9G170293-16	~~9201226~~	U1	1.0	07/24/09 04:39		
176	LGNRR	D9G170293-17	~~9201216~~	U1	1.0	07/24/09 04:42		
177	LGN15	D9G170293-21	9201226	U1	1.0	07/24/09 04:45		
178	LGN16	D9G170293-22	~~9201226~~	U1	1.0	07/24/09 04:48		
179	CCV				1.0	07/24/09 04:50		
180	CCB				1.0	07/24/09 04:53		
181	RLCV				1.0	07/24/09 04:56		
182	~~RINSE~~				~~1.0~~	~~07/24/09 04:59~~		
183	RINSE				1.0	~~07/24/09~~ 05:01		
184	RINSE				1.0	07/24/09 05:04		
185	RINSE				~~1.0~~	~~07/24/09 05:07~~	7/24/09 did not use.	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/24/09 10:41:57

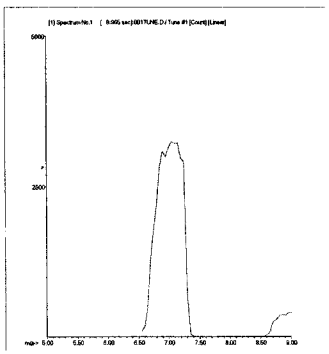
File ID: AG072309C **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	~~RINSE~~				1.0	~~07/24/09 05:10~~		
187	RINSE				1.0	07/24/09 05:12		
188	~~Cal Blank~~				1.0	~~07/24/09 05:15~~	KT 7/24/09	
189	Cal Blank				1.0	07/24/09 05:18		
190	100 ppb				1.0	07/24/09 05:21		
191	CCV				1.0	07/24/09 05:23		
192	CCB				1.0	07/24/09 05:26		
193	RLCV				1.0	07/24/09 05:29		
194	LGM20BQ	D9G170000	9198257	U1	1.0	07/24/09 05:32		
195	LGM20CQ	D9G170000	9198257	U1	1.0	07/24/09 05:34		
196	LGL5CQ	D9G160333-1	9198257	U1	1.0	07/24/09 05:37		
197	LGL5HQ	D9G160333-2	9198257	U1	1.0	07/24/09 05:40		
198	LGL5JQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:43		
199	LGL5JP5Q	D9G160333	9198257		5.0	07/24/09 05:46		
200	LGL5JZQ	D9G160333-3	9198257		1.0	07/24/09 05:48		
201	LGL5JSQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:51		
202	LGL5JDQ	D9G160333-3	9198257	U1	1.0	07/24/09 05:54		
203	CCV				1.0	07/24/09 05:57		
204	CCB				1.0	07/24/09 05:59		
205	RLCV				1.0	07/24/09 06:02		
206	LGL5PQ	D9G160333-5	9198257	U1	1.0	07/24/09 06:05		
207	LGL5XQ	D9G160333-9	9198257	U1	1.0	07/24/09 06:08		
208	LGL51Q	D9G160333-10	9198257	U1	1.0	07/24/09 06:10		
209	LGL52Q	D9G160333-11	9198257	U1	1.0	07/24/09 06:13		
210	LGL53Q	D9G160333-12	9198257	U1	1.0	07/24/09 06:16		
211	LGL54Q	D9G160333-13	9198257	U1	1.0	07/24/09 06:19		
212	LGL55Q	D9G160333-14	9198257	U1	1.0	07/24/09 06:22		
213	LGL56Q	D9G160333-15	9198257	U1	1.0	07/24/09 06:24		
214	LGL57Q	D9G160333-16	9198257	U1	1.0	07/24/09 06:27		
215	CCV				1.0	07/24/09 06:30		
216	CCB				1.0	07/24/09 06:33		
217	RLCV				1.0	07/24/09 06:35		
218	~~LGM3NBQ~~	~~D9G170000~~	~~9198261~~	~~U1~~	~~1.0~~	~~07/24/09 06:38~~		
219	LGM3NCQ	D9G170000	9198261	U1	1.0	07/24/09 06:41		
220	LGL5KQ	D9G160333-4	9198261	U1	1.0	07/24/09 06:44		
221	LGL5KP5Q	D9G160333	9198261		5.0	07/24/09 06:47		
222	LGL5KZQ	D9G160333-4	9198261		1.0	07/24/09 06:49		
223	~~LGL5KSQ~~	~~D9G160333-4~~	~~9198261~~	~~U1~~	~~1.0~~	~~07/24/09 06:52~~	KT 7/24/09 Did not use.	

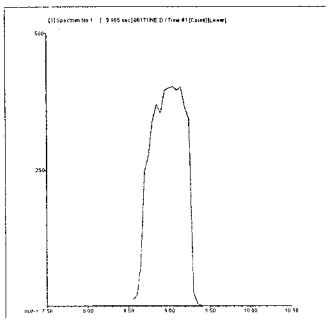
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072309C.B\001TUNE.D
Date Acquired: Jul 23 2009 08:41 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	34431	34827	34208	34362	34720	34038	0.97	5.00	
9 Be	4429	4401	4467	4394	4513	4370	1.34	5.00	
24 Mg	26351	26381	26218	26342	26503	26309	0.40	5.00	
59 Co	96386	97694	95406	97025	96141	95666	0.99	5.00	
115 In	1530814	1526828	1523984	1539561	1534081	1529618	0.40	5.00	
208 Pb	73935	75552	74578	73295	73549	72703	1.53	5.00	
238 U	145664	148897	144827	145175	144841	144582	1.25	5.00	

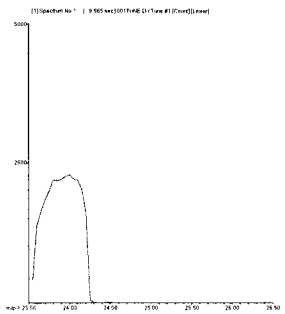


7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



9 Be
Mass Calib.
Actual: 9.05
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG072309C.B\001TUNE.D



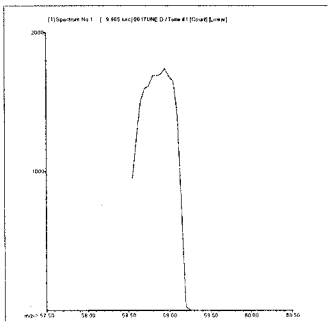
24 Mg

Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



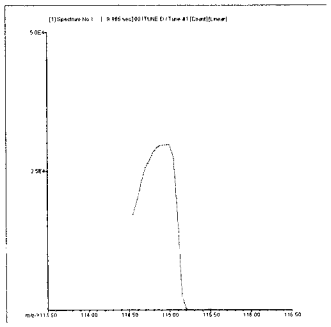
59 Co

Mass Calib.

Actual:	58.90		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



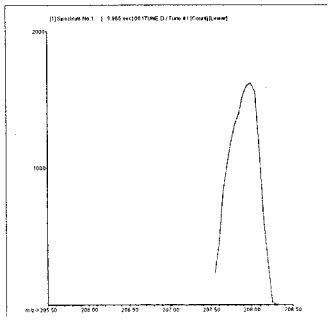
115 In

Mass Calib.

Actual:	114.90		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



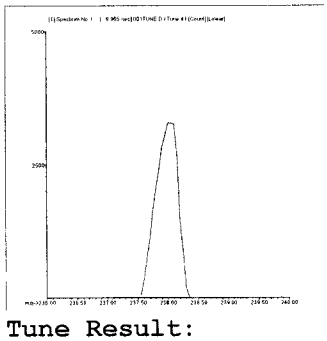
208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.00		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			

Tune Result: Pass

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG072309C.B\002CALB.D\002CALB.D#
Date Acquired: Jul 23 2009 08:44 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: Jul 23 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	-201	242.77
52	Cr	72	1	3087	8.11
55	Mn	72	1	1914	4.74
59	Co	72	1	117	13.09
60	Ni	72	1	150	17.64
63	Cu	72	1	28169	3.76
66	Zn	72	1	1953	0.52
75	As	72	1	100	9.17
78	Se	72	1	1990	5.10
95	Mo	72	1	70	14.29
107	Ag	115	1	13	114.56
111	Cd	115	1	15	88.05
118	Sn	115	1	10458	2.46
121	Sb	115	1	42	52.57
137	Ba	115	1	106	13.15
205	Tl	165	1	158	19.17
208	Pb	165	1	411	6.30
232	Th	165	1	67	22.91
238	U	165	1	78	17.32

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	648817	2.77
45	Sc	1	2493640	1.17
72	Ge	1	1074327	0.90
115	In	1	2751462	0.26
165	Ho	1	3967970	0.88

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\AG072309C.B\003CALB.D\003CALB.D#
Date Acquired:	Jul 23 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:	Jul 23 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	-154	123.17
52	Cr	72	1	3334	0.62
55	Mn	72	1	1317	11.07
59	Co	72	1	103	29.57
60	Ni	72	1	290	27.59
63	Cu	72	1	30505	14.18
66	Zn	72	1	314	5.84
75	As	72	1	93	26.19
78	Se	72	1	1824	7.99
95	Mo	72	1	77	49.38
107	Ag	115	1	47	12.37
111	Cd	115	1	9	76.70
118	Sn	115	1	590	19.55
121	Sb	115	1	49	7.87
137	Ba	115	1	14	74.18
205	Tl	165	1	120	15.47
208	Pb	165	1	188	12.47
232	Th	165	1	220	9.09
238	U	165	1	62	16.37

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	648622	0.87
45	Sc	1	2464179	0.48
72	Ge	1	1058296	1.48
115	In	1	2705760	1.08
165	Ho	1	3945088	0.69

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\AG072309C.B\004ICAL.D\004ICAL.D#
Date Acquired:	Jul 23 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:	Jul 23 2009 08:48 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	77345	1.16
51	V	72	1	1313178	0.22
52	Cr	72	1	1266171	0.57
55	Mn	72	1	1501646	1.37
59	Co	72	1	1589896	0.75
60	Ni	72	1	349056	0.93
63	Cu	72	1	849864	1.17
66	Zn	72	1	171430	0.91
75	As	72	1	159254	0.79
78	Se	72	1	31219	2.81
95	Mo	72	1	372210	0.57
107	Ag	115	1	1048650	0.17
111	Cd	115	1	205530	0.82
118	Sn	115	1	601440	1.08
121	Sb	115	1	686162	0.82
137	Ba	115	1	296446	0.37
205	Tl	165	1	2071041	0.79
208	Pb	165	1	2783678	0.49
232	Th	165	1	2586437	2.34
238	U	165	1	2941008	0.32

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	656219	1.15	648622	101.2	30 - 120	
45	Sc	1	2468080	0.96	2464179	100.2	30 - 120	
72	Ge	1	1066183	1.13	1058296	100.7	30 - 120	
115	In	1	2679157	0.29	2705760	99.0	30 - 120	
165	Ho	1	3904288	0.66	3945088	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\AG072309C.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\AG072309C.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 23 2009 08:52 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: Jul 23 2009 08:50 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.24	ppb	1.91	40	100.6	90 - 110	
51 V	72	1	39.27	ppb	1.16	40	98.2	90 - 110	
52 Cr	72	1	39.63	ppb	0.48	40	99.1	90 - 110	
55 Mn	72	1	39.23	ppb	1.10	40	98.1	90 - 110	
59 Co	72	1	38.97	ppb	0.94	40	97.4	90 - 110	
60 Ni	72	1	40.86	ppb	1.91	40	102.2	90 - 110	
63 Cu	72	1	40.59	ppb	2.70	40	101.5	90 - 110	
66 Zn	72	1	40.53	ppb	1.06	40	101.3	90 - 110	
75 As	72	1	39.78	ppb	0.41	40	99.5	90 - 110	
78 Se	72	1	39.41	ppb	3.83	40	98.5	90 - 110	
95 Mo	72	1	40.15	ppb	0.09	40	100.4	90 - 110	
107 Ag	115	1	39.42	ppb	3.16	40	98.6	90 - 110	
111 Cd	115	1	40.42	ppb	2.86	40	101.1	90 - 110	
118 Sn	115	1	39.37	ppb	1.67	40	98.4	90 - 110	
121 Sb	115	1	37.92	ppb	1.07	40	94.8	90 - 110	
137 Ba	115	1	39.26	ppb	2.03	40	98.2	90 - 110	
205 Tl	165	1	39.42	ppb	1.36	40	98.6	90 - 110	
208 Pb	165	1	40.31	ppb	1.10	40	100.8	90 - 110	
232 Th	165	1	44.36	ppb	1.53	40	110.9	90 - 110	Fail
238 U	165	1	40.63	ppb	1.32	40	101.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	656770	1.94	648622	101.3	30 - 120	
45 Sc	1	2455169	0.39	2464179	99.6	30 - 120	
72 Ge	1	1061846	0.91	1058296	100.3	30 - 120	
115 In	1	2694389	1.65	2705760	99.6	30 - 120	
165 Ho	1	3924619	0.57	3945088	99.5	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\006WASH.D\006WASH.D#
Date Acquired: Jul 23 2009 08:55 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: Jul 23 2009 08:50 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	0.921 ppb	10.89	1.30	
51 V	72	1	5.193 ppb	0.52	6.50	
52 Cr	72	1	2.145 ppb	2.98	2.60	
55 Mn	72	1	1.071 ppb	3.58	1.30	
59 Co	72	1	1.036 ppb	3.97	1.30	
60 Ni	72	1	2.100 ppb	1.69	2.60	
63 Cu	72	1	1.852 ppb	19.27	2.60	
66 Zn	72	1	10.530 ppb	2.01	13.00	
75 As	72	1	5.108 ppb	1.12	6.50	
78 Se	72	1	5.303 ppb	8.07	6.50	
95 Mo	72	1	2.213 ppb	3.31	2.60	
107 Ag	115	1	5.284 ppb	2.90	6.50	
111 Cd	115	1	1.066 ppb	4.74	1.30	
118 Sn	115	1	10.380 ppb	1.74	13.00	
121 Sb	115	1	2.149 ppb	1.48	2.60	
137 Ba	115	1	1.051 ppb	1.30	1.30	
205 Tl	165	1	1.120 ppb	1.09	1.30	
208 Pb	165	1	1.057 ppb	1.34	1.30	
232 Th	165	1	3.078 ppb	3.72	2.60	
238 U	165	1	1.100 ppb	1.87	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	660517	0.38	648622	101.8	30 - 120	
45 Sc	1	2448783	1.33	2464179	99.4	30 - 120	
72 Ge	1	1050495	0.89	1058296	99.3	30 - 120	
115 In	1	2703943	0.90	2705760	99.9	30 - 120	
165 Ho	1	3921165	0.97	3945088	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\AG072309C.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\AG072309C.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 23 2009 08:58 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: Jul 23 2009 08:50 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	-0.05	ppb	189.86	1.00	
52 Cr	72	1	0.01	ppb	205.10	1.00	
55 Mn	72	1	0.00	ppb	3886.20	1.00	
59 Co	72	1	0.00	ppb	46.69	1.00	
60 Ni	72	1	-0.02	ppb	35.26	1.00	
63 Cu	72	1	-0.15	ppb	49.61	1.00	
66 Zn	72	1	0.18	ppb	16.54	1.00	
75 As	72	1	0.00	ppb	521.13	1.00	
78 Se	72	1	0.41	ppb	87.73	1.00	
95 Mo	72	1	0.02	ppb	24.76	1.00	
107 Ag	115	1	0.01	ppb	40.27	1.00	
111 Cd	115	1	0.00	ppb	1633.20	1.00	
118 Sn	115	1	0.02	ppb	86.89	1.00	
121 Sb	115	1	0.09	ppb	6.94	1.00	
137 Ba	115	1	0.01	ppb	34.93	1.00	
205 Tl	165	1	0.03	ppb	9.42	1.00	
208 Pb	165	1	0.00	ppb	45.23	1.00	
232 Th	165	1	0.28	ppb	6.37	1.00	
238 U	165	1	0.00	ppb	30.96	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	644894	1.03	648622	99.4	30 - 120	
45 Sc	1	2458677	2.04	2464179	99.8	30 - 120	
72 Ge	1	1051744	1.08	1058296	99.4	30 - 120	
115 In	1	2665988	1.59	2705760	98.5	30 - 120	
165 Ho	1	3945473	0.44	3945088	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\AG072309C.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\AG072309C.B\008RLST.D\008RLST.D#
Date Acquired: Jul 23 2009 09:00 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: Jul 23 2009 08:50 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	0.93	ppb	16.53	1	92.9	50 - 150	
51 V	72	1	0.99	ppb	4.37	1	98.7	50 - 150	
52 Cr	72	1	0.98	ppb	3.55	1	97.8	50 - 150	
55 Mn	72	1	1.01	ppb	3.16	1	100.9	50 - 150	
59 Co	72	1	1.01	ppb	2.52	1	100.5	50 - 150	
60 Ni	72	1	1.02	ppb	4.57	1	102.0	50 - 150	
63 Cu	72	1	0.51	ppb	28.82	1	50.6	50 - 150	
66 Zn	72	1	11.00	ppb	0.96	10	110.0	50 - 150	
75 As	72	1	1.03	ppb	6.41	1	103.4	50 - 150	
78 Se	72	1	0.84	ppb	46.32	1	84.0	50 - 150	
95 Mo	72	1	1.05	ppb	6.76	1	104.7	50 - 150	
107 Ag	115	1	1.01	ppb	1.25	1	100.7	50 - 150	
111 Cd	115	1	0.99	ppb	5.58	1	99.5	50 - 150	
118 Sn	115	1	10.64	ppb	2.85	10	106.4	50 - 150	
121 Sb	115	1	1.06	ppb	2.92	1	105.7	50 - 150	
137 Ba	115	1	1.06	ppb	2.10	1	105.7	50 - 150	
205 Tl	165	1	1.01	ppb	1.07	1	101.2	50 - 150	
208 Pb	165	1	1.04	ppb	1.29	1	104.0	50 - 150	
232 Th	165	1	1.13	ppb	3.88	1	112.8	50 - 150	
238 U	165	1	1.03	ppb	1.96	1	103.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	664634	1.63	648622	102.5	30 - 120	
45 Sc	1	2483721	0.93	2464179	100.8	30 - 120	
72 Ge	1	1055301	0.71	1058296	99.7	30 - 120	
115 In	1	2683360	1.29	2705760	99.2	30 - 120	
165 Ho	1	3923786	0.62	3945088	99.5	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\AG072309C.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\AG072309C.B\009AFCE.D\009AFCE.D#
Date Acquired:	Jul 23 2009 09:03 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:	Jul 23 2009 08:50 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	0.17 ppb	0.42	0	92.4	80 - 120	
51 V	72	1	0.19 ppb	28.18	0	95.7	80 - 120	
52 Cr	72	1	0.18 ppb	8.31	0	90.9	80 - 120	
55 Mn	72	1	0.18 ppb	15.14	0	89.8	80 - 120	
59 Co	72	1	0.19 ppb	2.30	0	95.2	80 - 120	
60 Ni	72	1	0.13 ppb	17.06	0	64.5	80 - 120	
63 Cu	72	1	-0.83 ppb	17.60	0	-822.3	80 - 120	
66 Zn	72	1	2.09 ppb	0.14	2	94.8	80 - 120	
75 As	72	1	0.20 ppb	7.28	0	95.9	80 - 120	
78 Se	72	1	-0.16 ppb	291.52	0	-96.2	80 - 120	
95 Mo	72	1	0.22 ppb	6.91	0	103.9	80 - 120	
107 Ag	115	1	0.20 ppb	11.70	0	97.0	80 - 120	
111 Cd	115	1	0.18 ppb	23.88	0	91.5	80 - 120	
118 Sn	115	1	2.03 ppb	3.65	2	95.4	80 - 120	
121 Sb	115	1	0.22 ppb	8.00	0	103.6	80 - 120	
137 Ba	115	1	0.21 ppb	4.37	0	98.0	80 - 120	
205 Tl	165	1	0.20 ppb	1.71	0	97.8	80 - 120	
208 Pb	165	1	0.20 ppb	1.37	0	95.9	80 - 120	
232 Th	165	1	0.25 ppb	5.43	0	113.0	80 - 120	
238 U	165	1	0.20 ppb	0.05	0	98.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	658846	3.93	648622	101.6	30 - 120	
45 Sc	1	2436953	1.07	2464179	98.9	30 - 120	
72 Ge	1	1045851	0.90	1058296	98.8	30 - 120	
115 In	1	2699550	0.52	2705760	99.8	30 - 120	
165 Ho	1	3916629	1.04	3945088	99.3	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\AG072309C.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\AG072309C.B\010SMPL.D\010SMPL.D#
Date Acquired:	Jul 23 2009 09:06 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:	Jul 23 2009 08:50 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	173.22	3600	
51 V	72	1	-0.01	-0.01	ppb	89.38	3600	
52 Cr	72	1	-0.04	-0.04	ppb	43.34	3600	
55 Mn	72	1	0.00	0.00	ppb	318.86	3600	
59 Co	72	1	0.00	0.00	ppb	31.56	3600	
60 Ni	72	1	-0.07	-0.07	ppb	2.35	3600	
63 Cu	72	1	-1.42	-1.42	ppb	17.15	3600	
66 Zn	72	1	0.04	0.04	ppb	23.03	3600	
75 As	72	1	0.00	0.00	ppb	703.11	3600	
78 Se	72	1	0.84	0.84	ppb	63.33	3600	
95 Mo	72	1	0.00	0.00	ppb	139.03	3600	
107 Ag	115	1	0.00	0.00	ppb	292.92	3600	
111 Cd	115	1	0.01	0.01	ppb	135.69	3600	
118 Sn	115	1	0.05	0.05	ppb	54.50	3600	
121 Sb	115	1	0.01	0.01	ppb	16.53	3600	
137 Ba	115	1	0.00	0.00	ppb	3119.20	3600	
205 Tl	165	1	0.00	0.00	ppb	48.00	3600	
208 Pb	165	1	0.00	0.00	ppb	44.40	3600	
232 Th	165	1	0.04	0.04	ppb	4.98	1000	
238 U	165	1	0.00	0.00	ppb	15.61	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	634672	1.87	648622	97.8	30 - 120	
45 Sc	1	2431982	1.50	2464179	98.7	30 - 120	
72 Ge	1	1038465	1.42	1058296	98.1	30 - 120	
115 In	1	2658554	0.35	2705760	98.3	30 - 120	
165 Ho	1	3909862	0.22	3945088	99.1	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\

NK 7/24/09 Did not use.

ISTD Ref File : C:\ICPCHEM\1\DATA\AG072309C.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\AG072309C.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 23 2009 09:09 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: Jul 23 2009 08:50 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	0.05 ppb	14.80	1.00	
51 V	72	1	-0.57 ppb	20.62	1.00	
52 Cr	72	1	1.20 ppb	1.93	1.00	
55 Mn	72	1	3.62 ppb	1.70	1.00	
59 Co	72	1	0.16 ppb	5.80	1.00	
60 Ni	72	1	1.76 ppb	6.57	1.00	
63 Cu	72	1	1.24 ppb	18.81	1.00	
66 Zn	72	1	4.33 ppb	0.79	10.00	
75 As	72	1	0.54 ppb	6.27	1.00	
78 Se	72	1	0.84 ppb	7.51	1.00	
95 Mo	72	1	2034.00 ppb	1.18	2000.00	
107 Ag	115	1	0.07 ppb	10.50	1.00	
111 Cd	115	1	0.44 ppb	53.68	1.00	
118 Sn	115	1	0.18 ppb	26.35	10.00	
121 Sb	115	1	0.24 ppb	4.25	1.00	
137 Ba	115	1	1.58 ppb	3.20	1.00	
205 Tl	165	1	0.05 ppb	19.96	1.00	
208 Pb	165	1	0.14 ppb	4.85	1.00	
232 Th	165	1	0.07 ppb	10.13	1.00	
238 U	165	1	0.03 ppb	5.62	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	646198	1.87	648622	99.6	30 - 120	
45 Sc	1	2392755	1.16	2464179	97.1	30 - 120	
72 Ge	1	1007909	1.07	1058296	95.2	30 - 120	
115 In	1	2439534	1.11	2705760	90.2	30 - 120	
165 Ho	1	3632671	0.89	3945088	92.1	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\AG072309C.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\AG072309C.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 23 2009 09:11 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: Jul 23 2009 08:50 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	97.08	0.55	100	97.1	80 - 120	
51 V	72	1	103.20	0.44	100	103.2	80 - 120	
52 Cr	72	1	99.60	0.72	100	99.6	80 - 120	
55 Mn	72	1	100.60	2.03	100	100.6	80 - 120	
59 Co	72	1	95.79	0.56	100	95.8	80 - 120	
60 Ni	72	1	93.87	0.68	100	93.9	80 - 120	
63 Cu	72	1	93.73	1.18	100	93.7	80 - 120	
66 Zn	72	1	97.65	0.50	100	97.7	80 - 120	
75 As	72	1	99.24	0.44	100	99.2	80 - 120	
78 Se	72	1	105.10	0.70	100	105.1	80 - 120	
95 Mo	72	1	2108.00	0.74	2100	100.4	80 - 120	
107 Ag	115	1	85.26	1.88	100	85.3	80 - 120	
111 Cd	115	1	95.48	1.11	100	95.5	80 - 120	
118 Sn	115	1	99.08	0.51	100	99.1	80 - 120	
121 Sb	115	1	99.56	0.36	100	99.6	80 - 120	
137 Ba	115	1	101.60	0.68	100	101.6	80 - 120	
205 Tl	165	1	92.40	0.89	100	92.4	80 - 120	
208 Pb	165	1	92.12	1.81	100	92.1	80 - 120	
232 Th	165	1	104.70	0.14	100	104.7	80 - 120	
238 U	165	1	97.71	2.04	100	97.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	657698	1.16	648622	101.4	30 - 120	
45 Sc	1	2403994	0.72	2464179	97.6	30 - 120	
72 Ge	1	1020917	0.37	1058296	96.5	30 - 120	
115 In	1	2470059	0.29	2705760	91.3	30 - 120	
165 Ho	1	3677996	1.38	3945088	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\AG072309C.B\003CALB.D\003CALB.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\AG072309C.B\013SMPL.D\013SMPL.D#
Date Acquired:	Jul 23 2009 09:14 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:	Jul 23 2009 08:50 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	1.27	3600	
51 V	72	1	0.03	0.03	ppb	228.70	3600	
52 Cr	72	1	-0.03	-0.03	ppb	5.73	3600	
55 Mn	72	1	0.02	0.02	ppb	15.69	3600	
59 Co	72	1	0.00	0.00	ppb	146.79	3600	
60 Ni	72	1	-0.03	-0.03	ppb	16.77	3600	
63 Cu	72	1	-1.48	-1.48	ppb	5.94	3600	
66 Zn	72	1	0.97	0.97	ppb	4.75	3600	
75 As	72	1	0.02	0.02	ppb	80.25	3600	
78 Se	72	1	-0.17	-0.17	ppb	213.59	3600	
95 Mo	72	1	1.42	1.42	ppb	2.79	3600	
107 Ag	115	1	0.00	0.00	ppb	77.66	3600	
111 Cd	115	1	0.02	0.02	ppb	60.41	3600	
118 Sn	115	1	1.62	1.62	ppb	1.76	3600	
121 Sb	115	1	0.04	0.04	ppb	5.44	3600	
137 Ba	115	1	0.03	0.03	ppb	17.46	3600	
205 Tl	165	1	0.01	0.01	ppb	20.80	3600	
208 Pb	165	1	0.01	0.01	ppb	4.35	3600	
232 Th	165	1	0.77	0.77	ppb	16.71	1000	
238 U	165	1	0.01	0.01	ppb	21.86	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	677622	1.28	648622	104.5	30 - 120	
45 Sc	1	2505756	1.25	2464179	101.7	30 - 120	
72 Ge	1	1081454	1.36	1058296	102.2	30 - 120	
115 In	1	2769983	0.51	2705760	102.4	30 - 120	
165 Ho	1	3980405	0.79	3945088	100.9	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\AG072309C.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\AG072309C.B\014SMPL.D\014SMPL.D#
Date Acquired: Jul 23 2009 09:17 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: Jul 23 2009 08:50 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	-0.01	-0.01	ppb	288.45	3600	
52 Cr	72	1	-0.02	-0.02	ppb	51.37	3600	
55 Mn	72	1	-0.02	-0.02	ppb	7.72	3600	
59 Co	72	1	0.00	0.00	ppb	89.82	3600	
60 Ni	72	1	-0.07	-0.07	ppb	6.77	3600	
63 Cu	72	1	-1.42	-1.42	ppb	26.85	3600	
66 Zn	72	1	0.04	0.04	ppb	65.02	3600	
75 As	72	1	0.00	0.00	ppb	80.88	3600	
78 Se	72	1	2.00	2.00	ppb	9.72	3600	
95 Mo	72	1	0.33	0.33	ppb	5.10	3600	
107 Ag	115	1	0.00	0.00	ppb	825.74	3600	
111 Cd	115	1	0.01	0.01	ppb	17.33	3600	
118 Sn	115	1	0.04	0.04	ppb	43.07	3600	
121 Sb	115	1	0.01	0.01	ppb	20.05	3600	
137 Ba	115	1	0.00	0.00	ppb	107.18	3600	
205 Tl	165	1	0.00	0.00	ppb	62.16	3600	
208 Pb	165	1	0.00	0.00	ppb	70.50	3600	
232 Th	165	1	0.19	0.19	ppb	12.85	1000	
238 U	165	1	0.00	0.00	ppb	35.28	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	662446	1.21	648622	102.1	30 - 120	
45 Sc	1	2506701	1.13	2464179	101.7	30 - 120	
72 Ge	1	1055233	1.81	1058296	99.7	30 - 120	
115 In	1	2727756	0.74	2705760	100.8	30 - 120	
165 Ho	1	3942752	0.77	3945088	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\AG072309C.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\AG072309C.B\015 LR.D\015 LR.D#
Date Acquired: Jul 23 2009 09:20 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	1011.00 ppb	0.66	1000	101.1	90 - 110	
51 V	72	1	941.40 ppb	1.32	1000	94.1	90 - 110	
52 Cr	72	1	965.70 ppb	1.13	1000	96.6	90 - 110	
55 Mn	72	1	961.10 ppb	1.29	1000	96.1	90 - 110	
59 Co	72	1	958.50 ppb	0.93	1000	95.9	90 - 110	
60 Ni	72	1	993.00 ppb	0.81	1000	99.3	90 - 110	
63 Cu	72	1	964.70 ppb	1.76	1000	96.5	90 - 110	
66 Zn	72	1	1020.00 ppb	1.08	1000	102.0	90 - 110	
75 As	72	1	1014.00 ppb	0.18	1000	101.4	90 - 110	
78 Se	72	1	1013.00 ppb	0.68	1000	101.3	90 - 110	
95 Mo	72	1	1025.00 ppb	0.97	1000	102.5	90 - 110	
107 Ag	115	1	940.40 ppb	1.07	1000	94.0	90 - 110	
111 Cd	115	1	988.40 ppb	0.99	1000	98.8	90 - 110	
118 Sn	115	1	970.60 ppb	1.04	1000	97.1	90 - 110	
121 Sb	115	1	964.20 ppb	0.76	1000	96.4	90 - 110	
137 Ba	115	1	995.80 ppb	1.52	1000	99.6	90 - 110	
205 Tl	165	1	948.20 ppb	0.20	1000	94.8	90 - 110	
208 Pb	165	1	949.30 ppb	0.44	1000	94.9	90 - 110	
232 Th	165	1	1035.00 ppb	1.10	1000	103.5	90 - 110	
238 U	165	1	969.00 ppb	0.70	1000	96.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	659876	0.32	648622	101.7	30 - 120	
45 Sc	1	2438890	0.77	2464179	99.0	30 - 120	
72 Ge	1	1045130	1.09	1058296	98.8	30 - 120	
115 In	1	2678795	1.04	2705760	99.0	30 - 120	
165 Ho	1	3917020	0.17	3945088	99.3	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\AG072309C.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\AG072309C.B\016SMPL.D\016SMPL.D#
Date Acquired:	Jul 23 2009 09:22 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:	Jul 23 2009 08:50 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	0.06	0.06	ppb	32.64	3600	
51 V	72	1	0.04	0.04	ppb	39.01	3600	
52 Cr	72	1	0.00	0.00	ppb	310.31	3600	
55 Mn	72	1	0.05	0.05	ppb	24.01	3600	
59 Co	72	1	0.05	0.05	ppb	20.78	3600	
60 Ni	72	1	-0.01	-0.01	ppb	179.45	3600	
63 Cu	72	1	-1.52	-1.52	ppb	2.43	3600	
66 Zn	72	1	0.99	0.99	ppb	6.67	3600	
75 As	72	1	0.08	0.08	ppb	10.60	3600	
78 Se	72	1	-0.04	-0.04	ppb	1370.80	3600	
95 Mo	72	1	0.81	0.81	ppb	4.71	3600	
107 Ag	115	1	0.06	0.06	ppb	28.78	3600	
111 Cd	115	1	0.03	0.03	ppb	73.38	3600	
118 Sn	115	1	2.64	2.64	ppb	1.03	3600	
121 Sb	115	1	0.47	0.47	ppb	3.93	3600	
137 Ba	115	1	0.08	0.08	ppb	12.82	3600	
205 Tl	165	1	0.14	0.14	ppb	16.42	3600	
208 Pb	165	1	0.06	0.06	ppb	16.47	3600	
232 Th	165	1	5.50	5.50	ppb	19.13	1000	
238 U	165	1	0.12	0.12	ppb	1.36	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	632503	0.32	648622	97.5	30 - 120	
45 Sc	1	2394290	0.62	2464179	97.2	30 - 120	
72 Ge	1	1035384	0.47	1058296	97.8	30 - 120	
115 In	1	2659267	0.48	2705760	98.3	30 - 120	
165 Ho	1	3913099	0.39	3945088	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\AG072309C.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\AG072309C.B\017 CCV.D\017 CCV.D#
Date Acquired: Jul 23 2009 09:25 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: Jul 23 2009 08:50 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	48.51	ppb	1.99	50	97.0	90 - 110	
51 V	72	1	48.77	ppb	0.36	50	97.5	90 - 110	
52 Cr	72	1	49.16	ppb	0.42	50	98.3	90 - 110	
55 Mn	72	1	48.72	ppb	0.98	50	97.4	90 - 110	
59 Co	72	1	48.79	ppb	0.98	50	97.6	90 - 110	
60 Ni	72	1	50.67	ppb	1.21	50	101.3	90 - 110	
63 Cu	72	1	48.49	ppb	0.90	50	97.0	90 - 110	
66 Zn	72	1	50.51	ppb	0.26	50	101.0	90 - 110	
75 As	72	1	49.47	ppb	0.61	50	98.9	90 - 110	
78 Se	72	1	49.82	ppb	4.56	50	99.6	90 - 110	
95 Mo	72	1	50.62	ppb	1.31	50	101.2	90 - 110	
107 Ag	115	1	48.81	ppb	0.32	50	97.6	90 - 110	
111 Cd	115	1	49.18	ppb	0.94	50	98.4	90 - 110	
118 Sn	115	1	49.48	ppb	0.59	50	99.0	90 - 110	
121 Sb	115	1	49.28	ppb	0.29	50	98.6	90 - 110	
137 Ba	115	1	48.99	ppb	0.48	50	98.0	90 - 110	
205 Tl	165	1	48.84	ppb	1.75	50	97.7	90 - 110	
208 Pb	165	1	49.56	ppb	1.59	50	99.1	90 - 110	
232 Th	165	1	50.88	ppb	1.64	50	101.8	90 - 110	
238 U	165	1	50.48	ppb	1.25	50	101.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	649646	1.69	648622	100.2	30 - 120	
45 Sc	1	2403352	1.00	2464179	97.5	30 - 120	
72 Ge	1	1030799	0.75	1058296	97.4	30 - 120	
115 In	1	2661447	0.14	2705760	98.4	30 - 120	
165 Ho	1	3881222	0.91	3945088	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\AG072309C.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\AG072309C.B\018 CCB.D\018 CCB.D#
Date Acquired: Jul 23 2009 09:28 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: Jul 23 2009 08:50 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.009	ppb	173.18	1.00	
51 V	72	1	-0.007	ppb	1035.90	1.00	
52 Cr	72	1	-0.028	ppb	64.42	1.00	
55 Mn	72	1	-0.014	ppb	47.25	1.00	
59 Co	72	1	0.007	ppb	26.50	1.00	
60 Ni	72	1	-0.058	ppb	15.62	1.00	
63 Cu	72	1	-1.588	ppb	9.26	1.00	
66 Zn	72	1	-0.022	ppb	80.27	1.00	
75 As	72	1	0.021	ppb	43.20	1.00	
78 Se	72	1	0.026	ppb	1775.70	1.00	
95 Mo	72	1	0.131	ppb	9.23	1.00	
107 Ag	115	1	0.012	ppb	36.63	1.00	
111 Cd	115	1	0.014	ppb	74.14	1.00	
118 Sn	115	1	0.221	ppb	6.71	1.00	
121 Sb	115	1	0.111	ppb	8.40	1.00	
137 Ba	115	1	0.008	ppb	8.05	1.00	
205 Tl	165	1	0.052	ppb	9.16	1.00	
208 Pb	165	1	0.007	ppb	8.84	1.00	
232 Th	165	1	1.539	ppb	19.71	1.00	Fail
238 U	165	1	0.017	ppb	15.97	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	644546	0.82	648622	99.4	30 - 120	
45 Sc	1	2387264	0.30	2464179	96.9	30 - 120	
72 Ge	1	1023082	1.00	1058296	96.7	30 - 120	
115 In	1	2640219	0.25	2705760	97.6	30 - 120	
165 Ho	1	3863304	0.47	3945088	97.9	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\019WASH.D\019WASH.D#
Date Acquired: Jul 23 2009 09:30 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: Jul 23 2009 08:50 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	1.052 ppb	9.22	1.30	
51 V	72	1	5.232 ppb	0.78	6.50	
52 Cr	72	1	2.130 ppb	1.64	2.60	
55 Mn	72	1	1.033 ppb	0.81	1.30	
59 Co	72	1	1.050 ppb	4.69	1.30	
60 Ni	72	1	2.128 ppb	1.92	2.60	
63 Cu	72	1	0.314 ppb	56.75	2.60	
66 Zn	72	1	10.640 ppb	1.14	13.00	
75 As	72	1	5.324 ppb	1.47	6.50	
78 Se	72	1	4.277 ppb	3.12	6.50	
95 Mo	72	1	2.311 ppb	4.66	2.60	
107 Ag	115	1	5.201 ppb	1.06	6.50	
111 Cd	115	1	1.066 ppb	4.36	1.30	
118 Sn	115	1	10.560 ppb	2.25	13.00	
121 Sb	115	1	1.996 ppb	2.63	2.60	
137 Ba	115	1	1.025 ppb	3.39	1.30	
205 Tl	165	1	1.107 ppb	1.57	1.30	
208 Pb	165	1	1.068 ppb	0.70	1.30	
232 Th	165	1	2.580 ppb	1.54	2.60	
238 U	165	1	1.088 ppb	1.72	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	627981	2.31	648622	96.8	30 - 120	
45 Sc	1	2332987	1.05	2464179	94.7	30 - 120	
72 Ge	1	995692	0.66	1058296	94.1	30 - 120	
115 In	1	2612586	0.28	2705760	96.6	30 - 120	
165 Ho	1	3833267	0.22	3945088	97.2	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\AG072309C.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\AG072309C.B\020 BLK.D\020 BLK.D#
Date Acquired: Jul 23 2009 09:33 pm
Operator: TEL
Sample Name: LGMKFB
Misc Info: BLANK 9198162 6020
Vial Number: 2304
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 23 2009 08:50 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	0.005 ppb	173.20	2.00	
51 V	72	1	-0.013 ppb	150.47	2.00	
52 Cr	72	1	0.039 ppb	20.30	2.00	
55 Mn	72	1	0.035 ppb	22.33	2.00	
59 Co	72	1	-0.001 ppb	223.04	2.00	
60 Ni	72	1	-0.031 ppb	76.59	2.00	
63 Cu	72	1	-1.576 ppb	9.95	2.00	
66 Zn	72	1	0.510 ppb	9.12	2.00	
75 As	72	1	-0.010 ppb	99.77	2.00	
78 Se	72	1	-0.755 ppb	37.01	2.00	
95 Mo	72	1	0.058 ppb	9.74	2.00	
107 Ag	115	1	0.003 ppb	141.12	2.00	
111 Cd	115	1	0.011 ppb	113.64	2.00	
118 Sn	115	1	0.105 ppb	27.23	2.00	
121 Sb	115	1	0.057 ppb	6.95	2.00	
137 Ba	115	1	0.043 ppb	19.73	2.00	
205 Tl	165	1	0.027 ppb	19.84	2.00	
208 Pb	165	1	0.038 ppb	7.56	2.00	
232 Th	165	1	0.328 ppb	15.46	2.00	
238 U	165	1	0.003 ppb	14.78	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	610704	0.40	648622	94.2	30 - 120	
45 Sc	1	2325055	1.28	2464179	94.4	30 - 120	
72 Ge	1	984989	0.80	1058296	93.1	30 - 120	
115 In	1	2563045	1.31	2705760	94.7	30 - 120	
165 Ho	1	3816659	0.37	3945088	96.7	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\AG072309C.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\AG072309C.B\021 LCS.D\021 LCS.D#
Date Acquired: Jul 23 2009 09:36 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGMKFC
Misc Info: LCS
Vial Number: 2305
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	38.94	1.92	40	97.4	80 - 120	
51 V	72	1	40.84	0.89	40	102.1	80 - 120	
52 Cr	72	1	40.82	1.20	40	102.1	80 - 120	
55 Mn	72	1	40.45	1.33	40	101.1	80 - 120	
59 Co	72	1	40.28	2.41	40	100.7	80 - 120	
60 Ni	72	1	41.51	1.27	40	103.8	80 - 120	
63 Cu	72	1	39.72	1.50	40	99.3	80 - 120	
66 Zn	72	1	40.51	0.89	40	101.3	80 - 120	
75 As	72	1	39.53	0.64	40	98.8	80 - 120	
78 Se	72	1	37.73	4.76	40	94.3	80 - 120	
95 Mo	72	1	42.38	2.00	40	106.0	80 - 120	
107 Ag	115	1	39.90	1.21	40	99.8	80 - 120	
111 Cd	115	1	39.56	0.92	40	98.9	80 - 120	
118 Sn	115	1	0.02	17.31	40	0.1	80 - 120	
121 Sb	115	1	39.11	1.22	40	97.8	80 - 120	
137 Ba	115	1	40.22	2.10	40	100.6	80 - 120	
205 Tl	165	1	40.83	0.14	40	102.1	80 - 120	
208 Pb	165	1	41.57	0.15	40	103.9	80 - 120	
232 Th	165	1	43.08	4.28	40	107.7	80 - 120	
238 U	165	1	42.01	1.69	40	105.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	625620	2.42	648622	96.5	30 - 120	
45 Sc	1	2314044	0.66	2464179	93.9	30 - 120	
72 Ge	1	980002	0.89	1058296	92.6	30 - 120	
115 In	1	2592797	1.16	2705760	95.8	30 - 120	
165 Ho	1	3767882	0.64	3945088	95.5	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\AG072309C.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\AG072309C.B\022AREF.D\022AREF.D#
Date Acquired: Jul 23 2009 09:38 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFG 5X
Misc Info: D9G160231
Vial Number: 2306
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
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	0.05	0.01	ppb	173.24	3600	
51 V	72	1	31.21	6.24	ppb	3.14	3600	
52 Cr	72	1	14.21	2.84	ppb	3.33	3600	
55 Mn	72	1	0.63	0.13	ppb	6.33	3600	
59 Co	72	1	0.12	0.02	ppb	23.79	3600	
60 Ni	72	1	1.37	0.27	ppb	3.41	3600	
63 Cu	72	1	-8.39	-1.68	ppb	10.55	3600	
66 Zn	72	1	1.19	0.24	ppb	7.05	3600	
75 As	72	1	75.10	15.02	ppb	1.04	3600	
78 Se	72	1	0.15	0.03	ppb	1665.20	3600	
95 Mo	72	1	11.81	2.36	ppb	2.59	3600	
107 Ag	115	1	0.02	0.00	ppb	35.60	3600	
111 Cd	115	1	0.02	0.00	ppb	506.07	3600	
118 Sn	115	1	0.77	0.15	ppb	20.56	3600	
121 Sb	115	1	0.31	0.06	ppb	17.29	3600	
137 Ba	115	1	34.30	6.86	ppb	0.80	3600	
205 Tl	165	1	0.24	0.05	ppb	30.66	3600	
208 Pb	165	1	0.05	0.01	ppb	23.26	3600	
232 Th	165	1	4.28	0.86	ppb	20.02	1000	
238 U	165	1	4.16	0.83	ppb	1.15	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	611219	0.22	648622	94.2	30 - 120	
45 Sc	1	2277543	1.07	2464179	92.4	30 - 120	
72 Ge	1	942766	0.76	1058296	89.1	30 - 120	
115 In	1	2479571	0.87	2705760	91.6	30 - 120	
165 Ho	1	3684953	0.76	3945088	93.4	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\AG072309C.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\AG072309C.B\023SDIL.D\023SDIL.D#
Date Acquired: Jul 23 2009 09:41 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGP25
Misc Info: SERIAL DILUTION
Vial Number: 2307
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072309C.B\022AREF.D\022AREF.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	1.29	ppb	1.75	1.25	103.5	90 - 110	
52 Cr	72	1	0.72	ppb	5.63	0.57	127.0	90 - 110	
55 Mn	72	1	0.05	ppb	14.79	0.03	200.3	90 - 110	
59 Co	72	1	0.01	ppb	73.65	0.00	137.4	90 - 110	
60 Ni	72	1	0.11	ppb	19.67	0.05	206.2	90 - 110	
63 Cu	72	1	-1.90	ppb	5.81	-0.34	565.3	90 - 110	
66 Zn	72	1	0.13	ppb	3.22	0.05	282.1	90 - 110	
75 As	72	1	3.01	ppb	1.64	3.00	100.1	90 - 110	
78 Se	72	1	-0.72	ppb	20.27	0.01	-12106.8	90 - 110	
95 Mo	72	1	0.51	ppb	9.67	0.47	108.4	90 - 110	
107 Ag	115	1	0.00	ppb	191.02	0.00	-143.2	90 - 110	
111 Cd	115	1	-0.01	ppb	175.90	0.00	-866.4	90 - 110	
118 Sn	115	1	0.19	ppb	3.25	0.03	615.0	90 - 110	
121 Sb	115	1	0.02	ppb	18.68	0.01	194.5	90 - 110	
137 Ba	115	1	1.41	ppb	2.32	1.37	102.6	90 - 110	
205 Tl	165	1	0.01	ppb	7.88	0.01	84.5	90 - 110	
208 Pb	165	1	0.01	ppb	13.34	0.00	360.3	90 - 110	
232 Th	165	1	0.16	ppb	6.21	0.17	94.7	90 - 110	
238 U	165	1	0.17	ppb	4.59	0.17	101.9	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	621262	1.36	648622	95.8	30 - 120	
45 Sc	1	2296520	0.31	2464179	93.2	30 - 120	
72 Ge	1	978740	0.16	1058296	92.5	30 - 120	
115 In	1	2541926	0.99	2705760	93.9	30 - 120	
165 Ho	1	3760030	0.67	3945088	95.3	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\AG072309C.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: 07/24/09 10:42:03

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGLFGP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072309C # 23
Acquired: 07/23/2009 21:41:00
Calibrated: 07/23/2009 20:47:00

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	0.04615	100		*	
7440-62-2	Vanadium	51	15430	32.290	31.210	3.46		*	
7440-47-3	Chromium	52	11455	18.050	14.210	27.0		*	
7439-96-5	Manganese	55	1907	1.2520	0.62490	100		*	
7440-48-4	Cobalt	59	190	0.16165	0.11760	37.5		*	
7440-02-0	Nickel	60	630	2.8260	1.3700	106		*	
7440-50-8	Copper	63	13984	-47.430	-8.3900			*	
7440-66-6	Zinc	66	501	3.3485	1.1870	182		*	
7440-38-2	Arsenic	75	4479	75.150	75.110	0.0533	0.21	NC	☑
7782-49-2	Selenium	78	1493	-17.970	0.14850	12200	0.70	NC	☑
7439-98-7	Molybdenum	95	1820	12.800	11.810	8.38		*	
7440-22-4	Silver	107	30	-0.03480	0.02431	243		*	
7440-43-9	Cadmium	111	-7	-0.19625	0.02265	966		*	
7440-31-5	Tin	118	1637	4.7470	0.77180	515		*	
7440-36-0	Antimony	121	201	0.59550	0.30610	94.5		*	
7440-39-3	Barium	137	3974	35.210	34.300	2.65		*	
7440-28-0	Thallium	205	274	0.20075	0.23760	15.5		*	
7439-92-1	Lead	208	370	0.17830	0.04949	260		*	
7440-61-1	Uranium	238	4853	4.2320	4.1560	1.83		*	
7440-29-1	Thorium	232	4248	4.0535	4.2770	5.23		*	
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: Z Date: 7/24/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072309C.B\024PDS.D\024PDS.D#
Date Acquired: Jul 23 2009 09:44 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 2308
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 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	196.40	0.01	ppb	1.34	200	98.2	75 - 125	
51 V	72	1	208.60	6.24	ppb	1.70	200	101.1	75 - 125	
52 Cr	72	1	208.10	2.84	ppb	1.39	200	102.6	75 - 125	
55 Mn	72	1	200.70	0.13	ppb	2.31	200	100.3	75 - 125	
59 Co	72	1	198.90	0.02	ppb	1.46	200	99.4	75 - 125	
60 Ni	72	1	198.10	0.27	ppb	1.15	200	98.9	75 - 125	
63 Cu	72	1	199.60	-1.68	ppb	1.39	200	100.6	75 - 125	
66 Zn	72	1	200.70	0.24	ppb	0.98	200	100.2	75 - 125	
75 As	72	1	215.40	15.02	ppb	0.86	200	100.2	75 - 125	
78 Se	72	1	203.00	0.03	ppb	1.16	200	101.5	75 - 125	
95 Mo	72	1	212.90	2.36	ppb	0.62	200	105.2	75 - 125	
107 Ag	115	1	46.42	0.00	ppb	1.58	50	92.8	75 - 125	
111 Cd	115	1	194.80	0.00	ppb	1.35	200	97.4	75 - 125	
118 Sn	115	1	183.30	0.15	ppb	0.89	200	91.6	75 - 125	
121 Sb	115	1	196.10	0.06	ppb	1.82	200	98.0	75 - 125	
137 Ba	115	1	201.80	6.86	ppb	1.13	200	97.6	75 - 125	
205 Tl	165	1	186.90	0.05	ppb	1.15	200	93.4	75 - 125	
208 Pb	165	1	188.50	0.01	ppb	0.82	200	94.2	75 - 125	
232 Th	165	1	0.12	0.86	ppb	3.07	200	0.1	75 - 125	
238 U	165	1	193.70	0.83	ppb	1.75	200	96.4	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	615385	0.32	648622	94.9	30 - 120	
45 Sc	1	2279147	0.89	2464179	92.5	30 - 120	
72 Ge	1	952223	1.25	1058296	90.0	30 - 120	
115 In	1	2498590	1.14	2705760	92.3	30 - 120	
165 Ho	1	3744413	0.98	3945088	94.9	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\AG072309C.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

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 07/24/09 10:42:09

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGLFGZ** | Spike Dilution: **1.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072309C # 24
Acquired: 07/23/2009 21:44:00
Calibrated: 07/23/2009 20:47:00

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	142469	196.40	0.00923	98.2	200		☐
7440-62-2	Vanadium	51	2446550	208.60	6.2420	101	200		☐
7440-47-3	Chromium	52	2350250	208.10	2.8420	103	200		☐
7439-96-5	Manganese	55	2690480	200.70	0.12498	100	200		☐
7440-48-4	Cobalt	59	2824560	198.90	0.02352	99.4	200		☐
7440-02-0	Nickel	60	617361	198.10	0.27400	98.9	200		☐
7440-50-8	Copper	63	1488080	199.60	-1.6780	99.8	200		☐
7440-66-6	Zinc	66	306976	200.70	0.23740	100	200		☐
7440-38-2	Arsenic	75	306305	215.40	15.022	100	200		☑
7782-49-2	Selenium	78	54919	203.00	0.02970	101	200		☑
7439-98-7	Molybdenum	95	707584	212.90	2.3620	105	200		☐
7440-22-4	Silver	107	453945	46.420	0.00486	92.8	50.0		☐
7440-43-9	Cadmium	111	373459	194.80	0.00453	97.4	200		☐
7440-31-5	Tin	118	1027840	183.30	0.15436	91.6	200		☐
7440-36-0	Antimony	121	1254980	196.10	0.06122	98.0	200		☐
7440-39-3	Barium	137	557784	201.80	6.8600	97.5	200		☐
7440-28-0	Thallium	205	3711340	186.90	0.04752	93.4	200		☐
7439-92-1	Lead	208	5032760	188.50	0.00990	94.2	200		☐
7440-61-1	Uranium	238	5464210	193.70	0.83120	96.4	200		☐
7440-29-1	Thorium	232	3161	0.11900	0.85540				
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				

AS, Se only

Reviewed by: [signature] Date: 7/24/09

Spiked Sample (MS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072309C.B\025_MS.D\025_MS.D#
Date Acquired:	Jul 23 2009 09:47 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGLFGS 5X
Misc Info:	MATRIX SPIKE
Vial Number:	2309
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 23 2009 08:50 pm
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	8.96	0.01	ppb	2.65	40	22.4	50 - 150	
51 V	72	1	15.03	6.24	ppb	0.92	40	32.5	50 - 150	
52 Cr	72	1	11.33	2.84	ppb	1.12	40	26.4	50 - 150	
55 Mn	72	1	8.45	0.13	ppb	1.62	40	21.1	50 - 150	
59 Co	72	1	8.36	0.02	ppb	1.61	40	20.9	50 - 150	
60 Ni	72	1	8.66	0.27	ppb	0.71	40	21.5	50 - 150	
63 Cu	72	1	6.28	-1.68	ppb	3.78	40	16.4	50 - 150	
66 Zn	72	1	8.60	0.24	ppb	0.90	40	21.4	50 - 150	
75 As	72	1	24.06	15.02	ppb	1.16	40	43.7	50 - 150	
78 Se	72	1	7.33	0.03	ppb	10.90	40	18.3	50 - 150	
95 Mo	72	1	11.19	2.36	ppb	2.59	40	26.4	50 - 150	
107 Ag	115	1	7.56	0.00	ppb	1.18	40	18.9	50 - 150	
111 Cd	115	1	8.31	0.00	ppb	0.38	40	20.8	50 - 150	
118 Sn	115	1	0.33	0.15	ppb	8.45	40	0.8	50 - 150	
121 Sb	115	1	8.46	0.06	ppb	0.84	40	21.1	50 - 150	
137 Ba	115	1	15.72	6.86	ppb	1.02	40	33.5	50 - 150	
205 Tl	165	1	8.09	0.05	ppb	1.18	40	20.2	50 - 150	
208 Pb	165	1	8.18	0.01	ppb	1.40	40	20.5	50 - 150	
232 Th	165	1	8.82	0.86	ppb	0.75	40	21.6	50 - 150	
238 U	165	1	9.52	0.83	ppb	1.49	40	23.3	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	601350	0.25	648622	92.7	30 - 120	
45 Sc	1	2268671	0.57	2464179	92.1	30 - 120	
72 Ge	1	941844	0.56	1058296	89.0	30 - 120	
115 In	1	2456709	0.68	2705760	90.8	30 - 120	
165 Ho	1	3674158	0.70	3945088	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\AG072309C.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\AG072309C.B\026 MSD.D\026 MSD.D#
Date Acquired: Jul 23 2009 09:49 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLFGD 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2310
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
Sample Type: MSD
Dilution Factor: 5.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072309C.B\025 MS.D\025 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	8.52	ppb	2.05	8.96	5.00	20	
51 V	72	1	15.24	ppb	2.49	15.03	1.39	20	
52 Cr	72	1	11.43	ppb	0.89	11.33	0.88	20	
55 Mn	72	1	8.44	ppb	1.13	8.45	0.13	20	
59 Co	72	1	8.38	ppb	0.41	8.36	0.16	20	
60 Ni	72	1	8.75	ppb	1.94	8.66	1.09	20	
63 Cu	72	1	6.36	ppb	2.96	6.28	1.16	20	
66 Zn	72	1	8.61	ppb	2.97	8.60	0.14	20	
75 As	72	1	23.91	ppb	1.39	24.06	0.63	20	
78 Se	72	1	8.55	ppb	4.47	7.33	15.29	20	
95 Mo	72	1	11.49	ppb	3.11	11.19	2.65	20	
107 Ag	115	1	7.66	ppb	0.82	7.55	1.33	20	
111 Cd	115	1	8.26	ppb	1.64	8.31	0.54	20	
118 Sn	115	1	0.18	ppb	13.84	0.33	58.37	20	
121 Sb	115	1	8.42	ppb	0.34	8.46	0.53	20	
137 Ba	115	1	15.53	ppb	1.65	15.72	1.22	20	
205 Tl	165	1	8.10	ppb	0.80	8.09	0.10	20	
208 Pb	165	1	8.16	ppb	0.25	8.18	0.34	20	
232 Th	165	1	8.97	ppb	2.66	8.82	1.69	20	
238 U	165	1	9.43	ppb	0.28	9.52	0.99	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	612317	1.13	648622	94.4	30 - 120	
45 Sc	1	2264544	1.82	2464179	91.9	30 - 120	
72 Ge	1	934883	1.00	1058296	88.3	30 - 120	
115 In	1	2447566	0.51	2705760	90.5	30 - 120	
165 Ho	1	3691061	0.23	3945088	93.6	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\AG072309C.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\AG072309C.B\027SMPL.D\027SMPL.D#
Date Acquired: Jul 23 2009 09:52 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGLGF 5X
Misc Info: D9G160235
Vial Number: 2311
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 23 2009 08:50 pm
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	0.00	0.00	ppb	0.00	3600	
51 V	72	1	32.19	6.44	ppb	1.99	3600	
52 Cr	72	1	104.80	20.96	ppb	1.24	3600	
55 Mn	72	1	0.75	0.15	ppb	5.54	3600	
59 Co	72	1	0.25	0.05	ppb	10.70	3600	
60 Ni	72	1	2.02	0.40	ppb	13.39	3600	
63 Cu	72	1	-9.48	-1.90	ppb	12.45	3600	
66 Zn	72	1	0.87	0.17	ppb	8.05	3600	
75 As	72	1	65.45	13.09	ppb	1.86	3600	
78 Se	72	1	-1.39	-0.28	ppb	256.66	3600	
95 Mo	72	1	21.07	4.21	ppb	4.54	3600	
107 Ag	115	1	0.01	0.00	ppb	205.01	3600	
111 Cd	115	1	0.00	0.00	ppb	144870.00	3600	
118 Sn	115	1	0.87	0.17	ppb	18.78	3600	
121 Sb	115	1	0.24	0.05	ppb	23.30	3600	
137 Ba	115	1	38.54	7.71	ppb	2.91	3600	
205 Tl	165	1	0.13	0.03	ppb	2.16	3600	
208 Pb	165	1	0.17	0.03	ppb	2.46	3600	
232 Th	165	1	1.46	0.29	ppb	17.01	1000	
238 U	165	1	4.20	0.84	ppb	0.48	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	609466	1.71	648622	94.0	30 - 120	
45 Sc	1	2251217	0.99	2464179	91.4	30 - 120	
72 Ge	1	931612	1.20	1058296	88.0	30 - 120	
115 In	1	2449723	1.63	2705760	90.5	30 - 120	
165 Ho	1	3647068	0.47	3945088	92.4	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\AG072309C.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\AG072309C.B\028 CCV.D\028 CCV.D#
Date Acquired: Jul 23 2009 09:55 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: Jul 23 2009 08:50 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	48.36	ppb	4.72	50	96.7	90 - 110	
51 V	72	1	48.53	ppb	1.54	50	97.1	90 - 110	
52 Cr	72	1	48.57	ppb	1.26	50	97.1	90 - 110	
55 Mn	72	1	48.34	ppb	0.50	50	96.7	90 - 110	
59 Co	72	1	48.19	ppb	0.57	50	96.4	90 - 110	
60 Ni	72	1	49.42	ppb	0.48	50	98.8	90 - 110	
63 Cu	72	1	46.57	ppb	0.22	50	93.1	90 - 110	
66 Zn	72	1	49.64	ppb	0.58	50	99.3	90 - 110	
75 As	72	1	49.04	ppb	1.31	50	98.1	90 - 110	
78 Se	72	1	49.24	ppb	1.49	50	98.5	90 - 110	
95 Mo	72	1	50.45	ppb	0.93	50	100.9	90 - 110	
107 Ag	115	1	48.00	ppb	1.59	50	96.0	90 - 110	
111 Cd	115	1	48.92	ppb	0.82	50	97.8	90 - 110	
118 Sn	115	1	48.66	ppb	1.18	50	97.3	90 - 110	
121 Sb	115	1	48.39	ppb	0.89	50	96.8	90 - 110	
137 Ba	115	1	48.40	ppb	1.08	50	96.8	90 - 110	
205 Tl	165	1	49.07	ppb	0.74	50	98.1	90 - 110	
208 Pb	165	1	49.85	ppb	0.59	50	99.7	90 - 110	
232 Th	165	1	49.87	ppb	3.01	50	99.7	90 - 110	
238 U	165	1	50.73	ppb	0.63	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	627601	3.31	648622	96.8	30 - 120	
45 Sc	1	2300637	0.71	2464179	93.4	30 - 120	
72 Ge	1	997583	0.98	1058296	94.3	30 - 120	
115 In	1	2605372	0.46	2705760	96.3	30 - 120	
165 Ho	1	3774485	0.93	3945088	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\AG072309C.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\AG072309C.B\029 CCB.D\029 CCB.D#
Date Acquired: Jul 23 2009 09:58 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: Jul 23 2009 08:50 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.005	ppb	173.21	1.00	
51 V	72	1	0.013	ppb	210.72	1.00	
52 Cr	72	1	-0.018	ppb	56.31	1.00	
55 Mn	72	1	-0.018	ppb	34.80	1.00	
59 Co	72	1	0.001	ppb	355.36	1.00	
60 Ni	72	1	-0.062	ppb	0.39	1.00	
63 Cu	72	1	-2.440	ppb	11.26	1.00	
66 Zn	72	1	-0.014	ppb	86.21	1.00	
75 As	72	1	-0.009	ppb	17.77	1.00	
78 Se	72	1	-1.689	ppb	39.67	1.00	
95 Mo	72	1	0.046	ppb	7.23	1.00	
107 Ag	115	1	0.004	ppb	28.07	1.00	
111 Cd	115	1	-0.002	ppb	426.39	1.00	
118 Sn	115	1	0.105	ppb	4.05	1.00	
121 Sb	115	1	0.054	ppb	6.83	1.00	
137 Ba	115	1	0.003	ppb	89.81	1.00	
205 Tl	165	1	0.027	ppb	8.31	1.00	
208 Pb	165	1	0.006	ppb	24.73	1.00	
232 Th	165	1	1.240	ppb	17.77	1.00	Fail
238 U	165	1	0.009	ppb	27.14	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	621731	1.58	648622	95.9	30 - 120	
45 Sc	1	2290192	0.31	2464179	92.9	30 - 120	
72 Ge	1	972445	1.09	1058296	91.9	30 - 120	
115 In	1	2553504	1.06	2705760	94.4	30 - 120	
165 Ho	1	3775976	0.29	3945088	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\AG072309C.B\003CALB.D\003CALB.D#

1 :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\AG072309C.B\030WASH.D\030WASH.D#
Date Acquired: Jul 23 2009 10:00 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: Jul 23 2009 08:50 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	0.948 ppb	1.86	1.30	
51 V	72	1	5.200 ppb	2.06	6.50	
52 Cr	72	1	2.111 ppb	4.26	2.60	
55 Mn	72	1	1.020 ppb	0.92	1.30	
59 Co	72	1	1.037 ppb	1.86	1.30	
60 Ni	72	1	2.111 ppb	4.74	2.60	
63 Cu	72	1	-0.502 ppb	43.27	2.60	
66 Zn	72	1	10.660 ppb	1.77	13.00	
75 As	72	1	5.210 ppb	0.82	6.50	
78 Se	72	1	3.461 ppb	8.29	6.50	
95 Mo	72	1	2.161 ppb	6.59	2.60	
107 Ag	115	1	5.305 ppb	0.45	6.50	
111 Cd	115	1	1.076 ppb	5.12	1.30	
118 Sn	115	1	10.420 ppb	2.38	13.00	
121 Sb	115	1	1.956 ppb	5.25	2.60	
137 Ba	115	1	1.085 ppb	1.17	1.30	
205 Tl	165	1	1.096 ppb	1.35	1.30	
208 Pb	165	1	1.071 ppb	1.33	1.30	
232 Th	165	1	2.431 ppb	0.74	2.60	
238 U	165	1	1.092 ppb	0.47	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	620681	2.48	648622	95.7	30 - 120	
45 Sc	1	2289380	1.10	2464179	92.9	30 - 120	
72 Ge	1	989667	0.95	1058296	93.5	30 - 120	
115 In	1	2568596	1.26	2705760	94.9	30 - 120	
165 Ho	1	3780336	0.15	3945088	95.8	30 - 120	

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Tune File# 2 C:\ICPCHEM\1\7500\
Tune File# 3 C:\ICPCHEM\1\7500\

ISTD Ref File : C:\ICPCHEM\1\DATA\AG072309C.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: D9G170255

Client: Northgate Environmental

Batch(es) #: 9201157, 9201150

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: 7/29/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G170255	1 D	SE	LGNJH1AG	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	1 S	SE	LGNJH1AF	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	1 D	AS	LGNJH1AE	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	1 S	AS	LGNJH1AD	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	1	SE	LGNJH1AC	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	1	AS	LGNJH1AA	20090728	6020TOTA	9201150	AG072809B	024
D9G170255	2 D	SE	LGNJJ1AH	20090728	6020DSVD	9201157	AG072809B	024
D9G170255	2 S	SE	LGNJJ1AG	20090728	6020DSVD	9201157	AG072809B	024
D9G170255	2 D	AS	LGNJJ1AF	20090728	6020DSVD	9201157	AG072809B	024
D9G170255	2 S	AS	LGNJJ1AE	20090728	6020DSVD	9201157	AG072809B	024
D9G170255	2	SE	LGNJJ1AC	20090728	6020DSVD	9201157	AG072809B	024
D9G170255	2	AS	LGNJJ1AA	20090728	6020DSVD	9201157	AG072809B	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9201157**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Katie Stoltz

Prep Date: 07/22/09
Due Date: 07/29/09

Lot	Work Order			Initial Weight/Volume
D9G200000 Water	**LGP0W**	B	Due Date: SDG:	50 mL
D9G200000 Water	**LGP0W**	C	Due Date: SDG:	50 mL
D9G170255 Water	**LGNJJ** Dissolved		Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJJ** Dissolved	S	Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJJ** Dissolved	D	Due Date: 07/29/09 SDG: 8304614	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 7/28/09

7/29/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

DISSOLVED WATER DIGESTION FOR ICPMS (Prep code MD)

BATCH # 9201157 **ALLIQUOTTED BY:** JRW
PREP DATE: 7.22.2009 **DIGESTED BY:** KS

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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: KS

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	2

TEMPERATURE CYCLES

Thermometer ID: 14859 Block & Cup # : 5; 29

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3/HCl	7:00	95	12:00	94

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Katie Doyle ***Date:*** 7.22.09

Batch Number: **9201150**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Katie Stoltz

Prep Date: 07/22/09
Due Date: 07/29/09

Lot	Work Order			Initial Weight/Volume
D9G200000 Water	**LGP0Q**	B	Due Date: SDG:	50 mL
D9G200000 Water	**LGP0Q**	C	Due Date: SDG:	50 mL
D9G170255 Water	**LGNJH** Total		Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJH** Total	S	Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJH** Total	D	Due Date: 07/29/09 SDG: 8304614	50 mL
D9G180154 Water	**LGPGA** Total		Due Date: 07/30/09 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 7/28/09

7/29/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 920150 **ALLIQUOTTED BY:** JRW
PREP DATE: 7.22.2009 **DIGESTED BY:** KS

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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: KS

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3;17

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	7:00	95	11:20	97
HNO3	11:30	96	12:00	95
HNO3				

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Katie Doty ***Date:*** 7.22.09

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

Jul-28-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures | Lot No.: B2-ZN02045 | Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 | Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn — Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4426-09, ICP-MS (024) INT STD BRC — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 250.00
Date Prep./Opened: 07-24-2009
Date Expires(1): 11-10-2009 (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.: STD6317-08, Scandium Stock — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

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

Parent Std No.: STD6318-08, Holmium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

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

STD4462-09, NITRIC ACID

Analyst: DIAZL

Vendor: J.T. Baker Lot No.: H12022 Vendor's Expiration Date: 12-01-2009
Solvent: Water
Date Prep./Opened: 07-28-2009 Date Received: 12-30-2008
Date Expires(1): 07-28-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 206

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	100.00

STD4463-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water
Volume (ml): 1,000.0
Date Prep./Opened: 07-28-2009
Date Expires(1): 08-28-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4462-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4464-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn — Aliquot Amount (ml): 0.1000
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	10.000

STD4465-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4466-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4467-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4465-09, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 07-29-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
Mo	100.00	0.0010
Sb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
V	100.00	0.0010
Zn	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010
Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010

STD4468-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (2 Days)
pipettes: Met 20 and Met 8

Parent Std No.: STD4467-09, 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
Mo	0.0010	0.0002
Sb	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
Fe	0.0500	0.0100
Sn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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

STD4469-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 08-28-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4470-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00

Zn	20.000	100.00

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4471-09, ICPMS LR STD 1000 ppb

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 — Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4472-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4473-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: LRD 07/28/2009 FILE: AG072809B

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/28/09 16:26		☐
3	Cal Blank				1.0	07/28/09 16:29		☐
4	100 ppb				1.0	07/28/09 16:32		☐
5	ICV				1.0	07/28/09 16:34		☐
6	RLIV				1.0	07/28/09 16:37		☐
7	ICB				1.0	07/28/09 16:40		☐
8	RL STD				1.0	07/28/09 16:42		☐
9	AFCEE RL				1.0	07/28/09 16:45		☐
10	ALTSe				1.0	07/28/09 16:48		☐
11	ICSA				1.0	07/28/09 16:51		☐
12	ICSAB				1.0	07/28/09 16:53		☐
13	RINSE				1.0	07/28/09 16:56		☐
14	LR				1.0	07/28/09 16:59		☐
15	RINSE				1.0	07/28/09 17:01		☐
16	CCV				1.0	07/28/09 17:04		☐
17	CCB				1.0	07/28/09 17:07		☐
18	RLCV				1.0	07/28/09 17:10		☐
19	LGVDAB	D9G220000	9203117	MS	1.0	07/28/09 17:12		☐
20	LGVDAC	D9G220000	9203117	MS	1.0	07/28/09 17:15		☐
21	LGMTQ 5X	F9G170160-1	9203117	MS	5.0	07/28/09 17:18		☐
22	LGR1C 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:21	— Ag, Se, Cu only. 7/29/09	☐
23	LGR1CP25	F9G210207	9203117		25.0	07/28/09 17:23		☐
24	LGR1CZ	F9G210207-1	9203117		1.0	07/28/09 17:26		☐
25	~~LGR1CS 5X~~	~~F9G210207-1~~	~~9203117~~	~~MS~~	~~5.0~~	~~07/28/09 17:29~~		☐
26	~~LGR1CD 5X~~	~~F9G210207-1~~	~~9203117~~	~~MS~~	~~5.0~~	~~07/28/09 17:32~~	7/29/09 Did not use.	☐
27	LGR3J 5X	F9G210207-2	9203117	MS	5.0	07/28/09 17:34		☐
28	CCV				1.0	07/28/09 17:37		☐
29	CCB				1.0	07/28/09 17:40		☐
30	RLCV				1.0	07/28/09 17:43		☐
31	LGR1CS 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:48		☐
32	LGR1CD 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:50		☐
33	CCV				1.0	07/28/09 17:53		☐
34	CCB				1.0	07/28/09 17:56		☐
35	RLCV				1.0	07/28/09 17:59		☐
36	~~LGL5P~~	~~D9G160333-5~~	~~9198252~~	~~U1~~	~~1.0~~	~~07/28/09 18:02~~		☐
37	LGL5X	D9G160333-9	9198252	U1	1.0	07/28/09 18:04		☐
38	LGL51	D9G160333-10	9198252	U1	1.0	07/28/09 18:07		☐
39	LGL52	D9G160333-11	9198252	U1	1.0	07/28/09 18:10		☐
40	LGL53	D9G160333-12	9198252	U1	1.0	07/28/09 18:12		☐
41	LGL54	D9G160333-13	9198252	U1	1.0	07/28/09 18:15		☐
42	LGL55	D9G160333-14	9198252	U1	1.0	07/28/09 18:18		☐
43	LGL56	D9G160333-15	9198252	U1	1.0	07/28/09 18:21		☐
44	LGL57	D9G160333-16	9198252	U1	1.0	07/28/09 18:23		☐
45	CCV				1.0	07/28/09 18:26		☐
46	CCB				1.0	07/28/09 18:29		☐
47	~~RLCV~~				~~1.0~~	~~07/28/09 18:32~~	7/29/09 Did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	~~LGM2DB~~	D9G170000	9198253	46	~~1.0~~	~~07/28/09 18:34~~		
49	RINSE				1.0	07/28/09 18:37		
50	RINSE				1.0	07/28/09 18:40		
51	RINSE				1.0	07/28/09 18:43		
52	RINSE				1.0	07/28/09 18:45		
53	RINSE				1.0	07/28/09 18:48		
54	RINSE				1.0	07/28/09 18:51		
55	~~Cal Blank~~				~~1.0~~	~~07/28/09 18:54~~	RT 7/29/09 did not use	
56	Cal Blank				1.0	07/28/09 18:56		
57	100 ppb				1.0	07/28/09 18:59		
58	CCV				1.0	07/28/09 19:02		
59	CCB				1.0	07/28/09 19:05		
60	RLCV				1.0	07/28/09 19:07		
61	LGL5P	D9G160333-5	9198252	U1	1.0	07/28/09 19:10		
62	LGL5X	D9G160333-9	9198252	U1	1.0	07/28/09 19:13		
63	LGL51	D9G160333-10	9198252	U1	1.0	07/28/09 19:16		
64	LGL52	D9G160333-11	9198252	U1	1.0	07/28/09 19:18		
65	LGL53	D9G160333-12	9198252	U1	1.0	07/28/09 19:21		
66	LGL54	D9G160333-13	9198252	U1	1.0	07/28/09 19:24		
67	LGL55	D9G160333-14	9198252	U1	1.0	07/28/09 19:26		
68	LGL56	D9G160333-15	9198252	U1	1.0	07/28/09 19:29		
69	LGL57	D9G160333-16	9198252	U1	1.0	07/28/09 19:32		
70	CCV				1.0	07/28/09 19:35		
71	CCB				1.0	07/28/09 19:37		
72	RLCV				1.0	07/28/09 19:40		
73	LGM2DB	D9G170000	9198253	46	1.0	07/28/09 19:43		
74	LGM2DC	D9G170000	9198253	46	1.0	07/28/09 19:46		
75	LGL5K	D9G160333-4	9198261	U1	1.0	07/28/09 19:48		
76	LGL5KP5	D9G160333	9198261		5.0	07/28/09 19:51		
77	LGL5KZ	D9G160333-4	9198261		1.0	07/28/09 19:54		
78	LGL5KS	D9G160333-4	9198261253	U1	1.0	07/28/09 19:57		
79	LGL5KD	D9G160333-4	9198253	U1	1.0	07/28/09 19:59		
80	LGL58	D9G160333-17	9198253	U1	1.0	07/28/09 20:02		
81	LGL59	D9G160333-18	9198253	U1	1.0	07/28/09 20:05		
82	LGL6A	D9G160333-19	9198253	U1	1.0	07/28/09 20:07		
83	CCV				1.0	07/28/09 20:10		
84	CCB				1.0	07/28/09 20:13		
85	RLCV				1.0	07/28/09 20:16		
86	ICSA				1.0	07/28/09 20:18		
87	ICSAB				1.0	07/28/09 20:21		
88	WASH				1.0	07/28/09 20:24		
89	CCV				1.0	07/28/09 20:27		
90	CCB				1.0	07/28/09 20:29		
91	RLCV				1.0	07/28/09 20:32		
92	LGL6C	D9G160333-20	9198253	U1	1.0	07/28/09 20:35		
93	LGL6D	D9G160333-21	9198253	U1	1.0	07/28/09 20:38		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	LGL6E	D9G160333-22	9198253	U1	1.0	07/28/09 20:40		☐
95	LGL6F	D9G160333-23	9198253	U1	1.0	07/28/09 20:43		☐
96	LGL6G	D9G160333-24	9198253	U1	1.0	07/28/09 20:46		☐
97	LGL6H	D9G160333-25	9198253	U1	1.0	07/28/09 20:49		☐
98	LGL6K	D9G160333-26	9198253	U1	1.0	07/28/09 20:52		☐
99	LGL6KS	D9G160333-26	9198253	U1	1.0	07/28/09 20:54		☐
100	LGL6KD	D9G160333-26	9198253	U1	1.0	07/28/09 20:57		☐
101	CCV				1.0	07/28/09 21:00		☐
102	CCB				1.0	07/28/09 21:03		☐
103	RLCV				1.0	07/28/09 21:05		☐
104	LGP0WBF	D9G200000	9201157	MD	1.0	07/28/09 21:08		☐
105	LGP0WCF	D9G200000	9201157	MD	1.0	07/28/09 21:11		☐
106	LGNJJF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:14		☐
107	LGNJJP25F	D9G170255	9201157		25.0	07/28/09 21:16		☐
108	LGNJJZF	D9G170255-2	9201157		1.0	07/28/09 21:19		☐
109	LGNJJSF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:22		☐
110	LGNJJDF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:25		☐
111	CCV				1.0	07/28/09 21:27		☐
112	CCB				1.0	07/28/09 21:30		☐
113	RLCV				1.0	07/28/09 21:33		☐
114	LGP0QB	D9G200000	9201150	MS	1.0	07/28/09 21:36		☐
115	LGP0QC	D9G200000	9201150	MS	1.0	07/28/09 21:39		☐
116	LGNJH 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:41		☐
117	LGNJHP25	D9G170255	9201150		25.0	07/28/09 21:44		☐
118	LGNJHZ	D9G170255-1	9201150		1.0	07/28/09 21:47		☐
119	LGNJHS 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:50		☐
120	LGNJHD 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:52		☐
121	LGPGA 5X	D9G180154-1	9201150	MS	5.0	07/28/09 21:56		☐
122	CCV				1.0	07/28/09 21:59		☐
123	CCB				1.0	07/28/09 22:01		☐
124	RLCV				1.0	07/28/09 22:04		☐
125	LGL5KQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:07		☐
126	LGL5KP5Q	D9G160333	9198261		5.0	07/28/09 22:10		☐
127	LGL5KZQ	D9G160333-4	9198261		1.0	07/28/09 22:12		☐
128	LGL5KSQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:15		☐
129	LGL5KDQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:18		☐
130	CCV				1.0	07/28/09 22:20		☐
131	CCB				1.0	07/28/09 22:23		☐
132	RLCV				1.0	07/28/09 22:26		☐
133	LGFLKB	D9G140000	9195211	MS	1.0	07/28/09 22:29		☐
134	LGFLKC	D9G140000	9195211	MS	1.0	07/28/09 22:32		☐
135	LGFEL	H9G140108-4	9195211	MS	1.0	07/28/09 22:34		☐
136	LGFET	H9G140108-9	9195211	MS	1.0	07/28/09 22:37		☐
137	LGFE6	H9G140108-13	9195211	MS	1.0	07/28/09 22:40		☐
138	LGFE6P5	H9G140108	9195211		5.0	07/28/09 22:43		☐
139	CCV				1.0	07/28/09 22:45		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	CCB				1.0	07/28/09 22:48		☐
141	RLCV				1.0	07/28/09 22:51		☐
142	LGFE6Z	H9G140108-13	9195211		1.0	07/28/09 22:54		☐
143	LGFE6S	H9G140108-13	9195211	MS	1.0	07/28/09 22:56		☐
144	LGFE6D	H9G140108-13	9195211	MS	1.0	07/28/09 22:59		☐
145	LGFFD	H9G140108-18	9195211	MS	1.0	07/28/09 23:02		☐
146	LGFFK	H9G140108-23	9195211	MS	1.0	07/28/09 23:05		☐
147	CCV				1.0	07/28/09 23:07		☐
148	CCB				1.0	07/28/09 23:10		☐
149	RLCV				1.0	07/28/09 23:13		☐
150	LGP23B	D9G200000	9201183	04	1.0	07/28/09 23:16		☐
151	LGP23C	D9G200000	9201183	04	1.0	07/28/09 23:19		☐
152	LGMTN	D9G170158-1	9201183	04	1.0	07/28/09 23:21		☐
153	LGMTNP5	D9G170158	9201183		5.0	07/28/09 23:24		☐
154	LGMTNZ	D9G170158-1	9201183		1.0	07/28/09 23:27		☐
155	LGMTNS	D9G170158-1	9201183	04	1.0	07/28/09 23:30		☐
156	LGMTND	D9G170158-1	9201183	04	1.0	07/28/09 23:32		☐
157	LGMTR	D9G170158-2	9201183	04	1.0	07/28/09 23:35		☐
158	CCV				1.0	07/28/09 23:38		☐
159	CCB				1.0	07/28/09 23:41		☐
160	RLCV				1.0	07/28/09 23:43		☐
161	LGMTV	D9G170158-3	9201183	04	1.0	07/28/09 23:46		☐
162	LGMTW	D9G170158-4	9201183	04	1.0	07/28/09 23:49		☐
163	LGMTX	D9G170158-5	9201183	04	1.0	07/28/09 23:52		☐
164	LGMT0	D9G170158-6	9201183	04	1.0	07/28/09 23:54		☐
165	LGMT1	D9G170158-7	9201183	04	1.0	07/28/09 23:57		☐
166	LGMT2	D9G170158-8	9201183	04	1.0	07/29/09 00:00		☐
167	LGMT3	D9G170158-9	9201183	04	1.0	07/29/09 00:03		☐
168	LGMT4	D9G170158-10	9201183	04	1.0	07/29/09 00:05		☐
169	CCV				1.0	07/29/09 00:08		☐
170	CCB				1.0	07/29/09 00:11		☐
171	RLCV				1.0	07/29/09 00:14		☐
172	~~LGNWK~~	~~D9G170310-1~~	~~9201183~~	~~04~~	~~1.0~~	~~07/29/09 00:17~~		☐
173	LGNXA	D9G170310-2	9201183	04	1.0	07/29/09 00:19		☐
174	LGNXC	D9G170310-3	9201183	04	1.0	07/29/09 00:22		☐
175	LGNXD	D9G170310-4	9201183	04	1.0	07/29/09 00:25		☐
176	LGNXE	D9G170310-5	9201183	04	1.0	07/29/09 00:28		☐
177	LGNXF	D9G170310-6	9201183	04	1.0	07/29/09 00:30		☐
178	LGNXG	D9G170310-7	9201183	04	1.0	07/29/09 00:33		☐
179	CCV				1.0	07/29/09 00:36		☐
180	CCB				1.0	07/29/09 00:39		☐
181	RLCV				1.0	07/29/09 00:41		☐
182	RINSE				1.0	07/29/09 00:44		☐
183	RINSE				1.0	07/29/09 00:47		☐
184	RINSE				1.0	07/29/09 00:50		☐
185	~~RINSE~~				~~1.0~~	~~07/29/09 00:52~~	KF 7/29/09 Did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	~~RINSE~~				~~1.0~~	~~07/29/09 00:55~~		
187	RINSE				1.0	07/29/09 00:58		
188	~~Cal Blank~~				~~1.0~~	~~07/29/09 01:01~~	KF 7/29/09	
189	Cal Blank				1.0	07/29/09 01:03		
190	100 ppb				1.0	07/29/09 01:06		
191	CCV				1.0	07/29/09 01:09		
192	CCB				1.0	07/29/09 01:12		
193	RLCV				1.0	07/29/09 01:14		
194	LGH1CB	D9G150000	9196281	MS	1.0	07/29/09 01:17		
195	LGH1CC	D9G150000	9196281	MS	1.0	07/29/09 01:20		
196	LGHCW	H9G150125-4	9196281	MS	1.0	07/29/09 01:23		
197	LGHC5	H9G150125-9	9196281	MS	1.0	07/29/09 01:25		
198	LGHDC	H9G150125-15	9196281	MS	1.0	07/29/09 01:28		
199	LGHDK	H9G150125-20	9196281	MS	1.0	07/29/09 01:31		
200	CCV				1.0	07/29/09 01:34		
201	CCB				1.0	07/29/09 01:37		
202	RLCV				1.0	07/29/09 01:39		
203	LGHDKP5	H9G150125	9196281		5.0	07/29/09 01:42		
204	LGHDKZ	H9G150125-20	9196281		1.0	07/29/09 01:45		
205	LGHDKS	H9G150125-20	9196281	MS	1.0	07/29/09 01:48		
206	LGHDKD	H9G150125-20	9196281	MS	1.0	07/29/09 01:50		
207	LGHDV	H9G150125-26	9196281	MS	1.0	07/29/09 01:53		
208	LGHEF	H9G150125-32	9196281	MS	1.0	07/29/09 01:56		
209	CCV				1.0	07/29/09 01:59		
210	CCB				1.0	07/29/09 02:01		
211	RLCV				1.0	07/29/09 02:04		
212	LGKR0B	D9G160000	9197235	MS	1.0	07/29/09 02:07		
213	LGKR0C	D9G160000	9197235	MS	1.0	07/29/09 02:10		
214	LGKEJ	H9G160108-4	9197235	MS	1.0	07/29/09 02:13		
215	LGKE1	H9G160108-10	9197235	MS	1.0	07/29/09 02:15		
216	LGKFC	H9G160108-15	9197235	MS	1.0	07/29/09 02:18		
217	LGKFCP5	H9G160108	9197235		5.0	07/29/09 02:21		
218	LGKFCZ	H9G160108-15	9197235		1.0	07/29/09 02:24		
219	LGKFCS	H9G160108-15	9197235	MS	1.0	07/29/09 02:26		
220	LGKFCD	H9G160108-15	9197235	MS	1.0	07/29/09 02:29		
221	LGKFP	H9G160108-20	9197235	MS	1.0	07/29/09 02:32		
222	CCV				1.0	07/29/09 02:35		
223	CCB				1.0	07/29/09 02:38		
224	RLCV				1.0	07/29/09 02:40		
225	LGMH5B	D9G170000	9198153	MS	1.0	07/29/09 02:43		
226	LGMH5C	D9G170000	9198153	MS	1.0	07/29/09 02:46		
227	LGMH5L	D9G170000	9198153	MS	1.0	07/29/09 02:49		
228	LGLTF	H9G160302-4	9198153	MS	1.0	07/29/09 02:52		
229	LGLTFP5	H9G160302	9198153		5.0	07/29/09 02:54		
230	LGLTFZ	H9G160302-4	9198153		1.0	07/29/09 02:57		
231	CCV				1.0	07/29/09 03:00		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
232	CCB				1.0	07/29/09 03:03		
233	RLCV				1.0	07/29/09 03:05		
234	~~RINSE~~				~~1.0~~	~~07/29/09 03:08~~		
235	RINSE				1.0	07/29/09 03:11		
236	RINSE				1.0	07/29/09 03:14		
237	RINSE				1.0	07/29/09 03:16		
238	RINSE				1.0	07/29/09 03:19		
239	RINSE				1.0	07/29/09 03:22		
240	~~Cal Blank~~				~~1.0~~	~~07/29/09 03:25~~	KT 7/29/09	
241	Cal Blank				1.0	07/29/09 03:27		
242	100 ppb				1.0	07/29/09 03:30		
243	CCV				1.0	07/29/09 03:33		
244	CCB				1.0	07/29/09 03:36		
245	RLCV				1.0	07/29/09 03:39		
246	LGQDQB	D9G200000	9201309	46	1.0	07/29/09 03:41		
247	LGQDQC	D9G200000	9201309	46	1.0	07/29/09 03:44		
248	LGN18	D9G170316-1	9201320	U1	1.0	07/29/09 03:47		
249	LGN18P5	D9G170316	9201320		5.0	07/29/09 03:50		
250	LGN18Z	D9G170316-1	9201320		1.0	07/29/09 03:52		
251	LGN18S	D9G170316-1	9201309	U1	1.0	07/29/09 03:55		
252	LGN18D	D9G170316-1	9201309	U1	1.0	07/29/09 03:58		
253	LGN19	D9G170316-2	9201309	U1	1.0	07/29/09 04:01		
254	LGN2A	D9G170316-3	9201320	U1	1.0	07/29/09 04:03		
255	LGN2C	D9G170316-4	9201320	U1	1.0	07/29/09 04:06		
256	CCV				1.0	07/29/09 04:09		
257	CCB				1.0	07/29/09 04:12		
258	RLCV				1.0	07/29/09 04:14		
259	LGN2D	D9G170316-5	9201309	U1	1.0	07/29/09 04:17		
260	LGN2E	D9G170316-6	9201320	U1	1.0	07/29/09 04:20		
261	LGN2F	D9G170316-7	9201309	U1	1.0	07/29/09 04:23		
262	LGN2G	D9G170316-8	9201320	U1	1.0	07/29/09 04:26		
263	LGN2H	D9G170316-9	9201309	U1	1.0	07/29/09 04:28		
264	LGN2J	D9G170316-10	9201309	U1	1.0	07/29/09 04:31		
265	LGN2K	D9G170316-11	9201320	U1	1.0	07/29/09 04:34		
266	LGN2L	D9G170316-12	9201320	U1	1.0	07/29/09 04:37		
267	LGN2M	D9G170316-13	9201309	U1	1.0	07/29/09 04:39		
268	LGN2N	D9G170316-14	9201309	U1	1.0	07/29/09 04:42		
269	CCV				1.0	07/29/09 04:45		
270	CCB				1.0	07/29/09 04:48		
271	RLCV				1.0	07/29/09 04:51		
272	LGCJX	D9G100251-5	9194341		1.0	07/29/09 04:53	DQR	
273	CCV				1.0	07/29/09 04:56		
274	CCB				1.0	07/29/09 04:59		
275	RLCV				1.0	07/29/09 05:02		
276	~~LGM62B~~	~~D9G170000~~	~~9198286~~	~~U2~~	~~1.0~~	~~07/29/09 05:04~~		
277	~~LGM62C~~	~~D9G170000~~	~~9198286~~	~~U2~~	~~1.0~~	~~07/29/09 05:07~~	KT 7/29/09 Did not use.	

Denver

RUN SUMMARY

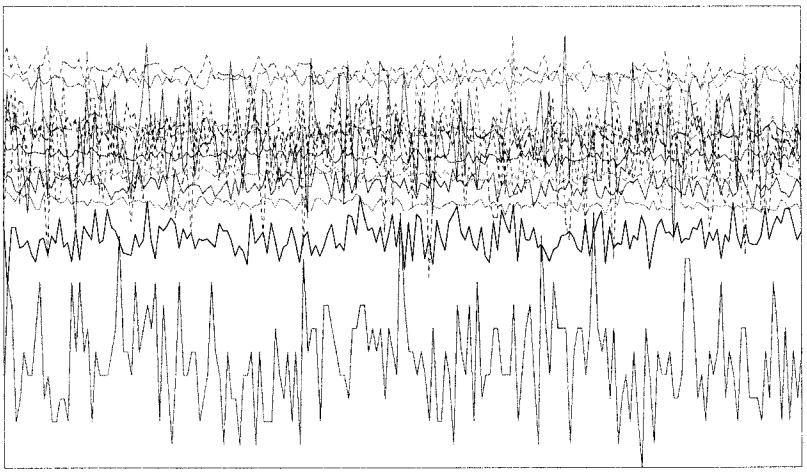
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: **AG072809B** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
278	~~LGM62L~~	~~D9G170000~~	~~9198286~~	~~U2~~	1.0	07/29/09 05:10		☐
279	LGL5Q	D9G160333-6	9198282	U2	1.0	07/29/09 05:13		☐
280	LGL5QP5	D9G160333	9198282		5.0	07/29/09 05:16		☐
281	LGL5QZ	D9G160333-6	9198282		1.0	07/29/09 05:18		☐
282	LGL6M	D9G160333-28	9198282	U2	1.0	07/29/09 05:21		☐
283	CCV				1.0	07/29/09 05:24		☐
284	CCB				1.0	07/29/09 05:27		☐
285	RLCV				1.0	07/29/09 05:29		☐
286	LG1J4B	D9G240000	9205120	MS	1.0	07/29/09 05:32		☐
287	LG1J4C	D9G240000	9205120	MS	1.0	07/29/09 05:35		☐
288	LGX8R	D9G230197-1	9205120	MS	1.0	07/29/09 05:38		☐
289	LGX80	D9G230197-2	9205120	MS	1.0	07/29/09 05:41		☐
290	LGX83	D9G230197-3	9205120	MS	1.0	07/29/09 05:43		☐
291	LGX85	D9G230197-4	9205120	MS	1.0	07/29/09 05:46		☐
292	LGX85P5	D9G230197	9205120		5.0	07/29/09 05:49		☐
293	LGX85Z	D9G230197-4	9205120		1.0	07/29/09 05:52		☐
294	CCV				1.0	07/29/09 05:55		☐
295	CCB				1.0	07/29/09 05:57		☐
296	RLCV				1.0	07/29/09 06:00		☐
297	LGX85S	D9G230197-4	9205120	MS	1.0	07/29/09 06:03		☐
298	LGX85D	D9G230197-4	9205120	MS	1.0	07/29/09 06:06		☐
299	LGX87	D9G230197-5	9205120	MS	1.0	07/29/09 06:09		☐
300	LGX9A	D9G230197-6	9205120	MS	1.0	07/29/09 06:11		☐
301	LGX9C	D9G230197-7	9205120	MS	1.0	07/29/09 06:14		☐
302	LG02Q 20X	D9G230277-1	9205120	MS	20.0	07/29/09 06:17		☐
303	LG021 20X	D9G230277-2	9205120	MS	20.0	07/29/09 06:20		☐
304	CCV				1.0	07/29/09 06:23		☐
305	CCB				1.0	07/29/09 06:25		☐
306	~~RLCV~~				1.0	07/29/09 06:28	VT 7/29/09 Did not use.	☐

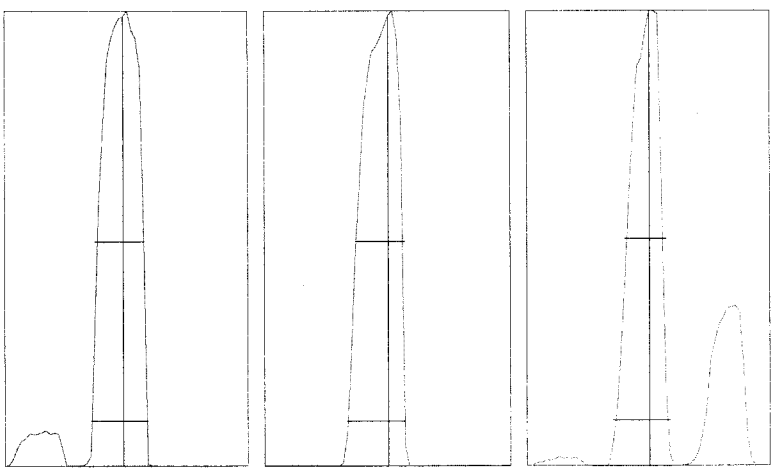
Tune Report

Tune File : NORM.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.863%
Doubly Charged:	70/140	1.818%

m/z	Range	Count	Mean	RSD%	Background
6	2,000	1214.0	1219.0	3.01	0.40
7	20,000	16598.0	16760.7	1.42	0.40
59	20,000	11035.0	11392.2	1.79	0.60
63	100	90.0	72.2	11.81	0.50
70	500	254.0	249.1	6.68	0.80
75	20	5.0	4.6	45.12	0.60
78	200	143.0	145.8	9.18	0.60
89	20,000	14387.0	14568.3	1.83	0.80
115	20,000	12715.0	12651.5	1.63	1.40
118	100	57.0	66.6	12.89	1.10
137	2,000	1412.0	1444.6	3.64	1.40
205	10,000	8467.0	8598.4	1.77	2.10
238	20,000	13531.0	13481.7	1.54	2.10
156/140	5	2.046%	1.940%	7.83	
70/140	5	1.903%	1.938%	7.03	



m/z:	7	89	205
Height:	16,558	14,799	9,079
Axis:	7.00	89.05	205.05
W-50%:	0.60	0.60	0.50
W-10%:	0.700	0.700	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 28, 2009 13:28:09
Printed : Jul 28, 2009 13:28:11

Tune Report

Tune File : NORM.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	: 1550	W	Extract 1	: 0	V	AMU Gain	: 132	
RF Matching	: 1.7	V	Extract 2	: -170	V	AMU Offset	: 123	
Smpl Depth	: 7.5	mm	Omega Bias-ce	: -30	V	Axis Gain	: 1.0006	
Torch-H	: -0.8	mm	Omega Lens-ce	: 0	V	Axis Offset	: -0.04	
Torch-V	: -0.3	mm	Cell Entrance	: -30	V	QP Bias	: -1	V
Carrier Gas	: 0.84	L/min	QP Focus	: 7	V			
Makeup Gas	: 0.21	L/min	Cell Exit	: -30	V	===Detector Parameters===		
Optional Gas	: ---	%				Discriminator	: 8	mV
Nebulizer Pump	: 0.1	rps	===Octopole Parameters===			Analog HV	: 1720	V
Sample Pump	: ---	rps	OctP RF	: 180	V	Pulse HV	: 1390	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 : Jul 28, 2009 13:28:09
Printed : Jul 28, 2009 13:28:15

P/A Factor Tuning Report

Acquired:Jul 28 2009 02:27 pm

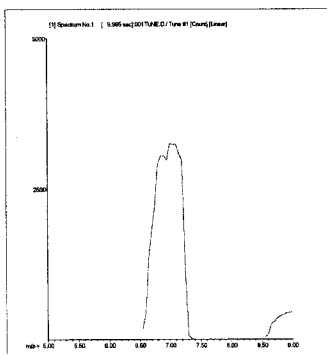
Mass[amu]	Element	P/A Factor
6	Li	0.062600
7	(Li)	Sensitivity too low
9	Be	0.069271
23	Na	0.075406
24	Mg	0.077275
27	Al	0.079248
39	K	0.079254
43	Ca	Sensitivity too low
45	Sc	0.080308
51	V	0.081067
52	Cr	0.083320
53	(Cr)	Sensitivity too low
55	Mn	0.084514
57	Fe	Sensitivity too low
59	Co	0.086846
60	Ni	0.087635
63	Cu	0.088758
66	Zn	0.088829
72	Ge	0.088260
75	As	0.087934
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	0.089842
98	(Mo)	0.089165
99	(Mo)	0.089854
105	Pd	0.091654
106	(Cd)	0.091488
107	Ag	Sensitivity too low
108	(Cd)	0.092233
111	Cd	0.092008
114	Cd	0.091543
115	In	0.090750
118	Sn	0.091015
121	Sb	0.091171
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.096491
206	(Pb)	0.095078
207	(Pb)	0.095253
208	Pb	0.094344
232	Th	0.093740
238	U	0.093786

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1390 V

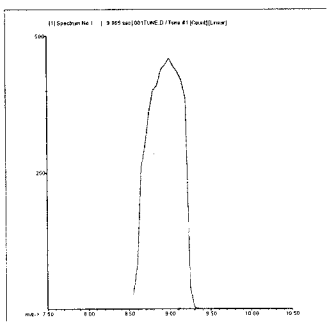
200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\001TUNE.D
Date Acquired: Jul 28 2009 04:23 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	35008	35295	35137	35059	34831	34717	0.67	5.00	
9 Be	4915	4937	4907	4946	4908	4880	0.54	5.00	~~RSDfail~~ KK 7/28/09
24 Mg	27333	27536	27387	27312	27543	26885	0.98	5.00	
59 Co	111637	112783	112414	110044	111134	111808	0.97	5.00	
115 In	1398392	1396618	1400794	1398677	1400984	1394888	0.19	5.00	
208 Pb	69177	70169	69984	69111	69049	67571	1.49	5.00	
238 U	133234	136918	132735	132938	131761	131818	1.60	5.00	

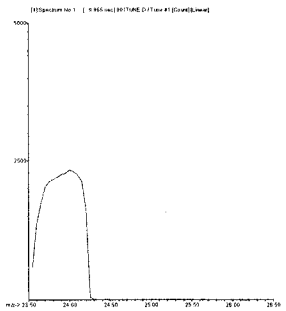


7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



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\AG072809B.B\001TUNE.D



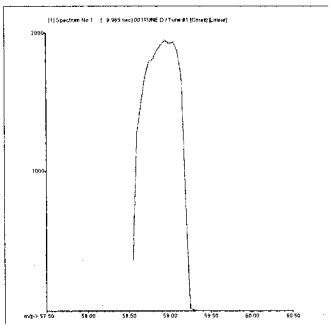
24 Mg

Mass Calib.

Actual: 24.00
Required: 23.90 - 24.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



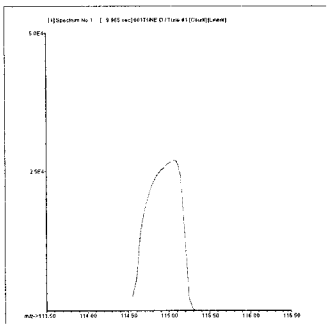
59 Co

Mass Calib.

Actual: 58.95
Required: 58.90 - 59.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



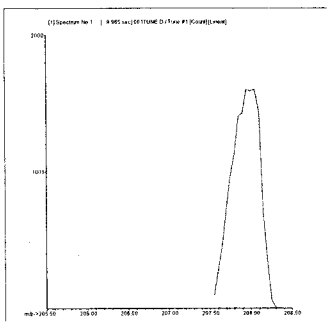
115 In

Mass Calib.

Actual: 115.00
Required: 114.90 - 115.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:



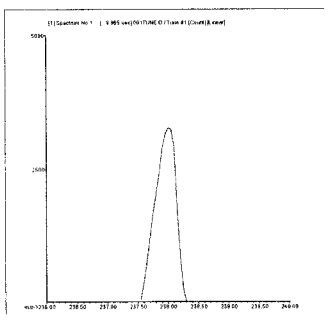
208 Pb

Mass Calib.

Actual: 208.00
Required: 207.90 - 208.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:



238 U

Mass Calib.

Actual: 238.00
Required: 237.90 - 238.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:

Tune Result: ~~Fail~~ pass. 7/28/09

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\002CALB.D\002CALB.D#
Date Acquired: Jul 28 2009 04:26 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: Jul 28 2009 04:27 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	-42	1299.20
52	Cr	72	1	3120	5.99
55	Mn	72	1	747	19.52
59	Co	72	1	143	28.20
60	Ni	72	1	80	21.65
63	Cu	72	1	417	9.99
66	Zn	72	1	518	2.04
75	As	72	1	65	30.04
78	Se	72	1	537	3.88
95	Mo	72	1	300	34.64
107	Ag	115	1	30	0.00
111	Cd	115	1	13	65.06
118	Sn	115	1	7376	6.12
121	Sb	115	1	63	21.05
137	Ba	115	1	36	10.83
205	Tl	165	1	139	9.09
208	Pb	165	1	318	18.42
232	Th	165	1	273	14.79
238	U	165	1	160	6.25

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	618926	2.08
45	Sc	1	2228973	1.36
72	Ge	1	949914	0.69
115	In	1	2463091	0.71
165	Ho	1	3495142	1.36

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\AG072809B.B\003CALB.D\003CALB.D#
Date Acquired: Jul 28 2009 04:29 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: Jul 28 2009 04:27 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-586	50.67
52	Cr	72	1	2844	8.09
55	Mn	72	1	773	7.80
59	Co	72	1	77	7.53
60	Ni	72	1	97	21.53
63	Cu	72	1	660	6.94
66	Zn	72	1	859	1.20
75	As	72	1	71	8.65
78	Se	72	1	583	14.58
95	Mo	72	1	187	26.96
107	Ag	115	1	20	100.00
111	Cd	115	1	-1	547.00
118	Sn	115	1	1647	4.39
121	Sb	115	1	46	8.45
137	Ba	115	1	29	43.68
205	Tl	165	1	49	23.95
208	Pb	165	1	247	19.16
232	Th	165	1	203	20.48
238	U	165	1	36	47.19

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	612846	1.52
45	Sc	1	2248241	0.59
72	Ge	1	964253	0.85
115	In	1	2469796	0.37
165	Ho	1	3500252	0.49

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\AG072809B.B\004ICAL.D\004ICAL.D#
Date Acquired:	Jul 28 2009 04:32 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:	Jul 28 2009 04:30 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	84145	1.48
51	V	72	1	1338341	1.15
52	Cr	72	1	1349521	1.13
55	Mn	72	1	1481750	0.68
59	Co	72	1	1731394	0.67
60	Ni	72	1	390907	0.79
63	Cu	72	1	913188	0.80
66	Zn	72	1	187625	0.70
75	As	72	1	157016	0.72
78	Se	72	1	28613	1.74
95	Mo	72	1	410299	0.45
107	Ag	115	1	1169999	0.75
111	Cd	115	1	222734	0.91
118	Sn	115	1	617854	1.29
121	Sb	115	1	679367	0.93
137	Ba	115	1	294326	0.77
205	Tl	165	1	1918161	1.27
208	Pb	165	1	2628987	0.27
232	Th	165	1	2297499	2.93
238	U	165	1	2711872	0.61

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	593763	2.37	612846	96.9	30 - 120	
45	Sc	1	2184940	0.81	2248241	97.2	30 - 120	
72	Ge	1	928474	0.85	964253	96.3	30 - 120	
115	In	1	2428470	0.11	2469796	98.3	30 - 120	
165	Ho	1	3502651	0.55	3500252	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\AG072809B.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\AG072809B.B\005 ICV.D\005 ICV.D#
Date Acquired:	Jul 28 2009 04:34 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:	Jul 28 2009 04:32 pm
Sample Type:	ICV
Total Dil Factor:	1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.64	ppb	2.09	40	101.6	90 - 110	
51 V	72	1	40.00	ppb	0.72	40	100.0	90 - 110	
52 Cr	72	1	40.08	ppb	0.53	40	100.2	90 - 110	
55 Mn	72	1	40.32	ppb	0.74	40	100.8	90 - 110	
59 Co	72	1	39.42	ppb	0.54	40	98.6	90 - 110	
60 Ni	72	1	40.13	ppb	2.08	40	100.3	90 - 110	
63 Cu	72	1	40.17	ppb	0.96	40	100.4	90 - 110	
66 Zn	72	1	39.59	ppb	2.09	40	99.0	90 - 110	
75 As	72	1	39.58	ppb	0.70	40	99.0	90 - 110	
78 Se	72	1	40.05	ppb	6.91	40	100.1	90 - 110	
95 Mo	72	1	39.79	ppb	0.42	40	99.5	90 - 110	
107 Ag	115	1	40.62	ppb	0.65	40	101.6	90 - 110	
111 Cd	115	1	40.89	ppb	0.86	40	102.2	90 - 110	
118 Sn	115	1	40.10	ppb	0.61	40	100.3	90 - 110	
121 Sb	115	1	39.02	ppb	1.51	40	97.6	90 - 110	
137 Ba	115	1	40.29	ppb	0.77	40	100.7	90 - 110	
205 Tl	165	1	41.79	ppb	1.27	40	104.5	90 - 110	
208 Pb	165	1	42.22	ppb	1.48	40	105.6	90 - 110	
232 Th	165	1	45.82	ppb	2.09	40	114.6	90 - 110	Fail
238 U	165	1	41.60	ppb	1.39	40	104.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	577939	0.57	612846	94.3	30 - 120	
45 Sc	1	2167703	0.29	2248241	96.4	30 - 120	
72 Ge	1	936252	0.48	964253	97.1	30 - 120	
115 In	1	2404262	0.68	2469796	97.3	30 - 120	
165 Ho	1	3456790	1.31	3500252	98.8	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\AG072809B.B\003CALB.D\003CALB.D#

1 :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\AG072809B.B\006WASH.D\006WASH.D#
Date Acquired: Jul 28 2009 04:37 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: Jul 28 2009 04:32 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	1.027 ppb	7.11	1.30	
51 V	72	1	5.242 ppb	2.18	6.50	
52 Cr	72	1	2.099 ppb	1.76	2.60	
55 Mn	72	1	1.045 ppb	2.14	1.30	
59 Co	72	1	1.018 ppb	1.10	1.30	
60 Ni	72	1	2.112 ppb	6.02	2.60	
63 Cu	72	1	2.062 ppb	2.18	2.60	
66 Zn	72	1	10.130 ppb	1.96	13.00	
75 As	72	1	5.102 ppb	2.56	6.50	
78 Se	72	1	5.108 ppb	11.35	6.50	
95 Mo	72	1	2.157 ppb	2.01	2.60	
107 Ag	115	1	5.357 ppb	0.68	6.50	
111 Cd	115	1	1.121 ppb	7.17	1.30	
118 Sn	115	1	10.580 ppb	1.04	13.00	
121 Sb	115	1	2.187 ppb	2.04	2.60	
137 Ba	115	1	1.080 ppb	0.60	1.30	
205 Tl	165	1	1.165 ppb	1.94	1.30	
208 Pb	165	1	1.101 ppb	1.59	1.30	
232 Th	165	1	2.920 ppb	1.83	2.60	
238 U	165	1	1.155 ppb	0.59	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	579274	0.16	612846	94.5	30 - 120	
45 Sc	1	2155941	0.98	2248241	95.9	30 - 120	
72 Ge	1	929578	0.57	964253	96.4	30 - 120	
115 In	1	2407558	0.59	2469796	97.5	30 - 120	
165 Ho	1	3449067	0.55	3500252	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\AG072809B.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\AG072809B.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 28 2009 04:40 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: Jul 28 2009 04:32 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	0.04	ppb	8.39	1.00	
52 Cr	72	1	-0.01	ppb	168.46	1.00	
55 Mn	72	1	0.00	ppb	167.32	1.00	
59 Co	72	1	0.00	ppb	108.03	1.00	
60 Ni	72	1	0.01	ppb	31.49	1.00	
63 Cu	72	1	-0.02	ppb	38.50	1.00	
66 Zn	72	1	-0.23	ppb	1.38	1.00	
75 As	72	1	0.01	ppb	221.38	1.00	
78 Se	72	1	0.07	ppb	148.87	1.00	
95 Mo	72	1	0.01	ppb	49.62	1.00	
107 Ag	115	1	0.01	ppb	23.10	1.00	
111 Cd	115	1	0.01	ppb	187.59	1.00	
118 Sn	115	1	-0.03	ppb	51.61	1.00	
121 Sb	115	1	0.09	ppb	2.19	1.00	
137 Ba	115	1	0.00	ppb	115.43	1.00	
205 Tl	165	1	0.02	ppb	7.30	1.00	
208 Pb	165	1	0.00	ppb	177.19	1.00	
232 Th	165	1	0.20	ppb	6.09	1.00	
238 U	165	1	0.00	ppb	18.83	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	575997	1.07	612846	94.0	30 - 120	
45 Sc	1	2181765	0.30	2248241	97.0	30 - 120	
72 Ge	1	931200	1.71	964253	96.6	30 - 120	
115 In	1	2420259	0.98	2469796	98.0	30 - 120	
165 Ho	1	3451752	0.32	3500252	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\AG072809B.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\AG072809B.B\008RLST.D\008RLST.D#
Date Acquired: Jul 28 2009 04:42 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: Jul 28 2009 04:32 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	1.08	ppb	7.28	1	108.3	50 - 150	
51 V	72	1	1.06	ppb	5.29	1	105.8	50 - 150	
52 Cr	72	1	1.05	ppb	2.76	1	105.3	50 - 150	
55 Mn	72	1	1.07	ppb	3.88	1	106.7	50 - 150	
59 Co	72	1	1.04	ppb	1.34	1	104.0	50 - 150	
60 Ni	72	1	1.06	ppb	10.73	1	106.1	50 - 150	
63 Cu	72	1	1.12	ppb	6.73	1	112.2	50 - 150	
66 Zn	72	1	10.07	ppb	0.97	10	100.7	50 - 150	
75 As	72	1	0.98	ppb	1.40	1	97.9	50 - 150	
78 Se	72	1	0.94	ppb	26.11	1	93.8	50 - 150	
95 Mo	72	1	1.03	ppb	10.38	1	102.7	50 - 150	
107 Ag	115	1	1.05	ppb	2.30	1	105.2	50 - 150	
111 Cd	115	1	1.06	ppb	3.80	1	105.6	50 - 150	
118 Sn	115	1	12.19	ppb	1.47	10	121.9	50 - 150	
121 Sb	115	1	1.05	ppb	3.75	1	104.8	50 - 150	
137 Ba	115	1	1.02	ppb	3.96	1	101.6	50 - 150	
205 Tl	165	1	1.09	ppb	1.19	1	108.5	50 - 150	
208 Pb	165	1	1.08	ppb	1.82	1	107.7	50 - 150	
232 Th	165	1	1.27	ppb	3.70	1	126.5	50 - 150	
238 U	165	1	1.13	ppb	0.83	1	112.8	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	575645	0.76	612846	93.9	30 - 120	
45 Sc	1	2153590	0.22	2248241	95.8	30 - 120	
72 Ge	1	926762	0.65	964253	96.1	30 - 120	
115 In	1	2411935	0.91	2469796	97.7	30 - 120	
165 Ho	1	3438365	0.69	3500252	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\AG072809B.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\AG072809B.B\009AFCE.D\009AFCE.D#
Date Acquired: Jul 28 2009 04:45 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: Jul 28 2009 04:32 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	8.53	0	76.1	80 - 120	
51 V	72	1	0.24	ppb	9.72	0	114.3	80 - 120	
52 Cr	72	1	0.49	ppb	1.78	0	232.0	80 - 120	
55 Mn	72	1	0.28	ppb	6.89	0	129.1	80 - 120	
59 Co	72	1	0.21	ppb	10.36	0	100.8	80 - 120	
60 Ni	72	1	0.38	ppb	10.86	0	179.1	80 - 120	
63 Cu	72	1	0.19	ppb	11.70	0	86.6	80 - 120	
66 Zn	72	1	1.78	ppb	1.17	2	88.3	80 - 120	
75 As	72	1	0.21	ppb	11.46	0	105.5	80 - 120	
78 Se	72	1	0.10	ppb	262.69	0	54.0	80 - 120	
95 Mo	72	1	0.18	ppb	13.02	0	88.3	80 - 120	
107 Ag	115	1	0.20	ppb	4.84	0	97.1	80 - 120	
111 Cd	115	1	0.22	ppb	3.92	0	102.2	80 - 120	
118 Sn	115	1	3.37	ppb	1.24	2	138.2	80 - 120	
121 Sb	115	1	0.22	ppb	2.78	0	106.4	80 - 120	
137 Ba	115	1	0.21	ppb	5.55	0	104.4	80 - 120	
205 Tl	165	1	0.22	ppb	0.38	0	103.3	80 - 120	
208 Pb	165	1	0.22	ppb	3.41	0	100.4	80 - 120	
232 Th	165	1	0.32	ppb	4.74	0	125.7	80 - 120	
238 U	165	1	0.23	ppb	2.37	0	99.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570607	0.14	612846	93.1	30 - 120	
45 Sc	1	2145575	0.91	2248241	95.4	30 - 120	
72 Ge	1	917819	0.73	964253	95.2	30 - 120	
115 In	1	2392885	0.63	2469796	96.9	30 - 120	
165 Ho	1	3409599	0.18	3500252	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\AG072809B.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\AG072809B.B\010SMPL.D\010SMPL.D#
Date Acquired: Jul 28 2009 04:48 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: Jul 28 2009 04:32 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	0.03	0.03	ppb	142.04	3600	
52 Cr	72	1	0.03	0.03	ppb	44.60	3600	
55 Mn	72	1	0.00	0.00	ppb	237.89	3600	
59 Co	72	1	0.00	0.00	ppb	135.84	3600	
60 Ni	72	1	0.00	0.00	ppb	281.73	3600	
63 Cu	72	1	-0.02	-0.02	ppb	30.05	3600	
66 Zn	72	1	-0.28	-0.28	ppb	2.33	3600	
75 As	72	1	0.00	0.00	ppb	192.78	3600	
78 Se	72	1	2.11	2.11	ppb	14.92	3600	
95 Mo	72	1	-0.02	-0.02	ppb	26.57	3600	
107 Ag	115	1	0.00	0.00	ppb	88.39	3600	
111 Cd	115	1	0.01	0.01	ppb	134.51	3600	
118 Sn	115	1	1.73	1.73	ppb	1.05	3600	
121 Sb	115	1	0.01	0.01	ppb	8.56	3600	
137 Ba	115	1	0.00	0.00	ppb	44.65	3600	
205 Tl	165	1	0.01	0.01	ppb	20.03	3600	
208 Pb	165	1	0.00	0.00	ppb	35.73	3600	
232 Th	165	1	0.04	0.04	ppb	13.07	1000	
238 U	165	1	0.00	0.00	ppb	671.13	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	569949	0.94	612846	93.0	30 - 120	
45 Sc	1	2153360	0.28	2248241	95.8	30 - 120	
72 Ge	1	918271	0.69	964253	95.2	30 - 120	
115 In	1	2380310	0.74	2469796	96.4	30 - 120	
165 Ho	1	3415149	0.80	3500252	97.6	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\AG072809B.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\AG072809B.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 28 2009 04:51 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: Jul 28 2009 04:32 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	0.02 ppb	115.97	1.00	
51 V	72	1	-0.26 ppb	84.20	1.00	
52 Cr	72	1	1.11 ppb	2.24	1.00	
55 Mn	72	1	2.45 ppb	0.50	1.00	
59 Co	72	1	0.11 ppb	7.39	1.00	
60 Ni	72	1	1.20 ppb	1.71	1.00	
63 Cu	72	1	0.53 ppb	6.44	1.00	
66 Zn	72	1	3.59 ppb	0.92	10.00	
75 As	72	1	0.49 ppb	4.70	1.00	
78 Se	72	1	0.16 ppb	82.85	1.00	
95 Mo	72	1	1931.00 ppb	0.84	2000.00	
107 Ag	115	1	0.07 ppb	1.69	1.00	
111 Cd	115	1	0.38 ppb	10.34	1.00	
118 Sn	115	1	0.00 ppb	809.63	10.00	
121 Sb	115	1	0.24 ppb	3.97	1.00	
137 Ba	115	1	1.58 ppb	3.75	1.00	
205 Tl	165	1	0.06 ppb	15.49	1.00	
208 Pb	165	1	0.15 ppb	2.24	1.00	
232 Th	165	1	0.11 ppb	9.46	1.00	
238 U	165	1	0.03 ppb	4.70	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	583208	2.05	612846	95.2	30 - 120	
45 Sc	1	1986317	1.73	2248241	88.3	30 - 120	
72 Ge	1	846300	0.21	964253	87.8	30 - 120	
115 In	1	2111321	0.53	2469796	85.5	30 - 120	
165 Ho	1	3134548	1.18	3500252	89.6	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\AG072809B.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\AG072809B.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 28 2009 04:53 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: Jul 28 2009 04:32 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	93.63	2.99	100	93.6	80 - 120	
51 V	72	1	103.60	1.24	100	103.6	80 - 120	
52 Cr	72	1	98.93	0.76	100	98.9	80 - 120	
55 Mn	72	1	99.31	0.60	100	99.3	80 - 120	
59 Co	72	1	93.37	0.46	100	93.4	80 - 120	
60 Ni	72	1	89.79	1.33	100	89.8	80 - 120	
63 Cu	72	1	86.99	1.17	100	87.0	80 - 120	
66 Zn	72	1	93.07	0.21	100	93.1	80 - 120	
75 As	72	1	96.03	0.46	100	96.0	80 - 120	
78 Se	72	1	96.83	2.64	100	96.8	80 - 120	
95 Mo	72	1	2066.00	0.46	2100	98.4	80 - 120	
107 Ag	115	1	86.32	3.24	100	86.3	80 - 120	
111 Cd	115	1	93.89	0.71	100	93.9	80 - 120	
118 Sn	115	1	102.40	0.55	100	102.4	80 - 120	
121 Sb	115	1	100.20	0.69	100	100.2	80 - 120	
137 Ba	115	1	102.40	0.15	100	102.4	80 - 120	
205 Tl	165	1	95.82	0.92	100	95.8	80 - 120	
208 Pb	165	1	94.36	0.88	100	94.4	80 - 120	
232 Th	165	1	112.30	1.30	100	112.3	80 - 120	
238 U	165	1	102.70	0.70	100	102.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	597697	0.87	612846	97.5	30 - 120	
45 Sc	1	1991170	0.11	2248241	88.6	30 - 120	
72 Ge	1	832795	0.22	964253	86.4	30 - 120	
115 In	1	2121354	0.23	2469796	85.9	30 - 120	
165 Ho	1	3205322	0.87	3500252	91.6	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\AG072809B.B\003CALB.D\003CALB.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\AG072809B.B\013SMPL.D\013SMPL.D#
Date Acquired: Jul 28 2009 04:56 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: Jul 28 2009 04:32 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	49.54	3600	
51 V	72	1	0.03	0.03	ppb	110.16	3600	
52 Cr	72	1	0.02	0.02	ppb	75.75	3600	
55 Mn	72	1	0.02	0.02	ppb	34.50	3600	
59 Co	72	1	0.01	0.01	ppb	16.98	3600	
60 Ni	72	1	0.04	0.04	ppb	52.27	3600	
63 Cu	72	1	0.01	0.01	ppb	179.76	3600	
66 Zn	72	1	-0.14	-0.14	ppb	23.90	3600	
75 As	72	1	0.02	0.02	ppb	34.01	3600	
78 Se	72	1	0.25	0.25	ppb	196.49	3600	
95 Mo	72	1	1.75	1.75	ppb	9.96	3600	
107 Ag	115	1	0.02	0.02	ppb	16.39	3600	
111 Cd	115	1	0.02	0.02	ppb	58.83	3600	
118 Sn	115	1	0.91	0.91	ppb	3.73	3600	
121 Sb	115	1	0.04	0.04	ppb	5.57	3600	
137 Ba	115	1	0.02	0.02	ppb	13.66	3600	
205 Tl	165	1	0.02	0.02	ppb	28.03	3600	
208 Pb	165	1	0.02	0.02	ppb	25.21	3600	
232 Th	165	1	0.55	0.55	ppb	10.16	1000	
238 U	165	1	0.03	0.03	ppb	8.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	591158	0.50	612846	96.5	30 - 120	
45 Sc	1	2105451	0.74	2248241	93.6	30 - 120	
72 Ge	1	914785	1.39	964253	94.9	30 - 120	
115 In	1	2403517	0.16	2469796	97.3	30 - 120	
165 Ho	1	3438218	0.80	3500252	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\AG072809B.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\AG072809B.B\014 LR.D\014 LR.D#
Date Acquired: Jul 28 2009 04:59 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 04:32 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	1013.00 ppb	2.73	1000	101.3	90 - 110	
51 V	72	1	905.20 ppb	1.18	1000	90.5	90 - 110	
52 Cr	72	1	927.40 ppb	1.96	1000	92.7	90 - 110	
55 Mn	72	1	927.70 ppb	1.51	1000	92.8	90 - 110	
59 Co	72	1	918.20 ppb	1.37	1000	91.8	90 - 110	
60 Ni	72	1	929.90 ppb	1.58	1000	93.0	90 - 110	
63 Cu	72	1	914.10 ppb	0.66	1000	91.4	90 - 110	
66 Zn	72	1	943.90 ppb	1.22	1000	94.4	90 - 110	
75 As	72	1	950.60 ppb	0.83	1000	95.1	90 - 110	
78 Se	72	1	971.10 ppb	0.95	1000	97.1	90 - 110	
95 Mo	72	1	971.30 ppb	1.05	1000	97.1	90 - 110	
107 Ag	115	1	940.20 ppb	1.29	1000	94.0	90 - 110	
111 Cd	115	1	957.50 ppb	0.99	1000	95.8	90 - 110	
118 Sn	115	1	952.00 ppb	1.85	1000	95.2	90 - 110	
121 Sb	115	1	941.40 ppb	0.72	1000	94.1	90 - 110	
137 Ba	115	1	967.90 ppb	1.32	1000	96.8	90 - 110	
205 Tl	165	1	956.80 ppb	1.64	1000	95.7	90 - 110	
208 Pb	165	1	940.00 ppb	1.26	1000	94.0	90 - 110	
232 Th	165	1	1089.00 ppb	1.54	1000	108.9	90 - 110	
238 U	165	1	984.60 ppb	1.02	1000	98.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	558668	1.18	612846	91.2	30 - 120	
45 Sc	1	2035738	0.57	2248241	90.5	30 - 120	
72 Ge	1	888676	1.18	964253	92.2	30 - 120	
115 In	1	2304474	0.81	2469796	93.3	30 - 120	
165 Ho	1	3408275	1.01	3500252	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\AG072809B.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\AG072809B.B\015SMPL.D\015SMPL.D#
Date Acquired: Jul 28 2009 05:01 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: Jul 28 2009 04:32 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	0.06	0.06	ppb	19.21	3600	
51 V	72	1	0.13	0.13	ppb	24.83	3600	
52 Cr	72	1	0.09	0.09	ppb	15.34	3600	
55 Mn	72	1	0.10	0.10	ppb	23.46	3600	
59 Co	72	1	0.10	0.10	ppb	9.00	3600	
60 Ni	72	1	0.10	0.10	ppb	28.14	3600	
63 Cu	72	1	0.09	0.09	ppb	10.12	3600	
66 Zn	72	1	-0.03	-0.03	ppb	81.27	3600	
75 As	72	1	0.14	0.14	ppb	25.22	3600	
78 Se	72	1	0.37	0.37	ppb	52.27	3600	
95 Mo	72	1	1.00	1.00	ppb	2.44	3600	
107 Ag	115	1	0.13	0.13	ppb	18.16	3600	
111 Cd	115	1	0.10	0.10	ppb	7.52	3600	
118 Sn	115	1	1.89	1.89	ppb	4.69	3600	
121 Sb	115	1	0.49	0.49	ppb	6.00	3600	
137 Ba	115	1	0.09	0.09	ppb	18.94	3600	
205 Tl	165	1	0.23	0.23	ppb	16.56	3600	
208 Pb	165	1	0.11	0.11	ppb	14.96	3600	
232 Th	165	1	3.89	3.89	ppb	14.26	1000	
238 U	165	1	0.18	0.18	ppb	1.35	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	571195	1.60	612846	93.2	30 - 120	
45 Sc	1	2090479	1.03	2248241	93.0	30 - 120	
72 Ge	1	890703	3.24	964253	92.4	30 - 120	
115 In	1	2364013	0.30	2469796	95.7	30 - 120	
165 Ho	1	3400498	0.39	3500252	97.2	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\AG072809B.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\AG072809B.B\016 CCV.D\016 CCV.D#
Date Acquired: Jul 28 2009 05:04 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: Jul 28 2009 04:32 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	50.44	ppb	1.69	50	100.9	90 - 110	
51 V	72	1	49.91	ppb	2.47	50	99.8	90 - 110	
52 Cr	72	1	49.68	ppb	2.43	50	99.4	90 - 110	
55 Mn	72	1	49.53	ppb	1.62	50	99.1	90 - 110	
59 Co	72	1	49.11	ppb	2.57	50	98.2	90 - 110	
60 Ni	72	1	50.19	ppb	2.20	50	100.4	90 - 110	
63 Cu	72	1	49.67	ppb	1.94	50	99.3	90 - 110	
66 Zn	72	1	49.58	ppb	1.71	50	99.2	90 - 110	
75 As	72	1	49.77	ppb	1.98	50	99.5	90 - 110	
78 Se	72	1	50.93	ppb	3.35	50	101.9	90 - 110	
95 Mo	72	1	50.32	ppb	1.70	50	100.6	90 - 110	
107 Ag	115	1	50.47	ppb	0.74	50	100.9	90 - 110	
111 Cd	115	1	50.11	ppb	0.80	50	100.2	90 - 110	
118 Sn	115	1	50.19	ppb	0.61	50	100.4	90 - 110	
121 Sb	115	1	50.38	ppb	0.66	50	100.8	90 - 110	
137 Ba	115	1	50.18	ppb	0.70	50	100.4	90 - 110	
205 Tl	165	1	51.72	ppb	0.94	50	103.4	90 - 110	
208 Pb	165	1	51.33	ppb	0.91	50	102.7	90 - 110	
232 Th	165	1	52.50	ppb	3.10	50	105.0	90 - 110	
238 U	165	1	51.20	ppb	1.38	50	102.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	566188	0.70	612846	92.4	30 - 120	
45 Sc	1	2112459	0.18	2248241	94.0	30 - 120	
72 Ge	1	900764	2.02	964253	93.4	30 - 120	
115 In	1	2353234	0.21	2469796	95.3	30 - 120	
165 Ho	1	3432399	0.49	3500252	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\AG072809B.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\AG072809B.B\017 CCB.D\017 CCB.D#
Date Acquired: Jul 28 2009 05:07 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: Jul 28 2009 04:32 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	0.004	ppb	173.20	1.00	
51 V	72	1	0.044	ppb	27.15	1.00	
52 Cr	72	1	0.016	ppb	46.29	1.00	
55 Mn	72	1	0.064	ppb	8.44	1.00	
59 Co	72	1	0.016	ppb	10.02	1.00	
60 Ni	72	1	0.011	ppb	61.68	1.00	
63 Cu	72	1	-0.002	ppb	118.82	1.00	
66 Zn	72	1	-0.116	ppb	6.18	1.00	
75 As	72	1	0.022	ppb	46.04	1.00	
78 Se	72	1	0.153	ppb	78.79	1.00	
95 Mo	72	1	0.155	ppb	5.59	1.00	
107 Ag	115	1	0.016	ppb	2.42	1.00	
111 Cd	115	1	0.021	ppb	41.11	1.00	
118 Sn	115	1	0.102	ppb	14.49	1.00	
121 Sb	115	1	0.102	ppb	9.70	1.00	
137 Ba	115	1	0.013	ppb	43.84	1.00	
205 Tl	165	1	0.048	ppb	8.05	1.00	
208 Pb	165	1	0.012	ppb	10.93	1.00	
232 Th	165	1	0.931	ppb	9.49	1.00	
238 U	165	1	0.028	ppb	11.68	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570573	1.35	612846	93.1	30 - 120	
45 Sc	1	2116831	0.95	2248241	94.2	30 - 120	
72 Ge	1	905672	0.90	964253	93.9	30 - 120	
115 In	1	2383450	0.80	2469796	96.5	30 - 120	
165 Ho	1	3407598	0.34	3500252	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\AG072809B.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\AG072809B.B\018WASH.D\018WASH.D#
Date Acquired: Jul 28 2009 05:10 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: Jul 28 2009 04:32 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	1.043 ppb	11.80	1.30	
51 V	72	1	5.245 ppb	1.53	6.50	
52 Cr	72	1	2.086 ppb	0.51	2.60	
55 Mn	72	1	1.038 ppb	2.08	1.30	
59 Co	72	1	1.005 ppb	3.33	1.30	
60 Ni	72	1	2.068 ppb	5.36	2.60	
63 Cu	72	1	2.158 ppb	1.62	2.60	
66 Zn	72	1	10.130 ppb	1.16	13.00	
75 As	72	1	5.134 ppb	1.72	6.50	
78 Se	72	1	5.428 ppb	11.09	6.50	
95 Mo	72	1	2.092 ppb	1.92	2.60	
107 Ag	115	1	5.256 ppb	0.97	6.50	
111 Cd	115	1	1.035 ppb	4.95	1.30	
118 Sn	115	1	10.590 ppb	1.00	13.00	
121 Sb	115	1	1.959 ppb	1.55	2.60	
137 Ba	115	1	1.083 ppb	1.39	1.30	
205 Tl	165	1	1.137 ppb	2.68	1.30	
208 Pb	165	1	1.111 ppb	1.45	1.30	
232 Th	165	1	2.561 ppb	0.77	2.60	
238 U	165	1	1.156 ppb	1.74	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570438	0.53	612846	93.1	30 - 120	
45 Sc	1	2115096	0.47	2248241	94.1	30 - 120	
72 Ge	1	910071	1.10	964253	94.4	30 - 120	
115 In	1	2368983	0.37	2469796	95.9	30 - 120	
165 Ho	1	3398785	0.65	3500252	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\AG072809B.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: 07/28/2009

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072809B.B\056CALB.D\056CALB.D#
Date Acquired:	Jul 28 2009 06:56 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:	Jul 28 2009 06:54 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	7	173.21
51	V	72	1	-502	23.06
52	Cr	72	1	1987	3.28
55	Mn	72	1	650	15.21
59	Co	72	1	103	30.55
60	Ni	72	1	47	33.47
63	Cu	72	1	377	13.92
66	Zn	72	1	1488	5.01
75	As	72	1	58	9.54
78	Se	72	1	503	14.21
95	Mo	72	1	413	11.54
107	Ag	115	1	27	77.76
111	Cd	115	1	23	44.81
118	Sn	115	1	6295	2.46
121	Sb	115	1	50	30.58
137	Ba	115	1	34	11.24
205	Tl	165	1	74	58.31
208	Pb	165	1	341	21.14
232	Th	165	1	217	17.36
238	U	165	1	91	27.74

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	372962	0.76
45	Sc	1	1530288	0.49
72	Ge	1	686281	0.94
115	In	1	1820296	0.38
165	Ho	1	2675852	0.26

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\AG072809B.B\057ICAL.D\057ICAL.D#
Date Acquired:	Jul 28 2009 06:59 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:	Jul 28 2009 06:57 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	56396	2.03
51	V	72	1	956518	0.93
52	Cr	72	1	945475	1.34
55	Mn	72	1	1045420	0.22
59	Co	72	1	1194814	0.82
60	Ni	72	1	274055	1.25
63	Cu	72	1	642426	0.80
66	Zn	72	1	132097	0.91
75	As	72	1	114091	0.14
78	Se	72	1	21611	3.41
95	Mo	72	1	298202	1.06
107	Ag	115	1	871780	1.36
111	Cd	115	1	166448	1.31
118	Sn	115	1	458904	0.61
121	Sb	115	1	511422	1.44
137	Ba	115	1	224588	2.09
205	Tl	165	1	1521804	1.48
208	Pb	165	1	2086079	0.36
232	Th	165	1	1962972	3.36
238	U	165	1	2227611	1.39

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	371940	0.16	372962	99.7	30 - 120	
45	Sc	1	1555237	0.59	1530288	101.6	30 - 120	
72	Ge	1	678000	0.76	686281	98.8	30 - 120	
115	In	1	1841746	0.75	1820296	101.2	30 - 120	
165	Ho	1	2673456	0.73	2675852	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\AG072809B.B\056CALB.D\056CALB.D#

0 :Element Failures	0
0 :ISTD Failures	0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\058 CCV.D\058 CCV.D#
Date Acquired: Jul 28 2009 07:02 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: Jul 28 2009 07:00 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	49.39	ppb	1.75	50	98.8	90 - 110	
51 V	72	1	49.27	ppb	0.46	50	98.5	90 - 110	
52 Cr	72	1	49.96	ppb	0.27	50	99.9	90 - 110	
55 Mn	72	1	50.03	ppb	0.64	50	100.1	90 - 110	
59 Co	72	1	50.35	ppb	0.05	50	100.7	90 - 110	
60 Ni	72	1	50.67	ppb	1.56	50	101.3	90 - 110	
63 Cu	72	1	50.23	ppb	0.72	50	100.5	90 - 110	
66 Zn	72	1	49.27	ppb	0.72	50	98.5	90 - 110	
75 As	72	1	49.91	ppb	0.44	50	99.8	90 - 110	
78 Se	72	1	52.01	ppb	1.45	50	104.0	90 - 110	
95 Mo	72	1	50.65	ppb	0.83	50	101.3	90 - 110	
107 Ag	115	1	49.99	ppb	1.90	50	100.0	90 - 110	
111 Cd	115	1	49.49	ppb	1.63	50	99.0	90 - 110	
118 Sn	115	1	49.98	ppb	1.39	50	100.0	90 - 110	
121 Sb	115	1	50.61	ppb	1.08	50	101.2	90 - 110	
137 Ba	115	1	50.16	ppb	1.57	50	100.3	90 - 110	
205 Tl	165	1	50.74	ppb	0.44	50	101.5	90 - 110	
208 Pb	165	1	50.88	ppb	0.59	50	101.8	90 - 110	
232 Th	165	1	50.33	ppb	2.28	50	100.7	90 - 110	
238 U	165	1	50.13	ppb	1.22	50	100.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	372752	1.76	372962	99.9	30 - 120	
45 Sc	1	1531091	0.92	1530288	100.1	30 - 120	
72 Ge	1	675781	0.50	686281	98.5	30 - 120	
115 In	1	1832467	0.73	1820296	100.7	30 - 120	
165 Ho	1	2674446	0.22	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\059 CCB.D\059 CCB.D#
Date Acquired: Jul 28 2009 07:05 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: Jul 28 2009 07:00 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	-0.012	ppb	0.00	1.00	
51 V	72	1	-0.013	ppb	173.17	1.00	
52 Cr	72	1	0.018	ppb	64.64	1.00	
55 Mn	72	1	0.037	ppb	7.00	1.00	
59 Co	72	1	0.004	ppb	40.96	1.00	
60 Ni	72	1	0.014	ppb	57.93	1.00	
63 Cu	72	1	0.025	ppb	35.09	1.00	
66 Zn	72	1	-0.762	ppb	4.14	1.00	
75 As	72	1	0.028	ppb	12.11	1.00	
78 Se	72	1	0.021	ppb	1258.80	1.00	
95 Mo	72	1	0.023	ppb	92.46	1.00	
107 Ag	115	1	0.014	ppb	47.72	1.00	
111 Cd	115	1	0.001	ppb	229.53	1.00	
118 Sn	115	1	-1.134	ppb	3.60	1.00	
121 Sb	115	1	0.062	ppb	11.59	1.00	
137 Ba	115	1	0.009	ppb	26.86	1.00	
205 Tl	165	1	0.048	ppb	19.28	1.00	
208 Pb	165	1	0.003	ppb	6.30	1.00	
232 Th	165	1	0.551	ppb	14.55	1.00	
238 U	165	1	0.012	ppb	13.68	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	375791	0.77	372962	100.8	30 - 120	
45 Sc	1	1543892	0.98	1530288	100.9	30 - 120	
72 Ge	1	693165	0.41	686281	101.0	30 - 120	
115 In	1	1838288	0.95	1820296	101.0	30 - 120	
165 Ho	1	2696902	0.60	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\060WASH.D\060WASH.D#
Date Acquired: Jul 28 2009 07:07 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: Jul 28 2009 07:00 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	0.976 ppb	10.41	1.30	
51 V	72	1	5.072 ppb	1.10	6.50	
52 Cr	72	1	2.066 ppb	2.10	2.60	
55 Mn	72	1	1.016 ppb	3.69	1.30	
59 Co	72	1	1.032 ppb	3.22	1.30	
60 Ni	72	1	2.118 ppb	4.88	2.60	
63 Cu	72	1	2.092 ppb	1.87	2.60	
66 Zn	72	1	9.352 ppb	1.42	13.00	
75 As	72	1	5.169 ppb	0.73	6.50	
78 Se	72	1	5.054 ppb	9.82	6.50	
95 Mo	72	1	1.972 ppb	4.44	2.60	
107 Ag	115	1	5.220 ppb	3.55	6.50	
111 Cd	115	1	1.018 ppb	3.93	1.30	
118 Sn	115	1	9.529 ppb	2.49	13.00	
121 Sb	115	1	1.950 ppb	1.27	2.60	
137 Ba	115	1	1.042 ppb	1.23	1.30	
205 Tl	165	1	1.108 ppb	0.74	1.30	
208 Pb	165	1	1.079 ppb	0.88	1.30	
232 Th	165	1	2.200 ppb	1.64	2.60	
238 U	165	1	1.114 ppb	0.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	380666	0.73	372962	102.1	30 - 120	
45 Sc	1	1538343	1.30	1530288	100.5	30 - 120	
72 Ge	1	694583	0.69	686281	101.2	30 - 120	
115 In	1	1853250	0.93	1820296	101.8	30 - 120	
165 Ho	1	2667916	1.26	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\083 CCV.D\083 CCV.D#
Date Acquired: Jul 28 2009 08:10 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: Jul 28 2009 07:00 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	49.59	ppb	1.36	50	99.2	90 - 110	
51 V	72	1	48.99	ppb	0.50	50	98.0	90 - 110	
52 Cr	72	1	49.22	ppb	0.92	50	98.4	90 - 110	
55 Mn	72	1	49.64	ppb	0.59	50	99.3	90 - 110	
59 Co	72	1	49.84	ppb	0.71	50	99.7	90 - 110	
60 Ni	72	1	49.74	ppb	1.14	50	99.5	90 - 110	
63 Cu	72	1	49.88	ppb	0.75	50	99.8	90 - 110	
66 Zn	72	1	49.81	ppb	0.31	50	99.6	90 - 110	
75 As	72	1	50.49	ppb	0.90	50	101.0	90 - 110	
78 Se	72	1	49.04	ppb	0.54	50	98.1	90 - 110	
95 Mo	72	1	50.57	ppb	1.09	50	101.1	90 - 110	
107 Ag	115	1	48.85	ppb	0.81	50	97.7	90 - 110	
111 Cd	115	1	49.43	ppb	0.82	50	98.9	90 - 110	
118 Sn	115	1	49.63	ppb	0.42	50	99.3	90 - 110	
121 Sb	115	1	50.97	ppb	0.84	50	101.9	90 - 110	
137 Ba	115	1	50.16	ppb	0.59	50	100.3	90 - 110	
205 Tl	165	1	51.01	ppb	1.40	50	102.0	90 - 110	
208 Pb	165	1	51.09	ppb	1.03	50	102.2	90 - 110	
232 Th	165	1	51.86	ppb	2.50	50	103.7	90 - 110	
238 U	165	1	51.08	ppb	0.28	50	102.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	342829	0.39	372962	91.9	30 - 120	
45 Sc	1	1458045	0.51	1530288	95.3	30 - 120	
72 Ge	1	653639	0.60	686281	95.2	30 - 120	
115 In	1	1784346	0.23	1820296	98.0	30 - 120	
165 Ho	1	2588124	0.89	2675852	96.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\084 CCB.D\084 CCB.D#
Date Acquired: Jul 28 2009 08:13 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: Jul 28 2009 07:00 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

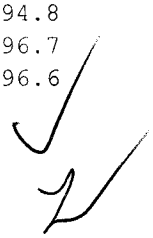
QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.005	ppb	209.43	1.00	
51 V	72	1	0.047	ppb	44.02	1.00	
52 Cr	72	1	0.012	ppb	132.64	1.00	
55 Mn	72	1	0.093	ppb	12.52	1.00	
59 Co	72	1	0.005	ppb	110.75	1.00	
60 Ni	72	1	0.019	ppb	52.66	1.00	
63 Cu	72	1	0.026	ppb	40.09	1.00	
66 Zn	72	1	-0.726	ppb	2.09	1.00	
75 As	72	1	-0.005	ppb	227.48	1.00	
78 Se	72	1	-0.074	ppb	579.76	1.00	
95 Mo	72	1	-0.053	ppb	6.54	1.00	
107 Ag	115	1	0.026	ppb	29.21	1.00	
111 Cd	115	1	0.028	ppb	6.26	1.00	
118 Sn	115	1	-0.871	ppb	7.64	1.00	
121 Sb	115	1	0.040	ppb	8.10	1.00	
137 Ba	115	1	0.034	ppb	22.34	1.00	
205 Tl	165	1	0.035	ppb	17.95	1.00	
208 Pb	165	1	0.018	ppb	14.32	1.00	
232 Th	165	1	0.356	ppb	20.54	1.00	
238 U	165	1	0.014	ppb	11.99	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	345069	0.48	372962	92.5	30 - 120	
45 Sc	1	1437444	0.62	1530288	93.9	30 - 120	
72 Ge	1	650889	0.86	686281	94.8	30 - 120	
115 In	1	1759348	0.67	1820296	96.7	30 - 120	
165 Ho	1	2583905	0.78	2675852	96.6	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\085WASH.D\085WASH.D#
Date Acquired: Jul 28 2009 08:16 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: Jul 28 2009 07:00 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	1.012 ppb	8.09	1.30	
51 V	72	1	5.059 ppb	0.44	6.50	
52 Cr	72	1	2.018 ppb	2.56	2.60	
55 Mn	72	1	1.019 ppb	3.66	1.30	
59 Co	72	1	0.986 ppb	2.74	1.30	
60 Ni	72	1	2.098 ppb	5.42	2.60	
63 Cu	72	1	2.029 ppb	0.76	2.60	
66 Zn	72	1	9.618 ppb	0.48	13.00	
75 As	72	1	5.096 ppb	1.93	6.50	
78 Se	72	1	5.087 ppb	16.74	6.50	
95 Mo	72	1	2.067 ppb	1.93	2.60	
107 Ag	115	1	5.084 ppb	2.08	6.50	
111 Cd	115	1	1.070 ppb	4.72	1.30	
118 Sn	115	1	9.419 ppb	2.10	13.00	
121 Sb	115	1	1.946 ppb	1.82	2.60	
137 Ba	115	1	1.085 ppb	4.87	1.30	
205 Tl	165	1	1.144 ppb	1.38	1.30	
208 Pb	165	1	1.117 ppb	2.51	1.30	
232 Th	165	1	2.338 ppb	1.54	2.60	
238 U	165	1	1.145 ppb	2.46	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	352229	0.70	372962	94.4	30 - 120	
45 Sc	1	1459515	1.84	1530288	95.4	30 - 120	
72 Ge	1	658450	0.44	686281	95.9	30 - 120	
115 In	1	1794112	0.89	1820296	98.6	30 - 120	
165 Ho	1	2545737	0.79	2675852	95.1	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\086ICSA.D\086ICSA.D#
Date Acquired: Jul 28 2009 08:18 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: Jul 28 2009 07:00 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	221.63	1.00	
51 V	72	1	-0.42 ppb	18.81	1.00	
52 Cr	72	1	1.12 ppb	2.14	1.00	
55 Mn	72	1	2.60 ppb	1.77	1.00	
59 Co	72	1	0.13 ppb	6.63	1.00	
60 Ni	72	1	1.42 ppb	4.34	1.00	
63 Cu	72	1	0.56 ppb	7.25	1.00	
66 Zn	72	1	3.30 ppb	3.46	10.00	
75 As	72	1	0.51 ppb	10.44	1.00	
78 Se	72	1	0.21 ppb	212.88	1.00	
95 Mo	72	1	1953.00 ppb	0.57	2000.00	
107 Ag	115	1	0.16 ppb	11.88	1.00	
111 Cd	115	1	0.52 ppb	26.09	1.00	
118 Sn	115	1	-0.02 ppb	308.36	10.00	
121 Sb	115	1	0.26 ppb	8.28	1.00	
137 Ba	115	1	1.60 ppb	4.43	1.00	
205 Tl	165	1	0.07 ppb	18.32	1.00	
208 Pb	165	1	0.15 ppb	5.43	1.00	
232 Th	165	1	0.11 ppb	29.15	1.00	
238 U	165	1	0.04 ppb	9.40	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364235	0.64	372962	97.7	30 - 120	
45 Sc	1	1433875	0.95	1530288	93.7	30 - 120	
72 Ge	1	637931	0.46	686281	93.0	30 - 120	
115 In	1	1634207	0.79	1820296	89.8	30 - 120	
165 Ho	1	2441011	0.25	2675852	91.2	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\087ICSB.D\087ICSB.D#
Date Acquired: Jul 28 2009 08:21 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: Jul 28 2009 07:00 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	91.75	1.09	100	91.8	80 - 120	
51 V	72	1	99.43	0.63	100	99.4	80 - 120	
52 Cr	72	1	98.21	0.55	100	98.2	80 - 120	
55 Mn	72	1	98.77	0.98	100	98.8	80 - 120	
59 Co	72	1	95.41	1.01	100	95.4	80 - 120	
60 Ni	72	1	90.74	0.70	100	90.7	80 - 120	
63 Cu	72	1	88.16	0.68	100	88.2	80 - 120	
66 Zn	72	1	93.64	0.66	100	93.6	80 - 120	
75 As	72	1	99.17	0.61	100	99.2	80 - 120	
78 Se	72	1	98.62	5.31	100	98.6	80 - 120	
95 Mo	72	1	2075.00	1.12	2100	98.8	80 - 120	
107 Ag	115	1	85.30	1.27	100	85.3	80 - 120	
111 Cd	115	1	93.76	1.61	100	93.8	80 - 120	
118 Sn	115	1	103.00	0.47	100	103.0	80 - 120	
121 Sb	115	1	101.20	1.36	100	101.2	80 - 120	
137 Ba	115	1	102.10	1.13	100	102.1	80 - 120	
205 Tl	165	1	94.65	0.62	100	94.7	80 - 120	
208 Pb	165	1	94.48	1.06	100	94.5	80 - 120	
232 Th	165	1	106.50	3.27	100	106.5	80 - 120	
238 U	165	1	99.81	1.60	100	99.8	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365209	0.68	372962	97.9	30 - 120	
45 Sc	1	1427732	0.24	1530288	93.3	30 - 120	
72 Ge	1	622717	0.49	686281	90.7	30 - 120	
115 In	1	1628507	0.66	1820296	89.5	30 - 120	
165 Ho	1	2432267	1.32	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\088WASH.D\088WASH.D#
Date Acquired: Jul 28 2009 08:24 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: Jul 28 2009 07:00 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	-0.006 ppb	187.00	1.30	
51 V	72	1	0.060 ppb	109.95	6.50	
52 Cr	72	1	0.024 ppb	9.83	2.60	
55 Mn	72	1	0.029 ppb	36.21	1.30	
59 Co	72	1	0.012 ppb	18.83	1.30	
60 Ni	72	1	0.044 ppb	31.66	2.60	
63 Cu	72	1	0.033 ppb	40.52	2.60	
66 Zn	72	1	-0.776 ppb	4.57	13.00	
75 As	72	1	0.020 ppb	33.15	6.50	
78 Se	72	1	-0.019 ppb	874.28	6.50	
95 Mo	72	1	1.708 ppb	2.35	2.60	
107 Ag	115	1	0.029 ppb	18.11	6.50	
111 Cd	115	1	0.016 ppb	68.10	1.30	
118 Sn	115	1	0.245 ppb	3.21	13.00	
121 Sb	115	1	0.030 ppb	30.99	2.60	
137 Ba	115	1	0.022 ppb	15.69	1.30	
205 Tl	165	1	0.024 ppb	18.17	1.30	
208 Pb	165	1	0.019 ppb	11.23	1.30	
232 Th	165	1	0.352 ppb	12.17	2.60	
238 U	165	1	0.025 ppb	7.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	363325	0.51	372962	97.4	30 - 120	
45 Sc	1	1482874	1.90	1530288	96.9	30 - 120	
72 Ge	1	672671	1.04	686281	98.0	30 - 120	
115 In	1	1783437	0.79	1820296	98.0	30 - 120	
165 Ho	1	2622816	0.33	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\089 CCV.D\089 CCV.D#
Date Acquired: Jul 28 2009 08:27 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: Jul 28 2009 07:00 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	50.12	ppb	0.33	50	100.2	90 - 110	
51 V	72	1	49.16	ppb	1.39	50	98.3	90 - 110	
52 Cr	72	1	50.05	ppb	0.36	50	100.1	90 - 110	
55 Mn	72	1	49.34	ppb	0.41	50	98.7	90 - 110	
59 Co	72	1	50.06	ppb	0.37	50	100.1	90 - 110	
60 Ni	72	1	50.31	ppb	1.35	50	100.6	90 - 110	
63 Cu	72	1	50.28	ppb	1.06	50	100.6	90 - 110	
66 Zn	72	1	50.09	ppb	0.85	50	100.2	90 - 110	
75 As	72	1	50.62	ppb	0.92	50	101.2	90 - 110	
78 Se	72	1	49.52	ppb	1.57	50	99.0	90 - 110	
95 Mo	72	1	50.45	ppb	0.48	50	100.9	90 - 110	
107 Ag	115	1	50.16	ppb	0.94	50	100.3	90 - 110	
111 Cd	115	1	50.18	ppb	0.66	50	100.4	90 - 110	
118 Sn	115	1	49.71	ppb	0.78	50	99.4	90 - 110	
121 Sb	115	1	51.01	ppb	0.63	50	102.0	90 - 110	
137 Ba	115	1	50.49	ppb	0.87	50	101.0	90 - 110	
205 Tl	165	1	51.22	ppb	1.98	50	102.4	90 - 110	
208 Pb	165	1	51.35	ppb	2.22	50	102.7	90 - 110	
232 Th	165	1	50.06	ppb	1.11	50	100.1	90 - 110	
238 U	165	1	51.01	ppb	0.63	50	102.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360733	0.73	372962	96.7	30 - 120	
45 Sc	1	1507692	0.79	1530288	98.5	30 - 120	
72 Ge	1	669841	0.72	686281	97.6	30 - 120	
115 In	1	1806763	0.77	1820296	99.3	30 - 120	
165 Ho	1	2623994	1.37	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\090 CCB.D\090 CCB.D#
Date Acquired: Jul 28 2009 08:29 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: Jul 28 2009 07:00 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	1.55	1.00	
51 V	72	1	0.071	ppb	55.20	1.00	
52 Cr	72	1	0.015	ppb	106.26	1.00	
55 Mn	72	1	0.055	ppb	10.87	1.00	
59 Co	72	1	0.005	ppb	44.52	1.00	
60 Ni	72	1	0.024	ppb	27.23	1.00	
63 Cu	72	1	0.023	ppb	2.68	1.00	
66 Zn	72	1	-0.719	ppb	6.73	1.00	
75 As	72	1	0.019	ppb	80.75	1.00	
78 Se	72	1	0.045	ppb	70.74	1.00	
95 Mo	72	1	0.113	ppb	52.27	1.00	
107 Ag	115	1	0.020	ppb	32.50	1.00	
111 Cd	115	1	0.006	ppb	92.48	1.00	
118 Sn	115	1	-0.864	ppb	1.54	1.00	
121 Sb	115	1	0.052	ppb	19.03	1.00	
137 Ba	115	1	0.024	ppb	43.45	1.00	
205 Tl	165	1	0.030	ppb	12.84	1.00	
208 Pb	165	1	0.009	ppb	11.35	1.00	
232 Th	165	1	0.493	ppb	20.96	1.00	
238 U	165	1	0.014	ppb	10.38	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	357965	0.57	372962	96.0	30 - 120	
45 Sc	1	1494556	0.79	1530288	97.7	30 - 120	
72 Ge	1	672880	0.38	686281	98.0	30 - 120	
115 In	1	1798094	0.38	1820296	98.8	30 - 120	
165 Ho	1	2616299	0.87	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\091WASH.D\091WASH.D#
Date Acquired: Jul 28 2009 08:32 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: Jul 28 2009 07:00 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	1.073 ppb	11.52	1.30	
51 V	72	1	5.079 ppb	0.58	6.50	
52 Cr	72	1	2.096 ppb	1.55	2.60	
55 Mn	72	1	1.029 ppb	3.73	1.30	
59 Co	72	1	1.057 ppb	0.26	1.30	
60 Ni	72	1	2.025 ppb	2.12	2.60	
63 Cu	72	1	2.050 ppb	1.78	2.60	
66 Zn	72	1	9.558 ppb	1.60	13.00	
75 As	72	1	5.160 ppb	1.07	6.50	
78 Se	72	1	5.830 ppb	18.99	6.50	
95 Mo	72	1	2.060 ppb	0.60	2.60	
107 Ag	115	1	5.235 ppb	2.56	6.50	
111 Cd	115	1	1.100 ppb	1.92	1.30	
118 Sn	115	1	9.523 ppb	1.71	13.00	
121 Sb	115	1	2.006 ppb	0.79	2.60	
137 Ba	115	1	1.150 ppb	3.05	1.30	
205 Tl	165	1	1.112 ppb	1.44	1.30	
208 Pb	165	1	1.082 ppb	2.41	1.30	
232 Th	165	1	2.252 ppb	1.48	2.60	
238 U	165	1	1.119 ppb	1.31	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365116	0.53	372962	97.9	30 - 120	
45 Sc	1	1511857	1.39	1530288	98.8	30 - 120	
72 Ge	1	685114	0.42	686281	99.8	30 - 120	
115 In	1	1798555	1.03	1820296	98.8	30 - 120	
165 Ho	1	2626430	0.14	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\101 CCV.D\101 CCV.D#
Date Acquired: Jul 28 2009 09:00 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: Jul 28 2009 07:00 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	50.73	ppb	1.47	50	101.5	90 - 110	
51 V	72	1	49.13	ppb	0.86	50	98.3	90 - 110	
52 Cr	72	1	49.13	ppb	0.41	50	98.3	90 - 110	
55 Mn	72	1	49.61	ppb	0.27	50	99.2	90 - 110	
59 Co	72	1	49.31	ppb	0.46	50	98.6	90 - 110	
60 Ni	72	1	49.34	ppb	1.24	50	98.7	90 - 110	
63 Cu	72	1	49.43	ppb	0.64	50	98.9	90 - 110	
66 Zn	72	1	49.65	ppb	0.36	50	99.3	90 - 110	
75 As	72	1	50.49	ppb	0.51	50	101.0	90 - 110	
78 Se	72	1	47.82	ppb	5.42	50	95.6	90 - 110	
95 Mo	72	1	50.26	ppb	2.07	50	100.5	90 - 110	
107 Ag	115	1	49.10	ppb	1.62	50	98.2	90 - 110	
111 Cd	115	1	49.91	ppb	0.40	50	99.8	90 - 110	
118 Sn	115	1	49.38	ppb	0.65	50	98.8	90 - 110	
121 Sb	115	1	50.67	ppb	0.96	50	101.3	90 - 110	
137 Ba	115	1	50.41	ppb	1.20	50	100.8	90 - 110	
205 Tl	165	1	51.43	ppb	0.93	50	102.9	90 - 110	
208 Pb	165	1	51.22	ppb	0.52	50	102.4	90 - 110	
232 Th	165	1	53.65	ppb	1.55	50	107.3	90 - 110	
238 U	165	1	51.36	ppb	1.45	50	102.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328877	0.54	372962	88.2	30 - 120	
45 Sc	1	1384036	1.09	1530288	90.4	30 - 120	
72 Ge	1	622196	0.71	686281	90.7	30 - 120	
115 In	1	1700346	0.93	1820296	93.4	30 - 120	
165 Ho	1	2473856	0.47	2675852	92.5	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\102 CCB.D\102 CCB.D#
Date Acquired: Jul 28 2009 09:03 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: Jul 28 2009 07:00 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	-0.005	ppb	241.61	1.00	
51 V	72	1	0.062	ppb	72.25	1.00	
52 Cr	72	1	0.038	ppb	47.18	1.00	
55 Mn	72	1	0.082	ppb	2.20	1.00	
59 Co	72	1	0.008	ppb	29.79	1.00	
60 Ni	72	1	0.015	ppb	70.63	1.00	
63 Cu	72	1	0.016	ppb	44.97	1.00	
66 Zn	72	1	-0.742	ppb	1.29	1.00	
75 As	72	1	0.006	ppb	323.47	1.00	
78 Se	72	1	-0.081	ppb	104.66	1.00	
95 Mo	72	1	-0.033	ppb	101.29	1.00	
107 Ag	115	1	0.018	ppb	17.42	1.00	
111 Cd	115	1	0.018	ppb	30.90	1.00	
118 Sn	115	1	-0.972	ppb	0.46	1.00	
121 Sb	115	1	0.034	ppb	7.67	1.00	
137 Ba	115	1	0.026	ppb	20.16	1.00	
205 Tl	165	1	0.045	ppb	18.68	1.00	
208 Pb	165	1	0.008	ppb	34.50	1.00	
232 Th	165	1	0.245	ppb	20.29	1.00	
238 U	165	1	0.017	ppb	6.10	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	323973	0.43	372962	86.9	30 - 120	
45 Sc	1	1380262	0.27	1530288	90.2	30 - 120	
72 Ge	1	615879	1.04	686281	89.7	30 - 120	
115 In	1	1674866	1.12	1820296	92.0	30 - 120	
165 Ho	1	2425029	0.36	2675852	90.6	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\103WASH.D\103WASH.D#
Date Acquired: Jul 28 2009 09:05 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: Jul 28 2009 07:00 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	1.224 ppb	13.96	1.30	
51 V	72	1	5.141 ppb	1.82	6.50	
52 Cr	72	1	2.062 ppb	0.85	2.60	
55 Mn	72	1	1.023 ppb	6.42	1.30	
59 Co	72	1	1.010 ppb	6.36	1.30	
60 Ni	72	1	2.050 ppb	3.43	2.60	
63 Cu	72	1	2.070 ppb	1.31	2.60	
66 Zn	72	1	9.521 ppb	0.86	13.00	
75 As	72	1	5.148 ppb	1.05	6.50	
78 Se	72	1	5.056 ppb	16.46	6.50	
95 Mo	72	1	1.938 ppb	3.50	2.60	
107 Ag	115	1	5.215 ppb	0.41	6.50	
111 Cd	115	1	1.027 ppb	2.72	1.30	
118 Sn	115	1	9.584 ppb	1.12	13.00	
121 Sb	115	1	2.010 ppb	1.04	2.60	
137 Ba	115	1	1.134 ppb	4.76	1.30	
205 Tl	165	1	1.118 ppb	1.65	1.30	
208 Pb	165	1	1.081 ppb	0.93	1.30	
232 Th	165	1	2.307 ppb	2.32	2.60	
238 U	165	1	1.124 ppb	1.07	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334043	1.33	372962	89.6	30 - 120	
45 Sc	1	1401790	0.39	1530288	91.6	30 - 120	
72 Ge	1	637060	0.58	686281	92.8	30 - 120	
115 In	1	1697626	0.63	1820296	93.3	30 - 120	
165 Ho	1	2479340	0.42	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\104 BLK.D\104 BLK.D#
Date Acquired: Jul 28 2009 09:08 pm
Operator: TEL
Sample Name: LGP0WBF
Misc Info: BLANK 9201157 6020
Vial Number: 2502
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 28 2009 07:00 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	-0.012 ppb	0.00	2.00	
51 V	72	1	0.052 ppb	73.44	2.00	
52 Cr	72	1	-0.014 ppb	97.93	2.00	
55 Mn	72	1	0.019 ppb	11.86	2.00	
59 Co	72	1	0.001 ppb	249.01	2.00	
60 Ni	72	1	0.012 ppb	76.59	2.00	
63 Cu	72	1	0.008 ppb	156.12	2.00	
66 Zn	72	1	-0.474 ppb	5.36	2.00	
75 As	72	1	-0.003 ppb	285.51	2.00	
78 Se	72	1	0.322 ppb	231.82	2.00	
95 Mo	72	1	-0.095 ppb	16.30	2.00	
107 Ag	115	1	0.010 ppb	19.36	2.00	
111 Cd	115	1	0.003 ppb	693.32	2.00	
118 Sn	115	1	-1.227 ppb	2.55	2.00	
121 Sb	115	1	0.018 ppb	39.64	2.00	
137 Ba	115	1	0.014 ppb	26.54	2.00	
205 Tl	165	1	0.011 ppb	7.06	2.00	
208 Pb	165	1	-0.002 ppb	36.49	2.00	
232 Th	165	1	0.023 ppb	13.67	2.00	
238 U	165	1	0.000 ppb	64.72	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	338308	0.90	372962	90.7	30 - 120	
45 Sc	1	1436978	1.18	1530288	93.9	30 - 120	
72 Ge	1	650429	0.79	686281	94.8	30 - 120	
115 In	1	1729804	1.13	1820296	95.0	30 - 120	
165 Ho	1	2499353	1.31	2675852	93.4	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\105 LCS.D\105 LCS.D#
Date Acquired:	Jul 28 2009 09:11 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGP0WCF
Misc Info:	LCS
Vial Number:	2503
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 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	41.84	0.09	40	104.6	80 - 120	
51 V	72	1	39.71	0.28	40	99.3	80 - 120	
52 Cr	72	1	39.90	0.60	40	99.8	80 - 120	
55 Mn	72	1	39.59	0.60	40	99.0	80 - 120	
59 Co	72	1	39.97	0.94	40	99.9	80 - 120	
60 Ni	72	1	39.29	0.32	40	98.2	80 - 120	
63 Cu	72	1	39.77	1.03	40	99.4	80 - 120	
66 Zn	72	1	39.67	0.82	40	99.2	80 - 120	
75 As	72	1	40.43	0.82	40	101.1	80 - 120	
78 Se	72	1	40.84	4.20	40	102.1	80 - 120	
95 Mo	72	1	39.83	1.88	40	99.6	80 - 120	
107 Ag	115	1	40.37	0.49	40	100.9	80 - 120	
111 Cd	115	1	40.17	0.66	40	100.4	80 - 120	
118 Sn	115	1	-1.31	1.61	40	-3.3	80 - 120	
121 Sb	115	1	40.89	0.52	40	102.2	80 - 120	
137 Ba	115	1	40.92	0.80	40	102.3	80 - 120	
205 Tl	165	1	41.44	0.63	40	103.6	80 - 120	
208 Pb	165	1	41.39	0.67	40	103.5	80 - 120	
232 Th	165	1	43.22	1.01	40	108.1	80 - 120	
238 U	165	1	42.75	0.97	40	106.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334331	0.61	372962	89.6	30 - 120	
45 Sc	1	1420526	0.34	1530288	92.8	30 - 120	
72 Ge	1	630473	0.72	686281	91.9	30 - 120	
115 In	1	1700008	0.74	1820296	93.4	30 - 120	
165 Ho	1	2492159	0.18	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\106AREF.D\106AREF.D#
Date Acquired: Jul 28 2009 09:14 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJJF 5X
Misc Info: D9G170255
Vial Number: 2504
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	0.07	0.01	ppb	155.65	3600	
51 V	72	1	43.44	8.69	ppb	1.14	3600	
52 Cr	72	1	18.00	3.60	ppb	0.35	3600	
55 Mn	72	1	2.82	0.56	ppb	6.53	3600	
59 Co	72	1	1.39	0.28	ppb	3.43	3600	
60 Ni	72	1	2.64	0.53	ppb	10.31	3600	
63 Cu	72	1	0.19	0.04	ppb	24.24	3600	
66 Zn	72	1	-2.48	-0.50	ppb	7.42	3600	
75 As	72	1	104.75	20.95	ppb	1.71	3600	
78 Se	72	1	3.39	0.68	ppb	87.98	3600	
95 Mo	72	1	17.96	3.59	ppb	3.52	3600	
107 Ag	115	1	0.09	0.02	ppb	57.41	3600	
111 Cd	115	1	0.03	0.01	ppb	90.28	3600	
118 Sn	115	1	-1.34	-0.27	ppb	15.71	3600	
121 Sb	115	1	0.38	0.08	ppb	10.63	3600	
137 Ba	115	1	21.24	4.25	ppb	4.38	3600	
205 Tl	165	1	0.27	0.05	ppb	26.12	3600	
208 Pb	165	1	0.06	0.01	ppb	16.92	3600	
232 Th	165	1	1.31	0.26	ppb	23.30	1000	
238 U	165	1	6.48	1.30	ppb	0.81	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	332015	0.78	372962	89.0	30 - 120	
45 Sc	1	1379177	1.12	1530288	90.1	30 - 120	
72 Ge	1	602978	0.47	686281	87.9	30 - 120	
115 In	1	1601013	0.69	1820296	88.0	30 - 120	
165 Ho	1	2390327	1.26	2675852	89.3	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\107SDIL.D\107SDIL.D#
Date Acquired: Jul 28 2009 09:16 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJJP25F
Misc Info: SERIAL DILUTION
Vial Number: 2505
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
Sample Type: SDIL
Dilution Factor: 5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\106AREF.D\106AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	-0.01	ppb	209.51	0.00	-180.4	90 - 110	
51 V	72	1	1.71	ppb	4.45	1.74	98.4	90 - 110	
52 Cr	72	1	0.98	ppb	3.47	0.72	135.5	90 - 110	
55 Mn	72	1	0.17	ppb	15.33	0.11	150.0	90 - 110	
59 Co	72	1	0.06	ppb	14.44	0.06	100.1	90 - 110	
60 Ni	72	1	0.27	ppb	10.61	0.11	256.3	90 - 110	
63 Cu	72	1	0.01	ppb	93.56	0.01	184.5	90 - 110	
66 Zn	72	1	-0.86	ppb	2.09	-0.10	871.0	90 - 110	
75 As	72	1	4.19	ppb	3.35	4.19	99.9	90 - 110	
78 Se	72	1	0.03	ppb	1202.30	0.14	22.4	90 - 110	
95 Mo	72	1	0.61	ppb	8.22	0.72	85.2	90 - 110	
107 Ag	115	1	0.01	ppb	11.10	0.00	191.8	90 - 110	
111 Cd	115	1	0.00	ppb	3792.20	0.00	-61.8	90 - 110	
118 Sn	115	1	-0.13	ppb	25.03	-0.05	241.4	90 - 110	
121 Sb	115	1	0.02	ppb	45.26	0.02	123.6	90 - 110	
137 Ba	115	1	0.84	ppb	3.47	0.85	99.4	90 - 110	
205 Tl	165	1	0.01	ppb	15.97	0.01	123.5	90 - 110	
208 Pb	165	1	0.00	ppb	59.45	0.00	54.7	90 - 110	
232 Th	165	1	0.04	ppb	24.47	0.05	70.4	90 - 110	
238 U	165	1	0.26	ppb	1.31	0.26	101.7	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	345758	0.84	372962	92.7	30 - 120	
45 Sc	1	1402700	0.86	1530288	91.7	30 - 120	
72 Ge	1	632138	0.68	686281	92.1	30 - 120	
115 In	1	1677054	0.56	1820296	92.1	30 - 120	
165 Ho	1	2450304	0.86	2675852	91.6	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:39

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJJP25F** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072809B # 107
Acquired: 07/28/2009 21:16:00
Calibrated: 07/28/2009 18:56:00

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	-0.13245	0.07340	280		*	
7440-62-2	Vanadium	51	14797	42.755	43.440	1.58		*	
7440-47-3	Chromium	52	10414	24.395	18.000	35.5		*	
7439-96-5	Manganese	55	2247	4.2310	2.8190	50.1		*	
7440-48-4	Cobalt	59	713	1.3875	1.3870	0.0360		*	
7440-02-0	Nickel	60	733	6.7600	2.6370	156		*	
7440-50-8	Copper	63	430	0.34925	0.18920	84.6		*	
7440-66-6	Zinc	66	319	-21.585	-2.4780			*	
7440-38-2	Arsenic	75	4504	104.65	104.80	0.143	0.21	NC	☑
7782-49-2	Selenium	78	470	0.76150	3.3940	77.6	0.70	NC	☑
7439-98-7	Molybdenum	95	2080	15.295	17.960	14.8		*	
7440-22-4	Silver	107	77	0.16415	0.08562	91.7		*	
7440-43-9	Cadmium	111	20	-0.01673	0.02705	162		*	
7440-31-5	Tin	118	5265	-3.2465	-1.3440			*	
7440-36-0	Antimony	121	134	0.47465	0.38420	23.5		*	
7440-39-3	Barium	137	1759	21.115	21.230	0.542		*	
7440-28-0	Thallium	205	257	0.33760	0.27320	23.6		*	
7439-92-1	Lead	208	336	0.03046	0.05571	45.3		*	
7440-61-1	Uranium	238	5465	6.5900	6.4800	1.70		*	
7440-29-1	Thorium	232	860	0.92000	1.3080	29.7		*	
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: [signature] Date: 7/29/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\108PDS.D\108PDS.D#
Date Acquired: Jul 28 2009 09:19 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJJZF
Misc Info: POST DIGESTION SPIKE
Vial Number: 2506
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 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	194.30	0.01	ppb	1.09	200	97.1	75 - 125	
51 V	72	1	205.00	8.69	ppb	1.84	200	98.2	75 - 125	
52 Cr	72	1	197.30	3.60	ppb	1.90	200	96.9	75 - 125	
55 Mn	72	1	193.40	0.56	ppb	0.39	200	96.4	75 - 125	
59 Co	72	1	187.10	0.28	ppb	0.76	200	93.4	75 - 125	
60 Ni	72	1	182.30	0.53	ppb	0.27	200	90.9	75 - 125	
63 Cu	72	1	185.00	0.04	ppb	0.77	200	92.5	75 - 125	
66 Zn	72	1	189.00	-0.50	ppb	0.09	200	94.7	75 - 125	
75 As	72	1	215.20	20.95	ppb	0.32	200	97.4	75 - 125	
78 Se	72	1	191.40	0.68	ppb	1.93	200	95.4	75 - 125	
95 Mo	72	1	205.80	3.59	ppb	0.35	200	101.1	75 - 125	
107 Ag	115	1	44.38	0.02	ppb	1.78	50	88.7	75 - 125	
111 Cd	115	1	186.70	0.01	ppb	0.52	200	93.3	75 - 125	
118 Sn	115	1	179.10	-0.27	ppb	1.15	200	89.7	75 - 125	
121 Sb	115	1	193.30	0.08	ppb	1.02	200	96.6	75 - 125	
137 Ba	115	1	198.60	4.25	ppb	1.26	200	97.2	75 - 125	
205 Tl	165	1	185.30	0.05	ppb	1.15	200	92.6	75 - 125	
208 Pb	165	1	182.70	0.01	ppb	1.45	200	91.3	75 - 125	
232 Th	165	1	0.04	0.26	ppb	4.39	200	0.0	75 - 125	
238 U	165	1	191.20	1.30	ppb	1.48	200	95.0	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	331417	1.63	372962	88.9	30 - 120	
45 Sc	1	1374241	0.75	1530288	89.8	30 - 120	
72 Ge	1	589103	0.33	686281	85.8	30 - 120	
115 In	1	1617559	1.03	1820296	88.9	30 - 120	
165 Ho	1	2421928	1.05	2675852	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:44

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJJZF** | Spike Dilution: **1.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500** | Channel 272
File: AG072809B # 108 | Method 6020_
Acquired: 07/28/2009 21:19:00 | ICPMS_024 | Matrix: AQUEOUS
Calibrated: 07/28/2009 18:56:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	97616	194.30	0.01468	97.1	200		☑
7440-62-2	Vanadium	51	1704760	205.00	8.6880	98.2	200		☑
7440-47-3	Chromium	52	1619600	197.30	3.6000	96.8	200		☑
7439-96-5	Manganese	55	1756480	193.40	0.56380	96.4	200		☑
7440-48-4	Cobalt	59	1942050	187.10	0.27740	93.4	200		☑
7440-02-0	Nickel	60	434149	182.30	0.52740	90.9	200		☑
7440-50-8	Copper	63	1032580	185.00	0.03784	92.5	200		☑
7440-66-6	Zinc	66	215756	189.00	-0.49560	94.5	200		☑
7440-38-2	Arsenic	75	213308	215.20	20.960	97.1	200		☑
7782-49-2	Selenium	78	35536	191.40	0.67880	95.4	200		☑
7439-98-7	Molybdenum	95	533000	205.80	3.5920	101	200		☑
7440-22-4	Silver	107	339820	44.380	0.01712	88.7	50.0		☑
7440-43-9	Cadmium	111	272889	186.70	0.00541	93.3	200		☑
7440-31-5	Tin	118	717226	179.10	-0.26880	89.6	200		☑
7440-36-0	Antimony	121	868190	193.30	0.07684	96.6	200		☑
7440-39-3	Barium	137	391796	198.60	4.2460	97.2	200		☑
7440-28-0	Thallium	205	2553930	185.30	0.05464	92.6	200		☑
7439-92-1	Lead	208	3451600	182.70	0.01114	91.3	200		☑
7440-61-1	Uranium	238	3857840	191.20	1.2960	95.0	200		☑
7440-29-1	Thorium	232	873	0.03810	0.26160				
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: [signature] Date: 7/29/09

Spiked Sample (MS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\109_MS.D\109_MS.D#
Date Acquired: Jul 28 2009 09:22 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJJSF 5X
Misc Info: MATRIX SPIKE
Vial Number: 2507
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	8.03	0.01	ppb	4.57	40	20.1	50 - 150	
51 V	72	1	17.09	8.69	ppb	1.53	40	35.1	50 - 150	
52 Cr	72	1	11.71	3.60	ppb	1.52	40	26.9	50 - 150	
55 Mn	72	1	8.67	0.56	ppb	0.33	40	21.4	50 - 150	
59 Co	72	1	8.36	0.28	ppb	0.64	40	20.8	50 - 150	
60 Ni	72	1	8.25	0.53	ppb	0.51	40	20.4	50 - 150	
63 Cu	72	1	7.89	0.04	ppb	2.13	40	19.7	50 - 150	
66 Zn	72	1	7.37	-0.50	ppb	2.00	40	18.7	50 - 150	
75 As	72	1	29.09	20.95	ppb	0.75	40	47.7	50 - 150	
78 Se	72	1	8.85	0.68	ppb	2.73	40	21.7	50 - 150	
95 Mo	72	1	12.48	3.59	ppb	2.80	40	28.6	50 - 150	
107 Ag	115	1	7.64	0.02	ppb	1.29	40	19.1	50 - 150	
111 Cd	115	1	8.22	0.01	ppb	1.95	40	20.6	50 - 150	
118 Sn	115	1	0.01	-0.27	ppb	260.00	40	0.0	50 - 150	
121 Sb	115	1	8.79	0.08	ppb	0.65	40	21.9	50 - 150	
137 Ba	115	1	12.48	4.25	ppb	1.10	40	28.2	50 - 150	
205 Tl	165	1	8.19	0.05	ppb	0.62	40	20.4	50 - 150	
208 Pb	165	1	8.08	0.01	ppb	0.47	40	20.2	50 - 150	
232 Th	165	1	9.01	0.26	ppb	1.99	40	22.4	50 - 150	
238 U	165	1	10.03	1.30	ppb	0.36	40	24.3	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	339976	0.42	372962	91.2	30 - 120	
45 Sc	1	1387428	1.23	1530288	90.7	30 - 120	
72 Ge	1	602997	0.41	686281	87.9	30 - 120	
115 In	1	1624749	0.76	1820296	89.3	30 - 120	
165 Ho	1	2461074	0.56	2675852	92.0	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\110 MSD.D\110 MSD.D#
Date Acquired: Jul 28 2009 09:25 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJJDF 5X
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2508
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
Sample Type: MSD
Dilution Factor: 5.00

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\109 MS.D\109 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	7.76	ppb	0.86	8.03	3.41	20	
51 V	72	1	16.28	ppb	2.19	17.09	4.85	20	
52 Cr	72	1	11.42	ppb	2.64	11.71	2.51	20	
55 Mn	72	1	8.35	ppb	1.15	8.67	3.69	20	
59 Co	72	1	8.07	ppb	0.92	8.36	3.54	20	
60 Ni	72	1	7.96	ppb	4.12	8.25	3.60	20	
63 Cu	72	1	7.76	ppb	2.03	7.89	1.58	20	
66 Zn	72	1	7.06	ppb	3.30	7.37	4.33	20	
75 As	72	1	27.83	ppb	0.46	29.09	4.43	20	
78 Se	72	1	8.20	ppb	11.20	8.85	7.59	20	
95 Mo	72	1	11.87	ppb	1.57	12.48	5.01	20	
107 Ag	115	1	7.52	ppb	3.13	7.64	1.60	20	
111 Cd	115	1	7.92	ppb	1.74	8.22	3.75	20	
118 Sn	115	1	-0.14	ppb	34.64	0.01	-244.93	20	
121 Sb	115	1	8.39	ppb	0.17	8.78	4.61	20	
137 Ba	115	1	12.09	ppb	2.42	12.48	3.17	20	
205 Tl	165	1	7.96	ppb	0.85	8.19	2.80	20	
208 Pb	165	1	7.88	ppb	1.05	8.08	2.46	20	
232 Th	165	1	8.92	ppb	1.86	9.01	1.00	20	
238 U	165	1	9.83	ppb	0.59	10.03	1.98	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336697	0.38	372962	90.3	30 - 120	
45 Sc	1	1368352	1.04	1530288	89.4	30 - 120	
72 Ge	1	595111	0.78	686281	86.7	30 - 120	
115 In	1	1605935	0.73	1820296	88.2	30 - 120	
165 Ho	1	2431033	0.24	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\111 CCV.D\111 CCV.D#
Date Acquired:	Jul 28 2009 09:27 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:	Jul 28 2009 07:00 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	50.97	ppb	1.65	50	101.9	90 - 110	
51 V	72	1	48.58	ppb	0.96	50	97.2	90 - 110	
52 Cr	72	1	49.57	ppb	1.07	50	99.1	90 - 110	
55 Mn	72	1	49.69	ppb	0.76	50	99.4	90 - 110	
59 Co	72	1	50.05	ppb	0.38	50	100.1	90 - 110	
60 Ni	72	1	50.10	ppb	0.67	50	100.2	90 - 110	
63 Cu	72	1	49.99	ppb	1.42	50	100.0	90 - 110	
66 Zn	72	1	50.42	ppb	0.52	50	100.8	90 - 110	
75 As	72	1	50.40	ppb	0.87	50	100.8	90 - 110	
78 Se	72	1	50.74	ppb	2.59	50	101.5	90 - 110	
95 Mo	72	1	50.28	ppb	0.82	50	100.6	90 - 110	
107 Ag	115	1	48.98	ppb	2.54	50	98.0	90 - 110	
111 Cd	115	1	49.92	ppb	2.11	50	99.8	90 - 110	
118 Sn	115	1	49.65	ppb	2.52	50	99.3	90 - 110	
121 Sb	115	1	50.69	ppb	2.29	50	101.4	90 - 110	
137 Ba	115	1	50.11	ppb	1.43	50	100.2	90 - 110	
205 Tl	165	1	51.89	ppb	1.69	50	103.8	90 - 110	
208 Pb	165	1	51.98	ppb	1.46	50	104.0	90 - 110	
232 Th	165	1	50.76	ppb	3.32	50	101.5	90 - 110	
238 U	165	1	51.26	ppb	0.72	50	102.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	341995	1.61	372962	91.7	30 - 120	
45 Sc	1	1410506	0.93	1530288	92.2	30 - 120	
72 Ge	1	625240	0.34	686281	91.1	30 - 120	
115 In	1	1724277	1.43	1820296	94.7	30 - 120	
165 Ho	1	2491006	0.97	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\112 CCB.D\112 CCB.D#
Date Acquired: Jul 28 2009 09:30 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: Jul 28 2009 07:00 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	930.89	1.00	
51 V	72	1	0.046	ppb	39.71	1.00	
52 Cr	72	1	0.027	ppb	51.44	1.00	
55 Mn	72	1	0.044	ppb	8.93	1.00	
59 Co	72	1	0.005	ppb	60.76	1.00	
60 Ni	72	1	0.020	ppb	41.04	1.00	
63 Cu	72	1	0.012	ppb	67.47	1.00	
66 Zn	72	1	-0.723	ppb	0.58	1.00	
75 As	72	1	0.014	ppb	82.22	1.00	
78 Se	72	1	-0.332	ppb	77.48	1.00	
95 Mo	72	1	-0.044	ppb	33.06	1.00	
107 Ag	115	1	0.015	ppb	22.94	1.00	
111 Cd	115	1	-0.012	ppb	93.03	1.00	
118 Sn	115	1	-0.968	ppb	5.85	1.00	
121 Sb	115	1	0.060	ppb	7.40	1.00	
137 Ba	115	1	0.018	ppb	32.52	1.00	
205 Tl	165	1	0.039	ppb	12.82	1.00	
208 Pb	165	1	0.007	ppb	22.42	1.00	
232 Th	165	1	0.424	ppb	19.72	1.00	
238 U	165	1	0.014	ppb	15.81	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	340678	0.98	372962	91.3	30 - 120	
45 Sc	1	1382674	1.09	1530288	90.4	30 - 120	
72 Ge	1	624130	1.05	686281	90.9	30 - 120	
115 In	1	1689551	1.72	1820296	92.8	30 - 120	
165 Ho	1	2468165	0.53	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\113WASH.D\113WASH.D#
Date Acquired: Jul 28 2009 09:33 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: Jul 28 2009 07:00 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	1.102 ppb	23.57	1.30	
51 V	72	1	5.036 ppb	0.20	6.50	
52 Cr	72	1	2.073 ppb	1.43	2.60	
55 Mn	72	1	1.012 ppb	4.21	1.30	
59 Co	72	1	1.014 ppb	4.35	1.30	
60 Ni	72	1	2.139 ppb	1.52	2.60	
63 Cu	72	1	2.072 ppb	5.52	2.60	
66 Zn	72	1	9.466 ppb	0.59	13.00	
75 As	72	1	5.136 ppb	0.93	6.50	
78 Se	72	1	5.971 ppb	9.35	6.50	
95 Mo	72	1	2.012 ppb	5.06	2.60	
107 Ag	115	1	5.151 ppb	0.35	6.50	
111 Cd	115	1	1.030 ppb	2.98	1.30	
118 Sn	115	1	9.527 ppb	1.50	13.00	
121 Sb	115	1	1.984 ppb	1.53	2.60	
137 Ba	115	1	1.097 ppb	2.88	1.30	
205 Tl	165	1	1.118 ppb	1.33	1.30	
208 Pb	165	1	1.086 ppb	1.49	1.30	
232 Th	165	1	2.239 ppb	3.26	2.60	
238 U	165	1	1.131 ppb	1.81	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	337940	0.88	372962	90.6	30 - 120	
45 Sc	1	1387661	1.65	1530288	90.7	30 - 120	
72 Ge	1	627413	0.75	686281	91.4	30 - 120	
115 In	1	1673364	0.63	1820296	91.9	30 - 120	
165 Ho	1	2458208	0.75	2675852	91.9	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\114 BLK.D\114 BLK.D#
Date Acquired: Jul 28 2009 09:36 pm
Operator: TEL
Sample Name: LGP0QB
Misc Info: BLANK 9201150 6020
Vial Number: 2509
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 28 2009 07:00 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	0.002 ppb	657.66	2.00	
51 V	72	1	0.061 ppb	73.05	2.00	
52 Cr	72	1	0.067 ppb	4.59	2.00	
55 Mn	72	1	0.035 ppb	29.39	2.00	
59 Co	72	1	0.000 ppb	414.49	2.00	
60 Ni	72	1	0.006 ppb	72.21	2.00	
63 Cu	72	1	0.030 ppb	16.68	2.00	
66 Zn	72	1	-0.471 ppb	4.35	2.00	
75 As	72	1	0.002 ppb	855.80	2.00	
78 Se	72	1	-0.100 ppb	87.97	2.00	
95 Mo	72	1	-0.090 ppb	28.01	2.00	
107 Ag	115	1	0.012 ppb	35.67	2.00	
111 Cd	115	1	0.003 ppb	249.53	2.00	
118 Sn	115	1	-1.094 ppb	2.30	2.00	
121 Sb	115	1	0.029 ppb	12.67	2.00	
137 Ba	115	1	0.185 ppb	5.76	2.00	
205 Tl	165	1	0.020 ppb	26.40	2.00	
208 Pb	165	1	0.003 ppb	47.81	2.00	
232 Th	165	1	0.079 ppb	20.66	2.00	
238 U	165	1	0.002 ppb	68.13	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326950	0.66	372962	87.7	30 - 120	
45 Sc	1	1354004	0.49	1530288	88.5	30 - 120	
72 Ge	1	602156	0.44	686281	87.7	30 - 120	
115 In	1	1634270	1.40	1820296	89.8	30 - 120	
165 Ho	1	2424590	0.69	2675852	90.6	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\115 LCS.D\115 LCS.D#
Date Acquired:	Jul 28 2009 09:39 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGP0QC
Misc Info:	LCS
Vial Number:	2510
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 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	38.82	0.23	40	97.1	80 - 120	
51 V	72	1	40.07	0.40	40	100.2	80 - 120	
52 Cr	72	1	40.36	0.59	40	100.9	80 - 120	
55 Mn	72	1	40.53	0.13	40	101.3	80 - 120	
59 Co	72	1	40.29	0.41	40	100.7	80 - 120	
60 Ni	72	1	40.38	1.07	40	101.0	80 - 120	
63 Cu	72	1	40.63	0.91	40	101.6	80 - 120	
66 Zn	72	1	37.80	0.53	40	94.5	80 - 120	
75 As	72	1	39.19	0.36	40	98.0	80 - 120	
78 Se	72	1	34.04	4.95	40	85.1	80 - 120	
95 Mo	72	1	41.11	1.00	40	102.8	80 - 120	
107 Ag	115	1	39.50	1.28	40	98.8	80 - 120	
111 Cd	115	1	38.14	1.04	40	95.4	80 - 120	
118 Sn	115	1	-1.23	1.22	40	-3.1	80 - 120	
121 Sb	115	1	39.46	1.73	40	98.7	80 - 120	
137 Ba	115	1	40.74	1.95	40	101.9	80 - 120	
205 Tl	165	1	41.60	0.12	40	104.0	80 - 120	
208 Pb	165	1	41.55	0.08	40	103.9	80 - 120	
232 Th	165	1	45.64	1.45	40	114.1	80 - 120	
238 U	165	1	43.35	0.07	40	108.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	322173	0.31	372962	86.4	30 - 120	
45 Sc	1	1326913	1.61	1530288	86.7	30 - 120	
72 Ge	1	585701	0.44	686281	85.3	30 - 120	
115 In	1	1644624	1.41	1820296	90.3	30 - 120	
165 Ho	1	2417838	0.92	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\116AREF.D\116AREF.D#
Date Acquired: Jul 28 2009 09:41 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJH 5X
Misc Info: D9G170255
Vial Number: 2511
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	0.04	0.01	ppb	1.63	3600	
51 V	72	1	38.35	7.67	ppb	0.92	3600	
52 Cr	72	1	16.83	3.37	ppb	2.30	3600	
55 Mn	72	1	4.86	0.97	ppb	4.70	3600	
59 Co	72	1	0.31	0.06	ppb	22.63	3600	
60 Ni	72	1	2.61	0.52	ppb	5.62	3600	
63 Cu	72	1	0.32	0.06	ppb	27.70	3600	
66 Zn	72	1	-1.56	-0.31	ppb	10.88	3600	
75 As	72	1	93.10	18.62	ppb	0.60	3600	
78 Se	72	1	2.03	0.41	ppb	76.50	3600	
95 Mo	72	1	17.46	3.49	ppb	5.35	3600	
107 Ag	115	1	0.11	0.02	ppb	49.98	3600	
111 Cd	115	1	0.11	0.02	ppb	34.11	3600	
118 Sn	115	1	-0.78	-0.16	ppb	10.10	3600	
121 Sb	115	1	0.34	0.07	ppb	5.28	3600	
137 Ba	115	1	23.22	4.64	ppb	3.57	3600	
205 Tl	165	1	0.21	0.04	ppb	28.42	3600	
208 Pb	165	1	0.16	0.03	ppb	9.84	3600	
232 Th	165	1	1.60	0.32	ppb	23.79	1000	
238 U	165	1	6.12	1.22	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	327647	0.68	372962	87.8	30 - 120	
45 Sc	1	1332155	1.16	1530288	87.1	30 - 120	
72 Ge	1	584756	0.20	686281	85.2	30 - 120	
115 In	1	1576646	0.70	1820296	86.6	30 - 120	
165 Ho	1	2404368	1.26	2675852	89.9	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\117SDIL.D\117SDIL.D#
Date Acquired:	Jul 28 2009 09:44 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHP25
Misc Info:	SERIAL DILUTION
Vial Number:	2512
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
Sample Type:	SDIL
Dilution Factor:	5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\116AREF.D\116AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	1638.70	0.00	82.1	90 - 110	
51 V	72	1	1.52	ppb	2.06	1.53	99.3	90 - 110	
52 Cr	72	1	0.93	ppb	2.72	0.67	138.7	90 - 110	
55 Mn	72	1	0.24	ppb	3.86	0.19	124.8	90 - 110	
59 Co	72	1	0.02	ppb	14.84	0.01	127.1	90 - 110	
60 Ni	72	1	0.29	ppb	12.61	0.10	274.8	90 - 110	
63 Cu	72	1	0.01	ppb	145.69	0.01	102.1	90 - 110	
66 Zn	72	1	-0.88	ppb	1.10	-0.06	1403.1	90 - 110	
75 As	72	1	3.74	ppb	4.99	3.72	100.5	90 - 110	
78 Se	72	1	-0.13	ppb	187.83	0.08	-162.6	90 - 110	
95 Mo	72	1	0.62	ppb	20.90	0.70	88.5	90 - 110	
107 Ag	115	1	0.01	ppb	22.47	0.00	147.9	90 - 110	
111 Cd	115	1	-0.01	ppb	200.53	0.00	-207.1	90 - 110	
118 Sn	115	1	-0.07	ppb	144.43	-0.03	211.0	90 - 110	
121 Sb	115	1	0.01	ppb	37.69	0.01	110.9	90 - 110	
137 Ba	115	1	0.93	ppb	0.84	0.93	99.6	90 - 110	
205 Tl	165	1	0.01	ppb	8.93	0.01	127.1	90 - 110	
208 Pb	165	1	0.01	ppb	22.61	0.01	90.4	90 - 110	
232 Th	165	1	0.04	ppb	9.29	0.06	66.8	90 - 110	
238 U	165	1	0.25	ppb	5.71	0.24	101.6	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335522	0.95	372962	90.0	30 - 120	
45 Sc	1	1353126	0.34	1530288	88.4	30 - 120	
72 Ge	1	611118	0.32	686281	89.0	30 - 120	
115 In	1	1661246	0.89	1820296	91.3	30 - 120	
165 Ho	1	2431086	1.04	2675852	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:49

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJHP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072809B # 117
Acquired: 07/28/2009 21:44:00
Calibrated: 07/28/2009 18:56:00

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	7	0.03460	0.04212	17.9		*	
7440-62-2	Vanadium	51	12691	38.075	38.340	0.691		*	
7440-47-3	Chromium	52	9710	23.340	16.830	38.7		*	
7439-96-5	Manganese	55	2860	6.0550	4.8550	24.7		*	
7440-48-4	Cobalt	59	263	0.39800	0.31310	27.1		*	
7440-02-0	Nickel	60	750	7.1700	2.6100	175		*	
7440-50-8	Copper	63	410	0.32225	0.31550	2.14		*	
7440-66-6	Zinc	66	292	-21.930	-1.5630			*	
7440-38-2	Arsenic	75	3897	93.550	93.120	0.462	0.21	NC	☑
7782-49-2	Selenium	78	423	-3.3080	2.0340	263	0.70	NC	☑
7439-98-7	Molybdenum	95	2027	15.455	17.460	11.5		*	
7440-22-4	Silver	107	73	0.15570	0.10530	47.9		*	
7440-43-9	Cadmium	111	8	-0.22825	0.11020	307		*	
7440-31-5	Tin	118	5475	-1.6555	-0.78460			*	
7440-36-0	Antimony	121	114	0.37305	0.33630	10.9		*	
7440-39-3	Barium	137	1906	23.135	23.220	0.366		*	
7440-28-0	Thallium	205	216	0.26715	0.21030	27.0		*	
7439-92-1	Lead	208	420	0.14540	0.16090	9.63		*	
7440-61-1	Uranium	238	5121	6.2200	6.1210	1.62		*	
7440-29-1	Thorium	232	960	1.0690	1.6000	33.2		*	
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: 7/29/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\118PDS.D\118PDS.D#
Date Acquired: Jul 28 2009 09:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJHZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 3101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 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	189.20	0.01	ppb	2.22	200	94.6	75 - 125	
51 V	72	1	200.30	7.67	ppb	1.93	200	96.5	75 - 125	
52 Cr	72	1	195.90	3.37	ppb	1.20	200	96.3	75 - 125	
55 Mn	72	1	192.70	0.97	ppb	1.94	200	95.9	75 - 125	
59 Co	72	1	189.00	0.06	ppb	1.11	200	94.5	75 - 125	
60 Ni	72	1	183.10	0.52	ppb	0.46	200	91.3	75 - 125	
63 Cu	72	1	181.40	0.06	ppb	1.68	200	90.7	75 - 125	
66 Zn	72	1	185.80	-0.31	ppb	0.61	200	93.0	75 - 125	
75 As	72	1	210.80	18.62	ppb	0.45	200	96.4	75 - 125	
78 Se	72	1	191.90	0.41	ppb	4.78	200	95.8	75 - 125	
95 Mo	72	1	203.50	3.49	ppb	0.62	200	100.0	75 - 125	
107 Ag	115	1	44.67	0.02	ppb	1.76	50	89.3	75 - 125	
111 Cd	115	1	185.10	0.02	ppb	1.61	200	92.5	75 - 125	
118 Sn	115	1	179.20	-0.16	ppb	1.55	200	89.7	75 - 125	
121 Sb	115	1	193.70	0.07	ppb	1.23	200	96.8	75 - 125	
137 Ba	115	1	199.30	4.64	ppb	0.87	200	97.4	75 - 125	
205 Tl	165	1	185.30	0.04	ppb	0.01	200	92.6	75 - 125	
208 Pb	165	1	184.30	0.03	ppb	0.80	200	92.1	75 - 125	
232 Th	165	1	0.06	0.32	ppb	7.66	200	0.0	75 - 125	
238 U	165	1	191.60	1.22	ppb	0.66	200	95.2	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	324252	1.06	372962	86.9	30 - 120	
45 Sc	1	1341675	1.11	1530288	87.7	30 - 120	
72 Ge	1	573678	0.36	686281	83.6	30 - 120	
115 In	1	1587283	1.26	1820296	87.2	30 - 120	
165 Ho	1	2394242	0.47	2675852	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:54

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJHZ** | Spike Dilution: **1.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072809B # 118
Acquired: 07/28/2009 21:47:00
Calibrated: 07/28/2009 18:56:00

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	92982	189.20	0.00842	94.6	200		☑
7440-62-2	Vanadium	51	1622040	200.30	7.6680	96.3	200		☑
7440-47-3	Chromium	52	1565750	195.90	3.3660	96.3	200		☑
7439-96-5	Manganese	55	1703850	192.70	0.97100	95.9	200		☑
7440-48-4	Cobalt	59	1910250	189.00	0.06262	94.5	200		☑
7440-02-0	Nickel	60	424664	183.10	0.52200	91.3	200		☑
7440-50-8	Copper	63	985824	181.40	0.06310	90.7	200		☑
7440-66-6	Zinc	66	206570	185.80	-0.31260	92.9	200		☑
7440-38-2	Arsenic	75	203456	210.80	18.624	96.1	200		☑
7782-49-2	Selenium	78	34707	191.90	0.40680	95.7	200		☑
7439-98-7	Molybdenum	95	513099	203.50	3.4920	100	200		☑
7440-22-4	Silver	107	335607	44.670	0.02106	89.3	50.0		☑
7440-43-9	Cadmium	111	265422	185.10	0.02204	92.5	200		☑
7440-31-5	Tin	118	704134	179.20	-0.15692	89.6	200		☑
7440-36-0	Antimony	121	853506	193.70	0.06726	96.8	200		☑
7440-39-3	Barium	137	385778	199.30	4.6440	97.3	200		☑
7440-28-0	Thallium	205	2525220	185.30	0.04206	92.6	200		☑
7439-92-1	Lead	208	3441980	184.30	0.03218	92.1	200		☑
7440-61-1	Uranium	238	3822410	191.60	1.2242	95.2	200		☑
7440-29-1	Thorium	232	1233	0.05912	0.32000				
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: [signature] Date: 7/29/09

Spiked Sample (MS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072809B.B\119_MS.D\119_MS.D#
Date Acquired:	Jul 28 2009 09:50 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHS 5X
Misc Info:	MATRIX SPIKE
Vial Number:	3102
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
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	8.18	0.01	ppb	2.53	40	20.4	50 - 150	
51 V	72	1	16.10	7.67	ppb	0.35	40	33.8	50 - 150	
52 Cr	72	1	11.39	3.37	ppb	0.96	40	26.3	50 - 150	
55 Mn	72	1	8.77	0.97	ppb	1.03	40	21.4	50 - 150	
59 Co	72	1	7.92	0.06	ppb	1.20	40	19.8	50 - 150	
60 Ni	72	1	7.98	0.52	ppb	5.21	40	19.7	50 - 150	
63 Cu	72	1	7.73	0.06	ppb	1.60	40	19.3	50 - 150	
66 Zn	72	1	7.22	-0.31	ppb	2.82	40	18.2	50 - 150	
75 As	72	1	27.41	18.62	ppb	0.42	40	46.8	50 - 150	
78 Se	72	1	9.14	0.41	ppb	8.11	40	22.6	50 - 150	
95 Mo	72	1	12.04	3.49	ppb	2.43	40	27.7	50 - 150	
107 Ag	115	1	7.48	0.02	ppb	3.89	40	18.7	50 - 150	
111 Cd	115	1	7.77	0.02	ppb	2.96	40	19.4	50 - 150	
118 Sn	115	1	0.01	-0.16	ppb	591.92	40	0.0	50 - 150	
121 Sb	115	1	8.34	0.07	ppb	2.01	40	20.8	50 - 150	
137 Ba	115	1	12.92	4.64	ppb	2.36	40	28.9	50 - 150	
205 Tl	165	1	8.02	0.04	ppb	0.77	40	20.0	50 - 150	
208 Pb	165	1	7.93	0.03	ppb	0.41	40	19.8	50 - 150	
232 Th	165	1	8.78	0.32	ppb	2.75	40	21.8	50 - 150	
238 U	165	1	9.84	1.22	ppb	0.74	40	23.9	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	330280	0.56	372962	88.6	30 - 120	
45 Sc	1	1354678	0.35	1530288	88.5	30 - 120	
72 Ge	1	590050	0.70	686281	86.0	30 - 120	
115 In	1	1595874	1.86	1820296	87.7	30 - 120	
165 Ho	1	2417465	0.32	2675852	90.3	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\120 MSD.D\120 MSD.D#
Date Acquired:	Jul 28 2009 09:52 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHD 5X
Misc Info:	MATRIX SPIKE DUPLICATE
Vial Number:	3103
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
Sample Type:	MSD
Dilution Factor:	5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\119 MS.D\119 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.73	ppb	5.32	8.18	5.57	20	
51 V	72	1	16.05	ppb	1.20	16.10	0.31	20	
52 Cr	72	1	11.39	ppb	0.58	11.39	0.00	20	
55 Mn	72	1	8.81	ppb	1.68	8.77	0.44	20	
59 Co	72	1	7.91	ppb	0.45	7.92	0.13	20	
60 Ni	72	1	8.23	ppb	1.20	7.98	3.02	20	
63 Cu	72	1	7.70	ppb	2.36	7.73	0.40	20	
66 Zn	72	1	7.09	ppb	0.50	7.22	1.71	20	
75 As	72	1	27.18	ppb	0.71	27.41	0.84	20	
78 Se	72	1	7.53	ppb	8.84	9.14	19.40	20	
95 Mo	72	1	11.79	ppb	1.85	12.04	2.10	20	
107 Ag	115	1	7.59	ppb	1.99	7.48	1.53	20	
111 Cd	115	1	7.98	ppb	0.71	7.77	2.60	20	
118 Sn	115	1	-0.16	ppb	73.02	0.01	-218.63	20	
121 Sb	115	1	8.50	ppb	0.74	8.34	1.86	20	
137 Ba	115	1	13.23	ppb	0.60	12.92	2.37	20	
205 Tl	165	1	8.02	ppb	1.17	8.02	0.09	20	
208 Pb	165	1	8.00	ppb	1.19	7.93	0.87	20	
232 Th	165	1	9.03	ppb	1.81	8.78	2.85	20	
238 U	165	1	9.91	ppb	1.49	9.84	0.71	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331609	0.42	372962	88.9	30 - 120	
45 Sc	1	1354065	0.98	1530288	88.5	30 - 120	
72 Ge	1	591478	0.63	686281	86.2	30 - 120	
115 In	1	1584871	0.32	1820296	87.1	30 - 120	
165 Ho	1	2426445	0.93	2675852	90.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\121SMPL.D\121SMPL.D#
Date Acquired: Jul 28 2009 09:56 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGPGA 5X
Misc Info: D9G180154
Vial Number: 3104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	-0.03	-0.01	ppb	217.09	3600	
51 V	72	1	40.61	8.12	ppb	0.47	3600	
52 Cr	72	1	42.85	8.57	ppb	1.88	3600	
55 Mn	72	1	1.73	0.35	ppb	2.25	3600	
59 Co	72	1	0.40	0.08	ppb	12.09	3600	
60 Ni	72	1	4.30	0.86	ppb	11.86	3600	
63 Cu	72	1	0.28	0.06	ppb	16.24	3600	
66 Zn	72	1	-3.62	-0.72	ppb	3.71	3600	
75 As	72	1	187.90	37.58	ppb	1.88	3600	
78 Se	72	1	5.38	1.08	ppb	24.33	3600	
95 Mo	72	1	17.83	3.57	ppb	0.97	3600	
107 Ag	115	1	0.09	0.02	ppb	6.22	3600	
111 Cd	115	1	0.00	0.00	ppb	3540.30	3600	
118 Sn	115	1	-0.94	-0.19	ppb	34.67	3600	
121 Sb	115	1	0.23	0.05	ppb	13.52	3600	
137 Ba	115	1	33.51	6.70	ppb	1.24	3600	
205 Tl	165	1	0.11	0.02	ppb	10.26	3600	
208 Pb	165	1	0.07	0.01	ppb	14.78	3600	
232 Th	165	1	0.35	0.07	ppb	23.48	1000	
238 U	165	1	37.75	7.55	ppb	1.06	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	342107	1.36	372962	91.7	30 - 120	
45 Sc	1	1383728	1.59	1530288	90.4	30 - 120	
72 Ge	1	598698	0.32	686281	87.2	30 - 120	
115 In	1	1584631	1.48	1820296	87.1	30 - 120	
165 Ho	1	2437181	1.02	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\122 CCV.D\122 CCV.D#
Date Acquired: Jul 28 2009 09:59 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: Jul 28 2009 07:00 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	49.75	ppb	0.53	50	99.5	90 - 110	
51 V	72	1	49.11	ppb	1.59	50	98.2	90 - 110	
52 Cr	72	1	49.87	ppb	0.64	50	99.7	90 - 110	
55 Mn	72	1	49.78	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	49.57	ppb	0.74	50	99.1	90 - 110	
60 Ni	72	1	50.39	ppb	0.92	50	100.8	90 - 110	
63 Cu	72	1	50.03	ppb	0.10	50	100.1	90 - 110	
66 Zn	72	1	50.08	ppb	0.91	50	100.2	90 - 110	
75 As	72	1	50.65	ppb	0.81	50	101.3	90 - 110	
78 Se	72	1	50.46	ppb	7.61	50	100.9	90 - 110	
95 Mo	72	1	50.36	ppb	1.25	50	100.7	90 - 110	
107 Ag	115	1	49.70	ppb	1.22	50	99.4	90 - 110	
111 Cd	115	1	49.78	ppb	1.79	50	99.6	90 - 110	
118 Sn	115	1	50.00	ppb	1.71	50	100.0	90 - 110	
121 Sb	115	1	51.15	ppb	1.20	50	102.3	90 - 110	
137 Ba	115	1	50.62	ppb	1.37	50	101.2	90 - 110	
205 Tl	165	1	51.47	ppb	0.19	50	102.9	90 - 110	
208 Pb	165	1	51.40	ppb	0.44	50	102.8	90 - 110	
232 Th	165	1	50.77	ppb	2.38	50	101.5	90 - 110	
238 U	165	1	50.76	ppb	0.24	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	348447	1.30	372962	93.4	30 - 120	
45 Sc	1	1431549	0.31	1530288	93.5	30 - 120	
72 Ge	1	634715	1.13	686281	92.5	30 - 120	
115 In	1	1727385	1.99	1820296	94.9	30 - 120	
165 Ho	1	2534007	0.75	2675852	94.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\123 CCB.D\123 CCB.D#
Date Acquired: Jul 28 2009 10:01 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: Jul 28 2009 07:00 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	-0.005	ppb	221.57	1.00	
51 V	72	1	0.048	ppb	56.92	1.00	
52 Cr	72	1	0.039	ppb	32.36	1.00	
55 Mn	72	1	0.043	ppb	28.36	1.00	
59 Co	72	1	0.007	ppb	54.95	1.00	
60 Ni	72	1	0.010	ppb	225.36	1.00	
63 Cu	72	1	0.006	ppb	146.44	1.00	
66 Zn	72	1	-0.716	ppb	0.56	1.00	
75 As	72	1	0.003	ppb	6.02	1.00	
78 Se	72	1	-0.042	ppb	321.49	1.00	
95 Mo	72	1	-0.042	ppb	49.44	1.00	
107 Ag	115	1	0.013	ppb	50.90	1.00	
111 Cd	115	1	0.007	ppb	125.51	1.00	
118 Sn	115	1	-0.748	ppb	5.98	1.00	
121 Sb	115	1	0.052	ppb	13.42	1.00	
137 Ba	115	1	0.012	ppb	56.71	1.00	
205 Tl	165	1	0.031	ppb	15.14	1.00	
208 Pb	165	1	0.006	ppb	37.52	1.00	
232 Th	165	1	0.599	ppb	19.48	1.00	
238 U	165	1	0.012	ppb	4.09	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336355	0.58	372962	90.2	30 - 120	
45 Sc	1	1373618	1.86	1530288	89.8	30 - 120	
72 Ge	1	619721	0.39	686281	90.3	30 - 120	
115 In	1	1668786	0.62	1820296	91.7	30 - 120	
165 Ho	1	2471015	0.10	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\124WASH.D\124WASH.D#
Date Acquired: Jul 28 2009 10:04 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: Jul 28 2009 07:00 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	1.112 ppb	6.84	1.30	
51 V	72	1	4.908 ppb	1.79	6.50	
52 Cr	72	1	2.080 ppb	1.92	2.60	
55 Mn	72	1	1.058 ppb	7.48	1.30	
59 Co	72	1	1.038 ppb	5.21	1.30	
60 Ni	72	1	2.076 ppb	4.67	2.60	
63 Cu	72	1	2.047 ppb	2.58	2.60	
66 Zn	72	1	9.431 ppb	0.28	13.00	
75 As	72	1	5.147 ppb	2.37	6.50	
78 Se	72	1	4.937 ppb	11.21	6.50	
95 Mo	72	1	2.010 ppb	4.06	2.60	
107 Ag	115	1	5.158 ppb	2.28	6.50	
111 Cd	115	1	1.026 ppb	2.14	1.30	
118 Sn	115	1	9.789 ppb	0.56	13.00	
121 Sb	115	1	1.962 ppb	2.82	2.60	
137 Ba	115	1	1.081 ppb	2.03	1.30	
205 Tl	165	1	1.113 ppb	1.04	1.30	
208 Pb	165	1	1.093 ppb	1.28	1.30	
232 Th	165	1	2.204 ppb	2.25	2.60	
238 U	165	1	1.116 ppb	0.63	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334490	1.02	372962	89.7	30 - 120	
45 Sc	1	1379170	0.82	1530288	90.1	30 - 120	
72 Ge	1	620774	0.75	686281	90.5	30 - 120	
115 In	1	1691395	0.40	1820296	92.9	30 - 120	
165 Ho	1	2465831	1.29	2675852	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\AG072809B.B\056CALB.D\056CALB.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: D9G180154

Client: Northgate Environmental

Batch(es) #: 9201150

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: 7/29/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9G180154	1	SE	LGPGA1A	20090728	6020TOTA	9201150	AG072809B	024
D9G180154	1	AS	LGPGA1AA	20090728	6020TOTA	9201150	AG072809B	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **9201150**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Katie Stoltz

Prep Date: 07/22/09
Due Date: 07/29/09

Lot	Work Order			Initial Weight/Volume
D9G200000 Water	**LGP0Q**	B	Due Date: SDG:	50 mL
D9G200000 Water	**LGP0Q**	C	Due Date: SDG:	50 mL
D9G170255 Water	**LGNJH** Total		Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJH** Total	S	Due Date: 07/29/09 SDG: 8304614	50 mL
D9G170255 Water	**LGNJH** Total	D	Due Date: 07/29/09 SDG: 8304614	50 mL
D9G180154 Water	**LGPGA** Total		Due Date: 07/30/09 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 7/28/09

7/29/09

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 920150 **ALLIQUOTTED BY:** JRW
PREP DATE: 7.22.2009 **DIGESTED BY:** KS

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A901LS267

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: KS

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3773-09	6/23/10	100uL	15
2008Cal-2	STD-2637-09	5/1/10	100uL	15

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	H12022	3

TEMPERATURE CYCLES

Thermometer ID: 4110 Block & Cup # : 3;17

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	7:00	95	11:20	97
HNO3	11:30	96	12:00	95
HNO3				

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

COMMENTS:

I certify that all information above is correct and complete.

Signature: Katie Doty ***Date:*** 7.22.09

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

Jul-28-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD4841-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures | Lot No.: B2-ZN02045 | Vendor's Expiration Date: 10-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 09-04-2008 | Date Received: 09-04-2008
Date Expires(1): 10-01-2009 (None)
Date Expires(2): 10-01-2009 (None)
(METALS)-Inventory ID: 779

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

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

STD3611-09, ICP-MS 1ppm Sn/Zn — Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 06-16-2009
Date Expires(1): 10-01-2009 (1 Year)

Parent Std No.: STD3609-09, ICP-MS 10 ppm Zn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-01-2009 Parent Date Expires(2): 10-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	10.000	1.0000

Parent Std No.: STD3610-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-01-2010 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	10.000	1.0000

STD4426-09, ICP-MS (024) INT STD BRC — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 250.00
Date Prep./Opened: 07-24-2009
Date Expires(1): 11-10-2009 (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.: STD6317-08, Scandium Stock — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

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

Parent Std No.: STD6318-08, Holmium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-10-2009 Parent Date Expires(2): 12-01-2009

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

STD4462-09, NITRIC ACID

Analyst: DIAZL

Vendor: J.T. Baker Lot No.: H12022 Vendor's Expiration Date: 12-01-2009
Solvent: Water
Date Prep./Opened: 07-28-2009 Date Received: 12-30-2008
Date Expires(1): 07-28-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 206

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	100.00

STD4463-09, ICP-MS BLANK

Analyst: DIAZL

Solvent: Water
Volume (ml): 1,000.0
Date Prep./Opened: 07-28-2009
Date Expires(1): 08-28-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4462-09, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4464-09, ICP-MS 10 ppm Sn

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022
Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 03-01-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1198-09, 1000 mg/L Sn — Aliquot Amount (ml): 0.1000
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	10.000

STD4465-09, ICP-MS 100 ppb cal

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	5,000.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4466-09, ICP-MS CCV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD3862-09, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4467-09, ICP-MS RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
pipettes: Met 21 and Met 8

Parent Std No.: STD3611-09, ICP-MS 1ppm Sn/Zn Aliquot Amount (ml): 0.0900

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1.0000	0.0090
1000 Zn	1.0000	0.0090

Parent Std No.: STD4465-09, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 07-29-2009

Component	Initial Conc (ug/L)	Final Conc (mg/L)
Mo	100.00	0.0010
Sb	100.00	0.0010
Se	100.00	0.0010
Th	100.00	0.0010
Tl	100.00	0.0010
U	100.00	0.0010
V	100.00	0.0010
Zn	100.00	0.0010
Fe	5,000.0	0.0500
Sn	100.00	0.0010
Ag	100.00	0.0010
Al	100.00	0.0010
As	100.00	0.0010
Ba	100.00	0.0010
Be	100.00	0.0010
Cd	100.00	0.0010
Co	100.00	0.0010
Cr	100.00	0.0010
Cu	100.00	0.0010
Mn	100.00	0.0010
Ni	100.00	0.0010
Pb	100.00	0.0010

STD4468-09, ICP-MS AFCEE RL STD

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (2 Days)
pipettes: Met 20 and Met 8

Parent Std No.: STD4467-09, 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
Mo	0.0010	0.0002
Sb	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
Fe	0.0500	0.0100
Sn	0.0010	0.0002
Ag	0.0010	0.0002
Al	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

STD4469-09, ICP-MS ICSA

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 50.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 08-28-2009 (1 Month)
Date Expires(2): 02-01-2010 (None)
pipettes: Met 8

Parent Std No.: STD0664-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-01-2010 Parent Date Expires(2): 02-01-2010

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

STD4470-09, ICP-MS ICSAB

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21, Met 20, and Met 8

Parent Std No.: STD1978-09, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-01-2010 Parent Date Expires(2): 04-01-2010

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

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00

Zn	20.000	100.00

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4471-09, ICPMS LR STD 1000 ppb

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD3773-09, ICPMS 2008CAL-1 Inorganic Ventures — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD3774-09, ICPMS 2008CAL-2 Inorganic Ventures — Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 06-23-2010 Parent Date Expires(2): 07-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4464-09, ICP-MS 10 ppm Sn — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 07-29-2009 Parent Date Expires(2): 03-01-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4472-09, ICPMS ICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 10.000
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 02-27-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD1213-09, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD1214-09, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-27-2010 Parent Date Expires(2): 02-27-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4473-09, LLCCV/RLICV

Analyst: DIAZL

Solvent: 5% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 07-28-2009
Date Expires(1): 07-29-2009 (1 Day)
Date Expires(2): 05-01-2010 (None)
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

Reviewed By: LRD 07/28/2009 File: AG072809B

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/28/09 16:26		☐
3	Cal Blank				1.0	07/28/09 16:29		☐
4	100 ppb				1.0	07/28/09 16:32		☐
5	ICV				1.0	07/28/09 16:34		☐
6	RLIV				1.0	07/28/09 16:37		☐
7	ICB				1.0	07/28/09 16:40		☐
8	RL STD				1.0	07/28/09 16:42		☐
9	AFCEE RL				1.0	07/28/09 16:45		☐
10	ALTSe				1.0	07/28/09 16:48		☐
11	ICSA				1.0	07/28/09 16:51		☐
12	ICSAB				1.0	07/28/09 16:53		☐
13	RINSE				1.0	07/28/09 16:56		☐
14	LR				1.0	07/28/09 16:59		☐
15	RINSE				1.0	07/28/09 17:01		☐
16	CCV				1.0	07/28/09 17:04		☐
17	CCB				1.0	07/28/09 17:07		☐
18	RLCV				1.0	07/28/09 17:10		☐
19	LGVDAB	D9G220000	9203117	MS	1.0	07/28/09 17:12		☐
20	LGVDAC	D9G220000	9203117	MS	1.0	07/28/09 17:15		☐
21	LGMTQ 5X	F9G170160-1	9203117	MS	5.0	07/28/09 17:18		☐
22	LGR1C 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:21	— Ag, Se, Cu only. 7/29/09	☐
23	LGR1CP25	F9G210207	9203117		25.0	07/28/09 17:23		☐
24	LGR1CZ	F9G210207-1	9203117		1.0	07/28/09 17:26		☐
25	~~LGR1CS 5X~~	~~F9G210207-1~~	~~9203117~~	~~MS~~	~~5.0~~	~~07/28/09 17:29~~		☐
26	~~LGR1CD 5X~~	~~F9G210207-1~~	~~9203117~~	~~MS~~	~~5.0~~	~~07/28/09 17:32~~	7/29/09 Did not use.	☐
27	LGR3J 5X	F9G210207-2	9203117	MS	5.0	07/28/09 17:34		☐
28	CCV				1.0	07/28/09 17:37		☐
29	CCB				1.0	07/28/09 17:40		☐
30	RLCV				1.0	07/28/09 17:43		☐
31	LGR1CS 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:48		☐
32	LGR1CD 5X	F9G210207-1	9203117	MS	5.0	07/28/09 17:50		☐
33	CCV				1.0	07/28/09 17:53		☐
34	CCB				1.0	07/28/09 17:56		☐
35	RLCV				1.0	07/28/09 17:59		☐
36	~~LGL5P~~	~~D9G160333-5~~	~~9198252~~	~~U1~~	~~1.0~~	~~07/28/09 18:02~~		☐
37	LGL5X	D9G160333-9	9198252	U1	1.0	07/28/09 18:04		☐
38	LGL51	D9G160333-10	9198252	U1	1.0	07/28/09 18:07		☐
39	LGL52	D9G160333-11	9198252	U1	1.0	07/28/09 18:10		☐
40	LGL53	D9G160333-12	9198252	U1	1.0	07/28/09 18:12		☐
41	LGL54	D9G160333-13	9198252	U1	1.0	07/28/09 18:15		☐
42	LGL55	D9G160333-14	9198252	U1	1.0	07/28/09 18:18		☐
43	LGL56	D9G160333-15	9198252	U1	1.0	07/28/09 18:21		☐
44	LGL57	D9G160333-16	9198252	U1	1.0	07/28/09 18:23		☐
45	CCV				1.0	07/28/09 18:26		☐
46	CCB				1.0	07/28/09 18:29		☐
47	~~RLCV~~				~~1.0~~	~~07/28/09 18:32~~	7/29/09 Did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	~~LGM2DB~~	D9G170000	9198253	46	~~1.0~~	~~07/28/09 18:34~~		
49	RINSE				1.0	07/28/09 18:37		
50	RINSE				1.0	07/28/09 18:40		
51	RINSE				1.0	07/28/09 18:43		
52	RINSE				1.0	07/28/09 18:45		
53	RINSE				1.0	07/28/09 18:48		
54	RINSE				1.0	07/28/09 18:51		
55	~~Cal Blank~~				~~1.0~~	~~07/28/09 18:54~~	RT 7/29/09 did not use	
56	Cal Blank				1.0	07/28/09 18:56		
57	100 ppb				1.0	07/28/09 18:59		
58	CCV				1.0	07/28/09 19:02		
59	CCB				1.0	07/28/09 19:05		
60	RLCV				1.0	07/28/09 19:07		
61	LGL5P	D9G160333-5	9198252	U1	1.0	07/28/09 19:10		
62	LGL5X	D9G160333-9	9198252	U1	1.0	07/28/09 19:13		
63	LGL51	D9G160333-10	9198252	U1	1.0	07/28/09 19:16		
64	LGL52	D9G160333-11	9198252	U1	1.0	07/28/09 19:18		
65	LGL53	D9G160333-12	9198252	U1	1.0	07/28/09 19:21		
66	LGL54	D9G160333-13	9198252	U1	1.0	07/28/09 19:24		
67	LGL55	D9G160333-14	9198252	U1	1.0	07/28/09 19:26		
68	LGL56	D9G160333-15	9198252	U1	1.0	07/28/09 19:29		
69	LGL57	D9G160333-16	9198252	U1	1.0	07/28/09 19:32		
70	CCV				1.0	07/28/09 19:35		
71	CCB				1.0	07/28/09 19:37		
72	RLCV				1.0	07/28/09 19:40		
73	LGM2DB	D9G170000	9198253	46	1.0	07/28/09 19:43		
74	LGM2DC	D9G170000	9198253	46	1.0	07/28/09 19:46		
75	LGL5K	D9G160333-4	9198261	U1	1.0	07/28/09 19:48		
76	LGL5KP5	D9G160333	9198261		5.0	07/28/09 19:51		
77	LGL5KZ	D9G160333-4	9198261		1.0	07/28/09 19:54		
78	LGL5KS	D9G160333-4	9198261253	U1	1.0	07/28/09 19:57		
79	LGL5KD	D9G160333-4	9198253	U1	1.0	07/28/09 19:59		
80	LGL58	D9G160333-17	9198253	U1	1.0	07/28/09 20:02		
81	LGL59	D9G160333-18	9198253	U1	1.0	07/28/09 20:05		
82	LGL6A	D9G160333-19	9198253	U1	1.0	07/28/09 20:07		
83	CCV				1.0	07/28/09 20:10		
84	CCB				1.0	07/28/09 20:13		
85	RLCV				1.0	07/28/09 20:16		
86	ICSA				1.0	07/28/09 20:18		
87	ICSAB				1.0	07/28/09 20:21		
88	WASH				1.0	07/28/09 20:24		
89	CCV				1.0	07/28/09 20:27		
90	CCB				1.0	07/28/09 20:29		
91	RLCV				1.0	07/28/09 20:32		
92	LGL6C	D9G160333-20	9198253	U1	1.0	07/28/09 20:35		
93	LGL6D	D9G160333-21	9198253	U1	1.0	07/28/09 20:38		

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	LGL6E	D9G160333-22	9198253	U1	1.0	07/28/09 20:40		☐
95	LGL6F	D9G160333-23	9198253	U1	1.0	07/28/09 20:43		☐
96	LGL6G	D9G160333-24	9198253	U1	1.0	07/28/09 20:46		☐
97	LGL6H	D9G160333-25	9198253	U1	1.0	07/28/09 20:49		☐
98	LGL6K	D9G160333-26	9198253	U1	1.0	07/28/09 20:52		☐
99	LGL6KS	D9G160333-26	9198253	U1	1.0	07/28/09 20:54		☐
100	LGL6KD	D9G160333-26	9198253	U1	1.0	07/28/09 20:57		☐
101	CCV				1.0	07/28/09 21:00		☐
102	CCB				1.0	07/28/09 21:03		☐
103	RLCV				1.0	07/28/09 21:05		☐
104	LGP0WBF	D9G200000	9201157	MD	1.0	07/28/09 21:08		☐
105	LGP0WCF	D9G200000	9201157	MD	1.0	07/28/09 21:11		☐
106	LGNJJF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:14		☐
107	LGNJJP25F	D9G170255	9201157		25.0	07/28/09 21:16		☐
108	LGNJJZF	D9G170255-2	9201157		1.0	07/28/09 21:19		☐
109	LGNJJSF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:22		☐
110	LGNJJDF 5X	D9G170255-2	9201157	MD	5.0	07/28/09 21:25		☐
111	CCV				1.0	07/28/09 21:27		☐
112	CCB				1.0	07/28/09 21:30		☐
113	RLCV				1.0	07/28/09 21:33		☐
114	LGP0QB	D9G200000	9201150	MS	1.0	07/28/09 21:36		☐
115	LGP0QC	D9G200000	9201150	MS	1.0	07/28/09 21:39		☐
116	LGNJH 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:41		☐
117	LGNJHP25	D9G170255	9201150		25.0	07/28/09 21:44		☐
118	LGNJHZ	D9G170255-1	9201150		1.0	07/28/09 21:47		☐
119	LGNJHS 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:50		☐
120	LGNJHD 5X	D9G170255-1	9201150	MS	5.0	07/28/09 21:52		☐
121	LGPGA 5X	D9G180154-1	9201150	MS	5.0	07/28/09 21:56		☐
122	CCV				1.0	07/28/09 21:59		☐
123	CCB				1.0	07/28/09 22:01		☐
124	RLCV				1.0	07/28/09 22:04		☐
125	LGL5KQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:07		☐
126	LGL5KP5Q	D9G160333	9198261		5.0	07/28/09 22:10		☐
127	LGL5KZQ	D9G160333-4	9198261		1.0	07/28/09 22:12		☐
128	LGL5KSQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:15		☐
129	LGL5KDQ	D9G160333-4	9198261	U1	1.0	07/28/09 22:18		☐
130	CCV				1.0	07/28/09 22:20		☐
131	CCB				1.0	07/28/09 22:23		☐
132	RLCV				1.0	07/28/09 22:26		☐
133	LGFLKB	D9G140000	9195211	MS	1.0	07/28/09 22:29		☐
134	LGFLKC	D9G140000	9195211	MS	1.0	07/28/09 22:32		☐
135	LGFEL	H9G140108-4	9195211	MS	1.0	07/28/09 22:34		☐
136	LGFET	H9G140108-9	9195211	MS	1.0	07/28/09 22:37		☐
137	LGFE6	H9G140108-13	9195211	MS	1.0	07/28/09 22:40		☐
138	LGFE6P5	H9G140108	9195211		5.0	07/28/09 22:43		☐
139	CCV				1.0	07/28/09 22:45		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	CCB				1.0	07/28/09 22:48		☐
141	RLCV				1.0	07/28/09 22:51		☐
142	LGFE6Z	H9G140108-13	9195211		1.0	07/28/09 22:54		☐
143	LGFE6S	H9G140108-13	9195211	MS	1.0	07/28/09 22:56		☐
144	LGFE6D	H9G140108-13	9195211	MS	1.0	07/28/09 22:59		☐
145	LGFFD	H9G140108-18	9195211	MS	1.0	07/28/09 23:02		☐
146	LGFFK	H9G140108-23	9195211	MS	1.0	07/28/09 23:05		☐
147	CCV				1.0	07/28/09 23:07		☐
148	CCB				1.0	07/28/09 23:10		☐
149	RLCV				1.0	07/28/09 23:13		☐
150	LGP23B	D9G200000	9201183	04	1.0	07/28/09 23:16		☐
151	LGP23C	D9G200000	9201183	04	1.0	07/28/09 23:19		☐
152	LGMTN	D9G170158-1	9201183	04	1.0	07/28/09 23:21		☐
153	LGMTNP5	D9G170158	9201183		5.0	07/28/09 23:24		☐
154	LGMTNZ	D9G170158-1	9201183		1.0	07/28/09 23:27		☐
155	LGMTNS	D9G170158-1	9201183	04	1.0	07/28/09 23:30		☐
156	LGMTND	D9G170158-1	9201183	04	1.0	07/28/09 23:32		☐
157	LGMTR	D9G170158-2	9201183	04	1.0	07/28/09 23:35		☐
158	CCV				1.0	07/28/09 23:38		☐
159	CCB				1.0	07/28/09 23:41		☐
160	RLCV				1.0	07/28/09 23:43		☐
161	LGMTV	D9G170158-3	9201183	04	1.0	07/28/09 23:46		☐
162	LGMTW	D9G170158-4	9201183	04	1.0	07/28/09 23:49		☐
163	LGMTX	D9G170158-5	9201183	04	1.0	07/28/09 23:52		☐
164	LGMT0	D9G170158-6	9201183	04	1.0	07/28/09 23:54		☐
165	LGMT1	D9G170158-7	9201183	04	1.0	07/28/09 23:57		☐
166	LGMT2	D9G170158-8	9201183	04	1.0	07/29/09 00:00		☐
167	LGMT3	D9G170158-9	9201183	04	1.0	07/29/09 00:03		☐
168	LGMT4	D9G170158-10	9201183	04	1.0	07/29/09 00:05		☐
169	CCV				1.0	07/29/09 00:08		☐
170	CCB				1.0	07/29/09 00:11		☐
171	RLCV				1.0	07/29/09 00:14		☐
172	~~LGNWK~~	~~D9G170310-1~~	~~9201183~~	~~04~~	~~1.0~~	~~07/29/09 00:17~~		☐
173	LGNXA	D9G170310-2	9201183	04	1.0	07/29/09 00:19		☐
174	LGNXC	D9G170310-3	9201183	04	1.0	07/29/09 00:22		☐
175	LGNXD	D9G170310-4	9201183	04	1.0	07/29/09 00:25		☐
176	LGNXE	D9G170310-5	9201183	04	1.0	07/29/09 00:28		☐
177	LGNXF	D9G170310-6	9201183	04	1.0	07/29/09 00:30		☐
178	LGNXG	D9G170310-7	9201183	04	1.0	07/29/09 00:33		☐
179	CCV				1.0	07/29/09 00:36		☐
180	CCB				1.0	07/29/09 00:39		☐
181	RLCV				1.0	07/29/09 00:41		☐
182	RINSE				1.0	07/29/09 00:44		☐
183	RINSE				1.0	07/29/09 00:47		☐
184	RINSE				1.0	07/29/09 00:50		☐
185	~~RINSE~~				~~1.0~~	~~07/29/09 00:52~~	NF 7/29/09 Did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	~~RINSE~~				~~1.0~~	~~07/29/09 00:55~~		☐
187	RINSE				1.0	07/29/09 00:58		☐
188	~~Cal Blank~~				~~1.0~~	~~07/29/09 01:01~~	KF 7/29/09	☐
189	Cal Blank				1.0	07/29/09 01:03		☐
190	100 ppb				1.0	07/29/09 01:06		☐
191	CCV				1.0	07/29/09 01:09		☐
192	CCB				1.0	07/29/09 01:12		☐
193	RLCV				1.0	07/29/09 01:14		☐
194	LGH1CB	D9G150000	9196281	MS	1.0	07/29/09 01:17		☐
195	LGH1CC	D9G150000	9196281	MS	1.0	07/29/09 01:20		☐
196	LGHCW	H9G150125-4	9196281	MS	1.0	07/29/09 01:23		☐
197	LGHC5	H9G150125-9	9196281	MS	1.0	07/29/09 01:25		☐
198	LGHDC	H9G150125-15	9196281	MS	1.0	07/29/09 01:28		☐
199	LGHDK	H9G150125-20	9196281	MS	1.0	07/29/09 01:31		☐
200	CCV				1.0	07/29/09 01:34		☐
201	CCB				1.0	07/29/09 01:37		☐
202	RLCV				1.0	07/29/09 01:39		☐
203	LGHDKP5	H9G150125	9196281		5.0	07/29/09 01:42		☐
204	LGHDKZ	H9G150125-20	9196281		1.0	07/29/09 01:45		☐
205	LGHDKS	H9G150125-20	9196281	MS	1.0	07/29/09 01:48		☐
206	LGHDKD	H9G150125-20	9196281	MS	1.0	07/29/09 01:50		☐
207	LGHDV	H9G150125-26	9196281	MS	1.0	07/29/09 01:53		☐
208	LGHEF	H9G150125-32	9196281	MS	1.0	07/29/09 01:56		☐
209	CCV				1.0	07/29/09 01:59		☐
210	CCB				1.0	07/29/09 02:01		☐
211	RLCV				1.0	07/29/09 02:04		☐
212	LGKR0B	D9G160000	9197235	MS	1.0	07/29/09 02:07		☐
213	LGKR0C	D9G160000	9197235	MS	1.0	07/29/09 02:10		☐
214	LGKEJ	H9G160108-4	9197235	MS	1.0	07/29/09 02:13		☐
215	LGKE1	H9G160108-10	9197235	MS	1.0	07/29/09 02:15		☐
216	LGKFC	H9G160108-15	9197235	MS	1.0	07/29/09 02:18		☐
217	LGKFCP5	H9G160108	9197235		5.0	07/29/09 02:21		☐
218	LGKFCZ	H9G160108-15	9197235		1.0	07/29/09 02:24		☐
219	LGKFCS	H9G160108-15	9197235	MS	1.0	07/29/09 02:26		☐
220	LGKFCD	H9G160108-15	9197235	MS	1.0	07/29/09 02:29		☐
221	LGKFP	H9G160108-20	9197235	MS	1.0	07/29/09 02:32		☐
222	CCV				1.0	07/29/09 02:35		☐
223	CCB				1.0	07/29/09 02:38		☐
224	RLCV				1.0	07/29/09 02:40		☐
225	LGMH5B	D9G170000	9198153	MS	1.0	07/29/09 02:43		☐
226	LGMH5C	D9G170000	9198153	MS	1.0	07/29/09 02:46		☐
227	LGMH5L	D9G170000	9198153	MS	1.0	07/29/09 02:49		☐
228	LGLTF	H9G160302-4	9198153	MS	1.0	07/29/09 02:52		☐
229	LGLTFP5	H9G160302	9198153		5.0	07/29/09 02:54		☐
230	LGLTFZ	H9G160302-4	9198153		1.0	07/29/09 02:57		☐
231	CCV				1.0	07/29/09 03:00		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: AG072809B **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
232	CCB				1.0	07/29/09 03:03		
233	RLCV				1.0	07/29/09 03:05		
234	~~RINSE~~				~~1.0~~	~~07/29/09 03:08~~		
235	RINSE				1.0	07/29/09 03:11		
236	RINSE				1.0	07/29/09 03:14		
237	RINSE				1.0	07/29/09 03:16		
238	RINSE				1.0	07/29/09 03:19		
239	RINSE				1.0	07/29/09 03:22		
240	~~Cal Blank~~				~~1.0~~	~~07/29/09 03:25~~	KT 7/29/09	
241	Cal Blank				1.0	07/29/09 03:27		
242	100 ppb				1.0	07/29/09 03:30		
243	CCV				1.0	07/29/09 03:33		
244	CCB				1.0	07/29/09 03:36		
245	RLCV				1.0	07/29/09 03:39		
246	LGQDQB	D9G200000	9201309	46	1.0	07/29/09 03:41		
247	LGQDQC	D9G200000	9201309	46	1.0	07/29/09 03:44		
248	LGN18	D9G170316-1	9201320	U1	1.0	07/29/09 03:47		
249	LGN18P5	D9G170316	9201320		5.0	07/29/09 03:50		
250	LGN18Z	D9G170316-1	9201320		1.0	07/29/09 03:52		
251	LGN18S	D9G170316-1	9201309	U1	1.0	07/29/09 03:55		
252	LGN18D	D9G170316-1	9201309	U1	1.0	07/29/09 03:58		
253	LGN19	D9G170316-2	9201309	U1	1.0	07/29/09 04:01		
254	LGN2A	D9G170316-3	9201320	U1	1.0	07/29/09 04:03		
255	LGN2C	D9G170316-4	9201320	U1	1.0	07/29/09 04:06		
256	CCV				1.0	07/29/09 04:09		
257	CCB				1.0	07/29/09 04:12		
258	RLCV				1.0	07/29/09 04:14		
259	LGN2D	D9G170316-5	9201309	U1	1.0	07/29/09 04:17		
260	LGN2E	D9G170316-6	9201320	U1	1.0	07/29/09 04:20		
261	LGN2F	D9G170316-7	9201309	U1	1.0	07/29/09 04:23		
262	LGN2G	D9G170316-8	9201320	U1	1.0	07/29/09 04:26		
263	LGN2H	D9G170316-9	9201309	U1	1.0	07/29/09 04:28		
264	LGN2J	D9G170316-10	9201309	U1	1.0	07/29/09 04:31		
265	LGN2K	D9G170316-11	9201320	U1	1.0	07/29/09 04:34		
266	LGN2L	D9G170316-12	9201320	U1	1.0	07/29/09 04:37		
267	LGN2M	D9G170316-13	9201309	U1	1.0	07/29/09 04:39		
268	LGN2N	D9G170316-14	9201309	U1	1.0	07/29/09 04:42		
269	CCV				1.0	07/29/09 04:45		
270	CCB				1.0	07/29/09 04:48		
271	RLCV				1.0	07/29/09 04:51		
272	LGCJX	D9G100251-5	9194341		1.0	07/29/09 04:53	DQR	
273	CCV				1.0	07/29/09 04:56		
274	CCB				1.0	07/29/09 04:59		
275	RLCV				1.0	07/29/09 05:02		
276	~~LGM62B~~	~~D9G170000~~	~~9198286~~	~~U2~~	~~1.0~~	~~07/29/09 05:04~~		
277	~~LGM62C~~	~~D9G170000~~	~~9198286~~	~~U2~~	~~1.0~~	~~07/29/09 05:07~~	KT 7/29/09 Did not use.	

Denver

RUN SUMMARY

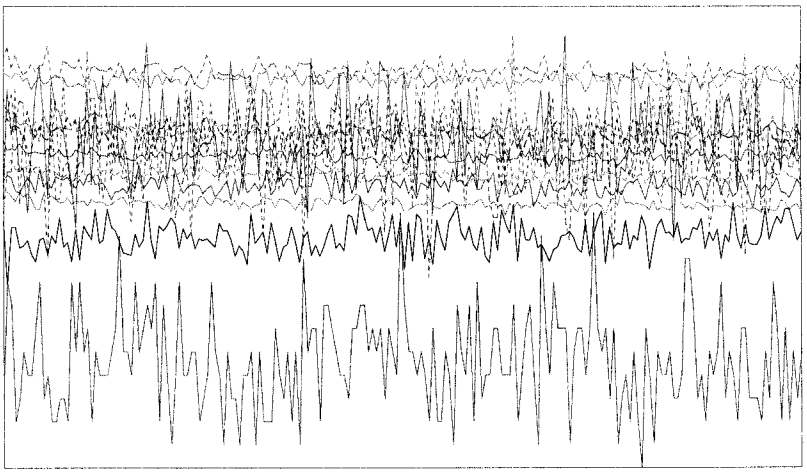
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 07/29/09 09:03:02

File ID: **AG072809B** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
278	~~LGM62L~~	~~D9G170000~~	~~9198286~~	~~U2~~	1.0	07/29/09 05:10		☐
279	LGL5Q	D9G160333-6	9198282	U2	1.0	07/29/09 05:13		☐
280	LGL5QP5	D9G160333	9198282		5.0	07/29/09 05:16		☐
281	LGL5QZ	D9G160333-6	9198282		1.0	07/29/09 05:18		☐
282	LGL6M	D9G160333-28	9198282	U2	1.0	07/29/09 05:21		☐
283	CCV				1.0	07/29/09 05:24		☐
284	CCB				1.0	07/29/09 05:27		☐
285	RLCV				1.0	07/29/09 05:29		☐
286	LG1J4B	D9G240000	9205120	MS	1.0	07/29/09 05:32		☐
287	LG1J4C	D9G240000	9205120	MS	1.0	07/29/09 05:35		☐
288	LGX8R	D9G230197-1	9205120	MS	1.0	07/29/09 05:38		☐
289	LGX80	D9G230197-2	9205120	MS	1.0	07/29/09 05:41		☐
290	LGX83	D9G230197-3	9205120	MS	1.0	07/29/09 05:43		☐
291	LGX85	D9G230197-4	9205120	MS	1.0	07/29/09 05:46		☐
292	LGX85P5	D9G230197	9205120		5.0	07/29/09 05:49		☐
293	LGX85Z	D9G230197-4	9205120		1.0	07/29/09 05:52		☐
294	CCV				1.0	07/29/09 05:55		☐
295	CCB				1.0	07/29/09 05:57		☐
296	RLCV				1.0	07/29/09 06:00		☐
297	LGX85S	D9G230197-4	9205120	MS	1.0	07/29/09 06:03		☐
298	LGX85D	D9G230197-4	9205120	MS	1.0	07/29/09 06:06		☐
299	LGX87	D9G230197-5	9205120	MS	1.0	07/29/09 06:09		☐
300	LGX9A	D9G230197-6	9205120	MS	1.0	07/29/09 06:11		☐
301	LGX9C	D9G230197-7	9205120	MS	1.0	07/29/09 06:14		☐
302	LG02Q 20X	D9G230277-1	9205120	MS	20.0	07/29/09 06:17		☐
303	LG021 20X	D9G230277-2	9205120	MS	20.0	07/29/09 06:20		☐
304	CCV				1.0	07/29/09 06:23		☐
305	CCB				1.0	07/29/09 06:25		☐
306	~~RLCV~~				1.0	07/29/09 06:28	VT 7/29/09 Did not use.	☐

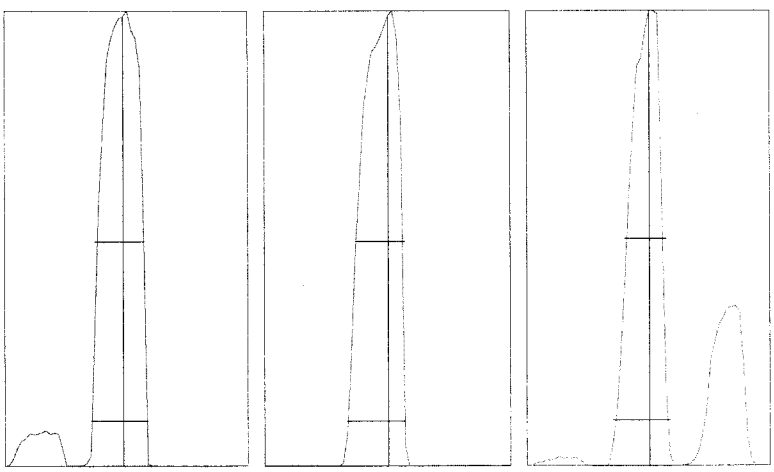
Tune Report

Tune File : NORM.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.863%
Doubly Charged:	70/140	1.818%

m/z	Range	Count	Mean	RSD%	Background
6	2,000	1214.0	1219.0	3.01	0.40
7	20,000	16598.0	16760.7	1.42	0.40
59	20,000	11035.0	11392.2	1.79	0.60
63	100	90.0	72.2	11.81	0.50
70	500	254.0	249.1	6.68	0.80
75	20	5.0	4.6	45.12	0.60
78	200	143.0	145.8	9.18	0.60
89	20,000	14387.0	14568.3	1.83	0.80
115	20,000	12715.0	12651.5	1.63	1.40
118	100	57.0	66.6	12.89	1.10
137	2,000	1412.0	1444.6	3.64	1.40
205	10,000	8467.0	8598.4	1.77	2.10
238	20,000	13531.0	13481.7	1.54	2.10
156/140	5	2.046%	1.940%	7.83	
70/140	5	1.903%	1.938%	7.03	



m/z:	7	89	205
Height:	16,558	14,799	9,079
Axis:	7.00	89.05	205.05
W-50%:	0.60	0.60	0.50
W-10%:	0.700	0.700	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 28, 2009 13:28:09
Printed : Jul 28, 2009 13:28:11

Tune Report

Tune File : NORM.U
Comment :

Tuning Parameters

===Plasma Condition===				===Ion Lenses===				===Q-Pole Parameters===		
RF Power	:	1550	W	Extract 1	:	0	V	AMU Gain	:	132
RF Matching	:	1.7	V	Extract 2	:	-170	V	AMU Offset	:	123
Smpl Depth	:	7.5	mm	Omega Bias-ce	:	-30	V	Axis Gain	:	1.0006
Torch-H	:	-0.8	mm	Omega Lens-ce	:	0	V	Axis Offset	:	-0.04
Torch-V	:	-0.3	mm	Cell Entrance	:	-30	V	QP Bias	:	-1 V
Carrier Gas	:	0.84	L/min	QP Focus	:	7	V			
Makeup Gas	:	0.21	L/min	Cell Exit	:	-30	V	===Detector Parameters===		
Optional Gas	:	---	%					Discriminator	:	8 mV
Nebulizer Pump	:	0.1	rps	===Octopole Parameters===				Analog HV	:	1720 V
Sample Pump	:	---	rps	OctP RF	:	180	V	Pulse HV	:	1390 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 : Jul 28, 2009 13:28:09
Printed : Jul 28, 2009 13:28:15

P/A Factor Tuning Report

Acquired:Jul 28 2009 02:27 pm

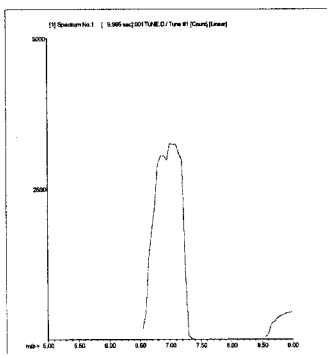
Mass[amu]	Element	P/A Factor
6	Li	0.062600
7	(Li)	Sensitivity too low
9	Be	0.069271
23	Na	0.075406
24	Mg	0.077275
27	Al	0.079248
39	K	0.079254
43	Ca	Sensitivity too low
45	Sc	0.080308
51	V	0.081067
52	Cr	0.083320
53	(Cr)	Sensitivity too low
55	Mn	0.084514
57	Fe	Sensitivity too low
59	Co	0.086846
60	Ni	0.087635
63	Cu	0.088758
66	Zn	0.088829
72	Ge	0.088260
75	As	0.087934
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	0.089842
98	(Mo)	0.089165
99	(Mo)	0.089854
105	Pd	0.091654
106	(Cd)	0.091488
107	Ag	Sensitivity too low
108	(Cd)	0.092233
111	Cd	0.092008
114	Cd	0.091543
115	In	0.090750
118	Sn	0.091015
121	Sb	0.091171
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
182	W	Sensitivity too low
195	Pt	Sensitivity too low
205	Tl	0.096491
206	(Pb)	0.095078
207	(Pb)	0.095253
208	Pb	0.094344
232	Th	0.093740
238	U	0.093786

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1390 V

200.8 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\001TUNE.D
Date Acquired: Jul 28 2009 04:23 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	35008	35295	35137	35059	34831	34717	0.67	5.00	
9 Be	4915	4937	4907	4946	4908	4880	0.54	5.00	~~RSDfail~~ 7/28/09
24 Mg	27333	27536	27387	27312	27543	26885	0.98	5.00	
59 Co	111637	112783	112414	110044	111134	111808	0.97	5.00	
115 In	1398392	1396618	1400794	1398677	1400984	1394888	0.19	5.00	
208 Pb	69177	70169	69984	69111	69049	67571	1.49	5.00	
238 U	133234	136918	132735	132938	131761	131818	1.60	5.00	



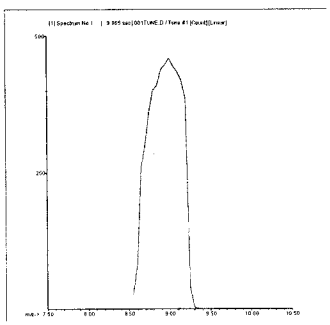
7 Li

Mass Calib.

Actual: 7.05
Required: 6.90 - 7.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



9 Be

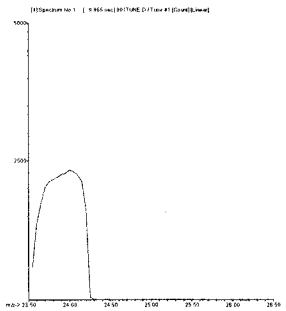
Mass Calib.

Actual: 9.00
Required: 8.90 - 9.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:

C:\ICPCHEM\1\DATA\AG072809B.B\001TUNE.D



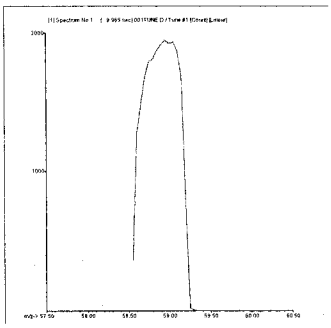
24 Mg

Mass Calib.

Actual: 24.00
Required: 23.90 - 24.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



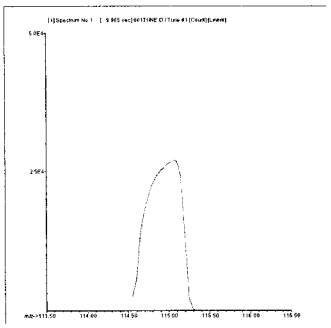
59 Co

Mass Calib.

Actual: 58.95
Required: 58.90 - 59.10
Flag:

Peak Width

Actual: 0.65
Required: 0.90
Flag:



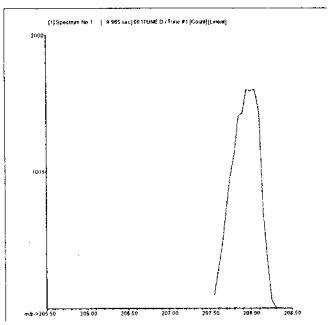
115 In

Mass Calib.

Actual: 115.00
Required: 114.90 - 115.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:



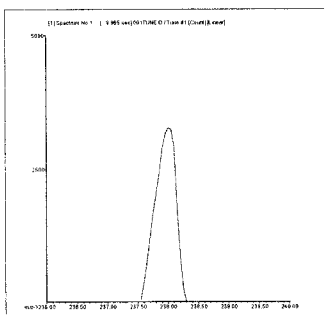
208 Pb

Mass Calib.

Actual: 208.00
Required: 207.90 - 208.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:



238 U

Mass Calib.

Actual: 238.00
Required: 237.90 - 238.10
Flag:

Peak Width

Actual: 0.60
Required: 0.90
Flag:

Tune Result: pass. ~~Fail~~ 7/28/09

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\002CALB.D\002CALB.D#
Date Acquired: Jul 28 2009 04:26 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: Jul 28 2009 04:27 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	173.21
51	V	72	1	-42	1299.20
52	Cr	72	1	3120	5.99
55	Mn	72	1	747	19.52
59	Co	72	1	143	28.20
60	Ni	72	1	80	21.65
63	Cu	72	1	417	9.99
66	Zn	72	1	518	2.04
75	As	72	1	65	30.04
78	Se	72	1	537	3.88
95	Mo	72	1	300	34.64
107	Ag	115	1	30	0.00
111	Cd	115	1	13	65.06
118	Sn	115	1	7376	6.12
121	Sb	115	1	63	21.05
137	Ba	115	1	36	10.83
205	Tl	165	1	139	9.09
208	Pb	165	1	318	18.42
232	Th	165	1	273	14.79
238	U	165	1	160	6.25

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	618926	2.08
45	Sc	1	2228973	1.36
72	Ge	1	949914	0.69
115	In	1	2463091	0.71
165	Ho	1	3495142	1.36

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\AG072809B.B\003CALB.D\003CALB.D#
Date Acquired: Jul 28 2009 04:29 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: Jul 28 2009 04:27 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-586	50.67
52	Cr	72	1	2844	8.09
55	Mn	72	1	773	7.80
59	Co	72	1	77	7.53
60	Ni	72	1	97	21.53
63	Cu	72	1	660	6.94
66	Zn	72	1	859	1.20
75	As	72	1	71	8.65
78	Se	72	1	583	14.58
95	Mo	72	1	187	26.96
107	Ag	115	1	20	100.00
111	Cd	115	1	-1	547.00
118	Sn	115	1	1647	4.39
121	Sb	115	1	46	8.45
137	Ba	115	1	29	43.68
205	Tl	165	1	49	23.95
208	Pb	165	1	247	19.16
232	Th	165	1	203	20.48
238	U	165	1	36	47.19

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	612846	1.52
45	Sc	1	2248241	0.59
72	Ge	1	964253	0.85
115	In	1	2469796	0.37
165	Ho	1	3500252	0.49

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\AG072809B.B\004ICAL.D\004ICAL.D#
Date Acquired:	Jul 28 2009 04:32 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:	Jul 28 2009 04:30 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	84145	1.48
51	V	72	1	1338341	1.15
52	Cr	72	1	1349521	1.13
55	Mn	72	1	1481750	0.68
59	Co	72	1	1731394	0.67
60	Ni	72	1	390907	0.79
63	Cu	72	1	913188	0.80
66	Zn	72	1	187625	0.70
75	As	72	1	157016	0.72
78	Se	72	1	28613	1.74
95	Mo	72	1	410299	0.45
107	Ag	115	1	1169999	0.75
111	Cd	115	1	222734	0.91
118	Sn	115	1	617854	1.29
121	Sb	115	1	679367	0.93
137	Ba	115	1	294326	0.77
205	Tl	165	1	1918161	1.27
208	Pb	165	1	2628987	0.27
232	Th	165	1	2297499	2.93
238	U	165	1	2711872	0.61

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	593763	2.37	612846	96.9	30 - 120	
45	Sc	1	2184940	0.81	2248241	97.2	30 - 120	
72	Ge	1	928474	0.85	964253	96.3	30 - 120	
115	In	1	2428470	0.11	2469796	98.3	30 - 120	
165	Ho	1	3502651	0.55	3500252	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\AG072809B.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\AG072809B.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 28 2009 04:34 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: Jul 28 2009 04:32 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.64	ppb	2.09	40	101.6	90 - 110	
51 V	72	1	40.00	ppb	0.72	40	100.0	90 - 110	
52 Cr	72	1	40.08	ppb	0.53	40	100.2	90 - 110	
55 Mn	72	1	40.32	ppb	0.74	40	100.8	90 - 110	
59 Co	72	1	39.42	ppb	0.54	40	98.6	90 - 110	
60 Ni	72	1	40.13	ppb	2.08	40	100.3	90 - 110	
63 Cu	72	1	40.17	ppb	0.96	40	100.4	90 - 110	
66 Zn	72	1	39.59	ppb	2.09	40	99.0	90 - 110	
75 As	72	1	39.58	ppb	0.70	40	99.0	90 - 110	
78 Se	72	1	40.05	ppb	6.91	40	100.1	90 - 110	
95 Mo	72	1	39.79	ppb	0.42	40	99.5	90 - 110	
107 Ag	115	1	40.62	ppb	0.65	40	101.6	90 - 110	
111 Cd	115	1	40.89	ppb	0.86	40	102.2	90 - 110	
118 Sn	115	1	40.10	ppb	0.61	40	100.3	90 - 110	
121 Sb	115	1	39.02	ppb	1.51	40	97.6	90 - 110	
137 Ba	115	1	40.29	ppb	0.77	40	100.7	90 - 110	
205 Tl	165	1	41.79	ppb	1.27	40	104.5	90 - 110	
208 Pb	165	1	42.22	ppb	1.48	40	105.6	90 - 110	
232 Th	165	1	45.82	ppb	2.09	40	114.6	90 - 110	Fail
238 U	165	1	41.60	ppb	1.39	40	104.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	577939	0.57	612846	94.3	30 - 120	
45 Sc	1	2167703	0.29	2248241	96.4	30 - 120	
72 Ge	1	936252	0.48	964253	97.1	30 - 120	
115 In	1	2404262	0.68	2469796	97.3	30 - 120	
165 Ho	1	3456790	1.31	3500252	98.8	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\AG072809B.B\003CALB.D\003CALB.D#

1 :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\AG072809B.B\006WASH.D\006WASH.D#
Date Acquired: Jul 28 2009 04:37 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: Jul 28 2009 04:32 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	1.027 ppb	7.11	1.30	
51 V	72	1	5.242 ppb	2.18	6.50	
52 Cr	72	1	2.099 ppb	1.76	2.60	
55 Mn	72	1	1.045 ppb	2.14	1.30	
59 Co	72	1	1.018 ppb	1.10	1.30	
60 Ni	72	1	2.112 ppb	6.02	2.60	
63 Cu	72	1	2.062 ppb	2.18	2.60	
66 Zn	72	1	10.130 ppb	1.96	13.00	
75 As	72	1	5.102 ppb	2.56	6.50	
78 Se	72	1	5.108 ppb	11.35	6.50	
95 Mo	72	1	2.157 ppb	2.01	2.60	
107 Ag	115	1	5.357 ppb	0.68	6.50	
111 Cd	115	1	1.121 ppb	7.17	1.30	
118 Sn	115	1	10.580 ppb	1.04	13.00	
121 Sb	115	1	2.187 ppb	2.04	2.60	
137 Ba	115	1	1.080 ppb	0.60	1.30	
205 Tl	165	1	1.165 ppb	1.94	1.30	
208 Pb	165	1	1.101 ppb	1.59	1.30	
232 Th	165	1	2.920 ppb	1.83	2.60	
238 U	165	1	1.155 ppb	0.59	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	579274	0.16	612846	94.5	30 - 120	
45 Sc	1	2155941	0.98	2248241	95.9	30 - 120	
72 Ge	1	929578	0.57	964253	96.4	30 - 120	
115 In	1	2407558	0.59	2469796	97.5	30 - 120	
165 Ho	1	3449067	0.55	3500252	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\AG072809B.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\AG072809B.B\007 ICB.D\007 ICB.D#
Date Acquired: Jul 28 2009 04:40 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: Jul 28 2009 04:32 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	0.04	ppb	8.39	1.00	
52 Cr	72	1	-0.01	ppb	168.46	1.00	
55 Mn	72	1	0.00	ppb	167.32	1.00	
59 Co	72	1	0.00	ppb	108.03	1.00	
60 Ni	72	1	0.01	ppb	31.49	1.00	
63 Cu	72	1	-0.02	ppb	38.50	1.00	
66 Zn	72	1	-0.23	ppb	1.38	1.00	
75 As	72	1	0.01	ppb	221.38	1.00	
78 Se	72	1	0.07	ppb	148.87	1.00	
95 Mo	72	1	0.01	ppb	49.62	1.00	
107 Ag	115	1	0.01	ppb	23.10	1.00	
111 Cd	115	1	0.01	ppb	187.59	1.00	
118 Sn	115	1	-0.03	ppb	51.61	1.00	
121 Sb	115	1	0.09	ppb	2.19	1.00	
137 Ba	115	1	0.00	ppb	115.43	1.00	
205 Tl	165	1	0.02	ppb	7.30	1.00	
208 Pb	165	1	0.00	ppb	177.19	1.00	
232 Th	165	1	0.20	ppb	6.09	1.00	
238 U	165	1	0.00	ppb	18.83	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	575997	1.07	612846	94.0	30 - 120	
45 Sc	1	2181765	0.30	2248241	97.0	30 - 120	
72 Ge	1	931200	1.71	964253	96.6	30 - 120	
115 In	1	2420259	0.98	2469796	98.0	30 - 120	
165 Ho	1	3451752	0.32	3500252	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\AG072809B.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\AG072809B.B\008RLST.D\008RLST.D#
Date Acquired: Jul 28 2009 04:42 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: Jul 28 2009 04:32 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	1.08	ppb	7.28	1	108.3	50 - 150	
51 V	72	1	1.06	ppb	5.29	1	105.8	50 - 150	
52 Cr	72	1	1.05	ppb	2.76	1	105.3	50 - 150	
55 Mn	72	1	1.07	ppb	3.88	1	106.7	50 - 150	
59 Co	72	1	1.04	ppb	1.34	1	104.0	50 - 150	
60 Ni	72	1	1.06	ppb	10.73	1	106.1	50 - 150	
63 Cu	72	1	1.12	ppb	6.73	1	112.2	50 - 150	
66 Zn	72	1	10.07	ppb	0.97	10	100.7	50 - 150	
75 As	72	1	0.98	ppb	1.40	1	97.9	50 - 150	
78 Se	72	1	0.94	ppb	26.11	1	93.8	50 - 150	
95 Mo	72	1	1.03	ppb	10.38	1	102.7	50 - 150	
107 Ag	115	1	1.05	ppb	2.30	1	105.2	50 - 150	
111 Cd	115	1	1.06	ppb	3.80	1	105.6	50 - 150	
118 Sn	115	1	12.19	ppb	1.47	10	121.9	50 - 150	
121 Sb	115	1	1.05	ppb	3.75	1	104.8	50 - 150	
137 Ba	115	1	1.02	ppb	3.96	1	101.6	50 - 150	
205 Tl	165	1	1.09	ppb	1.19	1	108.5	50 - 150	
208 Pb	165	1	1.08	ppb	1.82	1	107.7	50 - 150	
232 Th	165	1	1.27	ppb	3.70	1	126.5	50 - 150	
238 U	165	1	1.13	ppb	0.83	1	112.8	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	575645	0.76	612846	93.9	30 - 120	
45 Sc	1	2153590	0.22	2248241	95.8	30 - 120	
72 Ge	1	926762	0.65	964253	96.1	30 - 120	
115 In	1	2411935	0.91	2469796	97.7	30 - 120	
165 Ho	1	3438365	0.69	3500252	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\AG072809B.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\AG072809B.B\009AFCE.D\009AFCE.D#
Date Acquired: Jul 28 2009 04:45 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: Jul 28 2009 04:32 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	8.53	0	76.1	80 - 120	
51 V	72	1	0.24	ppb	9.72	0	114.3	80 - 120	
52 Cr	72	1	0.49	ppb	1.78	0	232.0	80 - 120	
55 Mn	72	1	0.28	ppb	6.89	0	129.1	80 - 120	
59 Co	72	1	0.21	ppb	10.36	0	100.8	80 - 120	
60 Ni	72	1	0.38	ppb	10.86	0	179.1	80 - 120	
63 Cu	72	1	0.19	ppb	11.70	0	86.6	80 - 120	
66 Zn	72	1	1.78	ppb	1.17	2	88.3	80 - 120	
75 As	72	1	0.21	ppb	11.46	0	105.5	80 - 120	
78 Se	72	1	0.10	ppb	262.69	0	54.0	80 - 120	
95 Mo	72	1	0.18	ppb	13.02	0	88.3	80 - 120	
107 Ag	115	1	0.20	ppb	4.84	0	97.1	80 - 120	
111 Cd	115	1	0.22	ppb	3.92	0	102.2	80 - 120	
118 Sn	115	1	3.37	ppb	1.24	2	138.2	80 - 120	
121 Sb	115	1	0.22	ppb	2.78	0	106.4	80 - 120	
137 Ba	115	1	0.21	ppb	5.55	0	104.4	80 - 120	
205 Tl	165	1	0.22	ppb	0.38	0	103.3	80 - 120	
208 Pb	165	1	0.22	ppb	3.41	0	100.4	80 - 120	
232 Th	165	1	0.32	ppb	4.74	0	125.7	80 - 120	
238 U	165	1	0.23	ppb	2.37	0	99.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570607	0.14	612846	93.1	30 - 120	
45 Sc	1	2145575	0.91	2248241	95.4	30 - 120	
72 Ge	1	917819	0.73	964253	95.2	30 - 120	
115 In	1	2392885	0.63	2469796	96.9	30 - 120	
165 Ho	1	3409599	0.18	3500252	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\AG072809B.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\AG072809B.B\010SMPL.D\010SMPL.D#
Date Acquired: Jul 28 2009 04:48 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: Jul 28 2009 04:32 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	0.03	0.03	ppb	142.04	3600	
52 Cr	72	1	0.03	0.03	ppb	44.60	3600	
55 Mn	72	1	0.00	0.00	ppb	237.89	3600	
59 Co	72	1	0.00	0.00	ppb	135.84	3600	
60 Ni	72	1	0.00	0.00	ppb	281.73	3600	
63 Cu	72	1	-0.02	-0.02	ppb	30.05	3600	
66 Zn	72	1	-0.28	-0.28	ppb	2.33	3600	
75 As	72	1	0.00	0.00	ppb	192.78	3600	
78 Se	72	1	2.11	2.11	ppb	14.92	3600	
95 Mo	72	1	-0.02	-0.02	ppb	26.57	3600	
107 Ag	115	1	0.00	0.00	ppb	88.39	3600	
111 Cd	115	1	0.01	0.01	ppb	134.51	3600	
118 Sn	115	1	1.73	1.73	ppb	1.05	3600	
121 Sb	115	1	0.01	0.01	ppb	8.56	3600	
137 Ba	115	1	0.00	0.00	ppb	44.65	3600	
205 Tl	165	1	0.01	0.01	ppb	20.03	3600	
208 Pb	165	1	0.00	0.00	ppb	35.73	3600	
232 Th	165	1	0.04	0.04	ppb	13.07	1000	
238 U	165	1	0.00	0.00	ppb	671.13	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	569949	0.94	612846	93.0	30 - 120	
45 Sc	1	2153360	0.28	2248241	95.8	30 - 120	
72 Ge	1	918271	0.69	964253	95.2	30 - 120	
115 In	1	2380310	0.74	2469796	96.4	30 - 120	
165 Ho	1	3415149	0.80	3500252	97.6	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\AG072809B.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\AG072809B.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 28 2009 04:51 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: Jul 28 2009 04:32 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	0.02 ppb	115.97	1.00	
51 V	72	1	-0.26 ppb	84.20	1.00	
52 Cr	72	1	1.11 ppb	2.24	1.00	
55 Mn	72	1	2.45 ppb	0.50	1.00	
59 Co	72	1	0.11 ppb	7.39	1.00	
60 Ni	72	1	1.20 ppb	1.71	1.00	
63 Cu	72	1	0.53 ppb	6.44	1.00	
66 Zn	72	1	3.59 ppb	0.92	10.00	
75 As	72	1	0.49 ppb	4.70	1.00	
78 Se	72	1	0.16 ppb	82.85	1.00	
95 Mo	72	1	1931.00 ppb	0.84	2000.00	
107 Ag	115	1	0.07 ppb	1.69	1.00	
111 Cd	115	1	0.38 ppb	10.34	1.00	
118 Sn	115	1	0.00 ppb	809.63	10.00	
121 Sb	115	1	0.24 ppb	3.97	1.00	
137 Ba	115	1	1.58 ppb	3.75	1.00	
205 Tl	165	1	0.06 ppb	15.49	1.00	
208 Pb	165	1	0.15 ppb	2.24	1.00	
232 Th	165	1	0.11 ppb	9.46	1.00	
238 U	165	1	0.03 ppb	4.70	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	583208	2.05	612846	95.2	30 - 120	
45 Sc	1	1986317	1.73	2248241	88.3	30 - 120	
72 Ge	1	846300	0.21	964253	87.8	30 - 120	
115 In	1	2111321	0.53	2469796	85.5	30 - 120	
165 Ho	1	3134548	1.18	3500252	89.6	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\AG072809B.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\AG072809B.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 28 2009 04:53 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: Jul 28 2009 04:32 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	93.63	2.99	100	93.6	80 - 120	
51 V	72	1	103.60	1.24	100	103.6	80 - 120	
52 Cr	72	1	98.93	0.76	100	98.9	80 - 120	
55 Mn	72	1	99.31	0.60	100	99.3	80 - 120	
59 Co	72	1	93.37	0.46	100	93.4	80 - 120	
60 Ni	72	1	89.79	1.33	100	89.8	80 - 120	
63 Cu	72	1	86.99	1.17	100	87.0	80 - 120	
66 Zn	72	1	93.07	0.21	100	93.1	80 - 120	
75 As	72	1	96.03	0.46	100	96.0	80 - 120	
78 Se	72	1	96.83	2.64	100	96.8	80 - 120	
95 Mo	72	1	2066.00	0.46	2100	98.4	80 - 120	
107 Ag	115	1	86.32	3.24	100	86.3	80 - 120	
111 Cd	115	1	93.89	0.71	100	93.9	80 - 120	
118 Sn	115	1	102.40	0.55	100	102.4	80 - 120	
121 Sb	115	1	100.20	0.69	100	100.2	80 - 120	
137 Ba	115	1	102.40	0.15	100	102.4	80 - 120	
205 Tl	165	1	95.82	0.92	100	95.8	80 - 120	
208 Pb	165	1	94.36	0.88	100	94.4	80 - 120	
232 Th	165	1	112.30	1.30	100	112.3	80 - 120	
238 U	165	1	102.70	0.70	100	102.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	597697	0.87	612846	97.5	30 - 120	
45 Sc	1	1991170	0.11	2248241	88.6	30 - 120	
72 Ge	1	832795	0.22	964253	86.4	30 - 120	
115 In	1	2121354	0.23	2469796	85.9	30 - 120	
165 Ho	1	3205322	0.87	3500252	91.6	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\AG072809B.B\003CALB.D\003CALB.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\AG072809B.B\013SMPL.D\013SMPL.D#
Date Acquired: Jul 28 2009 04:56 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: Jul 28 2009 04:32 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	49.54	3600	
51 V	72	1	0.03	0.03	ppb	110.16	3600	
52 Cr	72	1	0.02	0.02	ppb	75.75	3600	
55 Mn	72	1	0.02	0.02	ppb	34.50	3600	
59 Co	72	1	0.01	0.01	ppb	16.98	3600	
60 Ni	72	1	0.04	0.04	ppb	52.27	3600	
63 Cu	72	1	0.01	0.01	ppb	179.76	3600	
66 Zn	72	1	-0.14	-0.14	ppb	23.90	3600	
75 As	72	1	0.02	0.02	ppb	34.01	3600	
78 Se	72	1	0.25	0.25	ppb	196.49	3600	
95 Mo	72	1	1.75	1.75	ppb	9.96	3600	
107 Ag	115	1	0.02	0.02	ppb	16.39	3600	
111 Cd	115	1	0.02	0.02	ppb	58.83	3600	
118 Sn	115	1	0.91	0.91	ppb	3.73	3600	
121 Sb	115	1	0.04	0.04	ppb	5.57	3600	
137 Ba	115	1	0.02	0.02	ppb	13.66	3600	
205 Tl	165	1	0.02	0.02	ppb	28.03	3600	
208 Pb	165	1	0.02	0.02	ppb	25.21	3600	
232 Th	165	1	0.55	0.55	ppb	10.16	1000	
238 U	165	1	0.03	0.03	ppb	8.91	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	591158	0.50	612846	96.5	30 - 120	
45 Sc	1	2105451	0.74	2248241	93.6	30 - 120	
72 Ge	1	914785	1.39	964253	94.9	30 - 120	
115 In	1	2403517	0.16	2469796	97.3	30 - 120	
165 Ho	1	3438218	0.80	3500252	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\AG072809B.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\AG072809B.B\014 LR.D\014 LR.D#
Date Acquired: Jul 28 2009 04:59 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 04:32 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	1013.00 ppb	2.73	1000	101.3	90 - 110	
51 V	72	1	905.20 ppb	1.18	1000	90.5	90 - 110	
52 Cr	72	1	927.40 ppb	1.96	1000	92.7	90 - 110	
55 Mn	72	1	927.70 ppb	1.51	1000	92.8	90 - 110	
59 Co	72	1	918.20 ppb	1.37	1000	91.8	90 - 110	
60 Ni	72	1	929.90 ppb	1.58	1000	93.0	90 - 110	
63 Cu	72	1	914.10 ppb	0.66	1000	91.4	90 - 110	
66 Zn	72	1	943.90 ppb	1.22	1000	94.4	90 - 110	
75 As	72	1	950.60 ppb	0.83	1000	95.1	90 - 110	
78 Se	72	1	971.10 ppb	0.95	1000	97.1	90 - 110	
95 Mo	72	1	971.30 ppb	1.05	1000	97.1	90 - 110	
107 Ag	115	1	940.20 ppb	1.29	1000	94.0	90 - 110	
111 Cd	115	1	957.50 ppb	0.99	1000	95.8	90 - 110	
118 Sn	115	1	952.00 ppb	1.85	1000	95.2	90 - 110	
121 Sb	115	1	941.40 ppb	0.72	1000	94.1	90 - 110	
137 Ba	115	1	967.90 ppb	1.32	1000	96.8	90 - 110	
205 Tl	165	1	956.80 ppb	1.64	1000	95.7	90 - 110	
208 Pb	165	1	940.00 ppb	1.26	1000	94.0	90 - 110	
232 Th	165	1	1089.00 ppb	1.54	1000	108.9	90 - 110	
238 U	165	1	984.60 ppb	1.02	1000	98.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	558668	1.18	612846	91.2	30 - 120	
45 Sc	1	2035738	0.57	2248241	90.5	30 - 120	
72 Ge	1	888676	1.18	964253	92.2	30 - 120	
115 In	1	2304474	0.81	2469796	93.3	30 - 120	
165 Ho	1	3408275	1.01	3500252	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\AG072809B.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\AG072809B.B\015SMPL.D\015SMPL.D#
Date Acquired: Jul 28 2009 05:01 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: Jul 28 2009 04:32 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	0.06	0.06	ppb	19.21	3600	
51 V	72	1	0.13	0.13	ppb	24.83	3600	
52 Cr	72	1	0.09	0.09	ppb	15.34	3600	
55 Mn	72	1	0.10	0.10	ppb	23.46	3600	
59 Co	72	1	0.10	0.10	ppb	9.00	3600	
60 Ni	72	1	0.10	0.10	ppb	28.14	3600	
63 Cu	72	1	0.09	0.09	ppb	10.12	3600	
66 Zn	72	1	-0.03	-0.03	ppb	81.27	3600	
75 As	72	1	0.14	0.14	ppb	25.22	3600	
78 Se	72	1	0.37	0.37	ppb	52.27	3600	
95 Mo	72	1	1.00	1.00	ppb	2.44	3600	
107 Ag	115	1	0.13	0.13	ppb	18.16	3600	
111 Cd	115	1	0.10	0.10	ppb	7.52	3600	
118 Sn	115	1	1.89	1.89	ppb	4.69	3600	
121 Sb	115	1	0.49	0.49	ppb	6.00	3600	
137 Ba	115	1	0.09	0.09	ppb	18.94	3600	
205 Tl	165	1	0.23	0.23	ppb	16.56	3600	
208 Pb	165	1	0.11	0.11	ppb	14.96	3600	
232 Th	165	1	3.89	3.89	ppb	14.26	1000	
238 U	165	1	0.18	0.18	ppb	1.35	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	571195	1.60	612846	93.2	30 - 120	
45 Sc	1	2090479	1.03	2248241	93.0	30 - 120	
72 Ge	1	890703	3.24	964253	92.4	30 - 120	
115 In	1	2364013	0.30	2469796	95.7	30 - 120	
165 Ho	1	3400498	0.39	3500252	97.2	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\AG072809B.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\AG072809B.B\016 CCV.D\016 CCV.D#
Date Acquired: Jul 28 2009 05:04 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: Jul 28 2009 04:32 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	50.44	ppb	1.69	50	100.9	90 - 110	
51 V	72	1	49.91	ppb	2.47	50	99.8	90 - 110	
52 Cr	72	1	49.68	ppb	2.43	50	99.4	90 - 110	
55 Mn	72	1	49.53	ppb	1.62	50	99.1	90 - 110	
59 Co	72	1	49.11	ppb	2.57	50	98.2	90 - 110	
60 Ni	72	1	50.19	ppb	2.20	50	100.4	90 - 110	
63 Cu	72	1	49.67	ppb	1.94	50	99.3	90 - 110	
66 Zn	72	1	49.58	ppb	1.71	50	99.2	90 - 110	
75 As	72	1	49.77	ppb	1.98	50	99.5	90 - 110	
78 Se	72	1	50.93	ppb	3.35	50	101.9	90 - 110	
95 Mo	72	1	50.32	ppb	1.70	50	100.6	90 - 110	
107 Ag	115	1	50.47	ppb	0.74	50	100.9	90 - 110	
111 Cd	115	1	50.11	ppb	0.80	50	100.2	90 - 110	
118 Sn	115	1	50.19	ppb	0.61	50	100.4	90 - 110	
121 Sb	115	1	50.38	ppb	0.66	50	100.8	90 - 110	
137 Ba	115	1	50.18	ppb	0.70	50	100.4	90 - 110	
205 Tl	165	1	51.72	ppb	0.94	50	103.4	90 - 110	
208 Pb	165	1	51.33	ppb	0.91	50	102.7	90 - 110	
232 Th	165	1	52.50	ppb	3.10	50	105.0	90 - 110	
238 U	165	1	51.20	ppb	1.38	50	102.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	566188	0.70	612846	92.4	30 - 120	
45 Sc	1	2112459	0.18	2248241	94.0	30 - 120	
72 Ge	1	900764	2.02	964253	93.4	30 - 120	
115 In	1	2353234	0.21	2469796	95.3	30 - 120	
165 Ho	1	3432399	0.49	3500252	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\AG072809B.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\AG072809B.B\017 CCB.D\017 CCB.D#
Date Acquired: Jul 28 2009 05:07 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: Jul 28 2009 04:32 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	0.004	ppb	173.20	1.00	
51 V	72	1	0.044	ppb	27.15	1.00	
52 Cr	72	1	0.016	ppb	46.29	1.00	
55 Mn	72	1	0.064	ppb	8.44	1.00	
59 Co	72	1	0.016	ppb	10.02	1.00	
60 Ni	72	1	0.011	ppb	61.68	1.00	
63 Cu	72	1	-0.002	ppb	118.82	1.00	
66 Zn	72	1	-0.116	ppb	6.18	1.00	
75 As	72	1	0.022	ppb	46.04	1.00	
78 Se	72	1	0.153	ppb	78.79	1.00	
95 Mo	72	1	0.155	ppb	5.59	1.00	
107 Ag	115	1	0.016	ppb	2.42	1.00	
111 Cd	115	1	0.021	ppb	41.11	1.00	
118 Sn	115	1	0.102	ppb	14.49	1.00	
121 Sb	115	1	0.102	ppb	9.70	1.00	
137 Ba	115	1	0.013	ppb	43.84	1.00	
205 Tl	165	1	0.048	ppb	8.05	1.00	
208 Pb	165	1	0.012	ppb	10.93	1.00	
232 Th	165	1	0.931	ppb	9.49	1.00	
238 U	165	1	0.028	ppb	11.68	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570573	1.35	612846	93.1	30 - 120	
45 Sc	1	2116831	0.95	2248241	94.2	30 - 120	
72 Ge	1	905672	0.90	964253	93.9	30 - 120	
115 In	1	2383450	0.80	2469796	96.5	30 - 120	
165 Ho	1	3407598	0.34	3500252	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\AG072809B.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\AG072809B.B\018WASH.D\018WASH.D#
Date Acquired: Jul 28 2009 05:10 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: Jul 28 2009 04:32 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	1.043 ppb	11.80	1.30	
51 V	72	1	5.245 ppb	1.53	6.50	
52 Cr	72	1	2.086 ppb	0.51	2.60	
55 Mn	72	1	1.038 ppb	2.08	1.30	
59 Co	72	1	1.005 ppb	3.33	1.30	
60 Ni	72	1	2.068 ppb	5.36	2.60	
63 Cu	72	1	2.158 ppb	1.62	2.60	
66 Zn	72	1	10.130 ppb	1.16	13.00	
75 As	72	1	5.134 ppb	1.72	6.50	
78 Se	72	1	5.428 ppb	11.09	6.50	
95 Mo	72	1	2.092 ppb	1.92	2.60	
107 Ag	115	1	5.256 ppb	0.97	6.50	
111 Cd	115	1	1.035 ppb	4.95	1.30	
118 Sn	115	1	10.590 ppb	1.00	13.00	
121 Sb	115	1	1.959 ppb	1.55	2.60	
137 Ba	115	1	1.083 ppb	1.39	1.30	
205 Tl	165	1	1.137 ppb	2.68	1.30	
208 Pb	165	1	1.111 ppb	1.45	1.30	
232 Th	165	1	2.561 ppb	0.77	2.60	
238 U	165	1	1.156 ppb	1.74	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	570438	0.53	612846	93.1	30 - 120	
45 Sc	1	2115096	0.47	2248241	94.1	30 - 120	
72 Ge	1	910071	1.10	964253	94.4	30 - 120	
115 In	1	2368983	0.37	2469796	95.9	30 - 120	
165 Ho	1	3398785	0.65	3500252	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\AG072809B.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: 07/28/2009

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072809B.B\056CALB.D\056CALB.D#
Date Acquired:	Jul 28 2009 06:56 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:	Jul 28 2009 06:54 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	7	173.21
51	V	72	1	-502	23.06
52	Cr	72	1	1987	3.28
55	Mn	72	1	650	15.21
59	Co	72	1	103	30.55
60	Ni	72	1	47	33.47
63	Cu	72	1	377	13.92
66	Zn	72	1	1488	5.01
75	As	72	1	58	9.54
78	Se	72	1	503	14.21
95	Mo	72	1	413	11.54
107	Ag	115	1	27	77.76
111	Cd	115	1	23	44.81
118	Sn	115	1	6295	2.46
121	Sb	115	1	50	30.58
137	Ba	115	1	34	11.24
205	Tl	165	1	74	58.31
208	Pb	165	1	341	21.14
232	Th	165	1	217	17.36
238	U	165	1	91	27.74

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	372962	0.76
45	Sc	1	1530288	0.49
72	Ge	1	686281	0.94
115	In	1	1820296	0.38
165	Ho	1	2675852	0.26

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\AG072809B.B\057ICAL.D\057ICAL.D#
Date Acquired:	Jul 28 2009 06:59 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:	Jul 28 2009 06:57 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	56396	2.03
51	V	72	1	956518	0.93
52	Cr	72	1	945475	1.34
55	Mn	72	1	1045420	0.22
59	Co	72	1	1194814	0.82
60	Ni	72	1	274055	1.25
63	Cu	72	1	642426	0.80
66	Zn	72	1	132097	0.91
75	As	72	1	114091	0.14
78	Se	72	1	21611	3.41
95	Mo	72	1	298202	1.06
107	Ag	115	1	871780	1.36
111	Cd	115	1	166448	1.31
118	Sn	115	1	458904	0.61
121	Sb	115	1	511422	1.44
137	Ba	115	1	224588	2.09
205	Tl	165	1	1521804	1.48
208	Pb	165	1	2086079	0.36
232	Th	165	1	1962972	3.36
238	U	165	1	2227611	1.39

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	371940	0.16	372962	99.7	30 - 120	
45	Sc	1	1555237	0.59	1530288	101.6	30 - 120	
72	Ge	1	678000	0.76	686281	98.8	30 - 120	
115	In	1	1841746	0.75	1820296	101.2	30 - 120	
165	Ho	1	2673456	0.73	2675852	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\AG072809B.B\056CALB.D\056CALB.D#

0 :Element Failures	0
0 :ISTD Failures	0

Continuing Calibration Verification (CCV) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\058 CCV.D\058 CCV.D#
Date Acquired: Jul 28 2009 07:02 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: Jul 28 2009 07:00 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	49.39 ppb	1.75	50	98.8	90 - 110	
51 V	72	1	49.27 ppb	0.46	50	98.5	90 - 110	
52 Cr	72	1	49.96 ppb	0.27	50	99.9	90 - 110	
55 Mn	72	1	50.03 ppb	0.64	50	100.1	90 - 110	
59 Co	72	1	50.35 ppb	0.05	50	100.7	90 - 110	
60 Ni	72	1	50.67 ppb	1.56	50	101.3	90 - 110	
63 Cu	72	1	50.23 ppb	0.72	50	100.5	90 - 110	
66 Zn	72	1	49.27 ppb	0.72	50	98.5	90 - 110	
75 As	72	1	49.91 ppb	0.44	50	99.8	90 - 110	
78 Se	72	1	52.01 ppb	1.45	50	104.0	90 - 110	
95 Mo	72	1	50.65 ppb	0.83	50	101.3	90 - 110	
107 Ag	115	1	49.99 ppb	1.90	50	100.0	90 - 110	
111 Cd	115	1	49.49 ppb	1.63	50	99.0	90 - 110	
118 Sn	115	1	49.98 ppb	1.39	50	100.0	90 - 110	
121 Sb	115	1	50.61 ppb	1.08	50	101.2	90 - 110	
137 Ba	115	1	50.16 ppb	1.57	50	100.3	90 - 110	
205 Tl	165	1	50.74 ppb	0.44	50	101.5	90 - 110	
208 Pb	165	1	50.88 ppb	0.59	50	101.8	90 - 110	
232 Th	165	1	50.33 ppb	2.28	50	100.7	90 - 110	
238 U	165	1	50.13 ppb	1.22	50	100.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	372752	1.76	372962	99.9	30 - 120	
45 Sc	1	1531091	0.92	1530288	100.1	30 - 120	
72 Ge	1	675781	0.50	686281	98.5	30 - 120	
115 In	1	1832467	0.73	1820296	100.7	30 - 120	
165 Ho	1	2674446	0.22	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\059 CCB.D\059 CCB.D#
Date Acquired: Jul 28 2009 07:05 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: Jul 28 2009 07:00 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	-0.012	ppb	0.00	1.00	
51 V	72	1	-0.013	ppb	173.17	1.00	
52 Cr	72	1	0.018	ppb	64.64	1.00	
55 Mn	72	1	0.037	ppb	7.00	1.00	
59 Co	72	1	0.004	ppb	40.96	1.00	
60 Ni	72	1	0.014	ppb	57.93	1.00	
63 Cu	72	1	0.025	ppb	35.09	1.00	
66 Zn	72	1	-0.762	ppb	4.14	1.00	
75 As	72	1	0.028	ppb	12.11	1.00	
78 Se	72	1	0.021	ppb	1258.80	1.00	
95 Mo	72	1	0.023	ppb	92.46	1.00	
107 Ag	115	1	0.014	ppb	47.72	1.00	
111 Cd	115	1	0.001	ppb	229.53	1.00	
118 Sn	115	1	-1.134	ppb	3.60	1.00	
121 Sb	115	1	0.062	ppb	11.59	1.00	
137 Ba	115	1	0.009	ppb	26.86	1.00	
205 Tl	165	1	0.048	ppb	19.28	1.00	
208 Pb	165	1	0.003	ppb	6.30	1.00	
232 Th	165	1	0.551	ppb	14.55	1.00	
238 U	165	1	0.012	ppb	13.68	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	375791	0.77	372962	100.8	30 - 120	
45 Sc	1	1543892	0.98	1530288	100.9	30 - 120	
72 Ge	1	693165	0.41	686281	101.0	30 - 120	
115 In	1	1838288	0.95	1820296	101.0	30 - 120	
165 Ho	1	2696902	0.60	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\060WASH.D\060WASH.D#
Date Acquired: Jul 28 2009 07:07 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: Jul 28 2009 07:00 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	0.976 ppb	10.41	1.30	
51 V	72	1	5.072 ppb	1.10	6.50	
52 Cr	72	1	2.066 ppb	2.10	2.60	
55 Mn	72	1	1.016 ppb	3.69	1.30	
59 Co	72	1	1.032 ppb	3.22	1.30	
60 Ni	72	1	2.118 ppb	4.88	2.60	
63 Cu	72	1	2.092 ppb	1.87	2.60	
66 Zn	72	1	9.352 ppb	1.42	13.00	
75 As	72	1	5.169 ppb	0.73	6.50	
78 Se	72	1	5.054 ppb	9.82	6.50	
95 Mo	72	1	1.972 ppb	4.44	2.60	
107 Ag	115	1	5.220 ppb	3.55	6.50	
111 Cd	115	1	1.018 ppb	3.93	1.30	
118 Sn	115	1	9.529 ppb	2.49	13.00	
121 Sb	115	1	1.950 ppb	1.27	2.60	
137 Ba	115	1	1.042 ppb	1.23	1.30	
205 Tl	165	1	1.108 ppb	0.74	1.30	
208 Pb	165	1	1.079 ppb	0.88	1.30	
232 Th	165	1	2.200 ppb	1.64	2.60	
238 U	165	1	1.114 ppb	0.61	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	380666	0.73	372962	102.1	30 - 120	
45 Sc	1	1538343	1.30	1530288	100.5	30 - 120	
72 Ge	1	694583	0.69	686281	101.2	30 - 120	
115 In	1	1853250	0.93	1820296	101.8	30 - 120	
165 Ho	1	2667916	1.26	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\083 CCV.D\083 CCV.D#
Date Acquired: Jul 28 2009 08:10 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: Jul 28 2009 07:00 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	49.59	ppb	1.36	50	99.2	90 - 110	
51 V	72	1	48.99	ppb	0.50	50	98.0	90 - 110	
52 Cr	72	1	49.22	ppb	0.92	50	98.4	90 - 110	
55 Mn	72	1	49.64	ppb	0.59	50	99.3	90 - 110	
59 Co	72	1	49.84	ppb	0.71	50	99.7	90 - 110	
60 Ni	72	1	49.74	ppb	1.14	50	99.5	90 - 110	
63 Cu	72	1	49.88	ppb	0.75	50	99.8	90 - 110	
66 Zn	72	1	49.81	ppb	0.31	50	99.6	90 - 110	
75 As	72	1	50.49	ppb	0.90	50	101.0	90 - 110	
78 Se	72	1	49.04	ppb	0.54	50	98.1	90 - 110	
95 Mo	72	1	50.57	ppb	1.09	50	101.1	90 - 110	
107 Ag	115	1	48.85	ppb	0.81	50	97.7	90 - 110	
111 Cd	115	1	49.43	ppb	0.82	50	98.9	90 - 110	
118 Sn	115	1	49.63	ppb	0.42	50	99.3	90 - 110	
121 Sb	115	1	50.97	ppb	0.84	50	101.9	90 - 110	
137 Ba	115	1	50.16	ppb	0.59	50	100.3	90 - 110	
205 Tl	165	1	51.01	ppb	1.40	50	102.0	90 - 110	
208 Pb	165	1	51.09	ppb	1.03	50	102.2	90 - 110	
232 Th	165	1	51.86	ppb	2.50	50	103.7	90 - 110	
238 U	165	1	51.08	ppb	0.28	50	102.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	342829	0.39	372962	91.9	30 - 120	
45 Sc	1	1458045	0.51	1530288	95.3	30 - 120	
72 Ge	1	653639	0.60	686281	95.2	30 - 120	
115 In	1	1784346	0.23	1820296	98.0	30 - 120	
165 Ho	1	2588124	0.89	2675852	96.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\084 CCB.D\084 CCB.D#
Date Acquired: Jul 28 2009 08:13 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: Jul 28 2009 07:00 pm
Sample Type: CCB
Total Dil Factor: 1.00

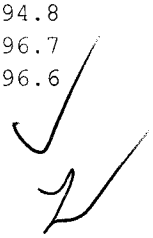
QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.005	ppb	209.43	1.00	
51 V	72	1	0.047	ppb	44.02	1.00	
52 Cr	72	1	0.012	ppb	132.64	1.00	
55 Mn	72	1	0.093	ppb	12.52	1.00	
59 Co	72	1	0.005	ppb	110.75	1.00	
60 Ni	72	1	0.019	ppb	52.66	1.00	
63 Cu	72	1	0.026	ppb	40.09	1.00	
66 Zn	72	1	-0.726	ppb	2.09	1.00	
75 As	72	1	-0.005	ppb	227.48	1.00	
78 Se	72	1	-0.074	ppb	579.76	1.00	
95 Mo	72	1	-0.053	ppb	6.54	1.00	
107 Ag	115	1	0.026	ppb	29.21	1.00	
111 Cd	115	1	0.028	ppb	6.26	1.00	
118 Sn	115	1	-0.871	ppb	7.64	1.00	
121 Sb	115	1	0.040	ppb	8.10	1.00	
137 Ba	115	1	0.034	ppb	22.34	1.00	
205 Tl	165	1	0.035	ppb	17.95	1.00	
208 Pb	165	1	0.018	ppb	14.32	1.00	
232 Th	165	1	0.356	ppb	20.54	1.00	
238 U	165	1	0.014	ppb	11.99	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	345069	0.48	372962	92.5	30 - 120	
45 Sc	1	1437444	0.62	1530288	93.9	30 - 120	
72 Ge	1	650889	0.86	686281	94.8	30 - 120	
115 In	1	1759348	0.67	1820296	96.7	30 - 120	
165 Ho	1	2583905	0.78	2675852	96.6	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\085WASH.D\085WASH.D#
Date Acquired: Jul 28 2009 08:16 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: Jul 28 2009 07:00 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	1.012 ppb	8.09	1.30	
51 V	72	1	5.059 ppb	0.44	6.50	
52 Cr	72	1	2.018 ppb	2.56	2.60	
55 Mn	72	1	1.019 ppb	3.66	1.30	
59 Co	72	1	0.986 ppb	2.74	1.30	
60 Ni	72	1	2.098 ppb	5.42	2.60	
63 Cu	72	1	2.029 ppb	0.76	2.60	
66 Zn	72	1	9.618 ppb	0.48	13.00	
75 As	72	1	5.096 ppb	1.93	6.50	
78 Se	72	1	5.087 ppb	16.74	6.50	
95 Mo	72	1	2.067 ppb	1.93	2.60	
107 Ag	115	1	5.084 ppb	2.08	6.50	
111 Cd	115	1	1.070 ppb	4.72	1.30	
118 Sn	115	1	9.419 ppb	2.10	13.00	
121 Sb	115	1	1.946 ppb	1.82	2.60	
137 Ba	115	1	1.085 ppb	4.87	1.30	
205 Tl	165	1	1.144 ppb	1.38	1.30	
208 Pb	165	1	1.117 ppb	2.51	1.30	
232 Th	165	1	2.338 ppb	1.54	2.60	
238 U	165	1	1.145 ppb	2.46	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	352229	0.70	372962	94.4	30 - 120	
45 Sc	1	1459515	1.84	1530288	95.4	30 - 120	
72 Ge	1	658450	0.44	686281	95.9	30 - 120	
115 In	1	1794112	0.89	1820296	98.6	30 - 120	
165 Ho	1	2545737	0.79	2675852	95.1	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\086ICSA.D\086ICSA.D#
Date Acquired: Jul 28 2009 08:18 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: Jul 28 2009 07:00 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	221.63	1.00	
51 V	72	1	-0.42 ppb	18.81	1.00	
52 Cr	72	1	1.12 ppb	2.14	1.00	
55 Mn	72	1	2.60 ppb	1.77	1.00	
59 Co	72	1	0.13 ppb	6.63	1.00	
60 Ni	72	1	1.42 ppb	4.34	1.00	
63 Cu	72	1	0.56 ppb	7.25	1.00	
66 Zn	72	1	3.30 ppb	3.46	10.00	
75 As	72	1	0.51 ppb	10.44	1.00	
78 Se	72	1	0.21 ppb	212.88	1.00	
95 Mo	72	1	1953.00 ppb	0.57	2000.00	
107 Ag	115	1	0.16 ppb	11.88	1.00	
111 Cd	115	1	0.52 ppb	26.09	1.00	
118 Sn	115	1	-0.02 ppb	308.36	10.00	
121 Sb	115	1	0.26 ppb	8.28	1.00	
137 Ba	115	1	1.60 ppb	4.43	1.00	
205 Tl	165	1	0.07 ppb	18.32	1.00	
208 Pb	165	1	0.15 ppb	5.43	1.00	
232 Th	165	1	0.11 ppb	29.15	1.00	
238 U	165	1	0.04 ppb	9.40	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	364235	0.64	372962	97.7	30 - 120	
45 Sc	1	1433875	0.95	1530288	93.7	30 - 120	
72 Ge	1	637931	0.46	686281	93.0	30 - 120	
115 In	1	1634207	0.79	1820296	89.8	30 - 120	
165 Ho	1	2441011	0.25	2675852	91.2	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\087ICSB.D\087ICSB.D#
Date Acquired: Jul 28 2009 08:21 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: Jul 28 2009 07:00 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	91.75	1.09	100	91.8	80 - 120	
51 V	72	1	99.43	0.63	100	99.4	80 - 120	
52 Cr	72	1	98.21	0.55	100	98.2	80 - 120	
55 Mn	72	1	98.77	0.98	100	98.8	80 - 120	
59 Co	72	1	95.41	1.01	100	95.4	80 - 120	
60 Ni	72	1	90.74	0.70	100	90.7	80 - 120	
63 Cu	72	1	88.16	0.68	100	88.2	80 - 120	
66 Zn	72	1	93.64	0.66	100	93.6	80 - 120	
75 As	72	1	99.17	0.61	100	99.2	80 - 120	
78 Se	72	1	98.62	5.31	100	98.6	80 - 120	
95 Mo	72	1	2075.00	1.12	2100	98.8	80 - 120	
107 Ag	115	1	85.30	1.27	100	85.3	80 - 120	
111 Cd	115	1	93.76	1.61	100	93.8	80 - 120	
118 Sn	115	1	103.00	0.47	100	103.0	80 - 120	
121 Sb	115	1	101.20	1.36	100	101.2	80 - 120	
137 Ba	115	1	102.10	1.13	100	102.1	80 - 120	
205 Tl	165	1	94.65	0.62	100	94.7	80 - 120	
208 Pb	165	1	94.48	1.06	100	94.5	80 - 120	
232 Th	165	1	106.50	3.27	100	106.5	80 - 120	
238 U	165	1	99.81	1.60	100	99.8	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365209	0.68	372962	97.9	30 - 120	
45 Sc	1	1427732	0.24	1530288	93.3	30 - 120	
72 Ge	1	622717	0.49	686281	90.7	30 - 120	
115 In	1	1628507	0.66	1820296	89.5	30 - 120	
165 Ho	1	2432267	1.32	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\088WASH.D\088WASH.D#
Date Acquired: Jul 28 2009 08:24 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: Jul 28 2009 07:00 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	-0.006 ppb	187.00	1.30	
51 V	72	1	0.060 ppb	109.95	6.50	
52 Cr	72	1	0.024 ppb	9.83	2.60	
55 Mn	72	1	0.029 ppb	36.21	1.30	
59 Co	72	1	0.012 ppb	18.83	1.30	
60 Ni	72	1	0.044 ppb	31.66	2.60	
63 Cu	72	1	0.033 ppb	40.52	2.60	
66 Zn	72	1	-0.776 ppb	4.57	13.00	
75 As	72	1	0.020 ppb	33.15	6.50	
78 Se	72	1	-0.019 ppb	874.28	6.50	
95 Mo	72	1	1.708 ppb	2.35	2.60	
107 Ag	115	1	0.029 ppb	18.11	6.50	
111 Cd	115	1	0.016 ppb	68.10	1.30	
118 Sn	115	1	0.245 ppb	3.21	13.00	
121 Sb	115	1	0.030 ppb	30.99	2.60	
137 Ba	115	1	0.022 ppb	15.69	1.30	
205 Tl	165	1	0.024 ppb	18.17	1.30	
208 Pb	165	1	0.019 ppb	11.23	1.30	
232 Th	165	1	0.352 ppb	12.17	2.60	
238 U	165	1	0.025 ppb	7.12	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	363325	0.51	372962	97.4	30 - 120	
45 Sc	1	1482874	1.90	1530288	96.9	30 - 120	
72 Ge	1	672671	1.04	686281	98.0	30 - 120	
115 In	1	1783437	0.79	1820296	98.0	30 - 120	
165 Ho	1	2622816	0.33	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\089 CCV.D\089 CCV.D#
Date Acquired: Jul 28 2009 08:27 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: Jul 28 2009 07:00 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	50.12	ppb	0.33	50	100.2	90 - 110	
51 V	72	1	49.16	ppb	1.39	50	98.3	90 - 110	
52 Cr	72	1	50.05	ppb	0.36	50	100.1	90 - 110	
55 Mn	72	1	49.34	ppb	0.41	50	98.7	90 - 110	
59 Co	72	1	50.06	ppb	0.37	50	100.1	90 - 110	
60 Ni	72	1	50.31	ppb	1.35	50	100.6	90 - 110	
63 Cu	72	1	50.28	ppb	1.06	50	100.6	90 - 110	
66 Zn	72	1	50.09	ppb	0.85	50	100.2	90 - 110	
75 As	72	1	50.62	ppb	0.92	50	101.2	90 - 110	
78 Se	72	1	49.52	ppb	1.57	50	99.0	90 - 110	
95 Mo	72	1	50.45	ppb	0.48	50	100.9	90 - 110	
107 Ag	115	1	50.16	ppb	0.94	50	100.3	90 - 110	
111 Cd	115	1	50.18	ppb	0.66	50	100.4	90 - 110	
118 Sn	115	1	49.71	ppb	0.78	50	99.4	90 - 110	
121 Sb	115	1	51.01	ppb	0.63	50	102.0	90 - 110	
137 Ba	115	1	50.49	ppb	0.87	50	101.0	90 - 110	
205 Tl	165	1	51.22	ppb	1.98	50	102.4	90 - 110	
208 Pb	165	1	51.35	ppb	2.22	50	102.7	90 - 110	
232 Th	165	1	50.06	ppb	1.11	50	100.1	90 - 110	
238 U	165	1	51.01	ppb	0.63	50	102.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	360733	0.73	372962	96.7	30 - 120	
45 Sc	1	1507692	0.79	1530288	98.5	30 - 120	
72 Ge	1	669841	0.72	686281	97.6	30 - 120	
115 In	1	1806763	0.77	1820296	99.3	30 - 120	
165 Ho	1	2623994	1.37	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\090 CCB.D\090 CCB.D#
Date Acquired: Jul 28 2009 08:29 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: Jul 28 2009 07:00 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	1.55	1.00	
51 V	72	1	0.071	ppb	55.20	1.00	
52 Cr	72	1	0.015	ppb	106.26	1.00	
55 Mn	72	1	0.055	ppb	10.87	1.00	
59 Co	72	1	0.005	ppb	44.52	1.00	
60 Ni	72	1	0.024	ppb	27.23	1.00	
63 Cu	72	1	0.023	ppb	2.68	1.00	
66 Zn	72	1	-0.719	ppb	6.73	1.00	
75 As	72	1	0.019	ppb	80.75	1.00	
78 Se	72	1	0.045	ppb	70.74	1.00	
95 Mo	72	1	0.113	ppb	52.27	1.00	
107 Ag	115	1	0.020	ppb	32.50	1.00	
111 Cd	115	1	0.006	ppb	92.48	1.00	
118 Sn	115	1	-0.864	ppb	1.54	1.00	
121 Sb	115	1	0.052	ppb	19.03	1.00	
137 Ba	115	1	0.024	ppb	43.45	1.00	
205 Tl	165	1	0.030	ppb	12.84	1.00	
208 Pb	165	1	0.009	ppb	11.35	1.00	
232 Th	165	1	0.493	ppb	20.96	1.00	
238 U	165	1	0.014	ppb	10.38	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	357965	0.57	372962	96.0	30 - 120	
45 Sc	1	1494556	0.79	1530288	97.7	30 - 120	
72 Ge	1	672880	0.38	686281	98.0	30 - 120	
115 In	1	1798094	0.38	1820296	98.8	30 - 120	
165 Ho	1	2616299	0.87	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\091WASH.D\091WASH.D#
Date Acquired: Jul 28 2009 08:32 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: Jul 28 2009 07:00 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	1.073 ppb	11.52	1.30	
51 V	72	1	5.079 ppb	0.58	6.50	
52 Cr	72	1	2.096 ppb	1.55	2.60	
55 Mn	72	1	1.029 ppb	3.73	1.30	
59 Co	72	1	1.057 ppb	0.26	1.30	
60 Ni	72	1	2.025 ppb	2.12	2.60	
63 Cu	72	1	2.050 ppb	1.78	2.60	
66 Zn	72	1	9.558 ppb	1.60	13.00	
75 As	72	1	5.160 ppb	1.07	6.50	
78 Se	72	1	5.830 ppb	18.99	6.50	
95 Mo	72	1	2.060 ppb	0.60	2.60	
107 Ag	115	1	5.235 ppb	2.56	6.50	
111 Cd	115	1	1.100 ppb	1.92	1.30	
118 Sn	115	1	9.523 ppb	1.71	13.00	
121 Sb	115	1	2.006 ppb	0.79	2.60	
137 Ba	115	1	1.150 ppb	3.05	1.30	
205 Tl	165	1	1.112 ppb	1.44	1.30	
208 Pb	165	1	1.082 ppb	2.41	1.30	
232 Th	165	1	2.252 ppb	1.48	2.60	
238 U	165	1	1.119 ppb	1.31	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	365116	0.53	372962	97.9	30 - 120	
45 Sc	1	1511857	1.39	1530288	98.8	30 - 120	
72 Ge	1	685114	0.42	686281	99.8	30 - 120	
115 In	1	1798555	1.03	1820296	98.8	30 - 120	
165 Ho	1	2626430	0.14	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\111 CCV.D\111 CCV.D#
Date Acquired:	Jul 28 2009 09:27 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:	Jul 28 2009 07:00 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	50.97	ppb	1.65	50	101.9	90 - 110	
51	V	72	1	48.58	ppb	0.96	50	97.2	90 - 110	
52	Cr	72	1	49.57	ppb	1.07	50	99.1	90 - 110	
55	Mn	72	1	49.69	ppb	0.76	50	99.4	90 - 110	
59	Co	72	1	50.05	ppb	0.38	50	100.1	90 - 110	
60	Ni	72	1	50.10	ppb	0.67	50	100.2	90 - 110	
63	Cu	72	1	49.99	ppb	1.42	50	100.0	90 - 110	
66	Zn	72	1	50.42	ppb	0.52	50	100.8	90 - 110	
75	As	72	1	50.40	ppb	0.87	50	100.8	90 - 110	
78	Se	72	1	50.74	ppb	2.59	50	101.5	90 - 110	
95	Mo	72	1	50.28	ppb	0.82	50	100.6	90 - 110	
107	Ag	115	1	48.98	ppb	2.54	50	98.0	90 - 110	
111	Cd	115	1	49.92	ppb	2.11	50	99.8	90 - 110	
118	Sn	115	1	49.65	ppb	2.52	50	99.3	90 - 110	
121	Sb	115	1	50.69	ppb	2.29	50	101.4	90 - 110	
137	Ba	115	1	50.11	ppb	1.43	50	100.2	90 - 110	
205	Tl	165	1	51.89	ppb	1.69	50	103.8	90 - 110	
208	Pb	165	1	51.98	ppb	1.46	50	104.0	90 - 110	
232	Th	165	1	50.76	ppb	3.32	50	101.5	90 - 110	
238	U	165	1	51.26	ppb	0.72	50	102.5	90 - 110	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	341995	1.61	372962	91.7	30 - 120	
45	Sc	1	1410506	0.93	1530288	92.2	30 - 120	
72	Ge	1	625240	0.34	686281	91.1	30 - 120	
115	In	1	1724277	1.43	1820296	94.7	30 - 120	
165	Ho	1	2491006	0.97	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\112 CCB.D\112 CCB.D#
Date Acquired: Jul 28 2009 09:30 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: Jul 28 2009 07:00 pm
Sample Type: CCB
Total Dil Factor: 1.00

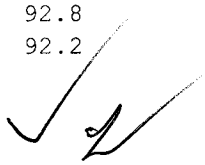
QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.001	ppb	930.89	1.00	
51 V	72	1	0.046	ppb	39.71	1.00	
52 Cr	72	1	0.027	ppb	51.44	1.00	
55 Mn	72	1	0.044	ppb	8.93	1.00	
59 Co	72	1	0.005	ppb	60.76	1.00	
60 Ni	72	1	0.020	ppb	41.04	1.00	
63 Cu	72	1	0.012	ppb	67.47	1.00	
66 Zn	72	1	-0.723	ppb	0.58	1.00	
75 As	72	1	0.014	ppb	82.22	1.00	
78 Se	72	1	-0.332	ppb	77.48	1.00	
95 Mo	72	1	-0.044	ppb	33.06	1.00	
107 Ag	115	1	0.015	ppb	22.94	1.00	
111 Cd	115	1	-0.012	ppb	93.03	1.00	
118 Sn	115	1	-0.968	ppb	5.85	1.00	
121 Sb	115	1	0.060	ppb	7.40	1.00	
137 Ba	115	1	0.018	ppb	32.52	1.00	
205 Tl	165	1	0.039	ppb	12.82	1.00	
208 Pb	165	1	0.007	ppb	22.42	1.00	
232 Th	165	1	0.424	ppb	19.72	1.00	
238 U	165	1	0.014	ppb	15.81	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	340678	0.98	372962	91.3	30 - 120	
45 Sc	1	1382674	1.09	1530288	90.4	30 - 120	
72 Ge	1	624130	1.05	686281	90.9	30 - 120	
115 In	1	1689551	1.72	1820296	92.8	30 - 120	
165 Ho	1	2468165	0.53	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\113WASH.D\113WASH.D#
Date Acquired: Jul 28 2009 09:33 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: Jul 28 2009 07:00 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	1.102 ppb	23.57	1.30	
51 V	72	1	5.036 ppb	0.20	6.50	
52 Cr	72	1	2.073 ppb	1.43	2.60	
55 Mn	72	1	1.012 ppb	4.21	1.30	
59 Co	72	1	1.014 ppb	4.35	1.30	
60 Ni	72	1	2.139 ppb	1.52	2.60	
63 Cu	72	1	2.072 ppb	5.52	2.60	
66 Zn	72	1	9.466 ppb	0.59	13.00	
75 As	72	1	5.136 ppb	0.93	6.50	
78 Se	72	1	5.971 ppb	9.35	6.50	
95 Mo	72	1	2.012 ppb	5.06	2.60	
107 Ag	115	1	5.151 ppb	0.35	6.50	
111 Cd	115	1	1.030 ppb	2.98	1.30	
118 Sn	115	1	9.527 ppb	1.50	13.00	
121 Sb	115	1	1.984 ppb	1.53	2.60	
137 Ba	115	1	1.097 ppb	2.88	1.30	
205 Tl	165	1	1.118 ppb	1.33	1.30	
208 Pb	165	1	1.086 ppb	1.49	1.30	
232 Th	165	1	2.239 ppb	3.26	2.60	
238 U	165	1	1.131 ppb	1.81	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	337940	0.88	372962	90.6	30 - 120	
45 Sc	1	1387661	1.65	1530288	90.7	30 - 120	
72 Ge	1	627413	0.75	686281	91.4	30 - 120	
115 In	1	1673364	0.63	1820296	91.9	30 - 120	
165 Ho	1	2458208	0.75	2675852	91.9	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\114 BLK.D\114 BLK.D#
Date Acquired: Jul 28 2009 09:36 pm
Operator: TEL
Sample Name: LGP0QB
Misc Info: BLANK 9201150 6020
Vial Number: 2509
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal Update: Jul 28 2009 07:00 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	0.002 ppb	657.66	2.00	
51 V	72	1	0.061 ppb	73.05	2.00	
52 Cr	72	1	0.067 ppb	4.59	2.00	
55 Mn	72	1	0.035 ppb	29.39	2.00	
59 Co	72	1	0.000 ppb	414.49	2.00	
60 Ni	72	1	0.006 ppb	72.21	2.00	
63 Cu	72	1	0.030 ppb	16.68	2.00	
66 Zn	72	1	-0.471 ppb	4.35	2.00	
75 As	72	1	0.002 ppb	855.80	2.00	
78 Se	72	1	-0.100 ppb	87.97	2.00	
95 Mo	72	1	-0.090 ppb	28.01	2.00	
107 Ag	115	1	0.012 ppb	35.67	2.00	
111 Cd	115	1	0.003 ppb	249.53	2.00	
118 Sn	115	1	-1.094 ppb	2.30	2.00	
121 Sb	115	1	0.029 ppb	12.67	2.00	
137 Ba	115	1	0.185 ppb	5.76	2.00	
205 Tl	165	1	0.020 ppb	26.40	2.00	
208 Pb	165	1	0.003 ppb	47.81	2.00	
232 Th	165	1	0.079 ppb	20.66	2.00	
238 U	165	1	0.002 ppb	68.13	2.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	326950	0.66	372962	87.7	30 - 120	
45 Sc	1	1354004	0.49	1530288	88.5	30 - 120	
72 Ge	1	602156	0.44	686281	87.7	30 - 120	
115 In	1	1634270	1.40	1820296	89.8	30 - 120	
165 Ho	1	2424590	0.69	2675852	90.6	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\115 LCS.D\115 LCS.D#
Date Acquired:	Jul 28 2009 09:39 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGP0QC
Misc Info:	LCS
Vial Number:	2510
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 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	38.82	0.23	40	97.1	80 - 120	
51 V	72	1	40.07	0.40	40	100.2	80 - 120	
52 Cr	72	1	40.36	0.59	40	100.9	80 - 120	
55 Mn	72	1	40.53	0.13	40	101.3	80 - 120	
59 Co	72	1	40.29	0.41	40	100.7	80 - 120	
60 Ni	72	1	40.38	1.07	40	101.0	80 - 120	
63 Cu	72	1	40.63	0.91	40	101.6	80 - 120	
66 Zn	72	1	37.80	0.53	40	94.5	80 - 120	
75 As	72	1	39.19	0.36	40	98.0	80 - 120	
78 Se	72	1	34.04	4.95	40	85.1	80 - 120	
95 Mo	72	1	41.11	1.00	40	102.8	80 - 120	
107 Ag	115	1	39.50	1.28	40	98.8	80 - 120	
111 Cd	115	1	38.14	1.04	40	95.4	80 - 120	
118 Sn	115	1	-1.23	1.22	40	-3.1	80 - 120	
121 Sb	115	1	39.46	1.73	40	98.7	80 - 120	
137 Ba	115	1	40.74	1.95	40	101.9	80 - 120	
205 Tl	165	1	41.60	0.12	40	104.0	80 - 120	
208 Pb	165	1	41.55	0.08	40	103.9	80 - 120	
232 Th	165	1	45.64	1.45	40	114.1	80 - 120	
238 U	165	1	43.35	0.07	40	108.4	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	322173	0.31	372962	86.4	30 - 120	
45 Sc	1	1326913	1.61	1530288	86.7	30 - 120	
72 Ge	1	585701	0.44	686281	85.3	30 - 120	
115 In	1	1644624	1.41	1820296	90.3	30 - 120	
165 Ho	1	2417838	0.92	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\116AREF.D\116AREF.D#
Date Acquired: Jul 28 2009 09:41 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJH 5X
Misc Info: D9G170255
Vial Number: 2511
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	0.04	0.01	ppb	1.63	3600	
51 V	72	1	38.35	7.67	ppb	0.92	3600	
52 Cr	72	1	16.83	3.37	ppb	2.30	3600	
55 Mn	72	1	4.86	0.97	ppb	4.70	3600	
59 Co	72	1	0.31	0.06	ppb	22.63	3600	
60 Ni	72	1	2.61	0.52	ppb	5.62	3600	
63 Cu	72	1	0.32	0.06	ppb	27.70	3600	
66 Zn	72	1	-1.56	-0.31	ppb	10.88	3600	
75 As	72	1	93.10	18.62	ppb	0.60	3600	
78 Se	72	1	2.03	0.41	ppb	76.50	3600	
95 Mo	72	1	17.46	3.49	ppb	5.35	3600	
107 Ag	115	1	0.11	0.02	ppb	49.98	3600	
111 Cd	115	1	0.11	0.02	ppb	34.11	3600	
118 Sn	115	1	-0.78	-0.16	ppb	10.10	3600	
121 Sb	115	1	0.34	0.07	ppb	5.28	3600	
137 Ba	115	1	23.22	4.64	ppb	3.57	3600	
205 Tl	165	1	0.21	0.04	ppb	28.42	3600	
208 Pb	165	1	0.16	0.03	ppb	9.84	3600	
232 Th	165	1	1.60	0.32	ppb	23.79	1000	
238 U	165	1	6.12	1.22	ppb	1.53	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	327647	0.68	372962	87.8	30 - 120	
45 Sc	1	1332155	1.16	1530288	87.1	30 - 120	
72 Ge	1	584756	0.20	686281	85.2	30 - 120	
115 In	1	1576646	0.70	1820296	86.6	30 - 120	
165 Ho	1	2404368	1.26	2675852	89.9	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\117SDIL.D\117SDIL.D#
Date Acquired:	Jul 28 2009 09:44 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHP25
Misc Info:	SERIAL DILUTION
Vial Number:	2512
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
Sample Type:	SDIL
Dilution Factor:	5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\116AREF.D\116AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.	Actual(%)	QC Range(%)	Flag
9 Be	6	1	0.00	ppb	1638.70	0.00	82.1	90 - 110	
51 V	72	1	1.52	ppb	2.06	1.53	99.3	90 - 110	
52 Cr	72	1	0.93	ppb	2.72	0.67	138.7	90 - 110	
55 Mn	72	1	0.24	ppb	3.86	0.19	124.8	90 - 110	
59 Co	72	1	0.02	ppb	14.84	0.01	127.1	90 - 110	
60 Ni	72	1	0.29	ppb	12.61	0.10	274.8	90 - 110	
63 Cu	72	1	0.01	ppb	145.69	0.01	102.1	90 - 110	
66 Zn	72	1	-0.88	ppb	1.10	-0.06	1403.1	90 - 110	
75 As	72	1	3.74	ppb	4.99	3.72	100.5	90 - 110	
78 Se	72	1	-0.13	ppb	187.83	0.08	-162.6	90 - 110	
95 Mo	72	1	0.62	ppb	20.90	0.70	88.5	90 - 110	
107 Ag	115	1	0.01	ppb	22.47	0.00	147.9	90 - 110	
111 Cd	115	1	-0.01	ppb	200.53	0.00	-207.1	90 - 110	
118 Sn	115	1	-0.07	ppb	144.43	-0.03	211.0	90 - 110	
121 Sb	115	1	0.01	ppb	37.69	0.01	110.9	90 - 110	
137 Ba	115	1	0.93	ppb	0.84	0.93	99.6	90 - 110	
205 Tl	165	1	0.01	ppb	8.93	0.01	127.1	90 - 110	
208 Pb	165	1	0.01	ppb	22.61	0.01	90.4	90 - 110	
232 Th	165	1	0.04	ppb	9.29	0.06	66.8	90 - 110	
238 U	165	1	0.25	ppb	5.71	0.24	101.6	90 - 110	

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	335522	0.95	372962	90.0	30 - 120	
45 Sc	1	1353126	0.34	1530288	88.4	30 - 120	
72 Ge	1	611118	0.32	686281	89.0	30 - 120	
115 In	1	1661246	0.89	1820296	91.3	30 - 120	
165 Ho	1	2431086	1.04	2675852	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:49

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJHP25** | Serial Dilution: **25.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072809B # 117
Acquired: 07/28/2009 21:44:00
Calibrated: 07/28/2009 18:56:00

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	7	0.03460	0.04212	17.9		*	
7440-62-2	Vanadium	51	12691	38.075	38.340	0.691		*	
7440-47-3	Chromium	52	9710	23.340	16.830	38.7		*	
7439-96-5	Manganese	55	2860	6.0550	4.8550	24.7		*	
7440-48-4	Cobalt	59	263	0.39800	0.31310	27.1		*	
7440-02-0	Nickel	60	750	7.1700	2.6100	175		*	
7440-50-8	Copper	63	410	0.32225	0.31550	2.14		*	
7440-66-6	Zinc	66	292	-21.930	-1.5630			*	
7440-38-2	Arsenic	75	3897	93.550	93.120	0.462	0.21	NC	☑
7782-49-2	Selenium	78	423	-3.3080	2.0340	263	0.70	NC	☑
7439-98-7	Molybdenum	95	2027	15.455	17.460	11.5		*	
7440-22-4	Silver	107	73	0.15570	0.10530	47.9		*	
7440-43-9	Cadmium	111	8	-0.22825	0.11020	307		*	
7440-31-5	Tin	118	5475	-1.6555	-0.78460			*	
7440-36-0	Antimony	121	114	0.37305	0.33630	10.9		*	
7440-39-3	Barium	137	1906	23.135	23.220	0.366		*	
7440-28-0	Thallium	205	216	0.26715	0.21030	27.0		*	
7439-92-1	Lead	208	420	0.14540	0.16090	9.63		*	
7440-61-1	Uranium	238	5121	6.2200	6.1210	1.62		*	
7440-29-1	Thorium	232	960	1.0690	1.6000	33.2		*	
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: 7/29/09

Post Digestion Spiked Sample (PDS) QC Report

Data File: C:\ICPCHEM\1\DATA\AG072809B.B\118PDS.D\118PDS.D#
Date Acquired: Jul 28 2009 09:47 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGNJHZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 3101
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 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	189.20	0.01	ppb	2.22	200	94.6	75 - 125	
51 V	72	1	200.30	7.67	ppb	1.93	200	96.5	75 - 125	
52 Cr	72	1	195.90	3.37	ppb	1.20	200	96.3	75 - 125	
55 Mn	72	1	192.70	0.97	ppb	1.94	200	95.9	75 - 125	
59 Co	72	1	189.00	0.06	ppb	1.11	200	94.5	75 - 125	
60 Ni	72	1	183.10	0.52	ppb	0.46	200	91.3	75 - 125	
63 Cu	72	1	181.40	0.06	ppb	1.68	200	90.7	75 - 125	
66 Zn	72	1	185.80	-0.31	ppb	0.61	200	93.0	75 - 125	
75 As	72	1	210.80	18.62	ppb	0.45	200	96.4	75 - 125	
78 Se	72	1	191.90	0.41	ppb	4.78	200	95.8	75 - 125	
95 Mo	72	1	203.50	3.49	ppb	0.62	200	100.0	75 - 125	
107 Ag	115	1	44.67	0.02	ppb	1.76	50	89.3	75 - 125	
111 Cd	115	1	185.10	0.02	ppb	1.61	200	92.5	75 - 125	
118 Sn	115	1	179.20	-0.16	ppb	1.55	200	89.7	75 - 125	
121 Sb	115	1	193.70	0.07	ppb	1.23	200	96.8	75 - 125	
137 Ba	115	1	199.30	4.64	ppb	0.87	200	97.4	75 - 125	
205 Tl	165	1	185.30	0.04	ppb	0.01	200	92.6	75 - 125	
208 Pb	165	1	184.30	0.03	ppb	0.80	200	92.1	75 - 125	
232 Th	165	1	0.06	0.32	ppb	7.66	200	0.0	75 - 125	
238 U	165	1	191.60	1.22	ppb	0.66	200	95.2	75 - 125	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	324252	1.06	372962	86.9	30 - 120	
45 Sc	1	1341675	1.11	1530288	87.7	30 - 120	
72 Ge	1	573678	0.36	686281	83.6	30 - 120	
115 In	1	1587283	1.26	1820296	87.2	30 - 120	
165 Ho	1	2394242	0.47	2675852	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\AG072809B.B\056CALB.D\056CALB.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: 07/29/09 09:03:54

Department: 090 (Metals) | Source: Spreadsheet

Sample: **LGNJHZ** | Spike Dilution: **1.00** | Sample Dilution: **5.00**

Instrument: **Agilent7500**
File: AG072809B # 118
Acquired: 07/28/2009 21:47:00
Calibrated: 07/28/2009 18:56:00

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	92982	189.20	0.00842	94.6	200		☑
7440-62-2	Vanadium	51	1622040	200.30	7.6680	96.3	200		☑
7440-47-3	Chromium	52	1565750	195.90	3.3660	96.3	200		☑
7439-96-5	Manganese	55	1703850	192.70	0.97100	95.9	200		☑
7440-48-4	Cobalt	59	1910250	189.00	0.06262	94.5	200		☑
7440-02-0	Nickel	60	424664	183.10	0.52200	91.3	200		☑
7440-50-8	Copper	63	985824	181.40	0.06310	90.7	200		☑
7440-66-6	Zinc	66	206570	185.80	-0.31260	92.9	200		☑
7440-38-2	Arsenic	75	203456	210.80	18.624	96.1	200		☑
7782-49-2	Selenium	78	34707	191.90	0.40680	95.7	200		☑
7439-98-7	Molybdenum	95	513099	203.50	3.4920	100	200		☑
7440-22-4	Silver	107	335607	44.670	0.02106	89.3	50.0		☑
7440-43-9	Cadmium	111	265422	185.10	0.02204	92.5	200		☑
7440-31-5	Tin	118	704134	179.20	-0.15692	89.6	200		☑
7440-36-0	Antimony	121	853506	193.70	0.06726	96.8	200		☑
7440-39-3	Barium	137	385778	199.30	4.6440	97.3	200		☑
7440-28-0	Thallium	205	2525220	185.30	0.04206	92.6	200		☑
7439-92-1	Lead	208	3441980	184.30	0.03218	92.1	200		☑
7440-61-1	Uranium	238	3822410	191.60	1.2242	95.2	200		☑
7440-29-1	Thorium	232	1233	0.05912	0.32000				
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: [signature] Date: 7/29/09

Spiked Sample (MS) QC Report

Data File:	C:\ICPCHEM\1\DATA\AG072809B.B\119_MS.D\119_MS.D#
Date Acquired:	Jul 28 2009 09:50 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHS 5X
Misc Info:	MATRIX SPIKE
Vial Number:	3102
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
Sample Type:	MS
Prep Dil. Factor:	5.00
Autodil Factor:	Undiluted
Final Dil Factor:	5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: ---

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)	QC Range(%)	QC Flag
9 Be	6	1	8.18	0.01	ppb	2.53	40	20.4	50 - 150	
51 V	72	1	16.10	7.67	ppb	0.35	40	33.8	50 - 150	
52 Cr	72	1	11.39	3.37	ppb	0.96	40	26.3	50 - 150	
55 Mn	72	1	8.77	0.97	ppb	1.03	40	21.4	50 - 150	
59 Co	72	1	7.92	0.06	ppb	1.20	40	19.8	50 - 150	
60 Ni	72	1	7.98	0.52	ppb	5.21	40	19.7	50 - 150	
63 Cu	72	1	7.73	0.06	ppb	1.60	40	19.3	50 - 150	
66 Zn	72	1	7.22	-0.31	ppb	2.82	40	18.2	50 - 150	
75 As	72	1	27.41	18.62	ppb	0.42	40	46.8	50 - 150	
78 Se	72	1	9.14	0.41	ppb	8.11	40	22.6	50 - 150	
95 Mo	72	1	12.04	3.49	ppb	2.43	40	27.7	50 - 150	
107 Ag	115	1	7.48	0.02	ppb	3.89	40	18.7	50 - 150	
111 Cd	115	1	7.77	0.02	ppb	2.96	40	19.4	50 - 150	
118 Sn	115	1	0.01	-0.16	ppb	591.92	40	0.0	50 - 150	
121 Sb	115	1	8.34	0.07	ppb	2.01	40	20.8	50 - 150	
137 Ba	115	1	12.92	4.64	ppb	2.36	40	28.9	50 - 150	
205 Tl	165	1	8.02	0.04	ppb	0.77	40	20.0	50 - 150	
208 Pb	165	1	7.93	0.03	ppb	0.41	40	19.8	50 - 150	
232 Th	165	1	8.78	0.32	ppb	2.75	40	21.8	50 - 150	
238 U	165	1	9.84	1.22	ppb	0.74	40	23.9	50 - 150	

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	330280	0.56	372962	88.6	30 - 120	
45 Sc	1	1354678	0.35	1530288	88.5	30 - 120	
72 Ge	1	590050	0.70	686281	86.0	30 - 120	
115 In	1	1595874	1.86	1820296	87.7	30 - 120	
165 Ho	1	2417465	0.32	2675852	90.3	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\120 MSD.D\120 MSD.D#
Date Acquired:	Jul 28 2009 09:52 pm
Acq. Method:	NormISIS.M
Operator:	TEL
Sample Name:	LGNJHD 5X
Misc Info:	MATRIX SPIKE DUPLICATE
Vial Number:	3103
Current Method:	C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File:	C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update:	Jul 28 2009 07:00 pm
Sample Type:	MSD
Dilution Factor:	5.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: C:\ICPCHEM\1\DATA\AG072809B.B\119 MS.D\119 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Ref Conc	Differ(%)	High Limit	Flag
9 Be	6	1	7.73	ppb	5.32	8.18	5.57	20	
51 V	72	1	16.05	ppb	1.20	16.10	0.31	20	
52 Cr	72	1	11.39	ppb	0.58	11.39	0.00	20	
55 Mn	72	1	8.81	ppb	1.68	8.77	0.44	20	
59 Co	72	1	7.91	ppb	0.45	7.92	0.13	20	
60 Ni	72	1	8.23	ppb	1.20	7.98	3.02	20	
63 Cu	72	1	7.70	ppb	2.36	7.73	0.40	20	
66 Zn	72	1	7.09	ppb	0.50	7.22	1.71	20	
75 As	72	1	27.18	ppb	0.71	27.41	0.84	20	
78 Se	72	1	7.53	ppb	8.84	9.14	19.40	20	
95 Mo	72	1	11.79	ppb	1.85	12.04	2.10	20	
107 Ag	115	1	7.59	ppb	1.99	7.48	1.53	20	
111 Cd	115	1	7.98	ppb	0.71	7.77	2.60	20	
118 Sn	115	1	-0.16	ppb	73.02	0.01	-218.63	20	
121 Sb	115	1	8.50	ppb	0.74	8.34	1.86	20	
137 Ba	115	1	13.23	ppb	0.60	12.92	2.37	20	
205 Tl	165	1	8.02	ppb	1.17	8.02	0.09	20	
208 Pb	165	1	8.00	ppb	1.19	7.93	0.87	20	
232 Th	165	1	9.03	ppb	1.81	8.78	2.85	20	
238 U	165	1	9.91	ppb	1.49	9.84	0.71	20	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331609	0.42	372962	88.9	30 - 120	
45 Sc	1	1354065	0.98	1530288	88.5	30 - 120	
72 Ge	1	591478	0.63	686281	86.2	30 - 120	
115 In	1	1584871	0.32	1820296	87.1	30 - 120	
165 Ho	1	2426445	0.93	2675852	90.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\121SMPL.D\121SMPL.D#
Date Acquired: Jul 28 2009 09:56 pm
Acq. Method: NormISIS.M
Operator: TEL
Sample Name: LGPGA 5X
Misc Info: D9G180154
Vial Number: 3104
Current Method: C:\ICPCHEM\1\METHODS\NormISIS.M
Calibration File: C:\ICPCHEM\1\CALIB\NormISIS.C
Last Cal. Update: Jul 28 2009 07:00 pm
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	-0.03	-0.01	ppb	217.09	3600	
51 V	72	1	40.61	8.12	ppb	0.47	3600	
52 Cr	72	1	42.85	8.57	ppb	1.88	3600	
55 Mn	72	1	1.73	0.35	ppb	2.25	3600	
59 Co	72	1	0.40	0.08	ppb	12.09	3600	
60 Ni	72	1	4.30	0.86	ppb	11.86	3600	
63 Cu	72	1	0.28	0.06	ppb	16.24	3600	
66 Zn	72	1	-3.62	-0.72	ppb	3.71	3600	
75 As	72	1	187.90	37.58	ppb	1.88	3600	
78 Se	72	1	5.38	1.08	ppb	24.33	3600	
95 Mo	72	1	17.83	3.57	ppb	0.97	3600	
107 Ag	115	1	0.09	0.02	ppb	6.22	3600	
111 Cd	115	1	0.00	0.00	ppb	3540.30	3600	
118 Sn	115	1	-0.94	-0.19	ppb	34.67	3600	
121 Sb	115	1	0.23	0.05	ppb	13.52	3600	
137 Ba	115	1	33.51	6.70	ppb	1.24	3600	
205 Tl	165	1	0.11	0.02	ppb	10.26	3600	
208 Pb	165	1	0.07	0.01	ppb	14.78	3600	
232 Th	165	1	0.35	0.07	ppb	23.48	1000	
238 U	165	1	37.75	7.55	ppb	1.06	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	342107	1.36	372962	91.7	30 - 120	
45 Sc	1	1383728	1.59	1530288	90.4	30 - 120	
72 Ge	1	598698	0.32	686281	87.2	30 - 120	
115 In	1	1584631	1.48	1820296	87.1	30 - 120	
165 Ho	1	2437181	1.02	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\122 CCV.D\122 CCV.D#
Date Acquired: Jul 28 2009 09:59 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: Jul 28 2009 07:00 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	49.75	ppb	0.53	50	99.5	90 - 110	
51 V	72	1	49.11	ppb	1.59	50	98.2	90 - 110	
52 Cr	72	1	49.87	ppb	0.64	50	99.7	90 - 110	
55 Mn	72	1	49.78	ppb	0.45	50	99.6	90 - 110	
59 Co	72	1	49.57	ppb	0.74	50	99.1	90 - 110	
60 Ni	72	1	50.39	ppb	0.92	50	100.8	90 - 110	
63 Cu	72	1	50.03	ppb	0.10	50	100.1	90 - 110	
66 Zn	72	1	50.08	ppb	0.91	50	100.2	90 - 110	
75 As	72	1	50.65	ppb	0.81	50	101.3	90 - 110	
78 Se	72	1	50.46	ppb	7.61	50	100.9	90 - 110	
95 Mo	72	1	50.36	ppb	1.25	50	100.7	90 - 110	
107 Ag	115	1	49.70	ppb	1.22	50	99.4	90 - 110	
111 Cd	115	1	49.78	ppb	1.79	50	99.6	90 - 110	
118 Sn	115	1	50.00	ppb	1.71	50	100.0	90 - 110	
121 Sb	115	1	51.15	ppb	1.20	50	102.3	90 - 110	
137 Ba	115	1	50.62	ppb	1.37	50	101.2	90 - 110	
205 Tl	165	1	51.47	ppb	0.19	50	102.9	90 - 110	
208 Pb	165	1	51.40	ppb	0.44	50	102.8	90 - 110	
232 Th	165	1	50.77	ppb	2.38	50	101.5	90 - 110	
238 U	165	1	50.76	ppb	0.24	50	101.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	348447	1.30	372962	93.4	30 - 120	
45 Sc	1	1431549	0.31	1530288	93.5	30 - 120	
72 Ge	1	634715	1.13	686281	92.5	30 - 120	
115 In	1	1727385	1.99	1820296	94.9	30 - 120	
165 Ho	1	2534007	0.75	2675852	94.7	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\123 CCB.D\123 CCB.D#
Date Acquired: Jul 28 2009 10:01 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: Jul 28 2009 07:00 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	-0.005	ppb	221.57	1.00	
51 V	72	1	0.048	ppb	56.92	1.00	
52 Cr	72	1	0.039	ppb	32.36	1.00	
55 Mn	72	1	0.043	ppb	28.36	1.00	
59 Co	72	1	0.007	ppb	54.95	1.00	
60 Ni	72	1	0.010	ppb	225.36	1.00	
63 Cu	72	1	0.006	ppb	146.44	1.00	
66 Zn	72	1	-0.716	ppb	0.56	1.00	
75 As	72	1	0.003	ppb	6.02	1.00	
78 Se	72	1	-0.042	ppb	321.49	1.00	
95 Mo	72	1	-0.042	ppb	49.44	1.00	
107 Ag	115	1	0.013	ppb	50.90	1.00	
111 Cd	115	1	0.007	ppb	125.51	1.00	
118 Sn	115	1	-0.748	ppb	5.98	1.00	
121 Sb	115	1	0.052	ppb	13.42	1.00	
137 Ba	115	1	0.012	ppb	56.71	1.00	
205 Tl	165	1	0.031	ppb	15.14	1.00	
208 Pb	165	1	0.006	ppb	37.52	1.00	
232 Th	165	1	0.599	ppb	19.48	1.00	
238 U	165	1	0.012	ppb	4.09	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	336355	0.58	372962	90.2	30 - 120	
45 Sc	1	1373618	1.86	1530288	89.8	30 - 120	
72 Ge	1	619721	0.39	686281	90.3	30 - 120	
115 In	1	1668786	0.62	1820296	91.7	30 - 120	
165 Ho	1	2471015	0.10	2675852	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\AG072809B.B\056CALB.D\056CALB.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\AG072809B.B\124WASH.D\124WASH.D#
Date Acquired: Jul 28 2009 10:04 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: Jul 28 2009 07:00 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	1.112 ppb	6.84	1.30	
51 V	72	1	4.908 ppb	1.79	6.50	
52 Cr	72	1	2.080 ppb	1.92	2.60	
55 Mn	72	1	1.058 ppb	7.48	1.30	
59 Co	72	1	1.038 ppb	5.21	1.30	
60 Ni	72	1	2.076 ppb	4.67	2.60	
63 Cu	72	1	2.047 ppb	2.58	2.60	
66 Zn	72	1	9.431 ppb	0.28	13.00	
75 As	72	1	5.147 ppb	2.37	6.50	
78 Se	72	1	4.937 ppb	11.21	6.50	
95 Mo	72	1	2.010 ppb	4.06	2.60	
107 Ag	115	1	5.158 ppb	2.28	6.50	
111 Cd	115	1	1.026 ppb	2.14	1.30	
118 Sn	115	1	9.789 ppb	0.56	13.00	
121 Sb	115	1	1.962 ppb	2.82	2.60	
137 Ba	115	1	1.081 ppb	2.03	1.30	
205 Tl	165	1	1.113 ppb	1.04	1.30	
208 Pb	165	1	1.093 ppb	1.28	1.30	
232 Th	165	1	2.204 ppb	2.25	2.60	
238 U	165	1	1.116 ppb	0.63	1.30	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	334490	1.02	372962	89.7	30 - 120	
45 Sc	1	1379170	0.82	1530288	90.1	30 - 120	
72 Ge	1	620774	0.75	686281	90.5	30 - 120	
115 In	1	1691395	0.40	1820296	92.9	30 - 120	
165 Ho	1	2465831	1.29	2675852	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\AG072809B.B\056CALB.D\056CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed