

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



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LAB CHRONICLE

OrderID:	Q2742	OrderDate:	7/31/2025 3:56:00 PM
Client:	G Environmental	Project:	Banker
Contact:	Gary Landis	Location:	O22

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2742-01	9 Banker	Water	Metals Group4	6010D	07/31/25	08/01/25	08/04/25	07/31/25



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Hit Summary Sheet
SW-846

SDG No.: Q2742
Client: G Environmental

Order ID: Q2742
Project ID: Banker

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	9 Banker							
Q2742-01	9 Banker	Water	Sodium	271000		434	1000	ug/L



SAMPLE DATA

Report of Analysis

Client:	G Environmental	Date Collected:	07/31/25
Project:	Banker	Date Received:	07/31/25
Client Sample ID:	9 Banker	SDG No.:	Q2742
Lab Sample ID:	Q2742-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-23-5	Sodium	271000	1	434		1000	ug/L	08/01/25 10:05	08/04/25 14:12	6010D	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group4			

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

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



METAL CALIBRATION DATA

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Sodium	19500	20000	98	90 - 110	P	08/04/2025	11:41	LB136697

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Sodium	1990	2000	100	80 - 120	P	08/04/2025	11:45	LB136697

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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	Sodium	23900	25000	96	90 - 110	P	08/04/2025	12:25	LB136697
CCV02	Sodium	24500	25000	98	90 - 110	P	08/04/2025	13:37	LB136697
CCV03	Sodium	23600	25000	94	90 - 110	P	08/04/2025	14:43	LB136697
CCV04	Sodium	23200	25000	93	90 - 110	P	08/04/2025	15:48	LB136697
CCV05	Sodium	22900	25000	92	90 - 110	P	08/04/2025	16:51	LB136697
CCV06	Sodium	24600	25000	98	90 - 110	P	08/04/2025	17:41	LB136697
CCV07	Sodium	24600	25000	98	90 - 110	P	08/04/2025	17:58	LB136697



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Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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	Sodium	2030	2000	102	65 - 135	P	08/04/2025	11:57	LB136697



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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Sodium	868	+/-1000	U	2000	P	08/04/2025	11:52	LB136697

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Sodium	868	+/-1000	U	2000	P	08/04/2025	12:29	LB136697
CCB02	Sodium	868	+/-1000	U	2000	P	08/04/2025	13:41	LB136697
CCB03	Sodium	868	+/-1000	U	2000	P	08/04/2025	14:54	LB136697
CCB04	Sodium	868	+/-1000	U	2000	P	08/04/2025	15:53	LB136697
CCB05	Sodium	868	+/-1000	U	2000	P	08/04/2025	16:55	LB136697
CCB06	Sodium	868	+/-1000	U	2000	P	08/04/2025	17:45	LB136697
CCB07	Sodium	868	+/-1000	U	2000	P	08/04/2025	18:02	LB136697

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: G Environmental

SDG No.: Q2742

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169078BL		WATER		Batch Number:	PB169078		Prep Date:	08/01/2025	
	Sodium	434	<500	U	1000	P	08/04/2025	13:29	LB136697

Metals

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INTERFERENCE CHECK SAMPLE

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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	Sodium	115			0	0	08/04/2025	12:01	LB136697
ICSAB01	Sodium	94.2			0	0	08/04/2025	12:05	LB136697



METAL

QC

DATA

metals
- 5a -
MATRIX SPIKE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q2742
contract: GENV01 **lab code:** ACE
matrix: Water **sample id:** Q2733-01 **client id:** TW-WTS-12MS
Percent Solids for Sample: NA **Spiked ID:** Q2733-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/L	75 - 125	75800		73800		1500	134		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q2742
contract: GENV01 **lab code:** ACE
matrix: Water **sample id:** Q2733-01 **client id:** TW-WTS-12MSD
Percent Solids for Sample: NA **Spiked ID:** Q2733-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/L	75 - 125	71600		73800		1500	-147		P

Metals
- 5b -

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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:	<u>G Environmental</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2742</u>
Contract:	<u>GENV01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2733-01</u>	Client ID:	<u>TW-WTS-12DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2733-01DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Sodium	ug/L	20	73800		77200		5		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>G Environmental</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2742</u>
Contract:	<u>GENV01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2733-01MS</u>	Client ID:	<u>TW-WTS-12MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2733-01MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Sodium	ug/L	20	75800		71600		6		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169078BS Sodium	ug/L	1500	1430		95	80 - 120	P

Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

TW-WTS-12L

Lab Name: Alliance

Contract: GENV01

Lab Code: ACE

Lb No.: lb136697

Lab Sample ID : Q2733-01L

SDG No.: Q2742

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				
Sodium	73800		66600		10		P



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

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
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000



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Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000



METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client: G Environmental

SDG No.: Q2742

Contract: GENV01

Lab Code: ACE

Method: _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB169078							
PB169078BL	PB169078BL	MB	WATER	08/01/2025	50.0	25.0	
PB169078BS	PB169078BS	LCS	WATER	08/01/2025	50.0	25.0	
Q2733-01DUP	TW-WTS-12DUP	DUP	WATER	08/01/2025	50.0	25.0	
Q2733-01MS	TW-WTS-12MS	MS	WATER	08/01/2025	50.0	25.0	
Q2733-01MSD	TW-WTS-12MSD	MSD	WATER	08/01/2025	50.0	25.0	
Q2742-01	9 Banker	SAM	WATER	08/01/2025	50.0	25.0	

metals
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ANALYSIS RUN LOG

Client: G Environmental

Contract: GENV01

Lab code: ACE

Sdg no.: Q2742

Instrument id number: _____

Method: _____

Run number: LB136697

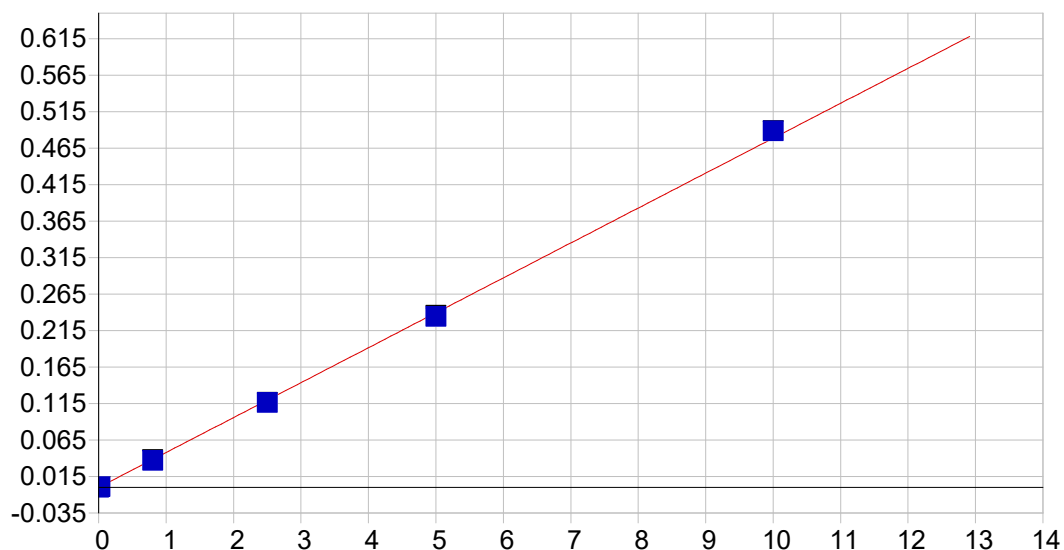
Start date: 08/04/2025

End date: 08/04/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1115	Na
S1	S1	1	1120	Na
S2	S2	1	1124	Na
S3	S3	1	1128	Na
S4	S4	1	1132	Na
S5	S5	1	1136	Na
ICV01	ICV01	1	1141	Na
LLICV01	LLICV01	1	1145	Na
ICB01	ICB01	1	1152	Na
CRI01	CRI01	1	1157	Na
ICSA01	ICSA01	1	1201	Na
ICSAB01	ICSAB01	1	1205	Na
CCV01	CCV01	1	1225	Na
CCB01	CCB01	1	1229	Na
PB169078BL	PB169078BL	1	1329	Na
PB169078BS	PB169078BS	1	1333	Na
CCV02	CCV02	1	1337	Na
CCB02	CCB02	1	1341	Na
Q2733-01DUP	TW-WTS-12DUP	1	1350	Na
Q2733-01L	TW-WTS-12L	5	1354	Na
Q2733-01MS	TW-WTS-12MS	1	1359	Na
Q2733-01MSD	TW-WTS-12MSD	1	1403	Na
Q2742-01	9 Banker	1	1412	Na
CCV03	CCV03	1	1443	Na
CCB03	CCB03	1	1454	Na
CCV04	CCV04	1	1548	Na
CCB04	CCB04	1	1553	Na
CCV05	CCV05	1	1651	Na
CCB05	CCB05	1	1655	Na
CCV06	CCV06	1	1741	Na
CCB06	CCB06	1	1745	Na
CCV07	CCV07	1	1758	Na
CCB07	CCB07	1	1802	Na



METAL RAW DATA

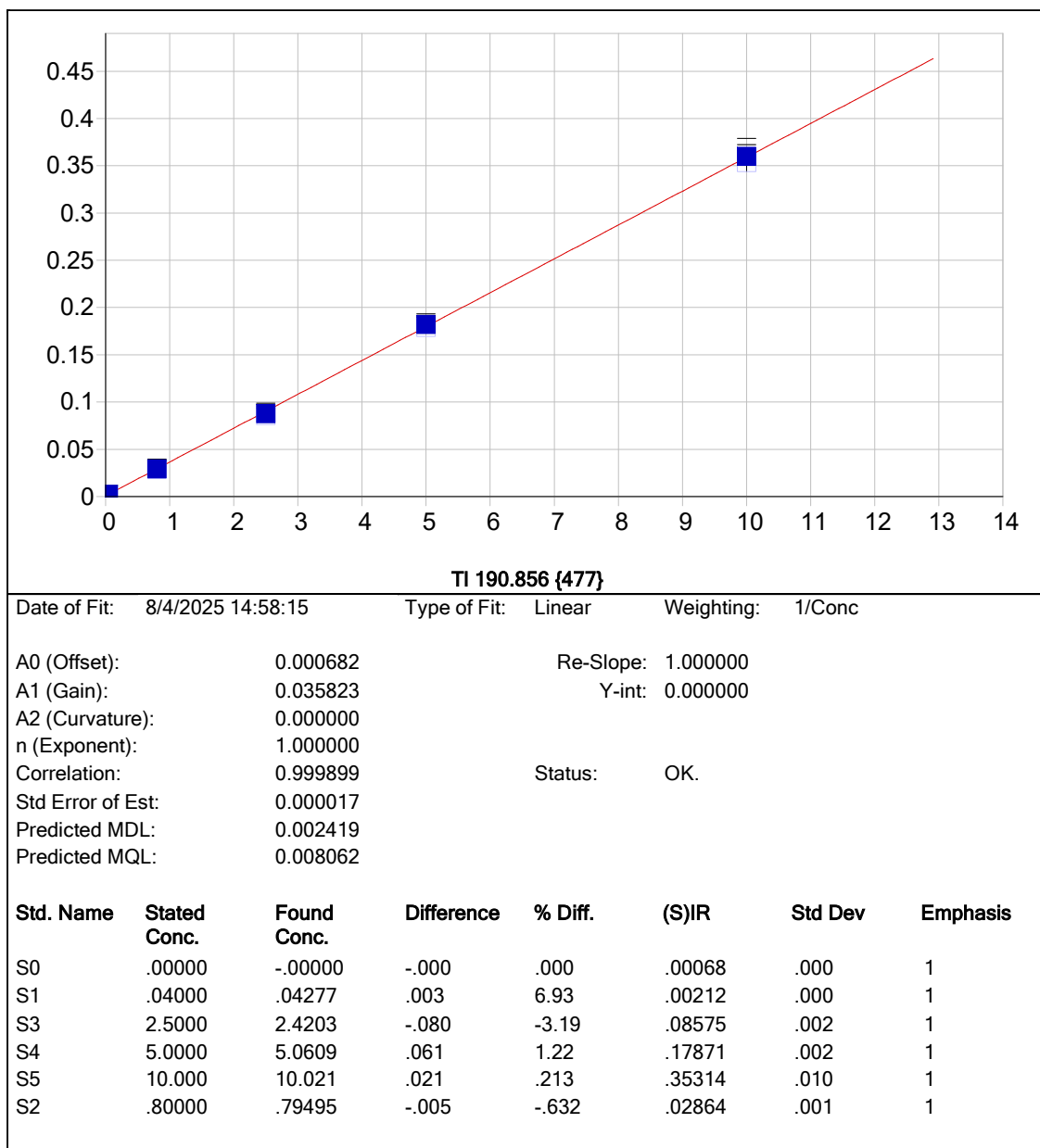


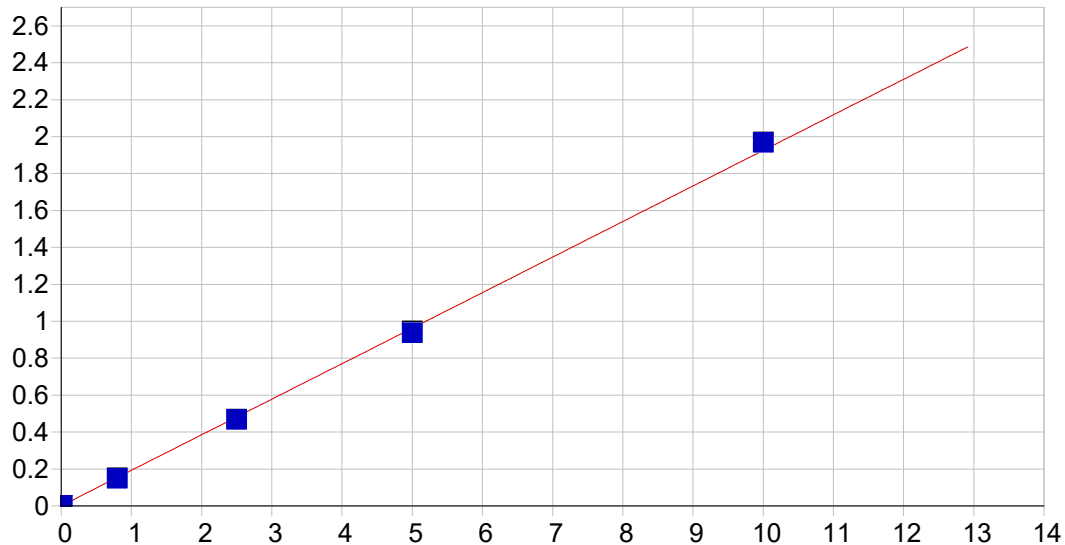
As 189.042 {479}

Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000019 Re-Slope: 1.000000
A1 (Gain): 0.047860 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999726 Status: OK.
Std Error of Est: 0.000026
Predicted MDL: 0.002523
Predicted MQL: 0.008410

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.02000	.02243	.002	12.2	.00109	.000	1
S3	2.5000	2.4254	-.075	-2.99	.11597	.000	1
S4	5.0000	4.8916	-.108	-2.17	.23387	.002	1
S5	10.000	10.207	.207	2.07	.48801	.000	1
S2	.80000	.77352	-.026	-3.31	.03700	.001	1



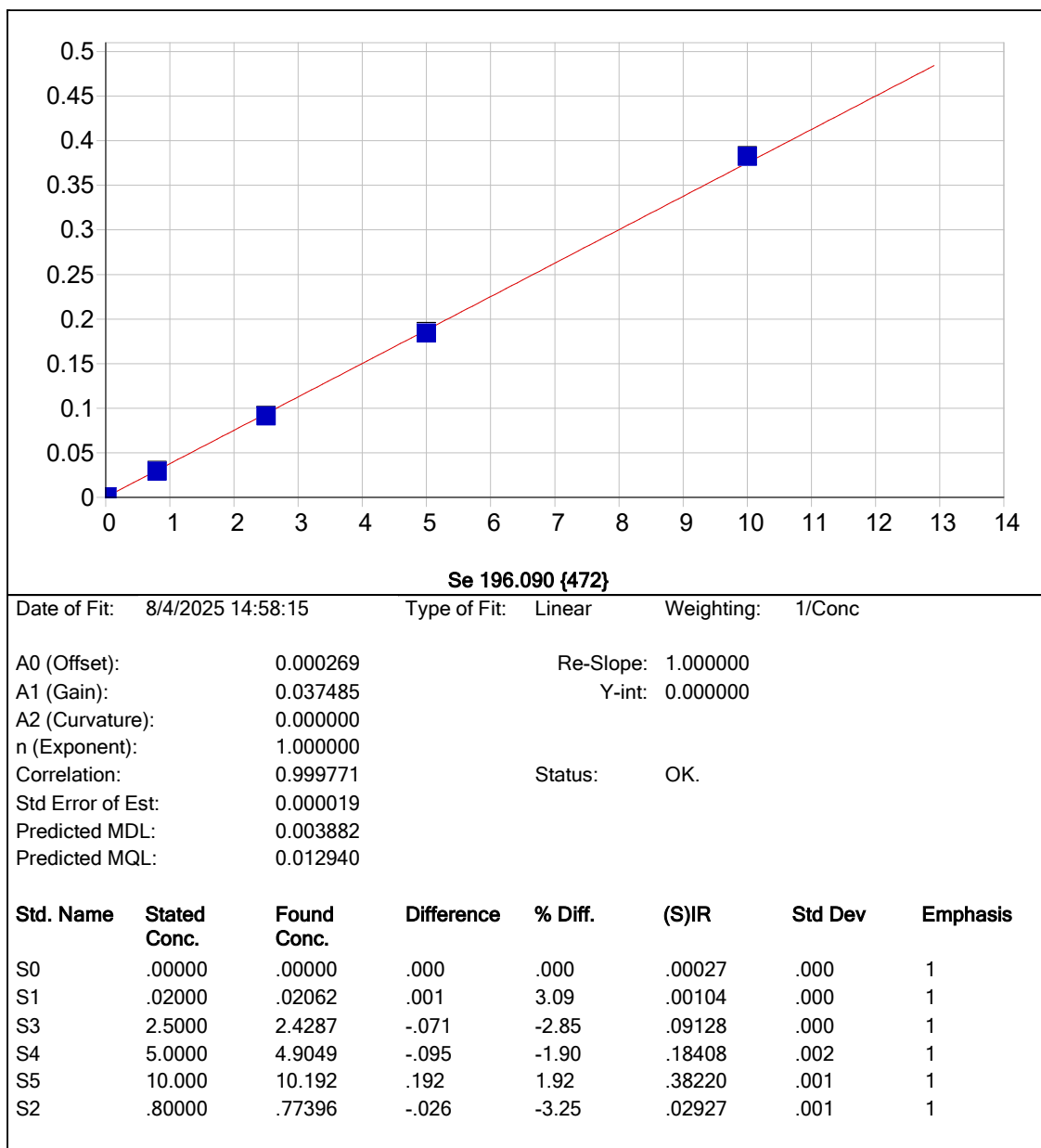


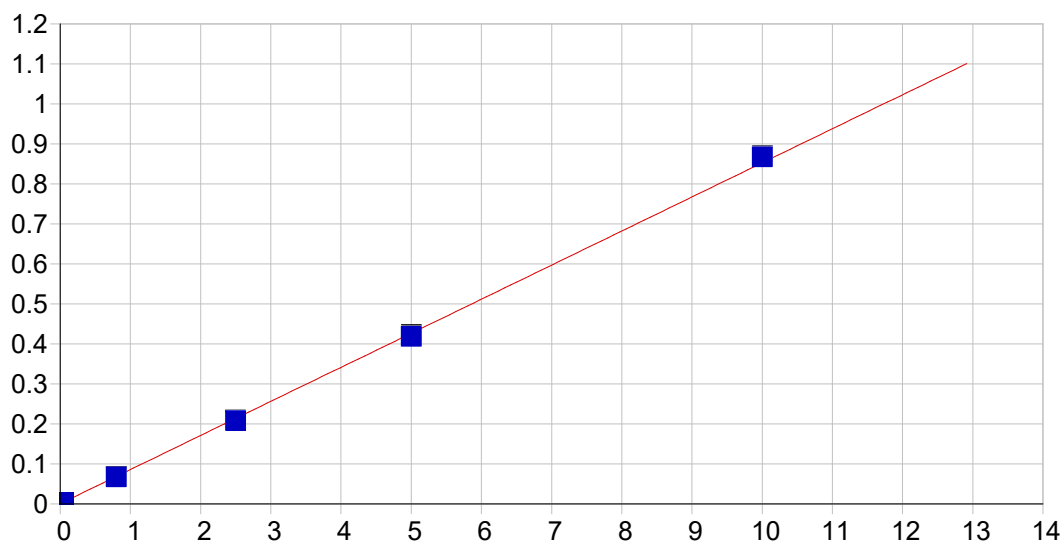
Pb 220.353 {453}

Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000221 Re-Slope: 1.000000
A1 (Gain): 0.192481 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999688 Status: OK.
Std Error of Est: 0.000087
Predicted MDL: 0.001464
Predicted MQL: 0.004879

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00022	.000	1
S1	.01200	.01119	-.001	-6.74	.00233	.000	1
S3	2.5000	2.4309	-.069	-2.76	.46763	.001	1
S4	5.0000	4.8716	-.128	-2.57	.93691	.009	1
S5	10.000	10.227	.227	2.27	1.9667	.002	1
S2	.80000	.77157	-.028	-3.55	.14857	.003	1



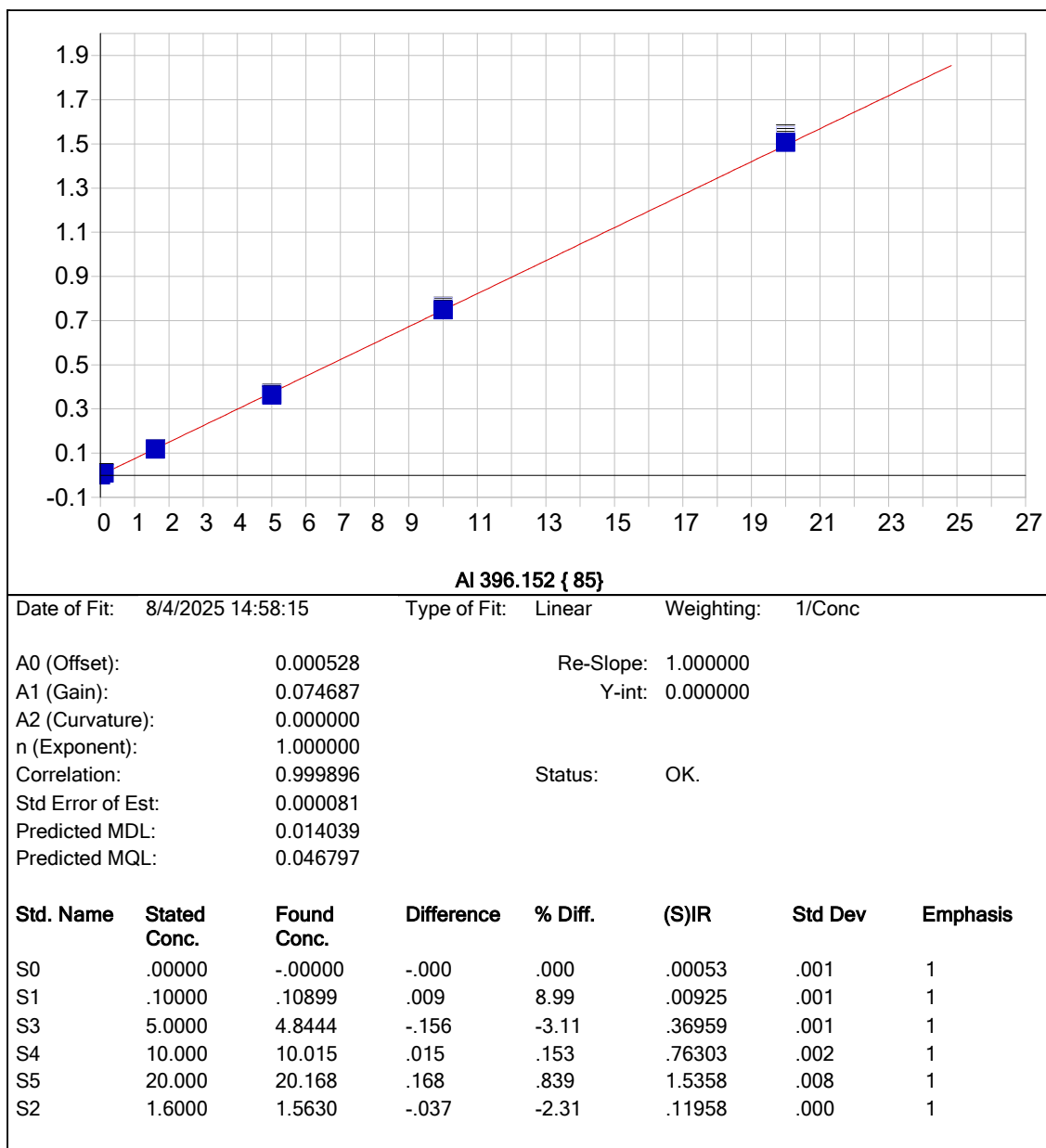


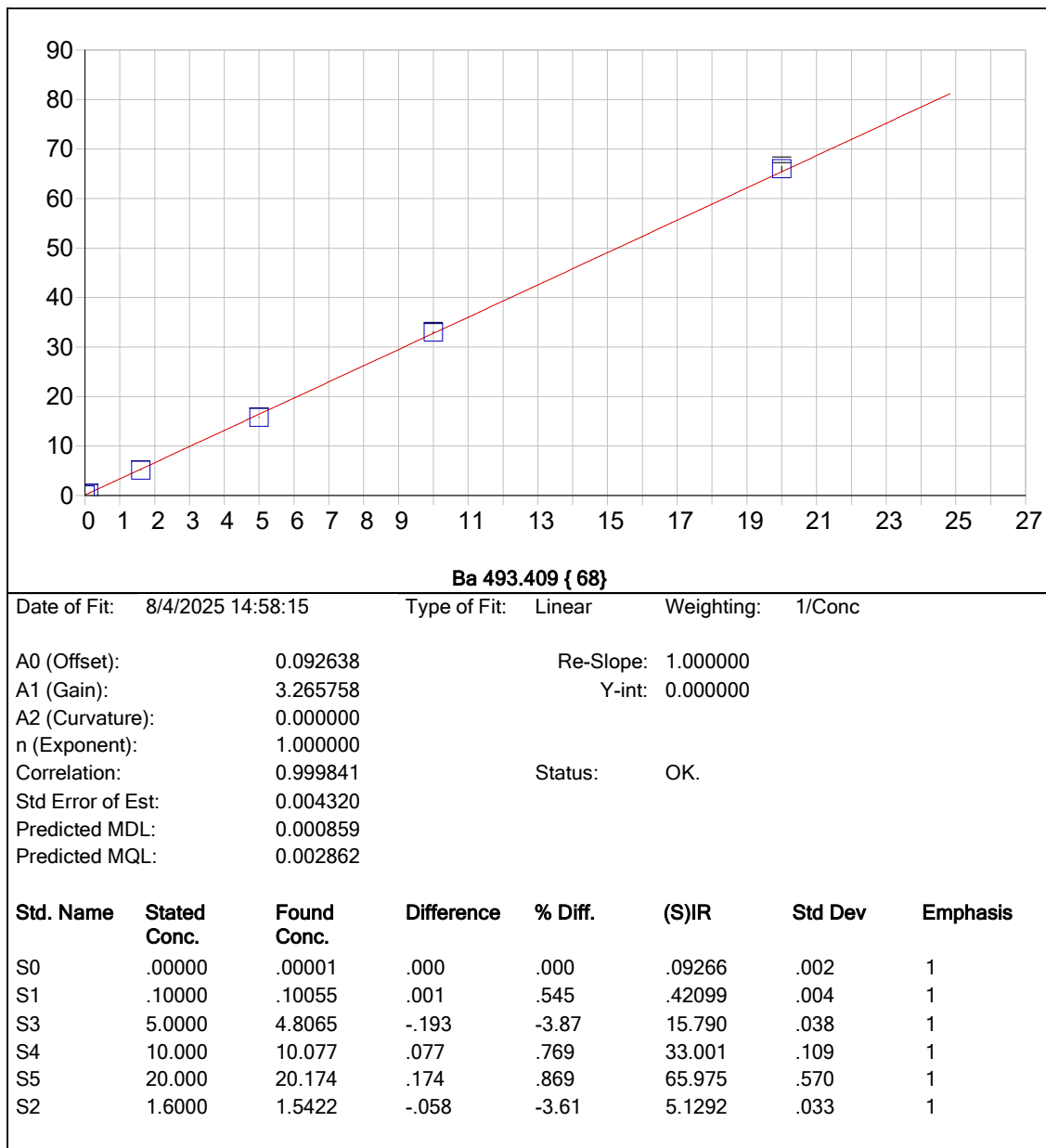
Sb 206.833 {463}

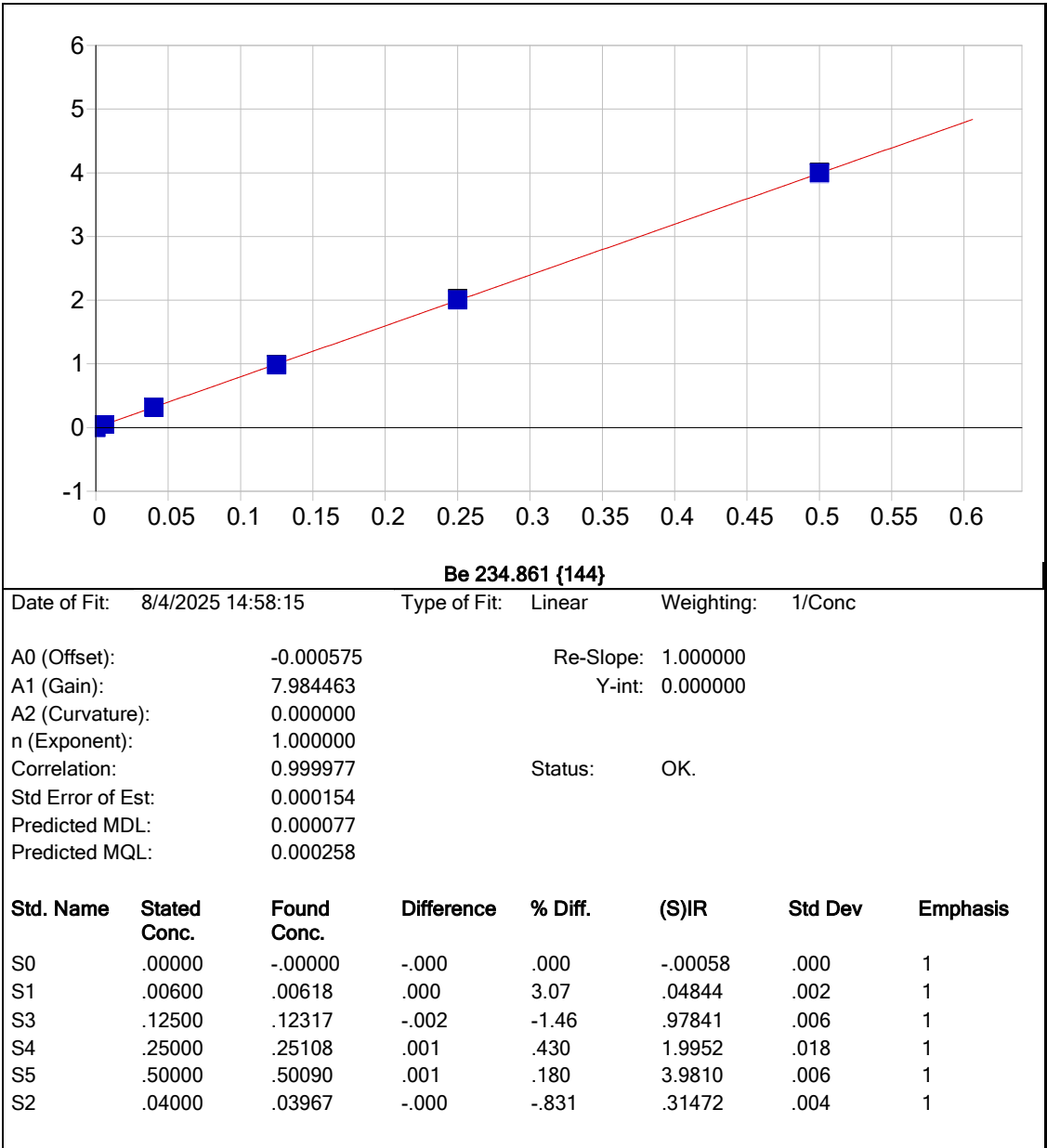
Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

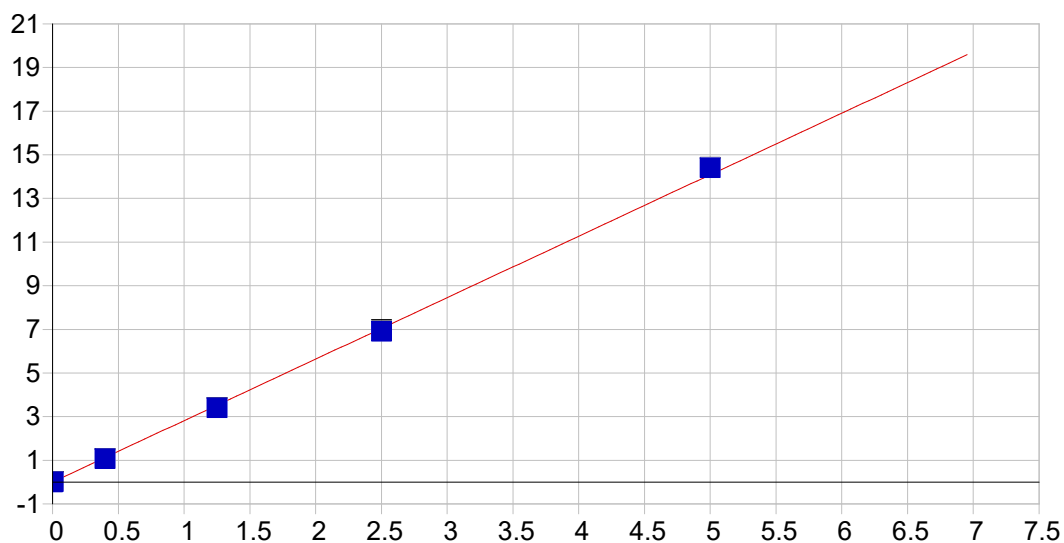
A0 (Offset): 0.000633 Re-Slope: 1.000000
A1 (Gain): 0.085194 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999809 Status: OK.
Std Error of Est: 0.000062
Predicted MDL: 0.002277
Predicted MQL: 0.007588

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00063	.000	1
S1	.05000	.05178	.002	3.56	.00505	.000	1
S3	2.5000	2.4371	-.063	-2.51	.20884	.001	1
S4	5.0000	4.9064	-.094	-1.87	.41979	.003	1
S5	10.000	10.176	.176	1.76	.86987	.000	1
S2	.80000	.77880	-.021	-2.65	.06717	.001	1







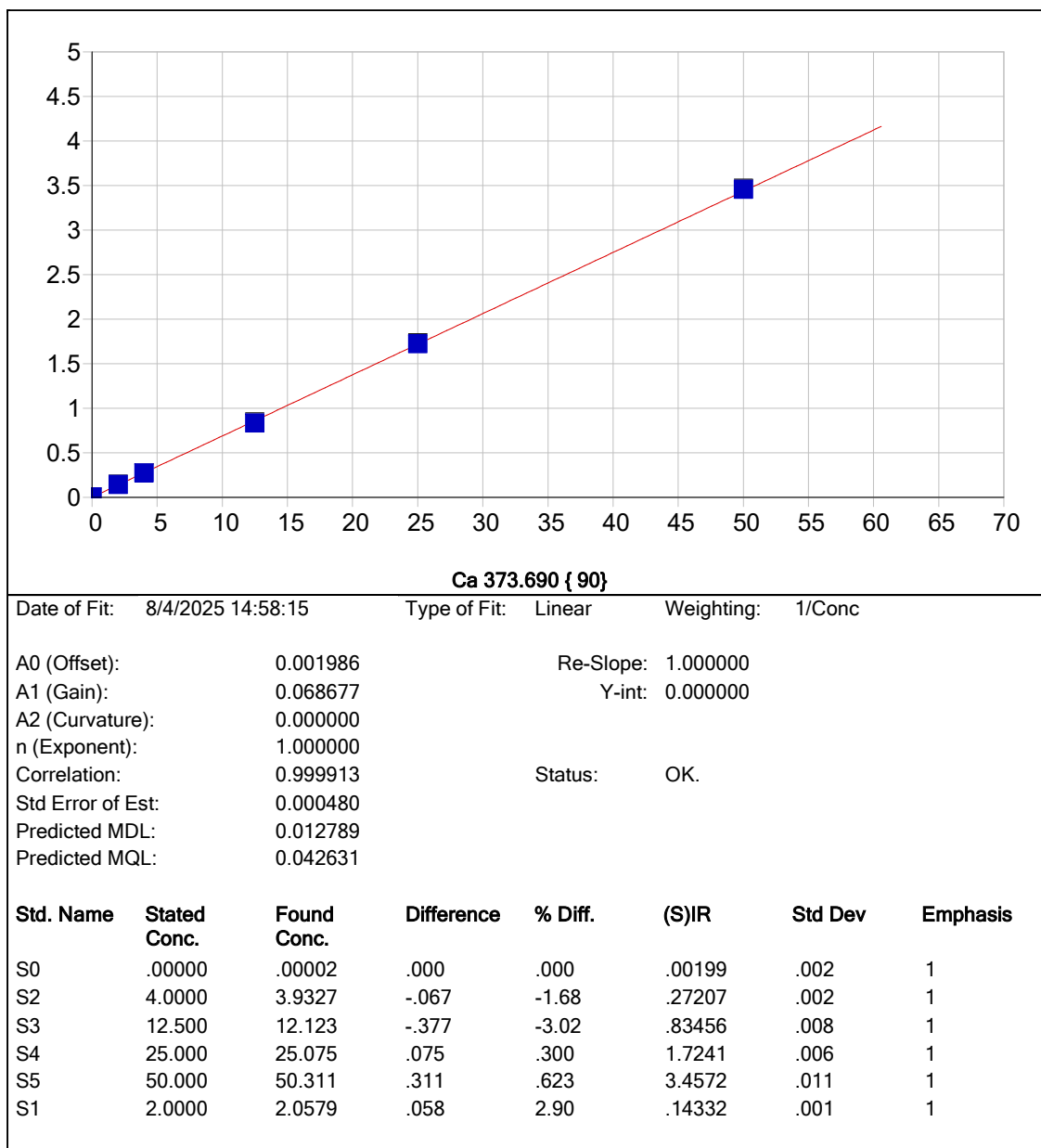


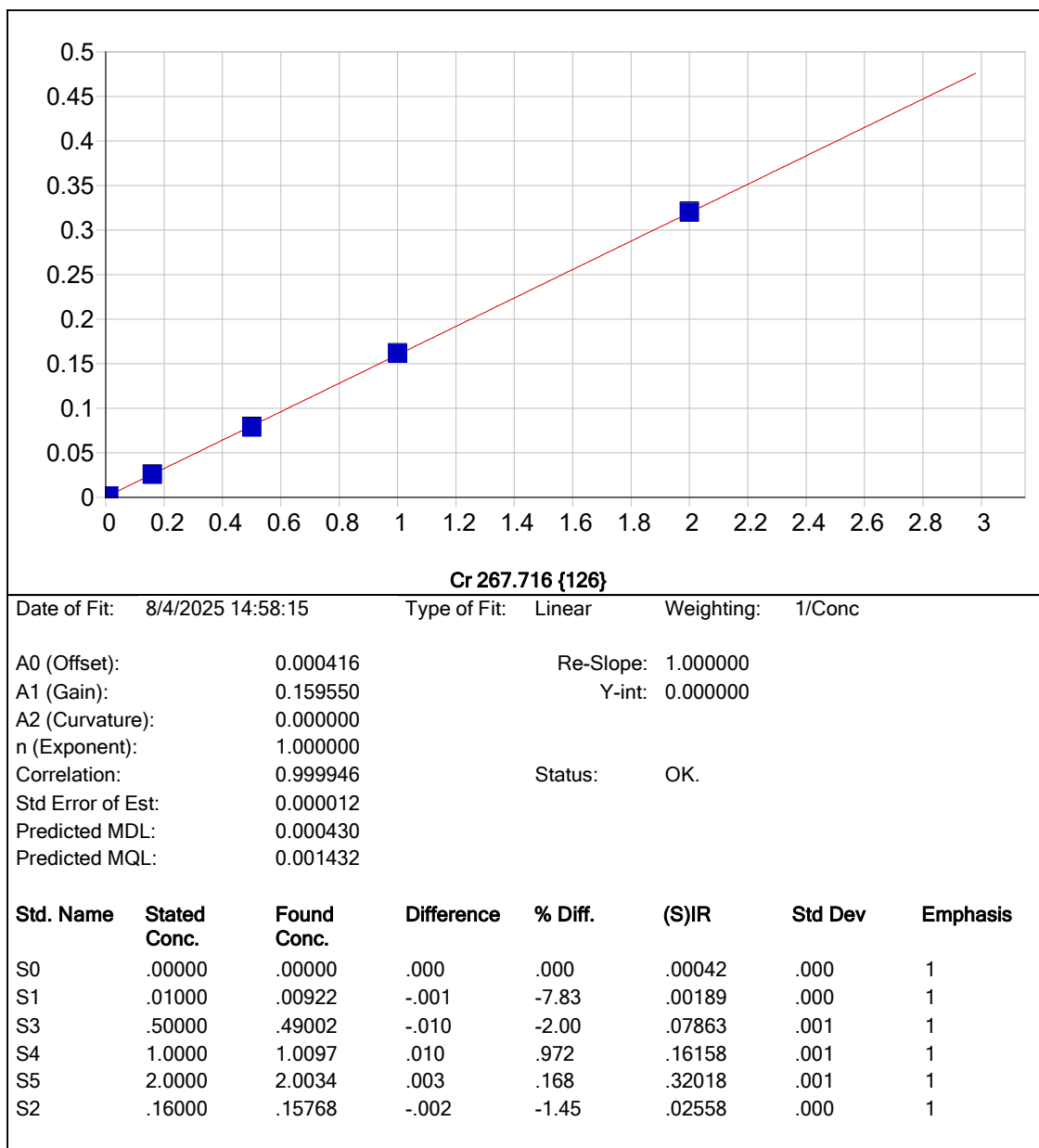
Cd 226.502 {449}

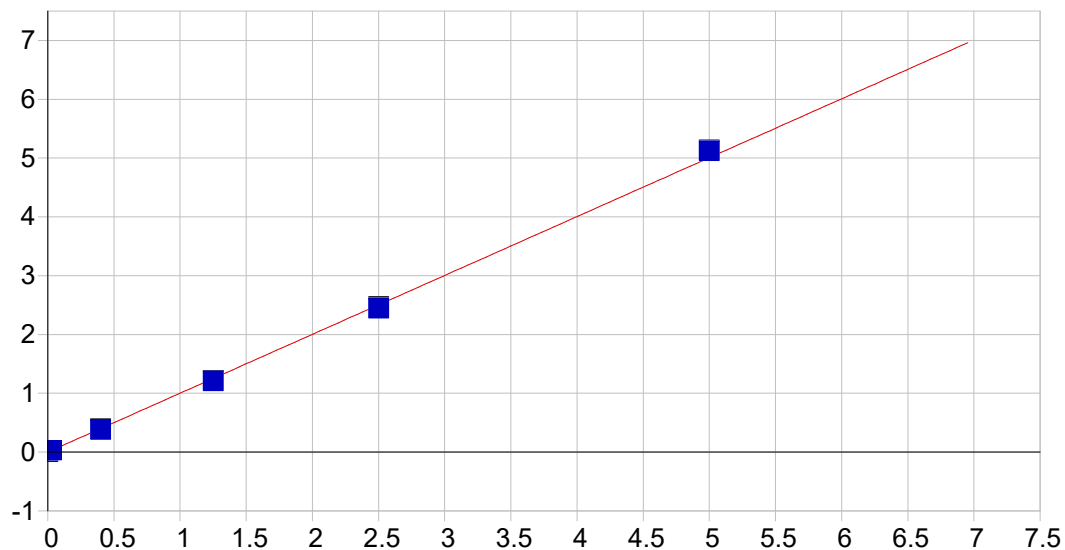
Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000366 Re-Slope: 1.000000
A1 (Gain): 2.817559 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999666 Status: OK.
Std Error of Est: 0.000662
Predicted MDL: 0.000084
Predicted MQL: 0.000280

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00036	.000	1
S1	.00600	.00590	-.000	-1.61	.01632	.000	1
S3	1.2500	1.2066	-.043	-3.47	3.4017	.008	1
S4	2.5000	2.4528	-.047	-1.89	6.9153	.065	1
S5	5.0000	5.1126	.113	2.25	14.414	.012	1
S2	.40000	.37808	-.022	-5.48	1.0656	.022	1





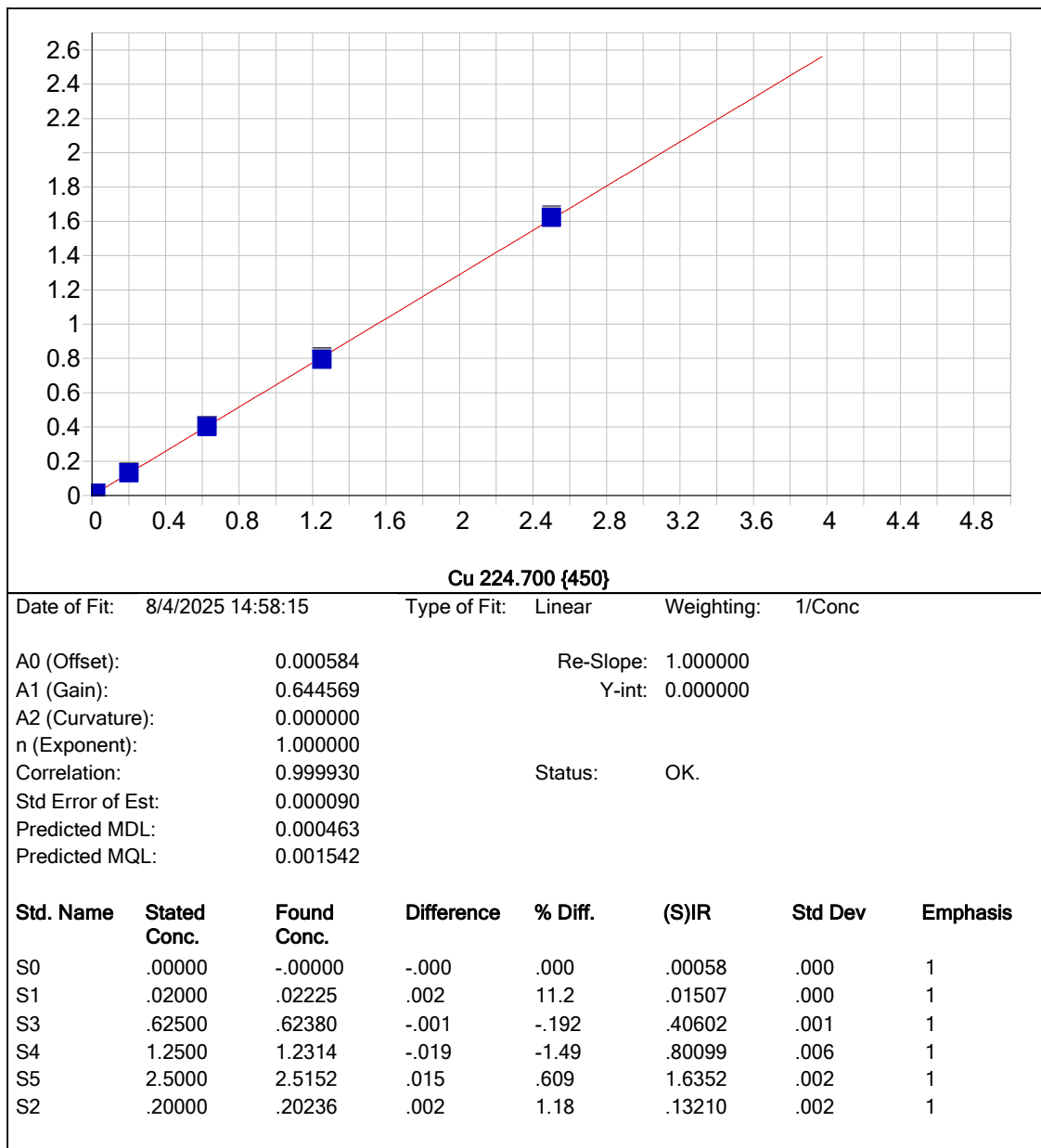


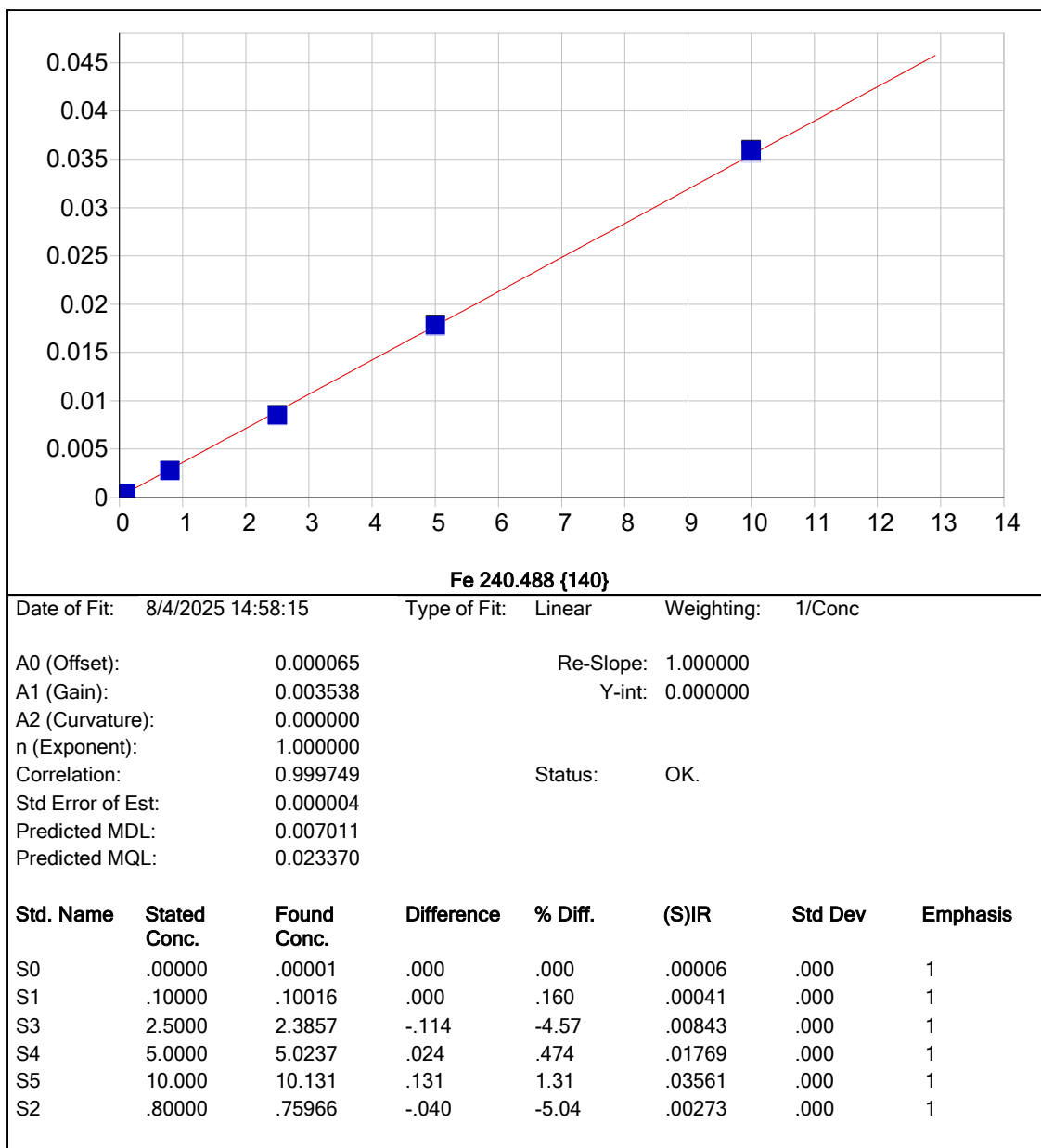
Co 228.616 {448}

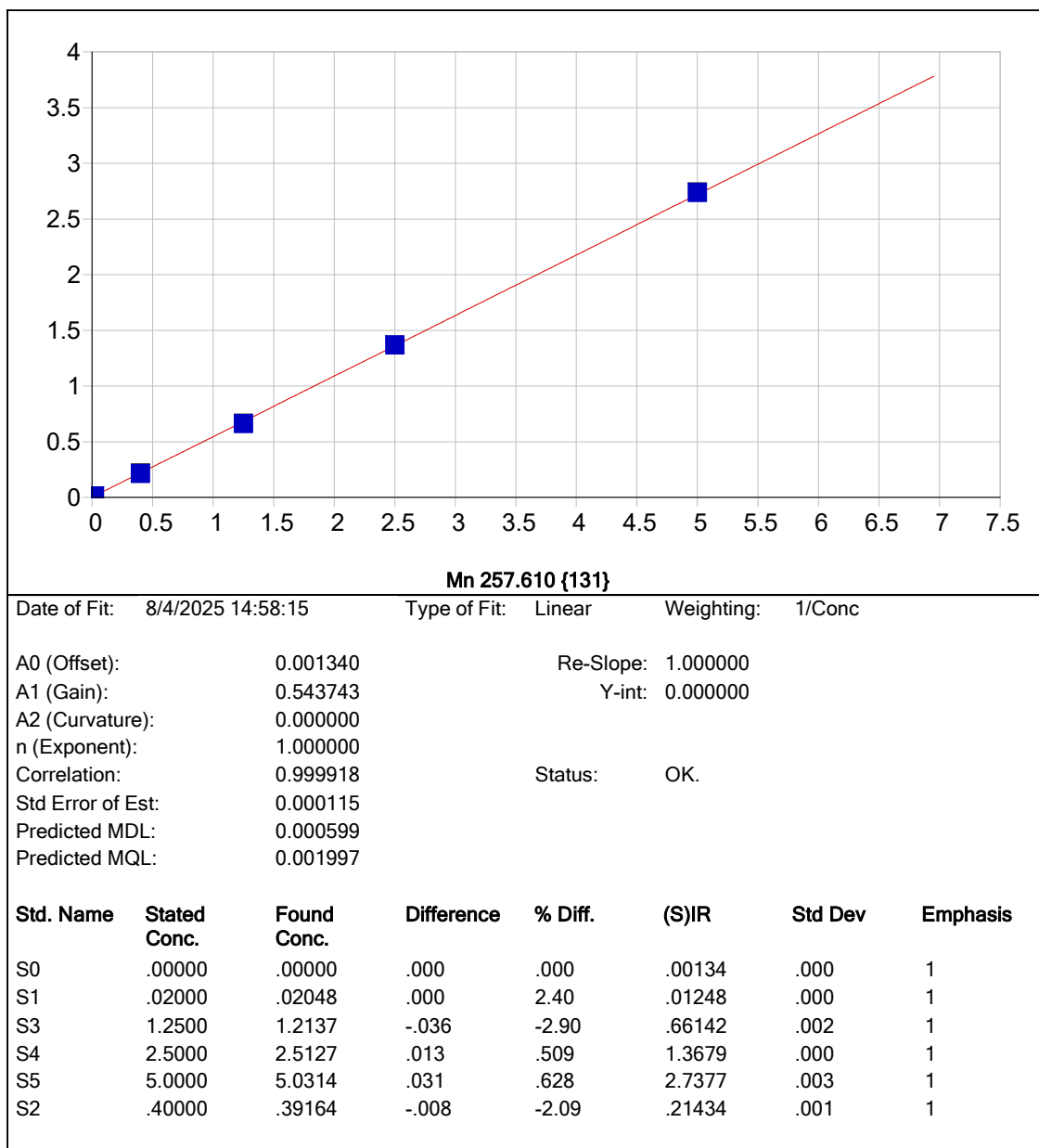
Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

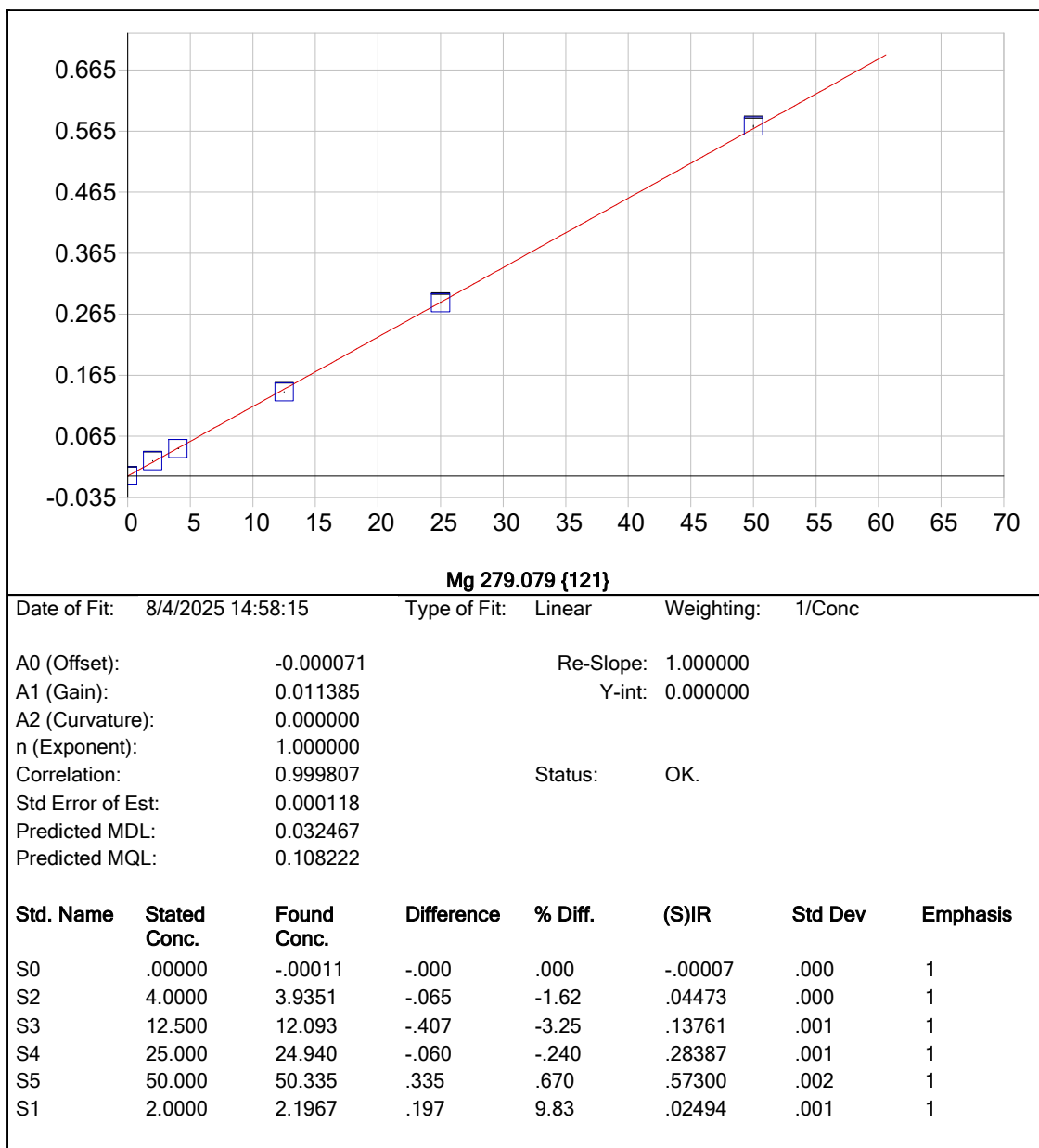
A0 (Offset): 0.000123 Re-Slope: 1.000000
A1 (Gain): 1.001307 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999675 Status: OK.
Std Error of Est: 0.000520
Predicted MDL: 0.000214
Predicted MQL: 0.000715

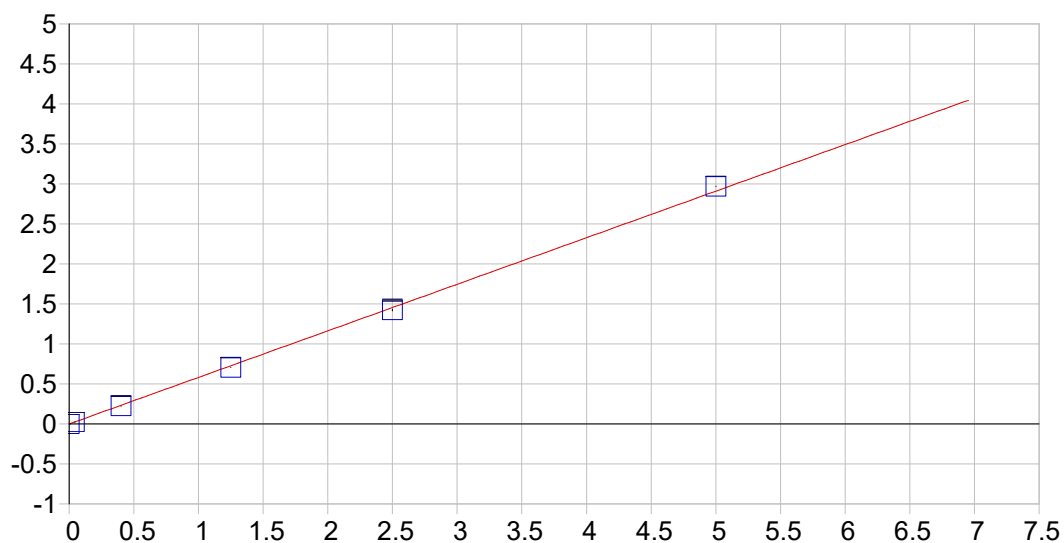
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00012	.000	1
S1	.03000	.03105	.001	3.49	.03108	.000	1
S3	1.2500	1.2080	-.042	-3.36	1.2118	.002	1
S4	2.5000	2.4433	-.057	-2.27	2.4509	.022	1
S5	5.0000	5.1139	.114	2.28	5.1292	.007	1
S2	.40000	.38375	-.016	-4.06	.38505	.008	1









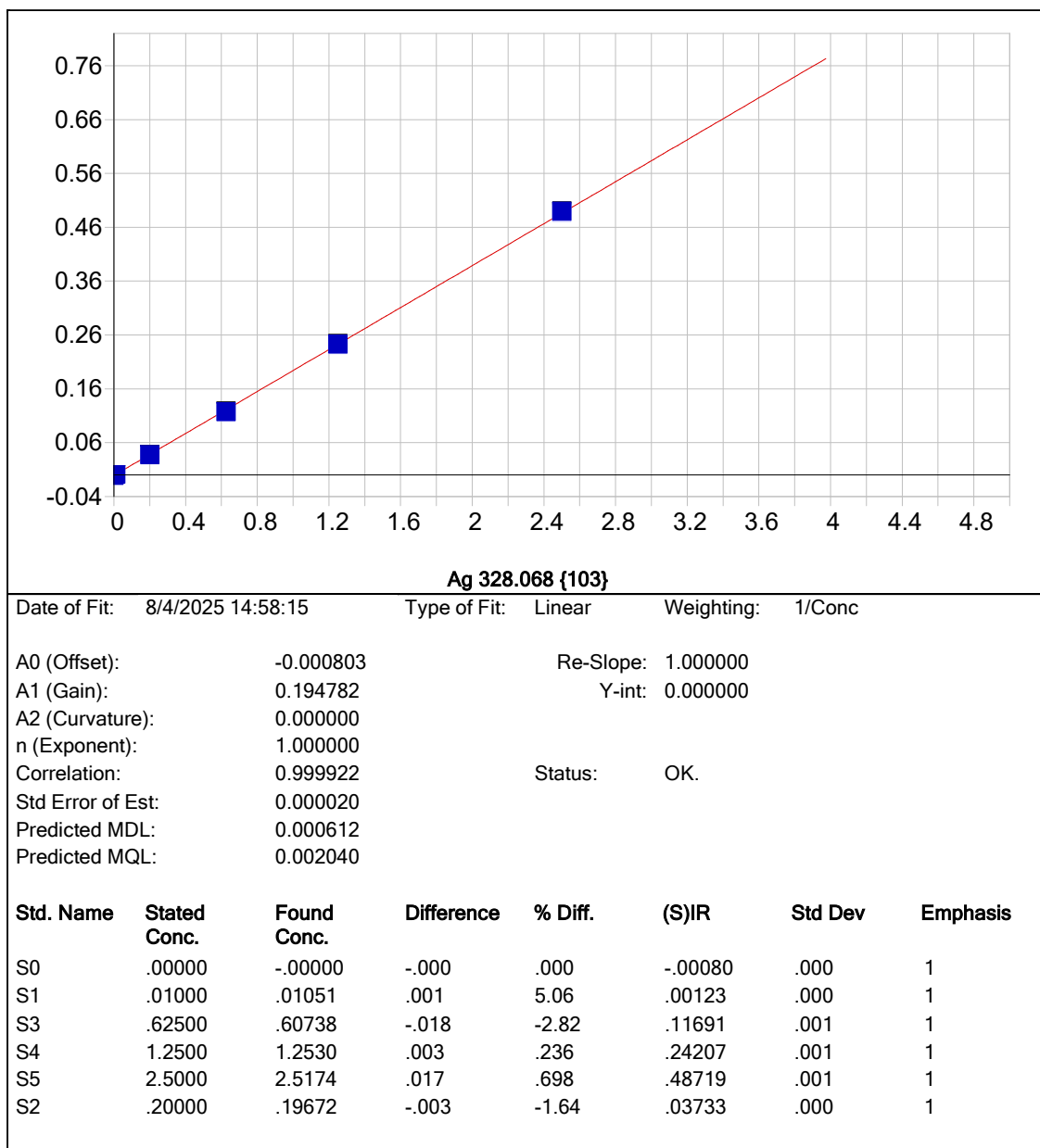


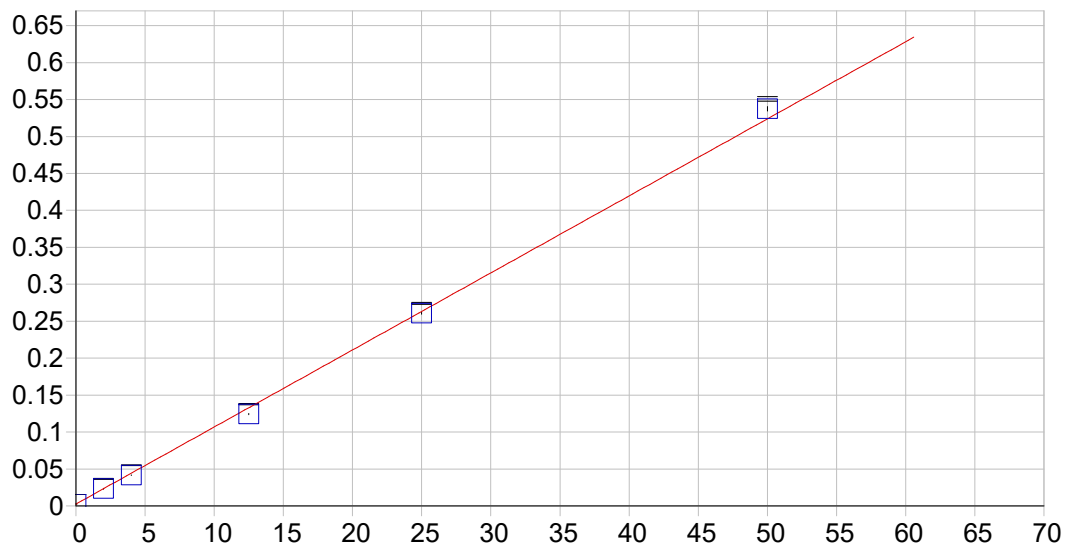
Ni 231.604 {446}

Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000426 Re-Slope: 1.000000
A1 (Gain): 0.581937 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999738 Status: OK.
Std Error of Est: 0.000313
Predicted MDL: 0.000391
Predicted MQL: 0.001304

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00043	.000	1
S1	.04000	.04143	.001	3.59	.02369	.000	1
S3	1.2500	1.2137	-.036	-2.90	.70587	.002	1
S4	2.5000	2.4470	-.053	-2.12	1.4236	.012	1
S5	5.0000	5.1021	.102	2.04	2.9687	.002	1
S2	.40000	.38573	-.014	-3.57	.22405	.005	1



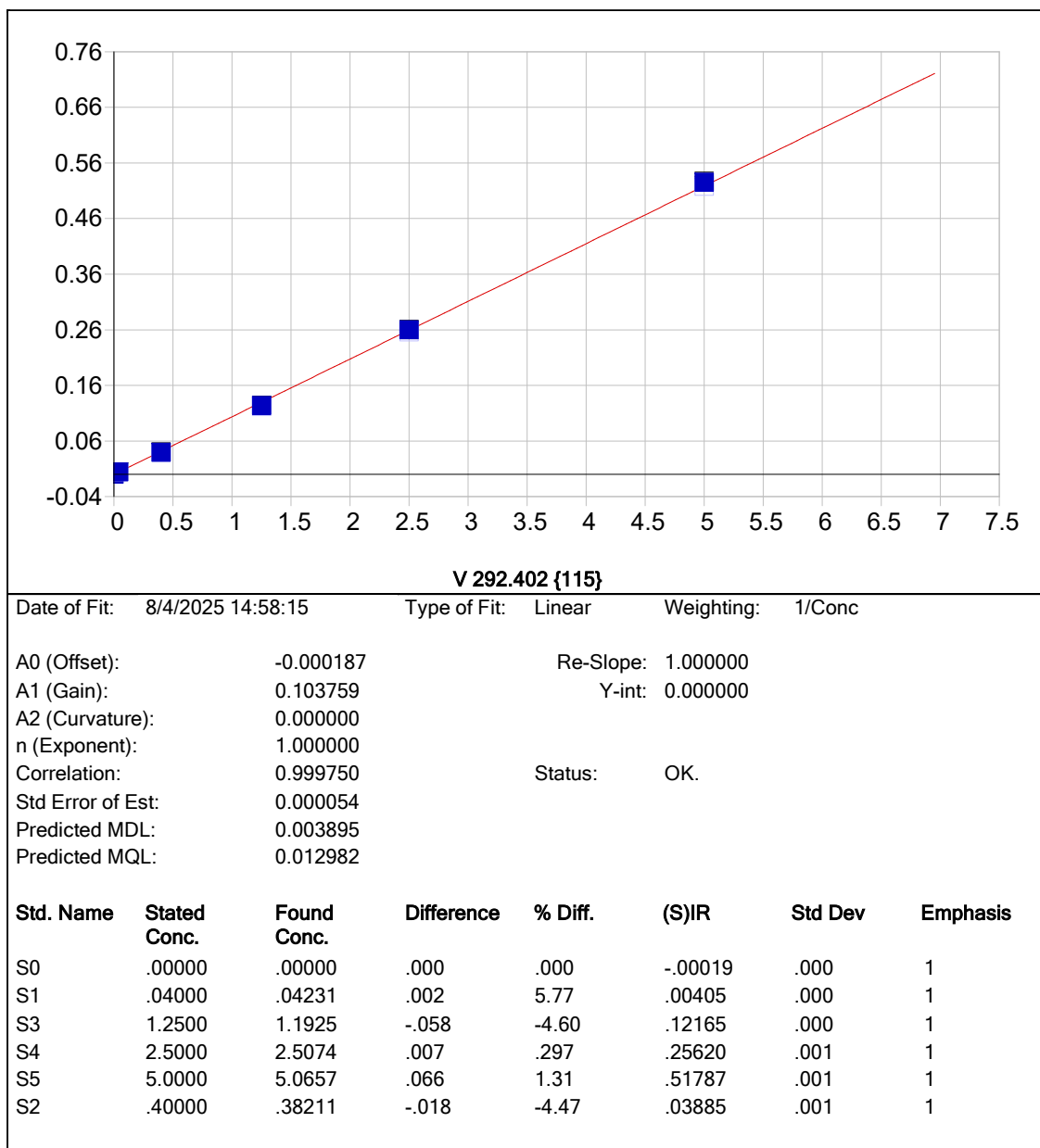


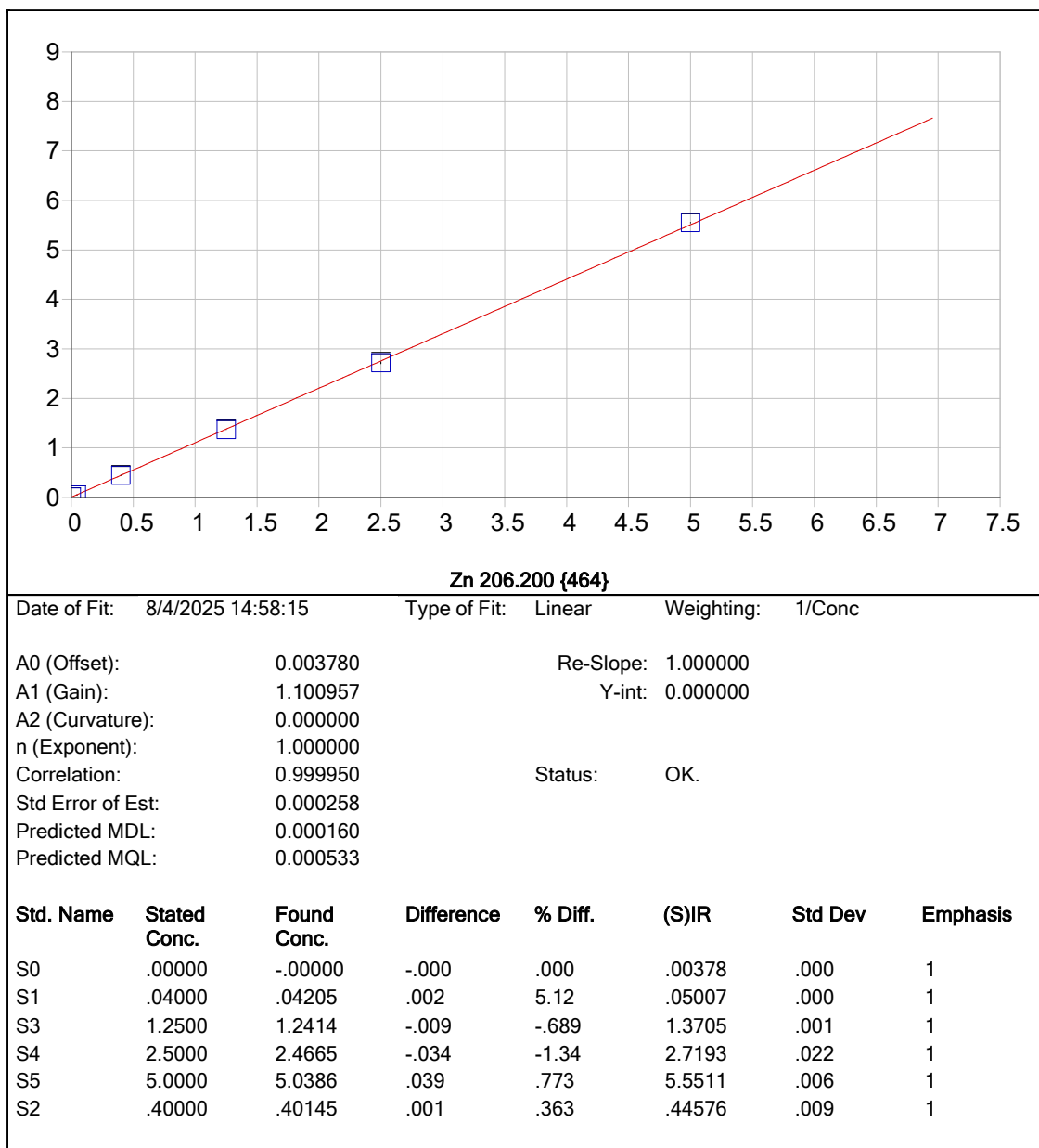
Na 589.592 { 57}

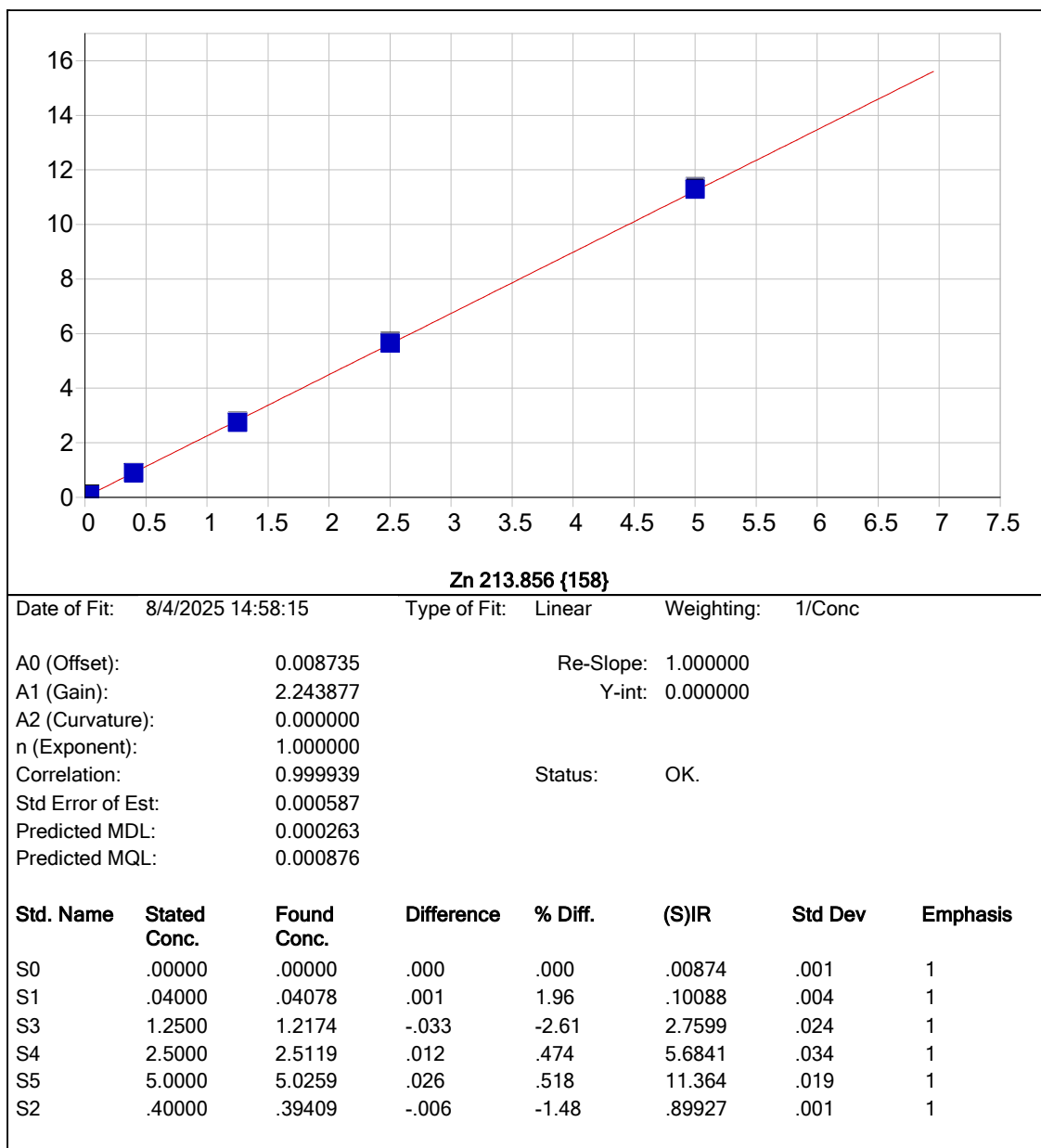
Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

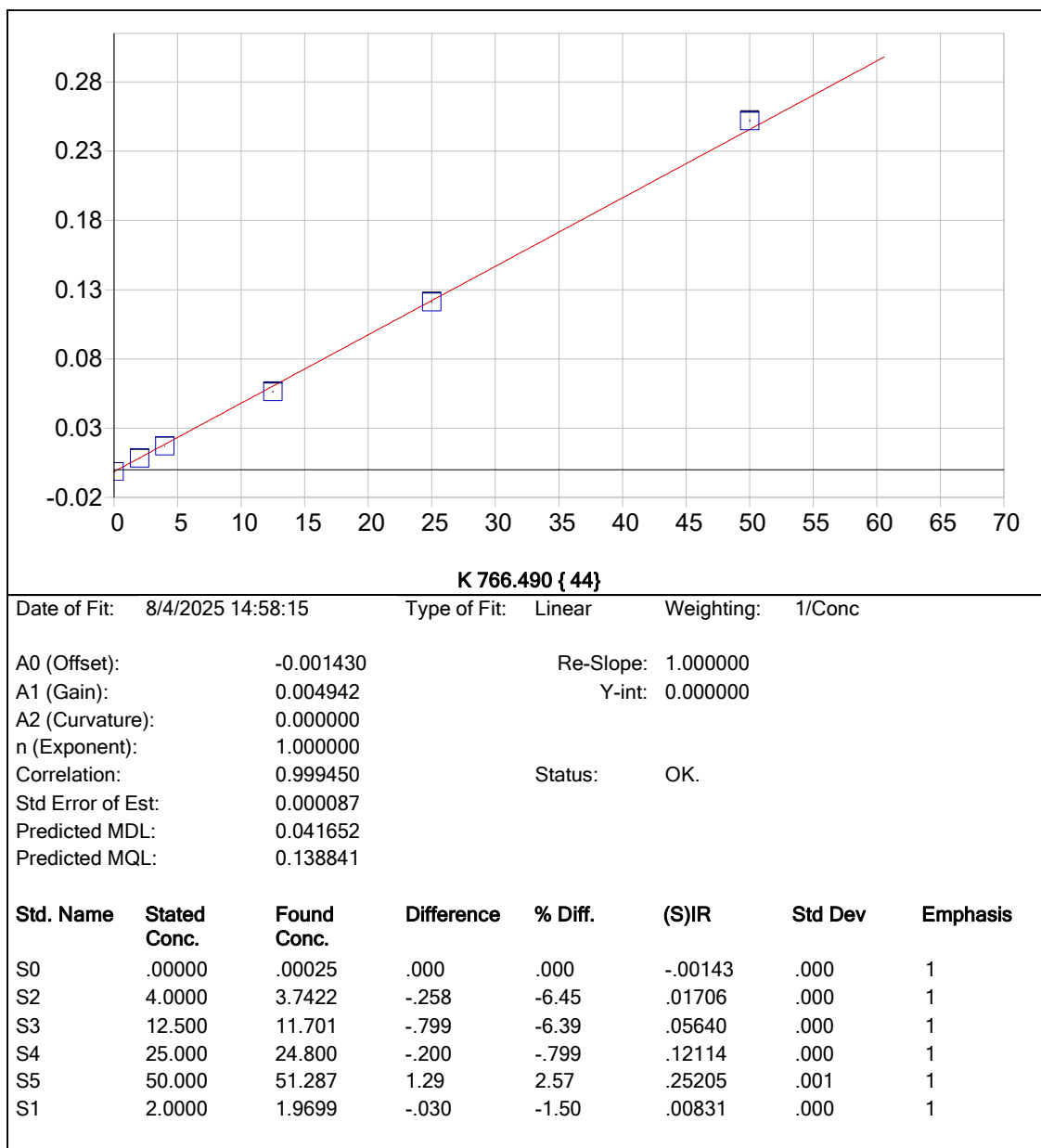
A0 (Offset): 0.002534 Re-Slope: 1.000000
A1 (Gain): 0.010426 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999439 Status: OK.
Std Error of Est: 0.000185
Predicted MDL: 0.015157
Predicted MQL: 0.050524

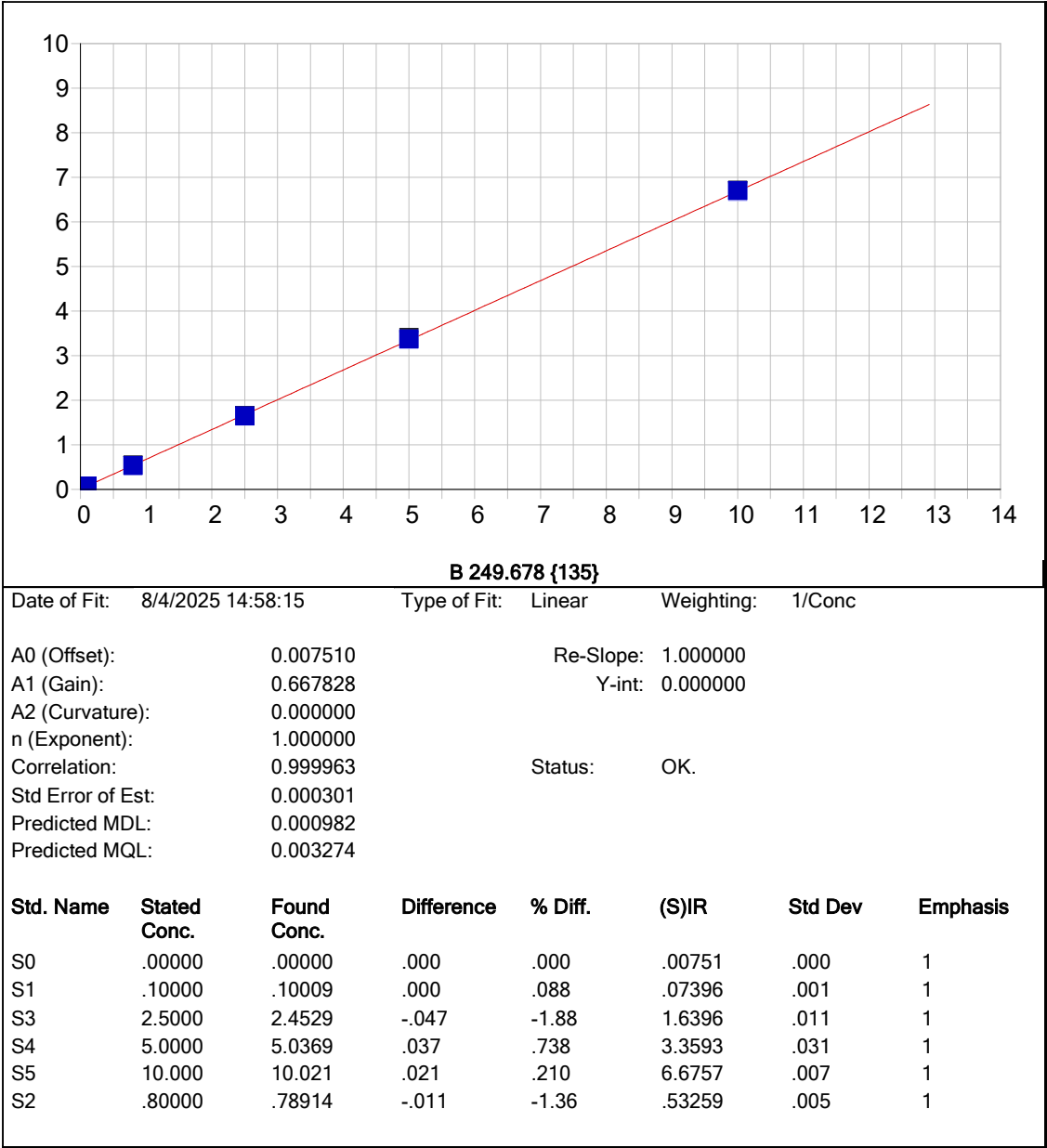
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00023	.000	.000	.00254	.000	1
S2	4.0000	3.7564	-.244	-6.09	.04170	.000	1
S3	12.500	11.679	-.821	-6.57	.12430	.001	1
S4	25.000	24.771	-.229	-.916	.26080	.001	1
S5	50.000	51.304	1.30	2.61	.53745	.003	1
S1	2.0000	1.9895	-.010	-.523	.02328	.001	1

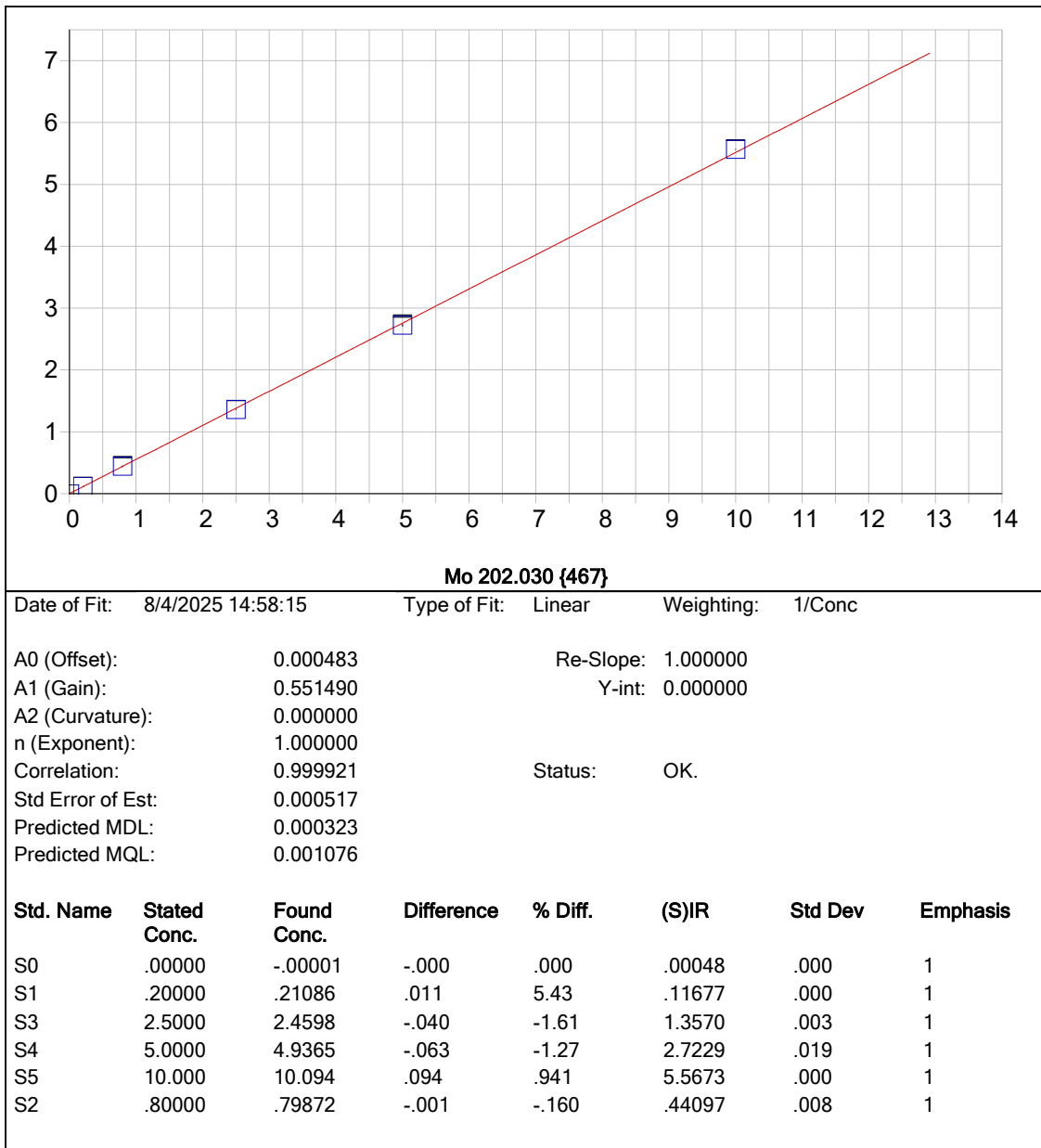


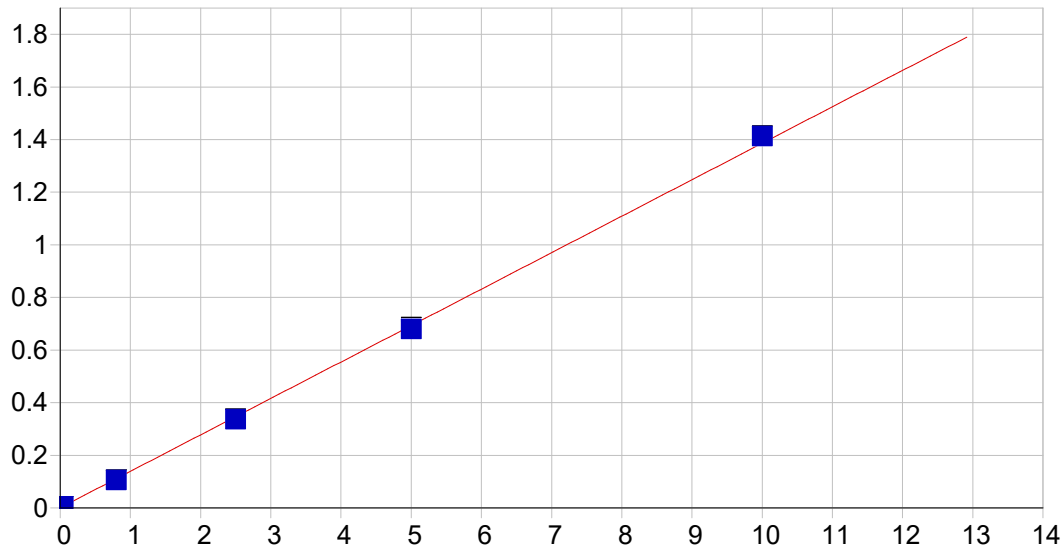










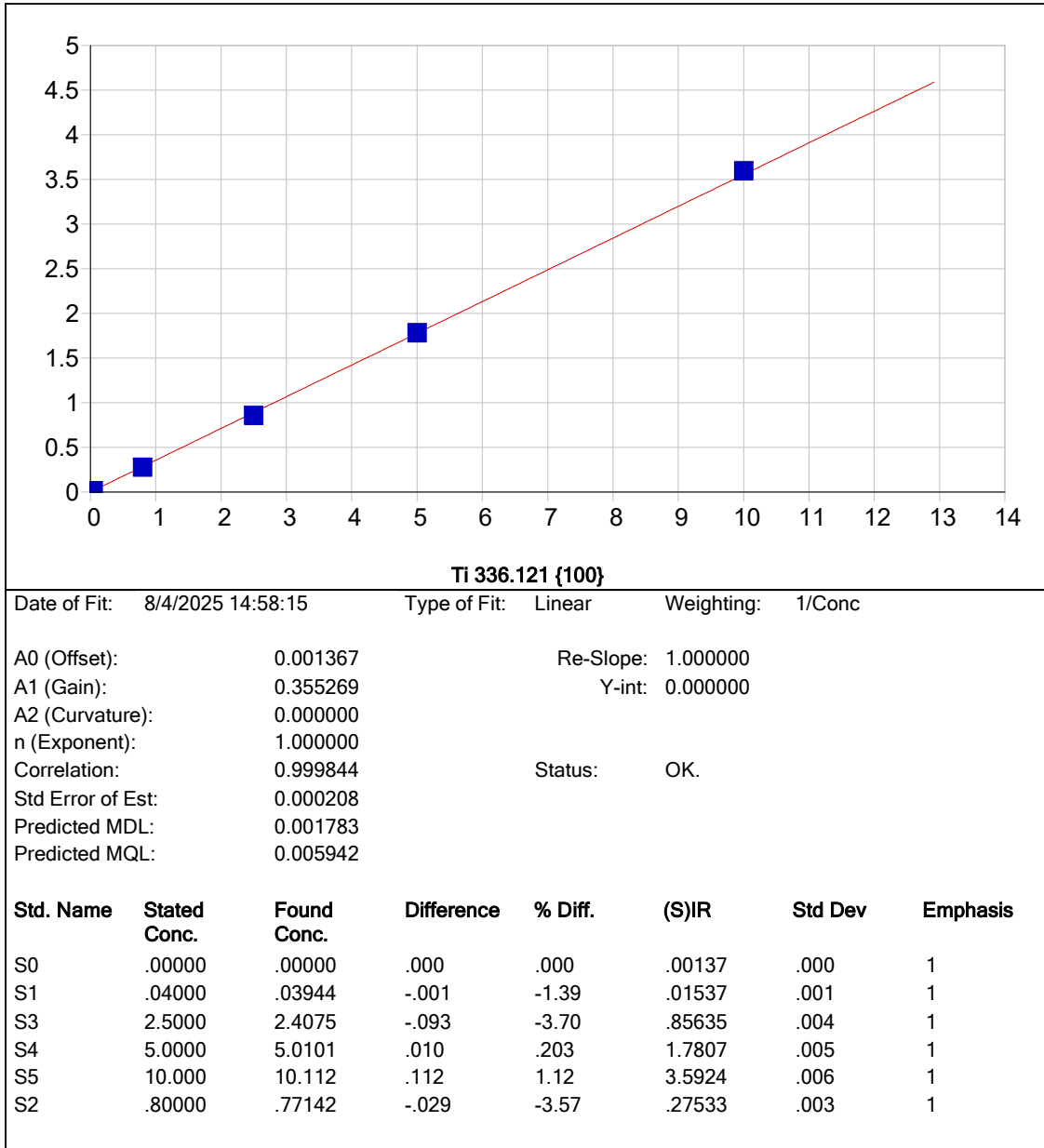


Sn 189.989 {478}

Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

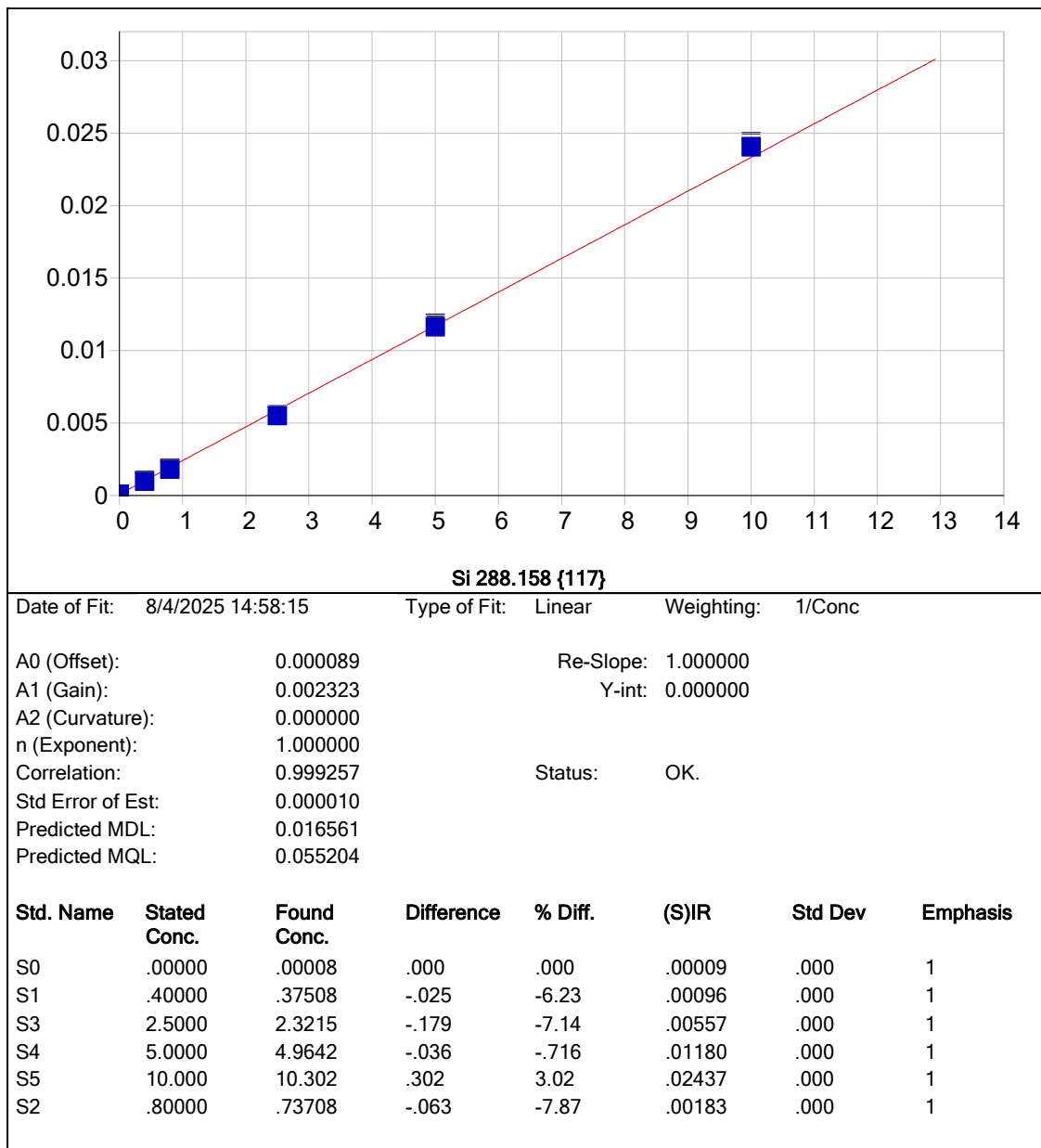
A0 (Offset): 0.000436 Re-Slope: 1.000000
A1 (Gain): 0.138550 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999754 Status: OK.
Std Error of Est: 0.000102
Predicted MDL: 0.000721
Predicted MQL: 0.002404

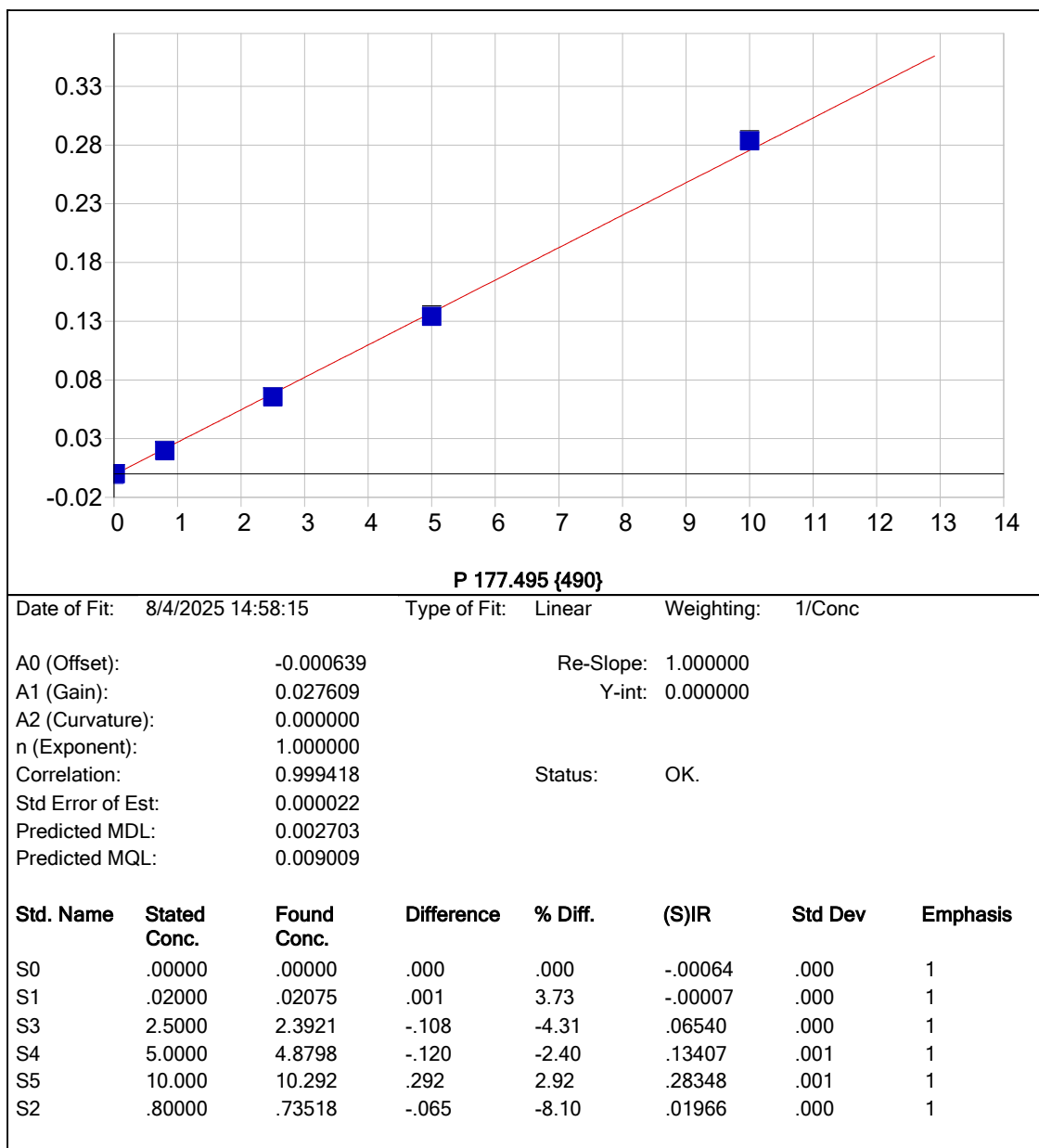
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00044	.000	1
S1	.04000	.03934	-.001	-1.66	.00588	.000	1
S3	2.5000	2.4324	-.068	-2.70	.33709	.001	1
S4	5.0000	4.9080	-.092	-1.84	.67973	.007	1
S5	10.000	10.196	.196	1.96	1.4117	.001	1
S2	.80000	.76386	-.036	-4.52	.10616	.002	1



Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

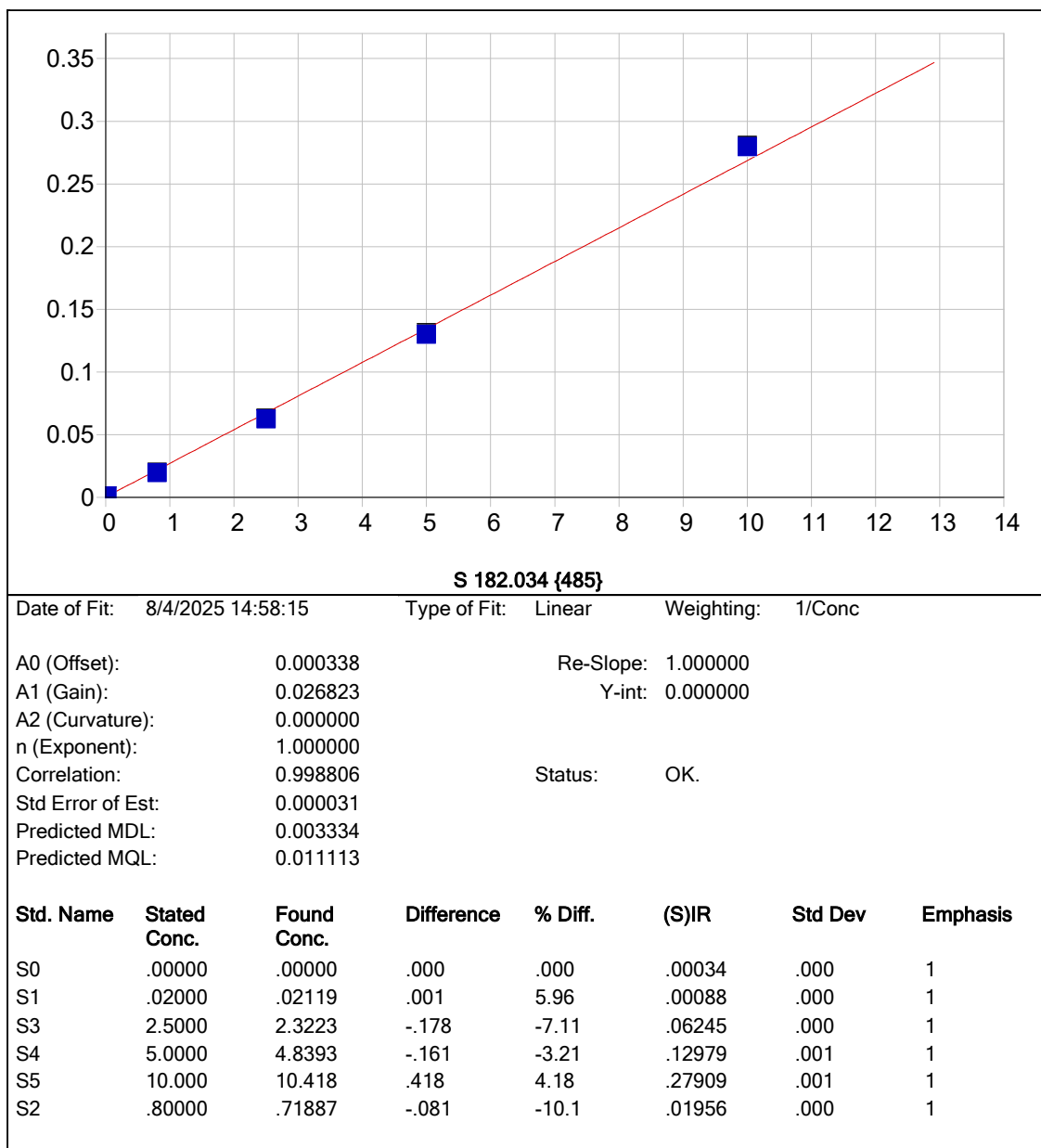
A0 (Offset): 0.001367 Re-Slope: 1.000000
A1 (Gain): 0.355269 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999844 Status: OK.
Std Error of Est: 0.000208
Predicted MDL: 0.001783
Predicted MQL: 0.005942

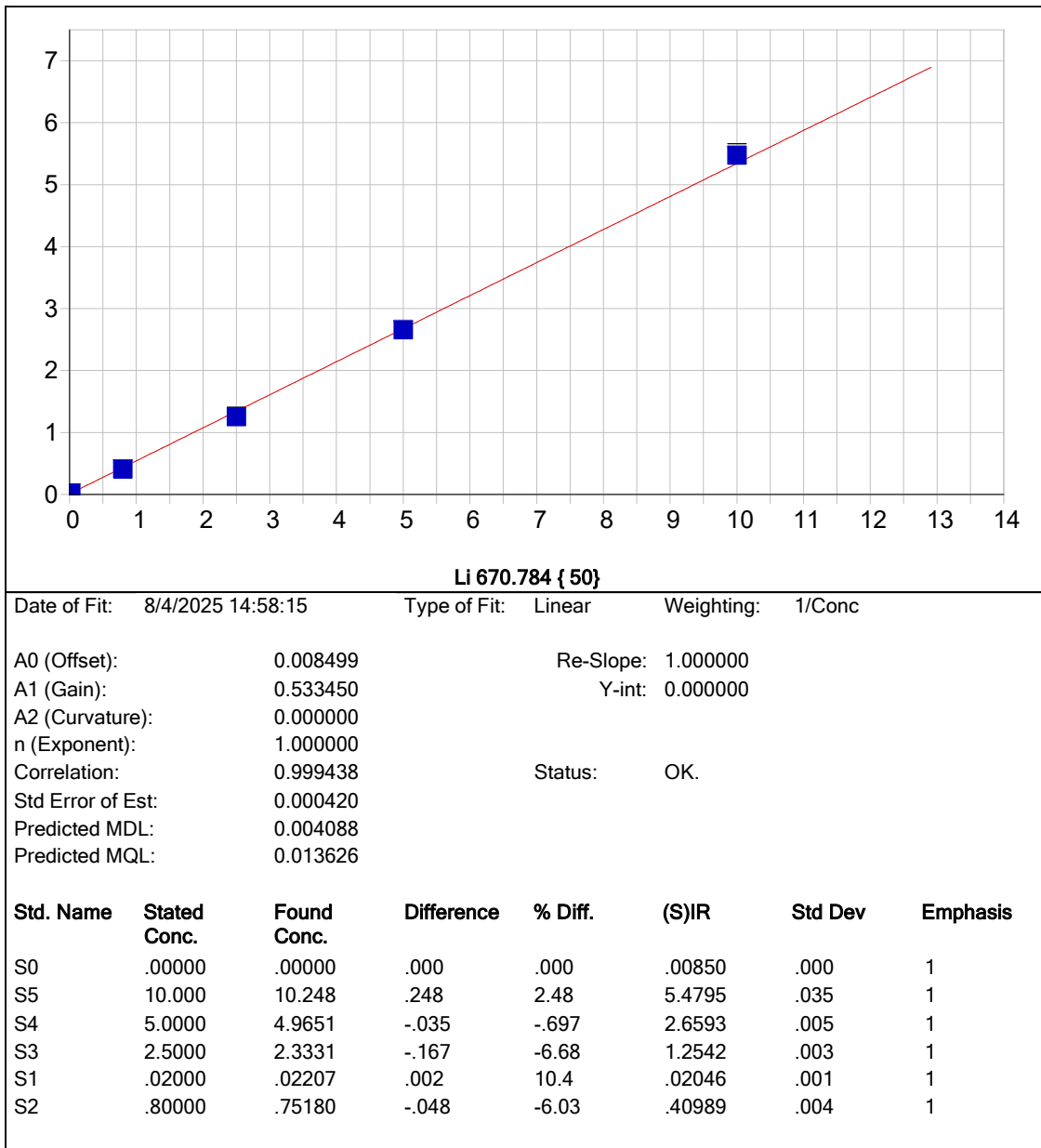


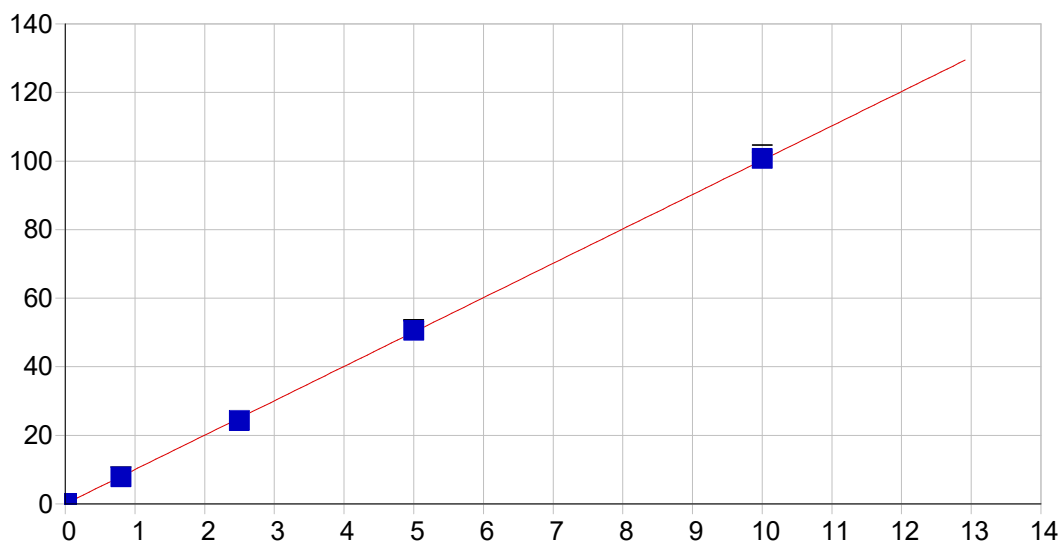


Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000639 Re-Slope: 1.000000
A1 (Gain): 0.027609 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999418 Status: OK.
Std Error of Est: 0.000022
Predicted MDL: 0.002703
Predicted MQL: 0.009009





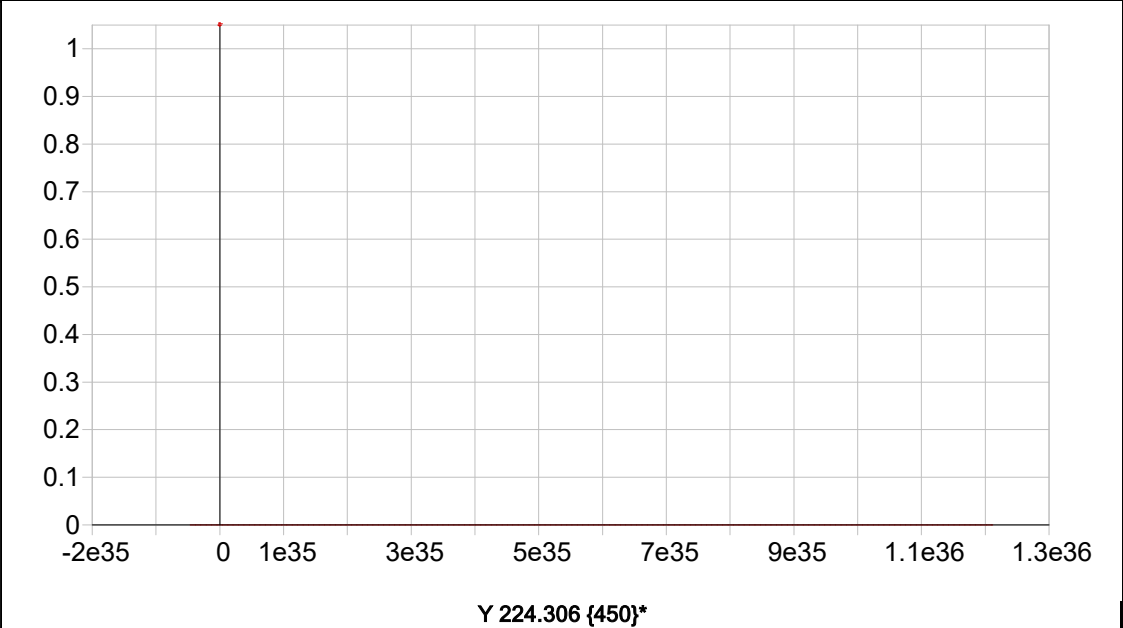


Sr 407.771 { 83}

Date of Fit: 8/4/2025 14:58:15 Type of Fit: Linear Weighting: 1/Conc

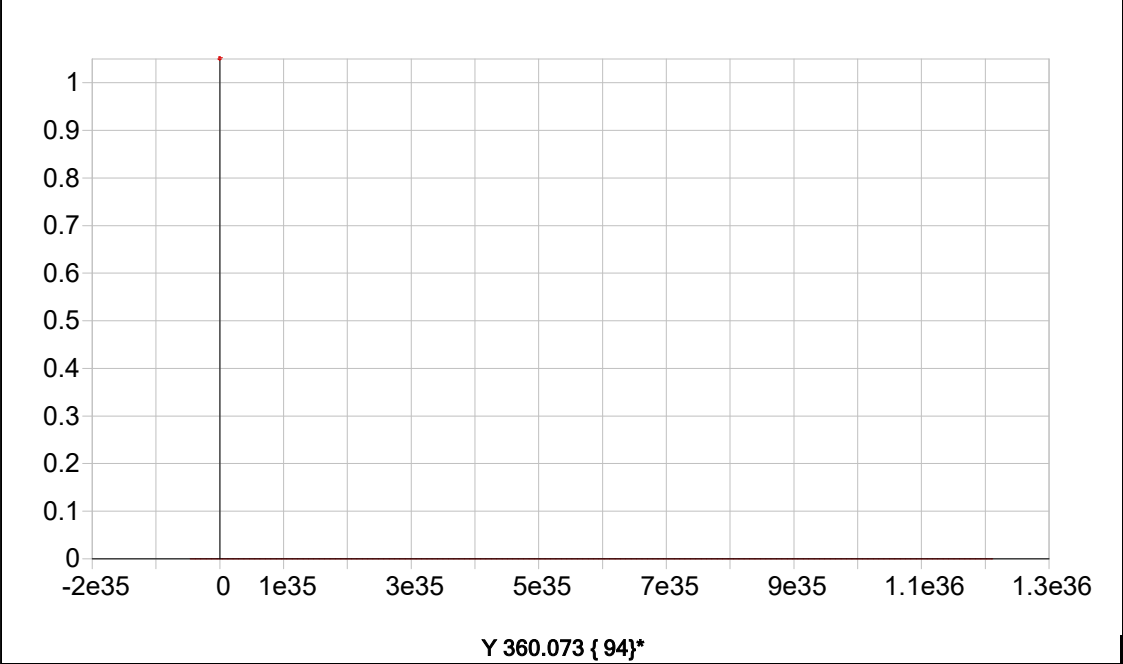
A0 (Offset): 0.002780 Re-Slope: 1.000000
A1 (Gain): 10.023203 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999910 Status: OK.
Std Error of Est: 0.003149
Predicted MDL: 0.000111
Predicted MQL: 0.000371

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00278	.000	1
S1	.02000	.02037	.000	1.85	.20791	.003	1
S3	2.5000	2.4231	-.077	-3.08	24.314	.056	1
S4	5.0000	5.0451	.045	.902	50.619	.272	1
S5	10.000	10.047	.047	.468	100.80	1.00	1
S2	.80000	.78463	-.015	-1.92	7.8750	.050	1

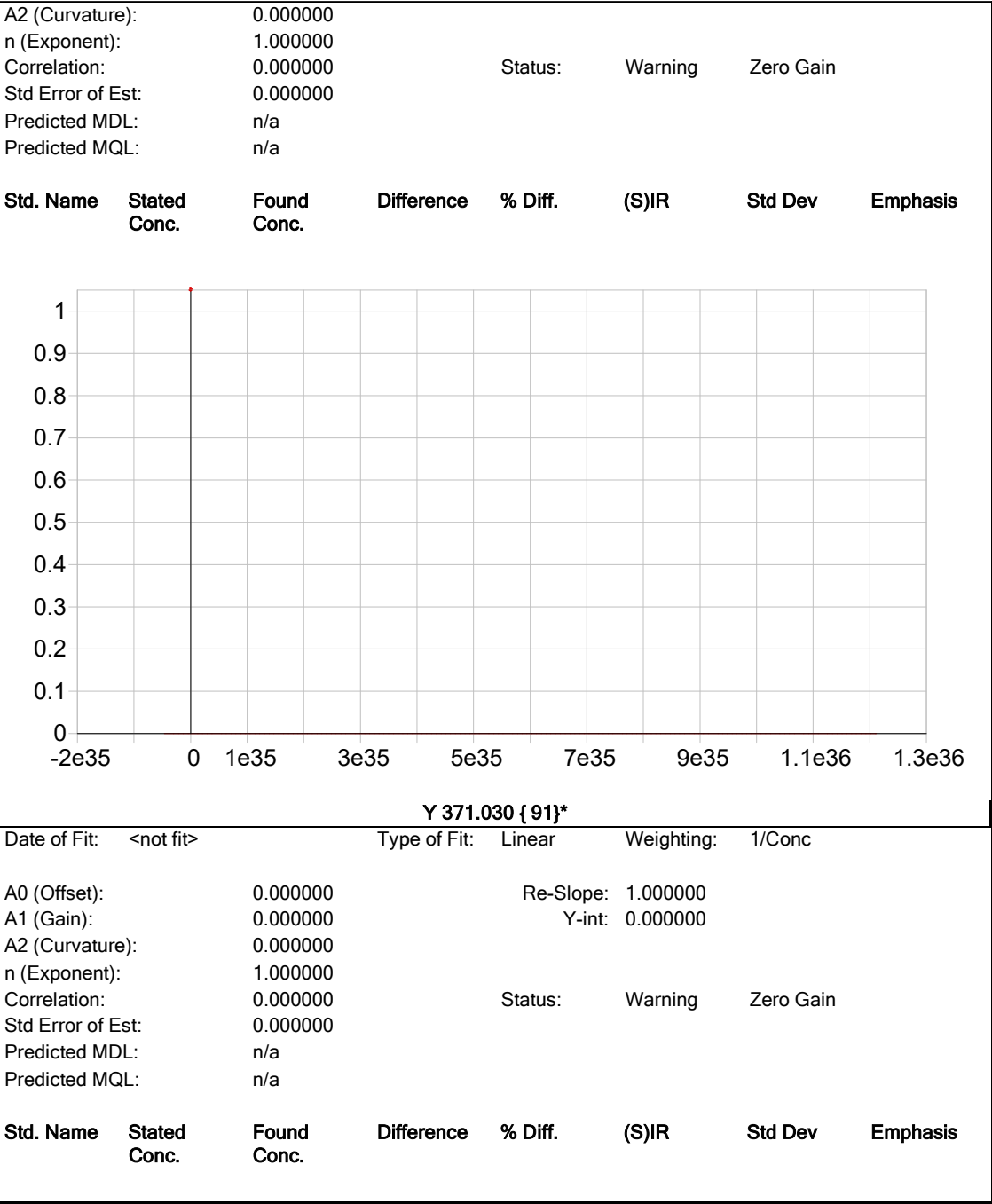


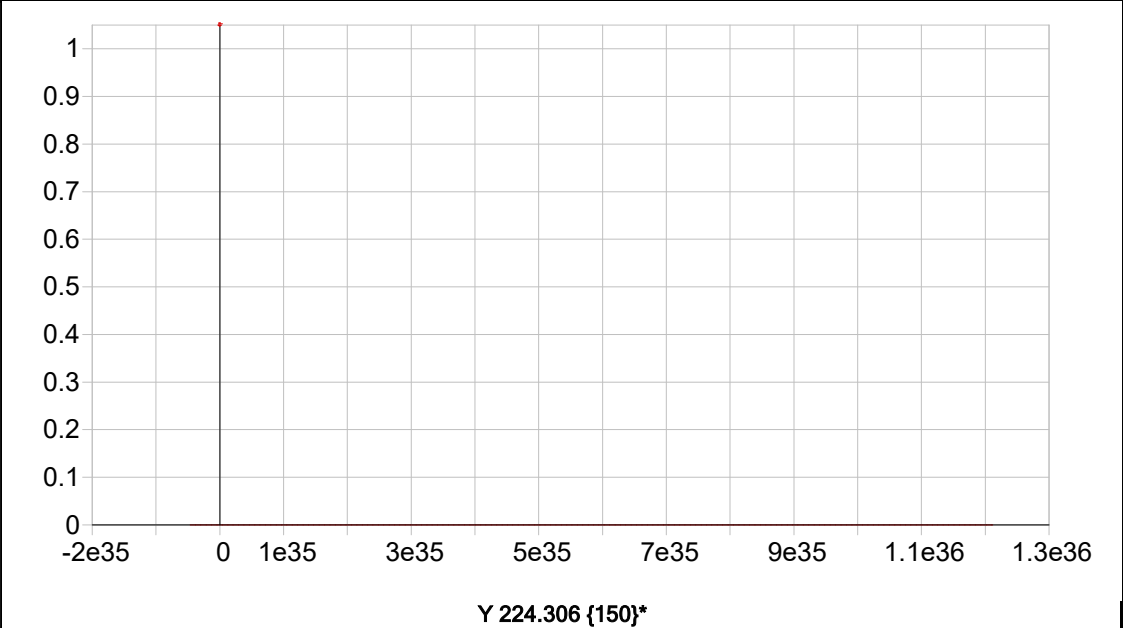
Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000	Re-Slope:	1.000000		
A1 (Gain):	0.000000	Y-int:	0.000000		
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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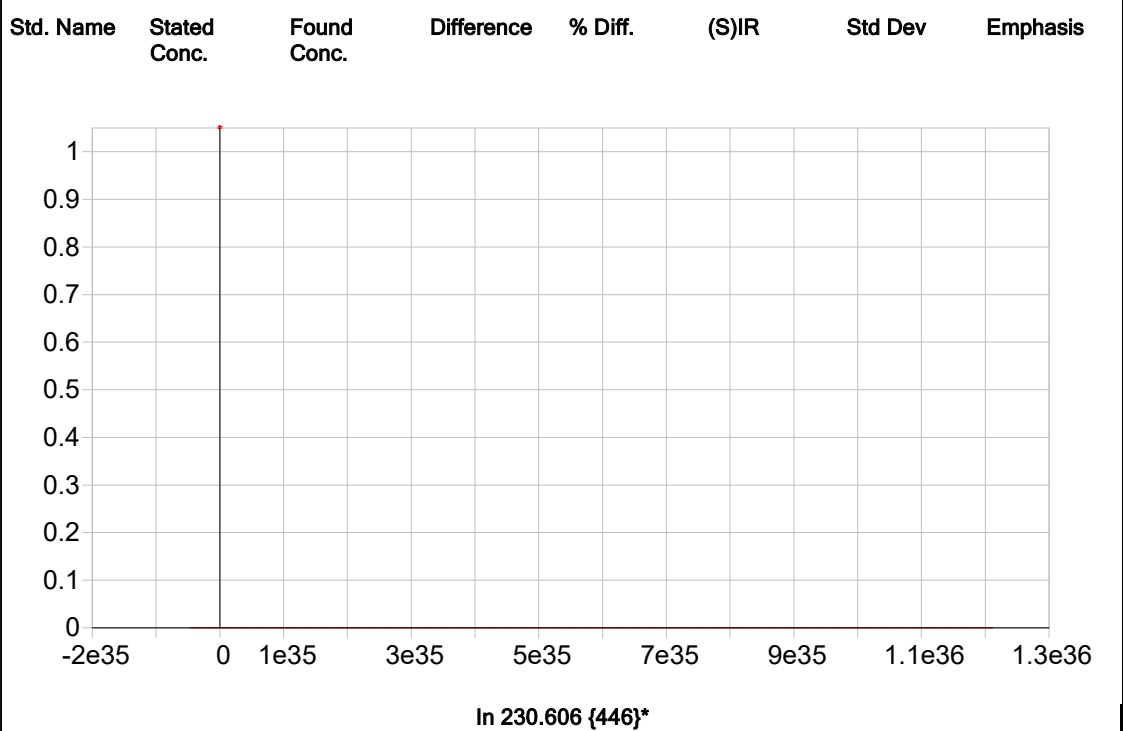


Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000	Re-Slope:	1.000000		
A1 (Gain):	0.000000	Y-int:	0.000000		





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				



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: 8/4/2025 11:15:54 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	.00002	.00068	.00022	.00027	.00063	.00053	.09266	-.00058
Stddev	.00011	.00005	.00015	.00009	.00010	.00065	.00155	.00043
%RSD	586.32	6.6741	66.618	31.827	16.276	123.72	1.6679	74.200

#1	.00004	.00073	.00038	.00025	.00052	.00009	.09441	-.00093
#2	-.00010	.00065	.00008	.00019	.00065	.00128	.09150	-.00069
#3	.00012	.00066	.00020	.00036	.00073	.00021	.09205	-.00010

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	-.00036	.00199	.00042	.00012	.00058	.00006	.00134	-.00007
Stddev	.00010	.00184	.00004	.00022	.00016	.00002	.00015	.00040
%RSD	27.194	92.803	10.559	174.49	27.025	25.139	11.024	550.11

#1	-.00047	-.00001	.00037	.00038	.00061	.00005	.00141	.00027
#2	-.00036	.00363	.00046	.00000	.00041	.00008	.00117	-.00051
#3	-.00027	.00233	.00042	-.00000	.00072	.00006	.00144	.00002

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	-.00043	-.00080	.00254	-.00019	.00874	-.00143	.00751	.00048
Stddev	.00002	.00002	.00013	.00025	.00053	.00004	.00025	.00010
%RSD	4.3818	2.4894	4.9740	133.47	6.0983	3.0357	3.3123	19.906

#1	-.00041	-.00083	.00266	-.00037	.00820	-.00138	.00735	.00037
#2	-.00045	-.00079	.00241	.00010	.00927	-.00145	.00780	.00055
#3	-.00042	-.00079	.00253	-.00029	.00874	-.00146	.00738	.00052

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	.00044	.00137	.00009	-.00064	.00034	.00850	.00278
Stddev	.00006	.00042	.00002	.00009	.00005	.00021	.00042
%RSD	12.803	30.487	22.622	13.529	13.926	2.4895	15.217

#1	.00038	.00151	.00007	-.00071	.00029	.00843	.00239
#2	.00049	.00169	.00010	-.00067	.00034	.00874	.00323
#3	.00045	.00090	.00010	-.00054	.00039	.00833	.00273

Sample Name: S0 Acquired: 8/4/2025 11:15:54 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5554.9	94078.	7815.4	4760.9	7044.2
Stddev	10.2	2956.	1.6	140.5	9.1
%RSD	.18365	3.1425	.02032	2.9504	.12979
#1	5550.1	96870.	7817.1	4892.2	7036.8
#2	5566.6	90981.	7814.1	4612.8	7054.4
#3	5548.0	94382.	7814.9	4777.7	7041.3

Sample Name: S1 Acquired: 8/4/2025 11:20:17 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	.00109	.00212	.00233	.00104	.00505	.00925	.42099	.04844
Stddev	.00017	.00010	.00003	.00002	.00007	.00116	.00446	.00151
%RSD	15.857	4.8558	1.4303	1.9170	1.4048	12.585	1.0587	3.1268

#1	.00090	.00217	.00234	.00103	.00513	.00837	.41602	.04698
#2	.00123	.00200	.00229	.00107	.00500	.00880	.42233	.04835
#3	.00114	.00219	.00236	.00103	.00503	.01057	.42463	.05000

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	.01632	.14332	.00189	.03108	.01507	.00041	.01248	.02494
Stddev	.00039	.00077	.00006	.00021	.00019	.00001	.00028	.00051
%RSD	2.3943	.53674	3.2371	.66045	1.2552	2.2572	2.2642	2.0426

#1	.01677	.14314	.00188	.03129	.01485	.00040	.01227	.02463
#2	.01608	.14265	.00183	.03108	.01515	.00042	.01237	.02466
#3	.01611	.14416	.00195	.03088	.01520	.00042	.01280	.02553

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	.02369	.00123	.02328	.00405	.10088	.00831	.07396	.11677
Stddev	.00037	.00023	.00055	.00016	.00363	.00031	.00135	.00021
%RSD	1.5606	18.792	2.3519	3.9906	3.5962	3.6866	1.8227	.17904

#1	.02378	.00125	.02311	.00415	.09980	.00823	.07307	.11701
#2	.02400	.00098	.02283	.00386	.09791	.00805	.07329	.11668
#3	.02328	.00144	.02389	.00413	.10492	.00864	.07551	.11663

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	.00588	.01537	.00096	-.00007	.00088	.02046	.20791
Stddev	.00003	.00064	.00006	.00003	.00003	.00096	.00264
%RSD	.45088	4.1696	5.9547	42.941	3.0380	4.7012	1.2675

#1	.00586	.01518	.00095	-.00006	.00089	.01984	.20518
#2	.00591	.01608	.00091	-.00009	.00091	.02157	.20810
#3	.00586	.01484	.00103	-.00004	.00086	.01997	.21044

Sample Name: S1 Acquired: 8/4/2025 11:20:17 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5506.9	94154.	7855.6	4799.4	6855.9
Stddev	34.3	2698.	110.4	153.5	38.7
%RSD	.62341	2.8658	1.4053	3.1981	.56435
#1	5479.4	94605.	7941.3	4844.1	6829.3
#2	5495.9	96599.	7894.6	4925.5	6838.2
#3	5545.4	91259.	7731.0	4628.5	6900.3

Sample Name: S2 Acquired: 8/4/2025 11:24:37 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03700	.02864	.14857	.02927	.06717	.11958	5.1292	.31472	1.0656
Stddev	.00063	.00057	.00280	.00064	.00118	.00045	.0326	.00353	.0219
%RSD	1.7047	1.9818	1.8869	2.1942	1.7598	.38006	.63615	1.1214	2.0520

#1	.03627	.02830	.14536	.02854	.06580	.11906	5.1329	.31081	1.0406
#2	.03733	.02929	.14983	.02972	.06778	.11976	5.0949	.31567	1.0749
#3	.03739	.02832	.15053	.02956	.06792	.11991	5.1598	.31767	1.0813

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.27207	.02558	.38505	.13210	.00273	.21434	.04473	.22405	.03733
Stddev	.00245	.00028	.00764	.00238	.00002	.00094	.00014	.00452	.00009
%RSD	.90037	1.1070	1.9848	1.7982	.55472	.43865	.31145	2.0159	.22999

#1	.27114	.02591	.37630	.12939	.00274	.21424	.04464	.21892	.03740
#2	.27022	.02546	.38846	.13304	.00273	.21345	.04466	.22578	.03734
#3	.27485	.02539	.39040	.13385	.00271	.21532	.04489	.22744	.03723

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04170	.03885	.89927	.01706	.53259	.44097	.10616	.27533	.00183
Stddev	.00047	.00076	.00097	.00014	.00528	.00814	.00193	.00267	.00004
%RSD	1.1339	1.9685	.10821	.81197	.99203	1.8470	1.8181	.97071	2.1104

#1	.04220	.03928	.89843	.01722	.52724	.43157	.10394	.27449	.00186
#2	.04126	.03797	.90034	.01703	.53274	.44538	.10702	.27318	.00179
#3	.04164	.03931	.89904	.01695	.53780	.44595	.10750	.27832	.00184

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01966	.01956	.40989	7.8750
Stddev	.00039	.00028	.00395	.0499
%RSD	1.9926	1.4276	.96409	.63402

#1	.01921	.01930	.41258	7.8787
#2	.01992	.01986	.40535	7.8232
#3	.01984	.01953	.41173	7.9229

Sample Name: S2 Acquired: 8/4/2025 11:24:37 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5469.2	92158.	7662.4	4715.1	6716.4
Stddev	94.5	365.	61.9	15.1	127.8
%RSD	1.7285	.39620	.80719	.32021	1.9024
#1	5571.6	91740.	7719.3	4731.9	6852.9
#2	5450.5	92319.	7671.5	4710.9	6696.7
#3	5385.3	92416.	7596.6	4702.6	6599.6

Sample Name: S3 Acquired: 8/4/2025 11:28:41 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.11597	.08575	.46763	.09128	.20884	.36959	15.790	.97841	3.4017
Stddev	.00048	.00182	.00114	.00031	.00089	.00100	.038	.00605	.0081
%RSD	.41461	2.1269	.24332	.33846	.42441	.27141	.24071	.61788	.23720

#1	.11596	.08612	.46665	.09147	.20950	.37024	15.747	.97143	3.3941
#2	.11549	.08377	.46736	.09092	.20783	.37009	15.801	.98215	3.4007
#3	.11645	.08736	.46888	.09145	.20919	.36843	15.821	.98164	3.4102

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.83456	.07863	1.2118	.40602	.00843	.66142	.13761	.70587	.11691
Stddev	.00757	.00092	.0018	.00105	.00005	.00212	.00058	.00181	.00091
%RSD	.90699	1.1676	.14471	.25741	.55376	.32012	.42025	.25624	.77807

#1	.82674	.07880	1.2100	.40563	.00839	.65904	.13798	.70407	.11645
#2	.83508	.07764	1.2118	.40523	.00841	.66215	.13792	.70585	.11633
#3	.84185	.07945	1.2135	.40721	.00848	.66308	.13695	.70768	.11796

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.12430	.12165	2.7599	.05640	1.6396	1.3570	.33709	.85635	.00557
Stddev	.00068	.00028	.0243	.00048	.0107	.0031	.00073	.00450	.00001
%RSD	.54475	.22902	.88100	.85123	.65115	.22777	.21682	.52528	.17655

#1	.12458	.12194	2.7502	.05621	1.6284	1.3576	.33700	.85186	.00557
#2	.12353	.12164	2.7419	.05604	1.6407	1.3537	.33641	.85633	.00556
#3	.12479	.12138	2.7876	.05695	1.6497	1.3598	.33786	.86086	.00558

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.06540	.06245	1.2542	24.314
Stddev	.00026	.00034	.0034	.056
%RSD	.40330	.54971	.27431	.23107

#1	.06537	.06270	1.2572	24.367
#2	.06514	.06206	1.2549	24.320
#3	.06567	.06260	1.2504	24.255

Sample Name: S3 Acquired: 8/4/2025 11:28:41 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5363.0	90097.	7577.3	4631.0	6409.1
Stddev	6.2	681.	8.6	31.1	5.4
%RSD	.11509	.75631	.11370	.67202	.08368
#1	5357.4	89975.	7585.1	4641.1	6413.0
#2	5361.9	90831.	7578.8	4655.9	6403.0
#3	5369.6	89485.	7568.0	4596.1	6411.2

Sample Name: S4 Acquired: 8/4/2025 11:32:45 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.23387	.17871	.93691	.18408	.41979	.76303	33.001	1.9952	6.9153
Stddev	.00180	.00156	.00864	.00167	.00314	.00204	.109	.0184	.0650
%RSD	.77129	.87031	.92175	.90926	.74706	.26797	.33063	.92254	.94032

#1	.23595	.18047	.94639	.18601	.42326	.76460	33.092	1.9837	6.9878
#2	.23267	.17813	.92948	.18307	.41715	.76378	33.032	1.9854	6.8620
#3	.23300	.17752	.93487	.18315	.41896	.76072	32.880	2.0164	6.8962

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7241	.16158	2.4509	.80099	.01769	1.3679	.28387	1.4236	.24207
Stddev	.0064	.00060	.0221	.00574	.00005	.0004	.00110	.0124	.00103
%RSD	.37255	.36879	.89953	.71697	.28366	.02876	.38732	.87302	.42509

#1	1.7221	.16123	2.4758	.80758	.01763	1.3681	.28467	1.4377	.24121
#2	1.7189	.16124	2.4339	.79704	.01773	1.3674	.28432	1.4142	.24179
#3	1.7312	.16227	2.4430	.79837	.01770	1.3681	.28262	1.4189	.24321

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.26080	.25620	5.6841	.12114	3.3593	2.7229	.67973	1.7807	.01180
Stddev	.00143	.00053	.0337	.00033	.0310	.0194	.00684	.0047	.00009
%RSD	.54988	.20834	.59326	.27048	.92379	.71425	1.0062	.26198	.74000

#1	.26094	.25681	5.6558	.12103	3.3399	2.7451	.68738	1.7764	.01178
#2	.26217	.25592	5.6750	.12151	3.3428	2.7087	.67422	1.7799	.01189
#3	.25931	.25586	5.7214	.12089	3.3951	2.7150	.67757	1.7857	.01172

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.13407	.12979	2.6593	50.619
Stddev	.00106	.00116	.0052	.272
%RSD	.79090	.89617	.19434	.53761

#1	.13529	.13113	2.6577	50.876
#2	.13344	.12906	2.6651	50.334
#3	.13348	.12918	2.6551	50.647

Sample Name: S4 Acquired: 8/4/2025 11:32:45 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5474.9	89848.	7646.1	4601.7	6412.0
Stddev	32.1	291.	46.8	14.5	50.5
%RSD	.58716	.32397	.61167	.31407	.78711
#1	5437.9	89579.	7636.0	4603.1	6355.3
#2	5495.8	90157.	7697.1	4615.5	6452.0
#3	5491.0	89808.	7605.3	4586.7	6428.8

Sample Name: S5 Acquired: 8/4/2025 11:36:56 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.48801	.35314	1.9667	.38220	.86987	1.5358	65.975	3.9810	14.414
Stddev	.00049	.00951	.0022	.00061	.00024	.0082	.570	.0063	.012
%RSD	.09959	2.6936	.11103	.16048	.02762	.53449	.86420	.15925	.08471

#1	.48833	.34309	1.9690	.38155	.87001	1.5445	65.414	3.9737	14.420
#2	.48745	.35432	1.9647	.38229	.86959	1.5282	65.958	3.9841	14.400
#3	.48825	.36200	1.9664	.38277	.87000	1.5347	66.554	3.9851	14.422

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.4572	.32018	5.1292	1.6352	.03561	2.7377	.57300	2.9687	.48719
Stddev	.0107	.00107	.0065	.0016	.00012	.0027	.00152	.0021	.00091
%RSD	.30808	.33467	.12675	.09931	.33803	.09893	.26581	.07093	.18608

#1	3.4529	.32082	5.1327	1.6367	.03566	2.7408	.57475	2.9709	.48818
#2	3.4693	.32078	5.1217	1.6335	.03570	2.7363	.57197	2.9667	.48640
#3	3.4493	.31894	5.1332	1.6355	.03547	2.7360	.57227	2.9685	.48698

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.53745	.51787	11.364	.25205	6.6757	5.5673	1.4117	3.5924	.02437
Stddev	.00288	.00139	.019	.00062	.0066	.0003	.0012	.0057	.00005
%RSD	.53515	.26899	.16335	.24411	.09887	.00504	.08737	.15940	.21992

#1	.54060	.51836	11.385	.25276	6.6831	5.5676	1.4119	3.5923	.02443
#2	.53497	.51629	11.351	.25170	6.6703	5.5673	1.4104	3.5982	.02432
#3	.53677	.51894	11.357	.25169	6.6738	5.5670	1.4129	3.5867	.02437

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.28348	.27909	5.4795	100.80
Stddev	.00064	.00097	.0348	1.00
%RSD	.22428	.34630	.63475	.99341

#1	.28398	.27811	5.5119	99.750
#2	.28276	.27913	5.4427	100.91
#3	.28369	.28004	5.4838	101.74

Sample Name: S5 Acquired: 8/4/2025 11:36:56 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	5294.8	89133.	7622.3	4530.1	6056.4
Stddev	9.8	85.	4.5	11.0	9.8
%RSD	.18581	.09551	.05905	.24390	.16253
#1	5283.5	89036.	7626.7	4530.9	6046.9
#2	5301.6	89196.	7622.4	4540.8	6066.6
#3	5299.4	89167.	7617.7	4518.7	6055.7

Sample Name: ICV01 Acquired: 8/4/2025 11:41:07 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.970826	3.972482	4.075526	4.002757	4.138520	7.865382
Stddev	.010276	.033433	.008147	.005625	.008330	.017771
%RSD	.2587869	.8416129	.1999045	.1405263	.2012724	.2259428

#1	3.976634	4.011034	4.066245	3.996747	4.135534	7.879640
#2	3.958961	3.951461	4.078834	4.007896	4.132096	7.871034
#3	3.976883	3.954950	4.081498	4.003627	4.147932	7.845472

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.810448	.2018685	1.977440	19.66004	.8120606	2.014839
Stddev	.105028	.0013510	.004753	.22994	.0165251	.004210
%RSD	1.344716	.6692455	.2403500	1.169594	2.034955	.2089527

#1	7.691678	.2003867	1.972245	19.39487	.8006967	2.011623
#2	7.891073	.2030318	1.978506	19.80441	.8310175	2.013291
#3	7.848595	.2021871	1.981570	19.78083	.8044677	2.019605

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.030504	3.983941	1.975045	19.70113	2.009473	.9823004
Stddev	.002369	.063284	.004191	.00964	.004961	.0169513
%RSD	.2298636	1.588477	.2121916	.0489146	.2468889	1.725670

#1	1.028782	3.963842	1.970752	19.70024	2.005527	.9684612
#2	1.029526	4.054833	1.979125	19.71118	2.007850	1.001208
#3	1.033206	3.933147	1.975259	19.69197	2.015043	.977232

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.51425	2.004055	2.006169	19.63089	F .0126930	F .0015014
Stddev	.23255	.002291	.036770	.33004	.0004605	.0007056
%RSD	1.191668	.1143403	1.832861	1.681218	3.627858	46.99724

#1	19.37367	2.006369	1.972589	19.31068	.0131619	.0023033
#2	19.78267	2.001786	2.045461	19.96994	.0126758	.0012254
#3	19.38642	2.004011	2.000457	19.61205	.0122414	.0009755

Sample Name: ICV01 Acquired: 8/4/2025 11:41:07 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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 -.000778	F -.003790	F -.039857	F .0075561	F .0194793	F -.002126
Stddev	.000862	.001678	.002427	.0027049	.0016459	.003895
%RSD	110.8294	44.26866	6.089980	35.79813	8.449688	183.1908

#1	.000205	-.003315	-.039510	.0093531	.0212499	-.003567
#2	-.001408	-.002400	-.042439	.0088700	.0191923	.002284
#3	-.001131	-.005653	-.037622	.0044452	.0179958	-.005096

Elem	Sr4077
Units	ppm
Avg	F -.003295
Stddev	.000047
%RSD	1.414195

#1	-.003299
#2	-.003339
#3	-.003246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5464.930	91550.36	7903.256	4690.455	6496.263
Stddev	8.325	1317.39	24.544	59.169	7.396
%RSD	.1523266	1.438974	.3105547	1.261476	.1138559

#1	5465.339	92531.58	7922.220	4747.262	6503.233
#2	5473.043	90053.06	7875.534	4629.177	6497.051
#3	5456.409	92066.42	7912.014	4694.926	6488.504

Sample Name: LLICV01 Acquired: 8/4/2025 11:45:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215443	.0449848	.0123908	.0201424	.0525370	.1139109
Stddev	.0010647	.0003750	.0005710	.0050069	.0012762	.0096646
%RSD	4.941712	.8336628	4.608431	24.85752	2.429079	8.484354

#1	.0218187	.0446213	.0129070	.0196526	.0510684	.1027756
#2	.0203693	.0453703	.0124880	.0253761	.0533757	.1188404
#3	.0224449	.0449628	.0117774	.0153983	.0531670	.1201168

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1061102	.0066805	.0062637	2.153539	.0089209	.0313337
Stddev	.0006088	.0000825	.0000374	.007678	.0001885	.0001097
%RSD	.5737107	1.235013	.5970980	.3565373	2.113002	.3500663

#1	.1062864	.0065897	.0062759	2.147237	.0089147	.0312807
#2	.1054328	.0067509	.0062217	2.162091	.0087356	.0312606
#3	.1066115	.0067009	.0062935	2.151291	.0091125	.0314598

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0227216	.1019264	.0212719	2.305166	.0419151	.0106542
Stddev	.0001537	.0029504	.0004318	.014357	.0000954	.0001644
%RSD	.6765221	2.894598	2.029958	.6228122	.2276590	1.542671

#1	.0227267	.0986772	.0216937	2.314633	.0419210	.0107897
#2	.0228727	.1026641	.0208308	2.288647	.0420074	.0107016
#3	.0225654	.1044379	.0212912	2.312219	.0418169	.0104714

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.994837	.0413055	.0424445	1.961085	.1165120	.2105705
Stddev	.037751	.0016782	.0000529	.045861	.0022036	.0007520
%RSD	1.892423	4.062905	.1245760	2.338576	1.891322	.3571301

#1	2.037751	.0422522	.0425029	1.995719	.1139679	.2101909
#2	1.980006	.0393678	.0424307	1.909075	.1177419	.2100840
#3	1.966753	.0422964	.0423999	1.978463	.1178261	.2114367

Sample Name: LLICV01 Acquired: 8/4/2025 11:45:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0402276	.0417660	.3642282	F .0244153	.0200131	.0168092
Stddev	.0001070	.0014874	.0137037	.0010485	.0012053	.0006968
%RSD	.2658645	3.561237	3.762399	4.294445	6.022509	4.145121

#1	.0401808	.0404559	.3751618	.0232413	.0196694	.0166688
#2	.0401520	.0433828	.3488551	.0247462	.0213529	.0175655
#3	.0403500	.0414592	.3686677	.0252585	.0190169	.0161934

Elem	Sr4077
Units	ppm
Avg	.0217058
Stddev	.0000447
%RSD	.2060711

#1	.0217105
#2	.0217480
#3	.0216589

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5574.351	94111.95	7788.779	4786.518	6965.481
Stddev	16.409	178.39	65.770	15.762	32.394
%RSD	.2943588	.1895476	.8444240	.3292988	.4650647

#1	5587.607	93920.21	7860.293	4779.400	6999.983
#2	5579.447	94273.01	7775.159	4775.571	6960.741
#3	5555.999	94142.62	7730.885	4804.584	6935.718

Sample Name: ICB01 Acquired: 8/4/2025 11:52:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0019492	.0010461	.0000104	-.000021	.0001429	.0104415	.0001923
Stddev	.0010364	.0023794	.0013042	.001345	.0026243	.0170816	.0006568
%RSD	53.16981	227.4646	12566.81	6458.937	1836.976	163.5931	341.5063

#1	.0029830	-.001592	.0002588	-.000643	.0027759	.0176128	.0005024
#2	.0009102	.003030	.0011725	-.000942	-.002473	-.009057	.0006366
#3	.0019546	.001700	-.001400	.001522	.000125	.022768	-.000562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000074	.0000541	-.021076	-.001376	.0002093	-.000325	-.005593
Stddev	.000034	.0000518	.006313	.000343	.0000711	.000320	.001678
%RSD	46.28627	95.69635	29.95117	24.89533	33.99225	98.49070	30.00975

#1	-.000036	.0000885	-.022099	-.001366	.0001733	-.000199	-.007254
#2	-.000102	-.000005	-.014315	-.001039	.0001633	-.000088	-.005627
#3	-.000085	.000079	-.026815	-.001724	.0002912	-.000689	-.003898

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001494	.0342257	-.000244	.0002548	-.041003	.0002989	-.001059
Stddev	.000355	.0190104	.000364	.0002992	.013170	.0033880	.000079
%RSD	23.79159	55.54426	149.1971	117.4257	32.12063	1133.494	7.509143

#1	-.001898	.0468311	-.000657	.0002936	-.025828	-.003516	-.001032
#2	-.001356	.0434865	-.000107	-.000062	-.047720	.002958	-.000996
#3	-.001228	.0123594	.000032	.000533	-.049461	.001454	-.001148

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.015639	.0013176	-.000035	-.000283	.0011092	.0050955	.0030152
Stddev	.025424	.0006872	.000129	.000196	.0011624	.0056406	.0007751
%RSD	162.5619	52.15735	366.2804	69.27489	104.7960	110.6995	25.70809

#1	-.008371	.0005813	-.000184	-.000060	.0008887	.0001006	.0036947
#2	.005358	.0019421	.000049	-.000362	.0023661	.0039727	.0031799
#3	-.043906	.0014295	.000029	-.000426	.0000728	.0112131	.0021709

Sample Name: ICB01 Acquired: 8/4/2025 11:52:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002900	-.001802	.0000217
Stddev	.001764	.004766	.0000934
%RSD	60.83250	264.4492	430.8285
#1	-.001648	.002704	.0001174
#2	-.002134	-.001320	-.000069
#3	-.004918	-.006790	.000017

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5636.625	94626.86	7891.266	4824.616	7147.156
Stddev	3.625	265.87	57.854	20.499	4.647
%RSD	.0643172	.2809627	.7331387	.4248843	.0650176
#1	5640.466	94728.29	7934.641	4828.397	7150.980
#2	5636.146	94827.08	7825.578	4842.961	7148.505
#3	5633.263	94325.21	7913.579	4802.489	7141.984

Sample Name: CRI01 Acquired: 8/4/2025 11:57:19 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0201108	.0463621	.0111678	.0219563	.0526086	.1114632	.1029082
Stddev	.0017145	.0020333	.0019569	.0046384	.0022556	.0189786	.0002840
%RSD	8.525444	4.385744	17.52301	21.12565	4.287495	17.02681	.2759654

#1	.0193755	.0479002	.0091212	.0170184	.0550829	.1090829	.1032045
#2	.0220704	.0440568	.0130207	.0262218	.0506671	.0937870	.1028819
#3	.0188866	.0471294	.0113614	.0226287	.0520758	.1315197	.1026383

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064109	.0061367	2.082241	.0098539	.0312075	.0229449	.1108585
Stddev	.0000437	.0000390	.006844	.0002566	.0002312	.0003483	.0099969
%RSD	.6818832	.6351684	.3286947	2.604037	.7406770	1.518058	9.017698

#1	.0064277	.0061490	2.076250	.0097082	.0311320	.0230239	.0996249
#2	.0064438	.0060931	2.080772	.0101501	.0310235	.0225639	.1187757
#3	.0063613	.0061680	2.089700	.0097032	.0314669	.0232470	.1141750

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205362	2.208710	.0418287	.0110505	2.034302	.0432490	.0447602
Stddev	.0004428	.032576	.0004196	.0002847	.041786	.0005332	.0018730
%RSD	2.155936	1.474866	1.003039	2.576742	2.054084	1.232872	4.184482

#1	.0202349	2.228961	.0418262	.0111232	1.992989	.0426442	.0432673
#2	.0210445	2.171133	.0414104	.0112919	2.076546	.0436513	.0468618
#3	.0203292	2.226037	.0422495	.0107365	2.033371	.0434516	.0441515

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.028348	.1027240	.2096478	.0400882	.0391410	.3756268	.0229598
Stddev	.081914	.0006753	.0003572	.0004069	.0018974	.0134698	.0026640
%RSD	4.038444	.6573764	.1703893	1.014922	4.847603	3.585956	11.60295

#1	1.957896	.1034454	.2100049	.0402590	.0412878	.3609635	.0256594
#2	2.118230	.1026197	.2092904	.0396238	.0376886	.3784665	.0203329
#3	2.008920	.1021069	.2096482	.0403819	.0384466	.3874503	.0228871

Sample Name: CRI01 Acquired: 8/4/2025 11:57:19 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0211588	.0198792	.0208125
Stddev	.0007094	.0007344	.0001794
%RSD	3.352772	3.694288	.8617556
#1	.0206568	.0198395	.0209567
#2	.0219703	.0206326	.0206117
#3	.0208492	.0191654	.0208693

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5526.401	91443.93	7981.003	4657.235	6896.418
Stddev	4.736	2459.20	16.482	145.597	6.918
%RSD	.0857000	2.689294	.2065181	3.126246	.1003105
#1	5530.020	93936.58	7999.172	4801.966	6892.006
#2	5528.143	89019.62	7976.827	4510.787	6904.391
#3	5521.041	91375.60	7967.011	4658.953	6892.857

Sample Name: ICSA01 Acquired: 8/4/2025 12:01:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094505	.0146292	-.008462	.0002255	-.004941	249.4825
Stddev	.0009085	.0005499	.002572	.0022830	.000897	.1950
%RSD	9.613245	3.759169	30.39994	1012.384	18.14908	.0781541

#1	.0092813	.0147063	-.011155	-.002069	-.004632	249.3236
#2	.0086384	.0140448	-.008202	.000248	-.004240	249.4240
#3	.0104316	.0151366	-.006029	.002497	-.005952	249.7001

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062431	.0017363	-.000556	237.6221	.0560673	.0022170
Stddev	.0003580	.0000712	.000212	1.1982	.0007463	.0000723
%RSD	5.734137	4.101786	38.16431	.5042258	1.331088	3.261531

#1	.0059169	.0016923	-.000801	236.4535	.0559100	.0021340
#2	.0061863	.0018185	-.000431	238.8478	.0554122	.0022669
#3	.0066261	.0016981	-.000436	237.5648	.0568797	.0022500

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104863	98.44583	.0065898	249.0685	.0049211	.0022201
Stddev	.0009754	.40846	.0007865	.5518	.0001826	.0002445
%RSD	9.301367	.4149044	11.93568	.2215269	3.710853	11.01391

#1	.0093775	98.90054	.0074981	248.8291	.0050938	.0024270
#2	.0112117	98.32697	.0061327	248.6768	.0047300	.0019502
#3	.0108697	98.11000	.0061387	249.6995	.0049395	.0022830

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1153356	.0029899	.0003306	.1145506	.0267066	.0008150
Stddev	.0128468	.0014385	.0004329	.0483303	.0026558	.0004895
%RSD	11.13863	48.11315	130.9548	42.19127	9.944458	60.05658

#1	.1007169	.0046227	.0005905	.0833859	.0297726	.0006901
#2	.1248268	.0024377	-.000169	.1702252	.0251136	.0013548
#3	.1204630	.0019093	.000570	.0900406	.0252337	.0004001

Sample Name: ICSA01 Acquired: 8/4/2025 12:01:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	-.003988	-.005183	.0148946	.0045160	-.000491	F .0204200
Stddev	.000754	.000799	.0163778	.0037236	.003231	.0034843
%RSD	18.91182	15.42124	109.9584	82.45265	657.8403	17.06309

#1	-.003872	-.006081	.0227744	.0045645	-.000393	.0171142
#2	-.004793	-.004549	-.003934	.0082150	.002690	.0240589
#3	-.003298	-.004919	.025843	.0007684	-.003770	.0200870

Elem	Sr4077
Units	ppm
Avg	.0038664
Stddev	.0006026
%RSD	15.58622

#1	.0031722
#2	.0042547
#3	.0041723

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5022.703	83394.11	7478.325	4281.521	5679.793
Stddev	18.319	26.84	43.556	14.591	16.534
%RSD	.3647218	.0321830	.5824250	.3407980	.2911020

#1	5016.031	83363.60	7528.248	4264.677	5676.234
#2	5008.654	83404.66	7448.083	4290.293	5665.329
#3	5043.422	83414.07	7458.644	4289.593	5697.817

Sample Name: ICSAB01 Acquired: 8/4/2025 12:05:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1059510	.1057156	.0374783	.0420910	.5985184	256.8488
Stddev	.0016232	.0005604	.0011931	.0043622	.0080785	2.0178
%RSD	1.532001	.5300888	3.183542	10.36383	1.349756	.7856041

#1	.1041548	.1061228	.0362000	.0371300	.5981712	259.0388
#2	.1063856	.1050765	.0385624	.0438166	.5906190	256.4427
#3	.1073127	.1059476	.0376726	.0453265	.6067649	255.0650

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5095980	.5079346	.9832673	244.1377	.5525148	.4982504
Stddev	.0057795	.0016416	.0001626	2.1142	.0030516	.0008751
%RSD	1.134129	.3231932	.0165373	.8659665	.5523107	.1756327

#1	.5157912	.5072718	.9834029	246.4598	.5534541	.4981954
#2	.5086544	.5098040	.9833119	243.6293	.5491040	.4974041
#3	.5043483	.5067280	.9830870	242.3242	.5549863	.4991517

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4901521	101.0005	.4993994	256.6415	.9884317	.2140074
Stddev	.0010649	1.0523	.0034560	1.8832	.0011960	.0010139
%RSD	.2172589	1.041903	.6920216	.7337830	.1209988	.4737656

#1	.4889872	102.2155	.5028579	258.2681	.9873392	.2147418
#2	.4903935	100.3767	.4993945	257.0780	.9882465	.2128506
#3	.4910756	100.4094	.4959460	254.5784	.9897095	.2144298

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0942303	.4904849	1.023926	.0138259	F .0255963	F .0002879
Stddev	.0099415	.0057096	.004101	.0261530	.0035793	.0002259
%RSD	10.55019	1.164079	.4005449	189.1598	13.98383	78.47210

#1	.0868874	.4954313	1.025835	.0400557	.0297188	.0000290
#2	.0902602	.4842368	1.026726	-.012250	.0237901	.0003896
#3	.1055434	.4917867	1.019219	.013671	.0232799	.0004450

Sample Name: ICSAB01 Acquired: 8/4/2025 12:05:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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 -.003632	F -.005898	F .0227982	F .0100404	F -.004046	F .0221497
Stddev	.000654	.001074	.0126949	.0043741	.004619	.0071902
%RSD	18.01061	18.20445	55.68345	43.56515	114.1593	32.46196

#1	-.003202	-.006563	.0104336	.0148436	-.002476	.0221809
#2	-.004385	-.006472	.0221618	.0062860	-.009246	.0293243
#3	-.003309	-.004660	.0357994	.0089917	-.000417	.0149440

Elem	Sr4077
Units	ppm
Avg	F .0044242
Stddev	.0001486
%RSD	3.359650

#1	.0045082
#2	.0045119
#3	.0042526

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5017.741	82562.15	7381.396	4258.237	5672.480
Stddev	4.190	346.05	25.542	26.068	12.664
%RSD	.0834966	.4191345	.3460323	.6121797	.2232513

#1	5013.454	82165.62	7373.391	4242.097	5659.560
#2	5017.941	82803.08	7360.816	4244.303	5673.008
#3	5021.826	82717.77	7409.982	4288.311	5684.871

Sample Name: ICSADLX20 Acquired: 8/4/2025 12:09:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000411	-.000150	-.000862	-.001057	-.001762	11.96915	.0007584
Stddev	.0020148	.002385	.001304	.002472	.001477	.05001	.0009972
%RSD	4898.590	1588.238	151.2342	233.9579	83.82112	.4178602	131.4925

#1	-.001962	.002399	.000448	-.003251	-.003450	11.91293	.0006927
#2	.000019	-.002327	-.000874	.001621	-.000704	12.00871	-.000204
#3	.002067	-.000522	-.002160	-.001540	-.001133	11.98580	.001787

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001030	.0000321	12.00350	.0011385	.0002790	.0007556	4.601203
Stddev	.0000864	.0000606	.06636	.0005551	.0000961	.0003687	.016397
%RSD	83.85765	189.1784	.5528390	48.75699	34.43782	48.78962	.3563545

#1	.0000110	.0000952	11.93982	.0016361	.0002938	.0003383	4.589105
#2	.0001823	.0000266	11.99843	.0005398	.0001764	.0010369	4.594640
#3	.0001158	-.000026	12.07225	.0012396	.0003669	.0008918	4.619865

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001502	12.35236	.0002199	.0000335	-.002984	.0016155	-.001160
Stddev	.000426	.07626	.0002572	.0006955	.009713	.0014306	.000425
%RSD	28.35351	.6173611	116.9457	2077.248	325.5241	88.55372	36.66940

#1	-.001011	12.26805	.0000711	-.000335	-.012527	.0019601	-.001612
#2	-.001731	12.41653	.0005169	.000836	.006891	.0000441	-.000767
#3	-.001765	12.37250	.0000717	-.000400	-.003316	.0028423	-.001101

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.048035	-.003381	.0001425	-.001507	.0007646	.0044678	.0012109
Stddev	.031795	.000962	.0002850	.000495	.0018849	.0089077	.0015550
%RSD	66.19247	28.44744	200.0176	32.86014	246.5084	199.3739	128.4154

#1	-.012020	-.004269	.0004616	-.000944	.0009426	-.003756	.0025417
#2	-.059868	-.003515	-.000087	-.001704	.0025543	.003230	.0015893
#3	-.072217	-.002360	.000053	-.001874	-.001203	.013930	-.000498

Sample Name: ICSADLX20 Acquired: 8/4/2025 12:09:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000741	-.003260	.0006088
Stddev	.004562	.001304	.0001208
%RSD	615.3321	40.00911	19.83496
#1	-.005715	-.004194	.0007471
#2	.000243	-.001770	.0005552
#3	.003248	-.003817	.0005242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5639.484	94954.14	7791.799	4814.573	6933.823
Stddev	16.975	212.62	26.923	17.412	17.595
%RSD	.3010000	.2239215	.3455248	.3616455	.2537622
#1	5658.811	95010.49	7812.292	4799.133	6954.026
#2	5626.991	94719.02	7761.308	4811.140	6925.590
#3	5632.650	95132.91	7801.797	4833.445	6921.854

Sample Name: ICSABDLX20 Acquired: 8/4/2025 12:14:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047066	.0073572	.0016688	.0041451	.0274458	12.29528	.0242850
Stddev	.0010737	.0005617	.0010951	.0023667	.0017801	.03554	.0010828
%RSD	22.81316	7.634363	65.62197	57.09668	6.485903	.2890702	4.458788

#1	.0039793	.0067443	.0005526	.0058860	.0291689	12.27160	.0252178
#2	.0059398	.0078473	.0027416	.0014503	.0275547	12.27808	.0230975
#3	.0042007	.0074799	.0017123	.0050990	.0256137	12.33615	.0245396

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254067	.0464320	12.31758	.0256734	.0239283	.0250344	4.733396
Stddev	.0001447	.0000544	.05969	.0002870	.0000150	.0002639	.016044
%RSD	.5696287	.1172303	.4846219	1.117918	.0628753	1.054109	.3389438

#1	.0254327	.0463827	12.27520	.0254706	.0239290	.0250646	4.750778
#2	.0252507	.0464904	12.29169	.0255479	.0239430	.0247567	4.730253
#3	.0255366	.0464227	12.38585	.0260018	.0239129	.0252818	4.719155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236964	12.72179	.0473704	.0098069	-.005726	.0260998	.0477226
Stddev	.0003407	.04182	.0002204	.0004380	.000333	.0013106	.0003675
%RSD	1.437679	.3287247	.4652030	4.466451	5.807543	5.021657	.7700631

#1	.0238140	12.71251	.0474467	.0093068	-.005682	.0245906	.0477906
#2	.0233124	12.68539	.0471220	.0099917	-.006079	.0269518	.0480514
#3	.0239626	12.76747	.0475424	.0101222	-.005418	.0267570	.0473259

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.056592	-.004341	-.000214	-.002296	-.000625	.0103056	.0022319
Stddev	.045157	.000659	.000103	.000209	.000982	.0036413	.0016198
%RSD	79.79430	15.19118	48.39817	9.079775	157.1129	35.33363	72.57120

#1	-.071132	-.003580	-.000095	-.002487	-.001745	.0062061	.0006624
#2	-.005956	-.004705	-.000265	-.002328	-.000219	.0131647	.0038976
#3	-.092689	-.004738	-.000281	-.002074	.000089	.0115459	.0021359

Sample Name: ICSABDLX20 Acquired: 8/4/2025 12:14:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003040	-.000786	.0004173
Stddev	.001012	.002089	.0000915
%RSD	33.28923	265.6700	21.92607

#1	-.002974	.000127	.0004656
#2	-.002063	-.003176	.0003118
#3	-.004084	.000690	.0004744

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5598.930	93714.16	7718.210	4764.623	6872.137
Stddev	10.977	152.21	25.937	36.269	15.070
%RSD	.1960569	.1624143	.3360509	.7612096	.2192879

#1	5591.100	93544.10	7748.135	4736.149	6857.187
#2	5611.477	93760.75	7704.292	4752.264	6887.323
#3	5594.212	93837.62	7702.203	4805.456	6871.902

Sample Name: CCV01 Acquired: 8/4/2025 12:25:48 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	5.060849	5.083540	5.012367	5.077162	5.067103	9.768089	9.827098
Stddev	.014770	.041769	.006566	.014536	.022948	.021779	.079086
%RSD	.2918492	.8216471	.1309955	.2862975	.4528747	.2229629	.8047704

#1	5.049845	5.070537	5.011392	5.061837	5.049106	9.792027	9.874738
#2	5.055066	5.130263	5.006343	5.078895	5.059259	9.749444	9.870749
#3	5.077635	5.049819	5.019366	5.090753	5.092944	9.762795	9.735807

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2485301	2.527172	24.75087	.9689963	2.519516	1.269896	4.855037
Stddev	.0013406	.003280	.10041	.0032563	.004636	.004485	.014489
%RSD	.5394121	.1297896	.4056759	.3360493	.1840140	.3532102	.2984289

#1	.2482308	2.523738	24.84373	.9699514	2.517342	1.267124	4.847359
#2	.2499951	2.527504	24.76457	.9653692	2.516367	1.267492	4.846003
#3	.2473644	2.530273	24.64432	.9716682	2.524840	1.275071	4.871749

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.456087	24.32707	2.526155	1.220470	23.88739	2.443236	2.460782
Stddev	.002350	.08892	.005830	.001278	.07121	.007247	.006857
%RSD	.0956762	.3655277	.2307665	.1047226	.2981243	.2966079	.2786600

#1	2.458771	24.22787	2.524714	1.220360	23.88528	2.434895	2.456262
#2	2.454401	24.35372	2.521181	1.221800	23.81725	2.446821	2.468672
#3	2.455088	24.39962	2.532570	1.219251	23.95963	2.447991	2.457412

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.21192	4.945154	5.112872	5.053609	4.926107	4.766929	5.069554
Stddev	.12554	.024876	.014280	.007898	.018219	.040967	.003987
%RSD	.5185053	.5030332	.2792920	.1562884	.3698392	.8593907	.0786445

#1	24.28033	4.939430	5.103329	5.044510	4.947122	4.757303	5.070331
#2	24.06704	4.972392	5.105998	5.057627	4.914761	4.731634	5.073095
#3	24.28840	4.923639	5.129289	5.058691	4.916439	4.811852	5.065236

Sample Name: CCV01 Acquired: 8/4/2025 12:25:48 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.984252	4.857331	5.021200
Stddev	.003939	.012003	.075191
%RSD	.0790202	.2471188	1.497473

#1	4.981016	4.855018	4.934381
#2	4.983103	4.846652	5.063918
#3	4.988638	4.870323	5.065302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5338.003	91544.27	7710.983	4639.815	6251.902
Stddev	12.219	214.48	27.657	24.264	11.703
%RSD	.2288988	.2342944	.3586714	.5229611	.1871869

#1	5326.259	91781.10	7728.239	4661.006	6238.577
#2	5350.646	91363.11	7679.083	4613.346	6256.622
#3	5337.103	91488.61	7725.627	4645.093	6260.508

Sample Name: CCB01 Acquired: 8/4/2025 12:29:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	-.000409	.0000547	.0004553	-.003658	-.001511	.0041848	.0002834
Stddev	.001300	.0014591	.0004570	.002004	.000643	.0034877	.0002338
%RSD	317.8230	2665.657	100.3658	54.78674	42.56449	83.34290	82.51076

#1	.000635	-.001083	.0009792	-.004356	-.000880	.0009894	.0000166
#2	-.001866	.001700	.0001384	-.001398	-.001487	.0036597	.0004525
#3	.000004	-.000452	.0002484	-.005219	-.002166	.0079053	.0003811

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000158	.0001915	-.018062	-.001615	.0003681	-.000215	-.005396
Stddev	.0000621	.0000567	.000465	.000084	.0000889	.000153	.006371
%RSD	394.1836	29.58791	2.572537	5.209032	24.14135	70.89249	118.0733

#1	.0000875	.0001946	-.018053	-.001679	.0003062	-.000061	-.002523
#2	-.000018	.0001334	-.018532	-.001646	.0003281	-.000366	-.000967
#3	-.000022	.0002466	-.017602	-.001519	.0004699	-.000220	-.012697

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001577	.0192606	.0002638	.0006259	-.073059	.0017648	-.001158
Stddev	.000647	.0248650	.0000667	.0004927	.002280	.0026545	.000324
%RSD	41.01429	129.0976	25.28046	78.72757	3.121304	150.4129	27.98762

#1	-.001030	.0395489	.0002981	.0010652	-.074559	.0028729	-.001180
#2	-.002290	.0267107	.0003064	.0000931	-.070435	.0036858	-.001470
#3	-.001410	-.008478	.0001869	.0007193	-.074184	-.001264	-.000823

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.051084	-.000389	.0007631	-.000790	.0001017	.0035501	.0029787
Stddev	.020648	.000647	.0002094	.000546	.0004064	.0067710	.0016884
%RSD	40.41920	166.1551	27.43555	69.08735	399.6282	190.7258	56.68295

#1	-.039359	-.000382	.0005987	-.001163	.0005111	.0000599	.0019517
#2	-.074925	-.001040	.0009988	-.000164	.0000957	.0113541	.0020571
#3	-.038968	.000254	.0006919	-.001044	-.000302	-.000764	.0049274

Sample Name: CCB01 Acquired: 8/4/2025 12:29:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003612	-.004832	.0002893
Stddev	.002491	.003301	.0000394
%RSD	68.96672	68.31611	13.60488

#1	-.000756	-.001351	.0002923
#2	-.004742	-.007917	.0003272
#3	-.005337	-.005229	.0002486

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5763.665	97910.48	7934.030	4911.567	7371.574
Stddev	22.605	371.30	46.630	19.423	20.675
%RSD	.3921927	.3792279	.5877160	.3954573	.2804683

#1	5786.343	98105.92	7976.053	4907.403	7391.280
#2	5763.515	97482.28	7942.171	4894.563	7373.394
#3	5741.135	98143.24	7883.866	4932.734	7350.050

Sample Name: PB169076BL Acquired: 8/4/2025 12:55:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000409	.0005247	-.001466	-.003589	-.000037	.0010573	-.000780
Stddev	.001066	.0010454	.000692	.000316	.001298	.0105593	.000297
%RSD	260.7675	199.2265	47.21850	8.794613	3513.371	998.6993	38.12975

#1	-.001593	.0016235	-.001286	-.003341	-.000692	-.004782	-.000697
#2	.000474	-.000457	-.000881	-.003944	.001458	.013247	-.001110
#3	-.000107	.000408	-.002230	-.003480	-.000876	-.005293	-.000533

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000095	-.000080	-.014105	-.001374	.0001256	-.000318	-.005026
Stddev	.000050	.000063	.013836	.000355	.0000958	.000163	.003263
%RSD	52.74016	78.59852	98.08897	25.80458	76.25648	51.08528	64.92518

#1	-.000057	-.000113	-.005104	-.001112	.0002250	-.000490	-.002412
#2	-.000152	-.000120	-.030037	-.001778	.0000338	-.000167	-.003983
#3	-.000077	-.000008	-.007176	-.001232	.0001181	-.000298	-.008683

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001803	.0446813	-.000013	.0007303	.0516572	.0015263	-.001257
Stddev	.000139	.0120106	.000130	.0004620	.0042265	.0027391	.000263
%RSD	7.710235	26.88055	1023.774	63.25470	8.181821	179.4656	20.94861

#1	-.001769	.0314383	.000098	.0010906	.0468779	.0045755	-.000955
#2	-.001956	.0477363	.000020	.0008908	.0549023	-.000726	-.001377
#3	-.001684	.0548694	-.000156	.0002095	.0531915	.000729	-.001440

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0288158	-.005820	-.000228	-.000400	.0008543	.0062952	.0029287
Stddev	.0428773	.000925	.000287	.000281	.0015536	.0055663	.0029491
%RSD	148.7978	15.89259	125.8975	70.08666	181.8595	88.42115	100.6975

#1	.0715075	-.005074	-.000360	-.000185	.0015424	.0003869	.0059330
#2	.0291846	-.005532	-.000426	-.000298	.0019450	.0070579	.0028151
#3	-.014245	-.006855	.000101	-.000718	-.000925	.0114409	.0000380

Sample Name: PB169076BL Acquired: 8/4/2025 12:55:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000591	-.001200	-.000051
Stddev	.003267	.001409	.000066
%RSD	552.8025	117.4049	129.2372
#1	-.001249	-.002489	.000011
#2	.002955	.000304	-.000043
#3	-.003478	-.001415	-.000120

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5563.683	94505.53	7711.596	4738.546	7083.163
Stddev	8.483	490.37	53.956	7.459	24.423
%RSD	.1524665	.5188759	.6996763	.1574184	.3448104
#1	5553.903	93943.46	7654.304	4730.001	7065.142
#2	5568.111	94727.29	7761.444	4743.757	7073.388
#3	5569.036	94845.85	7719.040	4741.880	7110.960

Sample Name: PB169076BS Acquired: 8/4/2025 13:00:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8210445	2.097352	1.002583	2.096728	.8516797	2.084883	.2094819
Stddev	.0064652	.020564	.001670	.006575	.0029313	.017008	.0016250
%RSD	.7874409	.9804669	.1665861	.3135684	.3441838	.8157707	.7757363

#1	.8179566	2.081959	1.003010	2.092707	.8508014	2.104328	.2084117
#2	.8167022	2.120706	1.000741	2.093161	.8492879	2.077542	.2113518
#3	.8284748	2.089391	1.003998	2.104315	.8549497	2.072778	.2086822

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2142352	.1997192	1.060671	.4124050	.2051471	.3253058	3.068103
Stddev	.0029010	.0006467	.008311	.0008419	.0009927	.0007235	.019612
%RSD	1.354103	.3238219	.7835938	.2041448	.4839109	.2224139	.6392068

#1	.2109402	.1993756	1.054479	.4114712	.2047071	.3247286	3.090682
#2	.2164049	.1993168	1.070117	.4131062	.2044504	.3250713	3.058311
#3	.2153606	.2004652	1.057417	.4126375	.2062837	.3261175	3.055316

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2102447	2.070620	.5165034	.0791097	2.920803	.3124155	.2160298
Stddev	.0011466	.011929	.0014262	.0005826	.025933	.0003840	.0036713
%RSD	.5453515	.5761172	.2761239	.7364727	.8878611	.1229258	1.699463

#1	.2094308	2.076594	.5153709	.0784372	2.941809	.3120259	.2118050
#2	.2115559	2.078382	.5160341	.0794302	2.928782	.3124267	.2184455
#3	.2097473	2.056884	.5181051	.0794616	2.891819	.3127937	.2178389

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.926115	.3077650	.4268291	.7053696	.2035969	.8606385	5.752698
Stddev	.039639	.0036494	.0004448	.0005758	.0015335	.0170843	.020590
%RSD	.3993408	1.185791	.1042118	.0816369	.7532062	1.985077	.3579213

#1	9.961113	.3035790	.4263367	.7050071	.2027919	.8476031	5.746800
#2	9.934164	.3094378	.4272020	.7050681	.2053653	.8799794	5.735700
#3	9.883070	.3102781	.4269485	.7060336	.2026336	.8543330	5.775593

Sample Name: PB169076BS Acquired: 8/4/2025 13:00:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.005772	.2001170	.2059167
Stddev	.004027	.0042521	.0014094
%RSD	69.77378	2.124821	.6844553

#1	-.006748	.1997889	.2056758
#2	-.001346	.2045236	.2074310
#3	-.009221	.1960384	.2046433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5721.629	97761.94	8133.054	4897.082	7111.302
Stddev	12.096	360.51	66.429	55.978	12.517
%RSD	.2114158	.3687626	.8167835	1.143085	.1760141

#1	5735.323	98105.68	8203.302	4959.487	7125.438
#2	5712.401	97386.72	8071.251	4851.295	7106.843
#3	5717.162	97793.42	8124.608	4880.463	7101.625

Sample Name: Q2725-02DLX5 Acquired: 8/4/2025 13:04:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000408	.0000579	.0171130	.0024134	.0115317	.7184436	.0469131
Stddev	.000770	.0016373	.0008444	.0019593	.0005027	.0125916	.0012633
%RSD	188.6331	2827.404	4.934209	81.18613	4.359531	1.752621	2.692788

#1	.000338	.0006812	.0180879	.0046054	.0120650	.7326550	.0469080
#2	-.000363	.0012920	.0166390	.0018027	.0110664	.7139977	.0481789
#3	-.001200	-.001800	.0166121	.0008321	.0114636	.7086781	.0456524

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000175	.0005470	5.365103	.0091479	.0010586	.0788294	3.911829
Stddev	.0000229	.0001034	.021801	.0007839	.0002017	.0001229	.027888
%RSD	130.5335	18.91126	.4063416	8.569054	19.05223	.1559208	.7129035

#1	-.000002	.0005153	5.382149	.0083969	.0012881	.0788949	3.882702
#2	.000043	.0004631	5.372622	.0090858	.0009097	.0786876	3.938285
#3	.000013	.0006625	5.340538	.0099610	.0009779	.0789057	3.914498

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0389943	1.293794	.0100052	.0013359	79.27096	.0035159	.2925311
Stddev	.0002570	.032451	.0003092	.0001167	.43768	.0029227	.0018113
%RSD	.6590386	2.508195	3.090784	8.735068	.5521352	83.12743	.6191826

#1	.0387573	1.272026	.0097432	.0014482	78.77319	.0066896	.2926961
#2	.0392675	1.278265	.0099261	.0012153	79.44413	.0009352	.2906429
#3	.0389582	1.331092	.0103463	.0013442	79.59557	.0029228	.2942542

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.817396	.0223412	.0038925	.0056174	.0270565	7.055822	1.754923
Stddev	.037011	.0002676	.0001857	.0001098	.0007261	.079226	.005162
%RSD	.9695413	1.197727	4.769989	1.954491	2.683735	1.122852	.2941437

#1	3.778451	.0224396	.0040424	.0057290	.0264052	6.964618	1.759994
#2	3.821627	.0225457	.0036848	.0055095	.0278395	7.107601	1.749675
#3	3.852110	.0220384	.0039503	.0056137	.0269250	7.095247	1.755099

Sample Name: Q2725-02DLX5 Acquired: 8/4/2025 13:04:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.635555	.0013569	.0404925
Stddev	.018877	.0034252	.0000800
%RSD	.3349699	252.4231	.1976398
#1	5.630903	.0039190	.0405669
#2	5.619439	.0026851	.0405028
#3	5.656324	-.002533	.0404078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5553.216	95377.92	8320.393	4740.175	6738.415
Stddev	16.466	342.36	46.420	12.240	24.324
%RSD	.2965155	.3589534	.5579118	.2582144	.3609703
#1	5542.508	95772.04	8275.518	4753.684	6724.597
#2	5572.177	95154.17	8317.443	4729.824	6766.500
#3	5544.965	95207.55	8368.218	4737.016	6724.147

Sample Name: Q2725-02DUPDLX5 Acquired: 8/4/2025 13:08:17 Type: Unk

Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000

User: Jaswal Custom ID1: Custom ID2: Custom ID3:

Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001039	.0003502	.0162352	-.001134	.0088812	.6975950	.0441233
Stddev	.003279	.0030691	.0003032	.003691	.0013498	.0084167	.0003029
%RSD	315.7255	876.4420	1.867354	325.6496	15.19795	1.206535	.6865832

#1	-.000888	.0030013	.0165846	-.003361	.0086164	.7028953	.0444625
#2	-.004391	-.003012	.0160797	-.003166	.0103437	.7019998	.0440278
#3	.002163	.001061	.0160414	.003127	.0076834	.6878900	.0438796

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000200	.0004991	5.188263	.0088772	.0009593	.0748616	3.813133
Stddev	.0000669	.0000597	.035759	.0004561	.0002116	.0002830	.025953
%RSD	334.4127	11.95447	.6892300	5.137633	22.06104	.3779586	.6806294

#1	-.000051	.0004618	5.210333	.0086192	.0008035	.0751882	3.828788
#2	.000030	.0004676	5.207451	.0086086	.0012003	.0746900	3.827435
#3	.000081	.0005679	5.147006	.0094038	.0008742	.0747067	3.783174

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377642	1.246638	.0093495	.0009651	77.18316	.0023315	.2819026
Stddev	.0006331	.004516	.0001949	.0001663	.59993	.0026497	.0010657
%RSD	1.676540	.3622636	2.084770	17.22782	.7772848	113.6478	.3780337

#1	.0375062	1.243478	.0095023	.0007971	77.71780	.0042617	.2807312
#2	.0384855	1.251811	.0091300	.0009685	77.29733	-.000689	.2821617
#3	.0373007	1.244625	.0094163	.0011296	76.53434	.003422	.2828148

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.726659	.0212183	.0035555	.0061605	.0275202	6.870395	1.660225
Stddev	.028397	.0002230	.0003107	.0004625	.0009376	.083940	.002130
%RSD	.7619992	1.050949	8.738445	7.507701	3.406936	1.221761	.1283133

#1	3.716678	.0212166	.0038862	.0056946	.0284418	6.930978	1.662634
#2	3.758699	.0214421	.0035105	.0061673	.0275516	6.905626	1.659447
#3	3.704600	.0209961	.0032697	.0066196	.0265674	6.774581	1.658592

Sample Name: Q2725-02DUPDLX5 Acquired: 8/4/2025 13:08:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.337970	.0025065	.0393549
Stddev	.062098	.0016524	.0003729
%RSD	1.163324	65.92316	.9475951

#1	5.407110	.0014452	.0396478
#2	5.286943	.0044103	.0394818
#3	5.319856	.0016640	.0389350

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5624.068	96301.52	8443.704	4767.884	6840.820
Stddev	7.243	287.40	36.558	10.518	10.977
%RSD	.1287824	.2984368	.4329674	.2205927	.1604620

#1	5629.175	95970.97	8405.360	4770.769	6843.415
#2	5615.779	96492.31	8478.168	4776.659	6828.778
#3	5627.250	96441.28	8447.583	4756.225	6850.267

Sample Name: Q2725-02LDLX25 Acquired: 8/4/2025 13:12:28 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000781	-.000613	.0030800	-.002453	.0016432	.1366319	.0076965
Stddev	.001975	.000955	.0007305	.003908	.0013836	.0041494	.0013348
%RSD	252.9188	155.6487	23.71794	159.3315	84.20359	3.036915	17.34318

#1	-.002781	.000210	.0029226	-.001279	.0007591	.1364899	.0085459
#2	-.000732	-.000390	.0024410	-.006813	.0009327	.1325554	.0061580
#3	.001169	-.001660	.0038764	.000734	.0032377	.1408505	.0083857

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000153	.0000682	1.066512	.0005759	.0002815	.0154604	.7444685
Stddev	.0000270	.0000300	.018524	.0001090	.0001709	.0002678	.0079418
%RSD	176.7438	44.02049	1.736909	18.92322	60.70417	1.732004	1.066775

#1	.0000443	.0000444	1.086749	.0005711	.0003769	.0155529	.7532255
#2	.0000105	.0001019	1.062393	.0006872	.0003833	.0156696	.7424475
#3	-.000009	.0000583	1.050394	.0004694	.0000842	.0151586	.7377324

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060295	.2737440	.0016441	.0003185	14.84163	-.000791	.0554773
Stddev	.0005690	.0559883	.0002124	.0005505	.11690	.000325	.0005257
%RSD	9.436529	20.45279	12.92176	172.8456	.7876727	41.09349	.9476390

#1	.0063930	.3247301	.0017302	-.000265	14.72798	-.000419	.0559704
#2	.0053738	.2826747	.0014021	.000828	14.96153	-.000936	.0549241
#3	.0063216	.2138271	.0018000	.000393	14.83539	-.001019	.0555373

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7624236	-.001289	.0007368	.0001037	.0047915	1.335417	.3274656
Stddev	.0163112	.000827	.0001176	.0005000	.0011692	.027812	.0014433
%RSD	2.139384	64.14542	15.95696	482.2495	24.40096	2.082648	.4407513

#1	.7791126	-.000360	.0007549	-.000305	.0039928	1.320806	.3289051
#2	.7616397	-.001945	.0006112	-.000045	.0061335	1.367489	.3274733
#3	.7465185	-.001563	.0008442	.000661	.0042483	1.317954	.3260185

Sample Name: Q2725-02LDLX25 Acquired: 8/4/2025 13:12:28 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.043788	-.000572	.0080509
Stddev	.004554	.004298	.0001158
%RSD	.4362621	751.0788	1.438241

#1	1.044131	-.001633	.0081782
#2	1.048161	.004157	.0080228
#3	1.039073	-.004241	.0079518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5697.078	98085.33	8287.380	4815.789	7145.674
Stddev	12.015	270.52	23.024	10.759	24.667
%RSD	.2108944	.2758045	.2778255	.2234198	.3452003

#1	5683.818	98374.40	8260.892	4820.268	7119.317
#2	5700.176	97838.27	8302.598	4803.514	7149.500
#3	5707.241	98043.32	8298.651	4823.586	7168.204

Sample Name: Q2725-02MSDLX5 Acquired: 8/4/2025 13:16:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1617189	.3805913	.2082561	.4092892	.1763906	1.127036	.0873424
Stddev	.0010451	.0005770	.0023999	.0003349	.0015702	.005861	.0010178
%RSD	.6462768	.1515926	1.152368	.0818306	.8901598	.5200614	1.165333

#1	.1605241	.3812426	.2096825	.4090738	.1770268	1.121307	.0865536
#2	.1624636	.3801443	.2096005	.4091187	.1746022	1.133021	.0869824
#3	.1621691	.3803870	.2054854	.4096751	.1775429	1.126778	.0884913

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0401697	.0392473	5.527545	.0898661	.0411943	.1387488	4.477504
Stddev	.0003570	.0001600	.017982	.0002518	.0000112	.0002907	.027969
%RSD	.8887602	.4076633	.3253152	.2801940	.0271687	.2094834	.6246641

#1	.0401175	.0393093	5.506935	.0899007	.0411815	.1389203	4.472015
#2	.0398416	.0393670	5.535666	.0900988	.0412021	.1389128	4.507810
#3	.0405499	.0390656	5.540035	.0895988	.0411994	.1384132	4.452685

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0795049	1.710341	.1096310	.0115984	80.06507	.0621022	.3297506
Stddev	.0004935	.035634	.0002933	.0005009	.77976	.0041014	.0013899
%RSD	.6206666	2.083429	.2675508	4.318637	.9739110	6.604243	.4214958

#1	.0792977	1.682720	.1094377	.0121668	80.11990	.0607236	.3310101
#2	.0791488	1.750563	.1094868	.0114072	80.81598	.0588678	.3299823
#3	.0800682	1.697741	.1099685	.0112213	79.25935	.0667153	.3282594

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.910485	.0807295	.0845407	.1165250	.0644637	7.149679	2.850533
Stddev	.077162	.0007739	.0002693	.0002441	.0001217	.080596	.017309
%RSD	1.305519	.9586829	.3185812	.2094770	.1887469	1.127274	.6072217

#1	5.919758	.0800851	.0842343	.1165692	.0646042	7.146976	2.865420
#2	5.982592	.0805153	.0847399	.1167440	.0643903	7.231592	2.854638
#3	5.829105	.0815879	.0846480	.1162618	.0643967	7.070467	2.831540

Sample Name: Q2725-02MSDLX5 Acquired: 8/4/2025 13:16:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.501836	.0459916	.0808216
Stddev	.021138	.0007976	.0000926
%RSD	.3842030	1.734166	.1146243
#1	5.521174	.0455773	.0808768
#2	5.505065	.0454866	.0808735
#3	5.479269	.0469111	.0807147

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5603.381	95625.90	8349.345	4757.715	6796.952
Stddev	13.384	386.58	60.273	16.064	22.696
%RSD	.2388568	.4042579	.7218892	.3376428	.3339204
#1	5588.015	95661.01	8354.036	4739.199	6771.208
#2	5612.497	95222.97	8407.135	4766.011	6805.576
#3	5609.631	95993.73	8286.863	4767.934	6814.073

Sample Name: Q2725-02MSDDLX5 Acquired: 8/4/2025 13:20:51 Type: Unk

Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000

User: Jaswal Custom ID1: Custom ID2: Custom ID3:

Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1535992	.3880999	.2009885	.3975718	.1713148	1.065223	.0839314
Stddev	.0006311	.0019015	.0007486	.0013917	.0004811	.009209	.0002948
%RSD	.4108984	.4899646	.3724529	.3500397	.2808052	.8644930	.3511992

#1	.1540625	.3859263	.2018413	.3969217	.1714682	1.070567	.0842220
#2	.1538547	.3889177	.2004395	.3966241	.1717004	1.054589	.0836326
#3	.1528804	.3894557	.2006848	.3991695	.1707757	1.070511	.0839397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0383722	.0378578	5.313604	.0859640	.0395382	.1334486	4.416835
Stddev	.0003032	.0001255	.015888	.0008436	.0002220	.0007346	.024513
%RSD	.7900788	.3316142	.2990045	.9813150	.5613992	.5504368	.5549936

#1	.0386034	.0378669	5.321221	.0864831	.0396311	.1338250	4.406897
#2	.0380289	.0377280	5.295342	.0864183	.0392849	.1326021	4.444757
#3	.0384842	.0379786	5.324250	.0849906	.0396986	.1339186	4.398852

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0771972	1.617161	.1056566	.0124863	77.52059	.0620778	.3198760
Stddev	.0008044	.019295	.0005948	.0003665	.30963	.0011379	.0007719
%RSD	1.042075	1.193144	.5629216	2.935036	.3994158	1.833050	.2413118

#1	.0778496	1.604254	.1056239	.0122672	77.45494	.0612365	.3191009
#2	.0762984	1.639342	.1050789	.0129094	77.85779	.0616244	.3198823
#3	.0774436	1.607886	.1062671	.0122823	77.24906	.0633725	.3206447

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.755188	.0771970	.0823235	.1103027	.0583993	6.978444	2.747304
Stddev	.031089	.0012084	.0002544	.0005989	.0011678	.051394	.013493
%RSD	.5401992	1.565367	.3089711	.5429245	1.999627	.7364660	.4911303

#1	5.779785	.0782402	.0825630	.1097042	.0586862	6.984822	2.746761
#2	5.765534	.0758729	.0820566	.1109019	.0571148	7.026352	2.734091
#3	5.720244	.0774779	.0823509	.1103022	.0593969	6.924160	2.761060

Sample Name: Q2725-02MSDDLX5 Acquired: 8/4/2025 13:20:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.324639	.0426092	.0781949
Stddev	.013067	.0024975	.0005168
%RSD	.2454021	5.861288	.6609009
#1	5.331626	.0453181	.0787274
#2	5.309564	.0421115	.0776954
#3	5.332727	.0403981	.0781618

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5633.755	95823.62	8522.271	4726.013	6840.648
Stddev	12.347	322.70	39.876	20.450	21.474
%RSD	.2191609	.3367657	.4679054	.4327038	.3139120
#1	5633.601	95967.15	8490.777	4744.327	6841.109
#2	5646.178	95454.05	8567.107	4703.947	6861.887
#3	5621.485	96049.65	8508.928	4729.765	6818.947

Sample Name: Q2725-02ADLX5 Acquired: 8/4/2025 13:24:57 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1621476	.3954910	.2062012	.4132871	.1709934	1.058836	.0827141
Stddev	.0009447	.0077539	.0015875	.0037807	.0009570	.010641	.0004587
%RSD	.5825912	1.960581	.7698574	.9147762	.5596980	1.004969	.5545064

#1	.1624879	.3973666	.2073636	.4091412	.1713485	1.070039	.0832308
#2	.1628750	.4021350	.2043926	.4165441	.1699095	1.057605	.0823548
#3	.1610800	.3869712	.2068475	.4141760	.1717221	1.048864	.0825568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0386796	.0386140	5.202346	.0869981	.0405302	.1349367	4.382522
Stddev	.0000638	.0001274	.015174	.0003158	.0000809	.0008297	.030776
%RSD	.1648174	.3299212	.2916773	.3630009	.1995043	.6148631	.7022374

#1	.0387135	.0385183	5.218714	.0866364	.0406069	.1340895	4.359763
#2	.0387192	.0385650	5.199579	.0871394	.0405378	.1349730	4.417538
#3	.0386061	.0387586	5.188747	.0872187	.0404458	.1357476	4.370266

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0764622	1.579015	.1078320	.0164799	77.08034	.0636767	.3217365
Stddev	.0003364	.011778	.0002604	.0006029	.25934	.0016797	.0007330
%RSD	.4399629	.7459317	.2414749	3.658662	.3364579	2.637917	.2278210

#1	.0760843	1.569210	.1080131	.0167806	76.78487	.0654882	.3218665
#2	.0767290	1.575754	.1075336	.0168734	77.27026	.0621707	.3223957
#3	.0765732	1.592080	.1079494	.0157858	77.18590	.0633712	.3209472

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.796109	.0769958	.0835833	.1362182	.0604222	6.916811	2.761693
Stddev	.008070	.0005454	.0001198	.0009798	.0006999	.043074	.016270
%RSD	.1392388	.7083019	.1433004	.7192927	1.158345	.6227364	.5891159

#1	5.799826	.0764487	.0835673	.1372833	.0601714	6.876837	2.747820
#2	5.786849	.0769994	.0837103	.1353552	.0612130	6.911169	2.757658
#3	5.801650	.0775394	.0834723	.1360162	.0598823	6.962428	2.779600

Sample Name: Q2725-02ADLX5 Acquired: 8/4/2025 13:24:57 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.316886	.0409967	.0771801
Stddev	.015151	.0018513	.0000916
%RSD	.2849527	4.515683	.1186321
#1	5.328753	.0390373	.0771429
#2	5.322083	.0427165	.0772844
#3	5.299820	.0412364	.0771130

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5509.112	94112.83	8516.440	4633.057	6710.146
Stddev	12.597	164.15	15.051	10.550	18.998
%RSD	.2286520	.1744206	.1767231	.2277112	.2831260
#1	5512.823	94198.65	8508.059	4645.236	6716.991
#2	5519.437	93923.56	8507.446	4626.739	6724.774
#3	5495.077	94216.29	8533.815	4627.195	6688.674

Sample Name: PB169078BL Acquired: 8/4/2025 13:29:01 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001134	.0004508	.0000626	.0000079	.0000082	.0087174	.0009443
Stddev	.001530	.0007580	.0005016	.0024140	.0015357	.0142036	.0004743
%RSD	135.0056	168.1436	801.9796	30712.35	18726.46	162.9344	50.22967

#1	-.000063	.0001392	-.000145	.0013919	.0006295	.0231804	.0009867
#2	-.002886	-.000102	.000635	-.002780	.0011359	-.005212	.0004502
#3	-.000451	.001315	-.000302	.001411	-.001741	.008183	.0013959

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000040	-.000001	-.013577	-.001298	.0001991	-.000208	-.006013
Stddev	.000048	.000021	.004473	.000450	.0002012	.000484	.004413
%RSD	119.5796	3023.864	32.94359	34.65691	101.0192	233.1166	73.39418

#1	-.000091	.000014	-.015494	-.000866	-.000003	.000085	-.005373
#2	-.000035	-.000025	-.008465	-.001263	.000201	-.000767	-.001955
#3	.000005	.000008	-.016772	-.001764	.000400	.000058	-.010712

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000535	.0365046	.0000460	.0005997	.0000296	-.000023	-.001304
Stddev	.000499	.0292906	.0000751	.0002579	.0181865	.001338	.000197
%RSD	93.30766	80.23807	163.1660	42.99936	61423.36	5709.242	15.14149

#1	.000031	.0312048	-.000009	.0008775	.0206821	-.001305	-.001532
#2	-.000724	.0680832	.000016	.0003679	-.007002	-.000130	-.001198
#3	-.000911	.0102258	.000131	.0005537	-.013591	.001365	-.001182

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046945	-.007204	.0000659	-.000739	.0004511	-.003438	.0027656
Stddev	.0114187	.000322	.0001144	.000101	.0005983	.007361	.0008597
%RSD	243.2377	4.468080	173.6963	13.61378	132.6261	214.0879	31.08687

#1	.0125971	-.006934	.0000617	-.000849	.0011072	.004132	.0026247
#2	.0098836	-.007560	-.000046	-.000651	-.000065	-.010571	.0019850
#3	-.008397	-.007118	.000182	-.000718	.000311	-.003876	.0036871

Sample Name: PB169078BL Acquired: 8/4/2025 13:29:01 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000883	-.002052	-.000025
Stddev	.003037	.000596	.000021
%RSD	343.8447	29.03334	84.71714
#1	.000902	-.002740	-.000005
#2	.000838	-.001732	-.000047
#3	-.004390	-.001685	-.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5660.613	96393.91	7828.447	4858.169	7156.092
Stddev	30.907	203.60	84.874	19.385	44.865
%RSD	.5459923	.2112154	1.084177	.3990223	.6269510
#1	5686.604	96570.75	7901.558	4868.062	7187.020
#2	5668.797	96171.33	7848.415	4835.833	7176.622
#3	5626.438	96439.63	7735.370	4870.611	7104.635

Sample Name: PB169078BS Acquired: 8/4/2025 13:33:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8019180	2.029820	.9920813	2.040115	.8348023	2.102406
Stddev	.0015482	.081919	.0030705	.008419	.0033015	.002536
%RSD	.1930688	4.035760	.3094983	.4126965	.3954891	.1206247

#1	.8018540	1.995408	.9950855	2.034936	.8353591	2.105132
#2	.8034973	2.123332	.9922099	2.049830	.8377900	2.101972
#3	.8004028	1.970721	.9889486	2.035579	.8312578	2.100116

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2108946	.2198643	.1991054	1.073372	.4107877	.2036875
Stddev	.0010175	.0006639	.0005323	.004775	.0018201	.0005838
%RSD	.4824836	.3019752	.2673551	.4448923	.4430802	.2866128

#1	.2098281	.2197093	.1996665	1.076623	.4127436	.2042757
#2	.2110011	.2192916	.1990421	1.067889	.4091437	.2036784
#3	.2118548	.2205920	.1986075	1.075604	.4104758	.2031082

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3209897	3.048395	.2125575	2.136002	.5125507	.0779420
Stddev	.0004500	.012033	.0009994	.016851	.0013692	.0005343
%RSD	.1402007	.3947472	.4701820	.7888943	.2671412	.6855063

#1	.3211329	3.036638	.2122234	2.121266	.5140298	.0773479
#2	.3204855	3.060687	.2117679	2.154374	.5122948	.0780950
#3	.3213507	3.047861	.2136811	2.132366	.5113274	.0783831

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.867985	.3118284	.2140110	9.826666	.3116487	.4211933
Stddev	.014327	.0060699	.0005417	.020704	.0007152	.0008390
%RSD	.4995389	1.946548	.2530972	.2106882	.2294985	.1991967

#1	2.871064	.3112754	.2136056	9.803894	.3111618	.4207920
#2	2.880522	.3060540	.2146262	9.844354	.3124699	.4221576
#3	2.852369	.3181559	.2138012	9.831748	.3113145	.4206303

Sample Name: PB169078BS Acquired: 8/4/2025 13:33:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7084975	.2068019	.8516927	5.778570	F .0002977	.2026280
Stddev	.0028777	.0021494	.0102564	.012708	.0026228	.0008799
%RSD	.4061753	1.039370	1.204234	.2199199	881.1444	.4342426

#1	.7106882	.2068354	.8486199	5.774224	.0005048	.2025822
#2	.7095659	.2046359	.8433240	5.792881	-.002423	.2017720
#3	.7052383	.2089344	.8631342	5.768605	.002811	.2035299

Elem	Sr4077
Units	ppm
Avg	.2055891
Stddev	.0005788
%RSD	.2815516

#1	.2059433
#2	.2049211
#3	.2059028

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5622.161	93897.14	7621.201	4776.281	6928.086
Stddev	13.243	442.52	41.815	30.611	29.101
%RSD	.2355473	.4712783	.5486679	.6408995	.4200452

#1	5607.455	94398.91	7663.462	4811.069	6898.408
#2	5625.885	93729.88	7620.293	4753.465	6929.277
#3	5633.143	93562.64	7579.847	4764.309	6956.574

Sample Name: CCV02 Acquired: 8/4/2025 13:37:21 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	5.044256	5.116285	5.020518	5.052884	5.066582	10.18681	10.11519
Stddev	.015592	.067535	.013133	.016314	.014483	.01377	.11640
%RSD	.3091018	1.320009	.2615951	.3228559	.2858457	.1351766	1.150732

#1	5.061910	5.135108	5.005984	5.060335	5.079719	10.17451	10.19295
#2	5.038488	5.172412	5.024037	5.064142	5.068976	10.20169	10.17127
#3	5.032369	5.041335	5.031534	5.034175	5.051052	10.18425	9.98137

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2610663	2.531869	25.72237	1.002143	2.522469	1.267525	4.934868
Stddev	.0013740	.004405	.16692	.003233	.003079	.000571	.000966
%RSD	.5263218	.1739712	.6489383	.3226279	.1220718	.0450865	.0195720

#1	.2600335	2.527661	25.65848	1.005869	2.519702	1.267888	4.935685
#2	.2626257	2.531499	25.91180	1.000482	2.521917	1.267822	4.935116
#3	.2605396	2.536447	25.59683	1.000078	2.525786	1.266867	4.933802

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.548653	25.24492	2.527188	1.251122	24.46183	2.539086	2.533969
Stddev	.007732	.05303	.004615	.000631	.06389	.002570	.001798
%RSD	.3033785	.2100778	.1826075	.0504639	.2611892	.1012337	.0709660

#1	2.543944	25.19375	2.522521	1.250645	24.51590	2.536541	2.535326
#2	2.557576	25.29964	2.527296	1.251838	24.39133	2.541681	2.531930
#3	2.544438	25.24137	2.531749	1.250883	24.47826	2.539035	2.534652

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.66047	5.186282	5.146561	5.070777	5.124191	4.849548	4.993434
Stddev	.15460	.020820	.007772	.005410	.024999	.003283	.027321
%RSD	.6269007	.4014352	.1510178	.1066990	.4878598	.0676991	.5471342

#1	24.71121	5.165666	5.155312	5.065078	5.118278	4.853104	4.963558
#2	24.78331	5.207299	5.143909	5.071411	5.151616	4.846633	4.999599
#3	24.48688	5.185882	5.140461	5.075843	5.102678	4.848907	5.017146

Sample Name: CCV02 Acquired: 8/4/2025 13:37:21 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.954045	5.101930	5.122174
Stddev	.011737	.007386	.063459
%RSD	.2369103	.1447663	1.238900

#1	4.955895	5.107153	5.158537
#2	4.964747	5.105158	5.159086
#3	4.941494	5.093480	5.048899

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5387.498	90494.32	7442.399	4583.475	6298.303
Stddev	17.251	597.42	51.959	20.070	23.401
%RSD	.3202043	.6601767	.6981457	.4378860	.3715367

#1	5389.062	90216.92	7444.472	4589.140	6313.019
#2	5403.914	90086.04	7389.435	4561.181	6310.570
#3	5369.519	91180.02	7493.291	4600.105	6271.319

Sample Name: CCB02 Acquired: 8/4/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0002426	.0020982	.0005508	-.002520	-.001671	.0129371	.0084268
Stddev	.0013719	.0011029	.0005188	.001213	.001792	.0071782	.0006792
%RSD	565.3981	52.56566	94.20750	48.11683	107.2375	55.48526	8.060348

#1	.0015292	.0031689	.0011403	-.002599	-.000290	.0160412	.0076773
#2	-.001201	.0009656	.0001634	-.003692	-.001027	.0047293	.0086015
#3	.000400	.0021602	.0003486	-.001270	-.003696	.0180410	.0090017

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000489	.0003023	-.003923	-.001155	.0005064	.0001650	-.004090
Stddev	.0000609	.0000408	.014030	.000219	.0001129	.0004479	.008587
%RSD	124.5203	13.50904	357.6350	18.91904	22.30169	271.4352	209.9306

#1	.0000687	.0003453	-.017812	-.001396	.0003809	.0004576	-.013673
#2	.0000974	.0002640	.010245	-.001101	.0005385	.0003881	-.001505
#3	-.000019	.0002975	-.004202	-.000969	.0005998	-.000351	.002907

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000795	.0053208	.0003540	.0009359	-.056320	.0018674	-.000068
Stddev	.000199	.0150894	.0001507	.0003429	.005396	.0025282	.000182
%RSD	25.08085	283.5952	42.57371	36.63661	9.580137	135.3900	269.3029

#1	-.001025	.0222368	.0005273	.0007602	-.050092	.0008349	.000088
#2	-.000696	-.006753	.0002531	.0013310	-.059597	.0000187	-.000023
#3	-.000665	.000479	.0002816	.0007164	-.059269	.0047484	-.000268

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.020369	-.002453	.0009143	.0002569	.0010473	.0082199	.0045763
Stddev	.022860	.000136	.0003159	.0001483	.0004029	.0146711	.0024293
%RSD	112.2297	5.528355	34.54728	57.72210	38.46808	178.4831	53.08479

#1	-.020269	-.002302	.0012367	.0003235	.0006015	-.008029	.0028336
#2	-.043278	-.002564	.0009007	.0000870	.0011550	.012193	.0035440
#3	.002441	-.002493	.0006054	.0003601	.0013853	.020495	.0073513

Sample Name: CCB02 Acquired: 8/4/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010369	-.001870	.0010538
Stddev	.0012580	.000583	.0000989
%RSD	121.3245	31.17455	9.385509

#1	.0020038	-.001917	.0009588
#2	.0014921	-.002427	.0010466
#3	-.000385	-.001264	.0011562

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5591.497	94016.26	7607.926	4723.208	7099.461
Stddev	11.664	588.89	60.180	32.875	22.858
%RSD	.2086103	.6263738	.7910218	.6960263	.3219640

#1	5578.862	93347.24	7676.802	4687.457	7073.440
#2	5601.855	94456.13	7565.505	4730.029	7116.299
#3	5593.773	94245.42	7581.471	4752.137	7108.644

Sample Name: Q2733-01 Acquired: 8/4/2025 13:45:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003354	.0062572	.0012926	-.009477	.0036121	1.456116
Stddev	.001311	.0017782	.0009404	.002794	.0012204	.004646
%RSD	39.10213	28.41864	72.75187	29.47767	33.78490	.3190758

#1	-.001930	.0052085	.0004814	-.006874	.0048623	1.459817
#2	-.003619	.0052527	.0023234	-.012429	.0024240	1.457630
#3	-.004512	.0083103	.0010731	-.009129	.0035500	1.450902

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4464486	-.000116	-.000200	452.0804	.0035857	.0008364
Stddev	.0011567	.000074	.000155	3.3236	.0002735	.0001942
%RSD	.2590902	63.66906	77.48631	.7351697	7.628440	23.22502

#1	.4451812	-.000143	-.000265	455.5547	.0036259	.0009974
#2	.4467172	-.000032	-.000023	451.7548	.0032943	.0006206
#3	.4474473	-.000172	-.000313	448.9315	.0038369	.0008910

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038320	3.534552	-.001213	.0502651	.0048347	-.000298
Stddev	.0002531	.035492	.000326	.0245856	.0003133	.000610
%RSD	6.603955	1.004141	26.87485	48.91183	6.479904	204.7548

#1	.0036149	3.498232	-.001523	.0281763	.0049904	-.000825
#2	.0041099	3.536270	-.000873	.0767534	.0044741	.000371
#3	.0037712	3.569153	-.001243	.0458656	.0050396	-.000439

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	147.5353	.0056354	.0080425	337.7085	.0715547	.2244317
Stddev	1.5762	.0019054	.0003389	3.9290	.0010680	.0005527
%RSD	1.068382	33.81109	4.213595	1.163443	1.492516	.2462769

#1	146.2158	.0064799	.0084331	334.1859	.0723905	.2240974
#2	147.1092	.0069725	.0078681	336.9938	.0719221	.2241280
#3	149.2807	.0034537	.0078264	341.9458	.0703515	.2250697

Sample Name: Q2733-01 Acquired: 8/4/2025 13:45:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003759	-.015937	9.131645	.0399664	F 245.8212	.2349308
Stddev	.000297	.000446	.070439	.0026525	.2345	.0030963
%RSD	7.903512	2.796297	.7713712	6.636730	.0954004	1.317943

#1	-.003435	-.015968	9.052704	.0385854	245.8674	.2376008
#2	-.003825	-.015476	9.154150	.0430244	246.0293	.2315366
#3	-.004018	-.016366	9.188081	.0382893	245.5671	.2356549

Elem	Sr4077
Units	ppm
Avg	8.288325
Stddev	.111880
%RSD	1.349850

#1	8.389282
#2	8.307652
#3	8.168040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4941.670	82453.68	7532.294	4153.293	5654.118
Stddev	4.095	425.47	49.076	7.557	8.955
%RSD	.0828570	.5160156	.6515460	.1819494	.1583845

#1	4942.911	82940.56	7508.143	4159.003	5650.436
#2	4937.099	82267.15	7499.973	4144.724	5647.589
#3	4945.001	82153.33	7588.766	4156.152	5664.327

Sample Name: Q2733-01DUP Acquired: 8/4/2025 13:50:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001843	.0057335	.0021715	-.008432	.0053262	1.567064
Stddev	.003432	.0013391	.0018827	.002082	.0007475	.013838
%RSD	186.2437	23.35645	86.69866	24.69685	14.03384	.8830547

#1	-.003659	.0041985	.0025383	-.006123	.0045949	1.577483
#2	-.003986	.0066626	.0001324	-.010167	.0052949	1.551363
#3	.002116	.0063394	.0038439	-.009006	.0060888	1.572346

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4796693	-.000175	-.000259	486.0359	.0041227	.0007953
Stddev	.0028301	.000018	.000115	2.6763	.0004762	.0000700
%RSD	.5900036	10.44682	44.23033	.5506436	11.55137	8.803609

#1	.4822736	-.000175	-.000243	489.0781	.0036400	.0007715
#2	.4766576	-.000193	-.000153	484.9854	.0045922	.0008741
#3	.4800767	-.000156	-.000381	484.0442	.0041360	.0007402

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043151	3.679424	-.000800	.0662786	.0052987	-.000166
Stddev	.0002033	.041804	.000377	.0243873	.0003409	.000205
%RSD	4.710226	1.136164	47.15484	36.79517	6.434068	123.4662

#1	.0043576	3.632057	-.001232	.0636478	.0051818	-.000315
#2	.0040940	3.695056	-.000542	.0918748	.0056827	.000068
#3	.0044938	3.711160	-.000625	.0433134	.0050316	-.000251

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.4201	.0066777	.0069822	354.0719	.0740135	.2433133
Stddev	1.6312	.0022608	.0003415	3.1336	.0012054	.0007926
%RSD	1.056313	33.85549	4.890367	.8850084	1.628580	.3257470

#1	152.8955	.0085875	.0066720	351.7314	.0754047	.2424742
#2	154.2245	.0072640	.0069266	352.8524	.0733537	.2434164
#3	156.1402	.0041815	.0073481	357.6318	.0732821	.2440493

Sample Name: Q2733-01DUP Acquired: 8/4/2025 13:50:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003094	-.016084	9.505135	.0435500	F 258.4034	.2590912
Stddev	.000352	.001856	.093528	.0026054	1.3545	.0001554
%RSD	11.36362	11.53780	.9839730	5.982615	.5241983	.0599753

#1	-.002833	-.018224	9.400245	.0406831	258.8708	.2591358
#2	-.003494	-.014921	9.535307	.0441935	259.4624	.2592194
#3	-.002956	-.015107	9.579852	.0457733	256.8771	.2589184

Elem	Sr4077
Units	ppm
Avg	8.988087
Stddev	.127799
%RSD	1.421872

#1	9.100253
#2	9.015050
#3	8.848958

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4961.185	83071.71	7350.325	4187.698	5680.189
Stddev	21.099	95.64	97.682	17.908	27.213
%RSD	.4252829	.1151269	1.328946	.4276454	.4790878

#1	4944.208	83090.30	7250.196	4187.366	5655.741
#2	4954.539	82968.15	7355.419	4205.770	5675.318
#3	4984.806	83156.69	7445.361	4169.958	5709.509

Sample Name: Q2733-01LX5 Acquired: 8/4/2025 13:54:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004085	.0000081	-.001333	-.005440	-.000228	.3574689
Stddev	.002268	.0007315	.001786	.004246	.001135	.0043926
%RSD	55.51791	9031.232	134.0661	78.06237	498.4973	1.228803

#1	-.005200	-.000272	-.000471	-.001380	-.000517	.3538035
#2	-.001475	-.000542	-.003387	-.009851	.001024	.3623378
#3	-.005580	.000838	-.000140	-.005088	-.001190	.3562653

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0928724	-.000035	-.000053	95.24700	-.000519	.0002308
Stddev	.0003646	.000044	.000024	.13345	.000318	.0001447
%RSD	.3926140	128.1297	45.06020	.1401070	61.28591	62.70013

#1	.0929966	.000016	-.000070	95.39968	-.000833	.0000898
#2	.0924620	-.000067	-.000062	95.15263	-.000197	.0002236
#3	.0931588	-.000052	-.000026	95.18869	-.000527	.0003789

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003638	.6867678	-.001425	.0251396	.0009051	.0000407
Stddev	.0004832	.0049870	.000467	.0249113	.0001405	.0001969
%RSD	132.8166	.7261573	32.78794	99.09191	15.51942	483.4069

#1	.0009060	.6906625	-.001122	.0250226	.0007612	.0000406
#2	-.000022	.6811470	-.001963	.0002870	.0010419	-.000156
#3	.000207	.6884937	-.001191	.0501091	.0009120	.000238

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.64293	.0031919	.0003934	63.18962	.0113836	.0446201
Stddev	.25586	.0025054	.0001122	.62037	.0003852	.0002108
%RSD	.9603285	78.49051	28.50963	.9817596	3.383652	.4723272

#1	26.92184	.0004079	.0003598	63.87420	.0113909	.0447174
#2	26.58786	.0039029	.0005185	63.02998	.0117651	.0443783
#3	26.41908	.0052650	.0003019	62.66466	.0109948	.0447646

Sample Name: Q2733-01LX5 Acquired: 8/4/2025 13:54:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003008	-.004089	1.724927	.0051540	F 49.06202	.0605171
Stddev	.000160	.001386	.019956	.0009764	.09234	.0006106
%RSD	5.326751	33.88517	1.156947	18.94477	.1882017	1.008980

#1	-.002963	-.002856	1.747661	.0048940	49.08889	.0606884
#2	-.003186	-.003823	1.716821	.0062341	49.13794	.0598391
#3	-.002875	-.005589	1.710299	.0043339	48.95923	.0610237

Elem	Sr4077
Units	ppm
Avg	1.749234
Stddev	.005718
%RSD	.3269134

#1	1.755347
#2	1.748339
#3	1.744015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5441.609	91856.81	7768.481	4584.876	6440.260
Stddev	13.466	396.22	58.328	21.859	10.191
%RSD	.2474637	.4313440	.7508293	.4767607	.1582413

#1	5426.062	91730.27	7830.154	4572.466	6428.893
#2	5449.153	91539.32	7714.203	4572.048	6443.305
#3	5449.612	92300.84	7761.087	4610.116	6448.581

Sample Name: Q2733-01MS Acquired: 8/4/2025 13:59:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8564153	2.108251	.9632904	2.141653	.8563121	3.597349
Stddev	.0023778	.040875	.0033284	.006793	.0008963	.026710
%RSD	.2776512	1.938820	.3455244	.3171914	.1046637	.7424998

#1	.8536704	2.124423	.9640401	2.133966	.8571967	3.566515
#2	.8577316	2.138567	.9661800	2.146848	.8554046	3.613380
#3	.8578440	2.061765	.9596510	2.144145	.8563350	3.612152

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6716131	.2064881	.2006994	476.2364	.4004350	.2064075
Stddev	.0016544	.0006330	.0008237	8.5526	.0021255	.0005892
%RSD	.2463305	.3065603	.4104303	1.795869	.5308030	.2854596

#1	.6701206	.2071988	.2011911	466.8489	.4010347	.2066855
#2	.6713268	.2062805	.2011586	483.5860	.4021962	.2068063
#3	.6733920	.2059850	.1997484	478.2742	.3980740	.2057307

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3059002	6.667381	.2036410	1.978585	.5174045	.0102513
Stddev	.0007383	.046743	.0007564	.035361	.0016468	.0006481
%RSD	.2413571	.7010628	.3714464	1.787204	.3182735	6.322153

#1	.3065278	6.613413	.2029172	2.014077	.5184943	.0096705
#2	.3060860	6.695017	.2035795	1.943356	.5182091	.0101331
#3	.3050867	6.693714	.2044263	1.978323	.5155101	.0109504

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	151.5442	.3109395	.2275575	351.1976	.3504029	.6609548
Stddev	.6645	.0056745	.0003052	1.6428	.0015488	.0006142
%RSD	.4384565	1.824945	.1341089	.4677581	.4420178	.0929246

#1	150.8252	.3052810	.2272383	349.3354	.3519073	.6612785
#2	151.6717	.3109076	.2275878	351.8160	.3504883	.6602465
#3	152.1356	.3166298	.2278464	352.4414	.3488131	.6613395

Sample Name: Q2733-01MS Acquired: 8/4/2025 13:59:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7157296	.1843642	10.04689	6.260155	F 252.1203	.4550409
Stddev	.0016945	.0016600	.07519	.028497	1.1683	.0010896
%RSD	.2367543	.9003820	.7483638	.4552176	.4633705	.2394440

#1	.7172106	.1825817	9.97325	6.290771	252.9685	.4562947
#2	.7160965	.1858657	10.04387	6.255292	252.6045	.4545042
#3	.7138817	.1846453	10.12354	6.234402	250.7878	.4543238

Elem	Sr4077
Units	ppm
Avg	8.858492
Stddev	.049109
%RSD	.5543757

#1	8.848937
#2	8.911676
#3	8.814862

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5043.301	84952.75	7461.725	4244.126	5777.780
Stddev	8.497	190.76	9.669	8.294	10.902
%RSD	.1684871	.2245430	.1295820	.1954213	.1886869

#1	5035.473	85140.82	7451.089	4237.742	5773.831
#2	5042.092	84759.41	7464.100	4241.136	5769.403
#3	5052.338	84958.01	7469.985	4253.501	5790.106

Sample Name: Q2733-01MSD Acquired: 8/4/2025 14:03:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8680847	2.181309	.9674129	2.184958	.8768451	3.520964
Stddev	.0052299	.013068	.0046492	.006835	.0004627	.011149
%RSD	.6024704	.5990771	.4805778	.3128251	.0527625	.3166446

#1	.8740424	2.181730	.9727526	2.190869	.8765831	3.513891
#2	.8642501	2.194160	.9652234	2.186531	.8773793	3.515185
#3	.8659618	2.168035	.9642627	2.177474	.8765729	3.533816

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6501589	.2046529	.2022542	447.7161	.4061083	.2082404
Stddev	.0013707	.0018228	.0008302	1.4943	.0006046	.0006613
%RSD	.2108291	.8906700	.4104842	.3337513	.1488776	.3175818

#1	.6493103	.2066866	.2032072	449.4062	.4056820	.2088904
#2	.6494262	.2041059	.2016880	447.1721	.4058427	.2082626
#3	.6517403	.2031662	.2018674	446.5701	.4068002	.2075683

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3079170	6.615606	.2072884	2.002357	.5213830	.0153682
Stddev	.0012131	.060099	.0006500	.022356	.0026973	.0006088
%RSD	.3939559	.9084357	.3135694	1.116501	.5173440	3.961756

#1	.3093079	6.565363	.2079968	2.028171	.5242844	.0150812
#2	.3070777	6.599272	.2067195	1.989651	.5189514	.0160675
#3	.3073655	6.682183	.2071488	1.989250	.5209134	.0149559

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.1260	.3203813	.2280418	332.1506	.3439351	.6637899
Stddev	1.3279	.0020540	.0005057	2.5109	.0041643	.0025473
%RSD	.9278139	.6411220	.2217712	.7559423	1.210789	.3837529

#1	141.7753	.3184713	.2276957	329.8573	.3485378	.6665756
#2	143.1726	.3225541	.2278075	331.7610	.3428389	.6632147
#3	144.4300	.3201186	.2286222	334.8335	.3404284	.6615793

Sample Name: Q2733-01MSD Acquired: 8/4/2025 14:03:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7269146	.1906587	9.607449	6.218804	F 236.2907	.4423169
Stddev	.0019167	.0010143	.097809	.034505	.7981	.0006849
%RSD	.2636784	.5320057	1.018053	.5548521	.3377423	.1548379

#1	.7288957	.1908785	9.501292	6.245637	237.0607	.4425596
#2	.7267786	.1915452	9.627142	6.230895	236.3441	.4415438
#3	.7250695	.1895526	9.693913	6.179881	235.4673	.4428474

Elem	Sr4077
Units	ppm
Avg	8.346451
Stddev	.072954
%RSD	.8740726

#1	8.420483
#2	8.344247
#3	8.274625

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5092.954	86154.27	7639.410	4283.724	5855.309
Stddev	18.370	29.80	63.609	14.359	15.955
%RSD	.3606903	.0345838	.8326461	.3352079	.2724910

#1	5072.428	86121.64	7572.473	4300.300	5836.890
#2	5098.583	86161.16	7646.692	4275.088	5864.142
#3	5107.850	86180.03	7699.065	4275.784	5864.894

Sample Name: Q2733-01A Acquired: 8/4/2025 14:07:39 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8762060	2.147820	.9786462	2.212129	.8671257	3.572830
Stddev	.0040190	.036001	.0035518	.004924	.0010622	.020453
%RSD	.4586804	1.676163	.3629323	.2225901	.1224936	.5724569

#1	.8716634	2.189382	.9749349	2.216230	.8659476	3.596424
#2	.8792993	2.126353	.9820136	2.206668	.8680103	3.560130
#3	.8776553	2.127723	.9789902	2.213489	.8674192	3.561936

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6689524	.2026647	.2036042	465.2209	.4031477	.2097631
Stddev	.0021044	.0021250	.0005351	1.4823	.0021154	.0006080
%RSD	.3145775	1.048552	.2627904	.3186140	.5247160	.2898395

#1	.6707758	.2048528	.2030241	466.9232	.4013899	.2095729
#2	.6666497	.2006089	.2037103	464.5239	.4054954	.2092730
#3	.6694316	.2025326	.2040783	464.2157	.4025576	.2104435

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3102882	6.779218	.2052690	1.963455	.5261953	.0738947
Stddev	.0007535	.101382	.0000601	.012236	.0017509	.0017750
%RSD	.2428501	1.495486	.0292690	.6231807	.3327508	2.402076

#1	.3095786	6.662917	.2052348	1.955462	.5242181	.0731323
#2	.3110791	6.848942	.2052337	1.977541	.5268185	.0759235
#3	.3102068	6.825795	.2053383	1.957361	.5275494	.0726283

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	150.8594	.3168698	.2311539	349.1856	.3447544	.6697015
Stddev	2.0656	.0015168	.0011646	4.2646	.0040095	.0002285
%RSD	1.369247	.4786883	.5038328	1.221289	1.163010	.0341222

#1	148.4784	.3179352	.2298338	344.2987	.3489879	.6695170
#2	152.1724	.3151332	.2315918	352.1539	.3410145	.6696304
#3	151.9274	.3175410	.2320362	351.1041	.3442608	.6699571

Sample Name: Q2733-01A Acquired: 8/4/2025 14:07:39 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7231939	.1864815	10.18114	6.261934	F 248.5081	.4494269
Stddev	.0024484	.0011467	.13842	.015678	.6945	.0035911
%RSD	.3385522	.6149224	1.359583	.2503705	.2794588	.7990493
#1	.7204144	.1854002	10.02132	6.254948	249.1370	.4526657
#2	.7241362	.1863603	10.26283	6.279891	247.7627	.4455650
#3	.7250312	.1876840	10.25927	6.250964	248.6245	.4500500

Elem	Sr4077
Units	ppm
Avg	8.733306
Stddev	.083482
%RSD	.9559086
#1	8.761565
#2	8.639362
#3	8.798992

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5042.311	86020.00	7689.699	4262.086	5782.448
Stddev	8.280	600.52	62.126	28.873	12.888
%RSD	.1642190	.6981174	.8079167	.6774437	.2228870
#1	5050.592	86713.04	7621.794	4294.832	5797.199
#2	5034.031	85653.55	7743.685	4240.286	5773.366
#3	5042.310	85693.40	7703.619	4251.141	5776.779

Sample Name: Q2742-01 Acquired: 8/4/2025 14:12:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003829	.0027149	.0005902	-.005823	.0012084	.1569377
Stddev	.001987	.0013993	.0003238	.001565	.0014805	.0086528
%RSD	51.90592	51.53909	54.87340	26.87025	122.5180	5.513504

#1	-.006018	.0042039	.0009597	-.007024	.0010737	.1595328
#2	-.002139	.0014272	.0003561	-.004054	-.000200	.1472844
#3	-.003330	.0025136	.0004546	-.006390	.002752	.1639960

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1501213	-.000146	-.000094	234.5109	-.000005	.0001961
Stddev	.0004076	.000018	.000052	1.3696	.000140	.0001436
%RSD	.2715000	12.07184	55.47557	.5840102	2893.416	73.23041

#1	.1502720	-.000166	-.000102	233.0837	-.000066	.0002865
#2	.1496599	-.000138	-.000142	235.8144	.000156	.0000305
#3	.1504322	-.000134	-.000039	234.6346	-.000104	.0002712

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086836	1.198664	.0277668	74.44869	.0040542	.0003586
Stddev	.0002244	.006182	.0003534	.20318	.0005060	.0001538
%RSD	2.583661	.5157244	1.272730	.2729063	12.47987	42.88272

#1	.0086776	1.203960	.0281748	74.31527	.0042858	.0005358
#2	.0089109	1.200161	.0275701	74.68252	.0044028	.0002802
#3	.0084623	1.191871	.0275555	74.34829	.0034739	.0002598

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	541.9473	.0026669	.0599476	12.06578	.0551459	.0039661
Stddev	1.9249	.0022906	.0000886	.03969	.0005449	.0002668
%RSD	.3551783	85.89037	.1477246	.3289421	.9881114	6.726100

#1	540.4299	.0004569	.0600273	12.03494	.0546895	.0042730
#2	541.2995	.0050304	.0598523	12.05184	.0549990	.0038365
#3	544.1125	.0025135	.0599632	12.11056	.0557491	.0037890

Sample Name: Q2742-01 Acquired: 8/4/2025 14:12:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247877	-.009017	F 16.53599	.0145435	19.60802	.0176859
Stddev	.0012398	.000867	.05885	.0027977	.10226	.0019158
%RSD	5.001820	9.617379	.3558782	19.23713	.5215424	10.83229

#1	.0241425	-.009688	16.60386	.0127847	19.55489	.0166961
#2	.0240034	-.008038	16.49929	.0130761	19.54325	.0198941
#3	.0262171	-.009325	16.50480	.0177697	19.72591	.0164675

Elem	Sr4077
Units	ppm
Avg	.4803802
Stddev	.0011252
%RSD	.2342226

#1	.4790810
#2	.4810354
#3	.4810241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5035.314	85379.42	7813.944	4273.637	5753.955
Stddev	17.362	277.87	42.923	26.623	20.518
%RSD	.3448139	.3254498	.5493175	.6229493	.3565844

#1	5055.113	85379.82	7853.037	4242.905	5777.331
#2	5022.682	85101.35	7768.012	4289.653	5738.929
#3	5028.147	85657.08	7820.785	4288.353	5745.606

Sample Name: Q2734-01 Acquired: 8/4/2025 14:17:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0798964	-.027845	1.132288	-.003430	-.013693	131.6035	.9531233
Stddev	.0001153	.001210	.002794	.000649	.001298	.2110	.0014280
%RSD	.1442630	4.345557	.2467501	18.92314	9.481033	.1603088	.1498221

#1	.0798586	-.028193	1.135501	-.003509	-.012504	131.4614	.9530721
#2	.0800258	-.026499	1.130935	-.004036	-.015078	131.5032	.9517216
#3	.0798048	-.028843	1.130428	-.002745	-.013497	131.8459	.9545762

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106720	.0079528	80.41663	.1867926	.1394471	1.276279	229.1042
Stddev	.0000693	.0002242	.36337	.0012317	.0002315	.001499	1.8749
%RSD	.6490685	2.819126	.4518574	.6593887	.1659826	.1174764	.8183584

#1	.0107312	.0079497	80.28163	.1854160	.1396941	1.275690	230.2377
#2	.0105958	.0077302	80.14008	.1877905	.1394120	1.277983	230.1348
#3	.0106890	.0081786	80.82818	.1871714	.1392352	1.275163	226.9401

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.755149	63.09698	.3488094	.0056684	6.748539	.3631217	1.206606
Stddev	.011912	.09068	.0001957	.0008064	.087090	.0044570	.001747
%RSD	.2069856	.1437118	.0560898	14.22674	1.290508	1.227418	.1447646

#1	5.753457	63.17454	.3487963	.0064049	6.812409	.3675342	1.205373
#2	5.744174	63.11911	.3490113	.0057937	6.783875	.3586214	1.205840
#3	5.767817	62.99728	.3486206	.0048067	6.649335	.3632095	1.208605

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23257	.3168342	.0051675	.0979991	3.559032	6.254461	6.082272
Stddev	.04288	.0069504	.0003498	.0009031	.018048	.056001	.035547
%RSD	.4190099	2.193698	6.768614	.9215328	.5071159	.8953772	.5844287

#1	10.27732	.3219722	.0050273	.0970356	3.561573	6.227250	6.049154
#2	10.22854	.3196046	.0049096	.0988263	3.539848	6.318868	6.119830
#3	10.19185	.3089259	.0055656	.0981352	3.575676	6.217265	6.077833

Sample Name: Q2734-01 Acquired: 8/4/2025 14:17:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.557539	.2133904	.1112267
Stddev	.012578	.0031538	.0024963
%RSD	.4917957	1.477956	2.244336
#1	2.544371	.2159074	.1104723
#2	2.558819	.2098526	.1091946
#3	2.569428	.2144111	.1140132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6211.726	106302.4	8968.099	5286.772	6202.215
Stddev	13.513	181.0	91.082	18.882	13.533
%RSD	.2175479	.1702361	1.015619	.3571638	.2181926
#1	6209.704	106507.8	9037.396	5272.379	6208.692
#2	6199.337	106166.4	9001.964	5308.152	6186.661
#3	6226.137	106233.0	8864.935	5279.785	6211.292

Sample Name: Q2741-01 Acquired: 8/4/2025 14:21:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0681009	-.025500	.1910103	-.000839	-.011622	75.61708	.5076491
Stddev	.0008846	.001116	.0029728	.001295	.002947	.07632	.0007040
%RSD	1.298917	4.376894	1.556375	154.3512	25.35986	.1009300	.1386740

#1	.0686174	-.024476	.1944256	.000239	-.014637	75.58746	.5083488
#2	.0670795	-.025336	.1890033	-.000481	-.008748	75.70377	.5069409
#3	.0686057	-.026690	.1896019	-.002276	-.011481	75.56001	.5076575

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075302	.0002605	138.8727	.1538403	.0807967	.2194822	171.3996
Stddev	.0000995	.0002223	.2685	.0005700	.0002093	.0015022	1.7433
%RSD	1.321734	85.33349	.1933536	.3705323	.2590934	.6844265	1.017111

#1	.0074267	.0002284	139.1740	.1531951	.0810316	.2210594	171.3749
#2	.0076252	.0004971	138.7851	.1540502	.0806298	.2180684	169.6687
#3	.0075389	.0000560	138.6589	.1542757	.0807289	.2193189	173.1551

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.814079	53.13684	.1529534	.0031652	3.263760	.2653356	.5830677
Stddev	.002249	.16583	.0006261	.0003081	.057617	.0024855	.0013303
%RSD	.0589751	.3120809	.4093256	9.735655	1.765362	.9367543	.2281466

#1	3.816606	52.99501	.1531781	.0031532	3.256819	.2625192	.5844327
#2	3.812294	53.31917	.1522460	.0028632	3.209928	.2662653	.5829952
#3	3.813338	53.09635	.1534361	.0034791	3.324534	.2672223	.5817752

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.09051	.0416428	.0111158	.0146932	2.051517	7.318589	3.421180
Stddev	.11521	.0128555	.0000792	.0003642	.018389	.298794	.016390
%RSD	.9529128	30.87093	.7126885	2.478832	.8963554	4.082670	.4790820

#1	12.08541	.0408347	.0111777	.0151049	2.048292	7.051662	3.439776
#2	11.97793	.0292104	.0110265	.0144130	2.071305	7.262739	3.414929
#3	12.20819	.0548833	.0111432	.0145615	2.034954	7.641368	3.408835

Sample Name: Q2741-01 Acquired: 8/4/2025 14:21:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.220330	.1361378	.7797567
Stddev	.021679	.0005093	.0028634
%RSD	.3485178	.3741157	.3672229
#1	6.239478	.1355558	.7816136
#2	6.196792	.1363550	.7811976
#3	6.224720	.1365024	.7764590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5778.546	98620.54	8318.733	4880.539	6206.342
Stddev	18.266	152.21	82.825	2.546	9.745
%RSD	.3161088	.1543383	.9956419	.0521643	.1570197
#1	5763.928	98739.45	8321.042	4878.419	6195.188
#2	5799.023	98673.17	8234.777	4879.835	6213.208
#3	5772.687	98449.00	8400.379	4883.362	6210.630

Sample Name: Q2743-01 Acquired: 8/4/2025 14:25:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2026312	-.021863	11.05358	.0012240	.0029486	114.5813
Stddev	.0008695	.002633	.03623	.0033835	.0012670	.3464
%RSD	.4291005	12.04550	.3277347	276.4349	42.96997	.3023451

#1	.2031049	-.023499	11.02609	.0041927	.0028075	114.9373
#2	.2031609	-.023264	11.04002	-.002460	.0042802	114.5611
#3	.2016277	-.018825	11.09463	.001939	.0017580	114.2453

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.051799	.0106260	.0135543	325.8345	.2291957	.1074341
Stddev	.009883	.0001460	.0000165	1.0513	.0011899	.0002892
%RSD	.2439204	1.374040	.1219515	.3226369	.5191796	.2692226

#1	4.061074	.0106950	.0135724	326.9974	.2305177	.1074033
#2	4.052921	.0107247	.0135401	324.9514	.2288590	.1071615
#3	4.041403	.0104583	.0135503	325.5548	.2282103	.1077375

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.634524	193.1793	2.645489	71.86863	.2834584	.0153154
Stddev	.009388	1.6399	.007431	.32162	.0014029	.0008697
%RSD	.3563613	.8488790	.2808901	.4475139	.4949043	5.678928

#1	2.628278	192.1179	2.653839	72.22737	.2826532	.0143156
#2	2.629973	192.3520	2.643028	71.77246	.2826437	.0157329
#3	2.645320	195.0680	2.639601	71.60607	.2850782	.0158976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.580323	.3506352	4.457690	11.73480	.0833784	.0166948
Stddev	.029356	.0021633	.008676	.11019	.0110878	.0000413
%RSD	.6409177	.6169667	.1946347	.9390061	13.29818	.2474628

#1	4.584635	.3483125	4.463668	11.66759	.0715330	.0166478
#2	4.549049	.3510006	4.461662	11.67483	.0850934	.0167110
#3	4.607285	.3525925	4.447738	11.86196	.0935088	.0167256

Sample Name: Q2743-01 Acquired: 8/4/2025 14:25:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6490466	3.579469	F 21.85182	F 22.50887	6.010009	.2048905
Stddev	.0013743	.016668	.24991	.01308	.017774	.0030687
%RSD	.2117438	.4656481	1.143672	.0580957	.2957474	1.497740

#1	.6474609	3.580140	21.90387	22.52372	5.991119	.2026501
#2	.6497847	3.562476	21.57999	22.49910	6.012506	.2083882
#3	.6498940	3.595791	22.07162	22.50379	6.026404	.2036332

Elem	Sr4077
Units	ppm
Avg	2.013551
Stddev	.019468
%RSD	.9668285

#1	2.029163
#2	2.019751
#3	1.991738

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6039.484	102811.6	9178.543	5073.206	5946.380
Stddev	6.923	371.4	72.605	12.289	11.572
%RSD	.1146231	.3612195	.7910249	.2422269	.1946122

#1	6045.739	102785.7	9099.081	5080.788	5955.988
#2	6040.667	103195.2	9195.130	5079.802	5949.617
#3	6032.046	102453.8	9241.420	5059.028	5933.533

Sample Name: CCV03 Acquired: 8/4/2025 14:43:24 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.887699	5.424548	4.644272	5.051938	4.993085	9.425452
Stddev	.024410	.082576	.021580	.010807	.019201	.115874
%RSD	.4994087	1.522260	.4646609	.2139268	.3845526	1.229377

#1	4.865246	5.334771	4.630106	5.041593	4.985627	9.556688
#2	4.884169	5.497254	4.633601	5.051065	4.978733	9.382411
#3	4.913681	5.441620	4.669109	5.063155	5.014897	9.337257

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.740061	.2356263	2.306539	24.44081	.9069431	2.322529
Stddev	.119433	.0029379	.010066	.25087	.0049643	.010310
%RSD	1.226209	1.246855	.4364174	1.026428	.5473644	.4439102

#1	9.875268	.2390158	2.297734	24.72659	.9067920	2.315145
#2	9.648928	.2340527	2.304370	24.25690	.9119812	2.318134
#3	9.695988	.2338104	2.317513	24.33895	.9020561	2.334308

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.187689	4.988521	2.403007	22.99524	2.329188	1.212028
Stddev	.004736	.014062	.022408	.31344	.009781	.000215
%RSD	.3987208	.2818931	.9325186	1.363065	.4199135	.0177035

#1	1.185105	4.972631	2.428860	23.34617	2.322664	1.212180
#2	1.184808	4.993571	2.391006	22.89644	2.324467	1.211782
#3	1.193155	4.999361	2.389154	22.74310	2.340434	1.212121

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.59068	2.376575	2.552583	25.11571	4.755081	4.882919
Stddev	.01375	.032911	.003936	.05451	.067555	.017458
%RSD	.0582752	1.384798	.1541831	.2170433	1.420688	.3575417

#1	23.57485	2.413406	2.554993	25.05370	4.831805	4.870671
#2	23.59761	2.366268	2.554714	25.13733	4.728914	4.875177
#3	23.59958	2.350052	2.548041	25.15609	4.704524	4.902910

Sample Name: CCV03 Acquired: 8/4/2025 14:43:24 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.692204	4.907049	4.876584	F 4.416047	4.791513	4.584649
Stddev	.019448	.051800	.003399	.019544	.017386	.062031
%RSD	.4144782	1.055622	.0697024	.4425691	.3628398	1.353019

#1	4.672929	4.966740	4.874046	4.399414	4.774433	4.651243
#2	4.691863	4.873900	4.875260	4.411154	4.790919	4.574198
#3	4.711821	4.880506	4.880446	4.437572	4.809189	4.528508

Elem	Sr4077
Units	ppm
Avg	4.813588
Stddev	.049043
%RSD	1.018843

#1	4.869818
#2	4.791292
#3	4.779654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5538.849	93952.66	8304.604	4615.462	6601.219
Stddev	15.889	136.99	104.805	9.723	13.484
%RSD	.2868593	.1458127	1.262013	.2106521	.2042622

#1	5536.420	94078.53	8187.206	4617.776	6606.976
#2	5555.813	93806.75	8337.861	4623.819	6610.869
#3	5524.315	93972.72	8388.746	4604.791	6585.812

Sample Name: CCB03 Acquired: 8/4/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	-.001004	-.002587	-.000449	-.002294	-.001972	.0103815	-.001047
Stddev	.001876	.001908	.000428	.002167	.001482	.0075638	.000294
%RSD	186.8362	73.76854	95.34063	94.44399	75.16611	72.85841	28.10387

#1	.000015	-.001550	-.000692	-.004779	-.002488	.0154775	-.001347
#2	.000141	-.001422	-.000700	-.000798	-.000301	.0016907	-.001035
#3	-.003169	-.004789	.000045	-.001305	-.003127	.0139763	-.000759

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000011	.0001790	.0107735	-.001616	.0003821	.0000369	-.003017
Stddev	.0000426	.0000059	.0102869	.000435	.0001537	.0002036	.004215
%RSD	4020.786	3.275910	95.48322	26.90498	40.22742	550.9103	139.6932

#1	-.000011	.0001724	.0191212	-.001115	.0002462	-.000198	-.004511
#2	.000048	.0001813	.0139181	-.001831	.0005489	.000168	-.006282
#3	-.000034	.0001835	-.000719	-.001900	.0003512	.000140	.001741

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001003	.0409153	.0002490	.0003119	.0893059	.0013942	-.000553
Stddev	.000362	.0306196	.0001906	.0003427	.0109424	.0024088	.000152
%RSD	36.07911	74.83658	76.53609	109.8619	12.25273	172.7769	27.43109

#1	-.000969	.0186428	.0004563	.0002871	.1011304	.0032729	-.000472
#2	-.000660	.0758320	.0000813	-.000018	.0795372	-.001321	-.000727
#3	-.001381	.0282711	.0002094	.000666	.0872501	.002231	-.000459

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2938677	-.002224	.0005655	-.000138	.0000446	.0038449	.0073822
Stddev	.0216567	.000710	.0004134	.000467	.0019057	.0047645	.0016628
%RSD	7.369537	31.93202	73.09943	337.7094	4270.500	123.9160	22.52432

#1	.2786912	-.001437	.0006482	-.000243	.0021869	.0014573	.0081408
#2	.3186684	-.002417	.0001171	.000372	-.000591	.0007464	.0054754
#3	.2842437	-.002817	.0009314	-.000544	-.001462	.0093311	.0085303

Sample Name: CCB03 Acquired: 8/4/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0063128	F -.010474	.0001927
Stddev	.0013811	.004020	.0000176
%RSD	21.87798	38.38015	9.108911

#1	.0078797	-.014620	.0002069
#2	.0052726	-.006593	.0001731
#3	.0057859	-.010211	.0001981

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5731.640	97444.49	8295.522	4770.804	7438.205
Stddev	5.190	212.63	29.327	14.947	14.198
%RSD	.0905518	.2182057	.3535267	.3133113	.1908764

#1	5725.882	97362.34	8311.979	4780.745	7430.057
#2	5735.957	97685.94	8312.925	4778.053	7454.599
#3	5733.082	97285.20	8261.663	4753.615	7429.959

Sample Name: Q2753-01 Acquired: 8/4/2025 14:58:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0957210	-.004256	.7666531	-.010024	.0012154	174.9108	1.539126
Stddev	.0040433	.001646	.0008593	.003657	.0028492	.1555	.001781
%RSD	4.224063	38.67491	.1120788	36.48494	234.4292	.0888837	.1157141

#1	.1003678	-.002387	.7665876	-.010810	.0031000	174.9577	1.541058
#2	.0937892	-.004889	.7658284	-.006037	.0026086	175.0375	1.537549
#3	.0930059	-.005492	.7675432	-.013224	-.002062	174.7373	1.538771

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117925	.0121572	561.4770	3.737702	.2223763	.8773246	356.7957
Stddev	.0001079	.0000859	3.5500	.003964	.0005678	.0034433	.7094
%RSD	.9151479	.7064084	.6322654	.1060598	.2553487	.3924819	.1988140

#1	.0116802	.0120800	557.3917	3.733133	.2218627	.8748547	357.2673
#2	.0118020	.0121418	563.2272	3.740228	.2222800	.8758613	355.9799
#3	.0118954	.0122497	563.8121	3.739746	.2229861	.8812580	357.1400

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.509101	340.4060	.5029179	.0151111	31.37846	.7742756	1.754994
Stddev	.003508	.5521	.0021371	.0009541	.08208	.0030365	.008721
%RSD	.0636780	.1621880	.4249424	6.313765	.2615754	.3921789	.4969513

#1	5.511266	340.3437	.5020356	.0148015	31.47293	.7749904	1.764676
#2	5.505053	340.9866	.5013631	.0143503	31.33778	.7768910	1.752555
#3	5.510983	339.8877	.5053549	.0161816	31.32467	.7709455	1.747752

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.51879	.4215986	.0160442	.0733122	12.55244	12.19184	13.41759
Stddev	.19889	.0027359	.0001649	.0009126	.03157	.12908	.07075
%RSD	.5163329	.6489444	1.027521	1.244809	.2515169	1.058730	.5272572

#1	38.70160	.4215592	.0162331	.0730274	12.55815	12.09925	13.38068
#2	38.30701	.4188826	.0159294	.0743332	12.51840	12.13700	13.37292
#3	38.54777	.4243541	.0159700	.0725759	12.58076	12.33929	13.49915

Sample Name: Q2753-01 Acquired: 8/4/2025 14:58:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	19.05323	.2831442	2.239012
Stddev	.10985	.0060079	.014626
%RSD	.5765624	2.121834	.6532305
#1	19.01812	.2890873	2.255472
#2	18.96523	.2770737	2.234054
#3	19.17635	.2832715	2.227509

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5895.692	103691.4	9773.511	5008.856	5434.167
Stddev	13.670	187.5	43.537	22.615	16.037
%RSD	.2318641	.1808409	.4454588	.4515067	.2951130
#1	5907.773	103753.4	9814.827	4987.709	5444.269
#2	5898.450	103480.8	9728.050	5006.162	5442.556
#3	5880.854	103840.1	9777.656	5032.698	5415.675

Sample Name: Q2758-01 Acquired: 8/4/2025 15:03:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2138828	-.050440	8.279147	.0103532	.0744110	91.94769	3.472369
Stddev	.0013945	.003615	.010021	.0012284	.0032474	.31337	.012367
%RSD	.6519746	7.166020	.1210343	11.86522	4.364170	.3408118	.3561529

#1	.2123925	-.053493	8.276583	.0097794	.0747976	92.17046	3.479951
#2	.2151560	-.046449	8.270656	.0095166	.0774479	91.58936	3.458099
#3	.2140999	-.051377	8.290200	.0117635	.0709876	92.08325	3.479058

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0109097	.0481277	57.85778	.2908835	.1217018	2.720003	354.8127
Stddev	.0000748	.0002363	.29096	.0008488	.0003324	.004216	1.1896
%RSD	.6859979	.4908948	.5028959	.2918113	.2731713	.1550159	.3352722

#1	.0109223	.0478554	57.93680	.2902078	.1214083	2.717475	356.1526
#2	.0109774	.0482495	57.53547	.2906064	.1216342	2.717664	353.8806
#3	.0108293	.0482782	58.10108	.2918363	.1220629	2.724870	354.4050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.701109	27.84784	.5878527	.0787748	3.404661	.3960250	8.405977
Stddev	.021618	.06079	.0003514	.0007075	.012147	.0011824	.020848
%RSD	.4598414	.2182775	.0597842	.8981748	.3567727	.2985710	.2480139

#1	4.714605	27.89761	.5880813	.0794331	3.412447	.3972315	8.415380
#2	4.676175	27.78009	.5874480	.0780266	3.410870	.3959754	8.382084
#3	4.712545	27.86583	.5880287	.0788646	3.390664	.3948683	8.420468

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.40596	.1059254	.0389463	1.545463	2.953953	6.218144	10.15438
Stddev	.05764	.0097593	.0002101	.001353	.017344	.171672	.00648
%RSD	.5538797	9.213403	.5395273	.0875426	.5871363	2.760818	.0638422

#1	10.44300	.1156661	.0387087	1.543947	2.973848	6.397491	10.15385
#2	10.33955	.1059625	.0391077	1.545894	2.942019	6.055346	10.14818
#3	10.43531	.0961475	.0390226	1.546548	2.945993	6.201597	10.16112

Sample Name: Q2758-01 Acquired: 8/4/2025 15:03:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.636914	.1650970	.0651473
Stddev	.021434	.0005581	.0012892
%RSD	.2481662	.3380403	1.978847
#1	8.619462	.1645293	.0655420
#2	8.630442	.1656450	.0637069
#3	8.660838	.1651167	.0661929

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6292.784	109018.8	9864.917	5300.934	6470.275
Stddev	4.973	193.7	24.057	12.943	6.848
%RSD	.0790330	.1776579	.2438644	.2441669	.1058446
#1	6296.336	108797.6	9866.941	5286.706	6470.517
#2	6294.916	109157.6	9887.898	5312.009	6476.999
#3	6287.100	109101.3	9839.912	5304.087	6463.308

Sample Name: PB169096BL Acquired: 8/4/2025 15:07:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001977	-.002884	-.000528	-.001637	-.004900	.0016097	-.002680
Stddev	.000199	.000864	.000213	.001361	.001796	.0060949	.000517
%RSD	10.08525	29.96950	40.24217	83.11953	36.65833	378.6391	19.29425

#1	-.001844	-.003316	-.000772	-.002080	-.006351	.0085141	-.002666
#2	-.002206	-.003448	-.000387	-.002722	-.002891	-.000662	-.003203
#3	-.001880	-.001889	-.000425	-.000110	-.005457	-.003023	-.002170

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000152	-.000001	.0023385	-.001615	.0002250	-.000264	-.003889
Stddev	.0000885	.000041	.0078937	.000068	.0001255	.000364	.001157
%RSD	584.1273	3902.284	337.5518	4.213027	55.76938	138.0304	29.74646

#1	-.000083	.000044	.0086970	-.001687	.0002763	-.000683	-.005140
#2	.000089	-.000011	.0048150	-.001552	.0000820	-.000031	-.002858
#3	.000039	-.000036	-.006496	-.001605	.0003166	-.000077	-.003670

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001492	.0096601	.0001442	.0006806	.1597940	-.001237	-.001059
Stddev	.000337	.0066017	.0002597	.0004293	.0124086	.002326	.000295
%RSD	22.55678	68.33944	180.1316	63.07156	7.765366	188.0753	27.87411

#1	-.001134	.0078317	-.000113	.0004680	.1521892	.001441	-.001389
#2	-.001801	.0169833	.000139	.0011747	.1530799	-.002759	-.000967
#3	-.001541	.0041654	.000406	.0003991	.1741130	-.002393	-.000821

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3615645	-.005016	-.000156	-.000963	-.000403	-.006997	.0043014
Stddev	.0385000	.000976	.000114	.000449	.000901	.016283	.0019691
%RSD	10.64816	19.46754	72.94046	46.59433	223.6372	232.7036	45.77687

#1	.4054588	-.004498	-.000198	-.001450	-.000248	-.025145	.0020901
#2	.3335167	-.006142	-.000027	-.000566	.000411	.006337	.0049491
#3	.3457181	-.004407	-.000243	-.000873	-.001371	-.002185	.0058650

Sample Name: PB169096BL Acquired: 8/4/2025 15:07:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0052634	-.004898	-.000125
Stddev	.0012532	.001441	.000050
%RSD	23.81049	29.42826	40.09690

#1	.0045169	-.005395	-.000140
#2	.0045630	-.003274	-.000166
#3	.0067102	-.006026	-.000069

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5845.319	101785.1	8372.885	4958.919	7527.062
Stddev	11.689	286.8	21.823	31.698	16.352
%RSD	.1999767	.2817397	.2606344	.6392020	.2172409

#1	5848.584	101883.8	8397.556	4988.710	7525.701
#2	5855.029	102009.5	8364.988	4962.438	7544.052
#3	5832.345	101462.0	8356.109	4925.608	7511.434

Sample Name: Q2740-01 Acquired: 8/4/2025 15:15:29 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0601583	-.021496	.2850456	.0005846	-.015433	114.0077	.4989343
Stddev	.0008284	.003026	.0010466	.0020494	.001770	1.8975	.0081146
%RSD	1.377101	14.07479	.3671570	350.5650	11.47021	1.664392	1.626386

#1	.0608918	-.024977	.2848814	.0013865	-.016836	111.8576	.4897999
#2	.0592597	-.019498	.2840908	-.001744	-.016017	115.4480	.5053095
#3	.0603233	-.020014	.2861646	.002112	-.013444	114.7174	.5016936

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079424	.0013461	40.88128	.1453248	.0899992	.2431471	214.9471
Stddev	.0002341	.0002118	.69675	.0007582	.0001543	.0013621	1.0361
%RSD	2.947739	15.73117	1.704320	.5217509	.1713981	.5601883	.4820197

#1	.0076868	.0013432	40.07957	.1457745	.0900391	.2425425	215.2571
#2	.0081464	.0011358	41.34052	.1444494	.0898289	.2421919	215.7927
#3	.0079939	.0015593	41.22374	.1457506	.0901295	.2447068	213.7913

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.343718	40.68533	.1619377	.0076301	7.495061	.3018671	.5267707
Stddev	.058923	.69786	.0005233	.0010430	.051692	.0034467	.0017169
%RSD	1.762204	1.715252	.3231413	13.66965	.6896861	1.141801	.3259214

#1	3.275912	39.88284	.1622128	.0075574	7.523675	.2980727	.5286984
#2	3.382482	41.14986	.1613342	.0087075	7.526119	.3027241	.5254060
#3	3.372762	41.02330	.1622660	.0066253	7.435388	.3048045	.5262078

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.445972	.0935112	.0036873	.0157001	2.927158	8.342020	5.966076
Stddev	.088848	.0111795	.0000870	.0007995	.030667	.313479	.031427
%RSD	1.051960	11.95525	2.360571	5.092213	1.047678	3.757835	.5267574

#1	8.506332	.1045237	.0035868	.0165697	2.891898	8.331193	5.963218
#2	8.487636	.0938381	.0037341	.0155337	2.947624	8.660773	5.936176
#3	8.343948	.0821719	.0037409	.0149970	2.941952	8.034095	5.998834

Sample Name: Q2740-01 Acquired: 8/4/2025 15:15:29 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.694316	.1179152	-.095517
Stddev	.015477	.0033121	.002147
%RSD	.5744229	2.808904	2.247765
#1	2.707911	.1144568	-.097787
#2	2.677473	.1182301	-.095243
#3	2.697564	.1210586	-.093520

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6422.091	111158.3	10000.67	5433.276	6703.292
Stddev	24.902	214.2	183.40	15.674	23.821
%RSD	.3877556	.1927386	1.833894	.2884756	.3553678
#1	6434.950	110966.5	10204.99	5415.389	6720.565
#2	6437.934	111389.6	9946.75	5439.833	6713.194
#3	6393.388	111118.9	9850.27	5444.607	6676.116

Sample Name: Q2740-01DUP Acquired: 8/4/2025 15:19:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0587561	-.020789	.3159849	.0002960	-.017639	116.1339	.4946312
Stddev	.0029039	.002465	.0019953	.0033254	.001943	.8005	.0031630
%RSD	4.942309	11.85785	.6314519	1123.501	11.01392	.6892977	.6394618

#1	.0605719	-.018023	.3137668	-.003501	-.017458	116.5661	.4967678
#2	.0602894	-.022755	.3165546	.002692	-.019667	116.6253	.4961281
#3	.0554069	-.021587	.3176335	.001697	-.015794	115.2101	.4909976

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080066	.0016181	48.79580	.1468359	.0936180	.2652391	217.0486
Stddev	.0000933	.0001069	.27064	.0004205	.0007623	.0015977	1.1050
%RSD	1.164909	6.605777	.5546456	.2863797	.8142250	.6023680	.5091022

#1	.0079394	.0014947	48.99578	.1465045	.0928641	.2640832	215.7991
#2	.0081131	.0016783	48.90380	.1473089	.0936015	.2645717	217.4496
#3	.0079674	.0016814	48.48784	.1466942	.0943884	.2670623	217.8971

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.598403	44.60370	.1653258	.0073409	7.510562	.3109951	.5166814
Stddev	.020736	.18639	.0007128	.0003337	.053048	.0022334	.0014165
%RSD	.5762623	.4178701	.4311607	4.545498	.7063134	.7181394	.2741602

#1	3.606459	44.78385	.1647808	.0069920	7.453359	.3102637	.5154408
#2	3.613903	44.61560	.1661324	.0076570	7.558137	.3135025	.5182248
#3	3.574848	44.41165	.1650640	.0073735	7.520189	.3092192	.5163785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.940663	.1016509	.0040851	.0146159	2.958903	8.537185	5.933210
Stddev	.060901	.0029970	.0002171	.0015986	.035321	.098356	.017381
%RSD	.7669569	2.948369	5.314397	10.93737	1.193728	1.152093	.2929430

#1	7.870749	.0988760	.0038366	.0164440	2.994798	8.633126	5.915142
#2	7.969059	.1012475	.0042376	.0134803	2.957726	8.541849	5.949811
#3	7.982180	.1048292	.0041811	.0139235	2.924185	8.436579	5.934677

Sample Name: Q2740-01DUP Acquired: 8/4/2025 15:19:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.569044	.1214514	-.089126
Stddev	.014363	.0011400	.001695
%RSD	.5590605	.9386832	1.901633
#1	2.557388	.1209155	-.087389
#2	2.585089	.1206781	-.089215
#3	2.564653	.1227607	-.090775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6383.076	109862.9	9892.069	5383.837	6614.727
Stddev	19.092	351.5	65.647	24.291	22.304
%RSD	.2991048	.3199393	.6636299	.4511767	.3371845
#1	6403.077	110264.8	9844.557	5411.512	6639.871
#2	6381.108	109710.9	9864.673	5373.950	6606.984
#3	6365.045	109613.0	9966.976	5366.049	6597.327

Sample Name: Q2740-01LX5 Acquired: 8/4/2025 15:23:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114247	-.004763	.0608822	-.001140	-.004428	27.33667	.1198741
Stddev	.0031252	.002477	.0017784	.001447	.002236	.05185	.0007399
%RSD	27.35448	52.01002	2.920995	126.9597	50.50429	.1896684	.6172038

#1	.0149857	-.003468	.0628893	.000470	-.006651	27.39017	.1192073
#2	.0101499	-.003202	.0602544	-.002332	-.002178	27.28665	.1197450
#3	.0091383	-.007619	.0595029	-.001558	-.004455	27.33317	.1206700

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020499	-.000314	10.05932	.0338072	.0186751	.0592371	51.39489
Stddev	.0000452	.000092	.01541	.0001421	.0000913	.0001114	.29209
%RSD	2.204135	29.31808	.1531460	.4204012	.4891646	.1879716	.5683320

#1	.0020428	-.000312	10.06292	.0339710	.0186506	.0592413	51.72913
#2	.0020086	-.000407	10.07261	.0337155	.0185985	.0591237	51.26694
#3	.0020982	-.000223	10.04243	.0337352	.0187762	.0593463	51.18861

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8258233	10.04175	.0338293	.0013772	1.814524	.0731866	.1254675
Stddev	.0015643	.09383	.0005142	.0001081	.006405	.0014151	.0005380
%RSD	.1894258	.9344308	1.519982	7.851305	.3529651	1.933610	.4288276

#1	.8260561	10.13927	.0344084	.0012563	1.817807	.0729877	.1260888
#2	.8272582	9.95210	.0334264	.0014105	1.807144	.0746907	.1251568
#3	.8241556	10.03389	.0336531	.0014648	1.818623	.0718815	.1251569

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.187361	.0087483	.0004761	.0017859	.7157088	2.171288	1.248960
Stddev	.007548	.0006971	.0002154	.0003783	.0071458	.086899	.006303
%RSD	.3450953	7.968752	45.24824	21.18133	.9984288	4.002205	.5046981

#1	2.187159	.0095356	.0002372	.0015675	.7230291	2.237132	1.255407
#2	2.179915	.0082094	.0005356	.0015674	.7153459	2.072792	1.248662
#3	2.195008	.0084998	.0006556	.0022226	.7087513	2.203940	1.242811

Sample Name: Q2740-01LX5 Acquired: 8/4/2025 15:23:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5562493	.0227762	-.022328
Stddev	.0021657	.0009004	.000179
%RSD	.3893332	3.953438	.8028667
#1	.5566553	.0220899	-.022483
#2	.5539094	.0224429	-.022369
#3	.5581833	.0237958	-.022132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5878.586	99868.39	8639.124	4888.806	7082.898
Stddev	9.100	394.29	31.135	12.996	7.984
%RSD	.1547934	.3948059	.3603910	.2658414	.1127233
#1	5868.191	99904.82	8658.630	4888.631	7076.269
#2	5885.110	99457.15	8603.218	4875.899	7080.662
#3	5882.457	100243.2	8655.524	4901.890	7091.761

Sample Name: Q2740-01MS Acquired: 8/4/2025 15:27:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7496555	2.114708	1.215441	1.709726	.3516101	133.9694	.7096058
Stddev	.0042552	.028556	.002007	.007149	.0028020	.0153	.0004715
%RSD	.5676258	1.350354	.1651004	.4181524	.7969123	.0114036	.0664512

#1	.7533083	2.147048	1.217340	1.717972	.3543379	133.9572	.7097875
#2	.7449831	2.104109	1.215641	1.705941	.3487394	133.9865	.7090704
#3	.7506751	2.092968	1.213341	1.705265	.3517529	133.9645	.7099595

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1771721	.1902928	46.52999	.4876150	.2970501	.5357169	232.9811
Stddev	.0006555	.0002140	.21673	.0018377	.0004468	.0019311	.1559
%RSD	.3699855	.1124565	.4657865	.3768781	.1503999	.3604638	.0669174

#1	.1767149	.1904978	46.30774	.4890008	.2967419	.5354223	233.0947
#2	.1779232	.1900708	46.74075	.4883139	.2968459	.5339501	233.0454
#3	.1768784	.1903098	46.54149	.4855304	.2975625	.5377784	232.8034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.112943	47.43986	.6631065	.0745779	10.41222	.5939609	.7451838
Stddev	.014253	.07135	.0008001	.0004281	.03314	.0014656	.0032235
%RSD	.3465340	.1503977	.1206641	.5740809	.3182344	.2467488	.4325803

#1	4.096794	47.39536	.6639786	.0740859	10.44956	.5942792	.7458843
#2	4.123763	47.52215	.6624063	.0747820	10.38634	.5952413	.7416676
#3	4.118272	47.40206	.6629345	.0748658	10.40074	.5923624	.7479994

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.35406	.2774447	.3536638	.6552097	3.082702	8.313481	11.45938
Stddev	.06188	.0011820	.0011324	.0006747	.002714	.061163	.02251
%RSD	.3565515	.4260127	.3201828	.1029768	.0880345	.7357102	.1964037

#1	17.42140	.2786897	.3537345	.6557604	3.084350	8.321583	11.43447
#2	17.29971	.2763380	.3524978	.6554116	3.084187	8.248671	11.46542
#3	17.34106	.2773064	.3547592	.6544571	3.079570	8.370190	11.47825

Sample Name: Q2740-01MS Acquired: 8/4/2025 15:27:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.474113	.3103010	.0852198
Stddev	.008928	.0023798	.0005076
%RSD	.3608576	.7669348	.5955955
#1	2.473345	.3099616	.0849503
#2	2.465594	.3128323	.0849039
#3	2.483400	.3081091	.0858053

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6302.975	108249.9	9651.923	5296.618	6485.342
Stddev	29.629	268.4	29.964	23.897	17.636
%RSD	.4700800	.2479805	.3104485	.4511796	.2719393
#1	6322.690	108006.2	9680.681	5295.750	6503.164
#2	6317.333	108205.9	9620.883	5320.937	6484.965
#3	6268.903	108537.6	9654.203	5273.166	6467.897

Sample Name: Q2740-01MSD Acquired: 8/4/2025 15:31:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7345470	2.097679	1.229112	1.673623	.3290827	138.9777	.7174662
Stddev	.0020335	.032844	.000655	.003418	.0005487	.3294	.0017059
%RSD	.2768429	1.565714	.0532798	.2042551	.1667327	.2370466	.2377601

#1	.7323061	2.120392	1.229843	1.676052	.3295924	139.1037	.7180741
#2	.7362749	2.112625	1.228915	1.675103	.3285019	139.2255	.7187849
#3	.7350600	2.060021	1.228579	1.669714	.3291538	138.6038	.7155397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1728371	.1862503	63.82360	.4734833	.3010534	.5615803	243.2166
Stddev	.0011738	.0004644	.04518	.0034473	.0004368	.0035231	1.7228
%RSD	.6791313	.2493355	.0707902	.7280814	.1451016	.6273570	.7083397

#1	.1723102	.1861991	63.86555	.4771765	.3010368	.5582384	244.4318
#2	.1720191	.1858137	63.82950	.4729230	.3006251	.5612422	243.9730
#3	.1741820	.1867382	63.77576	.4703505	.3014983	.5652603	241.2450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.050515	56.53255	.6624747	.0719712	10.95741	.6082517	.7880094
Stddev	.006025	.09459	.0009600	.0010300	.12561	.0043670	.0015662
%RSD	.1487514	.1673201	.1449175	1.431179	1.146361	.7179677	.1987523

#1	4.056922	56.44609	.6620868	.0721153	11.03286	.6092186	.7862311
#2	4.049660	56.63358	.6617692	.0729216	11.02697	.6120542	.7886138
#3	4.044963	56.51799	.6635680	.0708767	10.81241	.6034822	.7891834

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.92717	.2563497	.3452924	.6374315	3.440887	11.01546	11.88616
Stddev	.12868	.0041387	.0004717	.0023575	.009930	.07412	.02214
%RSD	.7177762	1.614476	.1366092	.3698456	.2886020	.6728560	.1862269

#1	17.97434	.2585886	.3448013	.6375707	3.436945	11.07638	11.87982
#2	18.02561	.2588866	.3457419	.6350075	3.452183	11.03706	11.86789
#3	17.78157	.2515738	.3453340	.6397163	3.433532	10.93294	11.91078

Sample Name: Q2740-01MSD Acquired: 8/4/2025 15:31:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.093375	.3096774	.0852119
Stddev	.003052	.0026638	.0006529
%RSD	.0986528	.8601790	.7662577

#1	3.091000	.3121403	.0846520
#2	3.092307	.3100417	.0850546
#3	3.096817	.3068503	.0859291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6356.273	109740.3	9764.137	5322.946	6453.302
Stddev	8.800	368.2	33.210	25.361	10.521
%RSD	.1384500	.3355348	.3401174	.4764442	.1630381

#1	6361.976	109632.7	9791.513	5352.230	6461.470
#2	6360.706	109437.9	9773.705	5308.314	6457.007
#3	6346.138	110150.3	9727.194	5308.293	6441.430

Sample Name: Q2740-01A Acquired: 8/4/2025 15:35:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7824732	2.093827	1.246210	1.819257	.7551545	116.6964	.6812506
Stddev	.0028056	.056526	.003303	.011707	.0041599	.3325	.0027077
%RSD	.3585577	2.699632	.2650227	.6434970	.5508705	.2848846	.3974580

#1	.7853335	2.084189	1.249925	1.813991	.7595593	116.5465	.6807399
#2	.7823606	2.154552	1.245099	1.832673	.7546112	116.4653	.6788346
#3	.7797256	2.042740	1.243606	1.811109	.7512929	117.0774	.6841772

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1816451	.1938285	46.12780	.4831797	.2904132	.5112817	221.4649
Stddev	.0016564	.0007009	.36110	.0015334	.0011386	.0018534	1.3406
%RSD	.9119128	.3616358	.7828349	.3173566	.3920778	.3625045	.6053156

#1	.1817865	.1945657	46.09868	.4828914	.2917224	.5134189	221.6402
#2	.1799225	.1937495	45.78214	.4818109	.2896539	.5103104	222.7092
#3	.1832263	.1931704	46.50259	.4848368	.2898632	.5101159	220.0453

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.662507	44.42278	.6600598	.0783104	10.27925	.5706860	.7086514
Stddev	.021517	.11771	.0020573	.0005804	.09187	.0059485	.0008086
%RSD	.5874824	.2649760	.3116882	.7411789	.8937466	1.042350	.1141007

#1	3.658525	44.39202	.6624220	.0786887	10.31829	.5639563	.7095264
#2	3.643260	44.32351	.6590964	.0786004	10.34515	.5728598	.7084959
#3	3.685737	44.55282	.6586609	.0776422	10.17431	.5752418	.7079318

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.99044	.3445693	.3862569	.7229155	3.137715	8.746515	11.24565
Stddev	.09889	.0033691	.0016600	.0017963	.026636	.067018	.06484
%RSD	.5497051	.9777679	.4297548	.2484741	.8489082	.7662273	.5765858

#1	17.96590	.3474335	.3876394	.7246160	3.132980	8.670400	11.31765
#2	18.09930	.3454172	.3867155	.7230938	3.113763	8.796671	11.22743
#3	17.90613	.3408573	.3844159	.7210368	3.166401	8.772472	11.19186

Sample Name: Q2740-01A Acquired: 8/4/2025 15:35:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.605949	.2926821	.0848243
Stddev	.013028	.0013381	.0021579
%RSD	.4999483	.4571828	2.543923
#1	2.607049	.2912212	.0843475
#2	2.618393	.2938483	.0829447
#3	2.592406	.2929766	.0871807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6228.052	106389.8	9648.521	5161.439	6477.047
Stddev	19.848	88.5	108.246	10.274	24.602
%RSD	.3186875	.0831878	1.121897	.1990624	.3798325
#1	6218.416	106310.0	9657.856	5150.693	6455.172
#2	6214.863	106374.5	9751.798	5162.458	6472.289
#3	6250.879	106485.0	9535.909	5171.166	6503.681

Sample Name: PB169096BS Acquired: 8/4/2025 15:39:30 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8400997	2.261154	.9876114	2.194648	.8864899	2.084241
Stddev	.0175596	.047431	.0203964	.046800	.0182592	.010550
%RSD	2.090186	2.097624	2.065228	2.132459	2.059714	.5061911

#1	.8319353	2.260571	.9794357	2.169420	.8792642	2.078340
#2	.8281087	2.214018	.9725713	2.165874	.8729494	2.096421
#3	.8602551	2.308874	1.010827	2.248649	.9072562	2.077962

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2133099	.2190446	.1943195	1.110407	.3939953	.2016720
Stddev	.0003068	.0005982	.0037031	.003351	.0040976	.0041026
%RSD	.1438491	.2730984	1.905688	.3018266	1.040013	2.034299

#1	.2133457	.2186364	.1925286	1.110244	.3908725	.1996868
#2	.2135973	.2197313	.1918522	1.107139	.3986351	.1989396
#3	.2129868	.2187662	.1985776	1.113837	.3924784	.2063896

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3231059	3.174536	.2127403	2.063601	.5070956	.0809264
Stddev	.0068632	.026606	.0014510	.008966	.0103919	.0010907
%RSD	2.124136	.8380986	.6820579	.4344693	2.049301	1.347791

#1	.3196573	3.149718	.2125866	2.054414	.5019835	.0797257
#2	.3186509	3.202627	.2142620	2.072328	.5002500	.0818560
#3	.3310095	3.171264	.2113722	2.064061	.5190533	.0811976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.960448	.3062188	.2214626	10.45629	.3151953	.4314858
Stddev	.029879	.0036205	.0021877	.05760	.0021240	.0089211
%RSD	1.009261	1.182335	.9878229	.5508999	.6738571	2.067528

#1	2.927522	.3034406	.2201232	10.39813	.3130652	.4266841
#2	2.985834	.3103133	.2239872	10.51332	.3173130	.4259940
#3	2.967988	.3049024	.2202776	10.45741	.3152078	.4417793

Sample Name: PB169096BS Acquired: 8/4/2025 15:39:30 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6999886	.2112517	.8728646	5.415255	F .0026339	.1884312
Stddev	.0154115	.0010918	.0117234	.105252	.0008779	.0034840
%RSD	2.201682	.5168314	1.343093	1.943623	33.33247	1.848960

#1	.6928208	.2117386	.8699050	5.364722	.0032741	.1846286
#2	.6894664	.2100012	.8857842	5.344799	.0029944	.1914697
#3	.7176786	.2120154	.8629046	5.536244	.0016331	.1891954

Elem	Sr4077
Units	ppm
Avg	.2101126
Stddev	.0001489
%RSD	.0708854

#1	.2102805
#2	.2100610
#3	.2099963

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5745.071	99018.53	8316.721	4816.145	7257.747
Stddev	104.393	929.60	30.440	32.986	123.870
%RSD	1.817085	.9388188	.3660110	.6849053	1.706731

#1	5801.057	99755.43	8334.409	4836.853	7320.551
#2	5809.528	97974.14	8281.572	4778.105	7337.635
#3	5624.628	99326.02	8334.181	4833.476	7115.054

Sample Name: CCV04 Acquired: 8/4/2025 15:48:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.933937	5.355718	4.718979	5.065650	5.061572	9.683473
Stddev	.009231	.156443	.017587	.019588	.009046	.031926
%RSD	.1870990	2.921037	.3726774	.3866755	.1787104	.3296982

#1	4.939555	5.534329	4.739167	5.086799	5.066871	9.715381
#2	4.923283	5.243006	4.706982	5.048131	5.051127	9.683508
#3	4.938972	5.289819	4.710789	5.062022	5.066717	9.651529

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.10395	.2473070	2.340222	25.16229	.9162079	2.360378
Stddev	.04271	.0029653	.005316	.12352	.0045715	.005616
%RSD	.4227281	1.199029	.2271641	.4909132	.4989581	.2379362

#1	10.14754	.2493117	2.346340	25.21282	.9133276	2.366795
#2	10.10216	.2439007	2.337595	25.02150	.9214790	2.356358
#3	10.06217	.2487085	2.336730	25.25253	.9138170	2.357982

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.205756	4.903295	2.462535	23.56326	2.368349	1.225786
Stddev	.001049	.007049	.007970	.19950	.004981	.002869
%RSD	.0869593	.1437611	.3236309	.8466691	.2103034	.2340690

#1	1.206918	4.895733	2.462407	23.65064	2.374054	1.227517
#2	1.205467	4.909684	2.454631	23.33498	2.364868	1.222474
#3	1.204882	4.904468	2.470568	23.70416	2.366124	1.227368

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.22854	2.425313	2.526868	24.59942	4.961421	5.004750
Stddev	.16493	.006140	.004078	.14016	.050150	.009677
%RSD	.7100410	.2531633	.1613950	.5697653	1.010805	.1933588

#1	23.12593	2.425484	2.527286	24.45022	4.997962	5.015842
#2	23.41879	2.419089	2.522596	24.72833	4.904245	4.998035
#3	23.14091	2.431365	2.530721	24.61970	4.982056	5.000373

Sample Name: CCV04 Acquired: 8/4/2025 15:48:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.752170	5.044555	4.878586	F 4.444369	4.756237	4.700495
Stddev	.021690	.021598	.064890	.015808	.036005	.008731
%RSD	.4564173	.4281357	1.330097	.3556786	.7570072	.1857517

#1	4.777201	5.064845	4.837599	4.461751	4.794050	4.700877
#2	4.740380	5.021852	4.953400	4.430852	4.722363	4.691579
#3	4.738930	5.046967	4.844758	4.440504	4.752299	4.709029

Elem	Sr4077
Units	ppm
Avg	5.042140
Stddev	.044425
%RSD	.8810828

#1	5.029139
#2	5.005665
#3	5.091615

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5598.193	95994.20	8104.002	4661.369	6698.053
Stddev	5.881	353.84	73.940	23.942	15.130
%RSD	.1050560	.3686052	.9123842	.5136172	.2258861

#1	5591.408	95716.86	8031.421	4636.074	6680.594
#2	5601.825	95873.02	8179.229	4683.677	6707.327
#3	5601.347	96392.70	8101.357	4664.356	6706.239

Sample Name: CCB04 Acquired: 8/4/2025 15:53:27 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0004171	-.000104	-.000581	-.002368	-.000545	.0219944	.0053843
Stddev	.0006343	.001141	.000400	.002520	.000425	.0100631	.0005646
%RSD	152.0549	1097.797	68.92471	106.4365	77.94990	45.75309	10.48583

#1	-.000289	.001177	-.000984	.000498	-.000075	.0335871	.0055208
#2	.000602	-.001008	-.000183	-.004239	-.000658	.0168861	.0058681
#3	.000939	-.000481	-.000576	-.003363	-.000901	.0155099	.0047640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000569	.0002837	.0050741	-.001739	.0003045	.0004712	.0025177
Stddev	.0000245	.0000788	.0051008	.000061	.0000919	.0003230	.0044546
%RSD	43.14469	27.77987	100.5260	3.497457	30.19791	68.55107	176.9297

#1	.0000441	.0002220	.0027687	-.001808	.0001984	.0005004	.0014481
#2	.0000851	.0002566	.0015329	-.001693	.0003542	.0007786	-.001305
#3	.0000413	.0003725	.0109206	-.001715	.0003609	.0001346	.007410

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001208	.0017039	.0004202	.0008924	.0060575	-.000931	.0001160
Stddev	.000284	.0212501	.0003857	.0004887	.0139764	.002366	.0001761
%RSD	23.48589	1247.177	91.78193	54.75853	230.7281	254.0818	151.8807

#1	-.001077	-.000072	.0002441	.0013290	.0007825	.000792	-.000040
#2	-.001013	-.018603	.0001541	.0003645	-.004514	.000043	.000080
#3	-.001533	.023786	.0008626	.0009836	.021904	-.003629	.000307

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2003097	.0007139	.0012626	.0004318	.0008577	-.002785	.0056832
Stddev	.0130533	.0006135	.0001779	.0004277	.0008794	.002969	.0027214
%RSD	6.516559	85.93463	14.09353	99.04786	102.5355	106.6051	47.88533

#1	.2136801	.0002864	.0014651	.0005918	.0007212	-.000141	.0026087
#2	.1996506	.0004385	.0011311	-.000053	.0000544	-.005997	.0077832
#3	.1875984	.0014168	.0011916	.000756	.0017973	-.002217	.0066577

Sample Name: CCB04 Acquired: 8/4/2025 15:53:27 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0003928	F -.012139	.0006210
Stddev	.0028378	.002043	.0001149
%RSD	722.4573	16.82943	18.50723

#1	.0011947	-.014026	.0006355
#2	-.002760	-.012421	.0007279
#3	.002743	-.009970	.0004994

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5868.673	102564.3	8315.143	4947.055	7594.830
Stddev	17.630	31.0	41.740	11.651	13.110
%RSD	.3004064	.0302638	.5019753	.2355112	.1726111

#1	5852.269	102546.1	8298.429	4957.351	7588.192
#2	5887.315	102600.1	8284.350	4934.408	7609.931
#3	5866.434	102546.7	8362.649	4949.404	7586.367

Sample Name: Q2734-02 Acquired: 8/4/2025 16:08:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003158	-.000758	.0052809	-.002741	.0009076	.1396059	.2464523
Stddev	.002028	.001809	.0012945	.004091	.0008397	.0175862	.0000895
%RSD	64.21776	238.5616	24.51226	149.2603	92.51590	12.59703	.0363154

#1	-.004003	.000373	.0052949	-.007441	.0003712	.1333321	.2464284
#2	-.000844	.000197	.0065684	-.000797	.0018752	.1260170	.2463771
#3	-.004628	-.002845	.0039795	.000015	.0004763	.1594687	.2465513

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000212	.0013339	97.17866	-.001327	.0030524	.0375028	.0052035
Stddev	.000055	.0000282	.47154	.000137	.0000770	.0007326	.0054431
%RSD	25.88837	2.112057	.4852288	10.35554	2.522796	1.953402	104.6034

#1	-.000209	.0013664	97.68175	-.001244	.0031409	.0382945	.0114846
#2	-.000269	.0013160	96.74677	-.001252	.0030004	.0373652	.0022583
#3	-.000159	.0013193	97.10746	-.001485	.0030160	.0368489	.0018677

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8317996	3.381918	.0077576	.0005191	374.1284	.0010376	.1021287
Stddev	.0021661	.070475	.0001976	.0002941	.3601	.0025219	.0007303
%RSD	.2604155	2.083874	2.547454	56.65017	.0962586	243.0517	.7150511

#1	.8334699	3.404099	.0075758	.0001832	373.7562	.0014393	.1017207
#2	.8293521	3.303021	.0079679	.0007298	374.1538	.0033345	.1016935
#3	.8325768	3.438633	.0077290	.0006444	374.4751	-.001661	.1029718

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.531718	.0146688	.0007273	-.001640	-.003468	2.406620	.0194313
Stddev	.039997	.0003096	.0002495	.000320	.001034	.013347	.0010594
%RSD	1.579847	2.110273	34.29893	19.51180	29.80146	.5546094	5.452099

#1	2.487637	.0149335	.0006784	-.001320	-.004656	2.392945	.0203595
#2	2.565693	.0147445	.0005059	-.001640	-.002771	2.407302	.0182772
#3	2.541823	.0143285	.0009976	-.001960	-.002979	2.419613	.0196573

Sample Name: Q2734-02 Acquired: 8/4/2025 16:08:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9345081	-.008328	.3585607
Stddev	.0147899	.001116	.0008715
%RSD	1.582634	13.39442	.2430649
#1	.9515857	-.008318	.3593261
#2	.9258950	-.009449	.3576122
#3	.9260436	-.007218	.3587438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5353.987	92636.08	8330.835	4497.634	6286.259
Stddev	60.496	187.42	57.252	6.894	72.417
%RSD	1.129922	.2023238	.6872258	.1532767	1.151982
#1	5284.156	92733.13	8269.130	4504.196	6202.650
#2	5387.322	92755.08	8382.233	4490.450	6326.892
#3	5390.483	92420.03	8341.142	4498.255	6329.234

Sample Name: Q2703-05 Acquired: 8/4/2025 16:12:37 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055904	-.007673	.0003200	.0018439	-.004291	.0527921	.1485130
Stddev	.0017540	.001940	.0011616	.0038136	.001196	.0092672	.0001480
%RSD	31.37556	25.27919	362.9935	206.8207	27.88173	17.55414	.0996759

#1	.0036267	-.009176	.0015025	.0049157	-.003540	.0432411	.1486753
#2	.0070017	-.008358	-.000820	-.002424	-.003662	.0617468	.1484784
#3	.0061429	-.005483	.000277	.003040	-.005671	.0533884	.1483853

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002687	-.000755	16.88295	-.000997	.0037732	.0004083	45.82412
Stddev	.0000829	.000058	.02363	.000223	.0000922	.0002187	.17847
%RSD	30.84334	7.724654	.1399750	22.36853	2.442995	53.57753	.3894778

#1	.0002930	-.000725	16.90975	-.000887	.0038510	.0001559	45.69690
#2	.0001763	-.000718	16.86513	-.000851	.0037974	.0005251	46.02814
#3	.0003366	-.000822	16.87396	-.001254	.0036714	.0005437	45.74731

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.492877	7.925547	.0038324	.0029112	274.1330	-.000835	.0938304
Stddev	.007327	.019760	.0003922	.0007585	1.7371	.001549	.0006705
%RSD	.1630695	.2493248	10.23255	26.05467	.6336639	185.5700	.7146072

#1	4.501235	7.920356	.0037421	.0037513	273.5968	-.002584	.0934291
#2	4.489835	7.908900	.0042618	.0027057	272.7273	-.000285	.0946045
#3	4.487563	7.947384	.0034933	.0022766	276.0750	.000364	.0934577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.343011	.1052691	.0012989	-.001463	.0015170	2.796760	1.729402
Stddev	.057838	.0009446	.0001740	.000622	.0008228	.031754	.004578
%RSD	1.331749	.8973385	13.39251	42.53864	54.24043	1.135387	.2647109

#1	4.281884	.1045350	.0012147	-.002178	.0022059	2.764396	1.731644
#2	4.396873	.1063348	.0014989	-.001041	.0006059	2.798018	1.732427
#3	4.350276	.1049375	.0011831	-.001171	.0017392	2.827867	1.724135

Sample Name: Q2703-05 Acquired: 8/4/2025 16:12:37 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4046088	-.005862	.1018619
Stddev	.0018804	.001653	.0002486
%RSD	.4647426	28.19044	.2440951
#1	.4059896	-.005190	.1016153
#2	.4053697	-.007745	.1021125
#3	.4024672	-.004652	.1018581

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5520.943	93968.95	8552.001	4590.987	6549.624
Stddev	6.412	125.23	16.079	18.417	14.071
%RSD	.1161460	.1332705	.1880127	.4011463	.2148368
#1	5513.598	94069.30	8540.095	4576.912	6537.582
#2	5525.423	93828.60	8570.291	4584.218	6546.198
#3	5523.810	94008.94	8545.615	4611.830	6565.092

Sample Name: Q2743-02 Acquired: 8/4/2025 16:16:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003231	-.001415	.2491284	-.000844	.0000074	.1470087	.4631542
Stddev	.001167	.000607	.0004147	.004288	.0017639	.0072663	.0019232
%RSD	36.13098	42.91434	.1664597	507.9929	23949.19	4.942742	.4152424

#1	-.001993	-.001691	.2486762	.003846	.0003166	.1552932	.4612740
#2	-.003388	-.000719	.2494909	-.004565	-.001891	.1440175	.4630710
#3	-.004312	-.001834	.2492180	-.001813	.001596	.1417155	.4651177

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000142	.0014188	72.82911	-.001956	.0006714	.0283514	.0127992
Stddev	.000068	.0000666	.15716	.000188	.0001584	.0004252	.0014972
%RSD	47.94193	4.690642	.2157940	9.594688	23.59403	1.499619	11.69726

#1	-.000126	.0013420	72.73167	-.002167	.0008544	.0281057	.0110748
#2	-.000217	.0014550	73.01042	-.001896	.0005787	.0288423	.0135554
#3	-.000084	.0014594	72.74524	-.001806	.0005813	.0281061	.0137674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0733620	4.305053	.0055463	.0005165	340.4104	.0033061	.4394339
Stddev	.0006644	.024244	.0002970	.0002745	.4446	.0012410	.0003318
%RSD	.9056147	.5631551	5.355258	53.14419	.1306096	37.53749	.0754984

#1	.0731167	4.280503	.0053087	.0006630	340.8210	.0046340	.4391989
#2	.0728552	4.328979	.0054509	.0001999	340.4720	.0031087	.4398134
#3	.0741142	4.305677	.0058793	.0006868	339.9382	.0021756	.4392893

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.397331	.0225255	.0014014	-.001719	-.002367	3.834780	.0264549
Stddev	.029221	.0007533	.0002089	.000603	.000273	.014124	.0035075
%RSD	2.091166	3.344431	14.90837	35.06248	11.52666	.3683169	13.25849

#1	1.368154	.0222897	.0016392	-.002026	-.002079	3.818778	.0291708
#2	1.397245	.0219183	.0013177	-.002105	-.002398	3.840054	.0276989
#3	1.426594	.0233686	.0012473	-.001024	-.002622	3.845509	.0224949

Sample Name: Q2743-02 Acquired: 8/4/2025 16:16:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.281389	-.005353	.4790180
Stddev	.012141	.002230	.0009394
%RSD	.9474911	41.65451	.1961163
#1	1.269142	-.005984	.4780697
#2	1.281603	-.007199	.4799483
#3	1.293421	-.002876	.4790360

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5471.478	94375.38	8464.895	4610.568	6454.322
Stddev	10.216	393.08	16.783	15.312	10.596
%RSD	.1867221	.4165038	.1982713	.3321023	.1641714
#1	5462.761	93954.21	8446.702	4596.286	6453.176
#2	5482.720	94439.44	8468.206	4608.683	6465.445
#3	5468.954	94732.49	8479.776	4626.735	6444.346

Sample Name: Q2753-02 Acquired: 8/4/2025 16:21:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001347	-.000468	-.000614	-.004237	-.004173	.0788907	.0695576
Stddev	.001042	.001349	.001320	.002828	.001828	.0028808	.0004635
%RSD	77.34590	288.4039	214.9161	66.73460	43.81095	3.651593	.6663577

#1	-.001125	-.001900	-.001398	-.005856	-.006051	.0764813	.0700507
#2	-.000434	-.000281	-.001354	-.005884	-.002399	.0781091	.0691309
#3	-.002482	.000778	.000910	-.000972	-.004070	.0820816	.0694911

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001055	.0002363	40.42580	.0074878	.0009345	.0060888	.0041161
Stddev	.0000322	.0000506	.12139	.0003812	.0001295	.0002247	.0070268
%RSD	30.49847	21.39975	.3002766	5.091145	13.86101	3.690205	170.7129

#1	.0001119	.0002182	40.50919	.0076823	.0007875	.0059282	.0050175
#2	.0001339	.0001972	40.48168	.0070486	.0009839	.0063456	.0106488
#3	.0000706	.0002934	40.28654	.0077326	.0010320	.0059927	-.003318

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1411790	6.233491	.0046825	.0011882	233.2891	.0021121	.0551203
Stddev	.0003539	.001416	.0002853	.0001508	2.0076	.0014554	.0001410
%RSD	.2506568	.0227211	6.093380	12.69343	.8605825	68.90498	.2558588

#1	.1412395	6.232234	.0044526	.0011225	231.3638	.0030478	.0551704
#2	.1414987	6.235025	.0050018	.0013607	233.1334	.0028532	.0549610
#3	.1407988	6.233212	.0045932	.0010814	235.3700	.0004354	.0552294

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.399924	.0064630	-.000527	-.004068	-.001458	.4185896	.0098724
Stddev	.031341	.0005244	.000128	.000087	.001258	.0061108	.0016131
%RSD	2.238748	8.114646	24.35678	2.146493	86.23561	1.459847	16.33940

#1	1.374931	.0070016	-.000642	-.004169	-.000189	.4171283	.0087428
#2	1.389754	.0064332	-.000550	-.004012	-.001483	.4252986	.0091546
#3	1.435086	.0059540	-.000388	-.004023	-.002704	.4133421	.0117199

Sample Name: Q2753-02 Acquired: 8/4/2025 16:21:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.941334	-.012375	.1261452
Stddev	.011014	.000348	.0001650
%RSD	.2794374	2.815563	.1308256
#1	3.929985	-.012545	.1260279
#2	3.951979	-.011974	.1263340
#3	3.942038	-.012606	.1260739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5610.531	96482.49	8784.047	4716.450	6652.982
Stddev	17.262	76.56	40.957	5.923	12.133
%RSD	.3076724	.0793524	.4662636	.1255717	.1823690
#1	5624.800	96570.67	8742.488	4714.032	6655.685
#2	5615.449	96432.94	8785.280	4712.118	6663.535
#3	5591.343	96443.86	8824.373	4723.198	6639.725

Sample Name: Q2753-02DUP Acquired: 8/4/2025 16:25:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003129	.0016026	.0012538	-.005974	-.004041	.1223261	.1174975
Stddev	.0015391	.0014764	.0006156	.001389	.001735	.0101439	.0006487
%RSD	491.8530	92.12417	49.09956	23.25457	42.93103	8.292528	.5521200

#1	-.001253	.0008720	.0007355	-.007579	-.002501	.1323053	.1179951
#2	.000369	.0006339	.0010916	-.005184	-.003702	.1120251	.1167638
#3	.001823	.0033018	.0019343	-.005161	-.005921	.1226477	.1177336

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000289	.0004235	66.33726	.0134379	.0018640	.0101021	.0072363
Stddev	.0001079	.0000250	.28411	.0001488	.0001880	.0001097	.0032442
%RSD	373.0878	5.894037	.4282769	1.107062	10.08492	1.085566	44.83177

#1	.0000875	.0004042	66.46425	.0135294	.0020730	.0101321	.0092986
#2	.0000948	.0004147	66.01180	.0135181	.0017087	.0101937	.0034969
#3	-.000096	.0004517	66.53571	.0132663	.0018102	.0099806	.0089135

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2342796	10.21421	.0075606	.0011602	413.4146	.0007785	.0955069
Stddev	.0010673	.04090	.0000726	.0004462	3.0816	.0021076	.0005286
%RSD	.4555472	.4004497	.9603508	38.45830	.7453908	270.7213	.5535040

#1	.2351140	10.25881	.0074839	.0006685	414.7674	-.001227	.0960208
#2	.2330770	10.20536	.0076283	.0012726	409.8880	.002975	.0949647
#3	.2346477	10.17846	.0075695	.0015394	415.5883	.000587	.0955353

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.534949	.0150171	.0000118	-.003541	-.002778	.7531656	.0179872
Stddev	.022309	.0003354	.0001966	.000207	.000448	.0119043	.0020756
%RSD	.8800395	2.233297	1662.052	5.853709	16.12256	1.580571	11.53946

#1	2.540299	.0146554	.0000014	-.003313	-.002296	.7457862	.0184279
#2	2.554096	.0150781	-.000179	-.003589	-.003181	.7668987	.0198071
#3	2.510452	.0153178	.000213	-.003719	-.002856	.7468117	.0157266

Sample Name: Q2753-02DUP Acquired: 8/4/2025 16:25:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.711361	-.010523	.2099763
Stddev	.013120	.001769	.0007381
%RSD	.1954842	16.80568	.3515210

#1	6.709624	-.008876	.2108237
#2	6.699197	-.010301	.2094734
#3	6.725263	-.012393	.2096319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5371.602	91531.61	8860.132	4456.039	6262.147
Stddev	8.739	399.05	82.255	17.269	7.533
%RSD	.1626972	.4359664	.9283705	.3875525	.1202882

#1	5368.600	91983.27	8896.815	4465.884	6265.447
#2	5381.447	91226.78	8917.663	4466.134	6267.466
#3	5364.759	91384.77	8765.918	4436.098	6253.527

Sample Name: Q2753-02LX5 Acquired: 8/4/2025 16:30:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000138	-.001557	-.001460	-.003628	-.002302	.0191961	.0106101
Stddev	.000924	.001494	.000488	.002969	.000950	.0060298	.0012987
%RSD	667.3233	95.97899	33.42138	81.82773	41.25763	31.41163	12.23990

#1	-.001146	-.003023	-.000948	-.000515	-.002310	.0124591	.0119817
#2	.000668	-.001609	-.001919	-.006428	-.001348	.0240872	.0093993
#3	.000063	-.000037	-.001514	-.003942	-.003248	.0210421	.0104494

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000023	.0000264	7.677756	-.000049	.0002495	.0010828	-.004744
Stddev	.000023	.0000331	.025388	.000234	.0000763	.0002590	.008240
%RSD	97.33440	125.4371	.3306729	478.2434	30.58653	23.91703	173.6825

#1	-.000014	.0000550	7.648446	.000045	.0002130	.0013790	-.014252
#2	-.000007	-.000010	7.691914	-.000315	.0003372	.0009701	.000316
#3	-.000049	.000034	7.692908	.000123	.0001983	.0008993	-.000297

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0255686	1.194560	.0008708	.0009748	37.92130	.0009080	.0086837
Stddev	.0003223	.030030	.0001438	.0003326	.50831	.0043088	.0000988
%RSD	1.260464	2.513895	16.51010	34.11961	1.340433	474.5675	1.138255

#1	.0251964	1.227122	.0008676	.0007689	37.33997	-.001106	.0087787
#2	.0257543	1.167956	.0007286	.0013585	38.28215	.005855	.0086910
#3	.0257550	1.188602	.0010161	.0007970	38.14176	-.002025	.0085814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.929360	-.004280	-.000154	-.001755	-.000793	.0753319	.0039150
Stddev	.071772	.000177	.000065	.000181	.000828	.0058141	.0023132
%RSD	3.719976	4.128385	42.24786	10.31359	104.3937	7.718013	59.08415

#1	2.010597	-.004209	-.000190	-.001924	-.001693	.0818400	.0049076
#2	1.902939	-.004481	-.000194	-.001564	-.000625	.0706504	.0055663
#3	1.874543	-.004149	-.000079	-.001777	-.000062	.0735054	.0012712

Sample Name: Q2753-02LX5 Acquired: 8/4/2025 16:30:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6778322	.0242892	.0236516
Stddev	.0106854	.0029765	.0001133
%RSD	1.576406	12.25454	.4789016

#1	.6655113	.0274358	.0235436
#2	.6834236	.0215185	.0236417
#3	.6845617	.0239132	.0237695

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5650.763	98233.96	8366.823	4726.336	7004.255
Stddev	2.615	234.20	45.999	15.858	6.336
%RSD	.0462745	.2384128	.5497806	.3355149	.0904572

#1	5647.894	98272.58	8315.912	4721.954	7000.030
#2	5653.011	97982.85	8405.393	4713.130	7001.196
#3	5651.385	98446.45	8379.163	4743.923	7011.540

Sample Name: Q2753-02MS Acquired: 8/4/2025 16:34:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8398932	2.045577	.9114502	2.151195	.8569874	2.111390	.3213753
Stddev	.0022265	.099784	.0044200	.003700	.0022951	.009209	.0012562
%RSD	.2650872	4.878046	.4849443	.1720174	.2678135	.4361610	.3908922

#1	.8403058	2.109903	.9129412	2.150545	.8563066	2.120026	.3228031
#2	.8418845	2.096200	.9064775	2.147863	.8551096	2.101699	.3208830
#3	.8374893	1.930628	.9149319	2.155178	.8595458	2.112444	.3204397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1917569	.1908848	64.80961	.3945520	.1970934	.3018463	3.271492
Stddev	.0019997	.0005468	.34630	.0005230	.0007825	.0008085	.035179
%RSD	1.042825	.2864656	.5343276	.1325531	.3970203	.2678626	1.075312

#1	.1940659	.1905470	65.20750	.3951356	.1968074	.3017200	3.231871
#2	.1906050	.1905917	64.64501	.3943947	.1964942	.3011084	3.283547
#3	.1905998	.1915157	64.57630	.3941257	.1979787	.3027106	3.299059

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4286318	11.68458	.4965829	.0770439	377.2951	.3022892	.3026980
Stddev	.0011435	.07996	.0017959	.0003651	4.2214	.0037909	.0008315
%RSD	.2667821	.6843063	.3616529	.4738572	1.118870	1.254050	.2747023

#1	.4293790	11.77683	.4959907	.0768716	381.8591	.3048183	.3026435
#2	.4273154	11.64169	.4951579	.0774632	373.5305	.2979305	.3018950
#3	.4292009	11.63522	.4986002	.0767967	376.4957	.3041187	.3035554

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.63537	.2723322	.4334339	.6776901	.2023708	1.632411	5.514006
Stddev	.12181	.0038131	.0012364	.0031414	.0003306	.010212	.014108
%RSD	.8933284	1.400170	.2852585	.4635466	.1633823	.6255614	.2558580

#1	13.50759	.2766566	.4330328	.6756667	.2027521	1.624433	5.522623
#2	13.75017	.2708871	.4324479	.6760945	.2021964	1.628881	5.521670
#3	13.64836	.2694529	.4348211	.6813091	.2021639	1.643920	5.497725

Sample Name: Q2753-02MS Acquired: 8/4/2025 16:34:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.751954	.1829014	.4002432
Stddev	.025630	.0024485	.0006686
%RSD	.4455832	1.338692	.1670577
#1	5.776835	.1816436	.4006857
#2	5.753389	.1857232	.4005699
#3	5.725636	.1813375	.3994740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5344.276	92050.11	8458.601	4450.378	6312.963
Stddev	15.765	361.02	71.058	21.873	13.605
%RSD	.2949936	.3921945	.8400739	.4914765	.2155081
#1	5352.650	92452.96	8379.863	4474.555	6317.551
#2	5354.087	91755.85	8477.980	4431.964	6323.681
#3	5326.091	91941.52	8517.959	4444.616	6297.658

Sample Name: Q2753-02MSD Acquired: 8/4/2025 16:38:32 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7570134	1.774206	.8200104	1.942775	.7734025	1.935918	.2832207
Stddev	.0021520	.054385	.0018832	.014167	.0024574	.011288	.0003658
%RSD	.2842698	3.065317	.2296493	.7291986	.3177429	.5830969	.1291382

#1	.7556646	1.714142	.8180717	1.926768	.7755101	1.939545	.2834501
#2	.7558804	1.820111	.8201270	1.953701	.7707032	1.923262	.2834131
#3	.7594951	1.788366	.8218325	1.947854	.7739941	1.944947	.2827989

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1740792	.1728138	52.88993	.3638979	.1790844	.2749159	2.935407
Stddev	.0015706	.0003999	.22715	.0012455	.0006513	.0006573	.030075
%RSD	.9022501	.2314363	.4294829	.3422575	.3636843	.2390882	1.024575

#1	.1754224	.1725968	53.05278	.3644191	.1788154	.2749090	2.903353
#2	.1744629	.1725692	52.98657	.3624765	.1786107	.2742620	2.939858
#3	.1723522	.1732753	52.63043	.3647982	.1798271	.2755765	2.963008

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3687832	9.750946	.4508134	.0674772	297.0097	.2762537	.2636469
Stddev	.0005150	.065324	.0011677	.0006039	.9030	.0029108	.0003848
%RSD	.1396594	.6699261	.2590174	.8949553	.3040177	1.053665	.1459595

#1	.3686050	9.755416	.4499111	.0668554	296.5323	.2758667	.2633212
#2	.3683808	9.813921	.4503969	.0675147	296.4456	.2793386	.2635480
#3	.3693636	9.683502	.4521322	.0680615	298.0511	.2735557	.2640715

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.87142	.2430719	.4062817	.6146896	.1880823	1.401766	4.951852
Stddev	.05602	.0030186	.0015668	.0018411	.0031079	.007425	.029042
%RSD	.4718851	1.241868	.3856408	.2995158	1.652393	.5297089	.5864861

#1	11.80795	.2454390	.4050329	.6125679	.1899138	1.393599	4.921144
#2	11.89233	.2441041	.4057726	.6158655	.1898391	1.403589	4.955537
#3	11.91397	.2396725	.4080398	.6156355	.1844939	1.408110	4.978876

Sample Name: Q2753-02MSD Acquired: 8/4/2025 16:38:32 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.358149	.1675862	.3473383
Stddev	.013762	.0033317	.0006111
%RSD	.3157669	1.988073	.1759525
#1	4.342258	.1685785	.3470112
#2	4.366110	.1703091	.3480434
#3	4.366078	.1638711	.3469604

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5369.402	93502.61	8314.913	4489.592	6453.216
Stddev	12.549	360.99	60.400	18.806	15.325
%RSD	.2337113	.3860710	.7264002	.4188828	.2374839
#1	5374.902	93852.06	8270.540	4504.262	6458.539
#2	5378.261	93131.10	8290.500	4468.391	6465.171
#3	5355.042	93524.67	8383.697	4496.124	6435.939

Sample Name: Q2753-02A Acquired: 8/4/2025 16:42:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8931505	2.153681	.9721821	2.384159	.9236906	2.125508	.3031364
Stddev	.0038881	.083274	.0027700	.004808	.0034143	.021248	.0016993
%RSD	.4353238	3.866593	.2849263	.2016505	.3696342	.9996837	.5605626

#1	.8887760	2.206437	.9694366	2.388824	.9232675	2.148371	.3019313
#2	.8944634	2.196924	.9721336	2.384432	.9272967	2.106366	.3023979
#3	.8962123	2.057681	.9749760	2.379220	.9205075	2.121786	.3050799

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2058085	.1994202	54.43700	.3971040	.2039678	.3144773	3.298823
Stddev	.0008006	.0006180	.08399	.0006549	.0005720	.0003236	.009176
%RSD	.3889818	.3099057	.1542813	.1649122	.2804184	.1029073	.2781533

#1	.2061437	.1991933	54.52816	.3967574	.2033300	.3148509	3.290753
#2	.2048948	.1989477	54.42005	.3978594	.2041383	.3142886	3.296913
#3	.2063869	.2001196	54.36278	.3966953	.2044351	.3142922	3.308804

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3944886	10.18330	.5155753	.0808039	310.0165	.3064893	.3020094
Stddev	.0004131	.01682	.0016785	.0004940	4.5336	.0016305	.0005240
%RSD	.1047275	.1652142	.3255609	.6113055	1.462387	.5319982	.1734872

#1	.3949290	10.20034	.5145618	.0809285	315.0664	.3061382	.3015884
#2	.3944272	10.16670	.5146512	.0812235	306.2967	.3082667	.3018436
#3	.3941096	10.18287	.5175127	.0802595	308.6863	.3050629	.3025962

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.44590	.3053052	.4473551	.7381658	.2125531	1.541211	5.882031
Stddev	.00057	.0018777	.0006835	.0030069	.0004801	.018829	.002885
%RSD	.0042449	.6150128	.1527767	.4073493	.2258717	1.221711	.0490521

#1	13.44655	.3055900	.4476758	.7359609	.2127791	1.561102	5.884250
#2	13.44564	.3033014	.4465703	.7369455	.2128784	1.538867	5.883073
#3	13.44550	.3070242	.4478192	.7415910	.2120017	1.523664	5.878769

Sample Name: Q2753-02A Acquired: 8/4/2025 16:42:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.212484	.1864561	.3705449
Stddev	.013913	.0036528	.0011130
%RSD	.2669094	1.959073	.3003576
#1	5.223386	.1866900	.3695924
#2	5.217251	.1826919	.3702741
#3	5.196814	.1899863	.3717683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5578.471	95820.70	8741.096	4682.985	6544.131
Stddev	14.625	257.18	27.260	17.968	31.234
%RSD	.2621620	.2683956	.3118587	.3836873	.4772784
#1	5589.271	95631.58	8717.421	4672.289	6566.136
#2	5584.314	95716.96	8770.898	4672.937	6557.874
#3	5561.828	96113.54	8734.969	4703.729	6508.382

Sample Name: PB169079TB Acquired: 8/4/2025 16:46:44 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002832	-.000223	-.001560	.0020740	.0009031	.0087036	-.003611
Stddev	.000588	.001766	.000684	.0030456	.0005355	.0051250	.000767
%RSD	20.74549	792.3663	43.87211	146.8466	59.29050	58.88317	21.24844

#1	-.002598	-.001671	-.002049	.0023072	.0014018	.0031758	-.004142
#2	-.002399	.001745	-.000778	-.001082	.0003372	.0132973	-.002731
#3	-.003501	-.000742	-.001853	.004996	.0009704	.0096378	-.003959

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000229	-.000094	.1096785	-.001271	-.000136	-.000201	-.000049
Stddev	.000039	.000011	.0077739	.000189	.000105	.000423	.001580
%RSD	16.96892	11.54909	7.087873	14.85825	77.63184	210.1439	3193.243

#1	-.000260	-.000092	.1103331	-.001091	-.000102	-.000665	.001559
#2	-.000186	-.000106	.1171044	-.001254	-.000253	.000166	-.000110
#3	-.000242	-.000085	.1015980	-.001468	-.000051	-.000105	-.001598

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039757	.0036799	.0009315	.0008503	431.5816	-.000537	-.000326
Stddev	.0002252	.0046463	.0002205	.0001144	3.7276	.000776	.000117
%RSD	5.665230	126.2607	23.67708	13.45858	.8636992	144.3593	35.79940

#1	.0038996	.0085716	.0010557	.0009723	435.8781	.000358	-.000262
#2	.0037984	.0031426	.0006768	.0007454	429.6573	-.000972	-.000256
#3	.0042291	-.000674	.0010619	.0008330	429.2095	-.000998	-.000461

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4314809	-.006179	.0007739	.0008398	.0003189	.0177407	.0078511
Stddev	.0265127	.000541	.0000712	.0001986	.0021228	.0237740	.0004628
%RSD	6.144593	8.753080	9.203286	23.64153	665.7914	134.0081	5.895242

#1	.4610459	-.006475	.0008539	.0006446	.0002845	.0258509	.0079635
#2	.4098165	-.005555	.0007174	.0008333	.0024587	-.009027	.0073424
#3	.4235803	-.006508	.0007503	.0010416	-.001787	.036398	.0082474

Sample Name: PB169079TB Acquired: 8/4/2025 16:46:44 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1614388	-.015539	.0002025
Stddev	.0033753	.001507	.0000639
%RSD	2.090742	9.697198	31.55809

#1	.1650741	-.015679	.0001979
#2	.1584041	-.013967	.0001410
#3	.1608383	-.016970	.0002685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5360.970	91800.66	8505.768	4477.329	6359.662
Stddev	9.169	402.19	70.781	27.371	8.779
%RSD	.1710289	.4381123	.8321508	.6113302	.1380382

#1	5352.851	92236.80	8562.270	4508.912	6361.119
#2	5359.146	91444.41	8426.374	4462.585	6350.247
#3	5370.914	91720.77	8528.661	4460.491	6367.622

Sample Name: CCV05 Acquired: 8/4/2025 16:51:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.045389	5.467332	4.761515	5.200185	5.192293	9.769146
Stddev	.011800	.086196	.011420	.013052	.008333	.026387
%RSD	.2338862	1.576569	.2398435	.2509861	.1604951	.2701076

#1	5.035874	5.553591	4.755721	5.202331	5.188395	9.743905
#2	5.041700	5.381199	4.754154	5.186194	5.186623	9.766988
#3	5.058594	5.467206	4.774671	5.212031	5.201861	9.796547

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.21710	.2485988	2.362057	25.37261	.9250536	2.390471
Stddev	.18023	.0006163	.005557	.01028	.0021479	.007119
%RSD	1.764036	.2478978	.2352595	.0405070	.2321907	.2978028

#1	10.41033	.2488335	2.359826	25.36515	.9259539	2.386587
#2	10.18742	.2490633	2.357962	25.38433	.9226021	2.386140
#3	10.05354	.2478997	2.368383	25.36835	.9266049	2.398687

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.224184	5.038449	2.493760	23.70394	2.397817	1.250612
Stddev	.002265	.037440	.003967	.08967	.005694	.001910
%RSD	.1850295	.7430840	.1590653	.3782824	.2374741	.1527081

#1	1.223328	5.003820	2.489475	23.60811	2.394711	1.249935
#2	1.222472	5.033349	2.497304	23.78580	2.394350	1.249133
#3	1.226753	5.078177	2.494501	23.71792	2.404388	1.252768

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.92344	2.456797	2.554071	25.97577	4.991582	5.100979
Stddev	.13566	.003444	.002183	.06392	.006166	.011091
%RSD	.5917752	.1401985	.0854676	.2460936	.1235376	.2174292

#1	22.87518	2.452882	2.556513	25.99427	4.988429	5.096524
#2	22.81852	2.458152	2.552309	25.90464	4.998687	5.092808
#3	23.07663	2.459359	2.553392	26.02841	4.987629	5.113604

Sample Name: CCV05 Acquired: 8/4/2025 16:51:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.804484	5.128402	4.910328	F 4.470553	4.838739	4.781711
Stddev	.012009	.008364	.017222	.002523	.017564	.007772
%RSD	.2499627	.1630909	.3507369	.0564370	.3629959	.1625331

#1	4.802352	5.123536	4.904452	4.470746	4.837577	4.772814
#2	4.793683	5.123610	4.896813	4.467939	4.821784	4.785144
#3	4.817417	5.138060	4.929719	4.472974	4.856856	4.787176

Elem	Sr4077
Units	ppm
Avg	5.151225
Stddev	.049038
%RSD	.9519652

#1	5.105303
#2	5.145495
#3	5.202876

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5522.212	95192.88	8164.842	4597.654	6625.980
Stddev	5.253	149.10	15.782	5.424	4.312
%RSD	.0951276	.1566290	.1932941	.1179670	.0650733

#1	5528.264	95224.30	8172.311	4594.400	6630.561
#2	5519.534	95323.77	8146.712	4594.647	6625.378
#3	5518.837	95030.58	8175.504	4603.915	6622.000

Sample Name: CCB05 Acquired: 8/4/2025 16:55:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	-.001412	-.002559	-.000147	-.002958	-.001332	-.003873	-.002239
Stddev	.001156	.001713	.000907	.002341	.000146	.002681	.000518
%RSD	81.92319	66.94086	617.0180	79.15541	10.97994	69.23721	23.14277

#1	-.000102	-.002062	.000757	-.004593	-.001452	-.005741	-.001707
#2	-.001841	-.004466	-.000142	-.004004	-.001376	-.005077	-.002269
#3	-.002292	-.001150	-.001056	-.000276	-.001169	-.000800	-.002742

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000253	.0002595	-.004178	-.001661	.0003623	-.000093	-.001394
Stddev	.0000691	.0000546	.001253	.000064	.0002262	.000217	.002530
%RSD	273.0765	21.03772	30.00447	3.868330	62.43894	233.4908	181.4527

#1	-.000016	.0002978	-.003205	-.001714	.0006163	.000134	-.001194
#2	.000105	.0002838	-.003736	-.001680	.0002878	-.000298	.001029
#3	-.000013	.0001970	-.005592	-.001590	.0001827	-.000115	-.004019

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001494	.0128087	.0003759	.0009849	.6133761	-.001069	-.000775
Stddev	.000647	.0307598	.0004622	.0002901	.0106258	.003042	.000130
%RSD	43.32349	240.1469	122.9379	29.45816	1.732350	284.5819	16.83380

#1	-.001882	-.019716	.0009013	.0009041	.6159950	-.000145	-.000926
#2	-.001853	.041432	.0001945	.0007437	.6224475	-.004466	-.000692
#3	-.000747	.016710	.0000320	.0013068	.6016857	.001404	-.000708

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7843530	-.001772	.0011708	.0004467	.0007808	-.008786	.0070010
Stddev	.0278875	.000876	.0003256	.0004551	.0006785	.007596	.0009224
%RSD	3.555476	49.45570	27.81239	101.8647	86.89924	86.45074	13.17586

#1	.8068645	-.000774	.0015160	.0001137	.0015155	-.017147	.0080628
#2	.7531564	-.002125	.0011273	.0002612	.0006490	-.002311	.0063972
#3	.7930381	-.002416	.0008692	.0009653	.0001778	-.006901	.0065430

Sample Name: CCB05 Acquired: 8/4/2025 16:55:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000274	.0027505	.0003584
Stddev	.001490	.0034052	.0000804
%RSD	544.2708	123.8036	22.42777

#1	.000442	-.000647	.0002656
#2	-.001987	.006163	.0004028
#3	.000724	.002735	.0004067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5763.602	100941.6	8420.762	4819.244	7529.502
Stddev	3.617	204.0	14.627	8.885	14.834
%RSD	.0627500	.2020625	.1737013	.1843693	.1970131

#1	5767.778	100819.1	8432.139	4819.138	7542.452
#2	5761.505	100828.6	8425.884	4828.182	7532.735
#3	5761.522	101177.0	8404.263	4810.412	7513.318

Sample Name: PB169101BL Acquired: 8/4/2025 16:59:43 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001361	-.003057	-.001638	.0008507	-.001657	-.003085	-.002143
Stddev	.000392	.000740	.001073	.0023219	.000567	.005671	.000191
%RSD	28.79500	24.19536	65.51154	272.9328	34.19622	183.8401	8.904787

#1	-.000946	-.003891	-.000622	-.000421	-.002289	.002868	-.001925
#2	-.001724	-.002481	-.002760	-.000557	-.001194	-.003698	-.002280
#3	-.001411	-.002799	-.001532	.003531	-.001488	-.008424	-.002224

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000022	-.000016	-.003969	-.001645	.0000066	-.000223	-.004623
Stddev	.000010	.000047	.004156	.000204	.0002375	.000292	.002059
%RSD	42.97009	298.7474	104.7114	12.41291	3623.978	131.3153	44.54377

#1	-.000030	-.000067	-.007487	-.001418	.0002291	-.000516	-.006243
#2	-.000025	-.000005	-.005038	-.001704	.0000341	.000069	-.005321
#3	-.000012	.000025	.000617	-.001813	-.000244	-.000221	-.002306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001411	.0129143	.0001187	.0010828	.5688024	-.002678	-.000392
Stddev	.000258	.0101453	.0001868	.0002294	.0142334	.000362	.000173
%RSD	18.29895	78.55890	157.2977	21.18536	2.502339	13.53139	44.19097

#1	-.001147	.0235367	.0002502	.0008184	.5529228	-.002364	-.000586
#2	-.001663	.0118809	-.000095	.0012290	.5730728	-.002595	-.000336
#3	-.001424	.0033252	.000201	.0012011	.5804118	-.003075	-.000254

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7765640	-.003882	.0002023	-.000661	.0004905	-.003203	.0037968
Stddev	.0071025	.000125	.0002438	.000523	.0012082	.003236	.0015385
%RSD	.9146004	3.232901	120.5015	79.17494	246.3310	101.0342	40.52234

#1	.7765664	-.003737	-.000077	-.001189	.0013403	.000461	.0020681
#2	.7836652	-.003961	.000374	-.000142	.0010237	-.004401	.0050159
#3	.7694603	-.003947	.000309	-.000652	-.000893	-.005669	.0043063

Sample Name: PB169101BL Acquired: 8/4/2025 16:59:43 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001047	-.001312	-.000088
Stddev	.000411	.003578	.000039
%RSD	39.23689	272.6657	44.03750

#1	-.001171	.000578	-.000043
#2	-.000589	.000925	-.000109
#3	-.001382	-.005439	-.000112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5777.614	100168.1	8178.732	4811.618	7502.089
Stddev	6.196	261.2	54.081	3.510	13.269
%RSD	.1072381	.2607597	.6612435	.0729582	.1768722

#1	5770.682	100466.9	8116.481	4815.253	7487.374
#2	5782.611	100054.0	8205.572	4811.353	7505.749
#3	5779.550	99983.4	8214.144	4808.247	7513.144

Sample Name: PB169101BS Acquired: 8/4/2025 17:04:03 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8341163	2.277296	.9791135	2.159901	.8753933	2.119021	.2205247
Stddev	.0033898	.096677	.0020942	.010224	.0028607	.010623	.0006530
%RSD	.4063900	4.245254	.2138857	.4733641	.3267952	.5012933	.2961305

#1	.8349120	2.272142	.9769837	2.160834	.8785416	2.111870	.2203887
#2	.8303994	2.183299	.9791866	2.149242	.8729531	2.113965	.2199503
#3	.8370374	2.376447	.9811701	2.169626	.8746851	2.131227	.2212350

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2198950	.1930648	1.133548	.3943866	.2015689	.3202678	3.131049
Stddev	.0008059	.0004843	.005765	.0019045	.0001802	.0008700	.009979
%RSD	.3664729	.2508651	.5086010	.4828944	.0894222	.2716567	.3187063

#1	.2197646	.1925804	1.130952	.3965852	.2015792	.3198573	3.141821
#2	.2191624	.1930648	1.129537	.3933265	.2013837	.3196789	3.129207
#3	.2207582	.1935491	1.140155	.3932481	.2017437	.3212671	3.122120

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2179455	2.083324	.5046666	.0810738	3.237253	.3174009	.2183420
Stddev	.0013504	.027103	.0013026	.0004239	.010185	.0082108	.0009692
%RSD	.6196180	1.300970	.2581190	.5228120	.3146077	2.586891	.4438884

#1	.2186884	2.069348	.5032299	.0814085	3.248898	.3173168	.2192693
#2	.2163867	2.066061	.5049991	.0812157	3.232850	.3092324	.2184211
#3	.2187613	2.114563	.5057708	.0805972	3.230011	.3256534	.2173357

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.69693	.3211964	.4352903	.6903375	.2158186	.8605360	5.367101
Stddev	.03136	.0011466	.0009628	.0040243	.0006950	.0057434	.015548
%RSD	.2931594	.3569914	.2211758	.5829447	.3220195	.6674230	.2896850

#1	10.71161	.3207139	.4357639	.6918405	.2150355	.8645261	5.371423
#2	10.71826	.3203698	.4341824	.6857780	.2163621	.8539533	5.349849
#3	10.66093	.3225054	.4359245	.6933939	.2160581	.8631284	5.380030

Sample Name: PB169101BS Acquired: 8/4/2025 17:04:03 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.001127	.2028508	.2161019
Stddev	.002493	.0009183	.0006899
%RSD	221.2220	.4527220	.3192486
#1	.001293	.2035619	.2161424
#2	-.000987	.2031765	.2153926
#3	-.003687	.2018140	.2167707

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5685.499	98679.84	8080.234	4752.108	7182.894
Stddev	9.292	309.75	16.336	12.251	15.132
%RSD	.1634292	.3138940	.2021782	.2578007	.2106726
#1	5688.053	98498.47	8079.527	4744.054	7198.154
#2	5693.246	98503.54	8096.912	4746.063	7182.636
#3	5675.197	99037.49	8064.262	4766.207	7167.892

Sample Name: Q2745-01 Acquired: 8/4/2025 17:08:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000923	-.015476	-.000797	-.006190	-.005163	-.007183	-.021701
Stddev	.000094	.000067	.000279	.000603	.000127	.004854	.000087
%RSD	10.21894	.4304077	35.00440	9.743325	2.461007	67.57059	.3999574

#1	-.000952	-.015544	-.000628	-.006877	-.005094	-.010506	-.021635
#2	-.001000	-.015475	-.000645	-.005747	-.005086	-.009430	-.021799
#3	-.000818	-.015411	-.001120	-.005947	-.005310	-.001613	-.021667

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000092	.0001280	-.028056	-.002473	-.000079	-.000733	-.016467
Stddev	.0000154	.0000227	.002553	.000107	.000033	.000060	.001279
%RSD	168.5322	17.72373	9.100879	4.330655	41.68234	8.242435	7.764544

#1	.0000038	.0001467	-.025993	-.002384	-.000106	-.000795	-.016641
#2	-.000003	.0001345	-.027263	-.002592	-.000089	-.000674	-.017650
#3	.000027	.0001027	-.030912	-.002444	-.000042	-.000731	-.015110

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001893	.0151405	.0005323	.0005180	-.226672	.0011011	-.002559
Stddev	.000050	.0094223	.0000252	.0000972	.001829	.0006730	.000081
%RSD	2.645048	62.23217	4.725627	18.77070	.8067214	61.11994	3.183142

#1	-.001897	.0260018	.0005054	.0005498	-.224762	.0004207	-.002532
#2	-.001840	.0102618	.0005552	.0005953	-.226846	.0011163	-.002494
#3	-.001940	.0091580	.0005363	.0004088	-.228407	.0017664	-.002650

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1945188	-.008083	-.000636	-.002975	-.000191	-.035548	-.009091
Stddev	.0161650	.000077	.000038	.000109	.000084	.001597	.000098
%RSD	8.310262	.9509016	5.898590	3.655278	43.78632	4.491904	1.081621

#1	.1921690	-.008043	-.000629	-.002888	-.000112	-.037028	-.009203
#2	.1796573	-.008172	-.000676	-.002939	-.000181	-.033856	-.009018
#3	.2117301	-.008035	-.000602	-.003097	-.000279	-.035761	-.009053

Sample Name: Q2745-01 Acquired: 8/4/2025 17:08:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-0.010656	-0.016227	-0.000182
Stddev	.001122	.000332	.000032
%RSD	10.52455	2.048066	17.75410

#1	-0.011014	-0.016255	-0.000145
#2	-0.011555	-0.016545	-0.000194
#3	-0.009399	-0.015882	-0.000206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	24878.19	411765.2	24819.73	21097.95	32249.32
Stddev	38.46	5259.0	187.55	50.05	41.88
%RSD	.1546020	1.277189	.7556641	.2372288	.1298709

#1	24862.78	417806.9	24825.31	21150.44	32240.80
#2	24921.97	409274.1	24629.45	21092.64	32294.81
#3	24849.83	408214.7	25004.44	21050.76	32212.36

Sample Name: Q2745-02 Acquired: 8/4/2025 17:12:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002841	-.000659	.0052184	-.002580	-.000059	.0525176	.0027563
Stddev	.000182	.001661	.0008764	.001566	.000775	.0058691	.0009117
%RSD	6.421512	252.2116	16.79511	60.68482	1324.440	11.17551	33.07604

#1	-.003040	-.001066	.0056774	-.003646	.000668	.0583833	.0035811
#2	-.002802	-.002078	.0057700	-.003313	-.000874	.0525244	.0017774
#3	-.002681	.001168	.0042078	-.000782	.000030	.0466451	.0029106

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000230	-.000058	4.411034	-.001653	.0068016	.0149624	.0856149
Stddev	.000022	.000042	.032751	.000188	.0001026	.0001422	.0035295
%RSD	9.673478	71.84299	.7424679	11.39566	1.508114	.9501543	4.122525

#1	-.000255	-.000026	4.448746	-.001436	.0068737	.0149639	.0882937
#2	-.000224	-.000106	4.394614	-.001749	.0068470	.0148196	.0869356
#3	-.000211	-.000043	4.389741	-.001773	.0066842	.0151039	.0816156

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203974	1.693124	.0085384	.0007467	13.57396	-.001063	.0541778
Stddev	.0005061	.020931	.0004194	.0002373	.04019	.000259	.0003470
%RSD	2.480996	1.236233	4.912075	31.77466	.2961047	24.38225	.6405129

#1	.0209647	1.668988	.0080694	.0009124	13.56342	-.001130	.0540809
#2	.0202348	1.706285	.0086681	.0004749	13.61837	-.001282	.0545629
#3	.0199926	1.704099	.0088776	.0008529	13.54009	-.000777	.0538895

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.085240	.0027942	.0001465	.0023133	-.000052	5.684093	.0075338
Stddev	.035388	.0004411	.0002606	.0003476	.000972	.042632	.0007695
%RSD	3.260829	15.78611	177.8308	15.02806	1872.354	.7500267	10.21440

#1	1.092078	.0024062	-.000039	.0020316	.001059	5.639339	.0074226
#2	1.046932	.0032740	.000034	.0022064	-.000470	5.724227	.0083529
#3	1.116709	.0027025	.000444	.0027018	-.000744	5.688713	.0068260

Sample Name: Q2745-02 Acquired: 8/4/2025 17:12:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.023897	-.016426	.0240902
Stddev	.021341	.003132	.0001070
%RSD	.4247941	19.06437	.4441519
#1	5.000731	-.019612	.0242131
#2	5.028202	-.013352	.0240180
#3	5.042757	-.016314	.0240394

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5750.511	99861.55	8190.111	4839.801	7335.710
Stddev	3.652	347.63	71.846	23.671	6.174
%RSD	.0635082	.3481160	.8772277	.4890963	.0841638
#1	5746.294	99460.32	8109.435	4816.035	7342.138
#2	5752.652	100072.7	8213.706	4839.990	7329.826
#3	5752.587	100051.6	8247.193	4863.376	7335.166

Sample Name: Q2756-01 Acquired: 8/4/2025 17:16:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065968	.0003186	.0404387	.0002410	-.001429	.2347676	.1233951
Stddev	.0028716	.0023743	.0001157	.0009378	.001593	.0073837	.0013113
%RSD	43.53049	745.2431	.2860422	389.1427	111.4388	3.145105	1.062690

#1	.0036200	-.000978	.0404598	-.000309	.000410	.2327440	.1225752
#2	.0093502	-.001125	.0403140	.001324	-.002334	.2429521	.1249075
#3	.0068201	.003059	.0405424	-.000292	-.002365	.2286067	.1227027

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000306	-.000108	73.21005	.0022463	.0071272	.0055409	11.94045
Stddev	.000042	.000004	.08974	.0002463	.0000814	.0002235	.01423
%RSD	13.86656	3.337213	.1225731	10.96274	1.142435	4.033897	.1192014

#1	-.000355	-.000109	73.21140	.0021323	.0070720	.0052984	11.95555
#2	-.000282	-.000104	73.29911	.0020778	.0072207	.0057387	11.93853
#3	-.000281	-.000111	73.11965	.0025289	.0070888	.0055854	11.92728

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.456535	9.660896	.0229897	.0008795	109.4275	.0011712	.2545955
Stddev	.004992	.035211	.0002513	.0001561	.5047	.0002909	.0007116
%RSD	.1444151	.3644643	1.093065	17.75023	.4612243	24.83996	.2794857

#1	3.459358	9.646468	.0231271	.0009226	109.9854	.0014804	.2551475
#2	3.459475	9.635191	.0231422	.0010095	109.0027	.0009028	.2548465
#3	3.450771	9.701029	.0226996	.0007063	109.2945	.0011306	.2537924

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.33082	.1046518	.0123367	-.002850	.0035140	9.384983	.5541484
Stddev	.11654	.0006470	.0001852	.000218	.0014104	.083295	.0056685
%RSD	.3040475	.6182102	1.501233	7.639183	40.13747	.8875369	1.022916

#1	38.45110	.1041283	.0124438	-.003000	.0037342	9.479346	.5547622
#2	38.21842	.1044519	.0124434	-.002949	.0020064	9.321685	.5594850
#3	38.32293	.1053751	.0121228	-.002600	.0048013	9.353917	.5481980

Sample Name: Q2756-01 Acquired: 8/4/2025 17:16:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.485168	-.003321	.7511036
Stddev	.007975	.001725	.0010616
%RSD	.2288129	51.94070	.1413456
#1	3.476051	-.005307	.7523248
#2	3.490846	-.002186	.7505864
#3	3.488607	-.002471	.7503997

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5418.551	92475.47	8075.666	4536.815	6526.450
Stddev	2.248	185.40	20.460	29.347	4.677
%RSD	.0414935	.2004861	.2533571	.6468615	.0716567
#1	5420.728	92316.26	8077.803	4519.653	6522.883
#2	5418.687	92431.13	8054.221	4520.091	6531.744
#3	5416.238	92679.02	8094.974	4570.701	6524.722

Sample Name: Q2756-01DUP Acquired: 8/4/2025 17:20:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079896	-.003535	.0405787	-.000252	-.000753	.2183800	.1207158
Stddev	.0010074	.000511	.0011198	.002996	.000349	.0055148	.0013593
%RSD	12.60912	14.46273	2.759482	1187.275	46.30450	2.525320	1.126006

#1	.0088300	-.004054	.0401573	-.002702	-.000760	.2139155	.1193120
#2	.0068729	-.003518	.0397308	-.001144	-.001099	.2245447	.1208096
#3	.0082659	-.003032	.0418481	.003089	-.000401	.2166798	.1220257

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000290	-.000078	72.26127	-.000428	.0071883	.0052526	11.57145
Stddev	.000025	.000022	.09205	.000104	.0001517	.0004302	.06862
%RSD	8.604879	28.82531	.1273835	24.29103	2.111002	8.190333	.5929898

#1	-.000317	-.000084	72.16170	-.000349	.0072986	.0048059	11.51462
#2	-.000268	-.000053	72.34327	-.000546	.0070152	.0052877	11.55206
#3	-.000286	-.000097	72.27885	-.000390	.0072510	.0056642	11.64768

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.415868	9.582448	.0222816	.0008409	106.2755	.0029982	.2501051
Stddev	.006870	.093037	.0001717	.0004789	.2621	.0022394	.0001454
%RSD	.2011223	.9709096	.7705491	56.95432	.2466013	74.69364	.0581142

#1	3.408908	9.519722	.0224680	.0009958	106.1475	.0051934	.2502709
#2	3.422644	9.689342	.0221299	.0012233	106.5770	.0007170	.2500450
#3	3.416053	9.538278	.0222469	.0003037	106.1020	.0030842	.2499995

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.18525	.1028818	.0122811	-.000132	.0044454	9.146012	.5312861
Stddev	.08272	.0000785	.0000985	.000390	.0021954	.013305	.0011746
%RSD	.2224611	.0763329	.8024539	294.4424	49.38512	.1454719	.2210865

#1	37.10326	.1029724	.0122785	-.000232	.0031686	9.146956	.5299775
#2	37.26869	.1028411	.0121838	-.000463	.0069804	9.158820	.5322492
#3	37.18380	.1028320	.0123809	.000297	.0031872	9.132261	.5316315

Sample Name: Q2756-01DUP Acquired: 8/4/2025 17:20:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.416818	-.002886	.7431860
Stddev	.030307	.003837	.0011567
%RSD	.8870053	132.9585	.1556448
#1	3.388871	-.007315	.7444235
#2	3.412548	-.000764	.7430027
#3	3.449033	-.000579	.7421319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5574.965	96013.75	8266.070	4668.381	6709.954
Stddev	8.934	465.16	26.055	24.552	16.051
%RSD	.1602591	.4844770	.3152041	.5259176	.2392099
#1	5580.900	96542.86	8294.181	4696.716	6720.174
#2	5579.306	95669.14	8242.730	4653.403	6718.234
#3	5564.690	95829.24	8261.300	4655.025	6691.454

Sample Name: Q2756-01LX5 Acquired: 8/4/2025 17:25:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019902	-.002526	.0088772	-.001394	-.001955	.0528297	.0238505
Stddev	.0011782	.001712	.0011967	.002582	.000395	.0135561	.0007655
%RSD	59.19864	67.78709	13.48043	185.1987	20.18589	25.66009	3.209496

#1	.0014254	-.003725	.0075411	.001061	-.001501	.0461918	.0238720
#2	.0012008	-.000565	.0098506	-.001156	-.002146	.0684256	.0230745
#3	.0033445	-.003288	.0092398	-.004088	-.002218	.0438717	.0246050

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000102	-.000023	15.98740	-.000802	.0014830	.0008443	2.512668
Stddev	.000008	.000033	.07530	.000254	.0000335	.0002108	.026100
%RSD	7.678193	148.2520	.4709747	31.70511	2.255805	24.96828	1.038717

#1	-.000095	-.000012	16.07183	-.000564	.0014653	.0008935	2.538397
#2	-.000110	-.000060	15.92719	-.001070	.0015215	.0006133	2.513393
#3	-.000101	.000004	15.96320	-.000771	.0014621	.0010263	2.486213

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7577342	2.157204	.0046404	.0009004	21.73043	.0005227	.0523714
Stddev	.0020501	.003253	.0002983	.0000898	.14716	.0042664	.0000846
%RSD	.2705584	.1507801	6.428866	9.977778	.6772292	816.1894	.1614696

#1	.7598352	2.158794	.0049556	.0009364	21.82933	.0023669	.0524634
#2	.7576284	2.153463	.0043624	.0009666	21.80066	-.004356	.0522970
#3	.7557391	2.159356	.0046033	.0007981	21.56131	.003557	.0523537

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.497520	.0185290	.0024440	-.001881	.0027481	1.964946	.1124326
Stddev	.046329	.0005166	.0000653	.000408	.0020185	.031936	.0030100
%RSD	.5452098	2.788042	2.670651	21.68436	73.45138	1.625265	2.677122

#1	8.529856	.0190177	.0025090	-.001870	.0004508	1.992153	.1140602
#2	8.518259	.0179884	.0023785	-.002294	.0042375	1.972901	.1089592
#3	8.444444	.0185810	.0024444	-.001478	.0035561	1.929785	.1142783

Sample Name: Q2756-01LX5 Acquired: 8/4/2025 17:25:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7213896	.0037919	.1627970
Stddev	.0054342	.0035414	.0003405
%RSD	.7533025	93.39265	.2091579
#1	.7273243	.0075839	.1630574
#2	.7201875	.0005704	.1629219
#3	.7166571	.0032215	.1624117

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5610.058	96439.74	8206.583	4682.765	6981.958
Stddev	8.844	7.07	33.371	12.030	13.550
%RSD	.1576433	.0073327	.4066329	.2569021	.1940785
#1	5618.669	96442.77	8229.235	4670.887	6991.232
#2	5610.507	96431.66	8222.251	4682.465	6988.235
#3	5600.998	96444.80	8168.261	4694.942	6966.407

Sample Name: Q2756-01MS Acquired: 8/4/2025 17:29:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8449154	2.076044	.9859208	2.097338	.8516944	2.262961	.3303057
Stddev	.0054908	.049140	.0004593	.009543	.0007566	.017792	.0006982
%RSD	.6498607	2.367025	.0465823	.4549904	.0888373	.7862136	.2113752

#1	.8449077	2.042310	.9857378	2.087806	.8509163	2.283321	.3310705
#2	.8394285	2.053397	.9855813	2.097316	.8517392	2.255156	.3297025
#3	.8504100	2.132424	.9864434	2.106892	.8524276	2.250405	.3301441

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1999118	.1938471	72.03852	.3963230	.2076575	.3090029	14.72017
Stddev	.0006472	.0002945	.21699	.0020353	.0003905	.0006988	.04654
%RSD	.3237354	.1519123	.3012205	.5135411	.1880513	.2261512	.3161655

#1	.1998815	.1939874	72.28658	.3947484	.2080973	.3095700	14.72078
#2	.2005735	.1940452	71.88387	.3955993	.2075237	.3082222	14.67332
#3	.1992802	.1935087	71.94512	.3986212	.2073515	.3092164	14.76639

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.574420	11.39536	.5248802	.0768450	109.2837	.3149829	.4586746
Stddev	.007243	.06826	.0006226	.0007496	.3422	.0041039	.0012469
%RSD	.2026480	.5990169	.1186151	.9754409	.3131553	1.302906	.2718381

#1	3.582721	11.38386	.5255899	.0776027	109.5123	.3194910	.4578517
#2	3.571159	11.46864	.5246244	.0768286	108.8903	.3139939	.4580630
#3	3.569380	11.33357	.5244262	.0761038	109.4487	.3114639	.4601092

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.70870	.3704846	.4619500	.6936969	.2115965	10.05036	6.073967
Stddev	.16795	.0009444	.0003530	.0003246	.0030844	.05085	.016199
%RSD	.3520308	.2549068	.0764194	.0467937	1.457695	.5059405	.2666874

#1	47.84657	.3707107	.4620833	.6933305	.2124617	10.05959	6.090400
#2	47.52165	.3712954	.4615498	.6938118	.2081718	9.99553	6.058013
#3	47.75789	.3694477	.4622170	.6939485	.2141559	10.09597	6.073486

Sample Name: Q2756-01MS Acquired: 8/4/2025 17:29:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.357179	.1936212	.9423980
Stddev	.015196	.0014483	.0023168
%RSD	.4526516	.7480326	.2458427

#1	3.356447	.1924545	.9450210
#2	3.342362	.1931669	.9406309
#3	3.372728	.1952423	.9415423

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5572.941	96553.25	8424.019	4719.376	6683.804
Stddev	11.400	40.58	17.478	20.530	12.188
%RSD	.2045686	.0420282	.2074762	.4350164	.1823556

#1	5568.342	96599.51	8425.197	4696.976	6673.492
#2	5585.923	96523.65	8405.982	4723.856	6697.255
#3	5564.559	96536.58	8440.879	4737.296	6680.665

Sample Name: Q2756-01MSD Acquired: 8/4/2025 17:33:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8199562	2.060472	.9581171	2.052741	.8442549	2.203254	.3205217
Stddev	.0037862	.034093	.0013123	.005366	.0042321	.008154	.0000717
%RSD	.4617615	1.654627	.1369658	.2614103	.5012863	.3700856	.0223596

#1	.8173474	2.084096	.9580775	2.047427	.8393687	2.195288	.3205621
#2	.8182223	2.075931	.9594487	2.052639	.8467678	2.202889	.3204389
#3	.8242989	2.021387	.9568250	2.058158	.8466281	2.211584	.3205640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1946276	.1875539	70.52251	.3829856	.2010569	.2991747	14.35146
Stddev	.0008812	.0002086	.22321	.0014702	.0005311	.0006973	.07127
%RSD	.4527810	.1112301	.3165098	.3838708	.2641776	.2330715	.4966320

#1	.1946233	.1873612	70.75627	.3813904	.2011080	.2988022	14.30870
#2	.1937486	.1877755	70.31161	.3842861	.2015607	.2987427	14.43374
#3	.1955110	.1875251	70.49965	.3832802	.2005021	.2999791	14.31194

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.509935	11.21388	.5069703	.0750437	107.8148	.3044273	.4500774
Stddev	.004563	.03152	.0008643	.0005199	.3222	.0024557	.0023157
%RSD	.1300042	.2811248	.1704901	.6928066	.2988478	.8066487	.5145065

#1	3.515167	11.24161	.5066224	.0744438	107.6974	.3021113	.4485792
#2	3.507861	11.22044	.5079544	.0753229	108.1792	.3041685	.4489085
#3	3.506777	11.17959	.5063342	.0753643	107.5677	.3070021	.4527446

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.96124	.3645071	.4610047	.6802942	.2034495	9.872045	5.920330
Stddev	.08454	.0013417	.0005941	.0014099	.0028832	.048711	.031179
%RSD	.1800305	.3680941	.1288654	.2072530	1.417132	.4934234	.5266418

#1	46.87053	.3651701	.4603412	.6790927	.2052651	9.830042	5.895822
#2	47.03784	.3629629	.4614873	.6799436	.2049583	9.925444	5.955424
#3	46.97534	.3653882	.4611856	.6818464	.2001250	9.860650	5.909743

Sample Name: Q2756-01MSD Acquired: 8/4/2025 17:33:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.339844	.1893796	.9210524
Stddev	.009393	.0015435	.0033891
%RSD	.2812497	.8150094	.3679597
#1	3.329016	.1877374	.9247715
#2	3.344704	.1908004	.9202476
#3	3.345811	.1896011	.9181381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5535.035	95386.62	8299.829	4667.529	6636.606
Stddev	2.978	73.26	34.838	15.242	11.153
%RSD	.0537986	.0768012	.4197424	.3265549	.1680491
#1	5532.406	95431.28	8269.912	4664.025	6634.993
#2	5534.429	95426.50	8338.077	4684.218	6626.347
#3	5538.269	95302.07	8291.498	4654.345	6648.477

Sample Name: Q2756-01A Acquired: 8/4/2025 17:37:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8454532	2.072467	.9867124	2.116776	.8645448	2.283343	.3307969
Stddev	.0033704	.006263	.0027858	.001311	.0010726	.014500	.0008854
%RSD	.3986475	.3021901	.2823323	.0619347	.1240635	.6350529	.2676662

#1	.8436307	2.066172	.9851097	2.116069	.8657520	2.273110	.3317626
#2	.8433865	2.078697	.9850984	2.115972	.8641808	2.299937	.3306050
#3	.8493424	2.072532	.9899292	2.118289	.8637016	2.276983	.3300232

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2007829	.1938617	71.95897	.3950669	.2080496	.3094195	14.66191
Stddev	.0005636	.0001137	.25873	.0001678	.0006877	.0002618	.04407
%RSD	.2806780	.0586319	.3595525	.0424850	.3305695	.0846169	.3005506

#1	.2010180	.1937849	72.25770	.3949145	.2080393	.3095552	14.65148
#2	.2011908	.1938080	71.81320	.3952468	.2073671	.3091177	14.62398
#3	.2001399	.1939923	71.80602	.3950393	.2087425	.3095856	14.71025

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.565577	11.26407	.5248433	.0742927	108.3314	.3182622	.4581978
Stddev	.009946	.06126	.0009324	.0004822	.3658	.0029899	.0007905
%RSD	.2789478	.5438661	.1776486	.6490149	.3376492	.9394464	.1725243

#1	3.576138	11.28223	.5247055	.0744396	108.0198	.3154808	.4579067
#2	3.556388	11.31420	.5239875	.0737541	108.2402	.3178816	.4590925
#3	3.564203	11.19578	.5258369	.0746843	108.7341	.3214242	.4575941

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.18572	.3740403	.4640683	.7059024	.2123980	10.01274	6.098130
Stddev	.05399	.0021961	.0008196	.0032111	.0018912	.06877	.028486
%RSD	.1144241	.5871250	.1766110	.4548967	.8903833	.6868620	.4671263

#1	47.19292	.3759046	.4631551	.7044894	.2139219	9.98028	6.066671
#2	47.12849	.3745967	.4643096	.7036400	.2102815	9.96620	6.105542
#3	47.23576	.3716195	.4647401	.7095777	.2129905	10.09174	6.122178

Sample Name: Q2756-01A Acquired: 8/4/2025 17:37:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.363746	.1919704	.9413001
Stddev	.010991	.0027209	.0029028
%RSD	.3267362	1.417345	.3083859
#1	3.355743	.1950439	.9445878
#2	3.359218	.1909979	.9402221
#3	3.376277	.1898695	.9390906

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5547.961	96082.55	8339.612	4674.941	6641.222
Stddev	10.128	145.27	16.817	15.966	13.657
%RSD	.1825618	.1511883	.2016494	.3415214	.2056405
#1	5558.292	96238.66	8323.283	4689.015	6653.107
#2	5547.541	96057.63	8338.675	4657.592	6644.256
#3	5538.048	95951.35	8356.877	4678.217	6626.304

Sample Name: CCV06 Acquired: 8/4/2025 17:41:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.207554	F 5.644167	4.947107	5.375657	5.335246	10.17259
Stddev	.010264	.147212	.006867	.024157	.022224	.01373
%RSD	.1971023	2.608211	.1388038	.4493863	.4165545	.1349346

#1	5.215380	5.806622	4.945209	5.403114	5.325127	10.15677
#2	5.195933	5.519608	4.941389	5.357667	5.319882	10.17963
#3	5.211350	5.606271	4.954724	5.366190	5.360729	10.18137

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.48390	.2569625	2.456395	25.96603	.9816118	2.474372
Stddev	.10991	.0006316	.004279	.10327	.0060713	.003413
%RSD	1.048406	.2457765	.1741914	.3977045	.6185085	.1379510

#1	10.56170	.2572847	2.459778	26.05919	.9884492	2.475726
#2	10.53183	.2573681	2.451585	25.98392	.9768518	2.470490
#3	10.35816	.2562349	2.457822	25.85499	.9795346	2.476901

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.263441	5.210934	2.573160	24.83924	2.480082	1.302802
Stddev	.001756	.055596	.002870	.04237	.003887	.010940
%RSD	.1389562	1.066919	.1115554	.1705866	.1567160	.8397305

#1	1.265124	5.264695	2.576422	24.87532	2.483159	1.315225
#2	1.261621	5.153668	2.572037	24.79258	2.475714	1.294604
#3	1.263580	5.214438	2.571021	24.84982	2.481372	1.298578

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.62369	2.551277	2.608871	26.64902	5.183090	5.233687
Stddev	.25104	.009301	.021695	.22955	.010968	.015200
%RSD	1.019490	.3645611	.8315860	.8613920	.2116176	.2904175

#1	24.84951	2.561696	2.633921	26.91047	5.183499	5.249362
#2	24.35338	2.543811	2.596135	26.48053	5.193848	5.219012
#3	24.66817	2.548326	2.596558	26.55605	5.171923	5.232688

Sample Name: CCV06 Acquired: 8/4/2025 17:41:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.002160	5.247242	5.167543	4.748392	5.048424	5.009154
Stddev	.013804	.023049	.053569	.020304	.015739	.014447
%RSD	.2759628	.4392585	1.036646	.4275948	.3117689	.2884110

#1	5.014115	5.268161	5.201187	4.755037	5.055910	5.016127
#2	4.987052	5.251033	5.105769	4.725598	5.030339	4.992543
#3	5.005313	5.222533	5.195675	4.764541	5.059024	5.018792

Elem	Sr4077
Units	ppm
Avg	5.160484
Stddev	.044414
%RSD	.8606636

#1	5.188907
#2	5.109303
#3	5.183241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5494.899	92713.57	8036.789	4582.226	6548.755
Stddev	5.259	708.56	50.269	46.960	7.857
%RSD	.0956981	.7642462	.6254847	1.024832	.1199739

#1	5489.712	91895.88	8024.540	4531.648	6542.097
#2	5494.760	93097.89	7993.777	4590.585	6546.748
#3	5500.226	93146.93	8092.050	4624.446	6557.421

Sample Name: CCB06 Acquired: 8/4/2025 17:45:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	-.001953	-.003278	-.000272	-.001002	.0009781	-.005556	-.001641
Stddev	.002405	.001456	.001300	.003586	.0017039	.006302	.000408
%RSD	123.1707	44.41983	477.9699	357.8611	174.2140	113.4290	24.87114

#1	-.001426	-.004833	-.001030	-.001099	.0015423	.001654	-.001343
#2	.000145	-.003053	-.001015	-.004539	.0023282	-.010016	-.002107
#3	-.004578	-.001947	.001229	.002632	-.000936	-.008306	-.001475

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000067	-.000010	.0123406	-.001365	.0000370	.0001671	-.004097
Stddev	.000020	.000073	.0054762	.000102	.0000857	.0004070	.005688
%RSD	29.07712	761.7588	44.37542	7.471912	231.5531	243.5202	138.8313

#1	-.000072	.000063	.0178040	-.001454	-.000033	-.000247	-.010627
#2	-.000084	-.000008	.0123660	-.001386	.000012	.000183	-.001445
#3	-.000046	-.000083	.0068517	-.001253	.000132	.000566	-.000220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001748	.0197872	-.000056	.0003345	.4808028	-.000893	-.001483
Stddev	.000061	.0092507	.000253	.0002591	.0118931	.003777	.000179
%RSD	3.503249	46.75085	449.4302	77.45057	2.473585	422.7134	12.07669

#1	-.001693	.0208723	.000217	.0002520	.4801000	-.004559	-.001389
#2	-.001814	.0100418	-.000281	.0001267	.4930316	-.001107	-.001372
#3	-.001736	.0284474	-.000105	.0006248	.4692767	.002985	-.001690

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7273479	-.001623	.0005332	-.000918	-.000185	-.001517	.0011179
Stddev	.0052620	.000571	.0001027	.000455	.000794	.010933	.0009549
%RSD	.7234461	35.20468	19.25368	49.58882	428.2939	720.6270	85.42216

#1	.7334011	-.001134	.0006424	-.000906	-.000630	.009927	.0005516
#2	.7247771	-.002251	.0005186	-.000469	.000732	-.011855	.0022204
#3	.7238656	-.001484	.0004387	-.001378	-.000659	-.002624	.0005816

Sample Name: CCB06 Acquired: 8/4/2025 17:45:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011899	.0017796	-.000075
Stddev	.0006709	.0004319	.000023
%RSD	56.38081	24.26922	31.12434

#1	.0015758	.0013542	-.000060
#2	.0015786	.0017668	-.000063
#3	.0004152	.0022177	-.000102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5703.553	98376.85	8067.648	4791.889	7374.489
Stddev	10.647	441.68	57.211	29.602	14.215
%RSD	.1866792	.4489648	.7091464	.6177542	.1927632

#1	5697.221	97891.61	8097.315	4758.949	7367.984
#2	5715.846	98483.51	8103.933	4816.266	7390.792
#3	5697.593	98755.43	8001.697	4800.452	7364.689

Sample Name: PB169098BL Acquired: 8/4/2025 17:49:45 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001420	-.002579	-.000651	-.003239	-.001169	-.004212	-.002683
Stddev	.000540	.001454	.001248	.003756	.000484	.012100	.000148
%RSD	38.00381	56.39078	191.7216	115.9394	41.45136	287.2963	5.511282

#1	-.000945	-.003325	-.001800	-.004377	-.001028	-.007112	-.002697
#2	-.001309	-.000903	-.000830	.000954	-.001708	-.014598	-.002824
#3	-.002007	-.003509	.000677	-.006295	-.000770	.009075	-.002529

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000067	-.000007	-.004343	-.001327	.0001634	-.000222	-.012412
Stddev	.000040	.000058	.005282	.000245	.0001059	.000430	.003681
%RSD	60.20735	773.1005	121.6425	18.47547	64.83980	193.8757	29.65869

#1	-.000076	.000012	-.009049	-.001158	.0001459	.000245	-.013565
#2	-.000023	-.000072	-.005350	-.001214	.0000673	-.000309	-.008292
#3	-.000101	.000038	.001371	-.001608	.0002770	-.000601	-.015379

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001709	.0210407	.0003974	.0007210	.3002081	-.004211	-.001313
Stddev	.000431	.0016385	.0004888	.0005602	.0113580	.001257	.000241
%RSD	25.19744	7.787496	122.9924	77.70040	3.783364	29.84614	18.37986

#1	-.001239	.0194739	.0009530	.0010216	.3031495	-.005649	-.001079
#2	-.002085	.0209056	.0002054	.0010666	.3098061	-.003318	-.001561
#3	-.001802	.0227427	.0000338	.0000746	.2876688	-.003667	-.001299

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4723482	-.004207	.0001235	-.000740	.0001848	-.008228	.0034968
Stddev	.0278525	.001149	.0001008	.000327	.0011743	.010636	.0013830
%RSD	5.896595	27.32021	81.58071	44.19209	635.3455	129.2635	39.55121

#1	.4403612	-.005534	.0000693	-.001117	-.000862	-.012671	.0028865
#2	.4854461	-.003562	.0000615	-.000571	-.000038	.003909	.0050801
#3	.4912373	-.003526	.0002398	-.000532	.001455	-.015922	.0025239

Sample Name: PB169098BL Acquired: 8/4/2025 17:49:45 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000189	-.004310	-.000047
Stddev	.002098	.001590	.000110
%RSD	1112.285	36.89291	233.9617

#1	-.000199	-.002869	-.000069
#2	-.002281	-.006016	.000072
#3	.001915	-.004045	-.000145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5701.019	97998.73	8156.370	4790.984	7383.226
Stddev	12.150	107.56	65.638	19.314	22.343
%RSD	.2131210	.1097548	.8047443	.4031315	.3026173

#1	5699.376	98049.83	8125.308	4812.983	7383.569
#2	5713.907	98071.22	8231.773	4776.816	7405.395
#3	5689.774	97875.15	8112.028	4783.152	7360.713

Sample Name: PB169098BS Acquired: 8/4/2025 17:54:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8286884	2.268502	.9873966	2.146380	.8682653	2.098414	.2156878
Stddev	.0035818	.059139	.0040384	.012312	.0022161	.010199	.0006649
%RSD	.4322261	2.606981	.4089995	.5735997	.2552341	.4860446	.3082749

#1	.8292880	2.273645	.9876906	2.144748	.8691944	2.110159	.2151837
#2	.8248447	2.206959	.9832191	2.134966	.8657359	2.093293	.2154384
#3	.8319327	2.324902	.9912799	2.159427	.8698657	2.091790	.2164414

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2158895	.1946567	1.097595	.4003897	.2017913	.3198428	3.117149
Stddev	.0009104	.0005849	.012615	.0020871	.0005029	.0008979	.019873
%RSD	.4217086	.3004939	1.149300	.5212765	.2492358	.2807435	.6375385

#1	.2149280	.1943149	1.083474	.3996795	.2013563	.3199476	3.127775
#2	.2167385	.1943231	1.101563	.3987503	.2016755	.3188970	3.094222
#3	.2160019	.1953321	1.107749	.4027393	.2023420	.3206837	3.129451

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2145582	2.073511	.5070696	.0797174	3.125107	.3147398	.2144790
Stddev	.0005428	.009966	.0011048	.0002964	.008516	.0031911	.0010143
%RSD	.2529889	.4806527	.2178781	.3718103	.2725148	1.013888	.4729191

#1	.2148245	2.062047	.5064280	.0800043	3.134819	.3114339	.2149394
#2	.2149164	2.080122	.5064355	.0794124	3.118917	.3178021	.2133161
#3	.2139337	2.078363	.5083453	.0797356	3.121583	.3149833	.2151814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.39477	.3143765	.4320874	.6986423	.2095401	.8563865	5.470143
Stddev	.08582	.0004240	.0006989	.0020346	.0022852	.0142156	.011452
%RSD	.8255843	.1348725	.1617412	.2912161	1.090589	1.659947	.2093554

#1	10.49266	.3148365	.4327755	.6987005	.2114854	.8688553	5.475571
#2	10.33247	.3140013	.4313783	.6965792	.2070234	.8409066	5.456986
#3	10.35919	.3142916	.4321084	.7006471	.2101115	.8593975	5.477872

Sample Name: PB169098BS Acquired: 8/4/2025 17:54:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.002496	.1963459	.2113864
Stddev	.000217	.0025605	.0002282
%RSD	8.681902	1.304098	.1079485

#1	-.002337	.1992230	.2116449
#2	-.002743	.1943173	.2113016
#3	-.002409	.1954975	.2112128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5692.692	98467.77	8131.479	4837.914	7133.981
Stddev	6.965	365.86	40.641	10.711	10.185
%RSD	.1223563	.3715567	.4997949	.2213934	.1427728

#1	5690.023	98309.71	8172.745	4825.552	7140.378
#2	5700.597	98886.09	8091.494	4844.425	7139.329
#3	5687.457	98207.50	8130.197	4843.765	7122.236

Sample Name: CCV07 Acquired: 8/4/2025 17:58:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	5.177838	5.474469	4.953695	5.296073	5.301003	10.17227	10.48381
Stddev	.026512	.180847	.026838	.040153	.029469	.02762	.15564
%RSD	.5120189	3.303456	.5417707	.7581691	.5559043	.2715639	1.484566

#1	5.172757	5.456542	4.962264	5.300733	5.300638	10.18527	10.30933
#2	5.154235	5.303254	4.923620	5.253793	5.271718	10.19100	10.60835
#3	5.206522	5.663612	4.975202	5.333693	5.330652	10.14055	10.53374

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2569703	2.461921	26.04076	.9664635	2.481171	1.263141	5.152231
Stddev	.0014204	.013122	.08211	.0039601	.014018	.006137	.008165
%RSD	.5527449	.5329903	.3153010	.4097482	.5649780	.4858770	.1584696

#1	.2565559	2.465959	25.98485	.9687748	2.483938	1.264321	5.146180
#2	.2585518	2.447255	26.13503	.9687248	2.465975	1.256499	5.148997
#3	.2558031	2.472550	26.00241	.9618909	2.493599	1.268602	5.161518

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.572244	24.80999	2.486178	1.284916	24.57227	2.562872	2.581289
Stddev	.011048	.06080	.014211	.004054	.04437	.008511	.010749
%RSD	.4295062	.2450708	.5716087	.3154972	.1805493	.3320874	.4164380

#1	2.564406	24.75147	2.491141	1.284018	24.58115	2.562195	2.577256
#2	2.584880	24.80564	2.470150	1.289343	24.61153	2.571701	2.593472
#3	2.567447	24.87284	2.497241	1.281386	24.52414	2.554719	2.573140

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.84841	5.166863	5.241326	4.999842	5.254931	5.046844	4.776803
Stddev	.02248	.031885	.028879	.036383	.019536	.044678	.017195
%RSD	.0869566	.6171008	.5509899	.7276741	.3717719	.8852629	.3599759

#1	25.82325	5.161252	5.242075	5.006863	5.248105	4.995394	4.776169
#2	25.86653	5.201181	5.212080	4.960460	5.276964	5.075850	4.759934
#3	25.85544	5.138156	5.269824	5.032202	5.239723	5.069289	4.794307

Sample Name: CCV07 Acquired: 8/4/2025 17:58:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.983798	4.979217	5.318714
Stddev	.046037	.012482	.026097
%RSD	.9237243	.2506840	.4906636

#1	4.976446	4.979340	5.291894
#2	4.941880	4.991637	5.320227
#3	5.033069	4.966674	5.344022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5486.677	94057.46	8004.828	4600.312	6536.840
Stddev	17.107	269.64	31.924	27.927	29.431
%RSD	.3117924	.2866786	.3988143	.6070693	.4502334

#1	5480.655	94360.19	8039.497	4631.920	6522.599
#2	5505.981	93843.06	7976.644	4578.976	6570.682
#3	5473.396	93969.13	7998.343	4590.039	6517.238

Sample Name: CCB07 Acquired: 8/4/2025 18:02:15 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0003154	-.002479	-.000834	-.003447	-.000736	-.009617	-.000774
Stddev	.0006361	.000783	.000542	.001676	.000642	.006835	.000981
%RSD	201.6825	31.57573	64.96223	48.62870	87.26483	71.07513	126.7226

#1	.0000245	-.001783	-.000271	-.002763	-.001199	-.011558	-.000256
#2	-.000123	-.003327	-.000879	-.002221	-.001005	-.015272	-.000161
#3	.001045	-.002328	-.001352	-.005357	-.000003	-.002021	-.001906

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000054	.0000113	.0044678	-.001335	-.000004	-.000138	-.008404
Stddev	.000082	.0000438	.0002733	.000198	.000061	.000245	.001995
%RSD	152.9065	388.6179	6.117116	14.81870	1511.276	177.7802	23.74360

#1	-.000033	-.000001	.0041566	-.001421	.000035	-.000314	-.010443
#2	.000016	.000060	.0045783	-.001475	.000027	.000142	-.006456
#3	-.000144	-.000025	.0046686	-.001109	-.000074	-.000241	-.008312

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001592	.0137549	-.000004	.0011277	.1957975	-.000641	-.001413
Stddev	.000016	.0065219	.000416	.0002933	.0046831	.001393	.000232
%RSD	1.030069	47.41536	11772.67	26.00754	2.391801	217.3655	16.41956

#1	-.001602	.0062634	-.000478	.0008234	.1921041	-.002126	-.001150
#2	-.001600	.0181670	.000297	.0011513	.2010648	-.000434	-.001590
#3	-.001573	.0168343	.000170	.0014085	.1942236	.000637	-.001498

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3810149	-.000114	.0006969	-.001076	.0006125	.0023695	.0030818
Stddev	.0327118	.001236	.0001739	.000486	.0014604	.0154246	.0023761
%RSD	8.585433	1079.514	24.95673	45.20890	238.4421	650.9647	77.09959

#1	.3608147	-.000112	.0006954	-.001576	.0022216	-.006727	.0023761
#2	.4187559	-.001352	.0008716	-.000605	-.000629	.020179	.0057308
#3	.3634739	.001120	.0005238	-.001047	.000245	-.006343	.0011386

Sample Name: CCB07 Acquired: 8/4/2025 18:02:15 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001190	-.006649	-.000090
Stddev	.0010541	.002446	.000082
%RSD	886.1925	36.78502	90.12106

#1	.0008696	-.004955	.000004
#2	.0005734	-.005540	-.000139
#3	-.001086	-.009454	-.000136

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5697.260	98863.27	7984.403	4836.340	7346.968
Stddev	11.429	238.71	84.235	4.279	9.936
%RSD	.2006033	.2414544	1.054993	.0884861	.1352434

#1	5689.385	98589.03	7983.503	4839.701	7337.028
#2	5710.369	98976.36	7900.622	4837.797	7356.900
#3	5692.027	99024.42	8069.084	4831.522	7346.978

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: 08/01/2025 **Time :** 10:05 **Temp :** 96 °C

End Digest Date: 08/01/2025 **Time :** 13:10 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: 

Supervisor Signature: 

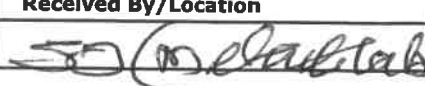
Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6007
LFS-2	0.25	M6015
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	M6158
1:1 HCL	5.00	MP85156
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# CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/01/25 14:16	SL5 metdig	
	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
PB169078BL	PBW078	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	15
PB169078BS	LCS078	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	16
Q2733-01MS	TW-WTS-12MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	19
Q2733-01MSD	TW-WTS-12MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	20
Q2733-01DUP	TW-WTS-12DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	18
Q2733-01	TW-WTS-12	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	17
Q2742-01	9 BANKER	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	21

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169078

WorkList ID : 191048

Department : Digestion

Date : 08-01-2025 09:31:47

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2733-01	TW-WTS-12	Water	Metals Group4	1:1 HNO3 to pH < 2	ENTA05	O11	07/30/2025	6010D
Q2742-01	9 Banker	Water	Metals Group4	1:1 HNO3 to pH < 2	GENV01	O22	07/31/2025	6010D

Date/Time 08/02/25 09:45
 Raw Sample Received by: SKS met d12
 Raw Sample Relinquished by: C/S smj

Date/Time 08/01/25 12:45
 Raw Sample Received by: C/S smj
 Raw Sample Relinquished by: SKS met d12

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM
STD. NAME	STD REF.#		
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458		
ICV Standard	MP86459		
CCV Standard	MP86462		
ICSA Standard	MP86460,MP86461		
CRI Standard	MP86458		
LCS Standard			
Chk Standard	MP86463,MP86464		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/04/25 11:15		Jaswal	OK
2	S1	S1	CAL2	08/04/25 11:20		Jaswal	OK
3	S2	S2	CAL3	08/04/25 11:24		Jaswal	OK
4	S3	S3	CAL4	08/04/25 11:28		Jaswal	OK
5	S4	S4	CAL5	08/04/25 11:32		Jaswal	OK
6	S5	S5	CAL6	08/04/25 11:36		Jaswal	OK
7	ICV01	ICV01	ICV	08/04/25 11:41		Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/04/25 11:45		Jaswal	OK
9	ICB01	ICB01	ICB	08/04/25 11:52		Jaswal	OK
10	CRI01	CRI01	CRDL	08/04/25 11:57		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/04/25 12:01		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/04/25 12:05		Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/04/25 12:09		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/04/25 12:14		Jaswal	OK
15	CCV01	CCV01	CCV	08/04/25 12:25		Jaswal	OK
16	CCB01	CCB01	CCB	08/04/25 12:29		Jaswal	OK
17	PB169076BL	PB169076BL	MB	08/04/25 12:55		Jaswal	OK
18	PB169076BS	PB169076BS	LCS	08/04/25 13:00		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

19	Q2725-02DL	CompDL	SAM	08/04/25 13:04	Straight 5x dilution for all elements	Jaswal	OK
20	Q2725-02DUPDL	CompDUPDL	DUP	08/04/25 13:08	Straight 5x dilution for all elements	Jaswal	OK
21	Q2725-02LDL	CompLDL	SD	08/04/25 13:12	Straight 25x dilution for all elements	Jaswal	OK
22	Q2725-02MSDL	CompMSDL	MS	08/04/25 13:16	Straight 5x dilution for all elements	Jaswal	OK
23	Q2725-02MSDDL	CompMSDDL	MSD	08/04/25 13:20	Straight 5x dilution for all elements	Jaswal	OK
24	Q2725-02ADL	CompADL	PS	08/04/25 13:24	Straight 5x dilution for all elements (0.1ml m6004,m6013-10ml sample before dilution)	Jaswal	OK
25	PB169078BL	PB169078BL	MB	08/04/25 13:29		Jaswal	OK
26	PB169078BS	PB169078BS	LCS	08/04/25 13:33		Jaswal	OK
27	CCV02	CCV02	CCV	08/04/25 13:37		Jaswal	OK
28	CCB02	CCB02	CCB	08/04/25 13:41		Jaswal	OK
29	Q2733-01	TW-WTS-12	SAM	08/04/25 13:45		Jaswal	OK
30	Q2733-01DUP	TW-WTS-12DUP	DUP	08/04/25 13:50		Jaswal	OK
31	Q2733-01L	TW-WTS-12L	SD	08/04/25 13:54		Jaswal	OK
32	Q2733-01MS	TW-WTS-12MS	MS	08/04/25 13:59		Jaswal	OK
33	Q2733-01MSD	TW-WTS-12MSD	MSD	08/04/25 14:03		Jaswal	OK
34	Q2733-01A	TW-WTS-12A	PS	08/04/25 14:07	0.1ml m6004,m6013-10ml sample	Jaswal	OK
35	Q2742-01	9 Banker	SAM	08/04/25 14:12		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM
STD. NAME	STD REF.#		
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458		
ICV Standard	MP86459		
CCV Standard	MP86462		
ICSA Standard	MP86460,MP86461		
CRI Standard	MP86458		
LCS Standard			
Chk Standard	MP86463,MP86464		

36	Q2734-01	VNJ-253	SAM	08/04/25 14:17		Jaswal	OK
37	Q2741-01	TR-05-07312025	SAM	08/04/25 14:21		Jaswal	OK
38	Q2743-01	WC1	SAM	08/04/25 14:25		Jaswal	OK
39	CCV03	CCV03	CCV	08/04/25 14:43		Jaswal	OK
40	CCB03	CCB03	CCB	08/04/25 14:54		Jaswal	OK
41	Q2753-01	289	SAM	08/04/25 14:58		Jaswal	OK
42	Q2758-01	WASTE	SAM	08/04/25 15:03	%soil missing	Jaswal	OK
43	PB169096BL	PB169096BL	MB	08/04/25 15:07		Jaswal	OK
44	Q2740-01	OR-02-07312025	SAM	08/04/25 15:15		Jaswal	OK
45	Q2740-01DUP	OR-02-07312025DUP	DUP	08/04/25 15:19		Jaswal	OK
46	Q2740-01L	OR-02-07312025L	SD	08/04/25 15:23		Jaswal	OK
47	Q2740-01MS	OR-02-07312025MS	MS	08/04/25 15:27		Jaswal	OK
48	Q2740-01MSD	OR-02-07312025MSD	MSD	08/04/25 15:31		Jaswal	OK
49	Q2740-01A	OR-02-07312025A	PS	08/04/25 15:35	0.1ml m6004,m6013-10ml sample	Jaswal	OK
50	PB169096BS	PB169096BS	LCS	08/04/25 15:39		Jaswal	OK
51	CCV04	CCV04	CCV	08/04/25 15:48		Jaswal	OK
52	CCB04	CCB04	CCB	08/04/25 15:53		Jaswal	OK
53	Q2734-02	VNJ-253	SAM	08/04/25 16:08		Jaswal	OK
54	Q2703-05	TP-4	SAM	08/04/25 16:12		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM
STD. NAME	STD REF.#		
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458		
ICV Standard	MP86459		
CCV Standard	MP86462		
ICSA Standard	MP86460,MP86461		
CRI Standard	MP86458		
LCS Standard			
Chk Standard	MP86463,MP86464		

55	Q2743-02	WC1	SAM	08/04/25 16:16		Jaswal	OK
56	Q2753-02	289	SAM	08/04/25 16:21		Jaswal	OK
57	Q2753-02DUP	289DUP	DUP	08/04/25 16:25		Jaswal	OK
58	Q2753-02L	289L	SD	08/04/25 16:30		Jaswal	OK
59	Q2753-02MS	289MS	MS	08/04/25 16:34		Jaswal	OK
60	Q2753-02MSD	289MSD	MSD	08/04/25 16:38		Jaswal	OK
61	Q2753-02A	289A	PS	08/04/25 16:42	0.1ml m6004,m6013-10ml sample	Jaswal	OK
62	PB169079TB	PB169079TB	MB	08/04/25 16:46		Jaswal	OK
63	CCV05	CCV05	CCV	08/04/25 16:51		Jaswal	OK
64	CCB05	CCB05	CCB	08/04/25 16:55		Jaswal	OK
65	PB169101BL	PB169101BL	MB	08/04/25 16:59		Jaswal	OK
66	PB169101BS	PB169101BS	LCS	08/04/25 17:04		Jaswal	OK
67	Q2745-01	RW8-SP100-2025073	SAM	08/04/25 17:08		Jaswal	OK
68	Q2745-02	RW8-SP303-2025073	SAM	08/04/25 17:12		Jaswal	OK
69	Q2756-01	71725	SAM	08/04/25 17:16	CCV fail for TI	Jaswal	Not Ok
70	Q2756-01DUP	71725DUP	DUP	08/04/25 17:20	CCV fail for TI	Jaswal	Not Ok
71	Q2756-01L	71725L	SD	08/04/25 17:25	CCV fail for TI	Jaswal	Not Ok
72	Q2756-01MS	71725MS	MS	08/04/25 17:29	CCV fail for TI	Jaswal	Not Ok
73	Q2756-01MSD	71725MSD	MSD	08/04/25 17:33	CCV fail for TI	Jaswal	Not Ok

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM
STD. NAME	STD REF.#		
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458		
ICV Standard	MP86459		
CCV Standard	MP86462		
ICSA Standard	MP86460,MP86461		
CRI Standard	MP86458		
LCS Standard			
Chk Standard	MP86463,MP86464		

74	Q2756-01A	71725A	PS	08/04/25 17:37	CCV fail for TI	Jaswal	Not Ok
75	CCV06	CCV06	CCV	08/04/25 17:41	CCV fail for TI	Jaswal	OK
76	CCB06	CCB06	CCB	08/04/25 17:45		Jaswal	OK
77	PB169098BL	PB169098BL	MB	08/04/25 17:49	CCV fail for TI	Jaswal	Not Ok
78	PB169098BS	PB169098BS	LCS	08/04/25 17:54	CCV fail for TI	Jaswal	Not Ok
79	CCV07	CCV07	CCV	08/04/25 17:58		Jaswal	OK
80	CCB07	CCB07	CCB	08/04/25 18:02		Jaswal	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2742

Test : Metals Group4

Prepbatch ID : PB169078,

Sequence ID/Qc Batch ID: LB136697,

Standard ID :

MP85156,MP86452,MP86453,MP86454,MP86455,MP86456,MP86457,MP86458,MP86459,MP86460,MP86461,MP86462,MP86463,MP86464,

Chemical ID :

M5467,M5470,M5499,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5820,M5942,M5962,M5970,M5984,M5985,M5996,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6077,M6127,M6128,M6137,M6142,M6144,M6145,M6146,M6151,M6152,M6155,M6158,M6159,M6162,M6163,M6164,M6165,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	MP85156	04/07/2025	08/18/2025	Kareem Khairalla	None	None	Sarabjit Jaswal
								04/07/2025

FROM 1250.00000ml of M6151 + 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)	MP86452	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal
								07/23/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = 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)	MP86453	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
<u>FROM</u> 5.00000ml of M5467 + 5.00000ml of M5470 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5970 + 5.00000ml of M5996 + 5.00000ml of M5997 + 5.00000ml of M6077 + 5.00000ml of M6146 + 455.00000ml of MP86452 = 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>
910	ICP AES STD S4	MP86454	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025
<u>FROM</u>	50.00000ml of MP86452 + 50.00000ml of MP86453 = 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>
909	ICP AES STD S3	MP86455	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP	Sarabjit Jaswal

A)

FROM 25.00000ml of MP86453 + 75.00000ml of MP86452 = 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>
3913	ICP AES STD S2	MP86456	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP	Sarabjit Jaswal

A)

FROM 16.00000ml of MP86453 + 184.00000ml of MP86452 = Final Quantity: 200.000 ml

[illegible]

<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	MP86458	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
FROM 2.00000ml of MP86457 + 98.00000ml of MP86452 = 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>
4163	NEW ICV-060925	MP86459	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
A) FROM 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.80000ml of MP86452 = Final Quantity: 50.000 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>
904	ICP AES ICSA SOLN	MP86460	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025
<u>FROM</u> 25.00000ml of M6152 + 225.00000ml of MP86452 = 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	MP86461	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
FROM 10.00000ml of M6152 + 10.00000ml of M6155 + 80.00000ml of MP86452 = 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>
911	ICP AES CCV SOLN	MP86462	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025
<u>FROM</u> 50.00000ml of MP86452 + 50.00000ml of MP86453 = 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	MP86463	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025
<u>FROM</u>	1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 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>
903	ICP AES RINSE SOLN	MP86464	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5470

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	04/17/2025 / Janvi	03/17/2023 / bin	M5499

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

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

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	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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

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.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

CHEMICAL RECEIPT LOG BOOK

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

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.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

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	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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

CHEMICAL RECEIPT LOG BOOK

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	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

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	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	05/07/2024 / JANVI	02/22/2024 / kareem	M5996

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-MEB727800	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

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	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	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 #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

CHEMICAL RECEIPT LOG BOOK

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	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

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	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

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	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

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	121724	12/17/2027	02/04/2025 /	01/13/2025 / Jaswal	M6145

CHEMICAL RECEIPT LOG BOOK

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	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

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)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

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	08/24/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

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	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

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	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

CHEMICAL RECEIPT LOG BOOK

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)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	05/22/2029	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/01/2028	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	01/02/2030	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57056
010924
Barium (Ba)

Lot #
Solvent: 24002546 Nitric Acid

Expiration Date:

010927

2% 40.0 (mL) Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

5E-05 Balance Uncertainty

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

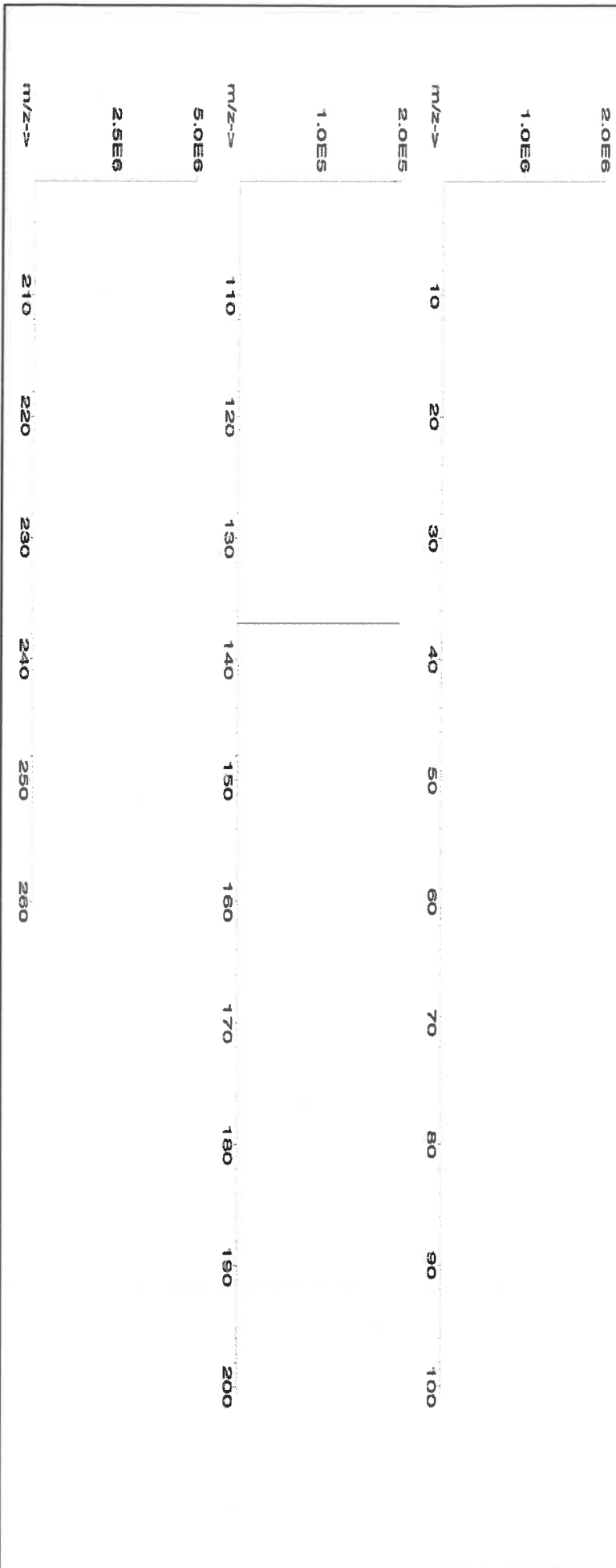
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
	010924
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	010924

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. Barium nitrate (Ba) IN023 BA0022019A1 1000 99.999 0.10 52.3 3.82417 3.82441 1000.1 2.0 10022-31-8 0.5 mg/m3 or-hat 355 mg/kg 3104a

[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 (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	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Lot #
Solvent: 24002546 Nitric Acid

2% 40.0 (mL) Nitric Acid

Expiration Date: 070127

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 5E-05 Balance Uncertainty 0.100 Flask Uncertainty

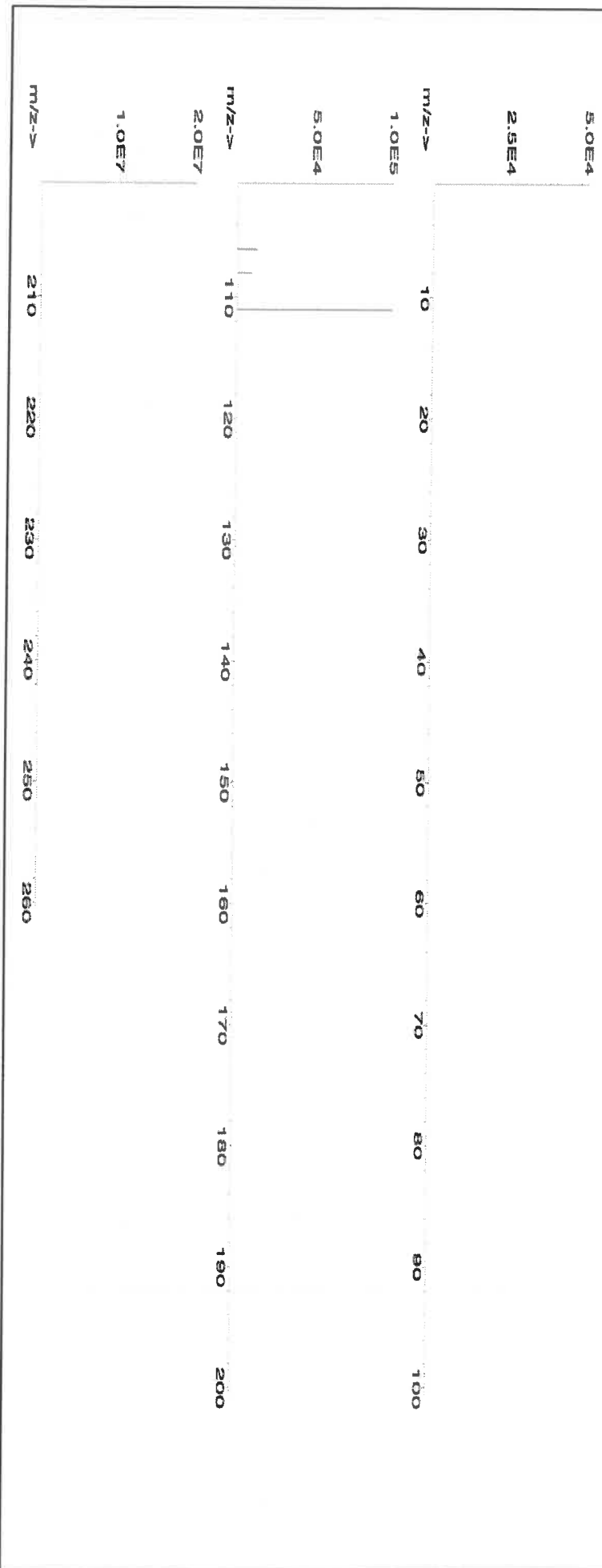
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

Compound

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

1. Cadmium nitrate tetrahydrate (Cd) IN024 CDM09221A1 1000 99.999 0.10 36.5 5.4797 5.4804 1000.1 2.0 10022-68-1 0.01 mg/m3 orl-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).



CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

Solvent: 21110221 Nitric Acid

Lot #

Expiration Date: 051526

5.0% 250.0 Nitric Acid (mL)

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 5000.1 0.12 Flask Uncertainty

Giovanni Esposito

Formulated By: Giovanni Esposito 051523

Pedro L. Renias

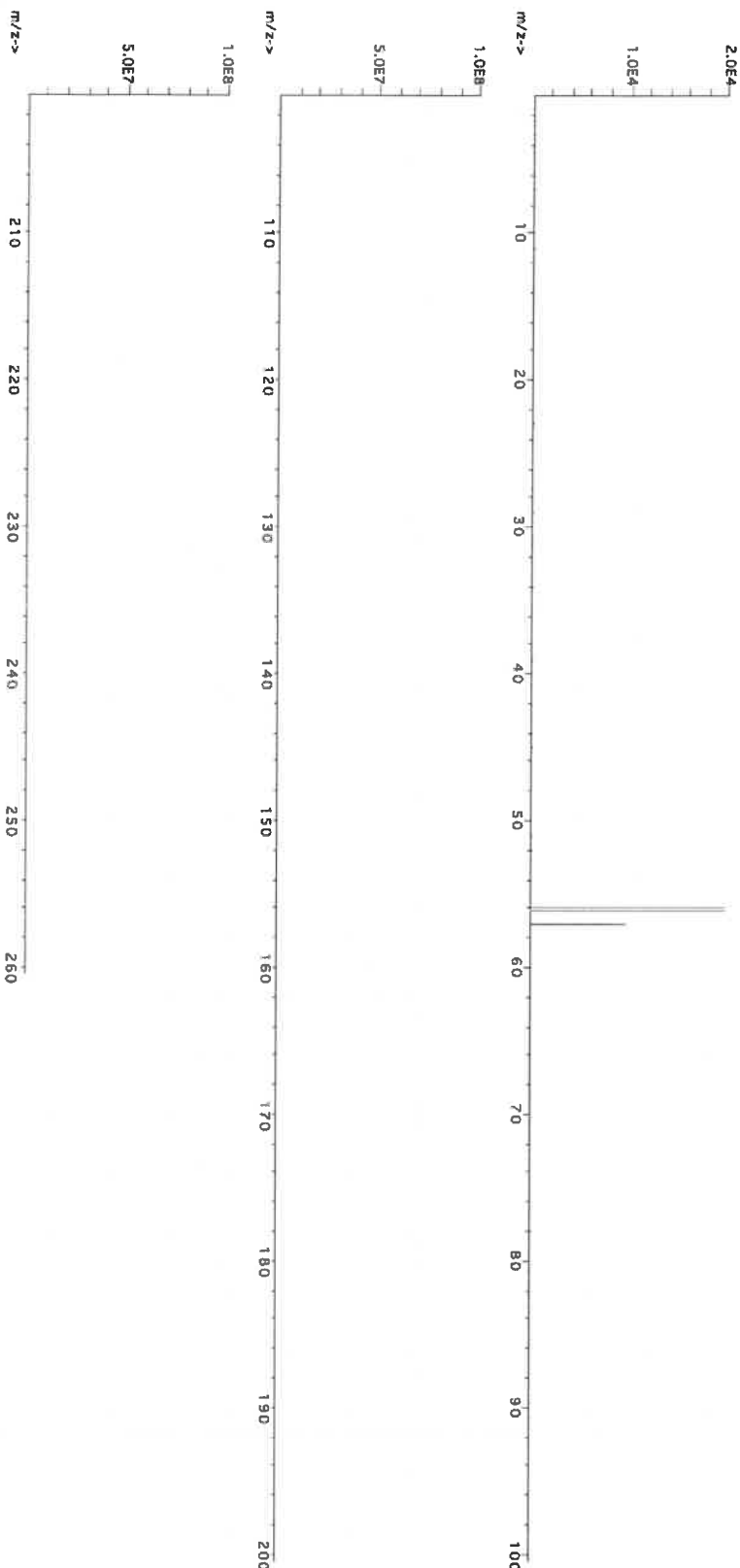
Reviewed By: Pedro L. Renias 051523

SDS Information

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

1. Iron (Fe) IN346 2302010-500 10000 99.995 0.10 100.0 50.0034 50.0111 10001.5 20.0 7439-89-6 5 mg/m3 or-tral 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	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	Rb	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	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	<0.10
B	<0.02	Cu	<0.10	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).



Refine your results. Redefine your industry.

RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO ₃

Value / Analyte(s):	1 000 µg/mL ea:	
	Potassium,	
	600 µg/mL ea:	
	Phosphorus,	
	300 µg/mL ea:	
	Sodium,	Iron,
	200 µg/mL ea:	
	Magnesium,	Aluminum,
	Cerium,	Selenium,
	Thallium,	
	100 µg/mL ea:	
	Lead,	Calcium,
	80 µg/mL ea:	
	Arsenic,	
	70 µg/mL ea:	
	Mercury,	
	50 µg/mL ea:	
	Nickel,	
	40 µg/mL ea:	
	Chromium,	
	30 µg/mL ea:	
	Copper,	Boron,
	Vanadium,	
	20 µg/mL ea:	
	Zinc,	Strontium,
	Barium,	Beryllium,
	Cadmium,	Cobalt,
	Manganese,	Lithium,
	7.5 µg/mL ea:	
	Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 30, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: WW-LFS-2
Lot Number: U2-MEB731108
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s):
200 µg/mL ea:
Silica,
80 µg/mL ea:
Antimony,
70 µg/mL ea:
Tin,
40 µg/mL ea:
Molybdenum,
20 µg/mL ea:
Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO ₂	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO ₂	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 17, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





M5467 R: 03/01/23 (14)

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57058
020623
Cerium (Ce)

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

020626
Ambient (20 °C)
1000
6UTB

Weight shown below was diluted to (mL):

1000.12 0.058 Balance Uncertainty
Flask Uncertainty

Lot #
Solvent: 21110221 Nitric Acid

2% 20.0 Nitric Acid
(mL)

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

Expanded
Uncertainty
+/- (µg/mL)

SDS Information

(Solvent Safety Info. On Attached pg.)
LD50: OSHA PEL (TWA)

CAS#

Actual
Conc. (µg/mL)

Actual
Weight (g)

Target
Weight (g)

Assay
(%)

Purity (%)

Nominal
Conc. (µg/mL)

Lot
Number

RM#

Compound

1. Cerium nitrate hexahydrate (Ce)

IN146 Z512CEB1

1000

89.999

0.10

32.8

3.04919

3.04921

1000.0

2.0

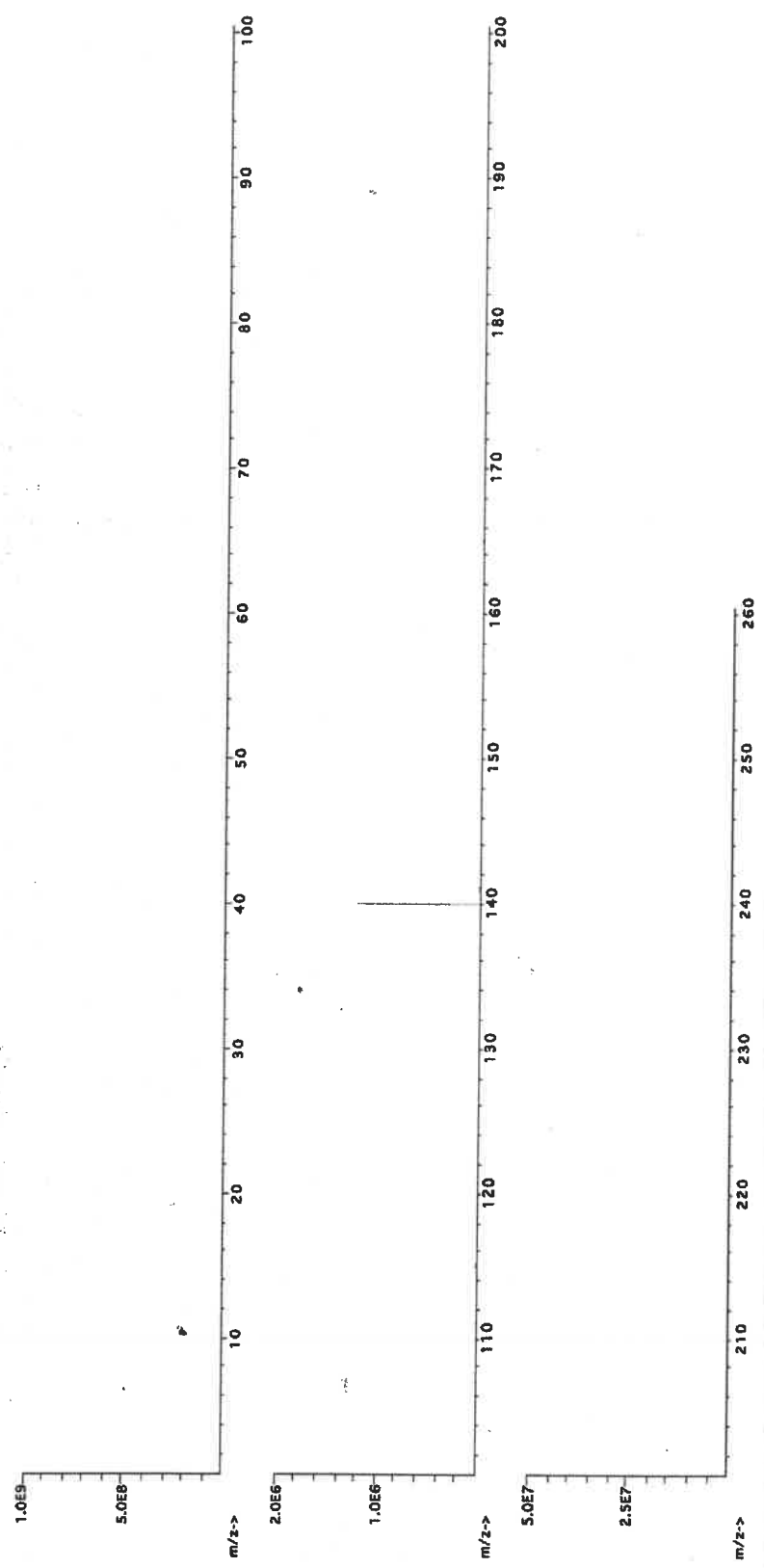
10294-41-4

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	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	La	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



M5497 - M5408
And on 4/14/23
063

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

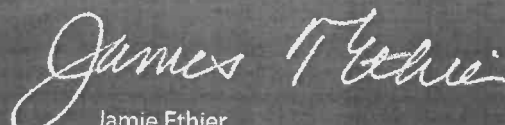
Retest Date: 2026-06-07

Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris 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



CERTIFIED WEIGHT REPORT:

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

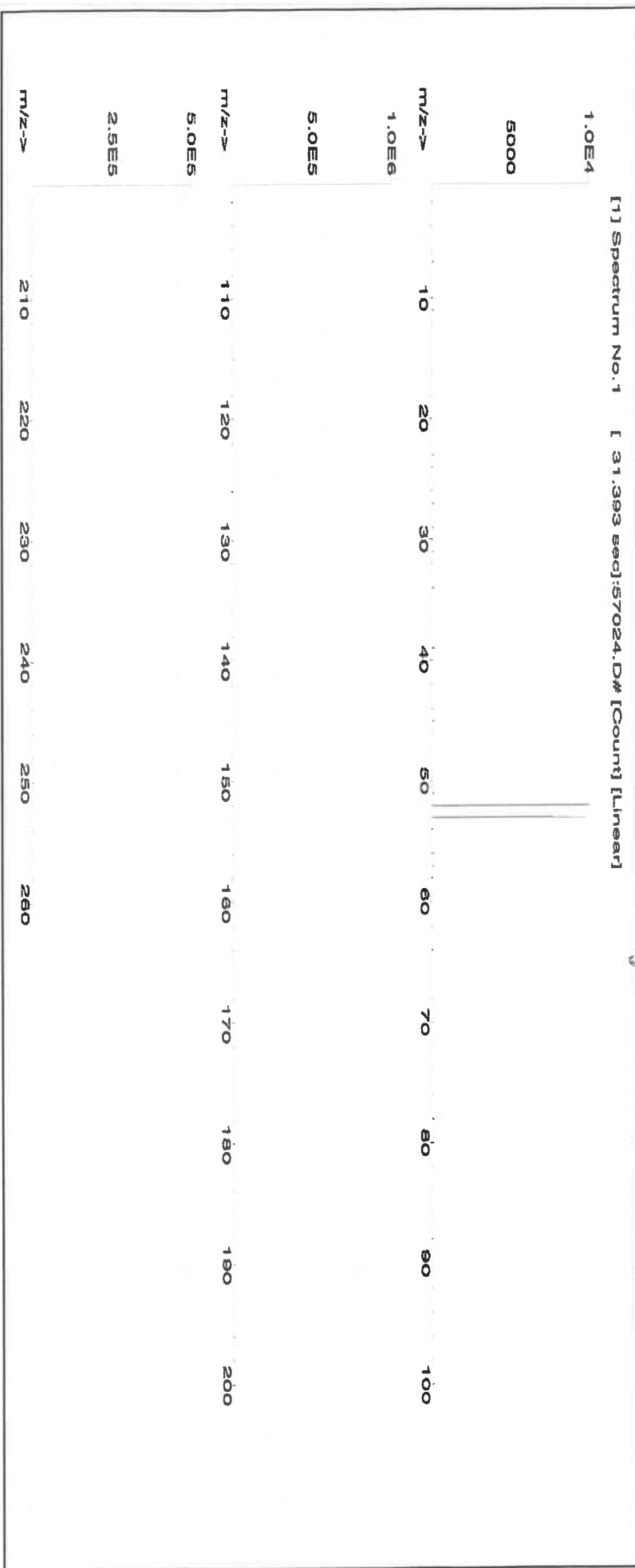
Lot #
21110221
Solvent: Nitric Acid

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Renteria	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	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





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 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 (mL) Nitric Acid

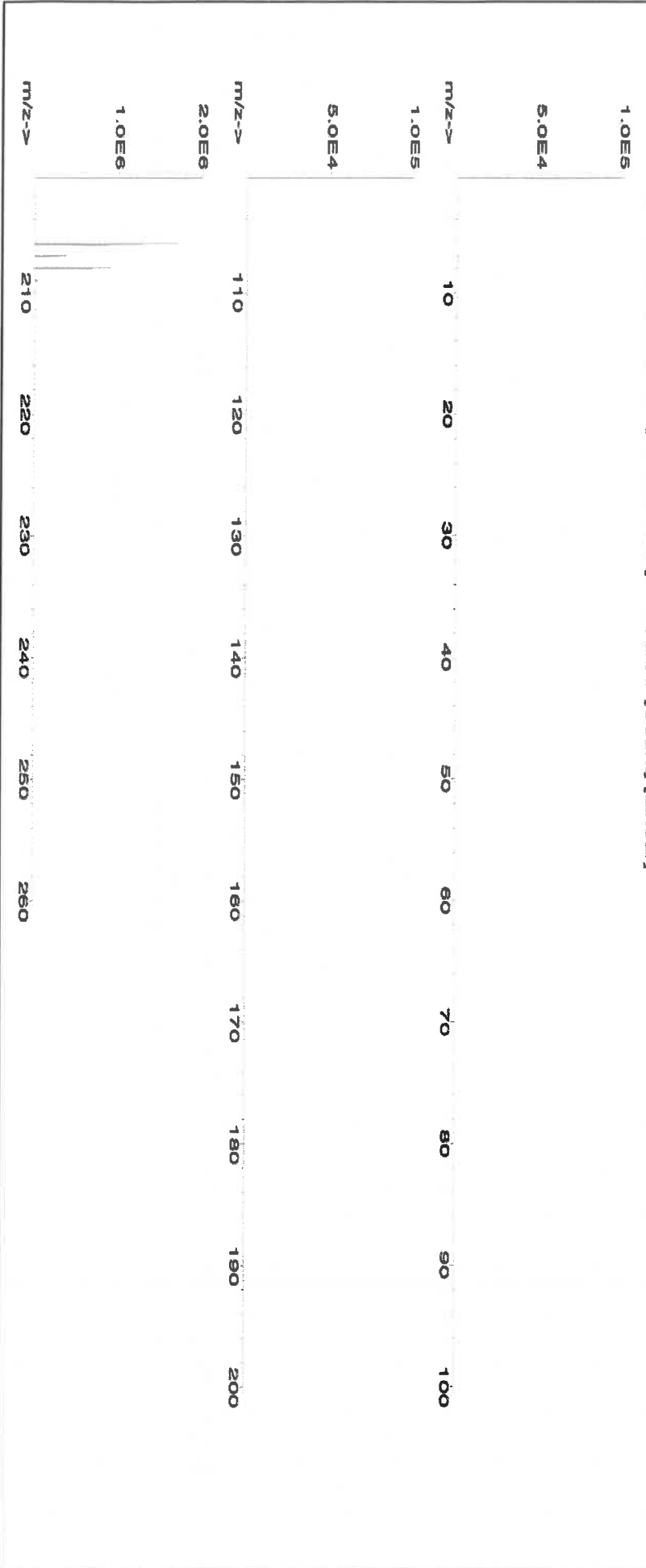
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

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

SDS Information

1. Lead(II) nitrate (Pb) IN029 PB0122016A1 1000 99.999 0.10 62.5 4.80071 4.80077 1000.0 2.0 10099-74-8 0.05 mg/m3 Intyms-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

(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: **57028**
Lot Number: **091223**
Description: **Nickel (NI)**

Lot # **24002546**
Solvent: **Nitric Acid**

Expiration Date: **091226**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

2.0% 40.0 (mL) Nitric Acid

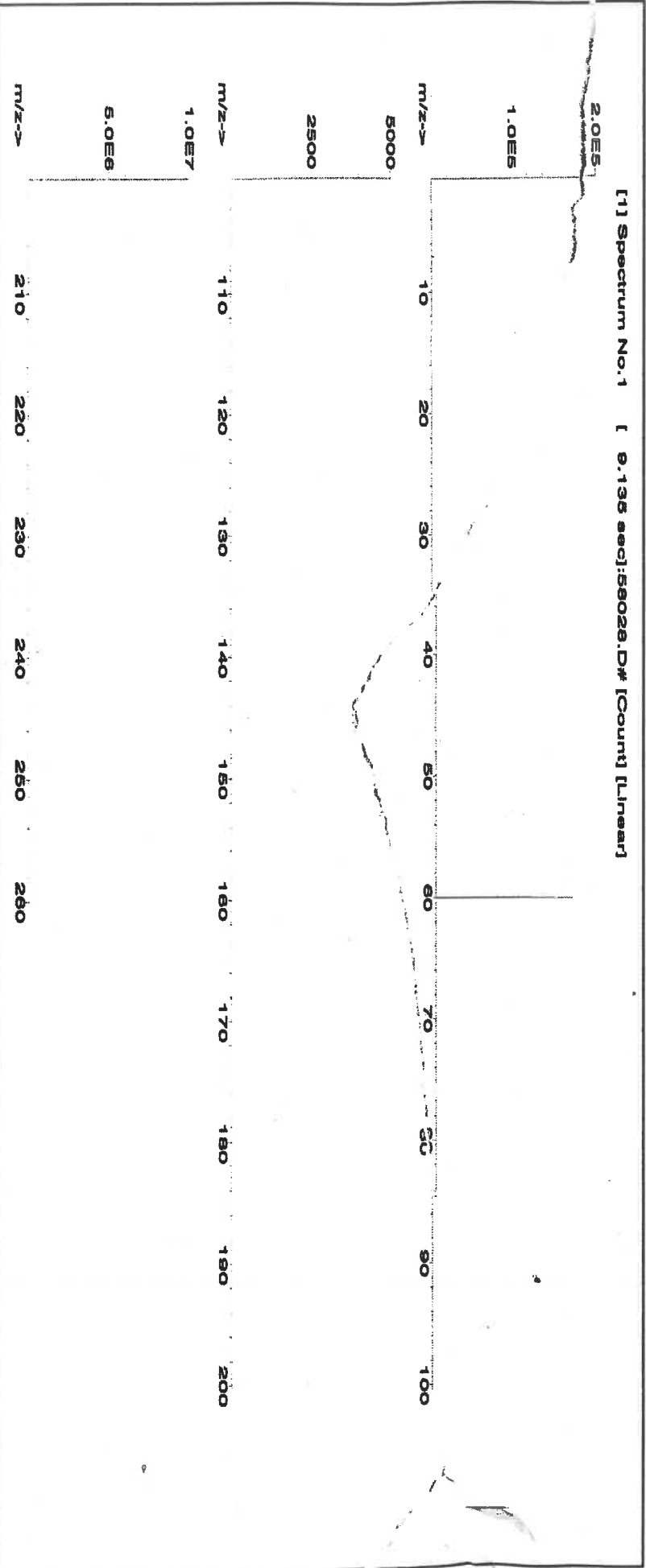
NIST Test Number: **6U7B**

Volume shown below was diluted to (mL): **2000.02** Balance Uncertainty **5E-05** Flask Uncertainty **0.056**

Formulated By:	<i>Lawrence Barry</i>	091223
Reviewed By:	<i>Pedro L. Renteria</i>	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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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





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	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: **58029**
Lot Number: **071723**
Description: **Copper (Cu)**

Lot #: **2110221**
Solvent: **Nitric Acid**

2.0%

40.0 (mL)
Nitric Acid

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Ruelas	071723

Expiration Date: **071726**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6L7B**

Volume shown below was diluted to (mL): **2000.02**
Balance Uncertainty: **5E-05**
Flask Uncertainty: **0.058**

SDS Information

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. Copper(II) nitrate trihydrate (Cu) 58129 022723 0.1000 200.0 0.084 1000 10000.5 1000.0 2.2 10031-43-3 1 mg/m3 or-rat 794 mg/kg 3114

[1] Spectrum No.1 [33.422 sec]:58029.D# [Count] [Linear]

1.0E6	m/z-->	10	20	30	40	50	60	70	80	90	100
5.0E5	m/z-->	110	120	130	140	150	160	170	180	190	200
2.5E7	m/z-->	210	220	230	240	250	260				



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	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	La	<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	Pb	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02			Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



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):

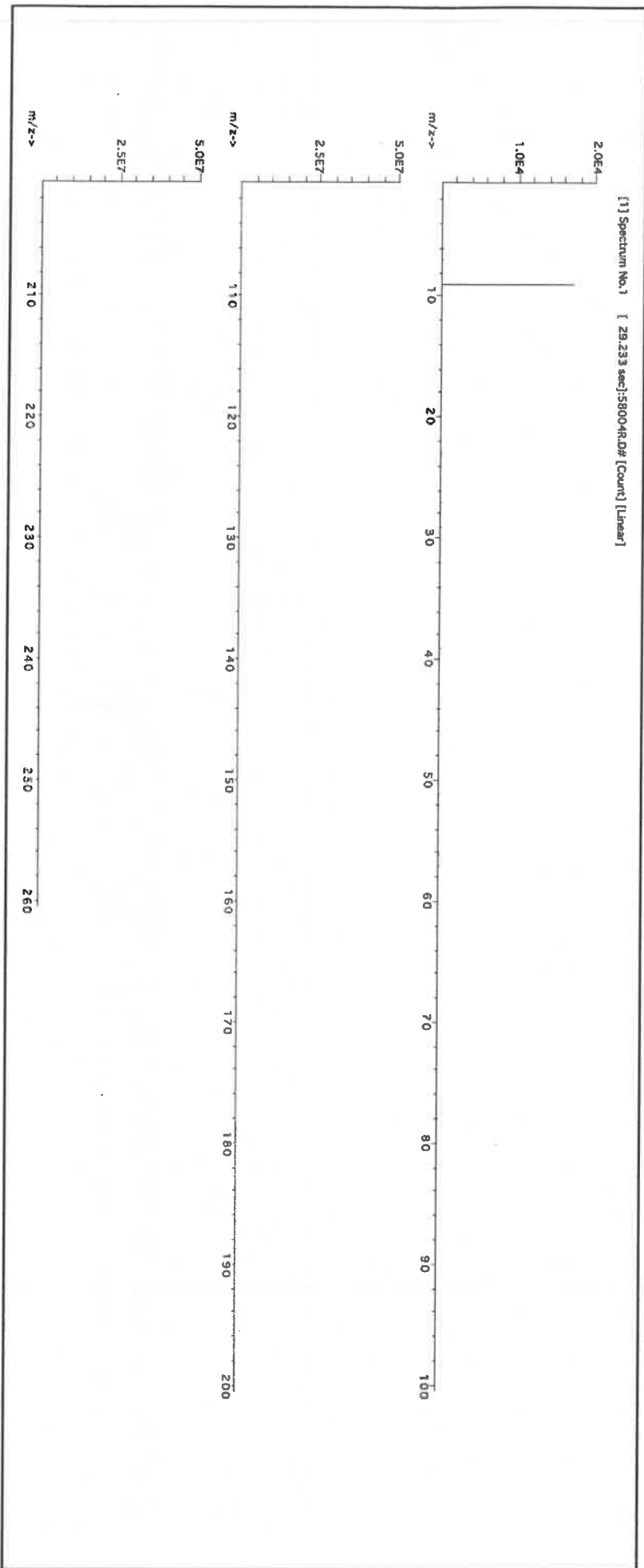
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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:

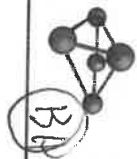
Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot #

R-02509124

M599



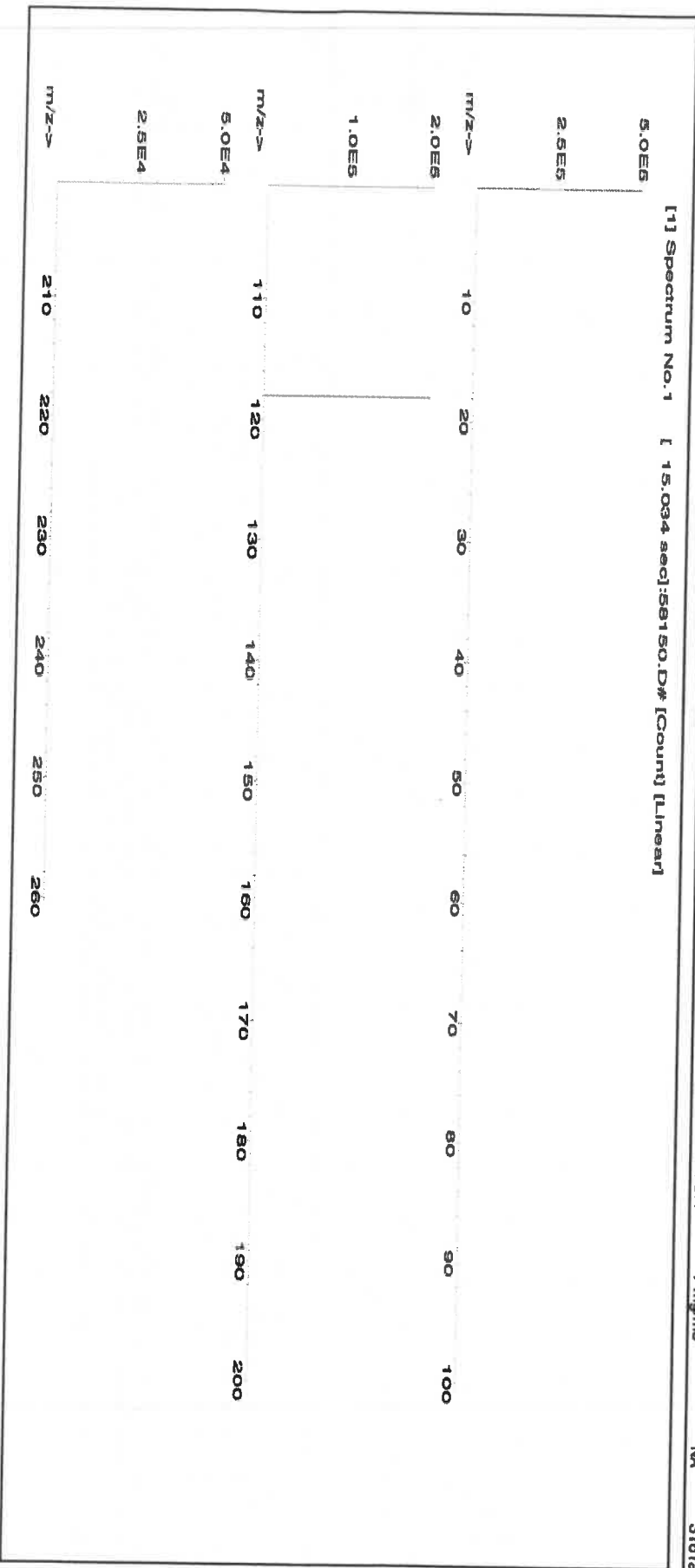
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

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

1. Ammonium hexafluoroantimonate(V) (Sn) INO10 SMD042023A1 1000 99.99 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	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).



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

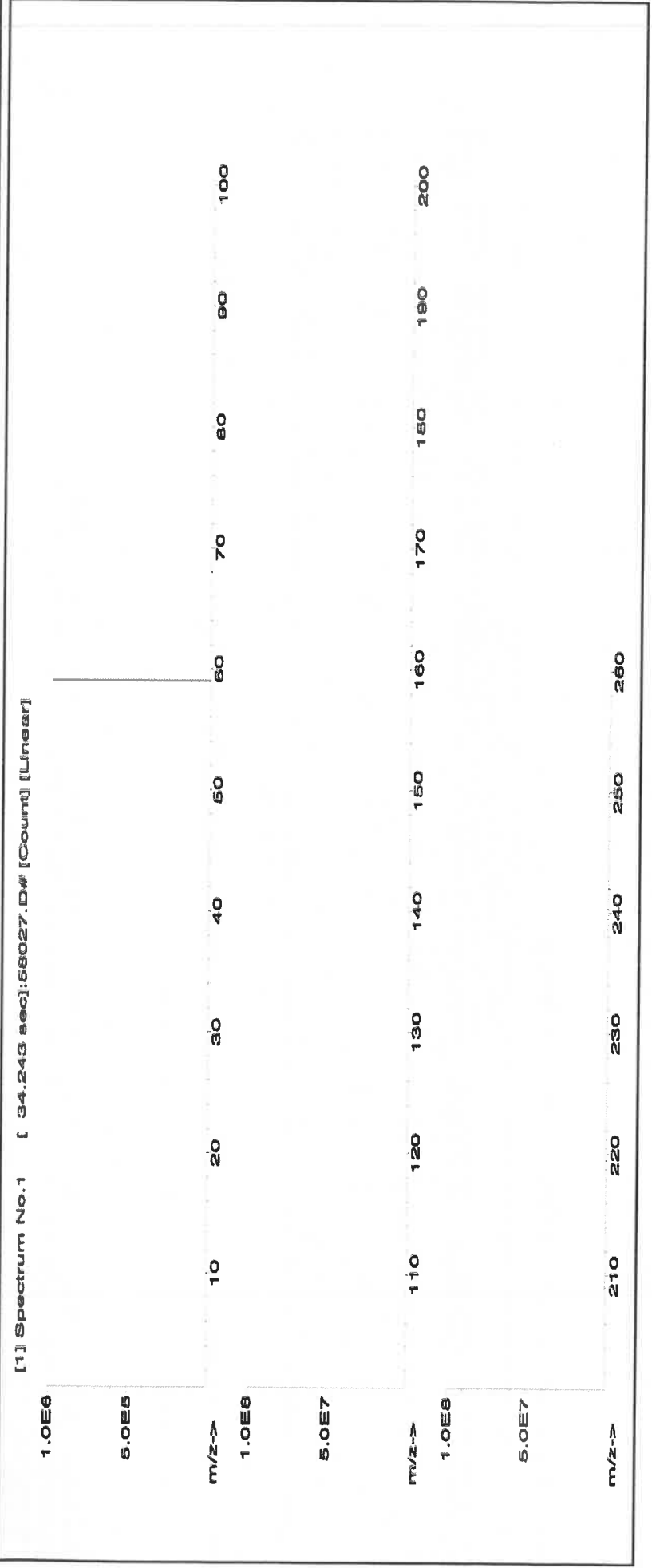
2.0% Nitric Acid
40.0 (mL)

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

SDS Information

Expanded Uncertainty +/- (µg/mL)
(Solvent Safety Info. On Attached pg.)
NIST SRM
CAS# OSHA PEL (TWA) LD50

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

2.0%

80.0

Nitric Acid

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

111326
Ambient (20 °C)
1000

NIST Test Number:
Volume shown below was diluted to (mL):

6UTB
4000.0

5E-05

Balance Uncertainty

0.06

Flask Uncertainty

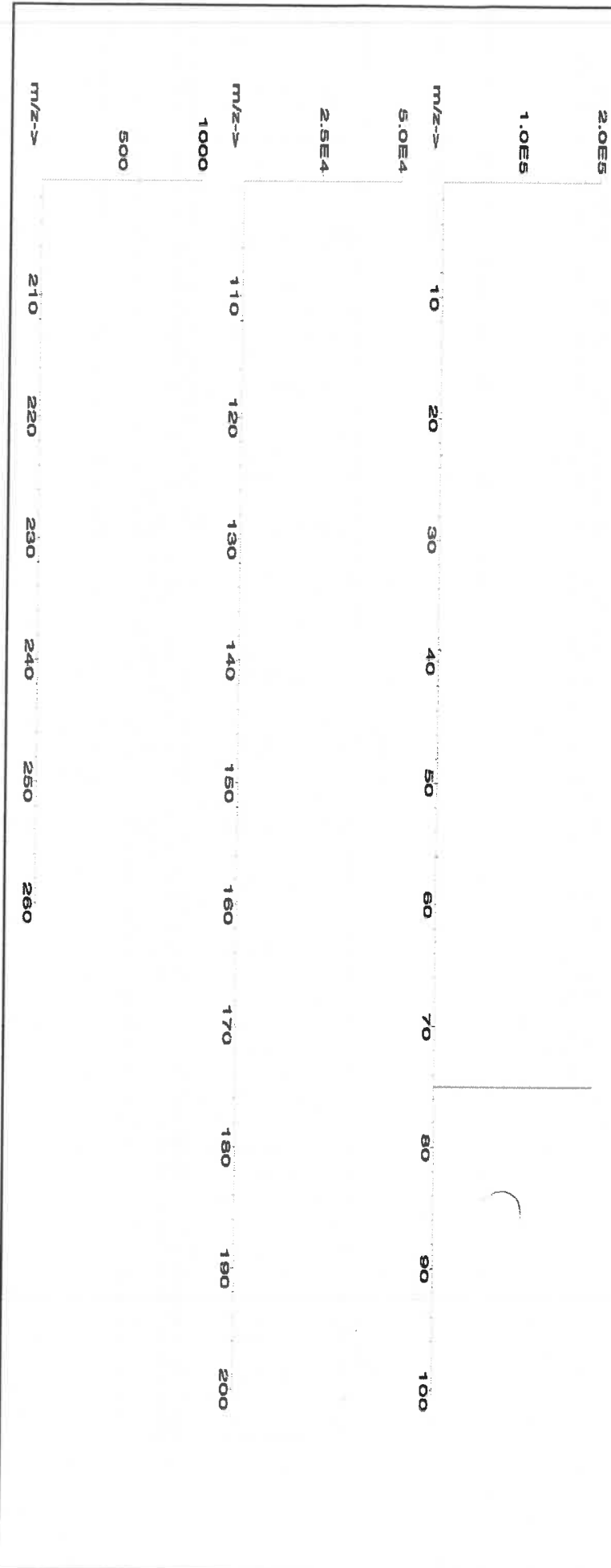
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rendas
	111323

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
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge [*]	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	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: MKB0857V Ammonium hydroxide

Lot #

AI: 021009124 M5814

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

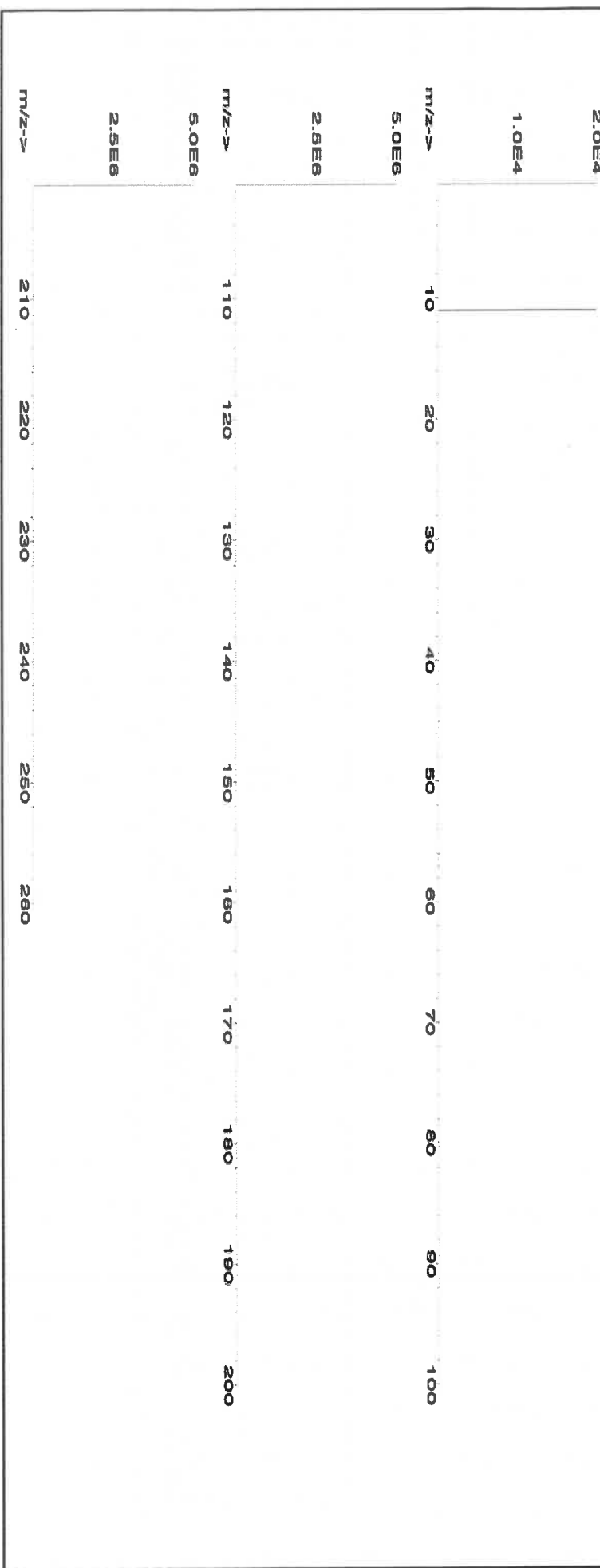
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48
5E-05 Balance Uncertainty
0.058 Flask Uncertainty
2.0% 40.0 Ammonium hydroxide (mL)

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:
Lot Number:
Description:

57016
122923
Sulfur (S)

Lot #

ASTM Type 1 Water

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122923	

Expiration Date:

122926

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6L7B

Weight shown below was diluted to (mL):

4000.0

SE-05 Balance Uncertainty
0.06 Flask Uncertainty

Compound

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

1. Ammonium sulfate (S) IN117 SLBR725V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA 0.01-0.02 4250mg/kg 3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	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: 57015
Lot Number: 091123
Description: Phosphorous (P)

Solvent: 24002546 Nitric Acid

Lot #

R: 02109124 M5820

Formulated By: Lawrence Barry 091123

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

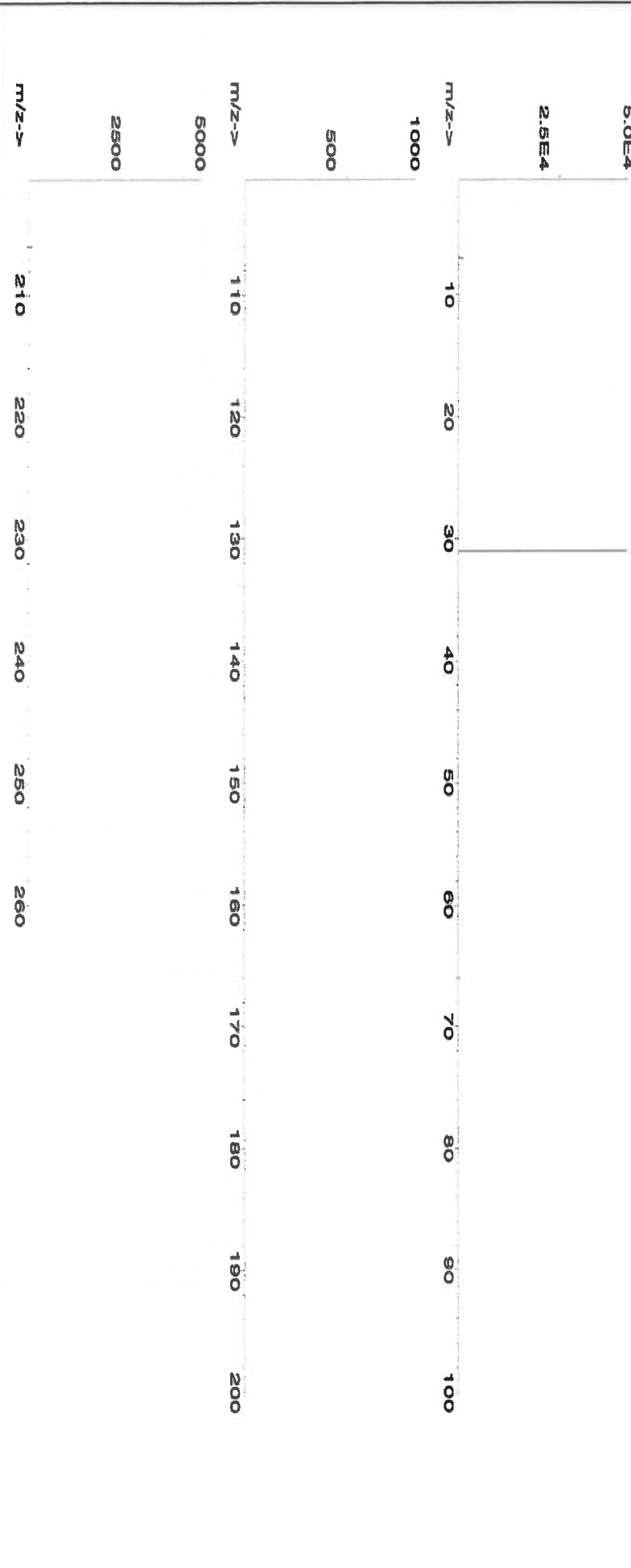
Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

Compound

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

1. Ammonium dihydrogen phosphate (P) IN008 PVO82019A1 1000 99.999 0.10 27.5 7.2729 7.2730 1000.0 2.0 7722-76-1 5 mg/m3 xH-rat >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (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.
- * 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: 02/22/24 M.5942

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: CGT11
Lot Number: T2-TI719972
Matrix: 2% (v/v) HNO₃
tr. HF
Value / Analyte(s): 1 000 µg/mL ea:
Titanium
Starting Material: Ti Metal
Starting Material Lot#: 2094
Starting Material Purity: 99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL
Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
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	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

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 - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 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 crystalline 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, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

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

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 Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





M5962 **R10614124**



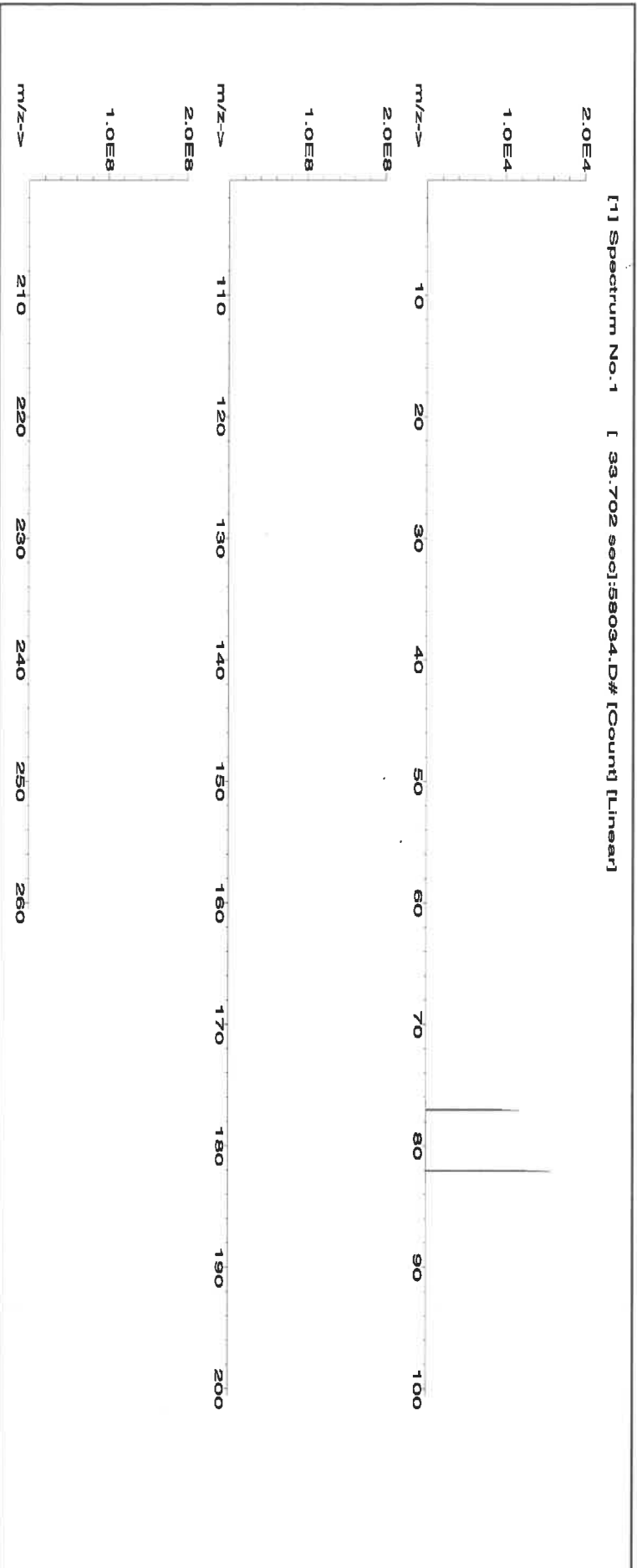
CERTIFIED WEIGHT REPORT:

Part Number: 57034
Lot Number: 060624
Description: Selenium (Se)
Expiration Date: 060627
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6LUTB
Volume shown below was diluted to (mL): 2000.07

Lot # 24002546
Solvent: Nitric Acid
2.0%
40.0 (mL)
Nitric Acid

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)
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	31.49





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.02	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com



Certified Reference Material CRM

M5970 M5971

R. 710124

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

CERTIFIED WEIGHT REPORT:

Part Number: **57003**
Lot Number: **062124**
Description: **Lithium (Li)**
Expiration Date: **06/12/27**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **250.11**
SE-05 Balance Uncertainty
0.016 Flask Uncertainty

Lot # **24002546**
Solvent: **Nitric Acid**

2.0% 5.0 (mL) Nitric Acid

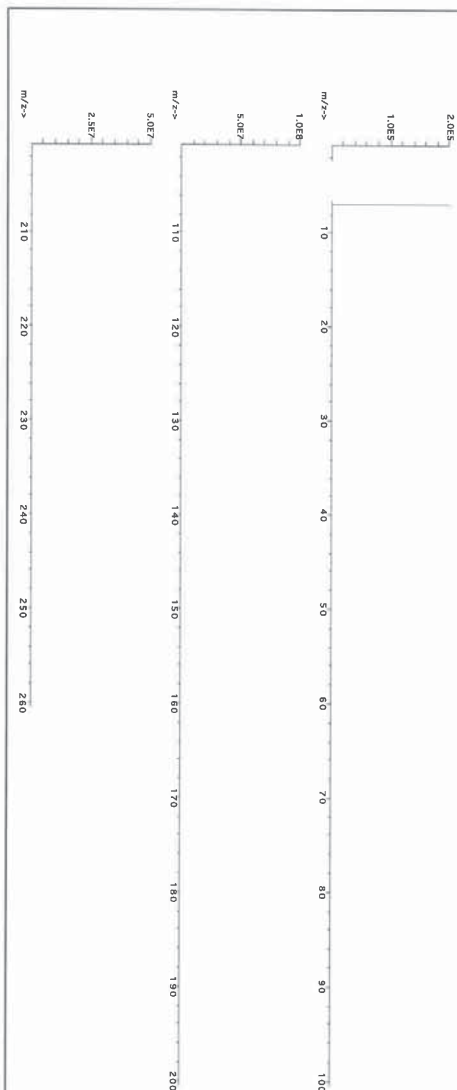
Microvial Capable	
Formulated By:	062124
Giovanni Esposito	

Reviewed By: *[Signature]*
Pietro L. Parias

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 or-hal 1428 mg/kg NA

[1] Spectrum No. 1 [32.093 sec; 15000.0Hz Count [Lines]



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

M5984
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: 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:

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

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

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_{ts} = 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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{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)

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



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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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



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:	CLPP-CAL-1	
Lot Number:	T2-MEB714417	
Matrix:	5% (v/v) HNO ₃	
Value / Analyte(s):	5 000 µg/mL ea:	
	Calcium,	Potassium,
	Magnesium,	Sodium,
	2 000 µg/mL ea:	
	Aluminum,	Barium,
	1 000 µg/mL ea:	
	Iron,	
	500 µg/mL ea:	
	Nickel,	Vanadium,
	Zinc,	Cobalt,
	Manganese,	
	250 µg/mL ea:	
	Silver,	Copper,
	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 ($\mu\text{g/mL}$)

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° $\pm$ 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



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: CLPP-CAL-3
Lot Number: T2-MEB727800
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 ± 7 µg/mL	Cadmium, Cd	500.0 ± 2.2 µg/mL
Lead, Pb	1 000 ± 4 µg/mL	Selenium, Se	1 000 ± 6 µg/mL
Thallium, Tl	1 000 ± 7 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
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:

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

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

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

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

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

December 21, 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

- **December 21, 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.

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EXP: 9/6/2029

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: V2-MEB746762
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 ± 5 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	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

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

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 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

- **September 06, 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 Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot # 24012496
Description: Magnesium (Mg)
Solvent: Nitric Acid

Expiration Date: 11/13/25
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUB
Weight shown below was diluted to (mL): 2000.07
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentas
	112124

Compound

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

1. Magnesium nitrate hexahydrate (Mg) IN030 MG000023A1 10000 99.999 0.10 8.51 234.9183 234.9459 10001.2 20.0 13446-18-9 NA off-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.823 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	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	Rc	<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	Rb	<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	Sm	<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	Sc	<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			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	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 preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

M6137
R-71013124

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: CGSI1
Lot Number: V2-SI744713
Matrix: tr. HNO₃
tr. HF
Value / Analyte(s): 1 000 µg/mL ea:
Silicon
Starting Material: Silica
Starting Material Lot#: 1771
Starting Material Purity: 99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL
Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	999 ± 5 µg/mL ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	1000 ± 7 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	<	0.000310	M	Eu	<	0.000310	O	Na	0.001656	M	Se	<	0.022000	M	Zn	<	0.002500	
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

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 - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphous (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

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 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

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

July 10, 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

- July 10, 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





CERTIFIED WEIGHT REPORT:

Part Number: 57119
Lot Number: 103024
Description: Potassium (K)

R-21113125

Solvent: 24002546 Nitric Acid
Lot #

Expiration Date: 103027
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

M6141
M6142
M6143

2% 80.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Renteria
	103024

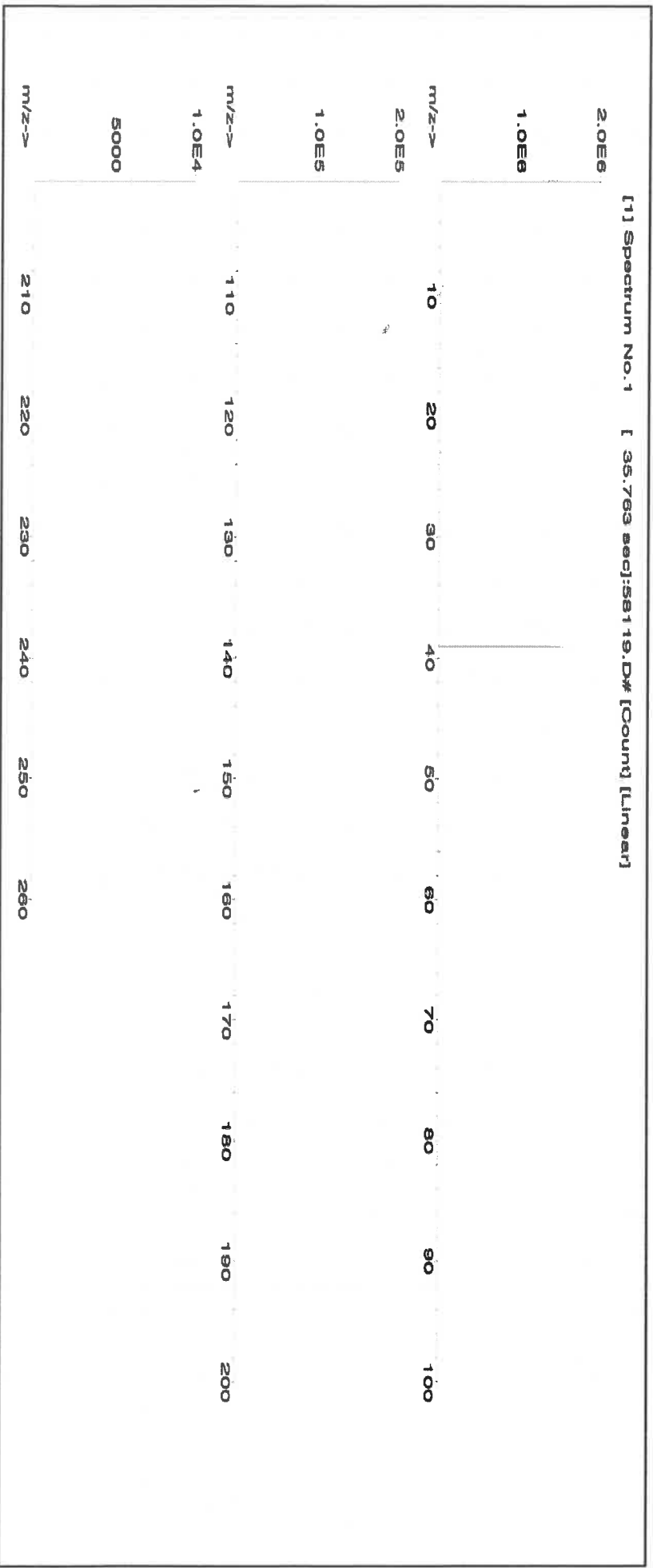
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM

SDS Information

(Solvent Safety Info. On Attached pg.)

1. Potassium nitrate (K) IN034 KD062022A1 10000 99.999 0.10 37.7 106.1040 ##### 10001.1 20.0 7757-79-1 5 mg/m3 orl-rat 3750 mg/kg 3141a

[1] Spectrum No. 1 [35.763 sec]:58119.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	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: 58111
Lot Number: 072424
Description: Sodium (Na)

Lot # R-1113/25
Solvent: 24002546 Nitric Acid

Expiration Date: 072427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

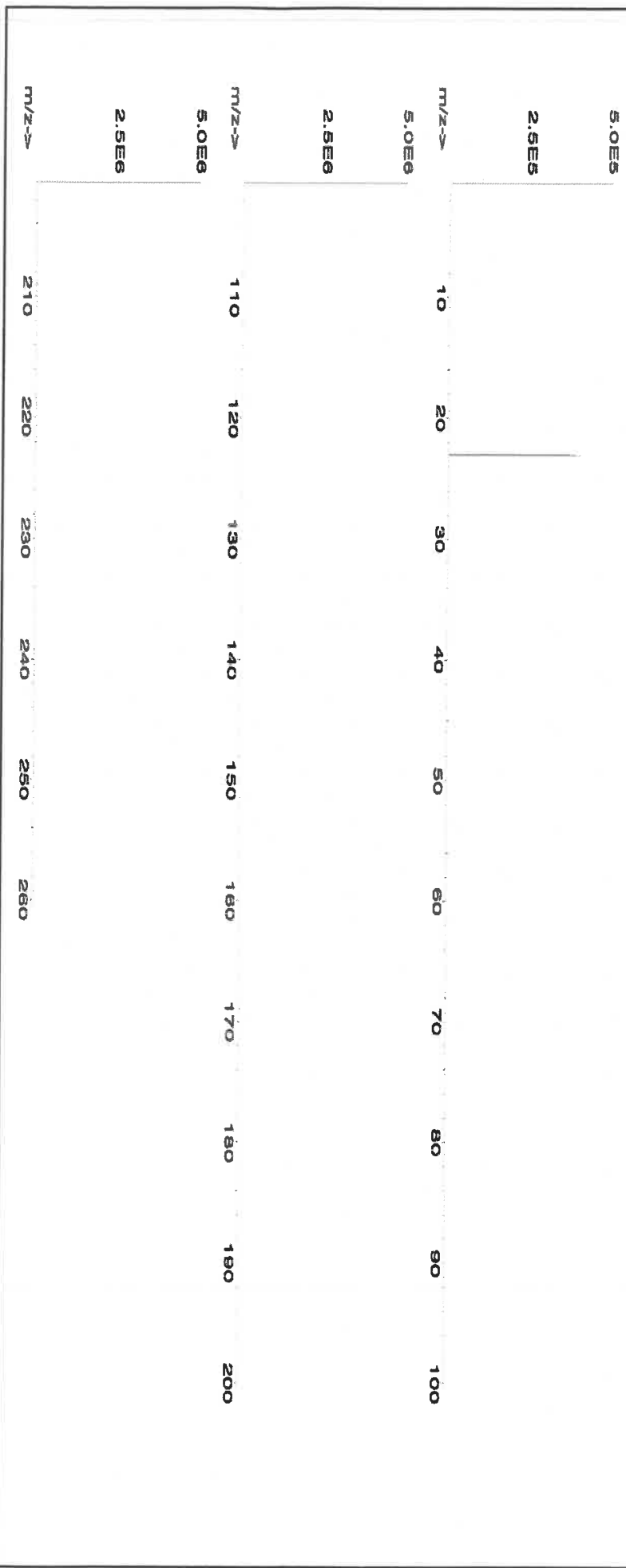
Weight shown below was diluted to (mL): 4000.2
5E-05 Balance Uncertainty
0.10 Flask Uncertainty

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Renteria	072424

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. Sodium nitrate (Na) IN036 NAV01201511 10000 99.999 0.10 26.9 148.7096 ##### 10000.0 20.0 7631-99-4 5 mg/m3 orl-rat 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	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	Rb	<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	T	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	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **58030** Lot # **24012496**
Lot Number: **121724** Nitric Acid
Description: **Zinc (Zn)**

Expiration Date: **121727** 2%
Recommended Storage: **Ambient (20 °C)** 40.0 (mL)

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

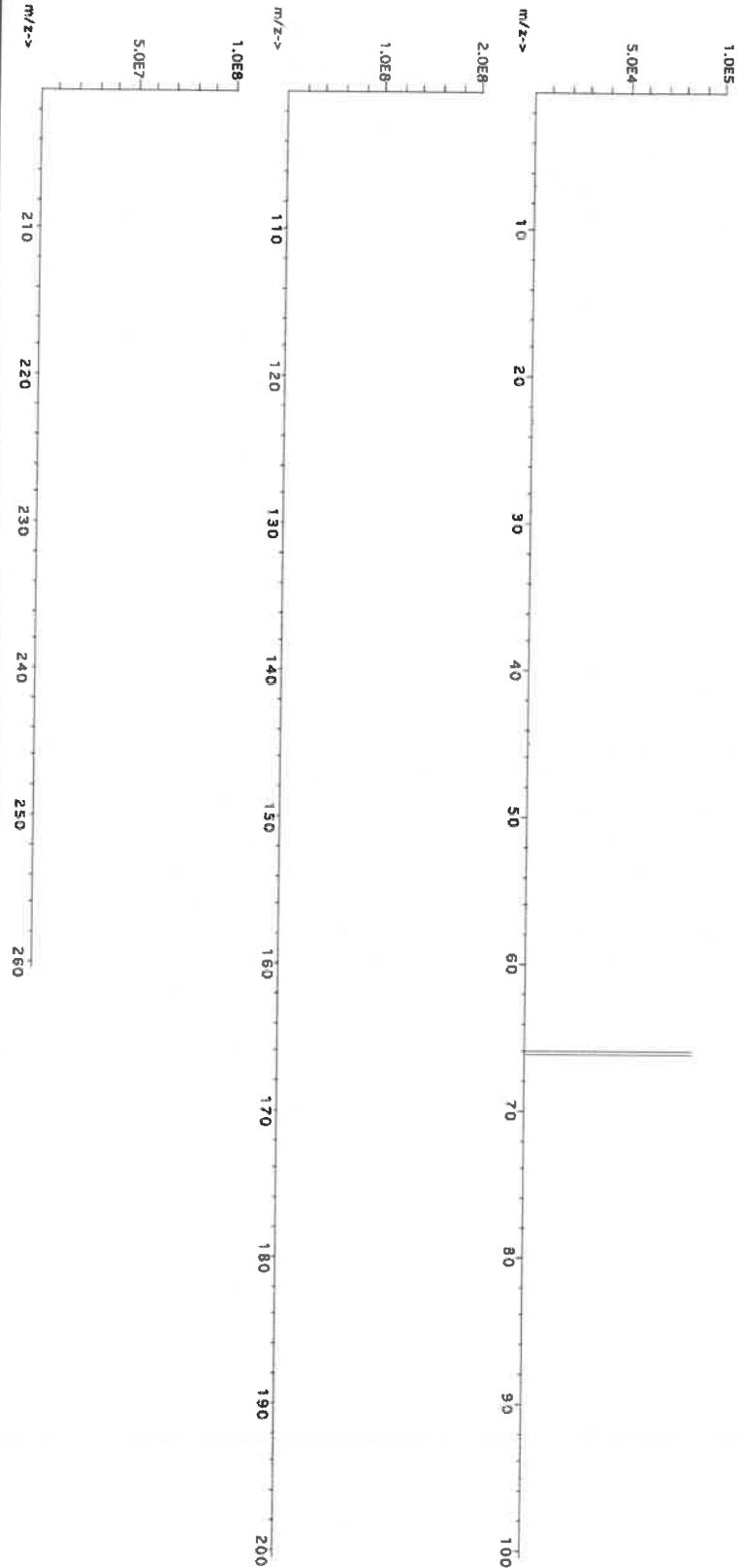
NIST Test Number: **6UTB**

Weight shown below was diluted to (mL): **2000.1** 0.10 Balance Uncertainty
Flask Uncertainty

<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
Reviewed By:	<i>Pedro L. Rentes</i>
	Pedro L. Rentes
	121724

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
IN016 ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	1000.0	2.0	10196-18-6
									1 mg/m3
									or-rat 1190mg/kg
									3168

[1] Spectrum No.1 [31.103 sec;58130.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	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantorsm**



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

A handwritten signature in cursive script that reads 'Jamie Ethier'.
Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™



R- 0210212025

m - 6158

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

 **avantor™**



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

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

Nitric Acid 69%
CMOS

 **avantorsTM**



m-6162

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

R. Date :- 04/27/2025

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	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 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	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 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	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24H0162012

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

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:	QCP-CICV-1		
Lot Number:	V2-MEB744107		
Matrix:	7% (v/v) HNO ₃		
Value / Analyte(s):	2 500 µg/mL ea:		
	Calcium,		Potassium,
	Magnesium,		Sodium,
	1 000 µg/mL ea:		
	Aluminum,		Barium,
	500 µg/mL ea:		
	Iron,		
	250 µg/mL ea:		
	Nickel,		Vanadium,
	Zinc,		Cobalt,
	Manganese,		
	125 µg/mL ea:		
	Silver,		Copper,
	100 µg/mL ea:		
	Chromium,		
	25 µg/mL ea:		
	Beryllium		

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
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 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
Cu	ICP Assay	3114	120618
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	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP 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

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), <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

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 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

- **May 22, 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:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



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

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: QCP-CICV-2
 Lot Number: U2-MEB733713
 Matrix: 3% (w/v) Tartaric acid
 1% (v/v) HNO₃
 Value / Analyte(s): 500 µg/mL ea:
 Antimony

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
Antimony, Sb	500.0 ± 2.8 µg/mL		

Density: 1.017 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

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)

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). <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

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

June 01, 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

- **June 01, 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

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: QCP-CICV-3
 Lot Number: V2-MEB749572
 Matrix: 7% (v/v) HNO₃
 Value / Analyte(s):
 500 µg/mL ea:
 Arsenic, Lead,
 Selenium, Thallium,
 250 µg/mL ea:
 Cadmium

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
Arsenic, As	500.0 ± 3.1 µg/mL	Cadmium, Cd	250.1 ± 1.1 µg/mL
Lead, Pb	500.0 ± 2.3 µg/mL	Selenium, Se	500.0 ± 3.2 µg/mL
Thallium, Tl	500.0 ± 3.0 µg/mL		

Density: 1.040 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

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), <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

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 02, 2025

- 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 02, 2030**

- 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:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM

M6030



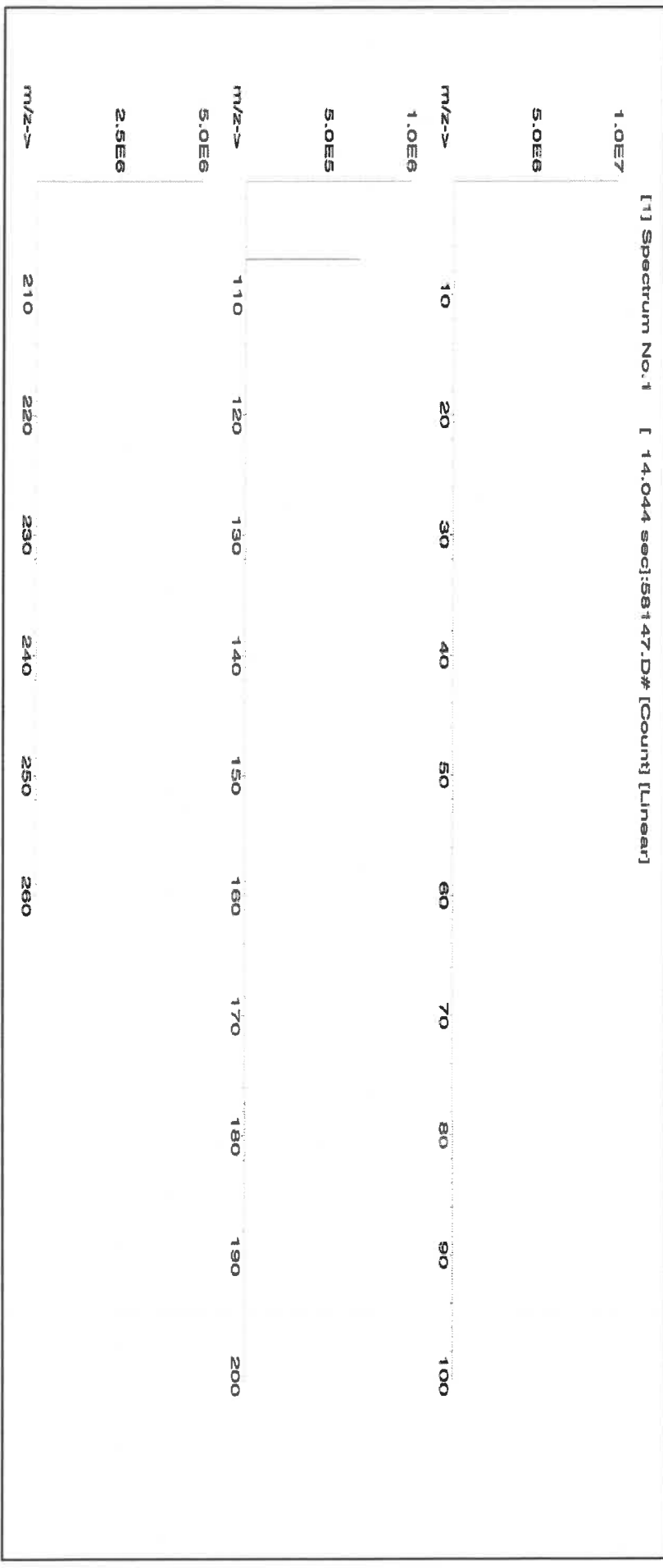
CERTIFIED WEIGHT REPORT:

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	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Silver nitrate (Ag)	IN035 J0612AGA1	1000.0	99.999	0.10	63.7	6.27992	6.27998	1000.0	2.0
								10 µg/mL	NA





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).



R: 10/18/24
Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number:

57051

Lot #
24002546

Solvent:
Nitric Acid

Lot Number:

071724

Description:

Antimony (Sb)

Expiration Date:

071727

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6LJB

Volume shown below was diluted to (mL):

2000.26

Balance Uncertainty
0.058

F flask Uncertainty

2.0%

40.0
(mL)

Nitric Acid

Giovanni Esposito

Formulated By:

Giovanni Esposito

071724

Reviewed By:

Pedro L. Rentas

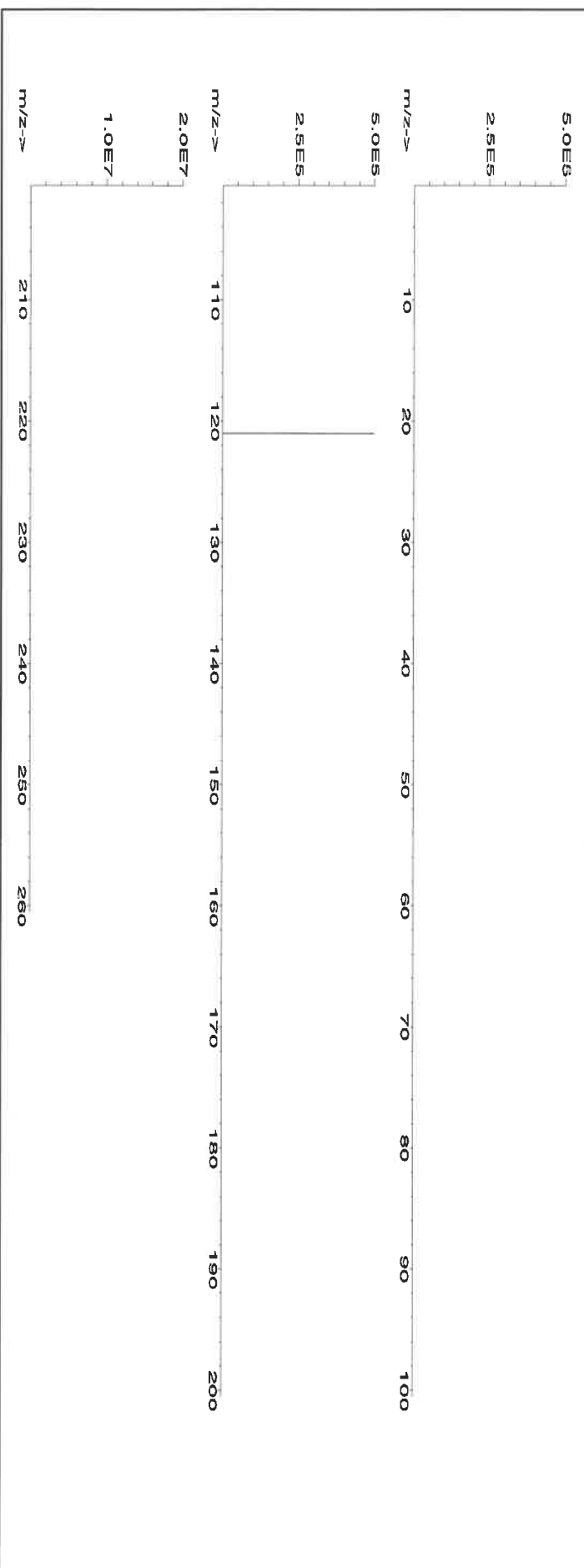
071724

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Antimony (Sb) 58151 060324 0.1000 200.0 0.084 1000 10001.4 1000.0 2.2 7440-36-0 0.5 mg/m3 orl-rat 7000 mg/kg 3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





Har P. R.



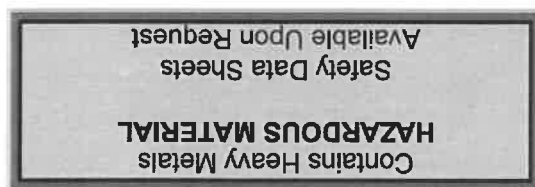
QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

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.

M6152



(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) interfering 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 $\pm$ 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value $\pm$ 15 percent of the listed certified value.



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

R : 04/20/21

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.



M6155

(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,





QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

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.

R: 8/5/24

M6019

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: CGSR1
Lot Number: U2-SR730227
Matrix: 0.1% (v/v) HNO₃
Value / Analyte(s): 1 000 µg/mL ea:
Strontium
Starting Material: SrCO₃
Starting Material Lot#: M2-2192
Starting Material Purity: 99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL
Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	998 ± 4 µg/mL ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985
Assay Method #2	1001 ± 3 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	1001 ± 2 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:

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

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

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_{ts} = 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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{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)

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	<	0.001980	M	Eu	<	0.000495	O	Na	0.000200	M	Se	<	0.013862	O	Zn	0.000143
O	Al	0.000370	O	Fe	0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495		
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990		
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<			
M	Ba	0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495			
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495		
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724		
O	Ca	0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990			
M	Cd	0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940			
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495		
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495		
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485		
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980		
M	Cu	0.000099	O	Mg	0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn	0.000066	M	Sb	<	0.014852	O	Y	<	0.000995			
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495		

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 - 87.62 +2 6 Sr(H₂O)₆+2

Chemical Compatibility - Soluble in HCl, and HNO₃. Avoid H₂SO₄, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO₃ / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (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 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

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

March 03, 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 03, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: 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

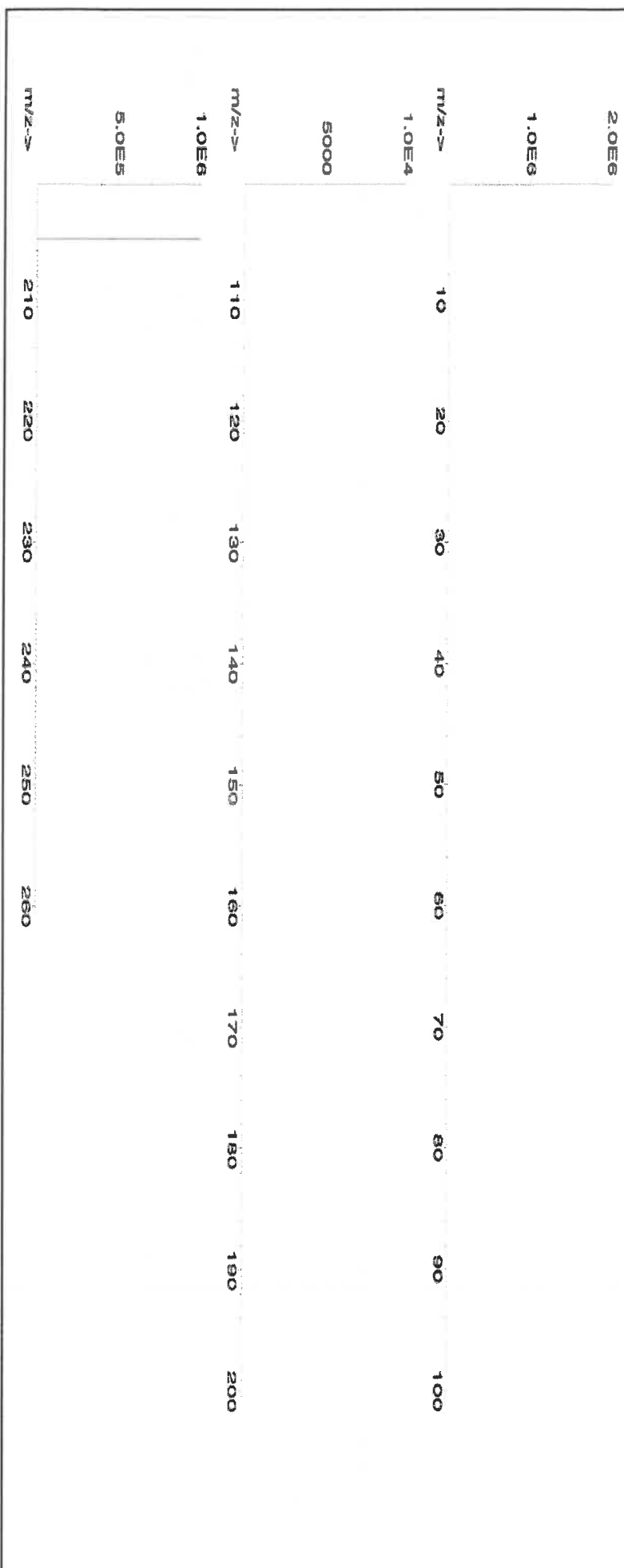
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Rendas</i>
	Pedro L. Rendas
	062724

SDS Information

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

1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 orl-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Sn	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02			Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M6021



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
<https://absolutestandards.com>

CERTIFIED WEIGHT REPORT:

Part Number: **57023**
Lot Number: **062424**
Description: **Vanadium (V)**

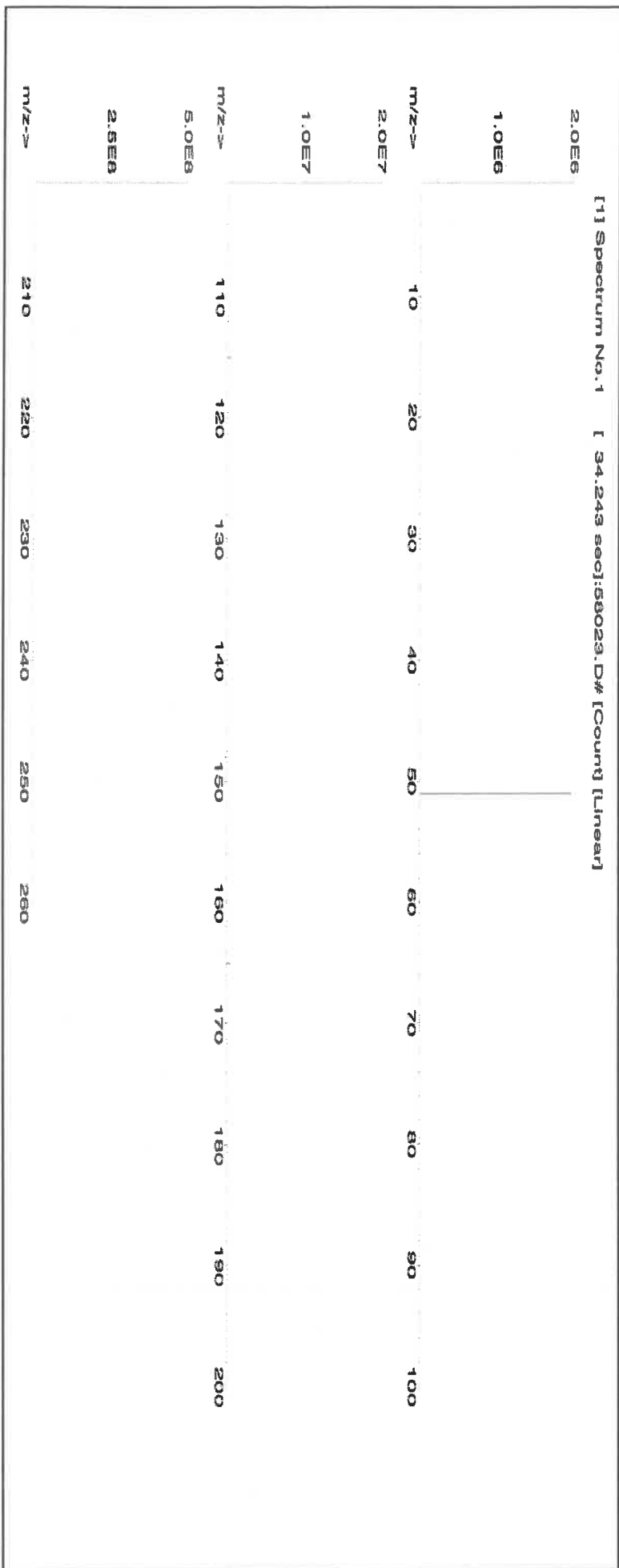
Lot # **24002546**
Solvent: **Nitric Acid**

Aleah O'Brady	
Formulated By:	Aleah O'Brady
	062424
Reviewed By:	Pedro L. Rantas
	062424

Expiration Date: **062427**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.3**
0.06 Balance Uncertainty
Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	7803-55-6 0.05 mg/m3 or-at 58.1mg/kg	3165





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ti	<0.02
														Tb	<0.02
														Te	<0.02
														Tl	<0.02
														Tm	<0.02
														Sn	<0.02
														Ti	<0.02
														W	<0.02
														U	<0.02
														V	T
														Yb	<0.02
														Y	<0.02
														Zn	<0.02
														Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:
COMPANY: Geop Inc
ADDRESS: 8 CARRIAGE
CITY: Succasunna STATE: NJ ZIP: 07876
ATTENTION:
PHONE: FAX:

PROJECT NAME: Banker
PROJECT NO.: LOCATION:
PROJECT MANAGER: GL
e-mail:
PHONE: FAX:

BILL TO: Geop Inc PO#: 8 CARRIAGE
ADDRESS: 8 CARRIAGE
CITY: Succasunna STATE: NJ ZIP: 07876
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) 5 Day DAYS*
HARDCOPY (DATA PACKAGE) DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
EDD FORMAT haste, Njdp

1	2	3	4	5	6	7	8	9
<u>Sodium</u>	<u>chloride</u>							

ALLIANCE
SAMPLE
ID

PROJECT
SAMPLE IDENTIFICATION

SAMPLE
MATRIX

SAMPLE
TYPE
COMP GRAB

SAMPLE
COLLECTION
DATE TIME

OF BOTTLES

PRESERVATIVES

COMMENTS

Specify Preservatives
A-HCl D-NaOH
B-HNO3 E-ICE
C-H2SO4 F-OTHER

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

9 Banker

DW

X 7/3/15 1230 2

1 2 3 4 5 6 7 8 9

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: DATE/TIME: RECEIVED BY:
1. 7/3/15 1. 15:52
RELINQUISHED BY SAMPLER: DATE/TIME: RECEIVED BY:
2. 2.
RELINQUISHED BY SAMPLER: DATE/TIME: RECEIVED BY:
3. 3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP
Comments: 9 Banker 39
Page ____ of CLIENT: ☐ Hand Delivered ☐ Other
Shipment Complete
☐ YES ☐ NO

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