

Cover Page

Order ID : P5044

Project ID : Quarterly

Client : Tris Pharma, Inc.

Lab Sample Number

P5044-01
P5044-02

Client Sample Number

OUTFALL-DSN-001
OUTFALL-DSN-002

I certify that the 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 hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 12/10/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P5044

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: PATEL VAISHALI

Date: 12/10/2024

LAB CHRONICLE

OrderID:	P5044	OrderDate:	11/27/2024 12:16:00 PM
Client:	Tris Pharma, Inc.	Project:	Quarterly
Contact:	Nichole Nikki Ferrari	Location:	L41,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5044-01	OUTFALL-DSN-001	Water	Metals Group3	200.7	11/27/24	12/02/24	12/05/24	11/27/24
P5044-02	OUTFALL-DSN-002	Water	Metals Group3	200.7	11/27/24	12/02/24	12/05/24	11/27/24



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: P5044

Order ID: P5044

Client: Tris Pharma, Inc.

Project ID: Quarterly

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : OUTFALL-DSN-001								
P5044-01	OUTFALL-DSN-001	Water	Copper	97.4		1.52	10.0	ug/L
P5044-01	OUTFALL-DSN-001	Water	Zinc	17.3	J	1.44	20.0	ug/L
Client ID : OUTFALL-DSN-002								
P5044-02	OUTFALL-DSN-002	Water	Copper	77.7		1.52	10.0	ug/L
P5044-02	OUTFALL-DSN-002	Water	Zinc	24.8		1.44	20.0	ug/L



SAMPLE DATA

Report of Analysis

Client:	Tris Pharma, Inc.	Date Collected:	11/27/24
Project:	Quarterly	Date Received:	11/27/24
Client Sample ID:	OUTFALL-DSN-001	SDG No.:	P5044
Lab Sample ID:	P5044-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-50-8	Copper	97.4		1	1.52	10.0	ug/L	12/02/24 11:40	12/05/24 18:04	EPA 200.7	
7440-66-6	Zinc	17.3	J	1	1.44	20.0	ug/L	12/02/24 11:40	12/05/24 18:04	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Tris Pharma, Inc.	Date Collected:	11/27/24
Project:	Quarterly	Date Received:	11/27/24
Client Sample ID:	OUTFALL-DSN-002	SDG No.:	P5044
Lab Sample ID:	P5044-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-50-8	Copper	77.7		1	1.52	10.0	ug/L	12/02/24 11:40	12/05/24 18:13	EPA 200.7	
7440-66-6	Zinc	24.8		1	1.44	20.0	ug/L	12/02/24 11:40	12/05/24 18:13	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits



METAL CALIBRATION DATA

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tris Pharma, Inc. **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Copper	512	510	100	95 - 105	P	12/05/2024	13:53	LB133769
	Zinc	1020	1000	102	95 - 105	P	12/05/2024	13:53	LB133769

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tris Pharma, Inc. **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Copper	21.8	20.0	109	80 - 120	P	12/05/2024	14:05	LB133769
	Zinc	42.9	40.0	107	80 - 120	P	12/05/2024	14:05	LB133769

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tris Pharma, Inc. SDG No.: P5044
Contract: TRIS02 Lab Code: CHEM Case No.: P5044 SAS No.: P5044
Initial Calibration Source: EPA
Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Copper	1250	1250	100	90 - 110	P	12/05/2024	14:45	LB133769
	Zinc	2510	2500	100	90 - 110	P	12/05/2024	14:45	LB133769
CCV02	Copper	1200	1250	96	90 - 110	P	12/05/2024	15:34	LB133769
	Zinc	2450	2500	98	90 - 110	P	12/05/2024	15:34	LB133769
CCV03	Copper	1220	1250	98	90 - 110	P	12/05/2024	16:42	LB133769
	Zinc	2520	2500	101	90 - 110	P	12/05/2024	16:42	LB133769
CCV04	Copper	1170	1250	94	90 - 110	P	12/05/2024	17:41	LB133769
	Zinc	2380	2500	95	90 - 110	P	12/05/2024	17:41	LB133769
CCV05	Copper	1140	1250	91	90 - 110	P	12/05/2024	18:39	LB133769
	Zinc	2390	2500	96	90 - 110	P	12/05/2024	18:39	LB133769
CCV06	Copper	1160	1250	92	90 - 110	P	12/05/2024	19:45	LB133769
	Zinc	2360	2500	95	90 - 110	P	12/05/2024	19:45	LB133769
CCV07	Copper	1150	1250	92	90 - 110	P	12/05/2024	20:23	LB133769
	Zinc	2430	2500	97	90 - 110	P	12/05/2024	20:23	LB133769



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Tris Pharma, Inc. **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
Initial Calibration Source: _____
Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Copper	21.6	20.0	108	40 - 160	P	12/05/2024	14:14	LB133769
	Zinc	42.8	40.0	107	40 - 160	P	12/05/2024	14:14	LB133769



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	Tris Pharma, Inc.				SDG No.:	P5044			
Contract:	TRIS02		Lab Code:	CHEM	Case No.:	P5044		SAS No.:	P5044
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	14:10	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	14:10	LB133769

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	14:50	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	14:50	LB133769
CCB02	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	15:41	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	15:41	LB133769
CCB03	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	16:46	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	16:46	LB133769
CCB04	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	17:47	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	17:47	LB133769
CCB05	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	18:43	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	18:43	LB133769
CCB06	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	19:50	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	19:50	LB133769
CCB07	Copper	20.0	+/-20.0	U	20.0	P	12/05/2024	20:27	LB133769
	Zinc	40.0	+/-40.0	U	40.0	P	12/05/2024	20:27	LB133769

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tris Pharma, Inc.

SDG No.: P5044

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB165328BL		WATER		Batch Number:	PB165328		Prep Date:	12/02/2024	
	Copper	10.0	<10.0	U	10.0	P	12/05/2024	15:59	LB133769
	Zinc	20.0	<20.0	U	20.0	P	12/05/2024	15:59	LB133769

Metals

- 4 -

INTERFERENCE CHECK SAMPLE

Client: Tris Pharma, Inc. **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Copper	4.69	2.0	234	-18	22	12/05/2024	14:18	LB133769
	Zinc	8.24			-40	40	12/05/2024	14:18	LB133769
ICSAB01	Copper	462	511	90	434	588	12/05/2024	14:33	LB133769
	Zinc	953	952	100	809	1095	12/05/2024	14:33	LB133769
ICSA	Copper	-1.04	2.0	52	-18	22	12/05/2024	14:37	LB133769
	Zinc	9.03			-40	40	12/05/2024	14:37	LB133769
ICSAB	Copper	518	511	101	434	588	12/05/2024	14:41	LB133769
	Zinc	1090	952	114	809	1095	12/05/2024	14:41	LB133769



METAL

QC

DATA

metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>Tris Pharma, Inc.</u>	level: <u>low</u>	sdg no.: <u>P5044</u>
contract: <u>TRIS02</u>	lab code: <u>CHEM</u>	case no.: <u>P5044</u> sas no.: <u>P5044</u>
matrix: <u>Water</u>	sample id: <u>P5044-02</u>	client id: <u>OUTFALL-DSN-002MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>P5044-02MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Copper	ug/L	75 - 125	217		77.7		150	93		P
Zinc	ug/L	75 - 125	124		24.8		100	99		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tris Pharma, Inc.</u>	level: <u>low</u>	sdg no.: <u>P5044</u>
contract: <u>TRIS02</u>	lab code: <u>CHEM</u>	case no.: <u>P5044</u> sas no.: <u>P5044</u>
matrix: <u>Water</u>	sample id: <u>P5044-02</u>	client id: <u>OUTFALL-DSN-002MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>P5044-02MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Copper	ug/L	75 - 125	213		77.7		150	90		P
Zinc	ug/L	75 - 125	122		24.8		100	97		P

Metals

- 5b -

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Matrix:

Level: LOW

Client ID:

Sample ID:

Spiked ID:

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M

.....

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tris Pharma, Inc. **Level:** LOW **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
Matrix: Water **Sample ID:** P5044-02 **Client ID:** OUTFALL-DSN-002DUP
Percent Solids for Sample: NA **Duplicate ID** P5044-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	77.7		77.6		0		P
Zinc	ug/L	20	24.8		24.3		2		P

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tris Pharma, Inc. **Level:** LOW **SDG No.:** P5044
Contract: TRIS02 **Lab Code:** CHEM **Case No.:** P5044 **SAS No.:** P5044
Matrix: Water **Sample ID:** P5044-02MS **Client ID:** OUTFALL-DSN-002MSD
Percent Solids for Sample: NA **Duplicate ID** P5044-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	217		213		2		P
Zinc	ug/L	20	124		122		2		P

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165328BS							
Copper	ug/L	150	146		97	85 - 115	P
Zinc	ug/L	100	101		101	85 - 115	P

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

OUTFALL-DSN-002L

Lab Name: Chemtech Consulting Group

Contract: TRIS02

Lab Code: CHEM

Lb No.: lb133769

Lab Sample ID : P5044-02L

SDG No.: P5044

Matrix (soil/water): Water

Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Copper	77.7	72.0	7		P
Zinc	24.8	22.1 J	11		P



METAL PREPARATION & INSTRUMENT DATA

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001050	0.0000000	0.0000000



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789
8900, Fax : 908 789 8922

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		As	Ba	Be	Cd	Co
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789
8900, Fax : 908 789 8922

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789
8900, Fax : 908 789 8922

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0067600	0.0000000	0.0000000	0.0000000



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tris Pharma, Inc.

SDG No.: P5044

Contract: TRIS02

Lab Code: CHEM

Case No.: P5044

SAS No.: P5044

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000



METAL PREPARATION & ANALYICAL SUMMARY

Metals

- 13 -

SAMPLE PREPARATION SUMMARY

Client:	<u>Tris Pharma, Inc.</u>	SDG No.:	<u>P5044</u>
Contract:	<u>TRIS02</u>	Lab Code:	<u>CHEM</u>
		Method:	<u></u>
		Case No.:	<u>P5044</u>
		SAS No.:	<u>P5044</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB165328							
P5044-01	OUTFALL-DSN-001	SAM	WATER	12/02/2024	50.0	25.0	
P5044-02	OUTFALL-DSN-002	SAM	WATER	12/02/2024	50.0	25.0	
P5044-02DUP	OUTFALL-DSN-002DUP	DUP	WATER	12/02/2024	50.0	25.0	
P5044-02MS	OUTFALL-DSN-002MS	MS	WATER	12/02/2024	50.0	25.0	
P5044-02MSD	OUTFALL-DSN-002MSD	MSD	WATER	12/02/2024	50.0	25.0	
PB165328BL	PB165328BL	MB	WATER	12/02/2024	50.0	25.0	
PB165328BS	PB165328BS	LCS	WATER	12/02/2024	50.0	25.0	

metals
- 14 -
ANALYSIS RUN LOG

Client: Tris Pharma, Inc. **Contract:** TRIS02

Lab code: CHEM **Case no.:** P5044 **Sas no.:** P5044 **Sdg no.:** P5044

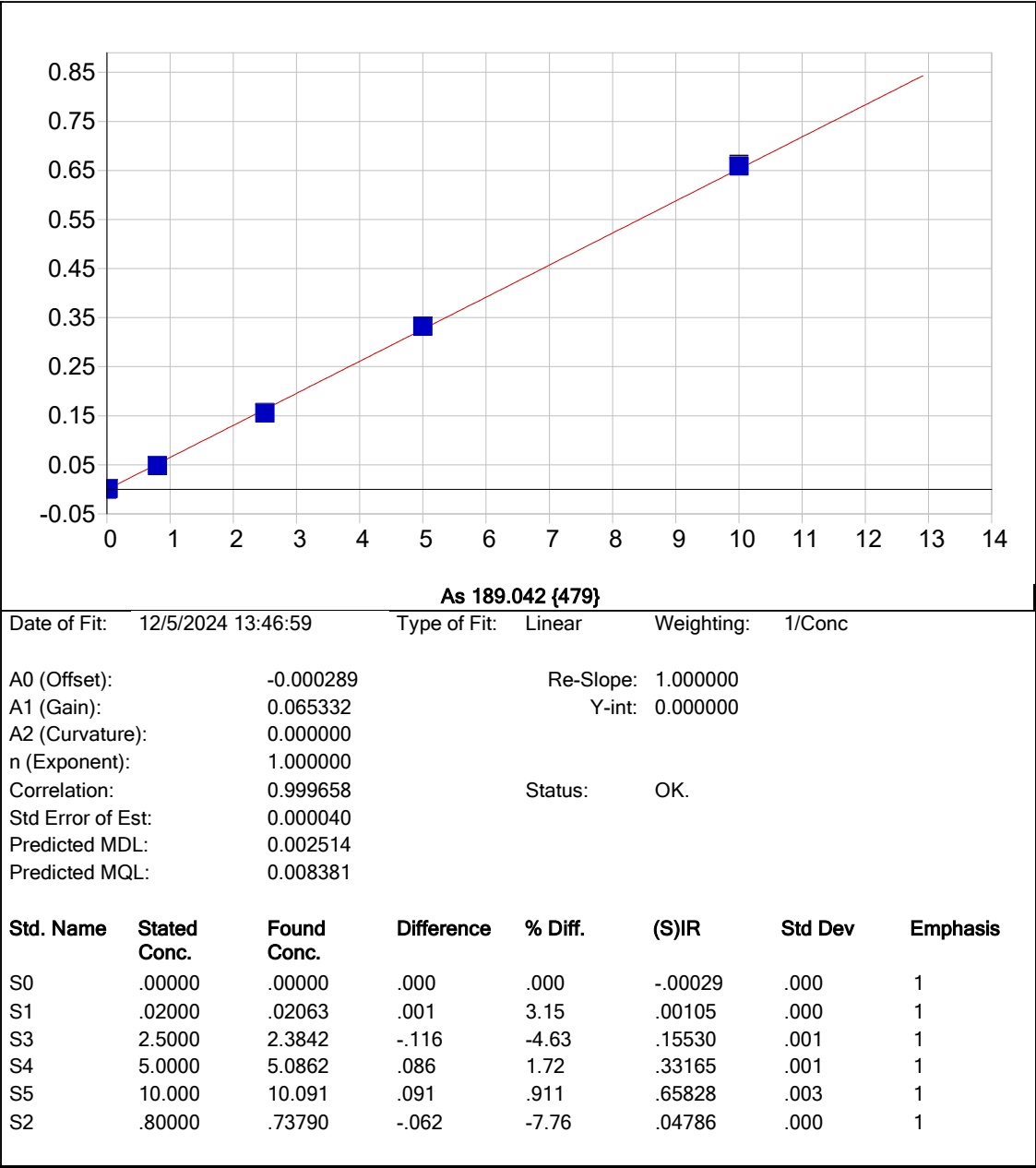
Instrument id number: **Method:** **Run number:** LB133769

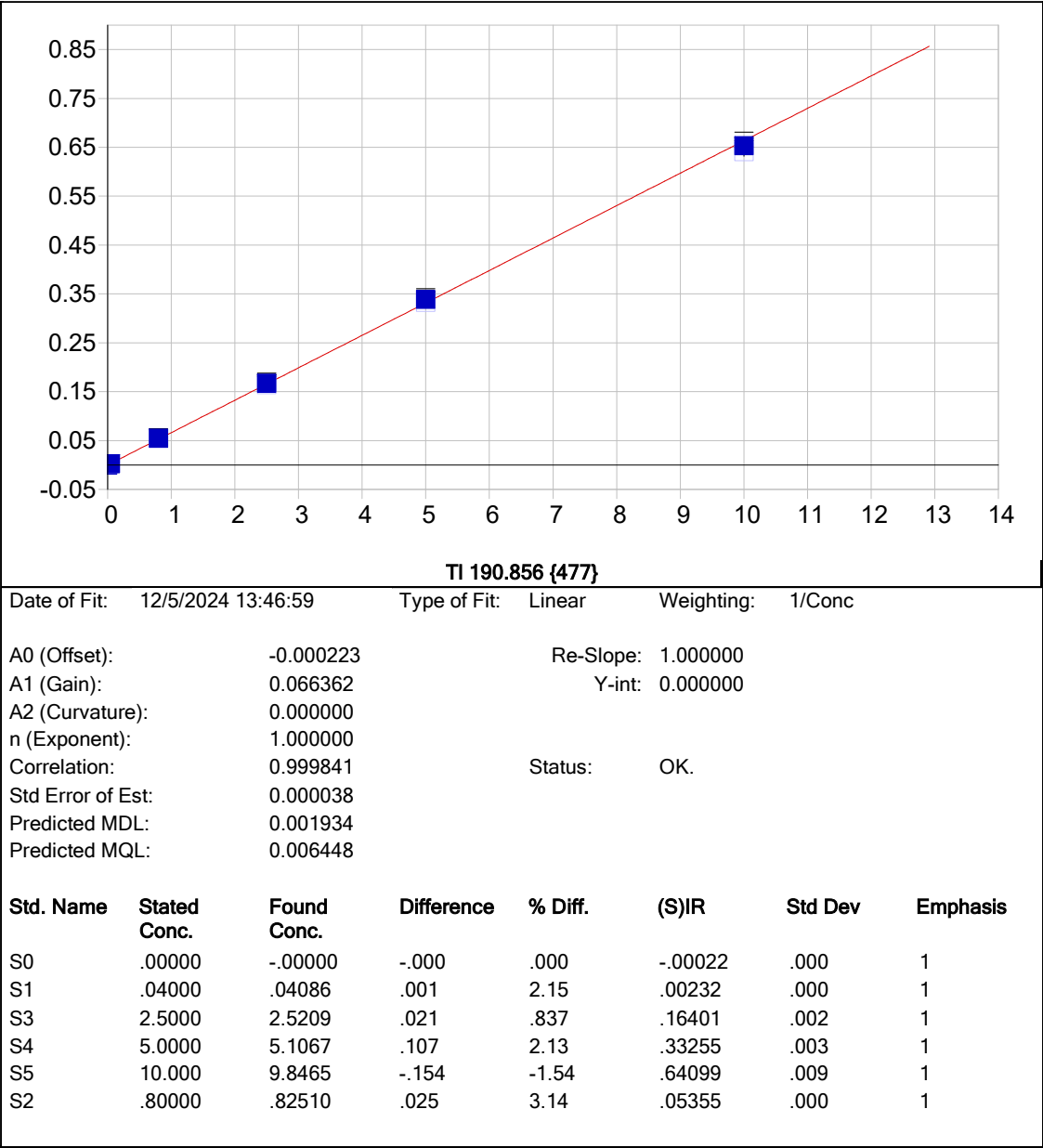
Start date: 12/05/2024 **End date:** 12/05/2024

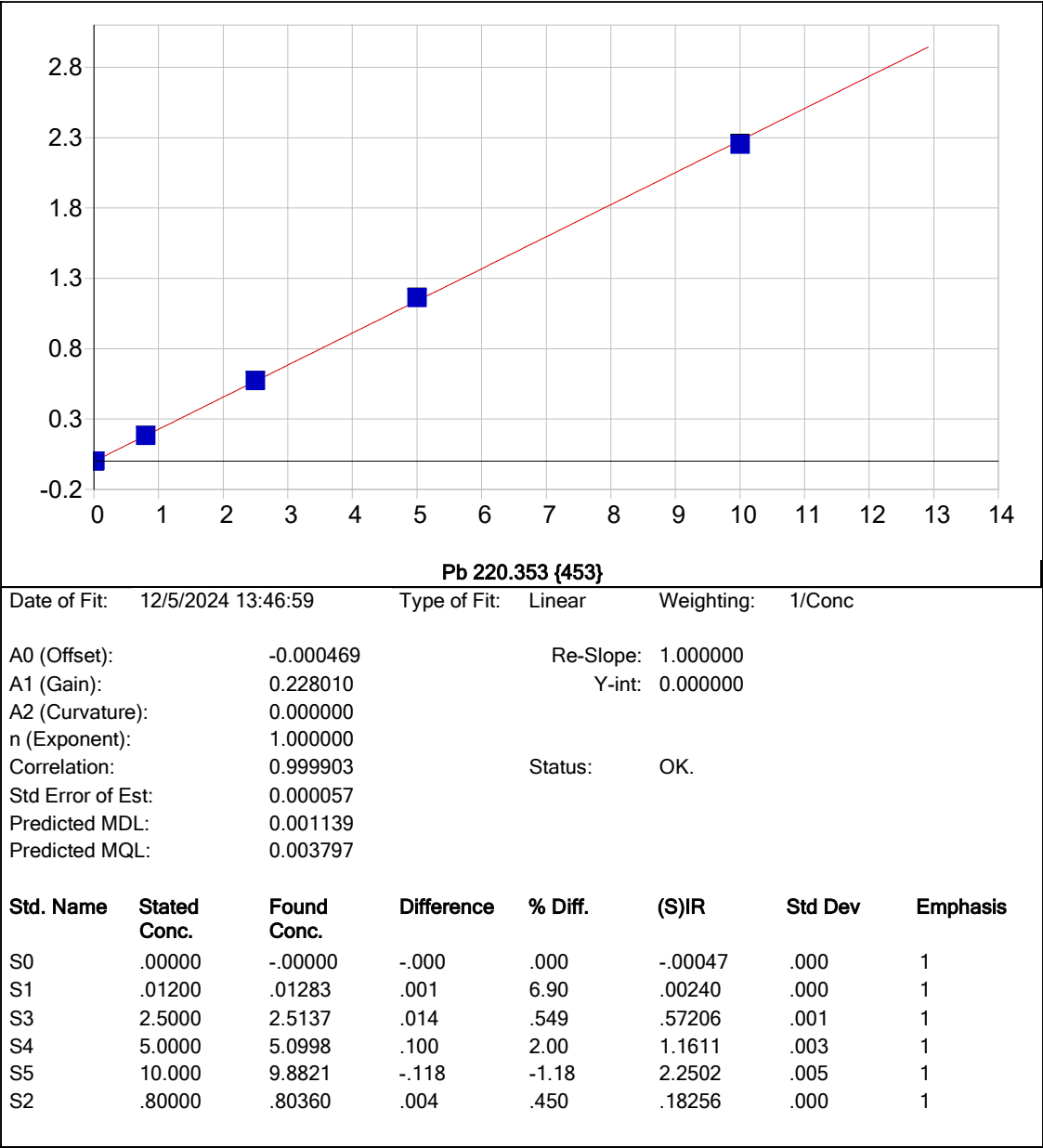
Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1321	Cu,Zn
S1	S1	1	1325	Cu,Zn
S2	S2	1	1330	Cu,Zn
S3	S3	1	1334	Cu,Zn
S4	S4	1	1338	Cu,Zn
S5	S5	1	1342	Cu,Zn
ICV01	ICV01	1	1353	Cu,Zn
LLICV01	LLICV01	1	1405	Cu,Zn
ICB01	ICB01	1	1410	Cu,Zn
CRI01	CRI01	1	1414	Cu,Zn
ICSA01	ICSA01	1	1418	Cu,Zn
ICSAB01	ICSAB01	1	1433	Cu,Zn
ICSA	ICSA	20	1437	Cu,Zn
ICSAB	ICSAB	20	1441	Cu,Zn
CCV01	CCV01	1	1445	Cu,Zn
CCB01	CCB01	1	1450	Cu,Zn
CCV02	CCV02	1	1534	Cu,Zn
CCB02	CCB02	1	1541	Cu,Zn
PB165328BL	PB165328BL	1	1559	Cu,Zn
PB165328BS	PB165328BS	1	1612	Cu,Zn
CCV03	CCV03	1	1642	Cu,Zn
CCB03	CCB03	1	1646	Cu,Zn
CCV04	CCV04	1	1741	Cu,Zn
CCB04	CCB04	1	1747	Cu,Zn
P5044-01	OUTFALL-DSN-001	1	1804	Cu,Zn
P5044-02DUP	OUTFALL-DSN-002DUP	1	1808	Cu,Zn
P5044-02	OUTFALL-DSN-002	1	1813	Cu,Zn
P5044-02MS	OUTFALL-DSN-002MS	1	1821	Cu,Zn
P5044-02MSD	OUTFALL-DSN-002MSD	1	1825	Cu,Zn
CCV05	CCV05	1	1839	Cu,Zn
CCB05	CCB05	1	1843	Cu,Zn
CCV06	CCV06	1	1945	Cu,Zn
CCB06	CCB06	1	1950	Cu,Zn
CCV07	CCV07	1	2023	Cu,Zn
CCB07	CCB07	1	2027	Cu,Zn

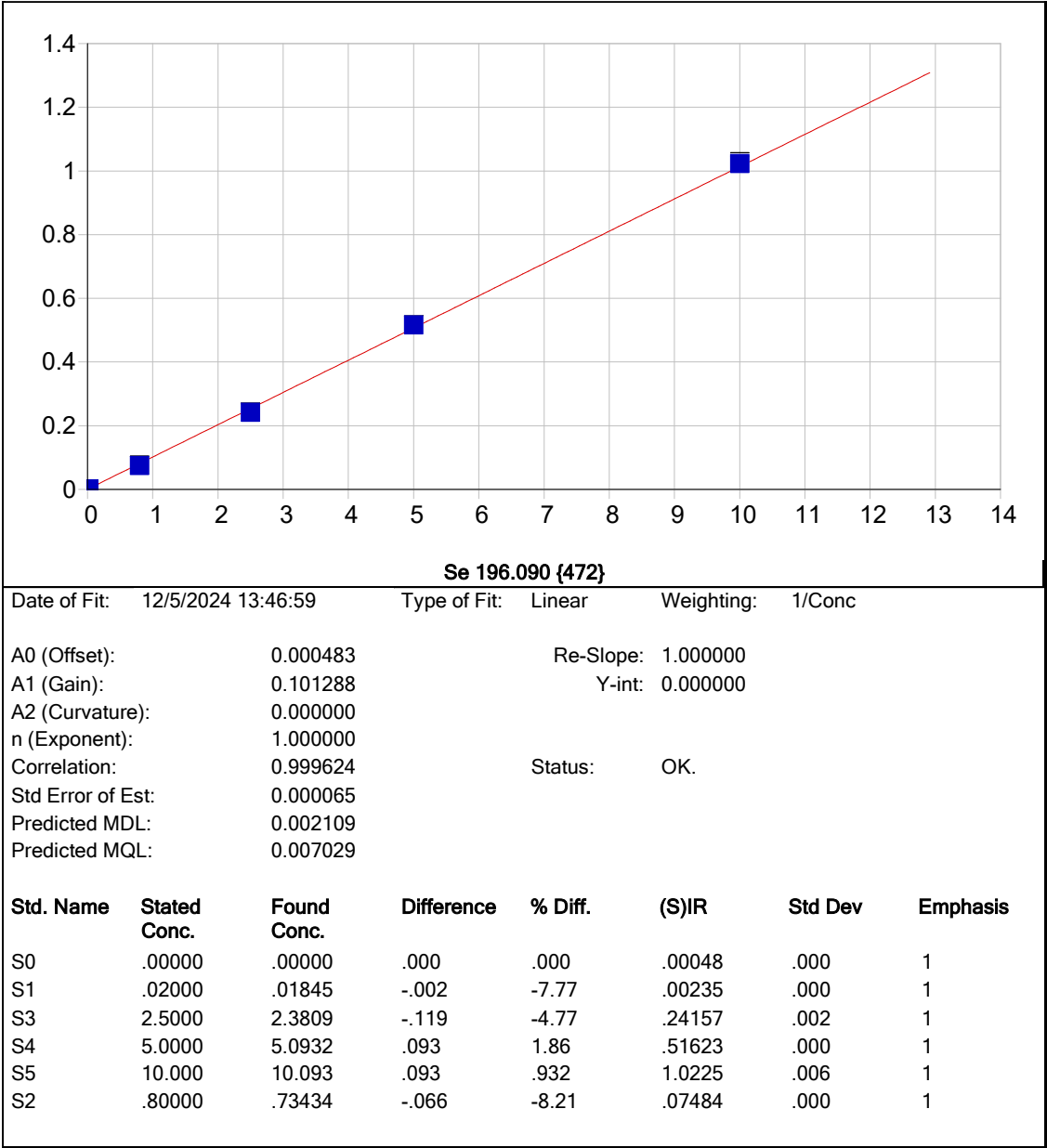


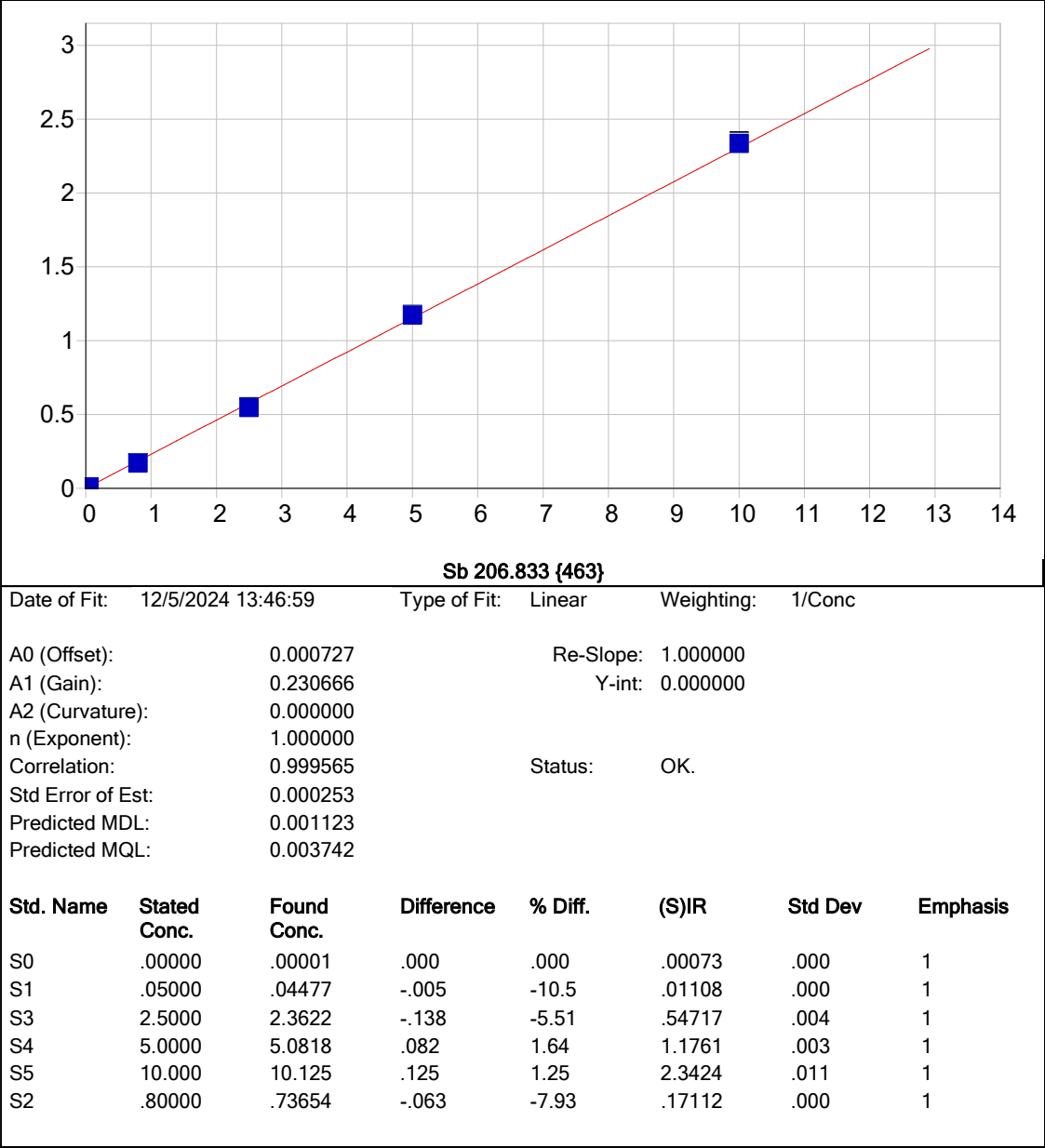
METAL RAW DATA

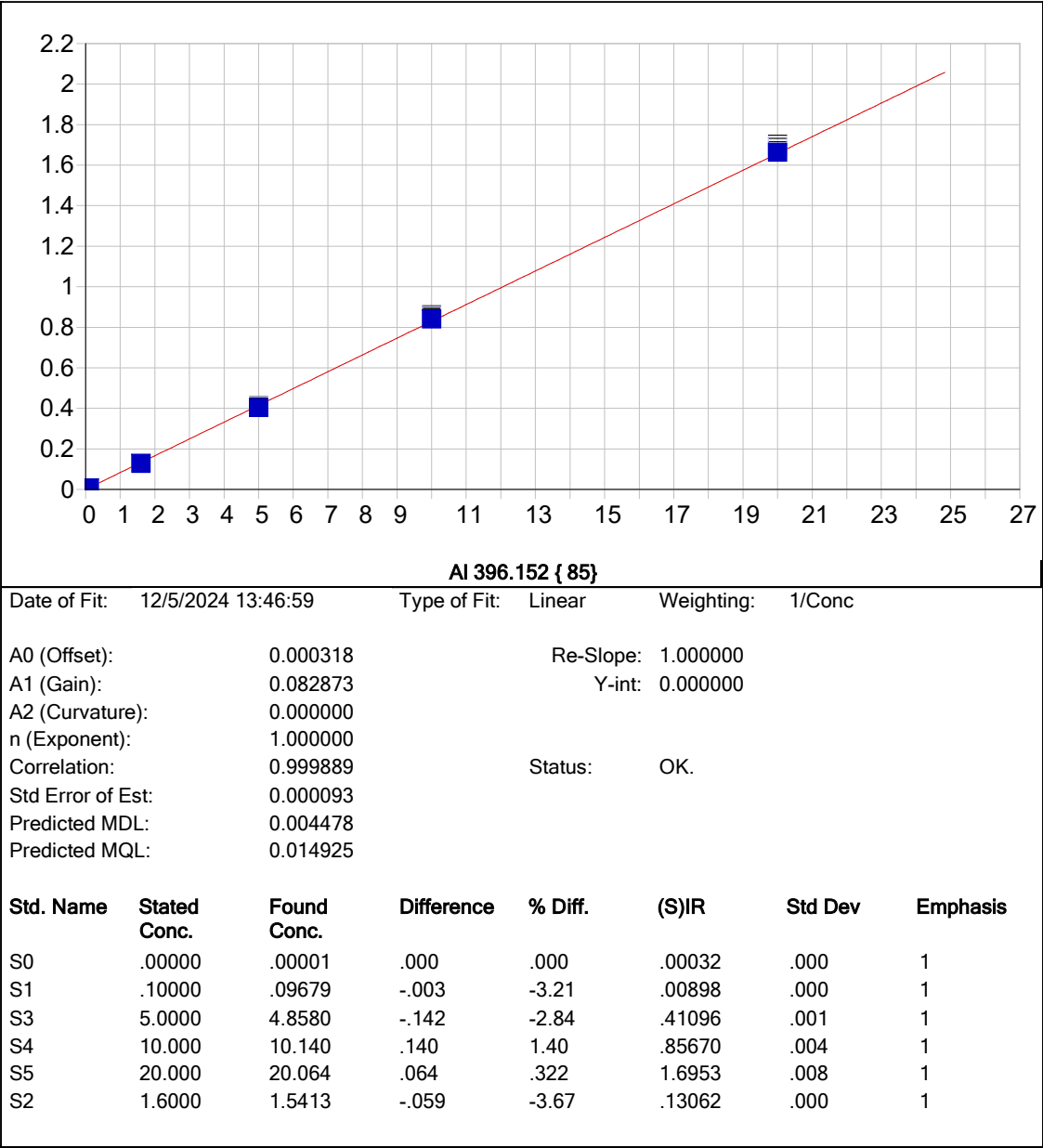


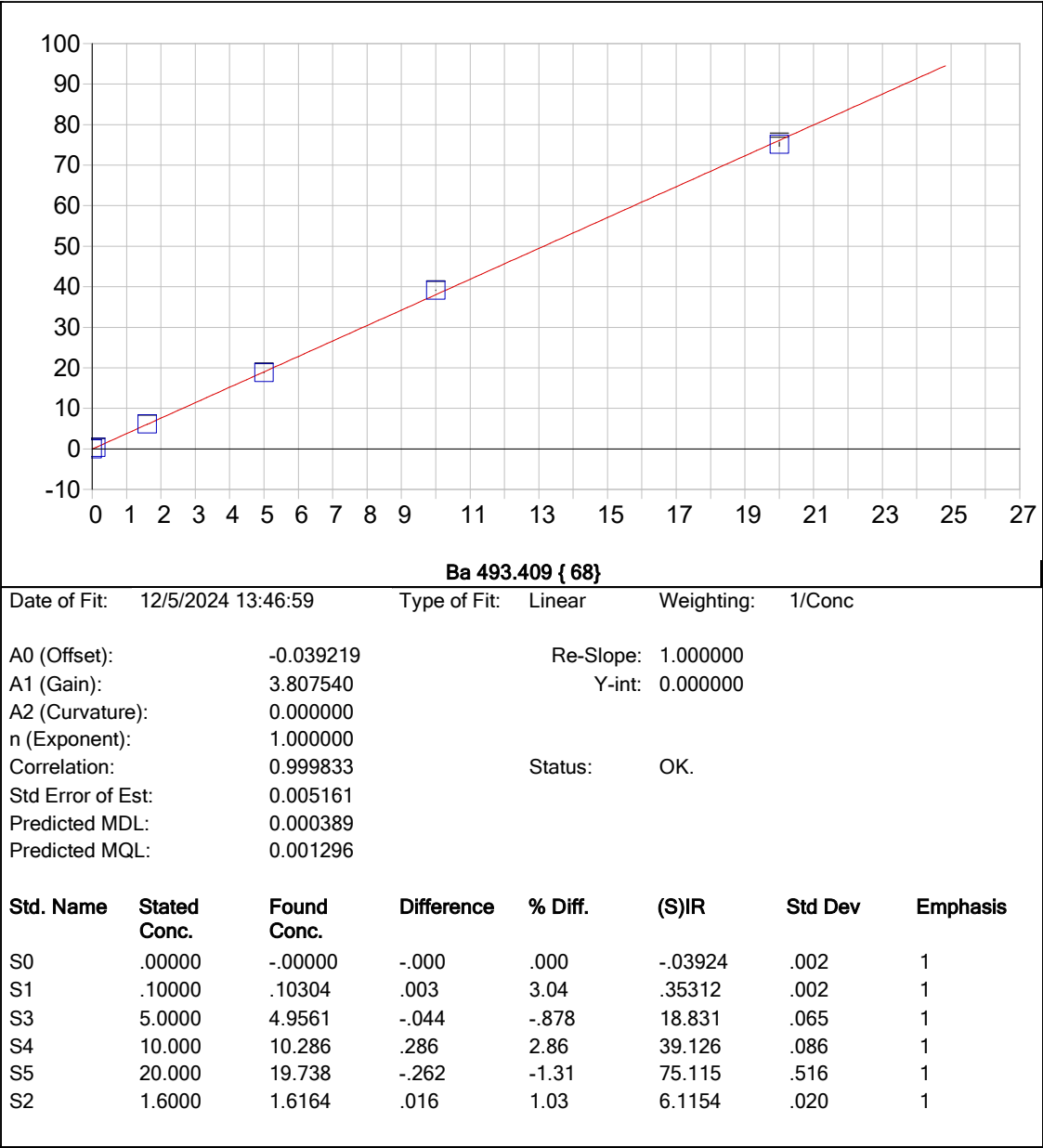


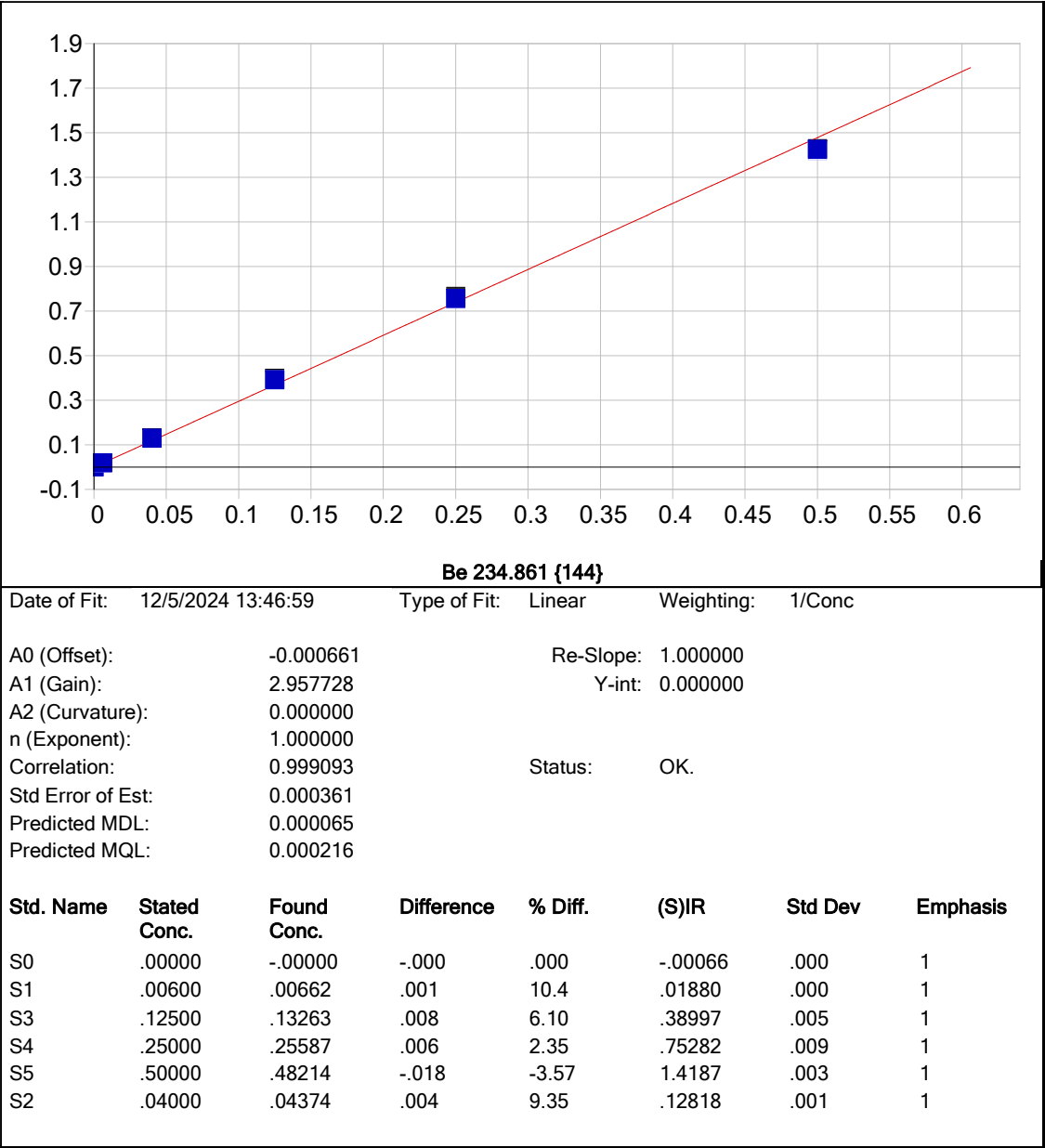


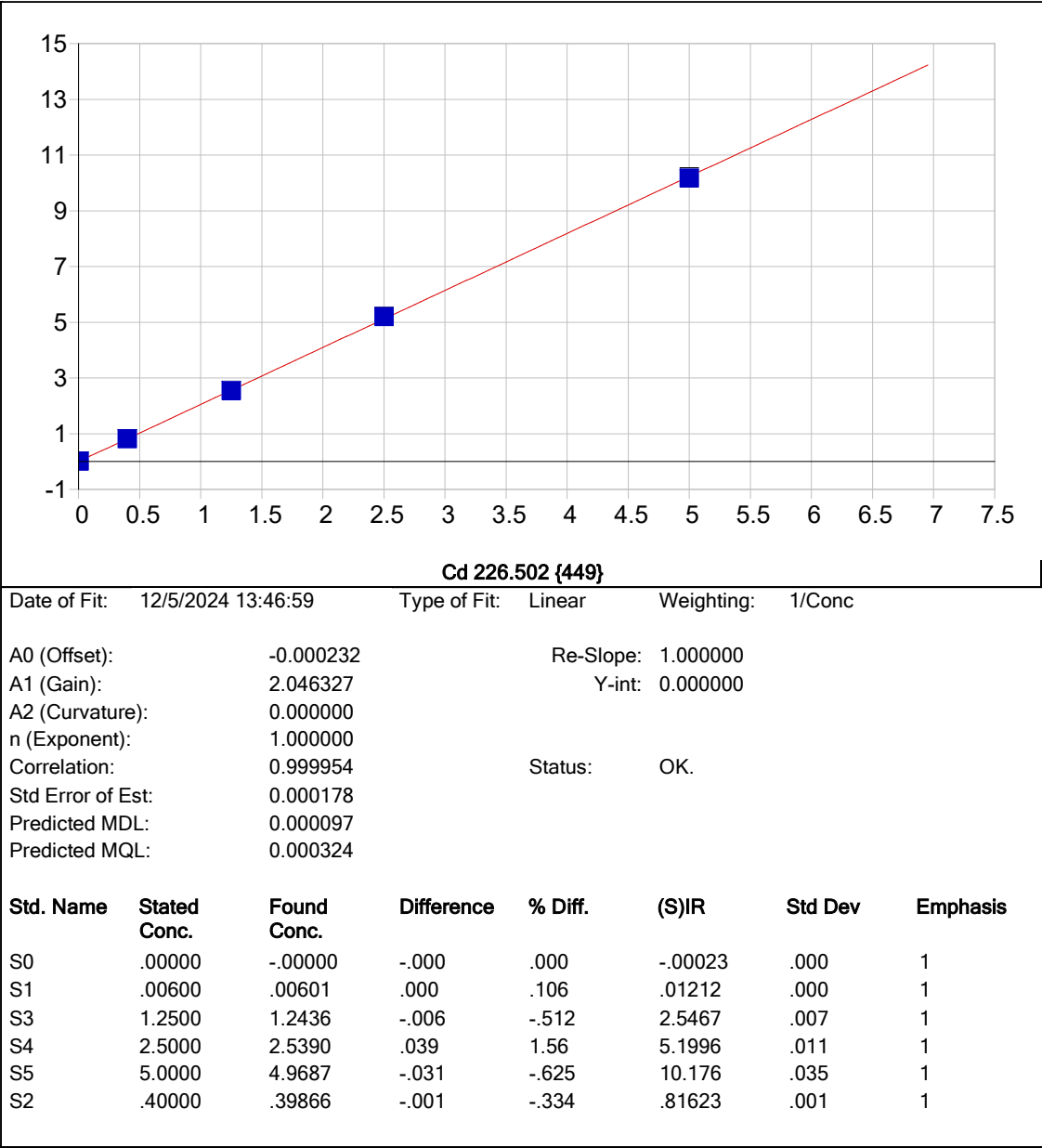


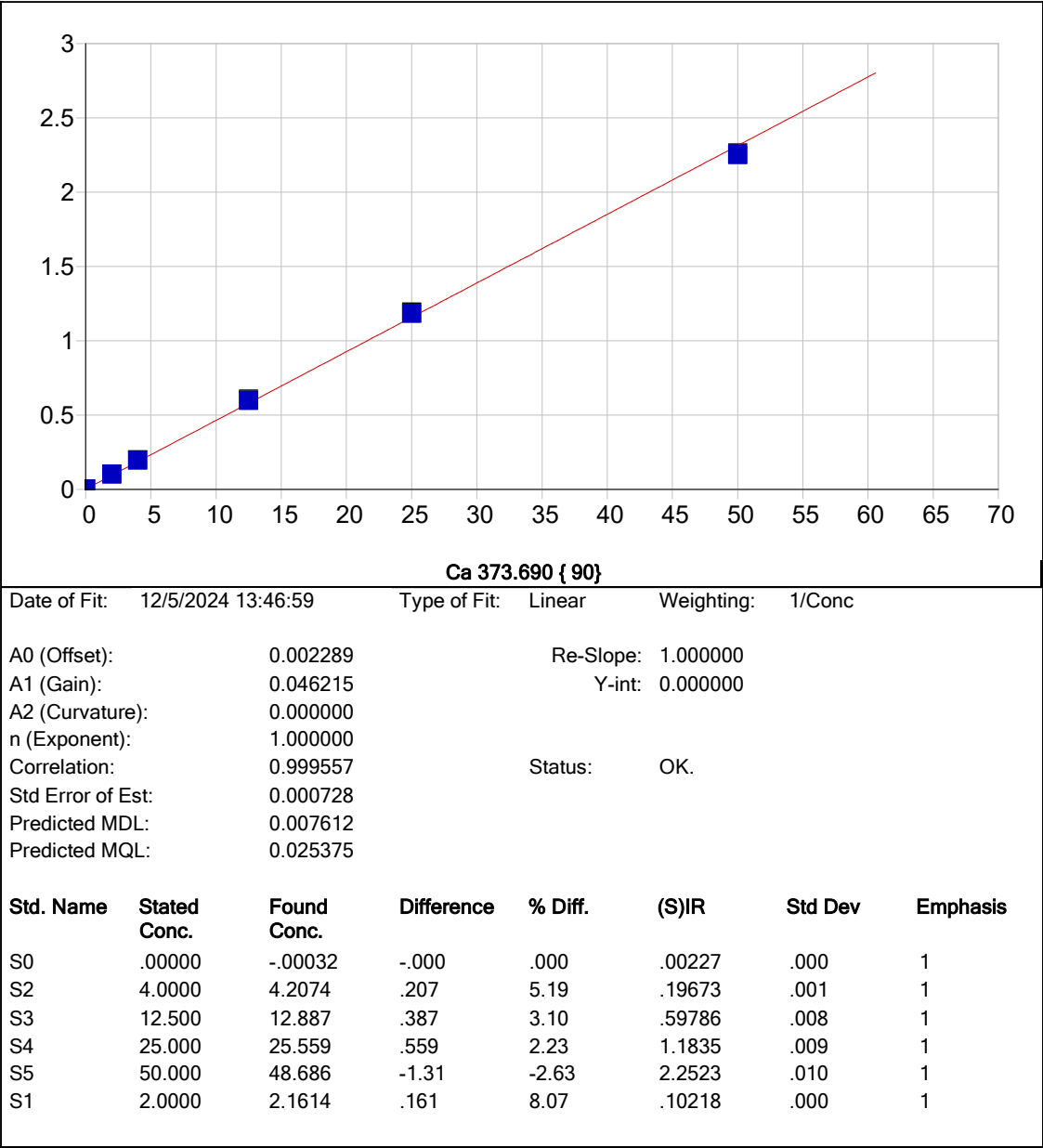


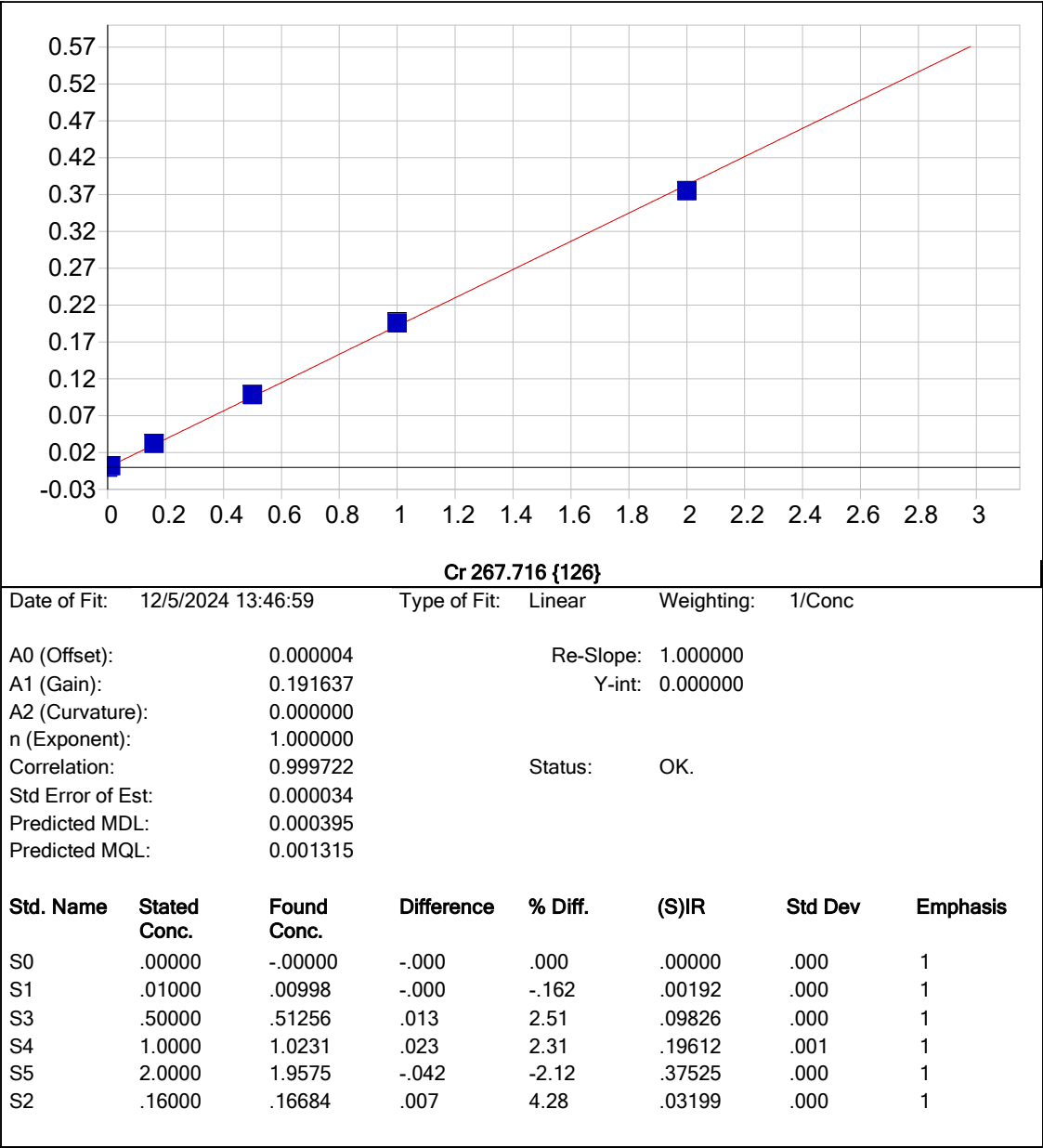


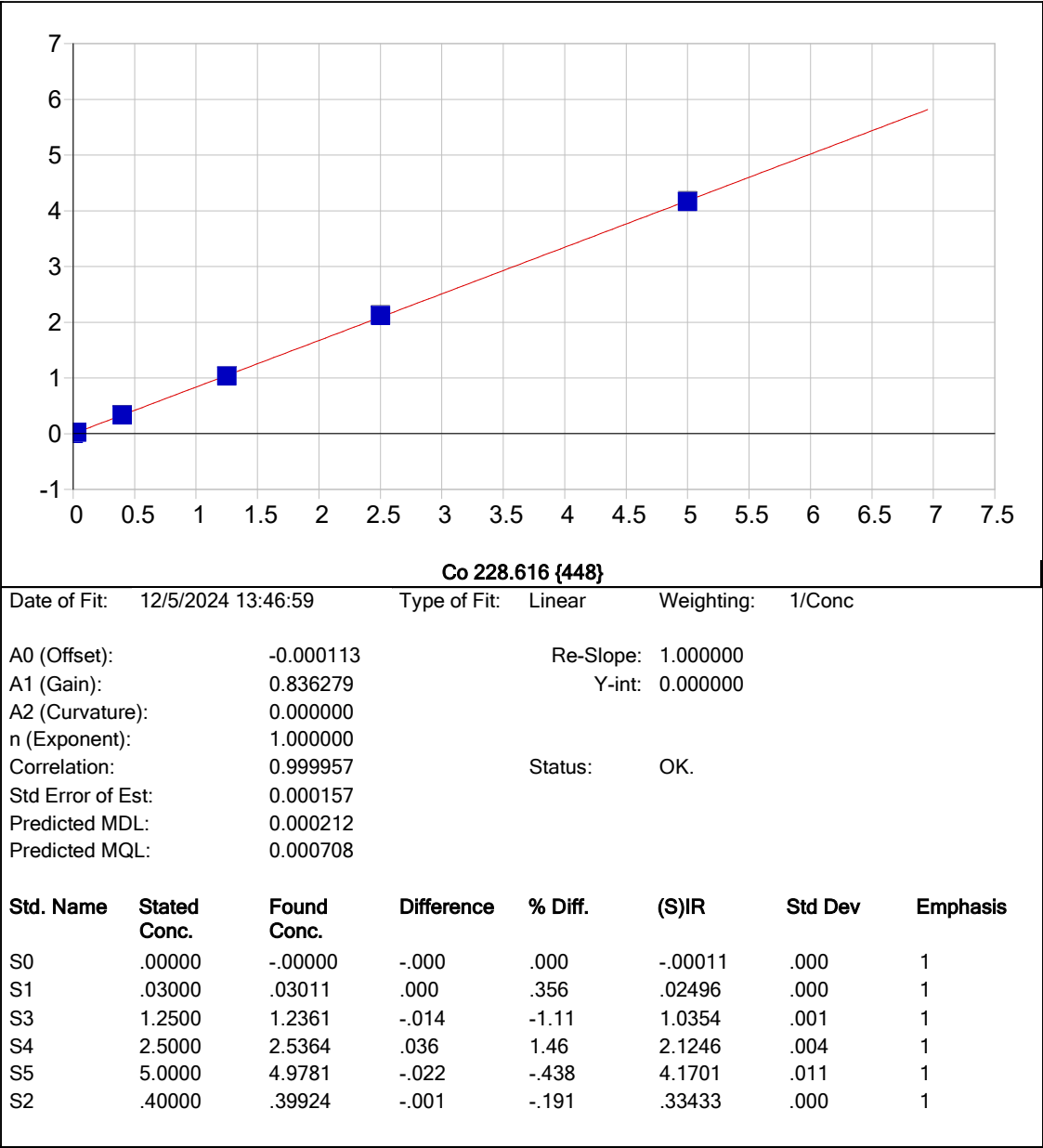


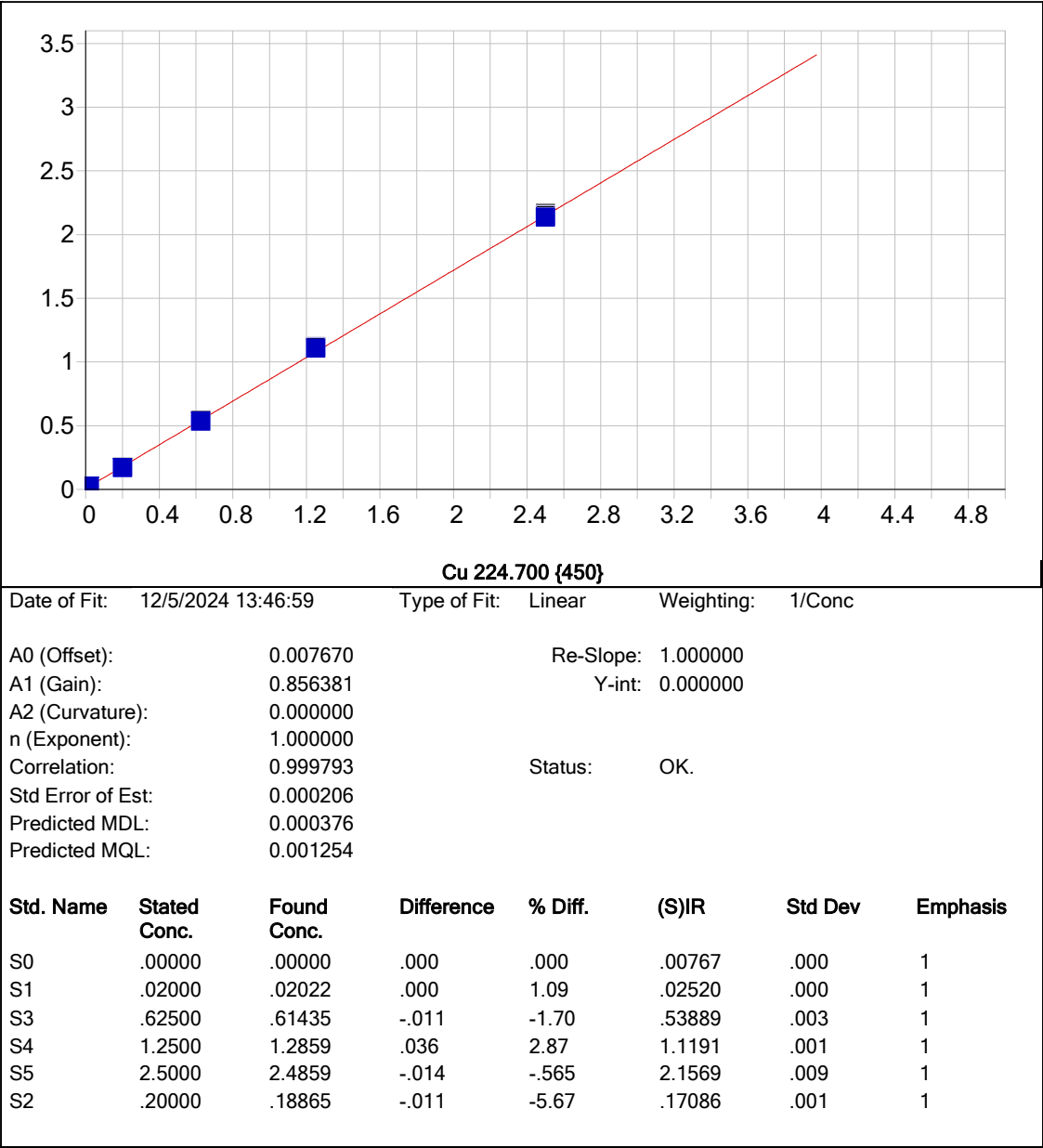


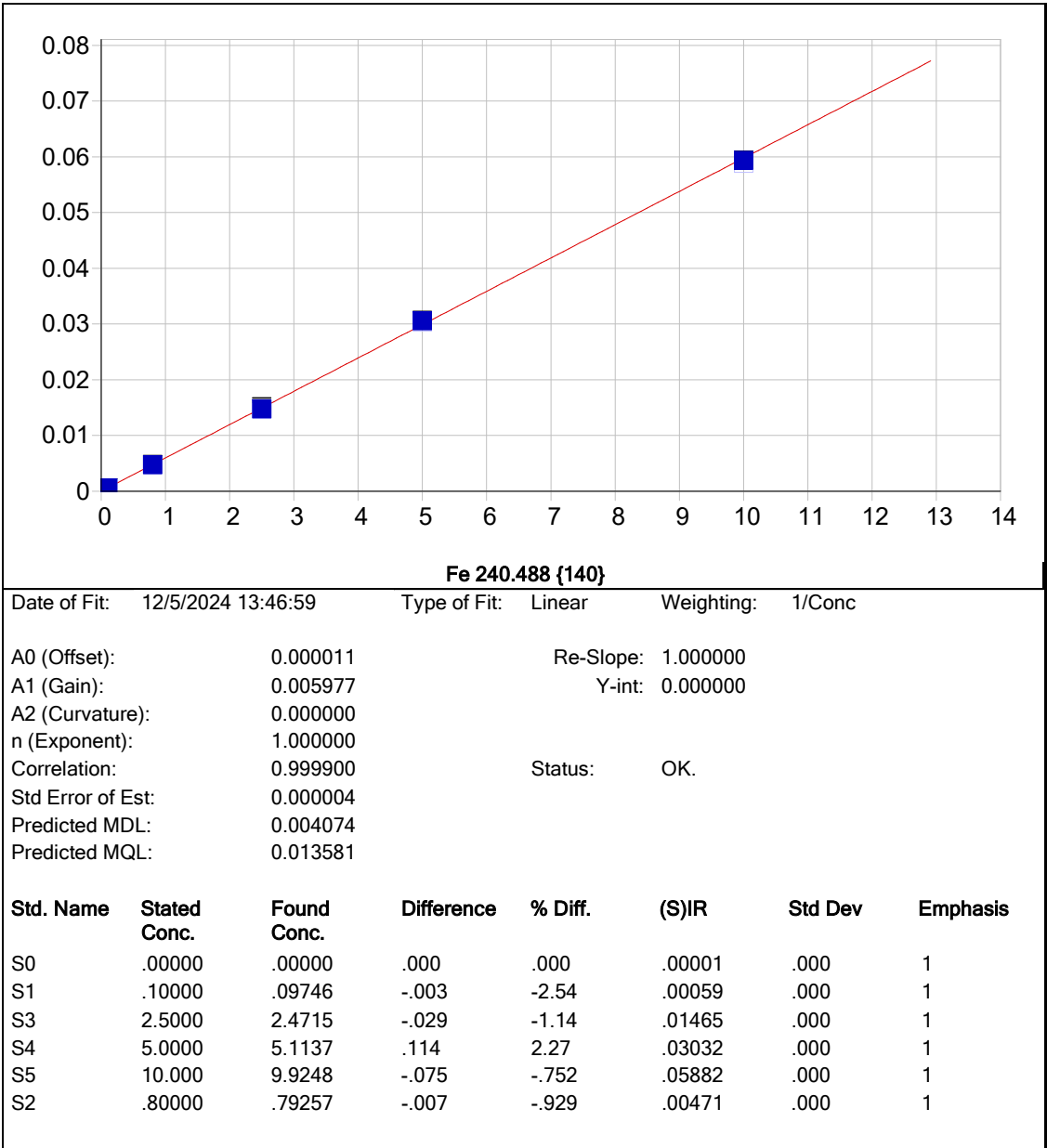


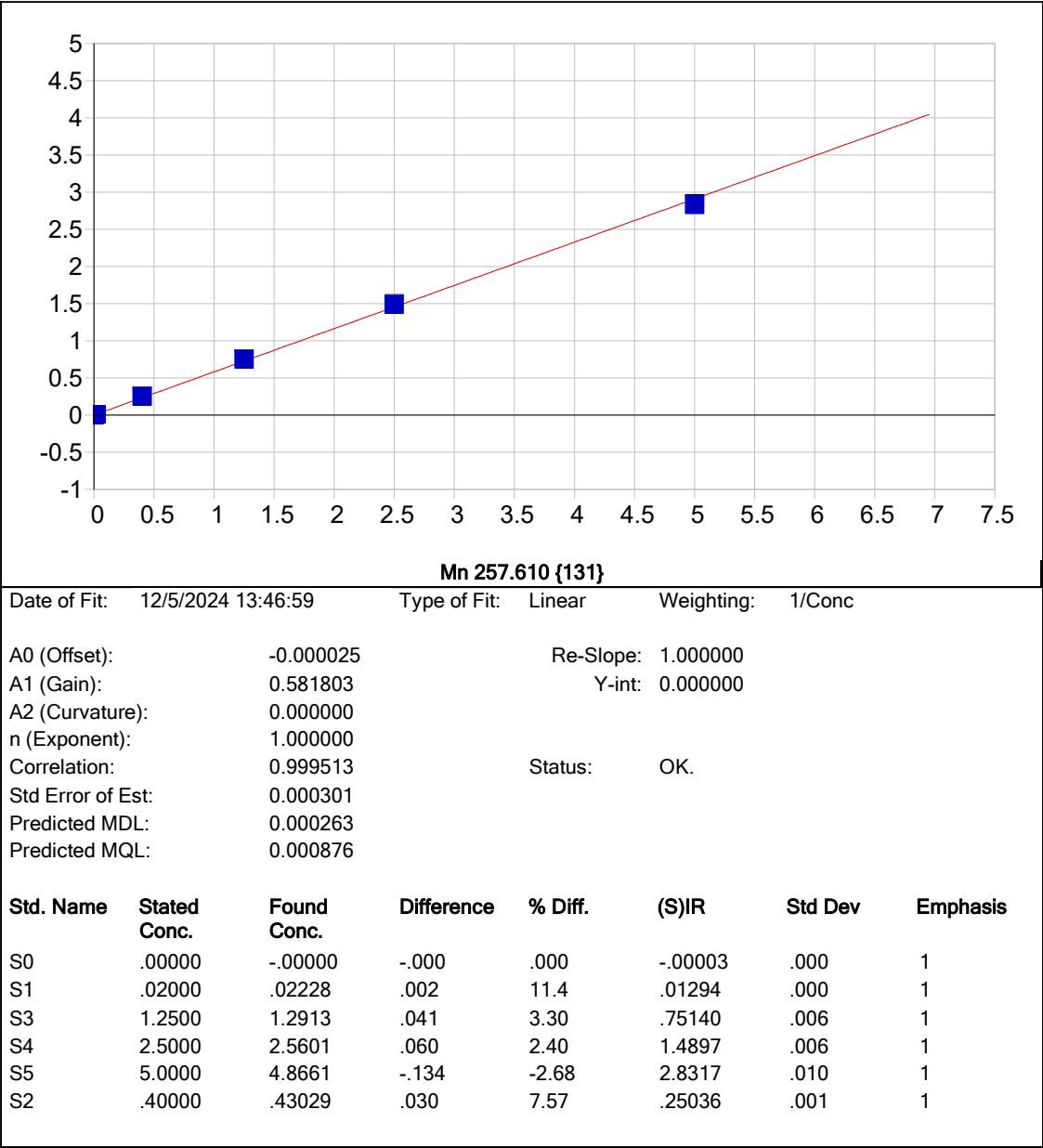


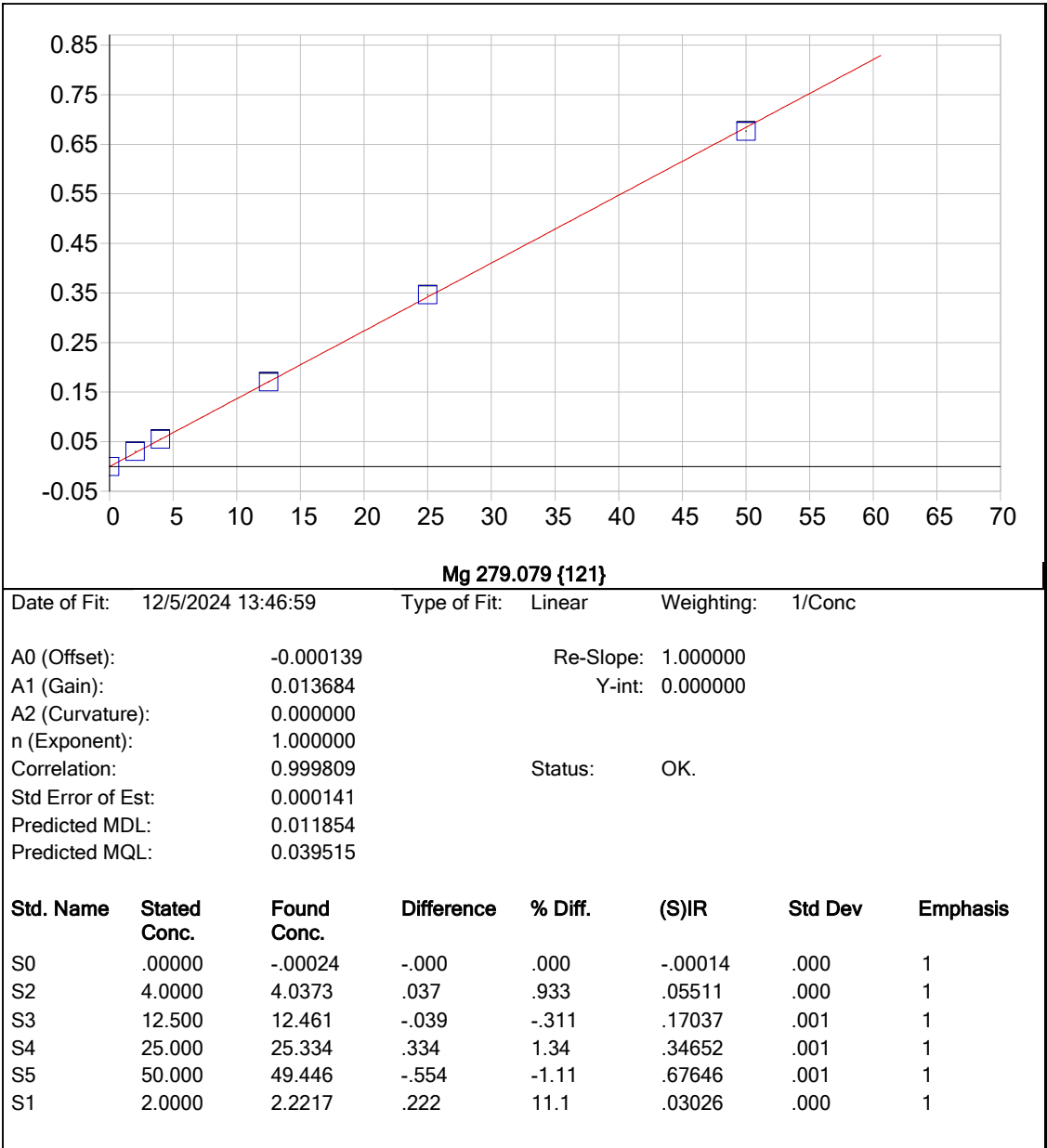


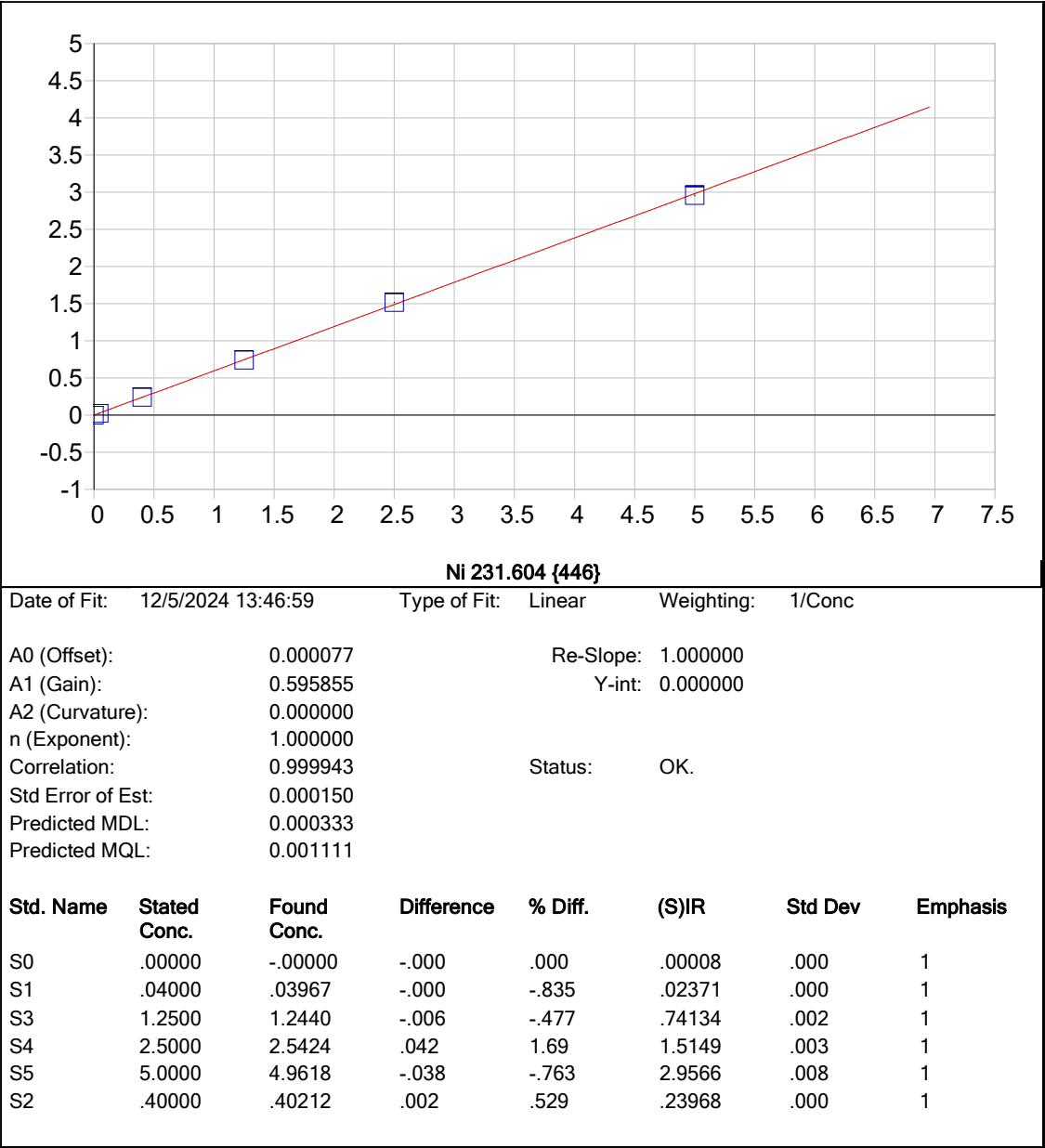


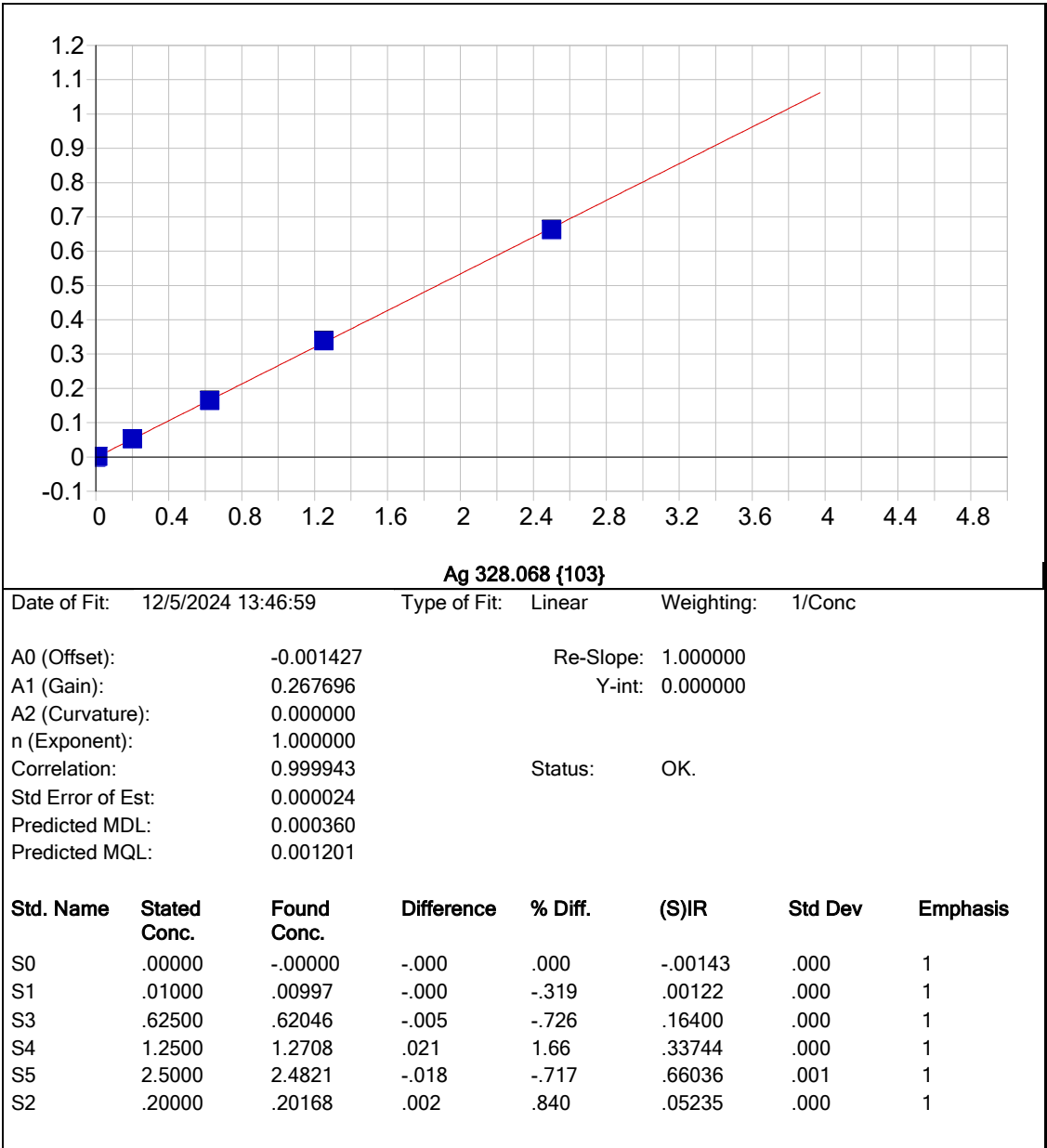


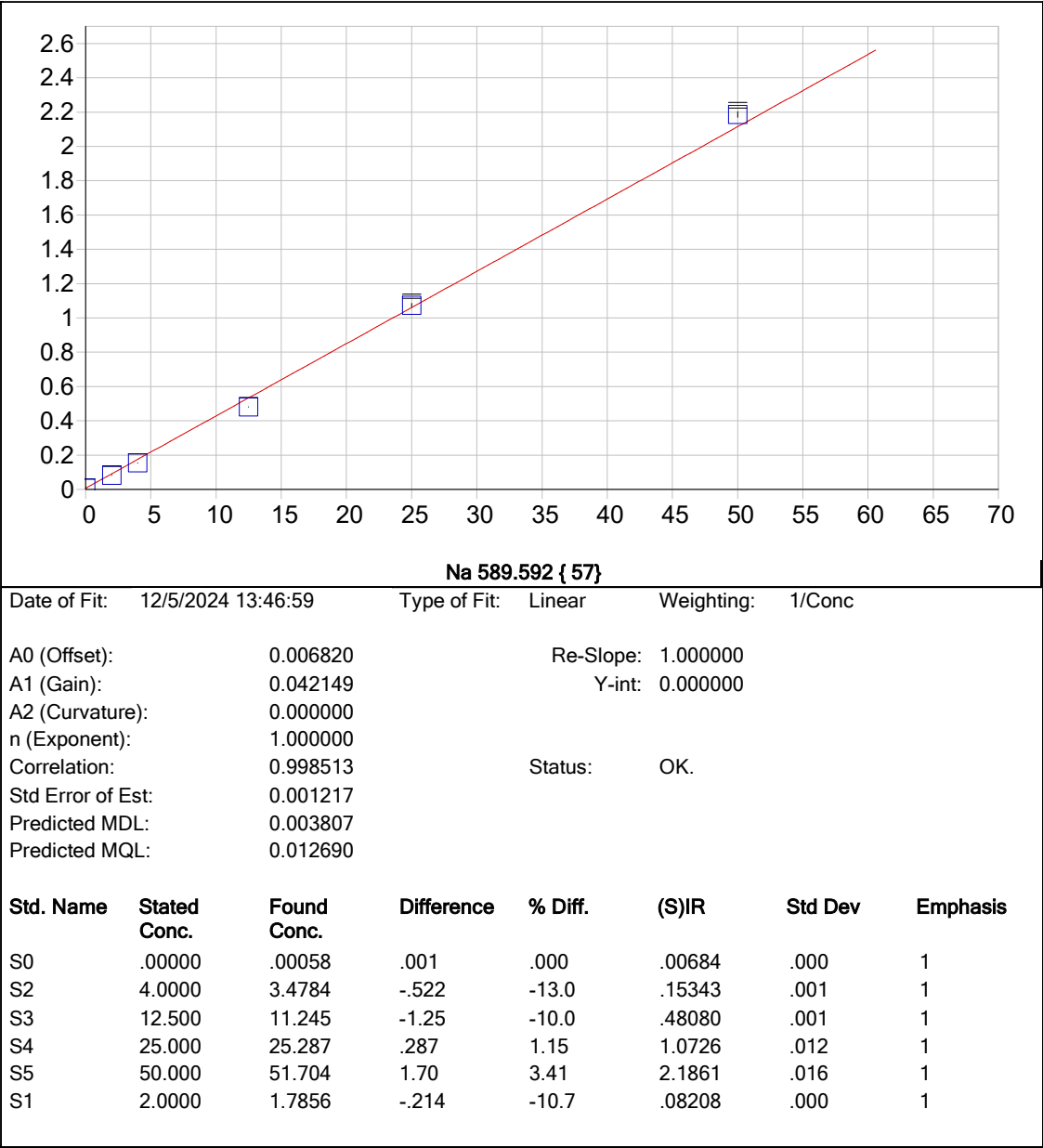


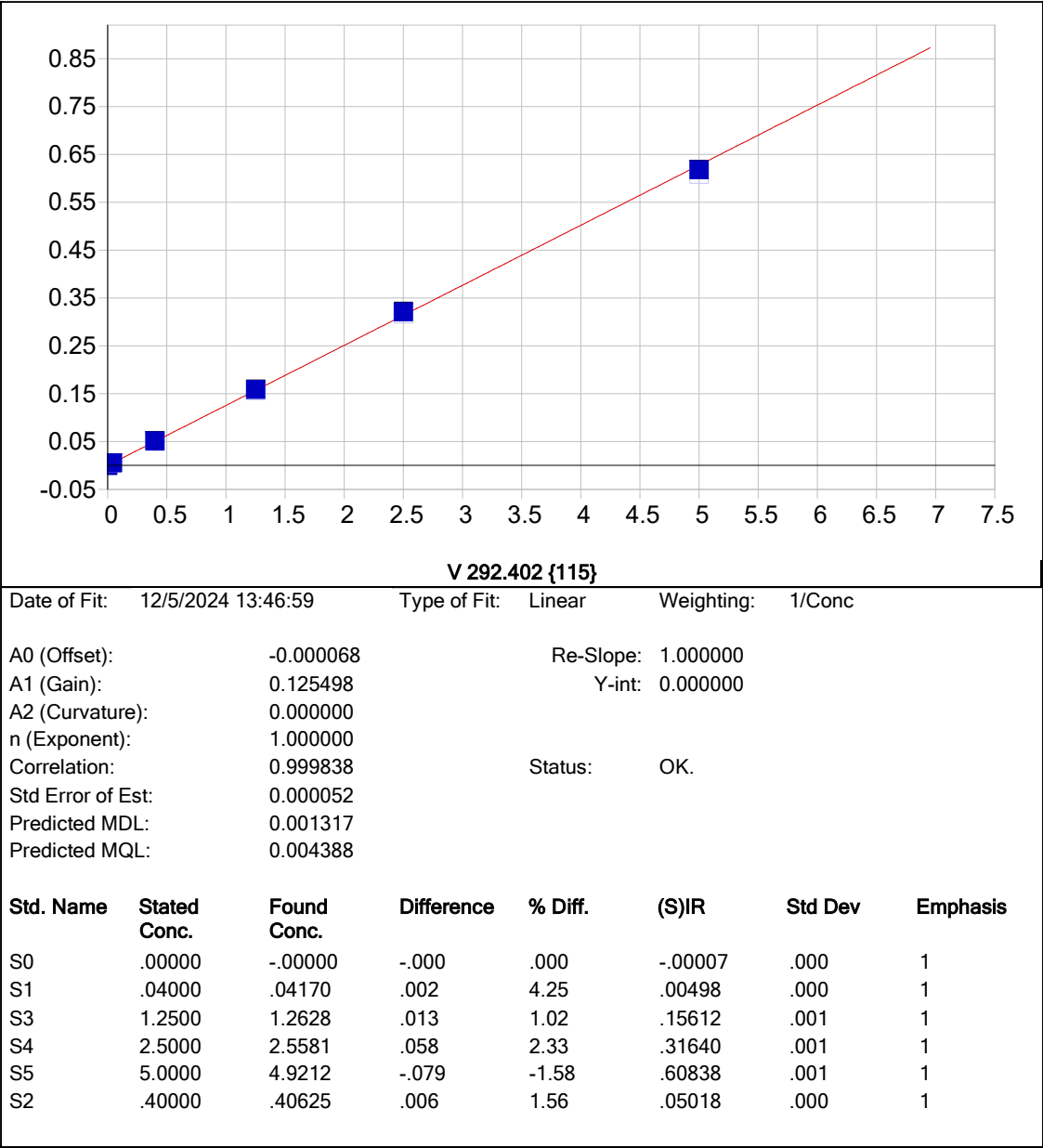


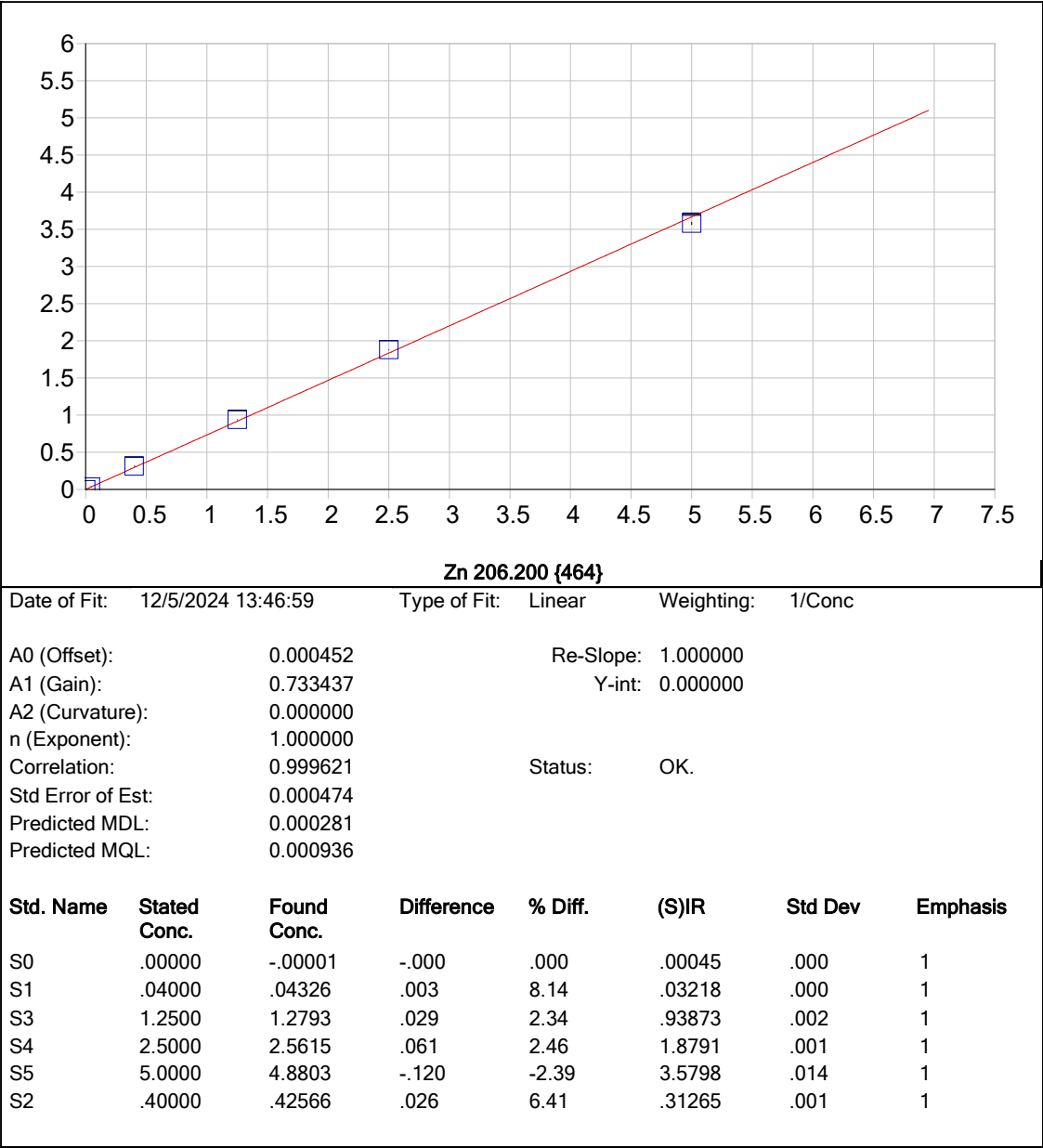


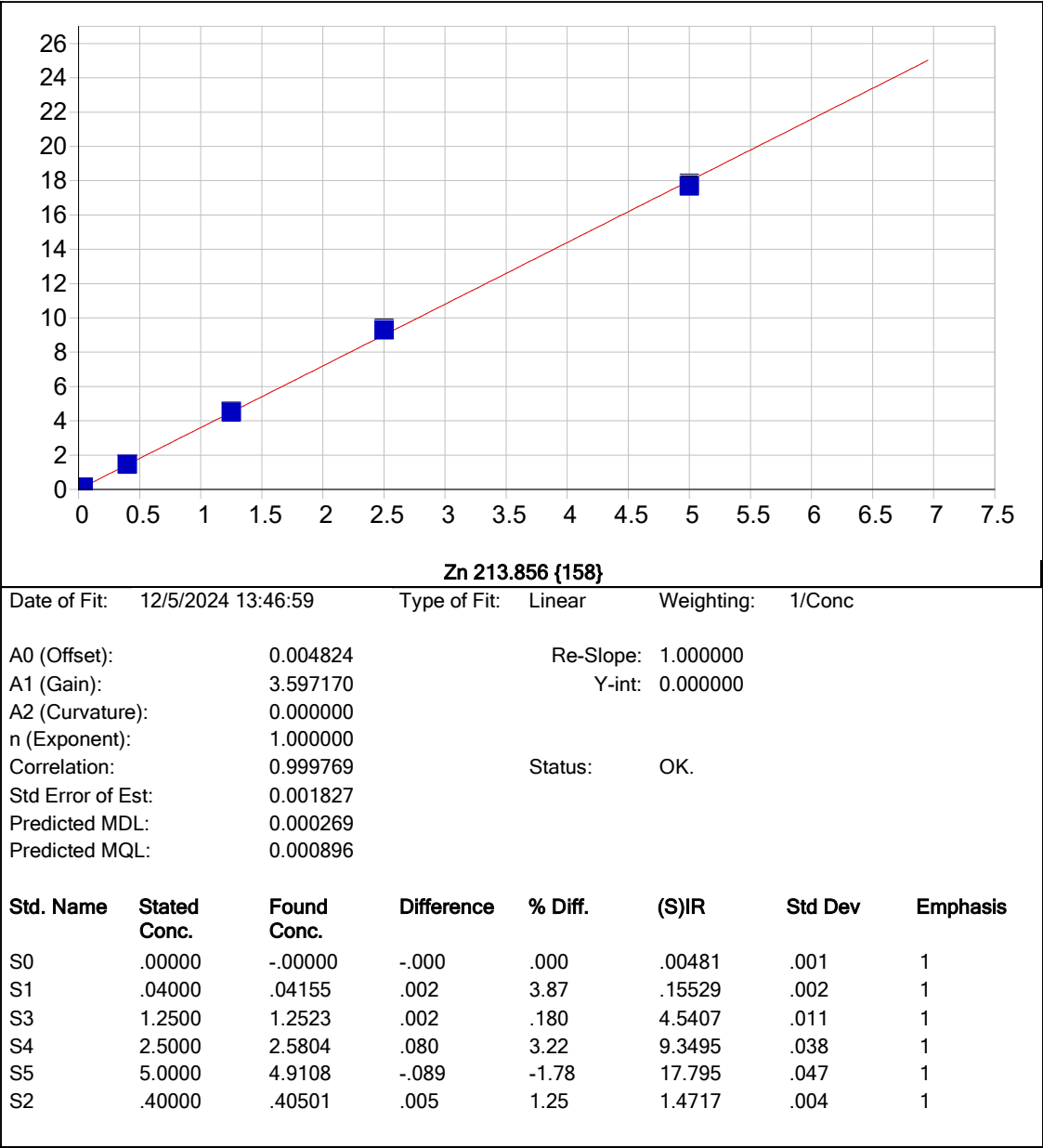


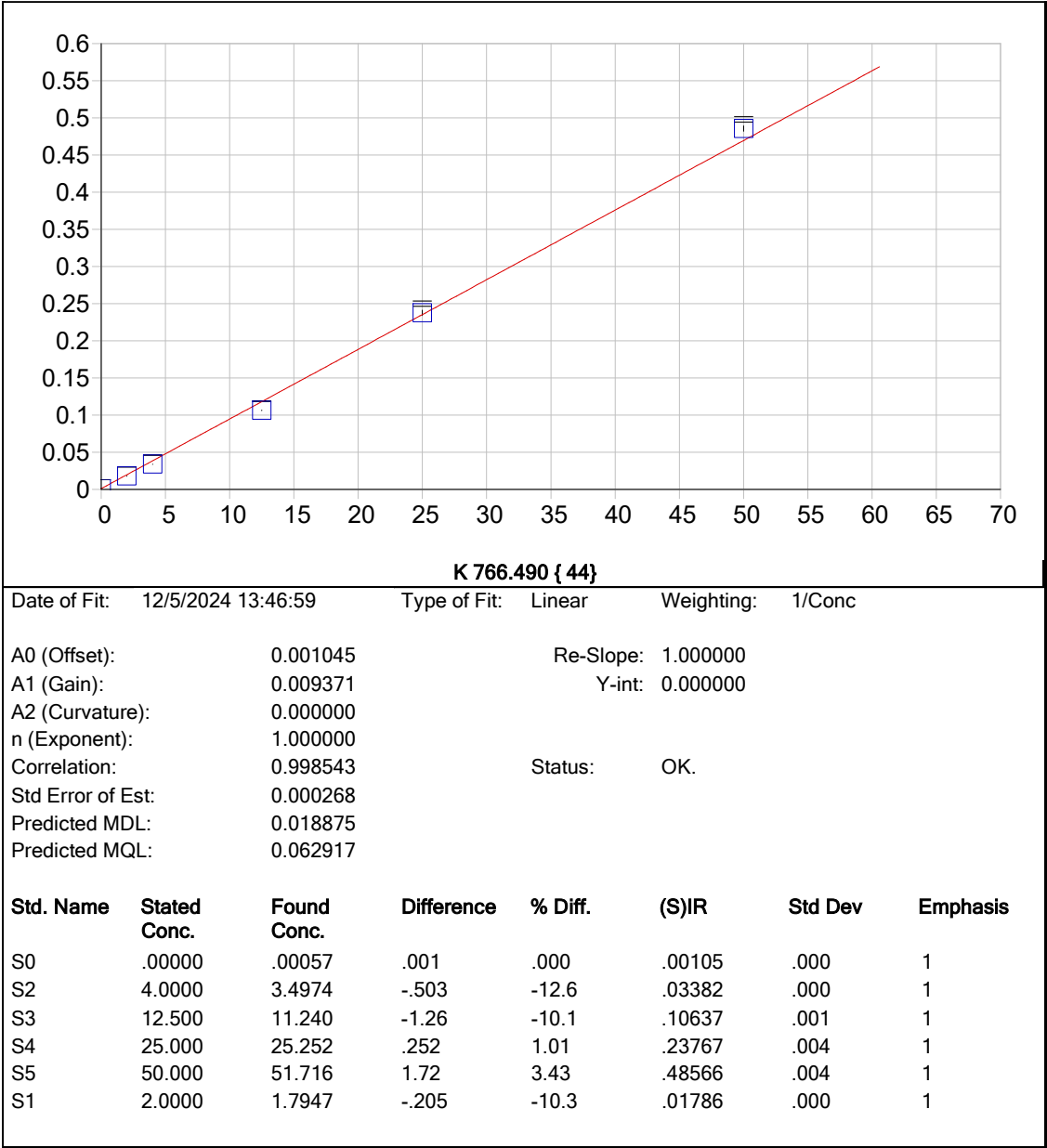


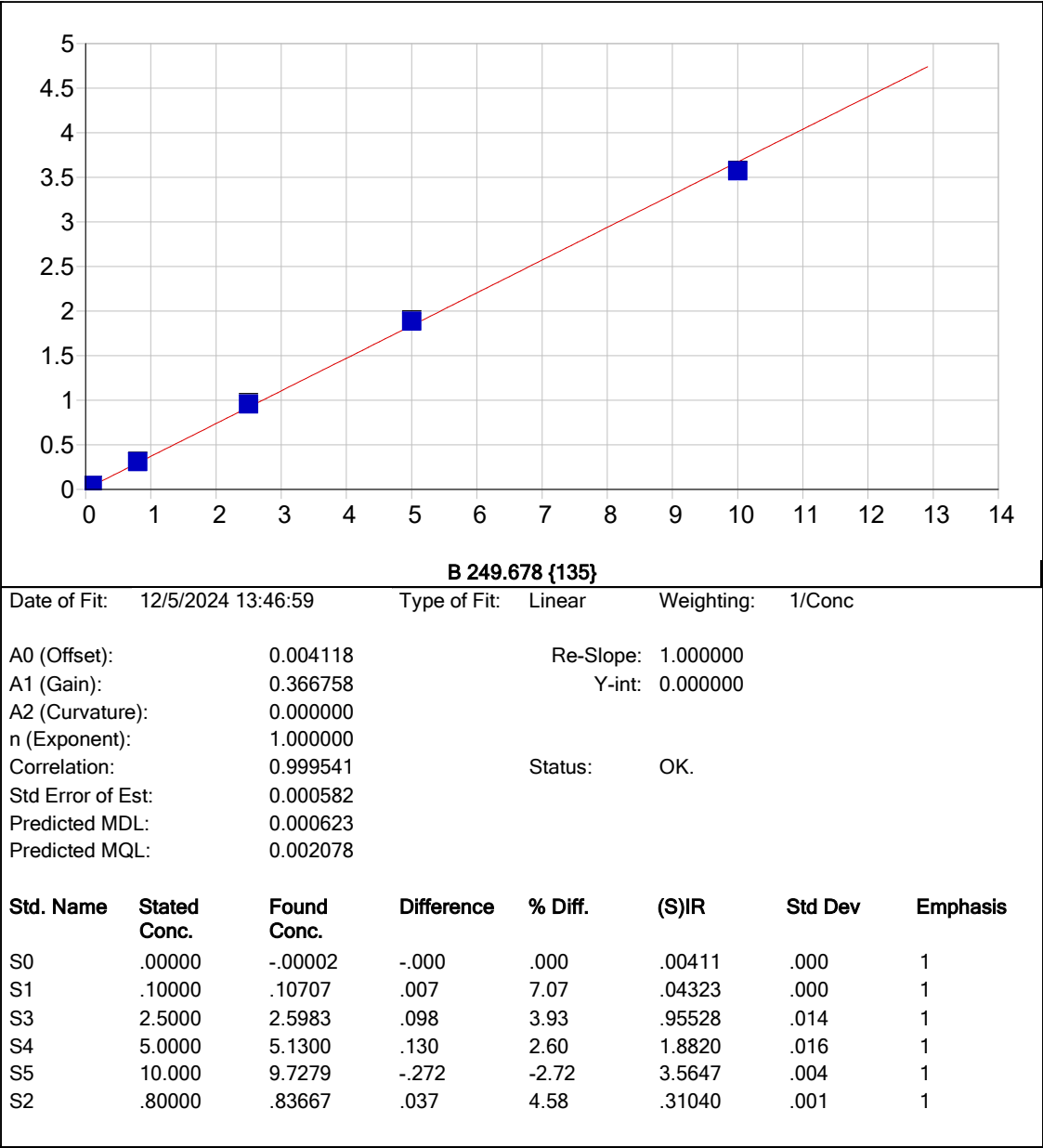


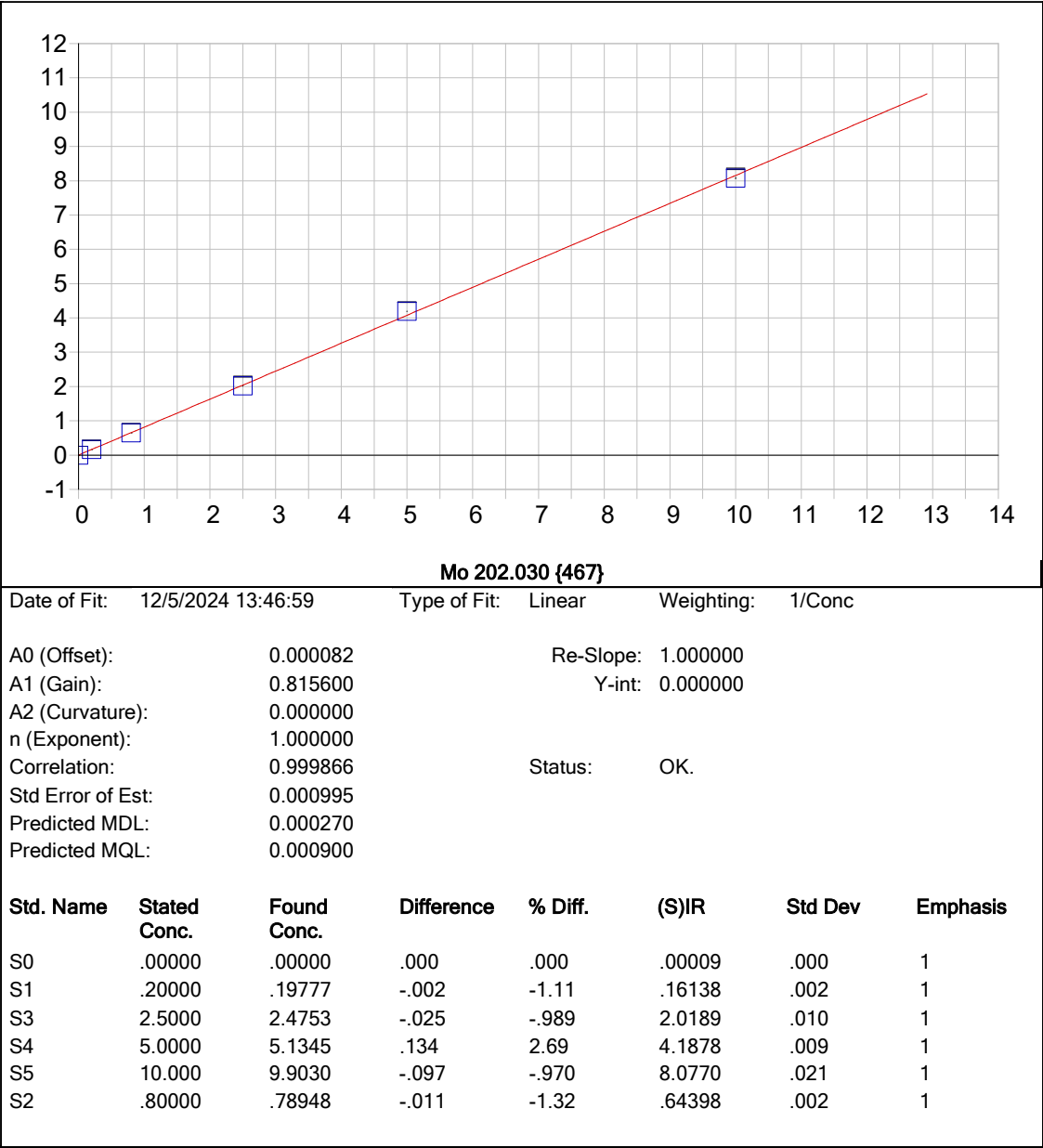


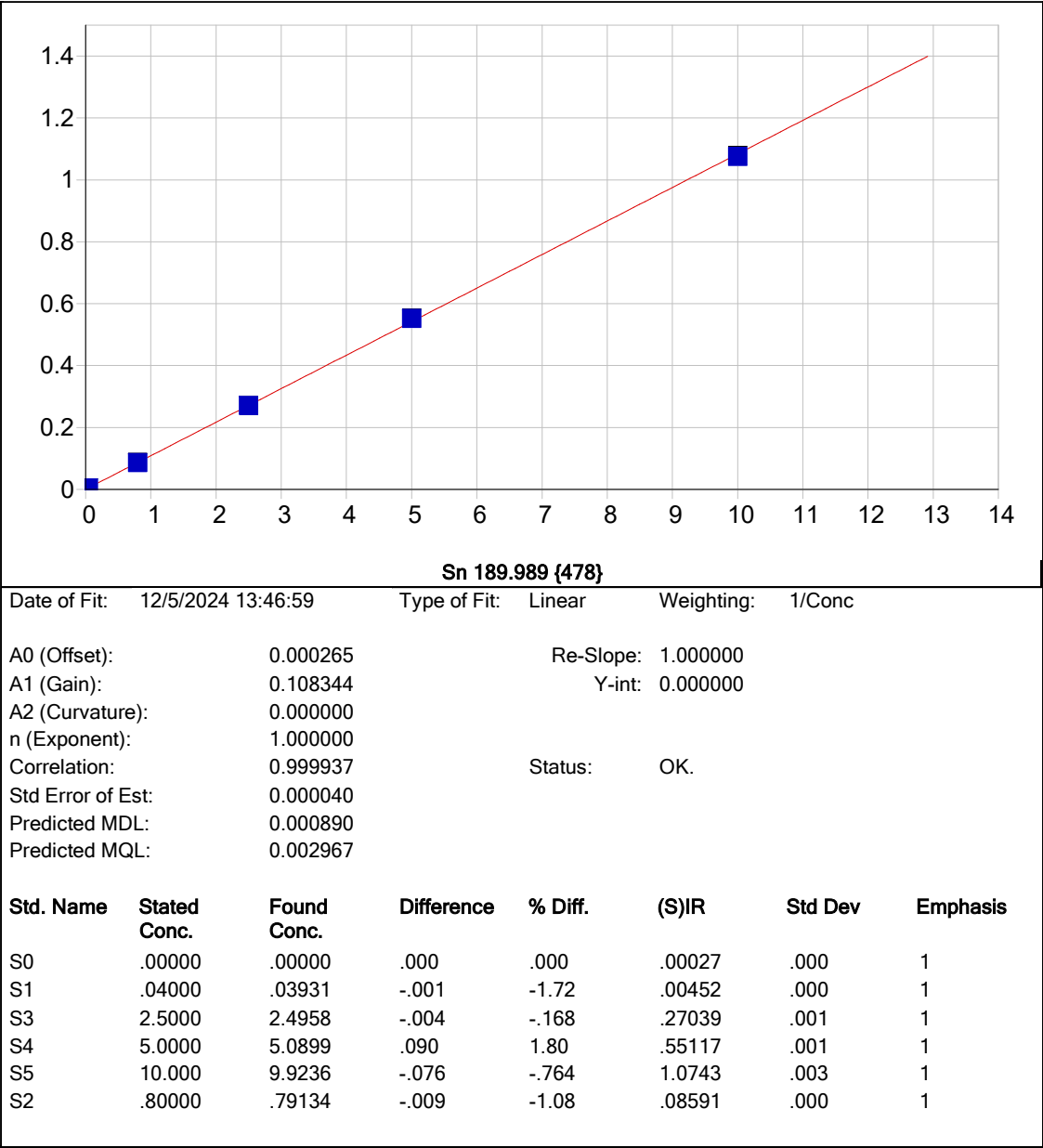


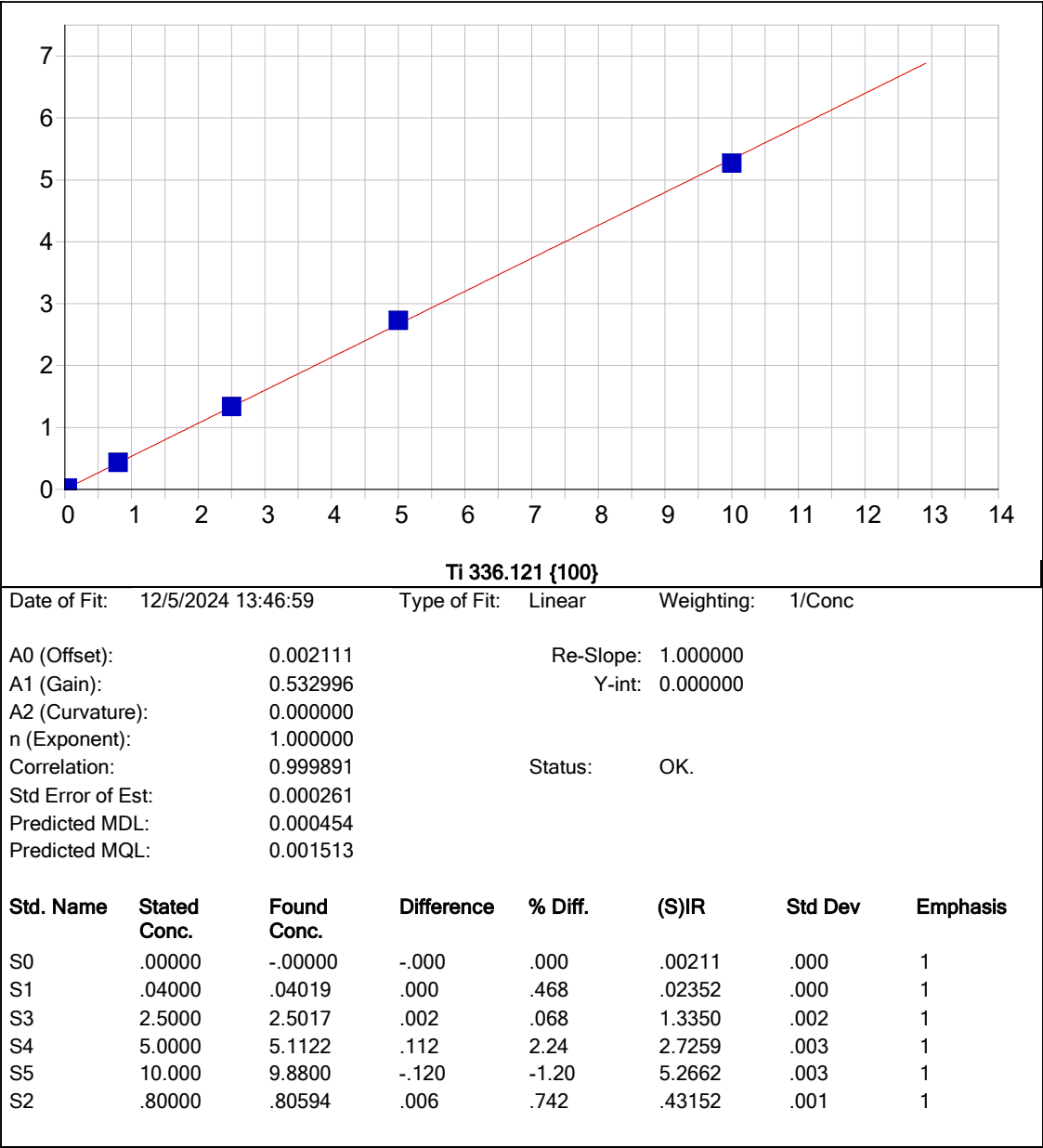


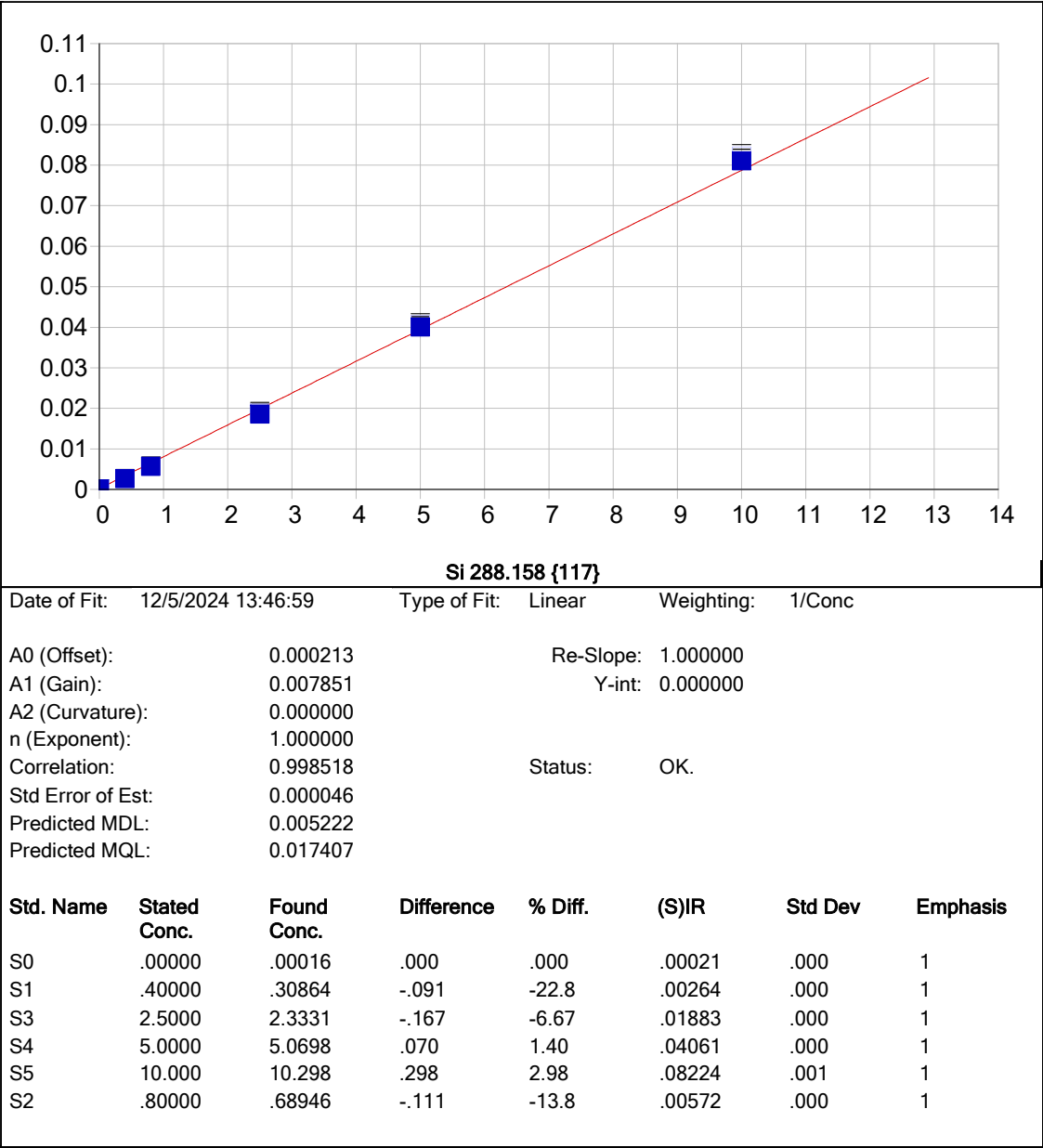


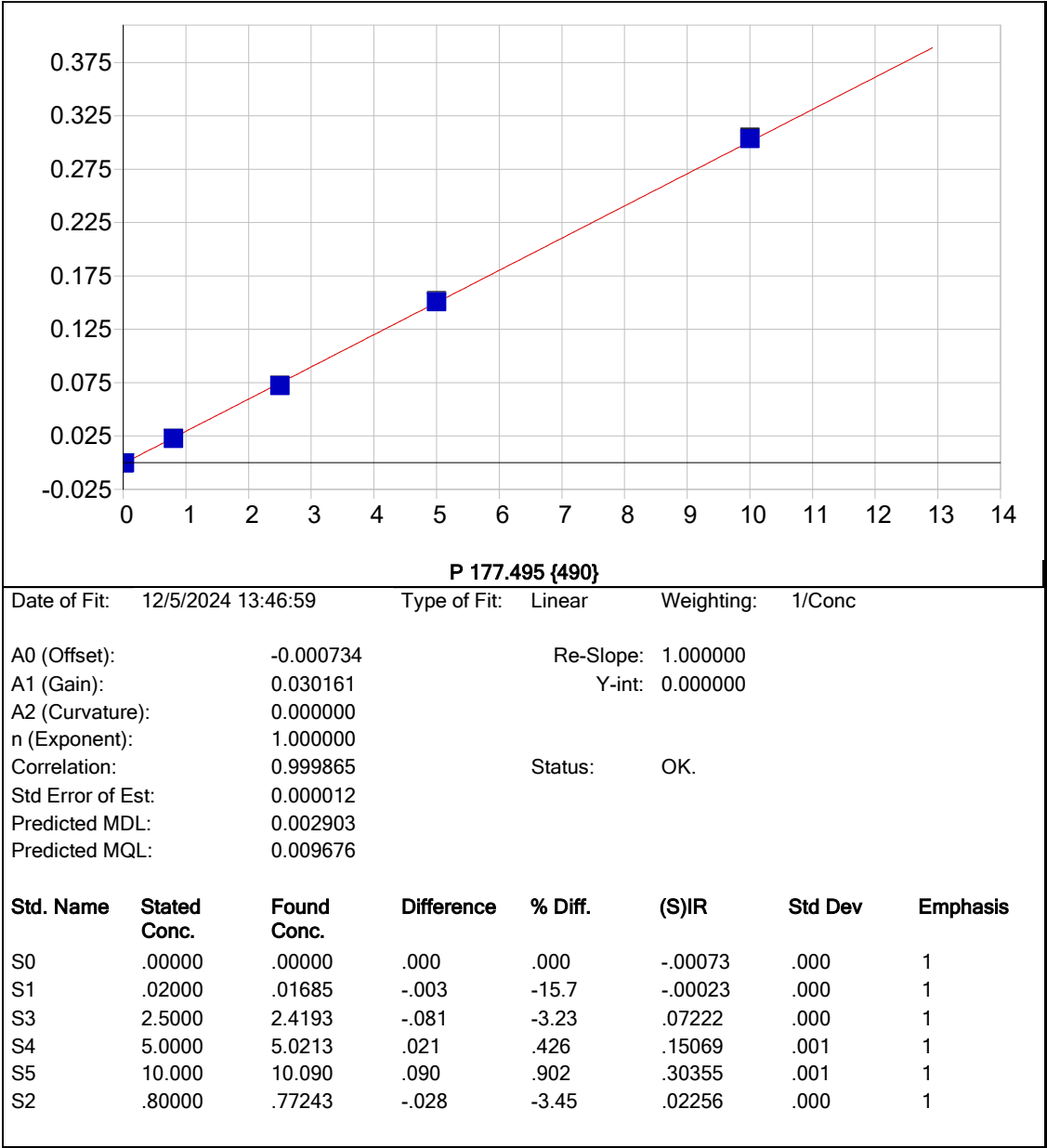


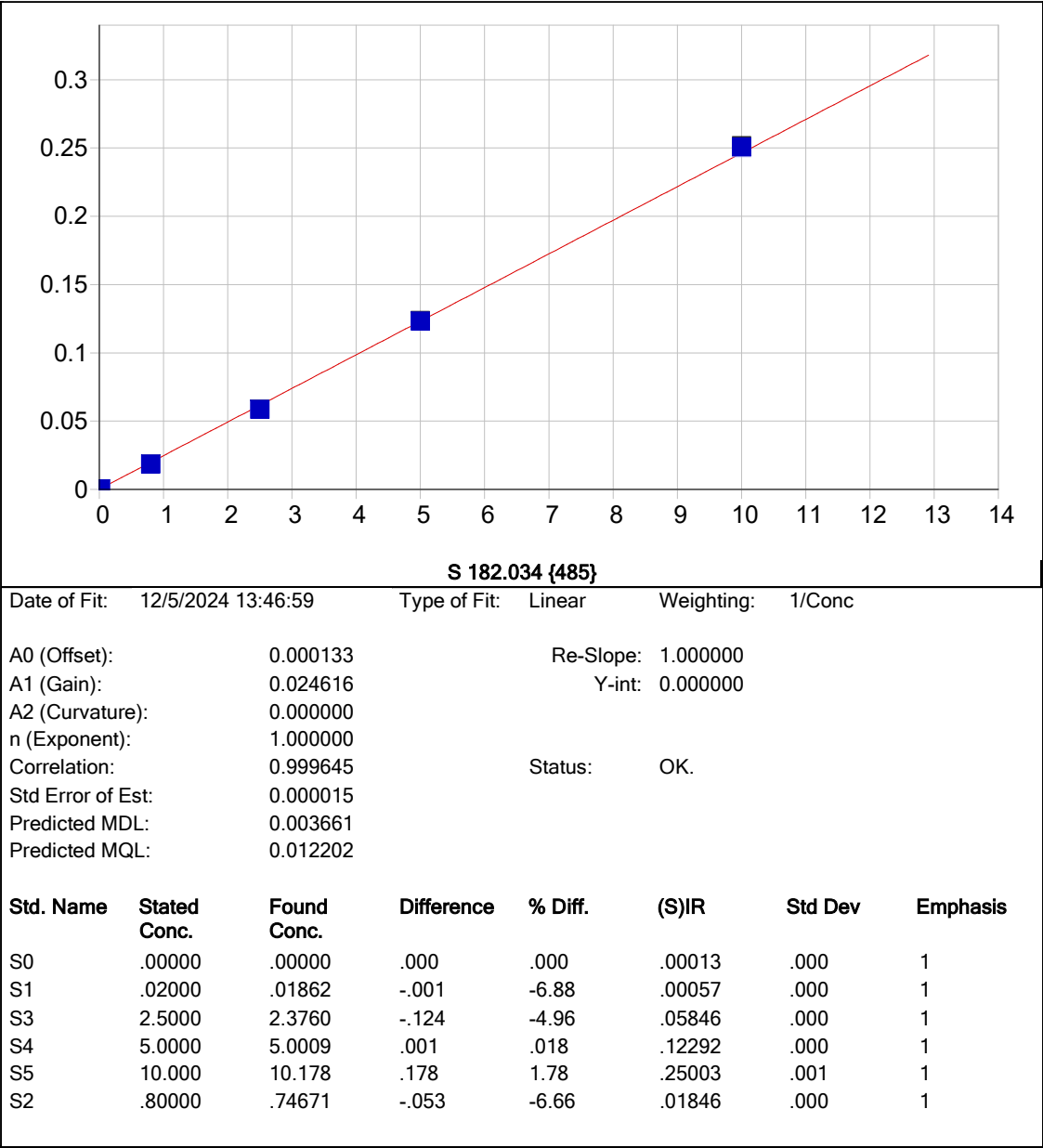


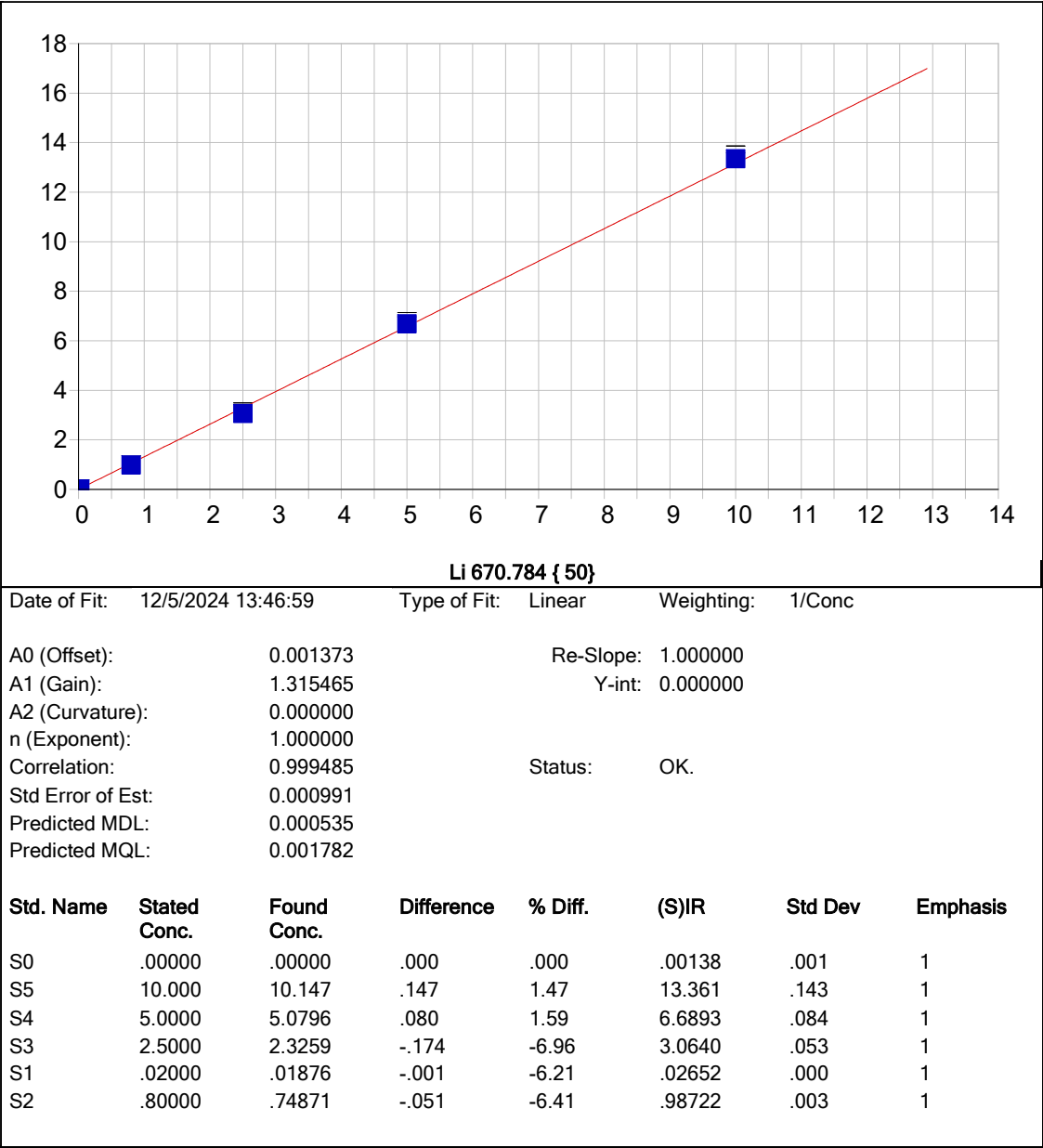


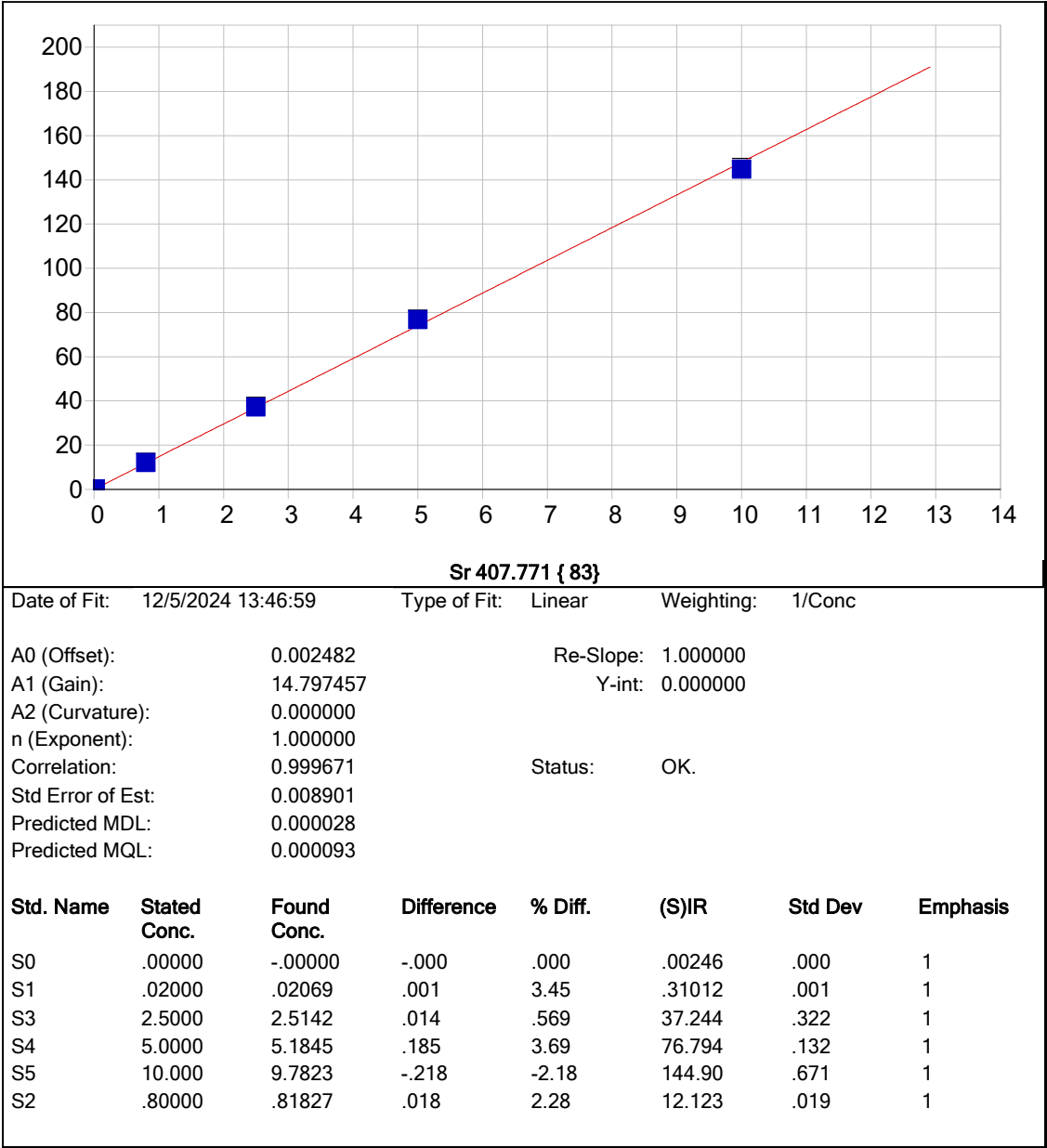


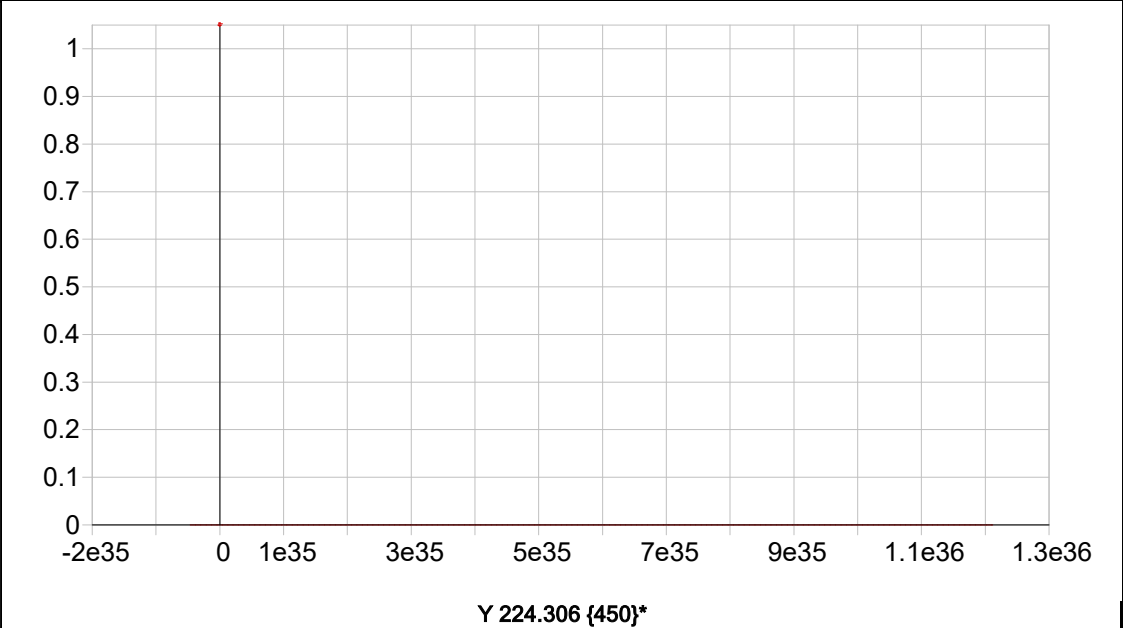








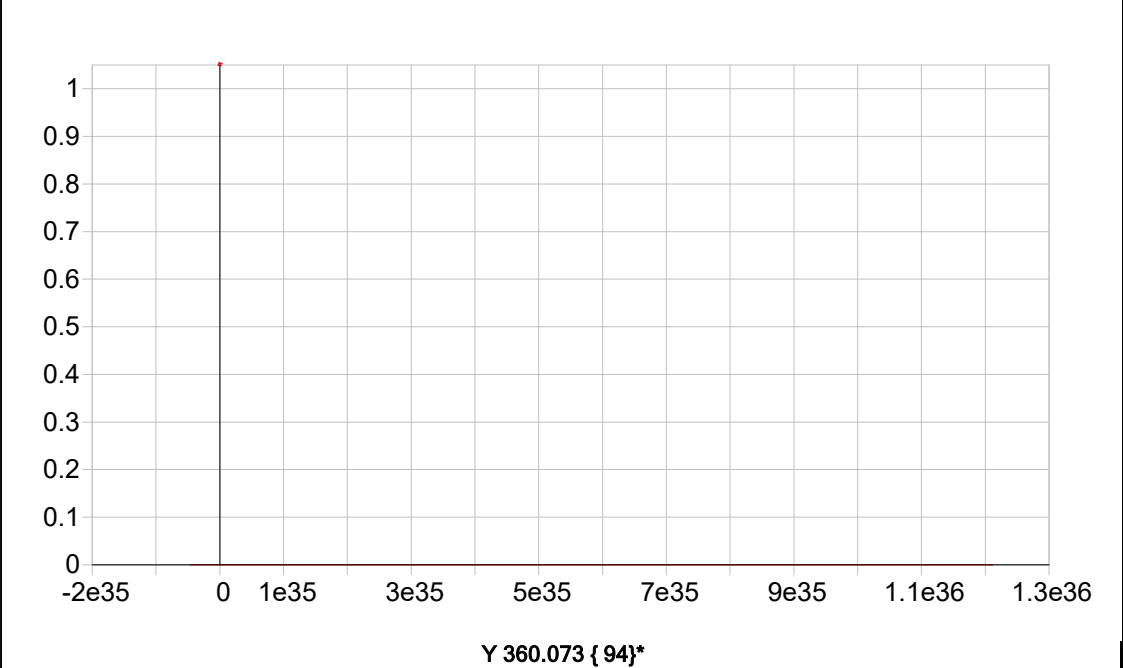




Date of Fit: 12/5/2024 13:20:53 Type of Fit: Linear Weighting: 1/Conc

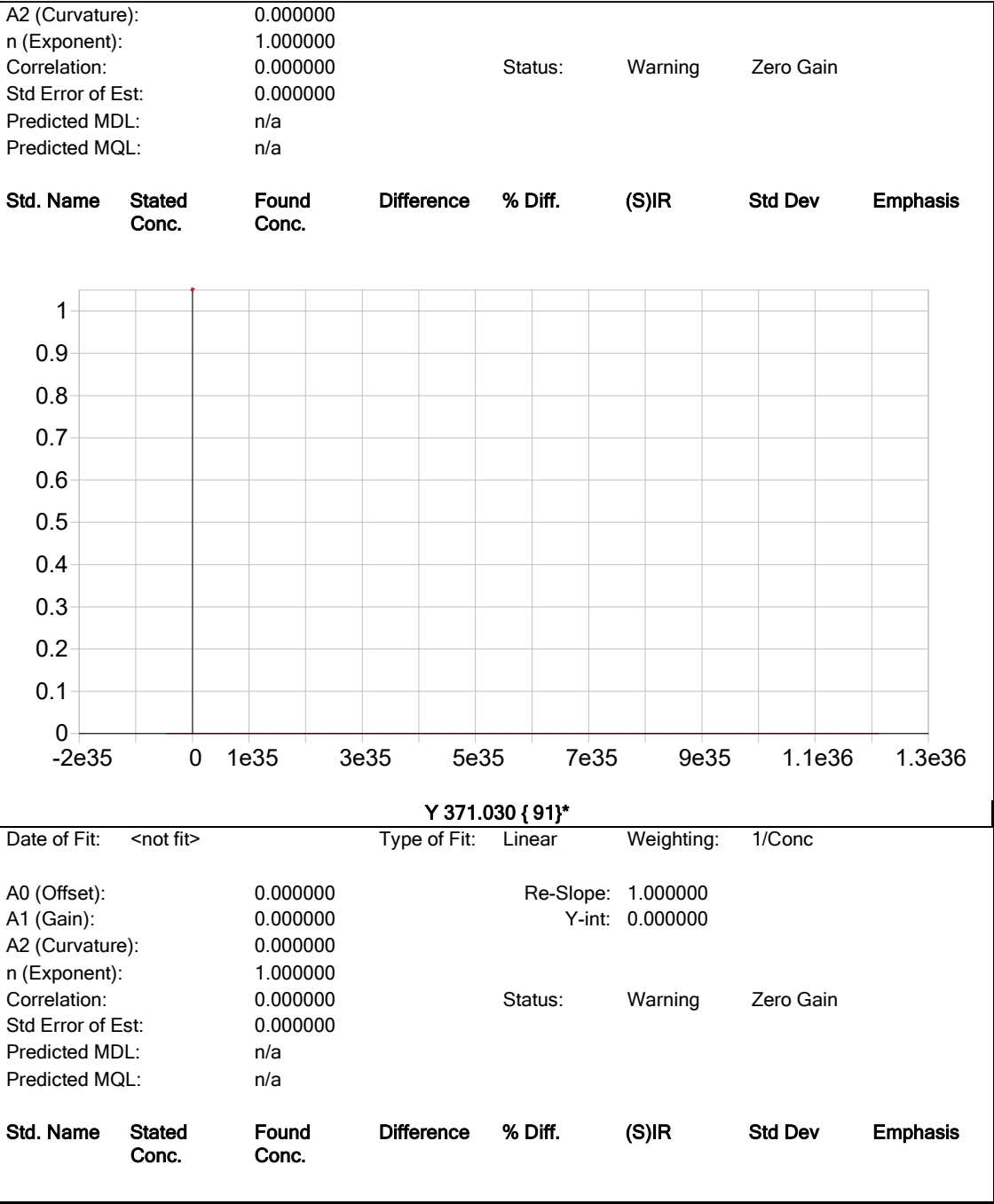
A0 (Offset): 0.000000 Re-Slope: 1.000000
A1 (Gain): 0.000000 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.000000 Status: Warning Zero Gain
Std Error of Est: 0.000000
Predicted MDL: n/a
Predicted MQL: n/a

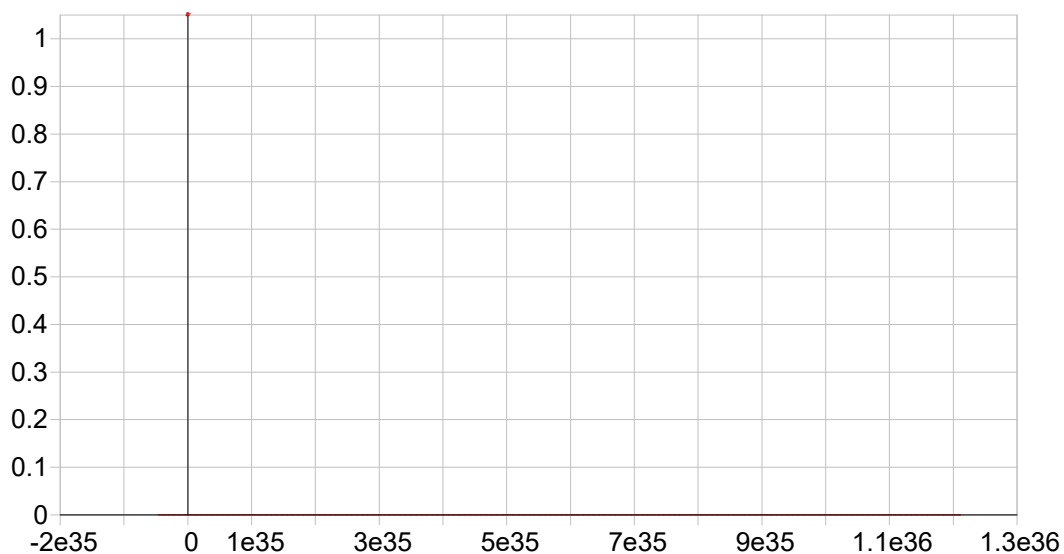
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Date of Fit: <not fit> Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000000 Re-Slope: 1.000000
A1 (Gain): 0.000000 Y-int: 0.000000

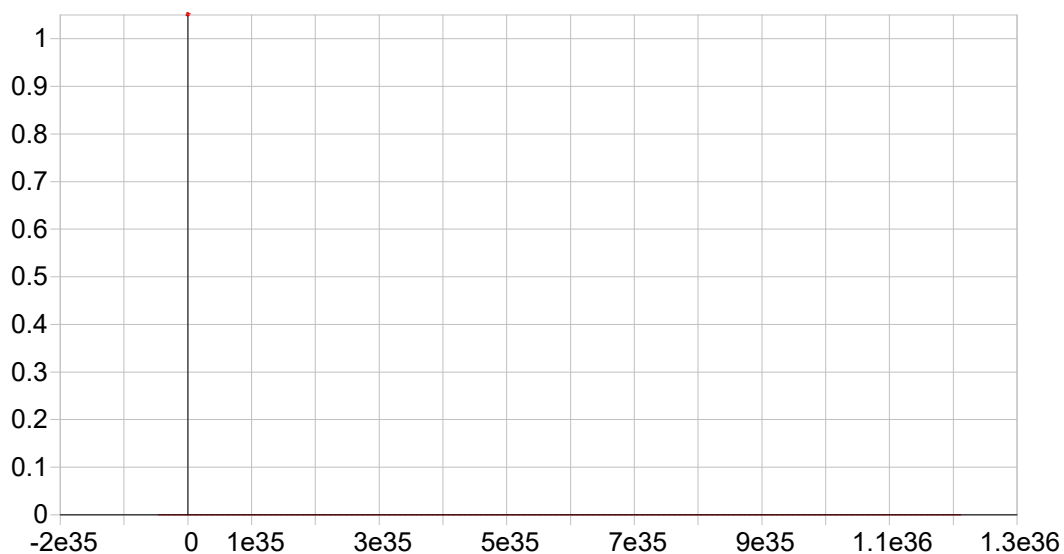




Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



In 230.606 {446}^{*}

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

A2 (Curvature):		0.000000		Status:	Warning	Zero Gain	
n (Exponent):		1.000000					
Correlation:		0.000000					
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

Sample Name: S0 Acquired: 12/5/2024 13:21:30 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00029	-.00022	-.00047	.00048	.00073	.00032	-.03924	-.00066
Stddev	.00014	.00007	.00043	.00012	.00049	.00011	.00152	.00015
%RSD	50.096	32.022	91.650	23.957	66.611	33.845	3.8664	22.578
#1	-.00024	-.00019	-.00002	.00057	.00081	.00043	-.04098	-.00065
#2	-.00017	-.00030	-.00051	.00035	.00021	.00032	-.03851	-.00053
#3	-.00045	-.00017	-.00088	.00053	.00117	.00021	-.03822	-.00082
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00023	.00227	.00000	-.00011	.00767	.00001	-.00003	-.00014
Stddev	.00027	.00025	.00003	.00015	.00021	.00001	.00003	.00014
%RSD	118.63	11.037	742.22	132.04	2.7347	65.999	107.13	101.47
#1	.00008	.00199	.00003	-.00025	.00748	.00000	-.00006	-.00026
#2	-.00033	.00247	-.00003	.00005	.00790	.00002	-.00001	.00002
#3	-.00045	.00236	.00001	-.00013	.00763	.00001	-.00002	-.00019
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00008	-.00143	.00684	-.00007	.00481	.00105	.00411	.00009
Stddev	.00026	.00004	.00024	.00006	.00105	.00010	.00022	.00011
%RSD	338.07	2.9123	3.4409	87.590	21.800	9.8054	5.3406	134.26
#1	-.00022	-.00140	.00657	.00000	.00377	.00093	.00433	.00012
#2	.00021	-.00140	.00695	-.00009	.00587	.00112	.00389	-.00004
#3	.00024	-.00148	.00701	-.00011	.00481	.00110	.00411	.00018
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.00027	.00211	.00021	-.00073	.00013	.00138	.00246	
Stddev	.00005	.00017	.00002	.00004	.00001	.00095	.00038	
%RSD	17.772	7.9496	7.1816	4.9104	10.676	69.055	15.628	
#1	.00031	.00225	.00023	-.00076	.00012	.00105	.00212	
#2	.00027	.00215	.00021	-.00075	.00015	.00063	.00237	
#3	.00021	.00193	.00020	-.00069	.00013	.00245	.00288	

Sample Name: S0 Acquired: 12/5/2024 13:21:30 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2238.0	55509.	13302.	1519.1	3902.4
Stddev	9.2	148.	45.	5.2	8.5
%RSD	.40922	.26704	.33782	.34388	.21753
#1	2228.1	55426.	13285.	1515.7	3893.2
#2	2239.8	55420.	13268.	1516.4	3903.8
#3	2246.1	55680.	13353.	1525.1	3910.0

Sample Name: S1 Acquired: 12/5/2024 13:25:55 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00105	.00232	.00240	.00235	.01108	.00898	.35312	.01880
Stddev	.00007	.00009	.00012	.00016	.00017	.00023	.00178	.00014
%RSD	6.9451	3.7113	4.9600	6.8727	1.5420	2.5723	.50396	.76746
#1	.00105	.00230	.00250	.00225	.01115	.00897	.35515	.01877
#2	.00113	.00241	.00243	.00226	.01120	.00922	.35182	.01868
#3	.00098	.00224	.00227	.00254	.01088	.00876	.35238	.01896
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01212	.10218	.00192	.02496	.02520	.00059	.01294	.03026
Stddev	.00009	.00030	.00001	.00026	.00023	.00000	.00020	.00019
%RSD	.70403	.29450	.51549	1.0429	.90638	.42934	1.5207	.62857
#1	.01202	.10187	.00191	.02510	.02546	.00059	.01292	.03010
#2	.01215	.10219	.00193	.02512	.02510	.00059	.01276	.03021
#3	.01218	.10247	.00192	.02466	.02504	.00058	.01315	.03047
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02371	.00122	.08208	.00498	.15529	.01786	.04323	.16138
Stddev	.00020	.00008	.00032	.00002	.00187	.00007	.00029	.00172
%RSD	.85843	6.7946	.38691	.45484	1.2065	.38737	.67797	1.0684
#1	.02392	.00132	.08237	.00497	.15580	.01794	.04333	.16334
#2	.02352	.00117	.08214	.00496	.15685	.01782	.04290	.16074
#3	.02370	.00118	.08174	.00500	.15321	.01783	.04346	.16007
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.00452	.02352	.00264	-.00023	.00057	.02652	.31012	
Stddev	.00005	.00022	.00001	.00004	.00002	.00050	.00077	
%RSD	1.0415	.94982	.50050	18.604	4.0227	1.8820	.24745	
#1	.00455	.02366	.00266	-.00026	.00055	.02709	.31024	
#2	.00454	.02326	.00263	-.00018	.00060	.02614	.30929	
#3	.00447	.02363	.00264	-.00024	.00056	.02634	.31081	

Sample Name: S1 Acquired: 12/5/2024 13:25:55 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2407.9	57855.	13720.	1602.2	4088.1
Stddev	21.4	167.	16.	16.6	33.1
%RSD	.88783	.28950	.11720	1.0336	.80902
#1	2383.6	57867.	13706.	1603.9	4050.1
#2	2416.5	57682.	13737.	1584.8	4103.5
#3	2423.7	58016.	13716.	1617.8	4110.6

Sample Name: S2 Acquired: 12/5/2024 13:30:16 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04786	.05355	.18256	.07484	.17112	.13062	6.1154	.12818
Stddev	.00016	.00005	.00049	.00033	.00024	.00045	.0199	.00065
%RSD	.33429	.10134	.26742	.44365	.14206	.34828	.32595	.50754
#1	.04771	.05350	.18201	.07449	.17087	.13010	6.0930	.12892
#2	.04803	.05356	.18274	.07516	.17115	.13080	6.1219	.12774
#3	.04785	.05361	.18293	.07487	.17135	.13095	6.1312	.12787
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.81623	.19673	.03199	.33433	.17086	.00471	.25036	.05511
Stddev	.00094	.00082	.00011	.00047	.00063	.00004	.00119	.00016
%RSD	.11479	.41442	.34695	.14045	.37056	.79793	.47492	.28607
#1	.81671	.19637	.03211	.33382	.17017	.00466	.24899	.05499
#2	.81515	.19767	.03196	.33440	.17102	.00473	.25104	.05529
#3	.81684	.19616	.03189	.33475	.17140	.00473	.25107	.05505
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.23968	.05235	.15343	.05018	1.4717	.03382	.31040	.64398
Stddev	.00050	.00005	.00062	.00012	.0038	.00026	.00117	.00151
%RSD	.20718	.09977	.40259	.23333	.25656	.75880	.37808	.23484
#1	.23983	.05229	.15278	.05005	1.4697	.03359	.31171	.64237
#2	.23912	.05240	.15401	.05022	1.4694	.03409	.30944	.64421
#3	.24008	.05236	.15350	.05028	1.4761	.03377	.31005	.64537
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.08591	.43152	.00572	.02256	.01846	.98722	12.123	
Stddev	.00013	.00117	.00007	.00011	.00006	.00252	.019	
%RSD	.14644	.27199	1.1674	.49111	.34617	.25515	.16070	
#1	.08603	.43035	.00565	.02262	.01847	.98449	12.100	
#2	.08593	.43269	.00578	.02262	.01840	.98773	12.135	
#3	.08578	.43152	.00573	.02243	.01852	.98945	12.133	

Sample Name: S2 Acquired: 12/5/2024 13:30:16 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2408.4	58319.	13891.	1623.5	4027.9
Stddev	8.1	357.	30.	16.5	6.7
%RSD	.33768	.61213	.21385	1.0167	.16615
#1	2417.4	58625.	13907.	1639.6	4035.0
#2	2406.3	57927.	13857.	1606.6	4026.9
#3	2401.5	58405.	13909.	1624.2	4021.7

Sample Name: S3 Acquired: 12/5/2024 13:34:19 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.15530	.16401	.57206	.24157	.54717	.41096	18.831	.38997
Stddev	.00090	.00182	.00139	.00233	.00447	.00129	.065	.00550
%RSD	.57921	1.1098	.24305	.96298	.81754	.31345	.34309	1.4097
#1	.15428	.16197	.57136	.23889	.54204	.41185	18.903	.39617
#2	.15560	.16545	.57115	.24280	.54919	.41154	18.814	.38803
#3	.15601	.16462	.57366	.24302	.55028	.40948	18.777	.38570
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.5467	.59786	.09826	1.0354	.53889	.01465	.75140	.17037
Stddev	.0068	.00763	.00038	.0013	.00279	.00037	.00644	.00114
%RSD	.26779	1.2758	.38840	.12789	.51857	2.5085	.85711	.66644
#1	2.5512	.58978	.09864	1.0365	.53569	.01426	.74439	.16915
#2	2.5388	.59886	.09788	1.0339	.54014	.01472	.75277	.17059
#3	2.5500	.60493	.09825	1.0357	.54084	.01498	.75705	.17139
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.74134	.16400	.48080	.15612	4.5407	.10637	.95528	2.0189
Stddev	.00192	.00027	.00130	.00104	.0109	.00054	.01356	.0101
%RSD	.25875	.16591	.26943	.66424	.24004	.50418	1.4197	.50124
#1	.74011	.16429	.48226	.15498	4.5457	.10581	.96972	2.0074
#2	.74036	.16375	.48038	.15637	4.5482	.10644	.95332	2.0229
#3	.74355	.16396	.47977	.15701	4.5282	.10687	.94281	2.0265
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.27039	1.3350	.01883	.07222	.05846	3.0640	37.244	
Stddev	.00063	.0022	.00038	.00009	.00023	.0534	.322	
%RSD	.23293	.16311	2.0323	.12538	.38893	1.7437	.86423	
#1	.26998	1.3326	.01842	.07216	.05844	3.1218	37.615	
#2	.27008	1.3368	.01887	.07233	.05825	3.0537	37.048	
#3	.27112	1.3356	.01918	.07218	.05870	3.0164	37.068	

Sample Name: S3 Acquired: 12/5/2024 13:34:19 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2235.9	55922.	13771.	1528.8	3705.9
Stddev	20.1	258.	111.	12.7	21.0
%RSD	.89691	.46197	.80623	.82937	.56671
#1	2258.9	56216.	13664.	1543.0	3730.2
#2	2222.6	55818.	13762.	1524.8	3693.8
#3	2226.1	55732.	13886.	1518.6	3693.8

Sample Name: S4 Acquired: 12/5/2024 13:38:34 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.33165	.33255	1.1611	.51623	1.1761	.85670	39.126	.75282
Stddev	.00088	.00319	.0029	.00047	.0027	.00384	.086	.00905
%RSD	.26629	.95958	.24826	.09187	.22636	.44790	.21864	1.2025
#1	.33074	.33573	1.1577	.51581	1.1741	.85314	39.172	.76163
#2	.33170	.32935	1.1628	.51614	1.1750	.85619	39.178	.75330
#3	.33250	.33257	1.1627	.51674	1.1791	.86076	39.027	.74354
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.1996	1.1835	.19612	2.1246	1.1191	.03032	1.4897	.34652
Stddev	.0108	.0088	.00118	.0039	.0011	.00010	.0063	.00074
%RSD	.20735	.73933	.60077	.18274	.10082	.32026	.42502	.21377
#1	5.1890	1.1893	.19726	2.1203	1.1178	.03021	1.4943	.34706
#2	5.1992	1.1877	.19619	2.1257	1.1196	.03040	1.4923	.34682
#3	5.2105	1.1734	.19491	2.1278	1.1199	.03034	1.4825	.34568
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.5149	.33744	1.0726	.31640	9.3495	.23767	1.8820	4.1878
Stddev	.0031	.00047	.0122	.00085	.0381	.00368	.0157	.0090
%RSD	.20730	.13877	1.1408	.26925	.40737	1.5499	.83289	.21551
#1	1.5114	.33772	1.0634	.31737	9.3056	.23452	1.8968	4.1838
#2	1.5162	.33769	1.0680	.31603	9.3742	.23678	1.8837	4.1814
#3	1.5173	.33689	1.0865	.31579	9.3685	.24172	1.8656	4.1981
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.55117	2.7259	.04061	.15069	.12292	6.6893	76.794	
Stddev	.00144	.0026	.00049	.00091	.00047	.0837	.132	
%RSD	.26044	.09635	1.2162	.60549	.38233	1.2516	.17202	
#1	.54985	2.7231	.04009	.15160	.12309	6.6243	76.810	
#2	.55097	2.7282	.04065	.14977	.12238	6.6599	76.655	
#3	.55270	2.7265	.04108	.15070	.12327	6.7838	76.918	

Sample Name: S4 Acquired: 12/5/2024 13:38:34 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2007.3	51655.	13374.	1340.9	3333.6
Stddev	5.1	211.	49.	18.4	6.8
%RSD	.25392	.40845	.36612	1.3687	.20326
#1	2009.9	51865.	13324.	1359.9	3336.5
#2	2010.6	51657.	13375.	1339.6	3338.5
#3	2001.5	51443.	13422.	1323.3	3325.9

Sample Name: S5 Acquired: 12/5/2024 13:42:46 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.65828	.64099	2.2502	1.0225	2.3424	1.6953	75.115	1.4187
Stddev	.00328	.00891	.0055	.0057	.0110	.0080	.516	.0032
%RSD	.49805	1.3895	.24372	.55975	.47015	.47108	.68698	.22931
#1	.66075	.65009	2.2479	1.0272	2.3478	1.6861	74.835	1.4209
#2	.65456	.64057	2.2565	1.0161	2.3297	1.7009	74.800	1.4150
#3	.65953	.63229	2.2463	1.0243	2.3497	1.6988	75.711	1.4203
Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	10.176	2.2523	.37525	4.1701	2.1569	.05882	2.8317	.67646
Stddev	.035	.0104	.00019	.0109	.0091	.00005	.0105	.00068
%RSD	.34615	.46093	.05026	.26080	.42149	.08628	.37011	.10094
#1	10.172	2.2638	.37530	4.1678	2.1608	.05887	2.8431	.67591
#2	10.213	2.2437	.37541	4.1819	2.1465	.05877	2.8226	.67624
#3	10.143	2.2493	.37504	4.1605	2.1634	.05882	2.8292	.67722
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.9566	.66036	2.1861	.60838	17.795	.48566	3.5647	8.0770
Stddev	.0076	.00060	.0159	.00086	.047	.00364	.0045	.0206
%RSD	.25666	.09134	.72623	.14179	.26204	.74871	.12486	.25453
#1	2.9559	.66048	2.1735	.60899	17.773	.48173	3.5665	8.1001
#2	2.9645	.66089	2.2039	.60740	17.848	.48891	3.5597	8.0608
#3	2.9494	.65970	2.1809	.60876	17.763	.48633	3.5681	8.0700
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	1.0743	5.2662	.08224	.30355	.25003	13.361	144.90	
Stddev	.0033	.0033	.00058	.00126	.00093	.143	.67	
%RSD	.30812	.06350	.70968	.41646	.37193	1.0672	.46280	
#1	1.0744	5.2631	.08157	.30500	.25094	13.200	144.29	
#2	1.0776	5.2656	.08255	.30299	.25008	13.470	144.80	
#3	1.0710	5.2698	.08260	.30266	.24908	13.415	145.62	

Sample Name: S5 Acquired: 12/5/2024 13:42:46 Type: Cal
Method: NON EPA-6010-200.7(v2491) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1952.1	51113.	13576.	1286.4	3179.9
Stddev	16.0	136.	24.	5.5	14.6
%RSD	.82136	.26539	.17551	.43008	.45779
#1	1944.8	51109.	13549.	1282.3	3173.1
#2	1970.5	50980.	13585.	1284.3	3196.6
#3	1941.1	51251.	13595.	1292.7	3169.9

Sample Name: ICV01 Acquired: 12/5/2024 13:53:03 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9654477	1.007813	.9860530	.9991795	.9815731	2.529636
Stddev	.0037499	.015256	.0019761	.0043905	.0011817	.008781
%RSD	.3884072	1.513790	.2004021	.4394081	.1203912	.3471366

#1	.9617446	.992744	.9881468	.9961820	.9812932	2.527683
#2	.9692426	1.023249	.9857914	.9971373	.9805564	2.521995
#3	.9653558	1.007446	.9842207	1.004219	.9828696	2.539229

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5188427	.5199378	.4995165	9.904493	.5229099	.5048899
Stddev	.0007353	.0040215	.0013631	.044591	.0011826	.0007455
%RSD	.1417204	.7734606	.2728892	.4502112	.2261486	.1476467

#1	.5192210	.5222041	.5000453	9.853055	.5238433	.5050695
#2	.5179953	.5152946	.4979683	9.932206	.5215801	.5040710
#3	.5193119	.5223147	.5005361	9.928219	.5233063	.5055291

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5123582	9.730086	.5187501	5.849678	.5076683	.2502780
Stddev	.0017939	.082896	.0019980	.018584	.0006451	.0004794
%RSD	.3501206	.8519545	.3851493	.3176896	.1270724	.1915632

#1	.5132392	9.651277	.5164431	5.828240	.5081075	.2497247
#2	.5102942	9.816539	.5199250	5.861210	.5069277	.2505372
#3	.5135412	9.722442	.5198821	5.859584	.5079698	.2505720

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.809864	.5078506	1.023250	9.586480	F .0050197	F -.000506
Stddev	.015206	.0034206	.005247	.032107	.0001551	.000153
%RSD	.1550051	.6735488	.5127734	.3349181	3.089105	30.26917

#1	9.822213	.5040771	1.019282	9.551162	.0048739	-.000608
#2	9.814497	.5087267	1.029199	9.613902	.0051826	-.000330
#3	9.792880	.5107480	1.021269	9.594378	.0050026	-.000580

Sample Name: ICV01 Acquired: 12/5/2024 13:53:03 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000714	F -.001362	F -.009701	F .0076961	F -.000697	F -.001693
Stddev	.000333	.000159	.001759	.0021862	.001951	.000574
%RSD	46.71407	11.67566	18.12885	28.40702	279.7850	33.89956
#1	-.000335	-.001189	-.011556	.0052400	-.002943	-.001102
#2	-.000965	-.001396	-.008058	.0084188	.000578	-.001729
#3	-.000841	-.001501	-.009488	.0094295	.000273	-.002249

Elem	Sr4077
Units	ppm
Avg	F -.008542
Stddev	.000087
%RSD	1.015560
#1	-.008466
#2	-.008637
#3	-.008522

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2161.117	54758.01	13847.33	1445.236	3703.877
Stddev	5.511	280.87	4.27	23.183	8.156
%RSD	.2550224	.5129229	.0308546	1.604119	.2201952
#1	2155.475	54950.36	13850.41	1459.418	3694.544
#2	2161.388	54435.70	13849.12	1418.483	3707.453
#3	2166.488	54887.97	13842.45	1457.809	3709.634

Sample Name: LLICV01 Acquired: 12/5/2024 14:05:50 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203871	.0418258	.0117869	.0188963	.0470617	.0995084	.1015630
Stddev	.0019280	.0007337	.0008830	.0004016	.0005552	.0036636	.0002241
%RSD	9.457124	1.754151	7.491701	2.125153	1.179626	3.681659	.2206900

#1	.0190773	.0426489	.0107780	.0184630	.0465060	.1032923	.1013697
#2	.0226010	.0412403	.0121639	.0192560	.0470628	.0959784	.1018087
#3	.0194829	.0415884	.0124190	.0189700	.0476163	.0992545	.1015105

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061398	.0059868	2.049435	.0099060	.0297354	.0217803	.0986795
Stddev	.0000264	.0000687	.007729	.0000885	.0002673	.0000995	.0044232
%RSD	.4303510	1.147182	.3771422	.8931073	.8987600	.4569525	4.482419

#1	.0061127	.0059963	2.042564	.0098743	.0294576	.0218389	.0961408
#2	.0061655	.0059139	2.057803	.0100059	.0297581	.0218367	.0961107
#3	.0061411	.0060503	2.047939	.0098377	.0299906	.0216654	.1037870

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210882	2.150548	.0396507	.0101373	1.967833	.0419860	.0429047
Stddev	.0001669	.010502	.0003047	.0001467	.007085	.0004109	.0002835
%RSD	.7915254	.4883402	.7684720	1.446820	.3600485	.9786156	.6608747

#1	.0212810	2.144718	.0397734	.0099680	1.963472	.0424585	.0427403
#2	.0209902	2.162671	.0393037	.0102268	1.964020	.0417122	.0427416
#3	.0209936	2.144254	.0398749	.0102171	1.976008	.0417874	.0432321

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.948159	.0997815	.2057025	.0385189	.0400920	.3252196	.0164414
Stddev	.012831	.0010381	.0008228	.0000186	.0001035	.0094390	.0024027
%RSD	.6586304	1.040370	.3999791	.0483901	.2582435	2.902351	14.61407

#1	1.933346	.0998988	.2047631	.0385025	.0400848	.3157095	.0184571
#2	1.955849	.1007559	.2062949	.0385150	.0399922	.3253635	.0170846
#3	1.955282	.0986897	.2060496	.0385392	.0401989	.3345859	.0137825

Sample Name: LLICV01 Acquired: 12/5/2024 14:05:50 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0190263	.0200831	.0214074
Stddev	.0019268	.0003038	.0000203
%RSD	10.12726	1.512849	.0948993
#1	.0194249	.0197349	.0214194
#2	.0169314	.0202204	.0214189
#3	.0207227	.0202940	.0213840

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2204.500	55676.75	13873.46	1467.022	3847.392
Stddev	3.455	173.00	46.18	3.615	5.378
%RSD	.1567303	.3107221	.3328401	.2464248	.1397820
#1	2204.851	55709.13	13825.59	1468.118	3841.509
#2	2200.883	55489.85	13877.04	1462.986	3848.611
#3	2207.767	55831.28	13917.73	1469.963	3852.056

Sample Name: ICB01 Acquired: 12/5/2024 14:10:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000176	.0001465	-.000140	-.000074	-.002277	-.000796	-.001669
Stddev	.002978	.0009539	.000844	.002033	.001073	.005549	.000332
%RSD	1693.572	651.0797	604.1080	2752.625	47.10638	696.8893	19.90844

#1	.001393	-.000826	-.001101	-.002419	-.001928	-.001789	-.002040
#2	-.003610	.001080	.000204	.001176	-.001423	-.005782	-.001569
#3	.001690	.000186	.000478	.001022	-.003481	.005182	-.001399

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000692	-.000025	-.016842	-.000013	.0000207	-.000445	-.000842
Stddev	.0000340	.000053	.004180	.000367	.0001614	.000318	.000919
%RSD	49.16841	207.6586	24.82191	2905.774	779.3713	71.45951	109.1770

#1	.0000651	-.000051	-.012471	.000080	.0001624	-.000406	-.000846
#2	.0000374	.000035	-.020801	.000299	.0000545	-.000780	.000079
#3	.0001051	-.000061	-.017254	-.000417	-.000155	-.000148	-.001759

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000137	-.005792	-.000393	-.000029	.0040281	.0003427	-.000329
Stddev	.000313	.011639	.000263	.000227	.0080929	.0008715	.000184
%RSD	229.3134	200.9640	67.03628	770.2184	200.9134	254.3222	56.06623

#1	-.000167	-.007135	-.000604	.000232	-.005082	.0005551	-.000287
#2	-.000434	-.016702	-.000098	-.000177	.006782	.0010884	-.000531
#3	.000191	.006461	-.000477	-.000144	.010385	-.000615	-.000169

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.032038	-.006178	-.000455	-.000592	-.000201	.0004597	.0002242
Stddev	.024789	.000040	.000161	.000604	.000246	.0016926	.0029453
%RSD	77.37528	.6464751	35.25982	102.1021	122.5172	368.2161	1313.863

#1	-.060588	-.006172	-.000365	.000049	-.000169	.0018645	.0035900
#2	-.019540	-.006220	-.000361	-.001151	-.000461	.0009339	-.001036
#3	-.015985	-.006141	-.000641	-.000672	.000028	-.001419	-.001881

Sample Name: ICB01 Acquired: 12/5/2024 14:10:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000860	-.000534	-.000126
Stddev	.001812	.000392	.000003
%RSD	210.6011	73.49541	1.980151
#1	-.002050	-.000872	-.000124
#2	.001225	-.000104	-.000129
#3	-.001756	-.000625	-.000126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2253.547	56771.16	14155.85	1489.626	3983.416
Stddev	24.981	192.98	26.01	7.275	23.020
%RSD	1.108533	.3399189	.1837733	.4884016	.5778843
#1	2258.639	56679.76	14128.32	1486.056	3991.191
#2	2226.412	56640.86	14180.02	1484.824	3957.515
#3	2275.590	56992.85	14159.21	1497.996	4001.541

Sample Name: CRI01 Acquired: 12/5/2024 14:14:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0200452	.0438813	.0117570	.0189188	.0458360	.0991206	.1022543
Stddev	.0012077	.0013273	.0013228	.0015375	.0007898	.0012851	.0005050
%RSD	6.024852	3.024874	11.25151	8.127038	1.723080	1.296449	.4938816
#1	.0213047	.0453231	.0132737	.0206829	.0450081	.0977033	.1016721
#2	.0188970	.0427100	.0108422	.0178635	.0465812	.0994489	.1025738
#3	.0199338	.0436108	.0111550	.0182101	.0459187	.1002097	.1025171
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063499	.0060229	2.105784	.0098161	.0303088	.0216189	.0992278
Stddev	.0000365	.0000084	.009810	.0004683	.0002555	.0004224	.0046301
%RSD	.5751101	.1400815	.4658719	4.770264	.8428663	1.953685	4.666152
#1	.0063859	.0060132	2.094965	.0092762	.0302367	.0219429	.0945765
#2	.0063510	.0060267	2.114099	.0101103	.0300971	.0211412	.0992706
#3	.0063128	.0060288	2.108289	.0100619	.0305925	.0217727	.1038364
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216577	2.194640	.0402156	.0100283	1.939225	.0431381	.0427763
Stddev	.0000430	.011689	.0001154	.0002495	.006503	.0005240	.0003433
%RSD	.1984220	.5326277	.2868324	2.488250	.3353628	1.214737	.8024486
#1	.0216889	2.189644	.0403175	.0102316	1.938646	.0429784	.0428440
#2	.0216755	2.207998	.0402391	.0097498	1.945999	.0427125	.0424042
#3	.0216087	2.186280	.0400904	.0101035	1.933031	.0437234	.0430806
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.880580	.1002583	.2066498	.0389400	.0400699	.3215209	.0167605
Stddev	.004044	.0003607	.0003899	.0006370	.0002654	.0016700	.0034692
%RSD	.2150359	.3597800	.1886794	1.635895	.6622470	.5193940	20.69892
#1	1.884206	.1000332	.2070022	.0394718	.0403368	.3228378	.0205775
#2	1.881314	.1000673	.2067163	.0382340	.0398061	.3196426	.0137991
#3	1.876219	.1006744	.2062309	.0391143	.0400667	.3220823	.0159049

Sample Name: CRI01 Acquired: 12/5/2024 14:14:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0182572	.0198912	.0214220
Stddev	.0025643	.0005929	.0000102
%RSD	14.04548	2.980597	.0476407
#1	.0157652	.0192200	.0214156
#2	.0181182	.0201098	.0214338
#3	.0208881	.0203437	.0214166

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2245.150	55779.59	13772.92	1491.820	3888.976
Stddev	2.992	219.80	33.59	17.338	6.374
%RSD	.1332662	.3940524	.2438762	1.162202	.1639044
#1	2246.765	55564.51	13752.32	1472.960	3895.821
#2	2241.697	55770.45	13754.75	1495.432	3883.210
#3	2246.987	56003.82	13811.68	1507.067	3887.898

Sample Name: ICSA01 Acquired: 12/5/2024 14:18:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064900	.0137736	.0072060	-.019115	-.002093	272.4921
Stddev	.0026038	.0010531	.0022413	.002242	.001932	1.0221
%RSD	40.11976	7.645623	31.10265	11.73103	92.30546	.3751084
#1	.0090819	.0149367	.0061190	-.018658	-.001425	272.7012
#2	.0065136	.0128849	.0057155	-.017136	-.004271	273.3935
#3	.0038745	.0134992	.0097834	-.021550	-.000584	271.3816
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050784	.0014789	.0063357	260.9891	.0579326	.0027129
Stddev	.0001920	.0000712	.0001804	.8983	.0003551	.0002435
%RSD	3.781211	4.814346	2.847312	.3441938	.6130162	8.976535
#1	.0048585	.0014084	.0062826	261.4692	.0575232	.0024542
#2	.0052127	.0014775	.0065367	259.9528	.0581155	.0027466
#3	.0051641	.0015508	.0061878	261.5453	.0581590	.0029377
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046943	101.1066	.0017315	283.0066	.0005990	-.005849
Stddev	.0002764	.5288	.0001071	.8183	.0002451	.000039
%RSD	5.888715	.5230464	6.183901	.2891606	40.91706	.6586295
#1	.0045415	101.2367	.0018546	283.1476	.0006130	-.005893
#2	.0050134	100.5248	.0016802	282.1268	.0003472	-.005832
#3	.0045280	101.5581	.0016598	283.7452	.0008367	-.005822
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0779820	.0113845	.0082357	.0413161	.0436524	.0001651
Stddev	.0158044	.0014997	.0007110	.0072991	.0012292	.0002632
%RSD	20.26675	13.17317	8.632831	17.66640	2.815965	159.4253
#1	.0618935	.0099723	.0086391	.0343962	.0449845	.0003538
#2	.0785664	.0129586	.0086532	.0406092	.0425618	-.000136
#3	.0934862	.0112227	.0074147	.0489429	.0434108	.000277

Sample Name: ICSA01 Acquired: 12/5/2024 14:18:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002654	-.000918	.0193891	-.004102	-.011423	F -.043568
Stddev	.001795	.000379	.0036276	.003511	.004407	.000412
%RSD	67.62490	41.24294	18.70943	85.59554	38.58163	.9460448
#1	-.004604	-.000554	.0210160	-.005183	-.008638	-.043880
#2	-.002285	-.000891	.0152328	-.000178	-.016504	-.043101
#3	-.001072	-.001310	.0219184	-.006945	-.009126	-.043724

Elem	Sr4077
Units	ppm
Avg	.0087728
Stddev	.0003283
%RSD	3.742599
#1	.0087227
#2	.0091233
#3	.0084724

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1953.939	49165.75	12807.57	1313.792	3011.265
Stddev	8.390	109.26	33.86	7.089	4.049
%RSD	.4293915	.2222281	.2643400	.5395737	.1344466
#1	1944.864	49097.60	12769.97	1312.228	3010.137
#2	1955.538	49291.78	12817.13	1321.532	3007.900
#3	1961.414	49107.89	12835.62	1307.615	3015.758

Sample Name: ICSAB01 Acquired: 12/5/2024 14:33:21 Type: Unk
Method: NON EPA-6010-200.7(v2492) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1084693	.0922039	.0592624	.0324877	.5896681	253.1286
Stddev	.0007404	.0028795	.0016569	.0033474	.0011796	.5275
%RSD	.6825792	3.122940	2.795808	10.30352	.2000507	.2083831
#1	.1090312	.0944999	.0575447	.0328709	.5899793	252.8286
#2	.1076303	.0889732	.0608508	.0289652	.5906610	253.7376
#3	.1087463	.0931385	.0593916	.0356269	.5883641	252.8194
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5146874	.5123817	.9912296	238.0906	.5447677	.4990576
Stddev	.0011372	.0044493	.0028607	.2928	.0020599	.0012347
%RSD	.2209397	.8683645	.2886010	.1229923	.3781205	.2473990
#1	.5159380	.5175086	.9897689	238.2805	.5468563	.4981085
#2	.5137156	.5095303	.9893942	238.2380	.5427378	.4986108
#3	.5144085	.5101064	.9945258	237.7534	.5447091	.5004534
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4622727	93.88290	.4956517	258.8030	1.020951	.1895280
Stddev	.0003686	.45552	.0012426	.5109	.002808	.0008230
%RSD	.0797286	.4852037	.2506986	.1973947	.2750370	.4342323
#1	.4620812	93.37847	.4942208	259.0089	1.020333	.1904765
#2	.4620393	94.26421	.4964594	259.1787	1.018503	.1890029
#3	.4626976	94.00603	.4962749	258.2213	1.024016	.1891045
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0937192	.4984620	.9527444	.0280515	F .0384463	F .0002958
Stddev	.0150262	.0010988	.0017739	.0091160	.0011556	.0002127
%RSD	16.03323	.2204466	.1861893	32.49734	3.005745	71.90772
#1	.0765892	.4996940	.9521264	.0230490	.0371413	.0003980
#2	.0998942	.4975830	.9547447	.0225319	.0388577	.0000513
#3	.1046740	.4981091	.9513622	.0385735	.0393399	.0004381

Sample Name: ICSAB01 Acquired: 12/5/2024 14:33:21 Type: Unk
Method: NON EPA-6010-200.7(v2492) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.002724	F -.001296	F .0027312	F .0238169	F -.003239	F -.040259
Stddev	.001440	.000486	.0028039	.0019180	.007791	.000652
%RSD	52.88076	37.48933	102.6631	8.053233	240.5350	1.618939
#1	-.001614	-.000738	.0012267	.0259926	.003720	-.039798
#2	-.002205	-.001625	.0010006	.0230878	-.001782	-.039974
#3	-.004351	-.001524	.0059663	.0223704	-.011656	-.041005

Elem	Sr4077
Units	ppm
Avg	F .0099384
Stddev	.0005326
%RSD	5.359312
#1	.0105414
#2	.0097414
#3	.0095322

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1926.234	48698.18	13038.96	1264.699	3020.191
Stddev	3.126	109.72	39.38	9.117	11.096
%RSD	.1622866	.2253005	.3020044	.7208576	.3673796
#1	1927.859	48798.89	12994.13	1273.127	3024.154
#2	1928.213	48581.26	13054.78	1255.022	3028.761
#3	1922.630	48714.40	13067.96	1265.948	3007.658

Sample Name: ICSADLX20 Acquired: 12/5/2024 14:37:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000573	-.000736	.0006082	-.001123	-.002379	12.91552	-.000959
Stddev	.003024	.001768	.0003656	.000840	.000107	.01157	.000242
%RSD	528.0130	240.1911	60.10712	74.79368	4.509443	.0896194	25.22775

#1	-.000289	-.001829	.0005599	-.001893	-.002497	12.90345	-.001138
#2	-.003728	-.001682	.0009956	-.000227	-.002351	12.91656	-.000684
#3	.002299	.001303	.0002692	-.001249	-.002288	12.92653	-.001055

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001052	.0000552	12.85929	.0025669	.0001658	-.000052	5.025038
Stddev	.0000606	.0000671	.02107	.0006120	.0002500	.000302	.015941
%RSD	57.66696	121.5928	.1638340	23.84200	150.7373	579.2540	.3172229

#1	.0000424	.0000365	12.83604	.0018882	-.000120	.000235	5.015528
#2	.0001097	.0001296	12.87710	.0030767	.000343	-.000023	5.016146
#3	.0001634	-.000001	12.86474	.0027358	.000274	-.000368	5.043441

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001683	13.12302	-.000129	.0001603	.0211369	.0018613	.0004513
Stddev	.0002591	.03280	.000120	.0001562	.0084923	.0005789	.0001309
%RSD	153.9016	.2499568	92.62809	97.43027	40.17788	31.10154	29.00762

#1	.0003591	13.08517	-.000258	.0002630	.0117185	.0023744	.0004022
#2	.0002726	13.14072	-.000107	-.000019	.0234816	.0019757	.0005997
#3	-.000127	13.14317	-.000022	.000238	.0282105	.0012337	.0003521

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.033527	-.006303	-.000270	-.001438	-.000538	-.000899	-.002693
Stddev	.014573	.000400	.000043	.000495	.000334	.004086	.002290
%RSD	43.46719	6.351377	15.82160	34.39549	62.04357	454.7239	85.01661

#1	-.033954	-.005850	-.000318	-.001962	-.000250	.002196	-.000049
#2	-.047882	-.006608	-.000235	-.000980	-.000459	.000638	-.004007
#3	-.018745	-.006452	-.000259	-.001372	-.000904	-.005530	-.004024

Sample Name: ICSADLX20 Acquired: 12/5/2024 14:37:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000590	-.002981	.0003692
Stddev	.001626	.000415	.0000274
%RSD	275.4915	13.93562	7.429237

#1	.000985	-.002827	.0003655
#2	-.000494	-.003452	.0003983
#3	-.002263	-.002665	.0003438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2220.799	55759.71	13937.99	1487.924	3794.494
Stddev	4.610	9.44	18.67	4.659	5.538
%RSD	.2075840	.0169278	.1339667	.3131206	.1459550

#1	2225.381	55759.87	13917.05	1491.535	3797.552
#2	2216.162	55769.08	13952.90	1489.572	3788.101
#3	2220.854	55750.20	13944.02	1482.665	3797.828

Sample Name: ICSABDLX20 Acquired: 12/5/2024 14:41:31 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2:
Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034806	.0050738	.0022371	.0011596	.0278792	12.82916	.0261088
Stddev	.0014405	.0011554	.0010397	.0027385	.0005604	.05306	.0001628
%RSD	41.38639	22.77271	46.47339	236.1652	2.010016	.4135944	.6236880
#1	.0051267	.0037426	.0025652	-.001600	.0273798	12.76795	.0262335
#2	.0028646	.0058160	.0010730	.003877	.0284852	12.86209	.0261683
#3	.0024505	.0056630	.0030731	.001201	.0277726	12.85745	.0259246
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0272706	.0515589	12.78756	.0298566	.0255685	.0258912	4.991406
Stddev	.0001774	.0001373	.00907	.0001954	.0002056	.0000945	.011314
%RSD	.6503706	.2663048	.0709383	.6543773	.8040925	.3648281	.2266745
#1	.0270843	.0514023	12.79557	.0297218	.0253349	.0259884	4.986669
#2	.0274374	.0516156	12.78940	.0300807	.0257221	.0257997	4.983231
#3	.0272902	.0516588	12.77771	.0297674	.0256484	.0258854	5.004319
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0269208	13.07458	.0516742	.0095976	.0078102	.0260395	.0545934
Stddev	.0002208	.08374	.0001283	.0004087	.0071492	.0003181	.0003525
%RSD	.8200313	.6404788	.2482579	4.257908	91.53660	1.221746	.6457285
#1	.0266739	13.01417	.0515371	.0091720	-.000441	.0261829	.0549865
#2	.0269894	13.17017	.0516944	.0099868	.012161	.0256749	.0543052
#3	.0270991	13.03941	.0517913	.0096340	.011711	.0262607	.0544885
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.044217	-.006426	-.000360	-.001730	-.000458	.0005425	-.002936
Stddev	.003326	.000658	.000089	.000258	.000172	.0029317	.002556
%RSD	7.521098	10.23533	24.60293	14.94186	37.44959	540.4090	87.03390
#1	-.046392	-.007164	-.000327	-.002027	-.000579	-.000468	-.003171
#2	-.040389	-.005902	-.000461	-.001598	-.000534	-.001750	-.000271
#3	-.045872	-.006211	-.000293	-.001564	-.000262	.003846	-.005366

Sample Name: ICSABDLX20 Acquired: 12/5/2024 14:41:31 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002154	-.002923	.0003878
Stddev	.001567	.000182	.0000463
%RSD	72.75406	6.224819	11.94858

#1	-.003832	-.002820	.0003635
#2	-.000727	-.003133	.0004413
#3	-.001904	-.002815	.0003587

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2218.093	55638.84	13928.21	1472.968	3794.036
Stddev	6.709	85.52	21.65	4.788	5.894
%RSD	.3024847	.1537028	.1554489	.3250438	.1553460

#1	2225.828	55547.62	13917.17	1470.348	3800.341
#2	2214.615	55651.69	13914.30	1478.494	3793.103
#3	2213.837	55717.20	13953.16	1470.062	3788.664

Sample Name: CCV01 Acquired: 12/5/2024 14:45:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.935976	4.889179	4.912576	4.966723	4.927352	9.914991	9.982019
Stddev	.015835	.023806	.024145	.011658	.011622	.008340	.095688
%RSD	.3207991	.4869079	.4914844	.2347289	.2358638	.0841156	.9586043
#1	4.945821	4.904321	4.935239	4.975130	4.935051	9.922519	10.08350
#2	4.917711	4.861739	4.915307	4.953414	4.913984	9.916427	9.89344
#3	4.944398	4.901476	4.887183	4.971624	4.933022	9.906026	9.96911
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2468113	2.449250	24.47657	.9957044	2.442983	1.250102	4.909548
Stddev	.0020140	.012062	.13270	.0014091	.009183	.001589	.040685
%RSD	.8160205	.4924900	.5421707	.1415153	.3758973	.1271206	.8286840
#1	.2487253	2.459920	24.49916	.9964072	2.452171	1.251627	4.867009
#2	.2469984	2.451668	24.59653	.9966238	2.442975	1.248456	4.948082
#3	.2447103	2.436162	24.33402	.9940821	2.433805	1.250222	4.913553
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.449067	24.39352	2.449816	1.230657	25.51871	2.473373	2.513331
Stddev	.009823	.04660	.010825	.002605	.06110	.001551	.008990
%RSD	.4010741	.1910542	.4418650	.2116364	.2394424	.0627052	.3577078
#1	2.445566	24.38353	2.459031	1.229740	25.52662	2.472634	2.503430
#2	2.460161	24.44431	2.452522	1.233596	25.45403	2.475155	2.515578
#3	2.441475	24.35273	2.437895	1.228635	25.57547	2.472330	2.520985
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.87187	4.916829	4.964379	4.888508	4.933355	4.939964	4.978493
Stddev	.13042	.023409	.010319	.020315	.007272	.026278	.023236
%RSD	.5243779	.4761053	.2078670	.4155663	.1473991	.5319493	.4667246
#1	24.79156	4.941581	4.974236	4.908164	4.931614	4.910493	5.001332
#2	24.80170	4.913860	4.953653	4.889769	4.941340	4.948444	4.979268
#3	25.02236	4.895046	4.965247	4.867592	4.927112	4.960955	4.954880

Sample Name: CCV01 Acquired: 12/5/2024 14:45:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.841233	4.982732	5.097346
Stddev	.019541	.011750	.003281
%RSD	.4036407	.2358133	.0643734
#1	4.860235	4.985392	5.100327
#2	4.842270	4.969880	5.097882
#3	4.821193	4.992923	5.093830

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2029.728	52467.32	13716.13	1354.622	3382.766
Stddev	6.602	62.69	54.97	9.559	6.796
%RSD	.3252521	.1194874	.4007676	.7056372	.2009050
#1	2028.196	52538.85	13664.72	1365.656	3375.255
#2	2036.961	52421.92	13709.59	1349.316	3388.490
#3	2024.027	52441.21	13774.07	1348.892	3384.554

Sample Name: CCB01 Acquired: 12/5/2024 14:50:00 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015220	.0004112	.0006092	.0005500	-.000045	.0027503	-.000875
Stddev	.0006771	.0012457	.0002136	.0011320	.000613	.0013550	.000292
%RSD	44.48705	302.9605	35.06311	205.8218	1375.369	49.26765	33.40590
#1	.0021120	-.000348	.0004481	.0012664	.000549	.0038669	-.000966
#2	.0007827	.001849	.0005281	.0011387	-.000675	.0012428	-.001111
#3	.0016712	-.000267	.0008515	-.000755	-.000007	.0031412	-.000548
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000014	.0000068	-.002787	-.000003	.0001192	-.000331	.0011596
Stddev	.000057	.0000685	.004847	.000355	.0000419	.000208	.0012575
%RSD	409.3259	1002.508	173.9417	13024.10	35.15402	62.85559	108.4452
#1	-.000039	.0000172	-.008374	-.000410	.0000718	-.000341	-.000262
#2	-.000054	.0000696	.000290	.000165	.0001343	-.000118	.001613
#3	.000051	-.000066	-.000276	.000237	.0001514	-.000534	.002128
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000150	.0006911	-.000181	.0000375	-.014507	.0002970	-.000135
Stddev	.000104	.0154969	.000270	.0000148	.009125	.0003866	.000271
%RSD	69.66491	2242.485	149.0595	39.54431	62.89960	130.1819	200.7701
#1	-.000059	-.013808	.000066	.0000233	-.024525	.0000188	-.000434
#2	-.000264	-.001142	-.000140	.0000529	-.012326	.0007385	.000096
#3	-.000127	.017023	-.000469	.0000363	-.006670	.0001337	-.000067
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.053837	-.003294	.0001221	-.000497	-.000462	-.000625	-.001637
Stddev	.006279	.000473	.0001112	.000100	.000188	.001411	.001565
%RSD	11.66309	14.35016	91.12277	20.07141	40.72300	225.7370	95.60464
#1	-.056726	-.002760	.0002241	-.000399	-.000398	-.002118	-.002895
#2	-.046633	-.003464	.0001387	-.000598	-.000314	-.000443	.000115
#3	-.058151	-.003658	.0000035	-.000493	-.000674	.000686	-.002130

Sample Name: CCB01 Acquired: 12/5/2024 14:50:00 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003604	-.000245	-.000077
Stddev	.002286	.000461	.000005
%RSD	63.41815	188.2205	6.394718
#1	-.003641	-.000727	-.000071
#2	-.001300	.000193	-.000080
#3	-.005871	-.000201	-.000080

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2296.941	58152.93	14425.98	1543.121	4063.960
Stddev	9.985	144.83	55.16	6.737	7.513
%RSD	.4347101	.2490524	.3823686	.4365952	.1848768
#1	2293.750	58054.34	14386.84	1535.629	4064.038
#2	2288.941	58085.22	14402.04	1545.053	4056.408
#3	2308.131	58319.21	14489.07	1548.681	4071.434

Sample Name: P5052-02 Acquired: 12/5/2024 14:54:20 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008077	-.014390	-.000020	.0057761	-.000300	.2523834	.1568871
Stddev	.002525	.000898	.001004	.0028861	.000876	.0023305	.0005221
%RSD	31.26182	6.237717	5022.114	49.96650	291.6476	.9233769	.3327837
#1	-.005216	-.015128	-.001175	.0039943	.000550	.2504232	.1573404
#2	-.009022	-.013391	.000639	.0042281	-.000250	.2549601	.1570046
#3	-.009994	-.014651	.000476	.0091060	-.001200	.2517668	.1563162
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000152	-.000340	16.76097	.0027204	.0044554	.0066851	.8261514
Stddev	.000021	.000027	.01665	.0002232	.0001443	.0001603	.0019808
%RSD	14.11939	8.070461	.0993595	8.204297	3.237825	2.397645	.2397604
#1	-.000152	-.000317	16.74205	.0024873	.0043088	.0066048	.8238898
#2	-.000173	-.000371	16.77342	.0027417	.0045972	.0065808	.8275779
#3	-.000130	-.000332	16.76743	.0029322	.0044602	.0068696	.8269865
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4890178	1.048300	.0052771	.0002541	375.0303	.0003368	.0551229
Stddev	.0004365	.016504	.0001803	.0001596	4.2956	.0006499	.0006328
%RSD	.0892690	1.574372	3.417679	62.80726	1.145404	192.9504	1.147938
#1	.4890982	1.032925	.0052155	.0001667	371.3136	-.000413	.0551400
#2	.4885467	1.046236	.0051356	.0004383	379.7333	.000697	.0544818
#3	.4894086	1.065739	.0054802	.0001573	374.0441	.000727	.0557470
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.215632	.0049759	-.000106	.0001837	.0013207	.5818021	.0088104
Stddev	.018557	.0000892	.000330	.0010482	.0004607	.0064241	.0029622
%RSD	.8375289	1.793451	311.5781	570.6887	34.87979	1.104171	33.62114
#1	2.214501	.0050385	.000275	.0011327	.0014712	.5854155	.0101749
#2	2.197667	.0050155	-.000285	-.000941	.0008036	.5856057	.0108445
#3	2.234728	.0048737	-.000308	.000360	.0016873	.5743850	.0054119

Sample Name: P5052-02 Acquired: 12/5/2024 14:54:20 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5566101	-.002842	.0335734
Stddev	.0020950	.000158	.0000586
%RSD	.3763829	5.569219	.1745973
#1	.5543377	-.002910	.0335260
#2	.5584647	-.002661	.0335552
#3	.5570279	-.002954	.0336389

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1833.838	48207.81	13248.46	1248.281	3057.038
Stddev	9.241	83.35	22.29	8.193	8.705
%RSD	.5039049	.1728886	.1682647	.6563485	.2847393
#1	1836.424	48296.40	13223.47	1257.460	3057.453
#2	1841.511	48196.09	13266.29	1245.671	3065.528
#3	1823.580	48130.95	13255.62	1241.710	3048.134

Sample Name: P5052-08 Acquired: 12/5/2024 14:58:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006632	-.013428	-.000466	.0089190	-.001454	.2542737	.2490748
Stddev	.002379	.001240	.000163	.0012247	.001630	.0023921	.0003842
%RSD	35.87352	9.235453	34.95550	13.73139	112.1370	.9407443	.1542717
#1	-.005738	-.014845	-.000509	.0081963	-.001650	.2523011	.2494740
#2	-.009328	-.012895	-.000603	.0082276	-.002977	.2569344	.2490429
#3	-.004829	-.012543	-.000286	.0103330	.000266	.2535854	.2487075
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000047	-.000217	8.207186	.0052095	.0039708	.0017900	.9036081
Stddev	.000033	.000010	.057793	.0002045	.0001144	.0001838	.0087656
%RSD	70.18502	4.452460	.7041724	3.926288	2.881903	10.26943	.9700625
#1	-.000012	-.000224	8.186833	.0052665	.0039146	.0017458	.8965147
#2	-.000077	-.000221	8.162323	.0053794	.0041025	.0016322	.9009019
#3	-.000052	-.000206	8.272401	.0049825	.0038954	.0019918	.9134076
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9196725	1.054668	.0051037	.0002637	344.5887	.0006055	.0534272
Stddev	.0051242	.005335	.0003088	.0003297	3.3505	.0007618	.0004383
%RSD	.5571787	.5058885	6.049681	125.0003	.9723135	125.8100	.8203915
#1	.9170272	1.056356	.0050753	.0006443	347.8908	.0011505	.0533901
#2	.9164115	1.048693	.0048101	.0000664	344.6836	-.000265	.0530086
#3	.9255788	1.058956	.0054256	.0000805	341.1918	.000931	.0538829
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.562253	.0045457	-.000300	.0002074	.0011011	.5363627	.0069828
Stddev	.020065	.0000826	.000109	.0006509	.0001947	.0007315	.0015773
%RSD	1.284362	1.816742	36.25639	313.8522	17.68219	.1363848	22.58807
#1	1.578841	.0044640	-.000388	-.000508	.0009212	.5371145	.0068570
#2	1.567968	.0045439	-.000178	.000365	.0013078	.5356534	.0054722
#3	1.539951	.0046292	-.000333	.000765	.0010744	.5363202	.0086192

Sample Name: P5052-08 Acquired: 12/5/2024 14:58:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3716103	-.001916	.0321511
Stddev	.0020989	.000510	.0001596
%RSD	.5648181	26.63586	.4964949
#1	.3716633	-.001355	.0321675
#2	.3736822	-.002041	.0323019
#3	.3694854	-.002352	.0319839

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1792.843	48757.06	13629.78	1231.839	3055.763
Stddev	7.762	67.66	3.86	4.592	10.789
%RSD	.4329219	.1387725	.0283289	.3727598	.3530677
#1	1792.671	48831.99	13631.87	1235.622	3059.490
#2	1800.690	48700.43	13625.32	1226.731	3064.194
#3	1785.170	48738.76	13632.15	1233.165	3043.604

Sample Name: P5052-20 Acquired: 12/5/2024 15:17:07 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010617	-.016284	.0002180	.0051437	-.001144	.1503520	.2057091
Stddev	.002993	.000884	.0013381	.0019773	.000688	.0003393	.0016001
%RSD	28.18675	5.429764	613.8714	38.44086	60.10299	.2256795	.7778628

#1	-.014053	-.015264	-.000407	.0029230	-.000493	.1503256	.2040938
#2	-.008581	-.016777	.001754	.0057945	-.001076	.1507038	.2057398
#3	-.009217	-.016813	-.000694	.0067135	-.001863	.1500267	.2072937

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000859	-.000261	5.563387	.0018717	.0043806	.0014400	4.008662
Stddev	.0000874	.000091	.039202	.0002641	.0000743	.0004212	.036238
%RSD	101.7594	34.73959	.7046408	14.10972	1.695808	29.24697	.9039968

#1	.0001694	-.000310	5.607558	.0019661	.0044621	.0012207	4.049247
#2	-.000005	-.000317	5.549871	.0015734	.0043166	.0019255	3.997191
#3	.000093	-.000156	5.532731	.0020756	.0043631	.0011737	3.979548

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.618711	.6391099	.0050095	.0005891	332.8337	.0003394	.0420557
Stddev	.016186	.0142469	.0001125	.0001510	5.8799	.0014787	.0003614
%RSD	.6180722	2.229170	2.245528	25.62541	1.766613	435.6887	.8592399

#1	2.636660	.6287382	.0051388	.0007333	327.0496	.0006622	.0417155
#2	2.614248	.6553544	.0049560	.0004322	332.6465	.0016300	.0420167
#3	2.605225	.6332371	.0049338	.0006019	338.8049	-.001274	.0424351

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7233977	.0032580	-.000283	.0014203	-.000416	.3595847	.0071502
Stddev	.0101152	.0004517	.000113	.0005199	.000175	.0040523	.0019293
%RSD	1.398294	13.86410	39.89948	36.60197	42.01584	1.126924	26.98242

#1	.7119280	.0032047	-.000374	.0011349	-.000616	.3642593	.0050617
#2	.7272214	.0037339	-.000320	.0020204	-.000295	.3570688	.0088659
#3	.7310436	.0028353	-.000157	.0011058	-.000336	.3574261	.0075230

Sample Name: P5052-20 Acquired: 12/5/2024 15:17:07 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2418861	-.002804	.0389378
Stddev	.0031046	.000069	.0004984
%RSD	1.283482	2.470098	1.279894
#1	.2452843	-.002855	.0383735
#2	.2391984	-.002833	.0391221
#3	.2411755	-.002725	.0393177

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1715.859	47745.40	13572.65	1174.238	2982.201
Stddev	14.975	60.28	40.13	2.031	13.611
%RSD	.8727201	.1262596	.2956636	.1729430	.4563982
#1	1731.139	47805.73	13618.84	1176.082	2996.350
#2	1715.228	47685.16	13546.40	1172.062	2981.050
#3	1701.210	47745.31	13552.71	1174.571	2969.202

Sample Name: P5052-14 Acquired: 12/5/2024 15:21:33 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008270	-.012430	.0002423	.0078644	-.000908	.2407969	.2108905
Stddev	.001889	.001654	.0011795	.0012183	.001007	.0056188	.0006147
%RSD	22.83953	13.30680	486.8198	15.49110	110.8616	2.333426	.2914895

#1	-.009944	-.014245	.0005956	.0067551	-.002010	.2370380	.2102736
#2	-.006222	-.012038	.0012047	.0091682	-.000036	.2380966	.2108947
#3	-.008644	-.011008	-.001073	.0076699	-.000678	.2472561	.2115031

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000064	-.000284	6.052750	.0018392	.0020460	-.001562	.4085969
Stddev	.000017	.000057	.070689	.0003578	.0000825	.000247	.0035062
%RSD	26.10411	20.15984	1.167884	19.45616	4.031455	15.79272	.8581071

#1	-.000079	-.000263	6.099564	.0014629	.0021237	-.001778	.4123976
#2	-.000046	-.000241	6.087251	.0021752	.0019595	-.001616	.4079045
#3	-.000066	-.000349	5.971436	.0018795	.0020548	-.001293	.4054885

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.959459	.5289785	.0012630	.0002599	316.9177	-.000712	.0258180
Stddev	.014358	.0114928	.0005289	.0000956	4.7281	.000421	.0002192
%RSD	.7327710	2.172633	41.87833	36.77282	1.491908	59.15367	.8490503

#1	1.965919	.5329197	.0009812	.0001699	317.0149	-.000954	.0256669
#2	1.969453	.5160337	.0009346	.0002495	312.1417	-.000957	.0257178
#3	1.943006	.5379822	.0018731	.0003602	321.5965	-.000226	.0260695

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5163068	.0006537	-.000439	.0012108	.0013374	.2946064	.0076958
Stddev	.0107856	.0002251	.000108	.0003063	.0000674	.0057793	.0005689
%RSD	2.088981	34.43215	24.65482	25.29549	5.039402	1.961703	7.392627

#1	.5159072	.0005624	-.000467	.0015593	.0013897	.3008101	.0077056
#2	.5057266	.0009101	-.000530	.0010888	.0013611	.2893748	.0071220
#3	.5272866	.0004886	-.000319	.0009843	.0012613	.2936341	.0082597

Sample Name: P5052-14 Acquired: 12/5/2024 15:21:33 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2861783	-.002678	.0424823
Stddev	.0061330	.000545	.0001128
%RSD	2.143075	20.35167	.2654227
#1	.2913536	-.002352	.0424426
#2	.2877772	-.003307	.0423948
#3	.2794042	-.002374	.0426096

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1783.179	48382.13	13393.73	1214.481	3054.553
Stddev	11.267	497.17	19.35	27.483	6.197
%RSD	.6318321	1.027589	.1444738	2.262922	.2028907
#1	1794.426	47868.09	13393.53	1189.044	3054.076
#2	1783.218	48860.51	13374.48	1243.632	3060.976
#3	1771.892	48417.77	13413.18	1210.768	3048.608

Sample Name: CCV02 Acquired: 12/5/2024 15:34:32 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.766620	4.977236	4.967869	4.775961	4.736723	9.551975	9.478787
Stddev	.011164	.059507	.007754	.018217	.023627	.027641	.033357
%RSD	.2342220	1.195574	.1560763	.3814207	.4987951	.2893730	.3519118

#1	4.753747	5.013838	4.973101	4.756167	4.712438	9.530878	9.491570
#2	4.772466	5.009296	4.971546	4.779696	4.738102	9.541783	9.503861
#3	4.773648	4.908574	4.958961	4.792021	4.759631	9.583265	9.440929

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2558356	2.502794	25.52894	1.014655	2.475161	1.202152	4.950396
Stddev	.0020205	.003059	.22942	.004028	.002799	.004106	.023434
%RSD	.7897623	.1222195	.8986609	.3969882	.1131002	.3415383	.4733793

#1	.2581023	2.506323	25.77466	1.018186	2.478307	1.198058	4.977353
#2	.2551808	2.501137	25.49179	1.015511	2.472946	1.202129	4.938952
#3	.2542237	2.500920	25.32036	1.010267	2.474229	1.206270	4.934883

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.505064	24.90842	2.477435	1.225230	22.80222	2.492687	2.453736
Stddev	.023737	.17714	.003349	.002512	.15316	.010856	.005619
%RSD	.9475610	.7111611	.1351934	.2050245	.6717071	.4354958	.2290100

#1	2.531973	25.09809	2.480737	1.227977	22.65705	2.504810	2.459658
#2	2.496120	24.87990	2.477529	1.224662	22.78732	2.483867	2.448478
#3	2.487097	24.74727	2.474040	1.223051	22.96229	2.489384	2.453073

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.59824	5.002486	4.864531	4.991476	4.885441	4.801394	5.078890
Stddev	.18009	.033458	.008236	.005627	.017638	.022495	.014694
%RSD	.7969422	.6688298	.1693051	.1127248	.3610346	.4685131	.2893161

#1	22.43479	5.039220	4.855325	4.996472	4.905805	4.783608	5.077785
#2	22.56861	4.994484	4.867068	4.992573	4.874963	4.793892	5.094106
#3	22.79131	4.973755	4.871200	4.985381	4.875555	4.826681	5.064780

Sample Name: CCV02 Acquired: 12/5/2024 15:34:32 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.876580	4.505396	4.944699
Stddev	.025602	.027248	.011115
%RSD	.5250058	.6047883	.2247858
#1	4.897421	4.480702	4.932092
#2	4.884317	4.500859	4.953085
#3	4.848002	4.534629	4.948920

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2183.468	54412.44	13834.98	1463.883	3535.521
Stddev	10.271	9.35	68.64	1.786	7.907
%RSD	.4703808	.0171771	.4961546	.1219727	.2236579
#1	2193.669	54410.88	13760.20	1465.936	3542.759
#2	2183.608	54422.47	13849.61	1463.020	3536.723
#3	2173.129	54403.97	13895.13	1462.692	3527.082

Sample Name: CCB02 Acquired: 12/5/2024 15:41:48 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002652	.0003782	.0007926	-.001777	-.000777	.0016224	.0017608
Stddev	.0007636	.0010988	.0009591	.000188	.000660	.0011540	.0002861
%RSD	287.9406	290.5207	121.0078	10.57007	84.92945	71.12906	16.24892

#1	.0000770	.0016381	.0015510	-.001990	-.000016	.0012959	.0014897
#2	.0011053	-.000122	-.000286	-.001705	-.001189	.0006669	.0017330
#3	-.000387	-.000381	.001112	-.001636	-.001127	.0029045	.0020598

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000650	-.000053	-.020327	-.000066	.0001534	-.000802	-.002174
Stddev	.0000320	.000016	.005648	.000130	.0000975	.000342	.003908
%RSD	49.17854	30.68490	27.78781	196.6449	63.55800	42.63123	179.7310

#1	.0000697	-.000037	-.016010	-.000126	.0000602	-.000852	-.006344
#2	.0000944	-.000069	-.018250	-.000155	.0001454	-.001116	-.001583
#3	.0000310	-.000051	-.026719	.000083	.0002547	-.000438	.001404

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000676	-.001498	-.000234	.0004082	.0226742	.0002511	-.000452
Stddev	.0001398	.002074	.000237	.0001432	.0122139	.0006299	.000136
%RSD	206.9829	138.4913	101.3700	35.07235	53.86682	250.8726	30.00106

#1	.0002247	-.003373	-.000066	.0005448	.0098175	.0000193	-.000389
#2	.0000208	-.001850	-.000131	.0002592	.0240818	-.000230	-.000607
#3	-.000043	.000730	-.000506	.0004206	.0341233	.000964	-.000359

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.013400	-.002548	-.000192	-.000482	-.000146	-.003281	-.004984
Stddev	.007247	.000313	.000130	.000287	.000120	.000951	.001733
%RSD	54.08126	12.29680	67.89130	59.54778	82.10622	28.98250	34.77128

#1	-.020251	-.002262	-.000339	-.000460	-.000033	-.002572	-.003132
#2	-.014137	-.002883	-.000145	-.000779	-.000272	-.004361	-.006566
#3	-.005813	-.002499	-.000092	-.000206	-.000133	-.002909	-.005254

Sample Name: CCB02 Acquired: 12/5/2024 15:41:48 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008674	.0007227	-.000109
Stddev	.0042978	.0003865	.000006
%RSD	495.4827	53.48440	5.918342
#1	-.002146	.0003573	-.000115
#2	.005789	.0011273	-.000109
#3	-.001041	.0006833	-.000102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2422.960	58823.68	14136.51	1607.896	4185.275
Stddev	2.761	87.16	23.12	1.627	4.658
%RSD	.1139437	.1481664	.1635800	.1011832	.1112998
#1	2425.391	58856.17	14111.35	1606.972	4189.934
#2	2419.959	58889.92	14156.84	1609.774	4180.618
#3	2423.531	58724.94	14141.33	1606.941	4185.272

Sample Name: PB165341TB Acquired: 12/5/2024 15:46:14 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009841	-.010599	-.000599	.0075675	-.001107	.0049194
Stddev	.000370	.000302	.000964	.0015542	.000984	.0026117
%RSD	3.763610	2.849883	160.9163	20.53816	88.90501	53.09038
#1	-.009482	-.010447	-.001713	.0063407	.000026	.0052244
#2	-.010222	-.010403	-.000058	.0070466	-.001747	.0073652
#3	-.009817	-.010947	-.000027	.0093153	-.001599	.0021686
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001551	-.000193	-.000254	-.016262	.0012253	-.000356
Stddev	.000420	.000058	.000074	.008551	.0000516	.000150
%RSD	27.11038	30.28277	29.26716	52.58249	4.214942	42.30542
#1	-.001086	-.000225	-.000204	-.007214	.0012259	-.000216
#2	-.001662	-.000125	-.000218	-.017363	.0011733	-.000515
#3	-.001905	-.000228	-.000340	-.024209	.0012765	-.000336
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008691	.0105104	.0014381	.0027299	.0011467	.0003261
Stddev	.000313	.0048718	.0001205	.0092065	.0002661	.0003255
%RSD	3.597346	46.35196	8.376648	337.2451	23.20855	99.81296
#1	-.008901	.0122762	.0015695	.0033740	.0009838	-.000002
#2	-.008332	.0050019	.0013329	.0115974	.0014538	.000331
#3	-.008842	.0142530	.0014119	-.006782	.0010025	.000649
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 346.8312	.0001815	.0017796	-.024916	-.007055	-.000100
Stddev	2.0318	.0005110	.0002218	.010132	.000678	.000059
%RSD	.5858216	281.4896	12.46045	40.66603	9.616062	59.26110
#1	345.7045	.0006653	.0019834	-.021660	-.006565	-.000131
#2	345.6124	-.000353	.0018121	-.036277	-.006772	-.000138
#3	349.1767	.000232	.0015435	-.016812	-.007830	-.000032

Sample Name: PB165341TB Acquired: 12/5/2024 15:46:14 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006426	-.000559	.0079721	.0029202	F .0256199	-.002060
Stddev	.0000755	.000344	.0018921	.0044183	.0011941	.000097
%RSD	11.75560	61.51455	23.73391	151.2989	4.660989	4.714736
#1	.0007234	-.000854	.0067581	.0001972	.0262916	-.002168
#2	.0006305	-.000181	.0070060	.0005454	.0263271	-.002036
#3	.0005738	-.000643	.0101522	.0080180	.0242412	-.001978

Elem	Sr4077
Units	ppm
Avg	-.000176
Stddev	.000017
%RSD	9.713646
#1	-.000196
#2	-.000163
#3	-.000169

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1892.383	48859.73	13292.22	1276.755	3167.265
Stddev	21.917	160.65	16.54	9.139	18.879
%RSD	1.158165	.3287886	.1244070	.7158211	.5960637
#1	1912.168	48695.13	13300.64	1266.550	3178.393
#2	1896.157	49016.11	13273.17	1284.186	3177.935
#3	1868.824	48867.94	13302.84	1279.528	3145.467

Sample Name: PB165363BL Acquired: 12/5/2024 15:50:47 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011739	-.001422	-.000128	.0005593	-.002121	-.000722	-.000405
Stddev	.0018629	.000177	.000681	.0009340	.000167	.003072	.000401
%RSD	158.6868	12.48505	531.5440	167.0017	7.850959	425.7553	98.98713
#1	.0002666	-.001227	.000444	-.000460	-.002289	-.003404	-.000647
#2	.0033166	-.001463	.000054	.001374	-.002117	.002630	-.000626
#3	-.000061	-.001575	-.000882	.000764	-.001956	-.001391	.000058
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000614	.0000490	-.003449	-.000090	-.000007	-.000611	-.000400
Stddev	.0000407	.0001027	.002006	.000151	.000091	.000285	.002327
%RSD	66.26470	209.5460	58.14836	168.6178	1321.656	46.66241	581.7345
#1	.0000994	-.000008	-.001967	-.000225	-.000003	-.000726	-.002025
#2	.0000185	-.000012	-.002649	-.000118	.000082	-.000286	.002266
#3	.0000663	.000168	-.005731	.000074	-.000100	-.000820	-.001441
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001374	-.004194	-.000463	.0003189	.1168843	.0006348	-.000117
Stddev	.0002326	.009257	.000259	.0001353	.0117386	.0007729	.000142
%RSD	169.3398	220.7431	55.89858	42.41215	10.04288	121.7603	121.1323
#1	.0003979	-.012014	-.000467	.0002258	.1034873	.0012804	-.000224
#2	-.000050	.006027	-.000203	.0004741	.1217988	-.000222	-.000172
#3	.000064	-.006594	-.000721	.0002569	.1253670	.000846	.000044
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0568447	-.005843	-.000260	-.000753	-.000542	-.001900	-.004081
Stddev	.0141083	.000281	.000219	.000364	.000259	.003437	.001368
%RSD	24.81895	4.811698	84.10159	48.36093	47.80477	180.8768	33.51924
#1	.0483548	-.005920	-.000434	-.000555	-.000622	.001726	-.005661
#2	.0490487	-.006078	-.000014	-.000530	-.000752	-.005109	-.003303
#3	.0731306	-.005532	-.000333	-.001173	-.000253	-.002318	-.003280

Sample Name: PB165363BL Acquired: 12/5/2024 15:50:47 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0030173	.0014729	-.000131
Stddev	.0002687	.0005318	.000008
%RSD	8.904730	36.10491	5.992076
#1	.0027186	.0018965	-.000122
#2	.0032393	.0016461	-.000136
#3	.0030941	.0008761	-.000136

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2293.764	56418.72	13720.73	1531.387	3977.992
Stddev	9.248	130.55	31.21	12.434	3.792
%RSD	.4031895	.2314012	.2274788	.8119401	.0953200
#1	2302.052	56540.05	13685.98	1542.983	3980.007
#2	2283.788	56280.57	13746.39	1518.258	3973.619
#3	2295.452	56435.55	13729.81	1532.920	3980.352

Sample Name: PB165363BS Acquired: 12/5/2024 15:55:11 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7465514	2.096947	1.016128	1.871008	.7390510	1.989990
Stddev	.0006217	.028561	.002220	.005633	.0033464	.008735
%RSD	.0832764	1.362033	.2184953	.3010505	.4527949	.4389564

#1	.7458377	2.129054	1.018605	1.876971	.7405000	1.984558
#2	.7468413	2.074369	1.015464	1.870275	.7414287	1.985346
#3	.7469753	2.087416	1.014316	1.865777	.7352243	2.000067

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2029569	.2295306	.2066862	1.128234	.4296139	.2073237
Stddev	.0002694	.0011404	.0003416	.009510	.0012590	.0006031
%RSD	.1327316	.4968484	.1652574	.8428961	.2930626	.2908823

#1	.2026878	.2292088	.2070806	1.138844	.4288300	.2079985
#2	.2032266	.2307973	.2064865	1.125381	.4310662	.2068374
#3	.2029564	.2285857	.2064916	1.120478	.4289455	.2071352

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3034028	3.014765	.2221873	2.118203	.5205611	.0760163
Stddev	.0007208	.011522	.0008703	.009847	.0010601	.0002300
%RSD	.2375549	.3821891	.3917181	.4648795	.2036432	.3025227

#1	.3041975	3.007835	.2215009	2.111038	.5217726	.0757523
#2	.3032194	3.008394	.2218949	2.114139	.5198034	.0761730
#3	.3027915	3.028066	.2231662	2.129431	.5201075	.0761237

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.734265	.3196699	.2084805	8.787496	.3178964	.4027423
Stddev	.005341	.0005976	.0001034	.012095	.0007898	.0010910
%RSD	.1953417	.1869516	.0495980	.1376432	.2484553	.2708834

#1	2.740290	.3191802	.2085867	8.800158	.3174479	.4040000
#2	2.730109	.3194936	.2083801	8.786272	.3188084	.4020524
#3	2.732396	.3203358	.2084748	8.776060	.3174329	.4021744

Sample Name: PB165363BS Acquired: 12/5/2024 15:55:11 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7156680	.2074933	F .6820490	5.927535	F -.010969	.1983102
Stddev	.0029553	.0004678	.0010495	.001864	.003351	.0004880
%RSD	.4129431	.2254269	.1538779	.0314494	30.54709	.2460705
#1	.7180128	.2072836	.6829037	5.929686	-.013788	.1985939
#2	.7166427	.2080292	.6808776	5.926540	-.007264	.1985900
#3	.7123484	.2071670	.6823658	5.926380	-.011856	.1977468

Elem	Sr4077
Units	ppm
Avg	.2152272
Stddev	.0004070
%RSD	.1891175
#1	.2153027
#2	.2155911
#3	.2147876

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2329.192	56192.99	13227.75	1561.324	3881.788
Stddev	6.071	104.51	7.10	6.711	10.631
%RSD	.2606561	.1859833	.0536515	.4298465	.2738655
#1	2324.687	56143.77	13219.59	1554.633	3873.214
#2	2326.794	56313.03	13231.27	1568.055	3878.467
#3	2336.097	56122.18	13232.41	1561.284	3893.683

Sample Name: PB165328BL Acquired: 12/5/2024 15:59:18 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010602	.0014278	.0003242	.0000000	-.001698	.0018880	.0029685
Stddev	.0007214	.0017560	.0003337	.0007004	.000510	.0006303	.0002217
%RSD	68.04606	122.9896	102.9300	1550742.	30.01149	33.38337	7.469572
#1	.0010693	.0020176	.0003275	-.000354	-.001718	.0013120	.0031561
#2	.0017770	.0028129	-.000011	-.000453	-.001179	.0017907	.0027238
#3	.0003342	-.000547	.000656	.000807	-.002198	.0025612	.0030254
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000638	.0000336	-.008104	-.000208	.0001357	-.000721	-.001599
Stddev	.0000502	.0000417	.005165	.000320	.0001996	.000086	.002313
%RSD	78.74019	124.1102	63.72883	153.5680	147.0511	11.90050	144.6574
#1	.0001128	.0000463	-.003819	-.000398	.0002432	-.000789	.000989
#2	.0000124	.0000674	-.006655	-.000389	.0002585	-.000748	-.002321
#3	.0000662	-.000013	-.013839	.000161	-.000095	-.000625	-.003465
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000082	-.002876	-.000199	.0001477	.0309397	.0004531	-.000614
Stddev	.000067	.009123	.000359	.0002717	.0107746	.0011763	.000088
%RSD	81.52344	317.2612	180.7004	183.9307	34.82455	259.5881	14.36449
#1	-.000155	-.010079	.000206	.0004488	.0197305	-.000331	-.000516
#2	-.000063	-.005931	-.000479	.0000736	.0318690	-.000115	-.000687
#3	-.000026	.007383	-.000322	-.000079	.0412195	.001806	-.000640
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000706	-.006150	-.000304	-.000982	-.000773	-.004870	-.002938
Stddev	.005540	.000807	.000109	.000654	.000207	.002027	.001086
%RSD	785.1923	13.11808	35.92345	66.63655	26.77668	41.62946	36.96800
#1	-.001203	-.005438	-.000301	-.001354	-.000535	-.003424	-.002705
#2	-.005980	-.007027	-.000197	-.001365	-.000911	-.007187	-.004121
#3	.005066	-.005987	-.000415	-.000226	-.000872	-.003999	-.001987

Sample Name: PB165328BL Acquired: 12/5/2024 15:59:18 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000492	-.000186	-.000121
Stddev	.000352	.000551	.000004
%RSD	71.50099	295.4959	3.211395
#1	-.000241	-.000723	-.000125
#2	-.000894	.000377	-.000121
#3	-.000341	-.000214	-.000117

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2487.332	60042.15	13883.31	1706.953	4231.150
Stddev	12.045	137.32	54.46	11.450	12.107
%RSD	.4842444	.2287124	.3922610	.6707731	.2861446
#1	2501.239	60127.12	13883.17	1716.263	4244.691
#2	2480.454	60115.61	13937.84	1710.429	4227.390
#3	2480.301	59883.72	13828.92	1694.169	4221.369

Sample Name: PB165371BS Acquired: 12/5/2024 16:07:39 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7253309	2.057165	.9920389	1.813512	.7374560	1.920369
Stddev	.0023748	.006152	.0009798	.006115	.0034381	.010956
%RSD	.3274100	.2990726	.0987640	.3372102	.4662082	.5705049

#1	.7278836	2.063972	.9931692	1.812772	.7370261	1.933018
#2	.7249222	2.052001	.9914325	1.819964	.7410888	1.913868
#3	.7231870	2.055522	.9915149	1.807801	.7342531	1.914220

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1969841	.2266663	.2021342	1.092921	.4209073	.2016130
Stddev	.0014841	.0019351	.0007535	.011168	.0011312	.0003506
%RSD	.7534180	.8537223	.3727939	1.021871	.2687486	.1738797

#1	.1986118	.2288983	.2030019	1.098409	.4200078	.2016560
#2	.1957061	.2256413	.2016437	1.080071	.4221773	.2012430
#3	.1966343	.2254594	.2017571	1.100284	.4205368	.2019401

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2921517	2.927181	.2164708	2.068773	.5060632	.0742879
Stddev	.0004512	.027419	.0018400	.023064	.0007990	.0000959
%RSD	.1544471	.9366923	.8500193	1.114873	.1578937	.1291061

#1	.2920181	2.921787	.2175733	2.084957	.5065668	.0743401
#2	.2926546	2.902860	.2143467	2.042364	.5064810	.0741772
#3	.2917823	2.956896	.2174925	2.078998	.5051419	.0743463

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.570123	.3126857	.2026498	8.382845	.3124833	.4011446
Stddev	.007588	.0017588	.0010432	.034039	.0044890	.0004141
%RSD	.2952228	.5624717	.5148017	.4060538	1.436555	.1032253

#1	2.561531	.3147029	.2032447	8.344133	.3176664	.4009647
#2	2.572937	.3114736	.2032596	8.408091	.3099462	.4016182
#3	2.575903	.3118806	.2014452	8.396310	.3098374	.4008508

Sample Name: PB165371BS Acquired: 12/5/2024 16:07:39 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7200295	.2080094	F .6788848	5.784837	F -.011276	.1906183
Stddev	.0019943	.0021627	.0076987	.009443	.001497	.0015489
%RSD	.2769803	1.039707	1.134021	.1632436	13.27626	.8125936
#1	.7218454	.2100429	.6843242	5.793482	-.012707	.1920998
#2	.7178951	.2057373	.6822544	5.786270	-.011402	.1890098
#3	.7203479	.2082481	.6700758	5.774759	-.009721	.1907454

Elem	Sr4077
Units	ppm
Avg	.2079058
Stddev	.0015090
%RSD	.7258257
#1	.2096384
#2	.2068793
#3	.2071997

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2440.281	58605.01	13636.22	1638.206	4045.531
Stddev	7.210	94.76	130.98	4.132	6.097
%RSD	.2954633	.1616901	.9605465	.2522480	.1507113
#1	2441.448	58657.91	13488.67	1642.447	4041.505
#2	2432.559	58661.52	13738.78	1637.978	4042.541
#3	2446.837	58495.62	13681.20	1634.192	4052.545

Sample Name: PB165328BS Acquired: 12/5/2024 16:12:44 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7259329	2.063475	.9834310	1.823952	.7187410	1.909198
Stddev	.0023281	.017805	.0033709	.005828	.0028234	.006576
%RSD	.3206992	.8628457	.3427728	.3195401	.3928328	.3444641

#1	.7232491	2.055325	.9827275	1.820010	.7204713	1.901674
#2	.7271411	2.051204	.9804673	1.821199	.7154829	1.912070
#3	.7274084	2.083896	.9870981	1.830647	.7202688	1.913851

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1942945	.2194155	.1994547	1.069632	.4152426	.1995887
Stddev	.0001647	.0007926	.0001944	.011470	.0007787	.0004215
%RSD	.0847773	.3612432	.0974452	1.072364	.1875228	.2111843

#1	.1941044	.2193311	.1995357	1.072873	.4160085	.1993440
#2	.1943913	.2186685	.1992329	1.056890	.4144517	.1993466
#3	.1943880	.2202470	.1995954	1.079134	.4152675	.2000754

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2915094	2.927169	.2126901	2.034711	.5002063	.0735471
Stddev	.0008468	.016999	.0010668	.017442	.0009857	.0000633
%RSD	.2904813	.5807417	.5015750	.8572408	.1970624	.0861350

#1	.2921006	2.908080	.2114904	2.039831	.5012518	.0736202
#2	.2905393	2.932752	.2130478	2.015282	.5000733	.0735138
#3	.2918883	2.940675	.2135320	2.049021	.4992939	.0735074

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.601818	.3081601	.2018224	F 8.457453	.3013383	.3881217
Stddev	.013213	.0011423	.0005157	.021047	.0011175	.0007188
%RSD	.5078506	.3706739	.2555409	.2488589	.3708469	.1851882

#1	2.592771	.3087861	.2012619	8.447433	.3020345	.3877892
#2	2.616981	.3068416	.2019282	8.443287	.3019312	.3876295
#3	2.595700	.3088525	.2022770	8.481638	.3000493	.3889466

Sample Name: PB165328BS Acquired: 12/5/2024 16:12:44 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6897586	.1990719	F .6611234	5.733579	F -.011395	.1898562
Stddev	.0015242	.0005653	.0060954	.019030	.001760	.0008341
%RSD	.2209823	.2839715	.9219805	.3319040	15.44960	.4393497
#1	.6908286	.1995168	.6555219	5.720102	-.012392	.1892157
#2	.6880134	.1984358	.6676149	5.725287	-.012430	.1907994
#3	.6904339	.1992632	.6602334	5.755348	-.009362	.1895534

Elem	Sr4077
Units	ppm
Avg	.2076384
Stddev	.0001100
%RSD	.0529627
#1	.2076179
#2	.2075401
#3	.2077571

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2405.737	57744.82	13698.83	1584.845	4016.037
Stddev	1.638	140.22	20.74	3.161	3.398
%RSD	.0680730	.2428324	.1513635	.1994238	.0846230
#1	2404.079	57658.45	13674.94	1581.920	4012.146
#2	2407.354	57669.39	13709.37	1584.416	4017.539
#3	2405.778	57906.61	13712.17	1588.198	4018.425

Sample Name: PB165287BL Acquired: 12/5/2024 16:16:47 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013293	.0005499	-.000112	.0006154	-.002110	-.001176	.0011443
Stddev	.0007339	.0004129	.000778	.0004094	.000557	.003030	.0003812
%RSD	55.21210	75.09165	694.9923	66.52534	26.38271	257.7323	33.31035

#1	.0016593	.0003245	-.000988	.0009973	-.002694	.000897	.0014926
#2	.0018404	.0002986	.000500	.0001832	-.002049	-.004653	.0012033
#3	.0004883	.0010264	.000152	.0006656	-.001586	.000229	.0007371

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000221	.0000305	-.016397	-.000259	.0000170	-.000838	.0021431
Stddev	.0000389	.0000718	.003778	.000213	.0000875	.000099	.0012001
%RSD	176.0603	235.5162	23.03933	82.26535	515.2105	11.76945	55.99689

#1	.0000455	.0000351	-.019314	-.000324	.0000962	-.000799	.0032317
#2	-.000023	-.000043	-.012130	-.000432	-.000077	-.000766	.0023413
#3	.000044	.000100	-.017747	-.000021	.000032	-.000951	.0008563

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000747	.0011500	-.000165	.0000669	-.001363	.0006543	-.000396
Stddev	.0001979	.0138745	.000114	.0001750	.010812	.0004924	.000115
%RSD	264.9964	1206.513	68.77307	261.6132	793.1818	75.26064	28.95093

#1	.0002931	-.009911	-.000228	.0000897	-.013015	.0004822	-.000502
#2	-.000093	.016718	-.000235	-.000118	.000580	.0012096	-.000274
#3	.000024	-.003357	-.000034	.000229	.008345	.0002710	-.000412

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.042959	-.007337	-.000323	-.000833	-.000416	-.001340	-.005012
Stddev	.015895	.000564	.000242	.000450	.000203	.002436	.002807
%RSD	37.00114	7.681268	74.85221	54.00097	48.86467	181.7801	56.00825

#1	-.061078	-.006747	-.000553	-.001302	-.000634	.001463	-.007913
#2	-.036436	-.007870	-.000071	-.000405	-.000383	-.002538	-.004813
#3	-.031363	-.007394	-.000346	-.000792	-.000231	-.002944	-.002309

Sample Name: PB165287BL Acquired: 12/5/2024 16:16:47 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001131	-.000286	-.000149
Stddev	.001854	.000415	.000019
%RSD	163.9564	145.2807	12.86311
#1	-.001919	-.000352	-.000162
#2	.000987	-.000664	-.000157
#3	-.002461	.000159	-.000127

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2435.873	58702.97	13989.13	1631.775	4177.116
Stddev	4.357	197.87	12.73	23.748	6.809
%RSD	.1788694	.3370738	.0910041	1.455324	.1630039
#1	2440.734	58565.49	13976.04	1617.609	4183.935
#2	2434.566	58613.68	14001.47	1618.524	4170.318
#3	2432.319	58929.76	13989.87	1659.191	4177.094

Sample Name: PB165287BS Acquired: 12/5/2024 16:21:08 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7245646	2.048365	.9781504	1.819304	.7168055	1.904823	.1951203
Stddev	.0068502	.024121	.0024891	.007313	.0034104	.001329	.0007388
%RSD	.9454207	1.177589	.2544734	.4019869	.4757739	.0697460	.3786488

#1	.7298368	2.061277	.9808761	1.827714	.7191954	1.903299	.1943784
#2	.7168218	2.063282	.9759979	1.814441	.7129001	1.905733	.1958561
#3	.7270352	2.020537	.9775770	1.815755	.7183211	1.905438	.1951265

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2179075	.1985811	1.066849	.4112511	.1988497	.2911779	2.920927
Stddev	.0001434	.0002227	.011815	.0015243	.0003416	.0010928	.015184
%RSD	.0658084	.1121586	1.107511	.3706586	.1718046	.3752930	.5198453

#1	.2180340	.1988103	1.055939	.4128505	.1991015	.2920596	2.904275
#2	.2177517	.1985675	1.065208	.4110877	.1989867	.2899553	2.924500
#3	.2179369	.1983655	1.079398	.4098150	.1984608	.2915187	2.934006

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2130664	2.013968	.4992747	.0731963	2.587273	.3084228	.2013021
Stddev	.0017181	.017503	.0006559	.0004525	.005892	.0022988	.0006524
%RSD	.8063633	.8690643	.1313601	.6181518	.2277360	.7453546	.3240751

#1	.2112053	1.996455	.4985931	.0735490	2.593817	.3064868	.2005652
#2	.2134020	2.013988	.4999013	.0733538	2.585616	.3078180	.2015352
#3	.2145919	2.031460	.4993296	.0726862	2.582387	.3109636	.2018059

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.430256	.3017378	.3881593	.6883191	.1976366	.6595099	5.692405
Stddev	.029762	.0011549	.0011386	.0003405	.0003039	.0054177	.012837
%RSD	.3530321	.3827315	.2933272	.0494703	.1537707	.8214784	.2255120

#1	8.433722	.3027071	.3894663	.6882580	.1973576	.6537896	5.706980
#2	8.458134	.3004601	.3873822	.6886860	.1979604	.6601770	5.687454
#3	8.398914	.3020463	.3876294	.6880132	.1975917	.6645632	5.682781

Sample Name: PB165287BS Acquired: 12/5/2024 16:21:08 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.008875	.1893041	.2064632
Stddev	.002334	.0005065	.0002673
%RSD	26.29821	.2675426	.1294709

#1	-.011269	.1891392	.2066047
#2	-.006606	.1889007	.2066300
#3	-.008751	.1898725	.2061549

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2391.333	57995.29	13730.71	1599.601	3994.506
Stddev	10.957	95.46	22.05	4.857	9.094
%RSD	.4582028	.1645912	.1606024	.3036630	.2276693

#1	2382.332	57956.33	13741.78	1601.430	3985.889
#2	2403.534	57925.47	13705.32	1603.278	4004.012
#3	2388.133	58104.06	13745.04	1594.094	3993.617

Sample Name: PB165370BL Acquired: 12/5/2024 16:25:09 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008343	-.000129	.0004367	-.000844	-.001760	.0011732	.0010233
Stddev	.0010133	.000589	.0009317	.000777	.000563	.0024153	.0002702
%RSD	121.4551	457.4601	213.3538	92.08393	31.99501	205.8757	26.40170
#1	.0017720	-.000022	.0004597	-.000447	-.002103	.0000771	.0009432
#2	-.000241	.000400	.0013566	-.000345	-.002069	.0039422	.0013245
#3	.000972	-.000763	-.000506	-.001739	-.001110	-.000500	.0008022
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000953	.0000274	-.012015	-.000152	.0001477	-.000787	-.001895
Stddev	.0000031	.0000819	.006070	.000325	.0000533	.000011	.001333
%RSD	3.279941	299.3736	50.51957	214.4358	36.09857	1.353982	70.36245
#1	.0000927	.0001217	-.010017	-.000525	.0002092	-.000798	-.002564
#2	.0000988	-.000026	-.007196	-.000002	.0001151	-.000777	-.000360
#3	.0000945	-.000014	-.018832	.000072	.0001187	-.000785	-.002761
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000064	-.002747	-.000262	.0002843	-.009967	-.000432	-.000455
Stddev	.000150	.002391	.000286	.0002058	.010161	.000495	.000139
%RSD	234.3941	87.04890	109.3766	72.39112	101.9445	114.4388	30.51766
#1	.000013	-.002058	.000059	.0004305	-.021405	.000070	-.000341
#2	-.000237	-.005406	-.000492	.0003734	-.006513	-.000447	-.000415
#3	.000032	-.000775	-.000352	.0000489	-.001984	-.000919	-.000610
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.023208	-.007886	-.000293	-.000158	.0000353	-.003668	-.004088
Stddev	.003718	.000430	.000082	.000658	.0000891	.002025	.000811
%RSD	16.02195	5.457230	27.96305	416.7287	252.3583	55.20264	19.84831
#1	-.025844	-.008154	-.000385	-.000916	.0000572	-.003993	-.004876
#2	-.024826	-.008116	-.000228	.000174	-.000063	-.001500	-.003255
#3	-.018955	-.007390	-.000265	.000269	.000112	-.005509	-.004132

Sample Name: PB165370BL Acquired: 12/5/2024 16:25:09 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001629	-.000630	-.000128
Stddev	.001386	.000258	.000008
%RSD	85.06265	40.86586	5.951710
#1	-.003084	-.000474	-.000135
#2	-.000326	-.000490	-.000120
#3	-.001476	-.000928	-.000130

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2407.454	58221.43	13997.88	1604.754	4132.437
Stddev	1.473	56.18	49.12	8.770	5.208
%RSD	.0611676	.0964975	.3509350	.5464893	.1260286
#1	2409.142	58242.32	13944.51	1597.147	4137.342
#2	2406.786	58264.17	14041.21	1614.346	4126.971
#3	2406.434	58157.79	14007.90	1602.768	4132.998

Sample Name: PB165370BS Acquired: 12/5/2024 16:29:30 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7205016	2.068362	.9849666	1.794039	.7063897	1.918875
Stddev	.0019370	.015025	.0008337	.003841	.0014874	.003730
%RSD	.2688384	.7264361	.0846390	.2140826	.2105610	.1943598

#1	.7226976	2.058656	.9858635	1.797941	.7078816	1.919475
#2	.7190359	2.060761	.9848211	1.793912	.7063807	1.922268
#3	.7197714	2.085669	.9842153	1.790263	.7049068	1.914881

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1960747	.2232108	.2005383	1.088406	.4176857	.2005849
Stddev	.0006096	.0008936	.0004782	.002349	.0005415	.0004119
%RSD	.3109008	.4003594	.2384392	.2158344	.1296357	.2053240

#1	.1961570	.2240039	.2010884	1.086117	.4179646	.2010461
#2	.1954282	.2222425	.2003033	1.088290	.4180309	.2004545
#3	.1966390	.2233858	.2002230	1.090811	.4170616	.2002539

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2894301	2.927702	.2155626	2.063908	.5030755	.0737206
Stddev	.0011028	.009488	.0003899	.009506	.0010129	.0005769
%RSD	.3810228	.3240665	.1808819	.4605979	.2013409	.7825011

#1	.2902898	2.921921	.2151215	2.074771	.5038799	.0739589
#2	.2898138	2.938651	.2158613	2.059842	.5034086	.0741402
#3	.2881867	2.922532	.2157052	2.057111	.5019380	.0730628

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.557592	.3110550	.2022271	8.376442	.3062778	.3860100
Stddev	.012687	.0017370	.0008555	.026927	.0015301	.0006880
%RSD	.4960499	.5584230	.4230154	.3214654	.4995899	.1782457

#1	2.544473	.3121187	.2016303	8.349414	.3080398	.3867641
#2	2.558506	.3090505	.2032071	8.403267	.3055093	.3858496
#3	2.569798	.3119957	.2018438	8.376646	.3052842	.3854164

Sample Name: PB165370BS Acquired: 12/5/2024 16:29:30 Type: Unk
Method: NON EPA-6010-200.7(v2493) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6937787	.1997409	F .6567605	5.778652	F -.007481	.1884914
Stddev	.0009910	.0003024	.0054605	.022478	.003742	.0002809
%RSD	.1428456	.1513705	.8314331	.3889890	50.02257	.1490029
#1	.6944316	.2000291	.6570826	5.778036	-.011764	.1887250
#2	.6926383	.1997674	.6620529	5.756488	-.005841	.1881798
#3	.6942660	.1994261	.6511461	5.801432	-.004839	.1885696

Elem	Sr4077
Units	ppm
Avg	.2067126
Stddev	.0000252
%RSD	.0122104
#1	.2067165
#2	.2066856
#3	.2067357

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2453.022	58374.87	13679.95	1617.660	4057.067
Stddev	11.436	101.28	51.07	6.396	19.586
%RSD	.4662171	.1734992	.3733474	.3953672	.4827679
#1	2441.461	58295.58	13621.04	1613.908	4036.389
#2	2453.274	58340.08	13707.04	1614.028	4059.471
#3	2464.330	58488.97	13711.77	1625.045	4075.340

Sample Name: CCV03 Acquired: 12/5/2024 16:42:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.857435	5.160840	5.022560	4.893933	4.838480	9.825786	9.794788
Stddev	.011225	.029431	.014486	.013714	.013903	.020497	.062521
%RSD	.2310869	.5702833	.2884274	.2802348	.2873523	.2085999	.6383065

#1	4.848613	5.177494	5.037033	4.880142	4.822566	9.816645	9.724494
#2	4.853623	5.126858	5.022585	4.894087	4.844601	9.811449	9.844179
#3	4.870070	5.178169	5.008061	4.907569	4.848272	9.849262	9.815691

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2559298	2.524314	25.27813	1.020015	2.500859	1.223873	4.939764
Stddev	.0013624	.008544	.09305	.001423	.006370	.001858	.019456
%RSD	.5323397	.3384712	.3680958	.1395427	.2547230	.1517904	.3938723

#1	.2568874	2.534179	25.29288	1.021356	2.507847	1.221823	4.920192
#2	.2565318	2.519494	25.36292	1.018522	2.499355	1.224349	4.959102
#3	.2543700	2.519269	25.17859	1.020169	2.495376	1.225445	4.939998

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.502338	24.98032	2.500386	1.239505	24.12715	2.503187	2.520400
Stddev	.007637	.02795	.006697	.002116	.07326	.009959	.010651
%RSD	.3051817	.1118901	.2678373	.1707435	.3036553	.3978340	.4225947

#1	2.495409	24.95038	2.508092	1.241835	24.12333	2.502777	2.513778
#2	2.510526	25.00572	2.495969	1.238979	24.05587	2.513344	2.514735
#3	2.501079	24.98487	2.497098	1.237702	24.20224	2.493439	2.532686

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.73501	5.037136	4.961257	5.059260	4.963341	4.898071	5.134034
Stddev	.09543	.013096	.007553	.015069	.005506	.030708	.020940
%RSD	.4020720	.2599957	.1522429	.2978554	.1109254	.6269396	.4078611

#1	23.66507	5.041922	4.964399	5.075956	4.959879	4.865136	5.158166
#2	23.69622	5.047166	4.952641	5.046667	4.960455	4.903161	5.120659
#3	23.84373	5.022320	4.966733	5.055158	4.969690	4.925916	5.123277

Sample Name: CCV03 Acquired: 12/5/2024 16:42:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.964264	4.758960	5.069287
Stddev	.006966	.018702	.007489
%RSD	.1403147	.3929821	.1477346
#1	4.967398	4.744162	5.061484
#2	4.956282	4.752739	5.076417
#3	4.969112	4.779980	5.069961

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2144.590	53153.72	13637.51	1409.998	3484.882
Stddev	7.983	40.94	42.52	7.826	6.374
%RSD	.3722506	.0770130	.3117750	.5550677	.1829053
#1	2153.805	53117.68	13607.08	1412.220	3491.254
#2	2139.764	53198.23	13619.35	1416.472	3478.506
#3	2140.201	53145.25	13686.09	1401.300	3484.885

Sample Name: CCB03 Acquired: 12/5/2024 16:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006569	.0013591	.0001370	.0007864	.0002738	-.001663	-.001924
Stddev	.0008245	.0002544	.0007149	.0005752	.0007330	.002956	.000163
%RSD	125.5126	18.71956	521.6561	73.13824	267.6942	177.7799	8.492486

#1	.0001522	.0012431	-.000592	.0001347	.0009718	-.000379	-.002110
#2	.0016083	.0016509	.000166	.0012230	.0003394	-.005043	-.001805
#3	.0002102	.0011834	.000837	.0010017	-.000490	.000434	-.001856

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000643	.0000770	-.013637	.0000843	.0002085	.0000360	-.002742
Stddev	.0000490	.0000474	.002526	.0001506	.0001157	.0001998	.001440
%RSD	76.19030	61.49109	18.52608	178.7339	55.52337	554.5839	52.49443

#1	.0001207	.0000346	-.013268	.0000452	.0001242	.0001312	-.003907
#2	.0000391	.0001281	-.016327	-.000043	.0001608	-.000194	-.001133
#3	.0000330	.0000684	-.011315	.000251	.0003405	.000170	-.003188

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000309	-.002514	-.000357	.0005478	-.005142	.0004908	-.000414
Stddev	.0000681	.003699	.000405	.0003078	.011030	.0008696	.000312
%RSD	220.2619	147.1406	113.5095	56.18303	214.5199	177.1796	75.37790

#1	.0000662	-.006125	-.000080	.0005562	-.016842	.0012732	-.000654
#2	-.000048	.001267	-.000821	.0008513	-.003649	-.000446	-.000061
#3	.000074	-.002684	-.000169	.0002359	.005066	.000645	-.000526

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.031280	-.002390	.0002806	-.001003	-.000427	.0020175	-.003375
Stddev	.010176	.000245	.0001268	.000205	.000235	.0021360	.000653
%RSD	32.53215	10.26490	45.19543	20.42171	54.98658	105.8751	19.33974

#1	-.034710	-.002338	.0003015	-.001034	-.000276	.0034683	-.003374
#2	-.039299	-.002657	.0003956	-.001191	-.000307	-.000435	-.004029
#3	-.019832	-.002174	.0001446	-.000784	-.000697	.003019	-.002723

Sample Name: CCB03 Acquired: 12/5/2024 16:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000927	-.000238	-.000009
Stddev	.001903	.000071	.000009
%RSD	205.3774	29.95907	96.83959

#1	-.002881	-.000272	-.000014
#2	.000920	-.000156	.000001
#3	-.000819	-.000286	-.000015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2219.094	55744.33	14002.93	1458.028	3935.877
Stddev	21.223	83.77	36.42	9.751	20.996
%RSD	.9563960	.1502832	.2600884	.6687585	.5334546

#1	2197.486	55691.15	13960.96	1448.205	3913.820
#2	2219.885	55840.90	14021.67	1467.704	3938.190
#3	2239.911	55700.93	14026.16	1458.175	3955.621

Sample Name: PB165371BL Acquired: 12/5/2024 16:51:09 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000570	-.000398	.0004864	-.000461	-.002094	.0004316	-.001245
Stddev	.0008339	.001613	.0007396	.000625	.000714	.0025209	.000231
%RSD	1462.064	405.1638	152.0513	135.7454	34.08277	584.0381	18.57889
#1	.0009049	-.001693	.0008792	-.000318	-.002326	.0031410	-.001016
#2	-.000762	.001408	-.000367	-.001145	-.002664	-.001845	-.001478
#3	.000028	-.000909	.000947	.000081	-.001293	-.000002	-.001242
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000499	.0000310	-.007414	-.000023	.0001907	-.000396	-.001386
Stddev	.0000166	.0000680	.003862	.000412	.0000859	.000118	.005108
%RSD	33.36438	219.4509	52.09352	1775.129	45.01409	29.71780	368.5081
#1	.0000307	-.000040	-.003486	-.000499	.0002568	-.000477	-.003103
#2	.0000607	.000096	-.007548	.000198	.0000937	-.000261	-.005414
#3	.0000582	.000037	-.011207	.000231	.0002217	-.000452	.004359
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000071	.0065035	-.000207	.0007478	-.010085	.0004026	-.000060
Stddev	.000179	.0014365	.000239	.0002944	.009967	.0010369	.000133
%RSD	252.7814	22.08759	115.3592	39.37699	98.82432	257.5108	220.5577
#1	.000006	.0050769	-.000089	.0010767	-.021282	-.000069	-.000169
#2	-.000276	.0079496	-.000050	.0006578	-.006790	-.000314	.000088
#3	.000057	.0064841	-.000483	.0005088	-.002184	.001592	-.000099
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.017960	-.004702	-.000347	-.000464	-.000263	-.000850	-.001746
Stddev	.009993	.000284	.000098	.000449	.000237	.003496	.001915
%RSD	55.64356	6.029382	28.25589	96.88116	89.91016	411.1302	109.6871
#1	-.018729	-.004487	-.000280	-.000208	-.000492	-.002885	-.000225
#2	-.027546	-.005024	-.000302	-.000983	-.000278	.003186	-.001116
#3	-.007604	-.004596	-.000460	-.000201	-.000020	-.002852	-.003896

Sample Name: PB165371BL Acquired: 12/5/2024 16:51:09 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0019496	-.000639	-.000105
Stddev	.0031317	.000368	.000021
%RSD	160.6351	57.59077	19.70642

#1	.0027880	-.000479	-.000087
#2	-.001516	-.000379	-.000099
#3	.004577	-.001061	-.000128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2314.641	57795.07	14378.96	1533.869	4074.588
Stddev	8.444	12.06	16.61	9.292	14.177
%RSD	.3648052	.0208650	.1154958	.6058072	.3479472

#1	2306.610	57799.00	14359.96	1523.160	4063.266
#2	2313.869	57781.53	14390.71	1538.652	4070.009
#3	2323.445	57804.67	14386.21	1539.796	4090.489

Sample Name: PB165344BL Acquired: 12/5/2024 16:55:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000150	.0007949	.0000446	.0002441	-.001909	.0003190	-.001089
Stddev	.001463	.0014523	.0003385	.0016125	.000468	.0024033	.000224
%RSD	977.6078	182.7008	758.4042	660.5118	24.49890	753.3989	20.58354
#1	-.001828	.0016375	-.000341	.0015523	-.001460	-.000611	-.001290
#2	.000528	-.000882	.000184	.0007375	-.002393	.003048	-.000847
#3	.000851	.001629	.000291	-.001557	-.001875	-.001480	-.001129
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000169	-.000012	-.015153	-.000145	.0000165	-.000566	-.000071
Stddev	.0000326	.000033	.003208	.000286	.0001428	.000245	.003066
%RSD	192.8674	267.7693	21.17287	197.2450	864.6017	43.22849	4310.992
#1	.0000422	.000024	-.018693	-.000474	.0001732	-.000557	.002422
#2	.0000285	-.000041	-.012437	-.000003	-.000017	-.000326	.000860
#3	-.000020	-.000020	-.014328	.000042	-.000106	-.000815	-.003495
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000066	-.006151	-.000091	.0007349	-.018706	.0001606	-.000463
Stddev	.0001845	.006440	.000273	.0000958	.010502	.0010320	.000126
%RSD	2800.508	104.6983	300.1145	13.03025	56.14429	642.7439	27.23220
#1	.0000889	-.011121	-.000271	.0008161	-.029394	-.000469	-.000410
#2	-.000205	-.008456	-.000225	.0007592	-.018323	-.000401	-.000607
#3	.000136	.001124	.000223	.0006293	-.008400	.001352	-.000372
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.031055	-.005558	-.000361	-.000924	-.000517	-.000676	-.004188
Stddev	.013186	.000339	.000209	.000493	.000263	.002723	.001614
%RSD	42.45999	6.099784	57.95294	53.31951	50.85240	402.7940	38.53063
#1	-.030690	-.005487	-.000120	-.000361	-.000450	-.000516	-.003015
#2	-.018056	-.005927	-.000466	-.001276	-.000806	-.003475	-.006029
#3	-.044421	-.005261	-.000498	-.001136	-.000293	.001963	-.003521

Sample Name: PB165344BL Acquired: 12/5/2024 16:55:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000273	-.000240	-.000094
Stddev	.003877	.000080	.000006
%RSD	1422.635	33.26875	6.652957
#1	.003084	-.000217	-.000089
#2	.000615	-.000174	-.000092
#3	-.004517	-.000328	-.000101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2325.530	57852.62	14181.40	1546.100	4095.245
Stddev	7.055	80.95	26.61	2.654	6.985
%RSD	.3033546	.1399308	.1876154	.1716747	.1705543
#1	2321.647	57763.54	14178.21	1543.739	4096.106
#2	2321.271	57872.63	14156.53	1548.973	4087.870
#3	2333.673	57921.70	14209.46	1545.588	4101.759

Sample Name: PB165344BS Acquired: 12/5/2024 16:59:49 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7367634	2.047711	.9601040	1.863613	.7460138	1.904273
Stddev	.0022273	.011818	.0014637	.010633	.0030527	.013619
%RSD	.3023058	.5771106	.1524558	.5705827	.4092081	.7151633

#1	.7366456	2.045413	.9587627	1.863285	.7450695	1.899029
#2	.7345974	2.037211	.9598841	1.853147	.7435448	1.919734
#3	.7390473	2.060508	.9616653	1.874407	.7494271	1.894056

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1930115	.2057476	.1930712	1.011938	.3960557	.1947257
Stddev	.0008218	.0007616	.0004023	.005325	.0007359	.0002790
%RSD	.4257977	.3701563	.2083464	.5262185	.1857947	.1432942

#1	.1920848	.2049602	.1926983	1.011762	.3967206	.1945011
#2	.1932978	.2064804	.1930179	1.006703	.3952651	.1946380
#3	.1936519	.2058023	.1934975	1.017349	.3961814	.1950381

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2947405	2.852343	.2042096	1.937696	.4876484	.0715882
Stddev	.0018208	.013266	.0015860	.015523	.0006872	.0003159
%RSD	.6177686	.4651084	.7766725	.8011249	.1409291	.4412659

#1	.2949913	2.838513	.2024561	1.953160	.4869145	.0714883
#2	.2928072	2.853551	.2046288	1.922114	.4877539	.0713344
#3	.2964229	2.864963	.2055440	1.937815	.4882767	.0719420

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.710793	.2989526	.2000935	8.810181	.2910469	.3948063
Stddev	.013482	.0009901	.0002895	.053758	.0004366	.0019224
%RSD	.4973527	.3311755	.1446900	.6101776	.1500084	.4869184

#1	2.707170	.2979286	.2000708	8.779598	.2910571	.3943067
#2	2.725717	.2990244	.2003937	8.872253	.2906054	.3931831
#3	2.699493	.2999049	.1998161	8.778692	.2914784	.3969292

Sample Name: PB165344BS Acquired: 12/5/2024 16:59:49 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6779068	.1958612	F .6674668	5.600942	F -.011661	.1972205
Stddev	.0030756	.0006050	.0066915	.020687	.001147	.0010680
%RSD	.4536912	.3088846	1.002527	.3693403	9.840117	.5415393
#1	.6757318	.1954129	.6597500	5.603219	-.010337	.1960599
#2	.6765628	.1956213	.6709870	5.579211	-.012276	.1981619
#3	.6814256	.1965493	.6716635	5.620396	-.012370	.1974397

Elem	Sr4077
Units	ppm
Avg	.2063159
Stddev	.0003398
%RSD	.1647200
#1	.2059582
#2	.2063550
#3	.2066345

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2307.001	57552.71	14016.20	1540.516	3948.198
Stddev	13.875	61.24	10.33	2.738	11.673
%RSD	.6014105	.1064032	.0737081	.1777049	.2956574
#1	2300.490	57598.65	14025.10	1537.714	3942.576
#2	2322.934	57576.30	14018.64	1540.649	3961.618
#3	2297.579	57483.19	14004.87	1543.185	3940.399

Sample Name: LR1 Acquired: 12/5/2024 17:03:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0696195	.0833857	.0242036	-.273308	-.007306	F 2411.933
Stddev	.0140639	.0104717	.0087928	.012899	.006116	8.117
%RSD	20.20105	12.55809	36.32838	4.719444	83.71895	.3365532
#1	.0641142	.0800065	.0238690	-.270657	-.013303	2420.023
#2	.0856033	.0951297	.0155829	-.261940	-.007535	2403.789
#3	.0591412	.0750209	.0331589	-.287326	-.001078	2411.988
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	.0099599	.1864130	1686.602	-.000715	.0550999
Stddev	-----	.0000728	.0017738	12.935	.000516	.0002820
%RSD	-----	.7311337	.9515254	.7669095	72.19600	.5117106
#1	^ -----	.0100288	.1880136	1695.789	-.000849	.0554089
#2	^ -----	.0099672	.1845060	1692.208	-.001151	.0548565
#3	.0167233	.0098837	.1867194	1671.810	-.000145	.0550343
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.234813	974.6678	-.149653	1661.881	.0128303	-.085739
Stddev	.011057	11.4178	.002373	12.015	.0006927	.001869
%RSD	4.708655	1.171460	1.585640	.7229757	5.398688	2.180045
#1	-.240177	979.0957	-.152329	1674.750	.0120375	-.083880
#2	-.242164	983.2085	-.147807	1659.934	.0133183	-.085718
#3	-.222097	961.6992	-.148821	1650.957	.0131351	-.087618
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2012.601	.0916942	.1818596	F 1650.157	.2855359	-.009575
Stddev	4.195	.0023858	.0032550	4.007	.0137384	.001404
%RSD	.2084300	2.601883	1.789845	.2428074	4.811444	14.65990
#1	2017.351	.0943969	.1795724	1645.664	.2901601	-.009933
#2	2009.404	.0908052	.1804204	1653.360	.2963656	-.008027
#3	2011.049	.0898806	.1855862	1651.447	.2700820	-.010766

Sample Name: LR1 Acquired: 12/5/2024 17:03:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257104	-.033905	.1719041	.0757308	-.195906	-.270122
Stddev	.0043362	.000522	.0112656	.0090129	.014359	.002128
%RSD	16.86557	1.539667	6.553417	11.90118	7.329536	.7878111
#1	.0209521	-.033306	.1702240	.0858647	-.212154	-.272006
#2	.0294392	-.034262	.1615729	.0686121	-.184919	-.270547
#3	.0267398	-.034147	.1839154	.0727156	-.190646	-.267814

Elem	Sr4077
Units	ppm
Avg	-.962779
Stddev	.011420
%RSD	1.186117
#1	-.967306
#2	-.971241
#3	-.949790

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1349.478	32963.67	10006.02	797.7804	1774.362
Stddev	9.412	60.74	7.49	5.3952	9.405
%RSD	.6974711	.1842704	.0748080	.6762803	.5300429
#1	1342.091	33033.69	9997.63	803.6893	1765.620
#2	1346.267	32925.11	10008.43	796.5357	1773.153
#3	1360.075	32932.21	10012.00	793.1164	1784.313

Sample Name: LR2 Acquired: 12/5/2024 17:08:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055224	-.031367	F 219.7245	.0009049	-.005190	.0466096
Stddev	.0019913	.000284	.5231	.0019433	.000784	.0071655
%RSD	36.05840	.9038166	.2380562	214.7424	15.10165	15.37337

#1	.0047717	-.031118	220.2740	-.000980	-.004293	.0545105
#2	.0077800	-.031308	219.2327	.002902	-.005744	.0447866
#3	.0040156	-.031675	219.6669	.000793	-.005532	.0405317

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^F *****	-.002723	-.005541	.3217433	.0089703	-.010163
Stddev	-----	.000049	.000127	.0071864	.0001701	.000125
%RSD	-----	1.780819	2.289192	2.233571	1.896309	1.231957

#1	^ -----	-.002688	-.005688	.3191385	.0087891	-.010274
#2	^ -----	-.002779	-.005464	.3298688	.0089954	-.010027
#3	^ -----	-.002703	-.005472	.3162225	.0091265	-.010187

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 294.2589	-.000304	40.68276	-.053252	F 44.31193	.0079987
Stddev	4.4900	.002684	.64451	.014353	.10354	.0003595
%RSD	1.525858	882.3343	1.584230	26.95237	.2336653	4.494814

#1	291.4141	-.003394	41.41905	-.051757	44.42855	.0083025
#2	299.4350	.001029	40.40839	-.039705	44.23081	.0076018
#3	291.9276	.001453	40.22083	-.068293	44.27643	.0080919

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6949822	-.017030	F 19.92922	.5533331	-.008094	-.006476
Stddev	.0366237	.000893	.12760	.0548708	.000548	.000228
%RSD	5.269730	5.243311	.6402464	9.916414	6.765528	3.514151

#1	.7308394	-.017012	20.07633	.6024593	-.008112	-.006314
#2	.6964698	-.016147	19.84853	.5634221	-.008633	-.006377
#3	.6576374	-.017933	19.86281	.4941179	-.007538	-.006736

Sample Name: LR2 Acquired: 12/5/2024 17:08:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005790	-.047881	-.006179	3.563047	-.012892	.0020223
Stddev	.000464	.000962	.001278	.046315	.006083	.0005547
%RSD	8.021675	2.008362	20.68627	1.299859	47.18712	27.42832
#1	-.005764	-.047271	-.007203	3.524626	-.016452	.0020607
#2	-.006267	-.047383	-.004746	3.550040	-.016355	.0025567
#3	-.005339	-.048990	-.006588	3.614474	-.005868	.0014494

Elem	Sr4077
Units	ppm
Avg	.0020695
Stddev	.0000159
%RSD	.7704420
#1	.0020666
#2	.0020552
#3	.0020867

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1645.059	50637.80	13704.32	1164.475	3316.308
Stddev	15.853	155.98	76.05	20.987	17.952
%RSD	.9636448	.3080242	.5549222	1.802281	.5413252
#1	1661.535	50492.27	13788.29	1140.644	3329.287
#2	1629.914	50618.68	13684.56	1180.204	3295.821
#3	1643.728	50802.46	13640.09	1172.575	3323.817

Sample Name: P5069-02 Acquired: 12/5/2024 17:12:33 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006222	-.011164	.0062292	.0069841	-.002047	-.006694	.2676988
Stddev	.001666	.002385	.0035841	.0017304	.000142	.003027	.0003581
%RSD	26.77632	21.36309	57.53641	24.77554	6.912838	45.22494	.1337700
#1	-.004300	-.010296	.0090096	.0053536	-.001934	-.009751	.2672992
#2	-.007259	-.009334	.0074937	.0067992	-.002002	-.003697	.2679905
#3	-.007108	-.013861	.0021843	.0087995	-.002206	-.006633	.2678068
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000241	-.000308	43.03025	.0021149	-.000366	-.000012	.0693337
Stddev	.000100	.000135	.12312	.0002392	.000163	.002566	.0026807
%RSD	41.33176	43.88833	.2861178	11.31020	44.49455	21378.38	3.866313
#1	-.000352	-.000210	42.88812	.0022009	-.000190	.002625	.0666570
#2	-.000159	-.000252	43.09867	.0018446	-.000512	-.000161	.0720183
#3	-.000212	-.000463	43.10396	.0022992	-.000396	-.002500	.0693257
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3960424	64.78294	.0038282	.0001949	265.0895	.0011462	.0231202
Stddev	.0024040	.16033	.0004859	.0003722	3.6715	.0003942	.0002723
%RSD	.6070109	.2474834	12.69266	191.0168	1.384986	34.39412	1.177892
#1	.3933351	64.61842	.0043019	-.000234	261.5930	.0011550	.0234163
#2	.3979274	64.79169	.0038516	.000429	264.7615	.0015359	.0228804
#3	.3968647	64.93872	.0033310	.000390	268.9139	.0007476	.0230640
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.402851	.0268406	.0022954	-.001307	-.000966	.2712383	.0033205
Stddev	.019715	.0008012	.0001728	.000880	.000312	.0104034	.0079881
%RSD	.8204850	2.985098	7.526383	67.32710	32.31904	3.835511	240.5694
#1	2.381613	.0261663	.0023946	-.000716	-.001298	.2657258	-.003895
#2	2.406372	.0277263	.0023958	-.000887	-.000923	.2832379	.001953
#3	2.420569	.0266293	.0020959	-.002318	-.000678	.2647512	.011904

Sample Name: P5069-02 Acquired: 12/5/2024 17:12:33 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.894067	-.006504	.3258788
Stddev	.011737	.000807	.0015336
%RSD	.4055577	12.40043	.4705960

#1	2.905118	-.007376	.3242707
#2	2.881747	-.006352	.3260406
#3	2.895336	-.005785	.3273251

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1824.767	48627.28	13128.67	1250.230	3083.559
Stddev	20.736	260.64	59.56	17.203	16.946
%RSD	1.136386	.5359899	.4536699	1.375970	.5495681

#1	1848.518	48920.72	13191.77	1269.159	3103.125
#2	1810.262	48538.45	13120.81	1245.982	3073.552
#3	1815.521	48422.67	13073.42	1235.549	3074.000

Sample Name: P5072-04 Acquired: 12/5/2024 17:17:00 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004954	-.012759	.0039823	.0062710	-.001846	.0628227	.3346321
Stddev	.000441	.001721	.0015295	.0012611	.000475	.0012369	.0012710
%RSD	8.895332	13.48767	38.40683	20.10919	25.71942	1.968960	.3798215
#1	-.005102	-.011380	.0055311	.0048623	-.001324	.0617439	.3332974
#2	-.004459	-.014688	.0039431	.0072945	-.001962	.0641728	.3347708
#3	-.005302	-.012210	.0024729	.0066562	-.002252	.0625513	.3358281
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000928	.0002501	31.15983	.0030837	.0075491	.0005026	.0285836
Stddev	.0000170	.0000280	.26738	.0003792	.0002511	.0002436	.0023381
%RSD	18.31090	11.18083	.8580877	12.29609	3.325895	48.47613	8.179870
#1	.0001125	.0002188	31.45758	.0035116	.0077242	.0003044	.0282308
#2	.0000834	.0002726	31.08167	.0027892	.0076615	.0004287	.0264420
#3	.0000826	.0002589	30.94025	.0029504	.0072614	.0007746	.0310781
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.303822	3.689541	.0069511	.0004000	326.8199	.0007571	.0433744
Stddev	.008228	.010328	.0003765	.0003499	3.5796	.0008948	.0007387
%RSD	.6310298	.2799345	5.416647	87.47101	1.095269	118.1875	1.703172
#1	1.312727	3.698083	.0073838	-.000004	324.8565	.0004287	.0433121
#2	1.302238	3.692478	.0066974	.000591	324.6517	.0017698	.0426688
#3	1.296502	3.678063	.0067723	.000613	330.9515	.0000729	.0441423
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.000713	.0097764	-.000225	-.001066	-.000799	.7173080	.0058723
Stddev	.012206	.0001300	.000185	.000855	.000372	.0089938	.0022726
%RSD	1.219713	1.330008	82.02956	80.23338	46.61101	1.253830	38.69971
#1	.994003	.0096928	-.000437	-.000090	-.000477	.7159771	.0036041
#2	1.014802	.0097103	-.000097	-.001687	-.000712	.7090537	.0081492
#3	.993333	.0099262	-.000142	-.001421	-.001206	.7268931	.0058637

Sample Name: P5072-04 Acquired: 12/5/2024 17:17:00 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5568227	-.006115	.1226337
Stddev	.0036117	.000197	.0004659
%RSD	.6486303	3.223244	.3799372
#1	.5609606	-.005890	.1221193
#2	.5552037	-.006260	.1227544
#3	.5543037	-.006194	.1230273

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1952.190	49735.66	13332.71	1322.302	3168.430
Stddev	16.955	212.92	14.26	14.425	24.722
%RSD	.8685067	.4281040	.1069449	1.090895	.7802546
#1	1933.533	49916.47	13319.95	1334.909	3141.787
#2	1966.658	49789.53	13348.10	1325.425	3190.627
#3	1956.378	49500.97	13330.08	1306.571	3172.876

Sample Name: P5072-08 Acquired: 12/5/2024 17:21:28 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009675	-.012094	.0009738	.0059656	-.002264	.0554361	.2128929
Stddev	.002411	.001624	.0001906	.0004880	.000936	.0014159	.0002253
%RSD	24.92256	13.42891	19.57610	8.180771	41.34682	2.554061	.1058233
#1	-.011036	-.010272	.0008659	.0054099	-.002753	.0555484	.2128006
#2	-.011098	-.013388	.0011939	.0063248	-.001184	.0567925	.2131497
#3	-.006891	-.012622	.0008615	.0061619	-.002853	.0539675	.2127284
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000146	-.000091	15.12626	.0016720	-.000270	.0015677	.0303189
Stddev	.0000151	.000041	.05514	.0004238	.000135	.0001370	.0038172
%RSD	103.4126	45.16188	.3645524	25.34397	49.85828	8.739061	12.59020
#1	.0000037	-.000132	15.18600	.0013062	-.000128	.0015988	.0346948
#2	.0000319	-.000050	15.11548	.0015735	-.000286	.0016866	.0276734
#3	.0000083	-.000091	15.07731	.0021364	-.000396	.0014179	.0285884
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2315991	2.690140	.0063985	.0003278	289.6927	.0007136	.0401971
Stddev	.0006113	.005966	.0002367	.0000975	2.1374	.0007467	.0002486
%RSD	.2639567	.2217892	3.698854	29.73293	.7378086	104.6379	.6185456
#1	.2317456	2.684991	.0061442	.0003812	287.5718	.0006636	.0404065
#2	.2321239	2.696679	.0064390	.0003869	289.6602	.0014839	.0399223
#3	.2309278	2.688750	.0066123	.0002153	291.8462	-.000007	.0402624
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8104813	.0079211	-.000013	.0004947	.0001908	.6481360	.0197610
Stddev	.0098085	.0004637	.000289	.0004855	.0002706	.0033409	.0014183
%RSD	1.210202	5.853914	2247.923	98.13222	141.8149	.5154677	7.177169
#1	.8029321	.0083735	.000031	.0005102	.0002108	.6464220	.0186043
#2	.8069441	.0079429	.000252	.0000017	-.000089	.6459999	.0213434
#3	.8215678	.0074469	-.000321	.0009723	.000451	.6519861	.0193355

Sample Name: P5072-08 Acquired: 12/5/2024 17:21:28 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3695238	-.003286	.0873161
Stddev	.0024997	.000385	.0000731
%RSD	.6764607	11.72782	.0837620
#1	.3666393	-.002993	.0872691
#2	.3710567	-.003722	.0872788
#3	.3708754	-.003142	.0874003

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1918.595	50268.26	13618.92	1313.678	3202.306
Stddev	45.114	145.54	48.61	6.962	43.885
%RSD	2.351413	.2895200	.3569034	.5299609	1.370426
#1	1947.534	50404.13	13578.35	1320.947	3234.141
#2	1866.613	50285.98	13605.62	1313.016	3152.244
#3	1941.638	50114.68	13672.79	1307.071	3220.532

Sample Name: P5072-08DUP Acquired: 12/5/2024 17:25:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009467	-.010257	-.000192	.0059987	-.001764	.0686988	.2170166
Stddev	.000827	.000651	.000254	.0016382	.000788	.0035769	.0003371
%RSD	8.732692	6.350799	132.1495	27.30934	44.69471	5.206649	.1553473

#1	-.009840	-.011007	.000006	.0043743	-.001920	.0648453	.2167952
#2	-.010041	-.009932	-.000104	.0059713	-.000909	.0693379	.2174046
#3	-.008519	-.009832	-.000479	.0076504	-.002463	.0719130	.2168499

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000116	-.000073	15.33490	.0019235	-.000111	.0016117	.0390437
Stddev	.0000608	.000036	.02362	.0002755	.000157	.0002551	.0056031
%RSD	522.1963	49.81776	.1540551	14.32399	141.3944	15.83090	14.35079

#1	-.000038	-.000074	15.34269	.0022406	.000070	.0013408	.0397352
#2	-.000007	-.000109	15.30836	.0017873	-.000203	.0016468	.0331270
#3	.000079	-.000036	15.35365	.0017427	-.000200	.0018475	.0442690

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2358570	2.722328	.0064204	.0003565	289.3391	.0005062	.0399931
Stddev	.0009561	.016254	.0002337	.0001657	1.6306	.0016249	.0005750
%RSD	.4053602	.5970463	3.640464	46.46688	.5635662	320.9701	1.437804

#1	.2348254	2.719784	.0061663	.0005312	287.9348	.0022892	.0403820
#2	.2360320	2.739704	.0066263	.0003367	291.1275	.0001208	.0402648
#3	.2367134	2.707497	.0064685	.0002017	288.9551	-.000891	.0393326

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8111522	.0073960	.0001141	-.000569	.0000708	.6402574	.0182130
Stddev	.0186116	.0001762	.0000842	.001083	.0002124	.0021941	.0017416
%RSD	2.294460	2.382228	73.78566	190.5114	299.9325	.3426927	9.562520

#1	.7942452	.0074705	.0002113	-.001770	-.000155	.6415042	.0194377
#2	.8081164	.0071947	.0000649	.000333	.000100	.6415441	.0162192
#3	.8310951	.0075226	.0000661	-.000269	.000267	.6377240	.0189821

Sample Name: P5072-08DUP Acquired: 12/5/2024 17:25:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3742396	-.003171	.0876243
Stddev	.0018152	.000447	.0002483
%RSD	.4850408	14.09372	.2834105
#1	.3729658	-.002656	.0877546
#2	.3734350	-.003397	.0877803
#3	.3763181	-.003460	.0873379

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1997.969	50531.58	13516.24	1345.375	3280.779
Stddev	39.860	181.60	25.53	6.798	41.319
%RSD	1.995018	.3593739	.1888862	.5052821	1.259420
#1	2029.697	50520.17	13487.65	1344.375	3312.065
#2	2010.981	50355.95	13524.30	1339.133	3296.332
#3	1953.229	50718.61	13536.77	1352.618	3233.941

Sample Name: P5072-08LX5 Acquired: 12/5/2024 17:30:21 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001731	-.001917	.0002203	.0003256	-.002017	.0159975	.0432092
Stddev	.001968	.001598	.0003064	.0019043	.000910	.0020846	.0004855
%RSD	113.6736	83.35859	139.0771	584.7752	45.12163	13.03068	1.123649
#1	-.001739	-.000432	.0002621	-.001844	-.002245	.0183779	.0436266
#2	-.003696	-.001711	-.000105	.001100	-.001015	.0144977	.0433246
#3	.000241	-.003608	.000504	.001721	-.002792	.0151169	.0426763
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000277	-.000045	3.164560	-.000301	.0000917	-.000091	.0048519
Stddev	.0000350	.000036	.024910	.000046	.0000869	.000084	.0020443
%RSD	126.2675	79.36878	.7871646	15.17619	94.83386	92.43456	42.13498
#1	-.000010	-.000004	3.178617	-.000330	.0000525	-.000076	.0043290
#2	.000059	-.000063	3.179264	-.000326	.0001912	-.000181	.0071069
#3	.000034	-.000068	3.135798	-.000249	.0000312	-.000015	.0031198
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0487854	.5699763	.0010947	.0005580	54.82322	.0000155	.0079754
Stddev	.0006099	.0028188	.0000761	.0003088	.31373	.0003056	.0001047
%RSD	1.250122	.4945483	6.947721	55.33571	.5722500	1965.395	1.313246
#1	.0493999	.5717561	.0011765	.0003620	55.15475	.0000570	.0078921
#2	.0487761	.5714465	.0010814	.0009140	54.78392	-.000309	.0080930
#3	.0481803	.5667264	.0010261	.0003982	54.53100	.000298	.0079410
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4568261	-.005337	-.000124	-.000501	-.000218	.1261324	-.000408
Stddev	.0329355	.000095	.000221	.000457	.000161	.0031954	.001919
%RSD	7.209637	1.773648	178.0804	91.09907	73.93650	2.533339	470.2045
#1	.4192360	-.005294	-.000324	-.000136	-.000219	.1246896	.000487
#2	.4706221	-.005272	-.000162	-.001013	-.000057	.1297947	.000899
#3	.4806201	-.005446	.000113	-.000355	-.000380	.1239129	-.002611

Sample Name: P5072-08LX5 Acquired: 12/5/2024 17:30:21 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0759438	.0030133	.0180052
Stddev	.0006699	.0000858	.0001612
%RSD	.8820864	2.848458	.8955454
#1	.0756855	.0029566	.0179839
#2	.0754416	.0029712	.0181760
#3	.0767044	.0031120	.0178556

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2135.553	54064.27	13618.32	1431.231	3575.683
Stddev	12.153	99.02	115.66	1.015	17.527
%RSD	.5690753	.1831470	.8493292	.0708947	.4901772
#1	2144.642	53956.75	13545.68	1430.332	3589.506
#2	2140.269	54151.71	13557.57	1431.029	3581.573
#3	2121.749	54084.36	13751.70	1432.331	3555.969

Sample Name: CCV04 Acquired: 12/5/2024 17:41:58 Type: Unk
Method: NON EPA-6010-200.7(v2494) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.672608	5.023425	4.910017	4.700315	4.632202	9.350561
Stddev	.017917	.013630	.008561	.025503	.034348	.027781
%RSD	.3834541	.2713342	.1743500	.5425896	.7415106	.2971067

#1	4.652045	5.039100	4.919112	4.671772	4.593203	9.330109
#2	4.680913	5.016809	4.902116	4.708309	4.645452	9.339384
#3	4.684866	5.014364	4.908823	4.720863	4.657953	9.382190

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.342632	.2552479	2.480643	24.98219	.9965409	2.444730
Stddev	.031223	.0024474	.004649	.03415	.0053770	.003119
%RSD	.3341952	.9588462	.1873929	.1366978	.5395642	.1275975

#1	9.307237	.2580721	2.485429	25.01399	1.001951	2.448154
#2	9.366264	.2539264	2.480357	24.98648	.991197	2.443987
#3	9.354397	.2537454	2.476145	24.94609	.996475	2.442049

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.172455	4.759190	2.454072	24.28599	2.446387	1.199709
Stddev	.006934	.034836	.000716	.03805	.001084	.001984
%RSD	.5914370	.7319651	.0291622	.1566835	.0443240	.1653712

#1	1.164780	4.719051	2.454341	24.26678	2.447012	1.201196
#2	1.174313	4.776983	2.453261	24.26138	2.447014	1.197456
#3	1.178270	4.781535	2.454614	24.32982	2.445135	1.200475

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.57557	2.435069	2.380527	26.06706	4.979310	4.789261
Stddev	.08629	.005826	.004301	.13929	.030082	.016884
%RSD	.3374113	.2392442	.1806724	.5343495	.6041428	.3525308

#1	25.66785	2.441564	2.375708	25.92908	5.013825	4.770122
#2	25.49688	2.430305	2.381894	26.06447	4.965443	4.795618
#3	25.56198	2.433338	2.383977	26.20762	4.958663	4.802044

Sample Name: CCV04 Acquired: 12/5/2024 17:41:58 Type: Unk
Method: NON EPA-6010-200.7(v2494) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.957205	4.789249	4.605491	4.962605	4.820690	F 4.429488
Stddev	.007154	.007290	.040380	.013341	.009164	.014119
%RSD	.1443171	.1522086	.8767840	.2688363	.1901027	.3187514
#1	4.965435	4.788346	4.561512	4.960849	4.826206	4.423575
#2	4.953708	4.782452	4.614065	4.976737	4.825752	4.419288
#3	4.952472	4.796947	4.640895	4.950229	4.810111	4.445603

Elem	Sr4077
Units	ppm
Avg	4.866358
Stddev	.005230
%RSD	.1074651
#1	4.865239
#2	4.872056
#3	4.861778

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2254.417	55693.51	13945.63	1512.774	3628.603
Stddev	18.793	101.85	42.34	8.767	17.851
%RSD	.8336199	.1828810	.3036317	.5795579	.4919416
#1	2276.117	55773.20	13897.47	1521.299	3648.611
#2	2243.487	55728.58	13977.03	1513.240	3614.311
#3	2243.647	55578.76	13962.38	1503.783	3622.886

Sample Name: CCB04 Acquired: 12/5/2024 17:47:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007021	-.000301	.0008442	-.001163	-.001179	-.001099	.0005775
Stddev	.0016446	.001503	.0003160	.000484	.000381	.000592	.0004026
%RSD	234.2499	499.3531	37.43001	41.62622	32.28044	53.90073	69.70978
#1	-.000776	-.000898	.0006889	-.001719	-.001577	-.000506	.0002832
#2	.002474	.001409	.0006359	-.000845	-.000819	-.001691	.0004130
#3	.000408	-.001414	.0012078	-.000923	-.001140	-.001099	.0010362
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000480	.0000786	-.008826	.0000524	.0001461	-.000973	-.002748
Stddev	.0000590	.0000264	.001080	.0000714	.0001089	.000144	.002099
%RSD	123.1162	33.63737	12.23454	136.2561	74.52547	14.75030	76.37911
#1	.0000871	.0000481	-.007908	.0000131	.0000456	-.000927	-.000845
#2	-.000020	.0000944	-.010016	.0001349	.0002617	-.001134	-.002400
#3	.000077	.0000934	-.008555	.0000093	.0001309	-.000858	-.004999
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000015	.0026778	-.000224	.0005621	.1703450	.0003562	-.000503
Stddev	.000074	.0114778	.000229	.0001673	.0141938	.0002048	.000227
%RSD	504.9737	428.6334	102.0459	29.75609	8.332397	57.49197	45.15620
#1	.000060	-.008704	-.000224	.0003719	.1539683	.0005432	-.000766
#2	-.000087	.014249	.000004	.0006281	.1779720	.0001374	-.000367
#3	-.000016	.002488	-.000454	.0006864	.1790948	.0003879	-.000377
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0990631	-.002649	-.000124	-.000771	-.000145	.0003505	-.005844
Stddev	.0125891	.000119	.000090	.000325	.000083	.0032157	.000749
%RSD	12.70815	4.508342	72.46821	42.18153	57.60529	917.4765	12.81491
#1	.0847123	-.002661	-.000070	-.001026	-.000208	.0025230	-.005025
#2	.1082450	-.002524	-.000074	-.000405	-.000050	.0018722	-.006016
#3	.1042320	-.002762	-.000228	-.000881	-.000175	-.003344	-.006493

Sample Name: CCB04 Acquired: 12/5/2024 17:47:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001623	.0002600	-.000021
Stddev	.001890	.0002900	.000006
%RSD	116.4064	111.5672	26.20666
#1	-.003172	-.000074	-.000018
#2	.000482	.000449	-.000018
#3	-.002181	.000405	-.000028

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2454.847	59722.25	14205.56	1641.436	4235.515
Stddev	6.075	105.95	3.24	5.272	4.633
%RSD	.2474573	.1774091	.0227729	.3212108	.1093767
#1	2455.567	59814.94	14202.06	1645.952	4237.025
#2	2448.444	59606.75	14208.44	1635.642	4230.315
#3	2460.529	59745.06	14206.17	1642.714	4239.204

Sample Name: P5072-08MS Acquired: 12/5/2024 17:52:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7183932	1.672191	.8556133	1.773586	.7135712	1.838670	.3925150
Stddev	.0045166	.013007	.0027253	.019129	.0079375	.006347	.0017185
%RSD	.6287032	.7778210	.3185230	1.078533	1.112369	.3451860	.4378277

#1	.7150890	1.666682	.8563203	1.761574	.7068494	1.841373	.3934983
#2	.7165509	1.687045	.8579154	1.763540	.7115360	1.831419	.3905306
#3	.7235397	1.662845	.8526041	1.795645	.7223282	1.843218	.3935162

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1980464	.1864636	16.14971	.3851122	.1859060	.2578369	2.831259
Stddev	.0003688	.0003743	.04516	.0003989	.0005299	.0020950	.013605
%RSD	.1862171	.2007283	.2796449	.1035894	.2850328	.8125316	.4805456

#1	.1984358	.1866969	16.10308	.3846632	.1861910	.2563306	2.816480
#2	.1980009	.1866620	16.19324	.3852472	.1862325	.2569507	2.843263
#3	.1977024	.1860319	16.15282	.3854260	.1852947	.2602294	2.834035

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4233511	4.492895	.4627271	.0711754	265.6220	.2892154	.2299272
Stddev	.0021474	.010187	.0012999	.0002461	3.4376	.0015804	.0007841
%RSD	.5072477	.2267444	.2809246	.3458258	1.294155	.5464317	.3410255

#1	.4211041	4.487400	.4631663	.0713684	269.3803	.2874263	.2306848
#2	.4235665	4.486634	.4637506	.0708982	262.6369	.2897986	.2299779
#3	.4253827	4.504650	.4612645	.0712595	264.8487	.2904213	.2291190

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.841687	.2690458	.3809526	.6401665	.1884176	1.276479	5.708697
Stddev	.033728	.0010402	.0017698	.0007674	.0008796	.006501	.020655
%RSD	.3427073	.3866184	.4645866	.1198724	.4668520	.5092667	.3618196

#1	9.875828	.2695562	.3800913	.6403367	.1876874	1.269000	5.693802
#2	9.808387	.2697323	.3797781	.6408344	.1893942	1.279668	5.732276
#3	9.840846	.2678491	.3829882	.6393282	.1881713	1.280769	5.700012

Sample Name: P5072-08MS Acquired: 12/5/2024 17:52:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3552051	.1806218	.2788198
Stddev	.0022315	.0016734	.0010118
%RSD	.6282220	.9264431	.3628909
#1	.3553248	.1825139	.2794277
#2	.3573744	.1793364	.2776517
#3	.3529163	.1800151	.2793799

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2154.834	53696.52	13665.64	1452.222	3447.204
Stddev	33.045	47.79	13.45	2.610	32.799
%RSD	1.533525	.0889977	.0984129	.1797395	.9514690
#1	2169.104	53749.70	13662.88	1449.361	3462.644
#2	2178.346	53682.69	13680.26	1454.474	3469.434
#3	2117.052	53657.17	13653.79	1452.831	3409.535

Sample Name: P5072-08MSD Acquired: 12/5/2024 17:56:24 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7333673	1.684135	.8576273	1.813538	.7309614	1.863903	.4034601
Stddev	.0057728	.005741	.0043012	.018638	.0077329	.003635	.0007721
%RSD	.7871694	.3408789	.5015176	1.027737	1.057913	.1950338	.1913754

#1	.7273437	1.689502	.8625294	1.794422	.7234928	1.862830	.4026630
#2	.7339068	1.684820	.8544855	1.814532	.7304572	1.867954	.4042045
#3	.7388515	1.678082	.8558671	1.831659	.7389341	1.860925	.4035130

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1948144	.1867376	16.00822	.3839581	.1865359	.2616237	2.869555
Stddev	.0007776	.0009211	.05064	.0006708	.0001850	.0020103	.002530
%RSD	.3991288	.4932812	.3163507	.1747033	.0991959	.7684080	.0881502

#1	.1940226	.1877315	15.97982	.3832614	.1865881	.2595787	2.866697
#2	.1948438	.1859126	15.97816	.3840133	.1866892	.2616949	2.871504
#3	.1955769	.1865688	16.06669	.3845995	.1863304	.2635975	2.870465

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4245826	4.467613	.4640909	.0717278	276.2898	.2899327	.2331731
Stddev	.0008854	.013535	.0017449	.0003289	1.2775	.0008646	.0007652
%RSD	.2085319	.3029672	.3759768	.4585626	.4623757	.2982103	.3281515

#1	.4245926	4.483219	.4661057	.0718342	274.9898	.2893003	.2324438
#2	.4254629	4.460559	.4630805	.0719903	277.5435	.2909179	.2331058
#3	.4236922	4.459062	.4630865	.0713589	276.3361	.2895798	.2339697

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.28037	.2679526	.3880663	.6418771	.1918460	1.300000	5.727484
Stddev	.06135	.0011307	.0018581	.0029001	.0008261	.002471	.020934
%RSD	.5967498	.4219743	.4788162	.4518138	.4305893	.1900747	.3655079

#1	10.35116	.2669703	.3861724	.6447842	.1909188	1.302148	5.737807
#2	10.24731	.2691886	.3881400	.6418630	.1921157	1.300551	5.741252
#3	10.24265	.2676989	.3898865	.6389841	.1925035	1.297300	5.703393

Sample Name: P5072-08MSD Acquired: 12/5/2024 17:56:24 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3630934	.1884454	.2821102
Stddev	.0017681	.0010889	.0005527
%RSD	.4869438	.5778519	.1959064
#1	.3651345	.1874123	.2818028
#2	.3621130	.1895826	.2827482
#3	.3620328	.1883412	.2817795

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2106.512	52902.51	13641.87	1420.939	3402.209
Stddev	30.505	186.94	17.39	7.829	30.622
%RSD	1.448107	.3533664	.1274592	.5509425	.9000758
#1	2138.916	52711.76	13630.13	1411.906	3433.718
#2	2102.269	52910.37	13633.62	1425.165	3400.352
#3	2078.351	53085.39	13661.84	1425.747	3372.558

Sample Name: P5072-08A Acquired: 12/5/2024 18:00:34 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7198363	1.690104	.8434058	1.789818	.7207450	1.824278	.3923071
Stddev	.0044155	.014829	.0013694	.006817	.0040120	.013994	.0031808
%RSD	.6134065	.8773855	.1623657	.3808734	.5566433	.7671233	.8107856

#1	.7147983	1.691951	.8421403	1.781989	.7180390	1.814094	.3896100
#2	.7230339	1.703923	.8432175	1.793029	.7253544	1.818506	.3914966
#3	.7216768	1.674439	.8448596	1.794437	.7188415	1.840236	.3958147

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1920383	.1834670	15.76944	.3774597	.1836566	.2568464	2.808419
Stddev	.0004013	.0001058	.04335	.0007373	.0001197	.0011626	.000434
%RSD	.2089557	.0576509	.2748768	.1953391	.0651828	.4526501	.0154560

#1	.1917794	.1833483	15.75207	.3782140	.1837875	.2555052	2.808349
#2	.1925005	.1835514	15.73748	.3774247	.1835528	.2574664	2.808024
#3	.1918350	.1835012	15.81878	.3767406	.1836294	.2575676	2.808884

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4133849	4.400057	.4559610	.0707115	272.6027	.2845592	.2307918
Stddev	.0008667	.014605	.0002673	.0002165	.9946	.0003151	.0007352
%RSD	.2096488	.3319354	.0586200	.3061524	.3648658	.1107423	.3185664

#1	.4132726	4.405438	.4557010	.0709071	272.3127	.2846576	.2300110
#2	.4125800	4.383525	.4559469	.0704789	271.7853	.2842066	.2308936
#3	.4143023	4.411209	.4562350	.0707484	273.7101	.2848133	.2314708

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.952544	.2608560	.3825364	.6347239	.1872390	1.277861	5.691659
Stddev	.079672	.0006294	.0014920	.0019543	.0005874	.009861	.023848
%RSD	.8005229	.2412838	.3900270	.3079036	.3137082	.7716615	.4189980

#1	9.893929	.2609608	.3809158	.6366840	.1868435	1.286628	5.670716
#2	9.920443	.2614264	.3838528	.6347126	.1869595	1.267185	5.717615
#3	10.04326	.2601807	.3828407	.6327753	.1879139	1.279770	5.686646

Sample Name: P5072-08A Acquired: 12/5/2024 18:00:34 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3475601	.1821475	.2770548
Stddev	.0069837	.0016130	.0014580
%RSD	2.009336	.8855296	.5262371

#1	.3397761	.1804720	.2758254
#2	.3532765	.1822806	.2766736
#3	.3496278	.1836897	.2786655

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2140.136	53775.38	13871.26	1427.426	3457.139
Stddev	14.071	110.00	28.46	10.417	15.568
%RSD	.6574944	.2045556	.2051995	.7297998	.4503110

#1	2155.303	53742.55	13886.64	1436.653	3471.167
#2	2137.599	53898.06	13888.73	1429.497	3459.860
#3	2127.506	53685.53	13838.42	1416.129	3440.390

Sample Name: P5044-01 Acquired: 12/5/2024 18:04:45 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000344	-.001342	.0051396	-.001103	-.002773	.0192742
Stddev	.001090	.000963	.0004452	.002158	.000475	.0015038
%RSD	317.0121	71.75557	8.662994	195.5869	17.13576	7.802005
#1	-.000721	-.001977	.0046298	-.000248	-.002953	.0179126
#2	.000885	-.001816	.0053364	-.003558	-.002235	.0190219
#3	-.001195	-.000234	.0054525	.000496	-.003133	.0208882
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1292200	.0003386	.0000914	35.71275	.0066442	.0006522
Stddev	.0002168	.0000227	.0000801	.13926	.0001844	.0001120
%RSD	.1677772	6.694092	87.67420	.3899319	2.774798	17.16653
#1	.1292567	.0003592	.0001196	35.87155	.0064362	.0006659
#2	.1294161	.0003143	.0001536	35.61150	.0067090	.0005340
#3	.1289871	.0003422	.0000010	35.65518	.0067874	.0007567
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1948356	.2215235	.0722693	8.430531	.0061507	.0005590
Stddev	.0004760	.0024655	.0005470	.054821	.0001862	.0003531
%RSD	.2442995	1.112961	.7569172	.6502629	3.027104	63.16451
#1	.1949931	.2229269	.0728050	8.448044	.0063640	.0008892
#2	.1943009	.2229670	.0722913	8.369094	.0060670	.0001868
#3	.1952129	.2186768	.0717117	8.474456	.0060210	.0006010
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.13401	.0010452	.0346629	4.066788	.0255038	.0001789
Stddev	.17802	.0009776	.0000446	.017433	.0005486	.0002423
%RSD	.6110546	93.53459	.1285608	.4286573	2.150990	135.4705
#1	28.92923	.0012250	.0347014	4.046741	.0260905	.0001327
#2	29.25199	.0019203	.0346141	4.078384	.0254172	.0004409
#3	29.22080	-.000010	.0346733	4.075241	.0250036	-.000037

Sample Name: P5044-01 Acquired: 12/5/2024 18:04:45 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001967	-.000721	8.314634	.3486856	F 10.52950	-.001517
Stddev	.000853	.000162	.031160	.0023913	.05366	.000250
%RSD	43.36344	22.53556	.3747576	.6858100	.5096492	16.46471
#1	-.001818	-.000657	8.279419	.3471523	10.47699	-.001765
#2	-.001198	-.000906	8.325845	.3474634	10.52727	-.001520
#3	-.002884	-.000600	8.338636	.3514410	10.58425	-.001266

Elem	Sr4077
Units	ppm
Avg	.1933804
Stddev	.0004604
%RSD	.2380937
#1	.1929217
#2	.1938426
#3	.1933770

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2315.832	57510.75	14355.06	1552.241	3896.313
Stddev	13.603	121.27	21.08	11.536	15.991
%RSD	.5873788	.2108572	.1468368	.7431545	.4104049
#1	2313.436	57645.07	14333.33	1553.087	3897.909
#2	2330.474	57477.86	14375.42	1563.330	3911.446
#3	2303.587	57409.33	14356.41	1540.306	3879.585

Sample Name: P5044-02DUP Acquired: 12/5/2024 18:08:59 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000498	-.000228	.0002476	-.000576	-.002462	.0725016
Stddev	.001831	.000736	.0005590	.001170	.000799	.0016096
%RSD	367.7730	322.2643	225.7404	203.1719	32.43434	2.220067
#1	-.001739	.000327	-.000324	-.001827	-.001541	.0735029
#2	-.001360	.000051	.000275	-.000393	-.002951	.0733569
#3	.001605	-.001063	.000793	.000492	-.002894	.0706449
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1409426	.0003407	.0001272	60.33837	.0077850	.0006847
Stddev	.0005770	.0000420	.0000980	.20801	.0000941	.0000154
%RSD	.4093944	12.34249	77.01048	.3447361	1.209178	2.253784
#1	.1404161	.0003600	.0002249	60.12516	.0077168	.0006997
#2	.1408522	.0002925	.0000289	60.54076	.0078924	.0006689
#3	.1415595	.0003696	.0001278	60.34918	.0077459	.0006855
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1552982	.2737164	.1046389	11.56815	.0068844	.0002422
Stddev	.0003800	.0055069	.0003476	.05027	.0001672	.0002547
%RSD	.2447097	2.011893	.3322027	.4345680	2.428539	105.1861
#1	.1555354	.2674927	.1045319	11.51160	.0069150	-.000034
#2	.1548599	.2779573	.1050275	11.60777	.0067040	.000467
#3	.1554993	.2756992	.1043575	11.58509	.0070341	.000293
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.46623	.0009016	.0485924	4.553756	.0291933	.0004816
Stddev	.10312	.0006827	.0001098	.019967	.0001619	.0001724
%RSD	.2991775	75.72106	.2258720	.4384787	.5544271	35.79965
#1	34.58524	.0005496	.0486027	4.574101	.0290079	.0003505
#2	34.40345	.0004667	.0484779	4.534189	.0292654	.0006769
#3	34.41001	.0016884	.0486967	4.552977	.0293065	.0004174

Sample Name: P5044-02DUP Acquired: 12/5/2024 18:08:59 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001464	-.000602	9.141269	.4188047	F 11.96273	-.005116
Stddev	.001251	.000221	.021580	.0061741	.01642	.000035
%RSD	85.43919	36.76146	.2360732	1.474214	.1372398	.6873937
#1	-.001612	-.000842	9.150014	.4196679	11.95745	-.005080
#2	-.000146	-.000557	9.157104	.4122444	11.94961	-.005118
#3	-.002634	-.000407	9.116689	.4245017	11.98114	-.005150

Elem	Sr4077
Units	ppm
Avg	.3183350
Stddev	.0003483
%RSD	.1094228
#1	.3179329
#2	.3185266
#3	.3185454

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2182.610	55087.43	13955.88	1480.234	3664.354
Stddev	9.849	18.48	21.14	4.418	18.206
%RSD	.4512653	.0335385	.1514977	.2984366	.4968310
#1	2185.244	55067.93	13977.18	1476.484	3678.860
#2	2190.874	55089.69	13934.90	1479.114	3670.279
#3	2171.711	55104.68	13955.56	1485.104	3643.924

Sample Name: P5044-02 Acquired: 12/5/2024 18:13:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008502	.0007576	.0007686	-.001151	-.003005	.0714916
Stddev	.0034051	.0004528	.0004754	.001415	.001042	.0031177
%RSD	400.5300	59.77059	61.85797	122.9404	34.67623	4.361007

#1	.0027401	.0002759	.0004223	-.001199	-.002285	.0726766
#2	.0028911	.0008222	.0013106	.000288	-.004200	.0679551
#3	-.003081	.0011746	.0005728	-.002541	-.002531	.0738430

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1410325	.0003897	.0001295	60.59816	.0081192	.0006943
Stddev	.0003216	.0000210	.0000625	.11871	.0003060	.0001264
%RSD	.2280185	5.381153	48.22234	.1959015	3.768727	18.20563

#1	.1409163	.0003787	.0001221	60.73213	.0084725	.0006263
#2	.1407851	.0003766	.0000711	60.55628	.0079362	.0008401
#3	.1413960	.0004139	.0001954	60.50606	.0079490	.0006164

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1554835	.2743792	.1050639	11.63923	.0069437	.0004527
Stddev	.0007989	.0018562	.0001635	.03578	.0003890	.0000364
%RSD	.5138316	.6764929	.1556337	.3073953	5.601790	8.046388

#1	.1545655	.2722488	.1049063	11.66358	.0067321	.0004130
#2	.1560218	.2756480	.1052328	11.65595	.0067064	.0004846
#3	.1558631	.2752407	.1050527	11.59815	.0073926	.0004605

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.69750	.0018965	.0496335	4.586425	.0288721	.0003438
Stddev	.13879	.0013185	.0002897	.021291	.0003994	.0003001
%RSD	.4000137	69.52284	.5836689	.4642272	1.383302	87.28076

#1	34.61511	.0024390	.0497429	4.588907	.0291359	-.000003
#2	34.85775	.0003933	.0493050	4.606367	.0284126	.000523
#3	34.61966	.0028573	.0498525	4.564001	.0290679	.000511

Sample Name: P5044-02 Acquired: 12/5/2024 18:13:14 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002042	-.000592	9.197973	.4177590	F 12.03891	-.005214
Stddev	.000128	.000237	.015205	.0037181	.05322	.000164
%RSD	6.249111	40.06059	.1653114	.8900068	.4421016	3.147919
#1	-.001987	-.000350	9.208993	.4149685	12.00239	-.005198
#2	-.001951	-.000824	9.204300	.4219799	12.09998	-.005385
#3	-.002188	-.000604	9.180626	.4163287	12.01435	-.005058

Elem	Sr4077
Units	ppm
Avg	.3194758
Stddev	.0007257
%RSD	.2271449
#1	.3186382
#2	.3199175
#3	.3198715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2186.905	54490.63	13873.11	1447.759	3657.205
Stddev	7.325	101.34	18.23	6.418	10.635
%RSD	.3349626	.1859717	.1313747	.4432887	.2907932
#1	2194.956	54560.79	13890.41	1454.962	3666.495
#2	2180.633	54374.45	13874.85	1442.649	3645.605
#3	2185.126	54536.65	13854.08	1445.666	3659.514

Sample Name: P5044-02LX5 Acquired: 12/5/2024 18:17:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013267	.0001456	-.000402	.0001105	-.002605	.0116252	.0278836
Stddev	.0016794	.0005855	.000518	.0030977	.000718	.0018989	.0003066
%RSD	126.5870	402.1905	128.7603	2802.648	27.57796	16.33467	1.099496
#1	.0023118	-.000519	-.000710	-.002846	-.001817	.0100621	.0278320
#2	.0022807	.000587	.000196	-.000155	-.002774	.0137384	.0282127
#3	-.000612	.000368	-.000692	.003333	-.003223	.0110750	.0276061
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001596	.0000224	12.08197	.0014606	.0000867	.0288066	.0518983
Stddev	.0000487	.0000643	.05500	.0003752	.0000016	.0001461	.0021633
%RSD	30.50927	286.4386	.4552188	25.68892	1.876185	.5070270	4.168279
#1	.0001810	.0000875	12.03749	.0018065	.0000879	.0289307	.0500954
#2	.0001039	-.000041	12.14347	.0015136	.0000873	.0286456	.0542970
#3	.0001940	.000021	12.06495	.0010617	.0000848	.0288433	.0513026
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0213976	2.277882	.0013366	.0004470	6.052435	.0002182	.0088422
Stddev	.0000914	.014700	.0001273	.0001060	.012715	.0004475	.0002076
%RSD	.4270475	.6453161	9.525833	23.71945	.2100851	205.0719	2.347707
#1	.0213479	2.263773	.0013689	.0005058	6.057190	.0004351	.0086229
#2	.0215030	2.293108	.0014447	.0003246	6.038028	.0005160	.0088681
#3	.0213418	2.276764	.0011963	.0005106	6.062088	-.000296	.0090357
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8836498	-.000549	-.000309	-.001388	-.000238	1.682694	.0762603
Stddev	.0089733	.000452	.000139	.000613	.000231	.010458	.0009898
%RSD	1.015484	82.46002	44.99822	44.16556	96.98033	.6215012	1.297976
#1	.8770456	-.000098	-.000237	-.000680	-.000184	1.673642	.0763840
#2	.8800376	-.001003	-.000470	-.001756	-.000491	1.680299	.0752144
#3	.8938663	-.000545	-.000222	-.001727	-.000039	1.694142	.0771824

Sample Name: P5044-02LX5 Acquired: 12/5/2024 18:17:29 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.250546	.0000202	.0615613
Stddev	.005085	.0001392	.0001340
%RSD	.2259409	690.2792	.2176324
#1	2.253072	.0000437	.0615764
#2	2.253873	.0001461	.0614204
#3	2.244693	-.000129	.0616870

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2441.519	59366.92	14364.51	1627.178	4090.721
Stddev	2.489	59.69	33.43	4.909	3.653
%RSD	.1019540	.1005438	.2327378	.3016586	.0893054
#1	2442.370	59427.71	14348.65	1630.406	4088.894
#2	2438.715	59308.40	14341.97	1621.529	4088.341
#3	2443.470	59364.65	14402.92	1629.598	4094.927

Sample Name: P5044-02MS Acquired: 12/5/2024 18:21:48 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7477347	1.956038	.9418309	1.844096	.7392482	1.969085
Stddev	.0035383	.031746	.0003536	.004980	.0016114	.008465
%RSD	.4732028	1.622958	.0375459	.2700529	.2179820	.4299114

#1	.7436693	1.990617	.9422382	1.849104	.7374024	1.962582
#2	.7494157	1.949282	.9416016	1.844040	.7403745	1.978656
#3	.7501192	1.928213	.9416531	1.839144	.7399678	1.966016

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3295078	.2182573	.1924206	62.52556	.3949043	.1933698
Stddev	.0004278	.0002139	.0001949	.26075	.0022464	.0003832
%RSD	.1298135	.0979865	.1012865	.4170288	.5688527	.1981501

#1	.3297745	.2183105	.1924067	62.82350	.3925221	.1930414
#2	.3290145	.2184396	.1922331	62.41420	.3952063	.1932773
#3	.3297346	.2180219	.1926221	62.33899	.3969844	.1937908

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4340961	3.049515	.3097494	13.70369	.4856223	.0739680
Stddev	.0005015	.013391	.0008599	.03301	.0011068	.0005445
%RSD	.1155253	.4391051	.2776261	.2409116	.2279092	.7362000

#1	.4341989	3.057233	.3106010	13.74053	.4857193	.0735672
#2	.4345382	3.034053	.3088814	13.67679	.4844702	.0745880
#3	.4335511	3.057259	.3097659	13.69376	.4866774	.0737488

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.66539	.2980036	.2484345	13.34696	.3259498	.3824439
Stddev	.10328	.0019452	.0022560	.04221	.0005505	.0006464
%RSD	.2895882	.6527594	.9080993	.3162492	.1688858	.1690285

#1	35.54644	.3001483	.2460785	13.29981	.3258313	.3816979
#2	35.73238	.2963532	.2486498	13.35982	.3265500	.3828411
#3	35.71734	.2975092	.2505751	13.38124	.3254683	.3827926

Sample Name: P5044-02MS Acquired: 12/5/2024 18:21:48 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6738086	.1909294	9.639351	6.134663	F 12.03475	.1843317
Stddev	.0009996	.0000693	.020721	.030148	.01987	.0001928
%RSD	.1483439	.0363157	.2149632	.4914323	.1650789	.1045770
#1	.6727747	.1909246	9.622518	6.169467	12.05736	.1841884
#2	.6747698	.1910010	9.633042	6.117903	12.02684	.1845508
#3	.6738812	.1908626	9.662494	6.116619	12.02007	.1842557

Elem	Sr4077
Units	ppm
Avg	.5198394
Stddev	.0010869
%RSD	.2090752
#1	.5185988
#2	.5206239
#3	.5202955

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2258.592	56338.56	13819.04	1522.863	3724.115
Stddev	8.782	154.84	12.01	7.817	17.077
%RSD	.3888055	.2748423	.0868812	.5133140	.4585492
#1	2268.690	56485.58	13809.14	1531.278	3742.751
#2	2252.752	56353.17	13832.39	1521.486	3720.375
#3	2254.333	56176.93	13815.58	1515.827	3709.217

Sample Name: P5044-02MSD Acquired: 12/5/2024 18:25:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7301252	1.915995	.9184535	1.805932	.7242332	1.915250
Stddev	.0049884	.019253	.0003300	.008209	.0036059	.004080
%RSD	.6832263	1.004871	.0359271	.4545519	.4978963	.2130387
#1	.7253308	1.894948	.9181270	1.799784	.7201166	1.911001
#2	.7297575	1.920318	.9184467	1.802758	.7268330	1.915613
#3	.7352873	1.932720	.9187868	1.815254	.7257499	1.919137
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3200626	.2095873	.1878051	60.58027	.3857712	.1890333
Stddev	.0003527	.0006343	.0000466	.18741	.0005624	.0004300
%RSD	.1102048	.3026575	.0248275	.3093564	.1457971	.2274895
#1	.3197076	.2091733	.1878580	60.78662	.3851270	.1888151
#2	.3204129	.2103176	.1877703	60.53354	.3860225	.1895286
#3	.3200672	.2092711	.1877868	60.42064	.3861643	.1887561
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4251850	2.989530	.3004737	13.27706	.4742083	.0720468
Stddev	.0003732	.010775	.0011155	.03732	.0005255	.0002544
%RSD	.0877835	.3604099	.3712323	.2811233	.1108247	.3530702
#1	.4253634	2.996774	.3017176	13.28176	.4741412	.0720716
#2	.4247560	2.977148	.3001413	13.31182	.4737195	.0722878
#3	.4254355	2.994667	.2995623	13.23761	.4747641	.0717809
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.57771	.2889581	.2431873	13.17593	.3136800	.3750769
Stddev	.20547	.0007593	.0014673	.06839	.0014788	.0001251
%RSD	.5775111	.2627538	.6033708	.5190719	.4714267	.0333638
#1	35.34048	.2893062	.2415365	13.09974	.3125951	.3750958
#2	35.69879	.2894809	.2436823	13.23202	.3153644	.3749433
#3	35.69387	.2880872	.2443432	13.19602	.3130805	.3751914

Sample Name: P5044-02MSD Acquired: 12/5/2024 18:25:47 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6586682	.1849444	9.482529	6.011267	F 11.82101	.1801721
Stddev	.0017215	.0005514	.011737	.032207	.03915	.0014392
%RSD	.2613595	.2981505	.1237740	.5357759	.3311942	.7987897

#1	.6569875	.1854610	9.478979	5.982452	11.77880	.1785133
#2	.6604278	.1850083	9.472977	6.005312	11.82811	.1810876
#3	.6585893	.1843638	9.495631	6.046035	11.85612	.1809155

Elem	Sr4077
Units	ppm
Avg	.5108794
Stddev	.0016173
%RSD	.3165783

#1	.5090375
#2	.5115336
#3	.5120671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2286.876	56912.57	14162.11	1526.222	3780.096
Stddev	8.383	111.68	7.18	10.385	11.242
%RSD	.3665759	.1962261	.0507183	.6804397	.2973957

#1	2294.213	56940.82	14170.11	1533.911	3790.517
#2	2288.676	57007.41	14160.02	1530.345	3781.588
#3	2277.739	56789.48	14156.21	1514.408	3768.182

Sample Name: P5044-02A Acquired: 12/5/2024 18:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7545903	1.964925	.9497541	1.856978	.7450237	1.984575
Stddev	.0015984	.015454	.0037448	.001843	.0016481	.007608
%RSD	.2118213	.7864876	.3942953	.0992442	.2212121	.3833462

#1	.7534451	1.976538	.9531007	1.857248	.7438121	1.976672
#2	.7564164	1.970851	.9504525	1.858671	.7443586	1.985204
#3	.7539094	1.947385	.9457093	1.855015	.7469004	1.991849

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3289011	.2187342	.1938491	62.51856	.4006225	.1951655
Stddev	.0017931	.0007816	.0004302	.19710	.0006327	.0003423
%RSD	.5451650	.3573187	.2219436	.3152682	.1579222	.1753808

#1	.3268418	.2195893	.1943436	62.74544	.4005348	.1950056
#2	.3297454	.2185565	.1935611	62.38960	.4000382	.1949325
#3	.3301162	.2180567	.1936424	62.42063	.4012944	.1955585

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4366317	3.056653	.3091458	13.75458	.4884510	.0741066
Stddev	.0011728	.003857	.0006711	.03472	.0016544	.0000332
%RSD	.2685902	.1261918	.2170771	.2524474	.3386970	.0448554

#1	.4379399	3.052476	.3095552	13.79447	.4901823	.0740803
#2	.4362804	3.060081	.3083713	13.73816	.4868862	.0740956
#3	.4356748	3.057402	.3095109	13.73111	.4882845	.0741440

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.65100	.2986257	.2509653	13.56629	.3262372	.3852033
Stddev	.40589	.0021504	.0001564	.13985	.0008336	.0012751
%RSD	1.107458	.7200944	.0623121	1.030876	.2555127	.3310240

#1	36.18803	.2976181	.2510534	13.41121	.3253714	.3863805
#2	36.81926	.2971642	.2507847	13.60483	.3263057	.3853805
#3	36.94570	.3010949	.2510577	13.68284	.3270344	.3838488

Sample Name: P5044-02A Acquired: 12/5/2024 18:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6821092	.1913272	9.758382	6.212774	F 12.15736	.1861450
Stddev	.0013350	.0005077	.044391	.043600	.03785	.0019459
%RSD	.1957149	.2653809	.4549047	.7017878	.3113514	1.045362
#1	.6835542	.1919126	9.709639	6.262986	12.20106	.1839204
#2	.6818518	.1910636	9.769018	6.190846	12.13627	.1869840
#3	.6809217	.1910055	9.796489	6.184491	12.13476	.1875307

Elem	Sr4077
Units	ppm
Avg	.5277673
Stddev	.0010769
%RSD	.2040460
#1	.5265497
#2	.5281578
#3	.5285945

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2246.690	55491.03	13726.30	1491.573	3698.379
Stddev	1.645	176.73	6.61	10.364	5.609
%RSD	.0732181	.3184837	.0481261	.6948484	.1516558
#1	2245.962	55678.95	13725.09	1501.224	3699.023
#2	2248.574	55465.95	13733.42	1492.876	3703.638
#3	2245.535	55328.17	13720.38	1480.619	3692.476

Sample Name: CCV05 Acquired: 12/5/2024 18:39:30 Type: Unk
Method: NON EPA-6010-200.7(v2495) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.579935	5.080113	4.998521	4.563631	4.503720	9.346701
Stddev	.003399	.017605	.003240	.005514	.003496	.006931
%RSD	.0742092	.3465567	.0648230	.1208209	.0776342	.0741571

#1	4.576166	5.061876	4.997926	4.562910	4.499771	9.352399
#2	4.580872	5.097011	4.995620	4.569470	4.506424	9.338985
#3	4.582767	5.081452	5.002018	4.558513	4.504964	9.348720

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.207206	.2656859	2.543861	25.46294	1.028639	2.486079
Stddev	.061791	.0018183	.001860	.02512	.005463	.001418
%RSD	.6711106	.6843718	.0730991	.0986689	.5311278	.0570359

#1	9.271497	.2652865	2.544921	25.47942	1.025155	2.485778
#2	9.148263	.2641005	2.541714	25.43402	1.025827	2.484834
#3	9.201860	.2676707	2.544948	25.47538	1.034936	2.487622

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.142020	4.768092	2.474791	24.76675	2.485066	1.210684
Stddev	.000906	.024566	.001994	.10441	.002782	.001524
%RSD	.0793119	.5152142	.0805782	.4215893	.1119656	.1258817

#1	1.142658	4.750068	2.473174	24.73842	2.484897	1.210512
#2	1.140984	4.796073	2.477019	24.67943	2.487928	1.209253
#3	1.142419	4.758134	2.474180	24.88241	2.482371	1.212286

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.79332	2.459978	2.392960	25.40742	5.070148	4.730023
Stddev	.14401	.001582	.010630	.13534	.023938	.001825
%RSD	.5808340	.0643276	.4442062	.5326762	.4721332	.0385908

#1	24.82734	2.459470	2.399154	25.31771	5.076649	4.729450
#2	24.91727	2.458712	2.399041	25.56309	5.043632	4.728553
#3	24.63534	2.461752	2.380686	25.34146	5.090165	4.732066

Sample Name: CCV05 Acquired: 12/5/2024 18:39:30 Type: Unk
Method: NON EPA-6010-200.7(v2495) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.073607	4.786637	4.611353	4.960150	4.881138	F 4.302249
Stddev	.010572	.008377	.038310	.016389	.001591	.013653
%RSD	.2083730	.1749996	.8307665	.3304049	.0325954	.3173357
#1	5.066729	4.776965	4.569008	4.941227	4.882219	4.299112
#2	5.068311	4.791478	4.643607	4.969724	4.879311	4.317197
#3	5.085780	4.791468	4.621443	4.969499	4.881884	4.290439

Elem	Sr4077
Units	ppm
Avg	4.863095
Stddev	.026051
%RSD	.5356811
#1	4.888030
#2	4.836056
#3	4.865199

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2388.621	56571.71	13983.29	1557.816	3748.810
Stddev	1.471	171.45	33.80	14.299	2.219
%RSD	.0615630	.3030673	.2417329	.9178787	.0591860
#1	2387.197	56573.44	13946.71	1550.919	3747.551
#2	2388.532	56399.40	14013.38	1548.274	3751.372
#3	2390.134	56742.29	13989.77	1574.256	3747.507

Sample Name: CCB05 Acquired: 12/5/2024 18:43:20 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017800	-.000065	.0003783	-.000660	.0025139	-.001884	.0023847
Stddev	.0005912	.001185	.0010401	.000549	.0015722	.000609	.0006560
%RSD	33.21121	1815.601	274.9494	83.19301	62.53818	32.33253	27.50718
#1	.0012293	-.000301	-.000335	-.000306	.0038859	-.001289	.0026393
#2	.0017059	.001220	-.000102	-.000382	.0007984	-.002507	.0016396
#3	.0024047	-.001115	.001572	-.001293	.0028576	-.001858	.0028752
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000880	.0000924	-.006706	.0001801	.0001740	-.000596	-.002861
Stddev	.0000282	.0001425	.005579	.0000774	.0000573	.000351	.003586
%RSD	32.08943	154.2333	83.19268	42.98698	32.95310	59.01034	125.3477
#1	.0000758	.0002527	-.008845	.0001350	.0001814	-.000995	-.002082
#2	.0001203	.0000447	-.010898	.0002696	.0002272	-.000458	.000272
#3	.0000679	-.000020	-.000374	.0001359	.0001133	-.000333	-.006772
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001909	.0015197	.0000388	.0005782	.1165378	.0006447	-.000574
Stddev	.0001041	.0113173	.0002407	.0002412	.0136303	.0012457	.000164
%RSD	54.52806	744.7137	620.4492	41.71638	11.69607	193.2220	28.61749
#1	.0003107	.0130096	-.000223	.0008041	.1033812	.0015449	-.000450
#2	.0001231	.0011660	.000088	.0006065	.1156354	-.000777	-.000760
#3	.0001388	-.009617	.000251	.0003242	.1305970	.001166	-.000512
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0904545	.0004327	.0005849	-.000881	-.000091	.0021268	-.006304
Stddev	.0188986	.0005472	.0002628	.000461	.000036	.0045654	.003499
%RSD	20.89289	126.4719	44.93011	52.38195	38.97446	214.6621	55.49868
#1	.0704989	.0010518	.0008811	-.000544	-.000132	.0067445	-.003304
#2	.0927848	.0002330	.0003796	-.001406	-.000073	.0020204	-.005462
#3	.1080799	.0000134	.0004940	-.000692	-.000069	-.002385	-.010147

Sample Name: CCB05 Acquired: 12/5/2024 18:43:20 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0017417	.0007343	.0001977
Stddev	.0027594	.0006751	.0000284
%RSD	158.4296	91.94362	14.35888
#1	.0022650	.0014135	.0002083
#2	-.001242	.0007261	.0002192
#3	.004202	.0000633	.0001655

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2471.825	58407.35	13800.00	1610.261	4186.167
Stddev	2.044	148.44	18.09	6.529	4.835
%RSD	.0826731	.2541412	.1311015	.4054481	.1155070
#1	2469.498	58317.46	13784.20	1606.581	4183.621
#2	2472.653	58325.90	13819.74	1606.403	4191.743
#3	2473.325	58578.68	13796.06	1617.799	4183.137

Sample Name: PB165365BL Acquired: 12/5/2024 19:04:11 Type: Unk
Method: NON EPA-6010-200.7(v2496) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000219	.0001911	.0001436	.0002440	-.002502	.0104688	.0024541
Stddev	.001350	.0013388	.0007962	.0009196	.000478	.0020160	.0001724
%RSD	615.8739	700.4798	554.3090	376.9209	19.11815	19.25748	7.024289

#1	.001034	.0014777	-.000065	.0012791	-.001950	.0087412	.0022570
#2	-.000043	.0002902	.001023	-.000069	-.002761	.0099812	.0025283
#3	-.001649	-.001195	-.000528	-.000479	-.002795	.0126839	.0025770

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000563	.0000447	-.009035	-.000020	.0000622	-.000929	-.000707
Stddev	.0000215	.0000664	.006260	.000139	.0001030	.000231	.003500
%RSD	38.26407	148.6645	69.28503	709.2308	165.6411	24.85188	495.3221

#1	.0000546	.0000777	-.012753	-.000178	.0001336	-.000685	.003041
#2	.0000786	-.000032	-.012543	.000082	-.000056	-.001143	-.003891
#3	.0000356	.000088	-.001808	.000038	.000109	-.000958	-.001270

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005029	-.000430	-.000263	.0002987	.1924619	-.000186	-.000778
Stddev	.0000977	.010280	.000089	.0001609	.0191326	.000439	.000087
%RSD	19.43569	2388.084	33.65466	53.87047	9.940952	235.7234	11.19056

#1	.0004177	.007321	-.000319	.0002461	.1715918	.000257	-.000795
#2	.0004812	.003478	-.000309	.0001706	.1966214	-.000621	-.000855
#3	.0006096	-.012091	-.000161	.0004793	.2091726	-.000195	-.000683

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0524327	-.006927	-.000381	-.000739	-.000252	-.003110	-.007014
Stddev	.0032437	.000095	.000064	.000495	.000061	.006056	.000866
%RSD	6.186478	1.366824	16.89718	66.98958	24.16306	194.7106	12.34667

#1	.0556981	-.006939	-.000345	-.000507	-.000190	-.009259	-.007515
#2	.0492111	-.006827	-.000455	-.000403	-.000312	-.002919	-.007512
#3	.0523888	-.007015	-.000342	-.001308	-.000253	.002848	-.006014

Sample Name: PB165365BL Acquired: 12/5/2024 19:04:11 Type: Unk
Method: NON EPA-6010-200.7(v2496) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0021619	-.000440	-.000140
Stddev	.0018010	.000101	.000026
%RSD	83.30532	23.04811	18.22604

#1	.0034808	-.000323	-.000163
#2	.0028949	-.000493	-.000113
#3	.0001100	-.000504	-.000145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2537.990	60376.65	14024.37	1682.361	4283.407
Stddev	6.398	61.09	27.22	6.359	5.542
%RSD	.2521047	.1011735	.1941083	.3779678	.1293748

#1	2530.606	60363.93	14002.10	1687.777	4277.607
#2	2541.480	60322.93	14016.29	1675.360	4283.966
#3	2541.885	60443.10	14054.71	1683.947	4288.648

Sample Name: PB165365BS Acquired: 12/5/2024 19:08:38 Type: Unk
Method: NON EPA-6010-200.7(v2496) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7200905	2.032966	1.001235	1.802143	.7161736	1.923873
Stddev	.0016252	.013163	.001254	.011879	.0039314	.004592
%RSD	.2256932	.6474534	.1252659	.6591805	.5489430	.2386926
#1	.7210054	2.019894	1.001444	1.795482	.7147819	1.922240
#2	.7182141	2.046217	.999889	1.795090	.7131274	1.929058
#3	.7210520	2.032788	1.002371	1.815859	.7206116	1.920320
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1923461	.1867442	.2043811	1.114596	.4274304	.2037047
Stddev	.0008338	.0002044	.0002690	.001909	.0011448	.0008434
%RSD	.4335083	.1094602	.1316070	.1712382	.2678332	.4140502
#1	.1927149	.1865496	.2040734	1.112570	.4265596	.2028120
#2	.1929320	.1867257	.2044982	1.116360	.4270044	.2038137
#3	.1913915	.1869572	.2045717	1.114858	.4287271	.2044883
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2890091	2.895221	.2168761	2.092488	.5105461	.0742244
Stddev	.0011584	.009914	.0011207	.014307	.0010408	.0004242
%RSD	.4008329	.3424197	.5167473	.6837354	.2038546	.5715448
#1	.2884105	2.895441	.2174151	2.098440	.5095014	.0741086
#2	.2882724	2.905023	.2176255	2.076165	.5105540	.0738702
#3	.2903443	2.885199	.2155877	2.102858	.5115829	.0746945
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.569795	.3136720	.2029607	9.807242	.3137381	.3906361
Stddev	.009675	.0014550	.0007522	.043109	.0006992	.0013564
%RSD	.3765041	.4638611	.3705886	.4395628	.2228720	.3472252
#1	2.559160	.3146280	.2036650	9.793593	.3141401	.3898616
#2	2.578076	.3143906	.2030487	9.855523	.3141434	.3898445
#3	2.572149	.3119976	.2021685	9.772609	.3129307	.3922023

Sample Name: PB165365BS Acquired: 12/5/2024 19:08:38 Type: Unk
Method: NON EPA-6010-200.7(v2496) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7108778	.2005199	F .6549988	5.691010	F -.006498	.1852963
Stddev	.0025175	.0002348	.0049403	.011142	.001443	.0008379
%RSD	.3541417	.1170851	.7542528	.1957760	22.20631	.4522029
#1	.7082054	.2007249	.6520730	5.679554	-.008095	.1844801
#2	.7132047	.2005710	.6607028	5.701808	-.006109	.1861544
#3	.7112232	.2002637	.6522206	5.691668	-.005289	.1852545
Elem	Sr4077					
Units	ppm					
Avg	.2093805					
Stddev	.0002783					
%RSD	.1328998					
#1	.2091080					
#2	.2096642					
#3	.2093693					
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	2483.350	58365.03	13490.63	1621.768	4083.350	
Stddev	6.404	133.94	55.73	8.839	4.322	
%RSD	.2578775	.2294948	.4130768	.5450306	.1058429	
#1	2483.247	58270.72	13440.44	1615.898	4081.222	
#2	2489.805	58306.01	13480.85	1617.472	4088.323	
#3	2476.998	58518.35	13550.60	1631.934	4080.505	

Sample Name: P5070-01 Acquired: 12/5/2024 19:12:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001712	-.000569	.0008278	.0080139	-.001946	.0197639	.0018635
Stddev	.000877	.001305	.0006354	.0011172	.000502	.0013949	.0003518
%RSD	51.23953	229.5774	76.76192	13.94112	25.79444	7.057639	18.87638

#1	-.000907	-.001482	.0011261	.0088212	-.001403	.0183170	.0021956
#2	-.002647	-.001151	.0012591	.0084816	-.002393	.0211001	.0018999
#3	-.001582	.000927	.0000981	.0067388	-.002041	.0198745	.0014949

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000159	-.000034	.0437553	.0004912	-.000010	-.008454	.0120599
Stddev	.0000282	.000055	.0044955	.0001428	.000055	.000230	.0036041
%RSD	177.6088	165.0589	10.27421	29.07359	525.9281	2.716958	29.88509

#1	.0000219	-.000006	.0452620	.0004745	-.000047	-.008490	.0085477
#2	.0000406	-.000097	.0473040	.0006416	.000053	-.008208	.0157494
#3	-.000015	.000002	.0387000	.0003575	-.000037	-.008663	.0118826

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013146	.0144503	.0001048	.0004820	.0071783	.0011239	.0075785
Stddev	.0001150	.0053790	.0002553	.0002029	.0053559	.0008411	.0001295
%RSD	8.751032	37.22447	243.5375	42.09091	74.61313	74.83503	1.708666

#1	.0011973	.0119585	.0001247	.0004779	.0028974	.0015200	.0077262
#2	.0013194	.0206234	.0003497	.0002812	.0054533	.0001579	.0074847
#3	.0014272	.0107691	-.000160	.0006869	.0131842	.0016939	.0075245

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.061554	-.009772	-.000000	.0181473	.0014165	.0044545	.0134274
Stddev	.005269	.000620	.000181	.0009303	.0002806	.0014904	.0024829
%RSD	8.559179	6.349407	81956.53	5.126479	19.80745	33.45776	18.49121

#1	-.055535	-.009458	.000209	.0172814	.0017197	.0043920	.0106874
#2	-.063797	-.010486	-.000094	.0180297	.0013638	.0059752	.0155281
#3	-.065331	-.009371	-.000115	.0191308	.0011660	.0029964	.0140667

Sample Name: P5070-01 Acquired: 12/5/2024 19:12:54 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3448840	-.001312	-.000118
Stddev	.0033002	.000229	.000028
%RSD	.9568865	17.46617	23.61203
#1	.3426910	-.001212	-.000086
#2	.3486794	-.001149	-.000135
#3	.3432816	-.001574	-.000134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2503.911	60937.27	14455.42	1651.018	4391.290
Stddev	8.949	74.01	29.03	2.488	6.233
%RSD	.3573911	.1214483	.2008166	.1506871	.1419403
#1	2498.048	60898.81	14465.85	1652.743	4388.185
#2	2499.474	60890.42	14422.61	1648.166	4387.219
#3	2514.211	61022.59	14477.79	1652.144	4398.466

Sample Name: P5070-05 Acquired: 12/5/2024 19:17:17 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001711	-.000836	.0176254	.0000860	-.002493	.1708315	.5977440
Stddev	.001271	.000451	.0004251	.0022219	.000196	.0034552	.0027362
%RSD	74.28791	53.90501	2.412079	2585.026	7.865132	2.022598	.4577553
#1	-.002184	-.001075	.0171633	.0023921	-.002311	.1705194	.5971789
#2	-.000271	-.000316	.0177131	-.002041	-.002701	.1744322	.6007187
#3	-.002677	-.001116	.0179999	-.000093	-.002467	.1675429	.5953345
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000667	.0002747	1.470869	.0142309	.0004308	.0255940	4.724179
Stddev	.0000344	.0000510	.008873	.0006260	.0000433	.0001813	.006285
%RSD	51.53075	18.55655	.6032307	4.399058	10.06080	.7082000	.1330299
#1	.0000543	.0003012	1.472189	.0137278	.0004392	.0253918	4.719777
#2	.0001055	.0003071	1.479007	.0140329	.0004693	.0257420	4.731376
#3	.0000402	.0002160	1.461410	.0149320	.0003838	.0256480	4.721383
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0429268	.1328629	.0054956	.0006047	-.004058	.0014524	.0938940
Stddev	.0001286	.0079948	.0002178	.0002028	.002868	.0007773	.0003570
%RSD	.2996637	6.017357	3.962281	33.53990	70.66541	53.52042	.3801800
#1	.0429762	.1343269	.0056896	.0008224	-.007364	.0016336	.0942940
#2	.0430234	.1400246	.0055371	.0004211	-.002246	.0021232	.0937803
#3	.0427808	.1242372	.0052600	.0005707	-.002564	.0006005	.0936078
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.029399	-.006006	.0026123	.0147476	.0135121	.1336100	.0356266
Stddev	.012117	.000523	.0001553	.0004635	.0002123	.0033261	.0006825
%RSD	41.21618	8.713281	5.945223	3.142802	1.571148	2.489442	1.915763
#1	-.015408	-.006086	.0027911	.0148340	.0136207	.1317904	.0350702
#2	-.036287	-.006484	.0025357	.0142471	.0132674	.1374490	.0363882
#3	-.036503	-.005447	.0025102	.0151619	.0136481	.1315906	.0354215

Sample Name: P5070-05 Acquired: 12/5/2024 19:17:17 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2085296	-.001580	.0127620
Stddev	.0024572	.000351	.0000262
%RSD	1.178362	22.19220	.2050171
#1	.2105438	-.001349	.0127327
#2	.2092531	-.001983	.0127704
#3	.2057918	-.001407	.0127829

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2423.440	59622.40	14229.13	1613.205	4190.953
Stddev	5.687	118.18	40.66	6.097	7.952
%RSD	.2346492	.1982146	.2857311	.3779267	.1897494
#1	2429.993	59712.27	14211.04	1614.896	4200.125
#2	2420.528	59488.53	14200.66	1606.441	4185.975
#3	2419.799	59666.39	14275.69	1618.277	4186.761

Sample Name: P5072-01 Acquired: 12/5/2024 19:21:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0842605	-.013639	.3052007	-.044557	-.005051	88.77197	1.213939
Stddev	.0046600	.001684	.0015990	.003018	.000670	1.03789	.013828
%RSD	5.530407	12.34906	.5239051	6.773714	13.27177	1.169167	1.139068

#1	.0789056	-.011699	.3038815	-.042834	-.005542	89.68558	1.223204
#2	.0864806	-.014486	.3047416	-.042794	-.005325	87.64345	1.198045
#3	.0873952	-.014732	.3069790	-.048042	-.004288	88.98690	1.220568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123201	.0222108	79.80952	.2337625	.1317772	.2451853	205.2221
Stddev	.0000783	.0002495	1.26744	.0001457	.0005193	.0024544	.6596
%RSD	.6353770	1.123397	1.588085	.0623155	.3940536	1.001050	.3214109

#1	.0123868	.0219460	81.20848	.2336593	.1312483	.2423963	205.9601
#2	.0122339	.0222448	78.73775	.2339291	.1317971	.2461436	204.6900
#3	.0123395	.0224415	79.48235	.2336991	.1322862	.2470160	205.0161

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.006951	63.64585	.2644116	-.006645	10.71616	.3576039	.7648763
Stddev	.076943	.90062	.0013092	.000285	.05187	.0045868	.0010442
%RSD	1.536723	1.415056	.4951523	4.281745	.4840365	1.282651	.1365142

#1	5.088694	64.61686	.2630795	-.006323	10.65628	.3624478	.7637542
#2	4.935934	62.83789	.2644588	-.006750	10.74501	.3533268	.7658194
#3	4.996224	63.48279	.2656967	-.006863	10.74720	.3570371	.7650554

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.47381	.1217057	.0088613	.0095855	4.746451	2.948368	8.007645
Stddev	.08877	.0013032	.0001320	.0012947	.061971	.018945	.061075
%RSD	.4558652	1.070784	1.489901	13.50638	1.305622	.6425420	.7627025

#1	19.38222	.1216093	.0090135	.0080914	4.804560	2.965925	7.938727
#2	19.47975	.1230544	.0087937	.0102889	4.681232	2.928289	8.029149
#3	19.55947	.1204533	.0087768	.0103762	4.753561	2.950891	8.055059

Sample Name: P5072-01 Acquired: 12/5/2024 19:21:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.551088	.2039439	-.007399
Stddev	.020930	.0019034	.001790
%RSD	.8204284	.9333140	24.19443
#1	2.535249	.2044582	-.005955
#2	2.543198	.2018361	-.009402
#3	2.574816	.2055373	-.006839

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2709.657	67085.24	16904.38	1816.028	3446.211
Stddev	7.780	60.25	196.41	7.278	11.989
%RSD	.2871326	.0898126	1.161862	.4007752	.3478843
#1	2718.593	67128.69	16697.56	1817.098	3458.532
#2	2705.994	67016.46	17088.38	1808.274	3445.516
#3	2704.385	67110.56	16927.20	1822.711	3434.585

Sample Name: P5072-05 Acquired: 12/5/2024 19:25:46 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0908767	-.013025	.3460792	-.060043	-.006369	108.7846	.9761601
Stddev	.0043292	.001899	.0004671	.002351	.000422	.1150	.0005818
%RSD	4.763875	14.57962	.1349812	3.915911	6.619065	.1057446	.0595973

#1	.0939559	-.015217	.3456899	-.059023	-.005981	108.6635	.9764089
#2	.0927476	-.011982	.3459505	-.062732	-.006309	108.8925	.9765761
#3	.0859267	-.011876	.3465972	-.058373	-.006818	108.7977	.9754953

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0166805	.0284675	45.03761	.2979151	.1621959	.2067837	264.7074
Stddev	.0001487	.0005917	.24083	.0004625	.0006146	.0025940	2.5310
%RSD	.8912472	2.078445	.5347365	.1552550	.3789237	1.254463	.9561367

#1	.0165982	.0277890	45.25124	.2973835	.1615113	.2037889	267.5871
#2	.0165913	.0288765	44.77661	.2981367	.1623765	.2082350	262.8359
#3	.0168522	.0287370	45.08497	.2982252	.1627001	.2083273	263.6991

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.323238	84.98976	.3191220	-.008931	11.41350	.4135724	.8582324
Stddev	.041023	.31669	.0010678	.000108	.06065	.0020497	.0018465
%RSD	.5601737	.3726166	.3346082	1.210957	.5314298	.4955965	.2151562

#1	7.364495	85.25124	.3179284	-.009024	11.46291	.4137900	.8599182
#2	7.282453	84.63764	.3199864	-.008957	11.43179	.4114226	.8585201
#3	7.322765	85.08041	.3194513	-.008812	11.34581	.4155046	.8562589

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.87842	.1551887	.0022738	.0087829	6.066293	2.632825	9.133109
Stddev	.16858	.0040099	.0000606	.0017617	.018134	.020182	.083379
%RSD	.6514468	2.583871	2.663822	20.05844	.2989384	.7665507	.9129275

#1	26.05113	.1598180	.0022319	.0073650	6.084659	2.650903	9.089819
#2	25.86983	.1529485	.0023432	.0107551	6.048399	2.636522	9.080281
#3	25.71429	.1527994	.0022462	.0082287	6.065820	2.611050	9.229229

Sample Name: P5072-05 Acquired: 12/5/2024 19:25:46 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3989195	.2417808	-.052221
Stddev	.0025720	.0009828	.003271
%RSD	.6447465	.4064912	6.264225
#1	.3967905	.2415576	-.055931
#2	.4017773	.2428560	-.049753
#3	.3981908	.2409288	-.050978

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2789.965	67603.29	16943.19	1854.094	3406.908
Stddev	9.224	240.69	37.08	12.286	4.306
%RSD	.3306194	.3560398	.2188704	.6626602	.1263936
#1	2789.338	67326.59	16943.45	1839.907	3409.232
#2	2781.071	67764.20	16980.14	1861.215	3401.939
#3	2799.487	67719.09	16905.98	1861.160	3409.552

Sample Name: P5072-05DUP Acquired: 12/5/2024 19:29:51 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0899319	-.011929	.3397839	-.057779	-.005222	104.2341	1.117522
Stddev	.0039057	.004079	.0013813	.002262	.002442	2.2420	.024760
%RSD	4.342981	34.19247	.4065084	3.915234	46.76672	2.150898	2.215652

#1	.0858753	-.007517	.3387860	-.057824	-.007799	105.1059	1.126909
#2	.0936669	-.012709	.3392054	-.060018	-.002942	105.9092	1.136217
#3	.0902534	-.015562	.3413603	-.055495	-.004925	101.6872	1.089441

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0176111	.0283713	37.41271	.2914024	.1648337	.1962735	257.2236
Stddev	.0002890	.0005021	.76878	.0009600	.0010005	.0019202	.9417
%RSD	1.641057	1.769800	2.054876	.3294468	.6069866	.9783478	.3661113

#1	.0175880	.0284281	37.63129	.2915197	.1647696	.1950591	257.6433
#2	.0179110	.0278432	38.04853	.2922984	.1638667	.1952740	257.8825
#3	.0173343	.0288426	36.55830	.2903892	.1658647	.1984873	256.1450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.057097	81.86937	.3239236	-.009182	11.08379	.4215308	.8301437
Stddev	.203501	1.76942	.0011816	.000486	.08607	.0088603	.0010122
%RSD	2.246866	2.161268	.3647886	5.292567	.7765313	2.101936	.1219333

#1	9.110244	82.43202	.3252516	-.009225	11.17476	.4241616	.8313122
#2	9.228752	83.28904	.3229883	-.008676	11.07296	.4287778	.8295368
#3	8.832297	79.88704	.3235308	-.009645	11.00364	.4116530	.8295821

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.74101	.1443288	.0024247	.0074332	5.926427	3.452852	9.190395
Stddev	.12948	.0014825	.0002259	.0002623	.132212	.013706	.021073
%RSD	.5453765	1.027179	9.317106	3.528711	2.230881	.3969590	.2292898

#1	23.87224	.1439578	.0021678	.0075067	5.969490	3.462321	9.166210
#2	23.73744	.1430671	.0025143	.0071420	6.031738	3.459100	9.204804
#3	23.61336	.1459616	.0025921	.0076509	5.778053	3.437135	9.200172

Sample Name: P5072-05DUP Acquired: 12/5/2024 19:29:51 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3922531	.2217723	-.067572
Stddev	.0076560	.0045298	.003270
%RSD	1.951812	2.042562	4.839249
#1	.3870999	.2238794	-.065998
#2	.4010505	.2248648	-.065387
#3	.3886089	.2165728	-.071332

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2951.555	71388.79	17340.91	1951.378	3564.311
Stddev	6.950	217.87	327.75	11.634	5.806
%RSD	.2354568	.3051855	1.890013	.5962012	.1629064
#1	2957.565	71138.52	17211.86	1938.447	3564.068
#2	2953.155	71536.09	17097.33	1960.998	3570.235
#3	2943.945	71491.75	17713.53	1954.689	3558.630

Sample Name: P5072-05LX5 Acquired: 12/5/2024 19:33:55 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212663	-.001130	.0706389	-.012692	-.004057	24.32498	.2420250
Stddev	.0019446	.002419	.0002705	.001293	.001124	.17714	.0025662
%RSD	9.143813	214.1776	.3828886	10.19058	27.69533	.7282424	1.060304
#1	.0209147	-.003468	.0704451	-.011824	-.003756	24.52938	.2449877
#2	.0233626	-.001283	.0705238	-.012074	-.003114	24.21610	.2405915
#3	.0195215	.001363	.0709479	-.014179	-.005300	24.22946	.2404958
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043114	.0022952	9.994737	.0722334	.0320499	.0502703	62.48854
Stddev	.0000220	.0000473	.084879	.0008462	.0000961	.0002881	.13255
%RSD	.5100551	2.062346	.8492332	1.171476	.2998491	.5730322	.2121256
#1	.0042870	.0022560	10.09274	.0713449	.0321248	.0499440	62.63782
#2	.0043176	.0023478	9.94655	.0723255	.0319416	.0504892	62.44319
#3	.0043297	.0022819	9.94492	.0730298	.0320834	.0503778	62.38462
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.986572	19.36098	.0636921	-.001757	2.466033	.1009056	.1998023
Stddev	.021325	.16707	.0002084	.000166	.013301	.0010162	.0003676
%RSD	1.073473	.8628987	.3271219	9.425332	.5393653	1.007106	.1839558
#1	2.011189	19.54734	.0638555	-.001678	2.468996	.1006755	.1997444
#2	1.974775	19.31096	.0634575	-.001947	2.451500	.1020171	.2001954
#3	1.973752	19.22463	.0637633	-.001645	2.477602	.1000241	.1994672
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.413271	.0291468	.0001429	-.000142	1.420634	.6979880	1.761255
Stddev	.012715	.0004439	.0002888	.000932	.010739	.0046058	.006140
%RSD	.2348831	1.523146	202.1650	654.6406	.7559267	.6598736	.3486211
#1	5.424321	.0286517	.0000436	-.001190	1.433031	.7011173	1.761918
#2	5.399374	.0295093	-.000083	.000169	1.414206	.6926992	1.754810
#3	5.416120	.0292795	.000468	.000594	1.414664	.7001474	1.767037

Sample Name: P5072-05LX5 Acquired: 12/5/2024 19:33:55 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0702825	.0516258	-.015655
Stddev	.0016532	.0009143	.000135
%RSD	2.352192	1.771039	.8620089
#1	.0684552	.0526561	-.015504
#2	.0716744	.0509111	-.015764
#3	.0707178	.0513101	-.015696

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2628.500	62000.43	14753.70	1735.073	3992.256
Stddev	10.722	103.43	132.24	13.600	2.815
%RSD	.4078969	.1668182	.8963305	.7838014	.0705225
#1	2616.704	61905.00	14606.78	1729.321	3989.511
#2	2637.653	61985.96	14791.12	1725.295	3995.137
#3	2631.143	62110.34	14863.20	1750.604	3992.120

Sample Name: P5072-05MS Acquired: 12/5/2024 19:38:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6477434	1.805406	1.235518	1.227137	.1962159	112.9466
Stddev	.0029940	.023518	.005918	.003709	.0003501	.3445
%RSD	.4622219	1.302623	.4790286	.3022127	.1784476	.3049723

#1	.6490158	1.831342	1.229991	1.230421	.1958365	112.5845
#2	.6498910	1.799404	1.234801	1.223115	.1962846	112.9854
#3	.6443233	1.785470	1.241763	1.227875	.1965266	113.2701

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.148485	.1866606	.2265115	37.88582	.5884263	.3642915
Stddev	.004204	.0004930	.0007736	.11669	.0023213	.0008299
%RSD	.3660606	.2641161	.3415243	.3080174	.3944876	.2278083

#1	1.144727	.1867834	.2258524	37.75227	.5858089	.3636615
#2	1.147701	.1870806	.2263188	37.93708	.5902354	.3639812
#3	1.153025	.1861178	.2273632	37.96812	.5892345	.3652318

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3890665	243.0134	7.227187	79.52201	.8146353	.0487252
Stddev	.0010260	1.2880	.030050	.29829	.0030978	.0004286
%RSD	.2637130	.5300145	.4157917	.3750976	.3802686	.8796578

#1	.3888576	241.6192	7.194644	79.19448	.8119800	.0484195
#2	.3881609	243.2621	7.233032	79.77806	.8138874	.0485410
#3	.3901808	244.1589	7.253885	79.59348	.8180386	.0492152

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.84969	.6154697	.9542697	29.33509	.3380247	.2613710
Stddev	.03143	.0047043	.0013382	.09296	.0016626	.0005715
%RSD	.2445890	.7643395	.1402301	.3168904	.4918421	.2186507

#1	12.81541	.6105899	.9546631	29.22788	.3361869	.2619603
#2	12.87714	.6158430	.9527790	29.39335	.3384629	.2608191
#3	12.85653	.6199762	.9553671	29.38403	.3394241	.2613335

Sample Name: P5072-05MS Acquired: 12/5/2024 19:38:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6255063	5.928100	5.805859	F 15.47591	.3631391	.3747369
Stddev	.0042940	.023153	.028466	.09281	.0040239	.0006205
%RSD	.6864840	.3905680	.4902977	.5996989	1.108077	.1655872
#1	.6222996	5.905841	5.773373	15.58068	.3667414	.3740605
#2	.6238347	5.926406	5.826435	15.44301	.3638794	.3748702
#3	.6303848	5.952054	5.817771	15.40402	.3587965	.3752799

Elem	Sr4077
Units	ppm
Avg	.0978998
Stddev	.0004801
%RSD	.4904039
#1	.0981771
#2	.0981770
#3	.0973455

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2927.622	71123.70	17300.20	1960.011	3524.419
Stddev	6.634	116.55	13.36	7.749	10.849
%RSD	.2266023	.1638681	.0772447	.3953635	.3078328
#1	2926.199	71229.84	17304.76	1963.378	3530.950
#2	2934.852	71142.29	17310.69	1965.507	3530.413
#3	2921.815	70998.98	17285.15	1951.148	3511.895

Sample Name: P5072-05MSD Acquired: 12/5/2024 19:42:07 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6447612	1.780005	1.223946	1.215641	.1948726	112.2014
Stddev	.0047652	.013438	.003906	.001960	.0003783	.4691
%RSD	.7390592	.7549552	.3191010	.1612162	.1941436	.4181292
#1	.6393731	1.764881	1.219475	1.217047	.1949039	111.7261
#2	.6464896	1.790574	1.225675	1.216473	.1944796	112.2137
#3	.6484210	1.784560	1.226689	1.213402	.1952343	112.6642
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.144133	.1846495	.2240782	37.45592	.5852065	.3612189
Stddev	.005491	.0003069	.0005418	.10453	.0024999	.0007690
%RSD	.4799665	.1661779	.2417725	.2790850	.4271873	.2128998
#1	1.138864	.1843140	.2236119	37.40952	.5827862	.3606449
#2	1.149823	.1847183	.2239502	37.38262	.5877791	.3609191
#3	1.143712	.1849160	.2246725	37.57562	.5850541	.3620927
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3848388	243.0657	7.167662	78.50018	.8076685	.0486231
Stddev	.0006952	.1147	.014389	.34976	.0020058	.0005518
%RSD	.1806407	.0472053	.2007428	.4455472	.2483464	1.134898
#1	.3843032	243.0435	7.154579	78.32964	.8063033	.0479969
#2	.3845888	242.9638	7.165334	78.26841	.8067307	.0488344
#3	.3856244	243.1900	7.183072	78.90249	.8099714	.0490382
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.87444	.6090790	.9481166	29.31575	.3411683	.2590984
Stddev	.03213	.0030807	.0011167	.10404	.0011981	.0007909
%RSD	.2495823	.5058006	.1177854	.3549058	.3511696	.3052549
#1	12.83880	.6079225	.9469977	29.22616	.3400635	.2581858
#2	12.90121	.6067439	.9492312	29.42986	.3424418	.2595860
#3	12.88331	.6125706	.9481208	29.29124	.3409995	.2595233

Sample Name: P5072-05MSD Acquired: 12/5/2024 19:42:07 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6219723	5.902174	6.544047	F 15.32230	.3639518	.3712882
Stddev	.0026392	.014501	.005068	.05412	.0011878	.0022767
%RSD	.4243217	.2456867	.0774438	.3532301	.3263591	.6131775
#1	.6191197	5.885921	6.539072	15.26001	.3653228	.3686643
#2	.6243272	5.906813	6.543866	15.34900	.3633001	.3727396
#3	.6224700	5.913788	6.549203	15.35788	.3632325	.3724608

Elem	Sr4077
Units	ppm
Avg	.0962846
Stddev	.0015708
%RSD	1.631371
#1	.0945838
#2	.0965892
#3	.0976807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2948.931	71509.24	17496.74	1966.321	3550.902
Stddev	7.296	39.74	16.88	4.709	9.381
%RSD	.2474138	.0555719	.0964753	.2395032	.2641819
#1	2953.061	71463.91	17499.83	1964.699	3558.479
#2	2953.226	71525.72	17511.86	1962.637	3553.818
#3	2940.507	71538.09	17478.53	1971.627	3540.410

Sample Name: CCV06 Acquired: 12/5/2024 19:45:53 Type: Unk
Method: NON EPA-6010-200.7(v2497) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.638514	5.084928	5.083204	4.606390	4.547783	9.230749
Stddev	.059949	.114414	.062981	.057291	.055247	.010272
%RSD	1.292418	2.250068	1.239010	1.243734	1.214815	.1112820

#1	4.569293	4.955021	5.010571	4.540274	4.484100	9.229506
#2	4.672604	5.170708	5.116344	4.641387	4.576368	9.221155
#3	4.673644	5.129054	5.122696	4.637510	4.582881	9.241586

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.072743	.2702678	2.592812	25.60628	1.025582	2.531093
Stddev	.036192	.0007434	.034648	.15028	.004268	.034309
%RSD	.3989127	.2750496	1.336291	.5868974	.4161461	1.355492

#1	9.071477	.2710298	2.552834	25.44327	1.030389	2.491556
#2	9.109552	.2702291	2.611460	25.63623	1.024122	2.548683
#3	9.037201	.2695446	2.614141	25.73933	1.022236	2.553039

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.156686	4.745484	2.489325	24.82368	2.532935	1.209062
Stddev	.013289	.045230	.015191	.12731	.033184	.000963
%RSD	1.148917	.9531144	.6102635	.5128742	1.310086	.0796423

#1	1.141348	4.697353	2.473468	24.68636	2.494632	1.209913
#2	1.163929	4.787107	2.503750	24.84687	2.551164	1.208017
#3	1.164780	4.751992	2.490757	24.93780	2.553009	1.209255

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.91442	2.458742	2.364704	24.77874	5.137301	4.788500
Stddev	.20319	.006655	.011835	.07301	.004918	.063132
%RSD	.8496571	.2706615	.5004938	.2946646	.0957289	1.318399

#1	24.14016	2.451062	2.362336	24.81827	5.142968	4.715620
#2	23.85692	2.462802	2.377544	24.82348	5.134788	4.823546
#3	23.74617	2.462363	2.354232	24.69449	5.134148	4.826335

Sample Name: CCV06 Acquired: 12/5/2024 19:45:53 Type: Unk
Method: NON EPA-6010-200.7(v2497) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.157720	4.766733	4.507106	5.059886	4.937639	F 4.221371
Stddev	.076096	.014618	.023798	.080267	.063679	.014896
%RSD	1.475377	.3066685	.5280037	1.586337	1.289658	.3528700
#1	5.069856	4.752830	4.480258	4.967253	4.864560	4.233002
#2	5.202275	4.781974	4.525602	5.103523	4.967133	4.226529
#3	5.201030	4.765394	4.515457	5.108881	4.981223	4.204581

Elem	Sr4077
Units	ppm
Avg	4.801900
Stddev	.013479
%RSD	.2807072
#1	4.787113
#2	4.813500
#3	4.805089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2403.743	58051.50	14122.65	1629.723	3765.283
Stddev	21.432	104.24	14.80	15.213	39.144
%RSD	.8916170	.1795671	.1048259	.9334844	1.039591
#1	2428.142	58051.51	14125.18	1636.947	3810.178
#2	2395.131	57947.25	14106.74	1612.243	3747.366
#3	2387.957	58155.73	14136.02	1639.978	3738.305

Sample Name: CCB06 Acquired: 12/5/2024 19:50:23 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008288	.0006089	.0003593	-.000294	.0000565	.0087682	.0028683
Stddev	.0011127	.0012791	.0017389	.001044	.0006537	.0020400	.0004388
%RSD	134.2619	210.0824	483.9850	354.5005	1157.784	23.26560	15.29658

#1	-.000456	.0020817	-.001132	.000712	.0004367	.0101101	.0024287
#2	.001448	-.000224	.002269	-.000223	-.000698	.0064207	.0033062
#3	.001494	-.000031	-.000059	-.001372	.000431	.0097739	.0028701

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000916	.0000939	-.008332	.0000503	.0002727	-.001133	.0105886
Stddev	.0000194	.0000759	.003308	.0001108	.0000908	.000223	.0018038
%RSD	21.17636	80.76305	39.70157	219.9723	33.30976	19.70766	17.03503

#1	.0000944	.0000779	-.011996	.0001410	.0003720	-.000997	.0085649
#2	.0001095	.0001766	-.005565	.0000832	.0001939	-.001011	.0120271
#3	.0000710	.0000274	-.007435	-.000073	.0002521	-.001390	.0111738

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006231	.0089342	-.000147	.0003471	.0852690	.0009564	-.000396
Stddev	.0003717	.0058298	.000380	.0001702	.0187079	.0012407	.000070
%RSD	59.64552	65.25195	258.7174	49.04440	21.93988	129.7343	17.53565

#1	.0002142	.0047792	.000019	.0004211	.0657221	.0015258	-.000438
#2	.0007148	.0155985	.000122	.0001524	.0870786	.0018102	-.000316
#3	.0009404	.0064250	-.000581	.0004679	.1030064	-.000467	-.000435

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0309376	-.003311	.0001889	-.000438	.0004190	.0013430	-.005561
Stddev	.0181251	.000543	.0003564	.000600	.0004089	.0032648	.002031
%RSD	58.58596	16.39694	188.6588	137.0241	97.58863	243.0905	36.51760

#1	.0150009	-.003547	.0003781	-.000986	-.000014	.0024986	-.005926
#2	.0271571	-.002690	.0004109	.000203	.000798	.0038730	-.003373
#3	.0506547	-.003696	-.000222	-.000530	.000473	-.002342	-.007385

Sample Name: CCB06 Acquired: 12/5/2024 19:50:23 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001979	-.000142	.0002487
Stddev	.001285	.000237	.0000662
%RSD	64.93069	167.0256	26.64142
#1	-.002536	-.000269	.0001844
#2	-.002892	-.000288	.0003167
#3	-.000510	.000131	.0002449

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2571.539	60253.13	13992.08	1693.048	4338.291
Stddev	10.043	40.29	18.94	8.953	10.186
%RSD	.3905317	.0668623	.1353357	.5288185	.2347860
#1	2567.412	60207.61	13985.21	1698.988	4335.784
#2	2582.988	60284.20	14013.49	1697.407	4349.496
#3	2564.218	60267.56	13977.53	1682.750	4329.593

Sample Name: P5072-05A Acquired: 12/5/2024 19:54:43 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6506092	1.818525	1.247182	1.229964	.1980310	114.8654
Stddev	.0007321	.010800	.003511	.002744	.0016635	.8965
%RSD	.1125261	.5938603	.2815232	.2231011	.8400064	.7805202

#1	.6507861	1.822830	1.249726	1.232492	.1999420	115.8971
#2	.6498049	1.806237	1.248644	1.230355	.1969069	114.2757
#3	.6512367	1.826509	1.243176	1.227046	.1972443	114.4233

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.161455	.1910611	.2279024	38.99837	.5949606	.3673077
Stddev	.009038	.0017455	.0003053	.41125	.0017838	.0004739
%RSD	.7781683	.9135895	.1339511	1.054541	.2998133	.1290234

#1	1.171853	.1929365	.2282541	39.47283	.5938987	.3675699
#2	1.155480	.1894838	.2277467	38.77826	.5939630	.3667606
#3	1.157033	.1907630	.2277064	38.74401	.5970199	.3675925

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3868464	247.3370	7.407986	81.32135	.8212809	.0499450
Stddev	.0018849	.7279	.075527	.83792	.0015701	.0001754
%RSD	.4872563	.2943104	1.019532	1.030376	.1911798	.3510905

#1	.3851363	248.1705	7.494934	82.28887	.8227388	.0500532
#2	.3888675	246.8260	7.358645	80.83198	.8196186	.0500391
#3	.3865355	247.0146	7.370381	80.84321	.8214852	.0497427

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.76673	.6265382	.9615789	29.24635	.3466278	.2623824
Stddev	.01692	.0055293	.0032815	.01891	.0013529	.0000539
%RSD	.1325017	.8825205	.3412597	.0646485	.3903011	.0205231

#1	12.74753	.6320156	.9617438	29.24059	.3480182	.2623376
#2	12.77945	.6209583	.9647748	29.26747	.3453158	.2624422
#3	12.77320	.6266406	.9582181	29.23100	.3465494	.2623675

Sample Name: P5072-05A Acquired: 12/5/2024 19:54:43 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6313769	6.045283	6.148638	F 15.64763	.3654763	.3764382
Stddev	.0015828	.053273	.031934	.02904	.0033952	.0027372
%RSD	.2506914	.8812358	.5193660	.1855567	.9289716	.7271342
#1	.6327432	6.104964	6.127913	15.65970	.3621297	.3794692
#2	.6296424	6.002532	6.185414	15.61451	.3653812	.3741469
#3	.6317451	6.028352	6.132589	15.66868	.3689181	.3756983

Elem	Sr4077
Units	ppm
Avg	.1003294
Stddev	.0015414
%RSD	1.536311
#1	.1020752
#2	.0991566
#3	.0997563

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2937.525	71029.37	17104.70	1963.923	3522.326
Stddev	5.113	140.73	185.01	9.007	3.403
%RSD	.1740715	.1981302	1.081611	.4586049	.0966153
#1	2941.094	70867.41	16892.15	1959.087	3519.802
#2	2931.667	71121.93	17229.58	1958.368	3526.196
#3	2939.814	71098.76	17192.36	1974.315	3520.979

Sample Name: P5070-03 Acquired: 12/5/2024 19:58:41 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005567	-.005362	.0144787	-.000299	.0007491	.3249651	.7142559
Stddev	.001024	.000666	.0013718	.001238	.0004223	.0053854	.0027847
%RSD	18.39806	12.41339	9.474598	414.6656	56.37677	1.657222	.3898793

#1	-.006328	-.004721	.0160025	.001023	.0011629	.3190078	.7139741
#2	-.004403	-.005315	.0140914	-.000488	.0007655	.3294881	.7171708
#3	-.005970	-.006050	.0133421	-.001432	.0003188	.3263994	.7116227

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000950	.0002185	2.870343	.0124476	.0044553	.0118830	16.30972
Stddev	.0000687	.0000182	.031368	.0000935	.0000985	.0008496	.14661
%RSD	72.27608	8.309910	1.092833	.7512987	2.211088	7.149669	.8989106

#1	.0000255	.0001977	2.837271	.0125054	.0044258	.0127651	16.19926
#2	.0001629	.0002268	2.874084	.0124976	.0043749	.0118138	16.25386
#3	.0000967	.0002310	2.899672	.0123397	.0045651	.0110702	16.47605

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1662717	.4532942	.0083745	.0000702	7.085149	.0032977	.1546234
Stddev	.0018199	.0069990	.0004382	.0001712	.025111	.0011355	.0003916
%RSD	1.094547	1.544022	5.232760	243.8994	.3544163	34.43294	.2532278

#1	.1643486	.4459558	.0088726	.0002670	7.085450	.0020154	.1547602
#2	.1664994	.4598953	.0080484	-.000012	7.110108	.0037015	.1541819
#3	.1679670	.4540314	.0082024	-.000045	7.059889	.0041760	.1549283

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7378073	.0068410	.0061089	.0014449	.0230483	.5543432	.1413333
Stddev	.0085287	.0002301	.0000832	.0004136	.0005297	.0021040	.0029197
%RSD	1.155956	3.364149	1.362478	28.62778	2.298316	.3795541	2.065857

#1	.7472666	.0070478	.0061110	.0019085	.0227765	.5521464	.1437786
#2	.7307047	.0065931	.0060247	.0013124	.0227097	.5563403	.1421207
#3	.7354506	.0068822	.0061911	.0011137	.0236587	.5545429	.1381006

Sample Name: P5070-03 Acquired: 12/5/2024 19:58:41 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.086198	-.000527	.0176489
Stddev	.008286	.000304	.0002338
%RSD	.7628099	57.64547	1.324600

#1	1.092962	-.000841	.0177408
#2	1.076956	-.000504	.0178228
#3	1.088675	-.000235	.0173832

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2421.850	60339.48	14464.89	1636.066	4129.055
Stddev	18.408	35.73	31.01	1.483	31.442
%RSD	.7600802	.0592154	.2143846	.0906581	.7614819

#1	2400.596	60346.73	14495.68	1637.680	4092.803
#2	2432.270	60371.03	14465.31	1635.756	4148.903
#3	2432.685	60300.68	14433.67	1634.762	4145.459

Sample Name: P5070-03DUP Acquired: 12/5/2024 20:02:58 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004889	-.005342	.0151518	.0000555	-.000645	.3283338	.7242902
Stddev	.001958	.000327	.0006678	.0004540	.000372	.0087761	.0082042
%RSD	40.05845	6.115232	4.407515	817.7576	57.63823	2.672918	1.132723

#1	-.002762	-.005107	.0157609	-.000097	-.000769	.3233208	.7201229
#2	-.005287	-.005715	.0152567	.000566	-.000939	.3232132	.7190061
#3	-.006618	-.005204	.0144377	-.000302	-.000227	.3384674	.7337416

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000943	.0001132	2.980710	.0132384	.0044295	.0116333	17.10323
Stddev	.0000523	.0000309	.056284	.0002751	.0002086	.0002819	.11309
%RSD	55.45840	27.31615	1.888274	2.077943	4.709580	2.423096	.6612487

#1	.0000425	.0001488	2.931373	.0133996	.0046155	.0117474	16.97705
#2	.0001471	.0000926	2.968743	.0133950	.0044691	.0113123	17.13716
#3	.0000934	.0000983	3.042016	.0129208	.0042039	.0118403	17.19547

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1711576	.4717947	.0084576	.0001466	7.337527	.0033607	.1623094
Stddev	.0032796	.0134301	.0000402	.0001489	.032286	.0004497	.0006860
%RSD	1.916138	2.846597	.4756037	101.5451	.4400119	13.38242	.4226483

#1	.1679503	.4573844	.0084112	.0003172	7.374559	.0031620	.1630588
#2	.1710174	.4740378	.0084832	.0000796	7.322734	.0038755	.1617123
#3	.1745050	.4839621	.0084783	.0000431	7.315288	.0030445	.1621573

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7714522	.0070212	.0063270	.0011617	.0238031	.5821989	.1450203
Stddev	.0087000	.0002421	.0001858	.0001880	.0007134	.0053488	.0025597
%RSD	1.127739	3.447971	2.937044	16.18392	2.996982	.9187254	1.765033

#1	.7807481	.0067427	.0065205	.0011500	.0234640	.5803380	.1429007
#2	.7635059	.0071811	.0063104	.0009799	.0233224	.5780291	.1478640
#3	.7701027	.0071398	.0061500	.0013553	.0246227	.5882296	.1442961

Sample Name: P5070-03DUP Acquired: 12/5/2024 20:02:58 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.102627	-.000582	.0176762
Stddev	.005717	.000541	.0003549
%RSD	.5185059	92.97892	2.007643
#1	1.096918	-.000628	.0174627
#2	1.102610	-.000019	.0174800
#3	1.108352	-.001098	.0180858

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2406.275	58047.79	14129.09	1573.393	4085.190
Stddev	1.479	205.25	134.77	9.059	7.593
%RSD	.0614808	.3535872	.9538258	.5757643	.1858662
#1	2407.628	57841.34	14215.85	1563.129	4093.799
#2	2406.501	58050.21	14197.58	1576.773	4082.322
#3	2404.696	58251.82	13973.83	1580.275	4079.449

Sample Name: P5070-03LX5 Acquired: 12/5/2024 20:07:15 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001261	-.002819	.0040100	-.000846	-.002082	.0644710	.1418437
Stddev	.001542	.000273	.0011116	.000762	.000587	.0006463	.0004025
%RSD	122.3450	9.693621	27.72107	90.04589	28.17461	1.002459	.2837924
#1	-.000444	-.002504	.0052378	-.001686	-.001444	.0641183	.1422300
#2	-.000299	-.002993	.0037203	-.000201	-.002202	.0640778	.1414267
#3	-.003040	-.002959	.0030719	-.000650	-.002598	.0652169	.1418745
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000705	-.000059	.5823540	.0025312	.0009115	.0009928	3.309614
Stddev	.0000077	.000062	.0036924	.0001435	.0001558	.0002252	.014972
%RSD	10.96548	106.2117	.6340507	5.667595	17.09318	22.68643	.4523850
#1	.0000730	-.000076	.5794908	.0026504	.0010779	.0010800	3.293274
#2	.0000618	.000011	.5810497	.0023720	.0007690	.0007370	3.312893
#3	.0000766	-.000111	.5865216	.0025713	.0008876	.0011613	3.322675
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0343748	.1006205	.0014235	.0000956	1.381270	.0009020	.0311657
Stddev	.0007620	.0074661	.0001182	.0000713	.017366	.0001634	.0004208
%RSD	2.216853	7.420009	8.304160	74.57620	1.257235	18.11483	1.350259
#1	.0345324	.0920241	.0015595	.0001778	1.363236	.0010379	.0315166
#2	.0350458	.1054832	.0013454	.0000580	1.382697	.0007207	.0312812
#3	.0335463	.1043542	.0013656	.0000509	1.397879	.0009472	.0306991
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1467600	-.004949	.0007475	-.000205	.0043433	.1083477	.0234166
Stddev	.0239290	.000101	.0001491	.000254	.0003152	.0019962	.0006769
%RSD	16.30481	2.034605	19.94814	124.2788	7.256257	1.842401	2.890460
#1	.1217500	-.005055	.0009148	-.000493	.0040348	.1091234	.0226843
#2	.1490932	-.004936	.0006287	-.000012	.0043304	.1060801	.0240192
#3	.1694369	-.004855	.0006990	-.000109	.0046647	.1098397	.0235463

Sample Name: P5070-03LX5 Acquired: 12/5/2024 20:07:15 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2252172	-.000307	.0033865
Stddev	.0055905	.000456	.0000308
%RSD	2.482293	148.5134	.9089770
#1	.2294055	-.000793	.0033789
#2	.2188689	-.000238	.0033602
#3	.2273772	.000110	.0034203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2569.425	59663.71	14012.50	1647.372	4305.397
Stddev	24.666	70.61	60.71	4.931	41.850
%RSD	.9599845	.1183491	.4332667	.2992956	.9720364
#1	2541.048	59733.72	13945.68	1652.977	4257.192
#2	2581.497	59592.51	14027.54	1643.706	4326.565
#3	2585.729	59664.90	14064.27	1645.432	4332.434

Sample Name: P5070-03MS Acquired: 12/5/2024 20:11:35 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7041127	1.825039	.9189679	1.670693	.7050908	2.138758	.8926572
Stddev	.0139445	.050854	.0208369	.039446	.0182457	.007781	.0018801
%RSD	1.980442	2.786461	2.267425	2.361045	2.587709	.3638128	.2106140
#1	.7141300	1.868226	.9300106	1.696125	.7144795	2.129865	.8911889
#2	.7100214	1.837902	.9319593	1.690702	.7167303	2.144317	.8947762
#3	.6881866	1.768988	.8949338	1.625253	.6840626	2.142092	.8920067
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2143481	.1904142	4.000166	.4367008	.1998635	.2829914	17.91779
Stddev	.0013693	.0045073	.027294	.0010030	.0048802	.0069292	.07879
%RSD	.6388027	2.367075	.6823255	.2296780	2.441771	2.448559	.4397306
#1	.2132317	.1929654	3.968938	.4360425	.2028624	.2877073	17.82697
#2	.2158759	.1930671	4.019463	.4378551	.2024959	.2862312	17.96788
#3	.2139367	.1852100	4.012097	.4362046	.1942323	.2750358	17.95852
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3632117	2.402934	.4918910	.0718261	9.988933	.3135410	.3377180
Stddev	.0021128	.022896	.0113353	.0004882	.024106	.0027454	.0013488
%RSD	.5816916	.9528267	2.304441	.6797231	.2413285	.8756175	.3993966
#1	.3608299	2.380211	.4985881	.0716430	9.992021	.3106149	.3377840
#2	.3648599	2.402592	.4982816	.0723794	9.963432	.3160603	.3363374
#3	.3639453	2.425998	.4788033	.0714559	10.01135	.3139478	.3390327
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.334698	.2831589	.4092665	.6599469	.2155623	1.077430	5.417165
Stddev	.024140	.0009404	.0096197	.0166308	.0010651	.005746	.169748
%RSD	.2586089	.3321189	2.350471	2.520025	.4940969	.5333303	3.133520
#1	9.308080	.2826641	.4144601	.6700153	.2143749	1.071006	5.526991
#2	9.340841	.2842434	.4151731	.6690744	.2164332	1.079202	5.502850
#3	9.355174	.2825692	.3981663	.6407509	.2158789	1.082081	5.221653

Sample Name: P5070-03MS Acquired: 12/5/2024 20:11:35 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.017143	.1905785	.2303394
Stddev	.026102	.0006551	.0000392
%RSD	2.566235	.3437647	.0170098
#1	1.034659	.1899433	.2302951
#2	1.029627	.1912519	.2303534
#3	.987143	.1905404	.2303696

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2400.585	57545.57	13635.36	1557.675	4031.130
Stddev	50.187	87.11	37.27	8.702	83.014
%RSD	2.090626	.1513774	.2733160	.5586227	2.059329
#1	2371.553	57457.92	13652.90	1549.880	3983.069
#2	2371.665	57546.65	13592.56	1567.063	3983.334
#3	2458.536	57632.13	13660.62	1556.082	4126.986

Sample Name: P5070-03MSD Acquired: 12/5/2024 20:15:36 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6773366	1.746522	.8856176	1.610415	.6800887	2.039414	.8454168
Stddev	.0012963	.012678	.0007811	.003579	.0017841	.006693	.0034855
%RSD	.1913890	.7259037	.0881966	.2222598	.2623364	.3281801	.4122770
#1	.6769399	1.760447	.8850716	1.606352	.6780580	2.034255	.8416032
#2	.6762850	1.743472	.8852690	1.611787	.6808034	2.037010	.8462097
#3	.6787850	1.735647	.8865123	1.613105	.6814047	2.046977	.8484375
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2039063	.1838037	3.763768	.4154805	.1925286	.2726885	16.85013
Stddev	.0010635	.0004233	.038558	.0012463	.0004708	.0007066	.12587
%RSD	.5215471	.2302883	1.024454	.2999714	.2445212	.2591265	.7470180
#1	.2026786	.1833412	3.719246	.4140587	.1920081	.2718728	16.70628
#2	.2045436	.1838980	3.785807	.4163845	.1926531	.2731101	16.94005
#3	.2044967	.1841718	3.786253	.4159982	.1929246	.2730827	16.90407
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3426314	2.295471	.4734483	.0679042	9.529695	.2965495	.3204638
Stddev	.0025897	.027116	.0012545	.0001759	.010485	.0019838	.0006978
%RSD	.7558224	1.181297	.2649624	.2590224	.1100270	.6689621	.2177584
#1	.3399470	2.268642	.4723746	.0677040	9.539303	.2943327	.3200631
#2	.3428324	2.294905	.4731431	.0679747	9.531272	.2981577	.3212696
#3	.3451147	2.322866	.4748272	.0680339	9.518511	.2971581	.3200586
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.897871	.2695418	.3942855	.6377809	.2040555	1.022491	5.197664
Stddev	.041771	.0017148	.0001644	.0014743	.0011892	.003448	.001213
%RSD	.4694499	.6361790	.0416934	.2311615	.5827765	.3372106	.0233410
#1	8.941342	.2676268	.3944643	.6366930	.2026949	1.022257	5.196650
#2	8.894234	.2700633	.3941410	.6371909	.2045756	1.026051	5.199008
#3	8.858038	.2709352	.3942511	.6394588	.2048960	1.019167	5.197335

Sample Name: P5070-03MSD Acquired: 12/5/2024 20:15:36 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9769776	.1817149	.2185739
Stddev	.0053800	.0004785	.0007363
%RSD	.5506740	.2633118	.3368689
#1	.9780476	.1822065	.2179075
#2	.9711431	.1812508	.2184498
#3	.9817422	.1816873	.2193644

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2485.262	60003.21	14216.38	1605.920	4172.742
Stddev	4.803	118.78	32.72	6.373	7.365
%RSD	.1932411	.1979498	.2301468	.3968600	.1765056
#1	2488.532	60045.49	14252.87	1605.153	4180.335
#2	2479.748	59869.08	14206.63	1599.965	4165.628
#3	2487.505	60095.07	14189.65	1612.642	4172.263

Sample Name: P5070-03A Acquired: 12/5/2024 20:19:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6755665	1.749915	.8788924	1.599866	.6749580	2.022095	.8420912
Stddev	.0026188	.019887	.0037127	.004309	.0015462	.002932	.0033513
%RSD	.3876384	1.136430	.4224312	.2693528	.2290760	.1450047	.3979771
#1	.6782387	1.766220	.8793141	1.597506	.6742879	2.025441	.8396052
#2	.6730046	1.727759	.8749868	1.597252	.6738599	2.019971	.8407659
#3	.6754564	1.755766	.8823762	1.604839	.6767261	2.020874	.8459025
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2021655	.1821432	3.758212	.4131490	.1909395	.2698001	16.88538
Stddev	.0010892	.0006360	.021473	.0013144	.0005909	.0004391	.05153
%RSD	.5387739	.3491769	.5713542	.3181322	.3094698	.1627632	.3051503
#1	.2016023	.1822517	3.733521	.4119921	.1914034	.2703051	16.82612
#2	.2014733	.1814599	3.772515	.4128767	.1902743	.2695077	16.91961
#3	.2034210	.1827180	3.768600	.4145782	.1911410	.2695875	16.91042
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3418979	2.274266	.4701262	.0681378	9.509972	.2958613	.3176205
Stddev	.0016609	.015912	.0013002	.0000746	.016244	.0011906	.0007453
%RSD	.4857983	.6996464	.2765547	.1095120	.1708117	.4024321	.2346610
#1	.3404762	2.285438	.4713008	.0682231	9.518465	.2945615	.3170117
#2	.3414938	2.256047	.4687292	.0680846	9.491242	.2961232	.3184517
#3	.3437235	2.281311	.4703487	.0681056	9.520209	.2968992	.3173980
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.873524	.2674470	.3919425	.6343160	.2022449	1.028649	5.174943
Stddev	.018291	.0012952	.0008465	.0029365	.0004621	.001090	.015956
%RSD	.2061278	.4842724	.2159620	.4629343	.2284941	.1059268	.3083355
#1	8.859859	.2660753	.3921974	.6346384	.2024895	1.029537	5.190512
#2	8.894303	.2676168	.3909979	.6312316	.2025333	1.028977	5.158626
#3	8.866409	.2686488	.3926322	.6370779	.2017119	1.027433	5.175693

Sample Name: P5070-03A Acquired: 12/5/2024 20:19:37 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9699080	.1802763	.2168079
Stddev	.0048273	.0007162	.0002681
%RSD	.4977060	.3972969	.1236548
#1	.9743445	.1800768	.2171173
#2	.9706121	.1796810	.2166609
#3	.9647673	.1810712	.2166455

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2506.677	60285.50	14358.44	1636.626	4209.533
Stddev	2.279	130.11	12.00	5.461	5.570
%RSD	.0909037	.2158219	.0835685	.3336970	.1323096
#1	2508.816	60226.61	14371.33	1637.180	4208.399
#2	2506.935	60195.26	14347.60	1630.909	4215.583
#3	2504.281	60434.65	14356.38	1641.790	4204.618

Sample Name: CCV07 Acquired: 12/5/2024 20:23:14 Type: Unk
Method: NON EPA-6010-200.7(v2498) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.601602	5.076587	5.079684	4.550220	4.511048	9.404770
Stddev	.007660	.040027	.017786	.009930	.005933	.023213
%RSD	.1664728	.7884673	.3501413	.2182238	.1315237	.2468237
#1	4.598596	5.031375	5.059550	4.540384	4.505368	9.430067
#2	4.595901	5.090880	5.086239	4.550035	4.510572	9.384446
#3	4.610310	5.107506	5.093262	4.560241	4.517206	9.399798
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.140384	.2644379	2.598550	26.33164	1.052120	2.534484
Stddev	.068870	.0009742	.005929	.03207	.002967	.005159
%RSD	.7534710	.3683963	.2281729	.1217988	.2819774	.2035353
#1	9.212439	.2655554	2.592272	26.36755	1.052279	2.528565
#2	9.075217	.2637678	2.599326	26.32152	1.055004	2.536869
#3	9.133496	.2639906	2.604054	26.30585	1.049077	2.538019
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.148383	4.834901	2.535884	25.55698	2.536806	1.231770
Stddev	.001115	.012365	.010105	.03117	.001849	.002569
%RSD	.0971326	.2557399	.3984693	.1219551	.0728849	.2085707
#1	1.149290	4.825826	2.545974	25.59272	2.535292	1.234056
#2	1.148721	4.829892	2.525765	25.54283	2.536259	1.232263
#3	1.147137	4.848984	2.535913	25.53540	2.538866	1.228990
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.91267	2.514176	2.427319	25.15314	5.219099	4.755910
Stddev	.10674	.005224	.006786	.08109	.016437	.004731
%RSD	.4284712	.2077780	.2795676	.3223887	.3149460	.0994744
#1	25.03124	2.515461	2.433222	25.19533	5.237639	4.751626
#2	24.88255	2.518637	2.428830	25.05965	5.206311	4.755116
#3	24.82422	2.508429	2.419904	25.20444	5.213346	4.760988

Sample Name: CCV07 Acquired: 12/5/2024 20:23:14 Type: Unk
Method: NON EPA-6010-200.7(v2498) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.155684	4.850466	4.615872	5.072140	4.940663	F 4.239197
Stddev	.019818	.013729	.043988	.028882	.013812	.021233
%RSD	.3843963	.2830472	.9529695	.5694244	.2795585	.5008851
#1	5.136251	4.863826	4.567893	5.043397	4.925224	4.256153
#2	5.154934	4.836396	4.625421	5.071864	4.944917	4.215382
#3	5.175867	4.851175	4.654300	5.101159	4.951847	4.246055

Elem	Sr4077
Units	ppm
Avg	4.918813
Stddev	.011508
%RSD	.2339683
#1	4.922494
#2	4.928030
#3	4.905914

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2425.120	56776.02	13826.51	1582.306	3775.397
Stddev	5.849	19.77	55.79	3.548	3.359
%RSD	.2411954	.0348267	.4034716	.2241999	.0889806
#1	2418.382	56754.31	13763.22	1578.364	3772.376
#2	2428.891	56780.76	13847.76	1583.313	3779.015
#3	2428.088	56793.00	13868.55	1585.242	3774.801

Sample Name: CCB07 Acquired: 12/5/2024 20:27:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009138	-.001116	.0000285	-.000067	.0038363	-.000841	.0033095
Stddev	.0000798	.000894	.0001946	.001785	.0006069	.004303	.0003299
%RSD	8.729412	80.08332	681.4528	2651.054	15.81932	511.8850	9.966926
#1	.0010057	-.000100	.0002514	-.000695	.0040294	-.005460	.0029445
#2	.0008637	-.001465	-.000107	.001946	.0043232	-.000116	.0035863
#3	.0008719	-.001783	-.000058	-.001454	.0031564	.003054	.0033976
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000642	.0001422	-.011530	-.000150	.0002682	-.000285	-.000662
Stddev	.0000127	.0000570	.002969	.000549	.0001563	.000267	.002838
%RSD	19.73820	40.06308	25.75461	365.8429	58.29405	93.56481	428.3701
#1	.0000768	.0001266	-.010101	.000083	.0000935	-.000356	.001692
#2	.0000514	.0002054	-.009545	.000244	.0003160	-.000509	.000134
#3	.0000644	.0000947	-.014943	-.000777	.0003951	.000010	-.003813
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001542	.0086941	-.000024	.0002296	.0672545	.0010819	-.000385
Stddev	.0002934	.0075931	.000122	.0001319	.0134758	.0003778	.000249
%RSD	190.2745	87.33631	508.5000	57.42208	20.03698	34.92531	64.59732
#1	.0003785	.0173996	-.000134	.0000793	.0530483	.0008505	-.000231
#2	.0002617	.0052442	.000108	.0002839	.0688589	.0008772	-.000252
#3	-.000178	.0034384	-.000046	.0003257	.0798562	.0015179	-.000672
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0624936	-.000641	.0005617	-.000034	-.000164	.0029593	-.006459
Stddev	.0245130	.000350	.0002720	.000259	.000430	.0017916	.000405
%RSD	39.22475	54.50670	48.41714	772.0744	261.8159	60.54132	6.275860
#1	.0355898	-.000670	.0008412	.000188	.000333	.0046576	-.006483
#2	.0683283	-.000976	.0005461	-.000318	-.000414	.0010871	-.006852
#3	.0835628	-.000278	.0002979	.000029	-.000412	.0031332	-.006043

Sample Name: CCB07 Acquired: 12/5/2024 20:27:08 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0027306	.0000445	.0001833
Stddev	.0025610	.0002592	.0000886
%RSD	93.78871	582.2487	48.32270
#1	.0021555	-.000252	.0002739
#2	.0055303	.000161	.0001792
#3	.0005061	.000225	.0000969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2487.203	57925.99	13266.50	1631.454	4153.053
Stddev	6.802	120.13	23.29	7.287	6.312
%RSD	.2734638	.2073932	.1755681	.4466770	.1519941
#1	2490.874	58060.94	13239.66	1637.617	4153.803
#2	2491.381	57886.32	13281.39	1633.333	4158.957
#3	2479.355	57830.70	13278.45	1623.411	4146.399

SOP ID : M200.7-Trace Elements-22

SDG No : N/A

Matrix : WATER

Pipette ID : ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 12/02/2024 Time : 11:40 Temp : 95 °C

End Digest Date: 12/02/2024 Time : 14:45 Temp : 95 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: *[Signature]*

Supervisor Signature: *[Signature]*

Temp : 1. 95°C 2. N/A

Standardized Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6000
LFS-2	0.25	M6009
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	1.00	MP83122
1:1 HCL	0.50	MP83105
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

Hot Block # 1 Cell # 50 Temp: 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/2/24 15:08	<i>[Signature]</i> Prep Group	<i>[Signature]</i> Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
P5044-01	OUTFALL-DSN-001	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	1
P5044-02	OUTFALL-DSN-002	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	2
P5044-02MS	OUTFALL-DSN-002MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	4
P5044-02MSD	OUTFALL-DSN-002MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	5
P5044-02DUP	OUTFALL-DSN-002DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
PB165328BL	PBW328	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	6
PB165328BS	LCS328	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	7

WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB165328

Worklist ID : 185895

Department : Digestion

Date : 12-02-2024 10:49:03

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5044-01	OUTFALL-DSN-001	Water	Metals Group3	1:1 HNO3 to pH < 2	TRIS02	L41	11/27/2024	200.7
P5044-02	OUTFALL-DSN-002	Water	Metals Group3	1:1 HNO3 to pH < 2	TRIS02	L41	11/27/2024	200.7

Date/Time 12/02/24 11:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 12/02/24 12:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133769

Review By	kareem	Review On	12/6/2024 3:36:51 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/05/24 13:21		Kareem	OK
2	S1	S1	CAL2	12/05/24 13:25		Kareem	OK
3	S2	S2	CAL3	12/05/24 13:30		Kareem	OK
4	S3	S3	CAL4	12/05/24 13:34		Kareem	OK
5	S4	S4	CAL5	12/05/24 13:38		Kareem	OK
6	S5	S5	CAL6	12/05/24 13:42		Kareem	OK
7	ICV01	ICV01	ICV	12/05/24 13:53		Kareem	OK
8	LLICV01	LLICV01	LLICV	12/05/24 14:05		Kareem	OK
9	ICB01	ICB01	ICB	12/05/24 14:10		Kareem	OK
10	CRI01	CRI01	CRDL	12/05/24 14:14		Kareem	OK
11	ICSA01	ICSA01	ICSA	12/05/24 14:18		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	12/05/24 14:33		Kareem	OK
13	ICSADL	ICSADL	ICSA	12/05/24 14:37		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	12/05/24 14:41		Kareem	OK
15	CCV01	CCV01	CCV	12/05/24 14:45		Kareem	OK
16	CCB01	CCB01	CCB	12/05/24 14:50		Kareem	OK
17	P5052-02	OR-640-COMP-50	SAM	12/05/24 14:54		Kareem	OK
18	P5052-08	OR-640-COMP-51	SAM	12/05/24 14:58		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133769

Review By	kareem	Review On	12/6/2024 3:36:51 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

19	P5052-20	OR-640-COMP-63	SAM	12/05/24 15:17		Kareem	OK
20	P5052-14	OR-640-COMP-62	SAM	12/05/24 15:21		Kareem	OK
21	CCV02	CCV02	CCV	12/05/24 15:34		Kareem	OK
22	CCB02	CCB02	CCB	12/05/24 15:41		Kareem	OK
23	PB165341TB	PB165341TB	MB	12/05/24 15:46		Kareem	OK
24	PB165363BL	PB165363BL	MB	12/05/24 15:50		Kareem	OK
25	PB165363BS	PB165363BS	LCS	12/05/24 15:55	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
26	PB165328BL	PB165328BL	MB	12/05/24 15:59		Kareem	OK
27	PB165371BS	PB165371BS	LCS	12/05/24 16:07	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
28	PB165328BS	PB165328BS	LCS	12/05/24 16:12	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
29	PB165287BL	PB165287BL	MB	12/05/24 16:16	NOT USE	Kareem	Not Ok
30	PB165287BS	PB165287BS	LCS	12/05/24 16:21	NOT USE	Kareem	Not Ok
31	PB165370BL	PB165370BL	MB	12/05/24 16:25		Kareem	OK
32	PB165370BS	PB165370BS	LCS	12/05/24 16:29	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
33	CCV03	CCV03	CCV	12/05/24 16:42		Kareem	OK
34	CCB03	CCB03	CCB	12/05/24 16:46		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133769

Review By	kareem	Review On	12/6/2024 3:36:51 PM
Supervise By		Supervise On	
STD. NAME	STD REF.#		
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084		
ICV Standard	MP83085		
CCV Standard	MP83088		
ICSA Standard	MP83086 MP83087		
CRI Standard	MP83084		
LCS Standard			
Chk Standard	MP83091 MP83092		

35	PB165371BL	PB165371BL	MB	12/05/24 16:51		Kareem	OK
36	PB165344BL	PB165344BL	MB	12/05/24 16:55		Kareem	OK
37	PB165344BS	PB165344BS	LCS	12/05/24 16:59	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
38	LR1	LR1	HIGH STD	12/05/24 17:03		Kareem	OK
39	LR2	LR2	HIGH STD	12/05/24 17:08		Kareem	OK
40	P5069-02	A3988-SLUDGE	SAM	12/05/24 17:12		Kareem	OK
41	P5072-04	MH-737	SAM	12/05/24 17:17		Kareem	OK
42	P5072-08	MH-738	SAM	12/05/24 17:21		Kareem	OK
43	P5072-08DUP	MH-738DUP	DUP	12/05/24 17:25		Kareem	OK
44	P5072-08L	MH-738L	SD	12/05/24 17:30		Kareem	OK
45	CCV04	CCV04	CCV	12/05/24 17:41		Kareem	OK
46	CCB04	CCB04	CCB	12/05/24 17:47		Kareem	OK
47	P5072-08MS	MH-738MS	MS	12/05/24 17:52	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
48	P5072-08MSD	MH-738MSD	MSD	12/05/24 17:56	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
49	P5072-08A	MH-738A	PS	12/05/24 18:00	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
50	P5044-01	OUTFALL-DSN-001	SAM	12/05/24 18:04		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133769

Review By	kareem	Review On	12/6/2024 3:36:51 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

51	P5044-02DUP	OUTFALL-DSN-002D	DUP	12/05/24 18:08		Kareem	OK
52	P5044-02	OUTFALL-DSN-002	SAM	12/05/24 18:13		Kareem	OK
53	P5044-02L	OUTFALL-DSN-002L	SD	12/05/24 18:17		Kareem	OK
54	P5044-02MS	OUTFALL-DSN-002M	MS	12/05/24 18:21	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
55	P5044-02MSD	OUTFALL-DSN-002M	MSD	12/05/24 18:25	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
56	P5044-02A	OUTFALL-DSN-002A	PS	12/05/24 18:29	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
57	CCV05	CCV05	CCV	12/05/24 18:39		Kareem	OK
58	CCB05	CCB05	CCB	12/05/24 18:43		Kareem	OK
59	PB165365BL	PB165365BL	MB	12/05/24 19:04		Kareem	OK
60	PB165365BS	PB165365BS	LCS	12/05/24 19:08	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
61	P5070-01	OIL	SAM	12/05/24 19:12		Kareem	OK
62	P5070-05	OILY-DEBRIS	SAM	12/05/24 19:17		Kareem	OK
63	P5072-01	MH-737	SAM	12/05/24 19:21		Kareem	OK
64	P5072-05	MH-738	SAM	12/05/24 19:25		Kareem	OK
65	P5072-05DUP	MH-738DUP	DUP	12/05/24 19:29		Kareem	OK
66	P5072-05L	MH-738L	SD	12/05/24 19:33		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB133769

Review By	kareem	Review On	12/6/2024 3:36:51 PM
Supervise By		Supervise On	
STD. NAME	STD REF.#		
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084		
ICV Standard	MP83085		
CCV Standard	MP83088		
ICSA Standard	MP83086 MP83087		
CRI Standard	MP83084		
LCS Standard			
Chk Standard	MP83091 MP83092		

67	P5072-05MS	MH-738MS	MS	12/05/24 19:38	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
68	P5072-05MSD	MH-738MSD	MSD	12/05/24 19:42	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
69	CCV06	CCV06	CCV	12/05/24 19:45		Kareem	OK
70	CCB06	CCB06	CCB	12/05/24 19:50		Kareem	OK
71	P5072-05A	MH-738A	PS	12/05/24 19:54	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
72	P5070-03	OIL-WATER	SAM	12/05/24 19:58		Kareem	OK
73	P5070-03DUP	OIL-WATERDUP	DUP	12/05/24 20:02		Kareem	OK
74	P5070-03L	OIL-WATERL	SD	12/05/24 20:07		Kareem	OK
75	P5070-03MS	OIL-WATERMS	MS	12/05/24 20:11	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
76	P5070-03MSD	OIL-WATERMSD	MSD	12/05/24 20:15	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
77	P5070-03A	OIL-WATERA	PS	12/05/24 20:19	0.1ML OF M6001 AND M6010 WERE ADDED TO 10ML OF SAMPLE	Kareem	OK
78	CCV07	CCV07	CCV	12/05/24 20:23		Kareem	OK
79	CCB07	CCB07	CCB	12/05/24 20:27		Kareem	OK

Prep Standard - Chemical Standard Summary

Order ID : P5044

Test : Metals Group3

Prepbatch ID : PB165328,

Sequence ID/Qc Batch ID: LB133769,

Standard ID :

MP83078 MP83079 MP73080 MP83081 MP83082 MP83084,MP83083,MP83085,MP83086
MP83087,MP83088,MP83091 MP83092,MP83105,MP83122,

Chemical ID :

M5192,M5218,M5288,M5295,M5296,M5390,M5394,M5429,M5467,M5498,M5515,M5658,M5697,M5698,M5747,M5748
,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M596
2,M5970,M5978,M5982,M6000,M6009,M6021,M6023,M6028,M6030,M6033,M6111,M6116,M6117,W3112,

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2950	ICP AES S1/CRI STOCK STD	MP83083	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal
								11/07/2024

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5515 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6033 + 0.06000ml of M5747 + 0.10000ml of M5697 + 0.10000ml of M5698 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M5982 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5819 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5467 + 0.25000ml of M5802 + 0.50000ml of M5390 + 0.50000ml of M5814 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5498 + 1.00000ml of M5769 + 1.00000ml of M5806 + 1.00000ml of M5978 + 2.00000ml of M5816 + 2.00000ml of M5818 + 77.68000ml of MP83078 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
912	ICP AES ICV SOLN	MP83085	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal
								11/07/2024

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.25000ml of M5218 + 0.25000ml of M5982 + 10.00000ml of M5295 + 89.77500ml of MP83078 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
911	ICP AES CCV SOLN	MP83088	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal
								11/07/2024

FROM 50.00000ml of MP83078 + 50.00000ml of MP83079 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
170	1:1HCL	MP83105	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal
								11/07/2024

FROM 1000.00000ml of M6111 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
169	1:1HNO3	MP83122	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024
FROM 1000.00000ml of M6116 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	02/20/2020 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	11/28/2022 / bin	09/19/2022 / bin	M5394

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	08/30/2026	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6000

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6009

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	01/25/2019 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22F0762009	05/09/2027	11/04/2024 / Eman	09/29/2024 / Janvi	M6111

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/06/2025	11/06/2024 / Janvi	09/29/2024 / Eman	M6117

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Lot #
Solvent: 24002546 Nitric Acid

2% 40.0 Nitric Acid (mL)

Expiration Date: 070127

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 5E-05 Balance Uncertainty 0.100 Flask Uncertainty

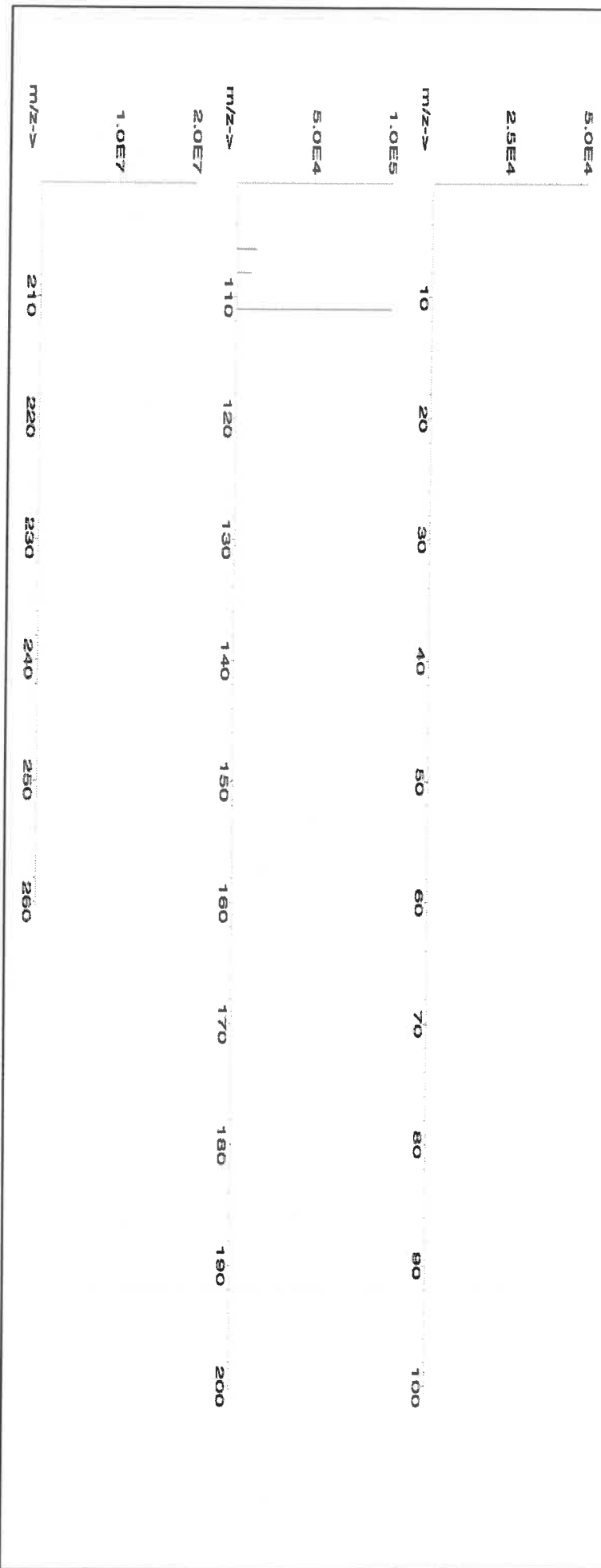
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

Compound

Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Cadmium nitrate tetrahydrate (Cd)	INO24 CDM09221A1	1000	99.999	0.10	36.5	5.4797	5.4804	1000.1	2.0	10022-68-1	0.01 mg/m3	or-rat 60.2mg/kg 3108

[1] Spectrum No.1 [12.514 sec]:\$8148.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.2	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: CHEM-CLP-4
Lot Number: S2-MEB711673
Matrix: 3% (v/v) HNO₃
3% (v/v) HF
Value / Analyte(s): 1 000 µg/mL ea:
Boron, Molybdenum,
Silicon, Tin,
Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 6 µg/mL	Molybdenum, Mo	1 000 ± 6 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 6 µg/mL
Titanium, Ti	1 000 ± 7 µg/mL		

Density: 1.030 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2(u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution	
Catalog Number:	CLPP-CAL-1	
Lot Number:	T2-MEB714417	
Matrix:	5% (v/v) HNO ₃	
Value / Analyte(s):	5 000 µg/mL ea:	Potassium, Sodium,
	Calcium, Magnesium,	
	2 000 µg/mL ea:	Barium,
	Aluminum,	
	1 000 µg/mL ea:	
	Iron,	
	500 µg/mL ea:	Vanadium, Cobalt,
	Nickel, Zinc, Manganese,	
	250 µg/mL ea:	Copper,
	Silver,	
	200 µg/mL ea:	
	Chromium,	
	50 µg/mL ea:	
	Beryllium	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: CLPP-CAL-3
Lot Number: T2-MEB714159
Matrix: 7% (v/v) HNO₃
Value / Analyte(s):
1 000 µg/mL ea:
Arsenic, Lead,
Selenium, Thallium,
500 µg/mL ea:
Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	1 000 ± 8 µg/mL	Cadmium, Cd	500.0 ± 2.1 µg/mL
Lead, Pb	1 000 ± 5 µg/mL	Selenium, Se	1 000 ± 8 µg/mL
Thallium, Tl	1 000 ± 7 µg/mL		

Density: 1.043 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO ₃

Value / Analyte(s):	1 000 µg/mL ea:	
	Potassium,	
	600 µg/mL ea:	
	Phosphorus,	
	300 µg/mL ea:	
	Sodium,	Iron,
	200 µg/mL ea:	
	Magnesium,	Aluminum,
	Cerium,	Selenium,
	Thallium,	
	100 µg/mL ea:	
	Lead,	Calcium,
	80 µg/mL ea:	
	Arsenic,	
	70 µg/mL ea:	
	Mercury,	
	50 µg/mL ea:	
	Nickel,	
	40 µg/mL ea:	
	Chromium,	
	30 µg/mL ea:	
	Copper,	Boron,
	Vanadium,	
	20 µg/mL ea:	
	Zinc,	Strontium,
	Barium,	Beryllium,
	Cadmium,	Cobalt,
	Manganese,	Lithium,
	7.5 µg/mL ea:	
	Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty (z)} = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum ((w_i)^2 (u_{\text{char } i}^2))]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty (z)} = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com; inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 30, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: WW-LFS-2
Lot Number: U2-MEB731108
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s):
200 µg/mL ea:
Silica,
80 µg/mL ea:
Antimony,
70 µg/mL ea:
Tin,
40 µg/mL ea:
Molybdenum,
20 µg/mL ea:
Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO ₂	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO ₂	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum (1/u_{\text{char } i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 17, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

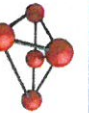
Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57042
051722
Molybdenum (Mo)

Lot # **Solvent:**
MKB08597V Ammonium hydroxide

0.5% **15.0** **Ammonium hydroxide**
(mL)

Expiration Date: 051725

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

3000.41

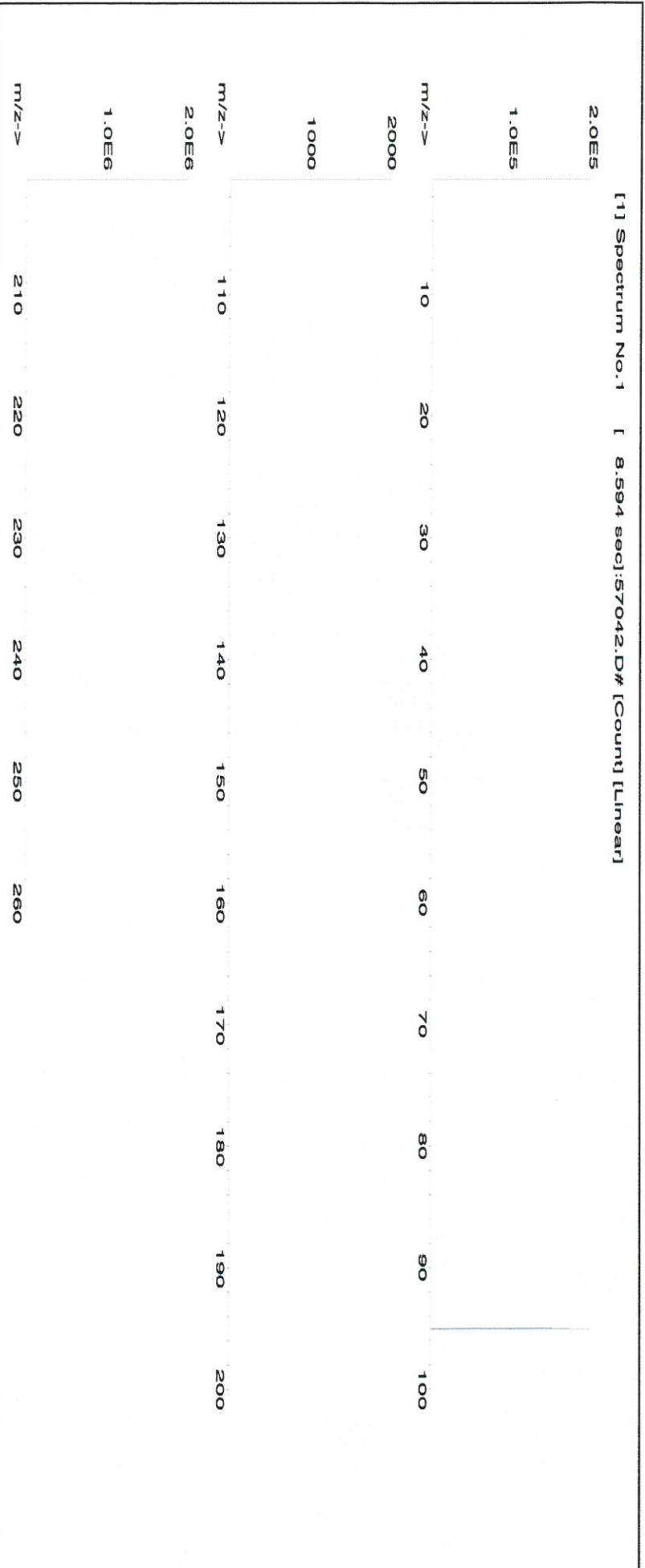
5E-05 **Balance Uncertainty**
0.058 **Flask Uncertainty**

Formulated By:	Lawrence Barry
	051722
Reviewed By:	Pedro L. Rendas
	051722

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	NIST SRM

1. Ammonium molybdate (Mo) 58142 022222 0.1000 300.0 0.084 1000 10001.0 1000.0 2.1 13106-76-8 5 mg(Mo)/m3 or-trat 333 mg/kg 3134





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Certificate of Analysis

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: CHEM-QC-4
 Lot Number: S2-MEB711674
 Matrix: 3% (v/v) HNO₃
 3% (v/v) HF
 Value / Analyte(s): 1 000 µg/mL ea:
 Boron, Molybdenum,
 Silicon, Tin,
 Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 7 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 001 ± 6 µg/mL		

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: **58119**
Lot Number: **071122**
Description: **Potassium (K)**

Solvent: 20510011 Nitric Acid

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): **10000**
NIST Test Number: 6UTB

2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
	071122
Reviewed By:	Pedro L. Rentas
	071122

Compound

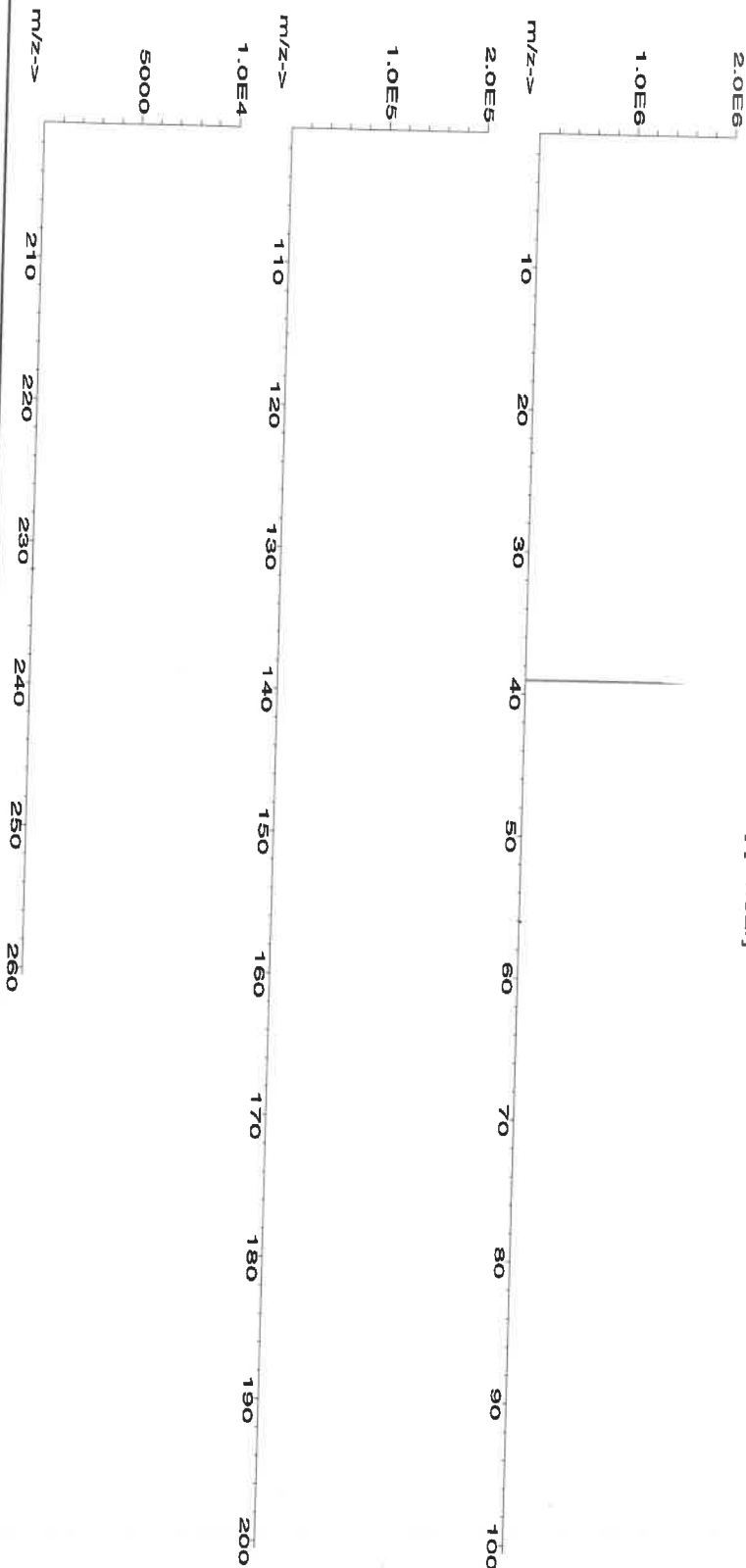
1. Potassium nitrate (K)

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	10000.2	20.0	7757-79-1	5 mg/m3	or-rat 3015 mg/kg	3141a

SDS Information

(Solvent Safety Info. On Attached pg.)
NIST SRM

[1] Spectrum No. 1 [35.763 sec]:58119.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 4/20/21

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M15292
M15293
M15294
M15295

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) ANALYSIS OF SAMPLES

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.





QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

- ICV1-1014** For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.
- ICV5-0415** For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.
- ICV6-0400** For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS

ICV1-1014		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	Concentration (µg/L) (after 100-fold dilution)	Analyte	Concentration (µg/L) (after 100-fold dilution)
Hg	4.0	CN ⁻	99



R-09/18/22 (RH)
Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: **57056**
Lot Number: **072122**
Description: **Barium (Ba)**

Solvent: **20510011 Nitric Acid**

M5387 - M5389 - M5390 - M5391 - M5392



Expiration Date: **072125**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

2% **40.0** **Nitric Acid**
(mL)

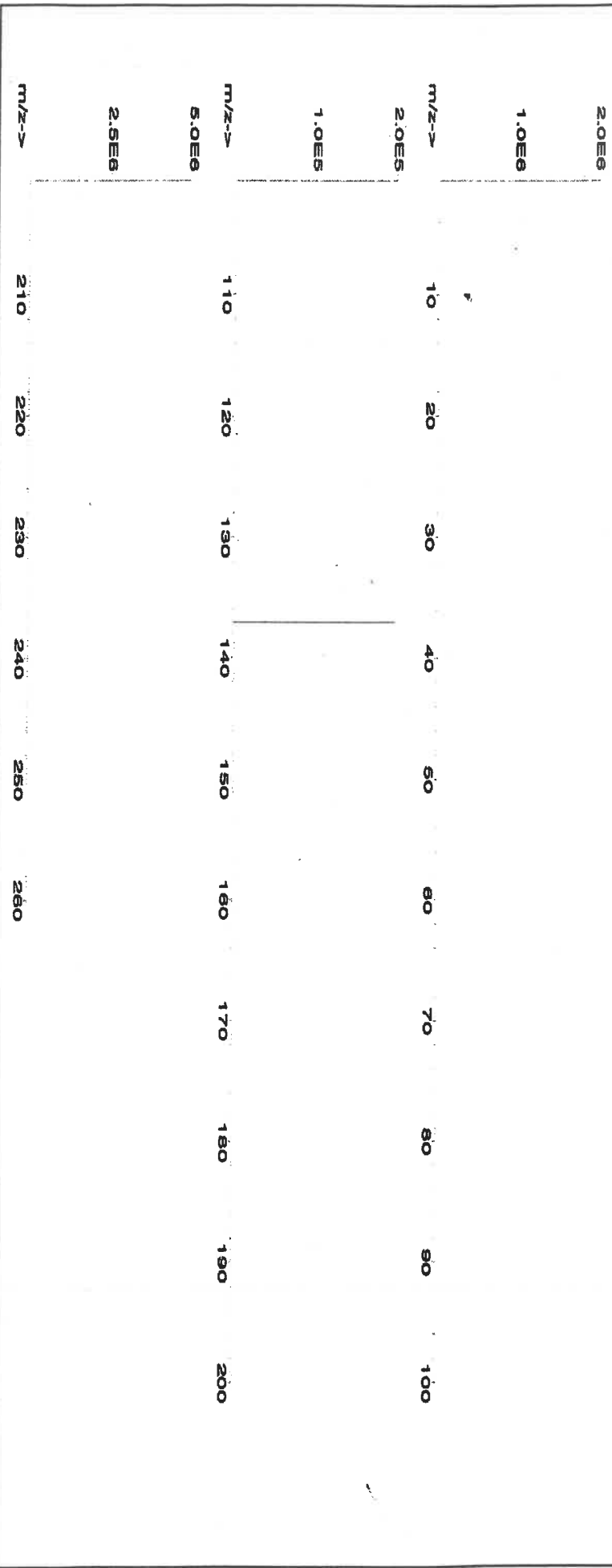
Weight shown below was diluted to (mL): **2000.02** **5E-05** Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Caporale</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentes</i>
	072122

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Barium nitrate (Ba)	IN023 BA022019A1	1000	99.899	0.10	52.3	3.82417	3.82426	1000.0	2.0

1. Barium nitrate (Ba) IN023 BA022019A1 1000 99.899 0.10 52.3 3.82417 3.82426 1000.0 2.0 10022-31-8 0.5 mg/m3 or-al 355 mg/kg 31046

[1] Spectrum No. 1 [12.514 sec]:58156.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.2	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Ben. L. R.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M5429 R1 0126/23 (B)

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57103
070622
Lithium (Li)

Solvent: 20510011 Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

070625
Ambient (20 °C)
10000
6UTB

2% 20.0 (mL)

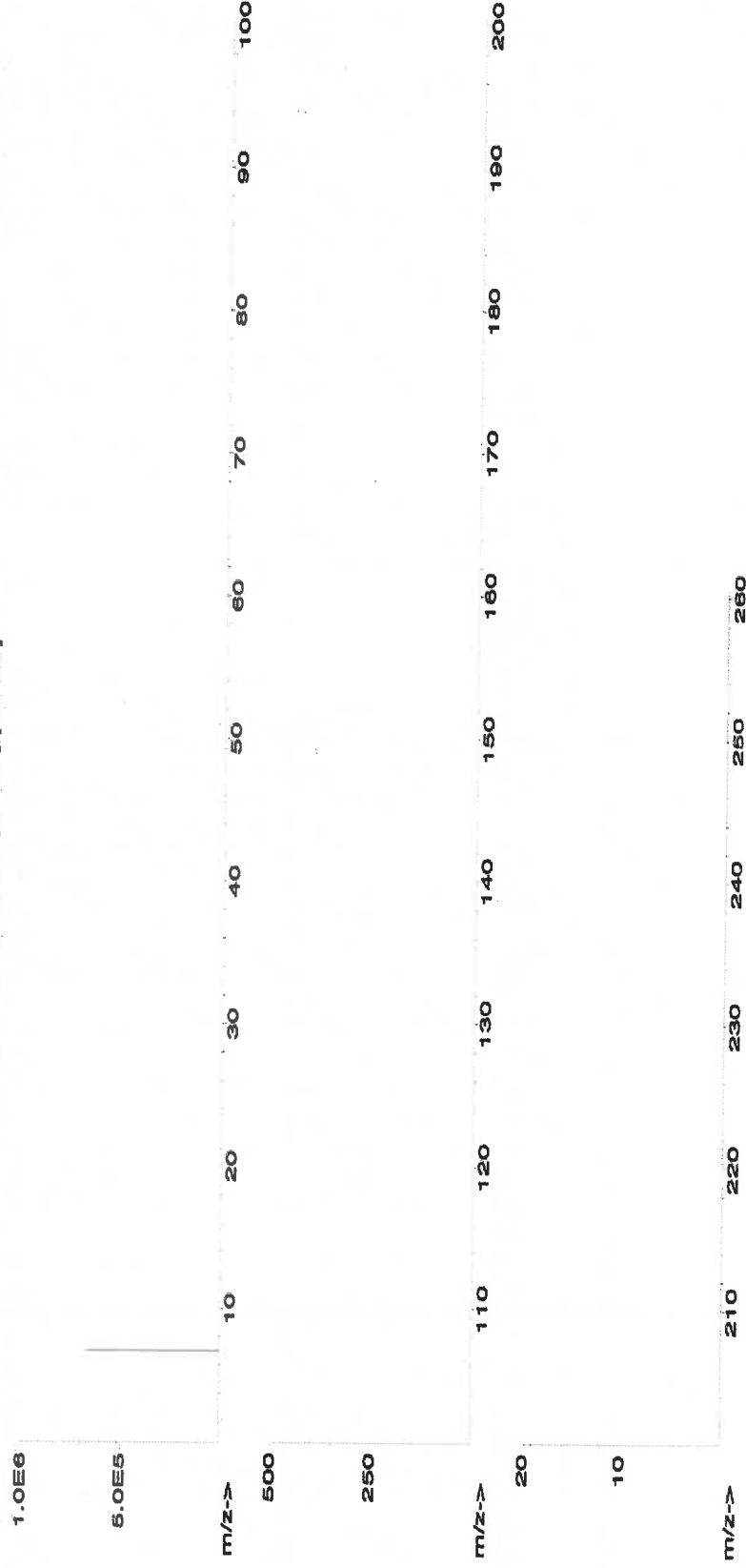
Weight shown below was diluted to (mL): 1000.12
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#	LD50	NIST SRM

1. Lithium nitrate (Li)	IN019	10000	99.999	0.10	10.0	100.0134	100.0173	10000.4	20.0	7790-69-4	5 mg/m3	of-rat 1426 mg/kg	NA

[1] Spectrum No.1 [9.619 sec]:58103.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.02	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.2	Ho	<0.02	La	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57058
020623
Cerium (Ce)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

020626
Ambient (20 °C)
1000
6UTB

Weight shown below was diluted to (mL):

1000.12 **0.058** **Balance Uncertainty**
Flask Uncertainty

Lot #
Solvent: **21110221** **Nitric Acid**

2% **20.0** **Nitric Acid**
(mL)

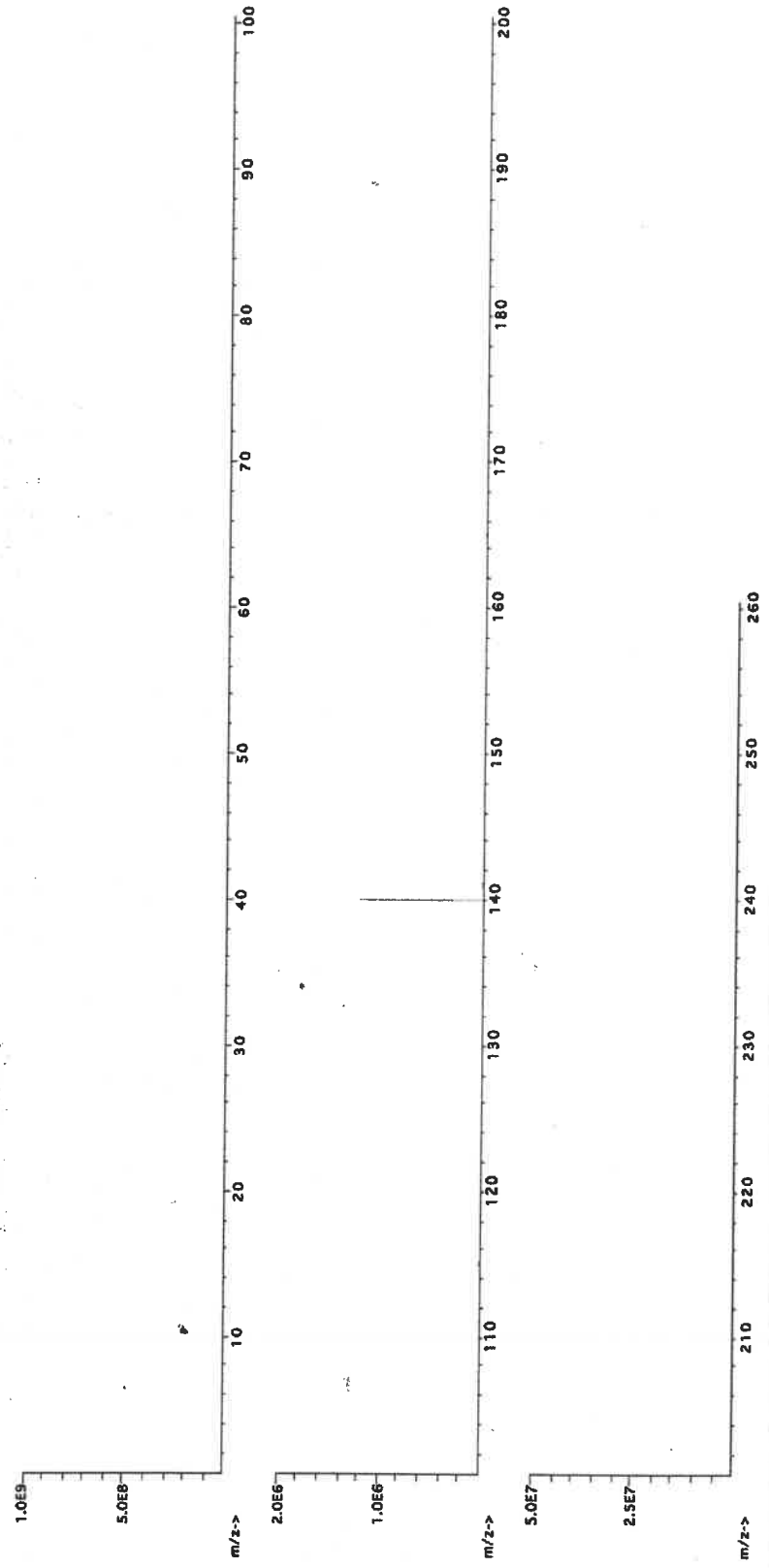
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty
+/- (µg/mL)
CAS#
OSHA PEL (TWA)
LD50
SRM

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA	NA

[1] Spectrum No.1 [43.472 sec]58158.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	La	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:

Lot Number: 031523

Description:

Calcium (Ca)

Expiration Date:

031526

Recommended Storage: Ambient (20 °C)

10000

NIST Test Number:

617B

Weight shown below was diluted to (mL): 3000.41

5E-05 Balance Uncertainty

0.058 Flask Uncertainty

卷一

Solvent: 21110221 Nitric Acid

Nitric Acid

2% Nitric Acid 60.0 (mL)

Nitric Acid

	
Formulated By: 	031523
	
Reviewed By: 	031523

SDS Information

Expanded

Uncertainty

Actual

Actual

Target

Inty Assay

Purity Unc

Nominal

Lot .

1

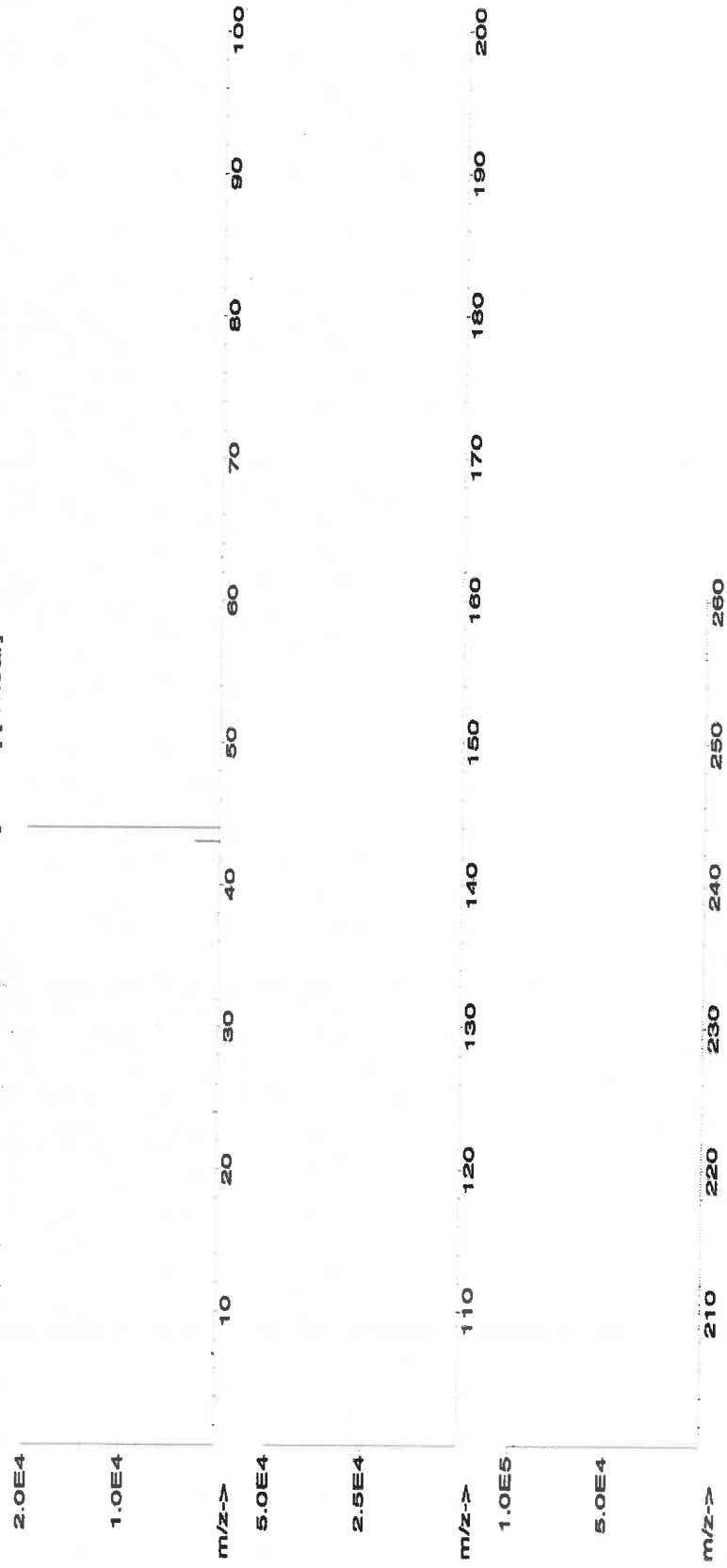
REGISTRATION
(Solvent Safety Info. On Attached no.)

NIST

SPM

[illegible]

[1] Spectrum No.1 [12.514 sec]:58120.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Ti	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02
																W	<0.02
																U	<0.02
																V	<0.02
																Yb	<0.02
																Y	<0.02
																Zn	<0.02
																Zr	<0.02

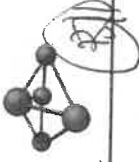
(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:	Lot Number:	Description:

58126
092122
Iron (Fe

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

Weight shown below was diluted to (mL):

Solvent: 20510011 Nitric Acid

7.0%	350.0	Nitric Acid
		(mL)

5E-05 Balance Uncertainty
0.12 Flask Uncertainty

Expanded
Uncertainty
+/- (µg/mL)

Actual Weight (g)	Actual Conc. ($\mu\text{g}/$

Target
Weight (g)

	Purity (%)	Uncertainty (%)	Assay (%)
1	99.9	0.1	99.9
2	99.9	0.1	99.9
3	99.9	0.1	99.9
4	99.9	0.1	99.9
5	99.9	0.1	99.9
6	99.9	0.1	99.9
7	99.9	0.1	99.9
8	99.9	0.1	99.9
9	99.9	0.1	99.9
10	99.9	0.1	99.9
11	99.9	0.1	99.9
12	99.9	0.1	99.9
13	99.9	0.1	99.9
14	99.9	0.1	99.9
15	99.9	0.1	99.9
16	99.9	0.1	99.9
17	99.9	0.1	99.9
18	99.9	0.1	99.9
19	99.9	0.1	99.9
20	99.9	0.1	99.9
21	99.9	0.1	99.9
22	99.9	0.1	99.9
23	99.9	0.1	99.9
24	99.9	0.1	99.9
25	99.9	0.1	99.9
26	99.9	0.1	99.9
27	99.9	0.1	99.9
28	99.9	0.1	99.9
29	99.9	0.1	99.9
30	99.9	0.1	99.9
31	99.9	0.1	99.9
32	99.9	0.1	99.9
33	99.9	0.1	99.9
34	99.9	0.1	99.9
35	99.9	0.1	99.9
36	99.9	0.1	99.9
37	99.9	0.1	99.9
38	99.9	0.1	99.9
39	99.9	0.1	99.9
40	99.9	0.1	99.9
41	99.9	0.1	99.9
42	99.9	0.1	99.9
43	99.9	0.1	99.9
44	99.9	0.1	99.9
45	99.9	0.1	99.9
46	99.9	0.1	99.9
47	99.9	0.1	99.9
48	99.9	0.1	99.9
49	99.9	0.1	99.9
50	99.9	0.1	99.9
51	99.9	0.1	99.9
52	99.9	0.1	99.9
53	99.9	0.1	99.9
54	99.9	0.1	99.9
55	99.9	0.1	99.9
56	99.9	0.1	99.9
57	99.9	0.1	99.9
58	99.9	0.1	99.9
59	99.9	0.1	99.9
60	99.9	0.1	99.9
61	99.9	0.1	99.9
62	99.9	0.1	99.9
63	99.9	0.1	99.9
64	99.9	0.1	99.9
65	99.9	0.1	99.9
66	99.9	0.1	99.9
67	99.9	0.1	99.9
68	99.9	0.1	99.9
69	99.9	0.1	99.9
70	99.9	0.1	99.9
71	99.9	0.1	99.9
72	99.9	0.1	99.9
73	99.9	0.1	99.9
74	99.9	0.1	99.9
75	99.9	0.1	99.9
76	99.9	0.1	99.9
77	99.9	0.1	99.9
78	99.9	0.1	99.9
79	99.9	0.1	99.9
80	99.9	0.1	99.9
81	99.9	0.1	99.9
82	99.9	0.1	99.9
83	99.9	0.1	99.9
84	99.9	0.1	99.9
85	99.9	0.1	99.9
86	99.9	0.1	99.9
87	99.9	0.1	99.9
88	99.9	0.1	99.9
89	99.9	0.1	99.9
90	99.9	0.1	99.9
91	99.9	0.1	99.9
92	99.9	0.1	99.9

Nominal Conc. ($\mu\text{g}/\text{mL}$)

Lot	RM#	Number

Compound	Yield (%)	mp (°C)	lit. mp (°C)	IR (cm ⁻¹)	¹ H NMR (ppm)	MS (m/z)	HRMS (m/z)	Elemental Analysis (%)
1	85	105-106	105-106	1715, 1640, 1510, 1460, 1380, 1280, 1180, 1100, 1050, 1000, 950, 900, 850, 800, 750, 700, 650, 600, 550, 500, 450, 400, 350, 300, 250, 200, 150, 100	7.8 (d, 1H), 7.6 (d, 1H), 7.4 (d, 1H), 7.2 (d, 1H), 7.0 (d, 1H), 6.8 (d, 1H), 6.6 (d, 1H), 6.4 (d, 1H), 6.2 (d, 1H), 6.0 (d, 1H), 5.8 (d, 1H), 5.6 (d, 1H), 5.4 (d, 1H), 5.2 (d, 1H), 5.0 (d, 1H), 4.8 (d, 1H), 4.6 (d, 1H), 4.4 (d, 1H), 4.2 (d, 1H), 4.0 (d, 1H), 3.8 (d, 1H), 3.6 (d, 1H), 3.4 (d, 1H), 3.2 (d, 1H), 3.0 (d, 1H), 2.8 (d, 1H), 2.6 (d, 1H), 2.4 (d, 1H), 2.2 (d, 1H), 2.0 (d, 1H), 1.8 (d, 1H), 1.6 (d, 1H), 1.4 (d, 1H), 1.2 (d, 1H), 1.0 (d, 1H), 0.8 (d, 1H), 0.6 (d, 1H), 0.4 (d, 1H), 0.2 (d, 1H)	100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767		

Compound

SDS Information

(Solvent Safety Info. On Attached pg.)

LD50

OSHA PEL (TWA)

Uncertainty
+/- (µg/mL)

Actual	Actual
Weight (g)	Conc. (µg/

Target Weight (g)

Purity	Uncertainty	Assay
(%)	(%)	(%)

Conc. ($\mu\text{g}/\text{mL}$)

RM#	Number

Compound	Yield (%)	mp (°C)	lit. mp (°C)	lit. yield (%)	lit. ref.
1	75	100-101	100-101	75	1
2	75	100-101	100-101	75	1
3	75	100-101	100-101	75	1
4	75	100-101	100-101	75	1
5	75	100-101	100-101	75	1
6	75	100-101	100-101	75	1
7	75	100-101	100-101	75	1
8	75	100-101	100-101	75	1
9	75	100-101	100-101	75	1
10	75	100-101	100-101	75	1
11	75	100-101	100-101	75	1
12	75	100-101	100-101	75	1
13	75	100-101	100-101	75	1
14	75	100-101	100-101	75	1
15	75	100-101	100-101	75	1
16	75	100-101	100-101	75	1
17	75	100-101	100-101	75	1
18	75	100-101	100-101	75	1
19	75	100-101	100-101	75	1
20	75	100-101	100-101	75	1
21	75	100-101	100-101	75	1
22	75	100-101	100-101	75	1
23	75	100-101	100-101	75	1
24	75	100-101	100-101	75	1
25	75	100-101	100-101	75	1
26	75	100-101	100-101	75	1
27	75	100-101	100-101	75	1
28	75	100-101	100-101	75	1
29	75	100-101	100-101	75	1
30	75	100-101	100-101	75	1
31	75	100-101	100-101	75	1
32	75	100-101	100-101	75	1
33	75	100-101	100-101	75	1
34	75	100-101	100-101	75	1
35	75	100-101	100-101	75	1
36	75	100-101	100-101	75	1
37	75	100-101	100-101	75	1
38	75	100-101	100-101	75	1
39	75	100-101	100-101	75	1
40	75	100-101	100-101	75	1
41	75	100-101	100-101	75	1
42	75	100-101	100-101	75	1
43	75	100-101	100-101	75	1
44	75	100-101	100-101	75	1
45	75	100-101	100-101	75	1
46	75	100-101	100-101	75	1
47	75	100-101	100-101	75	1
48	75	100-101	100-101	75	1
49	75	100-101	100-101	75	1
50	75	100-101	100-101	75	1
51	75	100-101	100-101	75	1
52	75	100-101	100-101	75	1
53	75	100-101	100-101	75	1
54	75	100-101	100-101	75	1
55	75	100-101	100-101	75	1
56	75	100-101	100-101	75	1
57	75	100-101	100-101	75	1
58	75	100-101	100-101	75	1
59	75	100-101	100-101	75	1
60	75	100-101	100-101	75	1
61	75	100-101	100-101	75	1
62	75	100-101	100-101	75	1
63	75	100-101	100-101	75	1</

Compound

1. Iron (Fe)

IN346 2224912-500

1000

00000

910

3

10

1

10

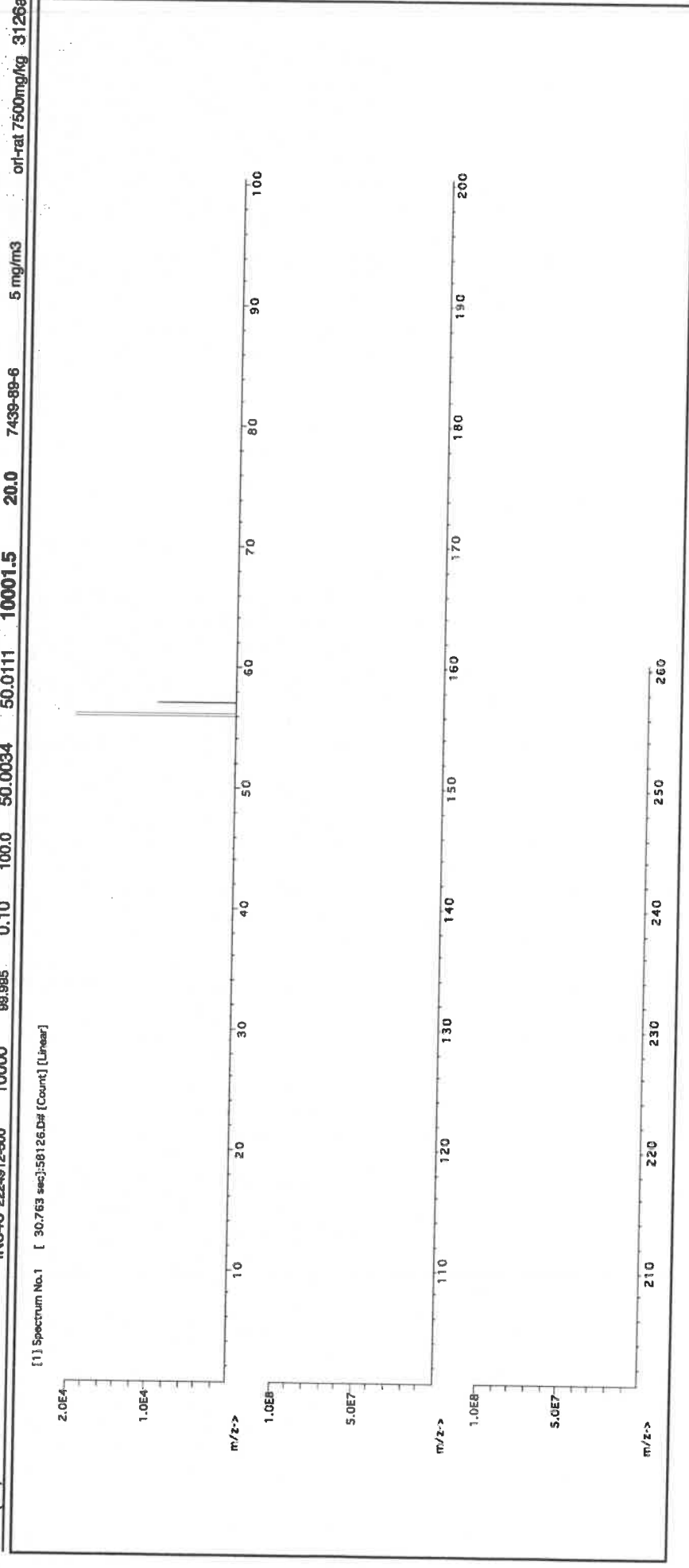
1003

1141

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466

1

11





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	La	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Ben P. Galt

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot #
21110221
Solvent: Nitric Acid

2.0%

40.0 (mL)
Nitric Acid

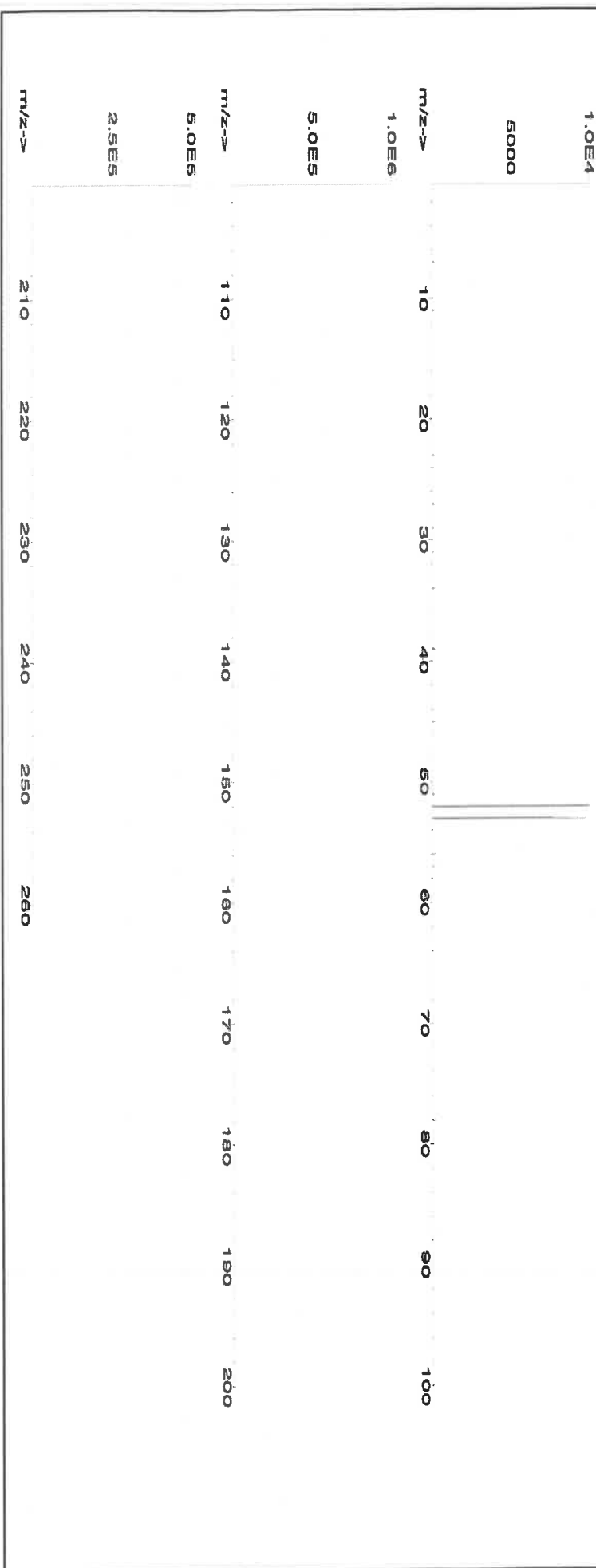
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	NIST SRM

1. Chromium(III) nitrate nonahydrate (Cr) 58124 071122 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 7789-02-8 0.5 mg(Cr)/m3 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M5697 R: 10/27/23



CERTIFIED WEIGHT REPORT:

Part Number: 58029
Lot Number: 102523
Description: Copper (Cu)

Lot # 24002546
Solvent: Nitric Acid

2.0% 40.0 Nitric Acid (mL)

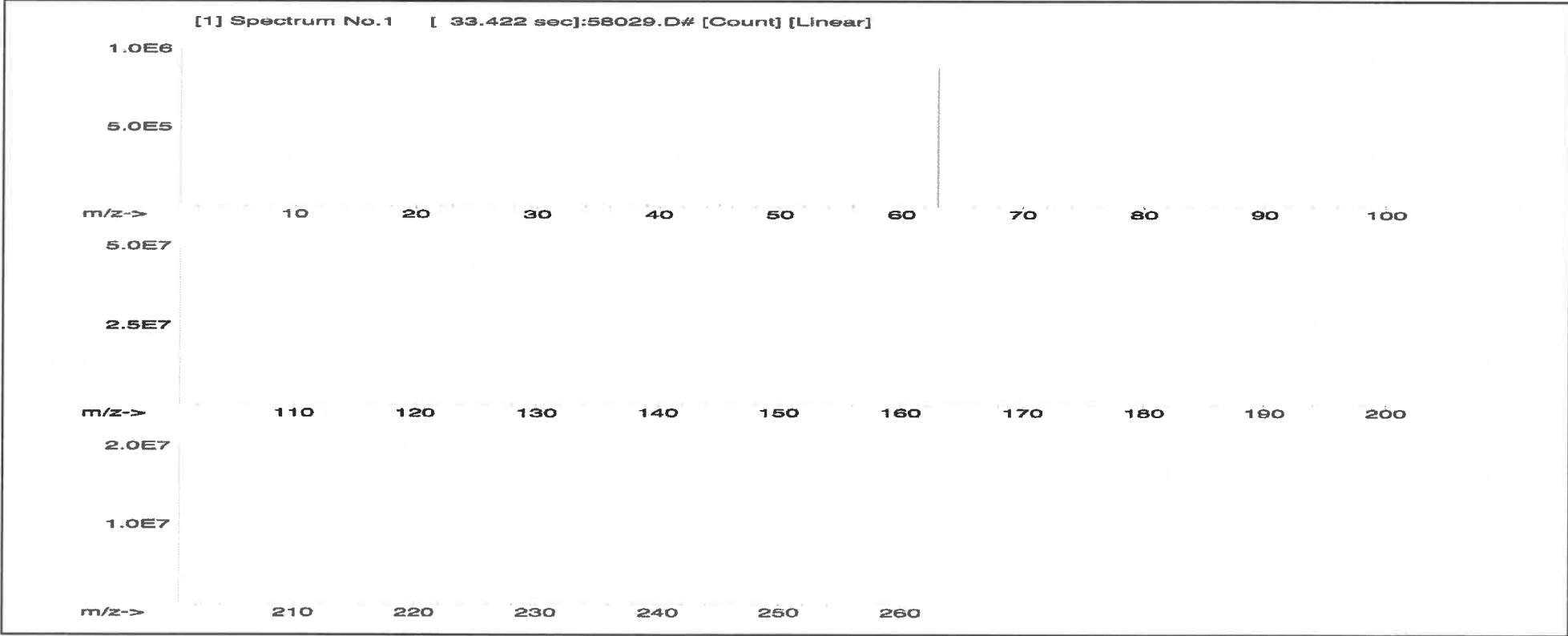
Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Expiration Date: 102526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

Expanded SDS Information										(Solvent Safety Info. On Attached pg.)			NIST
Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM

1. Copper(II) nitrate trihydrate (Cu) 58129 100223 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 10031-43-3 1 mg/m3 orl-rat 794 mg/kg 3114





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5698 R: 10/23/23

CERTIFIED WEIGHT REPORT:

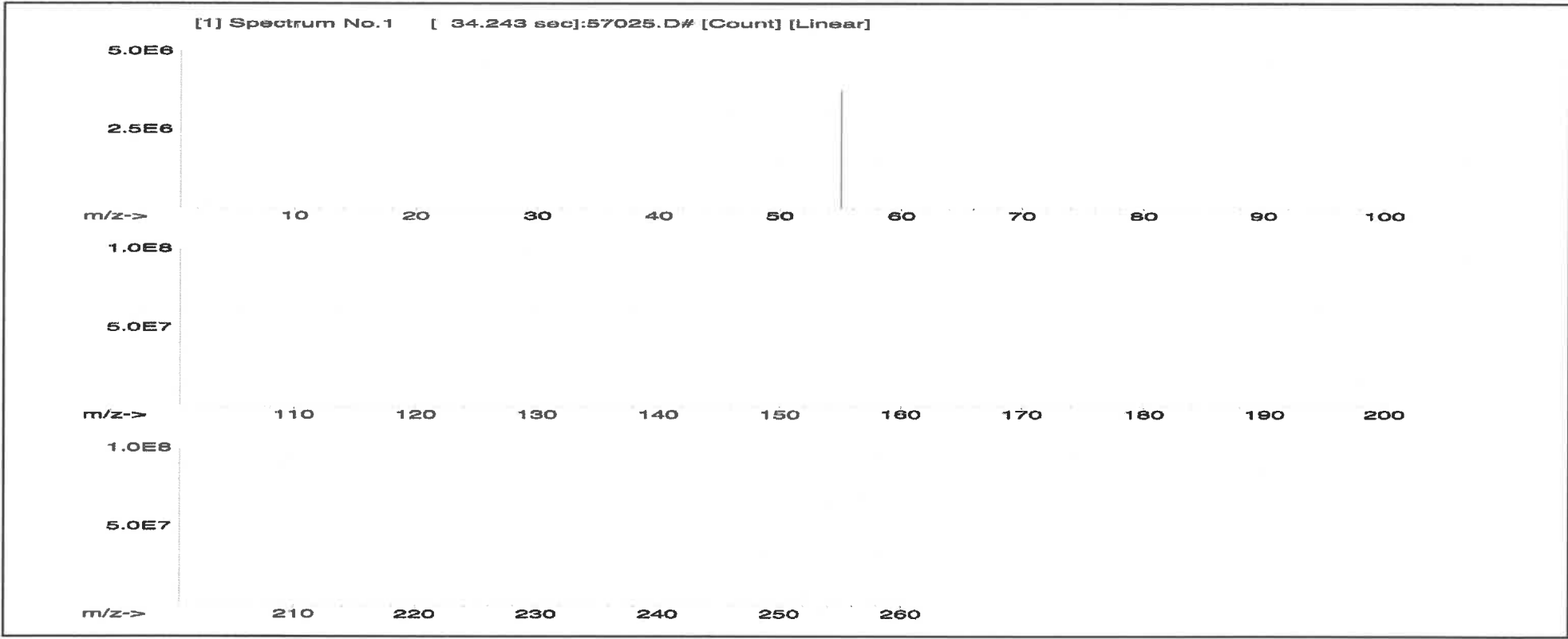
Part Number: 58025
Lot Number: 102623
Description: Manganese (Mn)

Lot # 24002546
Solvent: Nitric Acid
2.0% 60.0 (mL)
Nitric Acid

Expiration Date: 102626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan 102623
Reviewed By: Pedro L. Rentas 102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded	SDS Information			NIST
									Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)			SRM
										CAS#	OSHA PEL (TWA)	LD50	
Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	1000.0	2.1	20694-39-7	5 mg/m3	ori-rat >300mg/kg	3132





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Solvent: 24002546 Nitric Acid

Lot #

R: 12/20/23 MS747

Formulated By:	Lawrence Barry
	100923
Reviewed By:	Pedro L. Rentas
	100923

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000

2% 60.0 (mL) Nitric Acid

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

SDS Information

1. Lead(II) nitrate (Pb) IN029 PB0122016A1 1000 99.999 0.10 62.5 4.80071 4.80077 1000.0 2.0 10099-74-8 0.05 mg/m3 Intvms-ret 89 mg/kg 3128

[1] Spectrum No.1 [14.144 sec]:58082.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T) = Target analyte

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57028**
Lot Number: **091223**
Description: **Nickel (NI)**

Lot # **24002546** Solvent: **Nitric Acid**

Expiration Date: **091226**

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6U7B**

5E-05 Balance Uncertainty

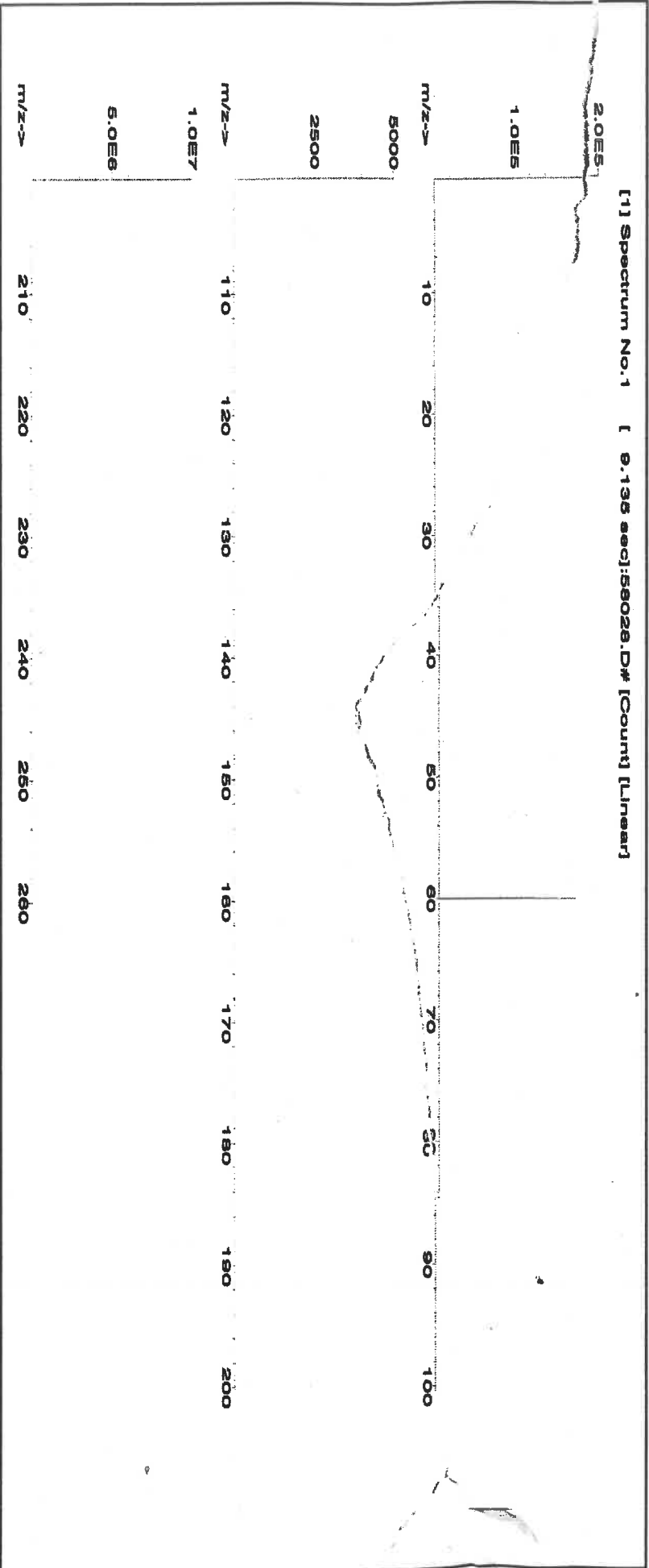
Volume shown below was diluted to (mL): **2000.02**

0.056 Flask Uncertainty

Formulated By:	<i>Lawrence Barry</i>	091223
Reviewed By:	<i>Pedro L. Renteria</i>	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Nickel(II) nitrate hexahydrate (NI) 58128 062023 0.1000 200.0 0.084 1000 10000.4 1000.0 2.2 13478-00-7 1 mg/m3 or-rel 1620 mg/kg 3136





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tb	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sn	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02

2% 40.0 (mL) Nitric Acid

M5768 M5769
BP R: 1/13/24

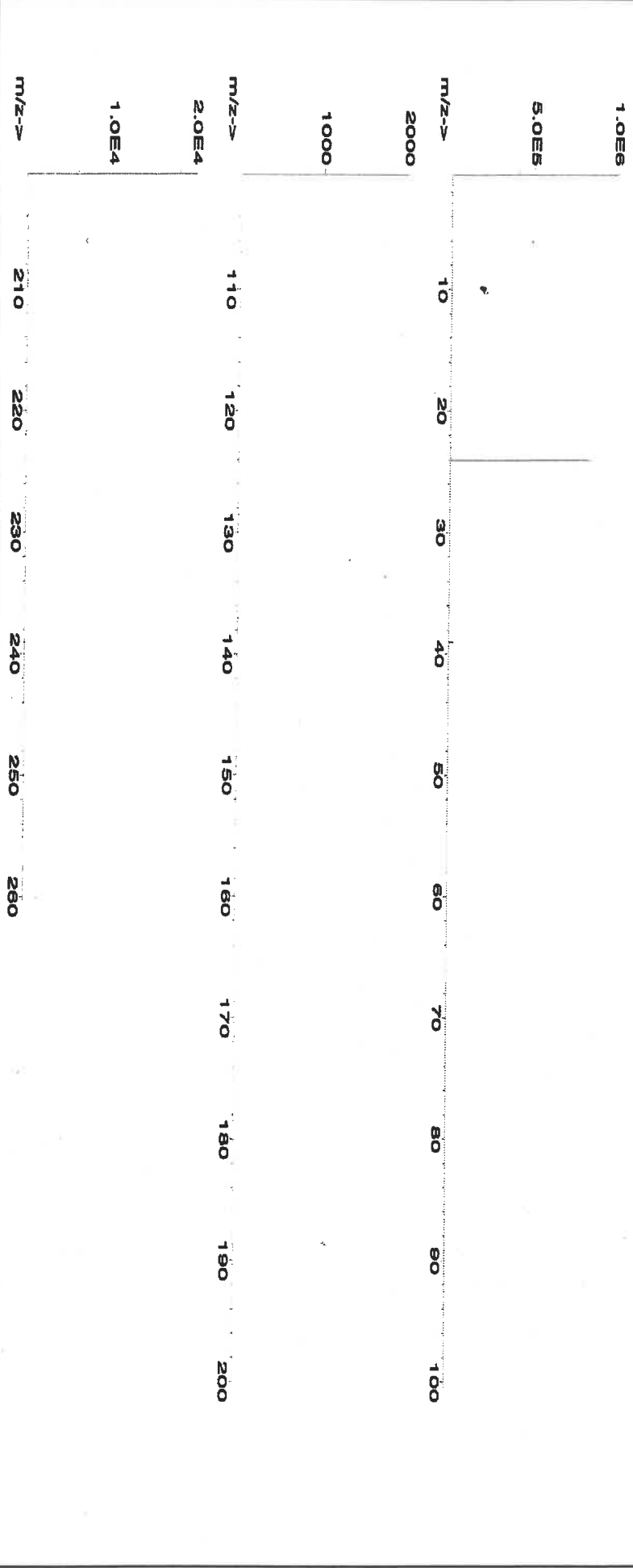
Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Magnesium nitrate hexahydrate (Mg) IN030 M500222A1 10000 99.999 0.10 8.51 234.9118 234.9126 10000.0 20.0 13446-18-9 NA or-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]: 58112.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

102526

2.0%

40.0
(mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

5E-05

Balance Uncertainty

0.058

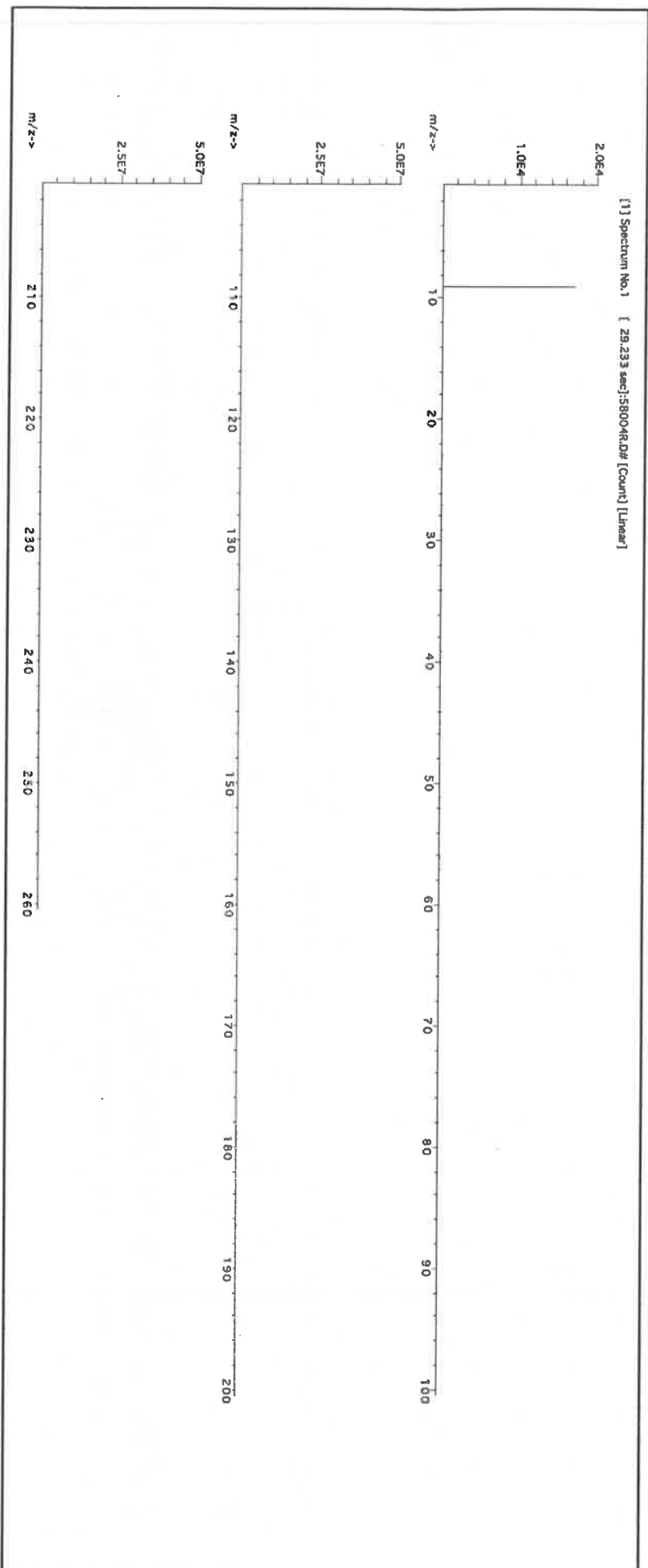
Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

Compound	Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Beryllium nitrate (Be) 58104 091423 0.1000 200.0 0.084 1000 10001.5 1000.0 2.2 13597-99-4 0.2µg/m3 Inj/mg-rat 3.16mg/kg NA





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.02	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.

* All standard containers are meticulously cleaned prior to use.

* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.

* All Standards should be stored with caps tight and under appropriate laboratory conditions.

* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot # R-02509124 M599

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL):

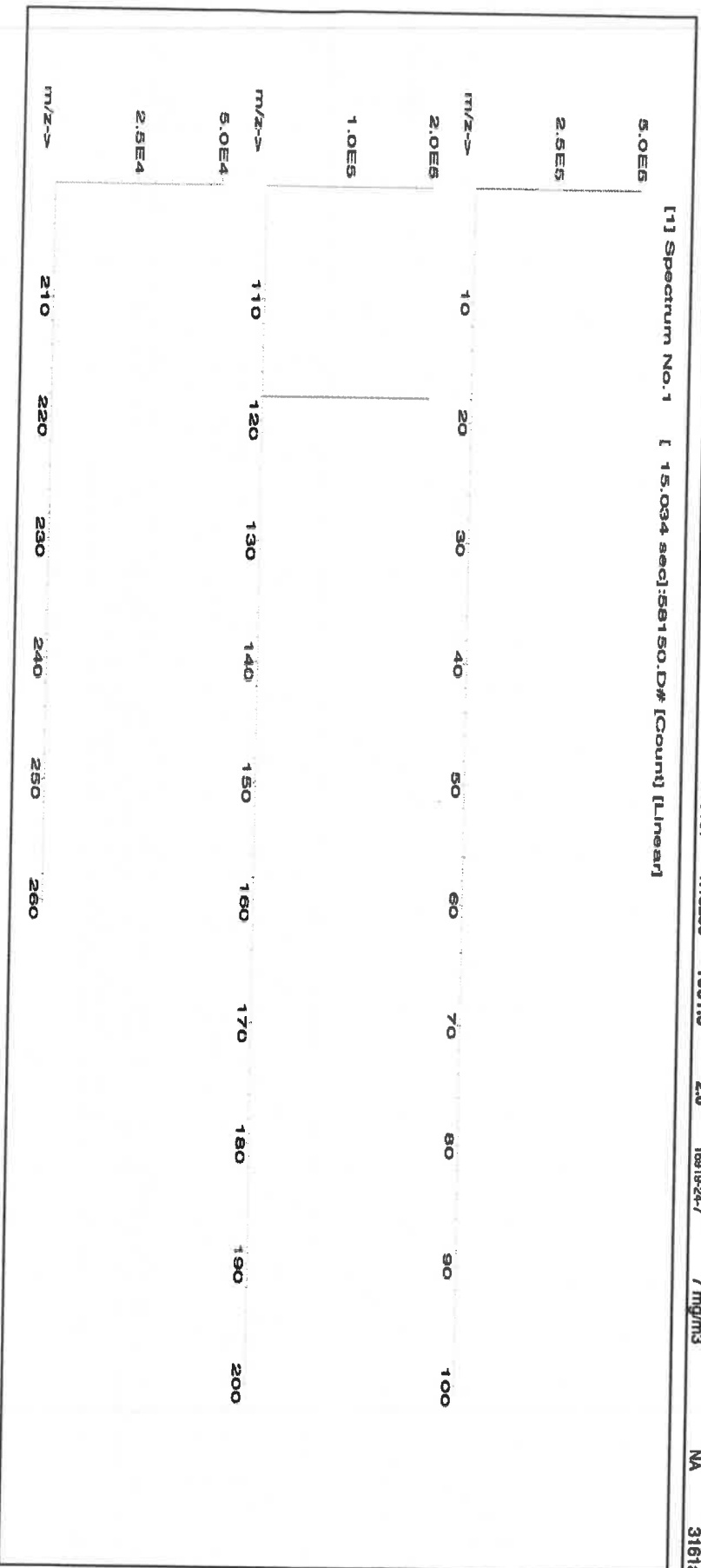
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan	
071123	
Reviewed By: Pedro L. Rientas	
071123	

Compound		Lot		Nominal		Purity		Uncertainty		Assay		Target		Actual		Actual		Expanded		SDS Information		NIST	
RM#	Number	Conc. (µmol/L)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µmol/L)	+/- (µmol/L)	CAS#	OSHA PEL (TWA)	LD50	SRM										

1. Ammonium hexafluoroantimonate(V) (Sn) INO10 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec]:56150.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 02/09/24 115800 (54)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

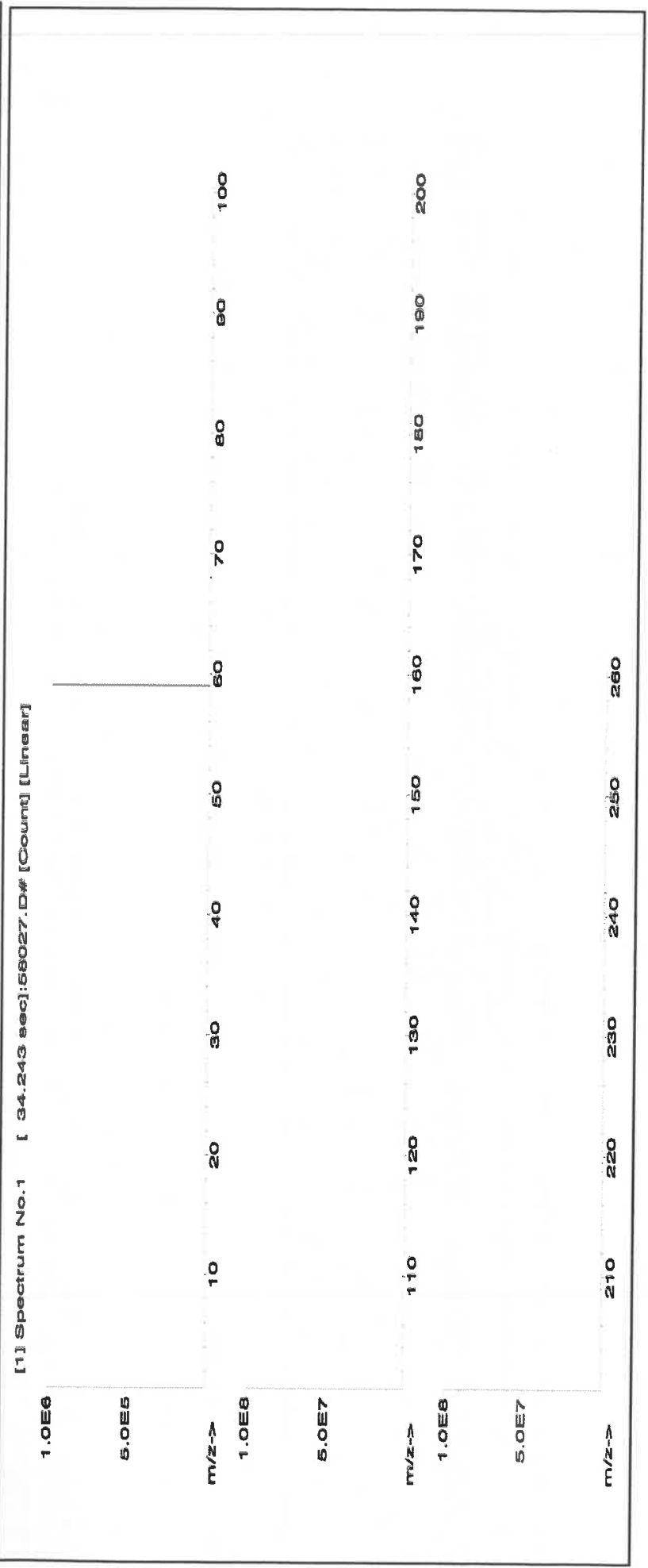
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty +/- (µg/mL)
Final Conc. (µg/mL)
Initial Conc. (µg/mL)
Nominal Conc. (µg/mL)
Pipette (mL)
Initial Vol. (mL)
Dilution Factor
Part Number
Lot Number

(Solvent Safety Info. On Attached pg.)
CAS#
OSHA PEL (TWA)
LD50
NIST
SRM

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

2.0%

80.0

Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

111326
Ambient (20 °C)
1000

NIST Test Number:
Volume shown below was diluted to (mL):

6UTB
4000.0

5E-05
Balance Uncertainty
0.06
Flask Uncertainty

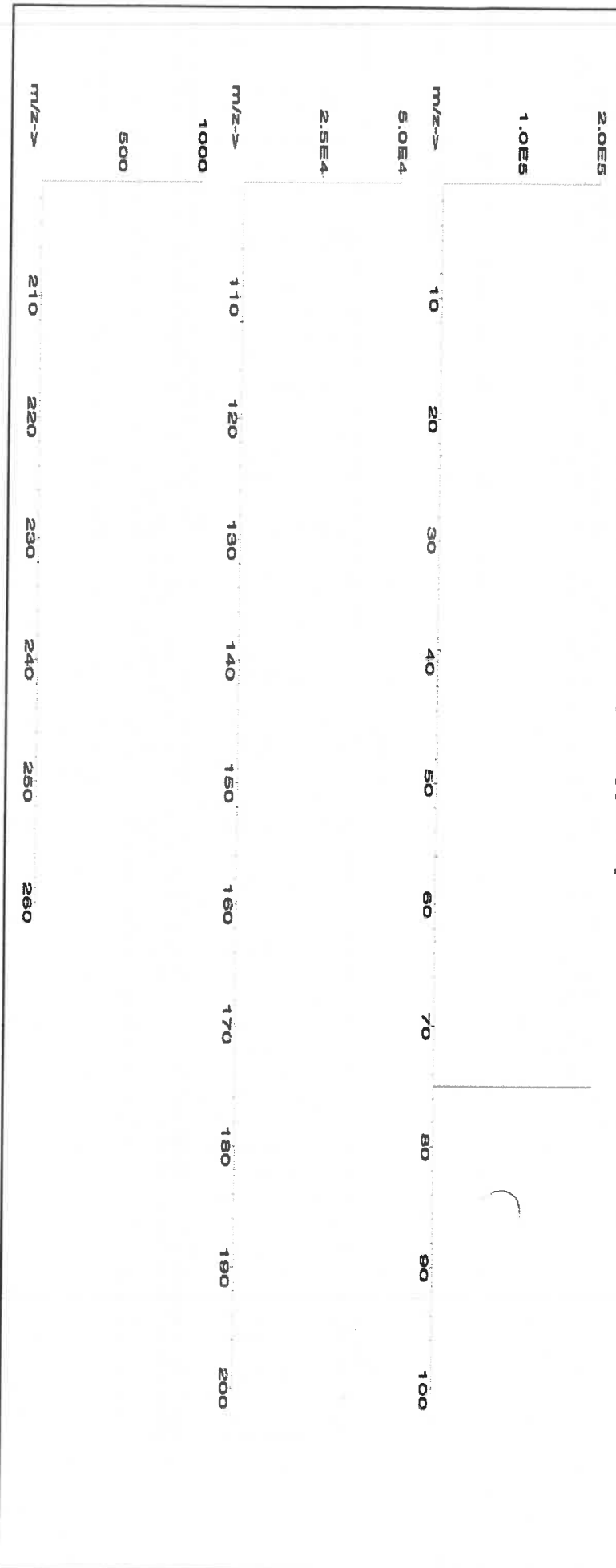
Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rendas	111323

Compound

Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	1000.0	2.0	7440-38-2	0.5 mg/m3	or-rat 500 mg/kg	3103a

[1] Spectrum No. 1 [34.433 sec]:57033.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sa	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57005**
Lot Number: **071123**
Description: **Boron (B)**

Solvent: MKB6597V Ammonium hydroxide

Lot #

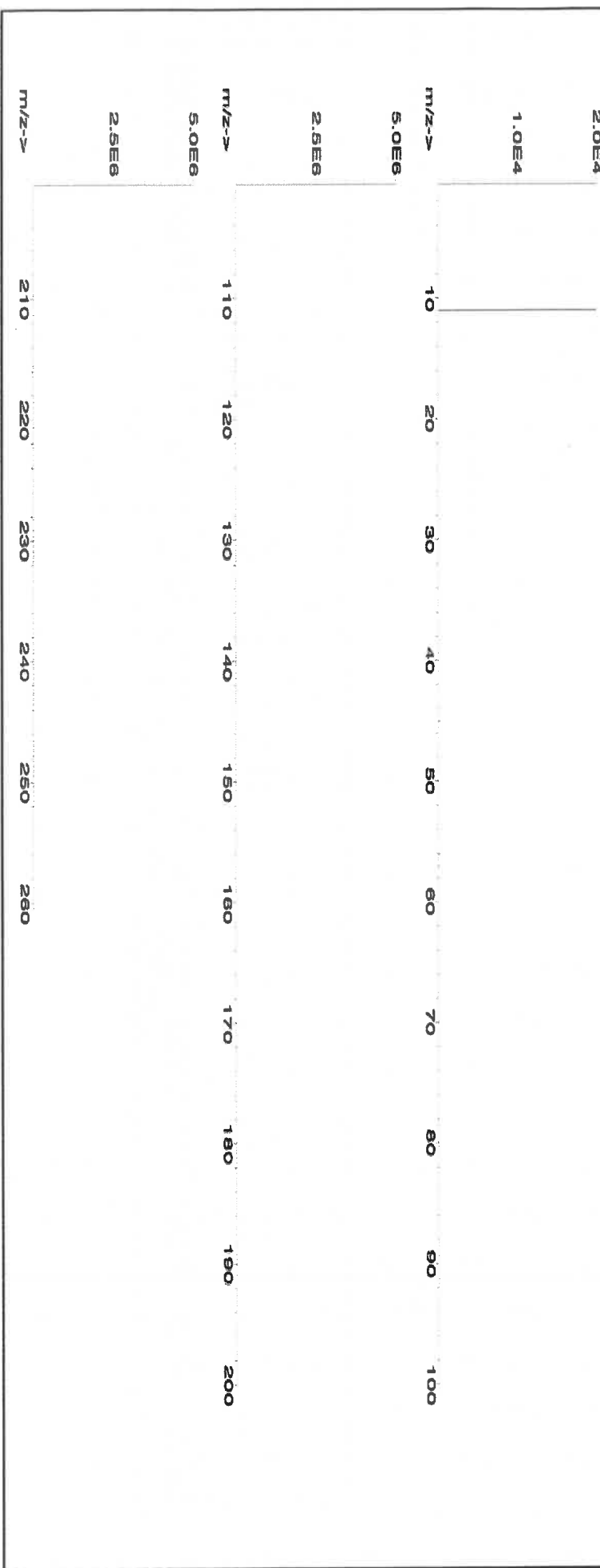
AI: 021009124 M5814

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 0.058 Balance Uncertainty
2.0% 40.0 Ammonium hydroxide (mL)

Formulated By:	Benson Chan
Reviewed By:	
Pedro L. Rientas	
071123	

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Boric acid (B)	IN018 BV082018A1	1000	99.999	0.10	17.3	11.55772	11.56201	1000.4	2.0
									10043-35-3
									2 mg/m3
									ort-nat 2660 mg/kg
									3107

[1] Spectrum No. 1 [12.275 sec]:56105.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Solvent: 21110221 Nitric Acid

Lot #

R102109124 M5815

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

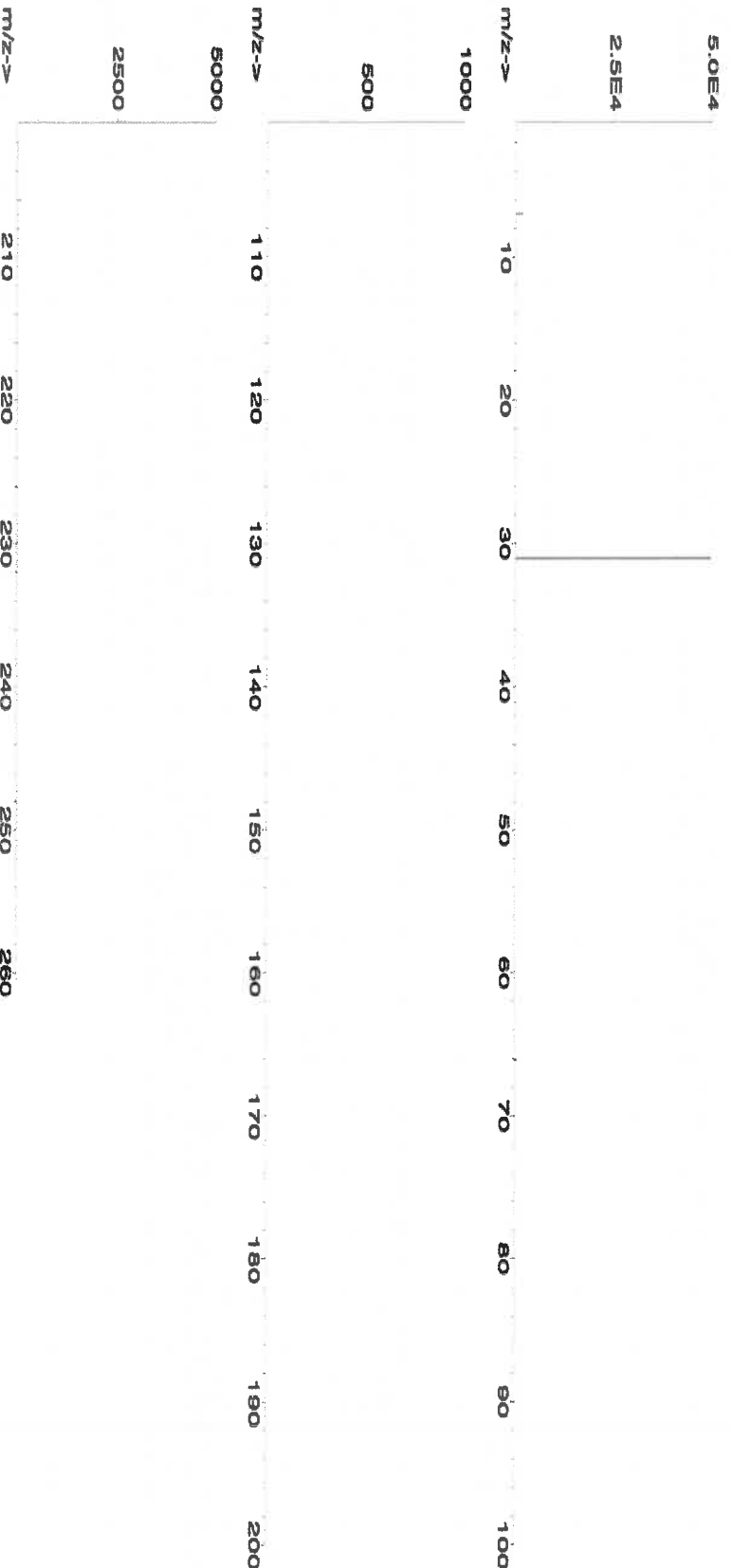
Formulated By: Lawrence Barry	041723
Reviewed By: Pedro L. Rentas	041723

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Ammonium dihydrogen phosphate (P) IN008 PVR2019A1 10000 99.999 0.10 27.5 72.7287 72.7289 10000.0 20.0 7722-76-1 5 mg/m3 or-hal >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57016
122923
Sulfur (S)

Lot #

ASTM Type 1 Water

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122923	

Expiration Date:

122926

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6L7B

Weight shown below was diluted to (mL):

4000.0

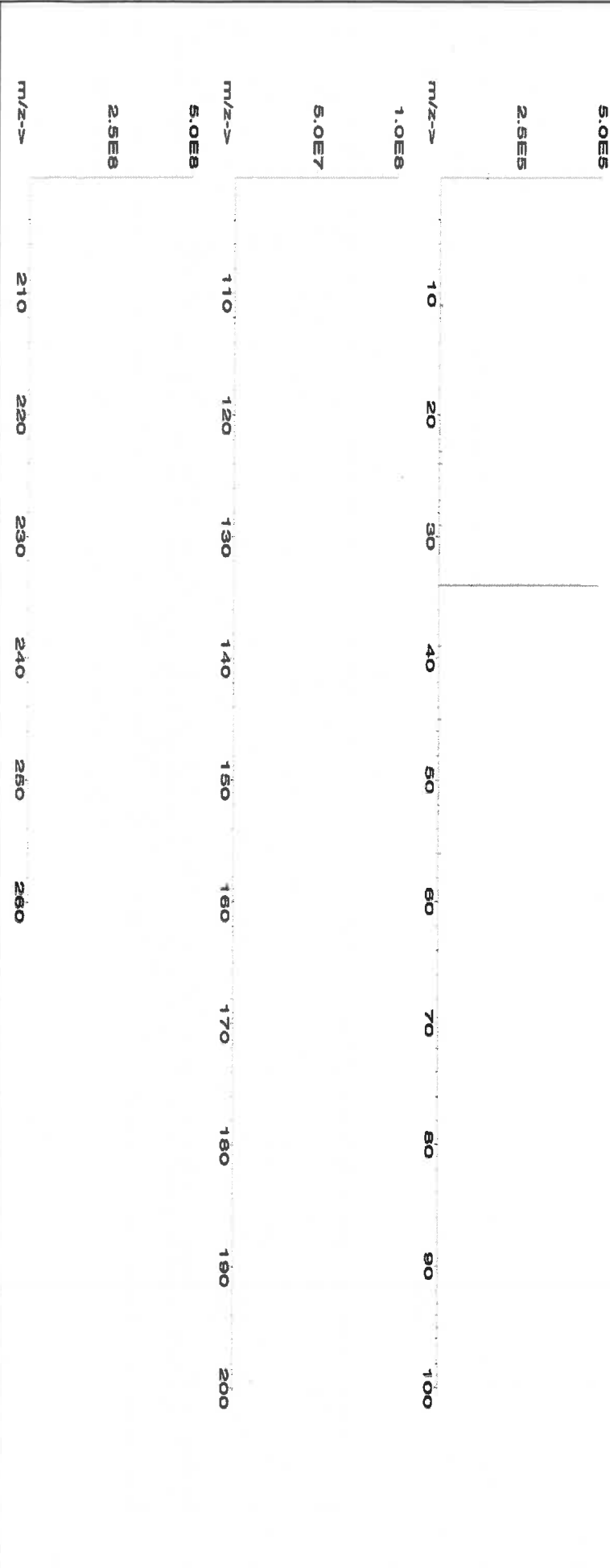
SE-05 Balance Uncertainty
0.06 Flask Uncertainty

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Ammonium sulfate (S) IN117 SLBR725V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA 0.01-0.02 4250mg/kg 3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	S	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57116
071123
Sulfur (S)

Lot #
Solvent: 071123
ASTM Type 1 Water

Formulated By:	Lawrence Barry
071123	
Reviewed By:	Pedro L. Rentas
071123	

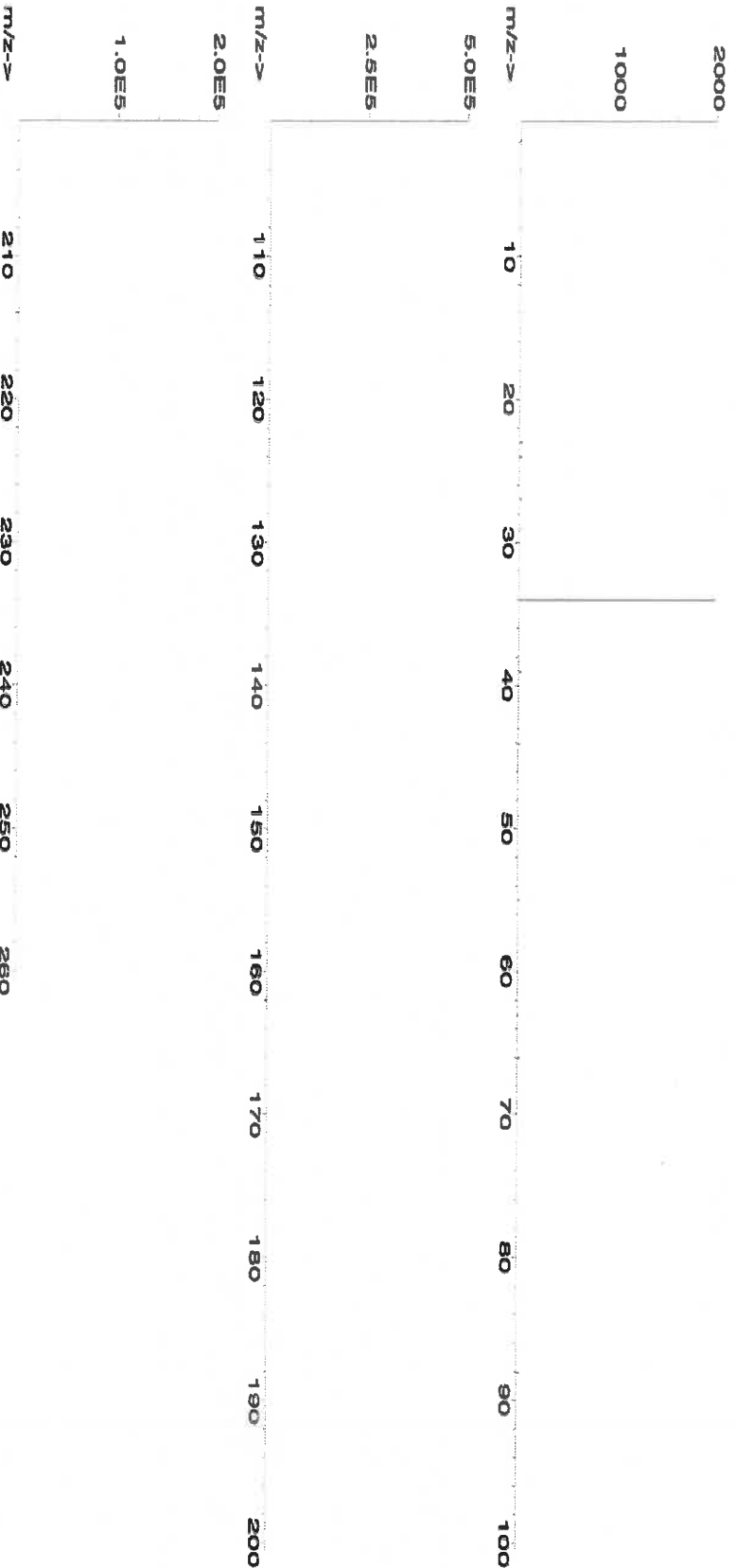
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded		CAS#	(Solvent Safety Info. On Attached pg.)	NIST SRM
									±	Uncertainty (µg/mL)			
SDS Information													
Expanded													

SDS Information

1. Ammonium sulfate (S) IN117 SLBR725V 10000 99.9 0.10 24.3 82.4675 82.4692 10000.1 20.0 7783-20-2 NA oral 4250mg/kg 3181

[1] Spectrum No. 1 [24.004 sec]:58116.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Ti	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57014**
Lot Number: **122023**
Description: **Silicon (Si)**

Solvent: **24002546 Nitric Acid**

Lot #

Expiration Date: **122026**

2% 40.0 (mL) Nitric Acid

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6UTB**

SE-05 Balance Uncertainty

Weight shown below was diluted to (mL): **1999.48 0.058 Flask Uncertainty**

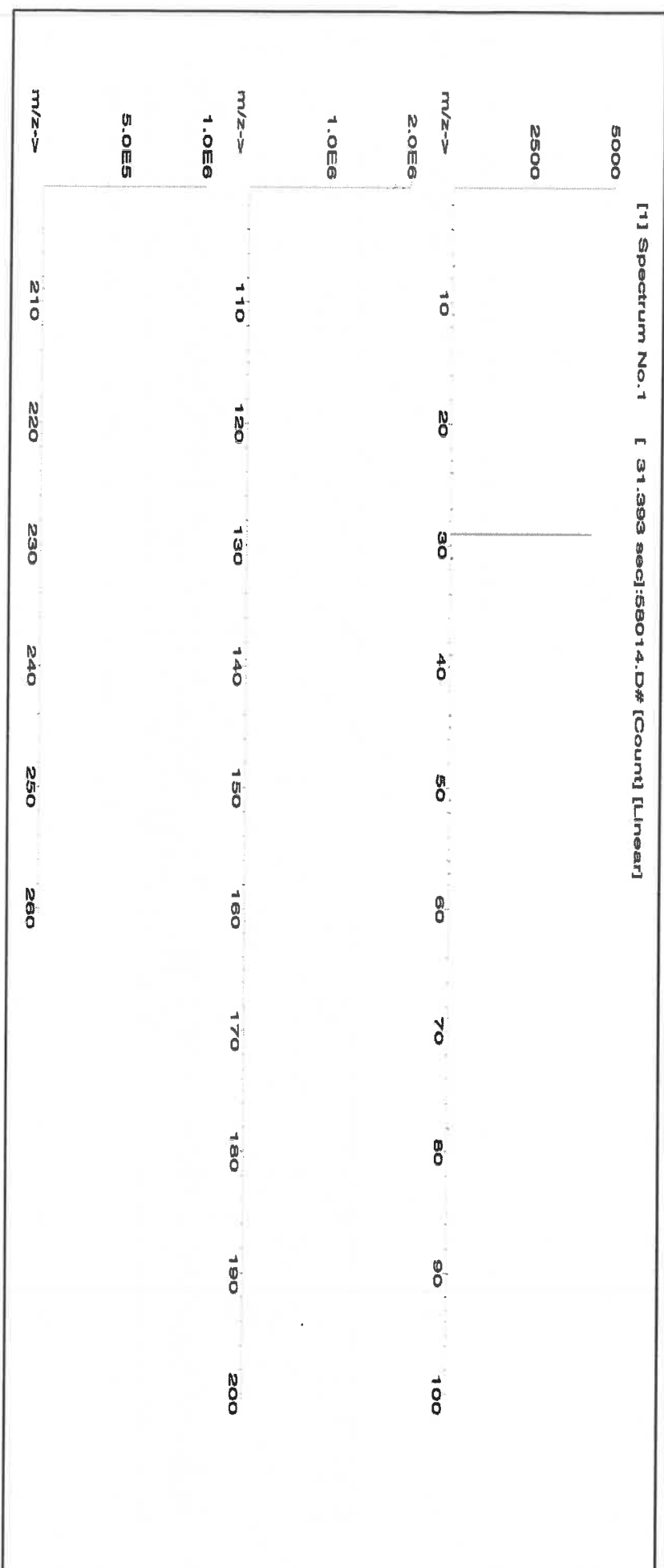
<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	122023

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Ammonium hexafluorosilicate (Si) IN009 S1D08022A1 1000 99.999 0.10 14.4 13.8854 13.8855 1000.0 2.0 18919-19-0 2.5 mg/m3 off-mus 70 mg/kg NA

[1] Spectrum No. 1 [31.393 sec; 158014.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Ru	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Solvent: 24002546 Nitric Acid

Lot # R: 02109124 MS819

2% 60.0 (mL) Nitric Acid

Expiration Date: 111626

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

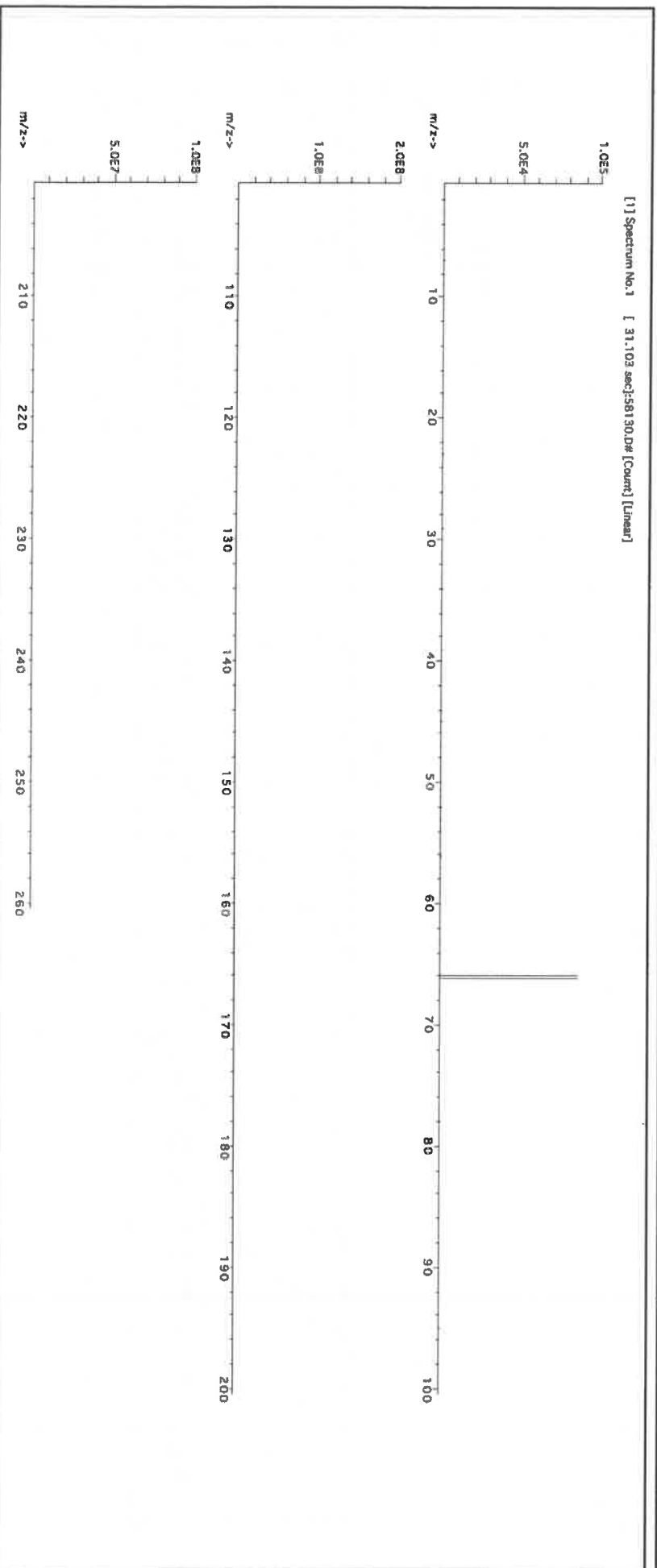
Weight shown below was diluted to (mL): 3000.4

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rientas	111623

Compound

Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty ± (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM

1. Zinc nitrate hexahydrate (Zn) IN016 ZNE03021A1 1000 99.999 0.10 24.3 12.3475 12.3502 1000.2 2.0 10196-18-6 1 mg/mL 3168 on-rat 1190mg/kg





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57015
Lot Number: 091123
Description: Phosphorous (P)

Solvent: 24002546 Nitric Acid

Lot #

R: 02109124 M5820

Lawrence Barry
Formulated By: Lawrence Barry
091123

Pedro L. Rentas
Reviewed By: Pedro L. Rentas
091123

2% 40.0 (mL) Nitric Acid

Expiration Date: 091126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6LJB

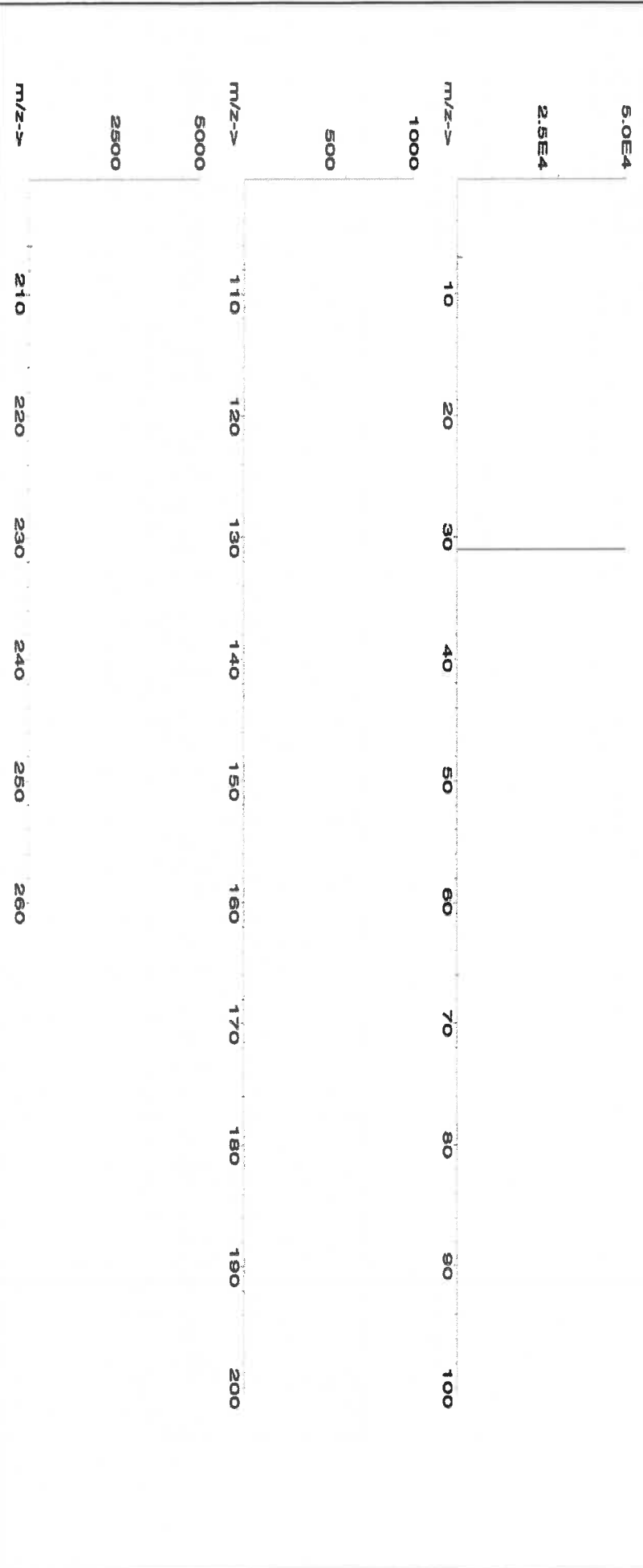
Weight shown below was diluted to (mL): 2000.02 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

SDS Information

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Ammonium dihydrogen phosphate (P) IN008 PVO82019A1 1000 99.999 0.10 27.5 7.2729 7.2730 1000.0 2.0 7722-76-1 5 mg/m3 xH-rat >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sa	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

MS962 **R: 06/14/24**

Lot # 24002546 Solvent: Nitric Acid

Part Number: **57034**
Lot Number: **060624**
Description: **Selenium (Se)**

2.0% 40.0 (mL) Nitric Acid

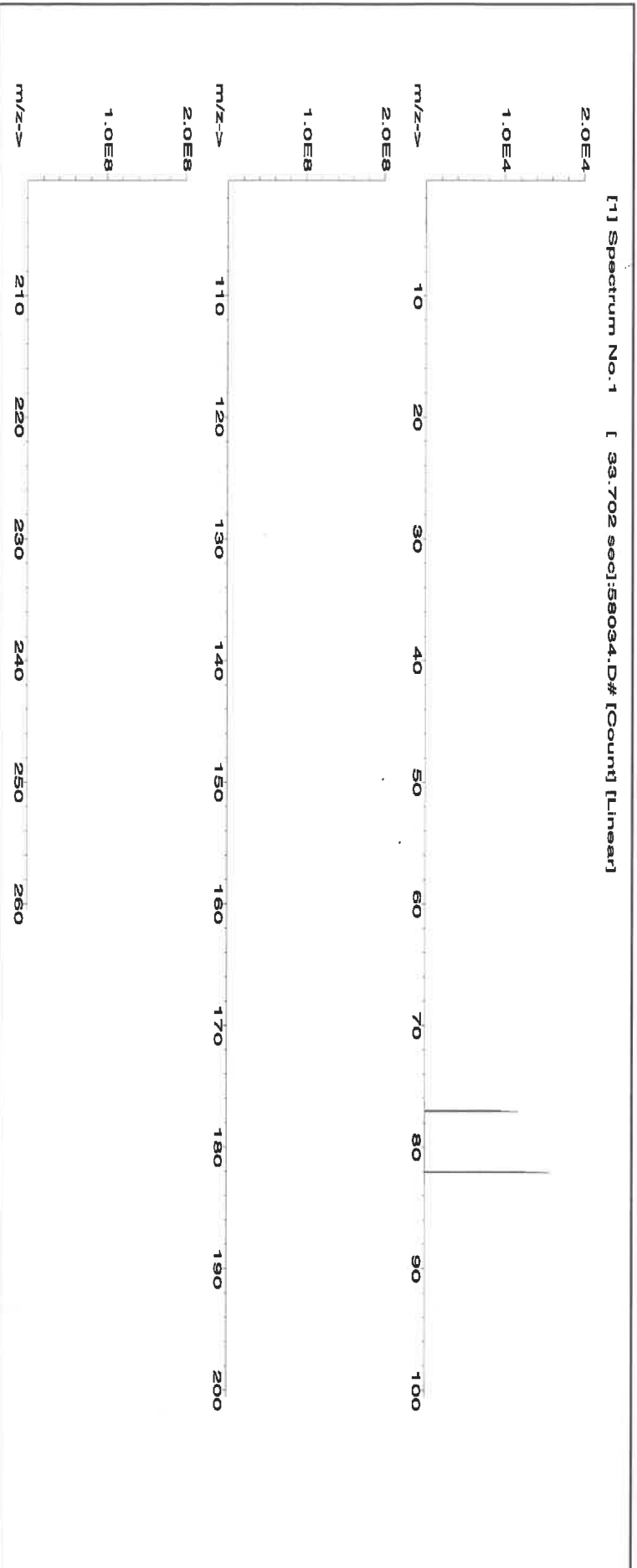
Expiration Date: 060627
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.07
SE-05 Balance Uncertainty 0.100
Flask Uncertainty

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rantas	060624

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM

1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	1000.0	2.2	7782-49-2	0.2 mg/m3	or-tral 6700 mg/kg	3149





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.02	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com



Certified Reference Material CRM

M5970 M5971

R. 710124

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: **57003**
Lot Number: **062124**
Description: **Lithium (Li)**
Expiration Date: **06/12/27**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **250.11**
SE-05 Balance Uncertainty
0.016 Flask Uncertainty

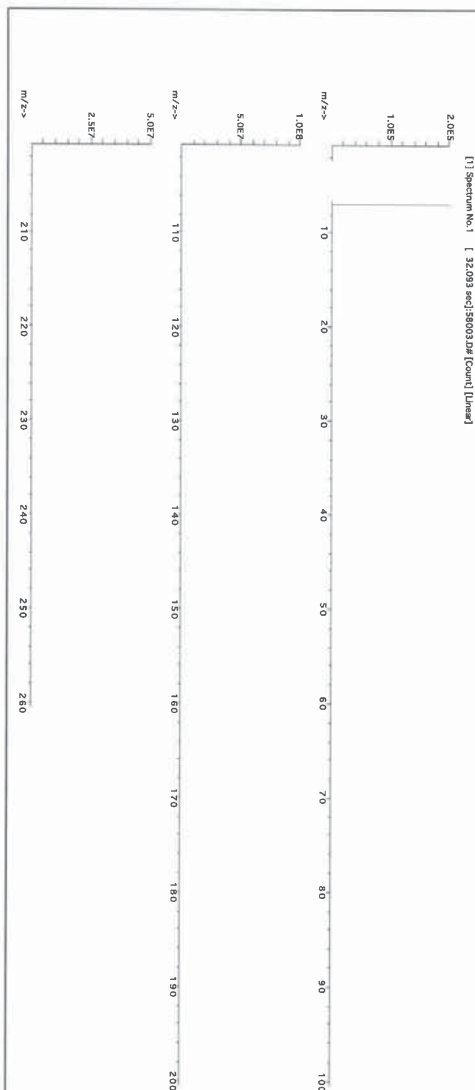
Lot # **24002546**
Solvent: **Nitric Acid**

2.0% 5.0 (mL) Nitric Acid

Microvial Capable	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Parias
CAS#	OSHA PEL (TWA)
LD50	SNM

Compound		Part		Lot		Dilution		Initial		Uncertainty		Nominal		Initial		Final		Expanded		SDS Information		NIST	
Number	Factor	Number	Factor	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	Vol. (mL)	Pipette (mL)	Uncertainty	± (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SNM

1. Lithium nitrate (Li) 58103 070622 0.1000 25.0 0.004 1000 10000.4 1000.0 2.0 7790-68-4 5 mg/m3 or-hal 1428 mg/kg NA





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Ca	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pb	<0.02	Se	<0.02
Sb	<0.02	Ce	<0.02	Er	<0.02	In	<0.02	Mg	<0.02	Nb	<0.02	Rb	<0.02	Si	<0.02
As	<0.2	Co	<0.02	Ea	<0.02	Ir	<0.02	Mn	<0.02	Os	<0.02	Sb	<0.02	Ag	<0.02
Ba	<0.02	Cr	<0.02	Gd	<0.02	La	<0.2	Hg	<0.2	Pd	<0.02	Sn	<0.02	Nd	<0.2
Be	<0.01	Cu	<0.02	Ga	<0.02	Mo	<0.02	Na	<0.02	P	<0.02	Str	<0.02	Sr	<0.02
Bi	<0.02	Fe	<0.02	Ge	<0.02	Nd	<0.02	Sc	<0.02	K	<0.2	Te	<0.02	Ta	<0.02
B	<0.02	Ca	<0.02	Au	<0.02	Th	<0.02	Si	<0.02	Pr	<0.02	Se	<0.02	Tb	<0.02
														Ti	<0.02
														Tl	<0.02
														Tm	<0.02
														Tn	<0.02
														Y	<0.02
														Zn	<0.02
														Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Certificate of Analysis

MS978, MS979



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea.

Starting Material: Titanium

Starting Material: Ti Metal

Starting Material Lot#: 2094

Starting Material Purity: 99.9975%

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 1002 ± 4 µg/mL

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods
Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \sum (X_i / U_i)$
 X_i = mean of Assay Method A with
 U_i = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k \cdot (U_{CRM}^2 + U_{LAB}^2 + U_{STAB}^2 + U_{HOM}^2 + U_{REP}^2)^{1/2}$
k = coverage factor = 2
 $U_{CRM} = [(2/(n-1)) \sum (U_{CRM,i})^2]^{1/2}$ where $U_{CRM,i}$ are the errors from each characterization method
 U_{LAB} = bottle to bottle homogeneity standard uncertainty
 U_{STAB} = long term stability standard uncertainty (storage)
 U_{HOM} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UHPA-filtered Clean Room. An UHPA-filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	<	0.000536	M Eu	<	0.000268	O Na	<	0.032670	M Se	<	0.001204	O Zn	<	0.003267
O Al	<	0.000872	O Fe	<	0.003225	O Nb	<	0.043560	O Si	<	0.004735	O Zr	<	0.043560
M As	<	0.008586	M Ga	<	0.000268	M Nd	<	0.000268	M Sm	<	0.000268			
M Au	<	0.004577	M Gd	<	0.000268	O Ni	<	0.010890	M Sn	<	0.000986			
O B	<	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	<	0.000986			
M Ba	<	0.002683	M Hf	<	0.002161	O P	<	0.054450	M Ta	<	0.010560			
M Be	<	0.005366	M Hg	<	0.003231	M Pb	<	0.001073	M Tb	<	0.000268			
M Bi	<	0.001609	M Ho	<	0.000268	M Pd	<	0.000268	M Th	<	0.001341			
O Ca	<	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Tl	<	0.053663			
M Cd	<	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Tl	<				
M Co	<	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Ti	<	0.000268			
M Cr	<	0.000752	O Li	<	0.000268	M Re	<	0.000268	M Tm	<	0.000268			
M Cs	<	0.000268	M Lu	<	0.000268	M Rh	<	0.000268	M U	<	0.000268			
O Cu	<	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146			
M Dy	<	0.000268	O Mn	<	0.003267	M Sb	<	0.004900	M Yb	<	0.000536			
M Er	<	0.000268	M Mo	<	0.000774	O Sc	<							

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence: Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability: 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution - powder reacts violently): Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystaline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N,
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	14N17N2, 36Ar12C,
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	1	48Ca, 196X=2
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	1	W, Mo, Co
			Nb, Ta, Cr, U
			Ce, Ar, Ni
			Ru
			(where X = Zr, Mo,

HAZARDOUS INFORMATION

HF Note: This standard should not be prepared or stored in glass.

HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, VA 24073, USA; Telephone: 800.868.6786; 540.565.3030; Fax: 540.565.3030; Email: info@inorganicventures.com

11.0

CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date:

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlikowski
Manager, Quality Control

TD9784

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul Gaines



Certified Reference Material CRM



45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57038
031524
Strontium (Sr)

Solvent: 24002546 Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

031527
Ambient (20 °C)
1000
6UTB
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Weight shown below was diluted to (mL): 2000.07

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

SDS Information

Expanded

Uncertainty

(Solvent Safety Info. On Attached pg.)

+/- (µg/mL)

LD50

CAS#

OSHA PEL (TWA)

Actual

Conc. (µg/mL)

Actual

Weight (g)

Target

Weight (g)

Assay

(%)

Purity

(%)

Nominal

Conc. (µg/mL)

Lot

Number

RM#

1000

89.997

0.10

41.2

4.85470

4.85502

1000.1

2.0

10042-76-9

NA

orl-rat >2000mg/kg 3153a

1. Strontium nitrate (Sr)

IN017 SR2022018A1

[1] Spectrum No.1 [14.495 sec]:58136.D# [Count] [Linear]

5.0E6

2.5E6

m/z-->

1.0E6

5.0E5

m/z-->

5.0E6

2.5E6

m/z-->



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Ti	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02
																W	<0.02
																U	<0.02
																V	<0.02
																Yb	<0.02
																Y	<0.02
																Zn	<0.02
																Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

2024 JUN 7 3:58 PM



Certified Reference Material CRM
R: 01/03/24 M6033



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

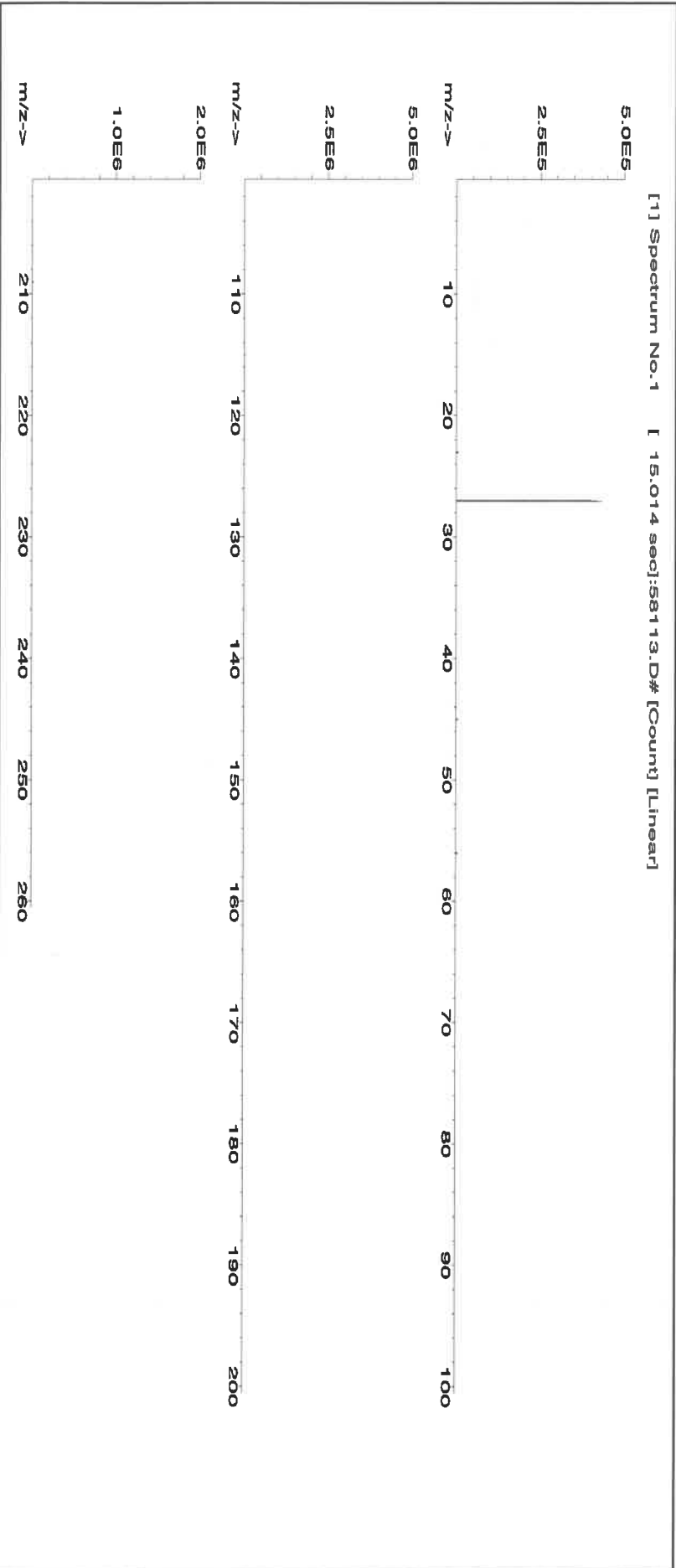
CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 011623
Description: Aluminum (Al)
Expiration Date: 011626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUTB
Weight shown below was diluted to (mL): 2000.02
Solvent: 20510011 Nitric Acid
Lot #
2% 40.0 (mL) Nitric Acid
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Aluminum nitrate nonahydrate (Al) IN022 ALUM12021A1 10000 99.999 0.10 7.30 273.9779 274.0078 10001.1 20.0 7784-27-2 2 mg/m3 or rat 3671 mg/kg 3101a



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Receive date
9/29/24
Met diag.

 avantor™



Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
Revision No.: 0

M6109
M6110
M6111

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	0.8 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	1.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	0.7 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**

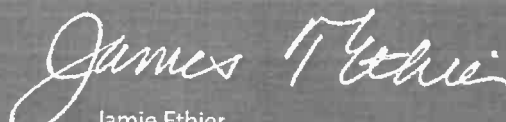


Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result

For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

 **avantor™**



Receive:
9/29/24
met dig

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**

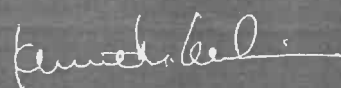


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

avantor™



Receive:
9/29/24
met dig

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**

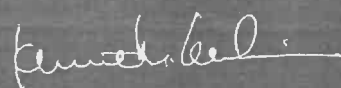


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance



CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 122226

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

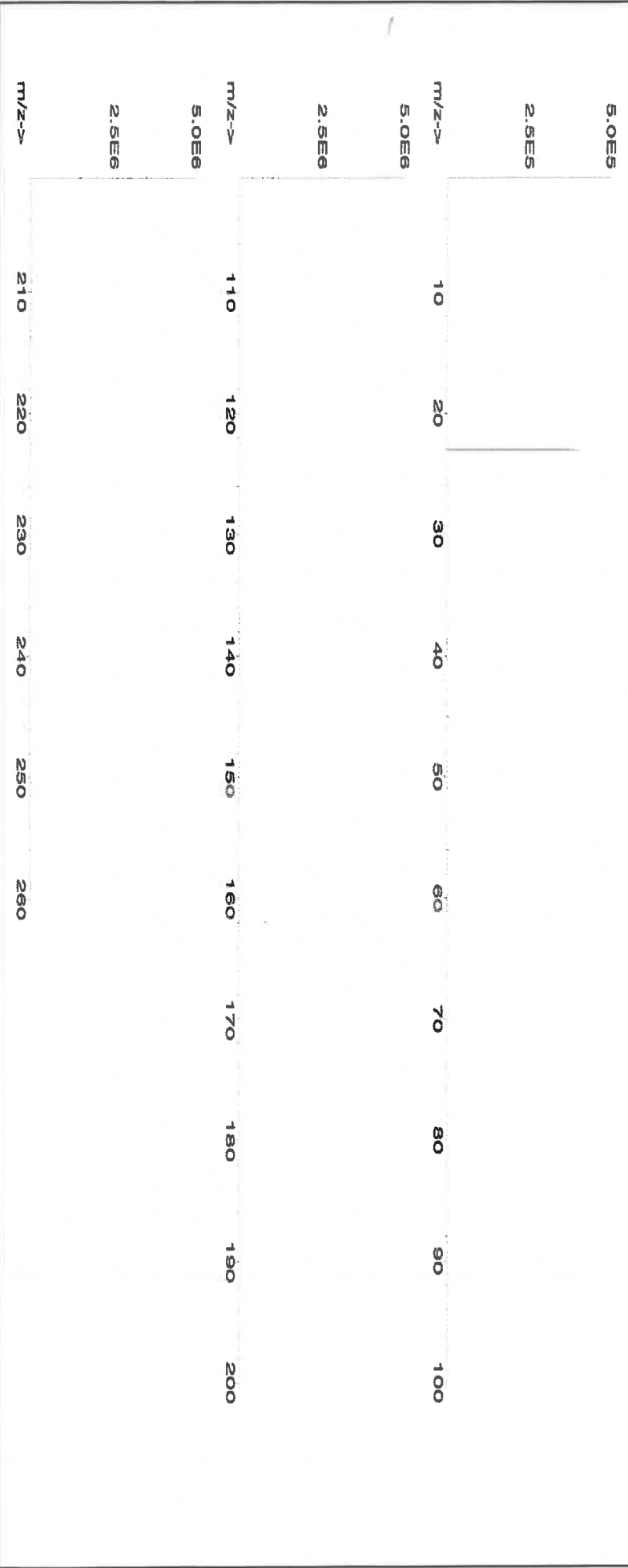
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
Reviewed By:	Pedro L. Rentas
	122223

SDS Information														
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded		SDS Information			NIST
									Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM	

1. Sodium nitrate (Na) IN036 NAV01201511 10000 99.999 0.10 26.9 111.5406 111.5479 10000.7 20.0 7631-99-4 5 mg/m3 or-trat 3430 mg/kg 3152a

[1] Spectrum No.1 [8.935 sec]:58111.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57051
120523
Antimony (Sb)

Lot #
Solvent:

24002546
Nitric Acid

2.0%
60.0
Nitric Acid
(mL)

Expiration Date:

120526

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6U7B

Volume shown below was diluted to (mL):

3000.41

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

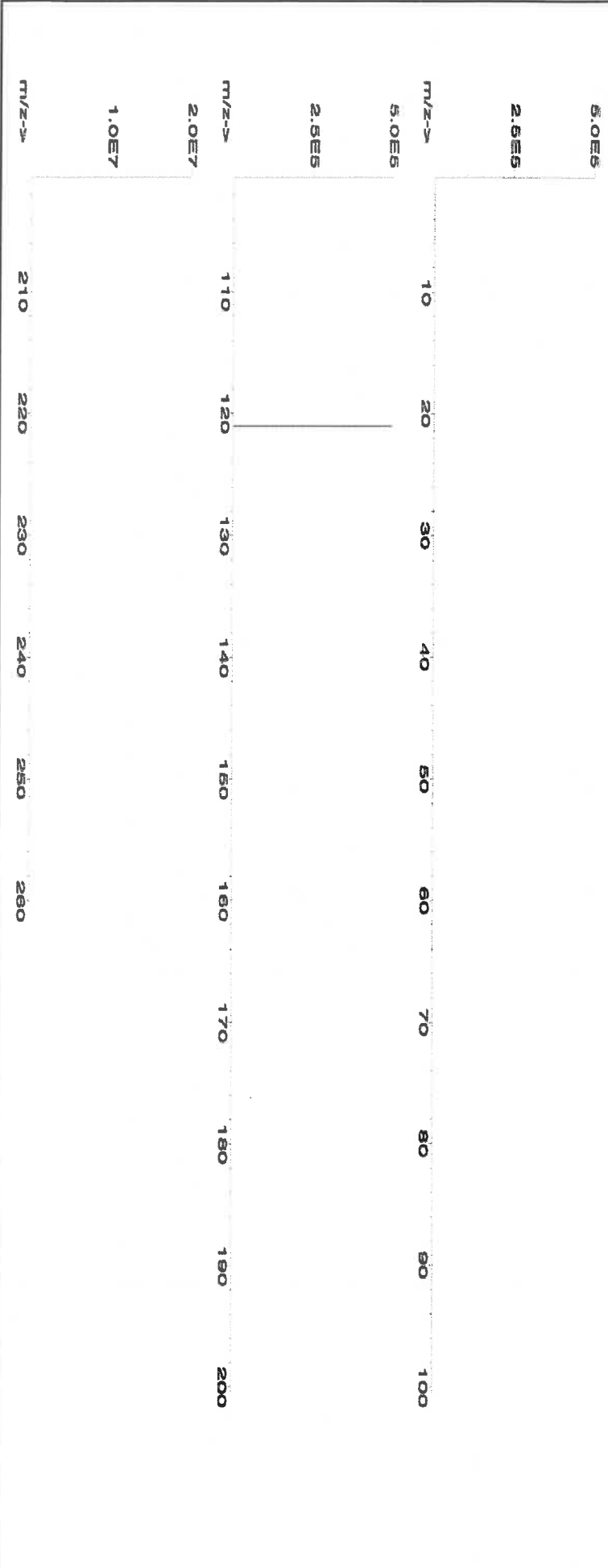
Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Renteria	120523

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	1000.0	2.1	7440-36-0	0.5 mg/m3	or-rel 7000 mg/kg	3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M6030



CERTIFIED WEIGHT REPORT:

Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**
Solvent: 24002546 Nitric Acid
Lot #

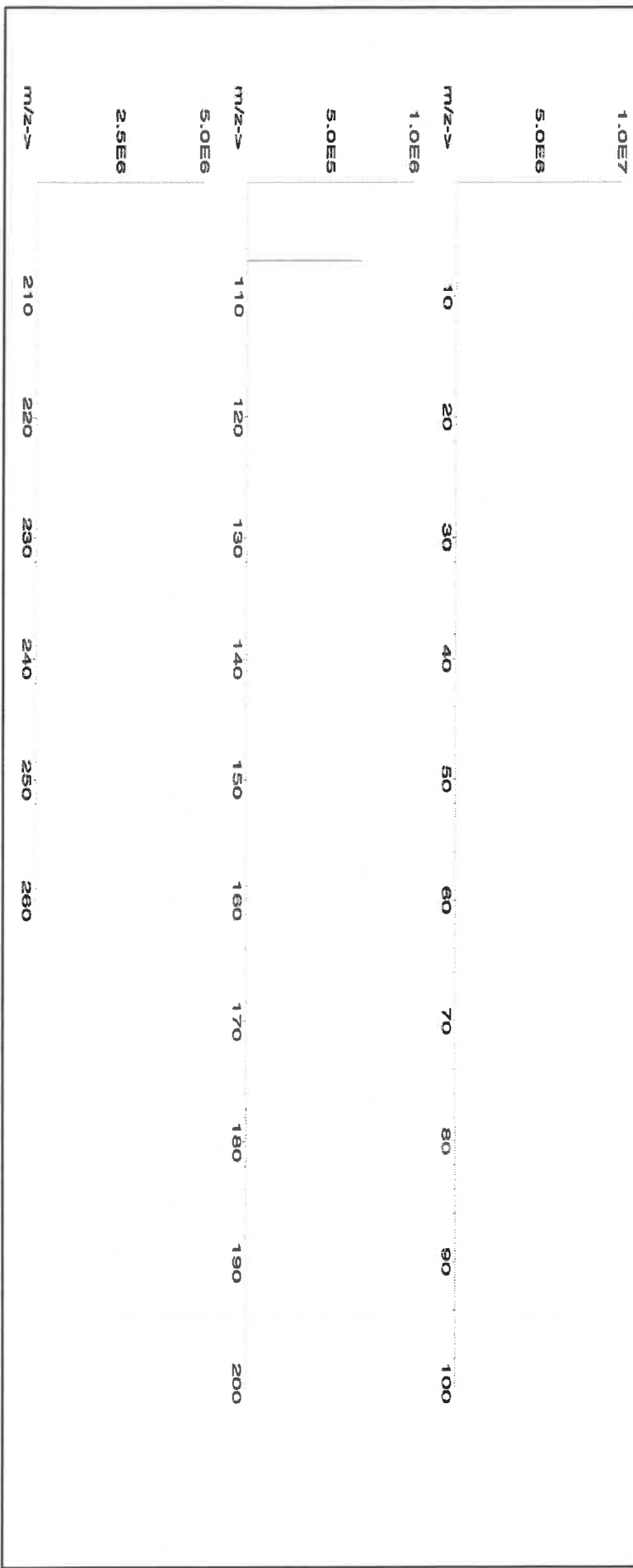
Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122823	

Weight shown below was diluted to (mL): 4000.30 0.058 Balance Uncertainty

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.999	0.10	63.7	6.27992	6.27998	1000.0
							2.0	7761-88-8	10 µg/mL
									NA
									3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 meghom deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Lot #

Solvent: 24002546 Nitric Acid

2% 40.0 (mL) Nitric Acid

Expiration Date:

062727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

2000.1

5E-05 Balance Uncertainty
0.10 Flask Uncertainty

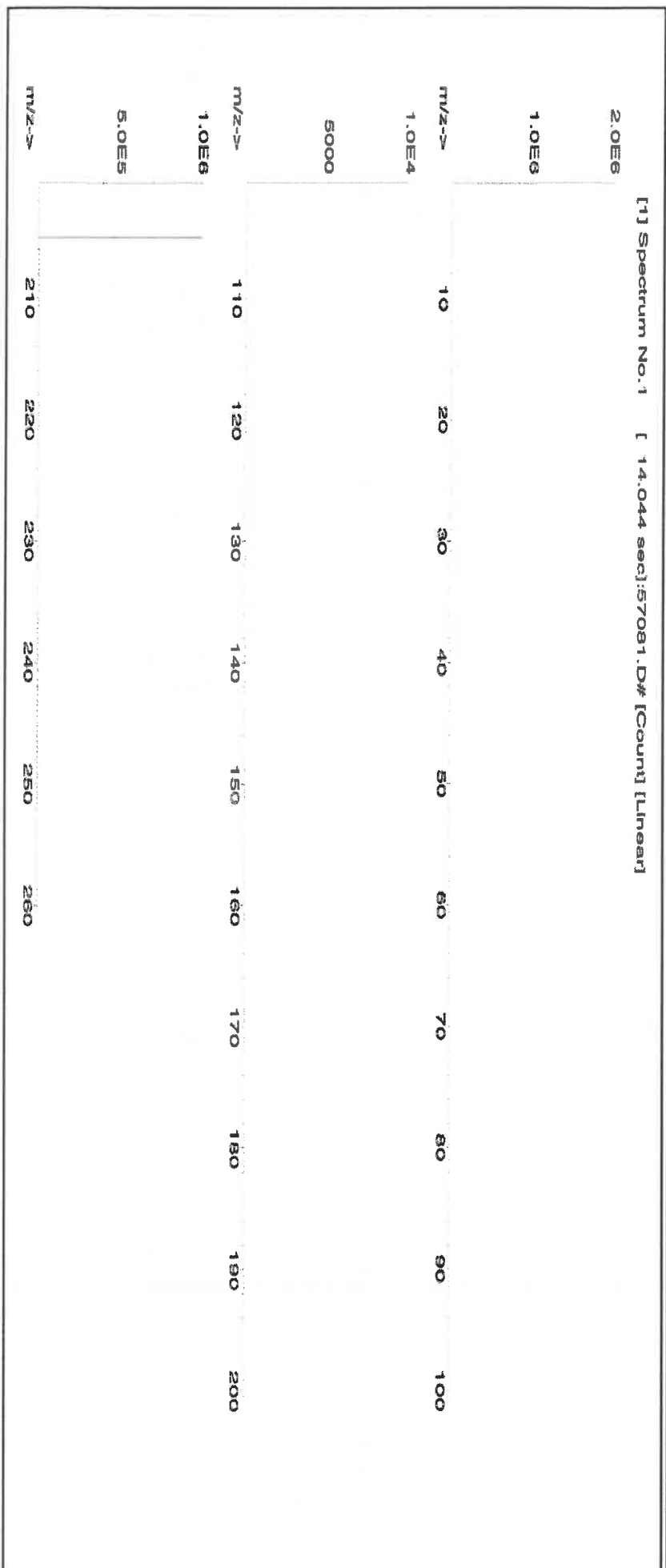
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renias</i>
	Pedro L. Renias
	062724

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 orl-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Sn	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02			Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M6021



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
<https://absolutestandards.com>

CERTIFIED WEIGHT REPORT:

Part Number: **57023**
Lot Number: **062424**
Description: **Vanadium (V)**

Lot # **24002546**
Solvent: **Nitric Acid**

Aleah O'Brady	
Formulated By:	Aleah O'Brady
	062424
Reviewed By:	Pedro L. Rantas
	062424

Expiration Date: **062427**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.3**
0.06 Balance Uncertainty
Flask Uncertainty

Compound		Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)		58123	021224	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	7803-55-6	0.05 mg/m3	or-at 58.1mg/kg	3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]

2.0E6	m/z-->	10	20	30	40	50	60	70	80	90	100
1.0E7	m/z-->	110	120	130	140	150	160	170	180	190	200
5.0E8	m/z-->	210	220	230	240	250	260				
2.5E9	m/z-->										



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ti	<0.02
														Tb	<0.02
														Te	<0.02
														Tl	<0.02
														Tm	<0.02
														Sn	<0.02
														Ti	<0.02
														W	<0.02
														U	<0.02
														V	T
														Yb	<0.02
														Y	<0.02
														Zn	<0.02
														Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. **P5044**
QUOTE NO.
COC Number **2041750**

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: **TRIS PHARMA, INC**
ADDRESS: **2033 ROUTE 130**
CITY: **MONMOUTH JUNCTION** STATE: **NJ** ZIP: **08852**
ATTENTION: **NIKKI TIERNEY**
PHONE: **732.823.4938** FAX: **N/A**

CLIENT PROJECT INFORMATION

PROJECT NAME: **QUARTERLY**
PROJECT NO.: LOCATION:
PROJECT MANAGER: **NIKKI TIERNEY**
e-mail: **NMTIERNEY@trispharma.com**
PHONE: **SAME** FAX: **N/A**

CLIENT BILLING INFORMATION

BILL TO: PO#: **211765**
ADDRESS:
CITY: **SAME** STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: **10** DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☒ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT

1 **BOD 5**
2 **TSS**
3 **METALS GRP 3**
4 **COB**
5 **VOCMS GRP 1**
6 **NON-POLAR METALS**
7
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES						COMMENTS
			COMP	GRAB	DATE	TIME		E	E	B	C	A	C	
1.DSN-001	OUTFALL DSN-001	NW		X	11/27/24	9:07AM	7	X	X	X	X	X	X	
2.DSN-002	OUTFALL DSN-002	NW		X	11/27/24	8:32AM	7	X	X	X	X	X	X	
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. N. Tierney	DATE/TIME: 11/27/24 9:41AM	RECEIVED BY: [Signature] 1210	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.1 °C
RELINQUISHED BY SAMPLER: 2.	DATE/TIME:	RECEIVED BY:	Comments:
RELINQUISHED BY SAMPLER: 3. [Signature]	DATE/TIME: 11-27-24	RECEIVED BY: 11-27-24	

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☐ YES ☐ NO



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P5044	TRIS02	Order Date : 11/27/2024 12:16:00 PM	Project Mgr :
Client Name : Tris Pharma, Inc.		Project Name : Quarterly	Report Type : Results Only
Client Contact : Nichole Nikki Ferrari		Receive DateTime : 11/27/2024 ~~12:00:00~~ AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : Tris Pharma, Inc.		Purchase Order : 17:30	Hard Copy Date :
Invoice Contact : Nichole Nikki Ferrari			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P5044-01	OUTFALL-DSN-001	Water	11/27/2024	09:07					
					VOCMS Group1		624.1	10 Bus. Days	
P5044-02	OUTFALL-DSN-002	Water	11/27/2024	08:32					
					VOCMS Group1		624.1	10 Bus. Days	

Relinquished By :

Date / Time : 11-27-24 1745

Received By :

Date / Time : 12/02/24 8:20

Storage Area : VOA Refridgerator Room

* Samples in (SM) Fridge @ 1745.