

Cover Page

Order ID : Q1119

Project ID : Monthly 2025

Client : Aramark Uniforms

Lab Sample Number

Q1119-01

Client Sample Number

FILTER CAKE

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: 1/23/2025

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 #: Q1119

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: KETAN PATEL

Date: 01/23/2025

LAB CHRONICLE

OrderID:	Q1119	OrderDate:	1/16/2025 3:44:00 PM
Client:	Aramark Uniforms	Project:	Monthly 2025
Contact:	Jose Liceaga	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1119-01	FILTER CAKE	TCLP			01/16/25			01/16/25
			TCLP Mercury	7470A		01/17/25	01/20/25	
			TCLPMetals Group1	6010D		01/17/25	01/20/25	



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Hit Summary Sheet
SW-846

SDG No.: Q1119
Client: Aramark Uniforms

Order ID: Q1119
Project ID: Monthly 2025

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : FILTER CAKE								
Q1119-01	FILTER CAKE	TCLP	Barium	259		6.28	50.0	ug/L
Q1119-01	FILTER CAKE	TCLP	Cadmium	0.23	J	0.094	3.00	ug/L
Q1119-01	FILTER CAKE	TCLP	Lead	56.2		3.51	6.00	ug/L
Q1119-01	FILTER CAKE	TCLP	Silver	0.69	J	0.58	5.00	ug/L



SAMPLE DATA

Report of Analysis

Client:	Aramark Uniforms	Date Collected:	01/16/25
Project:	Monthly 2025	Date Received:	01/16/25
Client Sample ID:	FILTER CAKE	SDG No.:	Q1119
Lab Sample ID:	Q1119-01	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	3.48	U	1	3.48	10.0	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7440-39-3	Barium	259		1	6.28	50.0	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7440-43-9	Cadmium	0.23	J	1	0.094	3.00	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7440-47-3	Chromium	0.66	U	1	0.66	5.00	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7439-92-1	Lead	56.2		1	3.51	6.00	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7439-97-6	Mercury	0.81	U	1	0.81	2.00	ug/L	01/17/25 14:18	01/20/25 11:45	SW7470A	
7782-49-2	Selenium	5.88	U	1	5.88	10.0	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050
7440-22-4	Silver	0.69	J	1	0.58	5.00	ug/L	01/17/25 12:30	01/20/25 13:08	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP Mercury			

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

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
Initial Calibration Source: EPA
Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV62	Mercury	4.00	4.0	100	90 - 110	CV	01/20/2025	11:03	LB134341

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
Initial Calibration Source: EPA
Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV50	Mercury	4.78	5.0	96	90 - 110	CV	01/20/2025	11:08	LB134341
CCV51	Mercury	4.52	5.0	90	90 - 110	CV	01/20/2025	11:38	LB134341
CCV52	Mercury	4.77	5.0	95	90 - 110	CV	01/20/2025	12:05	LB134341
CCV53	Mercury	4.86	5.0	97	90 - 110	CV	01/20/2025	12:26	LB134341



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Client:	<u>Aramark Uniforms</u>	SDG No.:	<u>Q1119</u>				
Contract:	<u>ARAM01</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1119</u>	SAS No.:	<u>Q1119</u>
Initial Calibration Source:	<u>EPA</u>						
Continuing Calibration Source:	Inorganic Ventures						

Sample ID	Analyte	Result	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		ug/L							
ICV01	Arsenic	1020	1000	102	95 - 105	P	01/20/2025	10:47	LB134350
	Barium	472	520	91	95 - 105	P	01/20/2025	10:47	LB134350
	Cadmium	501	510	98	95 - 105	P	01/20/2025	10:47	LB134350
	Chromium	531	520	102	95 - 105	P	01/20/2025	10:47	LB134350
	Lead	1000	1000	100	95 - 105	P	01/20/2025	10:47	LB134350
	Selenium	1030	1000	103	95 - 105	P	01/20/2025	10:47	LB134350
	Silver	255	250	102	95 - 105	P	01/20/2025	10:47	LB134350

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Aramark Uniforms **SDG No.:** Q1119

Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119

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	Arsenic	4970	5000	99	90 - 110	P	01/20/2025	11:31	LB134350
	Barium	9180	10000	92	90 - 110	P	01/20/2025	11:31	LB134350
	Cadmium	2430	2500	97	90 - 110	P	01/20/2025	11:31	LB134350
	Chromium	1000	1000	100	90 - 110	P	01/20/2025	11:31	LB134350
	Lead	4860	5000	97	90 - 110	P	01/20/2025	11:31	LB134350
	Selenium	5030	5000	100	90 - 110	P	01/20/2025	11:31	LB134350
	Silver	1230	1250	98	90 - 110	P	01/20/2025	11:31	LB134350
CCV02	Arsenic	4880	5000	98	90 - 110	P	01/20/2025	12:29	LB134350
	Barium	9310	10000	93	90 - 110	P	01/20/2025	12:29	LB134350
	Cadmium	2400	2500	96	90 - 110	P	01/20/2025	12:29	LB134350
	Chromium	995	1000	100	90 - 110	P	01/20/2025	12:29	LB134350
	Lead	4800	5000	96	90 - 110	P	01/20/2025	12:29	LB134350
	Selenium	4940	5000	99	90 - 110	P	01/20/2025	12:29	LB134350
	Silver	1230	1250	98	90 - 110	P	01/20/2025	12:29	LB134350
CCV03	Arsenic	4930	5000	99	90 - 110	P	01/20/2025	13:35	LB134350
	Barium	9210	10000	92	90 - 110	P	01/20/2025	13:35	LB134350
	Cadmium	2400	2500	96	90 - 110	P	01/20/2025	13:35	LB134350
	Chromium	976	1000	98	90 - 110	P	01/20/2025	13:35	LB134350
	Lead	4800	5000	96	90 - 110	P	01/20/2025	13:35	LB134350
	Selenium	5030	5000	101	90 - 110	P	01/20/2025	13:35	LB134350
	Silver	1200	1250	96	90 - 110	P	01/20/2025	13:35	LB134350
CCV04	Arsenic	4900	5000	98	90 - 110	P	01/20/2025	14:38	LB134350
	Barium	9340	10000	93	90 - 110	P	01/20/2025	14:38	LB134350
	Cadmium	2410	2500	96	90 - 110	P	01/20/2025	14:38	LB134350
	Chromium	991	1000	99	90 - 110	P	01/20/2025	14:38	LB134350
	Lead	4800	5000	96	90 - 110	P	01/20/2025	14:38	LB134350
	Selenium	4990	5000	100	90 - 110	P	01/20/2025	14:38	LB134350
	Silver	1220	1250	97	90 - 110	P	01/20/2025	14:38	LB134350
CCV05	Arsenic	4980	5000	100	90 - 110	P	01/20/2025	15:37	LB134350
	Barium	9410	10000	94	90 - 110	P	01/20/2025	15:37	LB134350
	Cadmium	2420	2500	97	90 - 110	P	01/20/2025	15:37	LB134350
	Chromium	987	1000	99	90 - 110	P	01/20/2025	15:37	LB134350
	Lead	4820	5000	96	90 - 110	P	01/20/2025	15:37	LB134350
	Selenium	5080	5000	102	90 - 110	P	01/20/2025	15:37	LB134350

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
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
CCV05	Silver	1230	1250	98	90 - 110	P	01/20/2025	15:37	LB134350
CCV06	Arsenic	4850	5000	97	90 - 110	P	01/20/2025	16:47	LB134350
	Barium	10500	10000	105	90 - 110	P	01/20/2025	16:47	LB134350
	Cadmium	2360	2500	94	90 - 110	P	01/20/2025	16:47	LB134350
	Chromium	966	1000	97	90 - 110	P	01/20/2025	16:47	LB134350
	Lead	4710	5000	94	90 - 110	P	01/20/2025	16:47	LB134350
	Selenium	4950	5000	99	90 - 110	P	01/20/2025	16:47	LB134350
	Silver	1190	1250	95	90 - 110	P	01/20/2025	16:47	LB134350
CCV07	Arsenic	4920	5000	98	90 - 110	P	01/20/2025	17:33	LB134350
	Barium	9000	10000	90	90 - 110	P	01/20/2025	17:33	LB134350
	Cadmium	2400	2500	96	90 - 110	P	01/20/2025	17:33	LB134350
	Chromium	987	1000	99	90 - 110	P	01/20/2025	17:33	LB134350
	Lead	4780	5000	96	90 - 110	P	01/20/2025	17:33	LB134350
	Selenium	5020	5000	100	90 - 110	P	01/20/2025	17:33	LB134350
	Silver	1200	1250	96	90 - 110	P	01/20/2025	17:33	LB134350
CCV08	Arsenic	4950	5000	99	90 - 110	P	01/20/2025	17:52	LB134350
	Barium	10500	10000	105	90 - 110	P	01/20/2025	17:52	LB134350
	Cadmium	2370	2500	95	90 - 110	P	01/20/2025	17:52	LB134350
	Chromium	969	1000	97	90 - 110	P	01/20/2025	17:52	LB134350
	Lead	4730	5000	94	90 - 110	P	01/20/2025	17:52	LB134350
	Selenium	5080	5000	102	90 - 110	P	01/20/2025	17:52	LB134350
	Silver	1190	1250	95	90 - 110	P	01/20/2025	17:52	LB134350



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Metals

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CRDL STANDARD FOR AA & ICP

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
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	Arsenic	22.2	20.0	111	40 - 160	P	01/20/2025	11:06	LB134350
	Barium	88.2	100	88	40 - 160	P	01/20/2025	11:06	LB134350
	Cadmium	6.15	6.0	102	40 - 160	P	01/20/2025	11:06	LB134350
	Chromium	10.3	10.0	103	40 - 160	P	01/20/2025	11:06	LB134350
	Lead	12.2	12.0	102	40 - 160	P	01/20/2025	11:06	LB134350
	Selenium	19.4	20.0	97	40 - 160	P	01/20/2025	11:06	LB134350
	Silver	11.1	10.0	111	40 - 160	P	01/20/2025	11:06	LB134350
CRA	Mercury	0.23	0.2	113	40 - 160	CV	01/20/2025	11:15	LB134341



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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	Aramark Uniforms				SDG No.:	Q1119				
Contract:	ARAM01		Lab Code:	CHEM		Case No.:	Q1119		SAS No.:	Q1119
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number	
ICB62	Mercury	0.20	+/-0.20	U	0.20	CV	01/20/2025	11:05	LB134341	

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB50	Mercury	0.20	+/-0.20	U	0.20	CV	01/20/2025	11:10	LB134341
CCB51	Mercury	0.20	+/-0.20	U	0.20	CV	01/20/2025	11:40	LB134341
CCB52	Mercury	0.20	+/-0.20	U	0.20	CV	01/20/2025	12:07	LB134341
CCB53	Mercury	0.20	+/-0.20	U	0.20	CV	01/20/2025	12:28	LB134341

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>Aramark Uniforms</u>		SDG No.: <u>Q1119</u>							
Contract: <u>ARAM01</u>		Lab Code: <u>CHEM</u>		Case No.: <u>Q1119</u>		SAS No.: <u>Q1119</u>			
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	11:01	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	11:01	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	11:01	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	11:01	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	11:01	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	11:01	LB134350
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2025	11:01	LB134350

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>Aramark Uniforms</u>		SDG No.: <u>Q1119</u>							
Contract: <u>ARAM01</u>	Lab Code: <u>CHEM</u>	Case No.: <u>Q1119</u>	SAS No.: <u>Q1119</u>						
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	11:36	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	11:36	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	11:36	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	11:36	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	11:36	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	11:36	LB134350
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2025	11:36	LB134350
CCB02	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	12:33	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	12:33	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	12:33	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	12:33	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	12:33	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	12:33	LB134350
	Silver	1.45	+/-10.0	J	10.0	P	01/20/2025	12:33	LB134350
CCB03	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	13:39	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	13:39	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	13:39	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	13:39	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	13:39	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	13:39	LB134350
	Silver	1.46	+/-10.0	J	10.0	P	01/20/2025	13:39	LB134350
CCB04	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	14:43	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	14:43	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	14:43	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	14:43	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	14:43	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	14:43	LB134350
	Silver	1.71	+/-10.0	J	10.0	P	01/20/2025	14:43	LB134350
CCB05	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	15:41	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	15:41	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	15:41	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	15:41	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	15:41	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	15:41	LB134350
	Silver	1.91	+/-10.0	J	10.0	P	01/20/2025	15:41	LB134350
CCB06	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	16:50	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	16:50	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	16:50	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	16:50	LB134350

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: <u>Aramark Uniforms</u>		SDG No.: <u>Q1119</u>							
Contract: <u>ARAM01</u>		Lab Code: <u>CHEM</u>		Case No.: <u>Q1119</u>		SAS No.: <u>Q1119</u>			
Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	16:50	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	16:50	LB134350
	Silver	1.46	+/-10.0	J	10.0	P	01/20/2025	16:50	LB134350
CCB07	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	17:37	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	17:37	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	17:37	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	17:37	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	17:37	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	17:37	LB134350
	Silver	1.43	+/-10.0	J	10.0	P	01/20/2025	17:37	LB134350
CCB08	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2025	17:56	LB134350
	Barium	100	+/-100	U	100	P	01/20/2025	17:56	LB134350
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2025	17:56	LB134350
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2025	17:56	LB134350
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2025	17:56	LB134350
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2025	17:56	LB134350
	Silver	1.70	+/-10.0	J	10.0	P	01/20/2025	17:56	LB134350

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Aramark Uniforms

SDG No.: Q1119

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166067TB		WATER		Batch Number:	PB166122		Prep Date:	01/17/2025	
	Mercury	2.00	<2.00	U	2.00	CV	01/20/2025	12:12	LB134341
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166122BL		WATER		Batch Number:	PB166122		Prep Date:	01/17/2025	
	Mercury	0.20	<0.20	U	0.20	CV	01/20/2025	11:22	LB134341

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Aramark Uniforms

SDG No.: Q1119

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166067TB		WATER		Batch Number:	PB166109		Prep Date:	01/17/2025	
	Arsenic	10.0	<10.0	U	10.0	P	01/20/2025	13:00	LB134350
	Barium	50.0	<50.0	U	50.0	P	01/20/2025	13:00	LB134350
	Cadmium	3.00	<3.00	U	3.00	P	01/20/2025	13:00	LB134350
	Chromium	0.84	<5.00	J	5.00	P	01/20/2025	13:00	LB134350
	Lead	6.00	<6.00	U	6.00	P	01/20/2025	13:00	LB134350
	Selenium	10.0	<10.0	U	10.0	P	01/20/2025	13:00	LB134350
	Silver	0.59	<5.00	J	5.00	P	01/20/2025	13:00	LB134350
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166068TB		WATER		Batch Number:	PB166109		Prep Date:	01/17/2025	
	Arsenic	10.0	<10.0	U	10.0	P	01/20/2025	12:55	LB134350
	Barium	50.0	<50.0	U	50.0	P	01/20/2025	12:55	LB134350
	Cadmium	3.00	<3.00	U	3.00	P	01/20/2025	12:55	LB134350
	Chromium	0.99	<5.00	J	5.00	P	01/20/2025	12:55	LB134350
	Lead	6.00	<6.00	U	6.00	P	01/20/2025	12:55	LB134350
	Selenium	10.0	<10.0	U	10.0	P	01/20/2025	12:55	LB134350
	Silver	5.00	<5.00	U	5.00	P	01/20/2025	12:55	LB134350
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166109BL		WATER		Batch Number:	PB166109		Prep Date:	01/17/2025	
	Arsenic	10.0	<10.0	U	10.0	P	01/20/2025	12:51	LB134350
	Barium	50.0	<50.0	U	50.0	P	01/20/2025	12:51	LB134350
	Cadmium	3.00	<3.00	U	3.00	P	01/20/2025	12:51	LB134350
	Chromium	5.00	<5.00	U	5.00	P	01/20/2025	12:51	LB134350
	Lead	6.00	<6.00	U	6.00	P	01/20/2025	12:51	LB134350
	Selenium	10.0	<10.0	U	10.0	P	01/20/2025	12:51	LB134350
	Silver	0.62	<5.00	J	5.00	P	01/20/2025	12:51	LB134350

Metals
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INTERFERENCE CHECK SAMPLE

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
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	Arsenic	0.38			-20	20	01/20/2025	11:10	LB134350
	Barium	2.56	6.0	43	-94	106	01/20/2025	11:10	LB134350
	Cadmium	-1.40	1.0	140	-5	7	01/20/2025	11:10	LB134350
	Chromium	57.5	52.0	111	42	62	01/20/2025	11:10	LB134350
	Lead	6.59			-12	12	01/20/2025	11:10	LB134350
	Selenium	-11.5			-20	20	01/20/2025	11:10	LB134350
	Silver	-0.92			-10	10	01/20/2025	11:10	LB134350
ICSAB01	Arsenic	108	104	104	88.4	120	01/20/2025	11:19	LB134350
	Barium	456	537	85	437	637	01/20/2025	11:19	LB134350
	Cadmium	993	972	102	826	1120	01/20/2025	11:19	LB134350
	Chromium	579	542	107	460	624	01/20/2025	11:19	LB134350
	Lead	56.1	49.0	114	37	61	01/20/2025	11:19	LB134350
	Selenium	35.5	46.0	77	26	66	01/20/2025	11:19	LB134350
	Silver	222	201	110	170	232	01/20/2025	11:19	LB134350



METAL

QC

DATA

metals
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MATRIX SPIKE SUMMARY

client: Aramark Uniforms **level:** low **sdg no.:** Q1119
contract: ARAM01 **lab code:** CHEM **case no.:** Q1119 **sas no.:** Q1119
matrix: Water **sample id:** Q1119-01 **client id:** FILTER CAKEMS
Percent Solids for Sample: NA **Spiked ID:** Q1119-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	417		10.0	U	400	104		P
Barium	ug/L	75 - 125	380		259		100	121		P
Cadmium	ug/L	75 - 125	97.2		0.23	J	100	97		P
Chromium	ug/L	75 - 125	202		5.00	U	200	101		P
Lead	ug/L	75 - 125	530		56.2		500	95		P
Mercury	ug/L	75 - 125	34.9		2.00	U	40.0	87		CV
Selenium	ug/L	75 - 125	1020		10.0	U	1000	102		P
Silver	ug/L	75 - 125	37.3		0.69	J	37.5	98		P

metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Aramark Uniforms **level:** low **sdg no.:** Q1119
contract: ARAM01 **lab code:** CHEM **case no.:** Q1119 **sas no.:** Q1119
matrix: Water **sample id:** Q1119-01 **client id:** FILTER CAKEMSD
Percent Solids for Sample: NA **Spiked ID:** Q1119-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	412		10.0	U	400	103		P
Barium	ug/L	75 - 125	369		259		100	111		P
Cadmium	ug/L	75 - 125	95.8		0.23	J	100	96		P
Chromium	ug/L	75 - 125	203		5.00	U	200	102		P
Lead	ug/L	75 - 125	523		56.2		500	93		P
Mercury	ug/L	75 - 125	36.1		2.00	U	40.0	90		CV
Selenium	ug/L	75 - 125	1000		10.0	U	1000	100		P
Silver	ug/L	75 - 125	37.4		0.69	J	37.5	98		P

Metals

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Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
Matrix: **Level:** LOW **Client ID:**
Sample ID: **Spiked ID:**

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

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DUPLICATE SAMPLE SUMMARY

Client: Aramark Uniforms **Level:** LOW **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
Matrix: Water **Sample ID:** Q1119-01 **Client ID:** FILTER CAKEDUP
Percent Solids for Sample: NA **Duplicate ID** Q1119-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	10.0	U	10.0	U			P
Barium	ug/L	20	259		270		4		P
Cadmium	ug/L	20	0.23	J	0.22	J	4		P
Chromium	ug/L	20	5.00	U	5.00	U			P
Lead	ug/L	20	56.2		56.1		0		P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	10.0	U	10.0	U			P
Silver	ug/L	20	0.69	J	0.63	J	9		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client: Aramark Uniforms **Level:** LOW **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119
Matrix: Water **Sample ID:** Q1119-01MS **Client ID:** FILTER CAKEMSD
Percent Solids for Sample: NA **Duplicate ID** Q1119-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	417		412		1		P
Barium	ug/L	20	380		369		3		P
Cadmium	ug/L	20	97.2		95.8		1		P
Chromium	ug/L	20	202		203		0		P
Lead	ug/L	20	530		523		1		P
Mercury	ug/L	20	34.9		36.1		3		CV
Selenium	ug/L	20	1020		1000		2		P
Silver	ug/L	20	37.3		37.4		0		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Case No.:** Q1119 **SAS No.:** Q1119

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166109BS							
Arsenic	ug/L	400	403		101	80 - 120	P
Barium	ug/L	100	86.4		86	80 - 120	P
Cadmium	ug/L	100	95.7		96	80 - 120	P
Chromium	ug/L	200	202		101	80 - 120	P
Lead	ug/L	500	482		96	80 - 120	P
Selenium	ug/L	1000	998		100	80 - 120	P
Silver	ug/L	37.5	37.2		99	80 - 120	P



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Client:	<u>Aramark Uniforms</u>	SDG No.:	<u>Q1119</u>				
Contract:	<u>ARAM01</u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>Q1119</u>	SAS No.:	<u>Q1119</u>

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166122BS Mercury	ug/L	4.0	3.87		97	80 - 120	CV

Metals
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ICP SERIAL DILUTIONS

SAMPLE NO.

FILTER CAKEL

Lab Name: Chemtech Consulting Group

Contract: ARAM01

Lab Code: CHEM **Lb No.:** lb134350

Lab Sample ID : Q1119-01L **SDG No.:** Q1119

Matrix (soil/water): Water

Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ-ence		Q	M
		C		C				
Arsenic	10.0	U	50.0	U				P
Barium	259		271		5			P
Cadmium	0.23	J	15.0	U	100.0			P
Chromium	5.00	U	25.0	U				P
Lead	56.2		57.1		2			P
Mercury	2.00	U	10.0	U				CV
Selenium	10.0	U	50.0	U				P
Silver	0.69	J	3.80	J	451			P



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		As	Ba	Be	Cd	Co
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Aramark Uniforms

SDG No.: Q1119

Contract: ARAM01

Lab Code: CHEM

Case No.: Q1119

SAS No.: Q1119

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000



METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Method:**
Case No.: Q1119 **SAS No.:** Q1119

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB166109							
PB166067TB	PB166067TB	MB	WATER	01/17/2025	50.0	25.0	
PB166068TB	PB166068TB	MB	WATER	01/17/2025	50.0	25.0	
PB166109BL	PB166109BL	MB	WATER	01/17/2025	50.0	25.0	
PB166109BS	PB166109BS	LCS	WATER	01/17/2025	50.0	25.0	
Q1119-01	FILTER CAKE	SAM	WATER	01/17/2025	50.0	25.0	
Q1119-01DUP	FILTER CAKEDUP	DUP	WATER	01/17/2025	50.0	25.0	
Q1119-01MS	FILTER CAKEMS	MS	WATER	01/17/2025	50.0	25.0	
Q1119-01MSD	FILTER CAKEMSD	MSD	WATER	01/17/2025	50.0	25.0	

Metals

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SAMPLE PREPARATION SUMMARY

Client: Aramark Uniforms **SDG No.:** Q1119
Contract: ARAM01 **Lab Code:** CHEM **Method:**
Case No.: Q1119 **SAS No.:** Q1119

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB166122							
PB166067TB	PB166067TB	MB	WATER	01/17/2025	3.0	30.0	
PB166122BL	PB166122BL	MB	WATER	01/17/2025	30.0	30.0	
PB166122BS	PB166122BS	LCS	WATER	01/17/2025	30.0	30.0	
Q1119-01	FILTER CAKE	SAM	WATER	01/17/2025	3.0	30.0	
Q1119-01DUP	FILTER CAKEDUP	DUP	WATER	01/17/2025	3.0	30.0	
Q1119-01MS	FILTER CAKEMS	MS	WATER	01/17/2025	3.0	30.0	
Q1119-01MSD	FILTER CAKEMSD	MSD	WATER	01/17/2025	3.0	30.0	

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ANALYSIS RUN LOG

Client: Aramark Uniforms **Contract:** ARAM01

Lab code: CHEM **Case no.:** Q1119 **Sas no.:** Q1119 **Sdg no.:** Q1119

Instrument id number: **Method:** **Run number:** LB134341

Start date: 01/20/2025 **End date:** 01/20/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1041	HG
S0.2	S0.2	1	1043	HG
S2.5	S2.5	1	1046	HG
S5	S5	1	1048	HG
S7.5	S7.5	1	1050	HG
S10	S10	1	1058	HG
ICV62	ICV62	1	1103	HG
ICB62	ICB62	1	1105	HG
CCV50	CCV50	1	1108	HG
CCB50	CCB50	1	1110	HG
CRA	CRA	1	1115	HG
PB166122BL	PB166122BL	1	1122	HG
PB166122BS	PB166122BS	1	1124	HG
CCV51	CCV51	1	1138	HG
CCB51	CCB51	1	1140	HG
Q1119-01	FILTER CAKE	1	1145	HG
Q1119-01DUP	FILTER CAKEDUP	1	1147	HG
Q1119-01MS	FILTER CAKEMS	1	1149	HG
Q1119-01MSD	FILTER CAKEMSD	1	1151	HG
CCV52	CCV52	1	1205	HG
CCB52	CCB52	1	1207	HG
PB166067TB	PB166067TB	1	1212	HG
CCV53	CCV53	1	1226	HG
CCB53	CCB53	1	1228	HG

metals
- 14 -
ANALYSIS RUN LOG

Client: Aramark Uniforms

Contract: ARAM01

Lab code: CHEM **Case no.:** Q1119 **Sas no.:** Q1119

Sdg no.: Q1119

Instrument id number: **Method:**

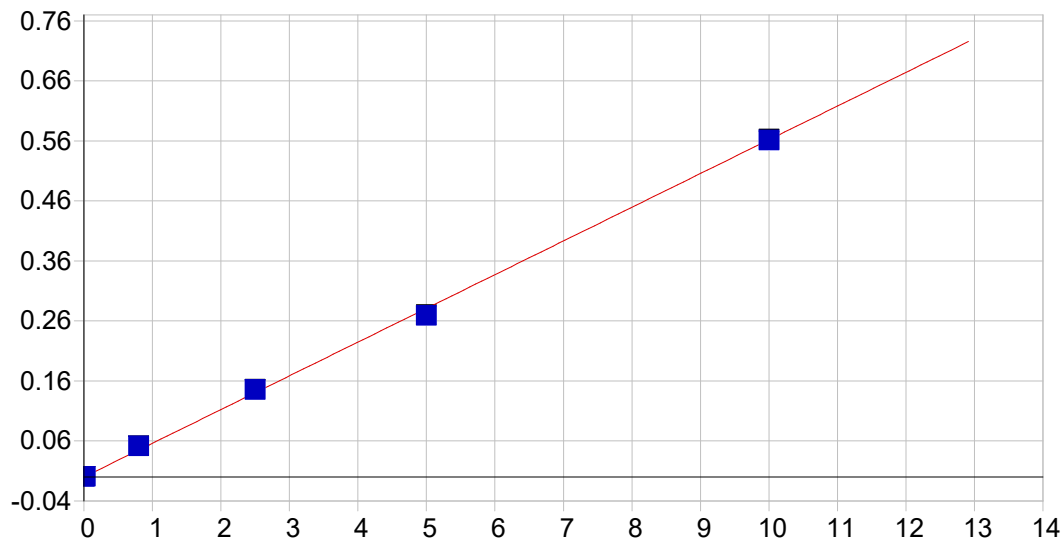
Run number: LB134350

Start date: 01/20/2025 **End date:** 01/20/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1021	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1026	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1030	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1034	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1039	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1043	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1047	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1053	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1101	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1106	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1110	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1119	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1131	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1136	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1229	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1233	Ag,As,Ba,Cd,Cr,Pb,Se
PB166109BL	PB166109BL	1	1251	Ag,As,Ba,Cd,Cr,Pb,Se
PB166068TB	PB166068TB	1	1255	Ag,As,Ba,Cd,Cr,Pb,Se
PB166067TB	PB166067TB	1	1300	Ag,As,Ba,Cd,Cr,Pb,Se
PB166109BS	PB166109BS	1	1304	Ag,As,Ba,Cd,Cr,Pb,Se
Q1119-01	FILTER CAKE	1	1308	Ag,As,Ba,Cd,Cr,Pb,Se
Q1119-01DUP	FILTER CAKEDUP	1	1313	Ag,As,Ba,Cd,Cr,Pb,Se
Q1119-01L	FILTER CAKEL	5	1317	Ag,As,Ba,Cd,Cr,Pb,Se
Q1119-01MS	FILTER CAKEMS	1	1321	Ag,As,Ba,Cd,Cr,Pb,Se
Q1119-01MSD	FILTER CAKEMSD	1	1325	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1335	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1339	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1438	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1443	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1537	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1541	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1647	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1650	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1733	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1737	Ag,As,Ba,Cd,Cr,Pb,Se
CCV08	CCV08	1	1752	Ag,As,Ba,Cd,Cr,Pb,Se
CCB08	CCB08	1	1756	Ag,As,Ba,Cd,Cr,Pb,Se



METAL RAW DATA

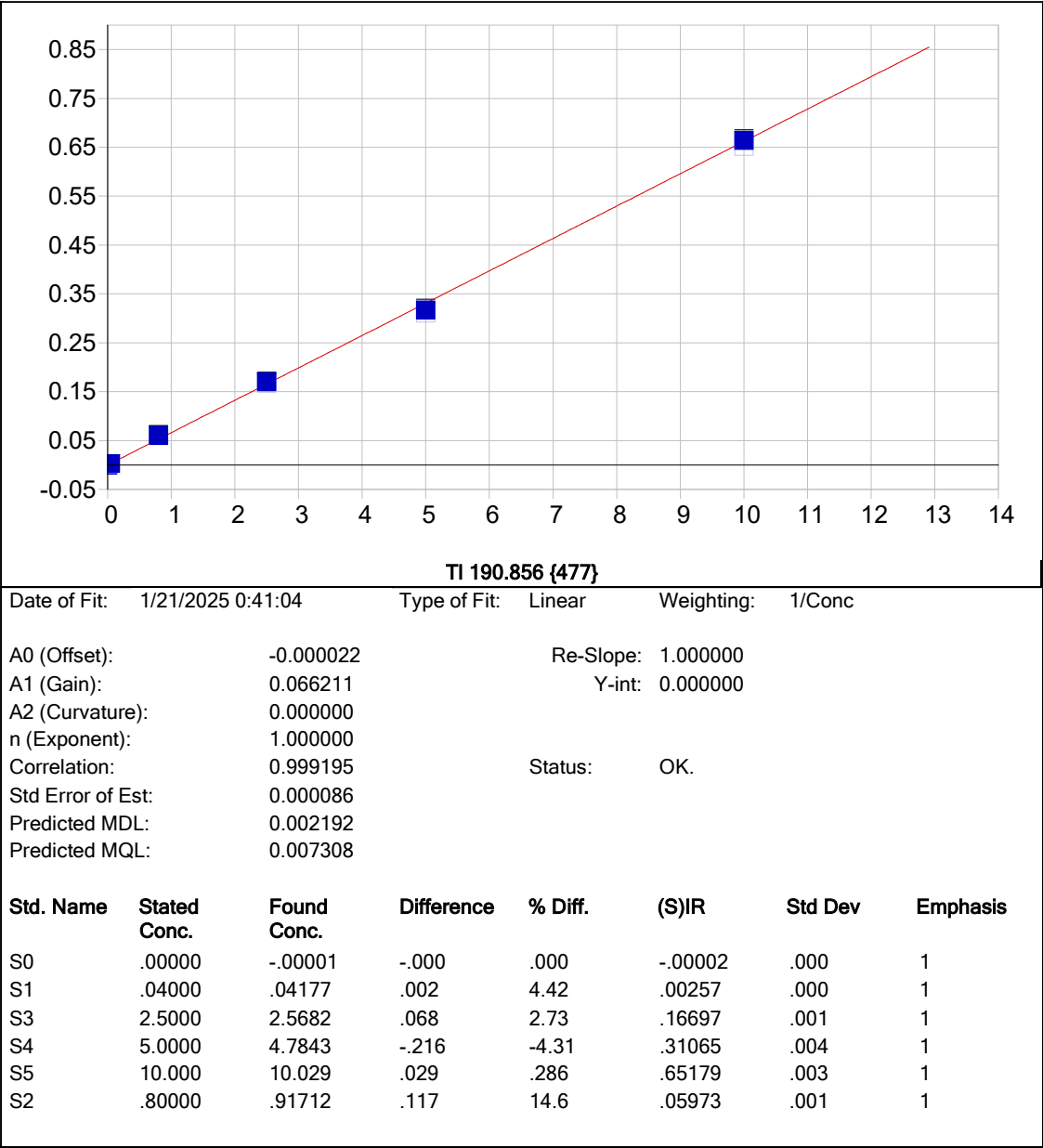


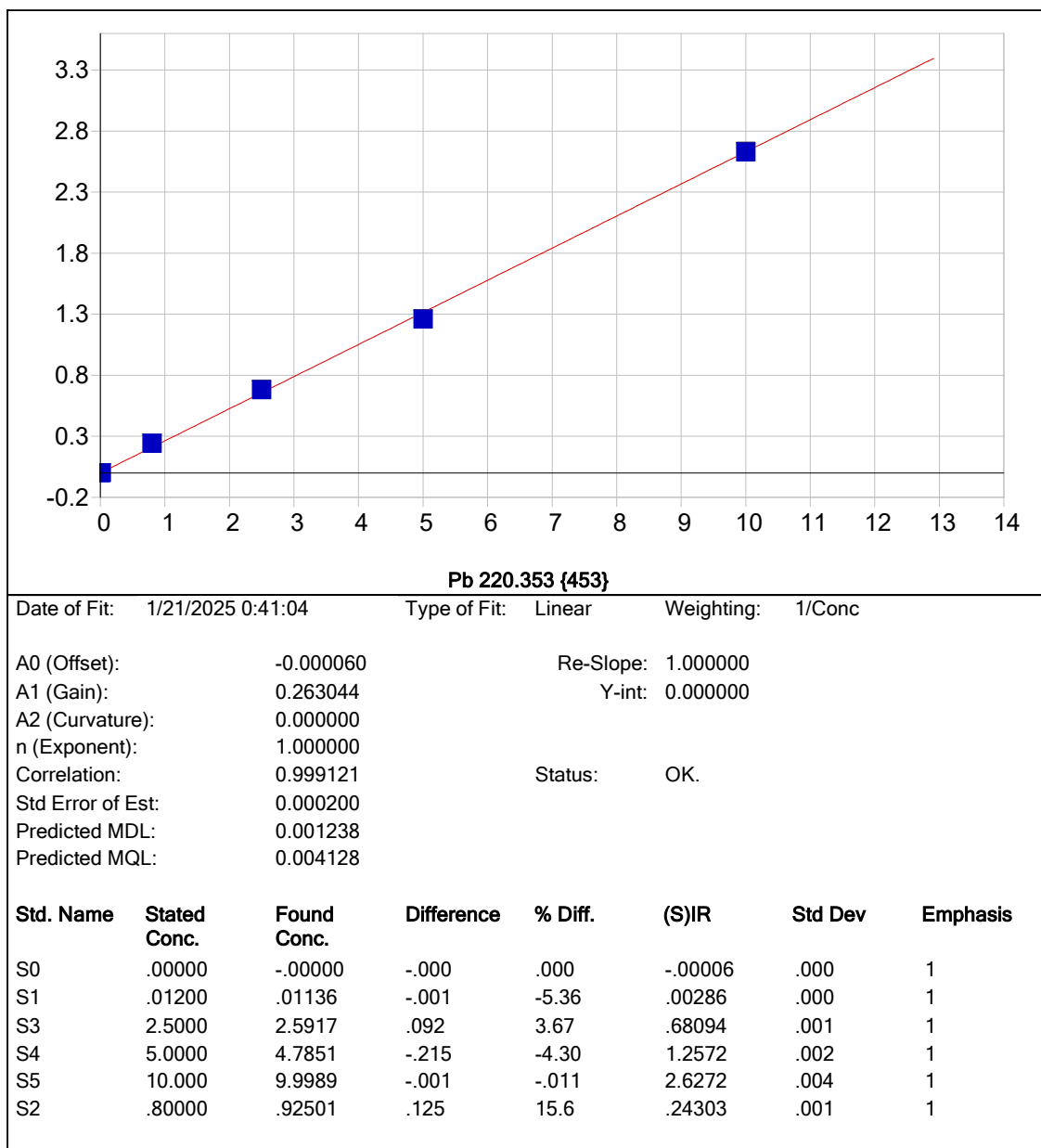
As 189.042 {479}

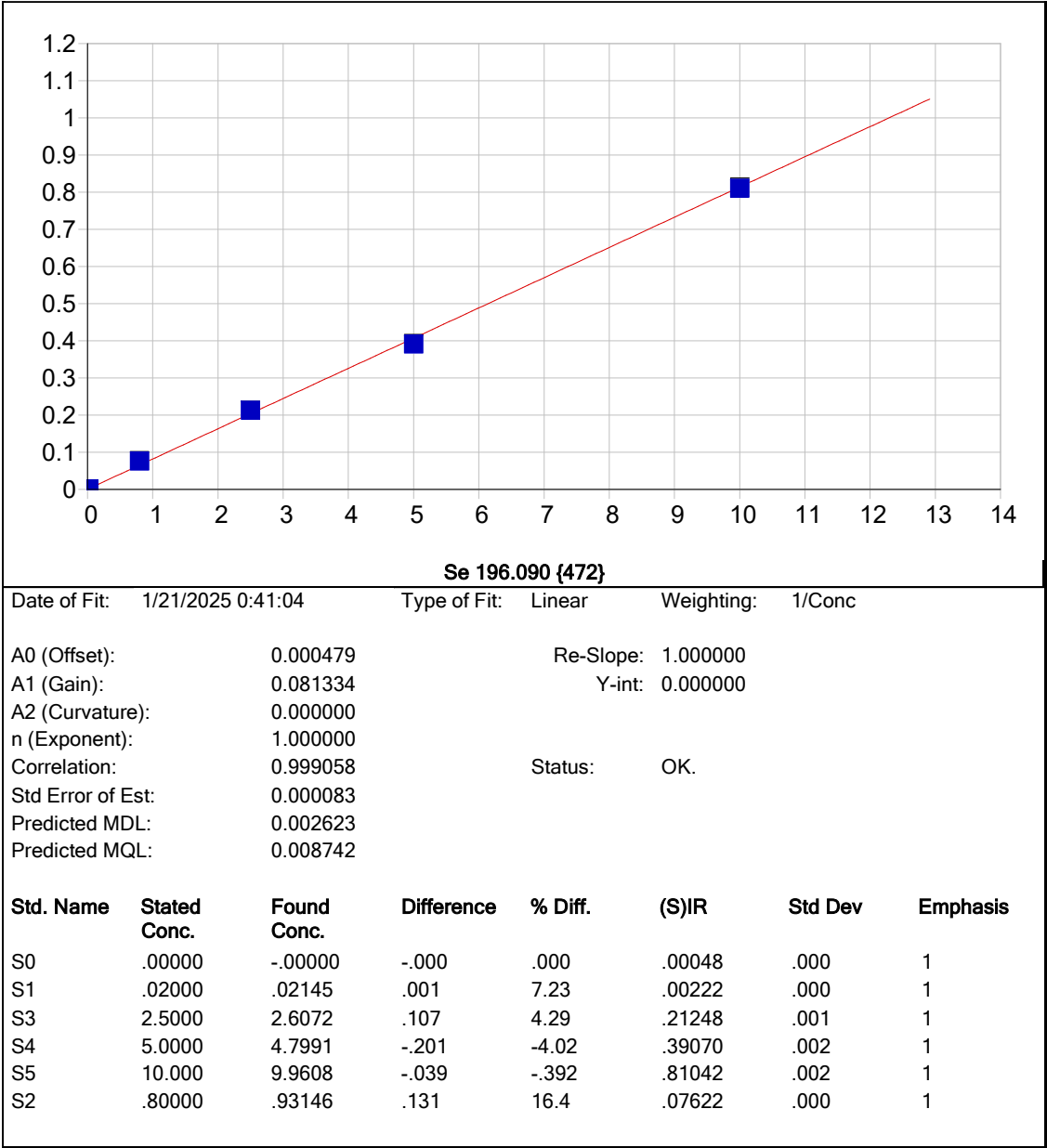
Date of Fit: 1/21/2025 0:41:04 Type of Fit: Linear Weighting: 1/Conc

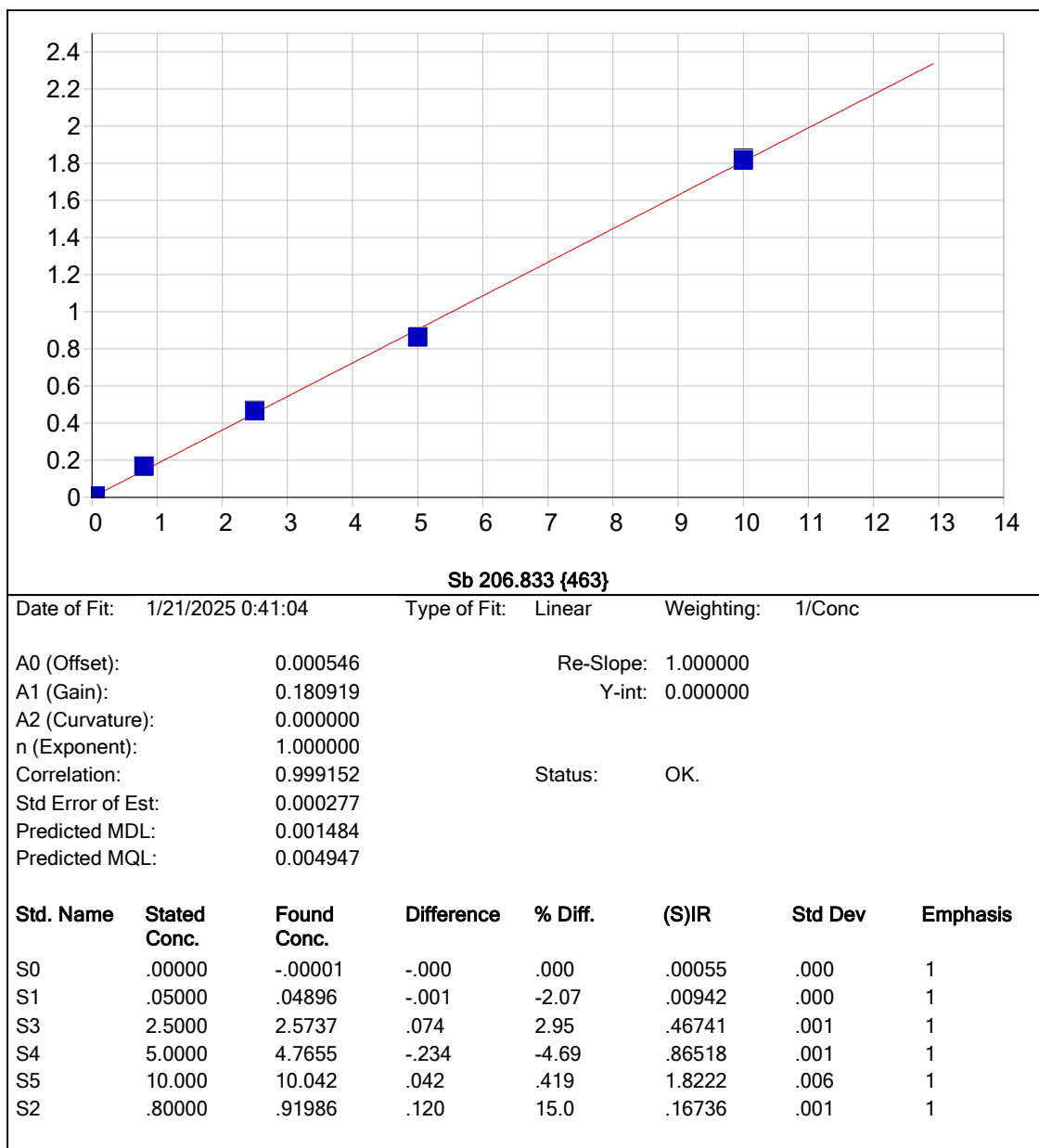
A0 (Offset): -0.000039 Re-Slope: 1.000000
A1 (Gain): 0.056191 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999136 Status: OK.
Std Error of Est: 0.000055
Predicted MDL: 0.002802
Predicted MQL: 0.009339

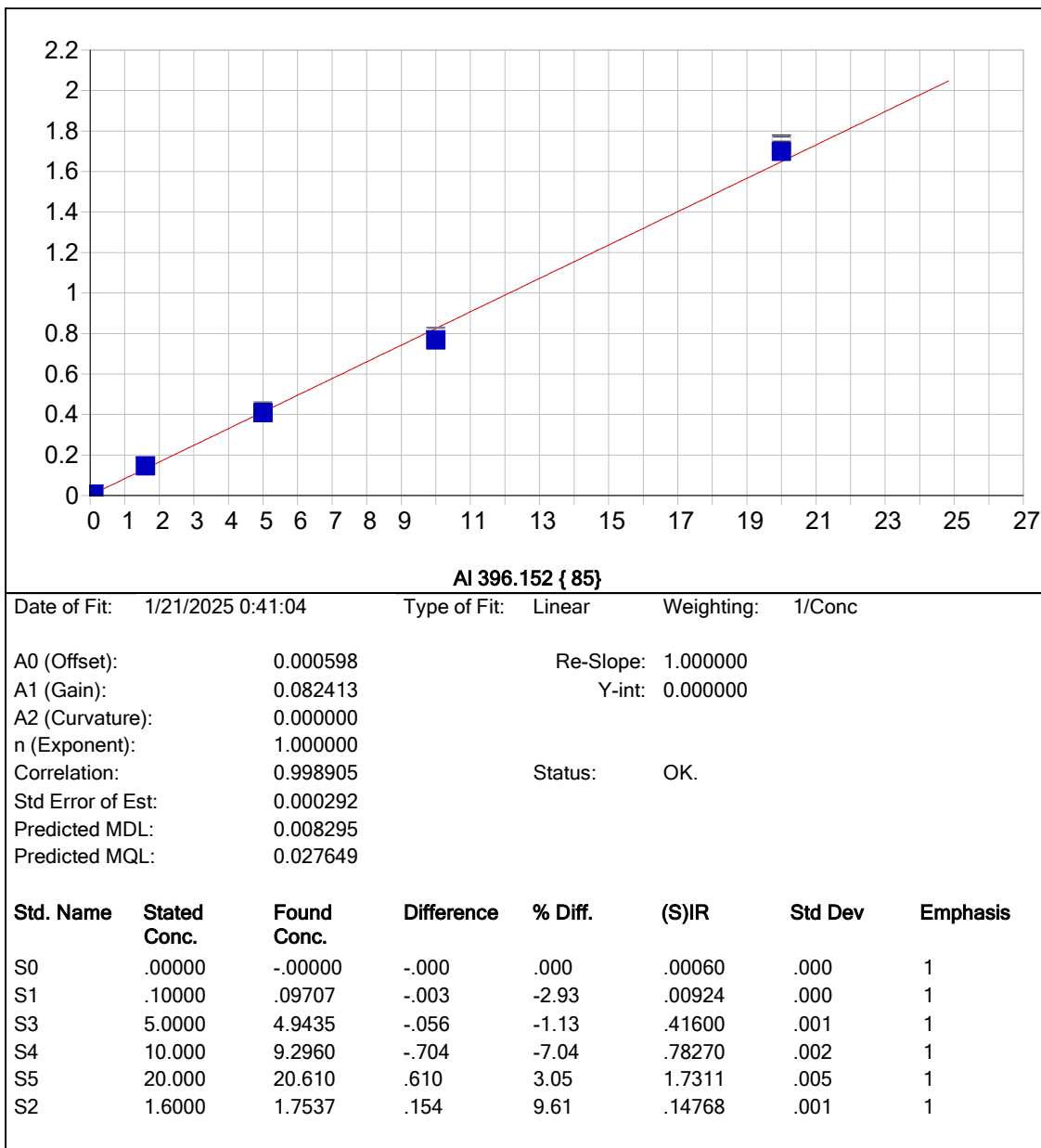
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00004	.000	1
S1	.02000	.02094	.001	4.71	.00113	.000	1
S3	2.5000	2.5929	.093	3.72	.14551	.001	1
S4	5.0000	4.7920	-.208	-4.16	.26892	.001	1
S5	10.000	9.9894	-.011	-.106	.56067	.002	1
S2	.80000	.92479	.125	15.6	.05188	.000	1

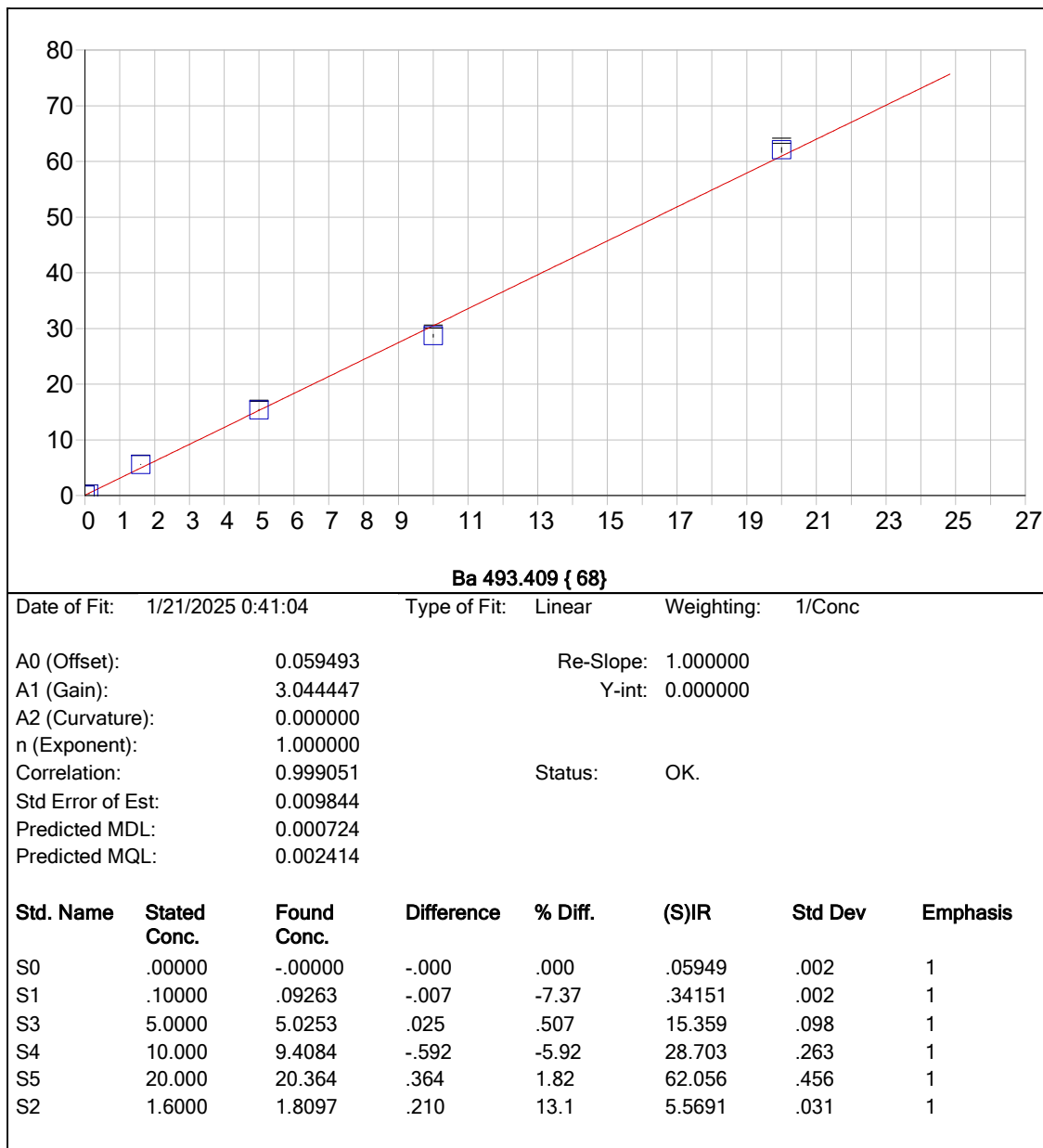


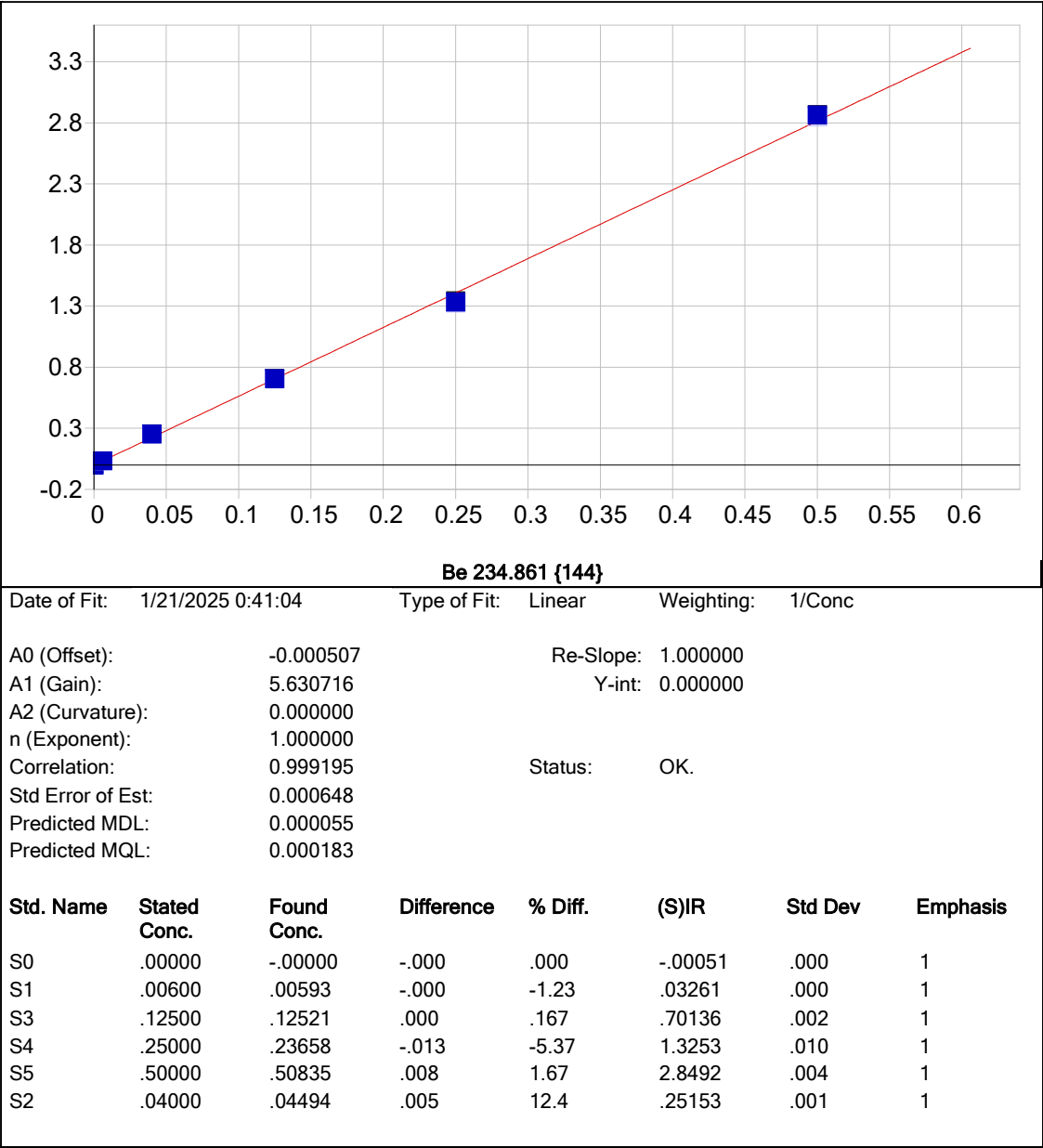


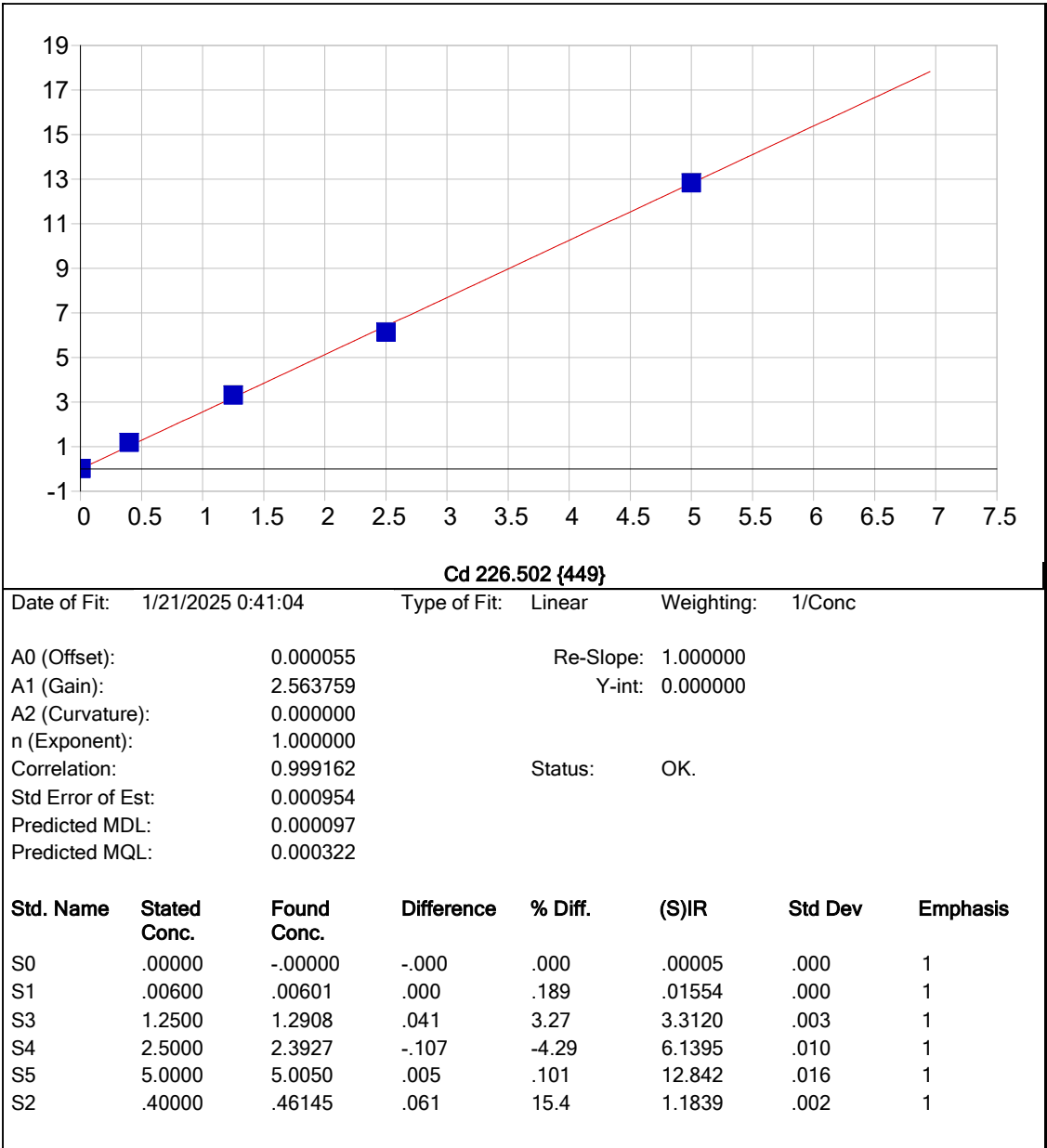


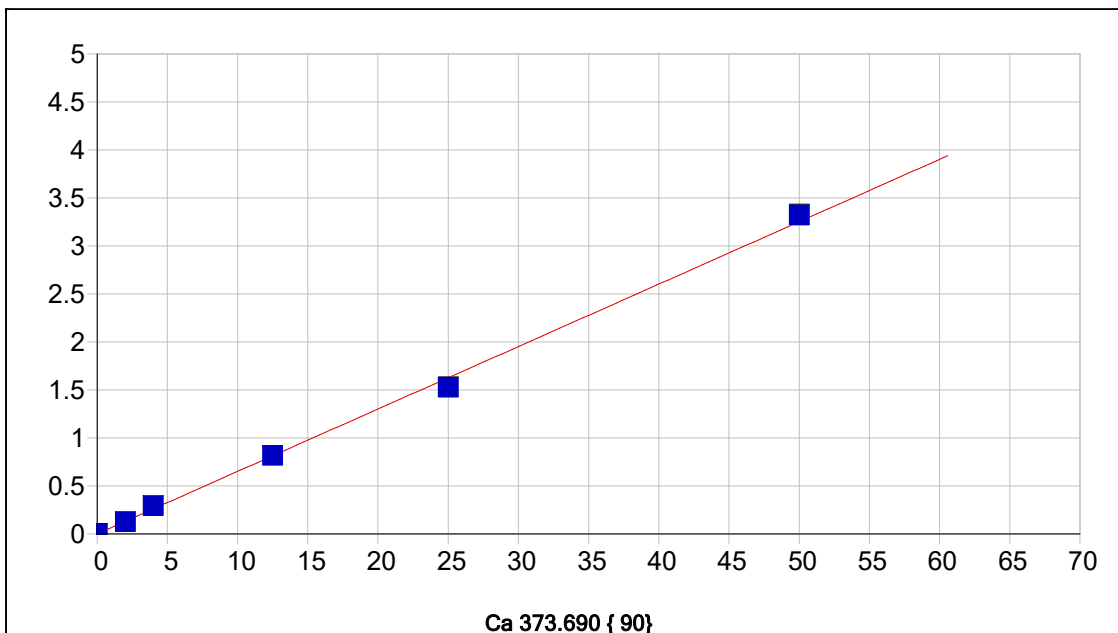




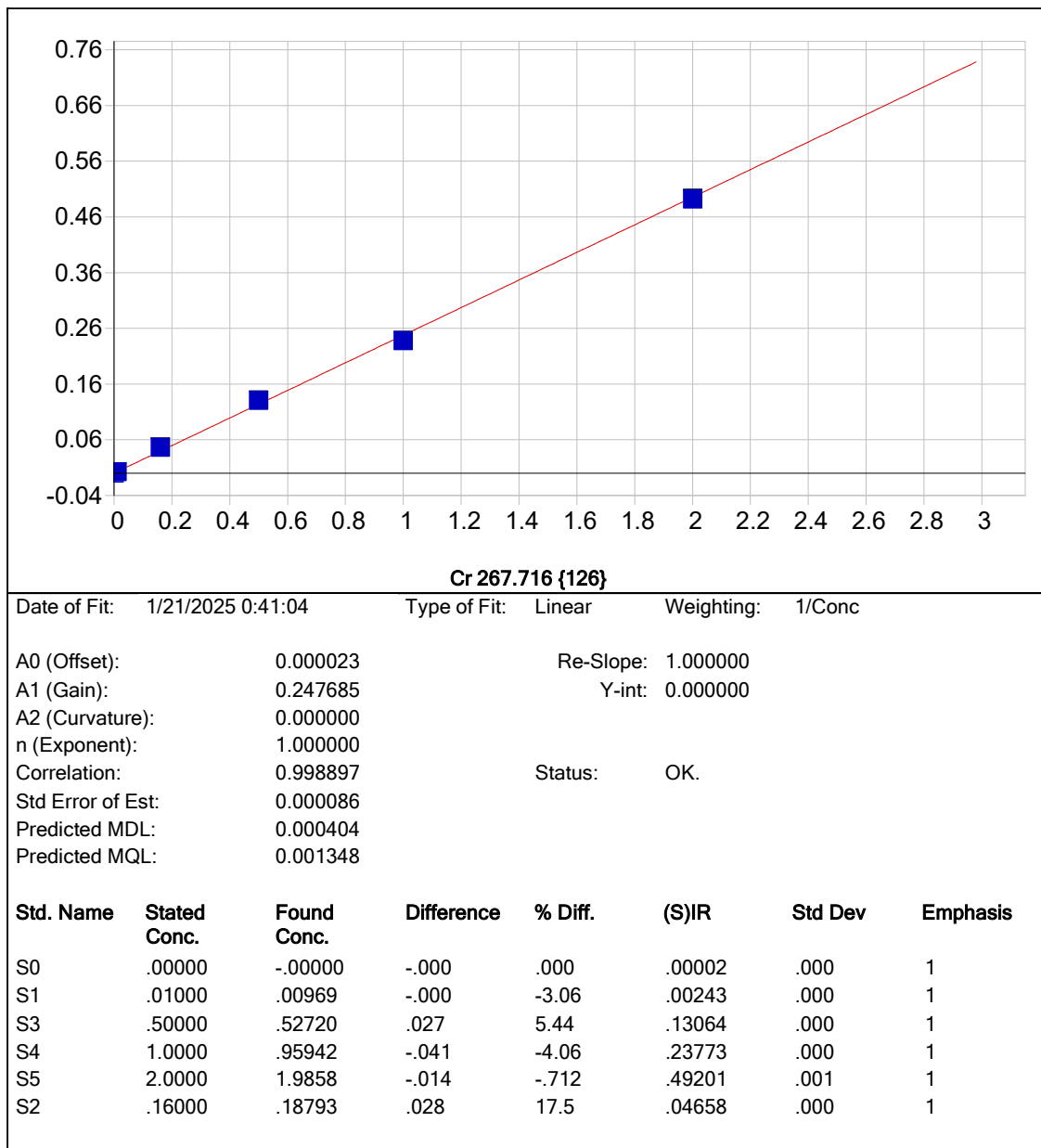


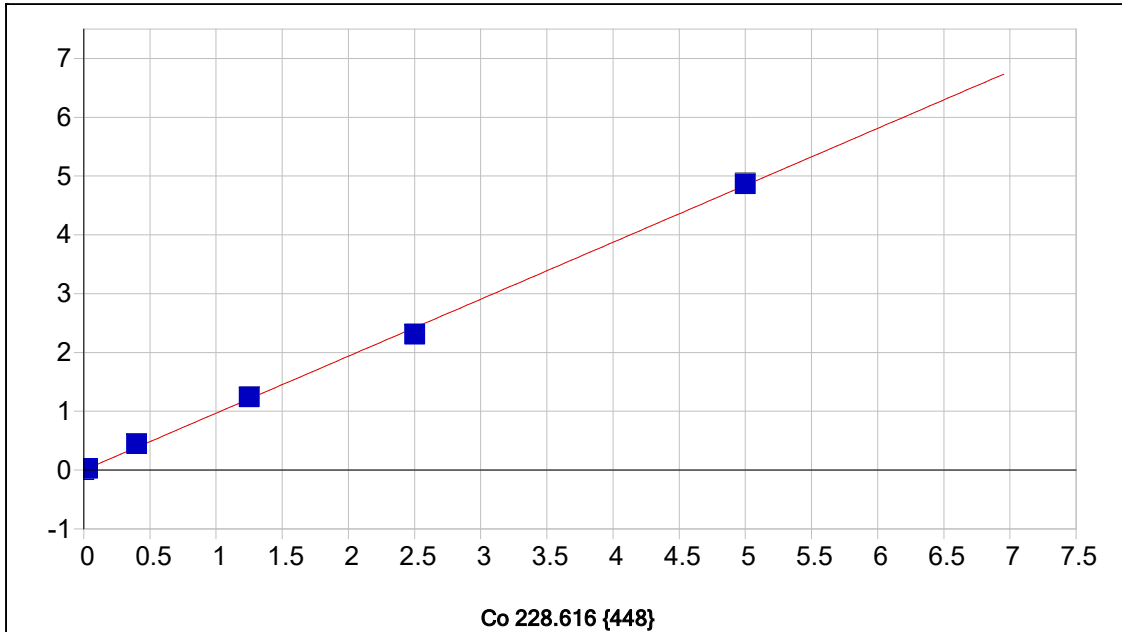




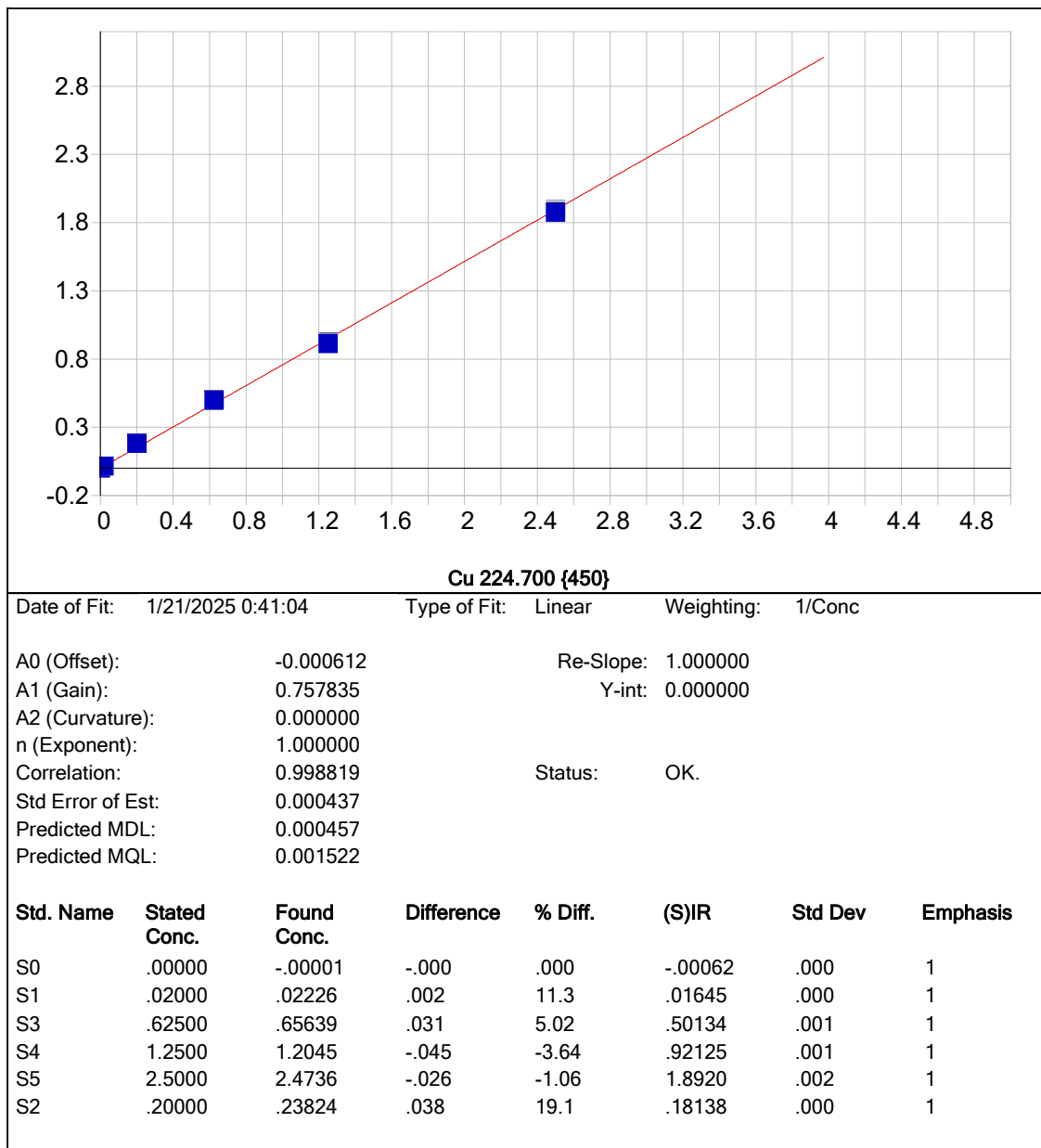


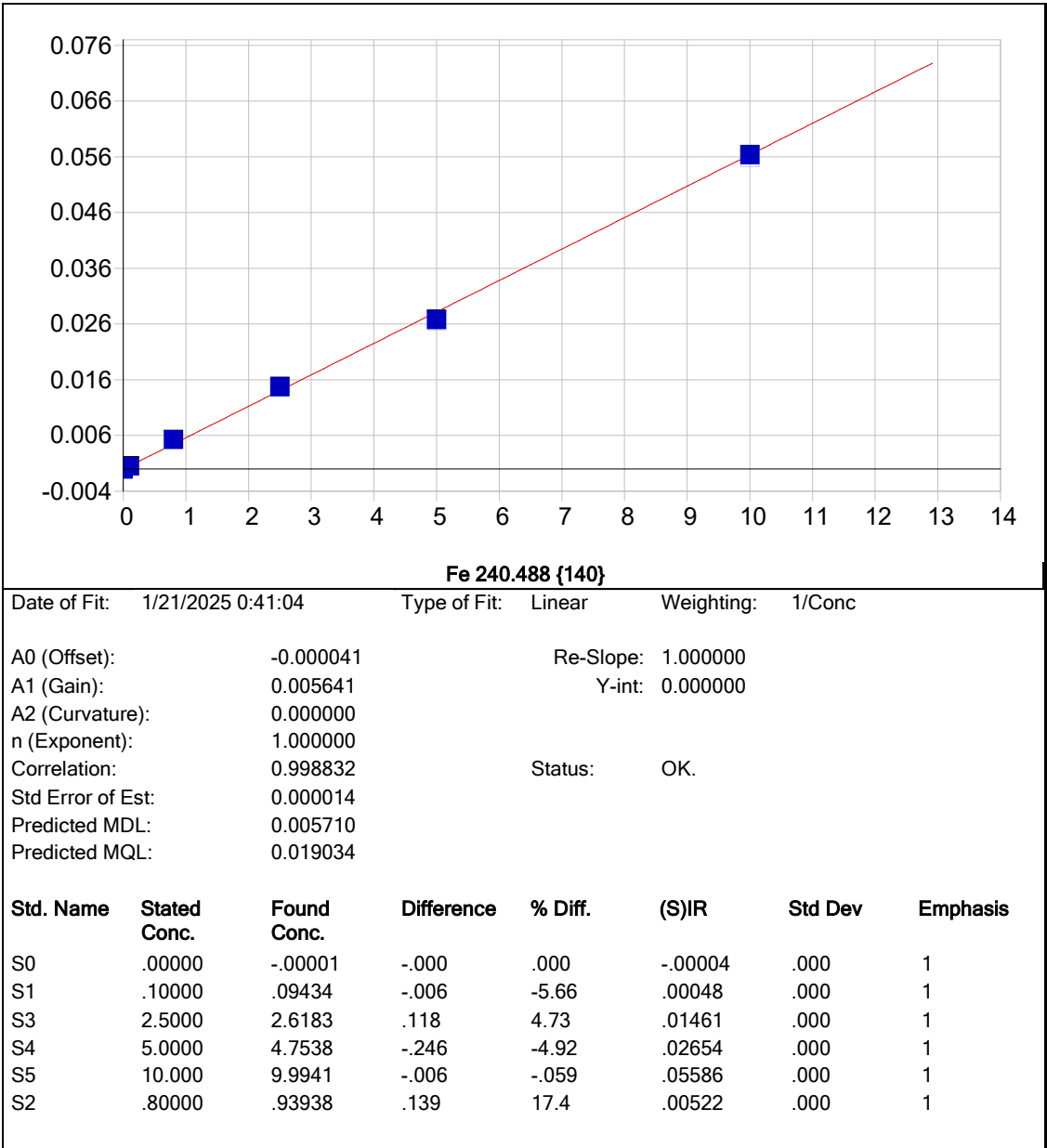
Date of Fit: 1/21/2025 0:41:04		Type of Fit: Linear		Weighting: 1/Conc			
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A1 (Gain): 0.065011		Y-int: 0.000000					
A2 (Curvature): 0.000000							
n (Exponent): 1.000000							
Correlation: 0.999022		Status: OK.					
Std Error of Est: 0.001522							
Predicted MDL: 0.010099							
Predicted MQL: 0.033662							
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00011	-.000	.000	.00113	.001	1
S2	4.0000	4.5084	.508	12.7	.29424	.001	1
S3	12.500	12.520	.020	.159	.81507	.003	1
S4	25.000	23.470	-1.53	-6.12	1.5270	.003	1
S5	50.000	51.065	1.06	2.13	3.3209	.009	1
S1	2.0000	1.9366	-.063	-3.17	.12704	.001	1

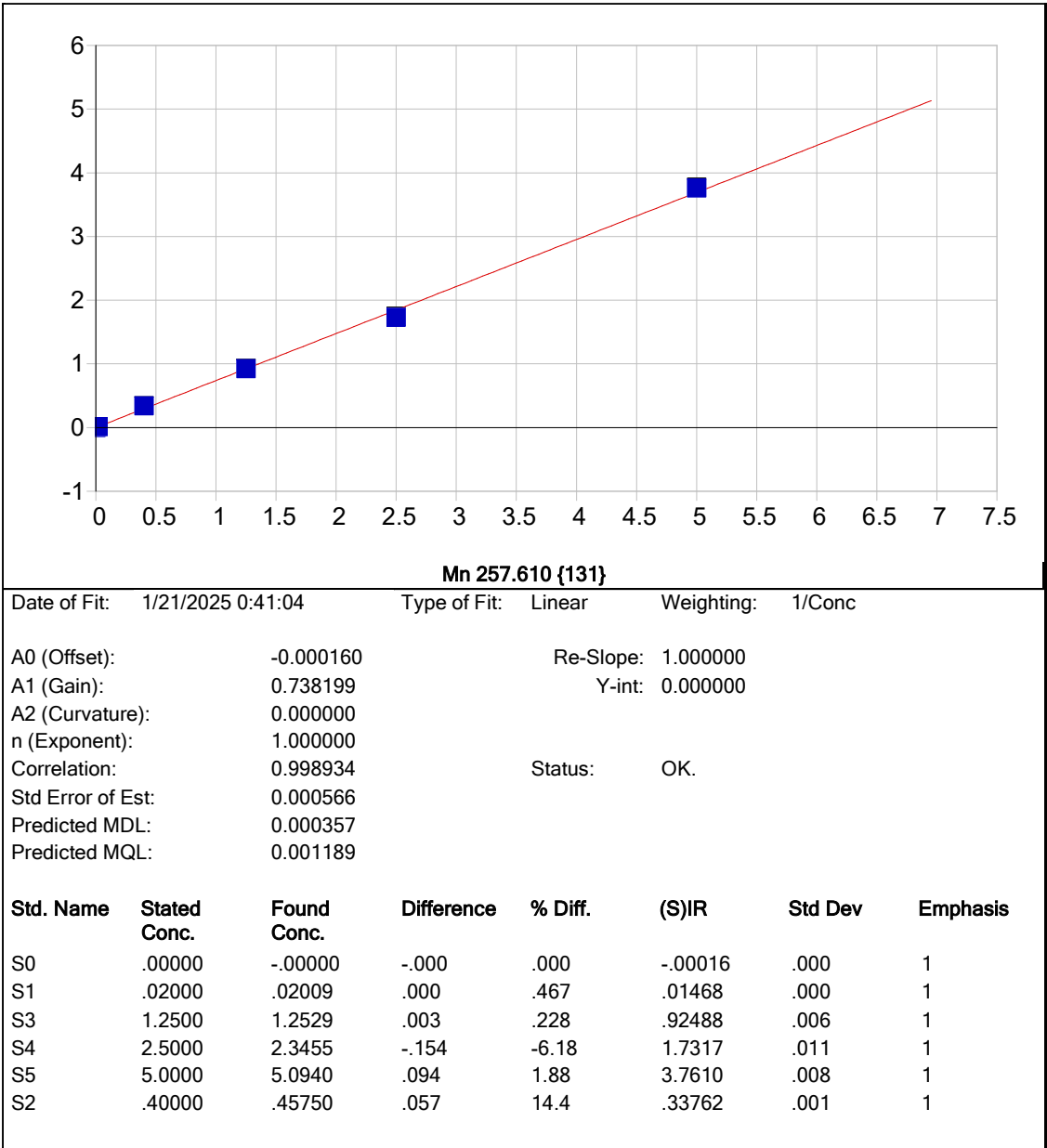




Date of Fit:		1/21/2025 0:41:04		Type of Fit:		Linear		Weighting:		1/Conc	
A0 (Offset):		0.000001		Re-Slope:		1.000000					
A1 (Gain):		0.968550		Y-int:		0.000000					
A2 (Curvature):		0.000000									
n (Exponent):		1.000000									
Correlation:		0.999137		Status:		OK.					
Std Error of Est:		0.000819									
Predicted MDL:		0.000227									
Predicted MQL:		0.000758									
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis				
S0	.00000	-.00000	-.000	.000	-.00000	.000	1				
S1	.03000	.02997	-.000	-.094	.02891	.000	1				
S3	1.2500	1.2840	.034	2.72	1.2457	.001	1				
S4	2.5000	2.3812	-.119	-4.75	2.3105	.005	1				
S5	5.0000	5.0240	.024	.480	4.8742	.007	1				
S2	.40000	.46077	.061	15.2	.44693	.000	1				

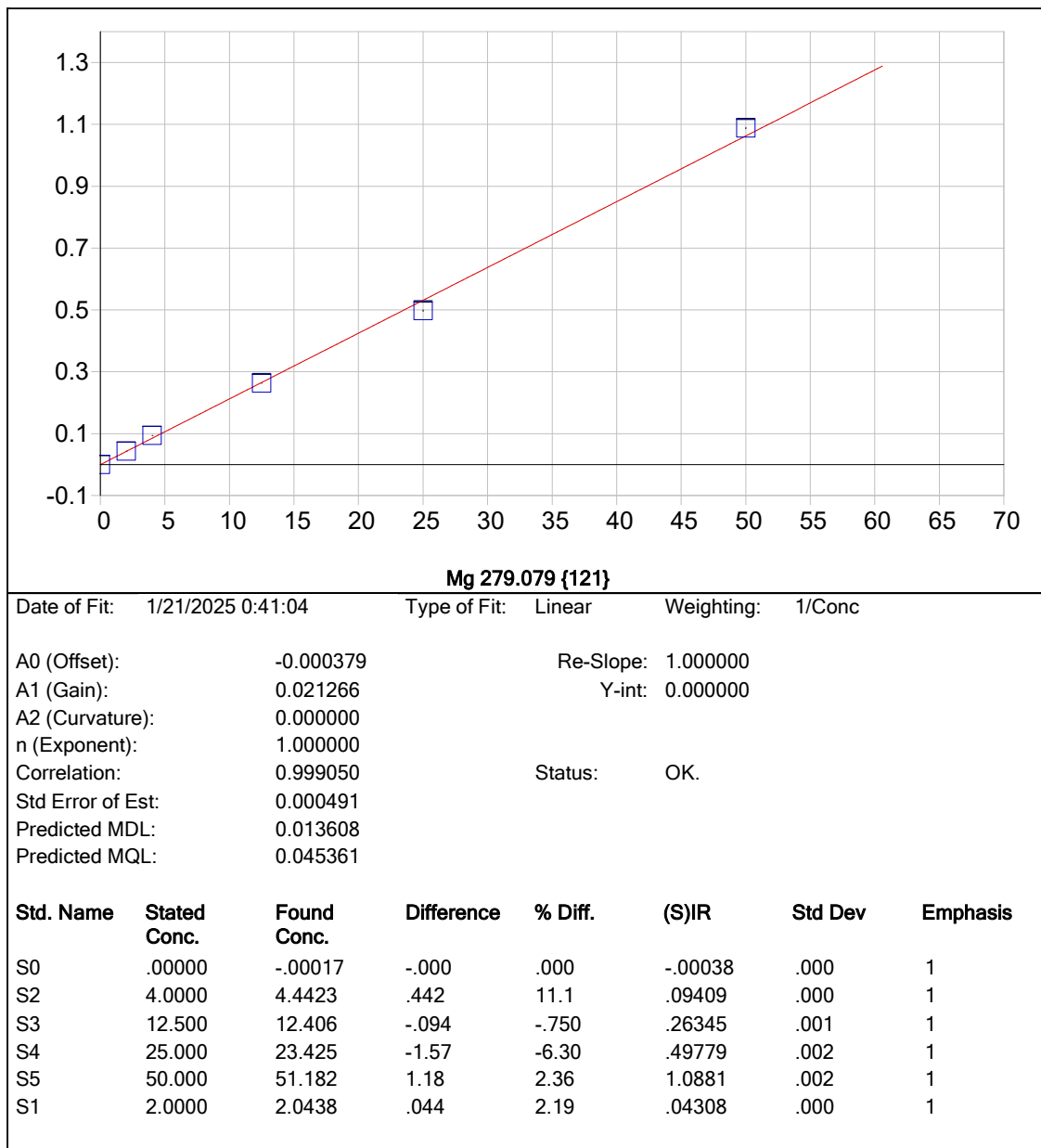


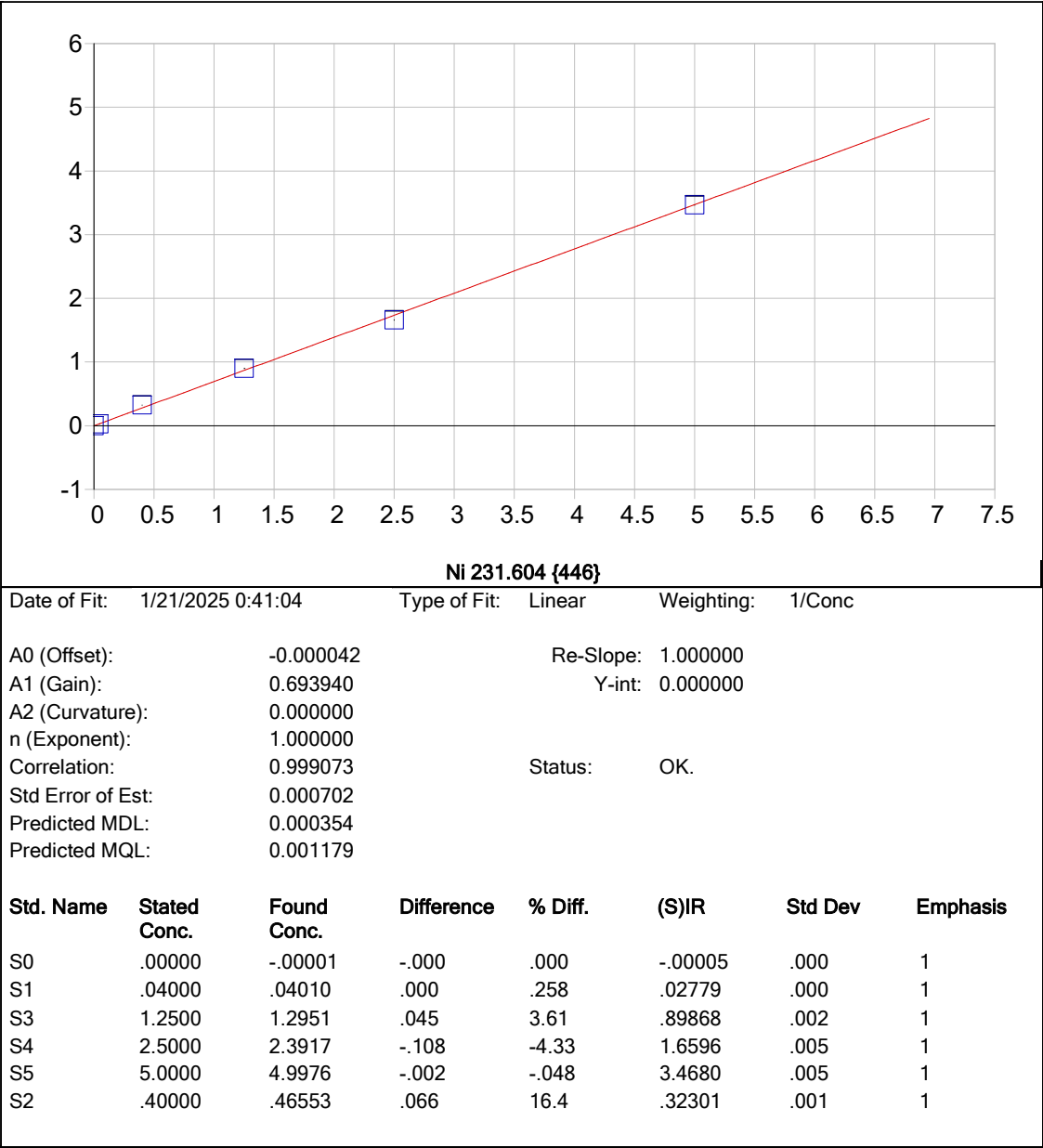


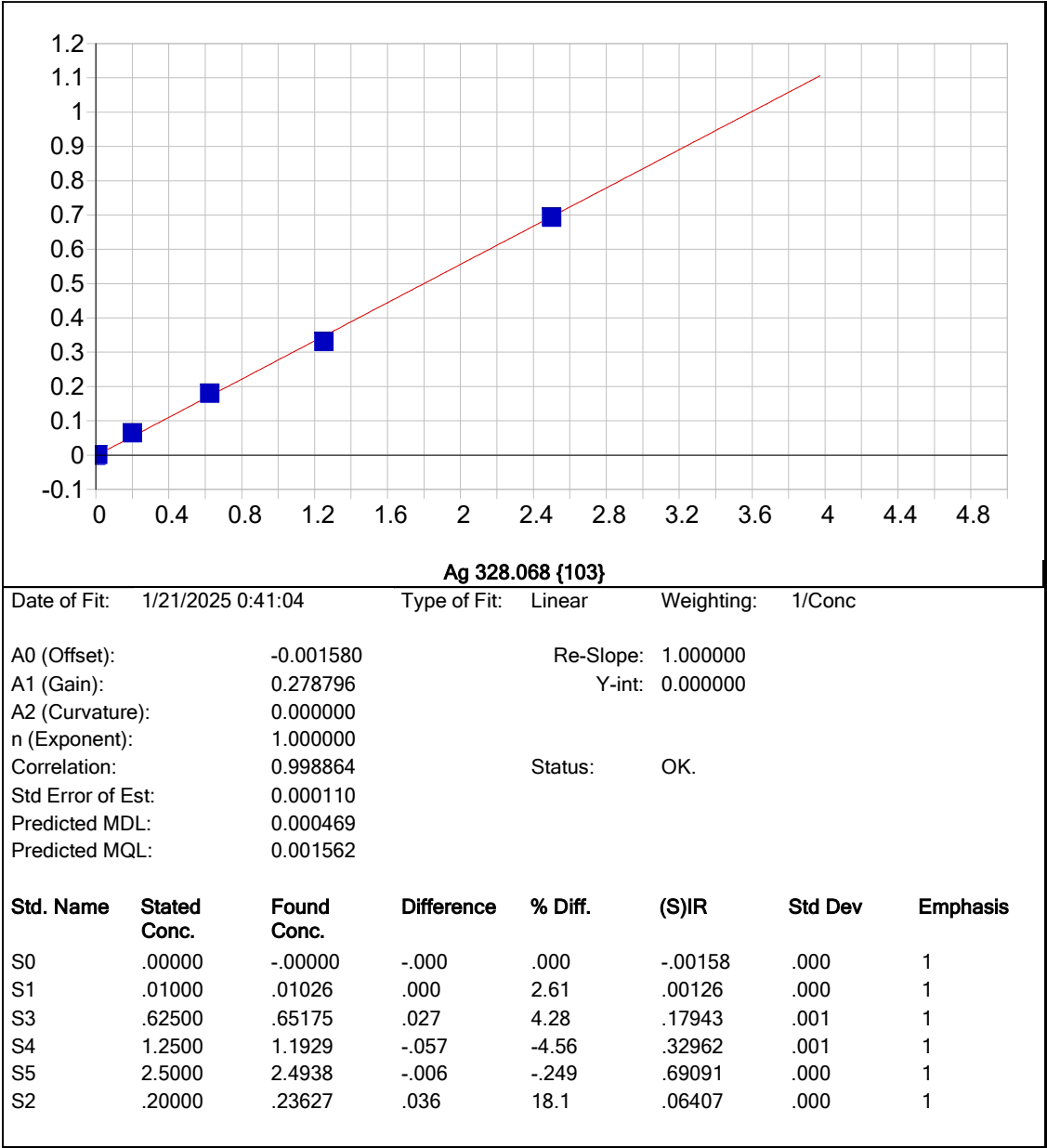


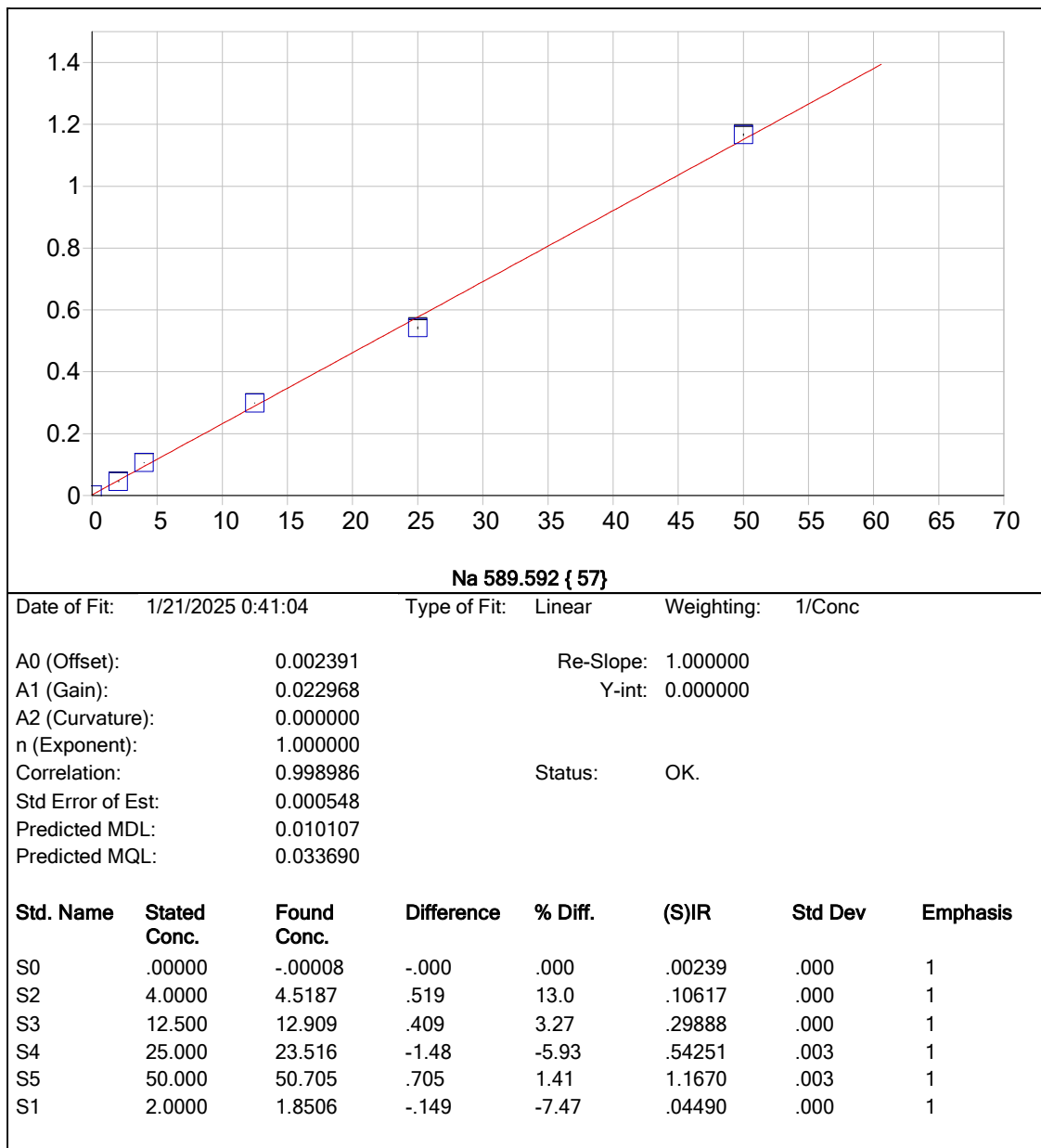
Date of Fit: 1/21/2025 0:41:04 Type of Fit: Linear Weighting: 1/Conc

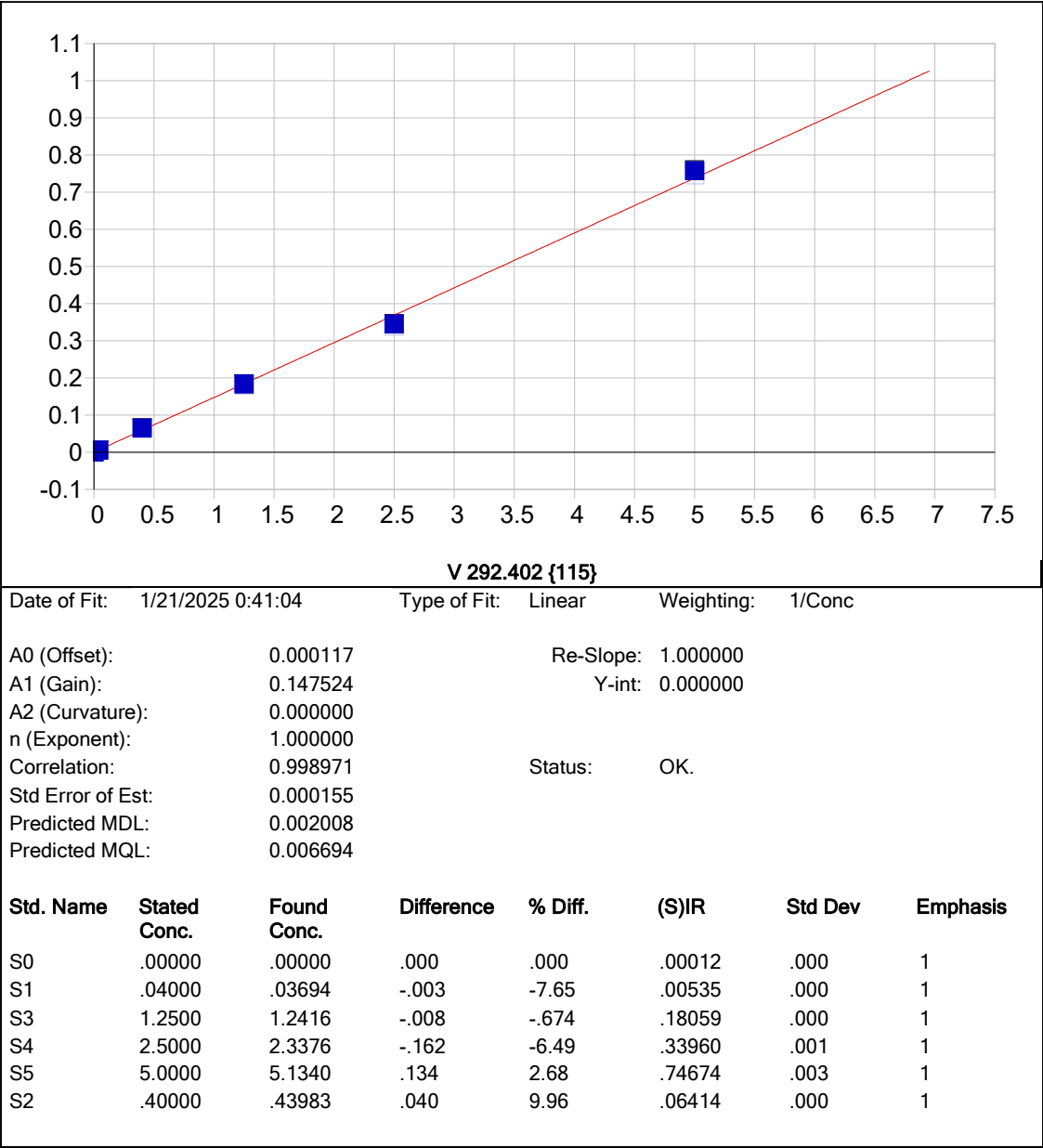
A0 (Offset): -0.000160 Re-Slope: 1.000000
A1 (Gain): 0.738199 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.998934 Status: OK.
Std Error of Est: 0.000566
Predicted MDL: 0.000357
Predicted MQL: 0.001189

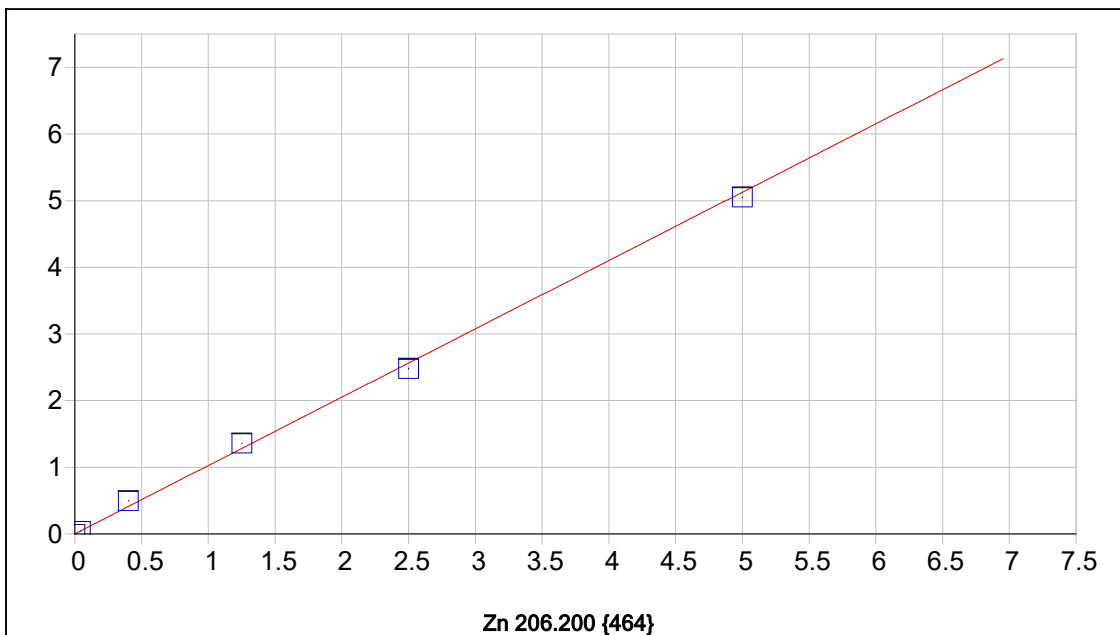




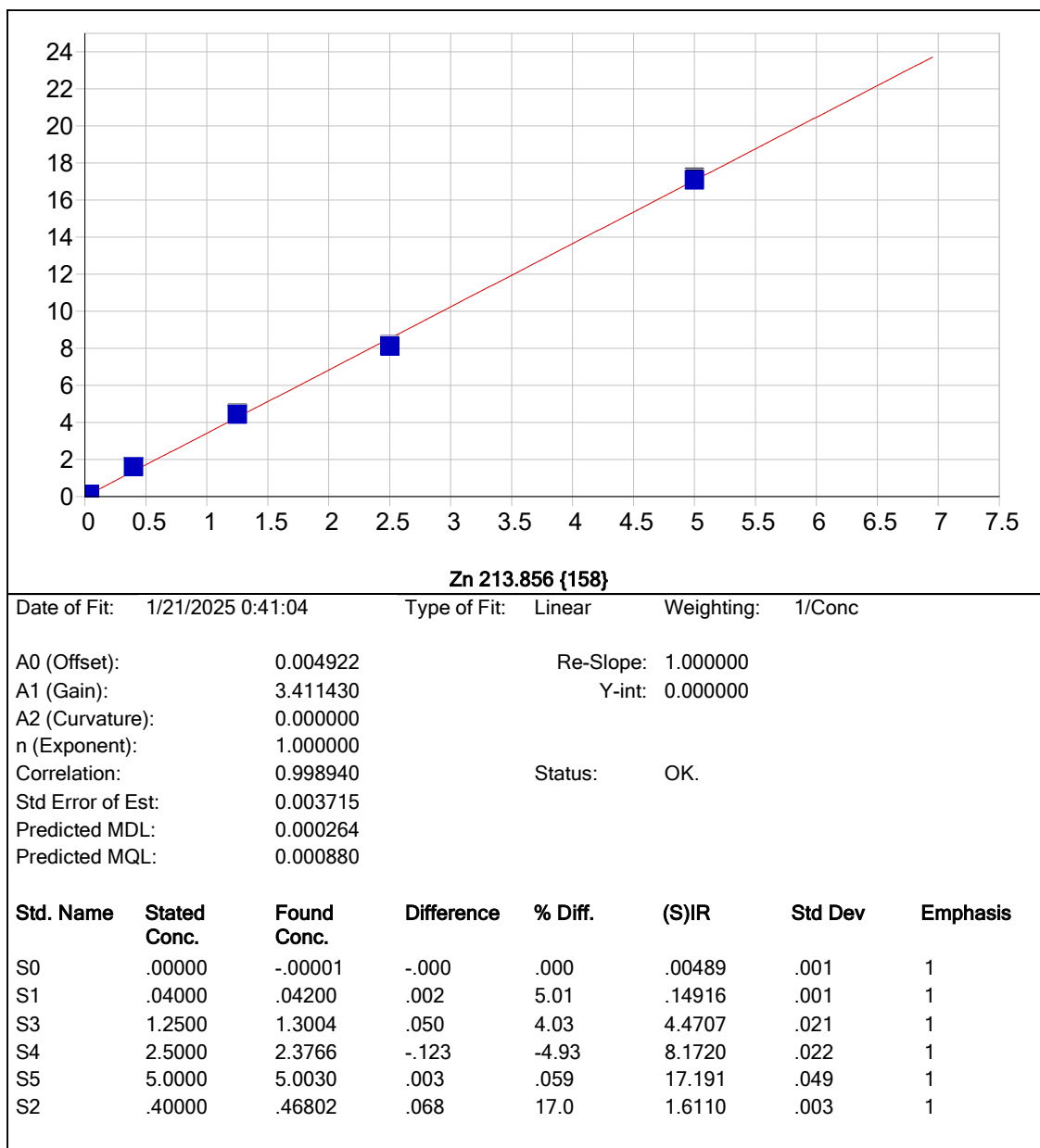


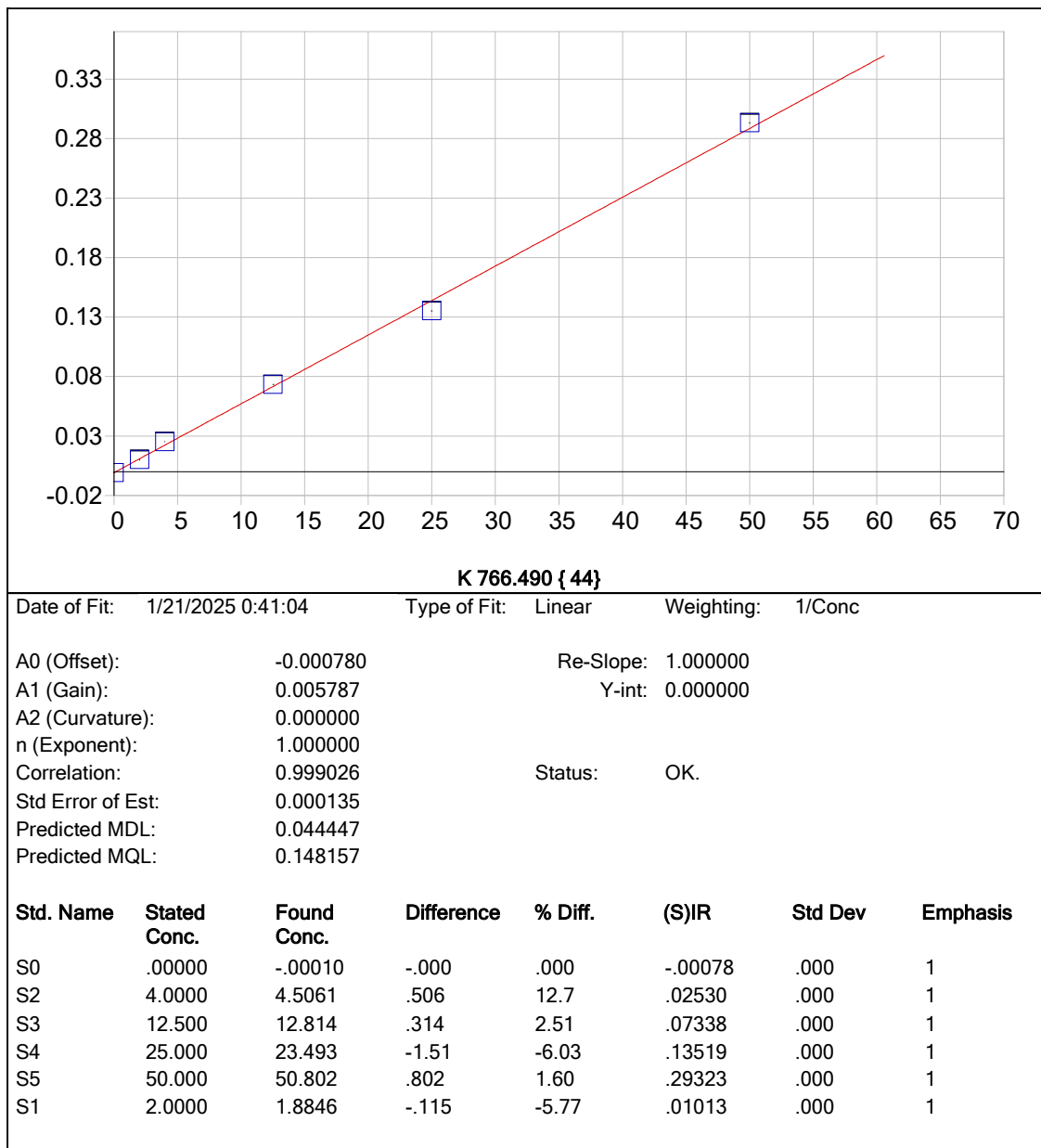


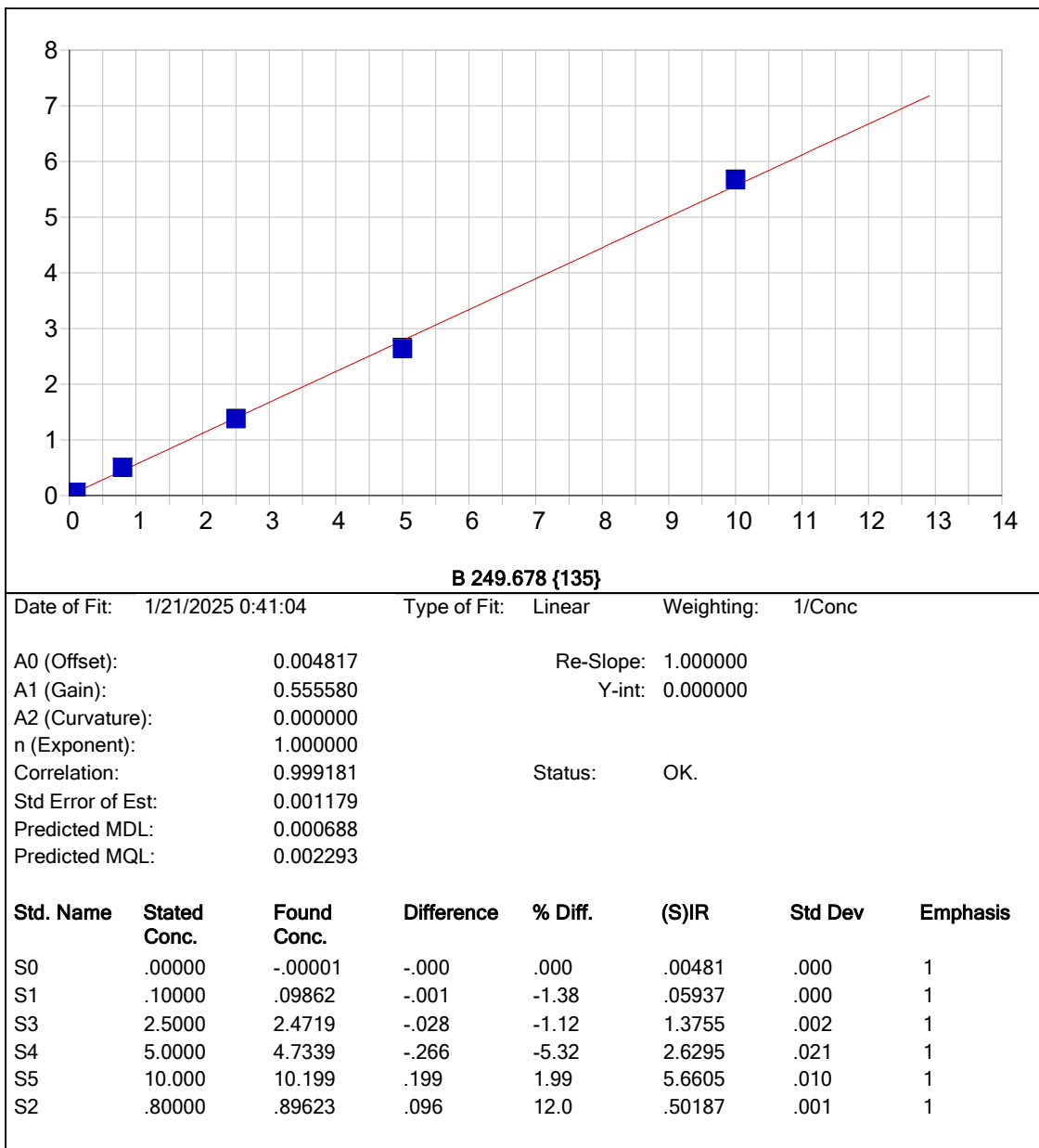


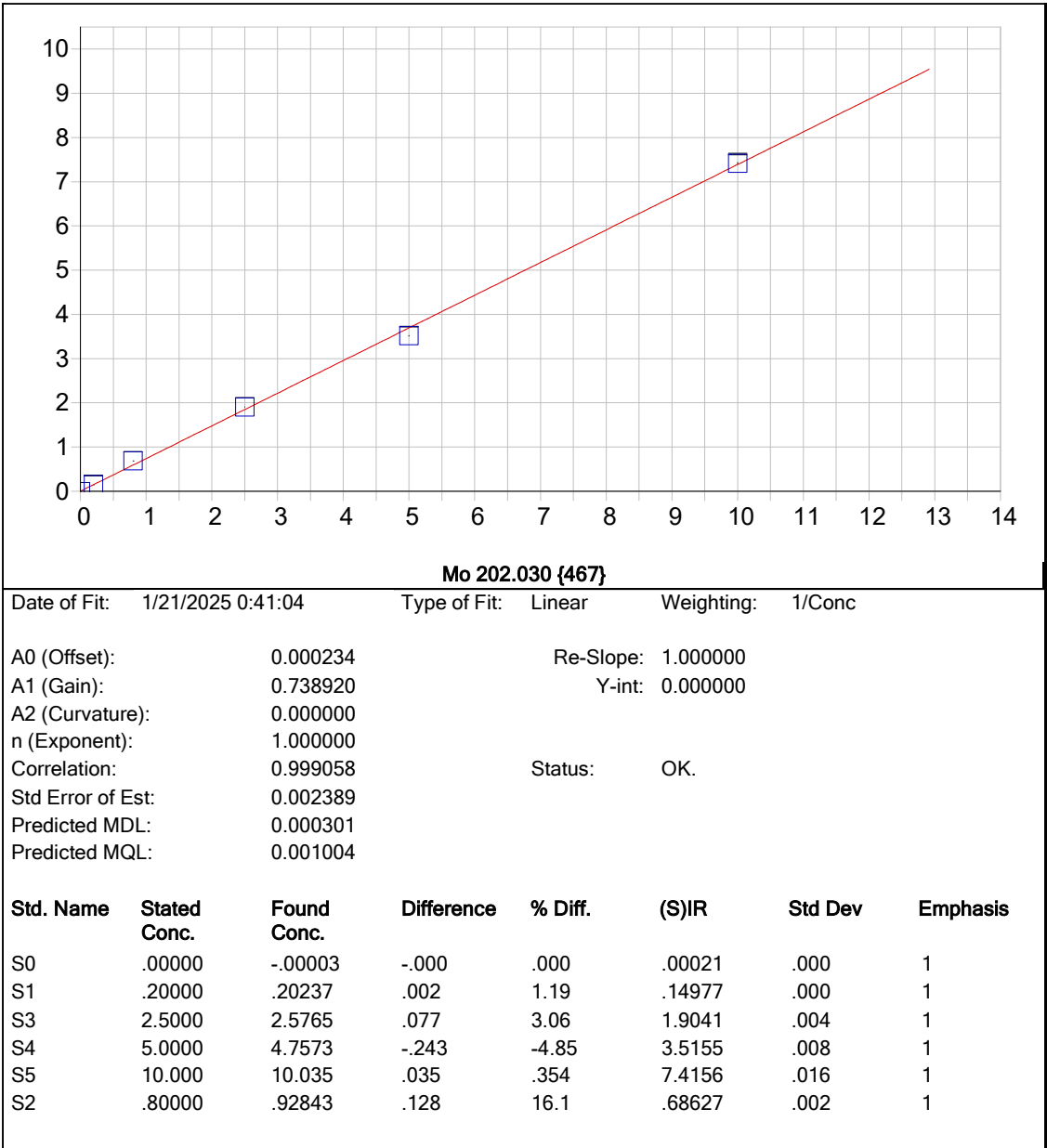


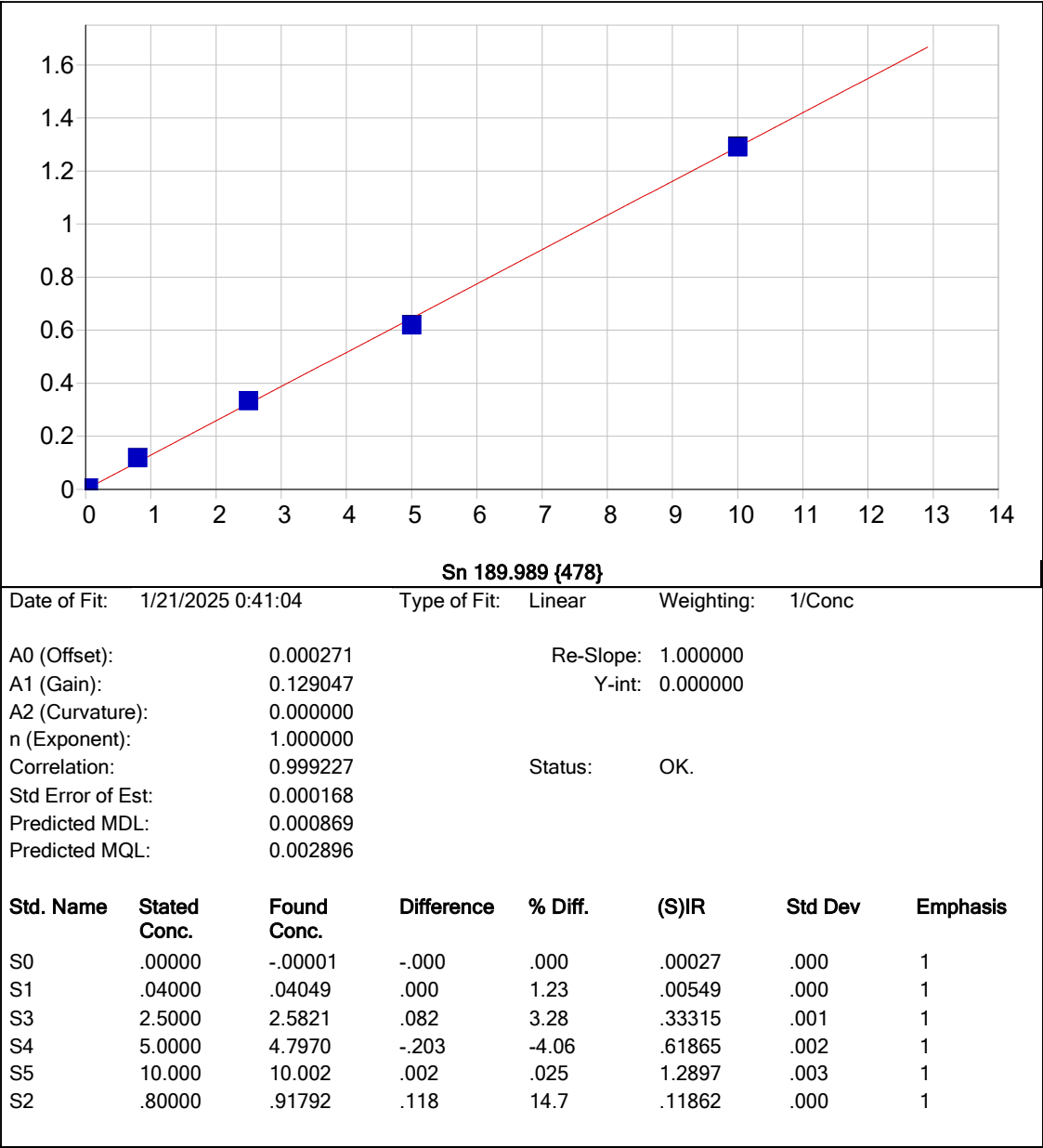
Date of Fit:		1/21/2025 0:41:04		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		0.000848		Re-Slope:		1.000000		
A1 (Gain):		1.025274		Y-int:		0.000000		
A2 (Curvature):		0.000000						
n (Exponent):		1.000000						
Correlation:		0.998637		Status:		OK.		
Std Error of Est:		0.001257						
Predicted MDL:		0.000207						
Predicted MQL:		0.000690						
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis	
S0	.00000	-.00001	-.000	.000	.00084	.000	1	
S1	.04000	.04324	.003	8.11	.04518	.000	1	
S3	1.2500	1.3227	.073	5.82	1.3570	.005	1	
S4	2.5000	2.4166	-.083	-3.34	2.4785	.006	1	
S5	5.0000	4.9257	-.074	-1.49	5.0510	.006	1	
S2	.40000	.48177	.082	20.4	.49480	.001	1	

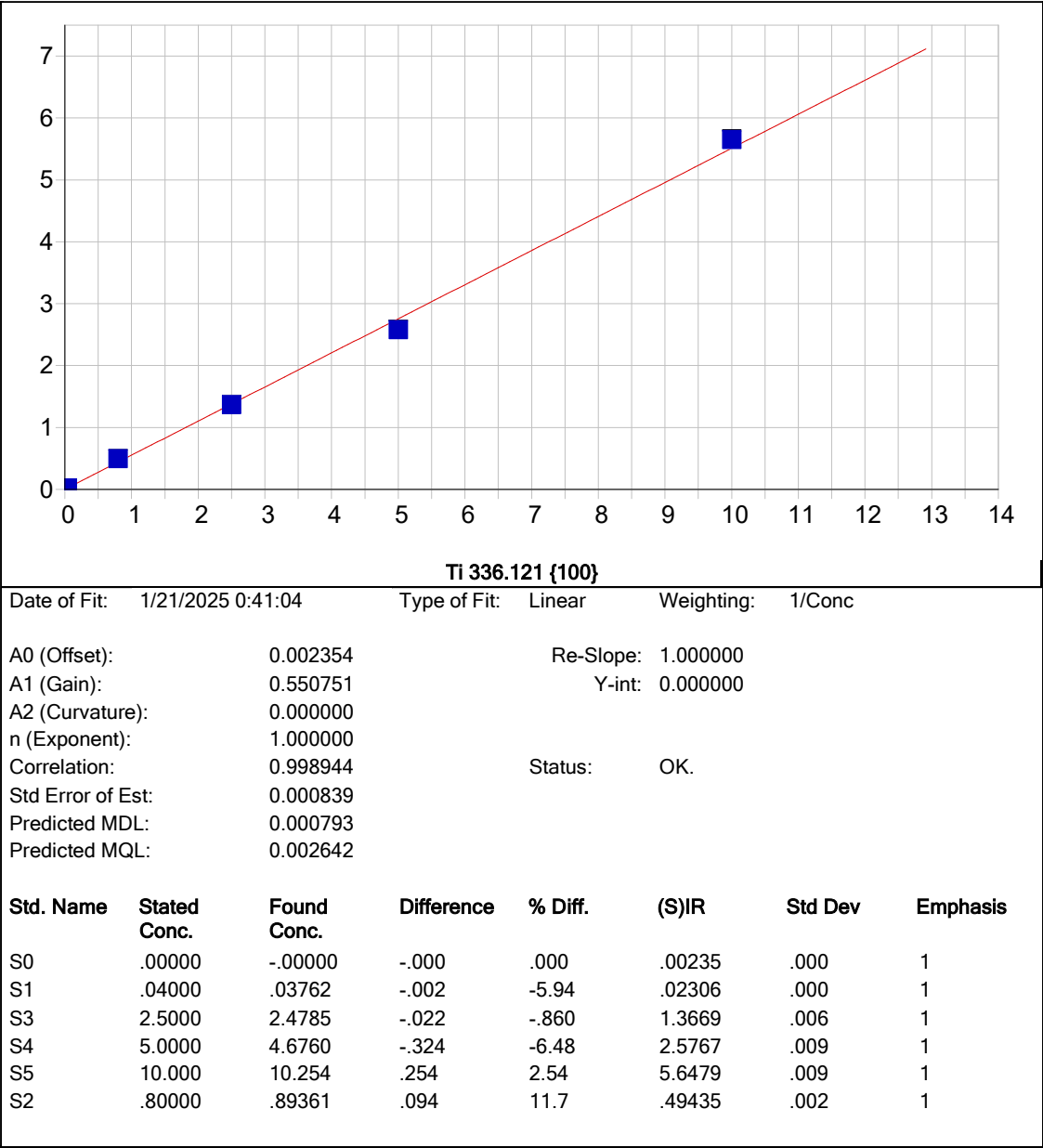


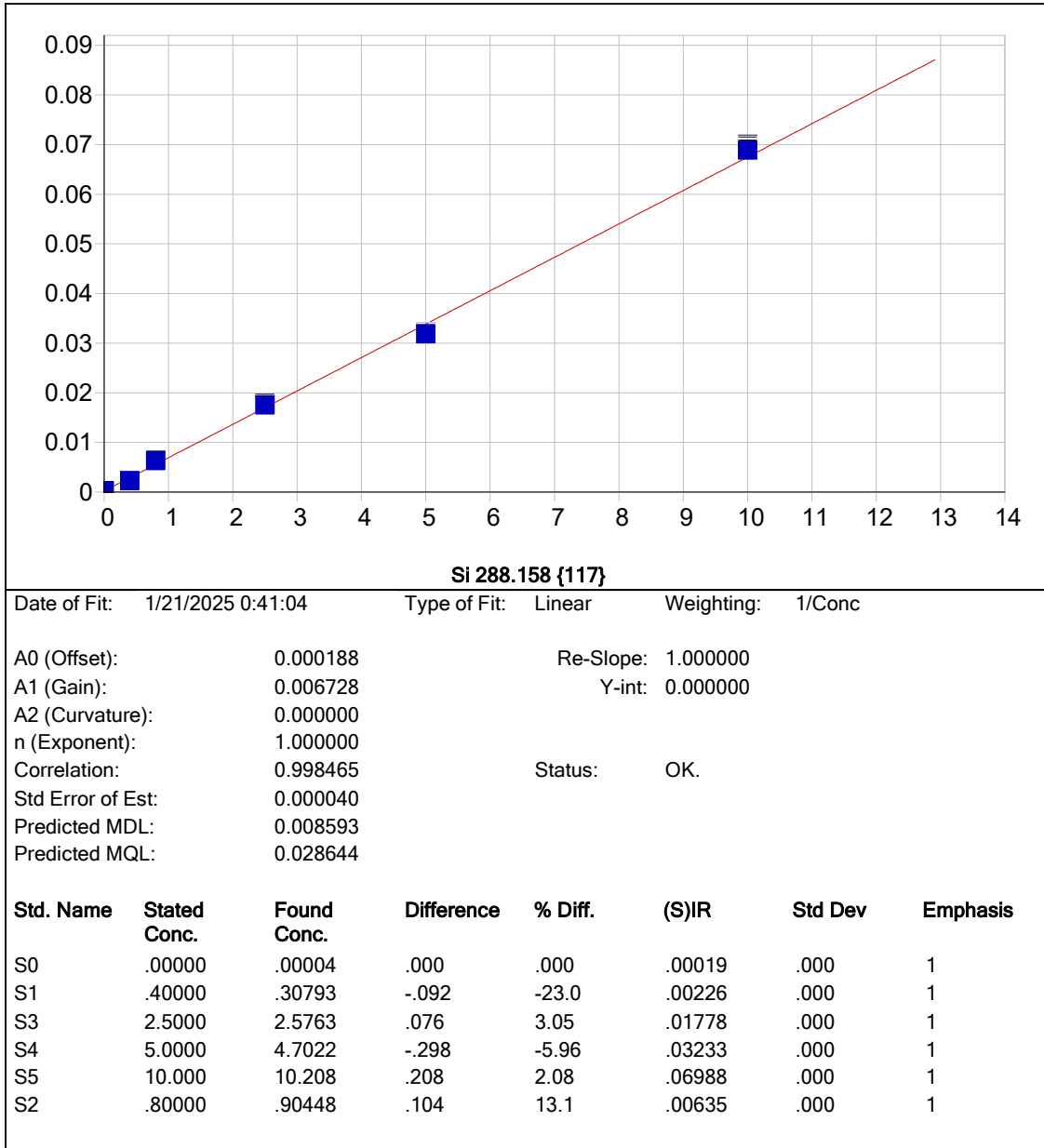


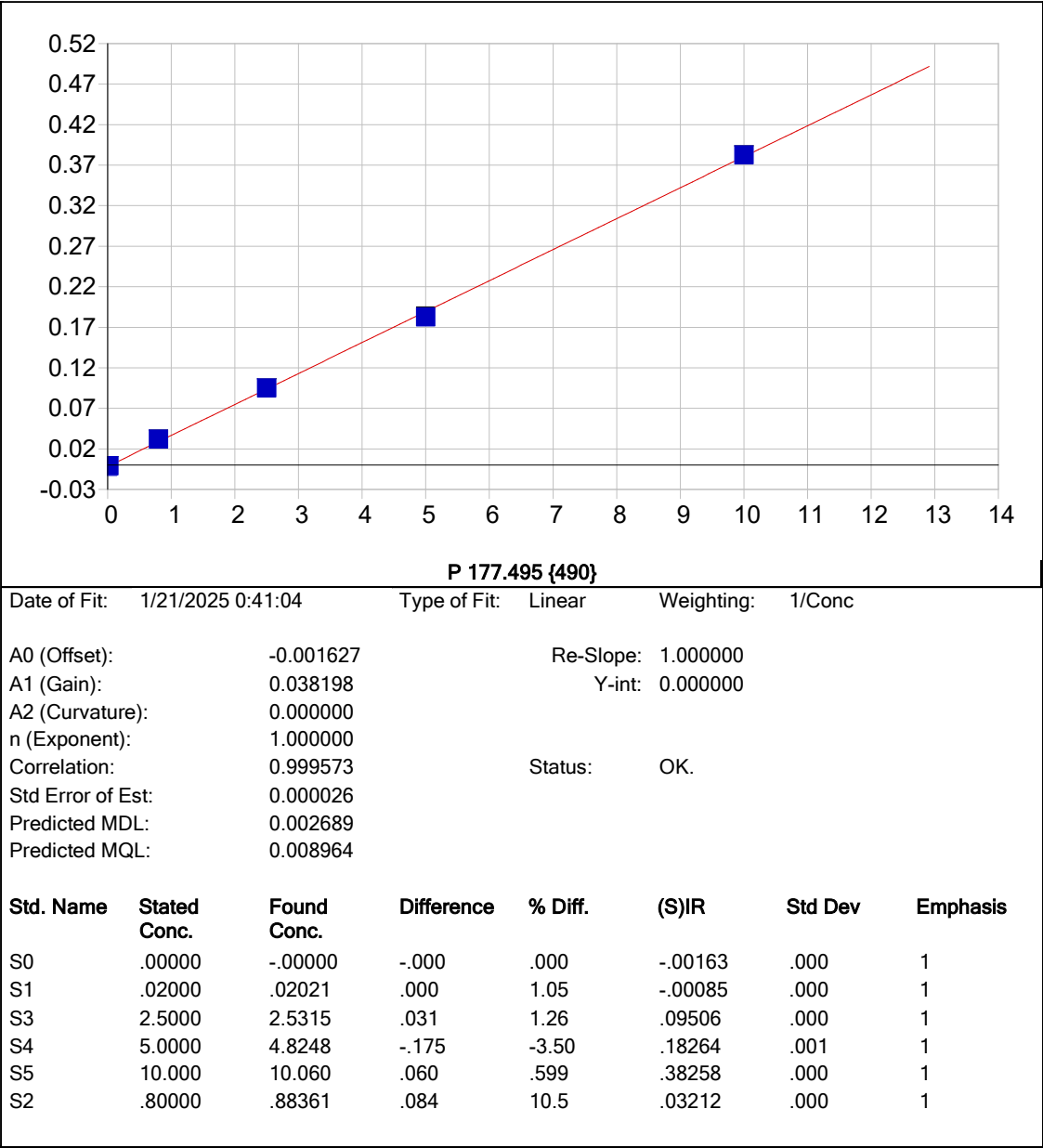


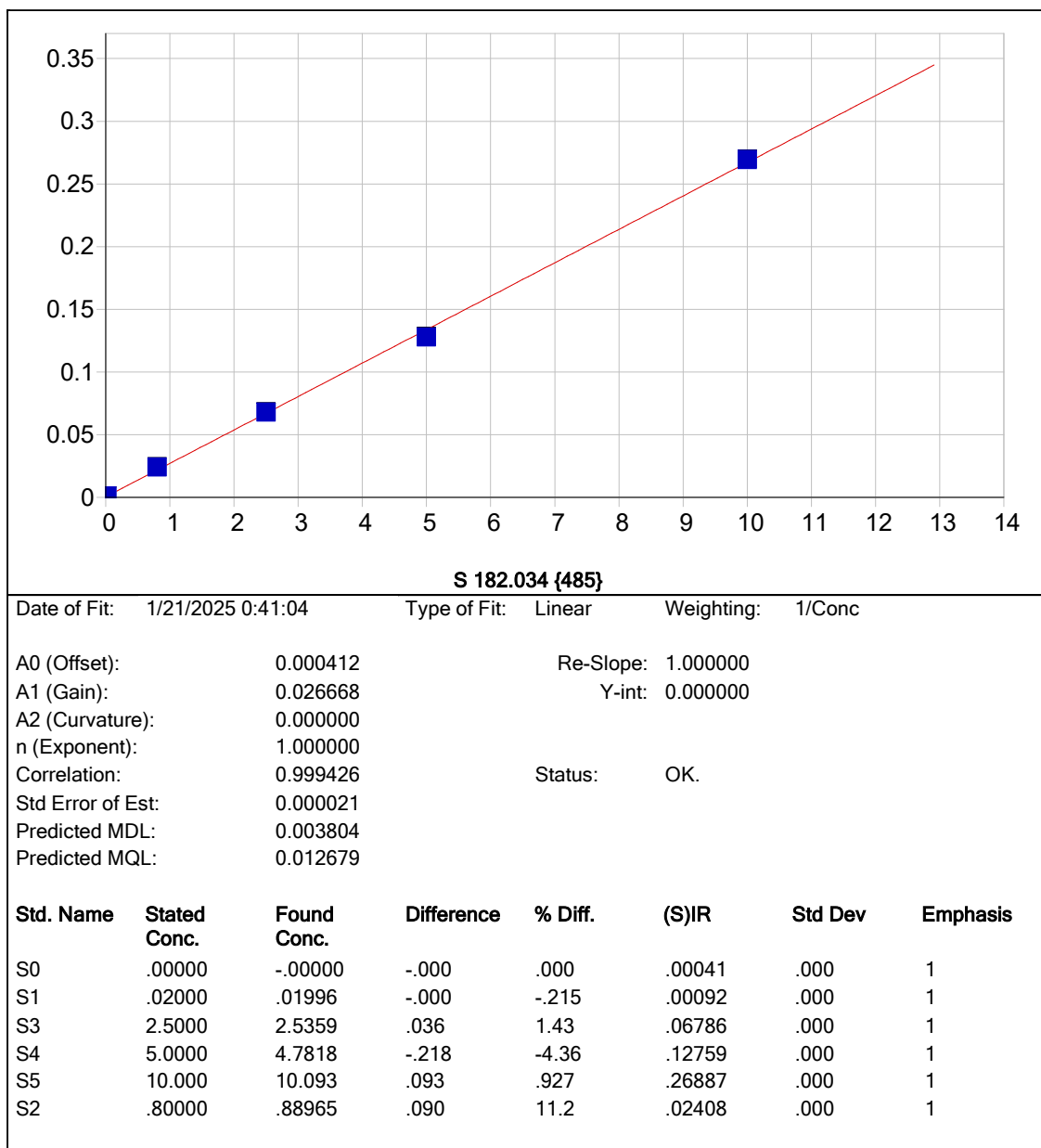


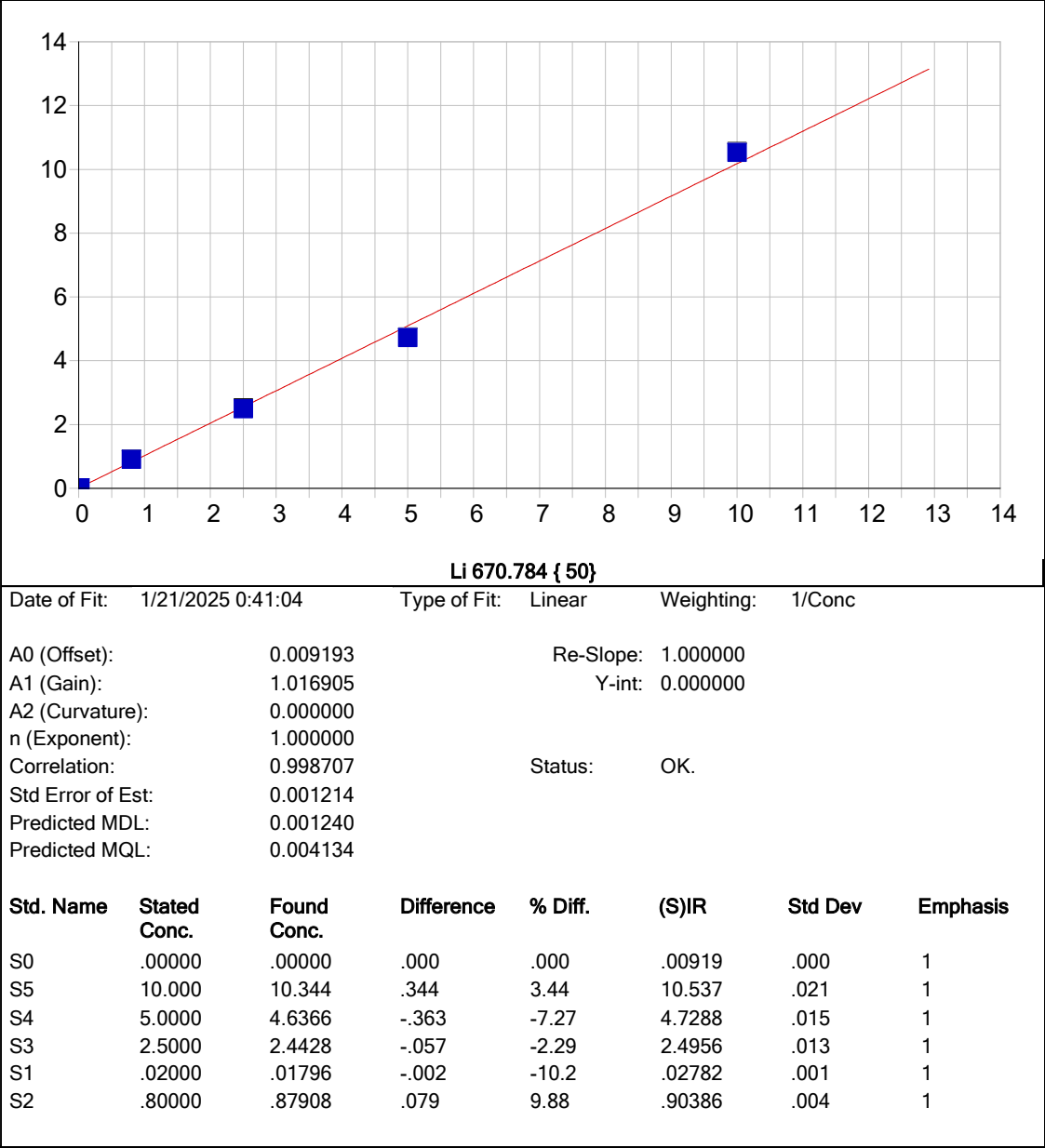


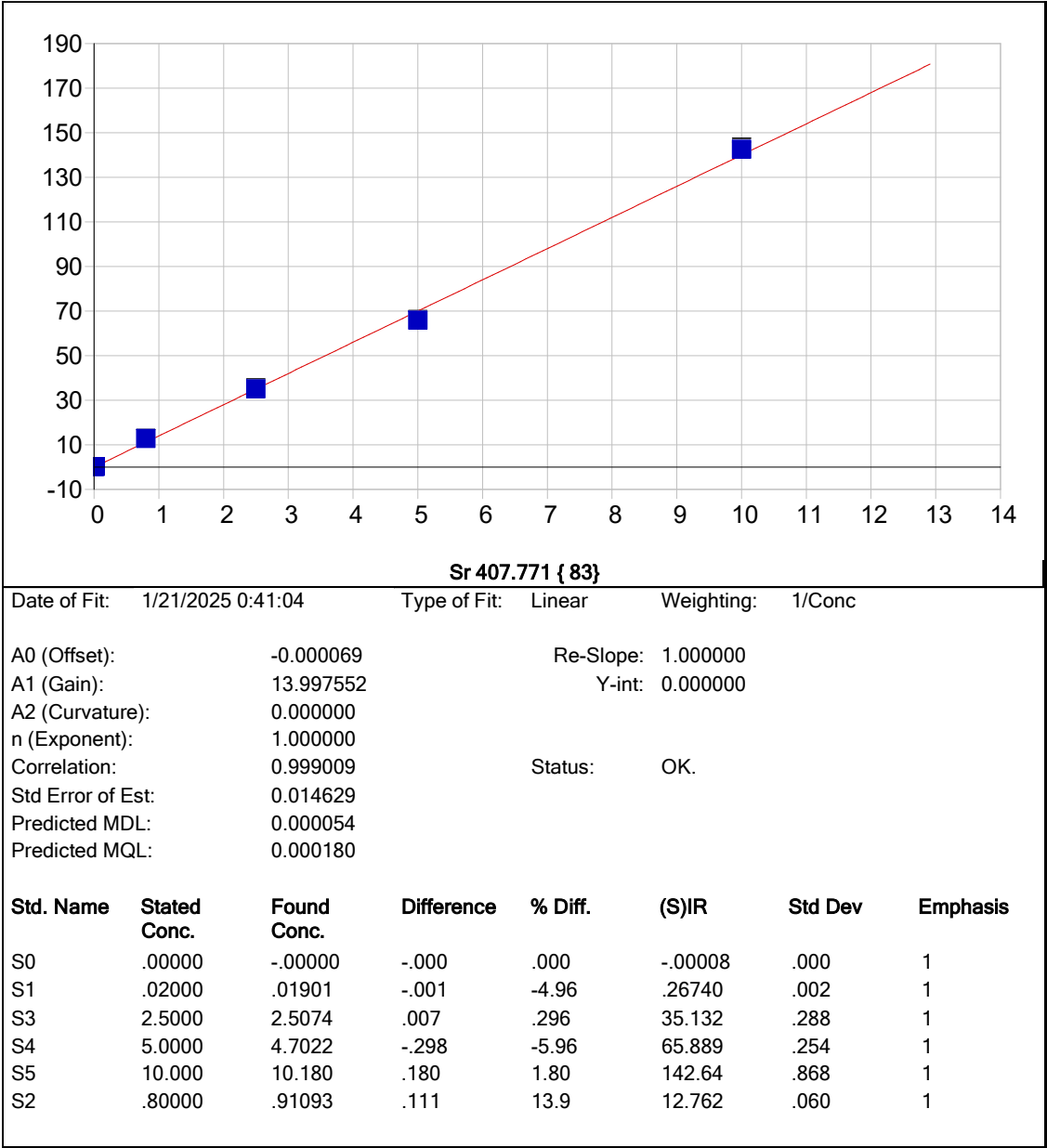


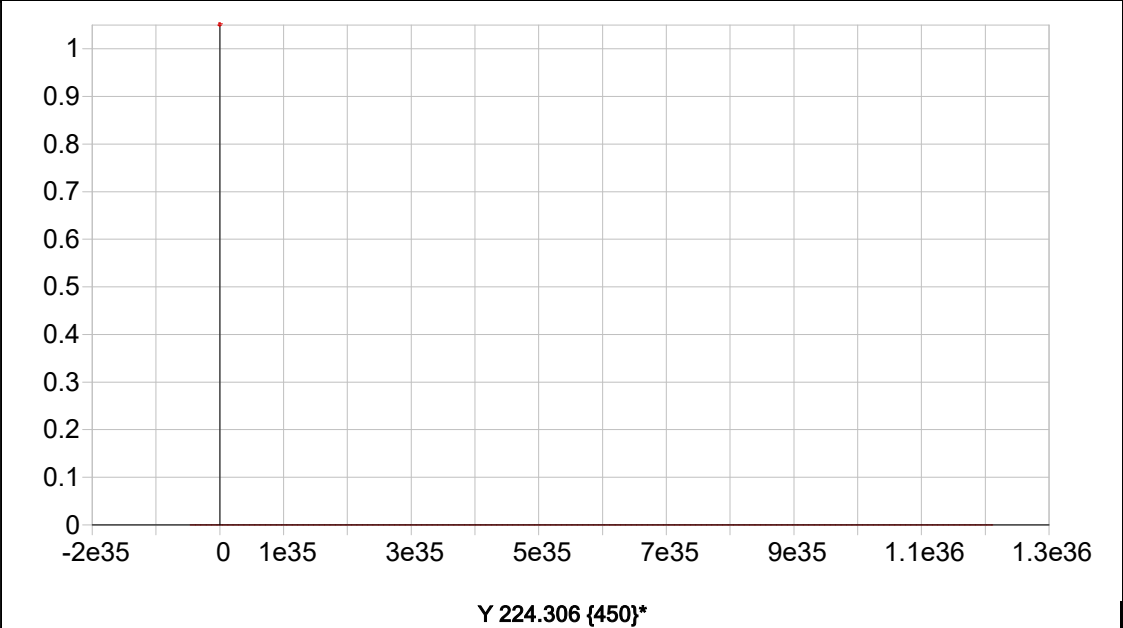






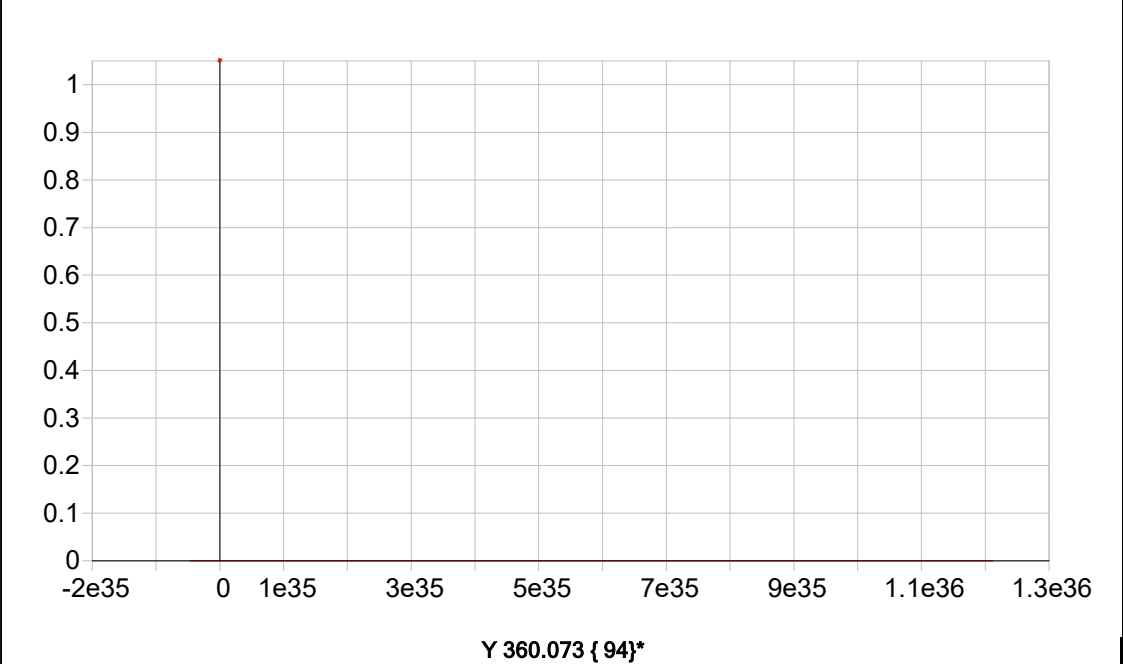




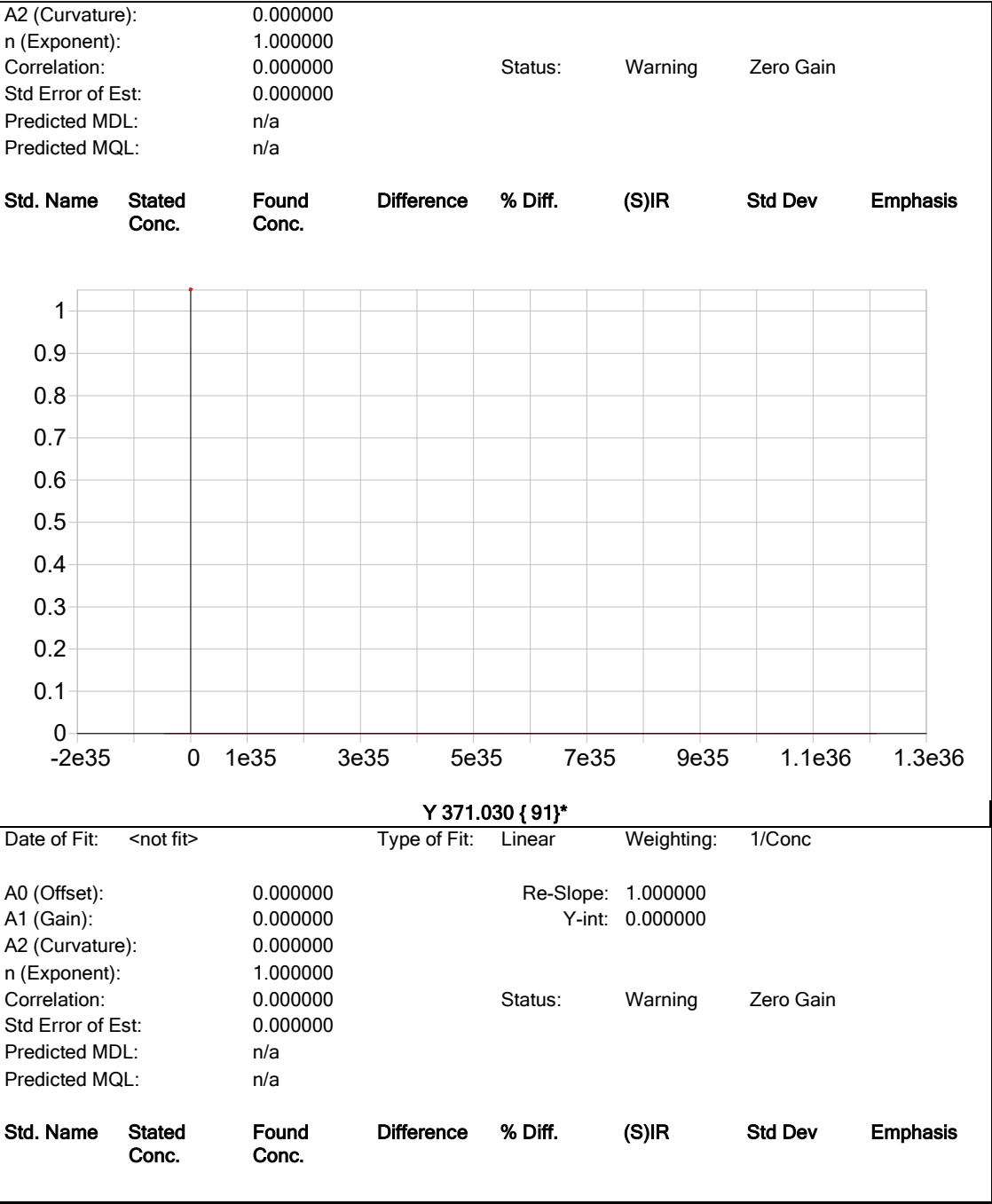


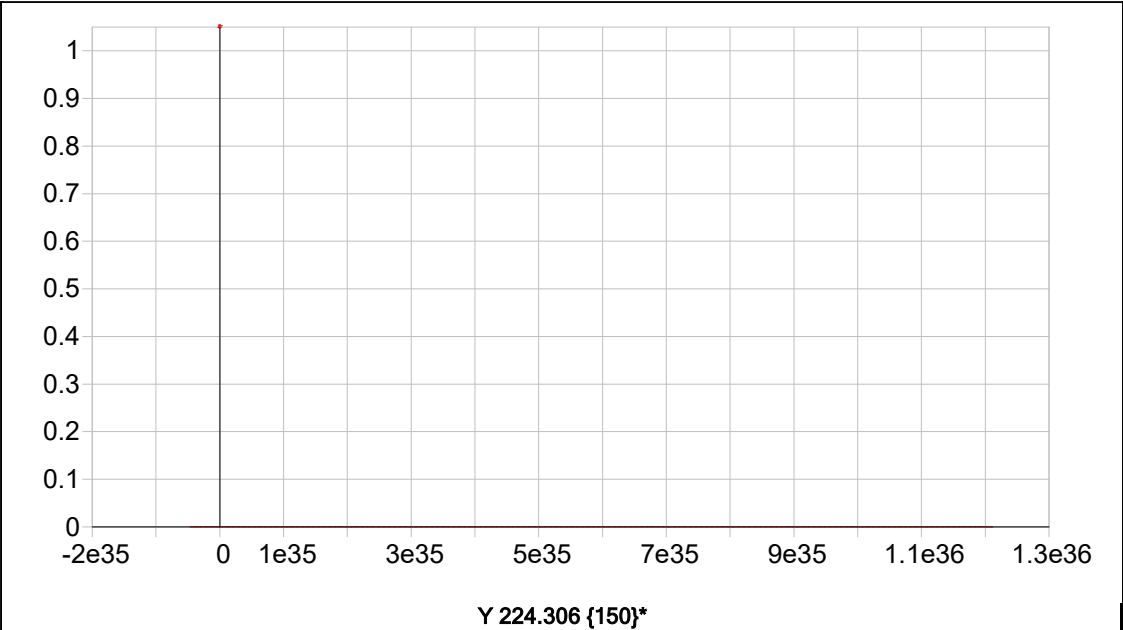
Date of Fit:	1/21/2025 0:41:04	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000	Re-Slope:	1.000000		
A1 (Gain):	0.000000	Y-int:	0.000000		
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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





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
							
ln 230.606 {446}* The plot shows a single data point at the origin (0, 1). The x-axis ranges from -2e35 to 1.3e36 with major ticks every 2e35. The y-axis ranges from 0 to 1 with major ticks every 0.1. A red dot marks the data point at (0, 1).							

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: 1/20/2025 10:21:52 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	-.00004	-.00002	-.00006	.00048	.00055	.00060	.05949	-.00051
Stddev	.00026	.00009	.00029	.00014	.00020	.00023	.00153	.00044
%RSD	677.61	381.68	476.10	29.771	35.970	38.481	2.5657	86.060
#1	.00027	-.00012	-.00013	.00044	.00077	.00078	.05782	-.00044
#2	-.00019	.00002	.00026	.00036	.00046	.00034	.06082	-.00011
#3	-.00019	.00004	-.00030	.00064	.00041	.00067	.05982	-.00098
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	.00005	.00113	.00002	-.00000	-.00062	-.00004	-.00016	-.00038
Stddev	.00014	.00071	.00010	.00019	.00008	.00004	.00022	.00016
%RSD	270.52	62.646	445.86	7055.2	12.655	87.896	133.23	41.683
#1	-.00010	.00043	.00014	-.00001	-.00071	-.00004	-.00008	-.00055
#2	.00008	.00185	-.00001	-.00018	-.00056	-.00008	-.00041	-.00023
#3	.00018	.00112	-.00006	.00019	-.00058	-.00001	-.00000	-.00037
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	-.00005	-.00158	.00239	.00012	.00489	-.00078	.00481	.00021
Stddev	.00018	.00005	.00016	.00021	.00072	.00015	.00014	.00009
%RSD	390.35	3.3301	6.5483	176.03	14.723	18.641	2.8979	41.292
#1	-.00019	-.00158	.00222	.00020	.00567	-.00076	.00497	.00014
#2	.00016	-.00163	.00241	-.00012	.00477	-.00065	.00471	.00019
#3	-.00011	-.00153	.00253	.00027	.00424	-.00093	.00476	.00031
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	.00235	.00019	-.00163	.00041	.00919	-.00008	
Stddev	.00005	.00018	.00006	.00005	.00010	.00041	.00007	
%RSD	19.660	7.8060	29.472	3.2927	25.028	4.4535	80.681	
#1	.00026	.00228	.00012	-.00157	.00032	.00959	-.00001	
#2	.00033	.00222	.00021	-.00165	.00052	.00877	-.00010	
#3	.00022	.00256	.00023	-.00167	.00039	.00922	-.00014	

Sample Name: S0 Acquired: 1/20/2025 10:21:52 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	2765.3	53126.	9562.4	2012.7	4041.6
Stddev	2.0	236.	65.5	3.6	5.3
%RSD	.07179	.44461	.68469	.17846	.13114
#1	2765.2	53353.	9637.8	2014.8	4037.2
#2	2763.4	53143.	9520.4	2014.8	4040.2
#3	2767.4	52881.	9528.9	2008.6	4047.5

Sample Name: S1 Acquired: 1/20/2025 10:26:19 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	.00113	.00257	.00286	.00222	.00942	.00924	.34151	.03261
Stddev	.00006	.00009	.00009	.00012	.00027	.00028	.00197	.00015
%RSD	5.2057	3.3547	2.9898	5.4651	2.8786	3.0513	.57649	.47323
#1	.00107	.00250	.00279	.00230	.00970	.00943	.34378	.03263
#2	.00118	.00256	.00296	.00229	.00916	.00891	.34058	.03245
#3	.00115	.00267	.00284	.00208	.00941	.00936	.34019	.03275
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	.01554	.12704	.00243	.02891	.01645	.00048	.01468	.04308
Stddev	.00003	.00062	.00005	.00010	.00032	.00004	.00004	.00034
%RSD	.21494	.48929	1.8984	.33596	1.9679	7.6638	.27494	.79598
#1	.01557	.12765	.00238	.02882	.01610	.00047	.01468	.04348
#2	.01551	.12641	.00242	.02901	.01673	.00045	.01472	.04288
#3	.01553	.12706	.00247	.02889	.01653	.00053	.01464	.04289
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	.02779	.00126	.04490	.00535	.14916	.01013	.05937	.14977
Stddev	.00012	.00004	.00016	.00007	.00139	.00032	.00043	.00039
%RSD	.42398	3.1668	.36014	1.2520	.93127	3.1859	.73138	.26255
#1	.02791	.00131	.04508	.00542	.15037	.01043	.05902	.14940
#2	.02768	.00123	.04479	.00528	.14764	.00979	.05923	.15018
#3	.02777	.00125	.04481	.00534	.14948	.01017	.05986	.14973
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	.00549	.02306	.00226	-.00085	.00092	.02782	.26740	
Stddev	.00006	.00045	.00005	.00004	.00005	.00130	.00182	
%RSD	1.0808	1.9679	2.3322	4.7083	5.2494	4.6677	.68003	
#1	.00547	.02293	.00221	-.00088	.00092	.02903	.26913	
#2	.00545	.02357	.00228	-.00081	.00087	.02645	.26551	
#3	.00556	.02269	.00231	-.00087	.00097	.02799	.26757	

Sample Name: S1 Acquired: 1/20/2025 10:26:19 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	2740.9	52432.	9313.0	1972.6	4009.4
Stddev	3.9	164.	19.4	7.0	4.9
%RSD	.14379	.31227	.20883	.35733	.12137
#1	2745.4	52251.	9291.6	1965.4	4012.8
#2	2738.4	52570.	9317.7	1979.4	4003.8
#3	2738.8	52474.	9329.7	1973.1	4011.6

Sample Name: S2 Acquired: 1/20/2025 10:30:44 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	.05188	.05973	.24303	.07622	.16736	.14768	5.5691	.25153
Stddev	.00011	.00122	.00058	.00043	.00066	.00087	.0311	.00066
%RSD	.22122	2.0430	.23688	.56806	.39612	.58901	.55901	.26361
#1	.05185	.06110	.24318	.07663	.16811	.14848	5.6050	.25219
#2	.05178	.05876	.24351	.07577	.16712	.14676	5.5532	.25086
#3	.05200	.05933	.24239	.07627	.16685	.14782	5.5491	.25155
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	1.1839	.29424	.04658	.44693	.18138	.00522	.33762	.09409
Stddev	.0023	.00130	.00022	.00034	.00026	.00002	.00103	.00024
%RSD	.19124	.44041	.46261	.07710	.14411	.33186	.30404	.25176
#1	1.1847	.29573	.04683	.44696	.18146	.00520	.33879	.09382
#2	1.1857	.29358	.04648	.44726	.18108	.00523	.33687	.09419
#3	1.1814	.29340	.04644	.44658	.18159	.00523	.33721	.09427
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	.32301	.06407	.10617	.06414	1.6110	.02530	.50187	.68627
Stddev	.00070	.00007	.00020	.00019	.0032	.00020	.00064	.00182
%RSD	.21611	.10596	.19159	.29694	.19817	.79416	.12821	.26549
#1	.32278	.06406	.10641	.06422	1.6116	.02551	.50223	.68837
#2	.32380	.06400	.10604	.06393	1.6139	.02511	.50226	.68526
#3	.32246	.06414	.10607	.06429	1.6076	.02527	.50113	.68518
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	.11862	.49435	.00635	.03212	.02408	.90386	12.762	
Stddev	.00005	.00242	.00006	.00014	.00017	.00414	.060	
%RSD	.03935	.48890	.94932	.42101	.69694	.45788	.47326	
#1	.11867	.49714	.00642	.03228	.02423	.90864	12.832	
#2	.11858	.49299	.00635	.03205	.02390	.90125	12.728	
#3	.11861	.49293	.00629	.03203	.02411	.90171	12.726	

Sample Name: S2 Acquired: 1/20/2025 10:30:44 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	2665.0	51718.	9453.9	1931.4	3850.0
Stddev	2.3	33.	8.1	2.8	4.4
%RSD	.08460	.06343	.08592	.14725	.11384
#1	2662.9	51688.	9457.7	1928.2	3850.8
#2	2664.6	51712.	9459.5	1932.7	3845.2
#3	2667.4	51753.	9444.6	1933.4	3853.9

Sample Name: S3 Acquired: 1/20/2025 10:34:55 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	.14551	.16697	.68094	.21248	.46741	.41600	15.359	.70136
Stddev	.00052	.00099	.00068	.00056	.00102	.00071	.098	.00156
%RSD	.35979	.59066	.10005	.26533	.21888	.17013	.63771	.22204

#1	.14603	.16801	.68172	.21311	.46858	.41550	15.310	.70207
#2	.14550	.16604	.68048	.21204	.46667	.41570	15.295	.69957
#3	.14499	.16687	.68061	.21227	.46699	.41681	15.472	.70243

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	3.3120	.81507	.13064	1.2457	.50134	.01461	.92488	.26345
Stddev	.0034	.00280	.00025	.0015	.00083	.00010	.00636	.00115
%RSD	.10379	.34311	.18950	.11792	.16565	.66062	.68759	.43688

#1	3.3156	.81403	.13041	1.2473	.50225	.01460	.92303	.26313
#2	3.3119	.81295	.13062	1.2455	.50114	.01452	.91965	.26249
#3	3.3087	.81824	.13090	1.2443	.50062	.01471	.93196	.26473

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	.89868	.17943	.29888	.18059	4.4707	.07338	1.3755	1.9041
Stddev	.00155	.00061	.00039	.00044	.0214	.00012	.0024	.0038
%RSD	.17216	.34035	.13085	.24393	.47885	.16234	.17230	.19886

#1	.90042	.18012	.29848	.18008	4.4953	.07351	1.3780	1.9085
#2	.89817	.17921	.29926	.18088	4.4608	.07336	1.3733	1.9019
#3	.89745	.17896	.29891	.18080	4.4560	.07327	1.3751	1.9019

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	.33315	1.3669	.01778	.09506	.06786	2.4956	35.132	
Stddev	.00061	.0058	.00007	.00011	.00006	.0133	.288	
%RSD	.18323	.42170	.42102	.11590	.08717	.53296	.81950	

#1	.33385	1.3635	.01785	.09499	.06793	2.4905	35.273	
#2	.33271	1.3637	.01770	.09500	.06783	2.4856	34.801	
#3	.33290	1.3735	.01778	.09518	.06783	2.5107	35.323	

Sample Name: S3 Acquired: 1/20/2025 10:34:55 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	2612.9	50089.	9338.3	1851.6	3729.1
Stddev	6.0	18.	29.1	5.2	7.1
%RSD	.23005	.03630	.31205	.27884	.18969
#1	2613.1	50081.	9347.7	1845.7	3733.4
#2	2606.8	50109.	9361.6	1853.7	3720.9
#3	2618.8	50076.	9305.7	1855.4	3732.9

Sample Name: S4 Acquired: 1/20/2025 10:39:09 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	.26892	.31065	1.2572	.39070	.86518	.78270	28.703	1.3253
Stddev	.00116	.00366	.0021	.00156	.00097	.00185	.263	.0098
%RSD	.43056	1.1773	.16728	.40046	.11227	.23640	.91646	.73707

#1	.26850	.30815	1.2578	.38904	.86406	.78332	28.496	1.3322
#2	.26803	.30896	1.2548	.39091	.86582	.78062	28.614	1.3141
#3	.27023	.31485	1.2589	.39215	.86565	.78416	28.999	1.3296

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	6.1395	1.5270	.23773	2.3105	.92125	.02654	1.7317	.49779
Stddev	.0100	.0035	.00031	.0046	.00146	.00012	.0113	.00205
%RSD	.16333	.22798	.13045	.19956	.15848	.44140	.65480	.41115

#1	6.1386	1.5289	.23809	2.3079	.91961	.02640	1.7422	.49975
#2	6.1300	1.5229	.23755	2.3077	.92172	.02661	1.7196	.49566
#3	6.1500	1.5290	.23755	2.3158	.92241	.02660	1.7332	.49794

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	1.6596	.32962	.54251	.33960	8.1720	.13519	2.6295	3.5155
Stddev	.0053	.00051	.00341	.00090	.0216	.00043	.0213	.0080
%RSD	.31731	.15493	.62916	.26499	.26406	.31724	.81036	.22621

#1	1.6581	.33018	.54014	.33996	8.1951	.13514	2.6407	3.5109
#2	1.6553	.32952	.54642	.33857	8.1684	.13564	2.6049	3.5109
#3	1.6655	.32917	.54096	.34026	8.1524	.13478	2.6428	3.5247

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	.61865	2.5767	.03233	.18264	.12759	4.7288	65.889	
Stddev	.00165	.0094	.00002	.00104	.00038	.0149	.254	
%RSD	.26656	.36378	.04649	.57131	.29999	.31554	.38486	

#1	.61923	2.5812	.03234	.18160	.12722	4.7378	66.159	
#2	.61679	2.5659	.03234	.18265	.12756	4.7116	65.656	
#3	.61994	2.5829	.03231	.18368	.12798	4.7370	65.852	

Sample Name: S4 Acquired: 1/20/2025 10:39:09 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	2586.7	50283.	9017.2	1847.2	3648.7
Stddev	6.3	69.	72.9	7.1	10.5
%RSD	.24544	.13821	.80827	.38417	.28782
#1	2588.5	50211.	8962.3	1839.3	3650.8
#2	2592.0	50287.	9099.9	1853.0	3658.0
#3	2579.7	50350.	8989.5	1849.3	3637.3

Sample Name: S5 Acquired: 1/20/2025 10:43:29 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	.56067	.65179	2.6272	.81042	1.8222	1.7311	62.056	2.8492
Stddev	.00207	.00304	.0043	.00243	.0063	.0045	.456	.0040
%RSD	.37006	.46603	.16409	.29987	.34319	.26217	.73442	.14169
#1	.55835	.64883	2.6256	.80813	1.8162	1.7354	61.545	2.8537
#2	.56130	.65163	2.6239	.81017	1.8218	1.7315	62.202	2.8458
#3	.56235	.65490	2.6321	.81297	1.8287	1.7264	62.421	2.8482
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	12.842	3.3209	.49201	4.8742	1.8920	.05586	3.7610	1.0881
Stddev	.016	.0094	.00122	.0066	.0015	.00009	.0076	.0019
%RSD	.12711	.28228	.24782	.13597	.08213	.15678	.20069	.17509
#1	12.838	3.3305	.49105	4.8736	1.8902	.05579	3.7685	1.0903
#2	12.829	3.3118	.49338	4.8679	1.8929	.05584	3.7534	1.0873
#3	12.860	3.3205	.49161	4.8811	1.8929	.05596	3.7610	1.0867
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	3.4680	.69091	1.1670	.74674	17.191	.29323	5.6605	7.4156
Stddev	.0047	.00033	.0027	.00266	.049	.00040	.0103	.0163
%RSD	.13689	.04712	.23099	.35661	.28567	.13636	.18264	.21977
#1	3.4673	.69079	1.1669	.74956	17.148	.29282	5.6695	7.4018
#2	3.4636	.69128	1.1697	.74639	17.244	.29362	5.6492	7.4114
#3	3.4730	.69066	1.1643	.74427	17.181	.29326	5.6627	7.4336
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	1.2897	5.6479	.06988	.38258	.26887	10.537	142.64	
Stddev	.0030	.0092	.00018	.00008	.00034	.021	.87	
%RSD	.23275	.16318	.25940	.01963	.12711	.19943	.60851	
#1	1.2880	5.6585	.06967	.38267	.26848	10.546	141.78	
#2	1.2880	5.6437	.07001	.38253	.26902	10.552	142.63	
#3	1.2932	5.6416	.06996	.38255	.26911	10.513	143.52	

Sample Name: S5 Acquired: 1/20/2025 10:43:29 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	2557.4	49144.	8571.1	1745.6	3567.2
Stddev	3.9	14.	17.5	1.5	2.7
%RSD	.15160	.02802	.20361	.08436	.07580
#1	2561.7	49133.	8553.2	1747.3	3569.7
#2	2555.9	49159.	8588.1	1745.0	3567.6
#3	2554.4	49140.	8571.9	1744.5	3564.3

Sample Name: ICV01 Acquired: 1/20/2025 10:47:50 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	1.019514	1.032566	1.003189	1.028606	1.020296	2.413334
Stddev	.003024	.015672	.001584	.003420	.002229	.004807
%RSD	.2966592	1.517725	.1578829	.3325346	.2184408	.1991845
#1	1.018927	1.023350	1.003763	1.025525	1.019116	2.418733
#2	1.016825	1.023688	1.004406	1.028006	1.018906	2.409518
#3	1.022788	1.050661	1.001399	1.032286	1.022867	2.411752
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4715068	.4825346	.5007231	9.564947	.5313443	.5044685
Stddev	.0005546	.0049287	.0009032	.018251	.0006292	.0007782
%RSD	.1176285	1.021411	.1803757	.1908083	.1184213	.1542588
#1	.4721458	.4881731	.5009342	9.585272	.5309699	.5050935
#2	.4711510	.4790468	.5015020	9.559607	.5320708	.5047151
#3	.4712236	.4803839	.4997330	9.549962	.5309922	.5035969
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5189331	9.805471	.4831144	5.663697	.5072897	.2550076
Stddev	.0011750	.083141	.0008655	.002488	.0010783	.0006423
%RSD	.2264180	.8479075	.1791528	.0439372	.2125630	.2518795
#1	.5197353	9.717647	.4835394	5.666570	.5077290	.2556320
#2	.5194796	9.882963	.4821186	5.662199	.5080789	.2550421
#3	.5175845	9.815803	.4836853	5.662323	.5060610	.2543488
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.684441	.4813426	1.011621	9.614089	F .0271088	F -.000298
Stddev	.082398	.0022185	.002342	.093011	.0002407	.000322
%RSD	.8508271	.4609076	.2315490	.9674409	.8880470	108.0711
#1	9.589822	.4818932	1.014144	9.521765	.0271496	-.000365
#2	9.740402	.4832339	1.009515	9.707771	.0273266	-.000582
#3	9.723098	.4789005	1.011204	9.612731	.0268503	.000052

Sample Name: ICV01 Acquired: 1/20/2025 10:47:50 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 -.002005	F -.000336	F -.004116	F .0031223	F -.004712	F -.002342
Stddev	.000245	.000344	.003222	.0012611	.002015	.000521
%RSD	12.21112	102.4135	78.28583	40.38999	42.76231	22.25169
#1	-.001874	-.000342	-.000589	.0042866	-.007028	-.002714
#2	-.001854	-.000676	-.004853	.0017828	-.003362	-.002564
#3	-.002288	.000011	-.006905	.0032976	-.003746	-.001746

Elem	Sr4077
Units	ppm
Avg	F -.008590
Stddev	.000093
%RSD	1.078616
#1	-.008491
#2	-.008675
#3	-.008603

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2724.604	52347.67	9759.675	1862.490	4032.082
Stddev	3.239	59.51	91.702	1.278	7.451
%RSD	.1188880	.1136756	.9396022	.0686444	.1847861
#1	2727.460	52341.13	9658.012	1861.044	4031.319
#2	2721.084	52410.17	9836.153	1863.471	4025.042
#3	2725.266	52291.70	9784.861	1862.953	4039.884

Sample Name: LLICV01 Acquired: 1/20/2025 10:53:58 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0206557	.0393938	.0125294	.0187675	.0507332	.0992769
Stddev	.0019350	.0017352	.0009379	.0022367	.0002909	.0093033
%RSD	9.367752	4.404848	7.485594	11.91778	.5732879	9.371105
#1	.0193994	.0375599	.0134008	.0212946	.0510499	.1076950
#2	.0196837	.0410098	.0115368	.0170422	.0504780	.1008475
#3	.0228840	.0396118	.0126508	.0179658	.0506717	.0892882
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0862863	.0057047	.0059009	1.893089	.0097063	.0294098
Stddev	.0016170	.0000342	.0000449	.011809	.0002130	.0000851
%RSD	1.873952	.5993052	.7602625	.6238027	2.194476	.2892900
#1	.0849508	.0056980	.0058532	1.886509	.0095924	.0294595
#2	.0880840	.0057418	.0059073	1.906722	.0095745	.0293116
#3	.0858240	.0056744	.0059422	1.886036	.0099521	.0294583
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223714	.1022887	.0190272	1.992775	.0392292	.0114119
Stddev	.0002198	.0037967	.0001182	.007222	.0000897	.0004182
%RSD	.9826805	3.711768	.6209475	.3624026	.2287203	3.664700
#1	.0226248	.1037550	.0189301	1.984950	.0393016	.0117631
#2	.0222317	.0979775	.0189927	1.999184	.0392573	.0115233
#3	.0222578	.1051336	.0191587	1.994191	.0391288	.0109493
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.943865	.0370625	.0434956	1.894343	.0956357	.2062510
Stddev	.007800	.0009369	.0005607	.021200	.0008255	.0004290
%RSD	.4012828	2.527773	1.289128	1.119131	.8631608	.2079825
#1	1.939722	.0366447	.0441301	1.903090	.0961684	.2057812
#2	1.939010	.0381355	.0432900	1.870169	.0960540	.2063497
#3	1.952862	.0364072	.0430668	1.909770	.0946848	.2066220

Sample Name: LLICV01 Acquired: 1/20/2025 10:53:58 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0383948	.0365323	.3312416	F .0151431	F .0133705	F .0157372
Stddev	.0002060	.0007529	.0071031	.0012391	.0033306	.0008009
%RSD	.5364287	2.061052	2.144393	8.182476	24.90999	5.089187
#1	.0386288	.0373035	.3382089	.0137694	.0098437	.0149257
#2	.0383151	.0357990	.3240101	.0161765	.0138056	.0157587
#3	.0382407	.0364943	.3315058	.0154833	.0164622	.0165271

Elem	Sr4077
Units	ppm
Avg	.0182453
Stddev	.0000704
%RSD	.3855604
#1	.0182494
#2	.0183136
#3	.0181731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2716.093	50834.77	9812.543	1823.216	4055.619
Stddev	5.342	197.66	30.895	8.425	10.931
%RSD	.1966633	.3888283	.3148490	.4620791	.2695303
#1	2711.022	50936.17	9822.111	1817.096	4044.720
#2	2715.587	50961.15	9777.997	1832.825	4055.554
#3	2721.669	50606.99	9837.522	1819.728	4066.582

Sample Name: ICB01 Acquired: 1/20/2025 11:01:33 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	-.000326	-.001231	-.000265	.0013320	-.001651	-.003525	-.001481
Stddev	.000898	.000247	.000824	.0026103	.001888	.007844	.000669
%RSD	275.8439	20.05110	310.9623	195.9658	114.3535	222.5420	45.12537

#1	.000322	-.000968	-.001198	.0009672	-.001873	.002317	-.002181
#2	-.001351	-.001457	.000362	.0041056	.000338	-.000450	-.000850
#3	.000053	-.001267	.000041	-.001077	-.003417	-.012441	-.001413

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000569	-.000006	-.009975	-.000203	.0001013	-.000220	.0027034
Stddev	.0000403	.000088	.005738	.000276	.0002363	.000482	.0042083
%RSD	70.72682	1546.681	57.52459	136.2591	233.1512	218.8066	155.6685

#1	.0000286	-.000079	-.006267	-.000204	.0003736	-.000254	-.000572
#2	.0001030	-.000029	-.016585	-.000479	-.000019	.000278	.001232
#3	.0000392	.000091	-.007074	.000074	-.000050	-.000684	.007450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000061	.0058727	.0000587	.0009257	-.060553	-.000361	-.000830
Stddev	.000158	.0092331	.0001351	.0004208	.005017	.001036	.000296
%RSD	257.5102	157.2204	230.2851	45.45237	8.284490	286.9476	35.67812

#1	-.000242	.0155835	-.000013	.0008563	-.064772	-.000726	-.001095
#2	.000051	.0048283	-.000026	.0005440	-.055006	.000808	-.000510
#3	.000006	-.002794	.000214	.0013769	-.061882	-.001166	-.000886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.082632	-.003845	-.000202	-.000706	.0004065	.0026596	-.003399
Stddev	.031278	.000502	.000300	.000422	.0002921	.0055527	.001534
%RSD	37.85153	13.05850	148.6432	59.78741	71.83609	208.7746	45.12709

#1	-.050175	-.004364	-.000361	-.001192	.0001692	.0044771	-.002587
#2	-.112579	-.003361	.000144	-.000423	.0003177	.0070758	-.005169
#3	-.085143	-.003810	-.000389	-.000504	.0007327	-.003574	-.002442

Sample Name: ICB01 Acquired: 1/20/2025 11:01:33 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	-.007101	-.001575	-.000027
Stddev	.004053	.000292	.000060
%RSD	57.07763	18.53239	224.0960

#1	-.010101	-.001864	-.000096
#2	-.002490	-.001579	.000012
#3	-.008712	-.001280	.000003

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2632.066	49925.55	9626.496	1784.037	3935.115
Stddev	7.238	59.15	35.004	5.661	9.634
%RSD	.2749936	.1184723	.3636206	.3173239	.2448292

#1	2628.348	49878.52	9666.625	1786.715	3926.468
#2	2640.407	49906.18	9602.248	1777.534	3945.500
#3	2627.442	49991.96	9610.614	1787.862	3933.377

Sample Name: CRI01 Acquired: 1/20/2025 11:06:00 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	.0222254	.0408500	.0121812	.0194326	.0523103	.1043127	.0881531
Stddev	.0029693	.0011991	.0006915	.0022380	.0014171	.0026872	.0004185
%RSD	13.36016	2.935316	5.676510	11.51685	2.709077	2.576103	.4747464

#1	.0251423	.0399960	.0128465	.0188926	.0538816	.1022727	.0885489
#2	.0192063	.0422208	.0122309	.0175139	.0511290	.1073575	.0881953
#3	.0223276	.0403331	.0114663	.0218912	.0519204	.1033078	.0877151

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058012	.0061501	1.918339	.0102898	.0301435	.0224397	.0984908
Stddev	.0000150	.0001524	.006538	.0002443	.0001460	.0002739	.0032520
%RSD	.2583987	2.477793	.3408213	2.374475	.4842837	1.220799	3.301836

#1	.0058185	.0061849	1.924677	.0100673	.0300033	.0225762	.0995420
#2	.0057928	.0062820	1.918722	.0102507	.0302946	.0226186	.1010872
#3	.0057923	.0059833	1.911618	.0105513	.0301325	.0221243	.0948432

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192498	2.039799	.0403461	.0111116	1.923354	.0380543	.0430406
Stddev	.0001201	.024327	.0000925	.0001395	.003690	.0007092	.0000988
%RSD	.6236298	1.192605	.2291831	1.255146	.1918564	1.863731	.2294822

#1	.0193813	2.021170	.0402414	.0110362	1.920616	.0374634	.0431486
#2	.0191462	2.030907	.0404164	.0110261	1.927550	.0378587	.0430185
#3	.0192218	2.067321	.0403806	.0112725	1.921896	.0388408	.0429548

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.878467	.0911393	.2091605	.0400182	.0366633	.3228095	.0175983
Stddev	.046402	.0005970	.0009629	.0005024	.0005513	.0058737	.0018174
%RSD	2.470213	.6550769	.4603708	1.255486	1.503597	1.819547	10.32698

#1	1.852613	.0904521	.2102265	.0394455	.0360792	.3241485	.0166931
#2	1.932037	.0915305	.2089009	.0402239	.0371744	.3163819	.0196906
#3	1.850751	.0914353	.2083539	.0403851	.0367362	.3278980	.0164113

Sample Name: CRI01 Acquired: 1/20/2025 11:06:00 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	.0167695	.0168873	.0183917
Stddev	.0031158	.0008927	.0000214
%RSD	18.57991	5.286436	.1161618
#1	.0171610	.0158565	.0184125
#2	.0196710	.0173943	.0183929
#3	.0134765	.0174111	.0183698

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2607.447	50702.22	9567.746	1813.555	3846.860
Stddev	8.813	164.62	10.069	4.881	7.325
%RSD	.3379751	.3246818	.1052365	.2691663	.1904188
#1	2603.195	50822.76	9579.300	1814.841	3842.946
#2	2601.566	50514.66	9560.851	1808.159	3842.324
#3	2617.579	50769.25	9563.086	1817.664	3855.311

Sample Name: ICSA01 Acquired: 1/20/2025 11:10:25 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	.0003753	.0144105	.0065938	-.011514	-.002922	240.1726
Stddev	.0032841	.0037526	.0019033	.002567	.002166	.3110
%RSD	874.9707	26.04078	28.86482	22.29399	74.11414	.1295028
#1	-.002877	.0101223	.0050008	-.011745	-.000708	240.0861
#2	.003690	.0160156	.0087015	-.008839	-.003022	240.5178
#3	.000313	.0170936	.0060791	-.013958	-.005036	239.9140
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025602	.0013381	-.001395	224.3583	.0575311	.0015902
Stddev	.0010351	.0000707	.000057	.5935	.0004028	.0002299
%RSD	40.43190	5.284473	4.070618	.2645536	.7001444	14.45511
#1	.0013655	.0012567	-.001440	223.8058	.0571670	.0017763
#2	.0031900	.0013837	-.001331	224.9858	.0579638	.0013332
#3	.0031251	.0013740	-.001413	224.2834	.0574625	.0016612
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0157461	98.69133	.0048924	241.6952	.0027557	-.000920
Stddev	.0007107	.58173	.0002512	.4745	.0008144	.000251
%RSD	4.513596	.5894439	5.133386	.1963040	29.55484	27.30399
#1	.0159880	98.30846	.0049322	241.3656	.0035735	-.001113
#2	.0163043	98.40479	.0046237	242.2390	.0027487	-.000636
#3	.0149460	99.36075	.0051213	241.4811	.0019447	-.001010
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012088	.0073686	.0031042	-.066881	.0344185	-.000362
Stddev	.005428	.0008932	.0004128	.045399	.0010387	.000142
%RSD	44.90284	12.12128	13.29958	67.88014	3.017815	39.12031
#1	-.014505	.0082431	.0029855	-.022430	.0352834	-.000513
#2	-.005872	.0074049	.0035634	-.113172	.0332665	-.000343
#3	-.015887	.0064578	.0027637	-.065042	.0347057	-.000232

Sample Name: ICSA01 Acquired: 1/20/2025 11:10:25 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	-0.002902	-0.001482	.0118749	-0.001576	F -0.023164	F -0.036762
Stddev	.000389	.000318	.0058057	.001016	.001940	.000597
%RSD	13.41338	21.48915	48.89031	64.48009	8.374626	1.625046
#1	-0.002774	-0.001210	.0179242	-0.000755	-0.021108	-0.037391
#2	-0.002593	-0.001403	.0113523	-0.002712	-0.023424	-0.036693
#3	-0.003340	-0.001832	.0063482	-0.001260	-0.024961	-0.036202

Elem	Sr4077
Units	ppm
Avg	-0.005620
Stddev	.000672
%RSD	11.95142
#1	-0.005543
#2	-0.004991
#3	-0.006327

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2429.676	46603.62	9370.034	1669.617	3369.073
Stddev	5.212	121.48	30.874	6.200	8.561
%RSD	.2145313	.2606717	.3294945	.3713382	.2540941
#1	2433.489	46696.51	9382.566	1675.884	3378.572
#2	2423.736	46648.21	9334.865	1669.479	3361.956
#3	2431.803	46466.14	9392.672	1663.487	3366.690

Sample Name: ICSAB01 Acquired: 1/20/2025 11:19:21 Type: Unk
Method: NON EPA-6010-200.7(v2491) 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	.1082444	.0938043	.0561212	.0354674	.6386317	242.5997
Stddev	.0020634	.0030709	.0013523	.0037381	.0034300	2.7229
%RSD	1.906212	3.273680	2.409668	10.53940	.5370789	1.122391

#1	.1086789	.0922683	.0557390	.0334964	.6391412	240.9166
#2	.1059984	.0973401	.0550010	.0331273	.6417784	241.1413
#3	.1100559	.0918046	.0576235	.0397785	.6349755	245.7412

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4558784	.4747913	.9926563	223.9607	.5785647	.5020574
Stddev	.0058849	.0057731	.0043505	2.8064	.0015428	.0022530
%RSD	1.290898	1.215933	.4382687	1.253068	.2666679	.4487448

#1	.4512580	.4696514	.9974178	221.8875	.5803362	.5045951
#2	.4538733	.4736850	.9916625	222.8404	.5775155	.5012846
#3	.4625038	.4810375	.9888887	227.1542	.5778423	.5002926

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5046699	98.80132	.4466429	241.4586	.9900593	.2218357
Stddev	.0019482	.42474	.0049209	2.9059	.0040963	.0002437
%RSD	.3860437	.4298974	1.101756	1.203459	.4137403	.1098552

#1	.5064264	99.21155	.4430705	239.2568	.9944672	.2218625
#2	.5050088	98.36342	.4446023	240.3668	.9893410	.2215797
#3	.5025744	98.82901	.4522558	244.7522	.9863697	.2220649

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.018476	.4660756	1.067184	-.022611	F .0310094	F .0000707
Stddev	.000131	.0053343	.002579	.014203	.0005692	.0001949
%RSD	.7093649	1.144512	.2417104	62.81313	1.835498	275.6204

#1	-.018507	.4632844	1.067450	-.031532	.0316390	.0002954
#2	-.018589	.4627160	1.064481	-.006233	.0308577	-.000053
#3	-.018332	.4722264	1.069619	-.030069	.0305314	-.000031

Sample Name: ICSAB01 Acquired: 1/20/2025 11:19:21 Type: Unk
Method: NON EPA-6010-200.7(v2491) 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 -.004077	F -.002356	F .0077603	F .0024750	F -.018967	F -.037684
Stddev	.001147	.000020	.0090481	.0017115	.004940	.000976
%RSD	28.13473	.8456358	116.5948	69.15410	26.04490	2.589040
#1	-.003368	-.002334	.0131305	.0038905	-.020629	-.036820
#2	-.005400	-.002363	.0128367	.0029615	-.013410	-.037488
#3	-.003462	-.002372	-.002686	.0005728	-.022861	-.038742

Elem	Sr4077
Units	ppm
Avg	F -.006559
Stddev	.001321
%RSD	20.14322
#1	-.007754
#2	-.006783
#3	-.005140

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2413.870	45790.63	9400.732	1601.796	3376.143
Stddev	10.806	127.04	113.048	4.290	12.440
%RSD	.4476812	.2774459	1.202546	.2678399	.3684748
#1	2407.103	45653.20	9498.127	1598.920	3366.709
#2	2408.175	45903.79	9427.304	1606.727	3371.480
#3	2426.333	45814.89	9276.764	1599.741	3390.242

Sample Name: ICSADLX20 Acquired: 1/20/2025 11:23:27 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	-.002250	-.000927	-.000024	-.000460	-.001345	11.72682	-.003590
Stddev	.003118	.001107	.001181	.001025	.001250	.00378	.000622
%RSD	138.5598	119.4152	4930.408	222.9745	92.89729	.0322513	17.32159
#1	-.001818	-.002074	.000826	-.000777	-.001658	11.72709	-.004015
#2	.000629	-.000844	-.001373	-.001289	-.002409	11.73046	-.002876
#3	-.005562	.000136	.000475	.000686	.000031	11.72291	-.003878
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001795	-.000101	11.27701	.0024116	.0000245	.0009427	4.670579
Stddev	.0000372	.000035	.02880	.0003277	.0002345	.0005288	.029951
%RSD	20.72163	34.64138	.2553773	13.58813	958.5451	56.09822	.6412716
#1	.0001954	-.000140	11.26096	.0026362	.0002083	.0010070	4.665544
#2	.0001370	-.000071	11.31026	.0020356	-.000240	.0003846	4.702729
#3	.0002061	-.000094	11.25981	.0025630	.000105	.0014364	4.643465
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004660	11.64829	-.000035	.0013849	-.046283	.0000201	-.000499
Stddev	.0002385	.04425	.000178	.0001885	.005384	.0017361	.000258
%RSD	51.17070	.3799237	509.2195	13.60876	11.63216	8637.149	51.64467
#1	.0002238	11.59888	.000167	.0014695	-.051932	.0020222	-.000455
#2	.0004737	11.68428	-.000167	.0011690	-.045707	-.001068	-.000266
#3	.0007005	11.66170	-.000105	.0015163	-.041211	-.000894	-.000776
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.084887	-.004965	-.000038	-.001716	-.000207	.0066361	-.000537
Stddev	.004010	.000502	.000083	.000228	.000792	.0035675	.000995
%RSD	4.723815	10.10512	219.9082	13.28929	382.7929	53.75866	185.4093
#1	-.080456	-.005539	-.000107	-.001836	-.000805	.0069554	.000107
#2	-.085939	-.004611	.000055	-.001859	-.000507	.0029197	-.000034
#3	-.088266	-.004745	-.000062	-.001453	.000692	.0100332	-.001683

Sample Name: ICSADLX20 Acquired: 1/20/2025 11:23:27 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	-.000430	-.003155	-.000126
Stddev	.003157	.001399	.000030
%RSD	734.3875	44.33494	23.52894
#1	.003093	-.001814	-.000093
#2	-.001379	-.003045	-.000150
#3	-.003003	-.004605	-.000135

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2635.253	51286.02	9629.573	1791.577	3904.246
Stddev	4.156	54.47	30.030	8.560	9.422
%RSD	.1577002	.1062059	.3118475	.4778165	.2413328
#1	2636.046	51263.92	9648.316	1792.649	3911.793
#2	2630.757	51348.07	9645.467	1799.550	3893.686
#3	2638.954	51246.08	9594.937	1782.531	3907.260

Sample Name: ICSABDLX20 Acquired: 1/20/2025 11:27:44 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	.0048843	.0056905	.0014564	.0007129	.0300784	12.00023	.0205627
Stddev	.0029184	.0006446	.0012266	.0025119	.0001860	.02795	.0004660
%RSD	59.75061	11.32819	84.22237	352.3279	.6183782	.2329336	2.266424
#1	.0031009	.0063383	.0003224	.0011323	.0298985	11.97984	.0201288
#2	.0032997	.0050490	.0027583	-.001982	.0302699	11.98876	.0210553
#3	.0082522	.0056843	.0012884	.002989	.0300668	12.03209	.0205040
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242957	.0497032	11.54440	.0287772	.0247630	.0268764	4.862042
Stddev	.0002402	.0002914	.04943	.0004896	.0002595	.0000716	.027751
%RSD	.9885294	.5861711	.4281784	1.701215	1.047878	.2662117	.5707740
#1	.0240190	.0494623	11.51930	.0292008	.0246344	.0268769	4.883353
#2	.0244189	.0496203	11.51255	.0282412	.0245929	.0269477	4.830662
#3	.0244493	.0500270	11.60134	.0288897	.0250617	.0268046	4.872111
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0237608	12.03827	.0494547	.0115150	-.050013	.0259903	.0520291
Stddev	.0001385	.08939	.0002978	.0001501	.004534	.0015496	.0004135
%RSD	.5829167	.7425793	.6022238	1.303866	9.066478	5.962023	.7947717
#1	.0239197	11.93707	.0491108	.0113419	-.046094	.0268643	.0522858
#2	.0236651	12.07127	.0496286	.0116103	-.048967	.0242012	.0522494
#3	.0236977	12.10647	.0496246	.0115927	-.054979	.0269055	.0515521
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.104416	-.004064	.0000165	-.001517	.0001202	.0010701	-.003557
Stddev	.043449	.000613	.0002540	.000936	.0003797	.0137541	.002239
%RSD	41.61134	15.07345	1534.780	61.69160	315.9063	1285.302	62.95429
#1	-.056126	-.003807	.0001934	-.001119	-.000066	.0125666	-.006142
#2	-.140344	-.004764	.0001307	-.000846	-.000130	.0048112	-.002288
#3	-.116777	-.003622	-.000274	-.002586	.000557	-.014168	-.002241

Sample Name: ICSABDLX20 Acquired: 1/20/2025 11:27:44 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	-.005529	-.003629	-.000188
Stddev	.000553	.001236	.000078
%RSD	10.00416	34.04880	41.40670

#1	-.005666	-.003161	-.000274
#2	-.006001	-.005030	-.000124
#3	-.004920	-.002695	-.000165

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2669.662	51284.69	9783.806	1790.091	3984.745
Stddev	9.648	53.12	87.595	5.137	17.265
%RSD	.3613815	.1035838	.8953042	.2869443	.4332673

#1	2666.548	51310.34	9884.846	1795.893	3984.518
#2	2680.482	51320.12	9729.275	1788.259	4002.122
#3	2661.956	51223.61	9737.298	1786.122	3967.595

Sample Name: CCV01 Acquired: 1/20/2025 11:31:59 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	4.967477	4.951958	4.861063	5.025371	5.083483	9.703599	9.177210
Stddev	.012337	.100936	.010582	.025404	.015705	.044414	.146720
%RSD	.2483627	2.038303	.2176829	.5055225	.3089348	.4577084	1.598745
#1	4.974047	4.935022	4.848877	5.024817	5.088582	9.747262	9.343670
#2	4.975138	5.060290	4.867927	5.051048	5.096005	9.658469	9.066681
#3	4.953245	4.860561	4.866385	5.000248	5.065863	9.705065	9.121279
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2370264	2.427125	23.45469	1.002078	2.423632	1.237581	4.754173
Stddev	.0014145	.005621	.06700	.004071	.005078	.000531	.036334
%RSD	.5967741	.2315745	.2856734	.4062374	.2095109	.0429340	.7642473
#1	.2386586	2.420661	23.51636	1.006756	2.417836	1.237975	4.726332
#2	.2361585	2.429852	23.46431	1.000139	2.425761	1.237791	4.795274
#3	.2362621	2.430862	23.38339	.999339	2.427298	1.236976	4.740913
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.266368	23.63031	2.425036	1.228484	24.67596	2.385552	2.480553
Stddev	.009590	.00389	.006166	.000769	.06819	.005328	.010610
%RSD	.4231601	.0164718	.2542770	.0625714	.2763413	.2233310	.4277155
#1	2.277427	23.62832	2.417963	1.229369	24.60431	2.391640	2.492313
#2	2.260337	23.63480	2.427865	1.227981	24.68351	2.383271	2.471699
#3	2.261340	23.62782	2.429280	1.228103	24.74006	2.381745	2.477646
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.17516	4.677142	5.051956	4.864302	4.659031	4.967657	4.751177
Stddev	.07613	.018824	.014454	.017984	.007366	.026760	.021154
%RSD	.3149240	.4024745	.2861017	.3697159	.1581066	.5386918	.4452287
#1	24.12217	4.698879	5.050280	4.846268	4.667444	4.936765	4.728031
#2	24.26240	4.666293	5.067174	4.882235	4.655909	4.983703	4.769509
#3	24.14090	4.666256	5.038413	4.864403	4.653739	4.982504	4.755989

Sample Name: CCV01 Acquired: 1/20/2025 11:31:59 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	4.764584	4.645494	4.722152
Stddev	.015703	.012569	.060200
%RSD	.3295788	.2705533	1.274849
#1	4.763137	4.658787	4.791664
#2	4.780960	4.633804	4.687842
#3	4.749654	4.643892	4.686952

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2591.544	49979.46	9294.968	1716.667	3737.908
Stddev	1.126	192.87	74.269	11.226	7.421
%RSD	.0434680	.3858906	.7990209	.6539611	.1985270
#1	2591.414	49763.11	9210.138	1704.580	3745.343
#2	2590.489	50133.37	9348.280	1726.768	3737.879
#3	2592.730	50041.90	9326.485	1718.651	3730.502

Sample Name: CCB01 Acquired: 1/20/2025 11:36:41 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	-.003696	-.000692	-.000661	.0004886	.0002195	.0025266	-.004258
Stddev	.001511	.000865	.000393	.0016549	.0007190	.0049074	.000593
%RSD	40.86852	125.0718	59.38201	338.6721	327.5528	194.2266	13.92429

#1	-.003469	-.001257	-.001015	.0004848	-.000484	.0014590	-.004933
#2	-.005308	-.001124	-.000730	.0021454	.000953	-.001759	-.003822
#3	-.002312	.000304	-.000239	-.001164	.000190	.007880	-.004018

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000588	-.000026	-.004882	-.000089	.0001010	.0001056	-.001536
Stddev	.0000195	.000111	.003758	.000244	.0001007	.0002701	.000864
%RSD	33.13089	427.7708	76.98514	273.9824	99.70682	255.7574	56.24285

#1	.0000587	-.000139	-.008740	.000078	.0002005	.0001612	-.002021
#2	.0000394	-.000023	-.001232	.000024	-.000001	-.000188	-.000539
#3	.0000783	.000084	-.004673	-.000369	.000104	.000344	-.002050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002211	.0005823	-.000091	.0011196	-.055263	-.000536	-.000154
Stddev	.0001755	.0038802	.000167	.0001567	.001370	.001645	.000226
%RSD	79.39483	666.3861	184.0666	13.99780	2.478310	307.0054	146.3793

#1	.0003959	-.000313	.000094	.0009431	-.053825	-.002434	-.000415
#2	.0000448	.004832	-.000137	.0011735	-.055412	.000474	-.000028
#3	.0002225	-.002772	-.000230	.0012423	-.056552	.000352	-.000020

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.076479	.0041053	.0000266	-.000090	.0005818	-.002589	-.004387
Stddev	.032258	.0002776	.0000884	.000027	.0006624	.007234	.000624
%RSD	42.17885	6.762889	331.9873	29.50366	113.8562	279.4140	14.22785

#1	-.099530	.0043499	.0000805	-.000116	.0007998	.002408	-.003717
#2	-.039615	.0038036	.0000749	-.000063	-.000162	.000709	-.004494
#3	-.090293	.0041624	-.000075	-.000092	.001108	-.010884	-.004951

Sample Name: CCB01 Acquired: 1/20/2025 11:36:41 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	-.006385	-.001502	-.000002
Stddev	.003712	.000563	.000042
%RSD	58.13187	37.44898	2403.233
#1	-.002108	-.001770	-.000046
#2	-.008767	-.000856	.000005
#3	-.008280	-.001881	.000036

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2664.491	51617.14	9416.481	1808.304	4037.094
Stddev	8.935	15.08	64.680	3.004	9.569
%RSD	.3353442	.0292195	.6868798	.1661093	.2370350
#1	2654.175	51632.35	9461.239	1805.632	4026.229
#2	2669.489	51602.18	9342.323	1811.555	4040.783
#3	2669.809	51616.88	9445.879	1807.725	4044.270

Sample Name: Q1092-02 Acquired: 1/20/2025 11:41:02 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	-.006061	-.006217	.0013688	.0047453	.0028021	.0760084	.1311489
Stddev	.003875	.001385	.0011081	.0009895	.0013870	.0029039	.0006121
%RSD	63.93375	22.27585	80.95074	20.85133	49.49611	3.820505	.4667220

#1	-.002350	-.005249	.0016782	.0036212	.0037283	.0778473	.1313351
#2	-.010082	-.005599	.0001389	.0051304	.0012076	.0726607	.1316463
#3	-.005750	-.007804	.0022893	.0054844	.0034706	.0775173	.1304653

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000101	.0016583	12.47042	.0027862	.0005785	.0028712	.7260881
Stddev	.000030	.0000651	.01015	.0002524	.0000543	.0001937	.0034242
%RSD	29.25599	3.925991	.0813841	9.058791	9.393026	6.746843	.4715924

#1	-.000098	.0016281	12.48030	.0029978	.0005384	.0027192	.7231493
#2	-.000073	.0017330	12.46003	.0028540	.0005567	.0030893	.7298482
#3	-.000132	.0016137	12.47093	.0025068	.0006404	.0028052	.7252666

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0596086	1.904190	.0072838	.0009941	279.8136	.0000406	5.308991
Stddev	.0003927	.014603	.0002827	.0001724	1.0884	.0009700	.011111
%RSD	.6587266	.7668656	3.880466	17.34317	.3889805	2387.640	.2092914

#1	.0592910	1.919768	.0071405	.0007971	278.5789	-.000764	5.297183
#2	.0600476	1.901989	.0071016	.0011178	280.2277	-.000231	5.319241
#3	.0594871	1.890812	.0076095	.0010672	280.6342	.001118	5.310548

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.147002	.1942066	.2654335	-.000267	.0000678	.2889070	1.461401
Stddev	.043374	.0011550	.0006494	.000556	.0009557	.0008441	.003331
%RSD	2.020190	.5947523	.2446433	208.2433	1408.456	.2921601	.2279389

#1	2.171950	.1952593	.2646887	.000111	.0011405	.2885289	1.465149
#2	2.096918	.1943895	.2658809	-.000906	-.000244	.2883180	1.458777
#3	2.172137	.1929710	.2657310	-.000007	-.000693	.2898740	1.460277

Sample Name: Q1092-02 Acquired: 1/20/2025 11:41:02 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	2.488618	.0008941	.0262518
Stddev	.005643	.0013096	.0000218
%RSD	.2267613	146.4687	.0829247
#1	2.482483	.0009713	.0262267
#2	2.493588	-.000452	.0262653
#3	2.489782	.002163	.0262635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2482.871	48305.37	9497.737	1678.242	3612.123
Stddev	2.719	80.73	18.566	5.823	4.867
%RSD	.1095187	.1671303	.1954776	.3469612	.1347433
#1	2482.579	48298.65	9477.520	1684.740	3610.175
#2	2480.310	48389.25	9501.669	1676.490	3608.532
#3	2485.725	48228.21	9514.022	1673.497	3617.662

Sample Name: Q1092-03 Acquired: 1/20/2025 11:45:25 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	-.008559	-.006944	.0014540	.0021576	.0027622	.0313196	.0539777
Stddev	.004135	.000676	.0005343	.0003679	.0016299	.0063513	.0007737
%RSD	48.30879	9.735102	36.74727	17.05250	59.00644	20.27881	1.433450
#1	-.005272	-.006423	.0012362	.0024200	.0009508	.0268078	.0532519
#2	-.007203	-.006701	.0020627	.0023159	.0032256	.0385826	.0538893
#3	-.013201	-.007708	.0010629	.0017371	.0041101	.0285684	.0547918
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000088	.0006111	7.553242	.0010777	.0003536	.0118900	.0391033
Stddev	.000028	.0001318	.037994	.0000711	.0001234	.0001448	.0095823
%RSD	31.39052	21.57349	.5030107	6.599471	34.90474	1.218142	24.50507
#1	-.000116	.0007627	7.520993	.0011094	.0002174	.0119508	.0317357
#2	-.000061	.0005233	7.543608	.0011275	.0004581	.0117246	.0499362
#3	-.000087	.0005473	7.595125	.0009963	.0003851	.0119945	.0356379
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197951	.7802946	.0020218	.0010478	195.2692	-.000780	2.587363
Stddev	.0003828	.0074388	.0000773	.0000653	.5816	.001740	.007287
%RSD	1.933901	.9533321	3.821320	6.227708	.2978421	223.0113	.2816286
#1	.0199432	.7725254	.0019865	.0009871	194.7633	-.001570	2.583886
#2	.0193603	.7810065	.0021104	.0010397	195.9047	-.001985	2.595737
#3	.0200817	.7873518	.0019685	.0011168	195.1396	.001214	2.582466
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9054631	.1111772	.0827303	.0013703	.0002880	.1361146	.7066212
Stddev	.0386686	.0010293	.0002529	.0001832	.0006383	.0008876	.0063068
%RSD	4.270592	.9257711	.3057322	13.36967	221.6386	.6520765	.8925260
#1	.9337411	.1103635	.0826009	.0012557	.0002449	.1370467	.7138424
#2	.9212494	.1108340	.0825682	.0015816	-.000328	.1360178	.7038265
#3	.8613987	.1123342	.0830217	.0012736	.000947	.1352795	.7021946

Sample Name: Q1092-03 Acquired: 1/20/2025 11:45:25 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	1.858719	.0001696	.0120633
Stddev	.006470	.0009183	.0000319
%RSD	.3480623	541.4713	.2645263
#1	1.857153	-.000384	.0120697
#2	1.853176	-.000336	.0120287
#3	1.865828	.001230	.0120916

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2475.999	50019.37	9750.569	1695.162	3629.441
Stddev	2.493	141.48	67.585	5.975	7.955
%RSD	.1006960	.2828551	.6931376	.3524804	.2191831
#1	2473.191	50166.59	9782.802	1697.965	3621.804
#2	2476.852	49884.43	9796.004	1688.301	3628.838
#3	2477.953	50007.07	9672.902	1699.220	3637.680

Sample Name: Q1096-01 Acquired: 1/20/2025 11:49:50 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	.0857148	.2595062	.0047973	.1372073	-.004415	.0244989
Stddev	.0049214	.0015406	.0005726	.0041201	.001303	.0020099
%RSD	5.741558	.5936806	11.93659	3.002812	29.51304	8.204007
#1	.0893427	.2610738	.0053095	.1358307	-.003635	.0267774
#2	.0876886	.2579940	.0049032	.1339517	-.005919	.0237419
#3	.0801129	.2594507	.0041791	.1418394	-.003690	.0229775
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0369271	-.002308	-.001058	3.075165	-.000681	-.011737
Stddev	.0003951	.000086	.000033	.021718	.000303	.000246
%RSD	1.069974	3.725135	3.158137	.7062238	44.48628	2.099772
#1	.0373186	-.002324	-.001095	3.091239	-.000967	-.012019
#2	.0369343	-.002384	-.001048	3.083797	-.000711	-.011564
#3	.0365284	-.002214	-.001030	3.050459	-.000364	-.011627
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0328818	.2181492	.2918890	.7200883	-.008030	.0041515
Stddev	.0001030	.0026681	.0008216	.0050754	.000217	.0001648
%RSD	.3132424	1.223081	.2814683	.7048232	2.700095	3.968572
#1	.0327644	.2161760	.2925730	.7259437	-.007782	.0040267
#2	.0329245	.2211849	.2921162	.7173727	-.008183	.0043383
#3	.0329567	.2170866	.2909777	.7169485	-.008125	.0040895
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	331.3668	-.085583	.2448981	572.2557	1.751370	F 25.32954
Stddev	7.4815	.002094	.0043102	5.4734	.001594	.08879
%RSD	2.257774	2.446586	1.759981	.9564676	.0910215	.3505287
#1	331.8446	-.084599	.2471921	574.8424	1.751557	25.27300
#2	338.5979	-.084162	.2475761	575.9564	1.749691	25.28374
#3	323.6578	-.087987	.2399261	565.9683	1.752863	25.43188

Sample Name: Q1096-01 Acquired: 1/20/2025 11:49:50 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	.0735492	.0011003	.8235255	1.028643	4.683320	.0089876
Stddev	.0013294	.0004140	.0238337	.002067	.032233	.0007115
%RSD	1.807503	37.62784	2.894106	.2009652	.6882567	7.916491
#1	.0720159	.0008048	.8306016	1.026292	4.649550	.0084063
#2	.0742531	.0015735	.8430198	1.029462	4.686652	.0097811
#3	.0743787	.0009226	.7969550	1.030175	4.713757	.0087756

Elem	Sr4077
Units	ppm
Avg	.0155258
Stddev	.0000383
%RSD	.2469130
#1	.0155082
#2	.0155698
#3	.0154994

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2138.239	43559.58	9509.133	1417.734	3326.529
Stddev	8.859	618.12	18.254	19.663	16.557
%RSD	.4143042	1.419011	.1919646	1.386920	.4977327
#1	2140.856	43289.68	9488.135	1414.151	3333.043
#2	2145.495	43122.30	9521.216	1400.110	3338.839
#3	2128.367	44266.74	9518.049	1438.943	3307.706

Sample Name: Q1115-01 Acquired: 1/20/2025 11:54:21 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0677870	-.005243	.5607724	-.025953	.0123611	80.60717
Stddev	.0005851	.003334	.0012292	.000598	.0011710	.28545
%RSD	.8632123	63.58529	.2191991	2.305412	9.472813	.3541291
#1	.0684626	-.004552	.5617862	-.025518	.0136634	80.93072
#2	.0674420	-.008868	.5611259	-.025705	.0113951	80.49989
#3	.0674564	-.002309	.5594052	-.026635	.0120248	80.39090
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6187339	.0063600	.0012822	16.89377	.2561497	.0525136
Stddev	.0031290	.0000064	.0000658	.07967	.0015587	.0003801
%RSD	.5057035	.1002863	5.131524	.4716155	.6085203	.7238244
#1	.6210848	.0063545	.0013578	16.95773	.2577351	.0528667
#2	.6199344	.0063670	.0012511	16.91907	.2546191	.0525627
#3	.6151825	.0063584	.0012377	16.80452	.2560949	.0521113
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1739845	150.2754	1.406976	13.71903	.0926086	.0009997
Stddev	.0008881	.3917	.006198	.06576	.0006058	.0001446
%RSD	.5104559	.2606519	.4404897	.4793532	.6541812	14.46962
#1	.1744823	150.6738	1.412209	13.78386	.0931346	.0011582
#2	.1745122	150.2617	1.408586	13.72087	.0927450	.0009658
#3	.1729592	149.8908	1.400132	13.65237	.0919462	.0008749
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.522330	.2821573	.6563095	6.303266	.0715392	.0050272
Stddev	.008134	.0017150	.0014365	.044069	.0005779	.0001306
%RSD	.5343255	.6078089	.2188769	.6991508	.8077891	2.597082
#1	1.531065	.2835387	.6574007	6.287210	.0716025	.0050084
#2	1.520950	.2826953	.6568458	6.353113	.0720828	.0049071
#3	1.514973	.2802378	.6546820	6.269477	.0709322	.0051662

Sample Name: Q1115-01 Acquired: 1/20/2025 11:54:21 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0122912	1.840527	F 11.20213	3.375982	2.013533	.0476834
Stddev	.0010784	.005359	.02027	.011636	.020083	.0004623
%RSD	8.773673	.2911929	.1809791	.3446734	.9974136	.9695059
#1	.0129577	1.845384	11.20931	3.389174	2.036191	.0476666
#2	.0128689	1.841419	11.21783	3.367176	2.006486	.0472297
#3	.0110470	1.834777	11.17924	3.371597	1.997924	.0481538

Elem	Sr4077
Units	ppm
Avg	-.038330
Stddev	.000292
%RSD	.7626616
#1	-.038613
#2	-.038029
#3	-.038347

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2896.998	56557.85	11036.76	1958.980	3813.599
Stddev	7.548	277.99	62.53	9.178	7.736
%RSD	.2605338	.4915098	.5666006	.4684845	.2028503
#1	2892.986	56245.52	10965.79	1949.691	3809.049
#2	2892.304	56778.15	11060.73	1959.206	3809.216
#3	2905.705	56649.88	11083.76	1968.042	3822.531

Sample Name: Q1115-04 Acquired: 1/20/2025 11:58:27 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	.1360140	-.004293	.6951715	-.021431	.0073988	53.11346	.7492049
Stddev	.0048220	.003050	.0011035	.003188	.0014966	.13695	.0024630
%RSD	3.545188	71.05143	.1587413	14.87393	20.22790	.2578509	.3287459
#1	.1350407	-.005781	.6946351	-.022378	.0084033	53.23943	.7518246
#2	.1412483	-.000784	.6964407	-.024039	.0081143	53.13327	.7488537
#3	.1317529	-.006314	.6944387	-.017878	.0056787	52.96768	.7469363
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052031	.0012845	149.6301	.2040594	.0295101	.2606864	112.8177
Stddev	.0000699	.0001895	.6577	.0008683	.0002227	.0025267	.7028
%RSD	1.344070	14.75284	.4395500	.4255327	.7547033	.9692319	.6229112
#1	.0051823	.0013557	150.2032	.2039580	.0293157	.2615402	112.5363
#2	.0052810	.0014280	149.7752	.2032462	.0297531	.2626756	112.2992
#3	.0051459	.0010697	148.9120	.2049740	.0294614	.2578435	113.6175
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.747759	39.13683	.1230738	.0004625	2.097382	.1769209	1.274135
Stddev	.009173	.19747	.0003700	.0003544	.018186	.0009813	.002235
%RSD	.5248572	.5045602	.3006106	76.63119	.8670904	.5546730	.1753921
#1	1.755672	39.25174	.1234766	.0008647	2.093307	.1759297	1.271907
#2	1.749902	39.24994	.1229956	.0003270	2.081579	.1778920	1.274121
#3	1.737705	38.90882	.1227492	.0001959	2.117260	.1769411	1.276377
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.550024	.0952818	.0053365	.0118519	1.897506	8.603162	2.818756
Stddev	.089705	.0014358	.0000232	.0001063	.005824	.059486	.000627
%RSD	1.188141	1.506896	.4339059	.8970758	.3069241	.6914477	.0222501
#1	7.532583	.0967749	.0053479	.0118365	1.904171	8.554368	2.818043
#2	7.470320	.0939111	.0053516	.0119650	1.894947	8.585690	2.819222
#3	7.647168	.0951594	.0053098	.0117541	1.893400	8.669427	2.819002

Sample Name: Q1115-04 Acquired: 1/20/2025 11:58:27 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	3.638698	.0176979	.4098888
Stddev	.011635	.0002186	.0024995
%RSD	.3197577	1.235181	.6097930
#1	3.644635	.0178321	.4124244
#2	3.646166	.0178160	.4098149
#3	3.625292	.0174457	.4074271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2665.894	52565.85	10298.41	1783.105	3704.143
Stddev	5.233	152.56	99.17	7.157	9.782
%RSD	.1962904	.2902269	.9629763	.4014027	.2640903
#1	2664.490	52734.70	10241.95	1790.620	3705.354
#2	2661.507	52524.93	10240.37	1782.326	3693.812
#3	2671.686	52437.92	10412.92	1776.369	3713.263

Sample Name: Q1115-07 Acquired: 1/20/2025 12:02:33 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2094882	-.005099	1.668999	-.039794	.2431402	74.64581
Stddev	.0020739	.001679	.001790	.003849	.0019334	.18846
%RSD	.9899866	32.93234	.1072462	9.672784	.7951873	.2524776

#1	.2071531	-.003948	1.667540	-.042956	.2450770	74.76021
#2	.2111158	-.007025	1.668461	-.035508	.2431334	74.74892
#3	.2101956	-.004322	1.670997	-.040918	.2412102	74.42829

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.418953	.0101626	.1586031	178.6332	.3532820	.1946596
Stddev	.006465	.0000986	.0004710	.4925	.0009347	.0004263
%RSD	.2672455	.9703471	.2969922	.2756887	.2645808	.2190193

#1	2.422725	.0102446	.1582534	179.1759	.3537520	.1941922
#2	2.422646	.0100532	.1584171	178.5090	.3538884	.1947592
#3	2.411489	.0101901	.1591387	178.2147	.3522056	.1950273

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9098806	250.6731	1.433945	89.02152	.3259786	.0221020
Stddev	.0032104	1.6020	.005476	.25446	.0007340	.0002920
%RSD	.3528348	.6390887	.3818922	.2858379	.2251600	1.321145

#1	.9063843	250.0710	1.439498	89.30195	.3251603	.0224092
#2	.9126956	252.4889	1.433789	88.95729	.3261969	.0220689
#3	.9105619	249.4593	1.428549	88.80534	.3265787	.0218280

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.456138	.4557380	2.366590	13.86952	.1700911	.0350380
Stddev	.015443	.0025529	.007033	.08595	.0022665	.0001576
%RSD	.6287544	.5601612	.2971915	.6196945	1.332513	.4497882

#1	2.444719	.4586630	2.373367	13.85660	.1678658	.0349448
#2	2.473709	.4539588	2.367078	13.96120	.1723966	.0352199
#3	2.449987	.4545921	2.359326	13.79076	.1700110	.0349493

Sample Name: Q1115-07 Acquired: 1/20/2025 12:02:33 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0436951	2.556400	7.207002	F 10.94012	F 16.93228	.0580399
Stddev	.0002815	.006334	.034122	.01484	.03691	.0014829
%RSD	.6442566	.2477679	.4734519	.1356049	.2179740	2.555020
#1	.0438999	2.559696	7.187821	10.92897	16.91605	.0579361
#2	.0433741	2.560406	7.246398	10.95696	16.97452	.0595719
#3	.0438113	2.549097	7.186786	10.93444	16.90627	.0566115

Elem	Sr4077
Units	ppm
Avg	.7063961
Stddev	.0071199
%RSD	1.007918
#1	.7036775
#2	.7010361
#3	.7144748

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2797.124	54775.31	11239.22	1890.156	3449.189
Stddev	8.673	62.03	68.32	1.555	5.686
%RSD	.3100737	.1132535	.6079055	.0822420	.1648420
#1	2803.862	54801.89	11176.44	1891.497	3455.618
#2	2787.338	54704.42	11311.99	1890.519	3444.821
#3	2800.173	54819.63	11229.23	1888.452	3447.128

Sample Name: Q1115-10 Acquired: 1/20/2025 12:06:45 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	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0772612	-.004913	27.46945	-.033859	.0282670	86.93419	.9005396
Stddev	.0009737	.003302	.07900	.003448	.0005862	.19584	.0028307
%RSD	1.260278	67.21193	.2876025	10.18490	2.073658	.2252760	.3143338
#1	.0783855	-.003145	27.39279	-.034576	.0282931	87.15651	.9037718
#2	.0767084	-.008722	27.46496	-.030108	.0288398	86.78721	.8993450
#3	.0766898	-.002871	27.55060	-.036892	.0276683	86.85884	.8985020
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106560	.0043027	233.0490	.2025716	.0400278	.4744009	158.0745
Stddev	.0000586	.0002270	.5023	.0007795	.0002357	.0012442	.5406
%RSD	.5495964	5.275363	.2155270	.3848287	.5889092	.2622678	.3419870
#1	.0107095	.0042976	233.6236	.2016728	.0397587	.4729784	157.4621
#2	.0105934	.0040784	232.8302	.2030641	.0401266	.4749378	158.4852
#3	.0106651	.0045323	232.6933	.2029778	.0401980	.4752865	158.2762
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.130448	75.24845	.0851980	-.000555	3.975208	.2163780	1.683657
Stddev	.011538	.22653	.0003188	.000212	.019898	.0029498	.001029
%RSD	.2793431	.3010481	.3741619	38.14403	.5005554	1.363268	.0611099
#1	4.142852	75.47702	.0854868	-.000794	3.961351	.2197840	1.683679
#2	4.128460	75.24433	.0848560	-.000390	3.966265	.2146542	1.682617
#3	4.120034	75.02401	.0852514	-.000481	3.998009	.2146956	1.684674
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.29439	.1336250	.0113151	.0243163	1.899845	9.383546	3.436155
Stddev	.07004	.0008571	.0004323	.0006599	.003721	.028561	.019369
%RSD	.6201194	.6414012	3.820846	2.713992	.1958453	.3043703	.5636965
#1	11.21450	.1328386	.0108967	.0239285	1.902116	9.352388	3.415975
#2	11.32348	.1345386	.0117601	.0250783	1.901868	9.389764	3.437894
#3	11.34520	.1334979	.0112884	.0239421	1.895551	9.408485	3.454597

Sample Name: Q1115-10 Acquired: 1/20/2025 12:06:45 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	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	9.234956	.0418306	.5221219
Stddev	.022031	.0008963	.0023434
%RSD	.2385567	2.142615	.4488123
#1	9.210046	.0426990	.5247932
#2	9.242940	.0409088	.5204130
#3	9.251881	.0418838	.5211594

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2657.972	51287.30	10142.09	1797.781	3502.450
Stddev	4.103	230.85	29.49	8.254	5.079
%RSD	.1543531	.4501135	.2907861	.4591056	.1450197
#1	2661.055	51528.17	10124.00	1807.247	3504.891
#2	2659.547	51067.97	10126.15	1792.090	3505.849
#3	2653.316	51265.77	10176.12	1794.007	3496.612

Sample Name: Q1115-02 Acquired: 1/20/2025 12:10:51 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	-.003882	-.006266	.0838514	.0012736	.0011060	.0577044	.3596757
Stddev	.002765	.000312	.0012576	.0032073	.0005182	.0039217	.0018121
%RSD	71.23837	4.981208	1.499787	251.8301	46.85448	6.796284	.5038242
#1	-.006866	-.006573	.0850713	-.002282	.0005084	.0532064	.3598478
#2	-.001405	-.005949	.0839236	.003948	.0013786	.0604072	.3577836
#3	-.003376	-.006275	.0825592	.002156	.0014311	.0594997	.3613956
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001121	-.000524	8.952260	.0005272	.0085336	.0126356	11.10132
Stddev	.0000592	.000045	.073020	.0002079	.0001880	.0001646	.08001
%RSD	52.85655	8.496113	.8156562	39.43789	2.202595	1.303074	.7207177
#1	.0001180	-.000515	8.955904	.0002966	.0087229	.0125826	11.17381
#2	.0001682	-.000485	8.877487	.0007005	.0085308	.0128202	11.11468
#3	.0000501	-.000572	9.023390	.0005844	.0083470	.0125040	11.01547
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5613780	1.974002	.0054081	.0011604	268.4492	.0008925	.1731176
Stddev	.0040648	.016421	.0000397	.0005571	.3859	.0007483	.0004864
%RSD	.7240716	.8318875	.7333168	48.01031	.1437636	83.83710	.2809926
#1	.5616806	1.976622	.0054526	.0008629	268.8877	.0001487	.1736011
#2	.5571703	1.956428	.0053764	.0018031	268.1612	.0008837	.1731233
#3	.5652830	1.988956	.0053955	.0008152	268.2987	.0016452	.1726283
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5483239	.0589456	.0000822	.0001755	.0004201	.5758383	.0114591
Stddev	.0125249	.0012072	.0002970	.0002844	.0005372	.0056276	.0014340
%RSD	2.284209	2.047957	361.3759	162.0535	127.8871	.9772937	12.51445
#1	.5618311	.0590346	.0004247	-.000140	-.000196	.5822665	.0106434
#2	.5460468	.0576963	-.000075	.000412	.000790	.5718004	.0106189
#3	.5370938	.0601058	-.000104	.000255	.000667	.5734480	.0131149

Sample Name: Q1115-02 Acquired: 1/20/2025 12:10:51 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	.3640873	-.004406	.0500456
Stddev	.0008995	.000455	.0003632
%RSD	.2470481	10.31950	.7257642
#1	.3648981	-.003982	.0500760
#2	.3642440	-.004886	.0496681
#3	.3631197	-.004348	.0503927

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2472.531	48589.15	9516.609	1675.344	3579.847
Stddev	3.091	103.49	88.980	4.312	.261
%RSD	.1250173	.2129936	.9349976	.2573515	.0072964
#1	2469.062	48493.62	9544.472	1676.700	3579.615
#2	2474.995	48574.74	9588.323	1670.518	3580.130
#3	2473.535	48699.09	9417.032	1678.815	3579.797

Sample Name: Q1115-05 Acquired: 1/20/2025 12:15:16 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	-.004087	-.007760	.0714278	.0024860	.0008536	.0996528	.2034822
Stddev	.000128	.002437	.0007947	.0025960	.0009065	.0035846	.0010711
%RSD	3.119598	31.40480	1.112557	104.4251	106.1918	3.597049	.5263958

#1	-.004088	-.005476	.0713039	.0023329	.0018804	.0957695	.2033998
#2	-.004214	-.007477	.0722772	.0051551	.0005164	.1028349	.2024547
#3	-.003959	-.010325	.0707024	-.000030	.0001641	.1003541	.2045922

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000139	.0008519	55.92864	.0003151	.0032284	.0172029	.0627202
Stddev	.0000485	.0000551	.40479	.0000820	.0001344	.0000402	.0043451
%RSD	348.8894	6.464311	.7237529	26.01075	4.163252	.2337058	6.927694

#1	-.000020	.0008092	56.10722	.0003679	.0032790	.0172492	.0675715
#2	-.000008	.0009140	55.46528	.0002207	.0033301	.0171764	.0591864
#3	.000069	.0008324	56.21343	.0003567	.0030760	.0171831	.0614025

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3508180	3.829350	.0043295	.0008242	293.8642	.0007218	.3025270
Stddev	.0024674	.043433	.0001696	.0002253	2.2849	.0012812	.0008395
%RSD	.7033252	1.134215	3.917860	27.33501	.7775521	177.5067	.2774912

#1	.3532917	3.841790	.0043266	.0007077	296.3961	-.000272	.3021533
#2	.3483570	3.781055	.0045005	.0010838	293.2410	.000269	.3034885
#3	.3508052	3.865206	.0041613	.0006810	291.9555	.002168	.3019393

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9545152	.0312786	.0007353	-.001813	-.001040	2.286141	.0056682
Stddev	.0354253	.0002588	.0002659	.000462	.000753	.012400	.0011815
%RSD	3.711338	.8275420	36.16191	25.49139	72.39820	.5423956	20.84471

#1	.9953157	.0309980	.0008753	-.002171	-.001680	2.287176	.0047383
#2	.9315772	.0315081	.0004286	-.001291	-.001227	2.273257	.0052687
#3	.9366526	.0313297	.0009019	-.001978	-.000211	2.297992	.0069977

Sample Name: Q1115-05 Acquired: 1/20/2025 12:15:16 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	1.188008	-.010964	.2200252
Stddev	.005670	.001113	.0004948
%RSD	.4772920	10.15455	.2248956
#1	1.194554	-.011620	.2194920
#2	1.184631	-.011592	.2204697
#3	1.184838	-.009678	.2201138

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2461.785	47710.50	9575.761	1637.969	3532.203
Stddev	3.818	64.25	17.764	7.532	2.453
%RSD	.1550951	.1346621	.1855074	.4598489	.0694548
#1	2458.870	47716.21	9581.618	1641.016	3533.475
#2	2466.107	47643.59	9589.855	1629.391	3533.760
#3	2460.378	47771.71	9555.808	1643.501	3529.375

Sample Name: Q1115-08 Acquired: 1/20/2025 12:19:42 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	-.006481	-.010199	.0619552	.0043428	.0239771	.0316099	.2030680
Stddev	.000729	.000521	.0007972	.0023088	.0012955	.0052133	.0008101
%RSD	11.24584	5.107313	1.286693	53.16466	5.403294	16.49263	.3989490
#1	-.005780	-.010726	.0619374	.0020393	.0241442	.0347394	.2039643
#2	-.007235	-.009684	.0627611	.0066570	.0226061	.0344986	.2028516
#3	-.006427	-.010186	.0611670	.0043322	.0251810	.0255917	.2023880
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000020	.0844965	80.54008	.0007102	.0286802	.2554159	.0335749
Stddev	.000018	.0004353	.25394	.0003754	.0002169	.0010127	.0029463
%RSD	92.95914	.5152281	.3153019	52.86095	.7563103	.3964983	8.775404
#1	.000000	.0849990	80.81280	.0007318	.0286807	.2565335	.0325368
#2	-.000035	.0842330	80.31042	.0010744	.0284630	.2551551	.0312881
#3	-.000023	.0842574	80.49703	.0003245	.0288968	.2545591	.0368997
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3267447	5.036458	.0293462	.0009850	295.3199	.0004749	.9102964
Stddev	.0011751	.010788	.0002963	.0004263	1.3291	.0003398	.0024688
%RSD	.3596412	.2141912	1.009661	43.27724	.4500573	71.55068	.2712107
#1	.3274508	5.038029	.0296879	.0011323	296.7401	.0000961	.9131471
#2	.3253882	5.024970	.0291610	.0013180	295.1135	.0005758	.9088903
#3	.3273951	5.046373	.0291897	.0005046	294.1061	.0007529	.9088518
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.569934	.0298742	.0015333	-.000897	-.001124	3.173621	.0129863
Stddev	.030082	.0007343	.0002038	.000402	.000564	.011126	.0022298
%RSD	1.916131	2.458038	13.29021	44.77011	50.13867	.3505831	17.17055
#1	1.570282	.0306975	.0016940	-.001111	-.000569	3.170857	.0113578
#2	1.599841	.0296383	.0013041	-.001147	-.001696	3.185868	.0120735
#3	1.539680	.0292869	.0016017	-.000434	-.001107	3.164137	.0155277

Sample Name: Q1115-08 Acquired: 1/20/2025 12:19:42 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	3.832208	-.013149	.3279942
Stddev	.008923	.001739	.0009921
%RSD	.2328461	13.22646	.3024844
#1	3.834067	-.011615	.3290523
#2	3.840054	-.012792	.3270849
#3	3.822501	-.015039	.3278454

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2441.690	47547.54	9566.039	1619.179	3517.040
Stddev	5.411	147.16	58.905	1.348	10.849
%RSD	.2216040	.3095026	.6157729	.0832397	.3084681
#1	2435.466	47704.79	9498.101	1618.877	3508.290
#2	2445.276	47413.15	9602.862	1620.652	3529.179
#3	2444.328	47524.68	9597.153	1618.008	3513.653

Sample Name: CCV02 Acquired: 1/20/2025 12:29:17 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	4.881309	4.974514	4.803545	4.937099	5.008639	9.721877	9.308882
Stddev	.003193	.036487	.009409	.009517	.011273	.037538	.066802
%RSD	.0654185	.7334708	.1958843	.1927560	.2250633	.3861207	.7176196

#1	4.881751	5.000362	4.800557	4.945681	5.009568	9.716562	9.298171
#2	4.884259	4.990403	4.814085	4.938750	5.019418	9.761789	9.380392
#3	4.877918	4.932777	4.795991	4.926864	4.996930	9.687279	9.248082

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2409762	2.395742	23.59514	.9949478	2.404288	1.227693	4.734512
Stddev	.0013336	.005694	.09975	.0022585	.006228	.001715	.030594
%RSD	.5534239	.2376536	.4227575	.2269922	.2590165	.1396820	.6461844

#1	.2406890	2.393975	23.59045	.9924905	2.401916	1.227706	4.750412
#2	.2424300	2.402109	23.69715	.9954204	2.411353	1.229402	4.699243
#3	.2398096	2.391141	23.49782	.9969326	2.399595	1.225972	4.753882

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.302338	23.83827	2.401135	1.229082	24.26008	2.400535	2.465542
Stddev	.009698	.09187	.004588	.000995	.06860	.011711	.008936
%RSD	.4212145	.3853837	.1910626	.0809938	.2827537	.4878390	.3624521

#1	2.300183	23.74572	2.399809	1.228553	24.26715	2.406121	2.459448
#2	2.312932	23.92944	2.406239	1.228463	24.18822	2.408406	2.461377
#3	2.293900	23.83965	2.397356	1.230231	24.32486	2.387077	2.475800

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.86309	4.758982	5.035927	4.812822	4.698901	4.940364	4.852213
Stddev	.03364	.033320	.010053	.012452	.032786	.037807	.017730
%RSD	.1409733	.7001486	.1996278	.2587302	.6977352	.7652727	.3654097

#1	23.83274	4.751322	5.034815	4.814618	4.699103	4.921959	4.846189
#2	23.85726	4.795465	5.046490	4.824278	4.731586	4.915283	4.872170
#3	23.89926	4.730159	5.026476	4.799569	4.666015	4.983850	4.838279

Sample Name: CCV02 Acquired: 1/20/2025 12:29:17 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	4.707667	4.717398	4.745909
Stddev	.015582	.030108	.060117
%RSD	.3309841	.6382262	1.266707

#1	4.703934	4.711449	4.728450
#2	4.724776	4.750036	4.812823
#3	4.694291	4.690709	4.696454

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2604.099	49878.06	9066.018	1737.502	3756.719
Stddev	6.150	133.21	41.419	10.862	10.590
%RSD	.2361493	.2670784	.4568556	.6251575	.2818849

#1	2606.039	49936.80	9076.158	1740.272	3760.395
#2	2597.214	49971.80	9020.471	1746.711	3744.781
#3	2609.046	49725.57	9101.425	1725.523	3764.980

Sample Name: CCB02 Acquired: 1/20/2025 12:33:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) 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	-.001290	-.001793	-.000572	-.000588	.0009079	.0002331	-.003397
Stddev	.001543	.000211	.000534	.002942	.0003372	.0047057	.000530
%RSD	119.5734	11.77046	93.44470	500.5048	37.14024	2019.113	15.60252

#1	-.002879	-.002037	-.000271	.000956	.0005329	-.005184	-.003488
#2	-.001193	-.001669	-.001189	-.003980	.0011862	.003309	-.002828
#3	.000201	-.001674	-.000255	.001260	.0010047	.002574	-.003877

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000565	-.000045	-.004777	-.000326	.0000304	-.000082	.0060764
Stddev	.0000156	.000064	.007045	.000164	.0000630	.000203	.0019310
%RSD	27.56029	142.7526	147.4954	50.45154	207.4067	247.5484	31.77841

#1	.0000617	.000009	-.012900	-.000337	-.000042	.000141	.0071450
#2	.0000390	-.000115	-.001102	-.000485	.000073	-.000132	.0072369
#3	.0000687	-.000028	-.000328	-.000156	.000060	-.000255	.0038473

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001683	.0062860	-.000242	.0014538	.0062967	-.000856	-.000683
Stddev	.0002532	.0007537	.000137	.0002459	.0066274	.000702	.000274
%RSD	150.4903	11.99054	56.58220	16.91241	105.2522	81.90710	40.06594

#1	.0000042	.0059000	-.000149	.0017360	-.000142	-.000631	-.000637
#2	.0000407	.0071545	-.000179	.0012857	.013098	-.001643	-.000976
#3	.0004599	.0058034	-.000400	.0013398	.005934	-.000295	-.000435

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.054073	.0053301	.0000850	-.000878	.0003696	.0029923	-.004421
Stddev	.036332	.0006687	.0002100	.000563	.0007351	.0020553	.003694
%RSD	67.19146	12.54592	246.9990	64.10878	198.9064	68.68740	83.54167

#1	-.048594	.0060002	.0002393	-.001463	-.000378	.0043411	-.008584
#2	-.092833	.0046628	-.000154	-.000833	.000395	.0040091	-.001537
#3	-.020791	.0053273	.000170	-.000339	.001092	.0006268	-.003142

Sample Name: CCB02 Acquired: 1/20/2025 12:33:26 Type: Unk
Method: NON EPA-6010-200.7(v2491) 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	-.007654	.0015561	.0000169
Stddev	.000708	.0002620	.0000200
%RSD	9.251762	16.83441	118.3238
#1	-.006839	.0015934	.0000321
#2	-.008005	.0017974	-.000006
#3	-.008118	.0012775	.000025

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2711.691	51978.44	9530.727	1830.805	4141.355
Stddev	5.134	125.20	28.370	6.276	5.301
%RSD	.1893377	.2408652	.2976644	.3428142	.1279937
#1	2714.370	51834.43	9501.098	1823.688	4135.281
#2	2714.931	52039.48	9557.642	1835.549	4145.046
#3	2705.771	52061.42	9533.440	1833.179	4143.738

Sample Name: Q1115-11 Acquired: 1/20/2025 12:37:46 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	-.005829	-.008010	1.038752	-.000157	.0031399	.1248996	.1717331
Stddev	.001678	.002132	.002936	.001775	.0010904	.0042827	.0003591
%RSD	28.77986	26.61869	.2825996	1130.657	34.72634	3.428915	.2091213
#1	-.003919	-.008990	1.038967	-.000324	.0022493	.1199563	.1716606
#2	-.006502	-.005564	1.035715	-.001842	.0043559	.1272496	.1721229
#3	-.007066	-.009476	1.041574	.001695	.0028144	.1274927	.1714157
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000006	.0014182	74.33700	.0005347	.0037675	.0243686	.0311575
Stddev	.000019	.0000173	.07444	.0002021	.0002095	.0000418	.0042229
%RSD	328.0809	1.222982	.1001418	37.80306	5.560717	.1717051	13.55324
#1	-.000014	.0014235	74.27921	.0004533	.0039420	.0243285	.0263421
#2	.000016	.0013988	74.31079	.0003859	.0038253	.0244120	.0329011
#3	-.000019	.0014323	74.42100	.0007648	.0035352	.0243655	.0342294
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3447608	3.109588	.0050982	.0012053	292.0144	.0001046	.3655571
Stddev	.0007329	.019256	.0001524	.0003996	1.9419	.0011819	.0029832
%RSD	.2125823	.6192473	2.989854	33.15181	.6650042	1130.041	.8160716
#1	.3447968	3.096859	.0051554	.0012505	292.8748	.0014035	.3686973
#2	.3440106	3.100164	.0049254	.0015803	293.3775	-.000182	.3652131
#3	.3454751	3.131741	.0052138	.0007850	289.7910	-.000908	.3627607
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.526937	.0329005	.0008871	-.002742	-.001506	3.466491	.0080776
Stddev	.066631	.0010104	.0001422	.000439	.000856	.008746	.0025791
%RSD	4.363718	3.071179	16.02566	16.00945	56.80678	.2522989	31.92838
#1	1.599212	.0321617	.0007688	-.002848	-.001942	3.471370	.0087930
#2	1.467952	.0340519	.0010448	-.003118	-.000521	3.471709	.0052164
#3	1.513649	.0324878	.0008475	-.002259	-.002057	3.456394	.0102235

Sample Name: Q1115-11 Acquired: 1/20/2025 12:37:46 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	2.130063	-.013323	.3037293
Stddev	.007098	.000282	.0003008
%RSD	.3332089	2.118288	.0990298
#1	2.136141	-.013082	.3037036
#2	2.122263	-.013633	.3040422
#3	2.131786	-.013255	.3034422

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2474.979	47512.23	9563.967	1642.362	3556.416
Stddev	1.435	98.80	40.653	8.690	2.854
%RSD	.0579932	.2079432	.4250665	.5291290	.0802362
#1	2475.870	47464.04	9596.398	1634.945	3553.308
#2	2475.744	47446.76	9577.144	1640.217	3558.917
#3	2473.323	47625.87	9518.360	1651.924	3557.022

Sample Name: PB166109BL Acquired: 1/20/2025 12:51:04 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	-.001095	-.001123	-.001174	.0004807	-.000241	.0037820	-.002709
Stddev	.001849	.001773	.000965	.0030918	.001203	.0032695	.000393
%RSD	168.8928	157.8973	82.22562	643.2459	499.1926	86.44769	14.51227
#1	.000978	.000853	-.000533	-.001313	.000976	.0071040	-.003067
#2	-.001686	-.001648	-.000704	-.001296	-.001431	.0036743	-.002288
#3	-.002577	-.002574	-.002284	.004051	-.000268	.0005677	-.002772
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000495	-.000095	-.003382	-.000348	.0000193	-.000278	.0035707
Stddev	.0000251	.000096	.006105	.000384	.0001473	.000508	.0050106
%RSD	50.61562	100.9857	180.5042	110.3193	763.3230	182.5312	140.3254
#1	.0000682	-.000191	-.000806	-.000184	.0001840	-.000653	.0050175
#2	.0000593	-.000093	.001012	-.000788	-.000100	.000300	-.002004
#3	.0000210	.000000	-.010353	-.000074	-.000026	-.000482	.007699
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000590	.0148746	.0002886	.0012427	.1134954	-.001160	.0001780
Stddev	.0002178	.0054572	.0000674	.0002456	.0190417	.000706	.0004526
%RSD	368.9583	36.68837	23.35545	19.76843	16.77748	60.86645	254.2107
#1	.0000051	.0085737	.0002496	.0011968	.1352918	-.001924	-.000224
#2	.0002987	.0179467	.0003665	.0015080	.1000923	-.001022	.000668
#3	-.000127	.0181032	.0002498	.0010231	.1051022	-.000533	.000090
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.032905	-.003995	-.000005	.0003425	.0008266	.0015299	-.005247
Stddev	.018496	.000308	.000162	.0004974	.0007613	.0013796	.000823
%RSD	56.21002	7.705093	3018.856	145.2392	92.10319	90.17884	15.68578
#1	-.027428	-.004268	.000108	.0009138	.0014647	.0001141	-.004346
#2	-.053521	-.003662	.000067	.0000055	.0010313	.0028703	-.005436
#3	-.017767	-.004055	-.000191	.0001082	-.000016	.0016052	-.005959

Sample Name: PB166109BL Acquired: 1/20/2025 12:51:04 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	-.008367	.0023522	-.000048
Stddev	.003288	.0013853	.000023
%RSD	39.29655	58.89262	48.52707

#1	-.007970	.0039076	-.000066
#2	-.011836	.0018981	-.000055
#3	-.005296	.0012510	-.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2678.615	53231.71	9695.766	1839.800	4049.026
Stddev	3.804	91.63	25.623	3.830	5.632
%RSD	.1420081	.1721263	.2642661	.2081920	.1390956

#1	2674.222	53190.58	9722.045	1844.220	4042.841
#2	2680.811	53336.70	9670.854	1837.727	4053.858
#3	2680.811	53167.86	9694.400	1837.453	4050.380

Sample Name: PB166068TB Acquired: 1/20/2025 12:55:43 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	-.005688	-.006472	-.000861	.0032660	-.000119	.0040399
Stddev	.002822	.001530	.000334	.0006580	.000488	.0063877
%RSD	49.60554	23.63803	38.79434	20.14760	410.7557	158.1149
#1	-.008359	-.006103	-.000624	.0037157	.000435	-.002560
#2	-.002737	-.005160	-.001243	.0035715	-.000304	.010192
#3	-.005969	-.008152	-.000717	.0025107	-.000487	.004488
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006788	-.000149	-.000179	-.002980	.0019775	-.000168
Stddev	.000617	.000084	.000108	.003568	.0000706	.000070
%RSD	9.092697	56.47159	60.63900	119.7120	3.568050	41.64164
#1	-.007425	-.000087	-.000060	-.001182	.0020112	-.000088
#2	-.006747	-.000245	-.000203	-.007089	.0020248	-.000199
#3	-.006193	-.000115	-.000273	-.000670	.0018964	-.000218
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009881	.0123869	.0006317	.0176520	.0009307	.0009063
Stddev	.0001288	.0027641	.0001349	.0021047	.0002550	.0003141
%RSD	13.03708	22.31456	21.36021	11.92331	27.39913	34.65471
#1	.0011102	.0097797	.0004960	.0193314	.0006449	.0006516
#2	.0008535	.0152848	.0007659	.0183336	.0010123	.0012572
#3	.0010007	.0120961	.0006333	.0152909	.0011349	.0008101
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 300.4569	.0003875	.0006526	-.029192	-.005332	.0002376
Stddev	.7883	.0012386	.0003636	.044625	.000777	.0002752
%RSD	.2623521	319.6679	55.71238	152.8670	14.57977	115.8429
#1	299.6905	.0015968	.0008830	-.080704	-.005813	.0001173
#2	301.2653	-.000878	.0002335	-.004535	-.004435	.0000430
#3	300.4148	.000444	.0008413	-.002336	-.005749	.0005524

Sample Name: PB166068TB Acquired: 1/20/2025 12:55:43 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	.0005225	-.000226	.0012102	.0014612	.0033547	-.003355
Stddev	.0006195	.000387	.0054455	.0014004	.0026466	.000273
%RSD	118.5807	171.5293	449.9691	95.84012	78.89253	8.127807
#1	-.000174	.000218	.0024797	.0012832	.0018045	-.003051
#2	.000730	-.000403	-.004758	.0001584	.0064107	-.003579
#3	.001012	-.000493	.005909	.0029422	.0018490	-.003433

Elem	Sr4077
Units	ppm
Avg	-.000027
Stddev	.000037
%RSD	138.5197
#1	-.000059
#2	.000014
#3	-.000035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2514.198	48794.66	9277.032	1723.636	3609.557
Stddev	3.465	140.17	44.326	7.636	4.437
%RSD	.1378286	.2872694	.4777984	.4430209	.1229339
#1	2513.694	48711.67	9307.677	1716.270	3613.856
#2	2517.888	48715.81	9297.212	1723.121	3609.822
#3	2511.012	48956.50	9226.207	1731.516	3604.993

Sample Name: PB166067TB Acquired: 1/20/2025 13:00:13 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	-.004912	-.007815	-.000848	.0029135	.0003086	.0086848
Stddev	.001473	.001467	.000856	.0018536	.0012575	.0006957
%RSD	29.99735	18.76640	100.9059	63.62311	407.5065	8.009981
#1	-.003470	-.006668	-.001452	.0031404	-.000166	.0092161
#2	-.006415	-.009467	-.001223	.0046431	-.000643	.0089408
#3	-.004851	-.007310	.000131	.0009568	.001734	.0078974
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005512	-.000113	-.000163	-.009859	.0016693	-.000207
Stddev	.000199	.000030	.000025	.007542	.0006039	.000055
%RSD	3.602281	26.70901	15.07423	76.50055	36.17713	26.69361
#1	-.005284	-.000096	-.000183	-.012659	.0018571	-.000143
#2	-.005603	-.000096	-.000136	-.015601	.0009938	-.000235
#3	-.005648	-.000148	-.000169	-.001317	.0021571	-.000242
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003140	.0151823	.0005452	.0030026	.0012189	.0011707
Stddev	.0004469	.0037273	.0000315	.0084618	.0004307	.0001445
%RSD	142.3282	24.55061	5.773664	281.8183	35.33837	12.34107
#1	.0003589	.0194753	.0005618	.0083660	.0007496	.0012795
#2	-.000154	.0133024	.0005650	-.006752	.0015962	.0010068
#3	.000737	.0127693	.0005089	.007394	.0013109	.0012258
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 317.6691	-.001999	.0005828	-.056989	-.006406	.0001845
Stddev	2.4160	.002012	.0001699	.018766	.000494	.0000790
%RSD	.7605310	100.6560	29.15660	32.92983	7.711766	42.82141
#1	320.4514	-.000271	.0006022	-.036622	-.005866	.0001260
#2	316.1021	-.001517	.0007422	-.073581	-.006515	.0001531
#3	316.4537	-.004208	.0004040	-.060765	-.006836	.0002743

Sample Name: PB166067TB Acquired: 1/20/2025 13:00:13 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	.0006316	.0002285	.0003915	.0017621	.0021331	-.003958
Stddev	.0002503	.0001714	.0013369	.0008035	.0027802	.000271
%RSD	39.62432	75.03099	341.4724	45.60215	130.3346	6.838092
#1	.0008347	.0002727	.0008027	.0025798	-.000276	-.003666
#2	.0007080	.0000393	.0014746	.0009736	.005175	-.004201
#3	.0003520	.0003735	-.001103	.0017328	.001500	-.004006

Elem	Sr4077
Units	ppm
Avg	-.000049
Stddev	.000029
%RSD	59.52290
#1	-.000080
#2	-.000022
#3	-.000046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2488.392	48513.60	9506.992	1679.080	3579.472
Stddev	5.427	138.91	28.062	6.343	9.674
%RSD	.2180854	.2863401	.2951750	.3777571	.2702740
#1	2484.844	48521.39	9497.107	1681.956	3573.286
#2	2485.692	48370.96	9538.659	1671.808	3574.510
#3	2494.639	48648.46	9485.210	1683.475	3590.621

Sample Name: PB166109BS Acquired: 1/20/2025 13:04:41 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8050227	2.036698	.9630383	1.995765	.8014981	1.884679
Stddev	.0033377	.013999	.0011831	.006408	.0009366	.005301
%RSD	.4146060	.6873155	.1228543	.3210834	.1168613	.2812478
#1	.8079928	2.052741	.9639831	1.997138	.8011812	1.885046
#2	.8014107	2.026965	.9617113	1.988782	.8007610	1.879204
#3	.8056646	2.030388	.9634205	2.001376	.8025521	1.889786
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1728996	.1901299	.1913941	.9711869	.4041300	.1926355
Stddev	.0008631	.0007377	.0002762	.0115554	.0005188	.0004689
%RSD	.4992007	.3879988	.1443110	1.189822	.1283762	.2433995
#1	.1719324	.1909727	.1916975	.9691738	.4036346	.1930080
#2	.1735915	.1898154	.1911572	.9607703	.4040859	.1921090
#3	.1731749	.1896016	.1913277	.9836166	.4046694	.1927897
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3065504	2.840694	.1824951	1.862938	.4830139	.0744888
Stddev	.0003327	.027463	.0002479	.008803	.0008124	.0001944
%RSD	.1085257	.9667818	.1358233	.4725392	.1682023	.2610223
#1	.3067489	2.818696	.1827736	1.867789	.4838417	.0742644
#2	.3061663	2.831911	.1822988	1.852776	.4822177	.0746053
#3	.3067359	2.871474	.1824128	1.868248	.4829824	.0745968
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.987896	.2799655	.2030578	9.261124	.2667603	.4103036
Stddev	.018685	.0012534	.0011390	.004572	.0010536	.0013503
%RSD	.6253708	.4476831	.5609315	.0493718	.3949738	.3291000
#1	2.967478	.2785183	.2043710	9.256213	.2676478	.4112994
#2	2.992068	.2806826	.2023378	9.261902	.2670372	.4087666
#3	3.004143	.2806957	.2024646	9.265258	.2655958	.4108446

Sample Name: PB166109BS Acquired: 1/20/2025 13:04:41 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6649278	.1827729	F .6915143	5.606022	F -.015271	.1904851
Stddev	.0018719	.0013908	.0039267	.012907	.002033	.0001289
%RSD	.2815237	.7609508	.5678465	.2302423	13.31441	.0676831
#1	.6648477	.1825259	.6893364	5.620538	-.013776	.1904710
#2	.6630971	.1815222	.6891591	5.595836	-.017586	.1906205
#3	.6668384	.1842707	.6960473	5.601693	-.014450	.1903639

Elem	Sr4077
Units	ppm
Avg	.1795081
Stddev	.0002626
%RSD	.1463068
#1	.1796941
#2	.1792077
#3	.1796224

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2669.332	51355.86	9480.603	1789.195	4016.127
Stddev	5.010	215.48	40.128	6.810	7.899
%RSD	.1876753	.4195764	.4232624	.3806446	.1966807
#1	2665.673	51505.64	9441.837	1787.899	4007.212
#2	2675.042	51453.02	9521.966	1796.561	4018.914
#3	2667.281	51108.91	9478.007	1783.126	4022.255

Sample Name: Q1119-01 Acquired: 1/20/2025 13:08:40 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	-.009177	-.010252	.1124186	.0023555	.0040300	.0967475	.5170458
Stddev	.002184	.002578	.0010633	.0029088	.0008075	.0042075	.0011563
%RSD	23.79680	25.14290	.9458278	123.4914	20.03583	4.348952	.2236444
#1	-.009571	-.011866	.1112161	-.000960	.0049333	.1001404	.5162491
#2	-.011137	-.007279	.1128053	.004479	.0033784	.0980625	.5183721
#3	-.006823	-.011611	.1132345	.003547	.0037784	.0920395	.5165161
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000096	.0004667	9.949606	.0012300	.0015538	.0584548	.9058261
Stddev	.000074	.0001053	.019329	.0000293	.0000540	.0005511	.0130443
%RSD	77.27080	22.55885	.1942738	2.379797	3.473278	.9428056	1.440043
#1	-.000177	.0003919	9.961108	.0012045	.0015055	.0578977	.9162736
#2	-.000083	.0004211	9.960421	.0012619	.0016121	.0584669	.8912061
#3	-.000029	.0005871	9.927290	.0012234	.0015439	.0589997	.9099986
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1109096	1.153921	.0134179	.0013796	242.2220	.0005736	.9944036
Stddev	.0005705	.009210	.0001132	.0005041	1.4762	.0008676	.0048620
%RSD	.5143914	.7981187	.8437676	36.53640	.6094515	151.2502	.4889314
#1	.1112667	1.158518	.0134557	.0008418	243.7430	.0014239	1.000018
#2	.1112106	1.159926	.0135074	.0018413	242.1280	-.000310	.991594
#3	.1102517	1.143317	.0132906	.0014557	240.7951	.000607	.991599
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.130096	.2511757	.0014254	.0018293	.0015766	.5115507	.7797278
Stddev	.055065	.0008345	.0002646	.0011083	.0007196	.0046753	.0059091
%RSD	4.872580	.3322552	18.56191	60.58267	45.64053	.9139397	.7578375
#1	1.153690	.2516607	.0015633	.0021846	.0022544	.5076368	.7782203
#2	1.067165	.2516544	.0011204	.0027164	.0016539	.5102875	.7747185
#3	1.169432	.2502121	.0015926	.0005870	.0008215	.5167278	.7862446

Sample Name: Q1119-01 Acquired: 1/20/2025 13:08:40 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	1.542855	-.003040	.0626407
Stddev	.011473	.000914	.0000243
%RSD	.7435946	30.07830	.0387655
#1	1.537733	-.003933	.0626553
#2	1.534836	-.002106	.0626540
#3	1.555997	-.003081	.0626126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2472.270	48868.67	9704.310	1663.518	3602.059
Stddev	1.499	167.73	54.700	7.560	4.537
%RSD	.0606302	.3432324	.5636716	.4544745	.1259474
#1	2472.557	48690.45	9673.038	1654.806	3606.247
#2	2473.605	49023.45	9672.421	1668.358	3602.691
#3	2470.649	48892.13	9767.472	1667.391	3597.240

Sample Name: Q1119-01DUP Acquired: 1/20/2025 13:13:05 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	-.007933	-.007785	.1121818	.0035745	.0036011	.0930629	.5390097
Stddev	.000418	.000709	.0003429	.0003960	.0011446	.0031626	.0028344
%RSD	5.267360	9.109982	.3056483	11.07772	31.78336	3.398324	.5258580
#1	-.007885	-.006994	.1120713	.0033293	.0041382	.0896536	.5422570
#2	-.008372	-.007997	.1119079	.0040313	.0043783	.0959008	.5370317
#3	-.007541	-.008364	.1125663	.0033629	.0022868	.0936342	.5377406
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000091	.0004485	10.10017	.0009267	.0015527	.0584783	.9513421
Stddev	.000023	.0000472	.02658	.0001539	.0002955	.0004743	.0055088
%RSD	25.67723	10.52270	.2631905	16.61000	19.03311	.8110528	.5790577
#1	-.000095	.0003940	10.12599	.0007990	.0017202	.0579928	.9575083
#2	-.000066	.0004775	10.07288	.0010976	.0017264	.0589405	.9469059
#3	-.000113	.0004739	10.10164	.0008836	.0012115	.0585016	.9496122
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1139260	1.172333	.0134725	.0012605	250.6489	.0012231	.9906048
Stddev	.0002720	.014496	.0001810	.0003945	.9375	.0010860	.0062222
%RSD	.2387373	1.236493	1.343449	31.29514	.3740265	88.79142	.6281167
#1	.1138565	1.170914	.0134043	.0016508	250.5099	.0011561	.9962212
#2	.1136955	1.158599	.0133355	.0008620	249.7887	.0023410	.9839163
#3	.1142260	1.187487	.0136777	.0012687	251.6482	.0001721	.9916770
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.133701	.2471354	.0014466	.0018244	.0011427	.5331905	.7847592
Stddev	.022125	.0010210	.0000527	.0003982	.0000705	.0015418	.0008412
%RSD	1.951582	.4131472	3.643143	21.82805	6.169921	.2891662	.1071922
#1	1.156874	.2460968	.0014330	.0014691	.0011222	.5336975	.7855468
#2	1.131432	.2481379	.0014019	.0022549	.0010847	.5344150	.7848578
#3	1.112799	.2471714	.0015047	.0017493	.0012212	.5314591	.7838731

Sample Name: Q1119-01DUP Acquired: 1/20/2025 13:13:05 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	1.543496	-.003966	.0644702
Stddev	.008591	.000707	.0003943
%RSD	.5565622	17.83224	.6115969
#1	1.553258	-.003153	.0649054
#2	1.540138	-.004433	.0641368
#3	1.537091	-.004314	.0643684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2475.218	49120.25	9932.423	1689.916	3595.934
Stddev	.478	36.56	3.073	5.994	3.933
%RSD	.0192919	.0744389	.0309348	.3547218	.1093675
#1	2475.668	49122.78	9934.661	1686.094	3596.374
#2	2474.717	49155.48	9933.688	1696.824	3591.800
#3	2475.270	49082.49	9928.920	1686.828	3599.629

Sample Name: Q1119-01LX5 Acquired: 1/20/2025 13:17:30 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	-.001669	-.001237	.0228238	-.000640	.0006748	.0211442	.1084270
Stddev	.000897	.000180	.0007646	.000359	.0006750	.0020603	.0005669
%RSD	53.73761	14.54437	3.349793	56.10882	100.0162	9.744288	.5227948
#1	-.002668	-.001223	.0234914	-.000322	.0013812	.0214903	.1078231
#2	-.000933	-.001424	.0219897	-.001029	.0000364	.0189327	.1089476
#3	-.001405	-.001065	.0229902	-.000568	.0006069	.0230096	.1085103
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000009	.0001177	2.094555	-.000258	.0002310	.0126253	.1883321
Stddev	.000012	.0000920	.005069	.000240	.0002073	.0003795	.0040142
%RSD	138.8804	78.13218	.2420296	92.88982	89.74612	3.006144	2.131429
#1	-.000023	.0000169	2.089753	-.000438	.0004568	.0121993	.1838461
#2	-.000002	.0001391	2.094057	-.000350	.0001869	.0129273	.1895650
#3	-.000002	.0001971	2.099855	.000014	.0000493	.0127495	.1915852
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0250762	.2613671	.0026851	.0015197	46.59206	.0000102	.1933208
Stddev	.0001511	.0134452	.0002086	.0001387	.22948	.0009904	.0002779
%RSD	.6026839	5.144172	7.767909	9.127585	.4925345	9751.553	.1437581
#1	.0249252	.2555722	.0024506	.0014061	46.78208	.0009093	.1933125
#2	.0250760	.2767380	.0027545	.0014787	46.65699	-.001051	.1936028
#3	.0252274	.2517911	.0028501	.0016743	46.33711	.000173	.1930472
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2006971	.0528257	.0002315	.0008816	.0008049	.1014903	.1499061
Stddev	.0360805	.0012392	.0002117	.0007884	.0009530	.0080614	.0016305
%RSD	17.97761	2.345778	91.42745	89.42823	118.4015	7.942985	1.087682
#1	.2250944	.0516662	.0003481	.0012556	.0005324	.1045285	.1496594
#2	.2177454	.0526795	.0003593	-.000024	.0000178	.0923513	.1484131
#3	.1592515	.0541315	-.000013	.001413	.0018645	.1075911	.1516460

Sample Name: Q1119-01LX5 Acquired: 1/20/2025 13:17:30 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	.3103833	.0021352	.0133426
Stddev	.0034595	.0007049	.0000593
%RSD	1.114595	33.01602	.4445335
#1	.3077291	.0027409	.0132756
#2	.3142959	.0013614	.0133638
#3	.3091250	.0023032	.0133884

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2622.556	53418.51	9701.818	1846.955	3868.657
Stddev	1.528	76.75	65.811	8.787	7.020
%RSD	.0582606	.1436719	.6783351	.4757741	.1814483
#1	2623.000	53329.90	9742.643	1837.999	3867.020
#2	2620.856	53464.09	9736.913	1855.564	3862.600
#3	2623.813	53461.55	9625.898	1847.300	3876.350

Sample Name: Q1119-01MS Acquired: 1/20/2025 13:21:48 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	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8342149	1.965653	1.059793	2.037410	.8296332	2.013946	.7593320
Stddev	.0014983	.003712	.004577	.011212	.0015207	.008093	.0014234
%RSD	.1796077	.1888632	.4318314	.5502947	.1832967	.4018540	.1874575
#1	.8325135	1.968687	1.059380	2.027456	.8282464	2.014269	.7607549
#2	.8353373	1.961513	1.055437	2.035219	.8293939	2.005696	.7579081
#3	.8347939	1.966758	1.064562	2.049556	.8312594	2.021873	.7593331
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1787226	.1944812	11.36686	.4043341	.1991988	.3558525	3.992665
Stddev	.0000243	.0007924	.02579	.0010070	.0006673	.0013418	.024029
%RSD	.0136090	.4074382	.2268540	.2490578	.3349855	.3770695	.6018412
#1	.1787046	.1943383	11.39590	.4046031	.1986780	.3543362	3.995600
#2	.1787128	.1937700	11.34665	.4032199	.1989675	.3563349	3.967302
#3	.1787503	.1953354	11.35803	.4051793	.1999510	.3568864	4.015092
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3173748	3.010843	.5041071	.0746022	251.2145	.2901072	1.182812
Stddev	.0004068	.013056	.0023343	.0001728	2.7943	.0007207	.005600
%RSD	.1281742	.4336206	.4630590	.2315785	1.112334	.2484144	.4734307
#1	.3170597	3.022563	.5042469	.0745490	249.5152	.2903673	1.182987
#2	.3178341	3.013196	.5017060	.0747952	249.6887	.2906618	1.188322
#3	.3172307	2.996771	.5063683	.0744622	254.4395	.2892926	1.177127
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.63883	.5029703	.4360121	.6906626	.1925755	1.230077	6.835637
Stddev	.01842	.0005354	.0012547	.0037574	.0002754	.020877	.040831
%RSD	.1582337	.1064516	.2877676	.5440214	.1430183	1.697176	.5973268
#1	11.63025	.5024622	.4345635	.6882514	.1922764	1.220927	6.818374
#2	11.65997	.5029193	.4367571	.6887445	.1926316	1.215338	6.806273
#3	11.62627	.5035294	.4367158	.6949918	.1928186	1.253967	6.882265

Sample Name: Q1119-01MS Acquired: 1/20/2025 13:21:48 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	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.610671	.1969525	.2570064
Stddev	.007682	.0013263	.0005655
%RSD	.4769672	.6733963	.2200196
#1	1.614871	.1975527	.2575479
#2	1.601804	.1978725	.2564197
#3	1.615338	.1954322	.2570516

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2471.214	49156.49	9466.633	1716.594	3573.952
Stddev	4.276	67.80	15.384	7.337	6.530
%RSD	.1730371	.1379344	.1625040	.4273995	.1827063
#1	2476.109	49123.23	9451.614	1711.985	3578.697
#2	2468.205	49234.51	9465.927	1712.744	3576.654
#3	2469.329	49111.75	9482.357	1725.055	3566.505

Sample Name: Q1119-01MSD Acquired: 1/20/2025 13:25:57 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	.8232317	1.956923	1.045525	2.009860	.8273507	2.015988	.7386762
Stddev	.0043079	.010499	.001931	.009695	.0029650	.003272	.0021168
%RSD	.5232866	.5365300	.1846886	.4823550	.3583690	.1623258	.2865630
#1	.8198578	1.968250	1.043851	2.011788	.8303693	2.019112	.7378711
#2	.8217531	1.955004	1.045087	1.999346	.8244424	2.012585	.7410774
#3	.8280841	1.947516	1.047638	2.018446	.8272403	2.016267	.7370802
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1780259	.1916701	11.23906	.4064869	.1973064	.3508115	3.936122
Stddev	.0007261	.0007251	.05103	.0008700	.0008073	.0005808	.019094
%RSD	.4078338	.3782969	.4540786	.2140325	.4091686	.1655470	.4850949
#1	.1773435	.1912291	11.18477	.4074350	.1971307	.3502828	3.948778
#2	.1787889	.1912741	11.28605	.4063007	.1966014	.3507185	3.945428
#3	.1779453	.1925069	11.24636	.4057251	.1981871	.3514331	3.914159
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3106710	3.001453	.4967988	.0747333	253.7859	.2891747	1.184286
Stddev	.0017946	.017212	.0017622	.0001705	1.0129	.0013022	.010461
%RSD	.5776388	.5734552	.3547095	.2281448	.3990968	.4503260	.8833120
#1	.3094957	2.981691	.4956531	.0746776	253.8522	.2890605	1.183024
#2	.3127367	3.013161	.4959153	.0749246	254.7641	.2879334	1.195320
#3	.3097807	3.009509	.4988280	.0745975	252.7416	.2905303	1.174512
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.53239	.4987011	.4399718	.6795877	.1889742	1.247980	6.550984
Stddev	.05450	.0032487	.0006722	.0015537	.0008868	.009017	.032641
%RSD	.4725585	.6514433	.1527715	.2286251	.4692545	.7225213	.4982535
#1	11.58892	.4961390	.4396011	.6784055	.1879505	1.251770	6.541207
#2	11.48018	.5023552	.4395666	.6790100	.1894676	1.237687	6.524349
#3	11.52809	.4976092	.4407477	.6813475	.1895046	1.254483	6.587395

Sample Name: Q1119-01MSD Acquired: 1/20/2025 13:25:57 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	1.550666	.1911677	.2513618
Stddev	.002847	.0004811	.0008022
%RSD	.1835979	.2516409	.3191562
#1	1.553650	.1913603	.2507931
#2	1.547979	.1915227	.2522794
#3	1.550369	.1906202	.2510129

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2517.618	49163.91	9557.429	1684.656	3682.140
Stddev	4.728	92.88	41.948	9.195	8.275
%RSD	.1877879	.1889262	.4389014	.5458365	.2247263
#1	2517.830	49058.13	9600.444	1688.738	3684.073
#2	2522.236	49232.13	9516.637	1674.126	3689.278
#3	2512.787	49201.48	9555.206	1691.104	3673.070

Sample Name: CCV03 Acquired: 1/20/2025 13:35:00 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	4.929396	5.016580	4.801998	5.033482	5.070192	9.682971	9.207992
Stddev	.002611	.018847	.008498	.001382	.003451	.044699	.073767
%RSD	.0529597	.3756963	.1769719	.0274470	.0680625	.4616218	.8011208
#1	4.926655	5.014763	4.810674	5.033970	5.070198	9.654211	9.292231
#2	4.931853	4.998706	4.793690	5.031922	5.066738	9.734468	9.176803
#3	4.929681	5.036269	4.801629	5.034553	5.073640	9.660235	9.154942
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2341155	2.402299	23.42106	.9756322	2.401237	1.230371	4.646246
Stddev	.0007552	.003318	.05938	.0002471	.002120	.000183	.010320
%RSD	.3225926	.1381200	.2535202	.0253285	.0882731	.0148796	.2221140
#1	.2349295	2.405985	23.41005	.9759050	2.403134	1.230493	4.635163
#2	.2339798	2.399552	23.48518	.9754234	2.398949	1.230160	4.655579
#3	.2334374	2.401358	23.36796	.9755681	2.401626	1.230459	4.647997
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.274434	23.49170	2.399425	1.195354	23.78900	2.379610	2.409676
Stddev	.008607	.04419	.002550	.000955	.12790	.005913	.004074
%RSD	.3784026	.1881229	.1062652	.0799022	.5376506	.2484790	.1690633
#1	2.271491	23.52390	2.401884	1.195902	23.64638	2.383796	2.411286
#2	2.284126	23.50990	2.396793	1.195908	23.82710	2.382187	2.412699
#3	2.267685	23.44132	2.399599	1.194251	23.89353	2.372846	2.405043
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.57662	4.644602	5.049728	4.795426	4.658014	4.850205	4.834064
Stddev	.12917	.012149	.004002	.007770	.014548	.045421	.006714
%RSD	.5478804	.2615819	.0792423	.1620290	.3123141	.9364821	.1388964
#1	23.43798	4.657490	5.050369	4.801004	4.652091	4.801811	4.841723
#2	23.69358	4.642957	5.045445	4.786551	4.674589	4.856891	4.829194
#3	23.59829	4.633359	5.053370	4.798723	4.647363	4.891913	4.831274

Sample Name: CCV03 Acquired: 1/20/2025 13:35:00 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	4.773845	4.680312	4.685271
Stddev	.010492	.022790	.016182
%RSD	.2197736	.4869351	.3453796
#1	4.780695	4.663377	4.697017
#2	4.761766	4.706224	4.691982
#3	4.779074	4.671336	4.666813

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2610.177	51702.04	9341.868	1766.625	3770.476
Stddev	1.424	92.73	51.990	.717	3.396
%RSD	.0545729	.1793521	.5565219	.0405732	.0900749
#1	2609.426	51600.40	9292.866	1765.809	3767.360
#2	2611.820	51723.70	9336.335	1767.155	3774.096
#3	2609.285	51782.03	9396.403	1766.911	3769.973

Sample Name: CCB03 Acquired: 1/20/2025 13:39:11 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	-.000431	-.001875	-.000430	-.001529	.0006760	-.007936	-.004510
Stddev	.002914	.001692	.000321	.001767	.0002971	.001963	.001237
%RSD	676.3991	90.24355	74.61610	115.5949	43.94328	24.73576	27.42800

#1	-.001386	-.001008	-.000118	-.000432	.0008309	-.009051	-.005159
#2	-.002748	-.003825	-.000759	-.000586	.0008637	-.005669	-.005288
#3	.002841	-.000792	-.000412	-.003567	.0003335	-.009087	-.003084

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000005	-.000013	-.000263	-.000291	.0002801	.0000436	.0050736
Stddev	.000016	.000023	.007355	.000033	.0000351	.0001562	.0045476
%RSD	304.1556	178.1921	2797.897	11.27579	12.54650	358.3989	89.63324

#1	.000002	-.000035	-.002073	-.000327	.0003173	.0002177	.0090453
#2	-.000024	-.000014	.007829	-.000262	.0002754	-.000003	.0001128
#3	.000006	.000011	-.006544	-.000285	.0002475	-.000084	.0060626

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004394	.0066552	-.000092	.0014588	-.005560	.0013686	-.000805
Stddev	.0003109	.0112421	.000425	.0002473	.002734	.0007854	.000276
%RSD	70.75799	168.9220	462.1604	16.94837	49.17666	57.38632	34.34902

#1	.0007558	.0161821	-.000542	.0013872	-.003725	.0015404	-.000776
#2	.0004283	.0095281	-.000037	.0012553	-.008702	.0020538	-.000544
#3	.0001342	-.005745	.000303	.0017340	-.004253	.0005115	-.001095

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.057483	.0065323	.0002130	-.000325	.0004022	.0031746	-.004455
Stddev	.049822	.0003418	.0003120	.000587	.0004363	.0034453	.003416
%RSD	86.67293	5.232138	146.4902	180.5236	108.4790	108.5266	76.68365

#1	-.100957	.0065519	-.000073	.000340	.0008505	.0028500	-.000589
#2	-.068377	.0068638	.000167	-.000546	-.000021	.0067708	-.005711
#3	-.003115	.0061811	.000545	-.000769	.000377	-.000097	-.007066

Sample Name: CCB03 Acquired: 1/20/2025 13:39:11 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	-.007669	.0006840	.0000111
Stddev	.001841	.0001792	.0000248
%RSD	24.00619	26.19545	223.7302
#1	-.008377	.0005047	.0000323
#2	-.005579	.0008630	.0000172
#3	-.009051	.0006844	-.000016

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2728.892	52713.67	9777.475	1858.784	4138.379
Stddev	5.643	119.21	52.254	4.129	5.903
%RSD	.2068028	.2261437	.5344325	.2221493	.1426288
#1	2722.531	52670.98	9835.990	1858.568	4131.566
#2	2730.848	52621.68	9735.471	1854.767	4141.959
#3	2733.298	52848.34	9760.964	1863.017	4141.611

Sample Name: Q1119-01A Acquired: 1/20/2025 13:43:32 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	.8250473	1.958215	1.051715	2.013202	.8233233	1.944241	.7104334
Stddev	.0022611	.023139	.005168	.010061	.0057008	.008355	.0022263
%RSD	.2740592	1.181643	.4913885	.4997683	.6924170	.4297257	.3133696
#1	.8246511	1.936710	1.046820	2.008020	.8226508	1.936371	.7079254
#2	.8230105	1.955235	1.051208	2.006788	.8179886	1.943342	.7111986
#3	.8274804	1.982699	1.057118	2.024798	.8293306	1.953009	.7121761
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1795904	.1927909	10.92339	.3982328	.1979633	.3536599	3.671823
Stddev	.0001214	.0008494	.00256	.0004332	.0010283	.0010830	.019563
%RSD	.0675862	.4405696	.0233972	.1087849	.5194661	.3062135	.5327800
#1	.1795161	.1919601	10.92506	.3979490	.1970624	.3530597	3.650011
#2	.1797305	.1927549	10.92465	.3987314	.1977438	.3530099	3.677643
#3	.1795246	.1936577	10.92044	.3980179	.1990836	.3549100	3.687815
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3015706	2.877888	.5003081	.0723814	228.6517	.2787581	1.153751
Stddev	.0009411	.002936	.0016714	.0005895	1.4949	.0026688	.003549
%RSD	.3120492	.1020234	.3340785	.8144605	.6537888	.9574001	.3076068
#1	.3010217	2.878873	.4989465	.0720004	229.3647	.2766914	1.150358
#2	.3010330	2.874586	.4998045	.0720835	226.9337	.2778118	1.153456
#3	.3026572	2.880205	.5021735	.0730604	229.6565	.2817712	1.157438
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.76016	.5102856	.4336826	.6845420	.1824237	1.126017	6.785066
Stddev	.07164	.0016594	.0028127	.0019909	.0005165	.009916	.028880
%RSD	.6658034	.3251959	.6485623	.2908353	.2831589	.8806338	.4256410
#1	10.72853	.5084030	.4314576	.6826481	.1818746	1.124790	6.761835
#2	10.70977	.5109176	.4327462	.6843604	.1824967	1.116772	6.775963
#3	10.84217	.5115361	.4368441	.6866174	.1828999	1.136490	6.817401

Sample Name: Q1119-01A Acquired: 1/20/2025 13:43:32 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	1.590674	.1833759	.2443022
Stddev	.007546	.0009483	.0005358
%RSD	.4743628	.5171290	.2193290
#1	1.583078	.1824745	.2437179
#2	1.590775	.1832882	.2444182
#3	1.598168	.1843649	.2447705

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2489.574	50539.48	9353.004	1744.560	3603.381
Stddev	8.807	30.82	28.182	6.538	10.612
%RSD	.3537737	.0609842	.3013182	.3747546	.2944907
#1	2495.541	50513.50	9325.689	1745.990	3611.780
#2	2493.723	50531.41	9351.341	1737.425	3606.909
#3	2479.459	50573.54	9381.980	1750.264	3591.455

Sample Name: Q1103-01 Acquired: 1/20/2025 13:47:40 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	.0413174	-.001676	.5774507	-.029996	.0033448	115.7900	.4396106
Stddev	.0009693	.001641	.0030650	.000706	.0012421	.1068	.0007169
%RSD	2.346050	97.86010	.5307867	2.354072	37.13559	.0922781	.1630668

#1	.0414951	-.003168	.5743979	-.030038	.0023878	115.7000	.4404383
#2	.0402716	.000081	.5805278	-.029270	.0028981	115.9081	.4391986
#3	.0421856	-.001942	.5774265	-.030680	.0047484	115.7618	.4391949

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081813	.0019186	13.18505	.1894661	.0936630	.3158289	195.7255
Stddev	.0000987	.0002510	.01991	.0006435	.0002873	.0021303	.6016
%RSD	1.205933	13.08468	.1510054	.3396323	.3067575	.6745235	.3073499

#1	.0080758	.0018493	13.16455	.1901872	.0939947	.3136470	196.3637
#2	.0081969	.0021969	13.18629	.1892609	.0934917	.3159362	195.1689
#3	.0082713	.0017094	13.20431	.1889502	.0935026	.3179036	195.6439

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.248413	29.03793	.1803034	.0033948	2.026574	.2737063	1.833906
Stddev	.008590	.06290	.0002992	.0001888	.011920	.0012752	.003744
%RSD	.2021923	.2166165	.1659403	5.560447	.5881833	.4659106	.2041531

#1	4.251777	28.96584	.1800130	.0033033	2.039922	.2734956	1.832578
#2	4.254812	29.08162	.1802867	.0036118	2.016992	.2725496	1.838132
#3	4.238650	29.06633	.1806106	.0032692	2.022807	.2750738	1.831006

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.835601	.0751242	.0036673	.0560107	3.039524	8.343315	6.271252
Stddev	.060135	.0029279	.0003374	.0005596	.003141	.010351	.020018
%RSD	.6806001	3.897400	9.199940	.9990089	.1033496	.1240595	.3192091

#1	8.904625	.0784133	.0040540	.0564269	3.038597	8.336024	6.294288
#2	8.794537	.0728023	.0034331	.0553746	3.043024	8.338758	6.261379
#3	8.807639	.0741569	.0035148	.0562306	3.036949	8.355162	6.258087

Sample Name: Q1103-01 Acquired: 1/20/2025 13:47:40 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	.8290286	.1170604	-.107548
Stddev	.0064639	.0003283	.000536
%RSD	.7796927	.2804526	.4979256
#1	.8329996	.1168391	-.108110
#2	.8325163	.1174376	-.107043
#3	.8215700	.1169046	-.107490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2974.024	57291.18	11218.46	2017.237	3761.452
Stddev	7.528	165.40	32.37	4.120	7.839
%RSD	.2531242	.2887081	.2885736	.2042275	.2083954
#1	2978.677	57181.62	11255.82	2016.520	3769.267
#2	2978.055	57481.44	11198.66	2021.668	3753.589
#3	2965.338	57210.46	11200.90	2013.522	3761.499

Sample Name: Q1110-01 Acquired: 1/20/2025 13:51:46 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	.0672395	-.018182	.7620305	-.058753	-.000676	157.6562	.6717667
Stddev	.0007904	.001608	.0023211	.001275	.002684	.3165	.0023933
%RSD	1.175439	8.844998	.3045914	2.170185	397.0111	.2007417	.3562754

#1	.0680778	-.019869	.7605073	-.060137	-.003377	157.4285	.6710295
#2	.0665080	-.016666	.7608824	-.058495	.001990	158.0176	.6744420
#3	.0671327	-.018010	.7647019	-.057626	-.000641	157.5225	.6698287

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107401	.0076949	29.41816	.4356712	.2117672	.5425756	349.4038
Stddev	.0000738	.0005742	.07071	.0008116	.0007277	.0027087	3.1761
%RSD	.6867113	7.462626	.2403452	.1862873	.3436440	.4992274	.9090016

#1	.0108123	.0070601	29.36800	.4349642	.2110964	.5408758	352.5314
#2	.0106649	.0081782	29.49903	.4354920	.2125409	.5456993	346.1814
#3	.0107431	.0078463	29.38746	.4365574	.2116643	.5411518	349.4986

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.193750	51.18772	.3642122	.0033282	6.459833	.5721778	.9698092
Stddev	.021138	.22556	.0003018	.0006522	.044709	.0016603	.0062311
%RSD	.2938448	.4406571	.0828732	19.59616	.6921042	.2901675	.6425050

#1	7.179766	50.93918	.3645596	.0039082	6.509168	.5702741	.9645364
#2	7.218067	51.37942	.3640140	.0026222	6.421996	.5729336	.9766852
#3	7.183416	51.24458	.3640631	.0034542	6.448335	.5733257	.9682059

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.287946	.1222433	.0018596	.4689160	6.597804	8.184132	6.676002
Stddev	.061342	.0064842	.0001900	.0021712	.012377	.059368	.009490
%RSD	.7401351	5.304362	10.21770	.4630141	.1875895	.7254076	.1421443

#1	8.358777	.1285495	.0020633	.4669319	6.589892	8.202282	6.683349
#2	8.252776	.1155946	.0016871	.4712352	6.612067	8.117808	6.679370
#3	8.252285	.1225858	.0018285	.4685808	6.591453	8.232308	6.665288

Sample Name: Q1110-01 Acquired: 1/20/2025 13:51:46 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	.8994131	.1664784	-.200907
Stddev	.0010223	.0010473	.003346
%RSD	.1136596	.6291014	1.665442
#1	.9002957	.1672695	-.204002
#2	.8996508	.1668749	-.197356
#3	.8982930	.1652907	-.201364

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3163.835	60929.13	12215.43	2126.433	3661.289
Stddev	5.456	193.16	68.64	3.631	4.058
%RSD	.1724593	.3170297	.5618857	.1707368	.1108293
#1	3157.724	60894.75	12291.08	2128.874	3659.391
#2	3168.218	61137.17	12157.13	2128.164	3665.949
#3	3165.563	60755.46	12198.07	2122.261	3658.529

Sample Name: Q1115-01DUP Acquired: 1/20/2025 13:55:55 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0694209	-.003584	.5573433	-.021586	.0076632	80.81018
Stddev	.0026508	.002271	.0018747	.002034	.0010038	.08671
%RSD	3.818469	63.37272	.3363650	9.424648	13.09819	.1073025
#1	.0714690	-.000985	.5565859	-.023428	.0087484	80.72244
#2	.0703669	-.005189	.5594782	-.019402	.0067680	80.81225
#3	.0664269	-.004577	.5559658	-.021927	.0074733	80.89583
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6264285	.0064034	.0008500	17.30971	.2555428	.0524807
Stddev	.0012262	.0000348	.0001498	.04594	.0008888	.0000885
%RSD	.1957447	.5439828	17.62648	.2653732	.3478214	.1686664
#1	.6251393	.0063980	.0009956	17.27155	.2545659	.0523815
#2	.6265662	.0064407	.0008580	17.29687	.2563039	.0525516
#3	.6275800	.0063717	.0006963	17.36070	.2557586	.0525091
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1640211	152.9367	1.433417	13.95320	.0917800	.0032544
Stddev	.0010440	1.1735	.001569	.03665	.0005412	.0004321
%RSD	.6365046	.7673147	.1094641	.2626949	.5896541	13.27849
#1	.1652118	151.6895	1.432378	13.95148	.0916985	.0030565
#2	.1635883	154.0191	1.432650	13.91743	.0923573	.0037501
#3	.1632630	153.1014	1.435222	13.99068	.0912842	.0029567
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.439560	.2859304	.6553738	6.210270	.0630715	.0051648
Stddev	.013628	.0016162	.0025382	.050754	.0028636	.0000925
%RSD	.9466550	.5652360	.3872851	.8172639	4.540247	1.791593
#1	1.430419	.2841455	.6542792	6.153888	.0606301	.0051693
#2	1.455223	.2863512	.6582757	6.252310	.0662235	.0050701
#3	1.433038	.2872946	.6535667	6.224611	.0623609	.0052550

Sample Name: Q1115-01DUP Acquired: 1/20/2025 13:55:55 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134151	1.836573	F 10.72421	3.467860	2.012907	.0479328
Stddev	.0007918	.001694	.05954	.010793	.006643	.0007848
%RSD	5.902186	.0922268	.5551471	.3112228	.3300062	1.637346
#1	.0139408	1.834720	10.66155	3.469998	2.014163	.0472345
#2	.0125045	1.836958	10.78004	3.477423	2.005726	.0487822
#3	.0138001	1.838041	10.73103	3.456158	2.018833	.0477817

Elem	Sr4077
Units	ppm
Avg	-.039802
Stddev	.001117
%RSD	2.805137
#1	-.038786
#2	-.040997
#3	-.039623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2921.189	56758.55	11063.25	1984.709	3841.934
Stddev	2.720	148.92	57.39	7.751	1.668
%RSD	.0931075	.2623677	.5187659	.3905268	.0434071
#1	2919.304	56835.57	11000.50	1987.784	3842.065
#2	2924.307	56586.90	11113.08	1975.893	3840.205
#3	2919.955	56853.19	11076.16	1990.451	3843.532

Sample Name: Q1115-01LX5 Acquired: 1/20/2025 14:00:01 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	.0112622	-.001623	.1127635	-.005302	.0006151	17.81738	.1320719
Stddev	.0011325	.002713	.0009036	.002252	.0002368	.02841	.0007259
%RSD	10.05542	167.1606	.8012756	42.48121	38.50532	.1594787	.5496075
#1	.0110444	.001387	.1124560	-.004355	.0003514	17.84216	.1328768
#2	.0102545	-.002376	.1137807	-.003678	.0006841	17.82362	.1318718
#3	.0124878	-.003880	.1120539	-.007874	.0008097	17.78636	.1314671
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015334	-.000440	3.844402	.0559028	.0103204	.0372415	33.37368
Stddev	.0000303	.000032	.006408	.0004925	.0002544	.0005707	.22886
%RSD	1.972964	7.340605	.1666732	.8809562	2.465513	1.532427	.6857451
#1	.0015059	-.000427	3.846077	.0553531	.0106133	.0366484	33.63716
#2	.0015286	-.000477	3.849805	.0560514	.0101931	.0372892	33.25951
#3	.0015658	-.000416	3.837323	.0563038	.0101547	.0377868	33.22436
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3203898	3.089801	.0185309	.0016679	.3034931	.0639098	.1446948
Stddev	.0010478	.009248	.0000648	.0003995	.0058537	.0012570	.0008915
%RSD	.3270238	.2993116	.3498545	23.95472	1.928761	1.966765	.6161052
#1	.3207016	3.086232	.0185027	.0017423	.3011083	.0630325	.1436686
#2	.3212463	3.082869	.0186051	.0020249	.3101627	.0653498	.1452778
#3	.3192216	3.100302	.0184850	.0012363	.2992083	.0633471	.1451380
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.300958	.0097048	.0008700	.0012551	.4083147	2.417579	.6733732
Stddev	.007433	.0003142	.0001188	.0006599	.0010809	.014451	.0005807
%RSD	.5713167	3.237793	13.65184	52.57751	.2647098	.5977593	.0862417
#1	1.292935	.0096217	.0009960	.0018753	.4095624	2.433114	.6739972
#2	1.307609	.0094404	.0007601	.0013283	.4076648	2.415087	.6728486
#3	1.302331	.0100522	.0008539	.0005616	.4077170	2.404536	.6732737

Sample Name: Q1115-01LX5 Acquired: 1/20/2025 14:00:01 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	.3856089	.0095212	-.008217
Stddev	.0046270	.0003336	.000052
%RSD	1.199911	3.503406	.6300514
#1	.3849800	.0091429	-.008268
#2	.3905182	.0097732	-.008220
#3	.3813286	.0096476	-.008164

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2788.897	52758.36	10119.61	1852.169	4097.307
Stddev	5.770	170.35	58.03	11.718	9.332
%RSD	.2068925	.3228911	.5734094	.6326519	.2277604
#1	2783.911	52725.11	10168.55	1864.548	4089.296
#2	2787.564	52607.09	10055.51	1841.248	4095.070
#3	2795.217	52942.89	10134.77	1850.712	4107.554

Sample Name: Q1115-01MS Acquired: 1/20/2025 14:04:16 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	.7941683	1.947049	1.572174	1.697643	.7163720	87.79184	.8683771
Stddev	.0036059	.011373	.002928	.003013	.0019482	.04854	.0008255
%RSD	.4540422	.5841216	.1862426	.1775046	.2719472	.0552940	.0950586

#1	.7901397	1.946853	1.575166	1.701116	.7168858	87.84729	.8682134
#2	.7970937	1.935775	1.569314	1.696088	.7180117	87.77119	.8692722
#3	.7952715	1.958519	1.572044	1.695725	.7142184	87.75703	.8676458

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1677553	.1918005	22.02250	.6434184	.2542191	.4571670	176.1074
Stddev	.0012086	.0001961	.06729	.0011814	.0002839	.0015281	1.1295
%RSD	.7204479	.1022560	.3055481	.1836047	.1116593	.3342627	.6413562

#1	.1674761	.1920011	22.01393	.6428914	.2544594	.4583341	176.1926
#2	.1667107	.1916092	21.95990	.6447715	.2542919	.4554374	177.1919
#3	.1690791	.1917912	22.09366	.6425922	.2539059	.4577296	174.9378

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.830587	17.54884	.5854595	.0681178	4.135989	.5679524	.9570120
Stddev	.003119	.08017	.0006898	.0002923	.031966	.0012778	.0022410
%RSD	.1704083	.4568634	.1178154	.4290760	.7728818	.2249865	.2341674

#1	1.829890	17.54303	.5855095	.0683667	4.131075	.5683567	.9545072
#2	1.827875	17.47173	.5861230	.0681908	4.170128	.5665213	.9577019
#3	1.833996	17.63176	.5847462	.0677959	4.106764	.5689791	.9588270

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.24266	.2890129	.3745708	.6905547	1.755512	2.984724	9.936945
Stddev	.15008	.0004723	.0008221	.0010814	.002833	.032743	.006073
%RSD	.9846122	.1634325	.2194881	.1565943	.1613653	1.097035	.0611187

#1	15.23516	.2893832	.3746133	.6916409	1.758782	2.977558	9.936068
#2	15.39635	.2884810	.3753709	.6905449	1.753842	3.020457	9.931358
#3	15.09647	.2891745	.3737283	.6894783	1.753910	2.956158	9.943409

Sample Name: Q1115-01MS Acquired: 1/20/2025 14:04:16 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	2.427540	.2205101	.1196438
Stddev	.007055	.0004545	.0010413
%RSD	.2906373	.2061313	.8703476

#1	2.421518	.2201279	.1194473
#2	2.425799	.2203896	.1187147
#3	2.435303	.2210127	.1207694

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2937.814	57392.96	11037.86	2025.685	3757.999
Stddev	1.457	148.39	71.31	4.899	1.835
%RSD	.0496004	.2585498	.6460712	.2418614	.0488338

#1	2939.213	57275.32	11027.22	2027.482	3758.325
#2	2936.305	57343.89	11113.89	2020.141	3759.650
#3	2937.925	57559.67	10972.46	2029.432	3756.023

Sample Name: Q1115-01MSD Acquired: 1/20/2025 14:08:14 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	.7809870	1.936900	1.559189	1.658335	.7132366	88.48876	.8884233
Stddev	.0031292	.009828	.002165	.004701	.0005578	.14002	.0055523
%RSD	.4006741	.5073954	.1388491	.2834863	.0782015	.1582333	.6249632
#1	.7835297	1.925791	1.557389	1.653966	.7127041	88.64369	.8822798
#2	.7819389	1.944461	1.561591	1.663309	.7138166	88.45132	.8899070
#3	.7774924	1.940448	1.558588	1.657729	.7131892	88.37126	.8930830
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691723	.1895902	22.25148	.6357764	.2521194	.4532944	176.4309
Stddev	.0006701	.0003995	.01039	.0006189	.0003339	.0016687	1.6833
%RSD	.3960775	.2107015	.0466853	.0973384	.1324455	.3681311	.9540596
#1	.1692483	.1897435	22.24150	.6364818	.2519493	.4549027	174.8290
#2	.1698011	.1898903	22.25070	.6355226	.2525042	.4534091	176.2786
#3	.1684674	.1891368	22.26223	.6353248	.2519049	.4515712	178.1852
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.875319	17.72267	.5807768	.0680131	4.095584	.5712363	.9494823
Stddev	.011269	.01542	.0010308	.0002347	.020496	.0009535	.0018904
%RSD	.6009350	.0869868	.1774934	.3451492	.5004475	.1669232	.1990969
#1	1.862425	17.73940	.5819321	.0677436	4.080931	.5716022	.9477043
#2	1.880249	17.70904	.5799511	.0681729	4.086816	.5719528	.9492746
#3	1.883284	17.71958	.5804472	.0681230	4.119006	.5701540	.9514679
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.23564	.2907395	.3756428	.6891444	1.800302	3.570096	9.851857
Stddev	.15587	.0013399	.0003237	.0011379	.010399	.042558	.010499
%RSD	1.023033	.4608708	.0861668	.1651113	.5776426	1.192072	.1065670
#1	15.06755	.2893437	.3755127	.6878481	1.791179	3.543919	9.856318
#2	15.26396	.2908594	.3760113	.6896071	1.798102	3.547168	9.839864
#3	15.37540	.2920155	.3754045	.6899781	1.811626	3.619203	9.859388

Sample Name: Q1115-01MSD Acquired: 1/20/2025 14:08:14 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	2.382176	.2251411	.1243032
Stddev	.006424	.0022122	.0003004
%RSD	.2696714	.9825635	.2416955
#1	2.382699	.2234913	.1241744
#2	2.375506	.2242771	.1246466
#3	2.388323	.2276549	.1240887

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2966.162	57776.16	10897.10	2061.498	3802.356
Stddev	6.361	36.94	52.01	5.053	2.729
%RSD	.2144636	.0639439	.4773161	.2450905	.0717684
#1	2959.491	57747.06	10863.70	2059.988	3802.661
#2	2966.834	57817.72	10870.57	2067.133	3799.487
#3	2972.160	57763.69	10957.03	2057.372	3804.919

Sample Name: Q1115-01A Acquired: 1/20/2025 14:12:11 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	.8044162	2.027141	1.580274	1.717751	.7345496	89.58746
Stddev	.0042322	.015570	.003792	.006254	.0051530	.12979
%RSD	.5261175	.7680990	.2399645	.3640737	.7015207	.1448729
#1	.8011730	2.030179	1.584339	1.724206	.7376576	89.44762
#2	.8092036	2.040969	1.579654	1.717327	.7373897	89.70405
#3	.8028720	2.010276	1.576831	1.711720	.7286014	89.61071
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8746822	.1704680	.1945330	22.26201	.6515773	.2568963
Stddev	.0009225	.0006094	.0006206	.07495	.0011142	.0005670
%RSD	.1054695	.3574655	.3190278	.3366814	.1710063	.2207195
#1	.8750413	.1711692	.1949521	22.22836	.6515541	.2574391
#2	.8753712	.1701684	.1948269	22.34789	.6527030	.2569422
#3	.8736342	.1700665	.1938201	22.20978	.6504749	.2563078
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4586128	176.4753	1.842862	17.78189	.5920996	.0695587
Stddev	.0033435	.7867	.004431	.05491	.0009960	.0005606
%RSD	.7290456	.4457896	.2404504	.3088210	.1682173	.8058744
#1	.4621558	175.6145	1.842149	17.71958	.5926605	.0689203
#2	.4581696	177.1572	1.847607	17.80285	.5926887	.0697855
#3	.4555130	176.6541	1.838831	17.82324	.5909496	.0699703
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.169746	.5752546	.9626292	15.49093	.2881196	.3833063
Stddev	.015693	.0033508	.0048332	.05199	.0011973	.0012316
%RSD	.3763450	.5824912	.5020838	.3355945	.4155577	.3213023
#1	4.155136	.5752054	.9624226	15.43215	.2868048	.3845980
#2	4.167768	.5719286	.9675624	15.53089	.2891472	.3831756
#3	4.186333	.5786297	.9579026	15.50975	.2884068	.3821452

Sample Name: Q1115-01A Acquired: 1/20/2025 14:12:11 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	.7021094	1.820259	4.866938	F 10.02200	2.424452	.2251085
Stddev	.0010476	.000391	.048806	.03467	.012115	.0014503
%RSD	.1492033	.0214965	1.002807	.3459476	.4996951	.6442507
#1	.7026845	1.820567	4.810584	10.04482	2.429399	.2248986
#2	.7027434	1.819819	4.894705	10.03907	2.433309	.2266523
#3	.7009003	1.820390	4.895526	9.98210	2.410646	.2237746

Elem	Sr4077
Units	ppm
Avg	.1229281
Stddev	.0010874
%RSD	.8845945
#1	.1241382
#2	.1226132
#3	.1220328

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2939.936	57270.75	10967.50	2005.807	3774.278
Stddev	4.680	78.77	25.41	6.499	5.502
%RSD	.1591919	.1375422	.2316985	.3240168	.1457754
#1	2935.367	57361.59	10939.94	2002.951	3770.945
#2	2939.720	57229.36	10972.55	2001.225	3771.261
#3	2944.720	57221.31	10990.01	2013.245	3780.629

Sample Name: Q1118-01 Acquired: 1/20/2025 14:16:09 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112281	-.010386	.0804787	-.036205	.0008137	88.66821
Stddev	.0029582	.004930	.0026293	.002283	.0016095	.10386
%RSD	26.34679	47.47002	3.267043	6.306829	197.7995	.1171338
#1	.0140146	-.007004	.0835148	-.038339	.0026502	88.55176
#2	.0081238	-.016043	.0789561	-.033797	.0001428	88.70159
#3	.0115458	-.008112	.0789654	-.036479	-.000352	88.75127
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4050194	.0057950	-.000355	36.86295	.2078478	.1633995
Stddev	.0017207	.0001260	.000057	.03810	.0001954	.0004192
%RSD	.4248415	2.174068	16.08396	.1033629	.0940151	.2565263
#1	.4047092	.0056555	-.000419	36.82679	.2077557	.1635774
#2	.4068741	.0059006	-.000334	36.90273	.2080722	.1637004
#3	.4034749	.0058288	-.000311	36.85933	.2077154	.1629207
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8344710	231.2042	2.171973	49.68448	.3331148	.0042368
Stddev	.0004887	1.2362	.007197	.18467	.0011617	.0001657
%RSD	.0585596	.5346732	.3313615	.3716776	.3487407	3.910929
#1	.8344104	232.2588	2.174341	49.49274	.3343347	.0042722
#2	.8349872	231.5100	2.177688	49.69957	.3329880	.0043820
#3	.8340155	229.8439	2.163890	49.86115	.3320217	.0040563
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.828288	.3422044	.3765528	19.94011	.0698428	.0043854
Stddev	.047869	.0018370	.0002497	.14526	.0021136	.0000697
%RSD	.4870522	.5368155	.0663139	.7284702	3.026174	1.589622
#1	9.882327	.3411886	.3763892	20.07430	.0721566	.0044433
#2	9.811334	.3410996	.3764289	19.96015	.0693581	.0044049
#3	9.791204	.3443250	.3768402	19.78587	.0680137	.0043080

Sample Name: Q1118-01 Acquired: 1/20/2025 14:16:09 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000006	5.585064	4.634099	F 10.51383	F 14.28265	.1242062
Stddev	.000494	.008454	.009820	.05962	.08049	.0006476
%RSD	8481.761	.1513646	.2119080	.5670584	.5635589	.5214169
#1	.000542	5.586205	4.645123	10.56789	14.36696	.1247775
#2	-.000417	5.592889	4.630885	10.52371	14.27437	.1243384
#3	-.000142	5.576098	4.626289	10.44989	14.20662	.1235026

Elem	Sr4077
Units	ppm
Avg	-.160755
Stddev	.001005
%RSD	.6254782
#1	-.161634
#2	-.160973
#3	-.159659

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3060.591	57751.18	11489.67	2007.569	3775.424
Stddev	2.644	79.14	66.26	7.864	6.079
%RSD	.0863964	.1370320	.5767223	.3917067	.1610114
#1	3062.043	57813.45	11560.01	2016.027	3770.811
#2	3057.539	57777.98	11480.57	2006.199	3773.148
#3	3062.192	57662.13	11428.43	2000.480	3782.312

Sample Name: PB166095BL Acquired: 1/20/2025 14:20:13 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	-.002279	-.000206	-.000715	.0007329	.0000950	-.000191	-.004402
Stddev	.001681	.001103	.000477	.0010949	.0009069	.007243	.000535
%RSD	73.76554	534.8037	66.63316	149.3942	954.6684	3796.874	12.16404

#1	-.003823	.000268	-.000553	.0017739	.0008211	-.008516	-.004724
#2	-.002525	-.001467	-.001252	-.000409	-.000922	.004666	-.003784
#3	-.000488	.000580	-.000341	.000834	.000385	.003277	-.004699

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000381	-.000038	-.006028	-.000086	-.000013	.0001266	.0069944
Stddev	.0000387	.000056	.003341	.000087	.000144	.0004105	.0023572
%RSD	101.4858	146.9210	55.42636	101.9345	1115.034	324.2657	33.70133

#1	.0000814	-.000031	-.007086	-.000138	-.000125	-.000133	.0067680
#2	.0000260	-.000097	-.002286	-.000135	-.000063	.000600	.0047585
#3	.0000070	.000014	-.008712	.000015	.000150	-.000087	.0094566

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003615	.0045796	-.000206	.0017142	-.031581	-.000777	-.000936
Stddev	.0000734	.0058386	.000187	.0002173	.001240	.000483	.000166
%RSD	20.31534	127.4929	90.59724	12.67449	3.927836	62.12121	17.75495

#1	.0003987	.0113177	.000001	.0015909	-.032941	-.000657	-.001019
#2	.0004089	.0014065	-.000360	.0019650	-.030512	-.001308	-.001043
#3	.0002769	.0010146	-.000259	.0015866	-.031289	-.000365	-.000744

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005910	-.004970	-.000062	-.000424	.0005506	.0088837	-.005143
Stddev	.0193648	.000067	.000414	.000234	.0004725	.0078093	.001773
%RSD	3276.765	1.341463	667.7267	55.17461	85.81744	87.90576	34.47363

#1	-.014156	-.004929	-.000315	-.000566	.0001373	.0071974	-.003976
#2	.022521	-.004934	.000416	-.000154	.0010658	.0173984	-.004270
#3	-.006592	-.005047	-.000287	-.000552	.0004488	.0020553	-.007183

Sample Name: PB166095BL Acquired: 1/20/2025 14:20:13 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	-.004976	-.000366	-.000061
Stddev	.004757	.000302	.000049
%RSD	95.58721	82.44661	80.59416
#1	-.001556	-.000018	-.000106
#2	-.002965	-.000542	-.000069
#3	-.010408	-.000538	-.000008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2699.371	51757.93	9805.493	1807.634	4105.392
Stddev	7.844	54.13	24.150	11.149	7.173
%RSD	.2905705	.1045923	.2462859	.6167466	.1747244
#1	2690.564	51721.52	9787.240	1796.479	4098.367
#2	2701.946	51820.14	9796.361	1818.776	4105.105
#3	2705.604	51732.14	9832.876	1807.645	4112.705

Sample Name: CCV04 Acquired: 1/20/2025 14:38:31 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.898089	5.011331	4.803601	4.991123	5.085956	9.793941	9.337167
Stddev	.018510	.022157	.002244	.017366	.016648	.018395	.009611
%RSD	.3778940	.4421332	.0467215	.3479395	.3273417	.1878237	.1029293
#1	4.878832	4.993811	4.804455	4.974160	5.069574	9.815170	9.326117
#2	4.899688	5.003946	4.801056	4.990344	5.085436	9.782699	9.341807
#3	4.915748	5.036238	4.805294	5.008866	5.102859	9.783956	9.343577
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2379044	2.407979	23.64866	.9914161	2.415590	1.233227	4.696536
Stddev	.0009146	.001441	.05237	.0014026	.002524	.001760	.034231
%RSD	.3844508	.0598582	.2214381	.1414719	.1044790	.1427315	.7288508
#1	.2389593	2.408203	23.69079	.9925694	2.415850	1.232257	4.706747
#2	.2373338	2.409295	23.66516	.9918242	2.417974	1.232164	4.724499
#3	.2374200	2.406439	23.59003	.9898548	2.412947	1.235258	4.658361
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.288523	23.71230	2.404796	1.215822	23.87726	2.403848	2.471700
Stddev	.009815	.08045	.000775	.001464	.05422	.003412	.008769
%RSD	.4288943	.3392592	.0322372	.1203747	.2270599	.1419456	.3547903
#1	2.295315	23.80458	2.405608	1.216721	23.81757	2.405949	2.461820
#2	2.292984	23.65694	2.404064	1.216613	23.92344	2.399911	2.478560
#3	2.277269	23.67538	2.404715	1.214134	23.89078	2.405685	2.474719
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.99226	4.709632	5.137266	4.797407	4.692564	4.925381	4.809199
Stddev	.15500	.017763	.011844	.007852	.013633	.026663	.002499
%RSD	.6460622	.3771533	.2305431	.1636660	.2905263	.5413453	.0519561
#1	23.93263	4.728429	5.126245	4.802895	4.706749	4.898022	4.808269
#2	24.16822	4.693126	5.135764	4.788413	4.691383	4.951289	4.807298
#3	23.87592	4.707340	5.149789	4.800912	4.679560	4.926832	4.812029

Sample Name: CCV04 Acquired: 1/20/2025 14:38:31 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.677877	4.727173	4.758635
Stddev	.010280	.019235	.043210
%RSD	.2197492	.4069116	.9080305
#1	4.684464	4.743524	4.804605
#2	4.666032	4.732015	4.752447
#3	4.683134	4.705979	4.718852

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2659.621	51561.67	9349.075	1763.399	3865.046
Stddev	1.401	41.67	45.476	1.644	6.259
%RSD	.0526662	.0808177	.4864253	.0932477	.1619366
#1	2658.177	51526.59	9298.750	1764.823	3858.286
#2	2660.974	51550.68	9387.223	1763.775	3866.215
#3	2659.711	51607.73	9361.253	1761.599	3870.639

Sample Name: CCB04 Acquired: 1/20/2025 14:43:02 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001505	-.000425	.0000007	-.000382	-.000171	.0003068	-.005059
Stddev	.001290	.001481	.0011166	.001909	.001023	.0063742	.001031
%RSD	85.72126	348.1497	167312.6	499.0267	600.0068	2077.768	20.38039

#1	-.000444	.000676	-.001031	-.000808	-.000461	-.001648	-.003945
#2	-.002941	-.002109	-.000153	-.002042	-.001017	.007429	-.005980
#3	-.001130	.000157	.001186	.001703	.000967	-.004861	-.005251

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000641	.0000095	-.004447	-.000235	-.000031	.0000587	.0023846
Stddev	.0000056	.0001089	.007737	.000364	.000062	.0000728	.0004620
%RSD	8.722606	1146.412	173.9845	154.5021	203.4021	123.8987	19.37590

#1	.0000665	.0000714	-.005988	-.000182	.000019	-.000024	.0022633
#2	.0000682	.0000733	.003945	-.000623	-.000010	.000111	.0028952
#3	.0000578	-.000116	-.011298	.000098	-.000101	.000090	.0019953

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004278	.0140609	-.000121	.0017054	-.035553	-.001000	-.000736
Stddev	.0002823	.0054678	.000180	.0003402	.007172	.000780	.000168
%RSD	65.97602	38.88637	148.1682	19.94834	20.17307	78.00179	22.83418

#1	.0006377	.0085205	-.000192	.0015425	-.042039	-.001895	-.000880
#2	.0005389	.0194530	.000083	.0014773	-.027850	-.000640	-.000775
#3	.0001069	.0142091	-.000255	.0020964	-.036771	-.000466	-.000551

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010797	.0051084	.0000498	-.000635	.0004680	.0013745	-.004006
Stddev	.016695	.0001679	.0002413	.000703	.0005634	.0028199	.001559
%RSD	154.6327	3.287460	484.4565	110.6245	120.3713	205.1556	38.91237

#1	-.024378	.0050617	-.000226	.000007	.0004274	.0003244	-.003553
#2	-.015855	.0052947	.000223	-.000527	.0010506	.0045687	-.005741
#3	.007843	.0049687	.000152	-.001386	-.000074	-.000770	-.002724

Sample Name: CCB04 Acquired: 1/20/2025 14:43:02 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.008043	-.000000	.0000580
Stddev	.003684	.000414	.0000266
%RSD	45.79985	115106.1	45.91692
#1	-.007317	.000453	.0000859
#2	-.012036	-.000096	.0000553
#3	-.004777	-.000359	.0000328

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2732.414	52513.49	9862.295	1829.467	4174.566
Stddev	5.888	400.83	44.816	13.624	9.036
%RSD	.2154802	.7632895	.4544216	.7446962	.2164584
#1	2727.854	52143.74	9819.076	1818.574	4164.570
#2	2730.328	52939.46	9908.554	1844.743	4176.974
#3	2739.061	52457.26	9859.254	1825.085	4182.155

Sample Name: PB166095BS Acquired: 1/20/2025 14:47:23 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	.8108770	2.037023	.9691320	2.033374	.8164910	1.875433
Stddev	.0036985	.006520	.0025253	.004297	.0019644	.004935
%RSD	.4561142	.3200509	.2605761	.2113224	.2405935	.2631436

#1	.8149055	2.044482	.9663147	2.036786	.8161042	1.881046
#2	.8076350	2.032413	.9711920	2.028548	.8147487	1.873482
#3	.8100905	2.034173	.9698894	2.034788	.8186200	1.871772

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1742834	.1902099	.1936974	.9636972	.4000108	.1944906
Stddev	.0006701	.0005753	.0004361	.0048979	.0013117	.0008078
%RSD	.3844833	.3024680	.2251499	.5082420	.3279239	.4153382

#1	.1748520	.1904940	.1934053	.9687957	.4011711	.1936436
#2	.1735446	.1895478	.1934884	.9590282	.3985875	.1945756
#3	.1744536	.1905880	.1941987	.9632675	.4002738	.1952525

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3081731	2.841741	.1839849	1.858536	.4884463	.0747134
Stddev	.0003874	.010947	.0006947	.010560	.0009942	.0007617
%RSD	.1257025	.3852293	.3775854	.5682103	.2035490	1.019557

#1	.3079370	2.846618	.1843330	1.869629	.4878632	.0749601
#2	.3079621	2.829203	.1831850	1.848604	.4878813	.0753212
#3	.3086202	2.849401	.1844367	1.857375	.4895942	.0738589

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.775859	.2801319	.2015690	9.305826	.2756817	.4133771
Stddev	.012312	.0034300	.0011525	.038537	.0002854	.0012183
%RSD	.4435338	1.224404	.5717788	.4141133	.1035074	.2947144

#1	2.764228	.2789752	.2028902	9.344762	.2760027	.4124991
#2	2.774593	.2774299	.2010467	9.305014	.2754567	.4128643
#3	2.788754	.2839907	.2007701	9.267701	.2755858	.4147680

Sample Name: PB166095BS Acquired: 1/20/2025 14:47:23 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	.6749503	.1833634	F .6800832	5.824102	F -.015955	.1889942
Stddev	.0002410	.0003993	.0025542	.005942	.000924	.0014788
%RSD	.0357003	.2177933	.3755734	.1020283	5.789166	.7824738
#1	.6747577	.1838245	.6791042	5.826854	-.015000	.1877618
#2	.6752205	.1831379	.6781633	5.817283	-.016022	.1885869
#3	.6748728	.1831279	.6829821	5.828169	-.016843	.1906340

Elem	Sr4077
Units	ppm
Avg	.1813792
Stddev	.0003935
%RSD	.2169565
#1	.1817903
#2	.1810060
#3	.1813413

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2675.217	52630.17	9631.319	1860.037	3983.560
Stddev	5.574	99.70	29.392	5.760	7.723
%RSD	.2083575	.1894443	.3051693	.3096706	.1938641
#1	2681.167	52559.96	9613.297	1860.034	3991.684
#2	2674.369	52744.30	9665.236	1865.798	3982.684
#3	2670.116	52586.26	9615.425	1854.278	3976.313

Sample Name: Q1113-01 Acquired: 1/20/2025 14:51:23 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	.0003174	-.002968	.0133079	-.001793	.0009614	.1731430
Stddev	.0015019	.001650	.0010099	.001085	.0014968	.0078238
%RSD	473.2152	55.59666	7.588637	60.52267	155.6863	4.518700
#1	.0009566	-.001067	.0133739	-.002990	.0026700	.1814631
#2	.0013939	-.003800	.0142832	-.000873	.0003324	.1659344
#3	-.001398	-.004036	.0122667	-.001517	-.000118	.1720316
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1763374	.0000837	.0003602	149.5932	.0059221	.0022303
Stddev	.0011047	.0000285	.0001577	.4767	.0002890	.0001823
%RSD	.6264899	34.07770	43.79344	.3186783	4.880114	8.174203
#1	.1766742	.0000785	.0001895	149.8123	.0059698	.0020393
#2	.1772345	.0000581	.0005005	149.9209	.0061843	.0024025
#3	.1751034	.0001145	.0003906	149.0463	.0056122	.0022489
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0160926	1.100063	.4648385	60.41164	.0417341	.0015296
Stddev	.0006100	.010977	.0013300	.30535	.0003020	.0000646
%RSD	3.790294	.9978801	.2861172	.5054563	.7236091	4.221626
#1	.0167851	1.102652	.4663644	60.53493	.0413855	.0015628
#2	.0156348	1.088023	.4642256	60.63607	.0419162	.0014551
#3	.0158581	1.109515	.4639254	60.06392	.0419006	.0015707
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	557.2975	.0027255	.3575871	34.88380	.3550611	.0044844
Stddev	10.1681	.0004826	.0016410	.25609	.0029534	.0001510
%RSD	1.824543	17.70508	.4588940	.7341152	.8318062	3.366999
#1	546.2252	.0032796	.3580211	34.72656	.3559270	.0044634
#2	566.2166	.0024994	.3557728	34.74553	.3574847	.0043449
#3	559.4507	.0023975	.3589675	35.17930	.3517715	.0046447

Sample Name: Q1113-01 Acquired: 1/20/2025 14:51:23 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	-.001830	.0028437	F 15.48206	F 11.89770	F 161.0533	-.007710
Stddev	.001168	.0007584	.07804	.01049	.4434	.000510
%RSD	63.82332	26.66890	.5040845	.0881818	.2753132	6.613463
#1	-.003167	.0032611	15.43790	11.90165	160.6107	-.007123
#2	-.001010	.0033018	15.43611	11.90564	161.0516	-.007968
#3	-.001312	.0019683	15.57217	11.88580	161.4975	-.008040

Elem	Sr4077
Units	ppm
Avg	.8959341
Stddev	.0017594
%RSD	.1963759
#1	.8964614
#2	.8973695
#3	.8939713

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2447.533	47629.91	9586.548	1690.201	3380.104
Stddev	10.132	29.36	76.536	6.485	4.032
%RSD	.4139873	.0616513	.7983672	.3836631	.1192948
#1	2457.471	47616.75	9543.690	1691.173	3384.733
#2	2447.911	47663.55	9541.042	1696.145	3377.355
#3	2437.217	47609.43	9674.910	1683.285	3378.225

Sample Name: Q1113-01DUP Acquired: 1/20/2025 14:55:43 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	.0024425	-.000675	.0134820	-.001632	.0016515	.1739816
Stddev	.0010345	.002046	.0013907	.001646	.0016726	.0062419
%RSD	42.35582	303.2229	10.31544	100.8669	101.2780	3.587708
#1	.0031290	-.002471	.0120041	.000267	.0035341	.1712950
#2	.0012526	.001552	.0136770	-.002517	.0003366	.1811170
#3	.0029459	-.001105	.0147649	-.002646	.0010839	.1695327
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1763269	.0001276	.0002399	149.5555	.0061356	.0024498
Stddev	.0006360	.0000177	.0001013	.4764	.0002818	.0001388
%RSD	.3606689	13.85239	42.22297	.3185203	4.593690	5.665971
#1	.1764414	.0001274	.0001588	150.0910	.0064453	.0023407
#2	.1756414	.0001454	.0002074	149.1788	.0058941	.0024027
#3	.1768978	.0001100	.0003534	149.3968	.0060674	.0026060
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0161562	1.106642	.4628931	60.28102	.0419981	.0015201
Stddev	.0003457	.011580	.0007593	.23585	.0002805	.0000804
%RSD	2.139585	1.046419	.1640346	.3912430	.6679810	5.292228
#1	.0157801	1.119394	.4630682	60.52631	.0417571	.0015722
#2	.0164601	1.103747	.4620615	60.26083	.0423060	.0014274
#3	.0162283	1.096783	.4635496	60.05592	.0419310	.0015606
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	575.3051	.0038844	.3621986	35.82723	.3479126	.0043563
Stddev	1.0085	.0016502	.0006583	.11561	.0006920	.0003304
%RSD	.1753039	42.48398	.1817548	.3226927	.1988990	7.585095
#1	576.3812	.0054111	.3627563	35.90153	.3487000	.0045074
#2	575.1526	.0041085	.3614724	35.88614	.3474012	.0045842
#3	574.3814	.0021335	.3623672	35.69403	.3476366	.0039773

Sample Name: Q1113-01DUP Acquired: 1/20/2025 14:55:43 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	-.002387	.0031590	F 15.93095	F 11.82554	F 162.3581	-.007345
Stddev	.000797	.0007656	.05889	.00889	.2833	.000408
%RSD	33.39580	24.23453	.3696416	.0751402	.1745112	5.554512
#1	-.003230	.0028367	15.99457	11.83449	162.2310	-.007153
#2	-.001645	.0026072	15.91995	11.81672	162.1606	-.007069
#3	-.002286	.0040330	15.87834	11.82540	162.6828	-.007814

Elem	Sr4077
Units	ppm
Avg	.9015824
Stddev	.0027045
%RSD	.2999759
#1	.9043235
#2	.8989160
#3	.9015076

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2423.826	47289.62	9755.231	1653.051	3359.286
Stddev	5.156	108.83	15.675	7.851	4.756
%RSD	.2127216	.2301384	.1606881	.4749618	.1415922
#1	2429.725	47181.02	9743.169	1646.820	3363.745
#2	2421.574	47289.15	9772.950	1661.870	3359.835
#3	2420.179	47398.68	9749.575	1650.464	3354.279

Sample Name: Q1113-01LX5 Acquired: 1/20/2025 15:00:04 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	-.000068	-.002058	.0015206	.0002406	-.000835	.0383963
Stddev	.001175	.002148	.0004218	.0022155	.001041	.0044518
%RSD	1733.686	104.4005	27.73889	920.6234	124.6773	11.59444
#1	-.001416	-.001607	.0014726	.0010943	-.000482	.0361884
#2	.000472	-.004395	.0011248	.0019024	-.000016	.0435205
#3	.000741	-.000170	.0019643	-.002275	-.002007	.0354799
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0329313	.0000332	.0001261	31.27408	.0010550	.0005339
Stddev	.0010446	.0000291	.0001131	.13438	.0002632	.0001127
%RSD	3.172079	87.70291	89.66323	.4296952	24.94526	21.10946
#1	.0341368	.0000092	.0002327	31.42613	.0008083	.0004625
#2	.0323640	.0000655	.0001379	31.22488	.0013320	.0004753
#3	.0322931	.0000248	.0000076	31.17124	.0010247	.0006638
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034214	.2284826	.0984229	12.65530	.0084946	.0013053
Stddev	.0004089	.0010667	.0009501	.04689	.0002029	.0001922
%RSD	11.95143	.4668488	.9652792	.3705177	2.388114	14.72631
#1	.0030209	.2292075	.0995059	12.70646	.0085831	.0013114
#2	.0034050	.2272577	.0977298	12.64506	.0086382	.0011100
#3	.0038382	.2289824	.0980330	12.61437	.0082626	.0014943
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	116.6341	.0003206	.0702767	6.800971	.0706164	.0008252
Stddev	.7283	.0014867	.0014722	.045456	.0001672	.0002041
%RSD	.6244032	463.7405	2.094865	.6683762	.2367577	24.73236
#1	116.2043	-.000904	.0693166	6.788816	.0708050	.0008171
#2	117.4750	-.000109	.0719717	6.851269	.0705577	.0010332
#3	116.2231	.001975	.0695418	6.762829	.0704865	.0006252

Sample Name: Q1113-01LX5 Acquired: 1/20/2025 15:00:04 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	-.001745	.0013374	3.155043	2.248210	F 30.67502	-.000428
Stddev	.000715	.0003932	.025591	.009908	.04029	.001166
%RSD	40.95812	29.40060	.8111067	.4407058	.1313409	272.5698
#1	-.001109	.0017696	3.133279	2.237175	30.68908	.000736
#2	-.001607	.0012418	3.183235	2.256344	30.70640	-.000424
#3	-.002519	.0010008	3.148614	2.251110	30.62959	-.001595

Elem	Sr4077
Units	ppm
Avg	.1838528
Stddev	.0006906
%RSD	.3756313
#1	.1846439
#2	.1835439
#3	.1833705

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2601.088	50205.49	10020.32	1736.944	3766.004
Stddev	3.095	364.87	26.14	15.406	3.243
%RSD	.1189939	.7267556	.2608675	.8869328	.0861027
#1	2598.272	50458.66	9993.62	1748.324	3765.913
#2	2600.589	49787.25	10021.49	1719.413	3762.809
#3	2604.402	50370.55	10045.86	1743.094	3769.292

Sample Name: Q1113-01MS Acquired: 1/20/2025 15:04:20 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9774978	2.156173	1.071847	2.389141	.9451904	2.259446
Stddev	.0045644	.016798	.002201	.007585	.0063960	.005396
%RSD	.4669457	.7790759	.2053852	.3174643	.6766854	.2388053
#1	.9724350	2.170057	1.071611	2.382677	.9386614	2.265675
#2	.9812979	2.160962	1.069773	2.387254	.9454653	2.256447
#3	.9787605	2.137501	1.074157	2.397491	.9514445	2.256216
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3690292	.1975629	.2173236	147.0663	.4305929	.2208283
Stddev	.0013915	.0006778	.0005241	.4144	.0006821	.0006052
%RSD	.3770633	.3430809	.2411426	.2817904	.1584092	.2740550
#1	.3704893	.1973171	.2167262	147.4431	.4312660	.2201498
#2	.3677184	.1970422	.2175385	147.1334	.4306106	.2213124
#3	.3688798	.1983293	.2177060	146.6225	.4299021	.2210228
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3395800	4.280650	.6418126	61.01252	.5798671	.0861264
Stddev	.0011725	.028018	.0030466	.23334	.0022349	.0003068
%RSD	.3452724	.6545338	.4746924	.3824397	.3854133	.3561852
#1	.3383978	4.304570	.6444578	61.25882	.5777819	.0857791
#2	.3395995	4.287554	.6424986	60.98394	.5795931	.0863606
#3	.3407425	4.249825	.6384815	60.79478	.5822264	.0862394
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	572.5391	.3106252	.5745763	46.93220	.5958539	.4644229
Stddev	2.2720	.0002763	.0021699	.15378	.0031202	.0014730
%RSD	.3968317	.0889544	.3776486	.3276550	.5236579	.3171629
#1	571.2076	.3108559	.5720718	47.09490	.5929315	.4631346
#2	571.2472	.3107007	.5757638	46.91243	.5954900	.4641053
#3	575.1625	.3103190	.5758932	46.78926	.5991401	.4660288

Sample Name: Q1113-01MS Acquired: 1/20/2025 15:04:20 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7118544	.1924033	F 16.60456	F 18.02127	F 155.7141	.2092558
Stddev	.0012191	.0006985	.05889	.03010	.1958	.0012769
%RSD	.1712538	.3630265	.3546905	.1670225	.1257423	.6102014
#1	.7111000	.1925720	16.67226	17.98661	155.4899	.2097802
#2	.7112024	.1930020	16.57629	18.04088	155.8012	.2101871
#3	.7132608	.1916359	16.56513	18.03631	155.8513	.2078003

Elem	Sr4077
Units	ppm
Avg	1.087875
Stddev	.007482
%RSD	.6877571
#1	1.081998
#2	1.085330
#3	1.096298

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2410.500	47987.95	9869.344	1638.329	3343.291
Stddev	9.092	56.43	8.976	2.613	12.694
%RSD	.3771870	.1175928	.0909523	.1594849	.3796912
#1	2419.792	47929.21	9871.785	1640.994	3356.028
#2	2410.084	48041.75	9876.848	1638.219	3343.207
#3	2401.622	47992.88	9859.400	1635.772	3330.640

Sample Name: Q1113-01MSD Acquired: 1/20/2025 15:08:34 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9524784	2.117801	1.062110	2.330097	.9255710	2.224442
Stddev	.0034713	.013617	.003597	.002879	.0016511	.006725
%RSD	.3644519	.6429984	.3386451	.1235547	.1783882	.3023186
#1	.9491953	2.127511	1.059587	2.332308	.9253790	2.231107
#2	.9561115	2.102235	1.060515	2.331141	.9273098	2.224562
#3	.9521284	2.123657	1.066229	2.326841	.9240244	2.217658
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3708662	.1981227	.2144210	146.4973	.4271545	.2187109
Stddev	.0013596	.0008531	.0000790	.3984	.0013753	.0001535
%RSD	.3666079	.4305804	.0368475	.2719449	.3219696	.0701933
#1	.3694063	.1981643	.2143481	146.1386	.4277660	.2188308
#2	.3720962	.1972495	.2144100	146.4271	.4255795	.2185379
#3	.3710961	.1989541	.2145049	146.9261	.4281180	.2187640
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3357240	4.265770	.6422111	60.64145	.5739182	.0849692
Stddev	.0005884	.023303	.0033442	.22463	.0008152	.0004377
%RSD	.1752760	.5462712	.5207280	.3704246	.1420354	.5150805
#1	.3354320	4.246092	.6383967	60.50212	.5741223	.0846980
#2	.3364013	4.291502	.6435976	60.52163	.5746119	.0854741
#3	.3353387	4.259716	.6446391	60.90058	.5730203	.0847356
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	563.4694	.3083057	.5703969	46.67911	.5993475	.4597999
Stddev	4.8536	.0039606	.0045998	.24970	.0040757	.0006970
%RSD	.8613775	1.284625	.8064274	.5349251	.6800274	.1515900
#1	557.8722	.3037384	.5730061	46.56052	.5983739	.4605453
#2	566.0216	.3103882	.5650857	46.96601	.5958467	.4591644
#3	566.5145	.3107907	.5730989	46.51081	.6038218	.4596900

Sample Name: Q1113-01MSD Acquired: 1/20/2025 15:08:34 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7039717	.1912471	F 16.39974	F 17.76226	F 151.8957	.2093473
Stddev	.0011935	.0007195	.03150	.01324	.0362	.0017728
%RSD	.1695402	.3762301	.1920609	.0745507	.0238282	.8468059
#1	.7050119	.1904253	16.37222	17.77753	151.9299	.2073105
#2	.7026687	.1917643	16.43409	17.75393	151.8578	.2105429
#3	.7042346	.1915515	16.39291	17.75533	151.8993	.2101883

Elem	Sr4077
Units	ppm
Avg	1.075452
Stddev	.017286
%RSD	1.607358
#1	1.078453
#2	1.056862
#3	1.091041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2454.988	48153.62	9865.953	1667.053	3401.522
Stddev	3.314	91.74	42.739	6.360	1.416
%RSD	.1349798	.1905246	.4331979	.3814938	.0416265
#1	2452.526	48070.94	9874.004	1661.427	3399.888
#2	2453.681	48252.32	9904.094	1673.953	3402.307
#3	2458.756	48137.61	9819.761	1665.780	3402.372

Sample Name: Q1113-01A Acquired: 1/20/2025 15:12:45 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	.9513711	2.122291	1.063626	2.330511	.9246077	2.205495
Stddev	.0060128	.003136	.003823	.020140	.0039131	.047617
%RSD	.6320181	.1477791	.3594078	.8641901	.4232198	2.159036
#1	.9453049	2.118674	1.062799	2.317449	.9220195	2.196619
#2	.9514792	2.124254	1.060284	2.320379	.9226943	2.162940
#3	.9573291	2.123944	1.067795	2.353705	.9291094	2.256926
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3713464	.2011608	.2144914	146.2499	.4226248	.2184072
Stddev	.0054512	.0021055	.0002222	1.9342	.0022877	.0007240
%RSD	1.467960	1.046697	.1035778	1.322558	.5413142	.3315034
#1	.3687637	.1992726	.2144600	145.5920	.4212630	.2180093
#2	.3676666	.2007783	.2142866	144.7304	.4252660	.2179694
#3	.3776090	.2034313	.2147276	148.4273	.4213453	.2192429
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3358928	4.188011	.6448700	60.20984	.5740846	.0850768
Stddev	.0017886	.020639	.0102887	.81411	.0020446	.0006807
%RSD	.5324890	.4928035	1.595465	1.352120	.3561547	.8001325
#1	.3340323	4.165089	.6394571	60.03385	.5732691	.0854058
#2	.3360464	4.193823	.6384178	59.49812	.5725735	.0855305
#3	.3375996	4.205120	.6567352	61.09755	.5764111	.0842941
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	547.6308	.3064296	.5682350	45.79842	.6116322	.4582813
Stddev	3.5190	.0044434	.0011493	.14094	.0076102	.0020694
%RSD	.6425877	1.450044	.2022549	.3077352	1.244245	.4515562
#1	547.7993	.3044222	.5695032	45.95602	.6061590	.4567445
#2	551.0625	.3033441	.5672623	45.68447	.6084150	.4574651
#3	544.0305	.3115224	.5679395	45.75479	.6203227	.4606344

Sample Name: Q1113-01A Acquired: 1/20/2025 15:12:45 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	.7055392	.1909638	F 15.90000	F 18.05344	F 152.9689	.2082230
Stddev	.0002541	.0027291	.05908	.05744	.3710	.0030192
%RSD	.0360088	1.429105	.3715484	.3181930	.2425208	1.449988
#1	.7058324	.1895072	15.95281	18.02640	152.6909	.2074028
#2	.7053836	.1892720	15.83620	18.01450	152.8257	.2056987
#3	.7054016	.1941121	15.91098	18.11941	153.3902	.2115676

Elem	Sr4077
Units	ppm
Avg	1.073723
Stddev	.007453
%RSD	.6940931
#1	1.079752
#2	1.065390
#3	1.076026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2453.330	48628.32	9721.523	1706.687	3390.670
Stddev	10.049	138.40	123.072	2.562	9.009
%RSD	.4096041	.2846012	1.265977	.1501274	.2656951
#1	2459.117	48629.22	9818.701	1705.975	3393.631
#2	2459.146	48489.48	9762.735	1704.555	3397.826
#3	2441.726	48766.27	9583.134	1709.529	3380.554

Sample Name: Q1113-03 Acquired: 1/20/2025 15:16:55 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016113	-.002455	.0367956	-.003306	-.001958	.3109261
Stddev	.0016898	.001734	.0003936	.004420	.001606	.0143971
%RSD	104.8683	70.64307	1.069765	133.7014	82.05287	4.630411
#1	.0009124	-.000794	.0364665	-.007622	-.001079	.3244421
#2	.0003832	-.004254	.0372316	-.003506	-.000983	.3125506
#3	.0035384	-.002317	.0366887	.001211	-.003812	.2957856
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4553511	.0000110	.0004852	286.2195	.0101338	.0040350
Stddev	.0028194	.0000124	.0000955	1.7591	.0001190	.0002283
%RSD	.6191626	112.5276	19.68717	.6145830	1.174471	5.659079
#1	.4581114	-.000003	.0004542	286.7914	.0100464	.0042292
#2	.4554658	.000021	.0004090	287.6215	.0100856	.0040924
#3	.4524761	.000015	.0005924	284.2457	.0102694	.0037834
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0775873	1.980032	.8432391	112.2389	.0597998	.0013473
Stddev	.0002928	.014783	.0036510	.3960	.0002323	.0005393
%RSD	.3774039	.7466257	.4329702	.3528430	.3884997	40.02482
#1	.0774749	1.991360	.8471897	112.4286	.0600450	.0019124
#2	.0773674	1.985428	.8425382	112.5043	.0595829	.0008383
#3	.0779197	1.963309	.8399894	111.7836	.0597715	.0012912
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1070.517	.0035716	.8796233	67.98789	.6024755	.0094605
Stddev	5.866	.0023931	.0017783	.39071	.0036990	.0001498
%RSD	.5480026	67.00296	.2021683	.5746793	.6139735	1.583206
#1	1067.614	.0008878	.8799408	68.43207	.6037672	.0094846
#2	1066.669	.0043438	.8812215	67.69736	.6053554	.0093002
#3	1077.269	.0054833	.8777076	67.83423	.5983038	.0095968

Sample Name: Q1113-03 Acquired: 1/20/2025 15:16:55 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.025926	-.001260	F 33.28994	F 15.24520	F 398.0816	-.012765
Stddev	.004190	.000455	.08852	.04460	1.2529	.001017
%RSD	.4083764	36.13988	.2659078	.2925660	.3147309	7.964874
#1	1.021393	-.000837	33.39205	15.26446	397.4948	-.013939
#2	1.026731	-.001742	33.24291	15.19421	397.2299	-.012185
#3	1.029655	-.001201	33.23486	15.27694	399.5202	-.012171

Elem	Sr4077
Units	ppm
Avg	1.731662
Stddev	.018241
%RSD	1.053379
#1	1.718373
#2	1.752459
#3	1.724153

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2355.752	45852.35	9914.167	1567.659	3229.386
Stddev	8.505	79.35	30.193	1.434	5.468
%RSD	.3610299	.1730461	.3045466	.0915013	.1693186
#1	2363.783	45760.89	9911.413	1567.168	3235.634
#2	2356.631	45902.70	9885.446	1569.275	3225.471
#3	2346.841	45893.46	9945.644	1566.535	3227.054

Sample Name: Q1113-05 Acquired: 1/20/2025 15:21:28 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015008	-.001036	.0120176	-.003699	.0010716	.0510810
Stddev	.0014955	.001934	.0002105	.001984	.0013294	.0086897
%RSD	99.64954	186.7468	1.751378	53.62963	124.0612	17.01166
#1	.0015081	.000496	.0122583	-.001465	.0024809	.0593803
#2	.0029926	-.003209	.0118677	-.005255	-.000160	.0518152
#3	.0000016	-.000393	.0119270	-.004377	.000894	.0420474
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1591626	.0000488	.0002208	140.7851	.0054855	.0016680
Stddev	.0003708	.0000195	.0000881	.0856	.0004758	.0001669
%RSD	.2329672	39.93585	39.91914	.0608169	8.674164	10.00866
#1	.1589727	.0000408	.0001204	140.8600	.0052909	.0014800
#2	.1589252	.0000710	.0002564	140.8035	.0051379	.0017254
#3	.1595899	.0000345	.0002856	140.6918	.0060279	.0017987
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082687	.5650932	.3672377	56.44976	.0340051	.0015078
Stddev	.0003986	.0049173	.0005845	.03736	.0005872	.0000867
%RSD	4.819996	.8701826	.1591484	.0661778	1.726859	5.752461
#1	.0082675	.5610254	.3676790	56.40790	.0333556	.0014384
#2	.0086679	.5705579	.3674592	56.46168	.0341612	.0014800
#3	.0078708	.5636963	.3665749	56.47971	.0344985	.0016051
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	556.8812	.0024341	.3056662	34.53336	.3099143	.0041071
Stddev	1.8449	.0012908	.0014052	.16516	.0017433	.0002117
%RSD	.3312969	53.02877	.4597052	.4782482	.5625001	5.155234
#1	558.8907	.0030370	.3043238	34.68645	.3079539	.0040098
#2	556.4890	.0009522	.3055481	34.55530	.3104988	.0043500
#3	555.2639	.0033131	.3071267	34.35833	.3112902	.0039614

Sample Name: Q1113-05 Acquired: 1/20/2025 15:21:28 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001379	-.001504	F 15.80550	F 10.48439	F 148.9202	-.007447
Stddev	.000998	.000359	.06373	.06823	1.0785	.000397
%RSD	72.35218	23.87556	.4031829	.6507312	.7241846	5.331546
#1	-.000402	-.001675	15.87877	10.40967	147.7805	-.007246
#2	-.002396	-.001092	15.77472	10.50014	149.0557	-.007191
#3	-.001340	-.001746	15.76300	10.54336	149.9246	-.007904

Elem	Sr4077
Units	ppm
Avg	.8513095
Stddev	.0014662
%RSD	.1722304
#1	.8512166
#2	.8528199
#3	.8498919

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2453.171	47917.41	10142.09	1646.729	3424.093
Stddev	17.557	28.19	32.20	4.717	21.194
%RSD	.7156750	.0588242	.3174706	.2864761	.6189596
#1	2473.393	47906.89	10175.38	1652.068	3447.922
#2	2444.306	47896.00	10139.76	1644.999	3417.007
#3	2441.814	47949.34	10111.11	1643.121	3407.351

Sample Name: PB166102BL Acquired: 1/20/2025 15:25:48 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	-.000875	-.000927	.0004619	.0005198	-.000251	.0079963
Stddev	.001966	.001320	.0005849	.0004666	.001443	.0039279
%RSD	224.7553	142.4716	126.6453	89.77137	574.6622	49.12197
#1	-.002827	.000503	.0004862	.0010075	-.001345	.0053931
#2	.001104	-.001182	-.000135	.0000777	.001385	.0125144
#3	-.000900	-.002100	.001034	.0004742	-.000793	.0060813
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008292	.0000930	-.000055	-.005650	-.000159	.0000509
Stddev	.000211	.0000325	.000058	.003228	.000158	.0002401
%RSD	2.541857	34.94282	105.1839	57.12890	99.49531	471.9978
#1	-.008112	.0001255	-.000122	-.004201	-.000094	.0000183
#2	-.008240	.0000930	-.000022	-.009348	-.000044	-.000171
#3	-.008524	.0000605	-.000021	-.003400	-.000339	.000306
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000620	.0035208	.0001054	.0086135	-.000138	.0015824
Stddev	.0003718	.0006145	.0001394	.0136707	.000138	.0001983
%RSD	600.0814	17.45427	132.2911	158.7130	100.1132	12.53153
#1	-.000365	.0039382	.0002095	-.004943	-.000077	.0014911
#2	.000317	.0028151	-.000053	.008388	-.000297	.0018099
#3	.000233	.0038090	.000160	.022396	-.000041	.0014461
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3142383	-.001295	-.000800	.1847413	-.004265	-.000103
Stddev	.0020123	.000329	.000071	.0654307	.000892	.000244
%RSD	.6403650	25.36035	8.910450	35.41748	20.90503	237.1822
#1	.3124773	-.001285	-.000737	.1464324	-.003636	-.000314
#2	.3138062	-.001629	-.000878	.1474998	-.005285	-.000159
#3	.3164316	-.000972	-.000787	.2602916	-.003873	.000164

Sample Name: PB166102BL Acquired: 1/20/2025 15:25:48 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	-.000637	-.000042	.0056022	-.003882	F .0174800	.0042319
Stddev	.000177	.000282	.0052546	.000393	.0020118	.0009647
%RSD	27.73714	669.6453	93.79488	10.13263	11.50922	22.79582
#1	-.000680	-.000320	.0082514	-.004278	.0195013	.0031711
#2	-.000788	-.000050	.0090049	-.003877	.0174609	.0044680
#3	-.000443	.000244	-.000450	-.003491	.0154778	.0050567

Elem	Sr4077
Units	ppm
Avg	-.000010
Stddev	.000012
%RSD	114.8072
#1	-.000003
#2	-.000024
#3	-.000004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2769.442	53312.56	10336.51	1838.676	4254.490
Stddev	5.225	82.07	21.56	4.708	3.551
%RSD	.1886633	.1539353	.2085395	.2560326	.0834628
#1	2771.036	53397.24	10355.98	1838.415	4258.567
#2	2773.684	53307.07	10313.35	1834.104	4252.828
#3	2763.605	53233.39	10340.21	1843.509	4252.074

Sample Name: CCV05 Acquired: 1/20/2025 15:37:40 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.975021	5.064328	4.819361	5.083091	5.137306	9.759268	9.406530
Stddev	.043176	.034902	.025795	.042026	.040800	.166046	.136754
%RSD	.8678531	.6891757	.5352414	.8267886	.7941894	1.701420	1.453815
#1	4.955374	5.050502	4.803472	5.065923	5.111764	9.653930	9.379886
#2	4.945163	5.038457	4.805488	5.052366	5.115795	9.950678	9.554645
#3	5.024527	5.104025	4.849124	5.130983	5.184361	9.673195	9.285059
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2374558	2.416180	23.67859	.9874132	2.421908	1.244641	4.805532
Stddev	.0040238	.015878	.41455	.0132003	.015527	.009154	.039583
%RSD	1.694560	.6571354	1.750740	1.336853	.6411084	.7354741	.8236906
#1	.2368440	2.406293	23.44802	1.002584	2.412278	1.238660	4.848790
#2	.2417505	2.407752	24.15717	.981103	2.413626	1.240084	4.771122
#3	.2337730	2.434494	23.43058	.978553	2.439820	1.255179	4.796685
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.316495	23.45030	2.415005	1.228122	24.28710	2.416809	2.491768
Stddev	.040608	.46209	.014505	.014289	.21694	.039054	.034357
%RSD	1.753008	1.970520	.6006304	1.163491	.8932475	1.615931	1.378824
#1	2.298782	23.28498	2.406357	1.244621	24.50121	2.394002	2.531419
#2	2.362951	23.97231	2.406906	1.219726	24.06743	2.461904	2.473073
#3	2.287752	23.09361	2.431751	1.220019	24.29266	2.394521	2.470813
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.58278	4.707871	5.121139	4.808947	4.737303	4.963884	4.949916
Stddev	.14008	.084605	.040552	.029092	.075982	.028159	.024637
%RSD	.5698481	1.797106	.7918515	.6049497	1.603916	.5672708	.4977279
#1	24.72953	4.691065	5.103253	4.794962	4.695123	4.992646	4.935713
#2	24.45049	4.799617	5.092605	4.789489	4.825019	4.936371	4.935670
#3	24.56833	4.632929	5.167559	4.842390	4.691768	4.962634	4.978364

Sample Name: CCV05 Acquired: 1/20/2025 15:37:40 Type: Unk
Method: NON EPA-6010-200.7(v2491) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.830694	4.798924	4.810353
Stddev	.029898	.076530	.087736
%RSD	.6189086	1.594723	1.823906
#1	4.804930	4.748501	4.828643
#2	4.823677	4.886983	4.887502
#3	4.863477	4.761287	4.714913

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2648.819	51684.59	9499.989	1789.258	3828.986
Stddev	17.226	551.13	172.217	22.737	20.462
%RSD	.6503091	1.066341	1.812815	1.270771	.5343903
#1	2655.302	51049.04	9558.988	1763.004	3838.507
#2	2661.863	51973.93	9306.027	1802.570	3842.952
#3	2629.293	52030.79	9634.953	1802.201	3805.498

Sample Name: CCB05 Acquired: 1/20/2025 15:41:51 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	.0000159	-.001729	-.000293	-.002252	-.000215	.0007351	-.007250
Stddev	.0023646	.001514	.000460	.001693	.000552	.0064508	.000235
%RSD	14911.91	87.51964	157.0137	75.19219	256.6754	877.4981	3.239892

#1	-.000831	-.003339	-.000624	-.004198	-.000116	.0068252	-.007511
#2	-.001809	-.000334	.000232	-.001439	.000281	-.006024	-.007055
#3	.002687	-.001516	-.000487	-.001118	-.000810	.001405	-.007184

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000523	.0000897	.0021317	-.000253	.0000939	-.000255	.0005531
Stddev	.0000546	.0000314	.0047963	.000506	.0000916	.000238	.0038320
%RSD	104.4675	34.97263	224.9988	199.6061	97.47774	93.35110	692.7953

#1	.0000332	.0000594	.0020800	.000329	-.000012	.000007	.0020762
#2	.0000098	.0001220	-.002639	-.000507	.000141	-.000458	-.003806
#3	.0001139	.0000877	.006954	-.000583	.000152	-.000315	.003389

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001878	.0046570	.0000354	.0019093	.0542432	-.000374	-.000748
Stddev	.0002901	.0088574	.0001314	.0003105	.0126556	.000885	.000106
%RSD	154.4917	190.1965	371.5203	16.26140	23.33120	237.0340	14.23084

#1	.0002181	.0131923	.0001857	.0015637	.0416732	-.000270	-.000645
#2	.0004616	.0052692	-.000057	.0021646	.0540738	.000455	-.000741
#3	-.000116	-.004491	-.000023	.0019996	.0669827	-.001306	-.000857

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0992326	.0025961	.0001673	-.000340	.0001030	.0064368	-.004497
Stddev	.0118808	.0001177	.0001564	.000814	.0005797	.0029714	.000456
%RSD	11.97268	4.532550	93.45350	239.5258	562.7874	46.16286	10.13663

#1	.0936146	.0026014	.0002747	-.000653	.0007722	.0030735	-.005013
#2	.0912026	.0024759	.0002394	.000584	-.000218	.0075308	-.004328
#3	.1128805	.0027110	-.000012	-.000950	-.000245	.0087061	-.004149

Sample Name: CCB05 Acquired: 1/20/2025 15:41:51 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	-.001609	-.000473	.0000296
Stddev	.001687	.001296	.0000463
%RSD	104.8490	273.9434	156.4334
#1	-.001954	-.000674	.0000825
#2	.000224	.000911	-.000003
#3	-.003096	-.001657	.000010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2729.481	53842.91	10150.19	1862.897	4155.668
Stddev	7.275	156.26	91.67	8.873	9.633
%RSD	.2665365	.2902213	.9031392	.4762888	.2318097
#1	2735.004	54008.54	10053.26	1872.906	4165.468
#2	2732.200	53698.11	10161.82	1859.784	4155.327
#3	2721.237	53822.09	10235.49	1855.999	4146.210

Sample Name: PB166102BS Acquired: 1/20/2025 15:46:12 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	.7923682	2.005908	.9404855	1.988360	.8004359	1.847776
Stddev	.0014335	.018586	.0005471	.008162	.0056242	.003054
%RSD	.1809128	.9265387	.0581767	.4104946	.7026447	.1652965
#1	.7908899	1.984835	.9403337	1.980691	.7957616	1.848040
#2	.7937522	2.012929	.9400302	1.987449	.7988684	1.850691
#3	.7924624	2.019960	.9410925	1.996939	.8066775	1.844599
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1682527	.1823096	.1876392	.9338819	.3919347	.1890431
Stddev	.0005293	.0003999	.0005029	.0019218	.0010237	.0004111
%RSD	.3145705	.2193554	.2679885	.2057815	.2611829	.2174633
#1	.1688275	.1826557	.1871377	.9360745	.3928828	.1889260
#2	.1681448	.1818718	.1876366	.9330814	.3908493	.1887033
#3	.1677856	.1824013	.1881433	.9324898	.3920719	.1895001
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3008408	2.812735	.1787109	1.805490	.4733479	.0729251
Stddev	.0006531	.013208	.0004620	.006378	.0013530	.0006392
%RSD	.2170816	.4695922	.2585164	.3532456	.2858395	.8764596
#1	.3001111	2.827849	.1782955	1.811938	.4723325	.0723896
#2	.3010410	2.806952	.1786289	1.799185	.4728273	.0736327
#3	.3013703	2.803405	.1792085	1.805348	.4748839	.0727530
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.845439	.2723888	.1984422	9.444959	.2619565	.4077220
Stddev	.025098	.0026019	.0006333	.032522	.0013046	.0015832
%RSD	.8820320	.9552132	.3191155	.3443318	.4980343	.3882932
#1	2.841557	.2695235	.1979078	9.466204	.2609502	.4063166
#2	2.872252	.2746041	.1982772	9.461153	.2614888	.4074123
#3	2.822509	.2730387	.1991417	9.407519	.2634306	.4094371

Sample Name: PB166102BS Acquired: 1/20/2025 15:46:12 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	.6495019	.1801694	F .6772685	5.472941	F -.014244	.1860558
Stddev	.0009131	.0003439	.0099891	.011377	.001215	.0005382
%RSD	.1405906	.1908652	1.474906	.2078772	8.532236	.2892696
#1	.6486700	.1805422	.6773417	5.459861	-.014578	.1866044
#2	.6493567	.1801013	.6872207	5.478422	-.012897	.1855286
#3	.6504789	.1798646	.6672430	5.480540	-.015258	.1860343

Elem	Sr4077
Units	ppm
Avg	.1778947
Stddev	.0002673
%RSD	.1502477
#1	.1781998
#2	.1777823
#3	.1777020

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2725.325	53059.29	9921.852	1831.207	4108.836
Stddev	5.322	122.69	19.910	3.655	9.231
%RSD	.1952799	.2312249	.2006633	.1995818	.2246528
#1	2728.459	52968.69	9899.128	1830.037	4114.305
#2	2728.336	53010.28	9936.230	1828.280	4114.025
#3	2719.180	53198.91	9930.198	1835.303	4098.179

Sample Name: Q1061-01 Acquired: 1/20/2025 15:50:12 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	.0051762	.0020260	.0104978	-.004995	-.000985	8.111655
Stddev	.0028252	.0018540	.0011212	.000593	.000464	.017205
%RSD	54.58107	91.50692	10.68055	11.87532	47.10544	.2121043
#1	.0022472	-.000111	.0104258	-.004508	-.000759	8.093824
#2	.0053967	.002992	.0094143	-.005656	-.001519	8.112984
#3	.0078847	.003198	.0116533	-.004822	-.000677	8.128157
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3015632	-.000938	-.000386	80.27280	.0411412	.0175265
Stddev	.0017381	.000052	.000103	.21535	.0001529	.0002228
%RSD	.5763557	5.511894	26.68230	.2682771	.3715760	1.271139
#1	.3034997	-.000886	-.000384	80.52080	.0410324	.0173124
#2	.3010514	-.000940	-.000285	80.13307	.0413159	.0177571
#3	.3001385	-.000990	-.000491	80.16452	.0410752	.0175102
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105439	23.85613	21.14035	17.47303	.0211984	.0037463
Stddev	.0004538	.10061	.23528	.11024	.0001217	.0001503
%RSD	4.304310	.4217195	1.112953	.6309381	.5742315	4.012453
#1	.0100208	23.91643	21.30496	17.59831	.0210706	.0035755
#2	.0108328	23.91198	20.87087	17.42993	.0212116	.0038049
#3	.0107782	23.73999	21.24523	17.39085	.0213130	.0038586
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	55.84325	.0108734	.0518737	18.07037	.0708036	.0024122
Stddev	.27270	.0009794	.0000844	.16682	.0006498	.0002467
%RSD	.4883284	9.007823	.1626721	.9231927	.9178058	10.22793
#1	55.82743	.0101326	.0519694	18.14344	.0715448	.0026953
#2	56.12351	.0119839	.0518099	18.18819	.0705338	.0022431
#3	55.57880	.0105035	.0518418	17.87948	.0703321	.0022982

Sample Name: Q1061-01 Acquired: 1/20/2025 15:50:12 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	-.000395	.0567445	F 16.70708	.3032849	6.682804	-.002574
Stddev	.000381	.0016499	.05291	.0016767	.019458	.000861
%RSD	96.49606	2.907599	.3167102	.5528430	.2911604	33.44747
#1	-.000694	.0580101	16.68085	.3019674	6.680441	-.001823
#2	-.000524	.0573450	16.76798	.3027150	6.703335	-.003514
#3	.000034	.0548785	16.67240	.3051722	6.664635	-.002386

Elem	Sr4077
Units	ppm
Avg	.1415613
Stddev	.0005470
%RSD	.3863697
#1	.1421625
#2	.1414283
#3	.1410932

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2676.947	52503.67	10412.72	1814.825	3855.010
Stddev	5.385	118.86	51.49	7.224	8.381
%RSD	.2011619	.2263878	.4944544	.3980563	.2173988
#1	2681.102	52631.91	10413.98	1823.105	3863.254
#2	2678.875	52481.90	10463.57	1809.810	3855.277
#3	2670.863	52397.19	10360.62	1811.560	3846.499

Sample Name: Q1061-02 Acquired: 1/20/2025 15:54:36 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205215	.0037100	.0035405	-.003463	-.001459	9.739448
Stddev	.0002502	.0015999	.0012208	.002961	.001743	.031195
%RSD	1.219279	43.12323	34.47965	85.51552	119.4692	.3202973
#1	.0207308	.0052958	.0036387	-.000503	-.003290	9.714190
#2	.0205892	.0020964	.0047092	-.003459	.000180	9.774318
#3	.0202444	.0037377	.0022736	-.006425	-.001266	9.729835
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4564975	-.002256	.0012540	48.41770	.0360184	.0158432
Stddev	.0016672	.000044	.0000607	.12526	.0003631	.0002490
%RSD	.3652100	1.972547	4.842378	.2587171	1.008198	1.571406
#1	.4549857	-.002247	.0011839	48.27308	.0360915	.0160145
#2	.4562214	-.002217	.0012895	48.49205	.0356243	.0155576
#3	.4582856	-.002304	.0012886	48.48797	.0363394	.0159575
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067526	21.90547	37.92170	8.930121	.0266184	.0053197
Stddev	.0002005	.11851	.26358	.041064	.0001687	.0005921
%RSD	2.969613	.5409996	.6950617	.4598414	.6337726	11.13140
#1	.0069457	21.99437	37.63764	8.910016	.0264664	.0056938
#2	.0065454	21.77092	38.15836	8.977364	.0265888	.0056283
#3	.0067667	21.95111	37.96910	8.902984	.0267999	.0046370
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.15688	.0104067	.0404911	14.44181	.0394221	-.001400
Stddev	.35193	.0017444	.0005207	.07845	.0007047	.000227
%RSD	.6051420	16.76215	1.285930	.5432097	1.787461	16.23017
#1	58.40331	.0123352	.0399567	14.50607	.0393488	-.001172
#2	57.75383	.0099460	.0405198	14.35439	.0387569	-.001627
#3	58.31350	.0089389	.0409969	14.46497	.0401605	-.001402

Sample Name: Q1061-02 Acquired: 1/20/2025 15:54:36 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001291	.1924903	F 14.32840	.4390716	6.123326	.0009814
Stddev	.000271	.0033141	.04313	.0041486	.028087	.0008214
%RSD	20.97901	1.721675	.3010219	.9448539	.4586952	83.69951
#1	-.001056	.1946194	14.27860	.4343933	6.119840	.0007661
#2	-.001587	.1941796	14.35265	.4405183	6.097144	.0018890
#3	-.001230	.1886720	14.35394	.4423031	6.152993	.0002891

Elem	Sr4077
Units	ppm
Avg	.0918300
Stddev	.0002898
%RSD	.3156239
#1	.0916517
#2	.0916740
#3	.0921645

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2767.611	52902.70	10542.84	1869.281	3939.491
Stddev	7.847	42.90	69.53	1.234	9.444
%RSD	.2835390	.0810867	.6595183	.0660351	.2397261
#1	2776.640	52886.92	10609.35	1870.507	3950.233
#2	2762.436	52951.25	10470.64	1868.038	3935.749
#3	2763.757	52869.93	10548.52	1869.298	3932.492

Sample Name: Q1061-03 Acquired: 1/20/2025 15:58:57 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	.0477459	.0126798	.0157730	-.014586	.0007665	14.19357
Stddev	.0040328	.0024460	.0006992	.001518	.0005859	.02019
%RSD	8.446329	19.29025	4.432936	10.40648	76.43356	.1422417
#1	.0436843	.0139387	.0165096	-.015966	.0011042	14.20897
#2	.0478040	.0098608	.0156911	-.014831	.0011054	14.20103
#3	.0517493	.0142398	.0151183	-.012960	.0000900	14.17071
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9315853	-.001089	-.001263	139.2604	.0554836	.0585342
Stddev	.0020622	.000071	.000049	.2049	.0005819	.0001527
%RSD	.2213642	6.528982	3.861773	.1471315	1.048834	.2609134
#1	.9320703	-.001089	-.001208	139.4187	.0561471	.0584572
#2	.9333618	-.001161	-.001298	139.3335	.0550598	.0584353
#3	.9293238	-.001019	-.001284	139.0289	.0552439	.0587101
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0304992	87.74595	38.80247	25.00533	.1130650	.0056693
Stddev	.0006092	.25038	.10893	.06294	.0002981	.0003309
%RSD	1.997374	.2853431	.2807296	.2517235	.2636116	5.836329
#1	.0306675	87.99567	38.71947	25.07755	.1134064	.0059905
#2	.0298235	87.74726	38.76213	24.97634	.1129320	.0056877
#3	.0310065	87.49492	38.92582	24.96211	.1128566	.0053295
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	176.9974	.0193349	.1087097	43.73022	.0975852	.0001658
Stddev	1.2165	.0005239	.0005712	.04896	.0011990	.0002765
%RSD	.6872807	2.709541	.5254332	.1119644	1.228631	166.7688
#1	178.2683	.0188215	.1092938	43.75133	.0989579	-.000019
#2	175.8439	.0198687	.1081524	43.76508	.0970544	.000484
#3	176.8799	.0193145	.1086829	43.67424	.0967432	.000032

Sample Name: Q1061-03 Acquired: 1/20/2025 15:58:57 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	-.001548	.0760791	F 19.10950	.9522618	F 11.59281	.0069870
Stddev	.001141	.0010848	.03770	.0027687	.00785	.0007203
%RSD	73.73916	1.425902	.1972657	.2907551	.0676773	10.30927
#1	-.000312	.0752171	19.13518	.9504512	11.59325	.0068820
#2	-.002562	.0772972	19.12709	.9508851	11.58475	.0077541
#3	-.001769	.0757229	19.06622	.9554490	11.60042	.0063250

Elem	Sr4077
Units	ppm
Avg	.2976307
Stddev	.0004859
%RSD	.1632613
#1	.2975498
#2	.2981520
#3	.2971903

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2603.266	50996.03	10191.23	1809.356	3573.821
Stddev	10.574	57.79	11.76	7.246	6.226
%RSD	.4061661	.1133235	.1154188	.4004598	.1741990
#1	2614.749	50929.33	10178.42	1801.840	3580.888
#2	2601.116	51031.21	10193.71	1809.929	3571.424
#3	2593.933	51027.55	10201.55	1816.298	3569.150

Sample Name: Q1061-04 Acquired: 1/20/2025 16:03:27 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	.1017695	.0044341	.0157845	-.010250	-.000883	10.01465
Stddev	.0030805	.0016898	.0019418	.000468	.001004	.01816
%RSD	3.026896	38.10931	12.30207	4.565977	113.6909	.1813758
#1	.1017229	.0063782	.0141962	-.010707	-.000044	9.99758
#2	.0987127	.0033183	.0179492	-.010271	-.001996	10.01265
#3	.1048731	.0036057	.0152080	-.009772	-.000610	10.03374
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9600996	-.000476	-.000655	142.8997	.0318765	.0235825
Stddev	.0038722	.000044	.000058	.0784	.0000546	.0000734
%RSD	.4033147	9.242544	8.917231	.0548351	.1712150	.3111200
#1	.9620078	-.000431	-.000695	142.8114	.0319345	.0234980
#2	.9556436	-.000519	-.000588	142.9269	.0318261	.0236204
#3	.9626474	-.000476	-.000681	142.9608	.0318689	.0236292
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177365	46.71719	22.57994	23.35186	.0717517	.0040033
Stddev	.0004342	.15902	.31081	.09644	.0002655	.0004953
%RSD	2.448308	.3403887	1.376503	.4129837	.3699833	12.37373
#1	.0172932	46.72684	22.30659	23.26053	.0718695	.0040261
#2	.0177552	46.55357	22.51521	23.45270	.0714477	.0044868
#3	.0181611	46.87117	22.91803	23.34235	.0719378	.0034969
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	149.5897	.0146529	.0716196	31.94754	.0611954	-.001011
Stddev	1.1599	.0022435	.0004972	.17355	.0007870	.000314
%RSD	.7753858	15.31074	.6941659	.5432413	1.285986	31.07830
#1	149.3082	.0161918	.0711866	31.97487	.0607441	-.001311
#2	148.5965	.0156883	.0721625	31.76194	.0621041	-.000685
#3	150.8645	.0120787	.0715096	32.10580	.0607380	-.001036

Sample Name: Q1061-04 Acquired: 1/20/2025 16:03:27 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	-.003474	.0561410	F 17.19847	2.206124	F 15.15624	-.000032
Stddev	.001003	.0006318	.04665	.007448	.07645	.000950
%RSD	28.88512	1.125457	.2712383	.3375952	.5044092	3008.895
#1	-.003758	.0567824	17.20570	2.205957	15.08173	.001012
#2	-.002359	.0555192	17.14862	2.198762	15.15251	-.000846
#3	-.004304	.0561213	17.24108	2.213654	15.23449	-.000261

Elem	Sr4077
Units	ppm
Avg	.3935808
Stddev	.0010132
%RSD	.2574217
#1	.3940797
#2	.3924150
#3	.3942478

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2612.766	50959.93	10249.55	1776.273	3621.003
Stddev	6.674	135.22	22.45	7.663	8.706
%RSD	.2554190	.2653422	.2190064	.4314088	.2404188
#1	2619.836	51081.88	10275.11	1774.146	3627.587
#2	2611.886	50983.39	10233.04	1784.775	3624.290
#3	2606.577	50814.51	10240.51	1769.898	3611.133

Sample Name: Q1061-05 Acquired: 1/20/2025 16:07:56 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	.0292466	.0017822	.2448048	-.006537	.0005950	17.83650
Stddev	.0027550	.0025916	.0008146	.003509	.0016443	.04193
%RSD	9.419982	145.4159	.3327390	53.68040	276.3650	.2350852

#1	.0293230	.0046141	.2438642	-.005988	-.000710	17.78859
#2	.0319627	.0012036	.2452735	-.010288	.002442	17.85440
#3	.0264542	-.000471	.2452766	-.003335	.000053	17.86652

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5893779	.0010310	.0031757	131.3755	.0322424	.0574648
Stddev	.0010590	.0000423	.0000553	.1165	.0002686	.0001820
%RSD	.1796836	4.101958	1.742493	.0886958	.8329728	.3167869

#1	.5886586	.0010785	.0031150	131.2594	.0321151	.0575384
#2	.5888811	.0010171	.0031886	131.3745	.0320611	.0572575
#3	.5905940	.0009974	.0032234	131.4925	.0325509	.0575985

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2682774	36.76789	7.420888	22.45268	.0832901	.0032690
Stddev	.0010881	.13445	.008179	.03495	.0002363	.0001718
%RSD	.4055936	.3656786	.1102161	.1556737	.2836599	5.256734

#1	.2670235	36.89038	7.411599	22.41868	.0833837	.0034120
#2	.2689741	36.62403	7.424055	22.48851	.0830214	.0030784
#3	.2688344	36.78927	7.427011	22.45084	.0834652	.0033165

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	256.8430	.0212722	.8382482	71.79314	.0732954	.0023382
Stddev	2.8416	.0016525	.0030386	.25032	.0013341	.0001220
%RSD	1.106376	7.768551	.3624902	.3486627	1.820164	5.216624

#1	259.8328	.0217596	.8366051	72.02476	.0729961	.0024228
#2	256.5188	.0226262	.8363850	71.52759	.0721363	.0023935
#3	254.1773	.0194308	.8417545	71.82708	.0747537	.0021984

Sample Name: Q1061-05 Acquired: 1/20/2025 16:07:56 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	-.001825	.0729477	F 22.83950	F 14.72384	F 35.18454	.0433689
Stddev	.000581	.0006508	.08423	.02280	.05030	.0009978
%RSD	31.83296	.8921275	.3687791	.1548173	.1429564	2.300771
#1	-.001301	.0722571	22.88413	14.74871	35.12877	.0423604
#2	-.001724	.0735496	22.74235	14.70394	35.22646	.0443557
#3	-.002450	.0730364	22.89202	14.71886	35.19839	.0433904

Elem	Sr4077
Units	ppm
Avg	.9296082
Stddev	.0057731
%RSD	.6210248
#1	.9348387
#2	.9234138
#3	.9305720

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2631.383	51666.23	10834.25	1788.563	3530.890
Stddev	10.368	56.84	46.38	1.321	11.691
%RSD	.3940228	.1100208	.4280560	.0738384	.3311000
#1	2643.110	51610.31	10885.91	1788.707	3544.302
#2	2627.608	51723.95	10796.20	1787.176	3525.515
#3	2623.432	51664.42	10820.65	1789.806	3522.853

Sample Name: Q1061-06 Acquired: 1/20/2025 16:12:19 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	.0462044	.0056209	.0072490	-.011315	-.000221	6.665483
Stddev	.0033488	.0007017	.0003883	.000202	.001093	.017332
%RSD	7.247766	12.48328	5.357353	1.786995	495.2102	.2600323
#1	.0451617	.0063135	.0075226	-.011463	.000768	6.654776
#2	.0499505	.0056388	.0068045	-.011084	-.001393	6.656192
#3	.0435010	.0049105	.0074199	-.011396	-.000037	6.685480
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9324066	-.001106	-.000662	142.8255	.0358560	.0308850
Stddev	.0024570	.000069	.000092	.2057	.0000960	.0001859
%RSD	.2635127	6.236955	13.92628	.1440032	.2676531	.6018919
#1	.9312414	-.001148	-.000617	142.8239	.0359645	.0306713
#2	.9307490	-.001027	-.000601	142.6207	.0358214	.0310092
#3	.9352294	-.001144	-.000768	143.0320	.0357821	.0309744
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080186	47.74120	27.44750	23.85344	.0652038	.0043738
Stddev	.0001400	.11923	.23578	.04038	.0000604	.0002498
%RSD	1.745705	.2497443	.8590260	.1692776	.0926130	5.711809
#1	.0078921	47.77842	27.56024	23.86614	.0652501	.0045921
#2	.0081690	47.60780	27.17652	23.80824	.0652257	.0041013
#3	.0079947	47.83739	27.60575	23.88595	.0651355	.0044279
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	158.6170	.0100171	.0504853	52.27027	.0839598	.0030183
Stddev	.8388	.0020045	.0004231	.11490	.0010212	.0000665
%RSD	.5288338	20.01047	.8380334	.2198236	1.216246	2.201666
#1	159.5511	.0086841	.0508462	52.28706	.0848537	.0029772
#2	157.9282	.0090448	.0500197	52.14789	.0828469	.0029828
#3	158.3716	.0123222	.0505900	52.37585	.0841788	.0030950

Sample Name: Q1061-06 Acquired: 1/20/2025 16:12:19 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	-.001618	.0397012	F 18.14894	.6519519	F 25.85881	-.009392
Stddev	.001019	.0014011	.03435	.0023989	.06035	.001330
%RSD	62.96953	3.529081	.1892558	.3679523	.2333648	14.16401
#1	-.001426	.0401169	18.15963	.6534373	25.87600	-.008197
#2	-.002720	.0381394	18.11052	.6532339	25.90870	-.010825
#3	-.000709	.0408475	18.17667	.6491844	25.79174	-.009152

Elem	Sr4077
Units	ppm
Avg	.3967999
Stddev	.0010204
%RSD	.2571488
#1	.3958775
#2	.3966263
#3	.3978960

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2579.714	50467.84	10264.96	1766.719	3593.615
Stddev	8.199	261.87	44.43	14.961	8.356
%RSD	.3178284	.5188767	.4328519	.8468259	.2325220
#1	2579.440	50276.21	10238.39	1758.134	3596.558
#2	2588.046	50766.22	10316.26	1783.995	3600.100
#3	2571.655	50361.09	10240.24	1758.029	3584.185

Sample Name: Q1061-07 Acquired: 1/20/2025 16:16:51 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0426703	.0125750	.0090432	-.018922	-.000242	6.099147
Stddev	.0037311	.0003887	.0022452	.001425	.000732	.015226
%RSD	8.744084	3.091216	24.82801	7.532445	301.8107	.2496479
#1	.0390347	.0123510	.0098960	-.017278	.000343	6.108868
#2	.0424862	.0123501	.0107371	-.019678	-.001063	6.106974
#3	.0464901	.0130238	.0064965	-.019811	-.000008	6.081599
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.820310	-.000138	-.002548	154.4602	.0226683	.0398717
Stddev	.008994	.000063	.000163	.3637	.0002626	.0000977
%RSD	.4941060	45.65205	6.396578	.2354898	1.158317	.2449854
#1	1.823128	-.000203	-.002529	154.8492	.0225585	.0398306
#2	1.810244	-.000135	-.002395	154.1286	.0224784	.0398013
#3	1.827558	-.000077	-.002719	154.4025	.0229679	.0399832
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0233488	114.4788	26.24910	42.32675	.0448144	.0052513
Stddev	.0003511	.5974	.22813	.10542	.0000814	.0004223
%RSD	1.503578	.5218473	.8690998	.2490697	.1815993	8.042006
#1	.0237006	114.0459	26.44221	42.44192	.0447310	.0048755
#2	.0229985	114.2303	26.30771	42.30329	.0448185	.0051701
#3	.0233472	115.1604	25.99739	42.23503	.0448936	.0057083
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	129.3429	.0155847	.0764011	24.02295	.0685016	.0025165
Stddev	1.4508	.0011358	.0002924	.14196	.0013688	.0003128
%RSD	1.121652	7.287580	.3827424	.5909307	1.998234	12.43216
#1	129.9881	.0142764	.0760784	23.91051	.0676321	.0027194
#2	130.3591	.0161612	.0766484	23.97588	.0677934	.0026739
#3	127.6814	.0163166	.0764765	24.18247	.0700795	.0021562

Sample Name: Q1061-07 Acquired: 1/20/2025 16:16:51 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000540	.0372859	F 17.44369	.3955587	F 25.47657	-.017829
Stddev	.000884	.0002907	.11035	.0033720	.05320	.000586
%RSD	163.8321	.7797526	.6326308	.8524592	.2088066	3.284754
#1	-.001444	.0376216	17.31774	.3934421	25.41525	-.017950
#2	-.000499	.0371188	17.48991	.3994472	25.50411	-.018346
#3	.000323	.0371172	17.52341	.3937866	25.51034	-.017193

Elem	Sr4077
Units	ppm
Avg	.3846210
Stddev	.0021085
%RSD	.5482014
#1	.3859563
#2	.3821903
#3	.3857164

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2605.781	50874.11	10295.59	1771.382	3644.435
Stddev	3.303	138.71	63.97	4.246	5.737
%RSD	.1267547	.2726593	.6213266	.2396815	.1574065
#1	2609.145	50931.99	10231.25	1776.284	3650.627
#2	2605.655	50715.83	10296.33	1768.920	3639.301
#3	2602.543	50974.50	10359.18	1768.941	3643.376

Sample Name: Q1061-08 Acquired: 1/20/2025 16:21:21 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0148333	.0033267	-.000746	-.004596	-.000814	1.879943
Stddev	.0018759	.0016313	.001353	.000777	.001856	.004865
%RSD	12.64679	49.03832	181.2995	16.90655	228.0558	.2587685
#1	.0156593	.0016920	-.002292	-.004184	.000708	1.883197
#2	.0126861	.0049546	.000222	-.004112	-.000268	1.882282
#3	.0161545	.0033334	-.000168	-.005492	-.002882	1.874351
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.092647	-.001767	.0004385	128.3069	.0172467	.0207562
Stddev	.005396	.000041	.0000595	.4441	.0002513	.0000713
%RSD	.4938612	2.304361	13.56526	.3461568	1.457121	.3437191
#1	1.089757	-.001793	.0004296	128.2809	.0173823	.0207759
#2	1.098873	-.001720	.0005019	128.7635	.0169567	.0208157
#3	1.089311	-.001787	.0003840	127.8764	.0174010	.0206771
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065691	15.64778	28.31065	18.85983	.0377046	.0041855
Stddev	.0004064	.11315	.08731	.02063	.0003855	.0005840
%RSD	6.185867	.7230823	.3084009	.1093705	1.022468	13.95262
#1	.0069870	15.63368	28.30993	18.85186	.0377077	.0035327
#2	.0061754	15.76732	28.22369	18.88326	.0380885	.0046581
#3	.0065448	15.54234	28.39831	18.84438	.0373175	.0043659
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	116.1503	.0004260	.0217437	28.57970	.0565379	.0001165
Stddev	.5059	.0009999	.0002522	.18016	.0002429	.0003021
%RSD	.4355230	234.7327	1.159780	.6303696	.4296623	259.3014
#1	115.9100	-.000709	.0214874	28.55371	.0566233	.0004314
#2	116.7315	.000809	.0217521	28.77144	.0567267	-.000171
#3	115.8094	.001178	.0219916	28.41395	.0562638	.000089

Sample Name: Q1061-08 Acquired: 1/20/2025 16:21:21 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002184	.0128645	F 11.06261	.3979679	F 28.27011	-.019400
Stddev	.000483	.0002735	.07201	.0038656	.07572	.000720
%RSD	22.09876	2.125614	.6509197	.9713397	.2678496	3.712908
#1	-.001648	.0125617	11.05031	.3968340	28.32919	-.020062
#2	-.002585	.0129383	11.13998	.3947960	28.18475	-.018633
#3	-.002319	.0130935	10.99755	.4022736	28.29639	-.019504

Elem	Sr4077
Units	ppm
Avg	.3957876
Stddev	.0019111
%RSD	.4828702
#1	.3945761
#2	.3979907
#3	.3947959

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2651.815	51790.87	10128.11	1818.013	3732.973
Stddev	7.846	163.21	8.25	8.217	10.563
%RSD	.2958911	.3151410	.0814123	.4519902	.2829692
#1	2656.971	51870.64	10134.75	1818.642	3739.216
#2	2655.690	51603.11	10118.88	1809.499	3738.927
#3	2642.785	51898.86	10130.70	1825.898	3720.777

Sample Name: Q1061-09 Acquired: 1/20/2025 16:25:45 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	.0085095	.0065688	.0130568	-.015181	-.001026	7.789726
Stddev	.0036277	.0002317	.0023897	.005151	.000283	.018828
%RSD	42.63116	3.527238	18.30223	33.93048	27.58823	.2417022
#1	.0066934	.0068353	.0134958	-.009697	-.001345	7.808913
#2	.0126865	.0064556	.0104780	-.019917	-.000804	7.771278
#3	.0061484	.0064155	.0151965	-.015929	-.000930	7.788988
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6897596	-.000179	-.000450	149.0790	.0390573	.0341362
Stddev	.0023483	.000071	.000171	.4393	.0003615	.0000908
%RSD	.3404545	39.98106	38.05340	.2947066	.9256171	.2661347
#1	.6924659	-.000233	-.000588	149.1885	.0392084	.0340392
#2	.6885528	-.000098	-.000505	149.4532	.0393188	.0342192
#3	.6882599	-.000205	-.000258	148.5953	.0386448	.0341503
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179739	66.98804	20.07655	19.07534	.0912992	.0037592
Stddev	.0002253	.41417	.02814	.09106	.0003362	.0000572
%RSD	1.253618	.6182798	.1401810	.4773677	.3681895	1.520532
#1	.0178111	67.43375	20.09071	19.05751	.0909144	.0037186
#2	.0178795	66.61504	20.04414	19.17400	.0915357	.0038245
#3	.0182311	66.91532	20.09480	18.99452	.0914476	.0037344
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	192.1020	.0109332	.1313167	57.06895	.1115568	.0005807
Stddev	1.4699	.0004626	.0016111	.37004	.0007658	.0001541
%RSD	.7651805	4.231204	1.226905	.6484121	.6864990	26.52720
#1	190.4051	.0113466	.1318276	57.41301	.1123288	.0005672
#2	192.9174	.0104335	.1326104	56.67750	.1107973	.0007411
#3	192.9836	.0110194	.1295120	57.11635	.1115444	.0004339

Sample Name: Q1061-09 Acquired: 1/20/2025 16:25:45 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	-.003944	.0388554	F 21.12574	.7490457	F 25.68876	-.001765
Stddev	.000814	.0001537	.12790	.0025869	.11640	.000500
%RSD	20.63934	.3956504	.6054269	.3453557	.4531358	28.30969
#1	-.004777	.0386792	21.25740	.7461116	25.57295	-.001872
#2	-.003150	.0389624	21.00197	.7500276	25.68756	-.001220
#3	-.003905	.0389247	21.11785	.7509978	25.80575	-.002202

Elem	Sr4077
Units	ppm
Avg	.5835564
Stddev	.0014242
%RSD	.2440595
#1	.5848540
#2	.5837826
#3	.5820327

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2624.959	51057.81	10282.46	1796.088	3623.847
Stddev	5.166	73.01	56.33	10.540	6.149
%RSD	.1968123	.1429976	.5478197	.5868447	.1696773
#1	2627.655	50974.63	10312.29	1794.433	3626.643
#2	2628.220	51087.47	10217.48	1786.473	3628.101
#3	2619.002	51111.32	10317.59	1807.358	3616.797

Sample Name: CCV06 Acquired: 1/20/2025 16:47:00 Type: Unk
Method: NON EPA-6010-200.7(v2621) 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	4.853875	4.872485	4.711276	4.951107	4.986456	9.319623
Stddev	.015912	.052433	.001868	.013253	.002982	.031266
%RSD	.3278251	1.076113	.0396408	.2676781	.0598009	.3354876
#1	4.841111	4.843445	4.709597	4.936316	4.984698	9.286491
#2	4.848811	4.933014	4.710944	4.961903	4.984771	9.348610
#3	4.871703	4.840997	4.713287	4.955102	4.989899	9.323769
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.50781	.2330649	2.359503	22.55070	.9662404	2.359591
Stddev	.06824	.0012485	.002821	.01626	.0024183	.003552
%RSD	.6494191	.5357065	.1195396	.0721246	.2502826	.1505180
#1	10.44155	.2344026	2.356250	22.54099	.9634977	2.355493
#2	10.57787	.2319305	2.361258	22.56948	.9680662	2.361510
#3	10.50403	.2328616	2.361003	22.54163	.9671573	2.361771
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.207330	5.337366	2.549854	22.62980	2.355588	1.188272
Stddev	.002499	.038914	.004511	.02883	.003762	.001261
%RSD	.2069785	.7290862	.1769059	.1274064	.1597035	.1061584
#1	1.206586	5.311900	2.546121	22.63683	2.351939	1.188585
#2	1.205288	5.382160	2.554867	22.65446	2.355371	1.189348
#3	1.210116	5.318039	2.548575	22.59810	2.359454	1.186884
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.81736	2.288655	2.411978	23.07007	4.606535	4.966376
Stddev	.18747	.000825	.008503	.16820	.031880	.010111
%RSD	.8216194	.0360352	.3525356	.7290923	.6920548	.2035955
#1	22.62268	2.289312	2.404194	22.88733	4.638976	4.956239
#2	22.99668	2.287729	2.410687	23.21841	4.575248	4.966428
#3	22.83272	2.288923	2.421052	23.10448	4.605380	4.976462

Sample Name: CCV06 Acquired: 1/20/2025 16:47:00 Type: Unk
Method: NON EPA-6010-200.7(v2621) 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	4.710732	F 4.449353	4.711333	4.758390	4.677154	F 4.451270
Stddev	.013609	.009766	.045526	.013403	.003636	.006074
%RSD	.2888859	.2194920	.9662981	.2816733	.0777395	.1364624
#1	4.696052	4.442387	4.660456	4.749552	4.674825	4.445162
#2	4.722928	4.460516	4.748227	4.773812	4.681344	4.457310
#3	4.713214	4.445157	4.725316	4.751806	4.675294	4.451337

Elem	Sr4077
Units	ppm
Avg	4.530798
Stddev	.021765
%RSD	.4803820
#1	4.549534
#2	4.506923
#3	4.535937

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2691.151	52316.54	9523.557	1802.384	3879.957
Stddev	2.084	195.81	26.217	10.783	6.030
%RSD	.0774328	.3742725	.2752836	.5982394	.1554044
#1	2693.372	52520.08	9496.227	1814.757	3883.980
#2	2690.842	52129.51	9548.497	1794.999	3873.025
#3	2689.239	52300.04	9525.945	1797.395	3882.867

Sample Name: CCB06 Acquired: 1/20/2025 16:50:50 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	-.000906	-.000462	-.000846	.0006310	-.000227	-.003001	-.005188
Stddev	.002432	.000362	.000754	.0002083	.000732	.004708	.000398
%RSD	268.4478	78.44244	89.07946	33.01052	323.1296	156.8909	7.664751

#1	-.000981	-.000537	-.000282	.0004440	-.001069	-.004486	-.004754
#2	.001562	-.000068	-.000555	.0008555	.000127	-.006788	-.005535
#3	-.003300	-.000780	-.001702	.0005934	.000262	.002271	-.005275

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000603	-.000034	.0032630	-.000263	.0000370	.0001931	.0040263
Stddev	.0000165	.000013	.0031065	.000295	.0001887	.0002617	.0049150
%RSD	27.29454	38.74407	95.20524	112.1791	509.5813	135.5861	122.0720

#1	.0000681	-.000038	.0040738	-.000603	.0002444	.0001790	.0070027
#2	.0000714	-.000019	.0058836	-.000120	-.000009	-.000061	.0067230
#3	.0000414	-.000044	-.000169	-.000067	-.000125	.000462	-.001647

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002900	.0033506	-.000054	.0014647	.0560872	.0000249	-.000785
Stddev	.0003113	.0086830	.000158	.0001786	.0098227	.0006485	.000341
%RSD	107.3421	259.1461	290.9787	12.19079	17.51327	2609.875	43.48610

#1	-.000056	-.004125	-.000214	.0015543	.0581403	.0001443	-.000972
#2	.000380	.012875	.000102	.0012590	.0647210	.0006054	-.000992
#3	.000546	.001302	-.000051	.0015806	.0454002	-.000675	-.000391

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1890231	.0066413	.0001252	-.000726	.0005491	.0096740	-.004662
Stddev	.0264839	.0006336	.0001572	.000666	.0003014	.0087271	.001977
%RSD	14.01091	9.540403	125.5815	91.76270	54.89876	90.21220	42.41690

#1	.1618191	.0073600	-.000033	-.000038	.0002575	.0173477	-.002616
#2	.2147227	.0064007	.000281	-.001367	.0005301	.0114937	-.004807
#3	.1905274	.0061633	.000127	-.000773	.0008595	.0001805	-.006562

Sample Name: CCB06 Acquired: 1/20/2025 16:50:50 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	-.005413	.0001614	.0000514
Stddev	.002207	.0014758	.0000318
%RSD	40.76064	914.1955	61.89197
#1	-.006144	-.001478	.0000654
#2	-.007162	.000578	.0000150
#3	-.002934	.001384	.0000740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2766.903	54335.69	10128.26	1888.579	4204.271
Stddev	4.403	341.01	46.25	9.842	2.360
%RSD	.1591452	.6275911	.4566525	.5211344	.0561259
#1	2763.638	54028.43	10091.22	1881.186	4201.604
#2	2765.161	54276.06	10180.10	1884.800	4206.087
#3	2771.911	54702.58	10113.46	1899.750	4205.123

Sample Name: Q1061-10 Acquired: 1/20/2025 16:55:11 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	.0212322	.0034673	.2021017	-.007263	-.000292	18.59126
Stddev	.0008903	.0028567	.0004605	.003186	.001837	.02418
%RSD	4.193111	82.39013	.2278517	43.86973	628.9171	.1300815
#1	.0221950	.0003483	.2019704	-.009201	.000819	18.57388
#2	.0204388	.0040968	.2026136	-.003586	-.002412	18.58103
#3	.0210627	.0059567	.2017211	-.009003	.000717	18.61888
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6765937	.0009707	.0029872	175.7505	.0765569	.0492509
Stddev	.0012380	.0000447	.0001676	.1881	.0004686	.0001608
%RSD	.1829771	4.605123	5.610285	.1070045	.6120443	.3264422
#1	.6754426	.0009785	.0029671	175.5682	.0764120	.0490776
#2	.6764352	.0009227	.0031639	175.9438	.0770808	.0492800
#3	.6779034	.0010111	.0028305	175.7395	.0761779	.0493952
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1316937	34.00292	9.427850	20.72646	.0763481	.0021289
Stddev	.0006593	.08481	.009164	.05285	.0006575	.0001349
%RSD	.5006397	.2494106	.0972002	.2550094	.8612251	6.337663
#1	.1309450	34.07924	9.418514	20.67617	.0760517	.0021818
#2	.1319483	34.01790	9.436832	20.78155	.0758908	.0022293
#3	.1321877	33.91162	9.428206	20.72166	.0771016	.0019756
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	205.9494	.0271632	1.353559	56.13104	.0954696	.0016810
Stddev	1.7839	.0011447	.005054	.12821	.0005933	.0001146
%RSD	.8661932	4.214301	.3733736	.2284097	.6215032	6.816556
#1	205.6552	.0267292	1.348106	56.26511	.0961445	.0017416
#2	204.3309	.0262989	1.354486	56.11838	.0952337	.0017525
#3	207.8621	.0284615	1.358086	56.00963	.0950304	.0015488

Sample Name: Q1061-10 Acquired: 1/20/2025 16:55:11 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	.0013421	.0937761	F 26.88894	4.153910	F 35.82501	.0182902
Stddev	.0010145	.0004203	.04105	.016294	.12352	.0007902
%RSD	75.59011	.4482367	.1526620	.3922607	.3447960	4.320422
#1	.0003232	.0940363	26.91608	4.171986	35.94532	.0177485
#2	.0013509	.0932912	26.90902	4.149396	35.69851	.0179251
#3	.0023521	.0940009	26.84172	4.140350	35.83120	.0191969

Elem	Sr4077
Units	ppm
Avg	.9345545
Stddev	.0062180
%RSD	.6653427
#1	.9416503
#2	.9319556
#3	.9300576

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2703.377	53017.96	10821.65	1814.332	3626.804
Stddev	5.499	127.93	49.68	9.633	7.213
%RSD	.2034249	.2412986	.4590885	.5309279	.1988844
#1	2709.722	53120.65	10879.01	1825.345	3631.832
#2	2699.980	52874.65	10792.36	1807.473	3630.041
#3	2700.430	53058.57	10793.57	1810.179	3618.539

Sample Name: Q1061-10DUP Acquired: 1/20/2025 16:59:33 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0200976	.0020153	.2033764	-.008346	-.000262	18.50104
Stddev	.0011513	.0018279	.0016912	.002275	.000927	.02771
%RSD	5.728519	90.69952	.8315452	27.25979	353.4228	.1497633

#1	.0210018	.0031750	.2028631	-.005992	-.001067	18.53269
#2	.0204895	.0029627	.2020013	-.010533	-.000470	18.48115
#3	.0188015	-.000092	.2052647	-.008513	.000751	18.48929

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6713434	.0009371	.0031404	174.7921	.0763024	.0496653
Stddev	.0014220	.0000485	.0000944	.3613	.0004018	.0001981
%RSD	.2118207	5.174916	3.006797	.2067260	.5266456	.3988444

#1	.6726821	.0008865	.0030322	175.2040	.0767202	.0498439
#2	.6714976	.0009417	.0031826	174.6439	.0759186	.0494523
#3	.6698506	.0009832	.0032063	174.5284	.0762685	.0496998

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1340898	33.64133	9.361234	20.58435	.0773508	.0022032
Stddev	.0009471	.10345	.011499	.08684	.0005072	.0000633
%RSD	.7063514	.3075192	.1228407	.4218789	.6557249	2.870724

#1	.1330647	33.70772	9.371833	20.68462	.0768460	.0021517
#2	.1342721	33.52213	9.362862	20.53463	.0778604	.0021840
#3	.1349325	33.69413	9.349008	20.53380	.0773460	.0022738

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	202.4358	.0273164	1.353505	55.54357	.0934529	.0014391
Stddev	1.3470	.0005370	.004322	.23006	.0002236	.0001796
%RSD	.6654178	1.965942	.3192992	.4141963	.2392771	12.47640

#1	203.0304	.0279022	1.348740	55.76615	.0934579	.0013987
#2	200.8937	.0271999	1.354602	55.30669	.0932269	.0012833
#3	203.3832	.0268473	1.357172	55.55787	.0936740	.0016355

Sample Name: Q1061-10DUP Acquired: 1/20/2025 16:59:33 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010923	.0928457	F 26.60660	4.187084	F 36.26508	.0178490
Stddev	.0001517	.0011553	.14693	.011574	.16144	.0011561
%RSD	13.88412	1.244352	.5522350	.2764286	.4451764	6.477174
#1	.0011934	.0928955	26.70728	4.174724	36.07974	.0191732
#2	.0011656	.0939754	26.43799	4.188860	36.34036	.0173333
#3	.0009179	.0916663	26.67452	4.197667	36.37513	.0170404

Elem	Sr4077
Units	ppm
Avg	.9349698
Stddev	.0141233
%RSD	1.510558
#1	.9404974
#2	.9454932
#3	.9189187

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2668.439	53119.49	10803.73	1807.127	3577.738
Stddev	10.160	128.26	24.80	7.267	10.991
%RSD	.3807619	.2414564	.2295247	.4021174	.3072114
#1	2679.233	52982.07	10796.33	1811.595	3589.257
#2	2667.022	53236.03	10783.47	1811.043	3576.592
#3	2659.062	53140.35	10831.38	1798.742	3567.364

Sample Name: Q1061-10LX5 Acquired: 1/20/2025 17:03:57 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	.0007205	.0001765	.0402826	-.001018	-.000310	3.846834	.1362202
Stddev	.0014793	.0014951	.0003433	.002444	.001106	.002979	.0007854
%RSD	205.3097	847.1372	.8521880	240.1376	356.9284	.0774365	.5765375
#1	.0022559	.0009146	.0402786	.001763	.000689	3.846965	.1364550
#2	.0006013	-.001544	.0399413	-.002824	-.001498	3.849746	.1353443
#3	-.000696	.001159	.0406279	-.001992	-.000121	3.843792	.1368615
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002831	.0004679	36.96897	.0157458	.0097723	.0284477	7.107273
Stddev	.0000840	.0001093	.05899	.0001612	.0000564	.0004825	.026528
%RSD	29.68155	23.36562	.1595620	1.023715	.5773219	1.696069	.3732464
#1	.0002150	.0004051	36.90155	.0157092	.0098374	.0279338	7.093175
#2	.0003770	.0004045	37.01110	.0159221	.0097412	.0285181	7.137873
#3	.0002573	.0005942	36.99425	.0156060	.0097383	.0288910	7.090770
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.989158	4.405317	.0153046	.0016573	40.99006	.0069552	.2786003
Stddev	.006381	.007315	.0001315	.0001613	.10988	.0005394	.0011519
%RSD	.3207827	.1660411	.8589566	9.732768	.2680580	7.755787	.4134560
#1	1.982730	4.412845	.0151650	.0014727	40.86334	.0069896	.2793477
#2	1.995491	4.398236	.0154261	.0017281	41.05888	.0074766	.2772738
#3	1.989253	4.404872	.0153228	.0017710	41.04796	.0063994	.2791795
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.01268	.0196346	.0005910	-.001606	.0193374	5.409297	.7972111
Stddev	.05978	.0004696	.0004003	.000323	.0003620	.018219	.0084336
%RSD	.5428091	2.391607	67.73592	20.09991	1.871891	.3368171	1.057885
#1	11.06912	.0199986	.0008149	-.001912	.0196541	5.390201	.7886632
#2	11.01886	.0198006	.0008293	-.001638	.0189428	5.411200	.7974446
#3	10.95005	.0191045	.0001288	-.001268	.0194151	5.426490	.8055255

Sample Name: Q1061-10LX5 Acquired: 1/20/2025 17:03:57 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	6.825309	.0044158	.1954037
Stddev	.046358	.0004796	.0002488
%RSD	.6792002	10.85994	.1273303
#1	6.785376	.0045705	.1951397
#2	6.814404	.0038780	.1956339
#3	6.876146	.0047990	.1954376

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2710.059	52591.65	10435.86	1819.162	3927.253
Stddev	18.166	86.33	27.77	5.964	33.615
%RSD	.6703357	.1641495	.2661044	.3278340	.8559431
#1	2724.252	52514.35	10404.14	1813.787	3952.852
#2	2716.339	52575.81	10447.65	1825.578	3939.723
#3	2689.586	52684.81	10455.79	1818.122	3889.185

Sample Name: Q1061-10MS Acquired: 1/20/2025 17:08:11 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	.8811775	2.060342	1.212765	2.081751	.5501857	27.14607
Stddev	.0037417	.023526	.002851	.001145	.0010480	.06114
%RSD	.4246224	1.141826	.2350612	.0550075	.1904793	.2252172
#1	.8847083	2.033551	1.215635	2.081223	.5491069	27.11328
#2	.8815686	2.069850	1.209934	2.083065	.5502503	27.21661
#3	.8772556	2.077625	1.212725	2.080965	.5511999	27.10832
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8898704	.1827817	.2085263	173.7690	.4866493	.2592979
Stddev	.0023375	.0000485	.0003137	.5322	.0022868	.0006070
%RSD	.2626800	.0265144	.1504377	.3062527	.4699130	.2341099
#1	.8906175	.1827371	.2088829	173.7341	.4846436	.2593534
#2	.8917430	.1828333	.2082926	174.3177	.4891396	.2586650
#3	.8872506	.1827748	.2084035	173.2551	.4861647	.2598752
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4293055	44.84867	9.489718	23.52426	.5953476	.0787427
Stddev	.0005973	.17788	.019544	.08461	.0005452	.0004741
%RSD	.1391300	.3966139	.2059443	.3596881	.0915742	.6020670
#1	.4287594	44.80558	9.498162	23.51666	.5956986	.0785586
#2	.4292139	45.04413	9.503621	23.61241	.5947196	.0792812
#3	.4299434	44.69630	9.467373	23.44370	.5956248	.0783883
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	207.8807	.3066243	1.596062	67.00910	.3443768	.4000765
Stddev	1.3327	.0010109	.006367	.26250	.0024684	.0011452
%RSD	.6411063	.3296794	.3989045	.3917355	.7167627	.2862404
#1	206.4405	.3064005	1.597967	67.05202	.3417778	.3995971
#2	209.0705	.3077284	1.601258	67.24749	.3466896	.4013835
#3	208.1311	.3057442	1.588960	66.72778	.3446629	.3992490

Sample Name: Q1061-10MS Acquired: 1/20/2025 17:08:11 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	.5648593	.2377858	F 34.39885	F 10.65460	F 35.19313	.2216614
Stddev	.0010937	.0010225	.16569	.03831	.05699	.0006323
%RSD	.1936297	.4300103	.4816857	.3595979	.1619235	.2852429
#1	.5653773	.2385181	34.31757	10.63688	35.13020	.2223405
#2	.5636027	.2382218	34.58949	10.62836	35.24124	.2215539
#3	.5655977	.2366176	34.28950	10.69857	35.20794	.2210897

Elem	Sr4077
Units	ppm
Avg	1.095937
Stddev	.006179
%RSD	.5637920
#1	1.093156
#2	1.103017
#3	1.091637

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2687.415	51980.03	10704.41	1783.916	3601.941
Stddev	1.355	254.62	39.50	8.732	4.768
%RSD	.0504125	.4898358	.3689747	.4895026	.1323789
#1	2688.575	52225.32	10744.72	1789.065	3600.111
#2	2685.926	51717.01	10665.79	1773.834	3607.353
#3	2687.743	51997.75	10702.72	1788.851	3598.359

Sample Name: Q1061-10MSD Acquired: 1/20/2025 17:12:27 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	.8708555	2.042887	1.208026	2.055251	.5455098	27.06961
Stddev	.0025589	.017383	.004415	.008873	.0020475	.01777
%RSD	.2938320	.8509036	.3654978	.4317363	.3753410	.0656277
#1	.8734217	2.024866	1.210402	2.063891	.5475520	27.06211
#2	.8683041	2.044241	1.202932	2.046162	.5434570	27.08990
#3	.8708408	2.059553	1.210745	2.055700	.5455203	27.05683
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9002817	.1844511	.2071861	174.6267	.4858595	.2587751
Stddev	.0017721	.0002379	.0004387	.2021	.0000489	.0005265
%RSD	.1968402	.1289614	.2117168	.1157439	.0100561	.2034685
#1	.8998106	.1846296	.2070408	174.5637	.4858812	.2582823
#2	.8987928	.1841811	.2068385	174.4637	.4858938	.2587132
#3	.9022418	.1845428	.2076789	174.8529	.4858036	.2593299
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4276180	44.89222	9.599943	23.62054	.5943463	.0790090
Stddev	.0016141	.11100	.028076	.05047	.0009158	.0002072
%RSD	.3774695	.2472621	.2924585	.2136659	.1540819	.2622072
#1	.4280650	45.02012	9.605821	23.58016	.5946487	.0791283
#2	.4258274	44.83551	9.569394	23.60435	.5933175	.0791290
#3	.4289614	44.82103	9.624615	23.67712	.5950726	.0787698
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	204.7586	.3063810	1.591138	66.63957	.3471031	.3982836
Stddev	1.7249	.0000409	.004951	.11781	.0021743	.0010865
%RSD	.8424115	.0133467	.3111702	.1767891	.6264137	.2728038
#1	206.7215	.3063848	1.595042	66.73388	.3472008	.3977522
#2	204.0700	.3063384	1.592804	66.67731	.3448816	.3975650
#3	203.4844	.3064199	1.585569	66.50751	.3492269	.3995335

Sample Name: Q1061-10MSD Acquired: 1/20/2025 17:12:27 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	.5656580	.2379866	F 34.06117	F 10.71583	F 34.92295	.2235547
Stddev	.0029297	.0003472	.08976	.04373	.11616	.0011005
%RSD	.5179326	.1458759	.2635285	.4080919	.3326314	.4922721
#1	.5650415	.2376473	34.16464	10.68254	34.93347	.2223046
#2	.5630855	.2379714	34.01462	10.69959	34.80188	.2239820
#3	.5688469	.2383411	34.00424	10.76535	35.03349	.2243775

Elem	Sr4077
Units	ppm
Avg	1.097631
Stddev	.016042
%RSD	1.461524
#1	1.111344
#2	1.079990
#3	1.101560

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2700.059	51917.32	10554.75	1802.032	3613.058
Stddev	2.131	80.86	35.60	4.278	5.955
%RSD	.0789230	.1557402	.3372952	.2373969	.1648078
#1	2701.999	51836.22	10558.02	1797.495	3619.016
#2	2700.399	51997.93	10588.60	1802.611	3613.051
#3	2697.778	51917.82	10517.63	1805.992	3607.107

Sample Name: Q1061-10A Acquired: 1/20/2025 17:16:43 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	.8595740	1.984942	1.196016	2.016445	.5413551	28.13802
Stddev	.0015707	.021321	.004050	.003269	.0013830	.03610
%RSD	.1827278	1.074152	.3386635	.1621224	.2554746	.1283122
#1	.8613218	2.000816	1.192118	2.013688	.5397619	28.11302
#2	.8582808	1.993303	1.195726	2.015591	.5422462	28.17941
#3	.8591192	1.960707	1.200204	2.020056	.5420572	28.12162
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9151983	.1863372	.2056380	176.3253	.4760605	.2575140
Stddev	.0041618	.0013718	.0004717	.5641	.0148466	.0005594
%RSD	.4547459	.7361957	.2293756	.3199148	3.118636	.2172296
#1	.9131977	.1872555	.2051177	176.5324	.4839747	.2569113
#2	.9199826	.1869958	.2057588	176.7567	.4852732	.2580165
#3	.9124145	.1847603	.2060376	175.6870	.4589335	.2576143
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4280376	44.25482	9.732415	23.82108	.5917836	.0759598
Stddev	.0005241	1.19932	.036324	.08777	.0006906	.0024222
%RSD	.1224371	2.710026	.3732300	.3684414	.1166911	3.188759
#1	.4283717	44.77983	9.743929	23.89672	.5920243	.0771267
#2	.4274336	45.10210	9.761587	23.84167	.5910049	.0775777
#3	.4283075	42.88252	9.691729	23.72485	.5923216	.0731751
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	198.4326	.3108275	1.597553	65.30966	.3495011	.3896833
Stddev	6.0574	.0015291	.048117	1.61377	.0021475	.0008078
%RSD	3.052636	.4919387	3.011900	2.470948	.6144447	.2072966
#1	200.7655	.3097851	1.627216	65.81994	.3505196	.3903025
#2	202.9768	.3125828	1.623407	66.60659	.3509498	.3887696
#3	191.5556	.3101145	1.542036	63.50243	.3470339	.3899779

Sample Name: Q1061-10A Acquired: 1/20/2025 17:16:43 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	.5632248	.2968795	F 34.98965	F 10.65249	F 34.35958	.2274697
Stddev	.0010151	.0070515	.84847	.01681	.03268	.0009559
%RSD	.1802254	2.375210	2.424920	.1577726	.0951095	.4202325
#1	.5643864	.2916651	35.30603	10.63345	34.33266	.2272231
#2	.5627796	.2940709	35.63448	10.66526	34.39594	.2285247
#3	.5625084	.3049026	34.02845	10.65875	34.35014	.2266612

Elem	Sr4077
Units	ppm
Avg	1.104432
Stddev	.004998
%RSD	.4525651
#1	1.101590
#2	1.101502
#3	1.110203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2725.144	53104.91	10432.20	1857.573	3646.587
Stddev	3.276	1435.94	47.25	54.120	8.160
%RSD	.1201989	2.703976	.4529216	2.913499	.2237676
#1	2724.868	52409.87	10400.39	1823.127	3653.963
#2	2728.549	52148.74	10409.73	1829.638	3647.976
#3	2722.015	54756.13	10486.50	1919.952	3637.822

Sample Name: Q1066-02 Acquired: 1/20/2025 17:20:59 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	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002488	-.000250	.0017316	-.001467	-.001374	.0485529	.0029789
Stddev	.002554	.000660	.0004457	.001263	.000406	.0022549	.0000952
%RSD	102.6548	263.7170	25.74146	86.12014	29.52664	4.644153	3.194940
#1	-.004796	.000445	.0012177	-.000351	-.001835	.0498856	.0029798
#2	-.002925	-.000869	.0020131	-.002839	-.001075	.0498236	.0030736
#3	.000256	-.000327	.0019639	-.001212	-.001210	.0459494	.0028833
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000754	.0000289	16.50974	.0008342	.0000768	.0704450	.2607924
Stddev	.0000577	.0000351	.05270	.0003991	.0001481	.0003294	.0060297
%RSD	76.59403	121.3188	.3191930	47.83843	192.7486	.4676431	2.312070
#1	.0000131	.0000691	16.57020	.0003963	.0002476	.0700869	.2575322
#2	.0001271	.0000140	16.47351	.0011773	-.000002	.0707353	.2570947
#3	.0000859	.0000038	16.48551	.0009292	-.000015	.0705126	.2677503
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236204	4.382080	.0007761	.0018784	72.46093	.0007186	.2741120
Stddev	.0000717	.023410	.0001262	.0001665	.58172	.0016422	.0006156
%RSD	.3034430	.5342324	16.26424	8.865311	.8027995	228.5256	.2245644
#1	.0235458	4.407459	.0008454	.0017896	71.80735	.0002342	.2748097
#2	.0236887	4.377452	.0006304	.0017751	72.65348	.0025484	.2736456
#3	.0236267	4.361329	.0008523	.0020705	72.92195	-.000627	.2738807
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.707764	.0552564	.0003815	-.000846	.0002239	3.465905	1.079021
Stddev	.042784	.0012487	.0000680	.000157	.0003316	.021584	.001472
%RSD	1.580034	2.259751	17.82889	18.61109	148.0904	.6227567	.1364497
#1	2.658368	.0566982	.0004596	-.000758	-.000084	3.440983	1.080403
#2	2.733132	.0545363	.0003352	-.001028	.000575	3.478197	1.079188
#3	2.731792	.0545346	.0003496	-.000753	.000181	3.478536	1.077472

Sample Name: Q1066-02 Acquired: 1/20/2025 17:20:59 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	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.661220	-.005310	.0592187
Stddev	.002215	.000795	.0001557
%RSD	.0475179	14.97658	.2629328
#1	4.659261	-.005933	.0591074
#2	4.663623	-.004414	.0593966
#3	4.660776	-.005582	.0591520

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2700.459	53532.58	10489.12	1818.260	4009.995
Stddev	7.694	189.17	73.77	4.868	9.197
%RSD	.2848966	.3533728	.7033400	.2677384	.2293494
#1	2705.238	53613.60	10407.37	1822.335	4015.050
#2	2704.555	53667.75	10550.73	1819.576	4015.555
#3	2691.584	53316.40	10509.26	1812.870	3999.379

Sample Name: PB166036BL Acquired: 1/20/2025 17:25:15 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	-.001911	-.002140	-.000706	-.001105	-.000789	-.001859	-.006945
Stddev	.001778	.000397	.000562	.001812	.002507	.005485	.001083
%RSD	93.03682	18.54686	79.55886	163.9946	317.9363	294.9756	15.59339
#1	-.000115	-.001688	-.000270	-.003164	-.001312	-.007378	-.007741
#2	-.001948	-.002300	-.001340	.000246	-.002993	-.001791	-.005712
#3	-.003670	-.002431	-.000508	-.000397	.001939	.003591	-.007382
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000819	-.000037	-.000795	-.000259	-.000113	.0002456	.0015809
Stddev	.0000283	.000018	.003643	.000161	.000064	.0002876	.0046224
%RSD	34.60128	47.17182	457.9327	62.21647	56.26733	117.1096	292.3870
#1	.0001146	-.000042	-.003807	-.000435	-.000041	.0005551	.0030622
#2	.0000662	-.000052	.003253	-.000224	-.000138	-.000013	.0052811
#3	.0000648	-.000018	-.001833	-.000118	-.000161	.000195	-.003601
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002860	.0037170	-.000096	.0016147	.1105177	-.000568	-.000972
Stddev	.0002910	.0050586	.000050	.0003518	.0091825	.001173	.000262
%RSD	101.7715	136.0935	52.70400	21.78766	8.308669	206.3256	26.93223
#1	.0001454	-.001954	-.000154	.0019102	.1000186	-.001848	-.000995
#2	.0006206	.005341	-.000067	.0017085	.1170506	-.000312	-.000699
#3	.0000919	.007764	-.000067	.0012255	.1144838	.000455	-.001221
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0598491	-.004983	-.000040	-.000254	.0003800	.0052335	-.004939
Stddev	.0052304	.000118	.000205	.000295	.0003680	.0109401	.001458
%RSD	8.739338	2.376876	518.9280	115.8529	96.82376	209.0410	29.52796
#1	.0538837	-.004860	-.000262	-.000593	.0001427	.0139554	-.005971
#2	.0620143	-.005096	.000142	-.000118	.0008039	.0087866	-.003271
#3	.0636492	-.004993	.000001	-.000053	.0001935	-.007042	-.005575

Sample Name: PB166036BL Acquired: 1/20/2025 17:25:15 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	.0009797	.0017010	-.000052
Stddev	.0049030	.0008100	.000012
%RSD	500.4733	47.61999	23.43768
#1	.0044735	.0024902	-.000039
#2	.0030908	.0017411	-.000055
#3	-.004625	.0008717	-.000063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2729.901	53273.65	10217.93	1827.498	4154.252
Stddev	4.910	217.05	45.00	6.625	11.508
%RSD	.1798697	.4074235	.4403854	.3625007	.2770140
#1	2725.745	53075.23	10266.57	1820.467	4146.015
#2	2728.640	53240.28	10209.47	1828.406	4149.340
#3	2735.319	53505.46	10177.77	1833.623	4167.400

Sample Name: PB166036BS Acquired: 1/20/2025 17:29:36 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
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7800548	1.939693	.9307559	1.938946	.7877070	1.825684
Stddev	.0031218	.023843	.0017108	.000762	.0027084	.005777
%RSD	.4002091	1.229208	.1838065	.0392903	.3438312	.3164470
#1	.7764504	1.916835	.9298425	1.938079	.7865473	1.824014
#2	.7819049	1.937833	.9296956	1.939511	.7908021	1.832113
#3	.7818091	1.964411	.9327295	1.939246	.7857715	1.820926
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1616773	.1815526	.1849380	.9176426	.3942621	.1865874
Stddev	.0004340	.0015813	.0002261	.0064293	.0009001	.0004314
%RSD	.2684618	.8710003	.1222621	.7006345	.2282998	.2311954
#1	.1612823	.1810976	.1847185	.9103195	.3944650	.1864138
#2	.1621420	.1833115	.1849254	.9223599	.3950435	.1862700
#3	.1616078	.1802487	.1851702	.9202485	.3932779	.1870786
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2970859	2.740093	.1720399	1.780072	.4674163	.0723407
Stddev	.0000927	.005974	.0004545	.019997	.0010478	.0004371
%RSD	.0311908	.2180068	.2641611	1.123388	.2241676	.6042627
#1	.2971918	2.742842	.1716040	1.767969	.4671359	.0728436
#2	.2970459	2.733239	.1725109	1.803154	.4665373	.0720512
#3	.2970199	2.744197	.1720049	1.769094	.4685758	.0721274
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.838652	.2683350	.1973428	9.155148	.2554737	.4033062
Stddev	.035752	.0016638	.0015914	.041905	.0024989	.0002245
%RSD	1.259473	.6200407	.8063979	.4577169	.9781366	.0556750
#1	2.834235	.2673607	.1965176	9.159532	.2544410	.4032265
#2	2.805314	.2702561	.1991773	9.111224	.2583234	.4035597
#3	2.876408	.2673881	.1963335	9.194688	.2536566	.4031324

Sample Name: PB166036BS Acquired: 1/20/2025 17:29:36 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	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6403894	.1743298	F .6649569	5.231293	F -.014013	.1785379
Stddev	.0023690	.0007669	.0022384	.016640	.002713	.0005487
%RSD	.3699308	.4399131	.3366272	.3180892	19.36251	.3073127
#1	.6380444	.1740407	.6662899	5.220194	-.012317	.1791501
#2	.6403423	.1751993	.6662081	5.223259	-.017142	.1783729
#3	.6427817	.1737495	.6623726	5.250425	-.012579	.1780906

Elem	Sr4077
Units	ppm
Avg	.1720660
Stddev	.0002916
%RSD	.1694833
#1	.1721441
#2	.1723107
#3	.1717433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2793.492	53522.47	10018.84	1831.199	4239.927
Stddev	2.558	96.56	84.83	3.723	4.505
%RSD	.0915610	.1804156	.8466858	.2032961	.1062630
#1	2791.183	53498.01	10041.44	1832.078	4243.025
#2	2793.052	53440.50	9924.99	1827.115	4241.998
#3	2796.241	53628.92	10090.07	1834.403	4234.759

Sample Name: CCV07 Acquired: 1/20/2025 17:33:35 Type: Unk
Method: NON EPA-6010-200.7(v2622) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.917330	4.884103	4.777338	5.015526	5.087426	9.668956	9.003143
Stddev	.006243	.005864	.003037	.005987	.004799	.022126	.093147
%RSD	.1269584	.1200680	.0635699	.1193748	.0943368	.2288318	1.034608
#1	4.918366	4.880995	4.780759	5.009737	5.084901	9.694362	8.981320
#2	4.922989	4.890867	4.776293	5.021694	5.092961	9.658581	9.105264
#3	4.910633	4.880446	4.774961	5.015146	5.084417	9.653923	8.922845
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2341460	2.395129	23.12530	.9867481	2.392865	1.223632	4.592654
Stddev	.0011722	.003016	.03345	.0009876	.002578	.001883	.033687
%RSD	.5006320	.1259141	.1446547	.1000891	.1077297	.1538737	.7335053
#1	.2332336	2.398330	23.10238	.9878310	2.395097	1.222360	4.626183
#2	.2354681	2.394715	23.10984	.9865162	2.393453	1.225795	4.558810
#3	.2337363	2.392341	23.16369	.9858970	2.390044	1.222741	4.592968
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.584986	23.32925	2.386688	1.200959	23.84584	2.365118	2.445643
Stddev	.005653	.07423	.003693	.002549	.19205	.002823	.005575
%RSD	.2186866	.3182036	.1547159	.2122258	.8053918	.1193480	.2279668
#1	2.588337	23.24886	2.390671	1.203856	23.99861	2.366053	2.448444
#2	2.578459	23.39520	2.386014	1.199060	23.63024	2.361946	2.449262
#3	2.588161	23.34369	2.383378	1.199960	23.90867	2.367354	2.439223
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.68181	4.597123	5.069118	4.768066	4.580015	4.892880	4.742299
Stddev	.20992	.026319	.003503	.010578	.016616	.043597	.010576
%RSD	.8864388	.5725058	.0691018	.2218614	.3628009	.8910392	.2230246
#1	23.84367	4.575062	5.065936	4.779599	4.592345	4.903607	4.750511
#2	23.44461	4.626255	5.072871	4.765785	4.561119	4.844920	4.746020
#3	23.75715	4.590053	5.068548	4.758815	4.586580	4.930112	4.730364

Sample Name: CCV07 Acquired: 1/20/2025 17:33:35 Type: Unk
Method: NON EPA-6010-200.7(v2622) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.691550	4.607200	4.619538
Stddev	.007182	.015926	.027518
%RSD	.1530914	.3456815	.5956826
#1	4.695290	4.620763	4.590089
#2	4.683269	4.589663	4.623930
#3	4.696090	4.611175	4.644596

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2692.323	52403.91	9626.531	1772.963	3901.297
Stddev	5.281	138.06	52.606	10.238	8.530
%RSD	.1961344	.2634461	.5464670	.5774694	.2186540
#1	2691.962	52245.76	9649.970	1768.042	3895.822
#2	2687.232	52465.58	9566.279	1766.114	3896.944
#3	2697.775	52500.37	9663.342	1784.733	3911.126

Sample Name: CCB07 Acquired: 1/20/2025 17:37:46 Type: Unk
Method: NON EPA-6010-200.7(v2622) 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	-.001431	-.001281	-.000042	.0020994	-.001104	-.003889	-.005667
Stddev	.000740	.000112	.000183	.0002079	.000199	.005404	.000333
%RSD	51.71455	8.741917	440.2643	9.904953	18.01649	138.9494	5.877232
#1	-.001070	-.001158	-.000207	.0018598	-.000885	-.009002	-.005321
#2	-.000941	-.001305	.000155	.0022062	-.001274	.001765	-.005694
#3	-.002282	-.001378	-.000073	.0022322	-.001153	-.004431	-.005986
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000858	-.000023	-.003438	-.000125	-.000229	-.000280	.0046693
Stddev	.0000396	.000013	.004277	.000513	.000290	.000148	.0014876
%RSD	46.18252	54.54788	124.4014	411.3852	126.3584	52.92641	31.85816
#1	.0001304	-.000038	-.000899	-.000366	-.000563	-.000235	.0035533
#2	.0000545	-.000017	-.008377	-.000473	-.000041	-.000446	.0063581
#3	.0000727	-.000015	-.001040	.000464	-.000084	-.000160	.0040966
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000688	.0060951	-.000105	.0014286	.0579549	-.000535	-.000730
Stddev	.0000604	.0045125	.000329	.0000520	.0182576	.000935	.000050
%RSD	87.93104	74.03483	314.2866	3.636696	31.50315	174.7504	6.901292
#1	.0000780	.0012219	-.000429	.0014793	.0397910	-.000562	-.000787
#2	.0001241	.0101291	.000229	.0013755	.0577688	.000413	-.000691
#3	.0000042	.0069342	-.000114	.0014310	.0763048	-.001456	-.000714
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1120612	.0008125	-.000055	-.000643	.0004532	.0078585	-.004756
Stddev	.0374640	.0002364	.000134	.000776	.0008749	.0080880	.002117
%RSD	33.43171	29.09990	244.2149	120.6642	193.0190	102.9203	44.50701
#1	.0693379	.0010101	.000100	-.001253	.0009024	.0144566	-.002823
#2	.1275416	.0008769	-.000133	.000230	.0010123	-.001165	-.007017
#3	.1393040	.0005505	-.000131	-.000906	-.000555	.010283	-.004426

Sample Name: CCB07 Acquired: 1/20/2025 17:37:46 Type: Unk
Method: NON EPA-6010-200.7(v2622) 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	-.004634	-.000250	.0000130
Stddev	.005803	.000518	.0000610
%RSD	125.2470	207.3980	467.7763
#1	-.010893	-.000143	.0000591
#2	-.003576	-.000813	.0000362
#3	.000568	.000207	-.000056

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2765.615	54174.72	10208.19	1871.454	4203.184
Stddev	6.265	107.98	12.95	10.660	6.588
%RSD	.2265428	.1993232	.1268614	.5696024	.1567417
#1	2761.561	54257.26	10222.23	1882.545	4200.957
#2	2772.831	54214.39	10205.64	1870.532	4210.597
#3	2762.452	54052.51	10196.70	1861.286	4197.998

Sample Name: LR1 Acquired: 1/20/2025 17:43:05 Type: Unk
Method: NON EPA-6010-200.7(v2620) 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	.0292147	.1387427	.0409393	-.120667	.0035690	1962.464	.0206386
Stddev	.0061994	.0051425	.0064993	.010784	.0068946	11.036	.0009342
%RSD	21.21999	3.706521	15.87542	8.937027	193.1797	.5623497	4.526402
#1	.0361749	.1365131	.0352176	-.132661	-.004195	1975.076	.0198929
#2	.0242859	.1446238	.0480058	-.111771	.005928	1954.576	.0216864
#3	.0271832	.1350913	.0395945	-.117569	.008975	1957.741	.0203364
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081615	-.020582	1735.852	-.002058	.0247039	-.767076	1072.632
Stddev	.0000804	.000667	4.701	.000459	.0005216	.002499	2.782
%RSD	.9849598	3.239943	.2708112	22.29208	2.111230	.3257268	.2593271
#1	.0081923	-.021146	1741.035	-.002587	.0241206	-.769324	1075.841
#2	.0082220	-.019846	1734.658	-.001768	.0251254	-.764386	1070.909
#3	.0080703	-.020753	1731.864	-.001819	.0248656	-.767519	1071.145
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.058907	1849.483	.0091768	.0283504	1912.295	.0430710	.0634335
Stddev	.000312	2.494	.0003412	.0005302	6.935	.0021670	.0003861
%RSD	.5303634	.1348542	3.717668	1.870139	.3626683	5.031126	.6087185
#1	-.058905	1850.335	.0094700	.0289616	1920.280	.0418218	.0629975
#2	-.059221	1846.675	.0088024	.0280765	1908.822	.0455732	.0637321
#3	-.058596	1851.440	.0092582	.0280132	1907.782	.0418180	.0635710
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1222.537	.5472714	-.008903	.0086658	-.037709	.1560426	.0706066
Stddev	4.762	.0029255	.000670	.0043590	.000584	.0042915	.0021482
%RSD	.3894943	.5345655	7.523348	50.30087	1.547827	2.750245	3.042481
#1	1217.558	.5443916	-.008301	.0056696	-.038242	.1608738	.0722415
#2	1227.047	.5471820	-.008784	.0066613	-.037801	.1545822	.0681736
#3	1223.005	.5502406	-.009625	.0136664	-.037085	.1526718	.0714046

Sample Name: LR1 Acquired: 1/20/2025 17:43:05 Type: Unk
 Method: NON EPA-6010-200.7(v2620) 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	-.261743	-.277017	-1.06188
Stddev	.016320	.000545	.00278
%RSD	6.235294	.1967311	.2616398
#1	-.243043	-.276711	-1.06509
#2	-.273117	-.277646	-1.06014
#3	-.269069	-.276693	-1.06042

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1898.855	37736.38	8714.363	1263.703	2435.887
Stddev	1.265	78.13	31.354	4.784	4.190
%RSD	.0666438	.2070438	.3597920	.3785576	.1720211
#1	1898.717	37748.38	8688.225	1269.033	2436.138
#2	1900.183	37807.81	8705.738	1262.295	2439.947
#3	1897.664	37652.94	8749.127	1259.781	2431.577

Sample Name: LR2 Acquired: 1/20/2025 17:48:00 Type: Unk
Method: NON EPA-6010-200.7(v2620) 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	.0093566	-.024079	238.3070	.0059611	-.008396	.0204125	105.3259
Stddev	.0026898	.004444	.4723	.0050900	.000728	.0032256	.9165
%RSD	28.74816	18.45810	.1982107	85.38682	8.671233	15.80221	.8701614

#1	.0123712	-.026115	238.4743	.0066522	-.008695	.0211122	106.3453
#2	.0084969	-.018981	237.7738	.0005609	-.007566	.0232310	105.0624
#3	.0072017	-.027140	238.6729	.0106703	-.008927	.0168945	104.5700

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002357	-.006367	.1441117	.0141634	-.027140	260.7461	-.023478
Stddev	.000019	.000157	.0017111	.0000324	.000046	1.3448	.000905
%RSD	.8212023	2.469725	1.187347	.2283835	.1676998	.5157569	3.855796

#1	-.002367	-.006538	.1438609	.0141266	-.027089	260.4195	-.023399
#2	-.002335	-.006228	.1459344	.0141873	-.027177	259.5947	-.022615
#3	-.002369	-.006335	.1425399	.0141762	-.027155	262.2241	-.024420

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.89915	-.051248	46.75660	.0038559	.3114426	-.012646	33.88485
Stddev	.51733	.008639	.03893	.0002202	.0135868	.000215	.43314
%RSD	1.152204	16.85776	.0832631	5.711322	4.362547	1.701789	1.278280

#1	45.22947	-.058994	46.73466	.0039855	.3157367	-.012530	34.01111
#2	44.30295	-.041931	46.73360	.0039807	.3223636	-.012894	34.24084
#3	45.16503	-.052819	46.80155	.0036017	.2962276	-.012513	33.40261

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3404457	-.004904	-.008540	-.004424	-.037202	-.014737	1.438780
Stddev	.0299304	.000118	.000215	.000469	.000462	.005875	.009085
%RSD	8.791537	2.414282	2.522897	10.59356	1.241204	39.86643	.6314294

#1	.3657018	-.004964	-.008291	-.004626	-.036888	-.021150	1.435431
#2	.3482486	-.004980	-.008652	-.003889	-.037732	-.013447	1.449064
#3	.3073866	-.004768	-.008676	-.004758	-.036986	-.009614	1.431846

Sample Name: LR2 Acquired: 1/20/2025 17:48:00 Type: Unk
Method: NON EPA-6010-200.7(v2620) 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	-.049700	-.001474	.0013534
Stddev	.003011	.000363	.0000319
%RSD	6.057835	24.62165	2.358824
#1	-.051960	-.001631	.0013897
#2	-.050857	-.001059	.0013298
#3	-.046282	-.001731	.0013407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2519.740	55278.07	10375.25	1800.494	4106.665
Stddev	2.658	68.55	52.96	3.632	3.599
%RSD	.1054900	.1240058	.5104572	.2017387	.0876293
#1	2518.767	55233.99	10339.16	1801.968	4103.487
#2	2522.748	55243.17	10436.05	1796.356	4110.572
#3	2517.706	55357.04	10350.53	1803.157	4105.934

Sample Name: CCV08 Acquired: 1/20/2025 17:52:42 Type: Unk
Method: NON EPA-6010-200.7(v2623) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.949320	4.840743	4.725607	5.075474	5.114265	9.382643
Stddev	.019644	.053745	.013130	.023647	.023674	.006181
%RSD	.3969105	1.110263	.2778573	.4659149	.4629053	.0658814
#1	4.934732	4.859104	4.718009	5.052343	5.089339	9.378329
#2	4.941570	4.780224	4.718043	5.074474	5.117009	9.389725
#3	4.971657	4.882901	4.740768	5.099606	5.136448	9.379876
Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.51051	.2281230	2.372222	24.23350	.9689638	2.371412
Stddev	.09904	.0013336	.007206	.06143	.0009801	.007254
%RSD	.9423127	.5845831	.3037496	.2534850	.1011538	.3058983
#1	10.42496	.2267984	2.369889	24.16803	.9691626	2.367663
#2	10.48756	.2294654	2.366472	24.28987	.9678995	2.366800
#3	10.61901	.2281054	2.380305	24.24259	.9698294	2.379774
Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.222409	4.547324	2.527643	22.95487	2.367328	1.192656
Stddev	.003316	.010701	.003570	.13352	.005554	.001629
%RSD	.2712621	.2353360	.1412296	.5816650	.2346204	.1366029
#1	1.219109	4.554446	2.528027	22.80870	2.365873	1.190832
#2	1.222377	4.535017	2.531004	23.07042	2.362646	1.193965
#3	1.225741	4.552507	2.523896	22.98549	2.373465	1.193172
Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.53016	2.292258	2.384189	23.68882	4.501996	5.021247
Stddev	.11262	.004134	.004927	.07517	.026701	.016423
%RSD	.4786025	.1803574	.2066366	.3173114	.5930933	.3270694
#1	23.65227	2.288619	2.383570	23.75051	4.473115	5.006981
#2	23.43039	2.291402	2.379600	23.60510	4.525784	5.017560
#3	23.50781	2.296753	2.389395	23.71086	4.507089	5.039200

Sample Name: CCV08 Acquired: 1/20/2025 17:52:42 Type: Unk
Method: NON EPA-6010-200.7(v2623) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.723908	F 4.438332	4.806194	4.707591	4.733646	F 4.442761
Stddev	.018752	.001988	.028109	.010289	.021420	.005870
%RSD	.3969619	.0447912	.5848420	.2185696	.4524990	.1321340
#1	4.717902	4.440105	4.823867	4.697192	4.722877	4.445292
#2	4.708895	4.438710	4.773781	4.707815	4.719748	4.446940
#3	4.744928	4.436183	4.820934	4.717767	4.758313	4.436049

Elem	Sr4077
Units	ppm
Avg	4.507889
Stddev	.014475
%RSD	.3211054
#1	4.499075
#2	4.524595
#3	4.499997

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2702.527	52998.70	9953.191	1799.214	3914.390
Stddev	6.942	108.70	48.498	5.417	8.203
%RSD	.2568545	.2050931	.4872621	.3010780	.2095542
#1	2709.569	53020.51	10007.12	1796.526	3917.232
#2	2702.323	53094.84	9913.17	1805.449	3920.794
#3	2695.690	52880.75	9939.28	1795.667	3905.144

Sample Name: CCB08 Acquired: 1/20/2025 17:56:53 Type: Unk
Method: NON EPA-6010-200.7(v2623) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001518	-.000328	-.000514	-.000945	-.000855	.0004055	-.028374
Stddev	.002231	.001669	.000804	.001708	.001151	.0018493	.000254
%RSD	146.9592	509.6592	156.3326	180.7560	134.6383	456.0301	.8968852
#1	-.004027	.001514	.000368	.000913	-.001773	-.001015	-.028145
#2	-.000767	-.001742	-.000705	-.001301	.000437	-.000265	-.028648
#3	.000241	-.000755	-.001205	-.002446	-.001229	.002497	-.028329
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000535	.0000023	-.015154	-.000290	.0000884	.0004869	.0078447
Stddev	.0000268	.0000226	.005589	.000165	.0001402	.0003010	.0001099
%RSD	50.12969	998.9990	36.88230	56.90086	158.6455	61.80731	1.401137
#1	.0000760	-.000012	-.018086	-.000410	.0002332	.0006341	.0078853
#2	.0000608	-.000010	-.018666	-.000359	-.000047	.0006861	.0079285
#3	.0000238	.000028	-.008709	-.000102	.000079	.0001407	.0077203
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000536	.0151987	-.000168	.0017028	.1835268	-.000213	-.000944
Stddev	.0002019	.0059842	.000166	.0003166	.0056378	.001459	.000024
%RSD	376.8401	39.37275	98.90626	18.59179	3.071926	684.6269	2.564330
#1	-.000082	.0094596	-.000285	.0014674	.1772618	.001148	-.000934
#2	.000286	.0214010	.000022	.0020627	.1881914	-.001754	-.000971
#3	-.000043	.0147356	-.000241	.0015783	.1851273	-.000033	-.000926
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1307617	-.000831	.0002484	-.000413	.0005312	.0017153	-.003102
Stddev	.0236588	.000233	.0000983	.000266	.0003239	.0038946	.001848
%RSD	18.09307	28.02270	39.57296	64.41725	60.97805	227.0555	59.56571
#1	.1060283	-.000605	.0003609	-.000618	.0002090	.0014710	-.001923
#2	.1330818	-.001071	.0002052	-.000510	.0008569	-.002051	-.005232
#3	.1531750	-.000818	.0001791	-.000112	.0005278	.005726	-.002152

Sample Name: CCB08 Acquired: 1/20/2025 17:56:53 Type: Unk
Method: NON EPA-6010-200.7(v2623) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

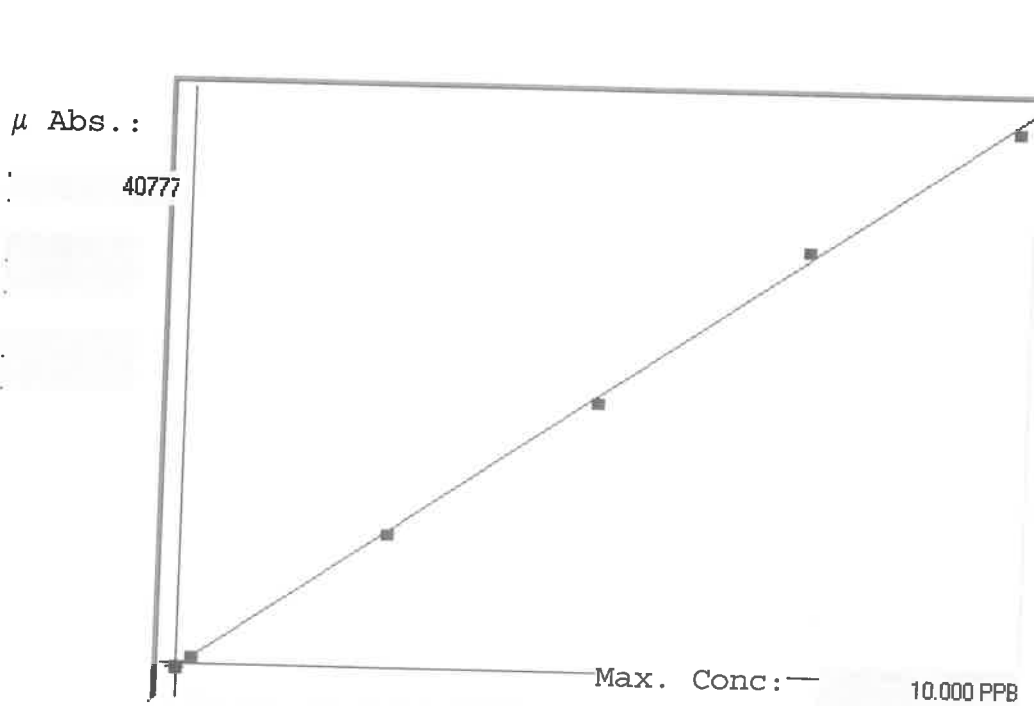
Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.006489	.0001800	-.000023
Stddev	.002291	.0005169	.000022
%RSD	35.30725	287.1682	94.77502
#1	-.003891	-.000341	-.000031
#2	-.007352	.000692	.000002
#3	-.008222	.000189	-.000040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2810.611	55705.71	10682.75	1912.490	4287.751
Stddev	3.545	187.20	33.06	9.746	4.173
%RSD	.1261275	.3360450	.3094430	.5095734	.0973176
#1	2807.680	55912.75	10647.29	1923.051	4283.016
#2	2814.551	55655.99	10712.71	1903.845	4289.346
#3	2809.603	55548.40	10688.26	1910.573	4290.890

LB134341

7470A

INSTRUMENT ID: CV1



Linear

A= 0.0000e+000

B= 2.4132e-004

C= 6.6390e-002

Rho= 0.9996773

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	% 1)
0.0	0.000	-0.009	-0.009	-311	0.000	-311	0				
0.2	0.200	0.231	0.031	681	0.0 %	681					16
2.5	2.500	2.478	-0.022	9993	0.0 %	9993					1
5.0	5.000	4.908	-0.092	20064	0.0 %	20064					2
7.5	7.500	7.685	0.185	31569	0.0 %	31569					2
10.0	10.000	9.907	-0.093	40777	0.0 %	40777					1

LB134341 INSTRUMENT ID : CV1

Method: 7470A

Operator: Admin

Date of Analysis: 20 Jan 2025 10:21:21

Sample ID	Extended ID	Abs.	Conc.	Std Conc	Method	Units	Date	Type	Type
0.0 - 1	50.2	-311	-	0.0000	7470A	PPB	20 Jan 2025 10:41:26	S	Std
0.2 - 1	52.5	681	-	0.2000	7470A	PPB	20 Jan 2025 10:43:44	S	Std
2.5 - 1	55.5	9993	-	2.5000	7470A	PPB	20 Jan 2025 10:46:01	S	Std
5.0 - 1	58.5	20064	-	5.0000	7470A	PPB	20 Jan 2025 10:48:18	S	Std
7.5 - 1	58	31569	-	7.5000	7470A	PPB	20 Jan 2025 10:50:35	S	Std
10.0 - 1		40777	-	10.0000	7470A	PPB	20 Jan 2025 10:58:10	S	Std
ICV62 - 1	ICV62	16293	3.9983	-	7470A	PPB	20 Jan 2025 11:03:30	U	SMPL
ICB62 - 1	ICB62	-126	0.0360	-	7470A	PPB	20 Jan 2025 11:05:45	U	SMPL
CCV50 - 1	CCV50	19547	4.7836	-	7470A	PPB	20 Jan 2025 11:08:01	U	SMPL
CCB50 - 1	CCB50	-195	0.0193	-	7470A	PPB	20 Jan 2025 11:10:17	U	SMPL
CRA - 1	CRA	660	0.2257	-	7470A	PPB	20 Jan 2025 11:15:32	U	SMPL
HighStd - 1	HighStd	38556	9.3709	-	7470A	PPB	20 Jan 2025 11:17:47	U	SMPL
ChkStd - 1	ChkStd	26744	6.5204	-	7470A	PPB	20 Jan 2025 11:20:02	U	SMPL
PB166122BL - 1	PBW	-267	0.0020	-	7470A	PPB	20 Jan 2025 11:22:20	U	SMPL
PB166122BS - 1	LCSW	15747	3.8665	-	7470A	PPB	20 Jan 2025 11:24:38	U	SMPL
Q1092-02 - 1	428	-194	0.0196	-	7470A	PPB	20 Jan 2025 11:26:54	U	SMPL
Q1092-03 - 1	429	4	0.0674	-	7470A	PPB	20 Jan 2025 11:29:12	U	SMPL
Q1115-02 - 1	366	61	0.0811	-	7470A	PPB	20 Jan 2025 11:31:29	U	SMPL
Q1115-05 - 1	VNJ-214	128	0.0973	-	7470A	PPB	20 Jan 2025 11:33:46	U	SMPL
Q1115-08 - 1	72-11995	91	0.0884	-	7470A	PPB	20 Jan 2025 11:36:01	U	SMPL
CCV51 - 1	CCV51	18453	4.5196	-	7470A	PPB	20 Jan 2025 11:38:16	U	SMPL
CCB51 - 1	CCB51	-155	0.0290	-	7470A	PPB	20 Jan 2025 11:40:32	U	SMPL
Q1115-11 - 1	VNJ-213	18	0.0707	-	7470A	PPB	20 Jan 2025 11:42:50	U	SMPL
Q1119-01 - 1	FILTER CAKE	8	0.0683	-	7470A	PPB	20 Jan 2025 11:45:05	U	SMPL
Q1119-01DUP - 1	FILTER CAKEDUP	10	0.0688	-	7470A	PPB	20 Jan 2025 11:47:20	U	SMPL
Q1119-01MS - 1	FILTER CAKEMS	14192	3.4913	-	7470A	PPB	20 Jan 2025 11:49:36	U	SMPL
Q1119-01MSD - 1	FILTER CAKEMSD	14687	3.6107	-	7470A	PPB	20 Jan 2025 11:51:52	U	SMPL
PB166123BL - 1	PBW	-138	0.0331	-	7470A	PPB	20 Jan 2025 11:54:10	U	SMPL
PB166123BS - 1	LCSW	15082	3.7060	-	7470A	PPB	20 Jan 2025 11:56:27	U	SMPL
Q1096-01 - 1	D3746	119	0.0951	-	7470A	PPB	20 Jan 2025 11:58:44	U	SMPL
Q1096-01DUP - 1	D3746DUP	88	0.0876	-	7470A	PPB	20 Jan 2025 12:01:03	U	SMPL
Q1096-01MS - 1	D3746MS	10975	2.7149	-	7470A	PPB	20 Jan 2025 12:03:19	U	SMPL
CCV52 - 1	CCV52	19486	4.7688	-	7470A	PPB	20 Jan 2025 12:05:35	U	SMPL
CCB52 - 1	CCB52	-212	0.0152	-	7470A	PPB	20 Jan 2025 12:07:51	U	SMPL
Q1096-01MSD - 1	D3746MSD	9597	2.3824	-	7470A	PPB	20 Jan 2025 12:10:09	U	SMPL
PB166067TB - 1	PB166067TB	-331	-0.0135	-	7470A	PPB	20 Jan 2025 12:12:24	U	SMPL
PB166068TB - 1	PB166068TB	-84	0.0461	-	7470A	PPB	20 Jan 2025 12:14:41	U	SMPL
Q1119-01LX5 - 1		47	0.0777	-	7470A	PPB	20 Jan 2025 12:16:59	U	SMPL
Q1119-01A - 1		14356	3.5308	-	7470A	PPB	20 Jan 2025 12:19:14	U	SMPL
Q1096-01LX5 - 1		27	0.0729	-	7470A	PPB	20 Jan 2025 12:21:31	U	SMPL
Q1096-01A - 1		14781	3.6334	-	7470A	PPB	20 Jan 2025 12:23:49	U	SMPL
CCV53 - 1	CCV53	19862	4.8596	-	7470A	PPB	20 Jan 2025 12:26:07	U	SMPL
CCB53 - 1	CCB53	-152	0.0297	-	7470A	PPB	20 Jan 2025 12:28:26	U	SMPL

SOP ID : M3010A-Digestion-17

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: 01/17/2025 Time : 12:30 Temp : 96 °C

End Digest Date: 01/17/2025 Time : 14:35 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. # 1

Dig Technician Signature: SK9

Supervisor Signature: [Signature]

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6002
LFS-2	1.00	M6011
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
Conc. HNO3	3.00	M6126
1:1 HCL	5.00	MP83499
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#1CELL #55 Temp: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/17/25 15:35	SK9. met digestion.	[Signature] Metals Lab
	Preparation Group	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
PB166067TB	PB166067TB	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	1
PB166068TB	PB166068TB	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	2
PB166109BL	PBW109	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
PB166109BS	LCS109	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	4
Q1092-02	428	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	5
Q1092-03	429	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	6
Q1096-01	D3746	<2	50	25	Pink	Colorless	Cloudy	Clear	N/A	7
Q1115-02	366	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	8
Q1115-05	VNJ-214	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	9
Q1115-08	72-11995	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	10
Q1115-11	VNJ-213	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	11
Q1119-01	FILTER CAKE	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	12
Q1119-01MS	FILTER CAKEMS	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	14
Q1119-01MSD	FILTER CAKEMSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6002,M6011	15
Q1119-01DUP	FILTER CAKEDUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	13

TCLP EXTRACTION LOGPAGE

PB16606

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Pi P
PB166067TB	LEB067	08	N/A	2000	N/A	N/A	N/A	4.93	1.0	T-
Q1092-02	428	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-
Q1092-03	429	02	100.01	2000	N/A	N/A	N/A	4.5	1.5	T-
Q1115-02	366	03	100.03	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q1115-05	VNJ-214	04	100.04	2000	N/A	N/A	N/A	6.0	1.5	T-1
Q1115-08	72-11995	05	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q1115-11	VNJ-213	06	100.03	2000	N/A	N/A	N/A	7.2	1.5	T-1
Q1119-01	FILTER CAKE	07	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1

TCLP EXTRACTION LOGPAGE

PB16606

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Pr P
PB166068TB	LEB068	N/A	N/A	N/A	N/A	N/A	N/A	4.93	1.0	N/
Q1096-01	D3746	N/A	N/A	N/A	N/A	N/A	N/A	7.2	1.5	N/

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134341

Review By	Ketan	Review On	1/20/2025 8:55:08 PM
Supervise By	mohan	Supervise On	1/20/2025 8:56:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP84101,MP84102,MP84103,MP84104,MP84105,MP84106
ICV Standard	MP84107
CCV Standard	MP84109
ICSA Standard	
CRI Standard	MP84111
LCS Standard	
Chk Standard	MP84108,MP84110,MP84112,MP84116

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/20/25 10:41		Mohan	OK
2	S0.2	S0.2	CAL2	01/20/25 10:43		Mohan	OK
3	S2.5	S2.5	CAL3	01/20/25 10:46		Mohan	OK
4	S5	S5	CAL4	01/20/25 10:48		Mohan	OK
5	S7.5	S7.5	CAL5	01/20/25 10:50		Mohan	OK
6	S10	S10	CAL6	01/20/25 10:58		Mohan	OK
7	ICV62	ICV62	ICV	01/20/25 11:03		Mohan	OK
8	ICB62	ICB62	ICB	01/20/25 11:05		Mohan	OK
9	CCV50	CCV50	CCV	01/20/25 11:08		Mohan	OK
10	CCB50	CCB50	CCB	01/20/25 11:10		Mohan	OK
11	CRA	CRA	CRDL	01/20/25 11:15		Mohan	OK
12	HighStd	HighStd	HIGH STD	01/20/25 11:17		Mohan	OK
13	ChkStd	ChkStd	SAM	01/20/25 11:20		Mohan	OK
14	PB166122BL	PB166122BL	MB	01/20/25 11:22		Mohan	OK
15	PB166122BS	PB166122BS	LCS	01/20/25 11:24		Mohan	OK
16	Q1092-02	428	SAM	01/20/25 11:26		Mohan	OK
17	Q1092-03	429	SAM	01/20/25 11:29		Mohan	OK
18	Q1115-02	366	SAM	01/20/25 11:31		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134341

Review By	Ketan	Review On	1/20/2025 8:55:08 PM
Supervise By	mohan	Supervise On	1/20/2025 8:56:07 PM
STD. NAME	STD REF.#		
ICAL Standard	MP84101,MP84102,MP84103,MP84104,MP84105,MP84106		
ICV Standard	MP84107		
CCV Standard	MP84109		
ICSA Standard			
CRI Standard	MP84111		
LCS Standard			
Chk Standard	MP84108,MP84110,MP84112,MP84116		

19	Q1115-05	VNJ-214	SAM	01/20/25 11:33		Mohan	OK
20	Q1115-08	72-11995	SAM	01/20/25 11:36		Mohan	OK
21	CCV51	CCV51	CCV	01/20/25 11:38		Mohan	OK
22	CCB51	CCB51	CCB	01/20/25 11:40		Mohan	OK
23	Q1115-11	VNJ-213	SAM	01/20/25 11:42		Mohan	OK
24	Q1119-01	FILTER CAKE	SAM	01/20/25 11:45		Mohan	OK
25	Q1119-01DUP	FILTER CAKEDUP	DUP	01/20/25 11:47		Mohan	OK
26	Q1119-01MS	FILTER CAKEMS	MS	01/20/25 11:49		Mohan	OK
27	Q1119-01MSD	FILTER CAKEMSD	MSD	01/20/25 11:51		Mohan	OK
28	PB166123BL	PB166123BL	MB	01/20/25 11:54		Mohan	OK
29	PB166123BS	PB166123BS	LCS	01/20/25 11:56		Mohan	OK
30	Q1096-01	D3746	SAM	01/20/25 11:58		Mohan	OK
31	Q1096-01DUP	D3746DUP	DUP	01/20/25 12:01		Mohan	OK
32	Q1096-01MS	D3746MS	MS	01/20/25 12:03		Mohan	OK
33	CCV52	CCV52	CCV	01/20/25 12:05		Mohan	OK
34	CCB52	CCB52	CCB	01/20/25 12:07		Mohan	OK
35	Q1096-01MSD	D3746MSD	MSD	01/20/25 12:10		Mohan	OK
36	PB166067TB	PB166067TB	MB	01/20/25 12:12		Mohan	OK
37	PB166068TB	PB166068TB	MB	01/20/25 12:14		Mohan	OK
38	Q1119-01L	FILTER CAKEL	SD	01/20/25 12:16		Mohan	OK

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134341

Review By	Ketan	Review On	1/20/2025 8:55:08 PM
Supervise By	mohan	Supervise On	1/20/2025 8:56:07 PM
STD. NAME	STD REF.#		
ICAL Standard	MP84101,MP84102,MP84103,MP84104,MP84105,MP84106		
ICV Standard	MP84107		
CCV Standard	MP84109		
ICSA Standard			
CRI Standard	MP84111		
LCS Standard			
Chk Standard	MP84108,MP84110,MP84112,MP84116		

39	Q1119-01A	FILTER CAKEA	PS	01/20/25 12:19		Mohan	OK
40	Q1096-01L	D3746L	SD	01/20/25 12:21		Mohan	OK
41	Q1096-01A	D3746A	PS	01/20/25 12:23		Mohan	OK
42	CCV53	CCV53	CCV	01/20/25 12:26		Mohan	OK
43	CCB53	CCB53	CCB	01/20/25 12:28		Mohan	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941		
ICV Standard	MP83942		
CCV Standard	MP83945		
ICSA Standard	MP83943,MP83944		
CRI Standard	MP83941		
LCS Standard			
Chk Standard	MP83948,MP83949		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/20/25 10:21		Kareem	OK
2	S1	S1	CAL2	01/20/25 10:26		Kareem	OK
3	S2	S2	CAL3	01/20/25 10:30		Kareem	OK
4	S3	S3	CAL4	01/20/25 10:34		Kareem	OK
5	S4	S4	CAL5	01/20/25 10:39		Kareem	OK
6	S5	S5	CAL6	01/20/25 10:43		Kareem	OK
7	ICV01	ICV01	ICV	01/20/25 10:47	ICV fail Ba, Be, Mg, and Mn	Kareem	OK
8	LLICV01	LLICV01	LLICV	01/20/25 10:53		Kareem	OK
9	ICB01	ICB01	ICB	01/20/25 11:01		Kareem	OK
10	CRI01	CRI01	CRDL	01/20/25 11:06		Kareem	OK
11	ICSA01	ICSA01	ICSA	01/20/25 11:10		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	01/20/25 11:19		Kareem	OK
13	ICSADL	ICSADL	ICSA	01/20/25 11:23		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	01/20/25 11:27		Kareem	OK
15	CCV01	CCV01	CCV	01/20/25 11:31		Kareem	OK
16	CCB01	CCB01	CCB	01/20/25 11:36		Kareem	OK
17	Q1092-02	428	SAM	01/20/25 11:41		Kareem	OK
18	Q1092-03	429	SAM	01/20/25 11:45		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941		
ICV Standard	MP83942		
CCV Standard	MP83945		
ICSA Standard	MP83943,MP83944		
CRI Standard	MP83941		
LCS Standard			
Chk Standard	MP83948,MP83949		

19	Q1096-01	D3746	SAM	01/20/25 11:49		Kareem	OK
20	Q1115-01	366	SAM	01/20/25 11:54		Kareem	OK
21	Q1115-04	VNJ-214	SAM	01/20/25 11:58		Kareem	OK
22	Q1115-07	72-11995	SAM	01/20/25 12:02		Kareem	OK
23	Q1115-10	VNJ-213	SAM	01/20/25 12:06		Kareem	OK
24	Q1115-02	366	SAM	01/20/25 12:10		Kareem	OK
25	Q1115-05	VNJ-214	SAM	01/20/25 12:15		Kareem	OK
26	Q1115-08	72-11995	SAM	01/20/25 12:19		Kareem	OK
27	CCV02	CCV02	CCV	01/20/25 12:29		Kareem	OK
28	CCB02	CCB02	CCB	01/20/25 12:33		Kareem	OK
29	Q1115-11	VNJ-213	SAM	01/20/25 12:37	,	Kareem	OK
30	PB166109BL	PB166109BL	MB	01/20/25 12:51		Kareem	OK
31	PB166068TB	PB166068TB	MB	01/20/25 12:55		Kareem	OK
32	PB166067TB	PB166067TB	MB	01/20/25 13:00		Kareem	OK
33	PB166109BS	PB166109BS	LCS	01/20/25 13:04	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE 0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
34	Q1119-01	FILTER CAKE	SAM	01/20/25 13:08		Kareem	OK
35	Q1119-01DUP	FILTER CAKEDUP	DUP	01/20/25 13:13		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

36	Q1119-01L	FILTER CAKEL	SD	01/20/25 13:17		Kareem	OK
37	Q1119-01MS	FILTER CAKEMS	MS	01/20/25 13:21	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
38	Q1119-01MSD	FILTER CAKEMSD	MSD	01/20/25 13:25	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
39	CCV03	CCV03	CCV	01/20/25 13:35		Kareem	OK
40	CCB03	CCB03	CCB	01/20/25 13:39		Kareem	OK
41	Q1119-01A	FILTER CAKEA	PS	01/20/25 13:43	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
42	Q1103-01	VNJ-241	SAM	01/20/25 13:47		Kareem	OK
43	Q1110-01	BIN-1	SAM	01/20/25 13:51		Kareem	OK
44	Q1115-01DUP	366DUP	DUP	01/20/25 13:55		Kareem	OK
45	Q1115-01L	366L	SD	01/20/25 14:00		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

46	Q1115-01MS	366MS	MS	01/20/25 14:04	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
47	Q1115-01MSD	366MSD	MSD	01/20/25 14:08	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
48	Q1115-01A	366A	PS	01/20/25 14:12	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
49	Q1118-01	OK-01-1-16-2025	SAM	01/20/25 14:16		Kareem	OK
50	PB166095BL	PB166095BL	MB	01/20/25 14:20		Kareem	OK
51	CCV04	CCV04	CCV	01/20/25 14:38		Kareem	OK
52	CCB04	CCB04	CCB	01/20/25 14:43		Kareem	OK
53	PB166095BS	PB166095BS	LCS	01/20/25 14:47	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
54	Q1113-01	DSN002	SAM	01/20/25 14:51		Kareem	OK
55	Q1113-01DUP	DSN002DUP	DUP	01/20/25 14:55		Kareem	OK
56	Q1113-01L	DSN002L	SD	01/20/25 15:00		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

57	Q1113-01MS	DSN002MS	MS	01/20/25 15:04	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
58	Q1113-01MSD	DSN002MSD	MSD	01/20/25 15:08	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
59	Q1113-01A	DSN002A	PS	01/20/25 15:12	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
60	Q1113-03	DSN001	SAM	01/20/25 15:16		Kareem	OK
61	Q1113-05	DSN003	SAM	01/20/25 15:21		Kareem	OK
62	PB166102BL	PB166102BL	MB	01/20/25 15:25		Kareem	OK
63	CCV05	CCV05	CCV	01/20/25 15:37		Kareem	OK
64	CCB05	CCB05	CCB	01/20/25 15:41		Kareem	OK
65	PB166102BS	PB166102BS	LCS	01/20/25 15:46	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
66	Q1061-01	MW-1	SAM	01/20/25 15:50		Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941		
ICV Standard	MP83942		
CCV Standard	MP83945		
ICSA Standard	MP83943,MP83944		
CRI Standard	MP83941		
LCS Standard			
Chk Standard	MP83948,MP83949		

67	Q1061-02	MW-2	SAM	01/20/25 15:54		Kareem	OK
68	Q1061-03	MW-3	SAM	01/20/25 15:58		Kareem	OK
69	Q1061-04	MW-4	SAM	01/20/25 16:03		Kareem	OK
70	Q1061-05	MW-5	SAM	01/20/25 16:07		Kareem	OK
71	Q1061-06	MW-6	SAM	01/20/25 16:12		Kareem	OK
72	Q1061-07	MW-7	SAM	01/20/25 16:16		Kareem	OK
73	Q1061-08	MW-8	SAM	01/20/25 16:21		Kareem	OK
74	Q1061-09	MW-9	SAM	01/20/25 16:25		Kareem	OK
75	CCV06	CCV06	CCV	01/20/25 16:47		Kareem	OK
76	CCB06	CCB06	CCB	01/20/25 16:50		Kareem	OK
77	Q1061-10	MW-10	SAM	01/20/25 16:55		Kareem	OK
78	Q1061-10DUP	MW-10DUP	DUP	01/20/25 16:59		Kareem	OK
79	Q1061-10L	MW-10L	SD	01/20/25 17:03		Kareem	OK
80	Q1061-10MS	MW-10MS	MS	01/20/25 17:08	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
81	Q1061-10MSD	MW-10MSD	MSD	01/20/25 17:12	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB134350

Review By	kareem	Review On	1/21/2025 11:18:00 AM
Supervise By	jaswal	Supervise On	1/23/2025 10:15:11 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

82	Q1061-10A	MW-10A	PS	01/20/25 17:16	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
83	Q1066-02	EFF-WASTE WATER	SAM	01/20/25 17:20		Kareem	OK
84	PB166036BL	PB166036BL	MB	01/20/25 17:25		Kareem	OK
85	PB166036BS	PB166036BS	LCS	01/20/25 17:29	0.1 OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE0.1 of M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
86	CCV07	CCV07	CCV	01/20/25 17:33		Kareem	OK
87	CCB07	CCB07	CCB	01/20/25 17:37		Kareem	OK
88	LR1	LR1	HIGH STD	01/20/25 17:43		Kareem	OK
89	LR2	LR2	HIGH STD	01/20/25 17:48		Kareem	OK
90	CCV08	CCV08	CCV	01/20/25 17:52		Kareem	OK
91	CCB08	CCB08	CCB	01/20/25 17:56		Kareem	OK

SOP ID :	M1311-TCLP-15	
SDG No :	N/A	Start Prep Date : 01/16/2025 Time : 18:25
Weigh By :	JP	End Prep Date : 01/17/2025 Time : 11:12
Balance ID :	WC SC-7	Combination Ratio : 20
pH Meter ID :	WC PH METER-1	ZHE Cleaning Batch : N/A
Extraction By :	JP	Initial Room Temperature: 23 °C
Filter By :	JP	Final Room Temperature: 22 °C
Pipette ID :	WC	TCLP Technician Signature : <i>JP</i>
Tumbler ID :	T-1	Supervisor By : <i>12</i>
TCLP Filter ID :	114771	

Standard Name	MLS USED	STD REF. # FROM LOG
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

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110801
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	N/A	W1931,W1934,W2350,W2755
pH Strips	N/A	W1937,W1938,W1939,W1940,W1941,W1942
N/A	N/A	N/A
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after filtration and before preservation. TUMBLER T-1 checked,30 rpm. Particle size reduction is not required. q1119-01 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01-17-25 11:40	<i>JP</i> TCLP Room	SPG. RS. 1 E-1
	Preparation Group TCLP	Analysis Group 1 put in 1 y

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB166067TB	LEB067	08	N/A	2000	N/A	N/A	N/A	4.93	1.0	T-1
Q1092-02	428	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q1092-03	429	02	100.01	2000	N/A	N/A	N/A	4.5	1.5	T-1
Q1115-02	366	03	100.03	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q1115-05	VNJ-214	04	100.04	2000	N/A	N/A	N/A	6.0	1.5	T-1
Q1115-08	72-11995	05	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q1115-11	VNJ-213	06	100.03	2000	N/A	N/A	N/A	7.2	1.5	T-1
Q1119-01	FILTER CAKE	07	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB166067TB	LEB067	N/A	N/A	N/A	N/A	N/A	N/A
Q1092-02	428	N/A	N/A	N/A	N/A	100	N/A
Q1092-03	429	N/A	N/A	N/A	N/A	100	N/A
Q1115-02	366	N/A	N/A	N/A	N/A	100	N/A
Q1115-05	VNJ-214	N/A	N/A	N/A	N/A	100	N/A
Q1115-08	72-11995	N/A	N/A	N/A	N/A	100	N/A
Q1115-11	VNJ-213	N/A	N/A	N/A	N/A	100	N/A
Q1119-01	FILTER CAKE	N/A	N/A	N/A	N/A	100	N/A

Hot Block ID : WC S-1 /WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB166067TB	LEB067	N/A	N/A	N/A	N/A	#1	4.93
Q1092-02	428	5.01	96.5	6.4	2.5	#1	4.93
Q1092-03	429	5.02	96.5	7.2	3.0	#1	4.93
Q1115-02	366	5.02	96.5	6.6	2.0	#1	4.93
Q1115-05	VNJ-214	5.01	96.5	8.6	3.5	#1	4.93
Q1115-08	72-11995	5.02	96.5	8.6	3.5	#1	4.93
Q1115-11	VNJ-213	5.03	96.5	9.5	4.0	#1	4.93
Q1119-01	FILTER CAKE	5.02	96.5	5.5	1.5	#1	4.93

Prep Standard - Chemical Standard Summary

Order ID : Q1119

Test : TCLP Mercury,TCLP Metals Group1

Prepbatch ID : PB166109,PB166122,

Sequence ID/Qc Batch ID: LB134341, LB134350, LB134350,

Standard ID :

MP83499,MP83500,MP83935,MP83936,MP83937,MP83938,MP83939,MP83940,MP83941,MP83942,MP83943,MP83944,MP83945,MP83948,MP83949,MP84100,MP84101,MP84102,MP84103,MP84104,MP84105,MP84106,MP84107,MP84108,MP84109,MP84110,MP84111,MP84112,MP84116,

Chemical ID :

M5062,M5130,M5192,M5218,M5223,M5288,M5295,M5296,M5390,M5393,M5429,M5466,M5467,M5496,M5497,M5515,M5532,M5658,M5697,M5698,M5747,M5748,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5882,M5959,M5962,M5970,M5978,M5982,M5985,M6002,M6011,M6021,M6023,M6028,M6030,M6121,M6126,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>
170	1:1HCL	MP83499	12/09/2024	01/30/2025	Eman Mughal	None	None	Sarabjit Jaswal
								12/09/2024

FROM 1250.00000ml of M6121 + 1250.00000ml of W3112 = Final Quantity: 2500.000 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>
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 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>
514	CAL BLK (S0/ICB/CCB)	MP83935	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 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>
907	ICP AES STD S (S5)	MP83936	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 5.00000ml of M5296 + 5.00000ml of M5393 + 5.00000ml of M5467 + 5.00000ml of M5802 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M5982 + 455.00000ml of MP83500 = Final Quantity: 500.000 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>
910	ICP AES STD S4	MP83937	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 50.00000ml of MP83500 + 50.00000ml of MP83936 = 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>
909	ICP AES STD S3	MP83938	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 25.00000ml of MP83936 + 75.00000ml of MP83500 = 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>
3913	ICP AES STD S2	MP83939	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 16.00000ml of MP83936 + 184.00000ml of MP83500 = Final Quantity: 200.000 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>
2950	ICP AES S1/CRI STOCK STD	MP83940	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 0.00200ml of M5982 + 0.00400ml of M5978 + 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M5818 + 0.05000ml of M5496 + 0.05000ml of M5515 + 0.05000ml of M5658 + 0.05000ml of M6030 + 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 + 0.15000ml 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 M5497 + 1.00000ml of M5768 + 1.00000ml of M5806 + 2.00000ml of M5816 + 77.68000ml of MP83500 = 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>
2951	ICP AES S1/CRI WORK STD	MP83941	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 2.00000ml of MP83940 + 98.00000ml of MP83500 = 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	MP83942	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.02500ml of M5982 + 0.10000ml of M5466 + 0.25000ml of M5218 + 10.00000ml of M5295 + 89.77500ml of MP83500 = 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>
904	ICP AES ICSA SOLN	MP83943	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 25.00000ml of M5130 + 225.00000ml of MP83500 = Final Quantity: 250.000 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>
3494	ICP AES ICSAB SOLN-1	MP83944	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5296 + 0.10000ml of M5970 + 0.10000ml of M5982 + 10.00000ml of M5130 + 10.00000ml of M5223 + 79.50000ml of MP83500 = 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	MP83945	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 50.00000ml of MP83500 + 50.00000ml of MP83936 = 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>
919	ICP AES INTERNAL STD	MP83948	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml 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>
903	ICP AES RINSE SOLN	MP83949	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								01/09/2025

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 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>
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84100	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal
								01/17/2025

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = 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>
1340	Hg 0.00 PPB STD	MP84101	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG)	Sarabjit Jaswal
FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 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>
1341	Hg 0.2 PPB STD	MP84102	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84100 = Final Quantity: 250.000 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>
1342	Hg 2.5 PPB STD	MP84103	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG)	Sarabjit Jaswal
A) FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84100 = Final Quantity: 250.000 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>
1343	Hg 5.0 PPB STD	MP84104	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG)	Sarabjit Jaswal
FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84100 = Final Quantity: 250.000 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>
1344	Hg 7.5 PPB STD	MP84105	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG)	Sarabjit Jaswal 01/17/2025
FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84100 = Final Quantity: 250.000 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>
1345	Hg 10.0 PPB STD	MP84106	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG)	Sarabjit Jaswal
FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84100 = Final Quantity: 250.000 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>
1346	Hg ICV SOLUTION	MP84107	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 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>
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84108	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 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>
1358	CCV (Hg 5.0 PPB SOLUTION)	MP84109	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84100 = Final Quantity: 500.000 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>
1352	CCB (Hg 0.00 PPB SOLUTION)	MP84110	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/17/2025
FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 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>
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP84111	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84100 = Final Quantity: 250.000 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>
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP84112	01/17/2025	01/18/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 01/17/2025
<u>FROM</u>	2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84100 = Final Quantity: 250.000 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>
68	STANNOUS CHLORIDE SOLUTION	MP84116	01/20/2025	01/21/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 01/20/2025
<u>FROM</u> 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	01/31/2025	05/20/2024 /	04/20/2021 / bin	M5130

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 #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	01/31/2025	05/20/2024 /	04/20/2021 / bin	M5223

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

CHEMICAL RECEIPT LOG BOOK

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	04/20/2021 / 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

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	10/12/2022 / bin	09/19/2022 / bin	M5393

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	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

CHEMICAL RECEIPT LOG BOOK

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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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	03/18/2023 / bin	03/17/2023 / bin	M5497

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 #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	02/28/2025	01/02/2025 /	03/30/2023 / mohan	M5532

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	01/08/2024 / bin	01/03/2024 / bin	M5768

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 #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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

CHEMICAL RECEIPT LOG BOOK

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	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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	07/14/2025	01/14/2025 / Eman	05/14/2024 / Jaswal	M6002

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	07/14/2025	01/14/2025 / Eman	05/14/2024 / Jaswal	M6011

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

CHEMICAL RECEIPT LOG BOOK

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	08/05/2024 / 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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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

M5882
 M3

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)



Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Solvent: 24002546 Nitric Acid

R: 815/24

Lot #

2% 40.0 Nitric Acid (mL)

Expiration Date: 070127

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): 2000.07 0.100 Flask Uncertainty

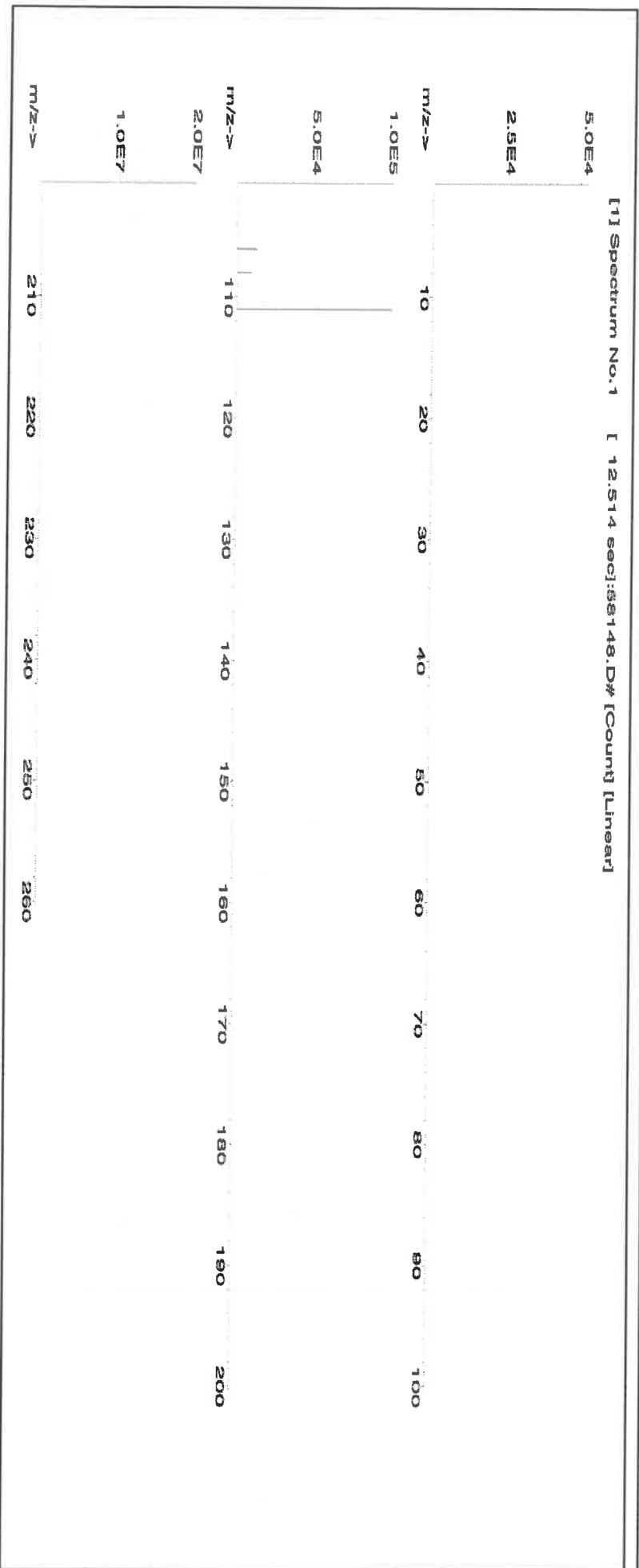
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

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. Cadmium nitrate tetrahydrate (Cd)	IN024 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).



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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
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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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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

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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
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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

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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

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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

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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

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1.0 ACCREDITATION / REGISTRATION

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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



300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

MS062
MS063
MB

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 Mass Spec Solution
Catalog Number: MSHG-10PPM
Lot Number: S2-HG709270
Matrix: 10% (v/v) HCl
Value / Analyte(s): 10 µg/mL ea:
Mercury
Starting Material: Hg metal
Starting Material Lot#: 1959
Starting Material Purity: 99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	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, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char i}^2) / (\sum (1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = 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)

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 ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	0.000011	M	Eu	<	0.000201	O	Na	0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al	0.000001	O	Fe	0.000001	M	Nb	<	0.000201	O	Si	0.000005	M	Zr	<	0.000201	
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201		
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007		
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201		
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201		
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201		
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216		
O	Ca	0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201			
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402		
M	Ce	<	0.000201	O	K	0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508			
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201		
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058		
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201		
M	Cu	<	0.000402	O	Mg	0.000001	O	S	<	0.053950	M	W	<	0.000604			
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201		
M	Er	<	0.000201	M	Mo	0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

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; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

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 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 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

- **September 22, 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 Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Instructions for QATS Reference Material: ICP-AES ICS

**QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)**

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 Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(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 interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,





Instructions for QATS Reference Material: ICP-AES ICS

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO₃. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO₃. Analyze this ICSAB solution by ICP-AES.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

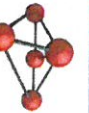
Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

ICSA
M5126
M5127
M5128
M5129
M5130

ICSB
M5219
M5220
M5221
M5222
M5223



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

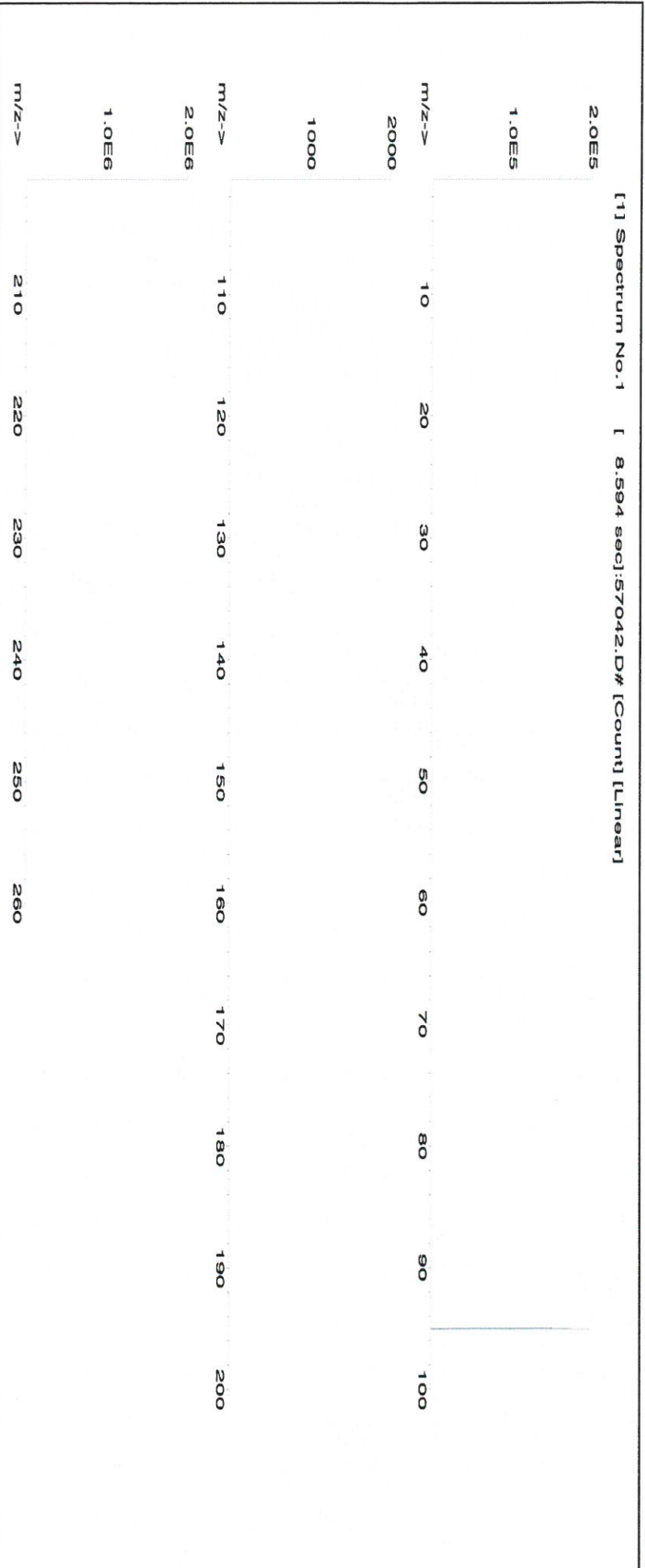
5E-05 **Balance Uncertainty**
0.058 **Flask Uncertainty**

Formulated By:	Lawrence Barry
	051722
Reviewed By:	Pedro L. Rentas
	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
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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-rat 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).

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





Instructions for QATS Reference Material: ICP-AES ICS

**QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)**

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 Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(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 interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,





Instructions for QATS Reference Material: ICP-AES ICS

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO₃. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO₃. Analyze this ICSAB solution by ICP-AES.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

ICSA
M5126
M5127
M5128
M5129
M5130

ICSB
M5219
M5220
M5221
M5222
M5223



Certified Reference Material CRM

M5288 R: 07/21/2022 SA



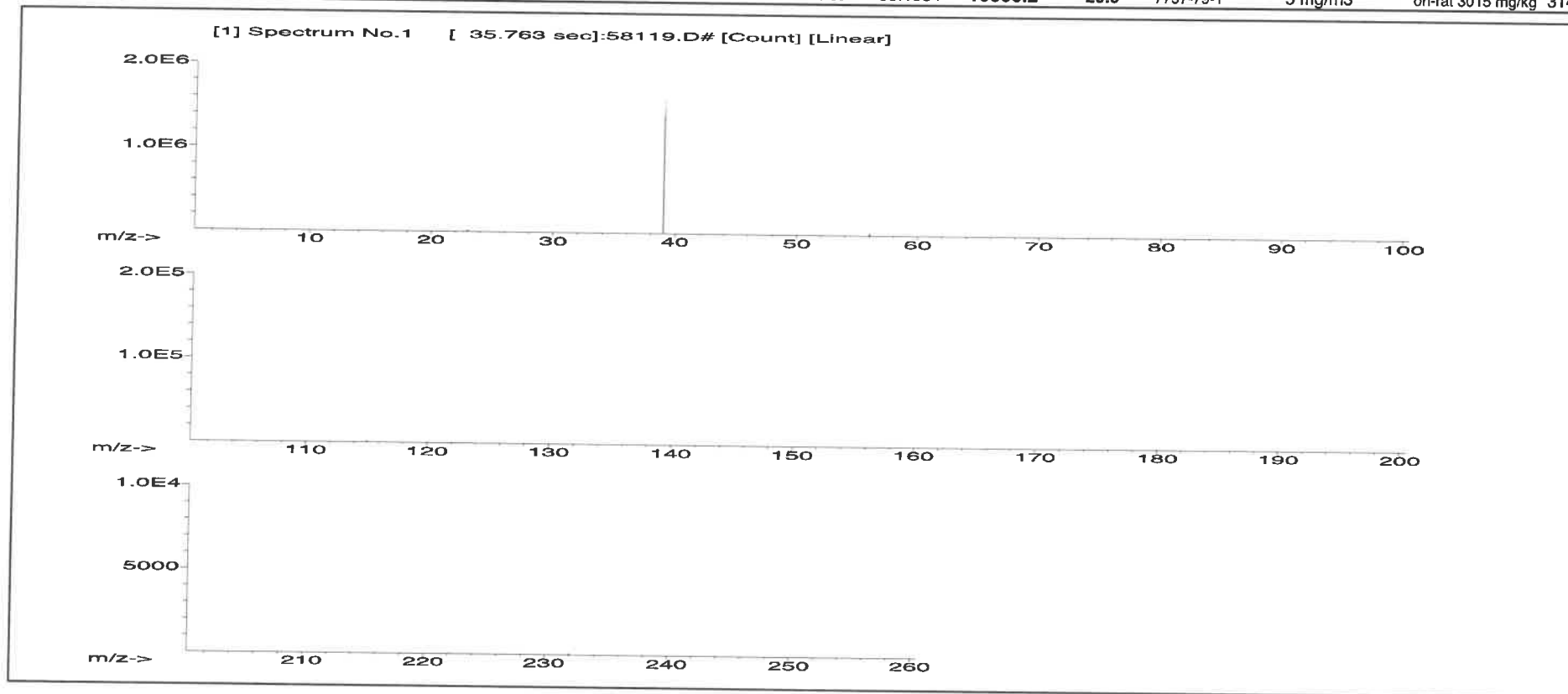
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 071122
Description: Potassium (K)
Solvent: 20510011 Nitric Acid
2% 40.0 Nitric Acid (mL)
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
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	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)	SDS Information (Solvent Safety Info. On Attached pg.)			NIST SRM
											CAS#	OSHA PEL (TWA)	LD50	
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	10000.2	20.0	7757-79-1	5 mg/m3	ori-rat 3015 mg/kg	3141a





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	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	T	Sc	<0.02	Ta	<0.02	Ti	<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).



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 **(B1)**

Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: 57056
Lot Number: 072122
Description: Barium (Ba)

Solvent: 20510011 Nitric Acid

Lot #

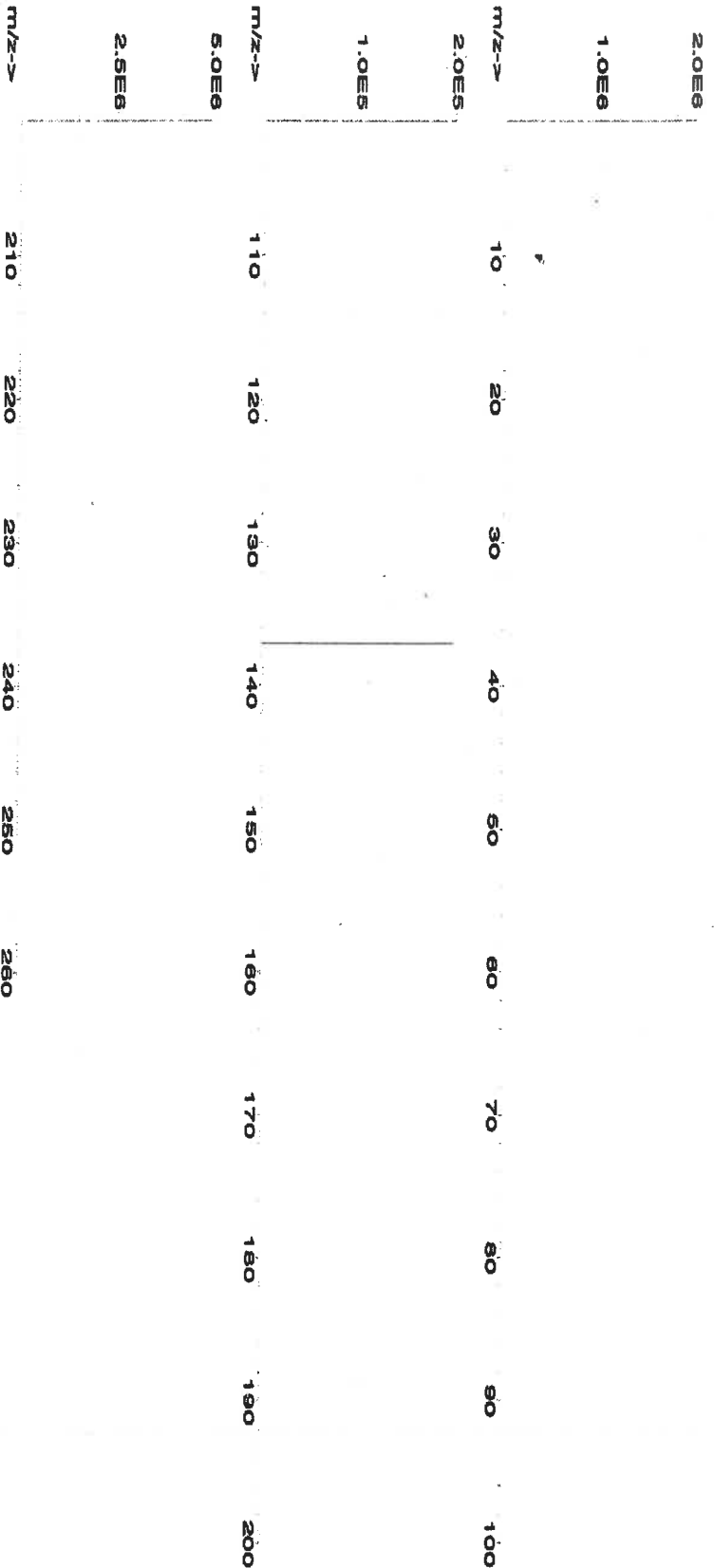
Expiration Date: 072125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

2% 40.0 (mL) Nitric Acid

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Renteria</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)	CAS#
1. Barium nitrate (Ba)	IN023	BA022019A1	1000	99.999	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. P. 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

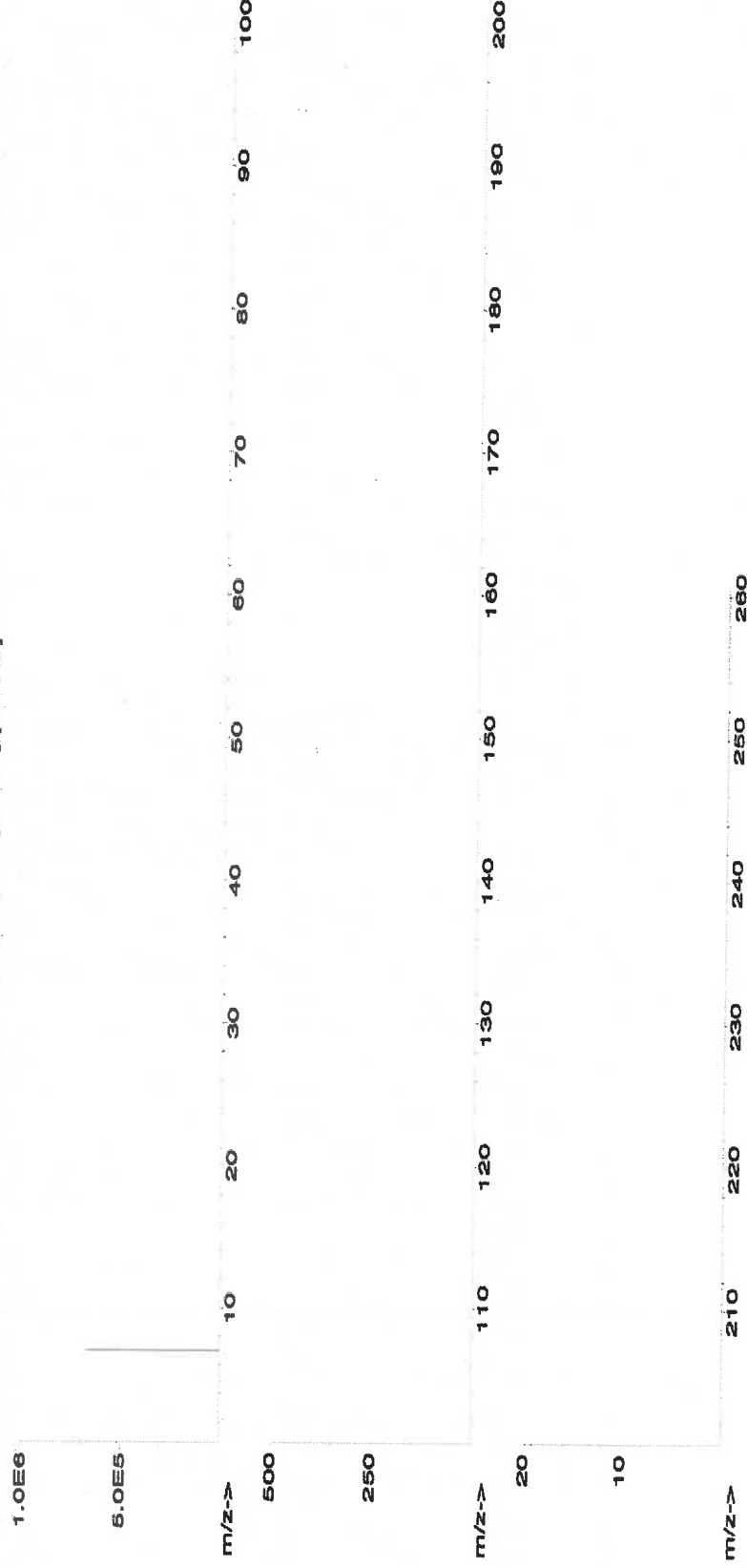
SDS Information

Expanded Uncertainty	(Solvent Safety Info. On Attached pg.)	NIST
+/- (µg/mL)	CAS#	SRM
20.0	7790-69-4	LD50
5 mg/m3	of-rat 1426 mg/kg	NA

Compound	Lot	Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Conc. (µg/mL)	Actual
----------	-----	--------	-----------------------	------------	------------------------	-----------	-------------------	-------------------	---------------	--------

1. Lithium nitrate (Li)	IN019	L2042019A1	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
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[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	<0.2	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	<0.01	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).



AN 5466

Certified Reference Material CRM



ANAB ISO 17034 Accredited
AFR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57058
061322
Cerium (Ce)

Solvent: 20510011 Nitric Acid

Lot #

Expiration Date:

061325

2% 20.0 Nitric Acid (mL)

Recommended Storage:
Nominal Concentration (µg/mL):

Ambient (20 °C)
1000

NIST Test Number:

6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

Compound

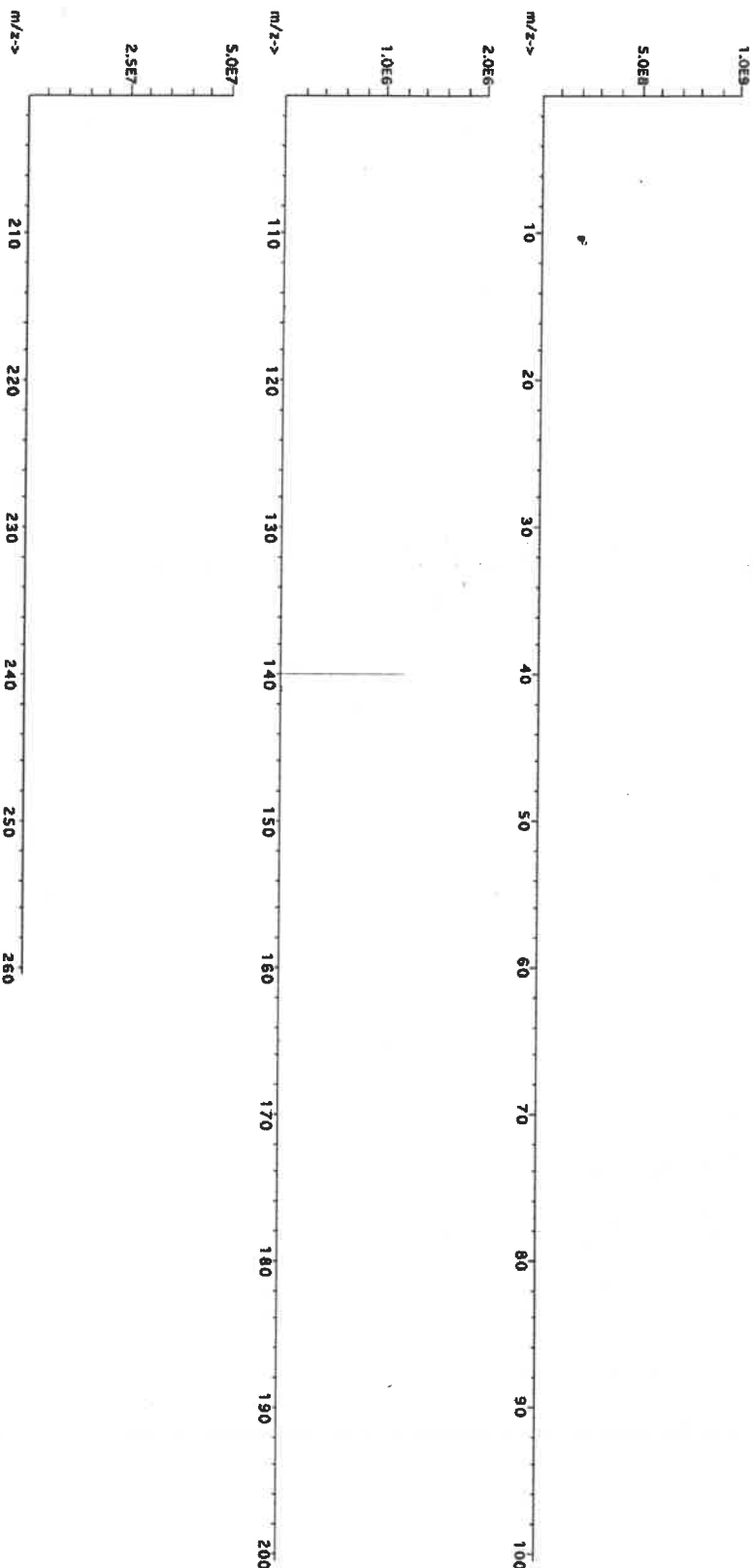
RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
-----	------------	-----------------------	------------	------------------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04923	1000.0	2.0	10294-41-4	NA	NA
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SDS Information

Formulated By:	Lawrence Barry
	061322
Reviewed By:	Pedro L. Renteria
	061322

[1] Spectrum No.1 [43.472 sec:158.00e [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	Er	<0.02	Ho	<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	Eu	<0.02	In	<0.02	Lu	<0.02	Nb	<0.02	Rc	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Gd	<0.02	Ga	<0.02	Ir	<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	Ga	<0.02	Fe	<0.2	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ge	<0.02	La	<0.02	Pb	<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	Au	<0.02	Mo	<0.02	K	<0.2	Nd	<0.02	Sc	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<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 WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 0.058 Balance Uncertainty
5E-05 Flask Uncertainty

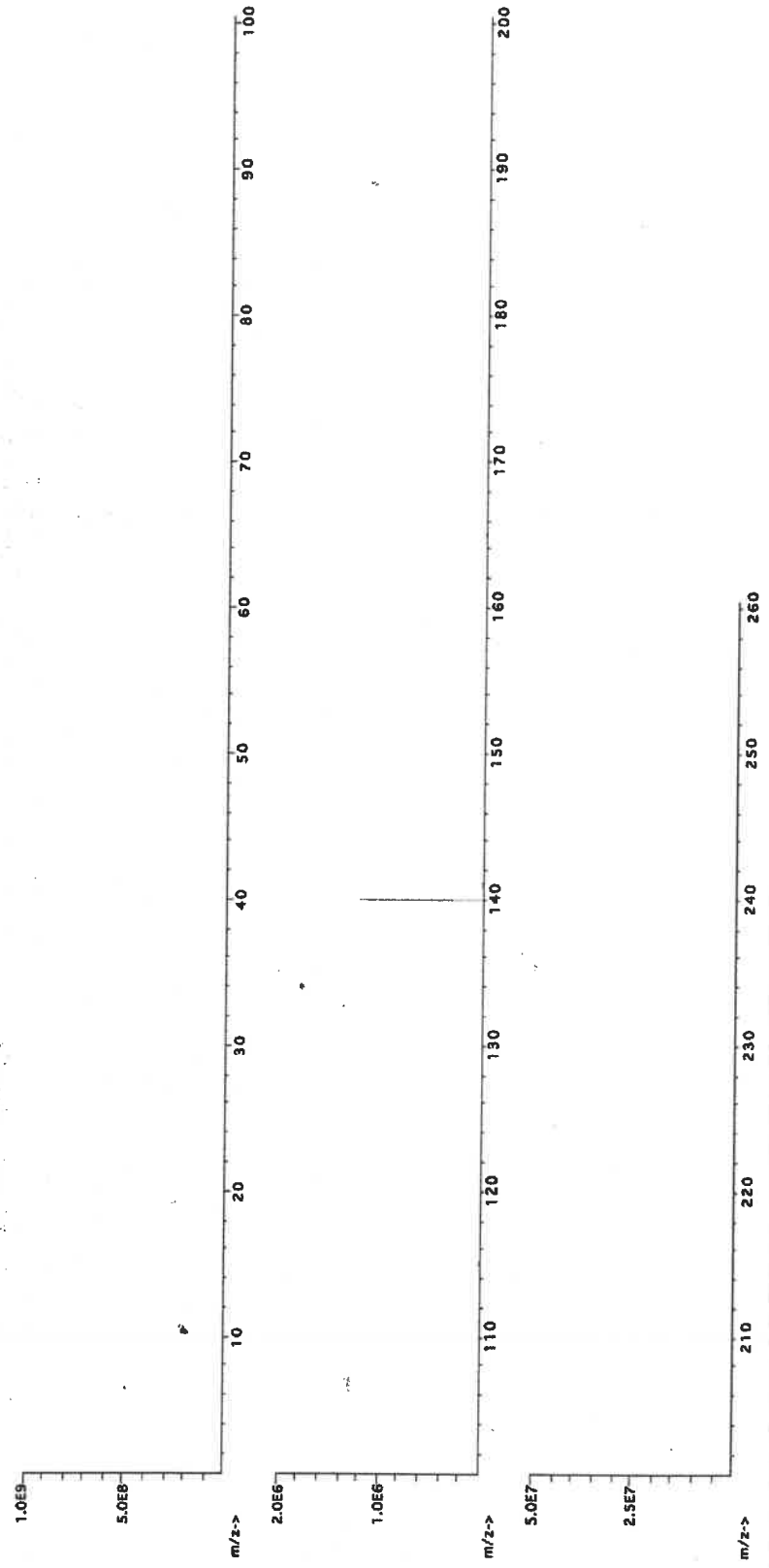
Solvent: 21110221 Nitric Acid
Lot #
2% 20.0 Nitric Acid (mL)

Lawrence Barry
Formulated By: Lawrence Barry 020623
Pedro L. Rentas
Reviewed By: Pedro L. Rentas 020623

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)	SDS Information		
										(Solvent Safety Info. On Attached pg.)	CAS#	LD50

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	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	<0.02	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).



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:

M5514, M5515
Lot #

R: 03/12/23

Part Number:

Solvent:

Lot Number:

Nitric Acid

Description:

Nitric Acid

Expiration Date:

7.0%

Recommended Storage:

350.0 (mL)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

5000.1

SE-05 Balance Uncertainty

0.12 Flask Uncertainty

<i>Giovanni Caporaso</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentas
	092122

SDS Information

Compound

Lot

Nominal

Purity

Uncertainty

Assay

Target

Actual

Actual

Expanded

Uncertainty

CAS#

OSHA PEL (TWA)

LD50

SRM

NIST

1. Iron (Fe)

IN346 2224912-500

10000

99.995

0.10

100.0

50.0034

50.0111

10001.5

20.0

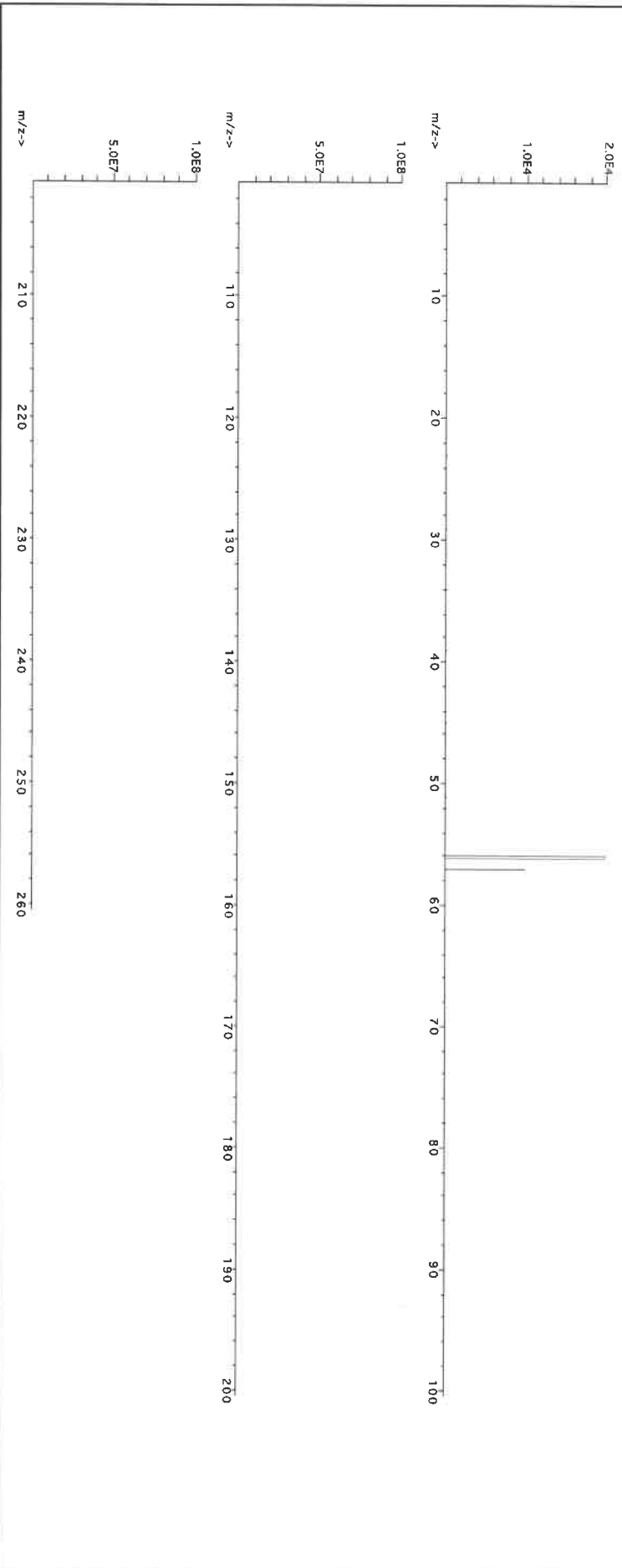
7439-89-6

5 mg/m3

or-hal 7500mg/kg

3126a

[1] Spectrum No.1 [30.763 sec] 58126.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	<0.10	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.
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QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

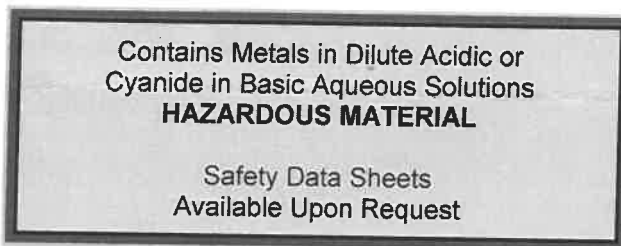
Instructions for QATS Reference Material: *Inorganic ICV Solutions*

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.



15528-32
MS

(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 $\mu\text{g/L}$ (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) K₂Cr₂O₇ 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 K₃Fe(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



CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot # 21110221
Solvent: 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

2.0%

40.0 (mL) Nitric Acid

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Volume shown below was diluted to (mL): 2000.02

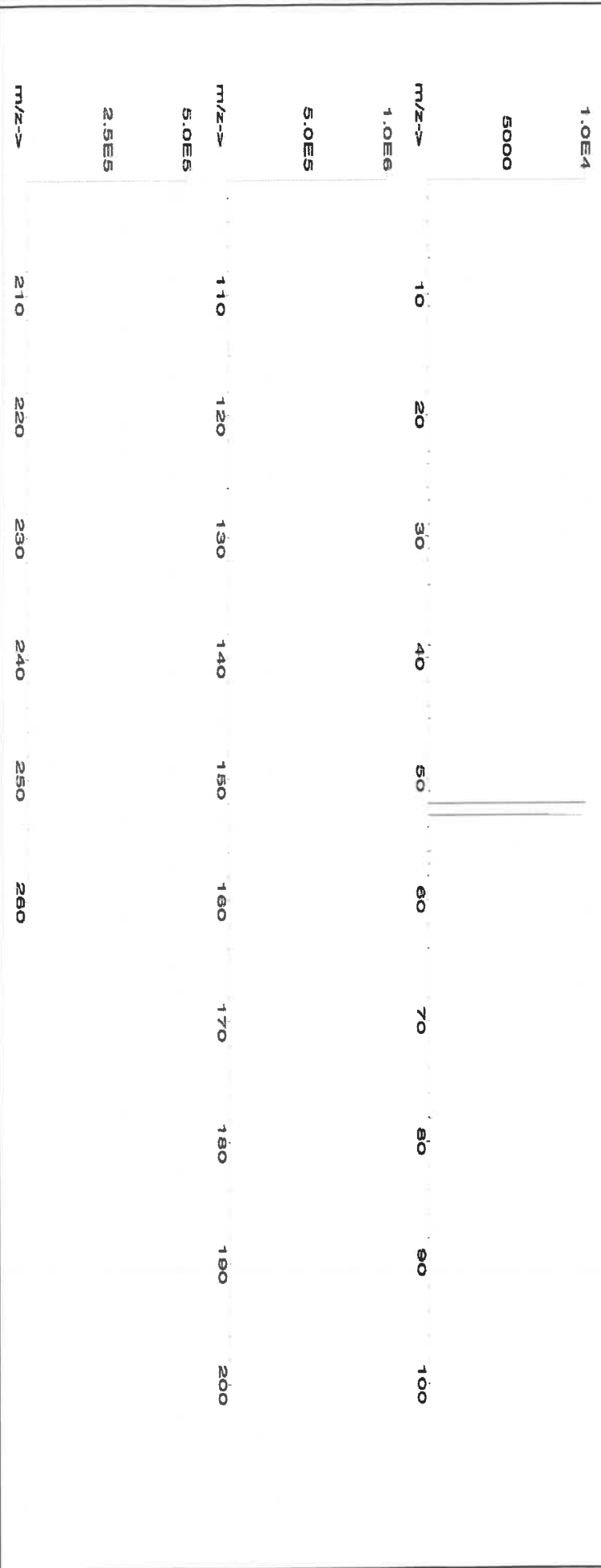
0.058 Flask Uncertainty

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)	CAS#	OSHA PEL (TWA)	LD50	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



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58029
Lot Number: 102523
Description: Copper (Cu)

Lot # 24002546
Solvent: Nitric Acid

2.0% 40.0
(mL) Nitric Acid

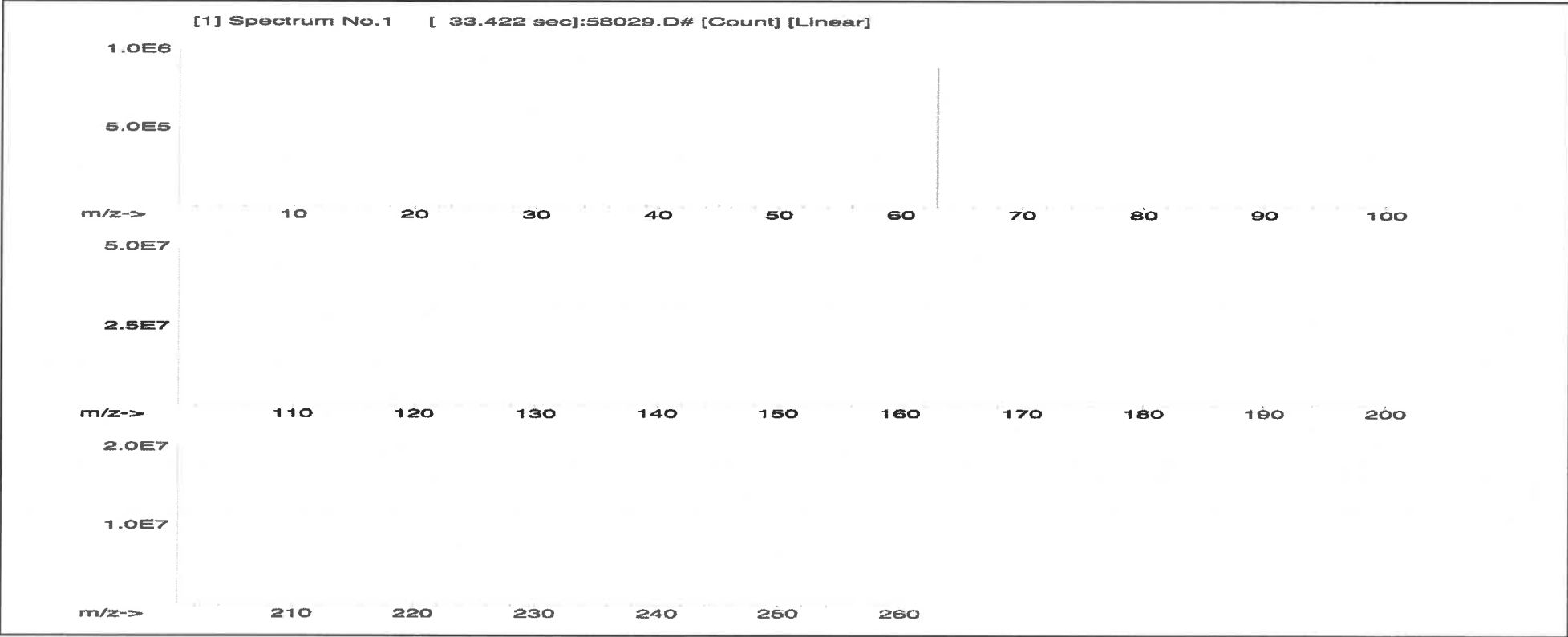
Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

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.)		
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)	NIST 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	ori-rat 794 mg/kg 3114
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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).

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58025
102623
Manganese (Mn)

Lot #
Solvent:

24002546
Nitric Acid

2.0%
60.0 (mL)
Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

102626
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL):

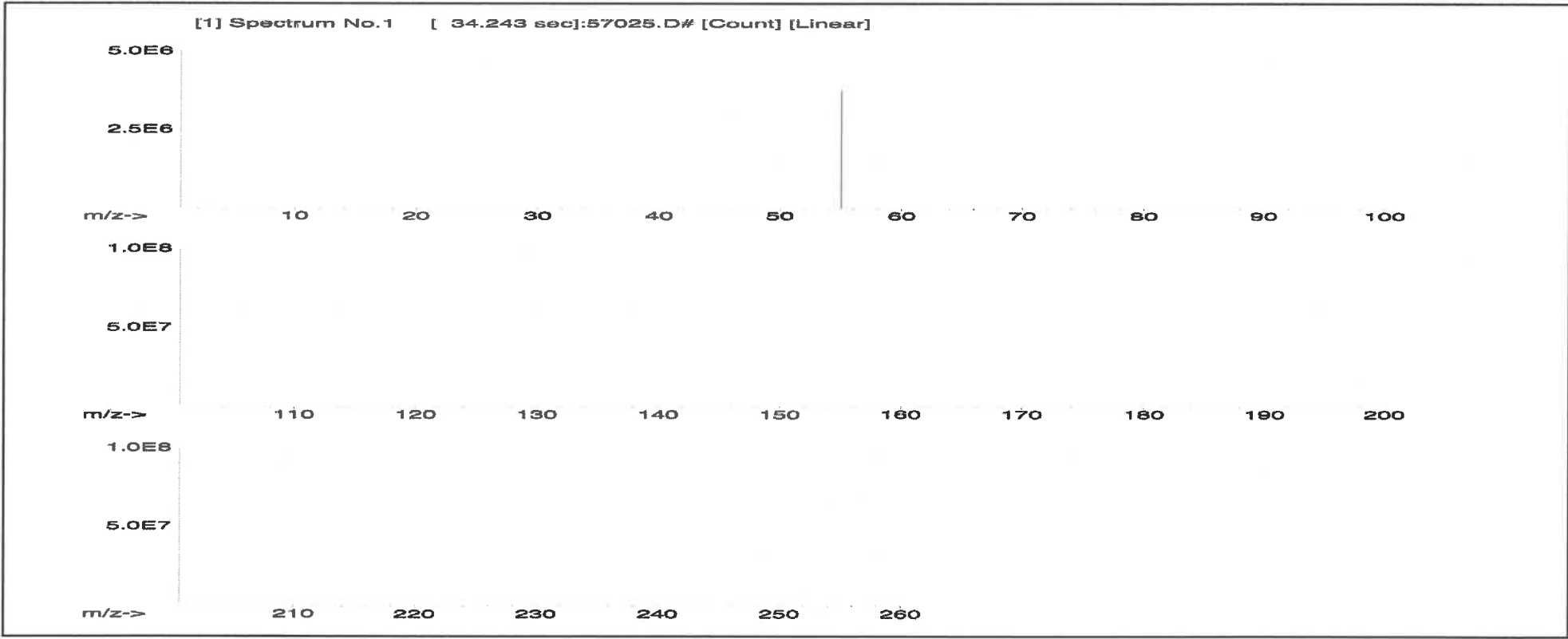
3000.41

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 Uncertainty +/- (µg/mL)	SDS Information			NIST SRM
										(Solvent Safety Info. On Attached pg.)			
										CAS#	OSHA PEL (TWA)	LD50	
1. 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**
NIST Test Number: **6UTB**

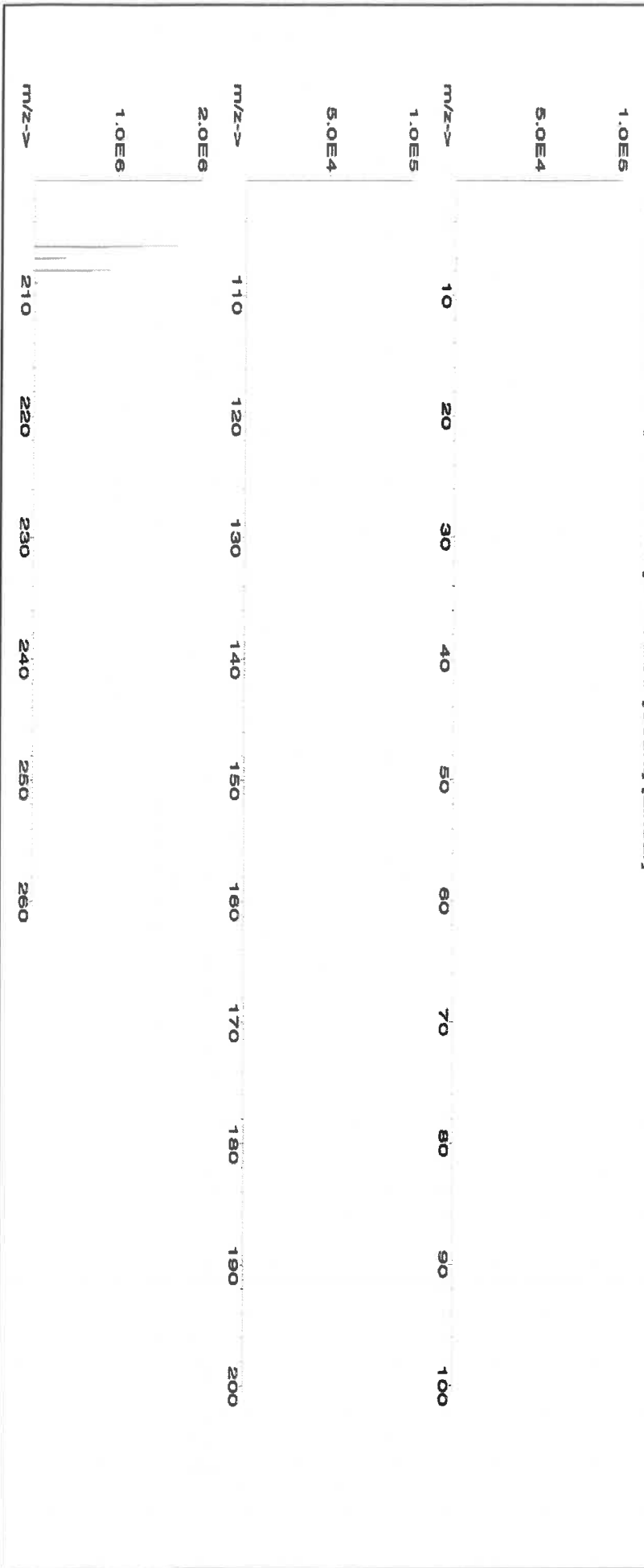
2% **60.0** **Nitric Acid**
(mL)

Weight shown below was diluted to (mL): **3000.41** **0.06** **Flask Uncertainty**

Compound	Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded		SDS Information		
									Uncertainty +/- (µg/mL)	CAS#	(Solvent Safety Info. On Attached pg.) OSHA PEL (TWA) LD50 SRM		

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.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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- * 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:

57028
091223
Nickel (NI)

Lot #
24002546
Solvent:
Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

091226
Ambient (20 °C)
1000
6U7B

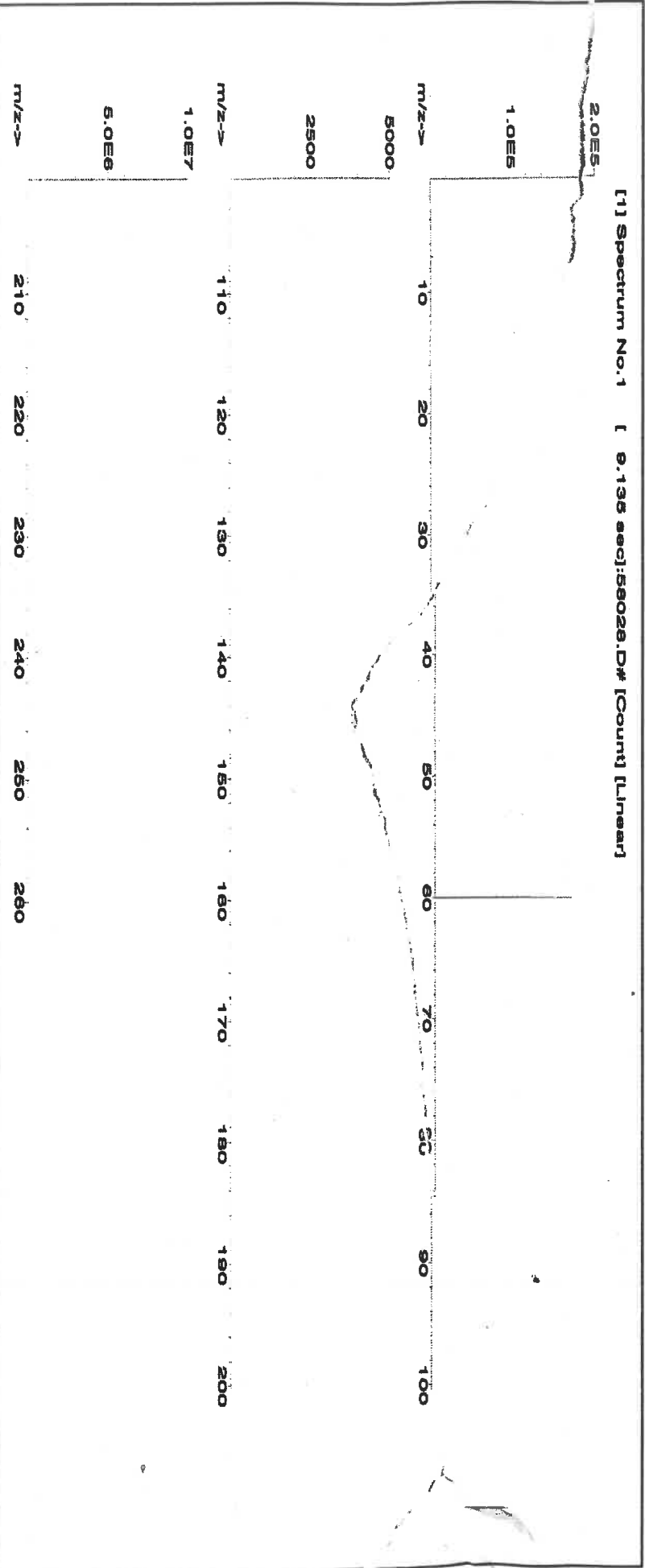
2.0%
40.0 (mL)
Nitric Acid

Volume shown below was diluted to (mL):
5E-05 Balance Uncertainty
0.056 Flask Uncertainty

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Renteria	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vd. (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
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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
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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.
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- * 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



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826

2% 40.0 (mL) Nitric Acid

Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000

M5768 M5769

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

BP R: 1/13/24

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

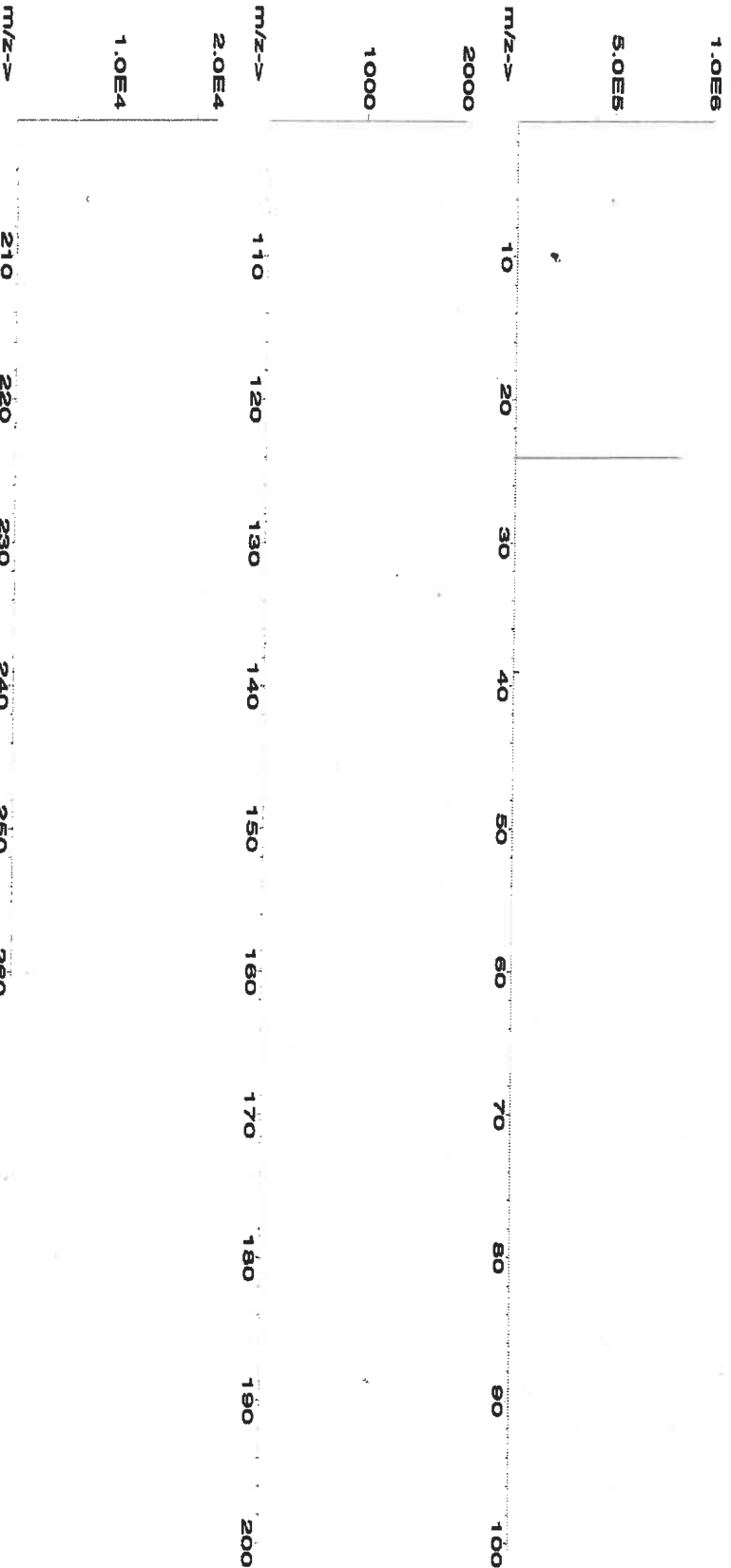
<i>Lawrence Barry</i>	
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
	091823

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
RW#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	Uncertainty	(Solvent Safety Info. On Attached pg.)
								± (µg/mL)	CAS#	OSHA PEL (TWA)
									LD50	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.
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- * 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:
Nominal Concentration (µg/mL):

Ambient (20 °C)

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

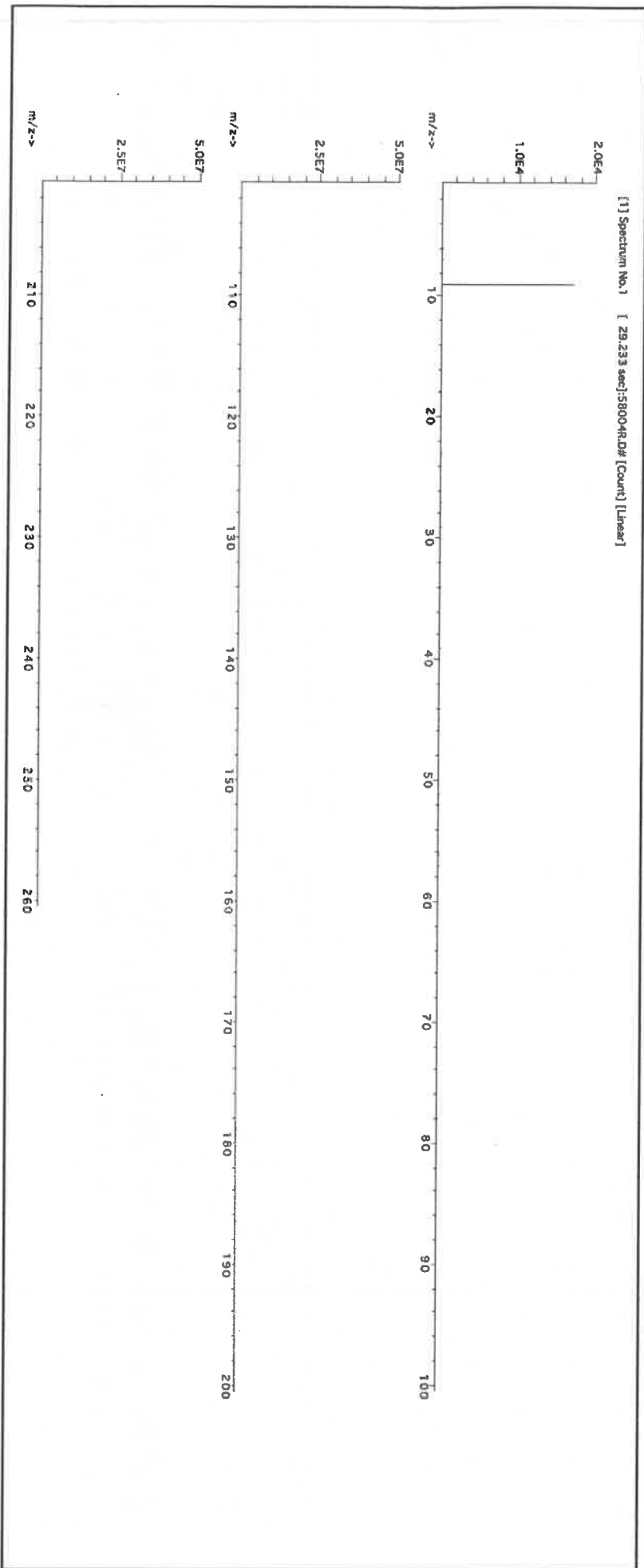
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

Compound	Part Number	Lot 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
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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	intrinsc-rat 3.16mg/kg	NA
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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	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	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:

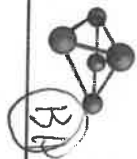
Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot #

R-02509124

M599



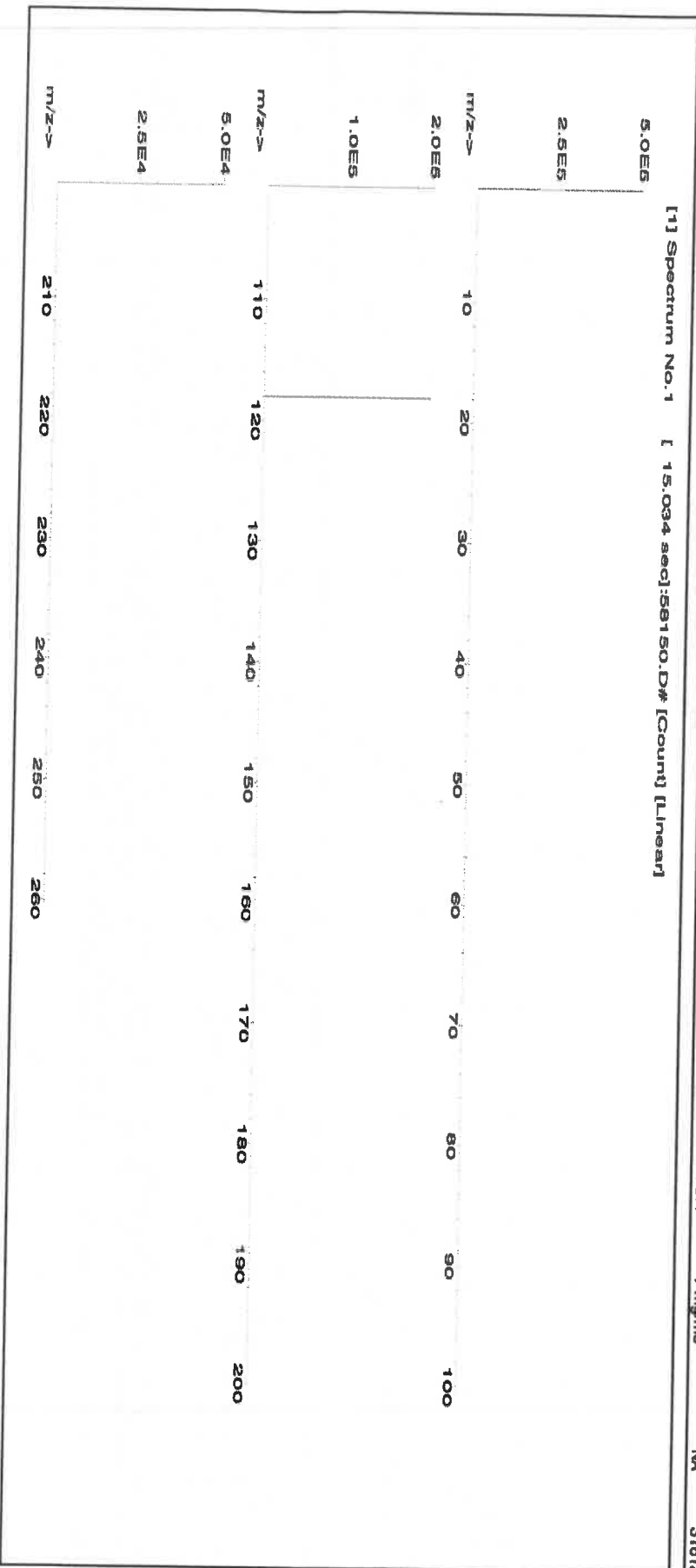
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan		071123
Reviewed By: Pedro L. Rientas		071123

Compound		Lot		Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information		
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM	NIST

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)

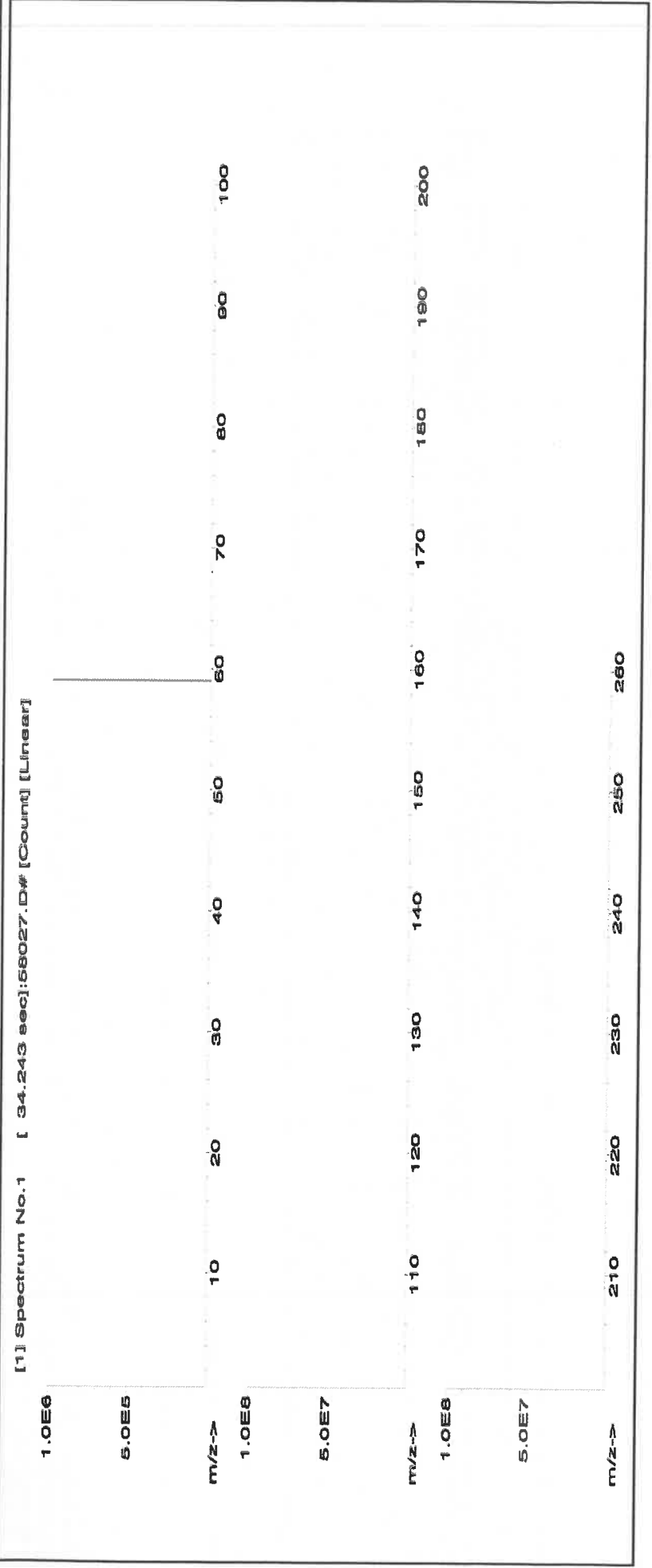
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty +/- (µg/mL)
Final Conc. (µg/mL)
Initial Conc. (µg/mL)
Nominal Conc. (µg/mL)
Pipette (mL)
Dilution Factor

(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	<0.2	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:

- * 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 (mL)

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

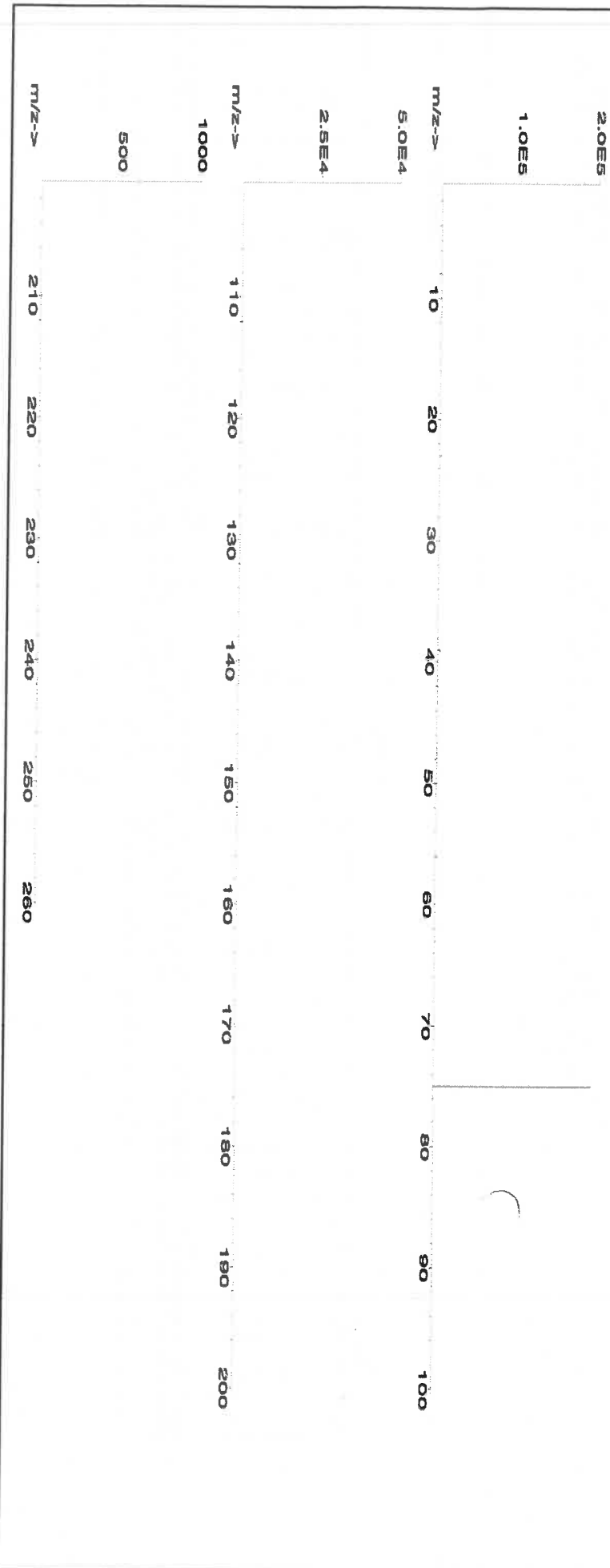
<i>[Signature]</i>	
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rendas
	111323

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
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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
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[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	Te	<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	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	Tl _h	<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: **57005**
Lot Number: **071123**
Description: **Boron (B)**

Solvent: MKB8697V Ammonium hydroxide

Lot #

AI: 021009124 M5814

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rientas
071123	

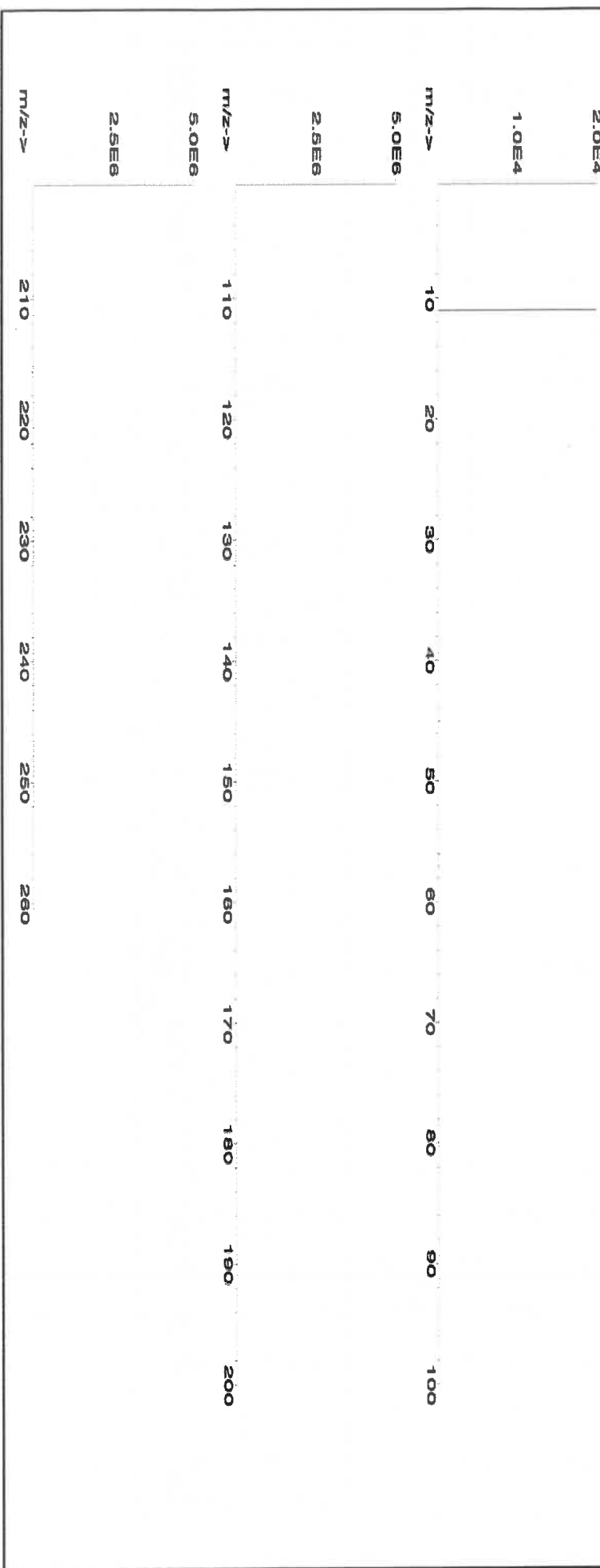
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48
5E-05 Balance Uncertainty
0.058 Flask Uncertainty
2.0% 40.0 Ammonium hydroxide (mL)

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
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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 or-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

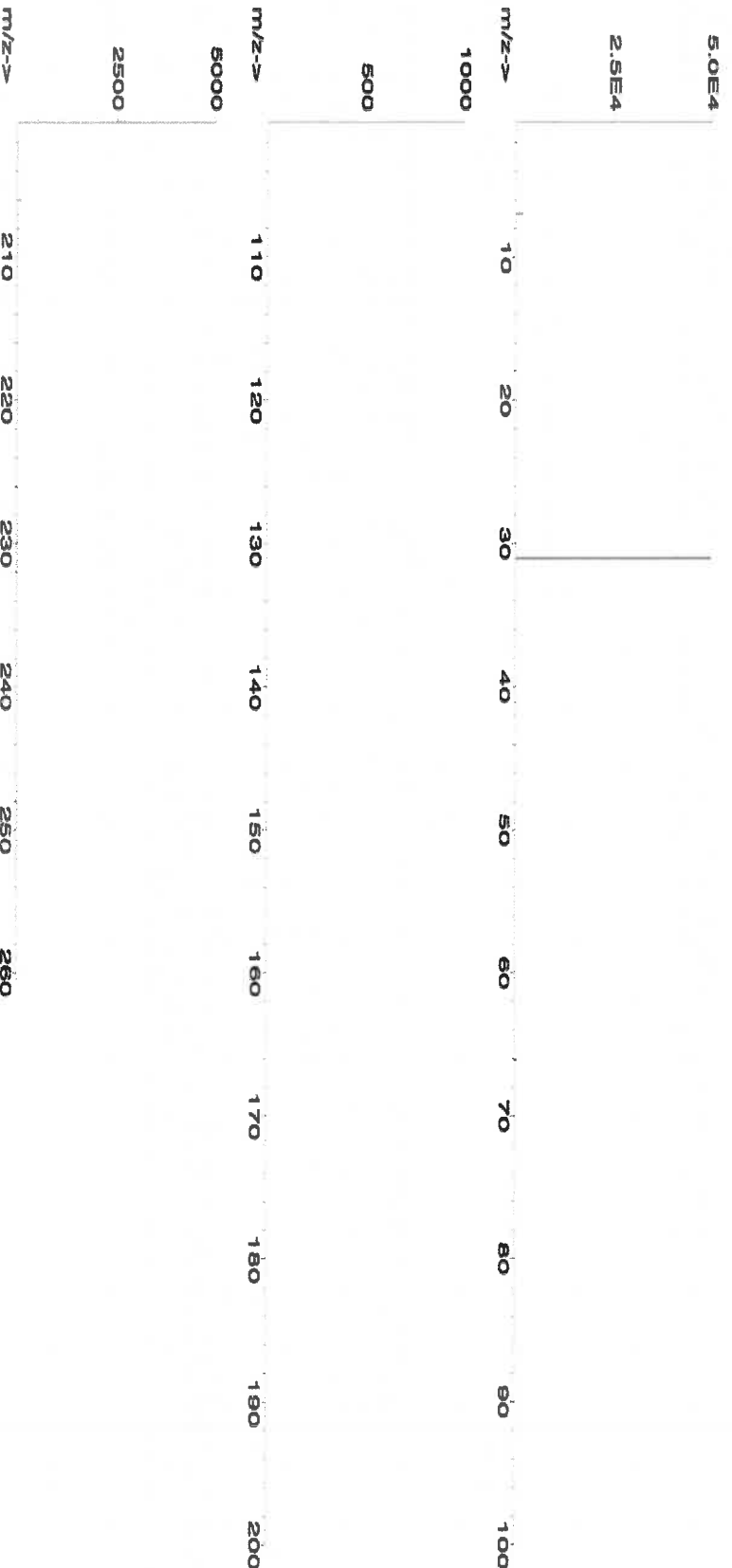
Formulated By: Lawrence Barry	041723
Reviewed By: Pedro L. Rentas	041723

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
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1. Ammonium dihydrogen phosphate (P) IN008 P082019A1 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:

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- * 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

SDS Information

(Solvent Safety Info. On Attached pg.)

NA

off-rel 4250mg/kg

3181

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

off-rel 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	La	<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: **57116**
Lot Number: **071123**
Description: **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 0.058 Balance Uncertainty
5E-05 Flask Uncertainty

SDS Information									
Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded
	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)
									CAS# OSHA PEL (TWA) LD50 SRM

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 #

R: 02/09/24 M5818

Expiration Date: **122026**

2% 40.0 (mL) Nitric Acid

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6UTB**

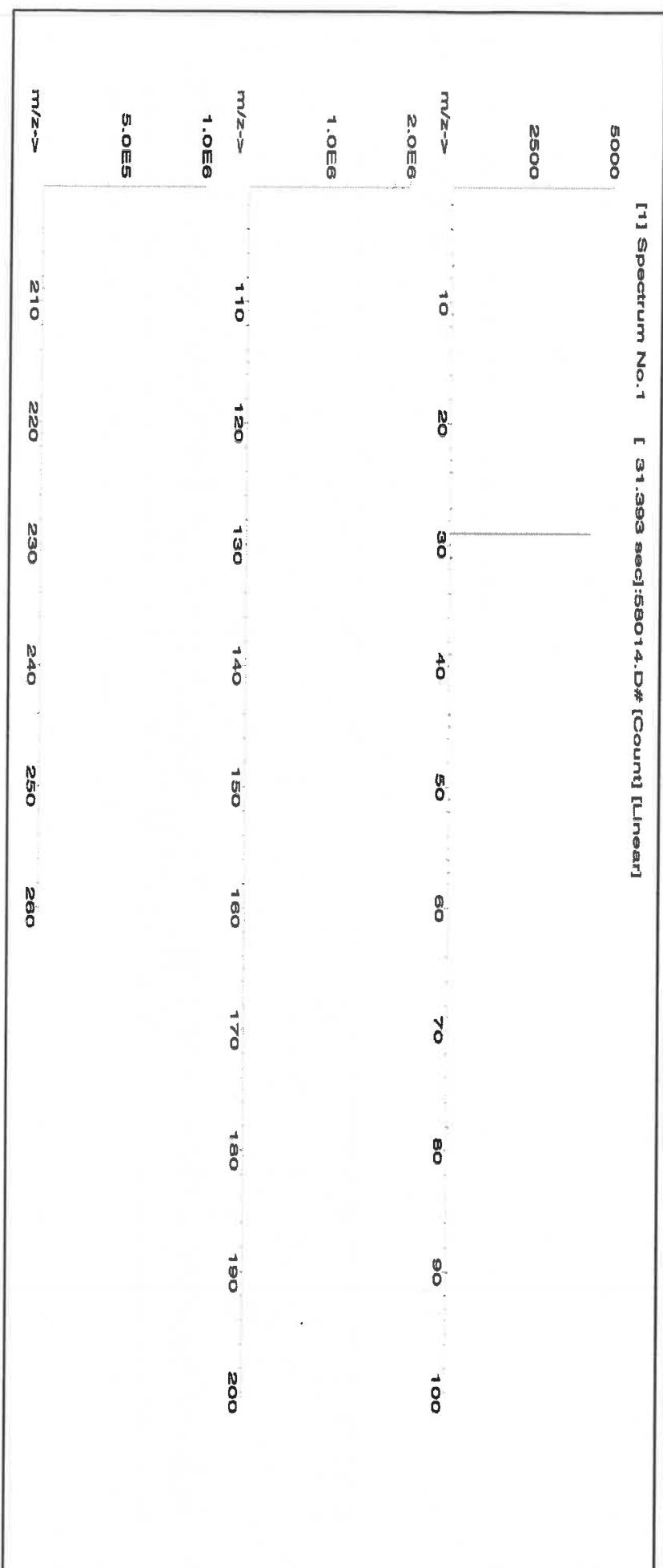
<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
Reviewed By:	Pedro L. Rentas
	122023

Weight shown below was diluted to (mL): **1999.48** 0.058 Balance Uncertainty
0.058 Flask Uncertainty

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	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	<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	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: 58030
Lot Number: 111623
Description: Zinc (Zn)

Solvent: 24002546 Nitric Acid

Lot # R: 02109124 MS819

2% 60.0 (mL) Nitric Acid

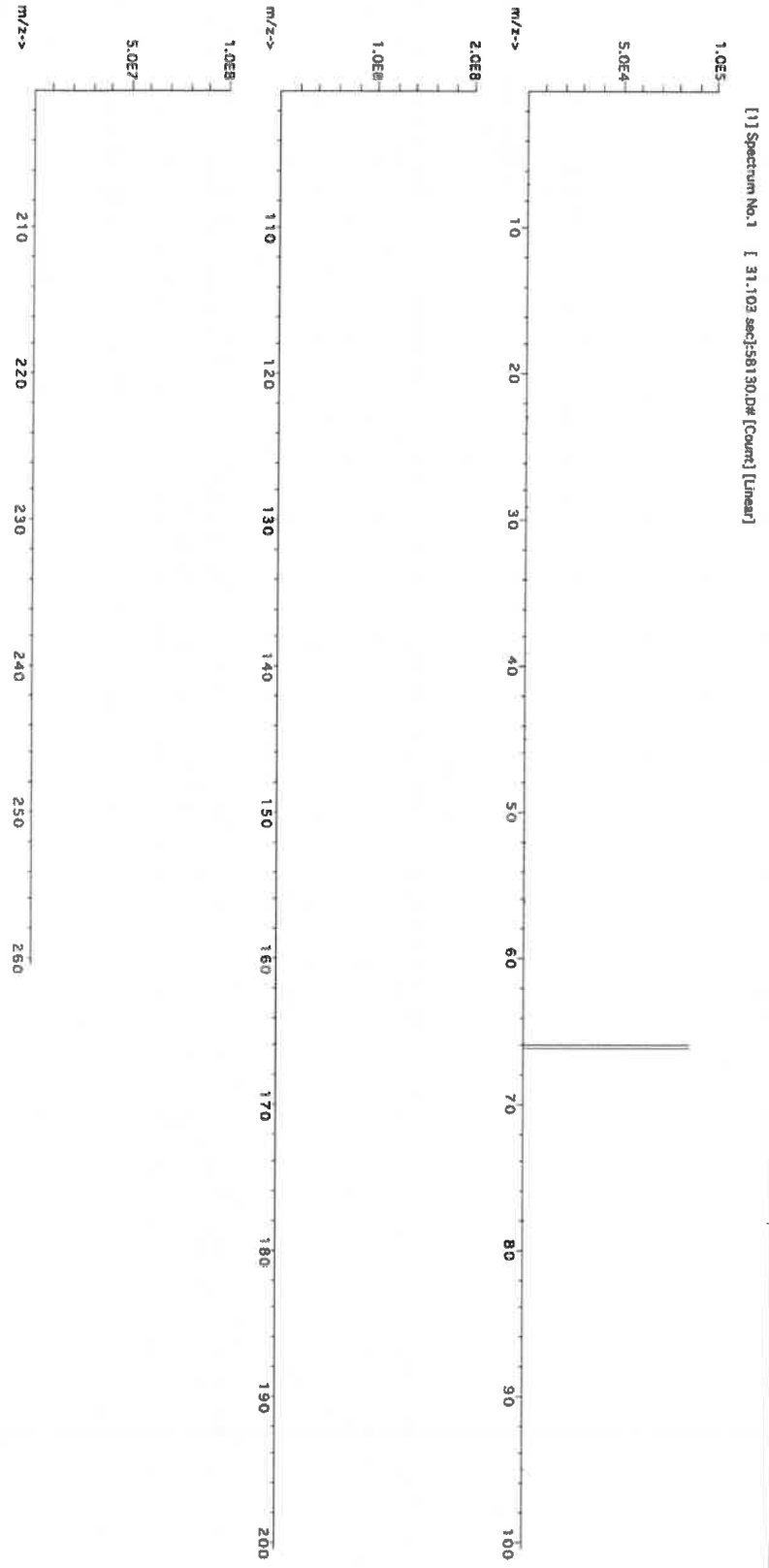
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Formulated By:	Benson Chan
	111623
Reviewed By:	Pedro L. Reintias
	111623

Weight shown below was diluted to (mL): 3000.4 0.06 Balance Uncertainty Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded		CAS#	SDS Information		NIST SRM
									±	(µg/mL)		(Solvent Safety Info. On Attached pg.)	LDSO	

1. Zinc nitrate hexahydrate (Zn) IN016 ZNE03021A1 1000 99.999 0.10 24.3 12.3475 12.3502 1000.2 2.0 10196-16-6 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).
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- * 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

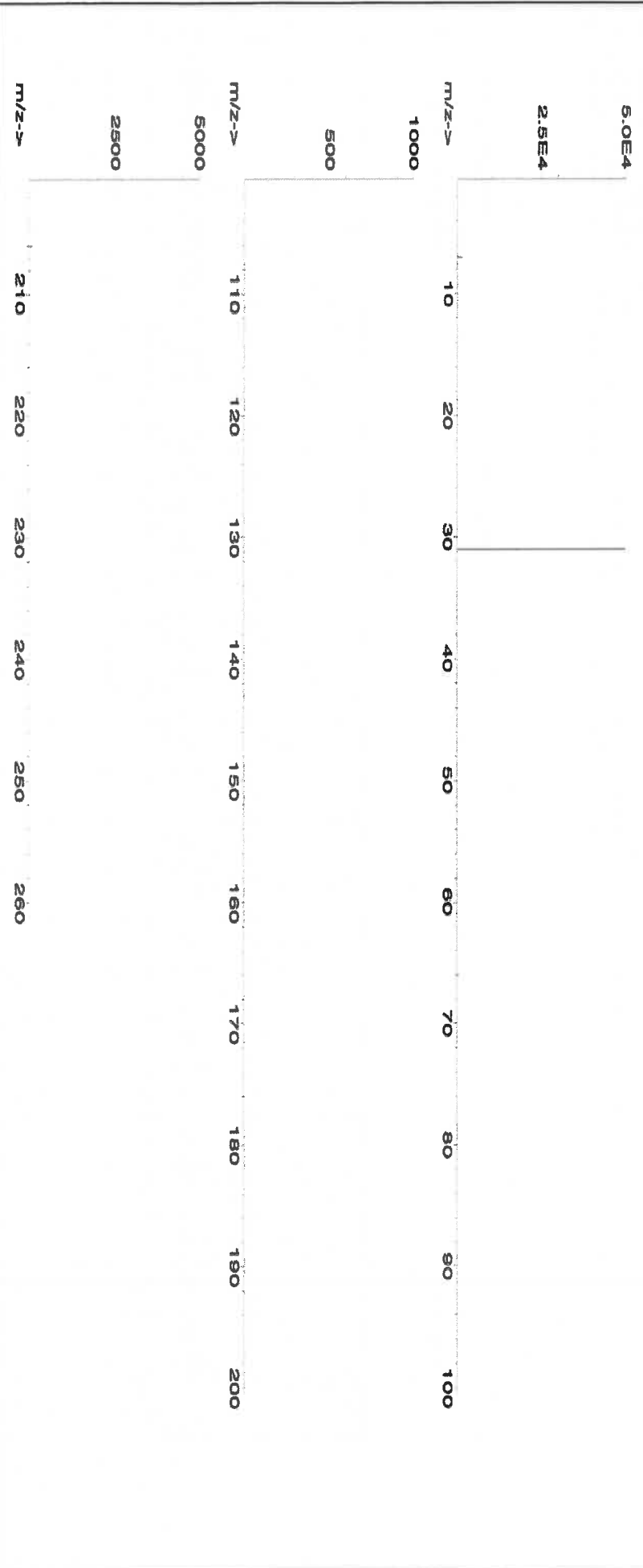
Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

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 PVO62019A1 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 (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	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.
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- * 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

M5959 R: 6/14/24

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: CGY10
Lot Number: V2-Y740548
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Yttrium
Starting Material: Yttrium Oxide
Starting Material Lot#: 2661 and 06230520YL
Starting Material Purity: 99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL
Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10011 ± 25 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	9997 ± 50 µg/mL ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	9984 ± 31 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- 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:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = 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)

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 ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.004600	M Eu	0.009037	M Na	0.086360	M Se <	0.005200	M Zn	0.030125
M Al	0.014862	O Fe	0.002410	M Nb <	0.000570	O Si	0.024100	O Zr <	0.002600
M As <	0.003500	M Ga <	0.000570	M Nd	0.000923	M Sm	0.000461		
M Au <	0.001700	M Gd <	0.003500	M Ni <	0.005700	M Sn <	0.002300		
O B	0.002209	M Ge <	0.005200	M Os <	0.001200	M Sr <	0.004600		
O Ba <	0.002500	M Hf <	0.000570	n P <		M Ta <	0.000570		
O Be <	0.001400	M Hg <	0.000570	M Pb	0.005020	M Tb	0.001044		
M Bi <	0.003500	M Ho	0.009037	M Pd <	0.005100	M Te <	0.002300		
O Ca	0.009841	M In <	0.002300	M Pr <	0.002300	M Th <	0.000570		
M Cd <	0.000570	M Ir <	0.000570	M Pt <	0.000570	M Ti <	0.003500		
M Ce <	0.002300	O K	0.018677	M Rb <	0.000570	M Tl <	0.000570		
M Co <	0.000570	M La	0.000461	M Re <	0.000570	M Tm <	0.003500		
M Cr <	0.004000	O Li <	0.009300	M Rh <	0.008000	M U <	0.000570		
M Cs <	0.000570	M Lu	0.000582	M Ru <	0.000570	M V	0.001265		
M Cu	0.002610	O Mg	0.001486	n S <		M W <	0.002300		
M Dy	0.003815	M Mn	0.000582	M Sb	0.005422	s Y <			
M Er	0.003615	M Mo <	0.005700	M Sc <	0.001200	M Yb	0.001827		

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

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

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H₂O)_{x+2}

Chemical Compatibility -Soluble in HCl, H₂SO₄ and HNO₃. Avoid HF, H₃PO₄ and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride.

Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H₂O / HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H₂O / HCl or HNO₃).

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 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

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

February 20, 2024

- 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

- February 20, 2029

- 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 Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





M5962 **R10614124**



CERTIFIED WEIGHT REPORT:

Part Number: 57034
Lot Number: 060624
Description: Selenium (Se)

Lot # 24002546
Solvent: Nitric Acid

2.0% 40.0 (mL) Nitric Acid

Expiration Date: 060627
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

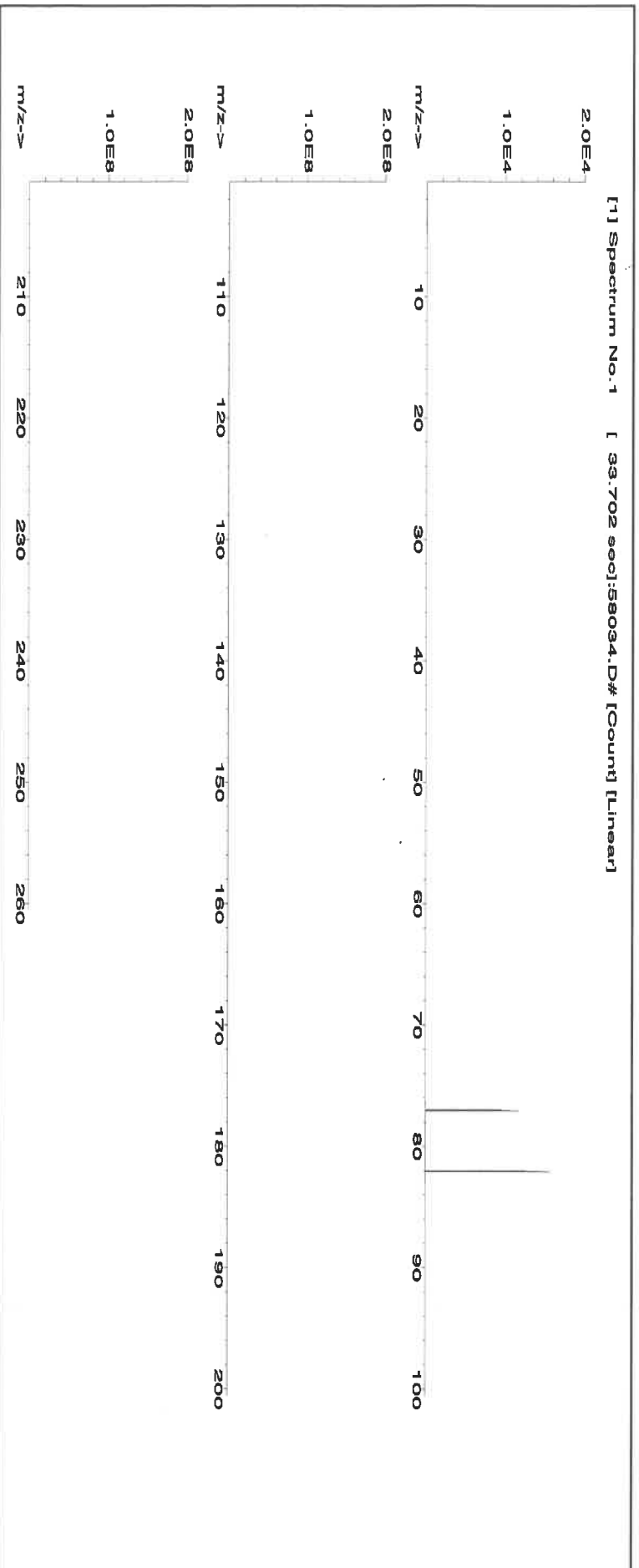
Volume shown below was diluted to (mL): 2000.07
SE-05 Balance Uncertainty 0.100
Flask Uncertainty

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
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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	T	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	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		<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.absolute-standards.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: 06/127
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

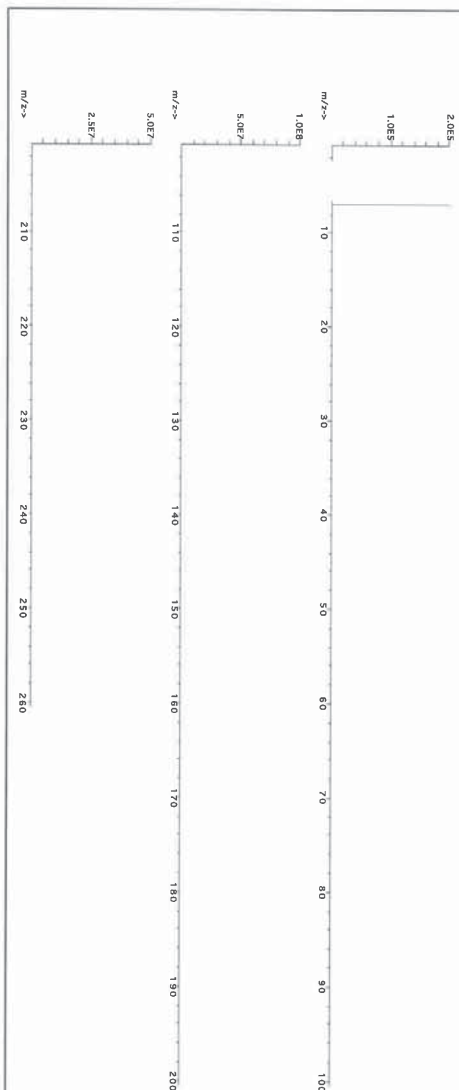
2.0% 5.0 (mL) Nitric Acid

Microvial Capable	
Formulated By:	062124
Giovanni Esposito	
Reviewed By: <i>[Signature]</i>	
Pietro L. Parias	062124

Compound		Part		Lot		Dilution		Initial		Uncertainty		Nominal		Initial		Final		Expanded		SDS Information		NIST	
Number	Factor	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)	Uncertainty	± (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SM

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	Oral: 1428 mg/kg	NA
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[1] Spectrum No. 1 [32.093 sec; 15000.0Hz Count [Lines]





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	T	Ni	<0.02	Pb	<0.02	Sc	Se	Tb	<0.02	W	<0.02		
Sb	<0.02	Ce	<0.2	Er	<0.02	Ho	<0.02	Mg	Nb	<0.02	Rc	<0.02	Rh	<0.02	Si	<0.02	Te	<0.02	U	<0.02	
As	<0.2	Co	<0.02	Eu	<0.02	In	<0.02	La	<0.01	Os	<0.02	Rb	<0.02	Sr	Ag	<0.2	Ti	<0.02	V	<0.02	
Ba	<0.02	Cr	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Sn	Nd	<0.2	Tm	<0.02	Yb	<0.02	
Be	<0.01	Cu	<0.02	Ga	<0.02	La	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	Se	<0.02	Sn	<0.02	Y	<0.02	
Bi	<0.02	Fe	<0.02	Ag	<0.02	Pb	<0.02	Mo	<0.02	Pt	<0.2	Se	<0.02	Ta	<0.02	Tl	<0.02	Zn	<0.02	Zr	<0.02
B	<0.02	Ca	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02	Tl	<0.02	Zn	<0.02	Zr	<0.02
(T) = Target analyte																					

(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).

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
M 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

M - Checked by ICP-MS
O - Checked by ICP-OES
I - Spectral Interference
n - Not Checked For
s - Solution Standard Element

- 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; Coordination Number; Chemical Form in Solution - 47.87 ± 4.6 Ti(F)₆-2 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); K₂SiO₇ - 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



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

Lot #

2% 40.0 Nitric Acid
(mL)

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

SDS Information

Expanded

Uncertainty

(Solvent Safety Info. On Attached pg.)

+/- (µg/mL)

CAS#

OSHA PEL (TWA)

LD50

NIST

SRM

Actual

Conc. (µg/mL)

Weight (g)

Target

Weight (g)

Purity (%)

Assay

(%)

Nominal

Conc. (µg/mL)

Lot

Number

RM#

Compound

1. Strontium nitrate (Sr)

IN017 SR2022018A1

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] 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:

- * 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 10:01 AM

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

M5985
R: 6/14/24

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: CGIN10
Lot Number: U2-IN729349
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Indium
Starting Material: Indium Metal
Starting Material Lot#: 2511
Starting Material Purity: 99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL
Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10021 ± 56 µg/mL ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	10035 ± 25 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	10001 ± 33 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- 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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum (1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char\ i})^2]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = 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)

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 ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na	0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al	0.003385	O	Fe	0.004462	M	Nb	<	0.000760	O	Si	0.024619	M	Zr	<	0.000760		
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760			
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760			
O	B	0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760			
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb	0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760			
O	Ca	0.004616	s	In	<			M	Pr	<	0.000760	M	Th	<	0.000760			
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100			
M	Ce	<	0.000760	O	K	0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760			
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760			
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600			
M	Cu	<	0.003800	O	Mg	0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn	0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760			

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

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

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 114.82 +3 6 In(H₂O)₆+3

Chemical Compatibility -Soluble in HCl, HNO₃, and H₂SO₄. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO₃); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

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 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

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

February 21, 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

- February 21, 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



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



R → 16/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
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
ACS - Free Chlorine (as Cl ₂)	<= 0.5 ppm	< 0.5
Phosphate (PO ₄)	<= 0.05 ppm	< 0.03
Sulfate (SO ₄)	<= 0.5 ppm	< 0.3
Sulfite (SO ₃)	<= 0.8 ppm	0.3
Ammonium (NH ₄)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 15.0 ppb	< 1
Trace Impurities – Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities – Selenium (Se), For Information Only	ppb	1.0
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

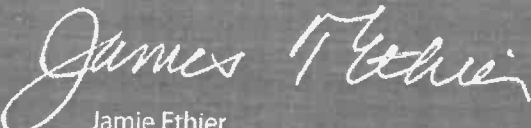
Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier

Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Nitric Acid 69%
CMOS



R → 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
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	2.3 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	100 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.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production



CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Solvent: 24002546 Nitric Acid

Lot #

<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
	122223
<i>Pedro L Rentas</i>	
Reviewed By:	Pedro L Rentas
	122223

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

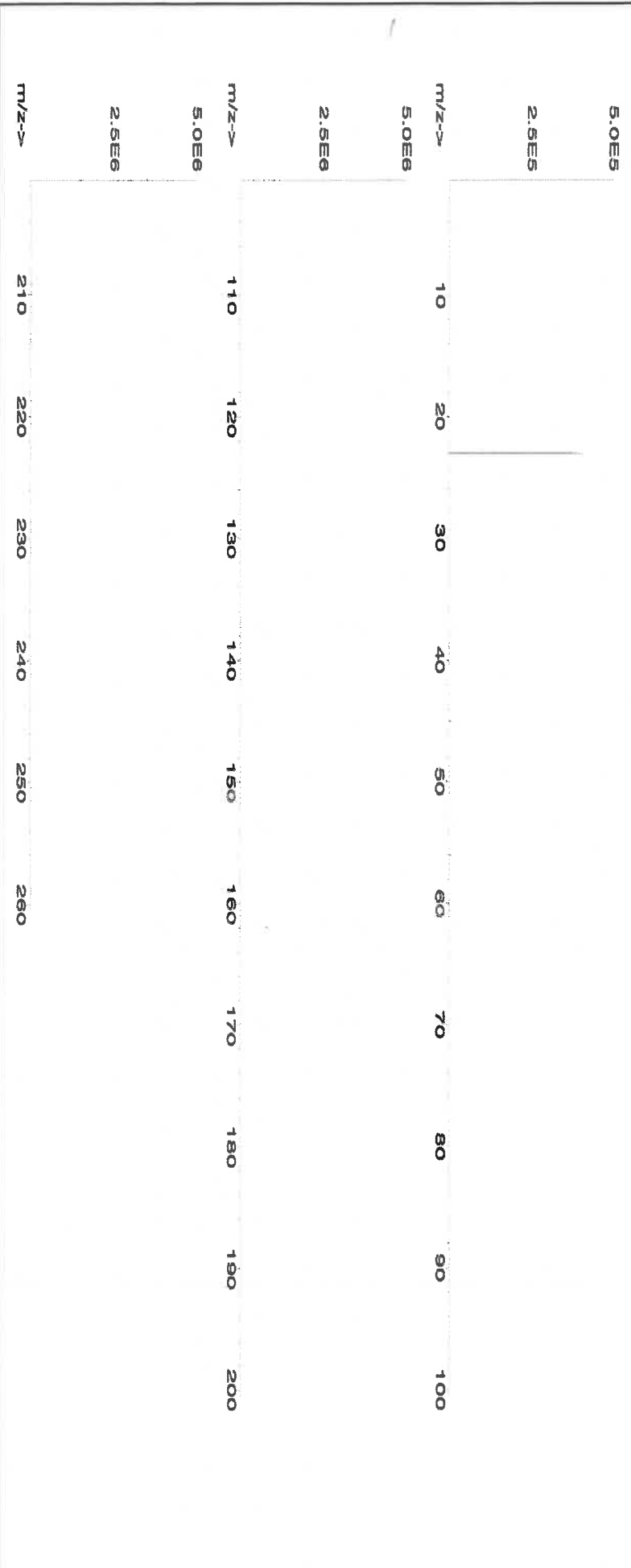
Expanded

SDS Information

Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Uncertainty	(Solvent Safety Info. On Attached pg.)	NIST
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	SRM
										OSHA PEL (TWA)	LD50

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

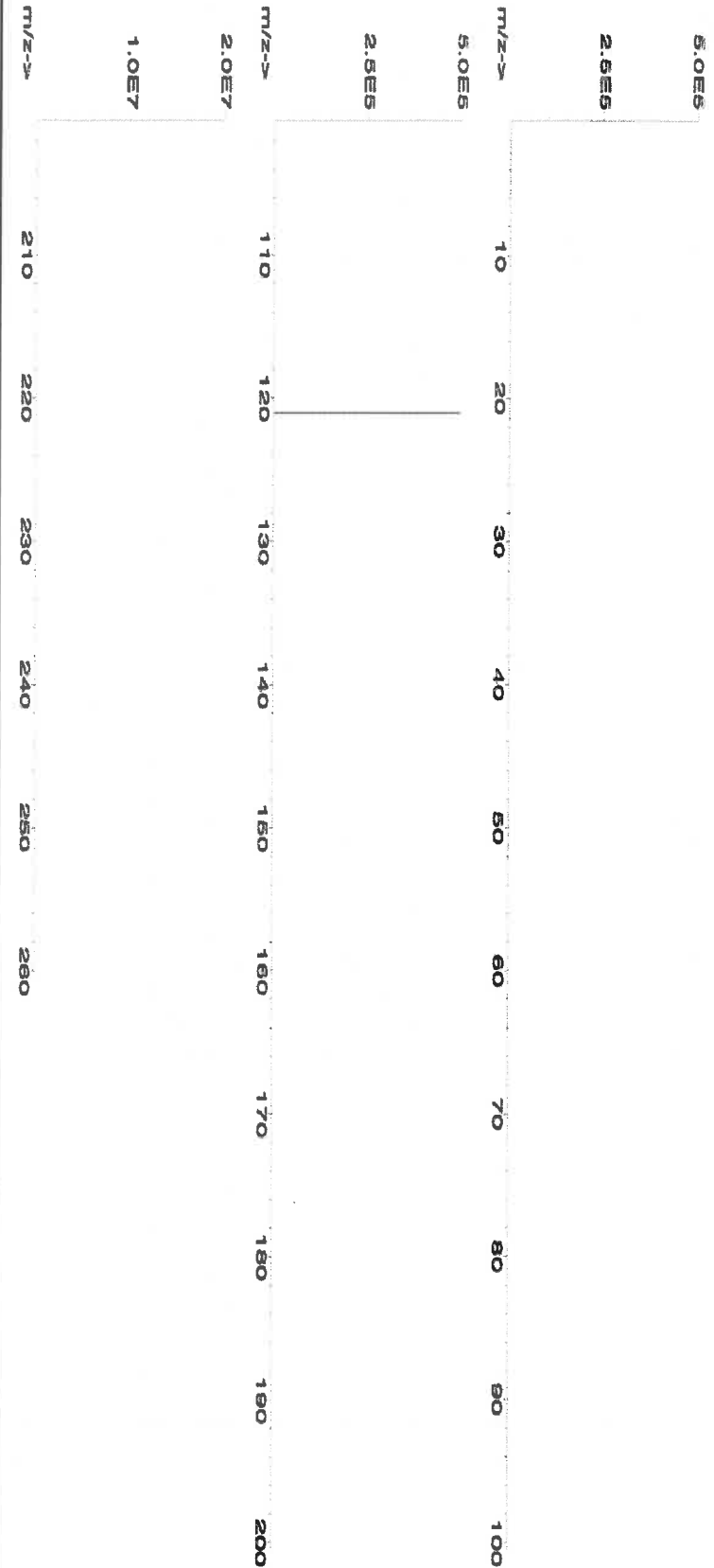
Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Renteria	120523

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
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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:

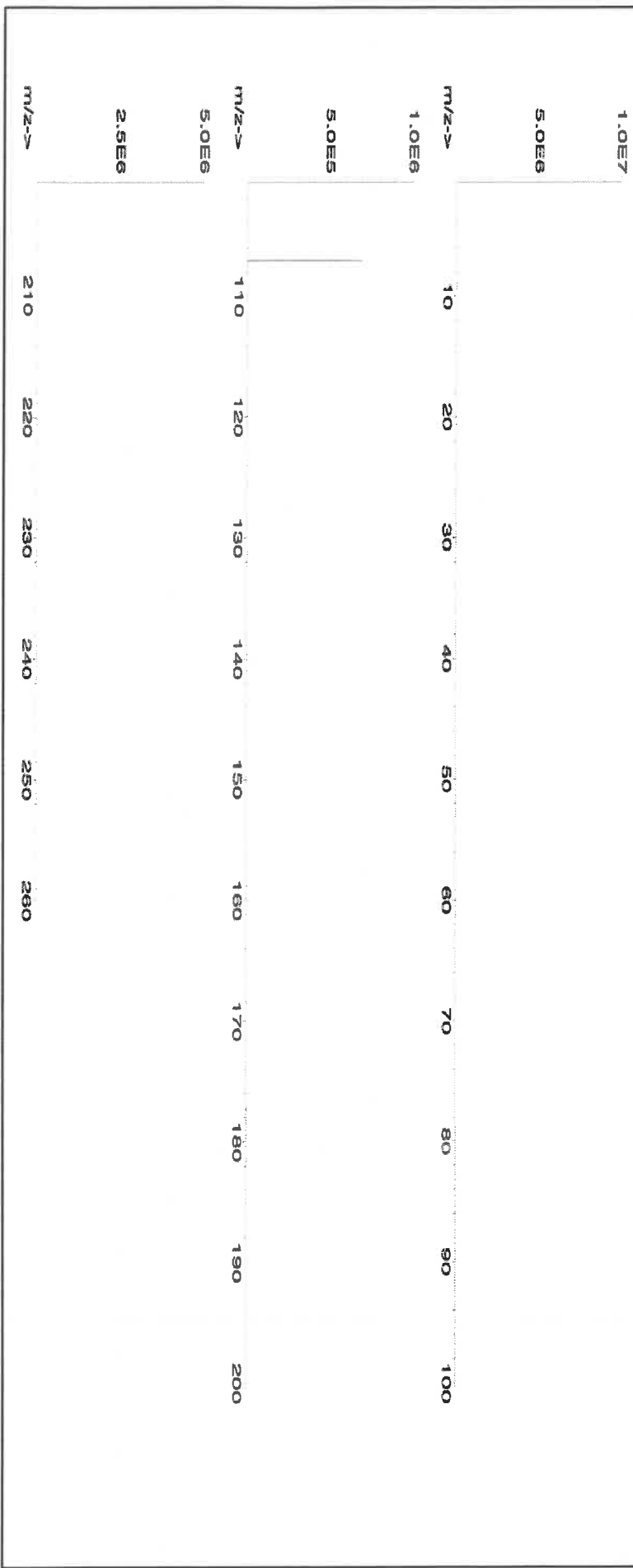
Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**
Solvent: **24002546 Nitric Acid**

Expiration Date: **122826**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **4000.30**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122823	

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	99.9996	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	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	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 Nitric Acid (mL)

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

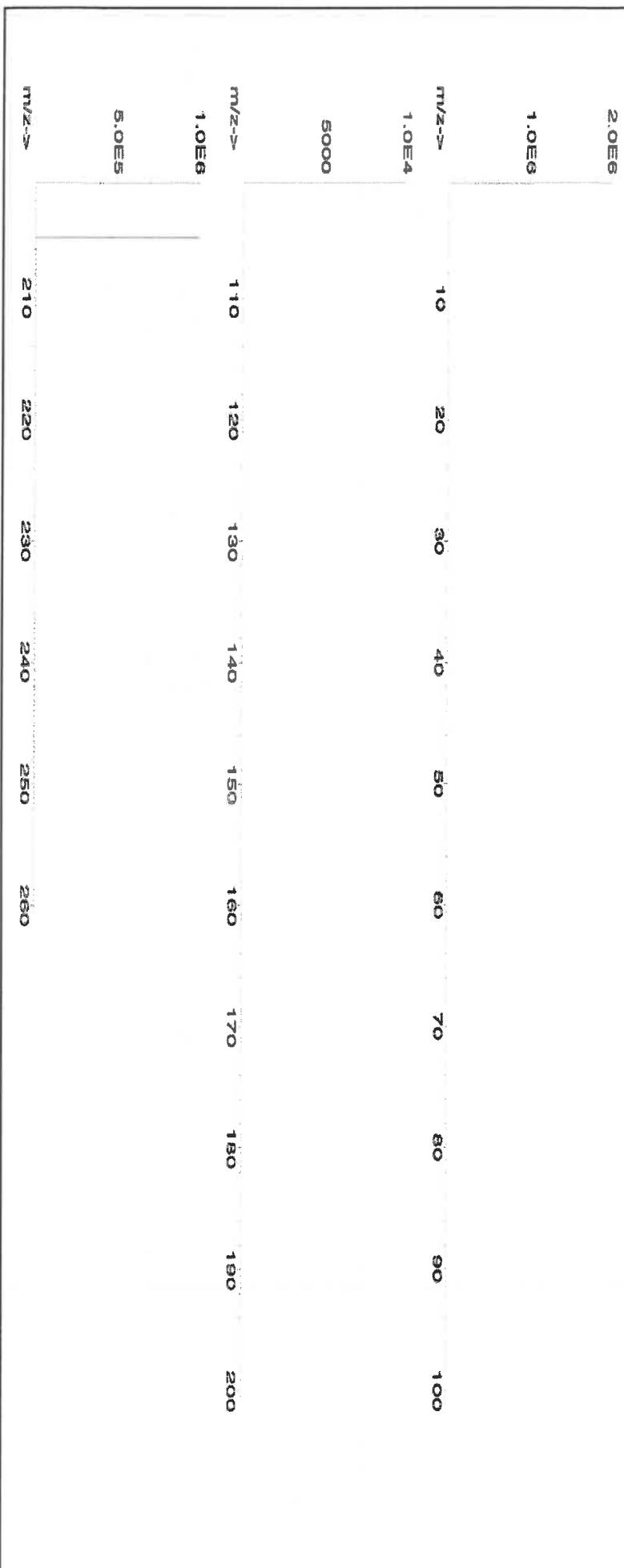
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renias</i>
	Pedro L. Renias
	062724

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
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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 or-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



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
Reviewed By:	Pedro L. Rantas
	062424

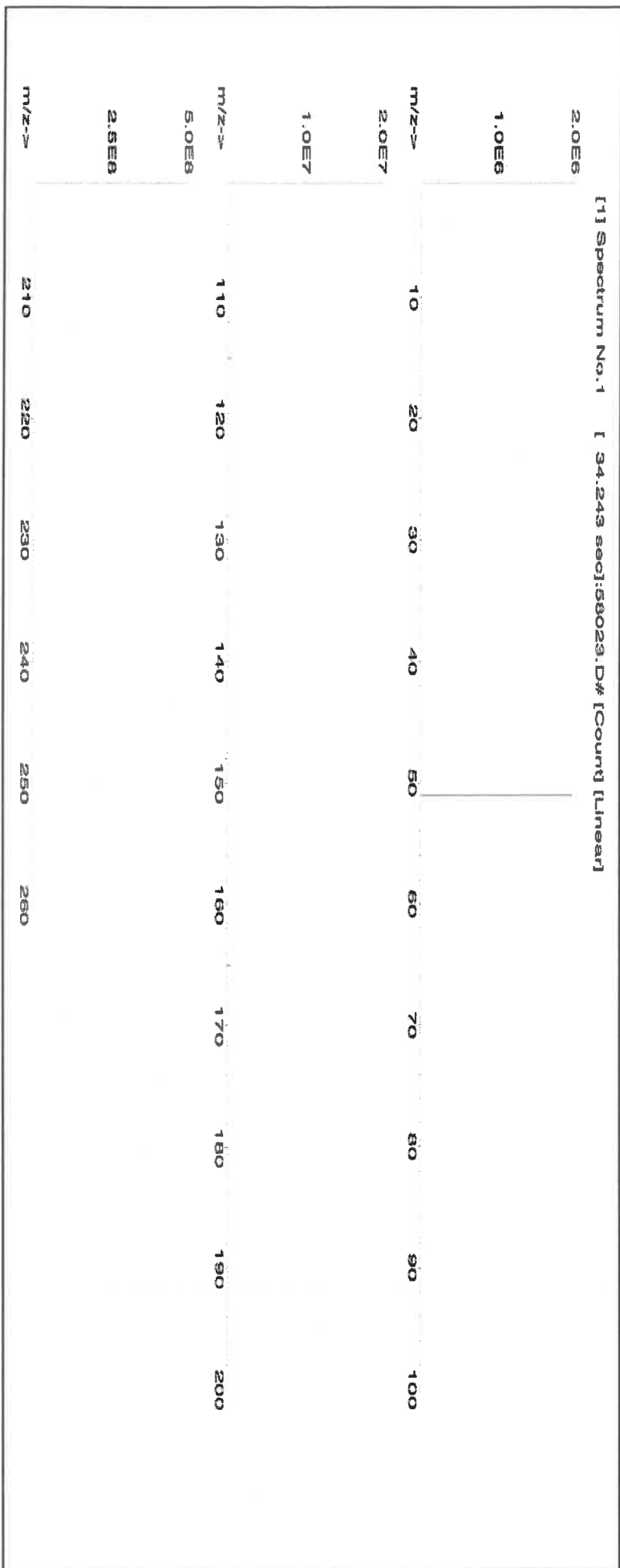
Expiration Date: 062427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

2.0% 40.0 (mL) Nitric Acid

Volume shown below was diluted to (mL): 2000.3 0.06 Balance Uncertainty Flask Uncertainty

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. 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-rat 58.1mg/kg		3165	

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]



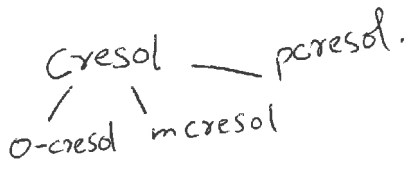


SHIPPING DOCUMENTS

CLIENT INFORMATION				CLIENT PROJECT INFORMATION				CLIENT BILLING INFORMATION							
REPORT TO BE SENT TO: COMPANY: <u>Aramark uniforms</u>				PROJECT NAME: <u>monthly</u>				BILL TO: _____ PO#: _____							
ADDRESS: <u>740 Frelinghuysen Ave</u>				PROJECT NO.: _____ LOCATION: _____				ADDRESS: _____							
CITY <u>Newark</u> STATE: <u>NJ</u> ZIP: <u>07114</u>				PROJECT MANAGER: _____				CITY _____ STATE: _____ ZIP: _____							
ATTENTION: <u>Jarrod Mills</u>				e-mail: _____				ATTENTION: _____ PHONE: _____							
PHONE: <u>973-824-1101</u> FAX: _____				PHONE: _____ FAX: _____				ANALYSIS							
DATA TURNAROUND INFORMATION				DATA DELIVERABLE INFORMATION											
FAX (RUSH) _____ DAYS*				☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)											
HARDCOPY (DATA PACKAGE): <u>Standard</u> DAYS*				☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP											
EDD: _____ DAYS*				☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B											
*TO BE APPROVED BY CHEMTECH				☐ Other _____											
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS				☐ EDD FORMAT _____											
CHEMTECH SAMPLE ID		PROJECT SAMPLE IDENTIFICATION		SAMPLE MATRIX		SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES		PRESERVATIVES		COMMENTS	
						COMP GRAB		DATE TIME				1 2 3 4 5 6 7 8 9		← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER	
1.		Filter <u>Filter cake</u>		S		✓		1-16-25 1338		5		E			
2.															
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:		DATE/TIME: <u>1340</u>		RECEIVED BY:		DATE/TIME: <u>1340</u>		Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>3.0</u> °C							
1. <u>Joe E...</u>		<u>1-16-25</u>		1. <u>[Signature]</u>		<u>1-16-25</u>		Comments: _____							
RELINQUISHED BY SAMPLER:		DATE/TIME:		RECEIVED BY:											
2.				2.											
RELINQUISHED BY SAMPLER:		DATE/TIME: <u>1810</u>		RECEIVED BY:											
3. <u>[Signature]</u>		<u>1-16-25</u>		3.											
Page _____ of _____				CLIENT: ☐ Hand Delivered ☐ Other _____				CHEMTECH: ☐ Picked Up ☐ Field Sampling				Shipment Complete ☐ YES ☐ NO			

TCLP TESTING REQUIREMENTS

VOLATILES	
BENZENE	
CARBON TETRACHLORIDE	
CHLOROFORM	
1,2-DICHLOROETHANE	
1,1-DICHLOROETHYLENE	
METHYL ETHYL KETONE	
TETRACHLOROETHYLENE	
TRICHLOROETHYLENE	
VINYL CHLORIDE	
SEMI-VOLATILES	
O-CRESOL	2 methyl phenol
M-CRESOL	3+4 methyl phenol
P-CRESOL	3+4 Methyl phenol
CRESOL	
PENTACHLOROPHENOL	
2,4,5-TRICHLOROPHENOL	
2,4,6-TRICHLOROPHENOL	
1,4-DICHLOROBENZENE	
2,4-DINITROTOLUENE	
HEXACHLOROBENZENE	
HEXACHLOROETHANE	
NITROBENZENE	
PYRIDINE	
METALS	
ARSENIC	
BARIUM	
CADMIUM	
CHROMIUM	
LEAD	
MERCURY	
SELENIUM	
SILVER	



** Lab must also test/report the following:
 Corrosivity
 Reactivity
 Flashpoint



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