

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

LAB CHRONICLE

OrderID:	Q3267	OrderDate:	10/1/2025 3:37:00 PM
Client:	METEM A GE POWER Business	Project:	Parsippany Wastewater Quarterly 2025
Contact:	Sundas Pervez	Location:	D31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3267-01	Q4	Water	Metals Group5	200.7	10/01/25	10/02/25	10/08/25	10/01/25



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Hit Summary Sheet
SW-846

SDG No.: Q3267

Order ID: Q3267

Client: METEM A GE POWER Business

Project ID: Parsippany Wastewater Quarterly 2025

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : Q4								
Q3267-01	Q4	Water	Chromium	453	D	26.5	250	ug/L
Q3267-01	Q4	Water	Nickel	2440	D	95.0	1000	ug/L
Q3267-01	Q4	Water	Zinc	196	JD	100	1000	ug/L



SAMPLE DATA

Report of Analysis

Client:	METEM A GE POWER Business	Date Collected:	10/01/25
Project:	Parsippany Wastewater Quarterly 2025	Date Received:	10/01/25
Client Sample ID:	Q4	SDG No.:	Q3267
Lab Sample ID:	Q3267-01	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.
7440-43-9	Cadmium	15.5	UD	50	15.5	150	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7440-47-3	Chromium	453	D	50	26.5	250	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7440-50-8	Copper	94.5	UD	50	94.5	500	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7439-92-1	Lead	60.5	UD	50	60.5	300	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7440-02-0	Nickel	2440	D	50	95.0	1000	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7440-22-4	Silver	40.5	UD	50	40.5	250	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	
7440-66-6	Zinc	196	JD	50	100	1000	ug/L	10/02/25 10:10	10/08/25 16:58	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group5			

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: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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	Cadmium	1950	2000	98	95 - 105	P	10/08/2025	12:24	LB137466
	Chromium	793	800	99	95 - 105	P	10/08/2025	12:24	LB137466
	Copper	999	1000	100	95 - 105	P	10/08/2025	12:24	LB137466
	Lead	3810	4000	95	95 - 105	P	10/08/2025	12:24	LB137466
	Nickel	1950	2000	98	95 - 105	P	10/08/2025	12:24	LB137466
	Silver	988	1000	99	95 - 105	P	10/08/2025	12:24	LB137466
	Zinc	1990	2000	99	95 - 105	P	10/08/2025	12:24	LB137466

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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	Cadmium	5.82	6.0	97	80 - 120	P	10/08/2025	12:32	LB137466
	Chromium	9.92	10.0	99	80 - 120	P	10/08/2025	12:32	LB137466
	Copper	21.7	20.0	108	80 - 120	P	10/08/2025	12:32	LB137466
	Lead	12.8	12.0	106	80 - 120	P	10/08/2025	12:32	LB137466
	Nickel	39.6	40.0	99	80 - 120	P	10/08/2025	12:32	LB137466
	Silver	10.2	10.0	102	80 - 120	P	10/08/2025	12:32	LB137466
	Zinc	42.7	40.0	107	80 - 120	P	10/08/2025	12:32	LB137466

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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	Cadmium	2480	2500	99	90 - 110	P	10/08/2025	13:12	LB137466
	Chromium	989	1000	99	90 - 110	P	10/08/2025	13:12	LB137466
	Copper	1240	1250	100	90 - 110	P	10/08/2025	13:12	LB137466
	Lead	4900	5000	98	90 - 110	P	10/08/2025	13:12	LB137466
	Nickel	2470	2500	99	90 - 110	P	10/08/2025	13:12	LB137466
	Silver	1240	1250	99	90 - 110	P	10/08/2025	13:12	LB137466
	Zinc	2480	2500	99	90 - 110	P	10/08/2025	13:12	LB137466
CCV02	Cadmium	2350	2500	94	90 - 110	P	10/08/2025	14:14	LB137466
	Chromium	951	1000	95	90 - 110	P	10/08/2025	14:14	LB137466
	Copper	1190	1250	95	90 - 110	P	10/08/2025	14:14	LB137466
	Lead	4700	5000	94	90 - 110	P	10/08/2025	14:14	LB137466
	Nickel	2360	2500	94	90 - 110	P	10/08/2025	14:14	LB137466
	Silver	1170	1250	94	90 - 110	P	10/08/2025	14:14	LB137466
	Zinc	2330	2500	93	90 - 110	P	10/08/2025	14:14	LB137466
CCV03	Cadmium	2320	2500	93	90 - 110	P	10/08/2025	15:04	LB137466
	Chromium	943	1000	94	90 - 110	P	10/08/2025	15:04	LB137466
	Copper	1170	1250	94	90 - 110	P	10/08/2025	15:04	LB137466
	Lead	4610	5000	92	90 - 110	P	10/08/2025	15:04	LB137466
	Nickel	2320	2500	93	90 - 110	P	10/08/2025	15:04	LB137466
	Silver	1200	1250	96	90 - 110	P	10/08/2025	15:04	LB137466
	Zinc	2380	2500	95	90 - 110	P	10/08/2025	15:04	LB137466
CCV04	Cadmium	2310	2500	93	90 - 110	P	10/08/2025	16:11	LB137466
	Chromium	965	1000	96	90 - 110	P	10/08/2025	16:11	LB137466
	Copper	1190	1250	95	90 - 110	P	10/08/2025	16:11	LB137466
	Lead	4670	5000	93	90 - 110	P	10/08/2025	16:11	LB137466
	Nickel	2340	2500	94	90 - 110	P	10/08/2025	16:11	LB137466
	Silver	1190	1250	95	90 - 110	P	10/08/2025	16:11	LB137466
	Zinc	2370	2500	95	90 - 110	P	10/08/2025	16:11	LB137466
CCV05	Cadmium	2280	2500	91	90 - 110	P	10/08/2025	17:02	LB137466
	Chromium	942	1000	94	90 - 110	P	10/08/2025	17:02	LB137466
	Copper	1180	1250	94	90 - 110	P	10/08/2025	17:02	LB137466
	Lead	4590	5000	92	90 - 110	P	10/08/2025	17:02	LB137466
	Nickel	2310	2500	92	90 - 110	P	10/08/2025	17:02	LB137466
	Silver	1230	1250	99	90 - 110	P	10/08/2025	17:02	LB137466

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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
CCV05	Zinc	2460	2500	98	90 - 110	P	10/08/2025	17:02	LB137466
CCV06	Cadmium	2330	2500	93	90 - 110	P	10/08/2025	17:53	LB137466
	Chromium	949	1000	95	90 - 110	P	10/08/2025	17:53	LB137466
	Copper	1200	1250	96	90 - 110	P	10/08/2025	17:53	LB137466
	Lead	4680	5000	94	90 - 110	P	10/08/2025	17:53	LB137466
	Nickel	2350	2500	94	90 - 110	P	10/08/2025	17:53	LB137466
	Silver	1210	1250	96	90 - 110	P	10/08/2025	17:53	LB137466
	Zinc	2410	2500	96	90 - 110	P	10/08/2025	17:53	LB137466



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Metals

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CRDL STANDARD FOR AA & ICP

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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	Cadmium	5.73	6.0	96	65 - 135	P	10/08/2025	12:41	LB137466
	Chromium	9.98	10.0	100	65 - 135	P	10/08/2025	12:41	LB137466
	Copper	21.6	20.0	108	65 - 135	P	10/08/2025	12:41	LB137466
	Lead	12.2	12.0	102	65 - 135	P	10/08/2025	12:41	LB137466
	Nickel	39.3	40.0	98	65 - 135	P	10/08/2025	12:41	LB137466
	Silver	10.6	10.0	106	65 - 135	P	10/08/2025	12:41	LB137466
	Zinc	43.1	40.0	108	65 - 135	P	10/08/2025	12:41	LB137466



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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	12:36	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	12:36	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	12:36	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	12:36	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	12:36	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	12:36	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	12:36	LB137466

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	13:16	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	13:16	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	13:16	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	13:16	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	13:16	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	13:16	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	13:16	LB137466
CCB02	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	14:18	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	14:18	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	14:18	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	14:18	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	14:18	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	14:18	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	14:18	LB137466
CCB03	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	15:13	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	15:13	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	15:13	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	15:13	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	15:13	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	15:13	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	15:13	LB137466
CCB04	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	16:15	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	16:15	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	16:15	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	16:15	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	16:15	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	16:15	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	16:15	LB137466
CCB05	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	17:06	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	17:06	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	17:06	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	17:06	LB137466
	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	17:06	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	17:06	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	17:06	LB137466
CCB06	Cadmium	0.50	+/-3	U	6.00	P	10/08/2025	17:57	LB137466
	Chromium	2.12	+/-5	U	10.0	P	10/08/2025	17:57	LB137466
	Copper	4.60	+/-10	U	20.0	P	10/08/2025	17:57	LB137466
	Lead	2.30	+/-6	U	12.0	P	10/08/2025	17:57	LB137466

Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Nickel	3.06	+/-20	U	40.0	P	10/08/2025	17:57	LB137466
	Silver	1.62	+/-5	U	10.0	P	10/08/2025	17:57	LB137466
	Zinc	16.7	+/-20	U	40.0	P	10/08/2025	17:57	LB137466

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169959BL	WATER			Batch Number:	PB169959		Prep Date:	10/02/2025	
	Cadmium	0.31	<1.5	U	3.00	P	10/08/2025	15:38	LB137466
	Chromium	0.53	<2.5	U	5.00	P	10/08/2025	15:38	LB137466
	Copper	1.89	<5	U	10.0	P	10/08/2025	15:38	LB137466
	Lead	1.21	<3	U	6.00	P	10/08/2025	15:38	LB137466
	Nickel	1.90	<10	U	20.0	P	10/08/2025	15:38	LB137466
	Silver	0.81	<2.5	U	5.00	P	10/08/2025	15:38	LB137466
	Zinc	2.00	<10	U	20.0	P	10/08/2025	15:38	LB137466

Metals
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INTERFERENCE CHECK SAMPLE

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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	Cadmium	1.10	1.0	110	-5	7	10/08/2025	12:45	LB137466
	Chromium	47.7	52.0	92	42	62	10/08/2025	12:45	LB137466
	Copper	16.3	2.0	815	-18	22	10/08/2025	12:45	LB137466
	Lead	-4.56			-12	12	10/08/2025	12:45	LB137466
	Nickel	3.02	2.0	151	-38	42	10/08/2025	12:45	LB137466
	Silver	7.27			-10	10	10/08/2025	12:45	LB137466
	Zinc	1.82			-40	40	10/08/2025	12:45	LB137466
ICSAB01	Cadmium	1010	972	104	826	1120	10/08/2025	12:50	LB137466
	Chromium	552	542	102	460	624	10/08/2025	12:50	LB137466
	Copper	496	511	97	434	588	10/08/2025	12:50	LB137466
	Lead	41.6	49.0	85	37	61	10/08/2025	12:50	LB137466
	Nickel	1000	954	105	810	1100	10/08/2025	12:50	LB137466
	Silver	219	201	109	170	232	10/08/2025	12:50	LB137466
	Zinc	1050	952	110	809	1095	10/08/2025	12:50	LB137466
ICSA	Cadmium	-1.84	1.0	184	-5	7	10/08/2025	12:54	LB137466
	Chromium	52.9	52.0	102	42	62	10/08/2025	12:54	LB137466
	Copper	24.1	2.0	1205	-18	22	10/08/2025	12:54	LB137466
	Lead	-13.4			-12	12	10/08/2025	12:54	LB137466
	Nickel	3.26	2.0	163	-38	42	10/08/2025	12:54	LB137466
	Silver	6.92			-10	10	10/08/2025	12:54	LB137466
	Zinc	1.80			-40	40	10/08/2025	12:54	LB137466
ICSAB	Cadmium	957	972	98	826	1120	10/08/2025	12:59	LB137466
	Chromium	588	542	108	460	624	10/08/2025	12:59	LB137466
	Copper	538	511	105	434	588	10/08/2025	12:59	LB137466
	Lead	45.5	49.0	93	37	61	10/08/2025	12:59	LB137466
	Nickel	972	954	102	810	1100	10/08/2025	12:59	LB137466
	Silver	208	201	104	170	232	10/08/2025	12:59	LB137466
	Zinc	1060	952	111	809	1095	10/08/2025	12:59	LB137466



METAL

QC

DATA

metals
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MATRIX SPIKE SUMMARY

client: <u>METEM A GE POWER Business</u>	level: <u>low</u>	sdg no.: <u>Q3267</u>
contract: <u>METE01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3260-02</u>	client id: <u>COMPMS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3260-02MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	75 - 125	93.0		0.80	J	100	92		P
Chromium	ug/L	75 - 125	207		14.9		200	96		P
Copper	ug/L	75 - 125	274		125		150	99		P
Lead	ug/L	75 - 125	451		17.2		500	87		P
Nickel	ug/L	75 - 125	253		18.6	J	250	94		P
Silver	ug/L	75 - 125	35.5		3.20	J	37.5	86		P
Zinc	ug/L	75 - 125	762		583		100	179		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>METEM A GE POWER Business</u>	level: <u>low</u>	sdg no.: <u>Q3267</u>
contract: <u>METE01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q3260-02</u>	client id: <u>COMPMSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q3260-02MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	75 - 125	96.9		0.80	J	100	96		P
Chromium	ug/L	75 - 125	219		14.9		200	102		P
Copper	ug/L	75 - 125	276		125		150	101		P
Lead	ug/L	75 - 125	472		17.2		500	91		P
Nickel	ug/L	75 - 125	262		18.6	J	250	97		P
Silver	ug/L	75 - 125	38.3		3.20	J	37.5	94		P
Zinc	ug/L	75 - 125	775		583		100	191		P

Metals

- 5b -

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: METEM A GE POWER Business **Level:** LOW **SDG No.:** Q3267
Contract: METE01 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q3260-02 **Client ID:** COMPDUP
Percent Solids for Sample: NA **Duplicate ID** Q3260-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	0.80	J	0.70	J	13		P
Chromium	ug/L	20	14.9		14.5		3		P
Copper	ug/L	20	125		119		5		P
Lead	ug/L	20	17.2		16.5		4		P
Nickel	ug/L	20	18.6	J	17.3	J	7		P
Silver	ug/L	20	3.20	J	2.74	J	15		P
Zinc	ug/L	20	583		552		5		P

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: METEM A GE POWER Business **Level:** LOW **SDG No.:** Q3267
Contract: METE01 **Lab Code:** ACE
Matrix: Water **Sample ID:** Q3260-02MS **Client ID:** COMPMSD
Percent Solids for Sample: NA **Duplicate ID** Q3260-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	93.0		96.9		4		P
Chromium	ug/L	20	207		219		6		P
Copper	ug/L	20	274		276		1		P
Lead	ug/L	20	451		472		5		P
Nickel	ug/L	20	253		262		3		P
Silver	ug/L	20	35.5		38.3		8		P
Zinc	ug/L	20	762		775		2		P

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169959BS							
Cadmium	ug/L	100	92.2		92	85 - 115	P
Chromium	ug/L	200	198		99	85 - 115	P
Copper	ug/L	150	149		99	85 - 115	P
Lead	ug/L	500	459		92	85 - 115	P
Nickel	ug/L	250	235		94	85 - 115	P
Silver	ug/L	37.5	35.0		93	85 - 115	P
Zinc	ug/L	100	100		100	85 - 115	P

Metals
-9 -
ICP SERIAL DILUTIONS

SAMPLE NO.

COMPL

Lab Name: Alliance

Contract: METE01

Lab Code: ACE

Lb No.: lb137466

Lab Sample ID : Q3260-02L

SDG No.: Q3267

Matrix (soil/water): Water

Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Difference	Q	M
	C		C				
Cadmium	0.80	J	15.0	U	100.0		P
Chromium	14.9		15.4	J	3		P
Copper	125		128		3		P
Lead	17.2		18.9	J	10		P
Nickel	18.6	J	17.3	J	7		P
Silver	3.20	J	25.0	U	100.0		P
Zinc	583		581		0		P



METAL PREPARATION & INSTRUMENT DATA

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001050	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0067600	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

Lab Code: ACE

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interelement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000



METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client: METEM A GE POWER Business

SDG No.: Q3267

Contract: METE01

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: PB169959							
PB169959BL	PB169959BL	MB	WATER	10/02/2025	50.0	25.0	
PB169959BS	PB169959BS	LCS	WATER	10/02/2025	50.0	25.0	
Q3260-02DUP	COMPDUP	DUP	WATER	10/02/2025	50.0	25.0	
Q3260-02MS	COMPMS	MS	WATER	10/02/2025	50.0	25.0	
Q3260-02MSD	COMPMSD	MSD	WATER	10/02/2025	50.0	25.0	
Q3267-01	Q4	SAM	WATER	10/02/2025	50.0	25.0	

metals
- 14 -
ANALYSIS RUN LOG

Client: METEM A GE POWER Business

Contract: METE01

Lab code: ACE

Sdg no.: Q3267

Instrument id number: _____ **Method:** _____

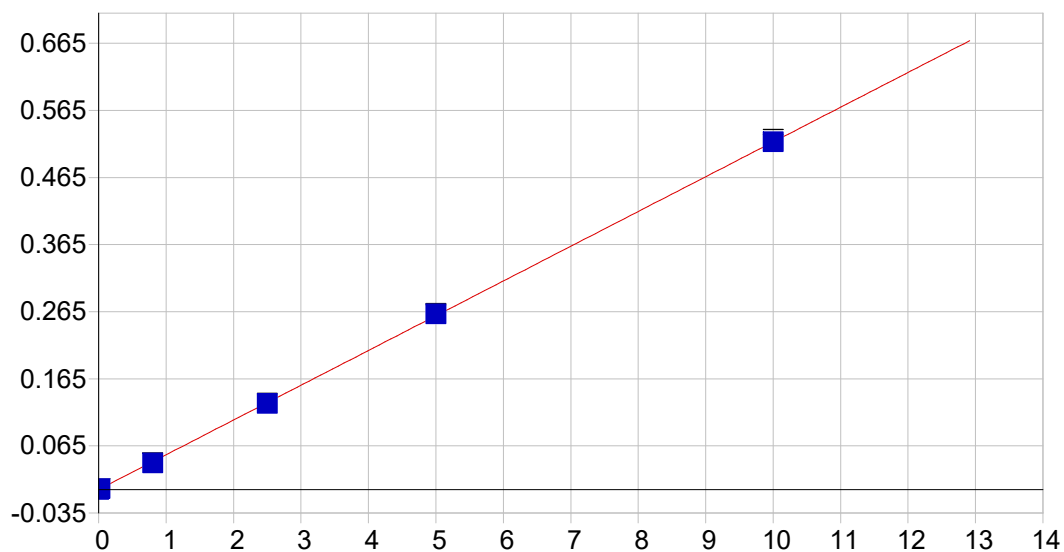
Run number: LB137466

Start date: 10/08/2025 **End date:** 10/08/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1200	Ag,Cd,Cr,Cu,Ni,Pb,Zn
S1	S1	1	1204	Ag,Cd,Cr,Cu,Ni,Pb,Zn
S2	S2	1	1208	Ag,Cd,Cr,Cu,Ni,Pb,Zn
S3	S3	1	1212	Ag,Cd,Cr,Cu,Ni,Pb,Zn
S4	S4	1	1216	Ag,Cd,Cr,Cu,Ni,Pb,Zn
S5	S5	1	1220	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICV01	ICV01	1	1224	Ag,Cd,Cr,Cu,Ni,Pb,Zn
LLICV01	LLICV01	1	1232	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICB01	ICB01	1	1236	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CRI01	CRI01	1	1241	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICSA01	ICSA01	1	1245	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICSAB01	ICSAB01	1	1250	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICSA	ICSA	20	1254	Ag,Cd,Cr,Cu,Ni,Pb,Zn
ICSAB	ICSAB	20	1259	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV01	CCV01	1	1312	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB01	CCB01	1	1316	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV02	CCV02	1	1414	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB02	CCB02	1	1418	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV03	CCV03	1	1504	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB03	CCB03	1	1513	Ag,Cd,Cr,Cu,Ni,Pb,Zn
PB169959BL	PB169959BL	1	1538	Ag,Cd,Cr,Cu,Ni,Pb,Zn
PB169959BS	PB169959BS	1	1543	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV04	CCV04	1	1611	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB04	CCB04	1	1615	Ag,Cd,Cr,Cu,Ni,Pb,Zn
Q3260-02DUP	COMPDUP	1	1632	Ag,Cd,Cr,Cu,Ni,Pb,Zn
Q3260-02L	COMPL	5	1637	Ag,Cd,Cr,Cu,Ni,Pb,Zn
Q3260-02MS	COMPMS	1	1641	Ag,Cd,Cr,Cu,Ni,Pb,Zn
Q3260-02MSD	COMPMSD	1	1645	Ag,Cd,Cr,Cu,Ni,Pb,Zn
Q3267-01	Q4	50	1658	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV05	CCV05	1	1702	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB05	CCB05	1	1706	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCV06	CCV06	1	1753	Ag,Cd,Cr,Cu,Ni,Pb,Zn
CCB06	CCB06	1	1757	Ag,Cd,Cr,Cu,Ni,Pb,Zn



METAL RAW DATA

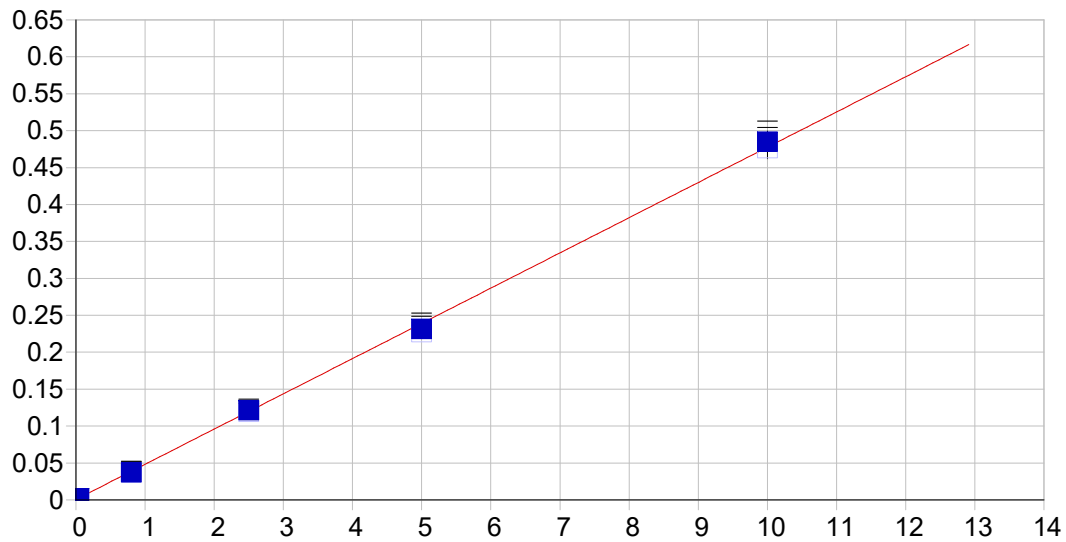


As 189.042 {479}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000037 Re-Slope: 1.000000
A1 (Gain): 0.051802 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999934 Status: OK.
Std Error of Est: 0.000014
Predicted MDL: 0.001942
Predicted MQL: 0.006472

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00004	.000	1
S1	.02000	.02182	.002	9.09	.00109	.000	1
S3	2.5000	2.4753	-.025	-.987	.12806	.001	1
S4	5.0000	5.0504	.050	1.01	.26132	.001	1
S5	10.000	10.007	.007	.068	.51781	.004	1
S2	.80000	.76565	-.034	-4.29	.03958	.000	1

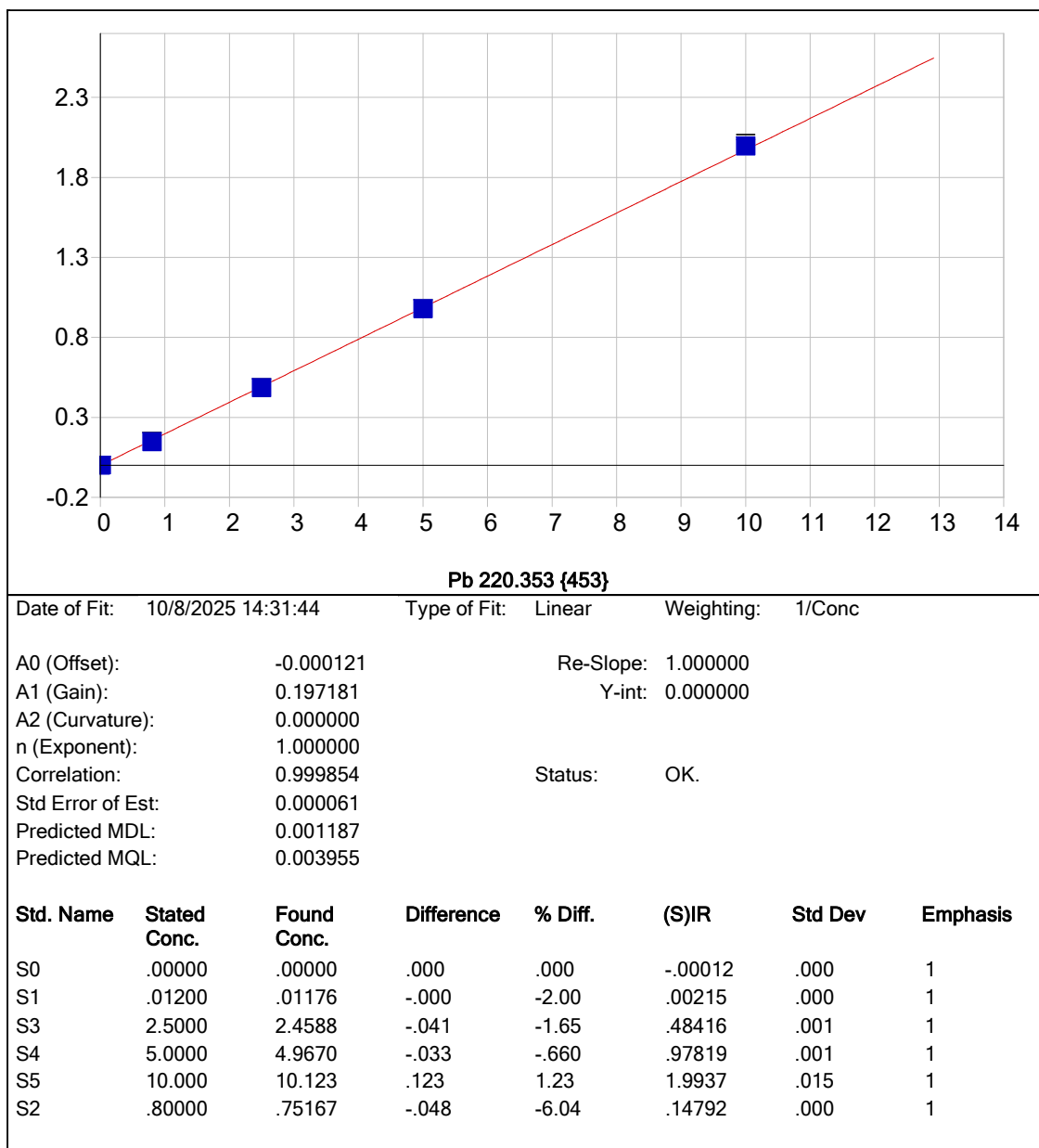


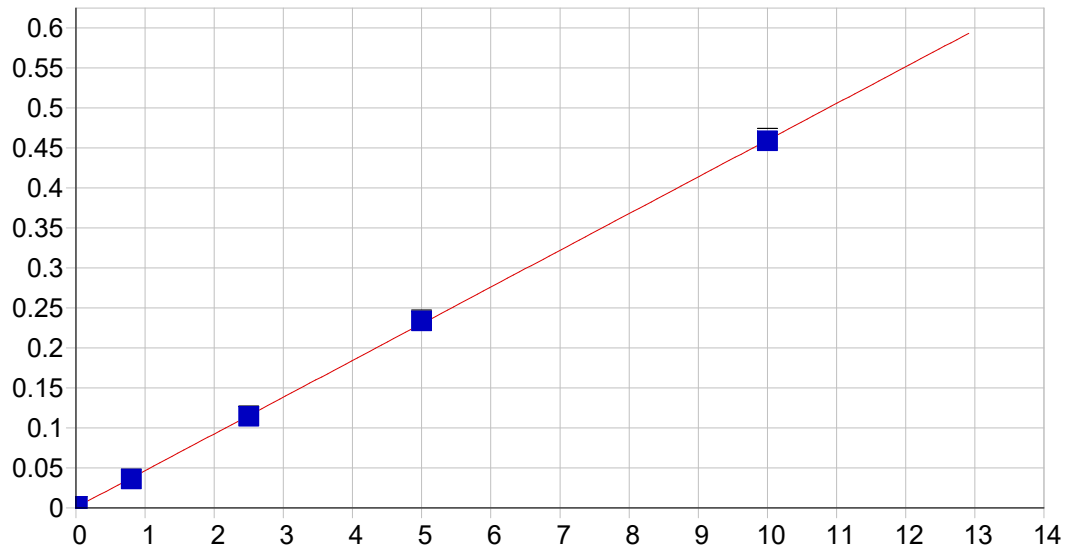
TI 190.856 {477}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000557 Re-Slope: 1.000000
A1 (Gain): 0.047702 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999744 Status: OK.
Std Error of Est: 0.000035
Predicted MDL: 0.002817
Predicted MQL: 0.009389

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00056	.000	1
S1	.04000	.04140	.001	3.50	.00241	.000	1
S3	2.5000	2.5308	.031	1.23	.11911	.002	1
S4	5.0000	4.8383	-.162	-3.23	.22701	.008	1
S5	10.000	10.157	.157	1.57	.47637	.014	1
S2	.80000	.77254	-.027	-3.43	.03671	.002	1



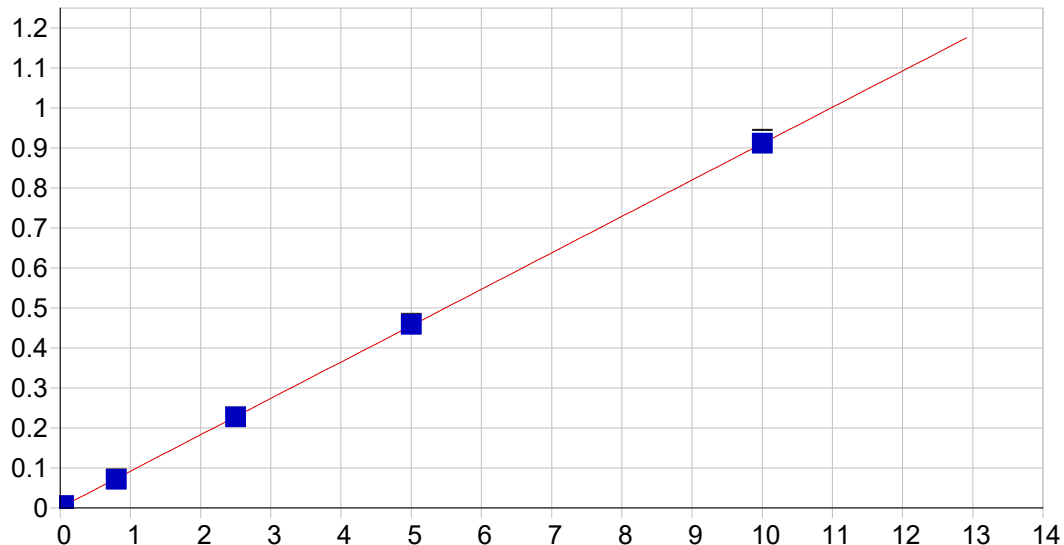


Se 196.090 {472}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000706 Re-Slope: 1.000000
A1 (Gain): 0.045907 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999914 Status: OK.
Std Error of Est: 0.000014
Predicted MDL: 0.002744
Predicted MQL: 0.009147

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00071	.000	1
S1	.02000	.02334	.003	16.7	.00178	.000	1
S3	2.5000	2.4767	-.023	-.933	.11437	.000	1
S4	5.0000	5.0729	.073	1.46	.23353	.001	1
S5	10.000	9.9788	-.021	-.212	.45868	.003	1
S2	.80000	.76826	-.032	-3.97	.03597	.000	1

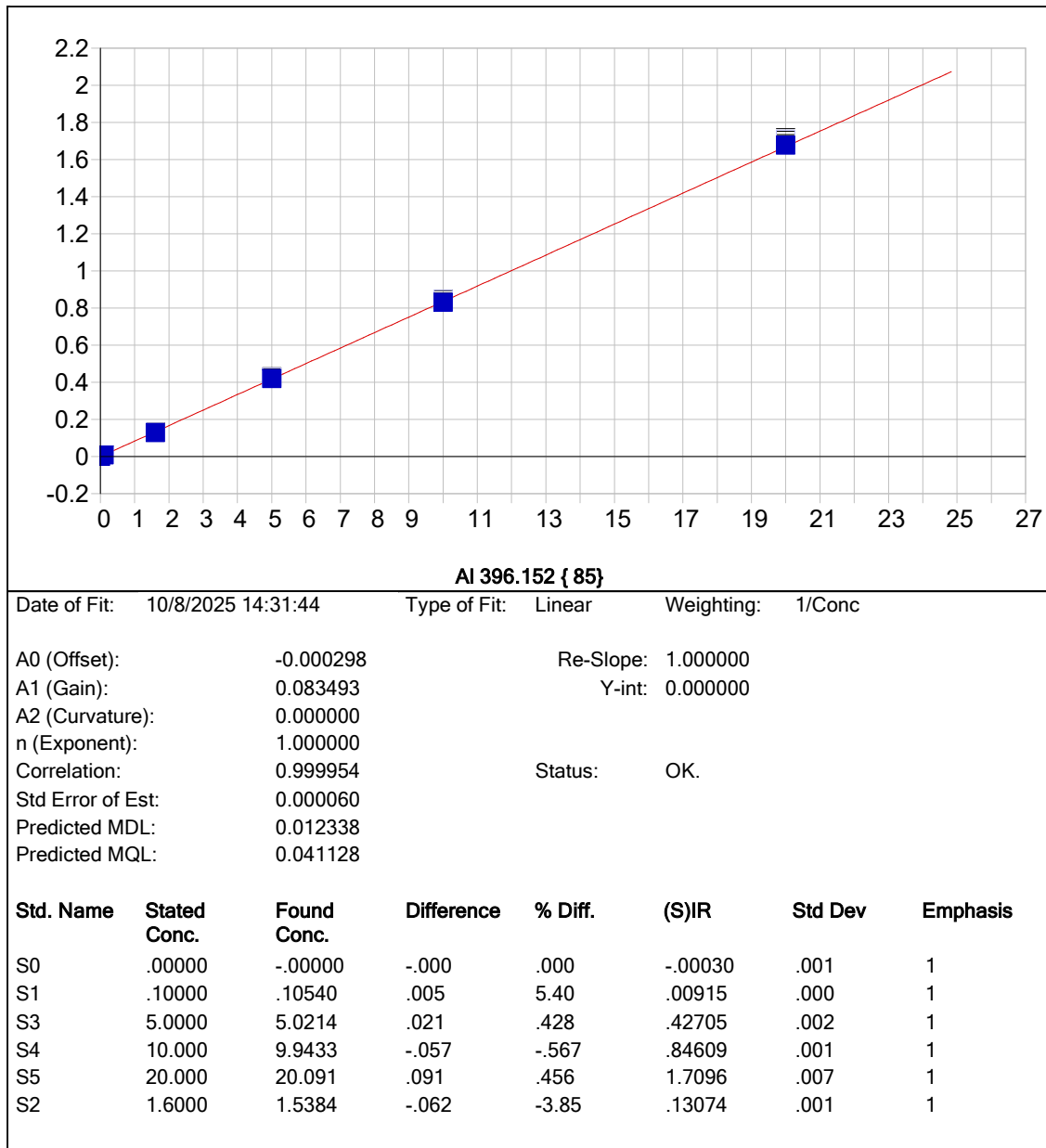


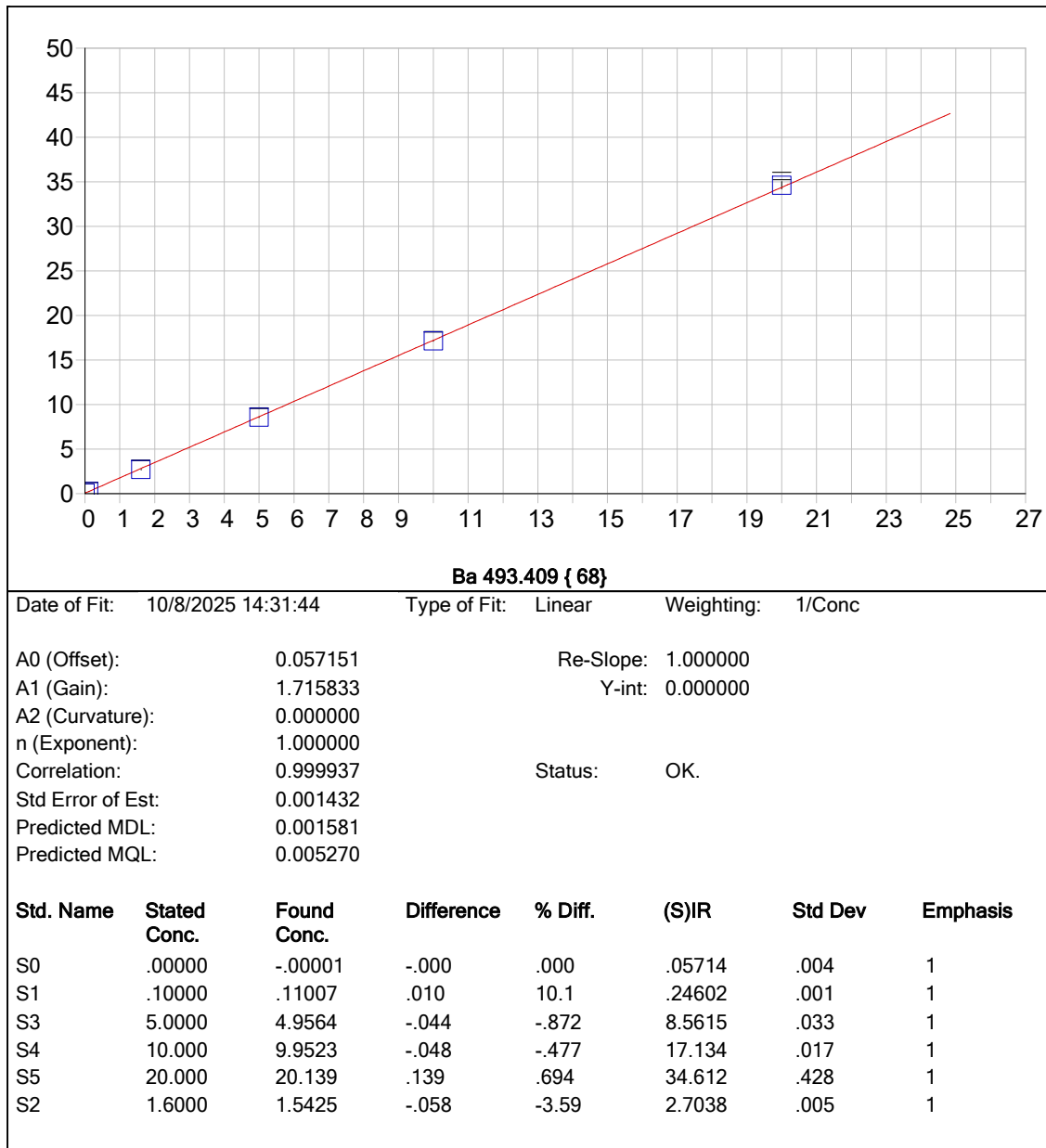
Sb 206.833 {463}

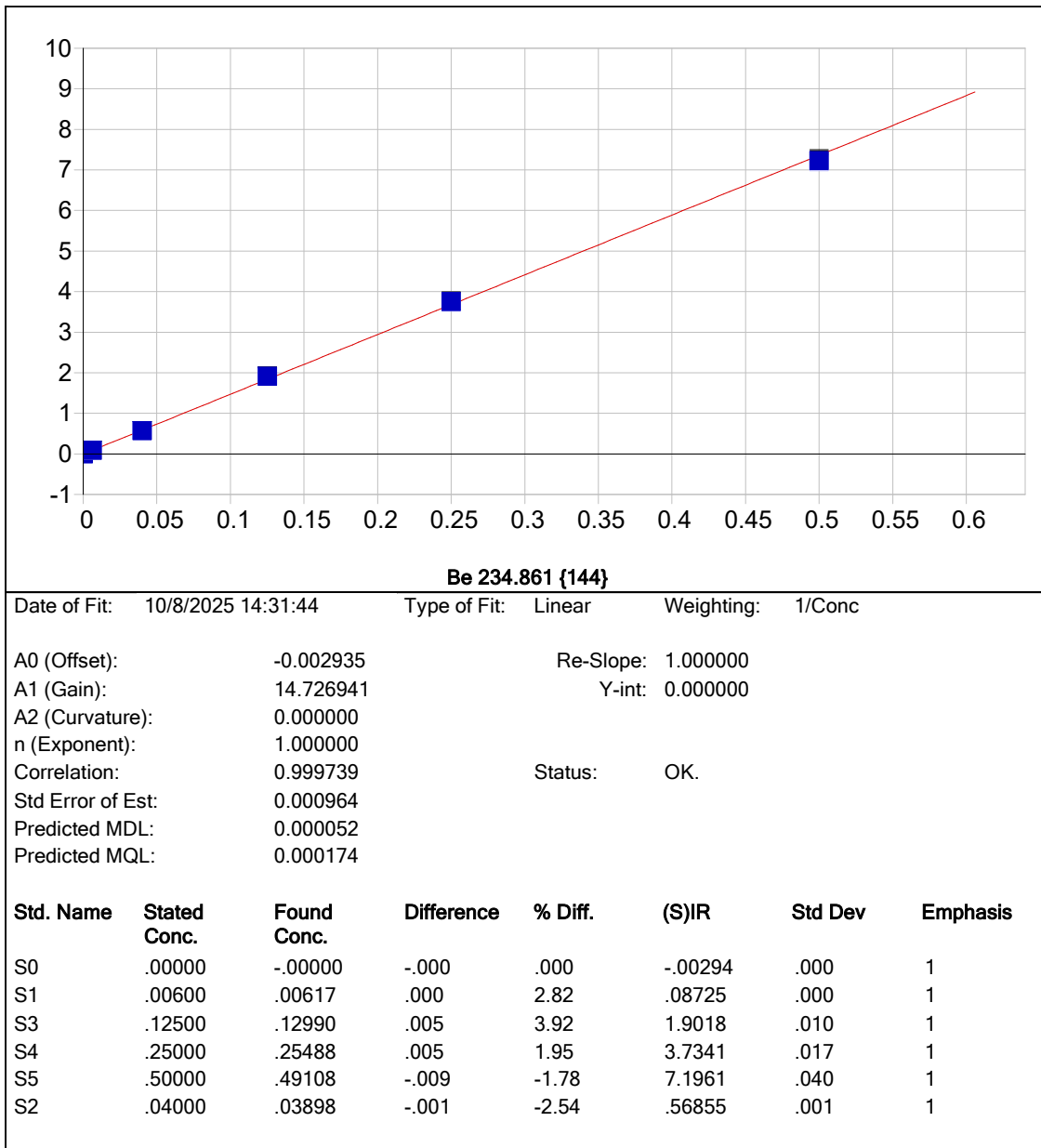
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

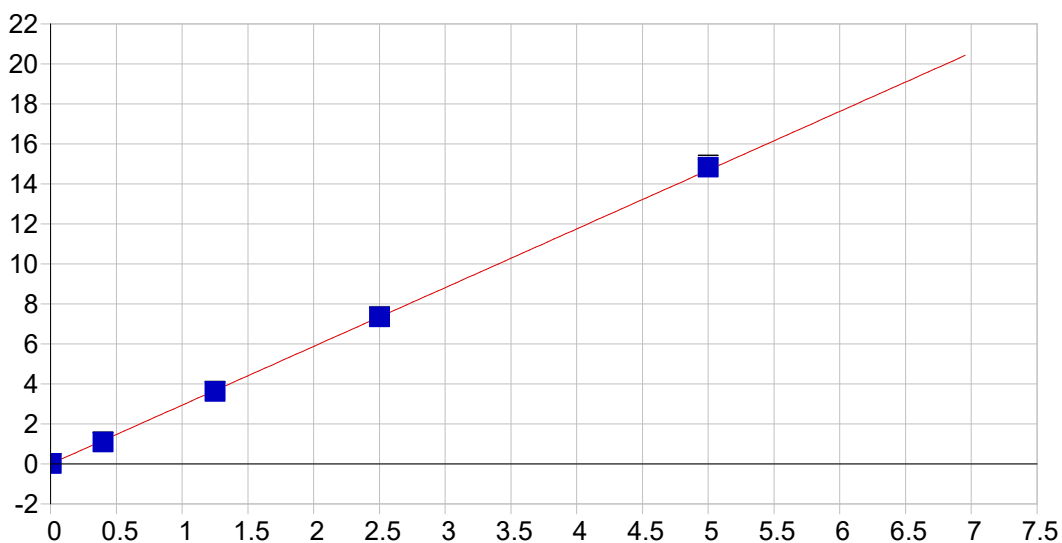
A0 (Offset): 0.000784 Re-Slope: 1.000000
A1 (Gain): 0.091002 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999968 Status: OK.
Std Error of Est: 0.000027
Predicted MDL: 0.001768
Predicted MQL: 0.005892

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00078	.000	1
S1	.05000	.05202	.002	4.04	.00553	.000	1
S3	2.5000	2.4894	-.011	-.426	.22794	.001	1
S4	5.0000	5.0277	.028	.555	.45955	.002	1
S5	10.000	10.008	.008	.079	.91399	.008	1
S2	.80000	.77302	-.027	-3.37	.07133	.001	1







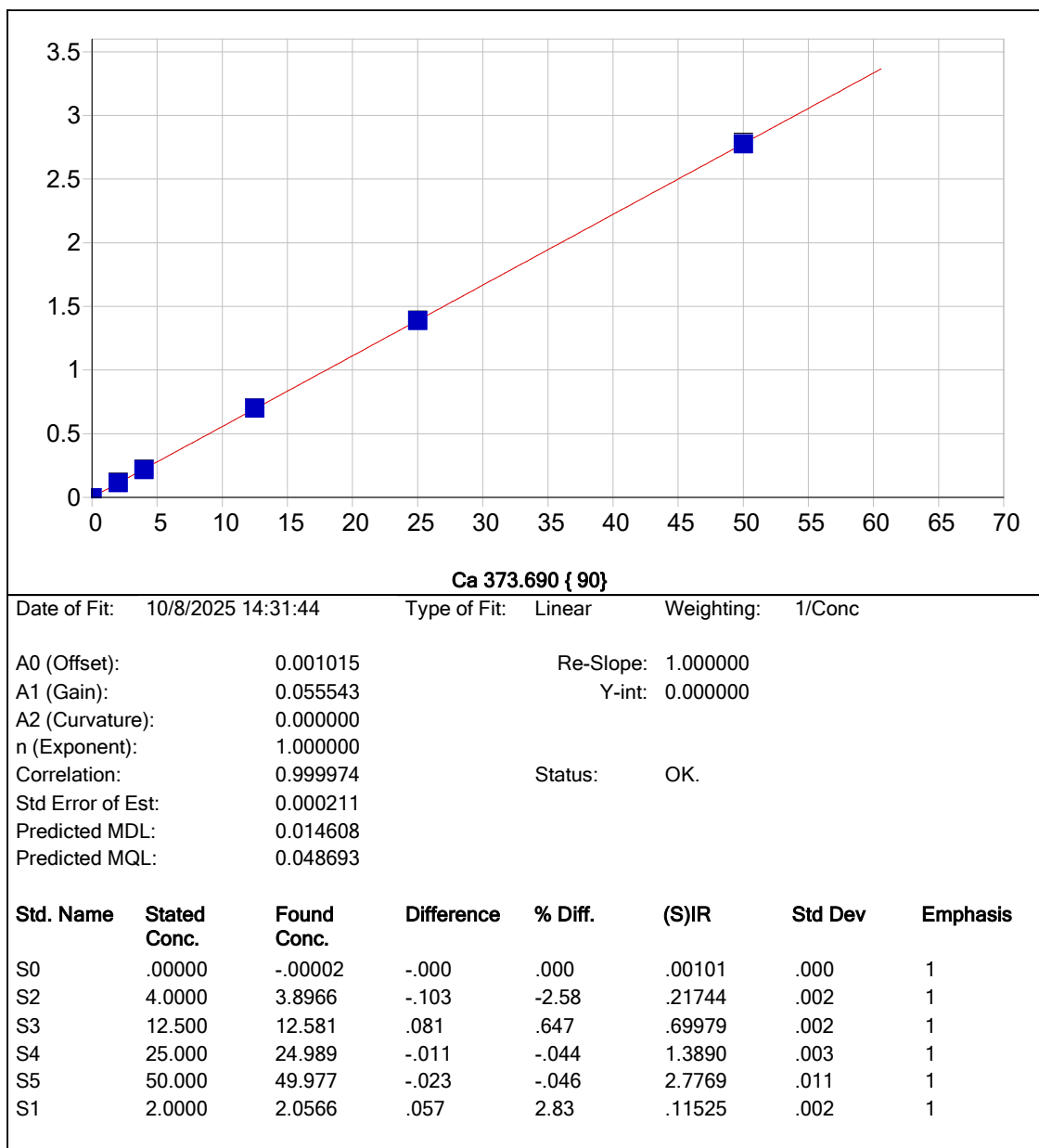


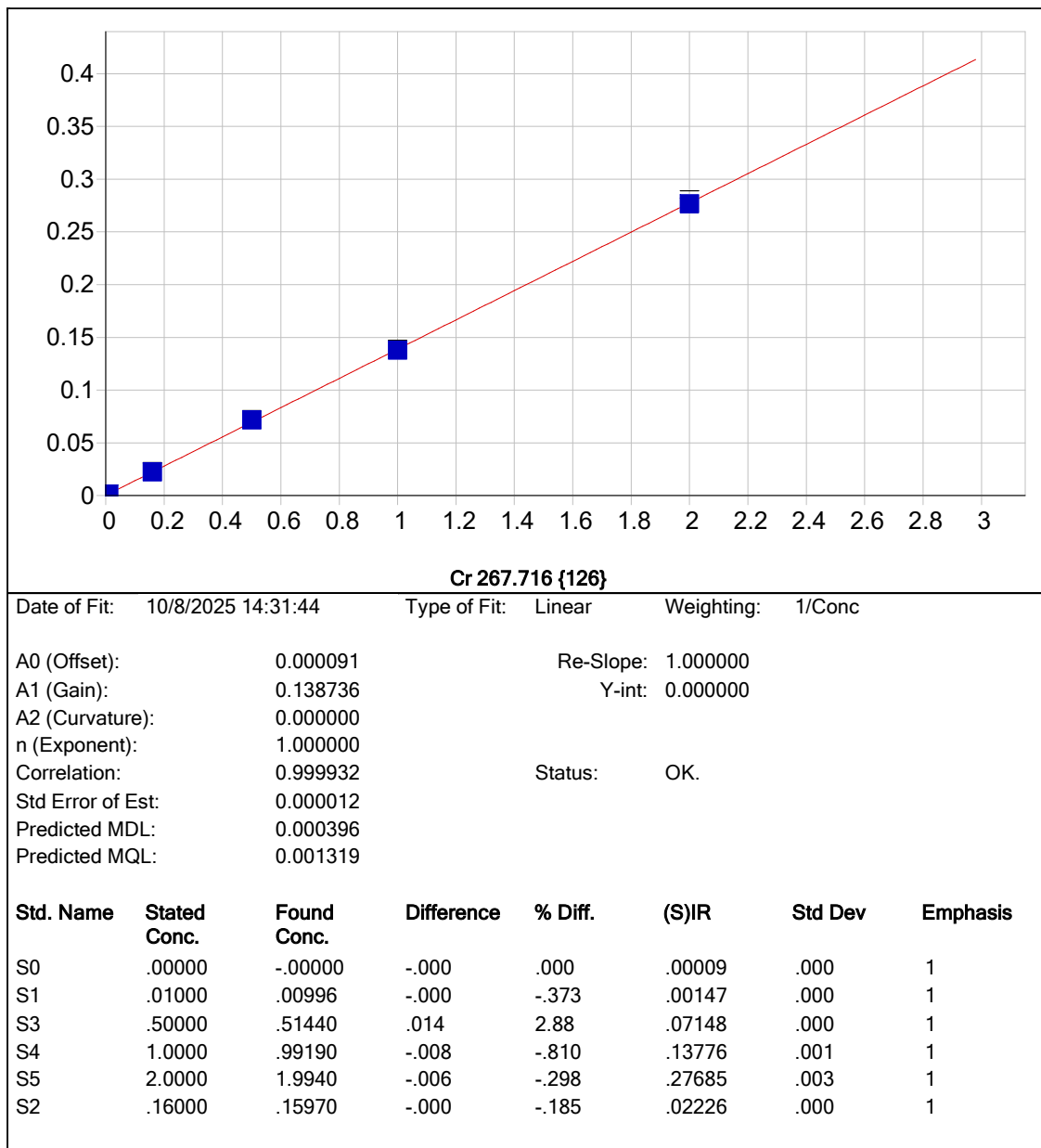
Cd 226.502 {449}

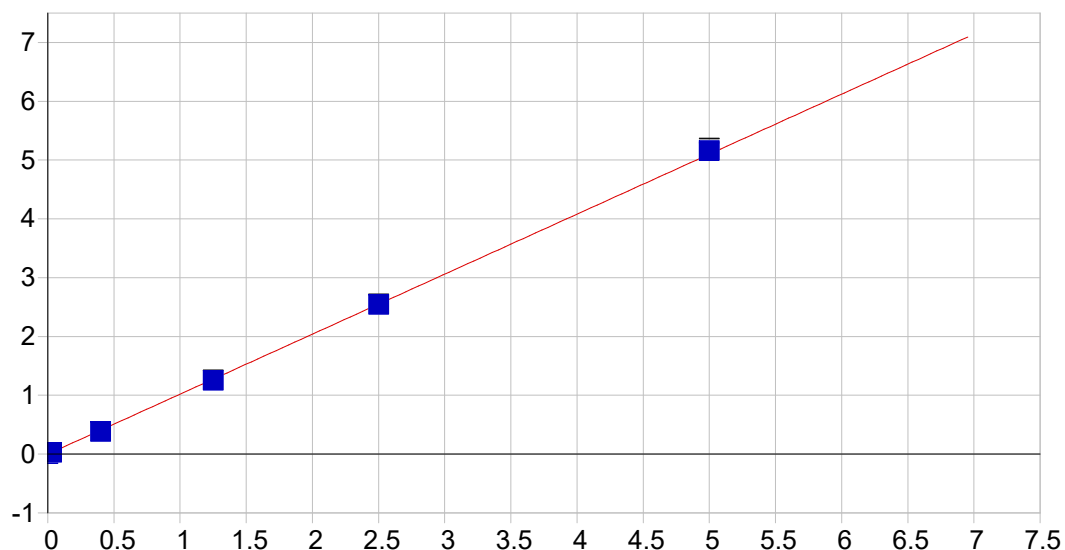
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000030 Re-Slope: 1.000000
A1 (Gain): 2.937551 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999843 Status: OK.
Std Error of Est: 0.000472
Predicted MDL: 0.000067
Predicted MQL: 0.000224

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00003	.000	1
S1	.00600	.00579	-.000	-3.45	.01704	.000	1
S3	1.2500	1.2312	-.019	-1.51	3.6190	.013	1
S4	2.5000	2.5004	.000	.017	7.3499	.030	1
S5	5.0000	5.0478	.048	.956	14.838	.104	1
S2	.40000	.37084	-.029	-7.29	1.0901	.001	1





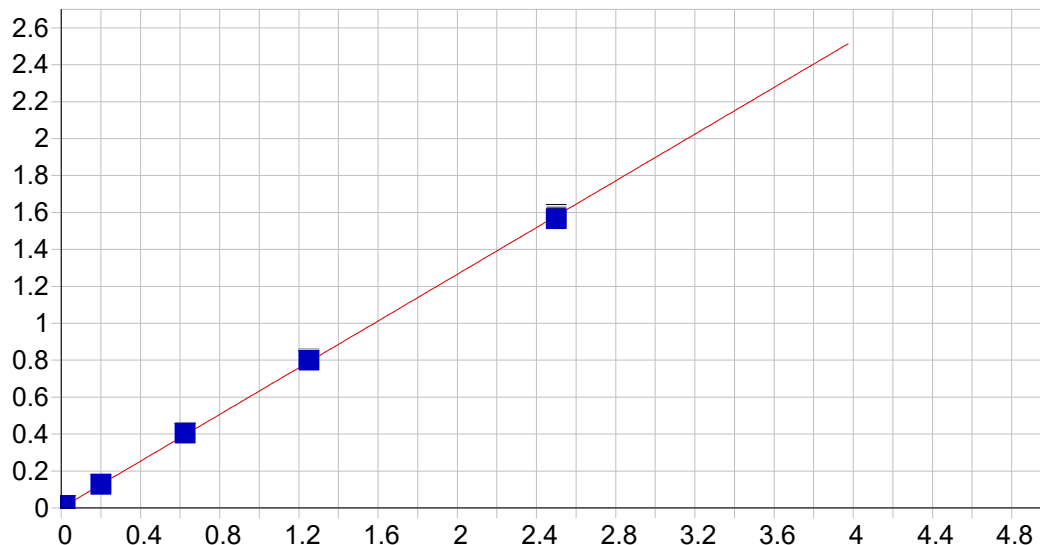


Co 228.616 {448}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000117 Re-Slope: 1.000000
A1 (Gain): 1.020202 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999855 Status: OK.
Std Error of Est: 0.000354
Predicted MDL: 0.000172
Predicted MQL: 0.000574

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00012	.000	1
S1	.03000	.03011	.000	.376	.03048	.000	1
S3	1.2500	1.2280	-.022	-1.76	1.2549	.004	1
S4	2.5000	2.4918	-.008	-.326	2.5464	.007	1
S5	5.0000	5.0557	.056	1.11	5.1664	.035	1
S2	.40000	.37437	-.026	-6.41	.38250	.000	1

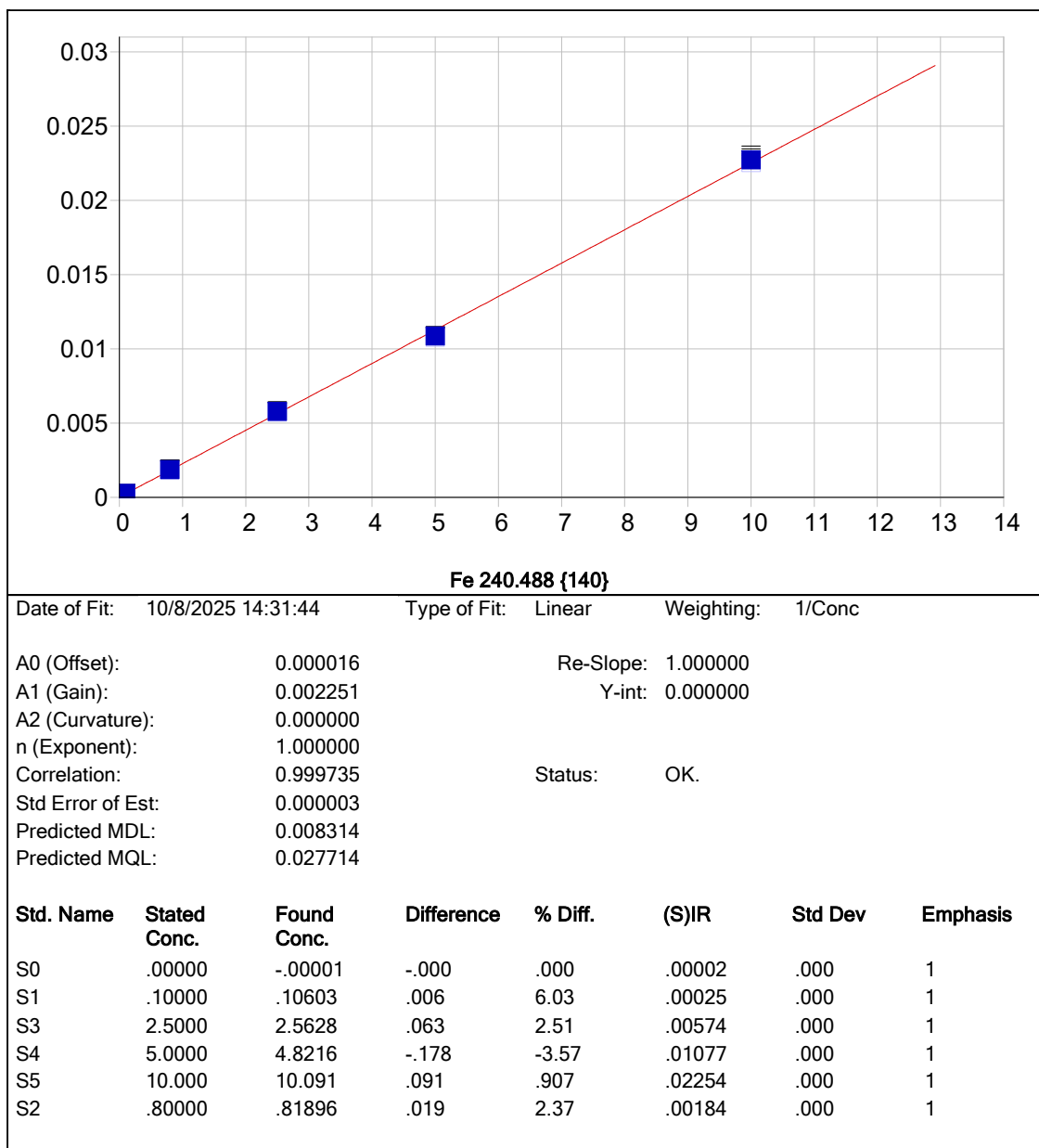


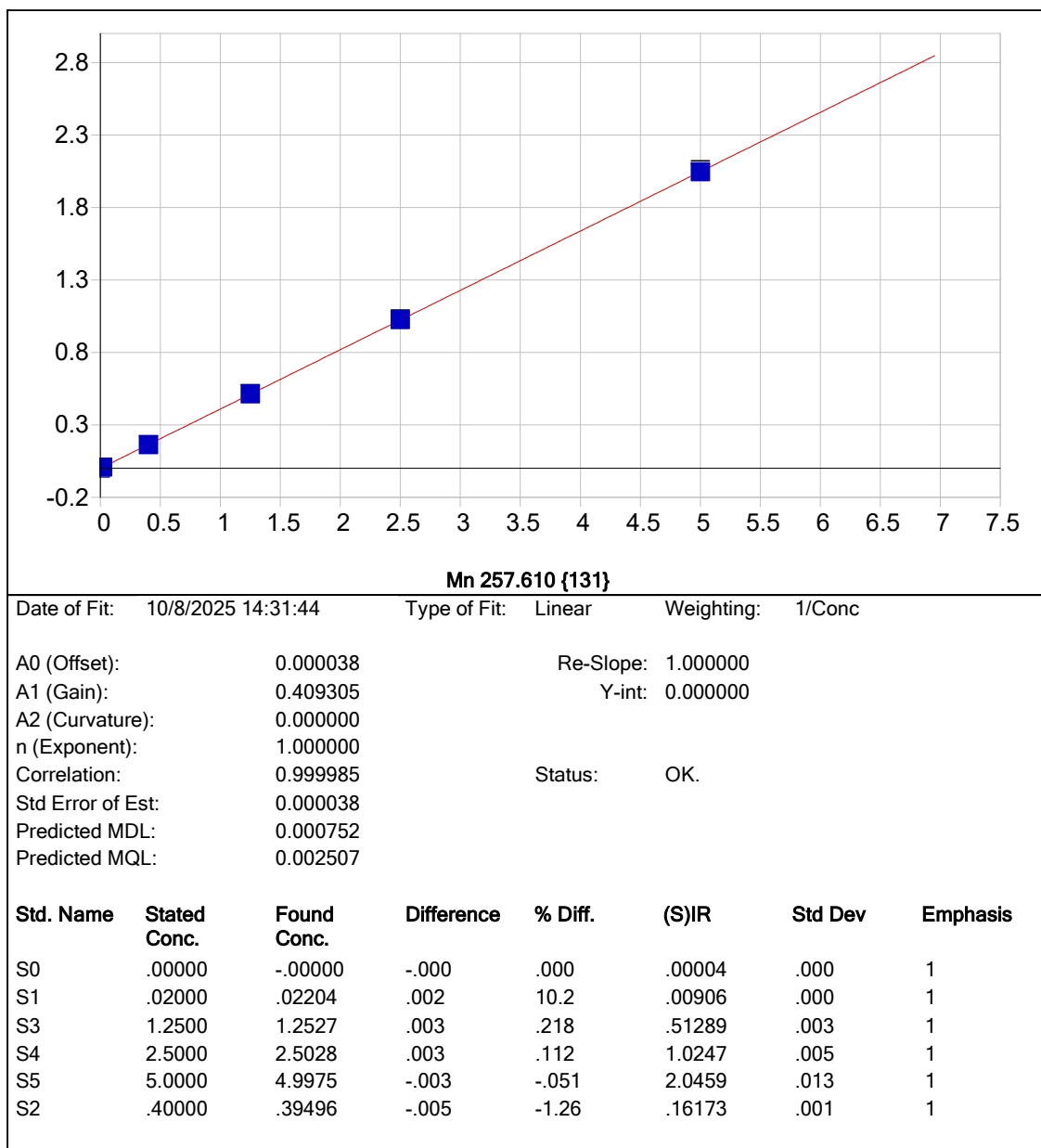
Cu 224.700 {450}

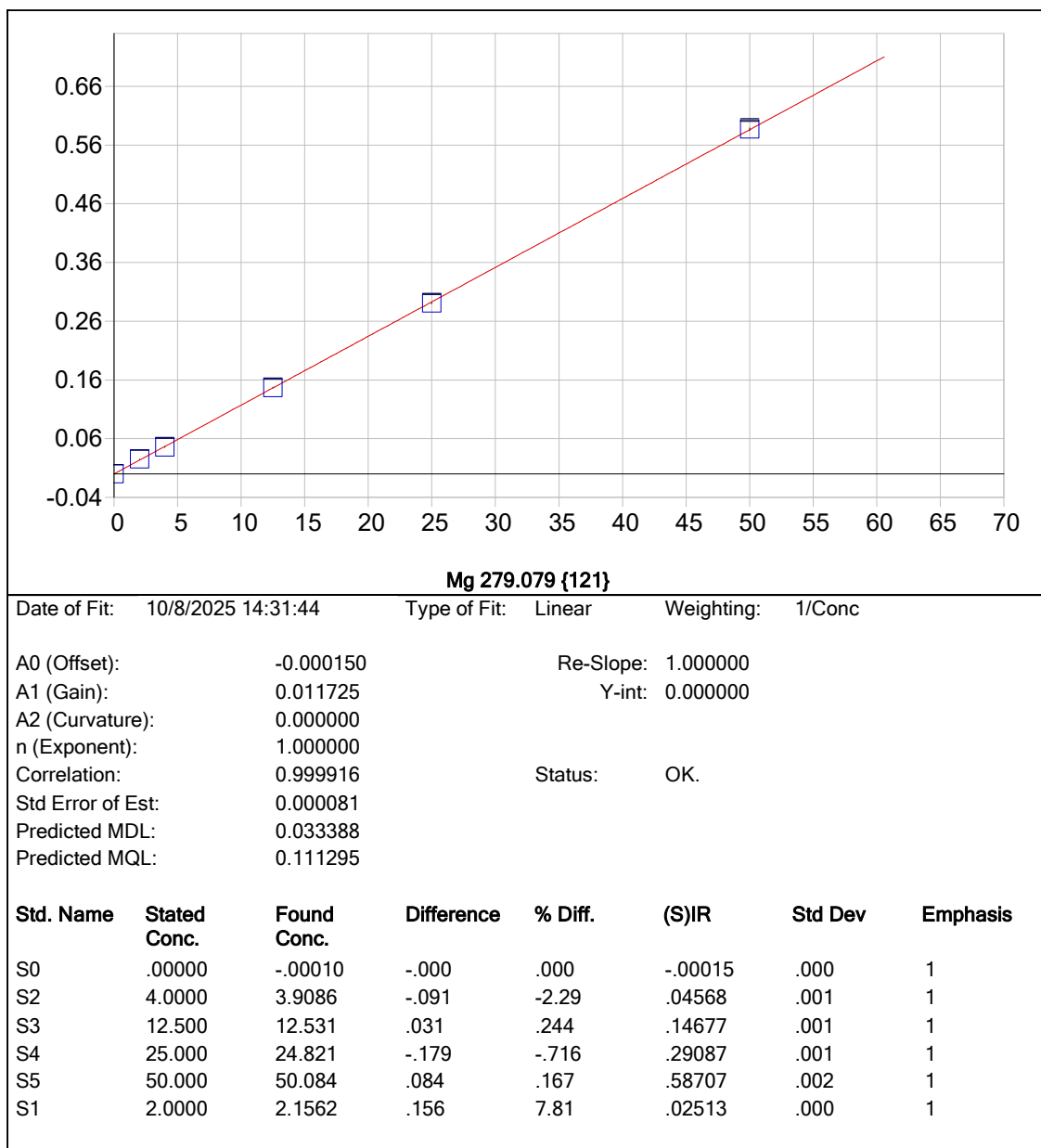
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

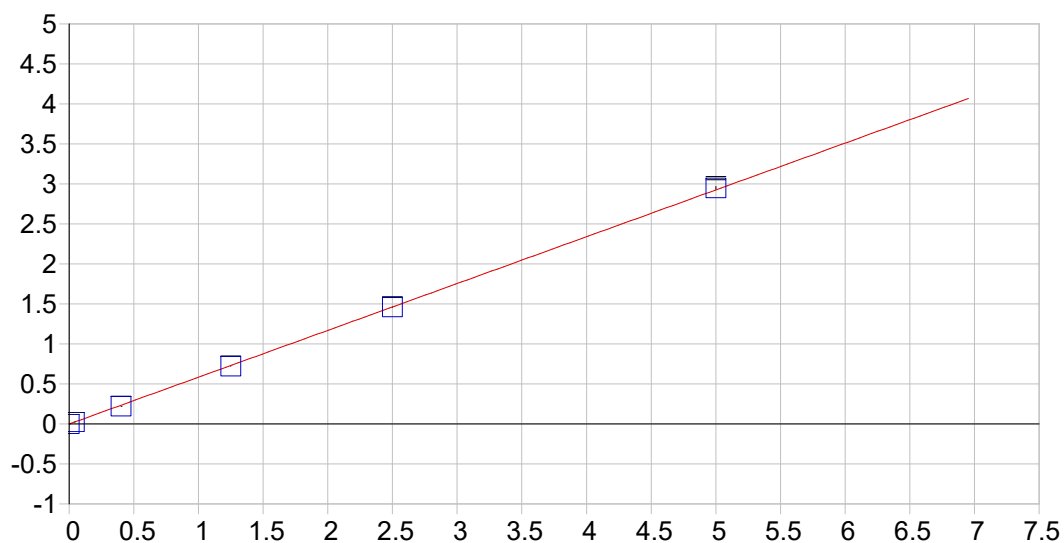
A0 (Offset):	0.000399	Re-Slope:	1.000000
A1 (Gain):	0.632503	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999902	Status:	OK.
Std Error of Est:	0.000105		
Predicted MDL:	0.000383		
Predicted MQL:	0.001278		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00040	.000	1
S1	.02000	.02217	.002	10.8	.01456	.000	1
S3	.62500	.63836	.013	2.14	.40745	.001	1
S4	1.2500	1.2612	.011	.897	.80471	.001	1
S5	2.5000	2.4731	-.027	-1.08	1.5778	.011	1
S2	.20000	.20020	.000	.102	.12808	.000	1







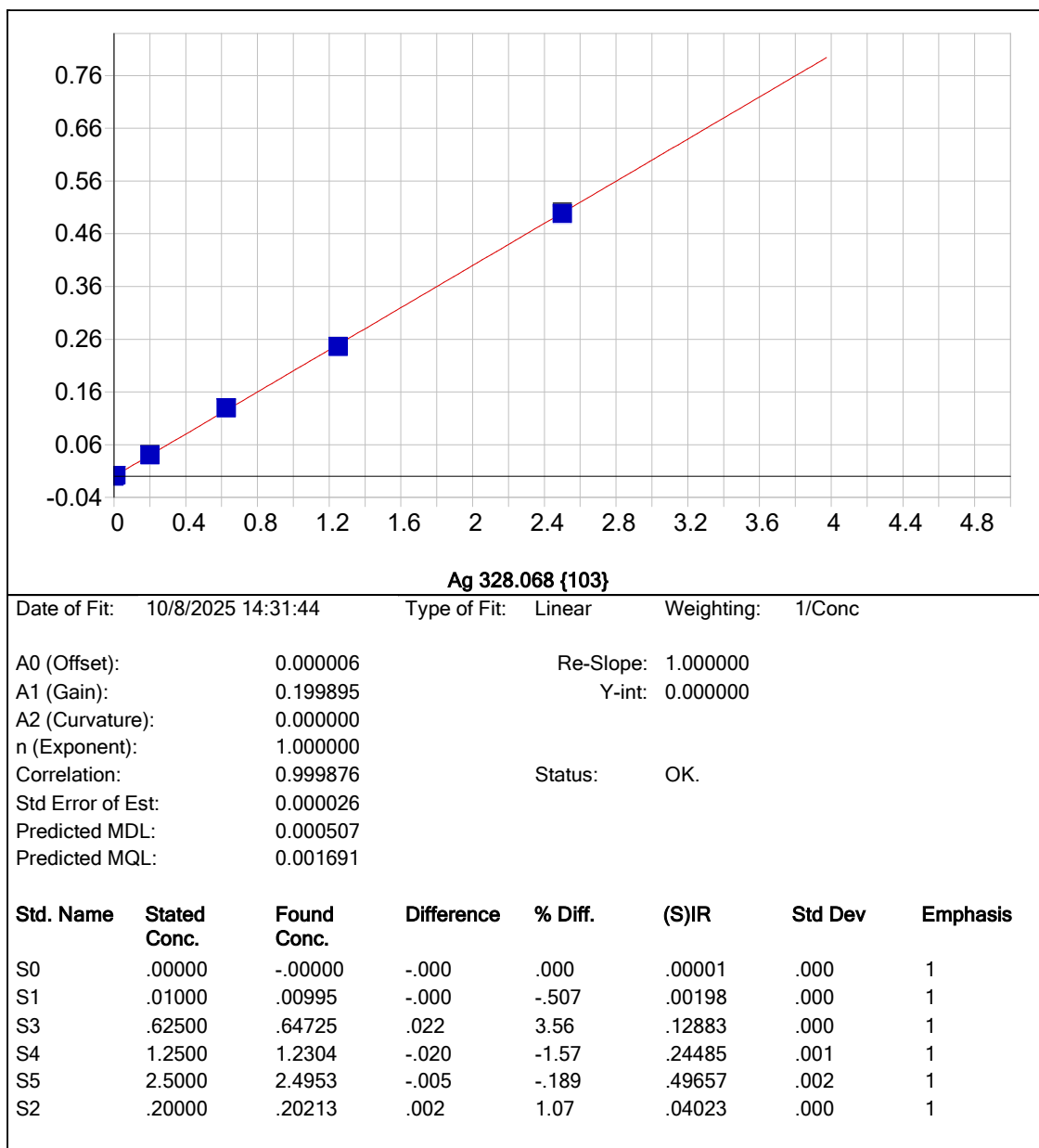


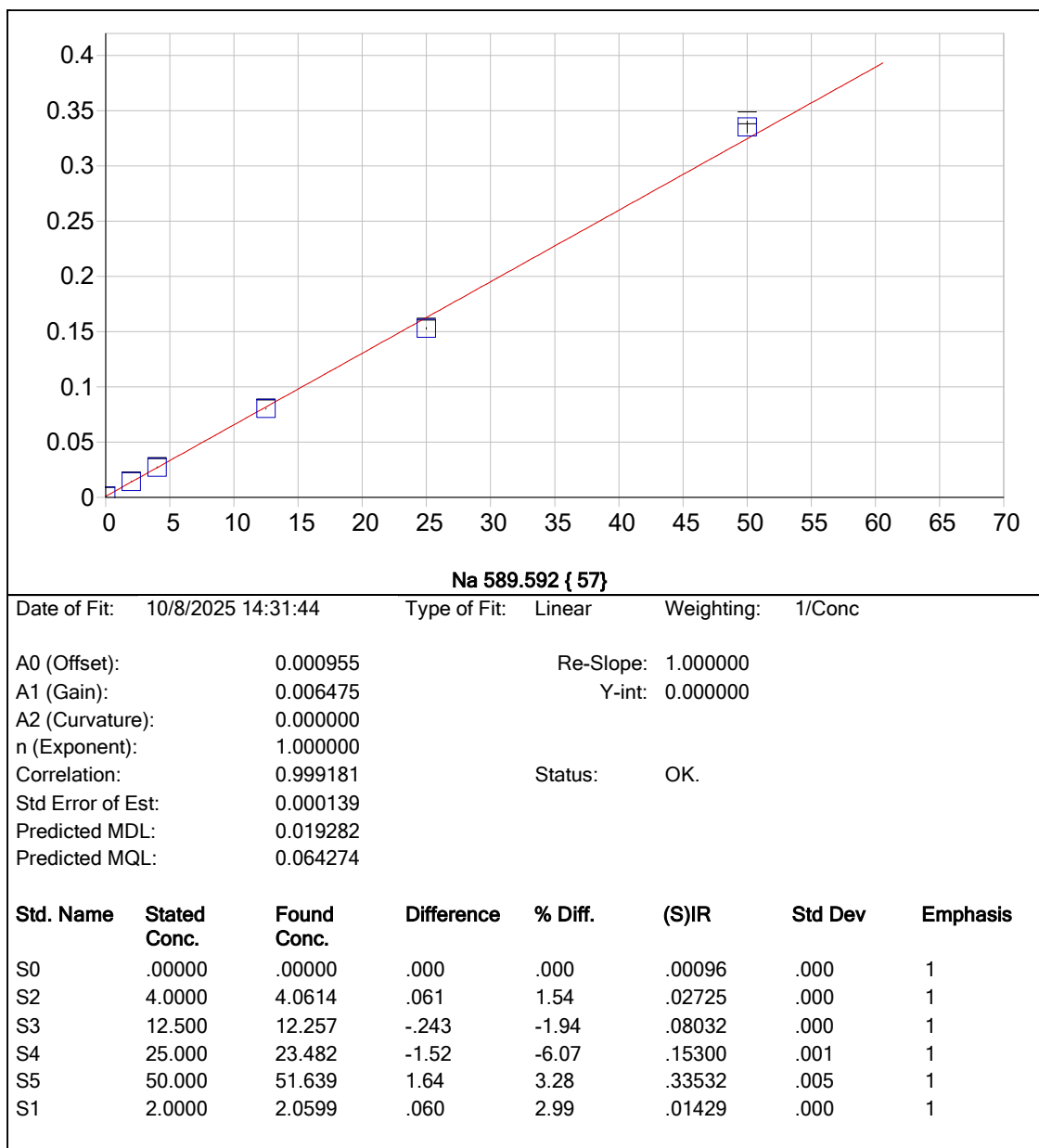
Ni 231.604 {446}

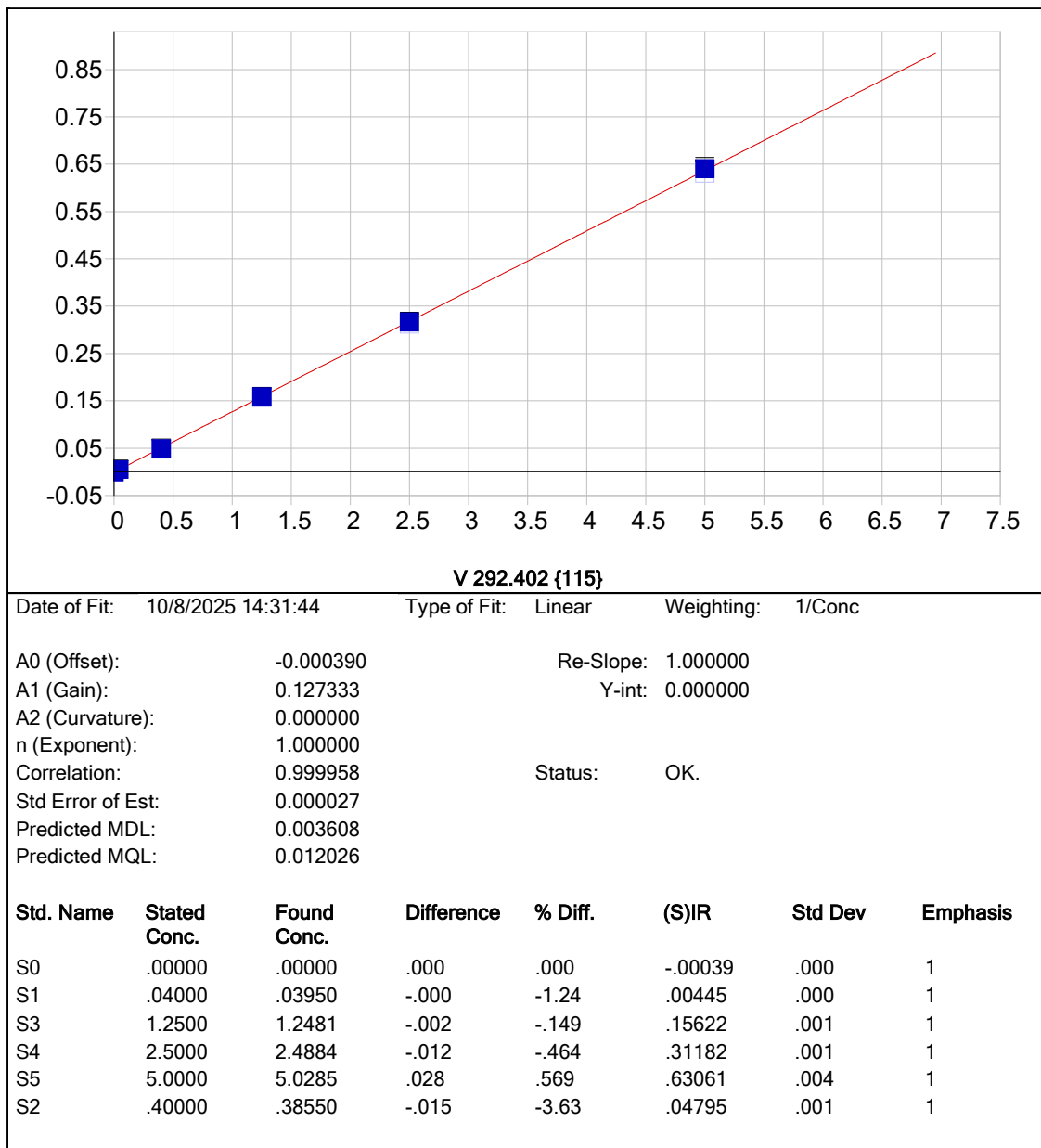
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

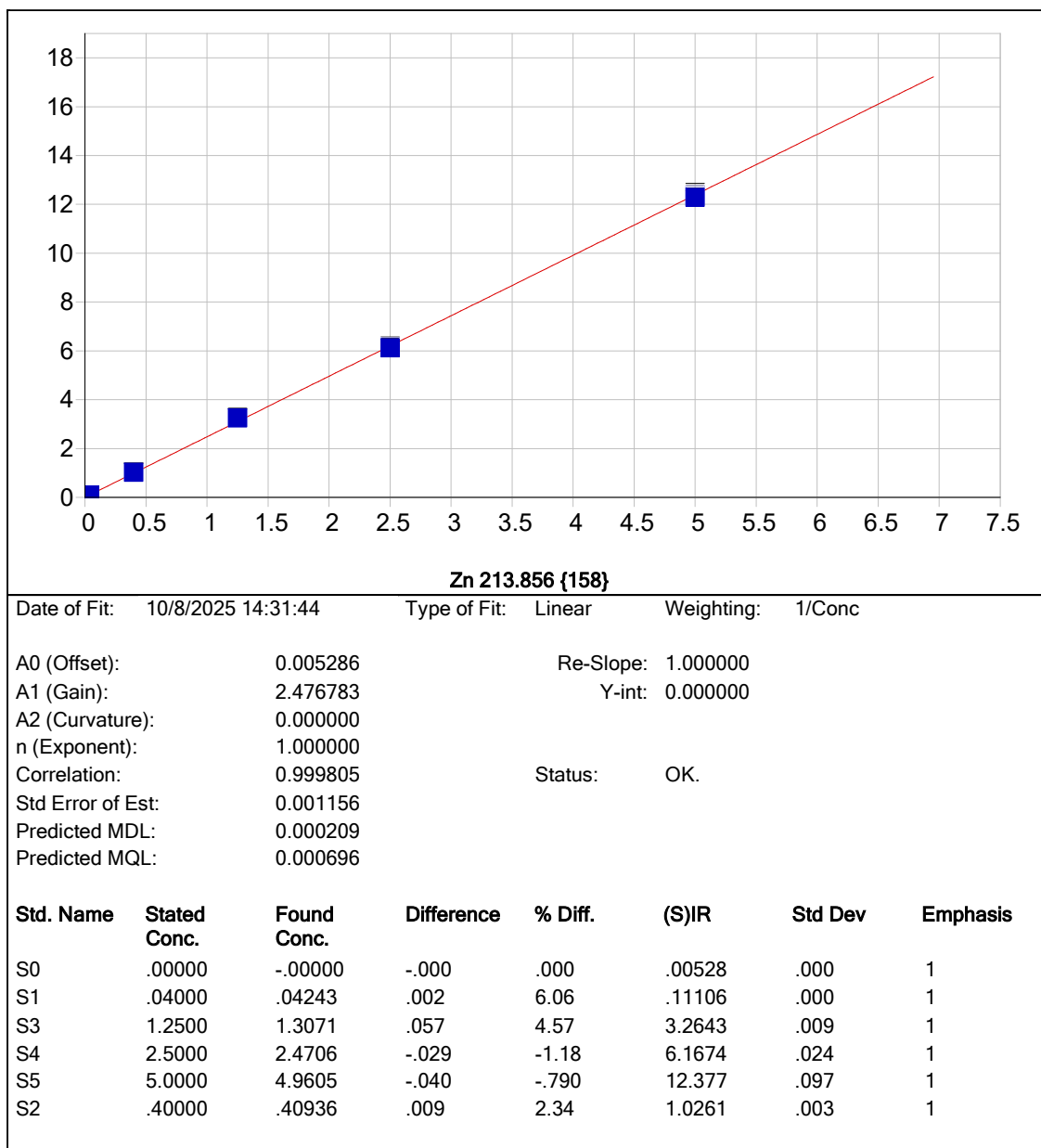
A0 (Offset): -0.000872 Re-Slope: 1.000000
A1 (Gain): 0.585131 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999901 Status: OK.
Std Error of Est: 0.000193
Predicted MDL: 0.000320
Predicted MQL: 0.001068

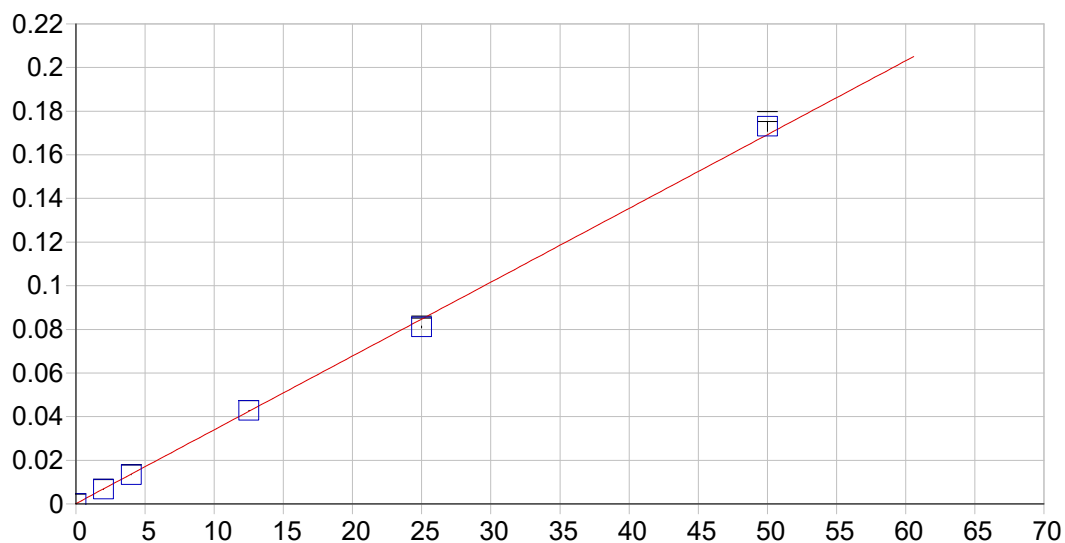
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00087	.000	1
S1	.04000	.04050	.001	1.25	.02283	.000	1
S3	1.2500	1.2334	-.017	-1.33	.72083	.002	1
S4	2.5000	2.4952	-.005	-.191	1.4592	.004	1
S5	5.0000	5.0429	.043	.858	2.9499	.020	1
S2	.40000	.37796	-.022	-5.51	.22028	.000	1









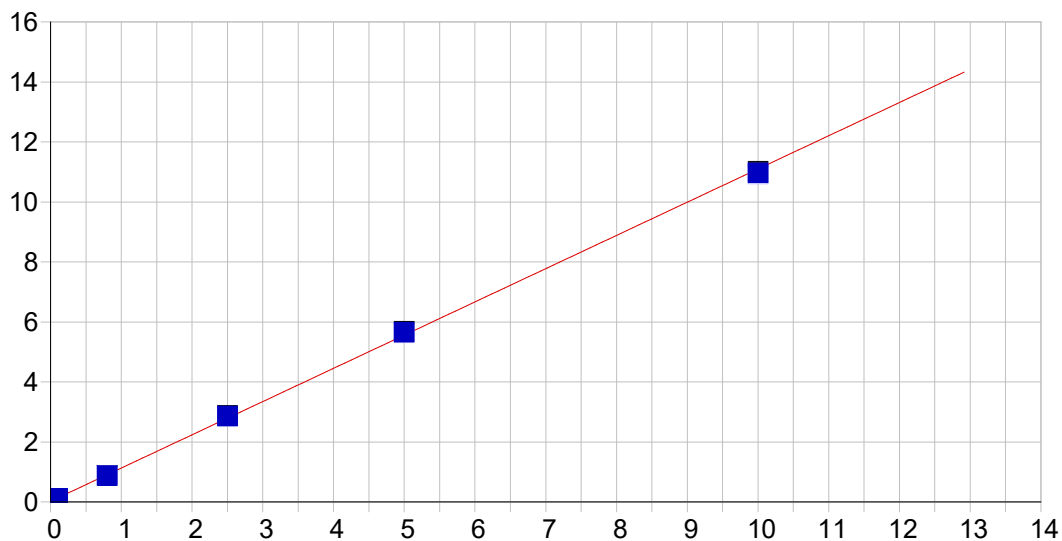


K 766.490 { 44}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000152 Re-Slope: 1.000000
A1 (Gain): 0.003382 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999594 Status: OK.
Std Error of Est: 0.000051
Predicted MDL: 0.044910
Predicted MQL: 0.149701

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00013	.000	.000	.00015	.000	1
S2	4.0000	3.9207	-.079	-1.98	.01341	.000	1
S3	12.500	12.617	.117	.935	.04282	.000	1
S4	25.000	23.923	-1.08	-4.31	.08106	.000	1
S5	50.000	51.107	1.11	2.21	.17300	.002	1
S1	2.0000	1.9324	-.068	-3.38	.00669	.000	1

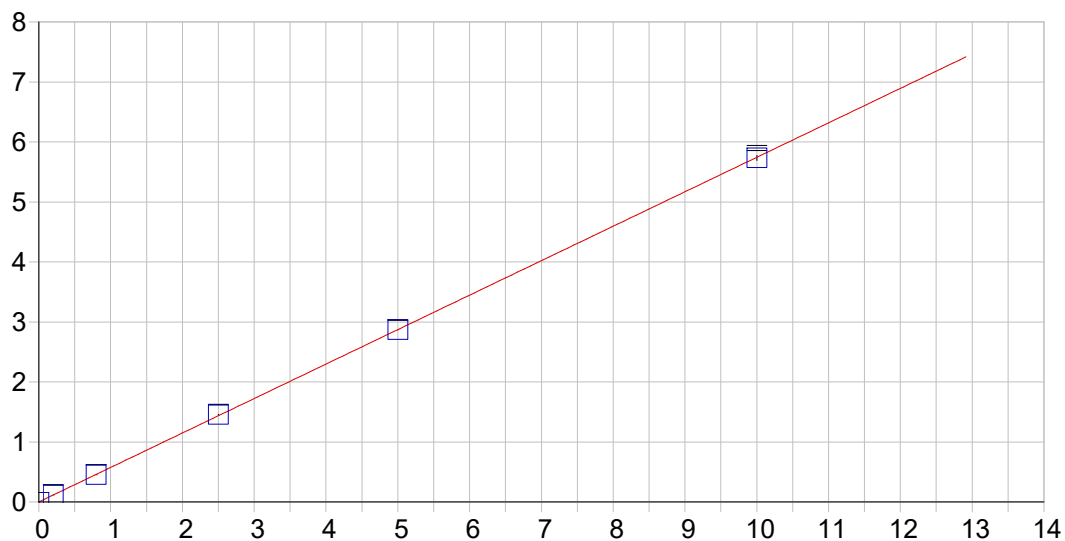


B 249.678 {135}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.020342 Re-Slope: 1.000000
A1 (Gain): 1.107541 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999838 Status: OK.
Std Error of Est: 0.001042
Predicted MDL: 0.000706
Predicted MQL: 0.002353

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.02034	.000	1
S1	.10000	.09956	-.000	-.436	.12996	.001	1
S3	2.5000	2.5658	.066	2.63	2.8520	.013	1
S4	5.0000	5.0873	.087	1.75	5.6347	.029	1
S5	10.000	9.8779	-.122	-1.22	10.921	.057	1
S2	.80000	.76949	-.031	-3.81	.86939	.004	1

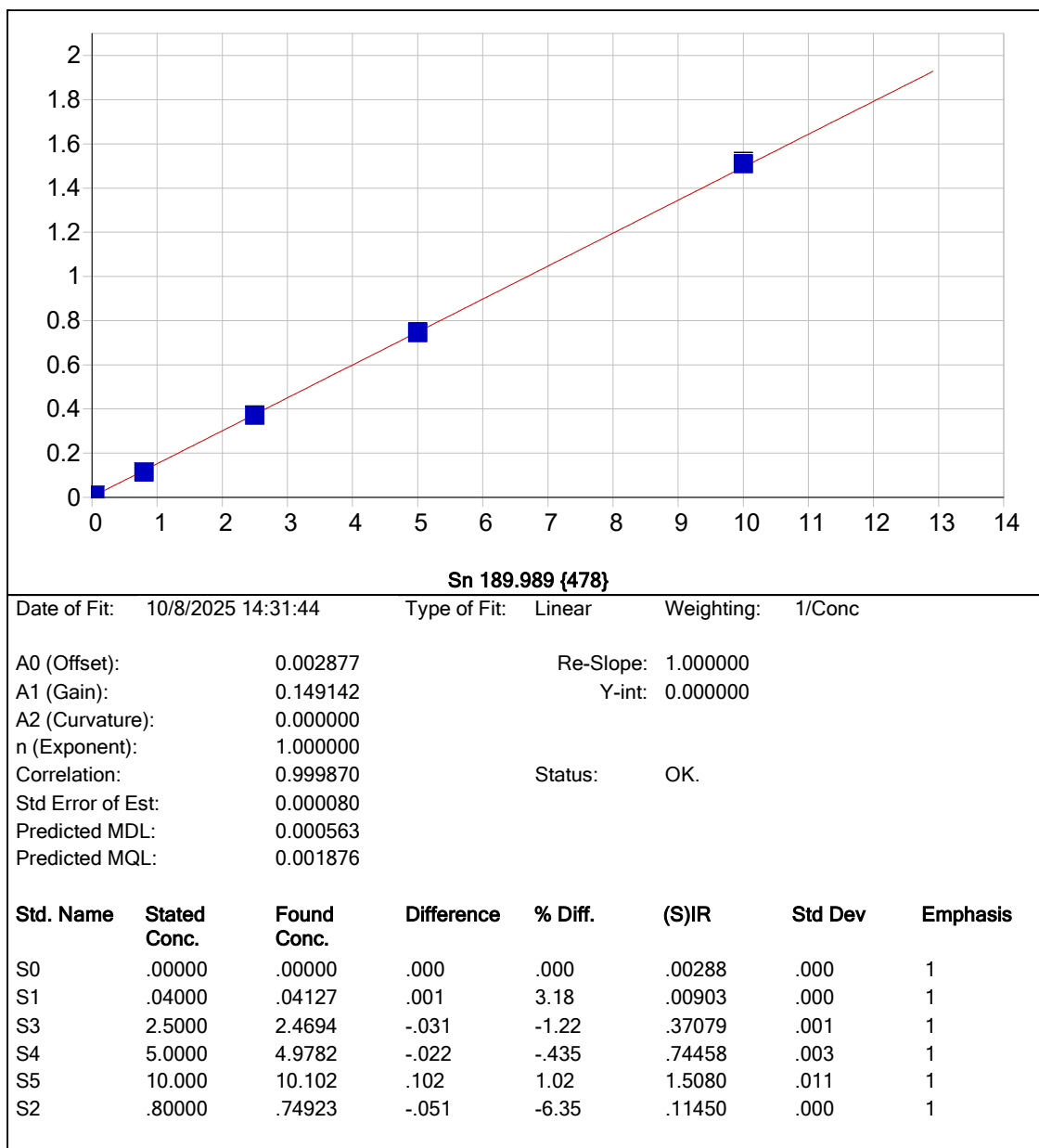


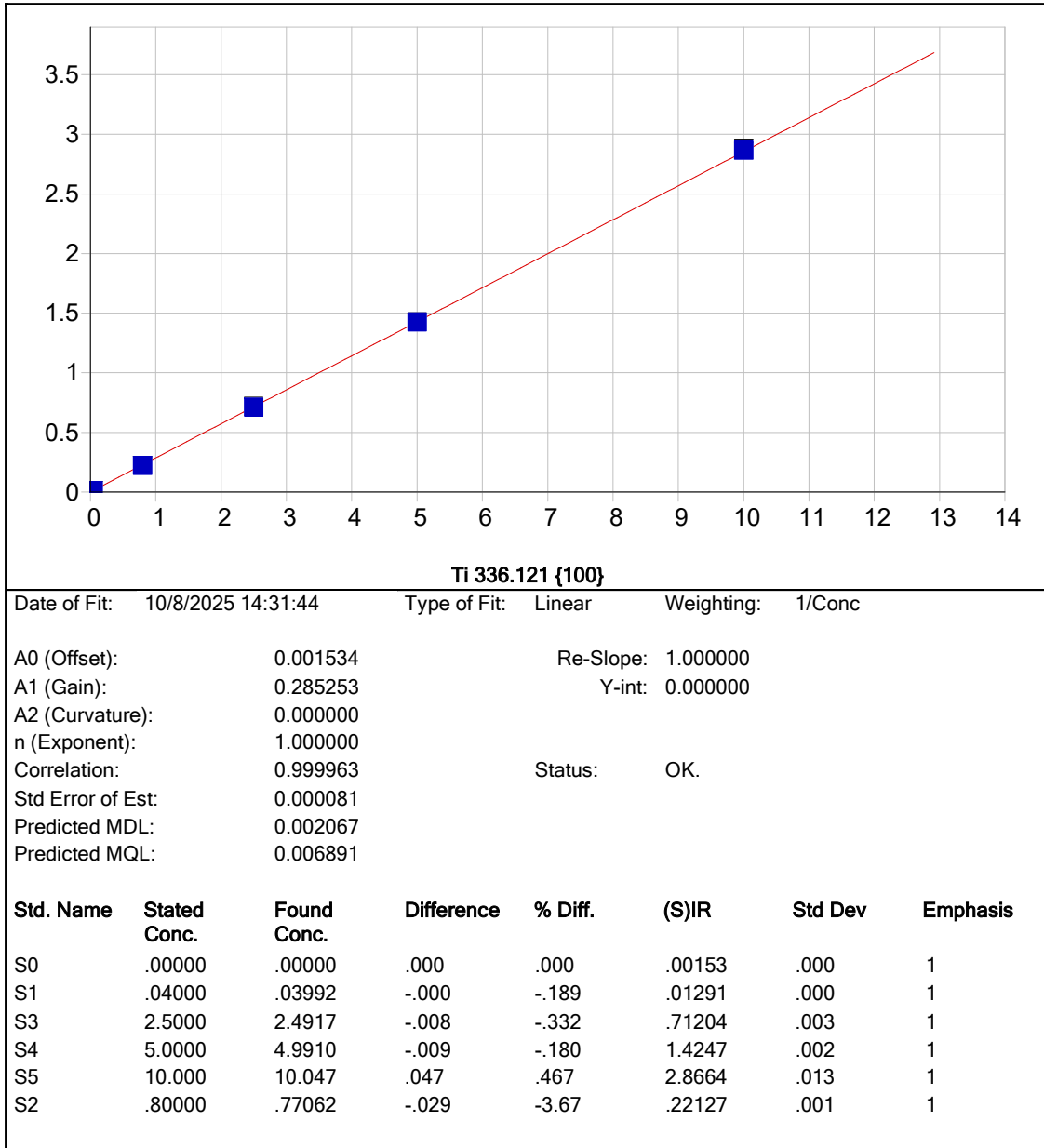
Mo 202.030 {467}

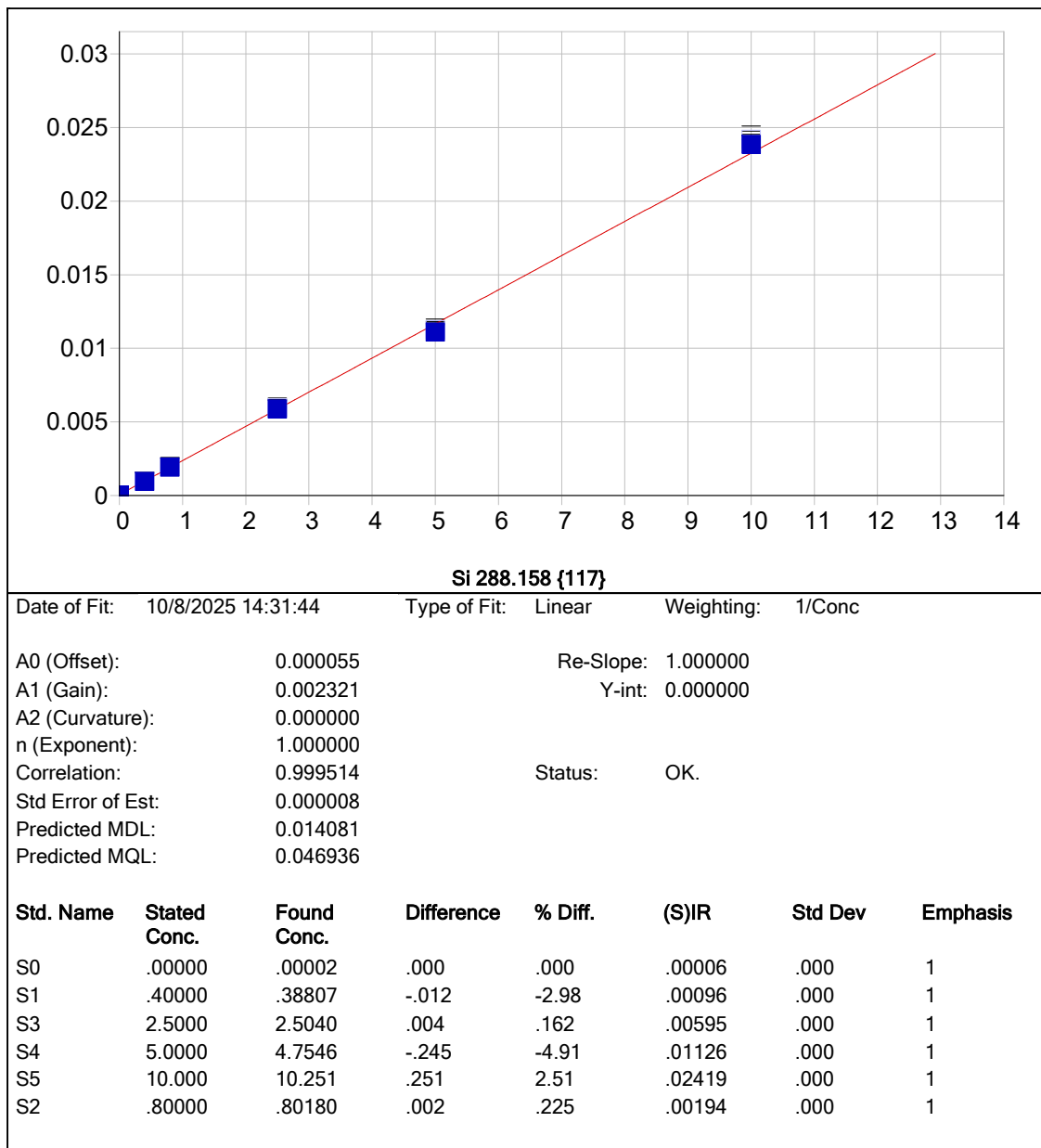
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

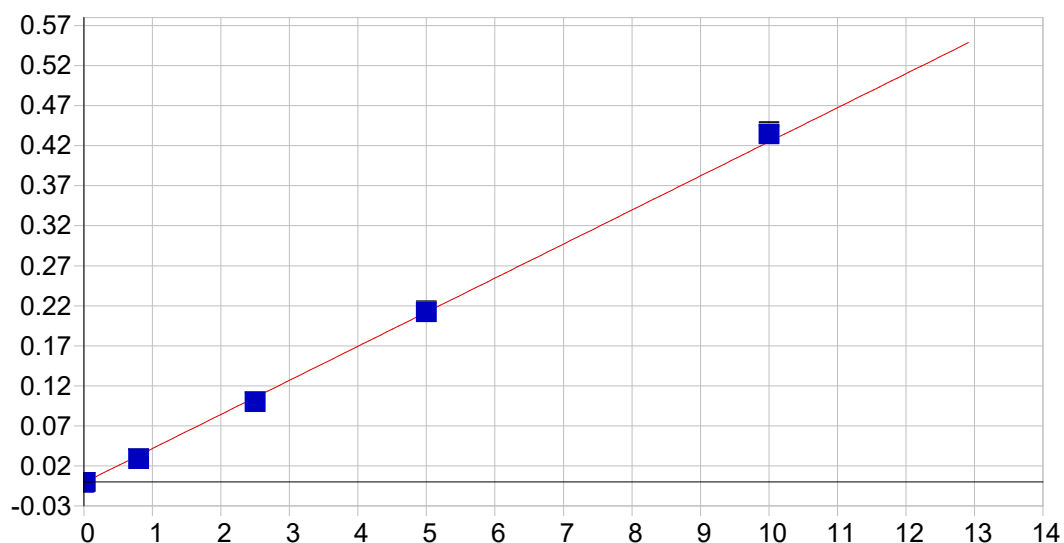
A0 (Offset): 0.000611 Re-Slope: 1.000000
A1 (Gain): 0.574271 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999978 Status: OK.
Std Error of Est: 0.000282
Predicted MDL: 0.000259
Predicted MQL: 0.000863

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00061	.000	1
S1	.20000	.20338	.003	1.69	.11741	.000	1
S3	2.5000	2.5347	.035	1.39	1.4562	.004	1
S4	5.0000	4.9919	-.008	-.163	2.8673	.004	1
S5	10.000	9.9835	-.016	-.165	5.7339	.043	1
S2	.80000	.78652	-.013	-1.69	.45229	.001	1







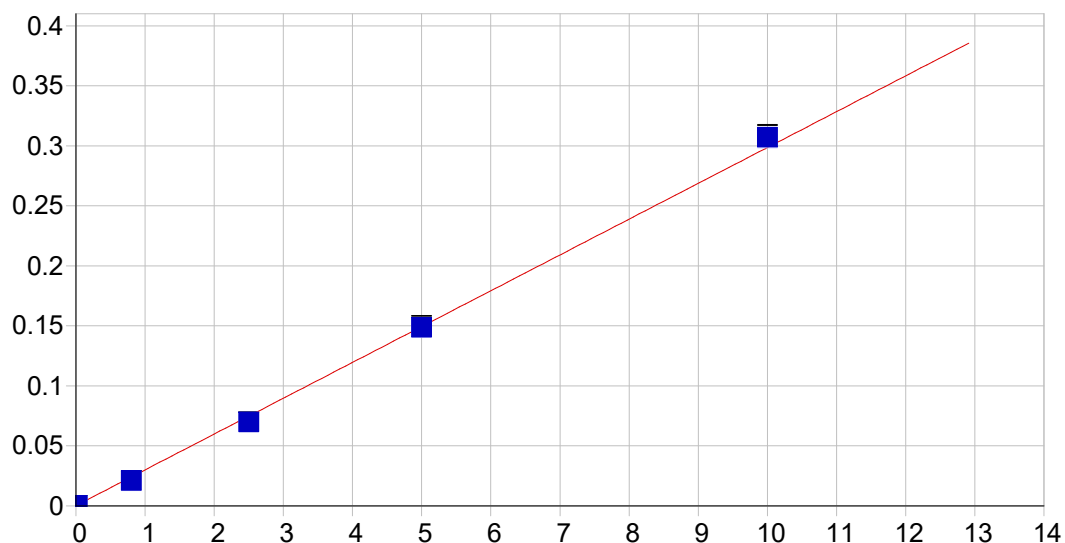


P 177.495 {490}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000862 Re-Slope: 1.000000
A1 (Gain): 0.042562 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999304 Status: OK.
Std Error of Est: 0.000037
Predicted MDL: 0.001564
Predicted MQL: 0.005213

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00086	.000	1
S1	.02000	.01898	-.001	-5.08	-.00005	.000	1
S3	2.5000	2.3688	-.131	-5.25	.09994	.000	1
S4	5.0000	5.0044	.004	.087	.21210	.001	1
S5	10.000	10.231	.231	2.31	.43452	.003	1
S2	.80000	.69701	-.103	-12.9	.02880	.000	1

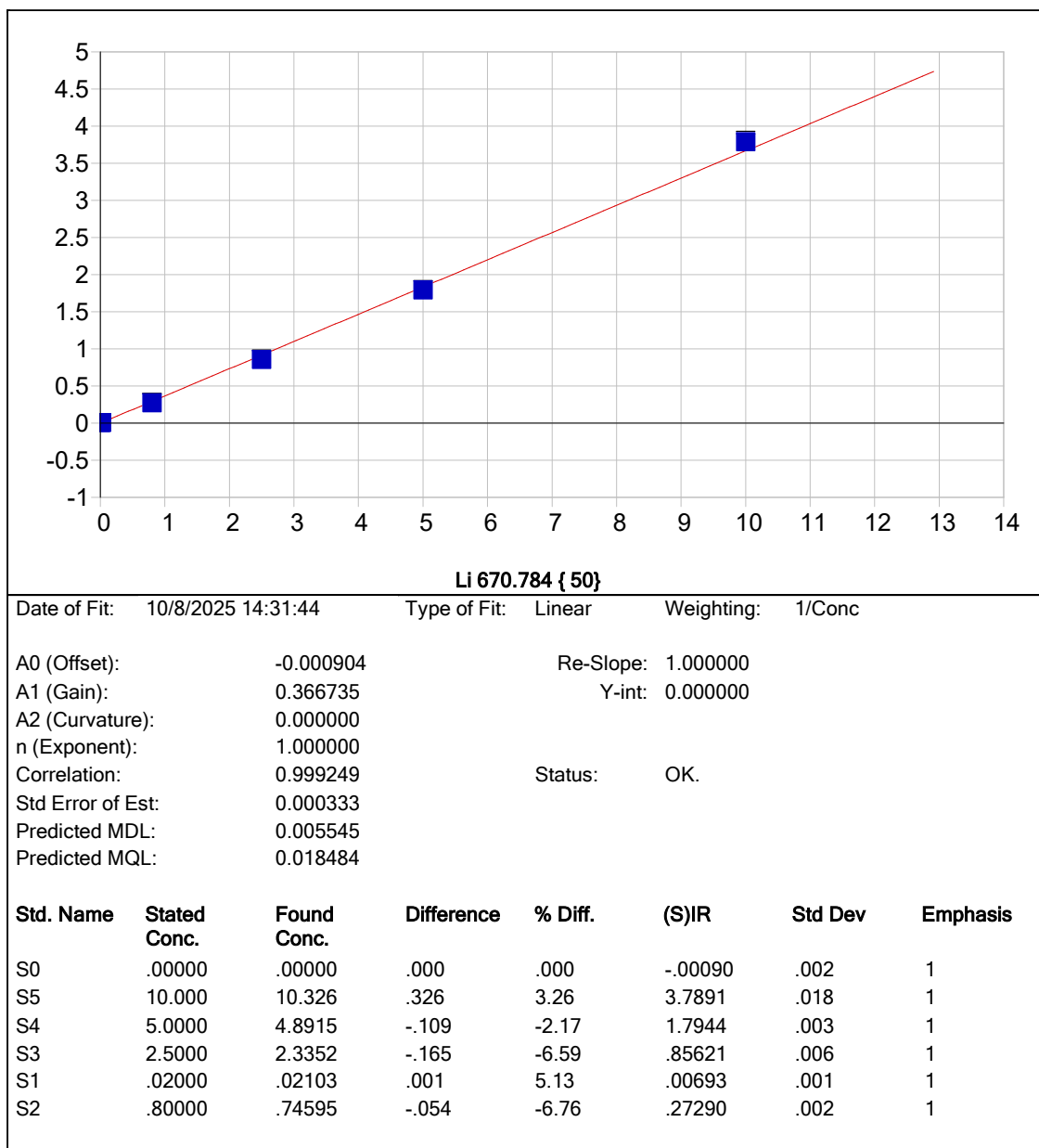


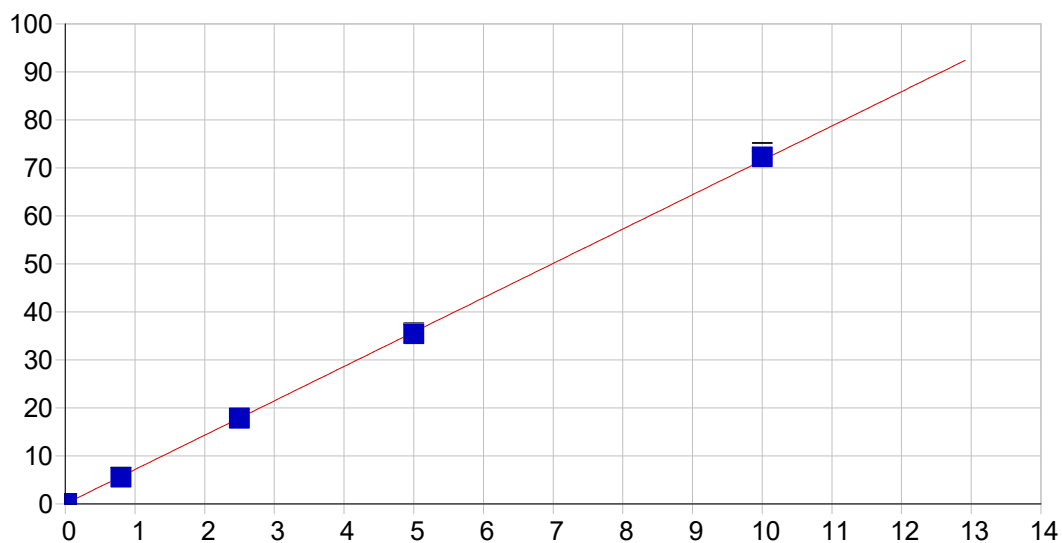
S 182.034 {485}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000195 Re-Slope: 1.000000
A1 (Gain): 0.029838 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999106 Status: OK.
Std Error of Est: 0.000030
Predicted MDL: 0.002536
Predicted MQL: 0.008452

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00020	.000	1
S1	.02000	.02287	.003	14.4	.00085	.000	1
S3	2.5000	2.3373	-.163	-6.51	.06974	.000	1
S4	5.0000	4.9821	-.018	-.358	.14846	.001	1
S5	10.000	10.282	.282	2.82	.30622	.002	1
S2	.80000	.69574	-.104	-13.0	.02089	.000	1



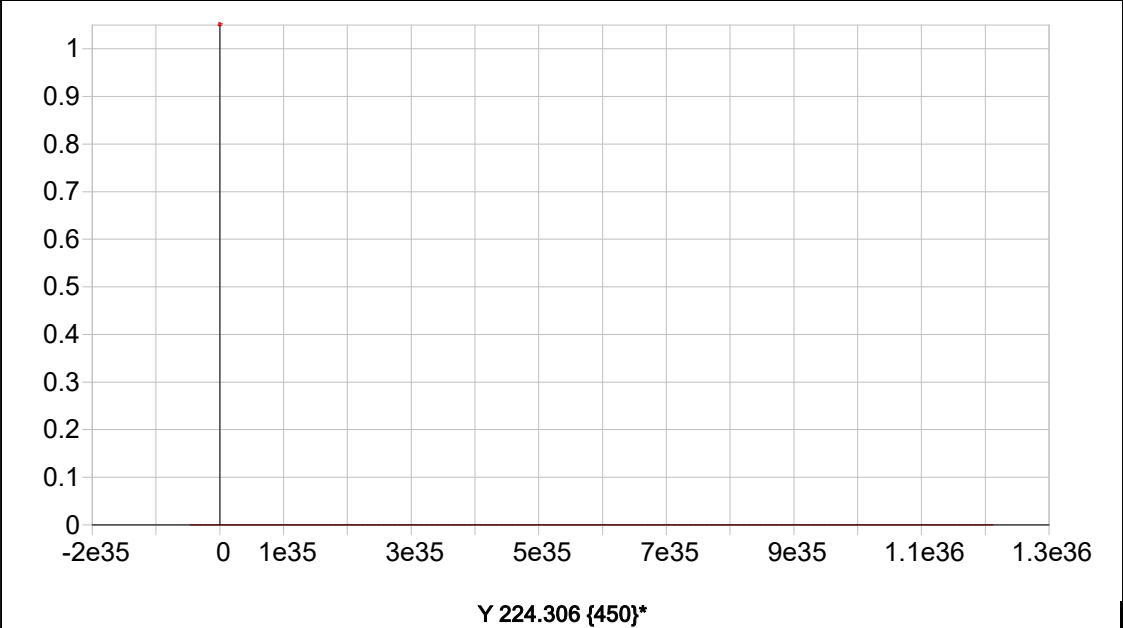


Sr 407.771 { 83}

Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

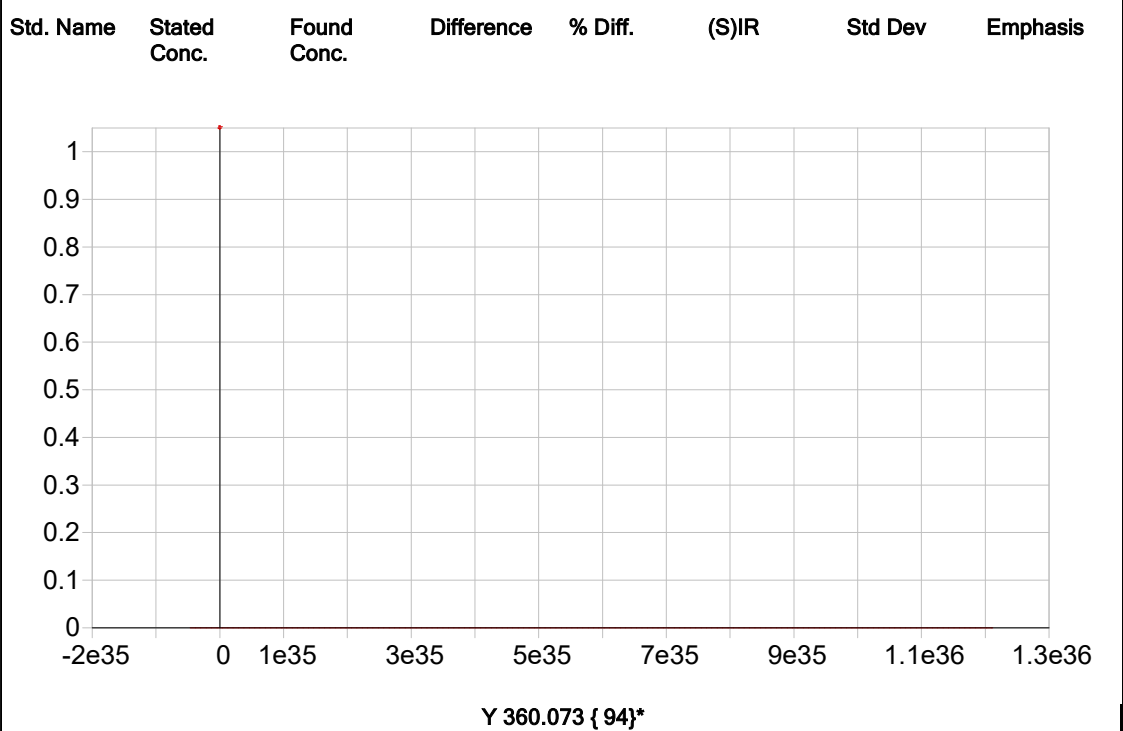
A0 (Offset):	0.002429	Re-Slope:	1.000000
A1 (Gain):	7.157015	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.001961		
Predicted MDL:	0.000137		
Predicted MQL:	0.000458		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00243	.000	1
S1	.02000	.02126	.001	6.28	.15525	.000	1
S3	2.5000	2.4832	-.017	-.673	17.792	.067	1
S4	5.0000	4.9494	-.051	-1.01	35.460	.148	1
S5	10.000	10.093	.093	.934	72.310	.857	1
S2	.80000	.77275	-.027	-3.41	5.5385	.019	1



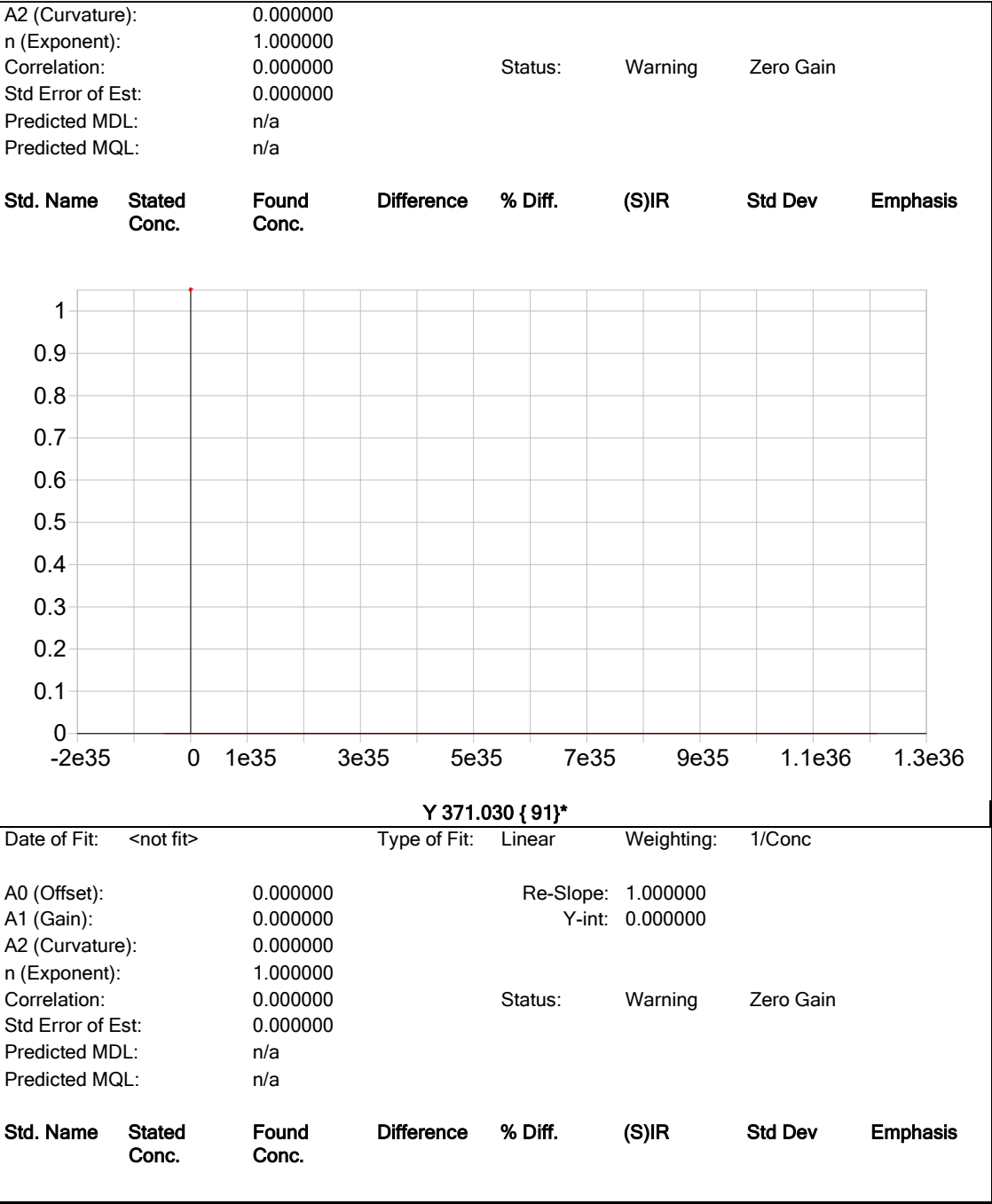
Date of Fit: 10/8/2025 14:31:44 Type of Fit: Linear Weighting: 1/Conc

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: 10/8/2025 12:00:01 Type: Cal
Method: 6010-200.7 NEW(v274) 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	-.00004	.00056	-.00012	.00071	.00078	-.00030	.05714	-.00294
Stddev	.00011	.00015	.00009	.00010	.00015	.00087	.00377	.00046
%RSD	287.96	26.068	76.154	14.773	19.683	290.43	6.5975	15.694

#1	-.00015	.00052	-.00020	.00068	.00061	.00053	.05685	-.00307
#2	.00006	.00072	-.00014	.00082	.00086	-.00120	.05353	-.00332
#3	-.00003	.00044	-.00002	.00062	.00089	-.00023	.06105	-.00243

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	-.00003	.00101	.00009	-.00012	.00040	.00002	.00004	-.00015
Stddev	.00012	.00011	.00001	.00016	.00021	.00001	.00013	.00013
%RSD	432.58	10.681	13.893	139.01	52.729	96.067	352.74	87.165

#1	.00009	.00114	.00008	-.00022	.00064	.00001	-.00011	-.00024
#2	-.00016	.00097	.00009	-.00019	.00030	.00000	.00010	.00000
#3	-.00002	.00094	.00011	.00007	.00026	.00003	.00013	-.00021

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	-.00087	.00001	.00096	-.00039	.00528	.00015	.02034	.00061
Stddev	.00011	.00009	.00012	.00045	.00043	.00009	.00047	.00017
%RSD	12.608	1466.4	12.439	114.51	8.0663	56.799	2.3071	27.103

#1	-.00094	-.00008	.00108	-.00065	.00479	.00020	.01997	.00075
#2	-.00074	.00010	.00095	-.00064	.00557	.00020	.02087	.00043
#3	-.00093	-.00000	.00084	.00013	.00546	.00005	.02019	.00066

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	.00288	.00153	.00006	-.00086	.00020	-.00090	.00243	
Stddev	.00006	.00036	.00001	.00005	.00006	.00219	.00041	
%RSD	1.9611	23.145	17.894	5.4494	28.779	241.78	16.956	

#1	.00281	.00155	.00006	-.00086	.00021	.00014	.00214	
#2	.00290	.00117	.00006	-.00091	.00013	.00056	.00290	
#3	.00292	.00188	.00004	-.00081	.00024	-.00342	.00224	

Sample Name: S0 Acquired: 10/8/2025 12:00:01 Type: Cal
Method: 6010-200.7 NEW(v274) 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	7001.1	106540.	6966.6	5448.8	8849.4
Stddev	11.3	496.	42.3	8.4	18.2
%RSD	.16104	.46559	.60691	.15493	.20547
#1	7013.8	107110.	7014.2	5457.5	8857.7
#2	6992.3	106260.	6952.0	5448.4	8828.6
#3	6997.1	106250.	6933.6	5440.6	8862.0

Sample Name: S1 Acquired: 10/8/2025 12:04:24 Type: Cal
Method: 6010-200.7 NEW(v274) 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	.00241	.00215	.00178	.00553	.00915	.24602	.08725
Stddev	.00004	.00012	.00005	.00005	.00013	.00039	.00113	.00024
%RSD	3.6084	5.1333	2.2464	3.0462	2.2883	4.2211	.45753	.27461

#1	.00105	.00230	.00216	.00172	.00547	.00877	.24630	.08736
#2	.00109	.00239	.00210	.00178	.00567	.00955	.24697	.08743
#3	.00113	.00254	.00220	.00183	.00544	.00913	.24478	.08698

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	.01704	.11525	.00147	.03048	.01456	.00025	.00906	.02513
Stddev	.00011	.00176	.00002	.00009	.00038	.00002	.00010	.00017
%RSD	.62689	1.5268	1.6123	.29626	2.6111	7.9031	1.1556	.69568

#1	.01698	.11681	.00145	.03056	.01496	.00023	.00905	.02524
#2	.01717	.11334	.00149	.03048	.01451	.00026	.00897	.02493
#3	.01699	.11559	.00148	.03038	.01421	.00027	.00917	.02522

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	.02283	.00198	.01429	.00445	.11106	.00669	.12996	.11741
Stddev	.00010	.00005	.00011	.00037	.00028	.00009	.00085	.00017
%RSD	.43200	2.6230	.74115	8.3527	.24809	1.2907	.65464	.14539

#1	.02293	.00199	.01431	.00472	.11134	.00659	.12907	.11726
#2	.02274	.00192	.01418	.00403	.11104	.00676	.13004	.11759
#3	.02281	.00202	.01439	.00461	.11079	.00671	.13077	.11738

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	.00903	.01291	.00096	-.00005	.00085	.00693	.15525
Stddev	.00005	.00037	.00002	.00005	.00001	.00122	.00041
%RSD	.53240	2.8289	2.1569	93.208	1.2227	17.641	.26564

#1	.00904	.01257	.00096	-.00002	.00084	.00809	.15532
#2	.00907	.01288	.00098	-.00011	.00086	.00565	.15481
#3	.00897	.01330	.00094	-.00003	.00086	.00706	.15562

Sample Name: S1 Acquired: 10/8/2025 12:04:24 Type: Cal
Method: 6010-200.7 NEW(v274) 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	6515.2	95043.	6924.3	4829.0	8048.6
Stddev	18.8	182.	13.6	26.1	23.5
%RSD	.28784	.19193	.19631	.54079	.29232
#1	6497.8	94939.	6922.8	4799.1	8027.4
#2	6512.8	95253.	6938.6	4840.3	8044.5
#3	6535.1	94936.	6911.5	4847.5	8073.9

Sample Name: S2 Acquired: 10/8/2025 12:08:40 Type: Cal
Method: 6010-200.7 NEW(v274) 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	.03958	.03671	.14792	.03597	.07133	.13074	2.7038	.56855
Stddev	.00020	.00159	.00032	.00017	.00051	.00091	.0053	.00118
%RSD	.49931	4.3221	.21370	.47147	.71133	.69875	.19612	.20805

#1	.03973	.03852	.14781	.03613	.07156	.13073	2.7001	.56788
#2	.03966	.03610	.14768	.03597	.07168	.13166	2.7015	.56991
#3	.03936	.03552	.14828	.03580	.07075	.12983	2.7099	.56786

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0901	.21744	.02226	.38250	.12808	.00184	.16173	.04568
Stddev	.0011	.00179	.00017	.00023	.00004	.00003	.00089	.00068
%RSD	.10162	.82233	.77222	.06053	.03241	1.4647	.55113	1.4911

#1	1.0894	.21832	.02245	.38224	.12808	.00184	.16115	.04517
#2	1.0895	.21863	.02217	.38262	.12813	.00182	.16128	.04645
#3	1.0914	.21539	.02215	.38265	.12804	.00187	.16276	.04541

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	.22028	.04023	.02725	.04795	1.0261	.01341	.86939	.45229
Stddev	.00021	.00003	.00031	.00084	.0029	.00014	.00366	.00100
%RSD	.09382	.06352	1.1535	1.7579	.28231	1.0368	.42053	.22070

#1	.22010	.04023	.02722	.04732	1.0294	.01332	.86968	.45260
#2	.22051	.04026	.02695	.04891	1.0246	.01334	.87290	.45309
#3	.22024	.04021	.02758	.04763	1.0242	.01357	.86560	.45117

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	.11450	.22127	.00194	.02880	.02089	.27290	5.5385	
Stddev	.00021	.00088	.00002	.00020	.00020	.00249	.0186	
%RSD	.18030	.39886	1.0828	.69817	.94046	.91390	.33616	

#1	.11447	.22228	.00196	.02896	.02112	.27470	5.5313	
#2	.11472	.22064	.00194	.02887	.02079	.27005	5.5247	
#3	.11431	.22090	.00192	.02857	.02077	.27394	5.5597	

Sample Name: S2 Acquired: 10/8/2025 12:08:40 Type: Cal
Method: 6010-200.7 NEW(v274) 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	6760.4	92011.	6980.4	4742.9	8216.3
Stddev	10.3	130.	31.1	18.0	14.9
%RSD	.15265	.14175	.44580	.37884	.18112
#1	6771.8	91950.	6968.9	4744.1	8232.8
#2	6751.8	92161.	6956.7	4760.2	8212.5
#3	6757.4	91922.	7015.6	4724.3	8203.8

Sample Name: S3 Acquired: 10/8/2025 12:12:43 Type: Cal
Method: 6010-200.7 NEW(v274) 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	.12806	.11911	.48416	.11437	.22794	.42705	8.5615	1.9018
Stddev	.00061	.00176	.00105	.00046	.00072	.00185	.0330	.0104
%RSD	.47265	1.4740	.21645	.40086	.31730	.43261	.38571	.54806

#1	.12874	.12082	.48513	.11484	.22876	.42868	8.5860	1.9138
#2	.12759	.11731	.48430	.11435	.22768	.42744	8.5746	1.8969
#3	.12784	.11918	.48305	.11392	.22738	.42504	8.5240	1.8947

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.6190	.69979	.07148	1.2549	.40745	.00574	.51289	.14677
Stddev	.0127	.00214	.00027	.0036	.00121	.00004	.00260	.00071
%RSD	.35128	.30536	.37941	.28826	.29748	.74996	.50652	.48223

#1	3.6301	.70210	.07158	1.2575	.40874	.00571	.51429	.14731
#2	3.6217	.69939	.07170	1.2563	.40728	.00579	.51449	.14596
#3	3.6051	.69789	.07118	1.2507	.40634	.00571	.50989	.14703

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	.72083	.12883	.08032	.15622	3.2643	.04282	2.8520	1.4562
Stddev	.00162	.00012	.00036	.00059	.0088	.00006	.0126	.0040
%RSD	.22433	.09084	.45417	.37957	.27057	.13801	.44099	.27145

#1	.72191	.12882	.08010	.15673	3.2740	.04285	2.8663	1.4604
#2	.72160	.12896	.08074	.15557	3.2566	.04286	2.8425	1.4557
#3	.71897	.12872	.08012	.15636	3.2624	.04276	2.8474	1.4526

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	.37079	.71204	.00595	.09994	.06974	.85621	17.792
Stddev	.00105	.00333	.00004	.00014	.00015	.00563	.067
%RSD	.28400	.46737	.71248	.14443	.22095	.65793	.37732

#1	.37167	.71371	.00600	.09986	.06985	.85843	17.842
#2	.37107	.71421	.00595	.10011	.06981	.86040	17.818
#3	.36962	.70821	.00591	.09985	.06956	.84981	17.715

Sample Name: S3 Acquired: 10/8/2025 12:12:43 Type: Cal
Method: 6010-200.7 NEW(v274) 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	6454.0	87989.	6503.6	4547.7	7608.1
Stddev	27.1	270.	35.5	22.3	32.0
%RSD	.41982	.30713	.54538	.49096	.42039
#1	6427.0	87866.	6467.0	4545.5	7580.0
#2	6453.8	88298.	6537.9	4571.0	7601.4
#3	6481.2	87801.	6506.1	4526.5	7642.9

Sample Name: S4 Acquired: 10/8/2025 12:16:40 Type: Cal
Method: 6010-200.7 NEW(v274) 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	.26132	.22701	.97819	.23353	.45955	.84609	17.134	3.7341
Stddev	.00102	.00844	.00134	.00132	.00233	.00091	.017	.0168
%RSD	.38911	3.7179	.13721	.56487	.50719	.10774	.09914	.45109

#1	.26048	.23224	.97971	.23248	.45688	.84708	17.149	3.7508
#2	.26102	.21727	.97764	.23309	.46066	.84590	17.115	3.7171
#3	.26245	.23151	.97720	.23501	.46112	.84529	17.137	3.7344

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	7.3499	1.3890	.13776	2.5464	.80471	.01077	1.0247	.29087
Stddev	.0300	.0026	.00068	.0073	.00134	.00002	.0049	.00106
%RSD	.40754	.18961	.49136	.28715	.16680	.19157	.48116	.36545

#1	7.3820	1.3897	.13700	2.5528	.80551	.01075	1.0279	.28977
#2	7.3451	1.3860	.13799	2.5479	.80545	.01078	1.0190	.29094
#3	7.3226	1.3912	.13829	2.5384	.80316	.01079	1.0270	.29189

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4592	.24485	.15300	.31182	6.1674	.08106	5.6347	2.8673
Stddev	.0045	.00051	.00084	.00134	.0241	.00047	.0292	.0042
%RSD	.30484	.20888	.54851	.43015	.39015	.57620	.51832	.14494

#1	1.4639	.24466	.15212	.31330	6.1472	.08067	5.6679	2.8703
#2	1.4585	.24445	.15311	.31148	6.1611	.08094	5.6128	2.8626
#3	1.4551	.24542	.15379	.31068	6.1941	.08158	5.6236	2.8690

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	.74458	1.4247	.01126	.21210	.14846	1.7944	35.460	
Stddev	.00324	.0017	.00011	.00137	.00148	.0031	.148	
%RSD	.43557	.11588	.94048	.64461	.99433	.17226	.41819	

#1	.74820	1.4266	.01116	.21347	.14901	1.7953	35.631	
#2	.74194	1.4236	.01126	.21073	.14679	1.7910	35.380	
#3	.74360	1.4239	.01137	.21211	.14959	1.7970	35.368	

Sample Name: S4 Acquired: 10/8/2025 12:16:40 Type: Cal
Method: 6010-200.7 NEW(v274) 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	6184.9	92063.	6389.0	4708.2	7093.8
Stddev	31.2	683.	6.1	26.2	48.3
%RSD	.50418	.74136	.09497	.55622	.68026
#1	6166.8	92820.	6394.5	4734.8	7052.1
#2	6167.0	91873.	6390.2	4707.5	7082.7
#3	6220.9	91495.	6382.5	4682.4	7146.7

Sample Name: S5 Acquired: 10/8/2025 12:20:44 Type: Cal
Method: 6010-200.7 NEW(v274) 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	.51781	.47637	1.9937	.45868	.91399	1.7096	34.612	7.1961
Stddev	.00394	.01442	.0150	.00343	.00760	.0074	.428	.0396
%RSD	.76109	3.0261	.75348	.74731	.83155	.43108	1.2366	.55033
#1	.52204	.48639	2.0098	.46225	.92069	1.7139	34.774	7.1573
#2	.51714	.45985	1.9912	.45835	.91555	1.7137	34.935	7.1945
#3	.51424	.48287	1.9801	.45542	.90573	1.7011	34.126	7.2365
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	14.838	2.7769	.27685	5.1664	1.5778	.02254	2.0459	.58707
Stddev	.104	.0110	.00350	.0350	.0111	.00030	.0128	.00228
%RSD	.70101	.39611	1.2639	.67692	.70304	1.3484	.62551	.38855
#1	14.957	2.7794	.27714	5.2062	1.5883	.02272	2.0435	.58640
#2	14.793	2.7864	.28019	5.1521	1.5788	.02271	2.0598	.58961
#3	14.764	2.7648	.27321	5.1408	1.5662	.02219	2.0346	.58519
Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.9499	.49657	.33532	.63061	12.377	.17300	10.921	5.7339
Stddev	.0200	.00223	.00530	.00441	.097	.00227	.057	.0434
%RSD	.67850	.44854	1.5801	.69965	.78495	1.3136	.52313	.75754
#1	2.9725	.49704	.33845	.63180	12.413	.17425	10.858	5.7794
#2	2.9429	.49853	.33830	.63431	12.452	.17438	10.934	5.7294
#3	2.9343	.49415	.32920	.62573	12.268	.17038	10.970	5.6928
Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	1.5080	2.8664	.02419	.43452	.30622	3.7891	72.310	
Stddev	.0110	.0134	.00029	.00255	.00247	.0177	.857	
%RSD	.73066	.46833	1.1959	.58717	.80737	.46632	1.1854	
#1	1.5207	2.8672	.02429	.43743	.30870	3.7824	72.601	
#2	1.5009	2.8794	.02442	.43270	.30376	3.8091	72.984	
#3	1.5024	2.8526	.02387	.43341	.30620	3.7758	71.345	

Sample Name: S5 Acquired: 10/8/2025 12:20:44 Type: Cal
Method: 6010-200.7 NEW(v274) 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	6172.4	90050.	6564.4	4535.9	6889.9
Stddev	44.7	750.	30.1	28.2	40.2
%RSD	.72404	.83292	.45870	.62194	.58381
#1	6132.3	89743.	6599.1	4516.9	6846.0
#2	6164.4	89502.	6549.2	4522.5	6898.8
#3	6220.6	90905.	6545.0	4568.3	6924.9

Sample Name: ICV01 Acquired: 10/8/2025 12:24:55 Type: Unk
Method: 6010-200.7 NEW(v274) 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	3.896245	4.035129	3.811935	3.911779	4.003381	7.777904
Stddev	.009142	.015411	.016566	.008240	.008129	.016374
%RSD	.2346312	.3819293	.4345870	.2106452	.2030566	.2105219

#1	3.885778	4.044099	3.797435	3.908448	3.995876	7.787073
#2	3.902662	4.017334	3.808380	3.905725	4.002253	7.787639
#3	3.900295	4.043955	3.829991	3.921162	4.012016	7.758999

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.804978	.2008821	1.950758	19.50083	.7934172	1.949896
Stddev	.031980	.0010127	.009016	.02098	.0045550	.008488
%RSD	.4097416	.5041389	.4621997	.1076038	.5740949	.4352915

#1	7.822528	.2002479	1.943980	19.52451	.7886919	1.943209
#2	7.768065	.2003484	1.947302	19.49344	.7977802	1.947035
#3	7.824341	.2020501	1.960991	19.48455	.7937793	1.959445

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9989046	3.943172	1.955475	19.46693	1.953001	.9878304
Stddev	.0035999	.008105	.010732	.02716	.007353	.0008724
%RSD	.3603854	.2055564	.5488145	.1394966	.3764895	.0883105

#1	.9958633	3.951161	1.959925	19.43561	1.947086	.9888337
#2	.9979714	3.943400	1.943234	19.48386	1.950682	.9872513
#3	1.002879	3.934955	1.963266	19.48133	1.961233	.9874062

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.01903	1.944663	1.987845	19.20343	3.967653	4.005991
Stddev	.06796	.010330	.001979	.04103	.020936	.013728
%RSD	.3573382	.5312225	.0995666	.2136637	.5276732	.3426853

#1	19.09747	1.954917	1.985848	19.24137	3.952069	3.993022
#2	18.98167	1.944815	1.987881	19.20903	3.959438	4.004582
#3	18.97794	1.934258	1.989805	19.15989	3.991450	4.020370

Sample Name: ICV01 Acquired: 10/8/2025 12:24:55 Type: Unk
Method: 6010-200.7 NEW(v274) 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	3.916771	3.929005	F 3.561226	F .0059887	F .0272674	F .0057217
Stddev	.010023	.008305	.029500	.0004938	.0030907	.0015366
%RSD	.2558885	.2113668	.8283723	8.245267	11.33481	26.85580

#1	3.907393	3.937185	3.585132	.0054188	.0307098	.0063505
#2	3.915588	3.920581	3.570289	.0062591	.0247309	.0068441
#3	3.927333	3.929250	3.528258	.0062883	.0263615	.0039704

Elem	Sr4077
Units	ppm
Avg	F -.003365
Stddev	.000072
%RSD	2.138581

#1	-.003425
#2	-.003285
#3	-.003386

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6490.420	91600.82	6611.875	4688.280	7565.993
Stddev	17.473	312.59	35.010	4.925	23.533
%RSD	.2692089	.3412519	.5294970	.1050591	.3110332

#1	6506.793	91782.63	6651.041	4687.164	7588.126
#2	6492.443	91239.87	6600.961	4684.008	7568.579
#3	6472.023	91779.95	6583.622	4693.668	7541.275

Sample Name: LLICV01 Acquired: 10/8/2025 12:32:30 Type: Unk
Method: 6010-200.7 NEW(v274) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191456	.0440919	.0127549	.0189810	.0517870	.0956007	.1009628
Stddev	.0015771	.0021786	.0008443	.0008904	.0027325	.0096724	.0010030
%RSD	8.237357	4.940940	6.619213	4.691169	5.276476	10.11748	.9934629

#1	.0175375	.0464692	.0134327	.0194186	.0534484	.0897085	.1018669
#2	.0192095	.0436153	.0130228	.0195680	.0532793	.1067636	.0998838
#3	.0206897	.0421911	.0118092	.0179564	.0486333	.0903299	.1011377

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066494	.0058232	2.011297	.0099210	.0296607	.0217053	.1070882
Stddev	.0000351	.0000543	.013716	.0002698	.0001733	.0002746	.0055691
%RSD	.5282275	.9323993	.6819260	2.719125	.5842139	1.265175	5.200485

#1	.0066591	.0058854	1.998490	.0096290	.0297705	.0219247	.1009588
#2	.0066105	.0057853	2.025769	.0099732	.0294609	.0213973	.1118375
#3	.0066787	.0057989	2.009630	.0101609	.0297505	.0217938	.1084684

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204055	2.083794	.0396184	.0102450	1.771937	.0386892	.0427417
Stddev	.0004815	.017807	.0002602	.0003682	.022730	.0027604	.0001588
%RSD	2.359614	.8545636	.6568547	3.593594	1.282757	7.134806	.3715832

#1	.0198505	2.069770	.0396913	.0103520	1.771824	.0356754	.0428658
#2	.0207115	2.103829	.0398345	.0105479	1.794723	.0392975	.0427965
#3	.0206545	2.077783	.0393295	.0098352	1.749264	.0410947	.0425627

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.825907	.1112342	.2008474	.0406493	.0388383	.3479305	.0177341
Stddev	.046213	.0016399	.0000976	.0004300	.0012180	.0141710	.0012863
%RSD	2.530974	1.474239	.0485846	1.057916	3.135985	4.072949	7.253386

#1	1.859109	.1098627	.2009105	.0407775	.0393934	.3334450	.0162957
#2	1.845484	.1107892	.2008968	.0410007	.0374417	.3617646	.0181324
#3	1.773127	.1130506	.2007350	.0401698	.0396798	.3485820	.0187742

Sample Name: LLICV01 Acquired: 10/8/2025 12:32:30 Type: Unk
Method: 6010-200.7 NEW(v274) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0239986	.0185552	.0201582
Stddev	.0019963	.0038257	.0000084
%RSD	8.318438	20.61795	.0418059

#1	.0261670	.0146953	.0201496
#2	.0222371	.0186246	.0201586
#3	.0235916	.0223458	.0201664

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6594.526	93252.93	6404.845	4742.915	8135.661
Stddev	5.451	400.29	51.479	36.921	1.187
%RSD	.0826652	.4292515	.8037446	.7784418	.0145931

#1	6600.400	92957.19	6389.734	4705.947	8137.007
#2	6593.551	93093.17	6462.188	4743.011	8135.214
#3	6589.628	93708.43	6362.613	4779.788	8134.762

Sample Name: ICB01 Acquired: 10/8/2025 12:36:44 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.000047	-.000151	.0003787	-.002649	-.001106	.0083942	.0021062
Stddev	.001269	.000761	.0008501	.001995	.002214	.0071223	.0017531
%RSD	2719.588	504.8774	224.4597	75.33094	200.1149	84.84816	83.23500

#1	-.000759	-.000623	.0004264	-.002018	-.001280	.0142814	.0012047
#2	.001419	.000727	-.000494	-.001045	.001189	.0104238	.0009874
#3	-.000800	-.000556	.001204	-.004883	-.003228	.0004774	.0041267

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000000	-.000103	-.000015	.0002059	.0000939	.0000872	.0041243
Stddev	.000016	.000038	.006000	.0004513	.0001451	.0005678	.0086897
%RSD	15640.86	36.61806	40128.87	219.1751	154.5530	651.3276	210.6941

#1	-.000010	-.000085	.002429	.0006926	.0001152	-.000324	.0050453
#2	-.000008	-.000078	.004378	-.000199	-.000061	-.000149	.0123169
#3	.000018	-.000146	-.006852	.000124	.000227	.000735	-.004989

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005878	.0006109	.0003570	.0000411	-.001494	.0021927	.0000083
Stddev	.0007232	.0369339	.0001223	.0002470	.004982	.0030627	.0001191
%RSD	123.0234	6045.459	34.26197	601.0816	333.5027	139.6762	1429.162

#1	.0012690	.0024569	.0002356	.0001632	-.007199	-.000619	-.000044
#2	-.000171	-.037211	.0004802	.0002033	.000722	.001741	-.000076
#3	.000666	.036587	.0003553	-.000243	.001996	.005456	.000145

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.098945	-.000801	-.000385	-.000057	-.001601	.0102749	-.000367
Stddev	.024803	.000496	.000263	.000453	.001846	.0095956	.002282
%RSD	25.06696	61.84941	68.34024	791.8734	115.2927	93.38909	621.7949

#1	-.105971	-.001025	-.000206	-.000501	-.001455	.0162693	.002248
#2	-.071387	-.000233	-.000686	.000405	.000168	-.000792	-.001397
#3	-.119476	-.001145	-.000262	-.000075	-.003516	.015348	-.001952

Sample Name: ICB01 Acquired: 10/8/2025 12:36:44 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0024766	-.000455	-.000130
Stddev	.0006288	.002642	.000127
%RSD	25.38917	580.0679	97.97065

#1	.0024811	.002319	-.000275
#2	.0031030	-.002941	-.000077
#3	.0018455	-.000744	-.000038

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7087.727	100073.8	7008.766	5107.723	8910.877
Stddev	14.730	309.5	33.836	25.781	11.383
%RSD	.2078195	.3092734	.4827689	.5047406	.1277417

#1	7085.533	99736.4	6993.059	5079.002	8900.962
#2	7103.431	100140.5	7047.601	5115.303	8923.307
#3	7074.217	100344.5	6985.638	5128.864	8908.362

Sample Name: CRI01 Acquired: 10/8/2025 12:41:02 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0215937	.0411255	.0122459	.0189469	.0500637	.0992544	.0994936
Stddev	.0026335	.0018849	.0002890	.0005579	.0004092	.0028570	.0011215
%RSD	12.19583	4.583339	2.359939	2.944422	.8172881	2.878445	1.127186

#1	.0203070	.0422203	.0120447	.0188303	.0499335	.1025525	.0982386
#2	.0198510	.0422072	.0121160	.0195539	.0497354	.0976729	.0998446
#3	.0246233	.0389490	.0125771	.0184566	.0505221	.0975380	.1003976

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065371	.0057293	1.982846	.0099781	.0293814	.0216244	.1105695
Stddev	.0000474	.0000541	.010330	.0002883	.0001868	.0001070	.0073467
%RSD	.7252190	.9437041	.5209511	2.889257	.6356317	.4947412	6.644415

#1	.0065620	.0057053	1.974070	.0103007	.0295347	.0217472	.1083476
#2	.0065668	.0057912	1.994229	.0098877	.0291734	.0215754	.1187707
#3	.0064824	.0056913	1.980237	.0097458	.0294361	.0215508	.1045903

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210794	2.077802	.0392711	.0105847	1.841665	.0401067	.0430714
Stddev	.0007148	.039942	.0000825	.0002411	.022080	.0008441	.0002717
%RSD	3.391141	1.922320	.2099757	2.277600	1.198904	2.104650	.6308592

#1	.0216482	2.068612	.0392811	.0103390	1.816948	.0407152	.0432484
#2	.0213132	2.043256	.0391842	.0105941	1.859437	.0391431	.0432073
#3	.0202770	2.121538	.0393482	.0108209	1.848611	.0404619	.0427585

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.878812	.1052636	.1981312	.0401121	.0385088	.3511649	.0179700
Stddev	.006000	.0004719	.0001019	.0004104	.0007772	.0065426	.0004918
%RSD	.3193594	.4482685	.0514112	1.023220	2.018245	1.863123	2.736935

#1	1.879784	.1048102	.1980355	.0396748	.0376125	.3440110	.0174507
#2	1.884267	.1052285	.1982383	.0404890	.0389171	.3526390	.0180305
#3	1.872385	.1057520	.1981199	.0401724	.0389968	.3568448	.0184287

Sample Name: CRI01 Acquired: 10/8/2025 12:41:02 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0236118	.0176719	.0200039
Stddev	.0009420	.0025751	.0003672
%RSD	3.989639	14.57185	1.835797

#1	.0242786	.0174020	.0201653
#2	.0240226	.0152424	.0202628
#3	.0225341	.0203714	.0195836

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6621.899	89715.15	6410.803	4611.784	8174.929
Stddev	14.616	446.68	27.020	24.047	24.882
%RSD	.2207163	.4978895	.4214808	.5214279	.3043707

#1	6635.949	90032.48	6436.860	4638.194	8193.791
#2	6622.972	89908.62	6382.912	4606.003	8184.267
#3	6606.777	89204.34	6412.637	4591.154	8146.729

Sample Name: ICSA01 Acquired: 10/8/2025 12:45:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0041214	.0149444	-.004559	.0062320	-.001322	225.0206
Stddev	.0025594	.0033308	.000689	.0018208	.003443	.3976
%RSD	62.09965	22.28767	15.10466	29.21791	260.4421	.1766741

#1	.0054149	.0152540	-.004186	.0082753	.002616	224.9764
#2	.0011734	.0181096	-.004138	.0047814	-.002816	225.4384
#3	.0057758	.0114697	-.005354	.0056392	-.003766	224.6469

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085051	.0008278	.0011026	212.9598	.0476913	.0015816
Stddev	.0011481	.0000603	.0001177	.3464	.0003275	.0001318
%RSD	13.49871	7.278198	10.67125	.1626385	.6867367	8.330630

#1	.0087842	.0007848	.0010875	213.0653	.0476833	.0014297
#2	.0072433	.0008019	.0012270	213.2411	.0473679	.0016649
#3	.0094880	.0008967	.0009932	212.5729	.0480228	.0016501

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163030	89.36204	.0056618	226.1102	.0030188	.0072677
Stddev	.0007076	.40872	.0000994	.4806	.0003492	.0002137
%RSD	4.340509	.4573807	1.754829	.2125491	11.56837	2.940917

#1	.0165038	89.17036	.0055956	225.6442	.0029471	.0075009
#2	.0168885	89.08437	.0057760	226.6041	.0033982	.0070811
#3	.0155167	89.83137	.0056137	226.0824	.0027109	.0072212

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0604492	.0034869	.0018200	-.005253	.0767671	.0005261
Stddev	.0151108	.0027775	.0001929	.033145	.0008043	.0002726
%RSD	24.99746	79.65475	10.60005	631.0213	1.047657	51.81145

#1	.0589568	.0055677	.0020426	-.043491	.0769133	.0008400
#2	.0461400	.0045600	.0017162	.012462	.0758997	.0003900
#3	.0762507	.0003330	.0017012	.015271	.0774882	.0003485

Sample Name: ICSA01 Acquired: 10/8/2025 12:45:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.003732	-.005673	.0199618	.0025687	-.002239	F .0634236
Stddev	.000013	.000684	.0141624	.0011202	.001792	.0033865
%RSD	.3354554	12.06454	70.94773	43.60988	80.03560	5.339548
#1	-.003744	-.005033	.0124886	.0018938	-.003736	.0653973
#2	-.003719	-.006395	.0362955	.0038618	-.000253	.0595132
#3	-.003732	-.005590	.0111012	.0019505	-.002728	.0653603

Elem	Sr4077
Units	ppm
Avg	.0046711
Stddev	.0004818
%RSD	10.31554
#1	.0046598
#2	.0051585
#3	.0041950

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6568.046	96756.89	7488.756	4988.181	7211.376
Stddev	7.097	402.56	43.639	7.461	6.149
%RSD	.1080543	.4160529	.5827316	.1495820	.0852652
#1	6573.227	97207.72	7505.148	4996.796	7206.951
#2	6559.957	96629.56	7439.294	4983.961	7208.779
#3	6570.953	96433.40	7521.826	4983.786	7218.397

Sample Name: ICSAB01 Acquired: 10/8/2025 12:50:42 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.1056925	.1305758	.0416154	.0531943	.6008600	249.1740
Stddev	.0025281	.0028554	.0019967	.0049202	.0005107	.0812
%RSD	2.391939	2.186797	4.798052	9.249410	.0849938	.0325800

#1	.1063093	.1291155	.0393205	.0506446	.6014293	249.2319
#2	.1029131	.1338660	.0425706	.0500723	.6007084	249.2089
#3	.1078552	.1287458	.0429551	.0588660	.6004422	249.0812

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5041714	.5064889	1.010449	237.3138	.5523649	.5024379
Stddev	.0000208	.0012593	.002076	.6123	.0018579	.0008186
%RSD	.0041327	.2486363	.2054971	.2580069	.3363475	.1629259

#1	.5041811	.5057888	1.008473	237.2418	.5537495	.5020569
#2	.5041475	.5079427	1.010261	237.9589	.5530916	.5018793
#3	.5041856	.5057352	1.012613	236.7406	.5502535	.5033776

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4961958	101.1714	.4970790	251.7426	1.000751	.2192246
Stddev	.0014904	.6099	.0042956	.4183	.001665	.0004316
%RSD	.3003616	.6028384	.8641623	.1661421	.1663672	.1968838

#1	.4945914	101.7866	.4947440	251.5509	.999061	.2196926
#2	.4964588	101.1609	.5020363	252.2223	1.000802	.2191393
#3	.4975372	100.5669	.4944566	251.4545	1.002390	.2188421

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0402344	.4873691	1.048724	-.170373	1.048947	1.010922
Stddev	.0136154	.0074667	.002804	.024632	.002554	.001667
%RSD	33.84018	1.532051	.2673514	14.45738	.2434771	.1648905

#1	.0394797	.4881370	1.045679	-.196305	1.047782	1.009393
#2	.0270120	.4944222	1.049295	-.147289	1.051876	1.010675
#3	.0542114	.4795481	1.051198	-.167526	1.047183	1.012699

Sample Name: ICSAB01 Acquired: 10/8/2025 12:50:42 Type: Unk
Method: 6010-200.7 NEW(v274) 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	1.023865	.9895460	1.013393	F .0043492	F .0041171	F .0675925
Stddev	.002135	.0018209	.024794	.0032236	.0012188	.0079041
%RSD	.2085329	.1840134	2.446667	74.11914	29.60356	11.69373

#1	1.021717	.9914013	1.031299	.0049827	.0052562	.0755525
#2	1.023892	.9894751	.985094	.0008559	.0028318	.0597455
#3	1.025987	.9877615	1.023788	.0072090	.0042635	.0674796

Elem	Sr4077
Units	ppm
Avg	F .0025606
Stddev	.0004888
%RSD	19.08791

#1	.0019997
#2	.0027876
#3	.0028947

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6061.929	84573.45	6581.444	4331.569	6647.566
Stddev	16.408	294.51	24.864	17.810	15.900
%RSD	.2706783	.3482295	.3777878	.4111631	.2391893

#1	6045.402	84286.64	6589.233	4350.752	6629.489
#2	6062.168	84558.61	6553.618	4328.395	6653.825
#3	6078.216	84875.10	6601.481	4315.559	6659.384

Sample Name: ICSA01DLX20 Acquired: 10/8/2025 12:54:46 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.000395	.0018876	-.000670	.0001403	-.000738	12.33119	.0038480
Stddev	.000381	.0032925	.001349	.0048602	.000567	.07312	.0011858
%RSD	96.46493	174.4297	201.2213	3463.811	76.87731	.5929884	30.81591

#1	-.000614	.0022914	.000341	-.004813	-.000083	12.30770	.0031565
#2	.000045	.0049595	-.000151	.000331	-.001059	12.41317	.0052173
#3	-.000616	-.001588	-.002202	.004902	-.001071	12.27270	.0031703

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000396	-.000092	12.26792	.0026456	.0003189	.0012073	4.708843
Stddev	.0000277	.000060	.04796	.0001068	.0001254	.0001912	.063478
%RSD	70.02908	65.89512	.3909009	4.035112	39.30880	15.83560	1.348054

#1	.0000510	-.000161	12.25471	.0026714	.0003650	.0012932	4.727819
#2	.0000598	-.000065	12.32110	.0027371	.0004148	.0013405	4.760669
#3	.0000080	-.000049	12.22796	.0025283	.0001771	.0009882	4.638042

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006430	12.76752	.0001628	.0003458	-.045903	.0032655	.0000902
Stddev	.0010322	.07779	.0000212	.0003396	.008041	.0030757	.0001139
%RSD	160.5171	.6092466	13.00974	98.21648	17.51841	94.18975	126.3122

#1	-.000291	12.85165	.0001383	.0006591	-.051204	.0003437	.0001391
#2	.001751	12.69821	.0001758	.0003934	-.036650	.0064749	.0001714
#3	.000468	12.75272	.0001742	-.000015	-.049855	.0029778	-.000040

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.188542	-.003615	.0000669	-.000857	-.001380	.0106664	-.001610
Stddev	.023748	.001060	.0000255	.000278	.002073	.0020219	.000876
%RSD	12.59568	29.33105	38.08686	32.41770	150.1704	18.95616	54.39106

#1	-.176737	-.002455	.0000869	-.000872	.000982	.0130001	-.000616
#2	-.173008	-.004534	.0000382	-.000572	-.002894	.0094376	-.002267
#3	-.215879	-.003856	.0000756	-.001127	-.002228	.0095615	-.001947

Sample Name: ICSA01DLX20 Acquired: 10/8/2025 12:54:46 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0024346	-.002596	.0005108
Stddev	.0006883	.000647	.0001277
%RSD	28.27248	24.91007	25.00763

#1	.0016404	-.002399	.0004830
#2	.0028045	-.003318	.0003993
#3	.0028588	-.002070	.0006502

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6542.749	95724.95	6510.915	4949.793	7889.272
Stddev	6.237	498.25	7.494	37.495	4.760
%RSD	.0953283	.5204977	.1150914	.7574964	.0603342

#1	6535.571	95224.33	6509.133	4922.572	7894.722
#2	6546.842	95729.73	6519.139	4934.249	7887.165
#3	6545.835	96220.79	6504.473	4992.560	7885.930

Sample Name: ICSAB01DLX20 Acquired: 10/8/2025 12:59:03 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0043954	.0039410	.0022735	.0064107	.0306346	11.79440	.0289787
Stddev	.0000828	.0012647	.0010846	.0017318	.0014232	.01993	.0019458
%RSD	1.883940	32.08913	47.70696	27.01367	4.645785	.1689597	6.714649

#1	.0044747	.0043427	.0026365	.0083809	.0307869	11.81668	.0269918
#2	.0043095	.0025244	.0031300	.0051294	.0291413	11.78824	.0290636
#3	.0044021	.0049561	.0010539	.0057217	.0319755	11.77828	.0308806

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0261337	.0478501	11.66992	.0293942	.0242765	.0268844	4.631137
Stddev	.0001605	.0000758	.04401	.0002293	.0000213	.0000658	.020779
%RSD	.6140991	.1584970	.3771647	.7799473	.0878831	.2445948	.4486807

#1	.0261653	.0478844	11.69592	.0294024	.0242892	.0269276	4.647238
#2	.0262760	.0477631	11.61910	.0296193	.0242885	.0268087	4.607681
#3	.0259597	.0479027	11.69473	.0291610	.0242519	.0269169	4.638493

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0274212	12.18088	.0485760	.0104004	-.136323	.0264533	.0530266
Stddev	.0003966	.01778	.0004797	.0001400	.009814	.0033927	.0000374
%RSD	1.446273	.1459420	.9875822	1.345766	7.198751	12.82517	.0705627

#1	.0269973	12.16044	.0490821	.0102778	-.133973	.0266941	.0530364
#2	.0274832	12.19273	.0485181	.0105529	-.147097	.0297192	.0530581
#3	.0277831	12.18948	.0481279	.0103705	-.127897	.0229466	.0529853

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.380054	.0637789	.0752138	.0506904	.0681621	.0747356	-.002465
Stddev	.008025	.0012134	.0001898	.0004967	.0011041	.0044724	.000642
%RSD	2.111555	1.902580	.2524012	.9798869	1.619818	5.984250	26.03175

#1	-.382045	.0630414	.0751744	.0510668	.0670529	.0777541	-.001930
#2	-.371221	.0651794	.0750467	.0501274	.0681724	.0695975	-.002288
#3	-.386896	.0631158	.0754202	.0508769	.0692610	.0768553	-.003176

Sample Name: ICSAB01DLX20 Acquired: 10/8/2025 12:59:03 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.000194	-.000993	.0002326
Stddev	.000130	.007595	.0000790
%RSD	66.93453	764.7944	33.96319

#1	-.000342	.003848	.0003226
#2	-.000102	-.009747	.0002004
#3	-.000137	.002919	.0001748

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6660.823	92046.55	6414.379	4797.253	8124.522
Stddev	17.290	342.98	39.898	15.354	26.569
%RSD	.2595707	.3726151	.6220069	.3200607	.3270271

#1	6642.364	91678.47	6371.362	4804.539	8096.006
#2	6663.464	92357.16	6421.607	4807.608	8128.981
#3	6676.640	92104.02	6450.170	4779.613	8148.580

Sample Name: CCV01 Acquired: 10/8/2025 13:12:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	4.919828	5.086792	4.903671	4.864691	4.898791	9.988206	10.21980
Stddev	.006246	.116971	.013115	.004242	.011410	.056294	.05977
%RSD	.1269525	2.299495	.2674574	.0871908	.2329231	.5636063	.5848469

#1	4.913886	5.221161	4.889049	4.860254	4.890773	10.05181	10.28581
#2	4.919260	5.031468	4.907570	4.868705	4.893746	9.96803	10.20424
#3	4.926339	5.007745	4.914395	4.865114	4.911854	9.94478	10.16935

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2452247	2.478872	25.13467	.9891684	2.466885	1.243764	5.123236
Stddev	.0032722	.009474	.09817	.0310514	.008997	.003275	.143577
%RSD	1.334365	.3822011	.3905927	3.139140	.3647276	.2633009	2.802477

#1	.2489427	2.469449	25.22283	1.009416	2.457497	1.240192	5.196634
#2	.2439487	2.478771	25.15231	.953418	2.467726	1.244475	4.957796
#3	.2427828	2.488397	25.02887	1.004671	2.475433	1.246624	5.215276

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.532423	24.84696	2.471886	1.235737	25.86250	2.505566	2.484051
Stddev	.019527	.14296	.008757	.033123	.64756	.005413	.074591
%RSD	.7710790	.5753586	.3542585	2.680427	2.503852	.2160352	3.002798

#1	2.549327	25.01200	2.462544	1.258400	26.14649	2.511767	2.539360
#2	2.536894	24.76708	2.473204	1.197724	25.12147	2.501787	2.399217
#3	2.511048	24.76179	2.479909	1.251088	26.31954	2.503143	2.513577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.38799	4.935564	5.033618	4.965996	5.053617	5.059126	4.921912
Stddev	.64240	.072529	.010169	.007361	.020114	.143810	.013366
%RSD	2.530344	1.469515	.2020128	.1482276	.3980161	2.842580	.2715672

#1	25.71659	5.018898	5.024449	4.958714	5.076468	5.097555	4.908374
#2	24.64776	4.901111	5.031849	4.965840	5.045793	4.900006	4.922263
#3	25.79962	4.886683	5.044554	4.973434	5.038591	5.179818	4.935099

Sample Name: CCV01 Acquired: 10/8/2025 13:12:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	4.788071	5.111002	5.094642
Stddev	.016998	.034635	.078239
%RSD	.3550004	.6776643	1.535717

#1	4.807112	5.148324	5.182266
#2	4.774428	5.104787	5.069880
#3	4.782673	5.079895	5.031779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6433.237	91032.69	6680.465	4711.809	7376.901
Stddev	17.746	2238.82	84.080	112.930	23.154
%RSD	.2758527	2.459353	1.258599	2.396733	.3138776

#1	6450.714	89515.41	6591.200	4624.854	7397.889
#2	6433.764	93603.98	6692.033	4839.442	7380.751
#3	6415.233	89978.68	6758.162	4671.131	7352.062

Sample Name: CCB01 Acquired: 10/8/2025 13:16:18 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0006696	-.000262	-.000732	.0013284	.0011195	.0011711	.0025308
Stddev	.0004497	.001830	.000437	.0018715	.0013309	.0039555	.0011975
%RSD	67.16258	699.4454	59.62407	140.8780	118.8857	337.7500	47.31797

#1	.0006940	-.000702	-.000964	.0010791	.0004559	-.000485	.0037385
#2	.0011067	.001749	-.000229	.0033121	.0002508	.005686	.0025102
#3	.0002082	-.001831	-.001004	-.000406	.0026517	-.001687	.0013437

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000056	-.000038	.0177155	-.000139	.0001982	.0003266	.0019590
Stddev	.000050	.000071	.0055055	.000300	.0002069	.0001796	.0090687
%RSD	88.99660	187.5104	31.07723	215.7752	104.3516	54.99564	462.9137

#1	-.000101	-.000111	.0124234	-.000075	.0001935	.0004823	-.000078
#2	-.000066	-.000034	.0173109	.000124	-.000006	.0001301	-.005918
#3	-.000002	.000031	.0234120	-.000466	.000407	.0003675	.011873

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001381	-.009478	.0001825	-.000397	-.032348	.0015894	.0002143
Stddev	.0007996	.014324	.0003015	.000422	.005083	.0019722	.0001516
%RSD	579.0877	151.1388	165.2048	106.4252	15.71503	124.0870	70.72777

#1	-.000664	.002049	.0004347	-.000165	-.037706	.0038629	.0003440
#2	.000143	-.025514	.0002643	-.000141	-.031745	.0003402	.0000477
#3	.000935	-.004968	-.000151	-.000885	-.027592	.0005650	.0002512

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.124320	.0013603	.0000586	.0023380	-.000379	.0162758	-.000790
Stddev	.019132	.0004895	.0001194	.0001957	.000579	.0068867	.000922
%RSD	15.38913	35.98529	203.7349	8.368596	152.6497	42.31211	116.6864

#1	-.146365	.0010785	-.000072	.0024910	-.001043	.0231467	-.000168
#2	-.114535	.0019255	.000085	.0024055	.000025	.0093735	-.001850
#3	-.112059	.0010769	.000162	.0021176	-.000120	.0163074	-.000354

Sample Name: CCB01 Acquired: 10/8/2025 13:16:18 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0009710	.0039060	-.000047
Stddev	.0022611	.0033516	.000144
%RSD	232.8641	85.80553	305.8842

#1	-.001386	.0015531	-.000202
#2	.003122	.0024214	.000082
#3	.001177	.0077434	-.000021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6537.207	97141.97	6465.557	5035.707	8224.516
Stddev	6.842	246.09	38.660	26.430	8.611
%RSD	.1046596	.2533273	.5979405	.5248591	.1046942

#1	6532.630	97241.36	6505.910	5054.259	8218.452
#2	6545.072	97322.81	6428.847	5047.418	8234.371
#3	6533.918	96861.73	6461.915	5005.445	8220.724

Sample Name: LR-2 Acquired: 10/8/2025 13:25:04 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.1050822	-.038441	.0158782	.0863270	-.160192	1862.349	.0265251
Stddev	.0058741	.007594	.0003000	.0062011	.005822	20.857	.0007062
%RSD	5.590036	19.75605	1.889575	7.183230	3.634675	1.119922	2.662247

#1	.1081783	-.036050	.0156431	.0878802	-.161651	1853.231	.0271636
#2	.1087606	-.032330	.0157754	.0916038	-.153779	1886.212	.0266450
#3	.0983076	-.046943	.0162161	.0794970	-.165146	1847.604	.0257666

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239148	.0362800	9.514899	-.091487	.0697790	.3174069	2559.179
Stddev	.0001804	.0015071	.195498	.000365	.0002381	.0138830	19.753
%RSD	.7542206	4.154123	2.054654	.3995090	.3412483	4.373893	.7718326

#1	.0240729	.0370767	9.645498	-.091514	.0700535	.3293848	2545.397
#2	.0237183	.0345417	9.290140	-.091839	.0696272	.3021910	2581.809
#3	.0239532	.0372215	9.609060	-.091109	.0696564	.3206450	2550.332

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.221828	1.038876	.0497781	^ *****	3.162798	.0551727	.0408705
Stddev	.001586	.033361	.0010269	-----	.036488	.0037220	.0019697
%RSD	.7148653	3.211248	2.062885	-----	1.153652	6.746095	4.819417

#1	-.220689	1.026586	.0508470	^ -----	3.123431	.0520911	.0430899
#2	-.223639	1.013404	.0496881	^ -----	3.169481	.0541190	.0393299
#3	-.221156	1.076639	.0487992	^ -----	3.195483	.0593079	.0401918

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1817.952	^ *****	-.018494	.0196374	.0037090	.4823550	.0836543
Stddev	2.431	-----	.000552	.0016276	.0009944	.0113705	.0026083
%RSD	.1337481	-----	2.984579	8.288153	26.80919	2.357296	3.117932

#1	1815.852	^ -----	-.017868	.0195605	.0046971	.4697413	.0811048
#2	1820.616	^ -----	-.018704	.0213021	.0027085	.4918178	.0835405
#3	1817.387	^ -----	-.018911	.0180497	.0037215	.4855058	.0863177

Sample Name: LR-2 Acquired: 10/8/2025 13:25:04 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.400589	.2660880	-2.45368
Stddev	.003020	.0036940	.01907
%RSD	.7539872	1.388260	.7774018

#1	-.402063	.2641787	-2.44029
#2	-.397114	.2703459	-2.47552
#3	-.402588	.2637393	-2.44524

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5599.709	78533.63	6426.049	4063.694	4999.532
Stddev	12.787	134.46	9.720	7.901	12.548
%RSD	.2283539	.1712169	.1512595	.1944297	.2509817

#1	5584.973	78599.51	6424.300	4056.308	4985.900
#2	5607.877	78622.44	6417.323	4072.025	5002.097
#3	5606.278	78378.93	6436.525	4062.749	5010.599

Sample Name: LR-3 Acquired: 10/8/2025 13:29:31 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0928734	.0375604	238.1093	.0045800	.1301061	.0975753	.0024579
Stddev	.0012559	.0062353	.8763	.0021220	.0025097	.0025198	.0019906
%RSD	1.352262	16.60059	.3680218	46.33170	1.928973	2.582422	80.98667

#1	.0942402	.0304167	238.3436	.0062289	.1311128	.0991507	.0047546
#2	.0926094	.0403548	237.1397	.0021859	.1272494	.0989061	.0012308
#3	.0917704	.0419097	238.8447	.0053252	.1319563	.0946691	.0013883

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004491	-.001133	.2112893	24.27402	.0066090	52.83959	.1547092
Stddev	.000038	.000069	.0043822	.17017	.0001537	.16929	.0029845
%RSD	.8524434	6.058380	2.074019	.7010239	2.325529	.3203791	1.929076

#1	-.004460	-.001099	.2089187	24.35035	.0065704	53.03155	.1581172
#2	-.004534	-.001212	.2086031	24.39265	.0064783	52.77555	.1534480
#3	-.004479	-.001088	.2163461	24.07905	.0067783	52.71167	.1525624

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.61572	-.194814	22.79269	.0022314	.3563718	-.020757	28.23243
Stddev	.06794	.046340	.07657	.0004079	.0234269	.002517	.23948
%RSD	.1267156	23.78698	.3359407	18.27900	6.573732	12.12631	.8482522

#1	53.65098	-.235160	22.87947	.0020477	.3296914	-.017900	28.35705
#2	53.65878	-.144201	22.76393	.0026988	.3735770	-.022648	28.38391
#3	53.53740	-.205082	22.73466	.0019477	.3658469	-.021723	27.95634

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7749296	-.006810	-.009342	-.007888	-.045244	-.066362	.1819546
Stddev	.0217773	.000279	.000220	.000377	.001164	.004173	.0019853
%RSD	2.810226	4.101325	2.356987	4.779536	2.572016	6.287519	1.091116

#1	.7744312	-.006894	-.009202	-.007527	-.045557	-.070827	.1818116
#2	.7969517	-.007037	-.009229	-.007859	-.046219	-.065695	.1840075
#3	.7534057	-.006498	-.009596	-.008279	-.043956	-.062563	.1800446

Sample Name: LR-3 Acquired: 10/8/2025 13:29:31 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0620704	.0062354	.0003972
Stddev	.0013296	.0081142	.0001214
%RSD	2.142152	130.1316	30.57300

#1	.0635469	.0055963	.0002909
#2	.0609675	.0146503	.0005296
#3	.0616968	-.001540	.0003711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6206.075	97446.96	6568.750	4746.902	8035.233
Stddev	13.243	67.98	30.148	16.469	14.473
%RSD	.2133848	.0697593	.4589660	.3469353	.1801233

#1	6191.169	97520.21	6534.249	4742.965	8018.673
#2	6210.571	97385.90	6581.975	4732.758	8041.560
#3	6216.484	97434.77	6590.025	4764.982	8045.466

Sample Name: Q3295-03 Acquired: 10/8/2025 13:34:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0943511	-.004074	1.901388	.0094345	-.013704	150.5082	.7267687
Stddev	.0019072	.002683	.001455	.0014137	.000602	.3049	.0049756
%RSD	2.021395	65.84690	.0765101	14.98455	4.391831	.2026042	.6846137

#1	.0960921	-.001042	1.900664	.0109402	-.013353	150.1911	.7239071
#2	.0923126	-.006140	1.900438	.0081354	-.013360	150.5344	.7238851
#3	.0946485	-.005040	1.903063	.0092280	-.014399	150.7993	.7325140

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087696	.0094392	31.22231	.2556534	.1219444	.5171635	265.5868
Stddev	.0001352	.0002291	.07764	.0003029	.0001327	.0014616	2.0284
%RSD	1.541877	2.427475	.2486683	.1184601	.1087751	.2826143	.7637458

#1	.0089196	.0097019	31.21735	.2554075	.1217962	.5188175	263.2840
#2	.0087322	.0093356	31.14727	.2559917	.1219848	.5160460	267.1088
#3	.0086570	.0092802	31.30231	.2555609	.1220521	.5166270	266.3677

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.545177	33.27624	.2012680	.0225416	4.630262	.4721424	1.289531
Stddev	.028907	.09924	.0007457	.0014241	.045454	.0017877	.003477
%RSD	.6359824	.2982169	.3704945	6.317810	.9816652	.3786379	.2696370

#1	4.522481	33.27199	.2009228	.0211894	4.578764	.4701176	1.287919
#2	4.535329	33.17920	.2021237	.0224073	4.647236	.4728068	1.293521
#3	4.577720	33.37754	.2007574	.0240281	4.664786	.4735027	1.287152

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.395898	.1977178	.0037416	.0450387	4.055251	2.424927	6.534654
Stddev	.071241	.0048795	.0002721	.0008030	.024710	.026368	.066534
%RSD	1.113851	2.467938	7.271438	1.782814	.6093286	1.087369	1.018176

#1	6.313834	.1931066	.0034306	.0458139	4.037294	2.412465	6.546921
#2	6.431995	.2028274	.0039355	.0450915	4.045026	2.455216	6.594200
#3	6.441864	.1972195	.0038588	.0442106	4.083432	2.407100	6.462839

Sample Name: Q3295-03 Acquired: 10/8/2025 13:34:15 Type: Unk
Method: 6010-200.7 NEW(v274) 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	1.910137	.1540961	-.045684
Stddev	.022276	.0022203	.001542
%RSD	1.166204	1.440865	3.374540

#1	1.915968	.1519622	-.044836
#2	1.928918	.1539325	-.047464
#3	1.885526	.1563938	-.044753

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7785.600	113044.4	8240.355	5744.878	7628.518
Stddev	12.001	293.5	39.316	21.715	2.557
%RSD	.1541450	.2596205	.4771124	.3779937	.0335177

#1	7777.897	112979.5	8201.237	5747.364	7627.906
#2	7799.428	112788.8	8279.866	5722.027	7631.325
#3	7779.476	113364.9	8239.964	5765.244	7626.322

Sample Name: Q3295-01 Acquired: 10/8/2025 13:38:17 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0453941	-.010075	.2861076	.0093411	-.015546	124.9108	.5606027
Stddev	.0018876	.000332	.0009485	.0024501	.000507	.1049	.0026817
%RSD	4.158175	3.298826	.3315339	26.22947	3.261832	.0839847	.4783652

#1	.0441924	-.009805	.2871768	.0070402	-.015684	125.0200	.5628669
#2	.0444202	-.009973	.2853673	.0119172	-.015970	124.9015	.5612999
#3	.0475697	-.010446	.2857788	.0090660	-.014984	124.8108	.5576412

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067729	.0047466	61.91065	.2117199	.1326186	.3014226	258.0729
Stddev	.0001312	.0003286	.19776	.0011773	.0001345	.0019179	3.0901
%RSD	1.937503	6.923216	.3194327	.5560715	.1014219	.6362757	1.197372

#1	.0066392	.0044225	62.04919	.2124830	.1325954	.2999734	261.4267
#2	.0067778	.0050796	61.99860	.2103640	.1324973	.3035974	255.3411
#3	.0069015	.0047379	61.68417	.2123127	.1327633	.3006969	257.4508

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.043983	46.06072	.1888891	.0242190	13.82283	.5130889	.4911687
Stddev	.023962	.03815	.0002375	.0005446	.15654	.0035240	.0012634
%RSD	.5925306	.0828161	.1257500	2.248596	1.132476	.6868159	.2572168

#1	4.070652	46.07699	.1890342	.0248147	14.00308	.5154562	.4902635
#2	4.037031	46.08802	.1890181	.0237467	13.72091	.5147714	.4906307
#3	4.024266	46.01713	.1886150	.0240957	13.74451	.5090390	.4926121

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.297087	.2618609	.0059282	.0231170	5.309494	3.110728	5.619557
Stddev	.087997	.0122948	.0001815	.0004195	.020566	.039507	.029980
%RSD	.9464957	4.695168	3.062258	1.814553	.3873453	1.270013	.5334997

#1	9.390768	.2742867	.0059037	.0226398	5.329282	3.154173	5.601027
#2	9.216170	.2497014	.0061207	.0234272	5.310971	3.101054	5.654146
#3	9.284322	.2615945	.0057601	.0232841	5.288229	3.076956	5.603498

Sample Name: Q3295-01 Acquired: 10/8/2025 13:38:17 Type: Unk
Method: 6010-200.7 NEW(v274) 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	3.757962	.1432417	.0030487
Stddev	.018960	.0002188	.0025437
%RSD	.5045372	.1527763	83.43423

#1	3.750017	.1430607	.0009947
#2	3.779602	.1431794	.0058940
#3	3.744267	.1434849	.0022574

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7938.733	114633.4	9113.056	5808.540	7617.260
Stddev	4.409	592.1	25.651	16.461	9.406
%RSD	.0555340	.5164980	.2814773	.2833988	.1234842

#1	7939.437	114058.8	9129.069	5811.903	7625.338
#2	7934.015	115241.5	9083.470	5823.061	7606.933
#3	7942.747	114599.9	9126.629	5790.657	7619.509

Sample Name: Q3295-01LX5 Acquired: 10/8/2025 13:46:24 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0112365	.0003159	.0655969	.0001804	-.003887	33.53375	.1530408
Stddev	.0028113	.0024445	.0006450	.0023666	.000139	.09174	.0022817
%RSD	25.01949	773.7077	.9833514	1312.114	3.582527	.2735831	1.490911

#1	.0144823	-.002037	.0656894	-.001540	-.004030	33.48548	.1505542
#2	.0095661	.000142	.0661908	.002879	-.003752	33.63955	.1550382
#3	.0096611	.002843	.0649106	-.000799	-.003877	33.47623	.1535300

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019464	.0006872	17.18508	.0563530	.0299361	.0861885	63.30767
Stddev	.0000543	.0001592	.04588	.0003684	.0005291	.0019768	.24043
%RSD	2.789222	23.16966	.2669676	.6537286	1.767558	2.293621	.3797764

#1	.0019721	.0008658	17.18182	.0566159	.0305100	.0881152	63.35158
#2	.0019831	.0005600	17.23250	.0565111	.0298306	.0862852	63.52311
#3	.0018841	.0006357	17.14092	.0559319	.0294676	.0841651	63.04831

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.121501	12.59063	.0434059	.0050628	3.205335	.1405643	.1265927
Stddev	.005203	.06436	.0009050	.0003129	.035371	.0053780	.0005623
%RSD	.4638922	.5111729	2.085056	6.181394	1.103497	3.825976	.4441613

#1	1.117201	12.51779	.0444020	.0053384	3.219802	.1343546	.1260111
#2	1.127284	12.63983	.0431818	.0051276	3.231179	.1437199	.1266335
#3	1.120017	12.61427	.0426340	.0047226	3.165024	.1436183	.1271335

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.302398	.0332091	.0010991	.0049403	1.513758	2.281473	1.326578
Stddev	.016594	.0007468	.0002497	.0003624	.011837	.028641	.021419
%RSD	.7207156	2.248665	22.72073	7.335449	.7819520	1.255366	1.614612

#1	2.303413	.0323577	.0008218	.0053576	1.508993	2.294651	1.349522
#2	2.318461	.0337531	.0013062	.0047038	1.527234	2.301153	1.323106
#3	2.285320	.0335165	.0011694	.0047597	1.505045	2.248615	1.307108

Sample Name: Q3295-01LX5 Acquired: 10/8/2025 13:46:24 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.8731566	.0405124	.0064349
Stddev	.0165642	.0027069	.0000746
%RSD	1.897046	6.681643	1.159592

#1	.8910747	.0389372	.0063546
#2	.8699921	.0389621	.0065021
#3	.8584029	.0436381	.0064481

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6729.693	102025.7	7046.566	5182.274	7737.090
Stddev	1.283	213.9	36.795	17.358	8.345
%RSD	.0190597	.2096109	.5221728	.3349445	.1078537

#1	6730.723	102240.0	7087.930	5196.839	7735.259
#2	6728.256	101812.3	7017.480	5163.068	7729.812
#3	6730.099	102024.8	7034.286	5186.916	7746.198

Sample Name: Q3295-01MS Acquired: 10/8/2025 13:50:29 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6630972	1.757775	1.198938	1.476833	.2638622	153.5757
Stddev	.0011617	.018222	.000736	.000966	.0012680	.1679
%RSD	.1751911	1.036642	.0613775	.0653856	.4805404	.1093446

#1	.6617709	1.738408	1.198282	1.477922	.2642650	153.6465
#2	.6639343	1.760335	1.198797	1.476079	.2624418	153.6966
#3	.6635863	1.774581	1.199734	1.476500	.2648799	153.3840

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7938581	.1658856	.1919121	77.71921	.5400482	.3432997
Stddev	.0034656	.0012948	.0002523	.13964	.0009645	.0004026
%RSD	.4365553	.7805247	.1314587	.1796699	.1785937	.1172720

#1	.7964581	.1672852	.1917034	77.82203	.5410936	.3429671
#2	.7899236	.1647305	.1918404	77.77537	.5391929	.3431847
#3	.7951926	.1656411	.1921925	77.56024	.5398581	.3437473

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6393938	258.6108	5.039315	58.83215	.6871310	.0783235
Stddev	.0009430	1.7681	.020535	.08689	.0003649	.0009430
%RSD	.1474812	.6836993	.4074996	.1476978	.0531044	1.203976

#1	.6398785	257.1376	5.062440	58.90613	.6867675	.0777233
#2	.6383071	260.5715	5.023212	58.85386	.6871280	.0794104
#3	.6399959	258.1232	5.032293	58.73646	.6874973	.0778367

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.54413	.8004975	.6761729	16.55103	.3606813	.3148332
Stddev	.08274	.0051848	.0005130	.07279	.0037583	.0004559
%RSD	.5323069	.6477018	.0758622	.4397733	1.042001	.1448040

#1	15.46364	.7945451	.6763603	16.50103	.3573240	.3150249
#2	15.62896	.8029173	.6755926	16.63453	.3647414	.3143127
#3	15.53980	.8040300	.6765658	16.51752	.3599785	.3151619

Sample Name: Q3295-01MS Acquired: 10/8/2025 13:50:29 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6376828	6.210053	3.639733	F 12.00102	3.801741	.3096681
Stddev	.0012115	.005186	.022608	.01598	.010033	.0050488
%RSD	.1899876	.0835163	.6211360	.1331768	.2638974	1.630382

#1	.6363388	6.215966	3.639007	12.01944	3.798083	.3048380
#2	.6380188	6.207918	3.662696	11.99266	3.794051	.3092560
#3	.6386909	6.206275	3.617498	11.99094	3.813089	.3149102

Elem	Sr4077
Units	ppm
Avg	.1768313
Stddev	.0030020
%RSD	1.697641

#1	.1798029
#2	.1737999
#3	.1768910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7884.260	116543.6	8289.448	5873.234	7315.149
Stddev	7.466	572.1	50.436	33.007	4.173
%RSD	.0946978	.4908623	.6084350	.5619831	.0570455

#1	7891.617	116671.9	8232.071	5882.389	7318.923
#2	7876.689	115918.3	8326.779	5836.616	7310.667
#3	7884.474	117040.7	8309.494	5900.697	7315.856

Sample Name: Q3295-01MSD Acquired: 10/8/2025 13:54:23 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6427578	1.682225	1.178855	1.428025	.2524854	151.7007
Stddev	.0014426	.011235	.004475	.003926	.0025556	4.7186
%RSD	.2244345	.6678476	.3795858	.2749344	1.012170	3.110435

#1	.6441186	1.671354	1.183996	1.430811	.2545794	149.3473
#2	.6429094	1.681529	1.176735	1.423535	.2496377	148.6218
#3	.6412454	1.693792	1.175834	1.429730	.2532390	157.1331

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7878142	.1532376	.1817469	73.75309	.5556849	.3389903
Stddev	.0244512	.0035749	.0006875	2.30861	.0003177	.0016877
%RSD	3.103679	2.332908	.3782743	3.130185	.0571743	.4978531

#1	.7776375	.1515650	.1825307	72.69703	.5555956	.3409176
#2	.7700949	.1508056	.1814638	72.16139	.5554213	.3382765
#3	.8157102	.1573421	.1812461	76.40084	.5560377	.3377768

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5446857	311.9844	5.169247	56.73449	.6672948	.0862186
Stddev	.0017790	2.9996	.162177	1.82573	.0031703	.0010939
%RSD	.3266089	.9614641	3.137344	3.218024	.4750917	1.268704

#1	.5463822	313.5897	5.106379	55.78481	.6709505	.0860364
#2	.5448406	308.5237	5.047916	55.57935	.6656338	.0852274
#3	.5428343	313.8397	5.353445	58.83932	.6653002	.0873922

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.28907	.8227884	.7611119	18.74490	.4767947	.3103216
Stddev	.14201	.0236264	.0041199	.19282	.0137572	.0014322
%RSD	.8213914	2.871499	.5413045	1.028650	2.885348	.4615101

#1	17.37811	.8096219	.7657151	18.81612	.4917824	.3119753
#2	17.12530	.8086789	.7598505	18.52660	.4738599	.3094958
#3	17.36380	.8500643	.7577702	18.89197	.4647417	.3094936

Sample Name: Q3295-01MSD Acquired: 10/8/2025 13:54:23 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6247782	6.055784	2.958425	F 12.22243	4.026611	.3197020
Stddev	.0029994	.181888	.026550	.05729	.008304	.0087131
%RSD	.4800790	3.003549	.8974424	.4686939	.2062395	2.725385

#1	.6278505	5.978994	2.942042	12.22241	4.027935	.3169522
#2	.6218574	5.924883	2.944175	12.27972	4.034175	.3126955
#3	.6246267	6.263474	2.989058	12.16514	4.017725	.3294583

Elem	Sr4077
Units	ppm
Avg	.1278116
Stddev	.0113499
%RSD	8.880179

#1	.1204833
#2	.1220660
#3	.1408854

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7836.210	108500.6	8543.354	5495.701	7283.109
Stddev	26.385	381.5	228.283	46.530	22.348
%RSD	.3367007	.3516059	2.672057	.8466598	.3068412

#1	7809.584	108306.3	8677.028	5442.236	7258.102
#2	7862.347	108940.2	8673.269	5527.032	7301.126
#3	7836.699	108255.4	8279.764	5517.836	7290.098

Sample Name: Q3295-01A Acquired: 10/8/2025 13:58:19 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6544029	1.690240	1.140166	1.512174	.6268292	122.5491
Stddev	.0023020	.057138	.003063	.004081	.0012530	.1177
%RSD	.3517659	3.380437	.2686364	.2698808	.1999030	.0960395

#1	.6566011	1.747163	1.142549	1.512813	.6270809	122.4137
#2	.6520095	1.690668	1.136711	1.507811	.6279373	122.6067
#3	.6545981	1.632890	1.141237	1.515898	.6254694	122.6269

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6810902	.1660473	.1823873	61.69320	.5061379	.3090642
Stddev	.0033459	.0003540	.0001758	.07316	.0012659	.0004216
%RSD	.4912485	.2131704	.0963900	.1185828	.2501036	.1364120

#1	.6773362	.1664273	.1825644	61.63294	.5073089	.3091381
#2	.6837579	.1657269	.1822129	61.77460	.5063100	.3086106
#3	.6821766	.1659878	.1823847	61.67205	.5047947	.3094441

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5253332	237.5039	4.098471	46.69916	.6280291	.0770121
Stddev	.0014700	1.5238	.013422	.06129	.0009598	.0008301
%RSD	.2798304	.6415998	.3274937	.1312340	.1528209	1.077871

#1	.5269000	236.3535	4.085718	46.69080	.6272714	.0760662
#2	.5239843	239.2321	4.112475	46.76420	.6291083	.0776189
#3	.5251153	236.9260	4.097220	46.64249	.6277076	.0773513

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.70314	.7366816	.6506061	15.82039	.3763447	.3283089
Stddev	.12157	.0004086	.0010077	.08910	.0030373	.0004392
%RSD	.8871700	.0554672	.1548877	.5632069	.8070451	.1337779

#1	13.60079	.7362320	.6508925	15.77913	.3754324	.3288153
#2	13.83752	.7367823	.6514396	15.92264	.3797335	.3280323
#3	13.67112	.7370304	.6494861	15.75939	.3738681	.3280790

Sample Name: Q3295-01A Acquired: 10/8/2025 13:58:19 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.6651553	5.349232	3.477623	F 10.60928	3.695350	.2724746
Stddev	.0047733	.009247	.022743	.03880	.033432	.0053146
%RSD	.7176234	.1728726	.6539913	.3656883	.9047039	1.950506

#1	.6705484	5.340779	3.457592	10.64898	3.729465	.2671888
#2	.6614737	5.359109	3.502347	10.57145	3.662646	.2724175
#3	.6634437	5.347810	3.472929	10.60743	3.693938	.2778177

Elem	Sr4077
Units	ppm
Avg	.1600701
Stddev	.0007472
%RSD	.4668231

#1	.1592779
#2	.1601701
#3	.1607623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7946.295	112683.8	8177.644	5631.952	7646.895
Stddev	7.156	270.6	32.245	9.209	10.968
%RSD	.0900558	.2401046	.3943047	.1635160	.1434350

#1	7938.037	112430.2	8149.973	5642.284	7635.073
#2	7950.656	112652.7	8213.054	5628.967	7656.741
#3	7950.193	112968.6	8169.905	5624.606	7648.870

Sample Name: LR-1 Acquired: 10/8/2025 14:02:14 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.002565	.0131591	-.002802	-.016641	.0257024	.3007980	.0259642
Stddev	.002918	.0032982	.001706	.004758	.0006217	.0319251	.0029891
%RSD	113.7620	25.06357	60.89258	28.59378	2.418789	10.61348	11.51252

#1	-.002426	.0096247	-.004687	-.013111	.0258108	.2830859	.0236671
#2	-.005550	.0136982	-.002352	-.014761	.0262627	.2816554	.0248818
#3	.000281	.0161545	-.001366	-.022053	.0250336	.3376527	.0293438

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008039	.0009664	2417.155	.0333574	.0071771	.0089258	.6379804
Stddev	.0000169	.0001452	113.019	.0004232	.0001156	.0006934	.0065546
%RSD	2.096310	15.02432	4.675705	1.268527	1.611242	7.768292	1.027393

#1	.0008046	.0011264	2308.926	.0338083	.0072699	.0093398	.6448327
#2	.0007868	.0008430	2408.119	.0332952	.0072139	.0081253	.6373375
#3	.0008204	.0009298	2534.422	.0329689	.0070475	.0093122	.6317710

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0293696	2277.677	.0274607	.0026435	2336.382	.0141219	.0745162
Stddev	.0016644	104.664	.0002751	.0005843	37.962	.0023439	.0009904
%RSD	5.667122	4.595206	1.001741	22.10540	1.624810	16.59753	1.329164

#1	.0277030	2182.085	.0271499	.0021936	2377.468	.0124915	.0744990
#2	.0293740	2261.432	.0276727	.0024329	2302.608	.0130662	.0735344
#3	.0310318	2389.513	.0275596	.0033039	2329.072	.0168079	.0755151

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.665129	.0002238	.0116927	-.012981	-.110713	-.003296	.0148073
Stddev	.484278	.0015601	.0003730	.000918	.006269	.015981	.0022386
%RSD	7.265849	696.9745	3.189708	7.073190	5.662625	484.8199	15.11802

#1	6.139804	-.001407	.0119811	-.013997	-.104796	.013621	.0140692
#2	6.761807	.000377	.0112715	-.012211	-.110061	-.005371	.0173217
#3	7.093775	.001702	.0118255	-.012734	-.117284	-.018139	.0130309

Sample Name: LR-1 Acquired: 10/8/2025 14:02:14 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.2464798	.8644356	.0617110
Stddev	.0049755	.0429486	.0028533
%RSD	2.018620	4.968403	4.623617

#1	.2424250	.8297316	.0589445
#2	.2520320	.8511069	.0615448
#3	.2449823	.9124684	.0646438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4455.278	69840.32	5927.463	3396.110	4684.663
Stddev	56.771	636.89	243.934	31.717	57.265
%RSD	1.274247	.9119165	4.115318	.9339302	1.222399

#1	4515.820	69515.94	6141.802	3387.368	4748.207
#2	4446.778	70574.10	5978.559	3431.282	4668.732
#3	4403.237	69430.93	5662.028	3369.681	4637.051

Sample Name: Q3295-01DUP Acquired: 10/8/2025 14:08:24 Type: Unk
Method: 6010-200.7 NEW(v274) 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	.0452194	-.004366	.2989570	.0034300	-.015075	127.9250	.5791418
Stddev	.0023197	.003579	.0026420	.0022659	.000249	.1168	.0033458
%RSD	5.129924	81.96959	.8837415	66.06222	1.653189	.0912884	.5777103

#1	.0428016	-.005761	.2992584	.0030941	-.014792	127.9940	.5829938
#2	.0454300	-.007038	.2961772	.0013507	-.015263	127.7901	.5774724
#3	.0474267	-.000300	.3014354	.0058451	-.015168	127.9908	.5769593

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071227	.0086048	64.16853	.2133008	.1384963	.3190939	248.4552
Stddev	.0000617	.0002357	.08833	.0011899	.0001888	.0006269	1.1600
%RSD	.8661604	2.739683	.1376467	.5578392	.1362950	.1964487	.4669027

#1	.0071324	.0088577	64.26995	.2119399	.1383597	.3197787	247.6850
#2	.0071789	.0085655	64.10851	.2141445	.1387117	.3189547	249.7894
#3	.0070567	.0083912	64.12712	.2138181	.1384175	.3185484	247.8912

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.202423	47.42841	.1980856	.0231444	13.02382	.5336867	.4883328
Stddev	.014429	.12429	.0003065	.0007169	.07913	.0025717	.0010347
%RSD	.3433564	.2620673	.1547311	3.097593	.6075474	.4818737	.2118833

#1	4.217887	47.39779	.1980941	.0227653	13.02894	.5320433	.4881167
#2	4.189320	47.32228	.1983877	.0239713	13.10026	.5323664	.4894586
#3	4.200062	47.56515	.1977749	.0226966	12.94226	.5366503	.4874233

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.847382	.1817961	.0058293	.0251995	5.612709	5.625962	6.021158
Stddev	.053045	.0047681	.0001856	.0005802	.010048	.044647	.038997
%RSD	.5995575	2.622783	3.183654	2.302261	.1790148	.7935802	.6476600

#1	8.837976	.1775685	.0056296	.0245297	5.623736	5.574699	6.051748
#2	8.904501	.1869645	.0058618	.0255269	5.604072	5.646861	6.034479
#3	8.799669	.1808554	.0059964	.0255420	5.610320	5.656327	5.977246

Sample Name: Q3295-01DUP Acquired: 10/8/2025 14:08:24 Type: Unk
Method: 6010-200.7 NEW(v274) 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	4.063175	.1446742	.0172495
Stddev	.051858	.0017422	.0020711
%RSD	1.276297	1.204214	12.00662

#1	4.095904	.1427766	.0193426
#2	4.090238	.1462013	.0152012
#3	4.003384	.1450447	.0172046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7642.512	118549.6	8634.270	5944.697	7266.659
Stddev	5.845	238.4	47.165	19.265	5.979
%RSD	.0764813	.2011293	.5462506	.3240780	.0822764

#1	7648.093	118770.4	8594.711	5930.757	7272.296
#2	7643.010	118296.8	8686.466	5936.653	7260.389
#3	7636.434	118581.7	8621.633	5966.681	7267.293

Sample Name: CCV02 Acquired: 10/8/2025 14:14:27 Type: Unk
Method: 6010-200.7 NEW(v274) 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	4.781080	4.676567	4.697105	4.776212	4.819309	9.496922	9.755614
Stddev	.014172	.049685	.014143	.013921	.008263	.044569	.026587
%RSD	.2964146	1.062425	.3010980	.2914689	.1714469	.4692991	.2725340

#1	4.780291	4.623281	4.707624	4.775520	4.824132	9.497959	9.751955
#2	4.795629	4.684795	4.702663	4.790467	4.824027	9.540963	9.731046
#3	4.767318	4.721624	4.681027	4.762651	4.809768	9.451843	9.783842

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2279990	2.350560	23.84566	.9505155	2.352247	1.190539	4.757973
Stddev	.0011810	.006604	.01405	.0069340	.007191	.003468	.011980
%RSD	.5179691	.2809602	.0589243	.7295045	.3056959	.2913130	.2517835

#1	.2290205	2.356590	23.85733	.9425168	2.358812	1.193602	4.760157
#2	.2267059	2.351589	23.83006	.9542026	2.353366	1.191243	4.768711
#3	.2282706	2.343502	23.84957	.9548270	2.344562	1.186773	4.745052

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.423388	23.64970	2.358128	1.170230	24.13282	2.394133	2.334345
Stddev	.009761	.03133	.005253	.006450	.20908	.003159	.009284
%RSD	.4027752	.1324690	.2227494	.5511868	.8663855	.1319306	.3977186

#1	2.421910	23.61444	2.362687	1.164363	23.89598	2.397285	2.326131
#2	2.414451	23.66030	2.359313	1.177137	24.29179	2.394146	2.344418
#3	2.433804	23.67435	2.352384	1.169189	24.21070	2.390968	2.332485

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.72172	4.613301	4.835532	4.728279	4.829683	4.688844	4.739535
Stddev	.23489	.023843	.013980	.020605	.007036	.041180	.027843
%RSD	.9901716	.5168396	.2891085	.4357748	.1456830	.8782653	.5874575

#1	23.45755	4.632942	4.845077	4.736592	4.834860	4.642738	4.768092
#2	23.90703	4.586771	4.842034	4.743428	4.821672	4.701822	4.738047
#3	23.80059	4.620188	4.819485	4.704816	4.832517	4.721971	4.712466

Sample Name: CCV02 Acquired: 10/8/2025 14:14:27 Type: Unk
Method: 6010-200.7 NEW(v274) 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	4.625954	4.734822	4.844467
Stddev	.024185	.032132	.023956
%RSD	.5228057	.6786235	.4944999

#1	4.621824	4.727215	4.843029
#2	4.651938	4.707177	4.821263
#3	4.604100	4.770075	4.869110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6702.535	101077.6	7265.446	5110.568	7733.755
Stddev	16.689	373.1	56.613	10.929	25.065
%RSD	.2490006	.3691129	.7792108	.2138416	.3240978

#1	6684.060	101498.5	7220.439	5114.510	7706.215
#2	6707.024	100787.8	7329.008	5098.215	7739.818
#3	6716.520	100946.4	7246.892	5118.978	7755.233

Sample Name: CCB02 Acquired: 10/8/2025 14:18:29 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.001732	-.004428	-.000709	.0006167	.0007588	-.008809	-.000336
Stddev	.001100	.001534	.000149	.0029164	.0004161	.003868	.000400
%RSD	63.51108	34.64912	21.05967	472.9118	54.83415	43.90467	119.1507

#1	-.001278	-.004390	-.000833	-.002655	.0003628	-.004346	.000073
#2	-.000932	-.005982	-.000543	.001560	.0011925	-.010914	-.000726
#3	-.002986	-.002914	-.000751	.002944	.0007212	-.011168	-.000353

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000158	-.000086	-.012727	.0002403	-.000018	-.000015	.0045857
Stddev	.000056	.000030	.009803	.0005376	.000137	.000106	.0020434
%RSD	35.40152	35.24779	77.02594	223.7346	756.3202	719.0318	44.55902

#1	-.000147	-.000051	-.002129	-.000327	-.000176	-.000021	.0069349
#2	-.000219	-.000102	-.014582	.000306	.000054	-.000118	.0036017
#3	-.000109	-.000105	-.021470	.000742	.000068	.000095	.0032206

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001933	-.005758	-.000010	-.000305	-.076896	-.000663	.0003170
Stddev	.0002396	.007323	.000078	.000554	.013733	.001486	.0002029
%RSD	123.9811	127.1686	768.6058	181.5761	17.85869	224.0213	64.00061

#1	-.000006	-.010127	-.000089	-.000150	-.076056	.001037	.0001385
#2	.000126	.002696	-.000008	.000155	-.063603	-.001315	.0002748
#3	.000459	-.009843	.000067	-.000920	-.091030	-.001712	.0005376

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.266401	-.010435	.0003116	-.017317	-.000645	.0021187	-.001155
Stddev	.040605	.000580	.0000517	.000804	.003182	.0074369	.001030
%RSD	15.24216	5.555821	16.58890	4.641911	493.1294	351.0063	89.14322

#1	-.241511	-.010848	.0003403	-.018185	-.003325	-.006361	-.001628
#2	-.244434	-.009772	.0002519	-.017169	-.001482	.005187	-.001864
#3	-.313258	-.010686	.0003425	-.016597	.002871	.007531	.000026

Sample Name: CCB02 Acquired: 10/8/2025 14:18:29 Type: Unk
Method: 6010-200.7 NEW(v274) 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	-.000790	-.006288	-.000148
Stddev	.001267	.002175	.000122
%RSD	160.3780	34.59187	82.53977

#1	.000463	-.004893	-.000252
#2	-.000762	-.008794	-.000014
#3	-.002071	-.005177	-.000178

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7061.966	99137.79	6949.483	5065.270	8915.969
Stddev	8.610	201.40	19.869	22.436	11.753
%RSD	.1219202	.2031505	.2859054	.4429301	.1318173

#1	7058.185	98964.69	6967.167	5061.136	8923.367
#2	7071.820	99089.84	6927.983	5045.188	8922.122
#3	7055.894	99358.83	6953.298	5089.485	8902.417

Sample Name: Q3296-1 Acquired: 10/8/2025 14:23:06 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0452760	-.024469	.1997126	.0096708	-.012632	170.4892	.9910692
Stddev	.0014084	.004105	.0029469	.0017490	.003258	.1277	.0009935
%RSD	3.110626	16.77567	1.475567	18.08527	25.79505	.0748938	.1002401

#1	.0441601	-.020377	.2022028	.0082695	-.015009	170.5069	.9908731
#2	.0448095	-.024444	.2004759	.0116310	-.013968	170.3536	.9921460
#3	.0468585	-.028587	.1964592	.0091120	-.008918	170.6072	.9901884

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083671	.0088088	76.89653	.3972273	.1727164	.4181316	271.3348
Stddev	.0000368	.0001837	.08958	.0008575	.0002277	.0016769	.9617
%RSD	.4398205	2.085638	.1164983	.2158680	.1318591	.4010434	.3544331

#1	.0083733	.0086289	76.91041	.3967177	.1729565	.4168090	272.1464
#2	.0084004	.0089961	76.80082	.3967468	.1726895	.4200176	270.2726
#3	.0083276	.0088015	76.97836	.3982173	.1725034	.4175681	271.5855

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.979706	64.81027	.2805404	.0542472	6.519470	.4827367	.5751131
Stddev	.007550	.07551	.0004577	.0004477	.004657	.0037823	.0017901
%RSD	.1897195	.1165093	.1631410	.8253662	.0714276	.7835049	.3112580

#1	3.981498	64.72724	.2805914	.0547167	6.514675	.4845172	.5771754
#2	3.986199	64.87483	.2809704	.0538250	6.519759	.4783927	.5739621
#3	3.971421	64.82874	.2800593	.0542000	6.523975	.4853001	.5742017

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.43975	.6108872	.0060320	.0210221	9.715362	2.507826	7.762414
Stddev	.04423	.0053645	.0001340	.0003340	.008077	.004091	.039802
%RSD	.2536153	.8781452	2.221947	1.588780	.0831410	.1631210	.5127591

#1	17.48976	.6161005	.0060057	.0214075	9.723564	2.512462	7.732180
#2	17.40580	.6053834	.0061772	.0208171	9.707415	2.504726	7.747553
#3	17.42367	.6111778	.0059131	.0208416	9.715107	2.506290	7.807509

Sample Name: Q3296-1 Acquired: 10/8/2025 14:23:06 Type: Unk
Method: 6010-200.7 NEW(v275) 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	3.166318	.1792037	-.045048
Stddev	.026102	.0018021	.000748
%RSD	.8243504	1.005624	1.661524

#1	3.138930	.1807590	-.045542
#2	3.169117	.1772288	-.044186
#3	3.190907	.1796234	-.045414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7739.481	115321.9	8468.186	5909.212	7069.654
Stddev	3.881	121.4	25.197	29.310	5.983
%RSD	.0501462	.1052284	.2975512	.4960040	.0846285

#1	7743.717	115182.1	8486.927	5891.255	7069.999
#2	7736.095	115399.8	8439.542	5893.346	7063.505
#3	7738.632	115383.8	8478.091	5943.034	7075.456

Sample Name: Q3293-01 Acquired: 10/8/2025 14:27:08 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.2053096	-.025309	.5608976	-.006222	.0024838	71.26919
Stddev	.0042258	.002737	.0086039	.003980	.0007615	.29221
%RSD	2.058259	10.81396	1.533947	63.96987	30.65930	.4100123

#1	.2092533	-.022311	.5707855	-.007644	.0033492	71.23570
#2	.2008492	-.027674	.5567901	-.001726	.0019161	71.57671
#3	.2058264	-.025942	.5551172	-.009296	.0021861	70.99517

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5355828	.0060438	.0208916	885.3894	.1344874	.1520160
Stddev	.0033847	.0000804	.0005703	11.8255	.0007379	.0025636
%RSD	.6319675	1.330050	2.729666	1.335624	.5486577	1.686407

#1	.5374488	.0059682	.0215455	896.4331	.1353352	.1548882
#2	.5376238	.0061283	.0204974	886.8223	.1339901	.1499593
#3	.5316758	.0060349	.0206319	872.9127	.1341369	.1512006

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.139404	157.3103	1.011307	32.69935	.2075970	.0318581
Stddev	.013913	.3956	.003278	.19763	.0037822	.0002835
%RSD	1.221049	.2514459	.3241464	.6043903	1.821899	.8898692

#1	1.155331	157.3800	1.010125	32.58270	.2116377	.0321211
#2	1.129623	156.8845	1.015012	32.92753	.2041414	.0318953
#3	1.133258	157.6663	1.008783	32.58780	.2070118	.0315578

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.10143	.1785065	2.041575	29.18676	.1337926	.0242162
Stddev	.05881	.0023122	.010065	.08056	.0026756	.0002032
%RSD	.1128722	1.295300	.4929848	.2760289	1.999810	.8392902

#1	52.11620	.1758574	2.034732	29.15366	.1340690	.0244346
#2	52.03665	.1801191	2.053132	29.12802	.1309895	.0240326
#3	52.15145	.1795430	2.036861	29.27860	.1363193	.0241814

Sample Name: Q3293-01 Acquired: 10/8/2025 14:27:08 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0397319	4.300894	6.021441	F 14.12972	F 51.84076	.3691823
Stddev	.0017092	.012074	.019399	.32671	1.21457	.0074965
%RSD	4.301945	.2807213	.3221621	2.312249	2.342882	2.030556

#1	.0414864	4.311036	6.025930	14.50697	53.23504	.3608718
#2	.0380718	4.304108	6.038202	13.93997	51.01261	.3754347
#3	.0396374	4.287539	6.000191	13.94220	51.27463	.3712405

Elem	Sr4077
Units	ppm
Avg	.8353656
Stddev	.0033099
%RSD	.3962198

#1	.8362078
#2	.8381730
#3	.8317160

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7282.536	107551.6	7776.037	5461.109	6466.434
Stddev	71.115	387.5	48.561	30.630	92.962
%RSD	.9765101	.3602495	.6244903	.5608741	1.437610

#1	7204.046	107998.9	7795.988	5488.557	6365.382
#2	7342.679	107333.7	7720.679	5428.068	6548.318
#3	7300.885	107322.1	7811.445	5466.704	6485.603

Sample Name: Q3294-01 Acquired: 10/8/2025 14:31:18 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0456552	-.032544	.2508748	.0058706	-.014851	195.6991	.8326243
Stddev	.0015555	.003642	.0020074	.0022473	.001290	.9607	.0044610
%RSD	3.407082	11.19124	.8001583	38.28087	8.689075	.4909155	.5357797

#1	.0459769	-.035880	.2531602	.0050837	-.013575	195.0441	.8341054
#2	.0470247	-.028658	.2493969	.0084056	-.016156	196.8020	.8361564
#3	.0439640	-.033093	.2500672	.0041226	-.014822	195.2512	.8276111

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131949	.0176298	31.75893	.3011883	.1562178	.2772667	272.5935
Stddev	.0001869	.0004837	.12634	.0011756	.0002939	.0010971	1.9500
%RSD	1.416386	2.743781	.3978067	.3903221	.1881039	.3956867	.7153493

#1	.0130001	.0176888	31.67544	.3013292	.1563932	.2761386	274.1123
#2	.0132119	.0171193	31.90428	.2999486	.1563817	.2773315	273.2736
#3	.0133727	.0180814	31.69708	.3022872	.1558786	.2783299	270.3945

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.597085	39.97602	.2060529	.0517293	8.241002	.4499744	.3897886
Stddev	.009695	.25501	.0009485	.0008755	.093025	.0017201	.0022499
%RSD	.3732875	.6379030	.4603252	1.692464	1.128806	.3822734	.5772045

#1	2.592013	39.75069	.2069434	.0525198	8.332654	.4491742	.3876073
#2	2.608263	40.25284	.2061598	.0518797	8.243690	.4519489	.3896571
#3	2.590978	39.92452	.2050555	.0507883	8.146662	.4488003	.3921013

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.66695	.1761378	.0075451	.0298734	8.098004	2.185181	8.395098
Stddev	.18756	.0161547	.0003651	.0010281	.030499	.013117	.009712
%RSD	.9536834	9.171621	4.838462	3.441364	.3766239	.6002688	.1156836

#1	19.85632	.1924539	.0073560	.0309497	8.086517	2.192939	8.406171
#2	19.66325	.1758100	.0079659	.0289016	8.132578	2.192568	8.388027
#3	19.48126	.1601495	.0073133	.0297688	8.074916	2.170036	8.391097

Sample Name: Q3294-01 Acquired: 10/8/2025 14:31:18 Type: Unk
Method: 6010-200.7 NEW(v275) 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	3.008342	.1191980	-.147966
Stddev	.010909	.0025029	.001491
%RSD	.3626392	2.099755	1.007521

#1	3.010442	.1197933	-.149156
#2	2.996536	.1213496	-.148447
#3	3.018049	.1164512	-.146294

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9699.627	141771.5	10385.57	7144.866	6998.337
Stddev	18.905	277.1	90.65	7.173	22.599
%RSD	.1949035	.1954416	.8728808	.1003938	.3229130

#1	9708.455	141828.6	10490.23	7147.307	6996.754
#2	9677.923	141470.3	10335.16	7150.499	6976.571
#3	9712.502	142015.6	10331.33	7136.791	7021.685

Sample Name: Q3297-01 Acquired: 10/8/2025 14:35:20 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0512500	-.016233	.1075657	.0090420	-.009876	170.1437	.3389116
Stddev	.0015724	.002373	.0002972	.0032521	.002411	2.0646	.0034165
%RSD	3.068173	14.62070	.2763156	35.96681	24.41276	1.213454	1.008085

#1	.0496107	-.016300	.1072249	.0116117	-.009130	172.5176	.3425878
#2	.0513934	-.018573	.1077016	.0053857	-.007926	169.1474	.3358338
#3	.0527458	-.013827	.1077707	.0101287	-.012571	168.7662	.3383131

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050381	.0022811	11.52173	.2101390	.0238580	.1123267	160.5986
Stddev	.0001010	.0001795	.15653	.0012054	.0001073	.0009159	.2426
%RSD	2.004680	7.867677	1.358565	.5736213	.4497440	.8154218	.1510791

#1	.0050696	.0021756	11.70220	.2115199	.0238073	.1133757	160.5385
#2	.0051195	.0021793	11.44015	.2092974	.0239813	.1116855	160.8656
#3	.0049251	.0024883	11.42284	.2095997	.0237855	.1119189	160.3916

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3800367	6.040678	.0848168	.0291446	.1826180	.3484129	.1195458
Stddev	.0042368	.049205	.0004048	.0008808	.0092393	.0041998	.0003522
%RSD	1.114834	.8145613	.4773022	3.022243	5.059347	1.205398	.2946362

#1	.3849235	6.095952	.0849990	.0290755	.1860253	.3532604	.1191392
#2	.3777927	6.024429	.0843528	.0300579	.1896698	.3458689	.1197414
#3	.3773939	6.001652	.0850984	.0283003	.1721590	.3461095	.1197568

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.834349	.0386397	.0091410	.0072048	1.527418	2.698462	1.711084
Stddev	.008254	.0061720	.0001452	.0010460	.008534	.016553	.002632
%RSD	.1707374	15.97310	1.588288	14.51818	.5587422	.6134052	.1538251

#1	4.827200	.0328948	.0089998	.0080610	1.536596	2.711936	1.712002
#2	4.843382	.0378598	.0091333	.0060389	1.525937	2.679985	1.713134
#3	4.832463	.0451646	.0092899	.0075145	1.519721	2.703464	1.708116

Sample Name: Q3297-01 Acquired: 10/8/2025 14:35:20 Type: Unk
Method: 6010-200.7 NEW(v275) 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	1.402524	.0910793	-.094877
Stddev	.004692	.0070188	.000502
%RSD	.3345429	7.706262	.5287053

#1	1.405382	.0987041	-.094309
#2	1.397108	.0896460	-.095258
#3	1.405081	.0848877	-.095063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7564.660	107225.8	7208.903	5515.329	8111.694
Stddev	9.896	415.6	94.639	16.214	11.250
%RSD	.1308123	.3876167	1.312804	.2939832	.1386880

#1	7554.384	106750.4	7100.173	5515.529	8099.814
#2	7565.469	107406.8	7253.783	5531.442	8113.085
#3	7574.125	107520.3	7272.751	5499.015	8122.184

Sample Name: Q3297-11 Acquired: 10/8/2025 14:39:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0719113	-.033697	.1079428	.0095029	-.019265	87.11979	.1668409
Stddev	.0026678	.000602	.0015838	.0038896	.001127	.14965	.0017926
%RSD	3.709880	1.785283	1.467306	40.93056	5.847716	.1717729	1.074442

#1	.0711686	-.033904	.1085757	.0067314	-.019796	87.11498	.1684300
#2	.0748717	-.034167	.1091124	.0139493	-.020028	86.97260	.1648976
#3	.0696935	-.033019	.1061404	.0078278	-.017971	87.27178	.1671952

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046524	.0018077	8.191391	.2550427	.0102885	.1281239	268.6452
Stddev	.0000198	.0004944	.013797	.0075566	.0000837	.0046720	5.3838
%RSD	.4257204	27.35139	.1684306	2.962882	.8136718	3.646501	2.004047

#1	.0046600	.0013414	8.175783	.2614996	.0103570	.1230875	271.9855
#2	.0046672	.0017556	8.201959	.2568971	.0103133	.1289676	271.5156
#3	.0046299	.0023261	8.196430	.2467316	.0101952	.1323166	262.4345

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0391511	4.942805	.0222573	.0555714	.3454845	.3399229	.0386659
Stddev	.0004020	.038006	.0000850	.0005636	.0227164	.0020676	.0016076
%RSD	1.026749	.7689117	.3816748	1.014248	6.575220	.6082617	4.157773

#1	.0395010	4.914733	.0222100	.0558365	.3471614	.3379885	.0400280
#2	.0387120	4.927628	.0222064	.0559535	.3673159	.3421020	.0390772
#3	.0392403	4.986054	.0223553	.0549241	.3219761	.3396782	.0368926

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.424942	.1701226	.0056114	.0084653	.8229337	3.226231	.8861777
Stddev	.097424	.0107404	.0001865	.0007695	.0016751	.051111	.0103979
%RSD	1.795859	6.313338	3.323798	9.089800	.2035545	1.584242	1.173338

#1	5.506520	.1758377	.0054238	.0082639	.8216856	3.254408	.8751867
#2	5.451238	.1767970	.0056137	.0078165	.8222780	3.257052	.8958582
#3	5.317069	.1577330	.0057969	.0093154	.8248375	3.167232	.8874883

Sample Name: Q3297-11 Acquired: 10/8/2025 14:39:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	1.900353	.0459707	-.200710
Stddev	.021546	.0024903	.005311
%RSD	1.133765	5.417084	2.646314

#1	1.875909	.0476046	-.204053
#2	1.916583	.0431046	-.203492
#3	1.908567	.0472030	-.194585

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7487.209	112127.8	8124.763	5725.616	7985.695
Stddev	55.587	2917.8	24.541	163.173	68.192
%RSD	.7424303	2.602198	.3020470	2.849883	.8539303

#1	7550.145	109897.2	8102.732	5609.233	8064.051
#2	7444.822	111056.5	8120.343	5655.484	7953.265
#3	7466.659	115429.9	8151.213	5912.130	7939.770

Sample Name: Q3268-01 Acquired: 10/8/2025 14:43:30 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.002623	-.013761	-.002574	.0052683	.0059618	7.369100
Stddev	.000558	.000999	.001057	.0017433	.0009211	.025239
%RSD	21.26191	7.260392	41.08738	33.09019	15.45013	.3425033

#1	-.003067	-.013118	-.001876	.0038016	.0051505	7.354688
#2	-.002804	-.013253	-.003790	.0071956	.0069631	7.354368
#3	-.001997	-.014912	-.002054	.0048077	.0057717	7.398243

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0381502	-.000070	-.000234	39.76709	.2275102	.0083039
Stddev	.0015353	.000039	.000056	.14017	.0006793	.0000211
%RSD	4.024261	56.19098	23.85803	.3524873	.2985687	.2545214

#1	.0389854	-.000031	-.000278	39.76425	.2273361	.0083277
#2	.0363784	-.000068	-.000171	39.62835	.2282595	.0082967
#3	.0390869	-.000110	-.000253	39.90866	.2269349	.0082874

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0568946	3.115440	.0601020	12.32289	.0427915	.0005401
Stddev	.0002040	.027498	.0003758	.05923	.0004055	.0002720
%RSD	.3585882	.8826442	.6252702	.4806597	.9476173	50.37047

#1	.0571180	3.120600	.0605000	12.27706	.0424917	.0002602
#2	.0567182	3.085727	.0597533	12.30183	.0432528	.0008036
#3	.0568475	3.139993	.0600527	12.38977	.0426298	.0005564

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	741.0628	-.001716	6.629897	93.64758	4.285375	.0092163
Stddev	6.6033	.001197	.009823	.27149	.013273	.0003815
%RSD	.8910568	69.77388	.1481601	.2899025	.3097319	4.139734

#1	745.9739	-.002803	6.625609	93.53227	4.277033	.0088681
#2	743.6583	-.000433	6.641135	93.45278	4.278410	.0096241
#3	733.5561	-.001913	6.622948	93.95768	4.300681	.0091566

Sample Name: Q3268-01 Acquired: 10/8/2025 14:43:30 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0358040	-.001527	2.163685	2.055605	F 403.8246	.0109740
Stddev	.0005430	.002536	.020300	.004036	1.1969	.0063987
%RSD	1.516498	166.0778	.9382321	.1963260	.2963907	58.30821

#1	.0356426	.000371	2.183003	2.054384	403.0258	.0127701
#2	.0353601	-.000545	2.142527	2.052321	403.2473	.0038691
#3	.0364094	-.004407	2.165526	2.060111	405.2007	.0162827

Elem	Sr4077
Units	ppm
Avg	.1911580
Stddev	.0009550
%RSD	.4995747

#1	.1907890
#2	.1904426
#3	.1922424

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6268.824	92485.69	6990.520	4745.233	6924.735
Stddev	15.175	103.69	6.976	9.878	13.481
%RSD	.2420689	.1121129	.0997916	.2081670	.1946839

#1	6251.494	92366.59	6991.611	4738.048	6909.430
#2	6275.244	92534.70	6996.887	4741.153	6929.929
#3	6279.733	92555.80	6983.063	4756.497	6934.847

Sample Name: Q3268-01DUP Acquired: 10/8/2025 14:47:47 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001643	-.012081	-.003218	.0035921	.0040385	7.693358
Stddev	.000559	.000562	.001083	.0036783	.0009293	.409715
%RSD	34.04225	4.649121	33.65944	102.3973	23.01206	5.325565

#1	-.002081	-.012730	-.002034	-.000132	.0033734	7.464979
#2	-.001013	-.011771	-.003460	.003685	.0051003	8.166363
#3	-.001836	-.011744	-.004159	.007223	.0036416	7.448733

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0415193	-.000142	-.000181	41.74563	.2328572	.0083675
Stddev	.0070589	.000050	.000110	2.08398	.0030520	.0000816
%RSD	17.00147	35.45350	60.89701	4.992099	1.310693	.9746694

#1	.0389606	-.000084	-.000142	40.62978	.2341108	.0084418
#2	.0495007	-.000162	-.000305	44.14994	.2293780	.0082802
#3	.0360966	-.000179	-.000095	40.45717	.2350828	.0083806

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0573617	3.195812	.0629752	12.95664	.0431937	.0003534
Stddev	.0004069	.018633	.0038681	.71840	.0001928	.0002085
%RSD	.7093802	.5830443	6.142190	5.544617	.4462698	58.97900

#1	.0568985	3.182031	.0608484	12.56621	.0432743	.0005920
#2	.0575246	3.188392	.0674400	13.78570	.0429737	.0002066
#3	.0576619	3.217012	.0606372	12.51799	.0433331	.0002616

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	740.1223	-.000174	6.913864	95.82409	4.637402	.0090600
Stddev	10.2552	.002007	.067068	.39133	.208410	.0000717
%RSD	1.385608	1151.547	.9700457	.4083847	4.494113	.7919293

#1	745.3554	-.000132	6.938523	95.73604	4.519840	.0091033
#2	728.3063	-.002203	6.837958	95.48429	4.878032	.0090995
#3	746.7052	.001812	6.965112	96.25195	4.514334	.0089771

Sample Name: Q3268-01DUP Acquired: 10/8/2025 14:47:47 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0353328	-.000061	2.229581	2.083408	F 406.8793	.0106106
Stddev	.0005742	.000950	.038690	.016360	5.0468	.0005667
%RSD	1.625217	1564.664	1.735297	.7852511	1.240369	5.341405

#1	.0350220	-.001083	2.219135	2.095868	410.9408	.0108034
#2	.0359954	.000105	2.197187	2.089473	408.4676	.0099726
#3	.0349809	.000795	2.272422	2.064881	401.2294	.0110558

Elem	Sr4077
Units	ppm
Avg	.1987484
Stddev	.0103333
%RSD	5.199196

#1	.1931807
#2	.2106716
#3	.1923929

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6252.921	88331.75	6522.546	4533.582	6909.682
Stddev	2.112	834.33	282.165	30.897	10.166
%RSD	.0337714	.9445430	4.325990	.6815196	.1471303

#1	6254.249	88026.60	6663.216	4511.045	6901.579
#2	6250.486	89275.69	6197.700	4568.802	6906.378
#3	6254.028	87692.95	6706.722	4520.898	6921.090

Sample Name: Q3268-01LX5 Acquired: 10/8/2025 14:52:03 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.002991	-.010974	-.000690	.0018153	.0023221	1.520141
Stddev	.001262	.005377	.000417	.0021364	.0006123	.007520
%RSD	42.19116	48.99905	60.50325	117.6863	26.36762	.4946932

#1	-.002231	-.013251	-.001037	.0032870	.0023413	1.524404
#2	-.004447	-.014838	-.000805	-.000635	.0017005	1.524562
#3	-.002294	-.004833	-.000227	.002794	.0029246	1.511458

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089667	-.000062	-.000145	8.454807	.0480157	.0017768
Stddev	.0003345	.000012	.000023	.044953	.0005481	.0000879
%RSD	3.730129	18.86205	16.13548	.5316817	1.141522	4.946116

#1	.0085834	-.000052	-.000163	8.495972	.0474438	.0016772
#2	.0091992	-.000074	-.000153	8.461607	.0485365	.0018096
#3	.0091174	-.000058	-.000119	8.406842	.0480668	.0018436

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133834	.6033622	.0125651	2.615553	.0090792	-.000195
Stddev	.0004924	.0135515	.0001061	.024038	.0001400	.000287
%RSD	3.678806	2.245993	.8442517	.9190469	1.542298	147.4598

#1	.0128205	.5890513	.0126767	2.638444	.0089733	-.000275
#2	.0135959	.6050366	.0124656	2.617702	.0090263	.000124
#3	.0137338	.6159986	.0125530	2.590512	.0092379	-.000433

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	144.5604	-.001191	1.413590	18.83775	1.040739	.0019108
Stddev	1.1402	.000212	.000988	.14487	.008150	.0002965
%RSD	.7887255	17.75925	.0698790	.7690316	.7831344	15.51584

#1	145.1340	-.001244	1.412539	18.78102	1.047145	.0021460
#2	143.2473	-.000959	1.413731	18.72982	1.043508	.0020086
#3	145.2999	-.001372	1.414499	19.00239	1.031565	.0015777

Sample Name: Q3268-01LX5 Acquired: 10/8/2025 14:52:03 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0076830	-.000552	.4192593	.4349985	F 92.59913	.0267564
Stddev	.0003174	.002721	.0040762	.0059537	.98700	.0008376
%RSD	4.131086	493.2205	.9722397	1.368676	1.065883	3.130574

#1	.0074358	-.001169	.4147386	.4347390	92.62815	.0271280
#2	.0075722	-.002911	.4203847	.4410777	93.57129	.0257973
#3	.0080409	.002425	.4226546	.4291788	91.59794	.0273441

Elem	Sr4077
Units	ppm
Avg	.0398805
Stddev	.0002151
%RSD	.5393916

#1	.0401247
#2	.0397191
#3	.0397976

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6240.461	97204.57	6737.709	4948.459	7223.764
Stddev	53.626	700.07	24.778	18.979	64.298
%RSD	.8593305	.7202022	.3677478	.3835276	.8900853

#1	6293.665	97726.55	6719.187	4957.599	7286.455
#2	6186.422	97478.15	6728.085	4961.139	7157.972
#3	6241.296	96409.03	6765.855	4926.640	7226.867

Sample Name: Q3268-01MS Acquired: 10/8/2025 14:56:17 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7757429	1.921353	.8799743	1.927731	.7674263	9.307519
Stddev	.0032325	.047689	.0012044	.003352	.0002093	.146075
%RSD	.4167043	2.482059	.1368663	.1739069	.0272685	1.569435

#1	.7745531	1.902495	.8787957	1.923940	.7676356	9.380479
#2	.7732739	1.885977	.8812029	1.928945	.7672171	9.402741
#3	.7794018	1.975588	.8799242	1.930306	.7674263	9.139336

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2314779	.1810435	.1881786	41.27713	.5986984	.1971304
Stddev	.0029383	.0029808	.0004601	.66507	.0025314	.0000603
%RSD	1.269358	1.646444	.2444968	1.611231	.4228110	.0305684

#1	.2314769	.1825657	.1876639	41.54138	.5968486	.1970652
#2	.2344167	.1829559	.1883220	41.76946	.5976633	.1971841
#3	.2285401	.1776090	.1885500	40.52055	.6015833	.1971418

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3235467	6.167080	.2521393	14.38432	.5136099	.0659873
Stddev	.0009489	.049257	.0038743	.19086	.0013058	.0002240
%RSD	.2932878	.7987039	1.536579	1.326855	.2542319	.3394425

#1	.3225119	6.113602	.2543113	14.45923	.5125883	.0657336
#2	.3243761	6.177047	.2544403	14.52637	.5150810	.0661574
#3	.3237522	6.210591	.2476663	14.16737	.5131604	.0660711

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	762.2190	.2906561	6.858007	105.3479	4.588850	.4084493
Stddev	4.6473	.0081521	.026921	.7066	.079662	.0007126
%RSD	.6097045	2.804736	.3925411	.6707761	1.736000	.1744514

#1	761.6522	.2919787	6.829002	104.5467	4.621322	.4076708
#2	757.8811	.2980660	6.882192	105.6145	4.647148	.4086079
#3	767.1237	.2819235	6.862826	105.8824	4.498080	.4090691

Sample Name: Q3268-01MS Acquired: 10/8/2025 14:56:17 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7119115	.1919413	3.074217	7.948937	F 400.7687	.1990740
Stddev	.0030172	.0032363	.022766	.032966	2.6833	.0020469
%RSD	.4238095	1.686061	.7405526	.4147252	.6695382	1.028221

#1	.7103438	.1928334	3.054515	7.922896	398.2926	.2013961
#2	.7100008	.1946378	3.099140	7.937912	400.3938	.1982944
#3	.7153897	.1883525	3.068995	7.986003	403.6197	.1975314

Elem	Sr4077
Units	ppm
Avg	.3785874
Stddev	.0053582
%RSD	1.415306

#1	.3799552
#2	.3831291
#3	.3726779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6351.555	91478.19	6921.677	4687.832	6995.267
Stddev	5.780	400.56	109.310	15.809	6.132
%RSD	.0910083	.4378784	1.579244	.3372421	.0876661

#1	6354.108	91897.61	6863.956	4700.379	7000.406
#2	6344.937	91437.36	6853.326	4670.075	6988.479
#3	6355.619	91099.61	7047.748	4693.040	6996.917

Sample Name: Q3268-01MSD Acquired: 10/8/2025 15:00:23 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7766036	1.939977	.8786338	1.940920	.7639980	9.181981
Stddev	.0065622	.041392	.0074638	.014346	.0058211	.079772
%RSD	.8449887	2.133646	.8494810	.7391411	.7619273	.8687859

#1	.7830384	1.979352	.8866808	1.957270	.7707036	9.181222
#2	.7699210	1.943752	.8772828	1.930437	.7610467	9.102592
#3	.7768515	1.896827	.8719377	1.935054	.7602437	9.262130

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2302012	.1843056	.1880519	41.01841	.6029505	.1963180
Stddev	.0017074	.0010824	.0011794	.25065	.0012943	.0013352
%RSD	.7417213	.5872897	.6271610	.6110791	.2146633	.6801061

#1	.2310299	.1831681	.1893922	40.89062	.6019479	.1978249
#2	.2282375	.1844260	.1875907	40.85741	.6024920	.1952825
#3	.2313361	.1853228	.1871727	41.30721	.6044117	.1958466

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3230917	6.130318	.2512836	14.21356	.5135987	.0653587
Stddev	.0020695	.036173	.0019120	.14834	.0038302	.0000582
%RSD	.6405445	.5900740	.7608931	1.043671	.7457566	.0890834

#1	.3254653	6.169225	.2496794	14.11557	.5180039	.0654084
#2	.3216655	6.097703	.2507722	14.14088	.5117374	.0652946
#3	.3221442	6.124027	.2533994	14.38423	.5110549	.0653730

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	751.4777	.2870377	6.939742	104.6494	4.698194	.4068921
Stddev	8.6019	.0033119	.024475	.4447	.029983	.0031410
%RSD	1.144659	1.153825	.3526853	.4249826	.6381885	.7719416

#1	750.9379	.2885498	6.967833	104.9610	4.668408	.4105051
#2	743.1585	.2832397	6.928382	104.1401	4.697805	.4048119
#3	760.3368	.2893238	6.923010	104.8472	4.728371	.4053591

Sample Name: Q3268-01MSD Acquired: 10/8/2025 15:00:23 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7424203	.1872039	3.021825	8.002834	F 402.2476	.1998504
Stddev	.0050775	.0032119	.012029	.081882	4.2287	.0040116
%RSD	.6839078	1.715722	.3980609	1.023168	1.051278	2.007299
#1	.7482333	.1841398	3.031737	8.096682	407.1009	.1990058
#2	.7401752	.1869264	3.008443	7.945954	400.2860	.1963284
#3	.7388523	.1905456	3.025297	7.965865	399.3559	.2042171

Elem	Sr4077
Units	ppm
Avg	.3764682
Stddev	.0018977
%RSD	.5040654
#1	.3747379
#2	.3761690
#3	.3784977

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6417.292	90639.71	6821.485	4644.900	7062.323
Stddev	24.975	201.74	48.356	22.294	33.659
%RSD	.3891898	.2225719	.7088729	.4799749	.4765938
#1	6388.987	90450.69	6873.033	4620.481	7024.044
#2	6426.662	90852.12	6814.297	4650.049	7075.640
#3	6436.228	90616.31	6777.126	4664.169	7087.286

Sample Name: CCV03 Acquired: 10/8/2025 15:04:30 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.704296	5.201387	4.607582	4.682807	4.713646	9.209264
Stddev	.007925	.075744	.006586	.001427	.014940	.029113
%RSD	.1684606	1.456223	.1429366	.0304809	.3169570	.3161282

#1	4.696492	5.236328	4.605029	4.682045	4.702212	9.178200
#2	4.704058	5.253353	4.602655	4.681922	4.708177	9.235924
#3	4.712337	5.114480	4.615062	4.684454	4.730551	9.213668

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.227590	.2471051	2.316414	23.26888	.9434547	2.310346
Stddev	.016630	.0034276	.005764	.08470	.0022487	.006419
%RSD	.1802174	1.387108	.2488421	.3639841	.2383512	.2778498

#1	9.237545	.2506109	2.315038	23.36342	.9459201	2.309908
#2	9.208392	.2469429	2.311463	23.24330	.9415161	2.304156
#3	9.236832	.2437614	2.322742	23.19993	.9429280	2.316972

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.171539	4.597010	2.341329	23.15129	2.317489	1.199337
Stddev	.003033	.063476	.012579	.19893	.006693	.003094
%RSD	.2589102	1.380803	.5372680	.8592551	.2888113	.2579654

#1	1.169279	4.540217	2.355650	23.37954	2.317311	1.200696
#2	1.170351	4.585281	2.332067	23.05953	2.310887	1.195796
#3	1.174986	4.665532	2.336270	23.01481	2.324270	1.201519

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.58650	2.344193	2.379582	24.03979	5.036678	4.750895
Stddev	.09939	.009149	.005852	.22619	.075398	.008514
%RSD	.4400369	.3902743	.2459160	.9408808	1.496970	.1792017

#1	22.53249	2.348967	2.385172	23.86347	5.112139	4.746410
#2	22.52582	2.349967	2.380076	23.96110	5.036552	4.745561
#3	22.70120	2.333645	2.373499	24.29482	4.961344	4.760713

Sample Name: CCV03 Acquired: 10/8/2025 15:04:30 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.645478	4.684570	F 4.445451	4.725455	4.698475	F 4.385689
Stddev	.007288	.007294	.071798	.004417	.015648	.029331
%RSD	.1568779	.1556928	1.615098	.0934806	.3330543	.6687953

#1	4.646509	4.692976	4.397981	4.720367	4.709938	4.414267
#2	4.637729	4.679922	4.410322	4.728312	4.704840	4.355659
#3	4.652195	4.680812	4.528050	4.727687	4.680648	4.387141

Elem	Sr4077
Units	ppm
Avg	4.657484
Stddev	.070357
%RSD	1.510623

#1	4.738340
#2	4.623898
#3	4.610214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6808.381	96558.38	6762.091	4909.725	7853.315
Stddev	13.555	243.89	85.907	9.262	21.953
%RSD	.1990931	.2525849	1.270421	.1886545	.2795379

#1	6811.612	96728.89	6677.632	4907.843	7847.934
#2	6820.028	96667.22	6759.265	4919.784	7877.458
#3	6793.502	96279.01	6849.377	4901.548	7834.553

Sample Name: CCB03 Acquired: 10/8/2025 15:13:35 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000559	-.013195	-.000419	-.000701	.0004357	.0069765
Stddev	.000667	.002462	.000386	.002340	.0007294	.0114331
%RSD	119.3608	18.66152	92.27675	333.5657	167.3807	163.8804

#1	-.000185	-.011709	-.000805	.001101	-.000326	.0201757
#2	-.001330	-.011838	-.000418	.000141	.000507	.0001460
#3	-.000162	-.016037	-.000032	-.003345	.001127	.0006078

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000886	-.000124	-.000110	-.002132	.0004846	.0000599
Stddev	.002489	.000034	.000020	.009293	.0001911	.0001921
%RSD	281.0254	27.26364	17.82185	435.8146	39.44157	320.5523

#1	.001703	-.000086	-.000119	.004965	.0007018	-.000116
#2	-.001098	-.000151	-.000125	.001289	.0003419	.000032
#3	-.003262	-.000135	-.000088	-.012651	.0004102	.000265

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002530	.0084967	.0001389	-.001323	.0003267	-.000028
Stddev	.0001882	.0055582	.0006317	.012690	.0001126	.000346
%RSD	74.39588	65.41566	454.8379	959.0327	34.45358	1234.878

#1	.0000387	.0071383	.0004483	.012202	.0001977	-.000419
#2	.0003914	.0146081	-.000588	-.003202	.0003774	.000238
#3	.0003290	.0037436	.000556	-.012970	.0004050	.000097

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1451540	.0015635	.0001977	.0956072	-.008626	.0000273
Stddev	.0093294	.0018912	.0000450	.0210948	.000785	.0001005
%RSD	6.427253	120.9622	22.75855	22.06403	9.102695	367.5925

#1	.1345620	.0037306	.0001510	.0716979	-.007958	-.000087
#2	.1487488	.0002466	.0002013	.1115927	-.009491	.000068
#3	.1521513	.0007132	.0002408	.1035311	-.008428	.000101

Sample Name: CCB03 Acquired: 10/8/2025 15:13:35 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009840	-.001055	.0106470	-.001144	F .0434525	-.001356
Stddev	.000465	.000990	.0064822	.000272	.0002391	.003321
%RSD	4.724917	93.78841	60.88293	23.75931	.5501666	244.9272

#1	-.010215	-.000285	.0099548	-.001104	.0433804	.002323
#2	-.009984	-.000710	.0174475	-.000895	.0437193	-.004131
#3	-.009320	-.002172	.0045386	-.001434	.0432578	-.002259

Elem	Sr4077
Units	ppm
Avg	-.000159
Stddev	.000028
%RSD	17.76658

#1	-.000190
#2	-.000153
#3	-.000134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7108.730	99908.99	6872.823	5047.430	8973.188
Stddev	10.015	319.36	32.396	11.205	14.204
%RSD	.1408786	.3196465	.4713642	.2220001	.1582907

#1	7118.348	99647.10	6876.824	5038.536	8989.550
#2	7098.361	100264.8	6903.033	5043.739	8964.026
#3	7109.482	99815.1	6838.612	5060.015	8965.988

Sample Name: Q3268-01A Acquired: 10/8/2025 15:17:55 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.8346329	1.985131	.9368070	2.105072	.8370040	9.400809
Stddev	.0036969	.042872	.0009607	.006271	.0028596	.059795
%RSD	.4429423	2.159642	.1025506	.2979154	.3416483	.6360672

#1	.8388888	2.034054	.9379127	2.112040	.8402336	9.408588
#2	.8327929	1.967217	.9363314	2.103294	.8347935	9.456333
#3	.8322171	1.954121	.9361768	2.099881	.8359850	9.337504

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2306088	.1972616	.2006019	41.60734	.6200645	.2088294
Stddev	.0021686	.0015883	.0005605	.20626	.0022617	.0006396
%RSD	.9403738	.8051474	.2793917	.4957186	.3647564	.3062920

#1	.2298336	.1954797	.2012399	41.72441	.6182209	.2095672
#2	.2330585	.1977769	.2001889	41.72843	.6225883	.2084301
#3	.2289344	.1985282	.2003770	41.36919	.6193844	.2084910

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3438489	6.122053	.2587499	14.54093	.5459791	.0703481
Stddev	.0014112	.073410	.0017817	.07738	.0015469	.0012103
%RSD	.4104137	1.199110	.6885814	.5321586	.2833198	1.720418

#1	.3454528	6.202169	.2603637	14.47142	.5477600	.0714284
#2	.3432962	6.105977	.2590480	14.62431	.5452073	.0690402
#3	.3427978	6.058014	.2568379	14.52705	.5449700	.0705756

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	704.8213	.3010442	7.087124	102.1283	4.879939	.4326830
Stddev	5.9806	.0040090	.017618	1.2758	.045525	.0015293
%RSD	.8485280	1.331699	.2485904	1.249200	.9328914	.3534432

#1	710.6165	.2989451	7.076771	103.2554	4.828151	.4343911
#2	705.1763	.3056669	7.077135	102.3863	4.898020	.4322167
#3	698.6711	.2985207	7.107467	100.7433	4.913645	.4314410

Sample Name: Q3268-01A Acquired: 10/8/2025 15:17:55 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7643672	.1955048	3.066116	8.434905	F 422.5923	.1953280
Stddev	.0056339	.0013530	.016877	.049326	3.4981	.0052757
%RSD	.7370725	.6920576	.5504309	.5847858	.8277746	2.700928

#1	.7695485	.1967596	3.075867	8.480794	426.1307	.1993779
#2	.7583697	.1956835	3.075852	8.382742	419.1359	.1972441
#3	.7651836	.1940713	3.046628	8.441178	422.5103	.1893620

Elem	Sr4077
Units	ppm
Avg	.3834025
Stddev	.0028594
%RSD	.7457995

#1	.3857856
#2	.3841902
#3	.3802318

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5960.580	87886.58	6430.587	4454.498	6563.584
Stddev	24.372	182.44	35.065	9.725	25.343
%RSD	.4088940	.2075801	.5452774	.2183244	.3861153

#1	5932.502	87791.75	6470.459	4458.016	6534.332
#2	5972.968	87771.08	6416.747	4461.975	6578.930
#3	5976.270	88096.90	6404.555	4443.503	6577.489

Sample Name: PB170008BL Acquired: 10/8/2025 15:22:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.000765	-.008872	.0003632	-.000884	.0011833	.0067833
Stddev	.000965	.001157	.0004910	.000511	.0009848	.0055638
%RSD	126.2560	13.04486	135.1903	57.74887	83.22147	82.02097

#1	-.000812	-.008038	-.000204	-.000921	.0018413	.0131469
#2	.000224	-.008385	.000651	-.000356	.0000512	.0043657
#3	-.001705	-.010193	.000642	-.001376	.0016576	.0028374

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005942	-.000064	-.000076	-.000211	-.000229	.0001859
Stddev	.0013154	.000034	.000029	.005656	.000152	.0000839
%RSD	221.3612	53.26731	38.77712	2684.988	66.42079	45.15663

#1	-.000301	-.000103	-.000109	.003307	-.000326	.0002285
#2	.002104	-.000045	-.000067	-.006735	-.000307	.0000892
#3	-.000021	-.000043	-.000052	.002796	-.000054	.0002400

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002348	.0036557	-.000025	.0022939	.0001135	.0002352
Stddev	.0002342	.0030731	.000470	.0176727	.0003382	.0003823
%RSD	99.72676	84.06291	1878.741	770.4277	297.9118	162.5430

#1	.0003958	.0058399	.000220	.0193275	-.000008	.0004222
#2	.0003424	.0001417	.000272	-.015955	.000496	.0004880
#3	-.000034	.0049855	-.000567	.003509	-.000147	-.000205

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9055402	-.000479	.0000101	F 1.371645	-.006613	-.000161
Stddev	.0271164	.004259	.0002031	.058456	.000706	.000141
%RSD	2.994501	889.4784	2011.333	4.261737	10.67715	87.39012

#1	.9252815	.003990	-.000223	1.305206	-.005822	-.000245
#2	.9167174	-.004491	.000148	1.415182	-.006839	-.000239
#3	.8746217	-.000936	.000105	1.394547	-.007179	.000001

Sample Name: PB170008BL Acquired: 10/8/2025 15:22:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-0.001165	.0006043	.0154156	-0.003737	F .0879815	F .0184393
Stddev	.000320	.0008978	.0099005	.000413	.0094715	.0023317
%RSD	27.44204	148.5704	64.22407	11.05094	10.76533	12.64510

#1	-0.001231	-0.000345	.0115436	-0.004213	.0984549	.0210548
#2	-0.001446	.000719	.0080363	-0.003514	.0854723	.0165782
#3	-0.000817	.001439	.0266670	-0.003483	.0800172	.0176849

Elem	Sr4077
Units	ppm
Avg	-0.000262
Stddev	.000137
%RSD	52.26535

#1	-0.000346
#2	-0.000336
#3	-0.000104

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6825.001	103685.1	7156.189	5307.244	8613.154
Stddev	9.825	252.7	63.916	19.093	2.566
%RSD	.1439541	.2437521	.8931573	.3597562	.0297942

#1	6824.035	103393.5	7209.031	5301.623	8615.568
#2	6815.695	103841.8	7174.389	5328.517	8610.459
#3	6835.273	103819.9	7085.147	5291.592	8613.437

Sample Name: PB170008BS Acquired: 10/8/2025 15:26:21 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7522785	2.108030	.9106123	1.885401	.7759033	1.868044
Stddev	.0020587	.029278	.0005374	.007447	.0007045	.011630
%RSD	.2736593	1.388901	.0590186	.3949965	.0908010	.6225707

#1	.7509757	2.084081	.9100728	1.878576	.7767165	1.873334
#2	.7546519	2.140670	.9111477	1.893344	.7755171	1.854710
#3	.7512080	2.099339	.9106163	1.884284	.7754763	1.876089

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1884027	.2087837	.1832551	.9768455	.4098372	.1855262
Stddev	.0028712	.0017343	.0000502	.0070650	.0005586	.0001300
%RSD	1.523978	.8306851	.0273959	.7232437	.1363023	.0700607

#1	.1907331	.2081657	.1833127	.9694062	.4092821	.1856232
#2	.1851952	.2074430	.1832317	.9834646	.4103993	.1855768
#3	.1892797	.2107424	.1832208	.9776656	.4098303	.1853785

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2949960	2.774165	.1990409	1.944673	.4780161	.0690931
Stddev	.0005205	.015903	.0021996	.029747	.0004104	.0001379
%RSD	.1764388	.5732414	1.105096	1.529661	.0858517	.1995608

#1	.2955199	2.782638	.1981353	1.911797	.4783482	.0692077
#2	.2944790	2.784037	.1974387	1.952492	.4781428	.0689401
#3	.2949892	2.755820	.2015487	1.969728	.4775573	.0691314

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.865353	.2884840	.1965592	9.181206	.3118897	.3972364
Stddev	.028768	.0042675	.0008935	.040528	.0020380	.0004841
%RSD	1.004005	1.479289	.4545863	.4414233	.6534422	.1218776

#1	2.871975	.2906016	.1975744	9.205131	.3118039	.3969804
#2	2.833850	.2835718	.1962108	9.134412	.3098960	.3977947
#3	2.890232	.2912785	.1958923	9.204074	.3139693	.3969339

Sample Name: PB170008BS Acquired: 10/8/2025 15:26:21 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6568039	.1912159	.7613656	5.356400	F .0491005	.1880126
Stddev	.0010298	.0014775	.0086380	.010798	.0015095	.0023883
%RSD	.1567856	.7726943	1.134534	.2015929	3.074256	1.270310

#1	.6577321	.1928119	.7696620	5.364761	.0474912	.1856807
#2	.6569834	.1909401	.7620123	5.344209	.0493254	.1879036
#3	.6556962	.1898958	.7524224	5.360231	.0504850	.1904536

Elem	Sr4077
Units	ppm
Avg	.1888407
Stddev	.0011125
%RSD	.5891418

#1	.1897684
#2	.1876073
#3	.1891464

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7025.328	101470.6	6639.839	5224.605	8551.295
Stddev	17.776	186.1	43.180	28.932	10.523
%RSD	.2530307	.1833559	.6503237	.5537676	.1230575

#1	7045.822	101257.2	6649.742	5191.619	8559.945
#2	7016.078	101598.7	6677.207	5236.516	8539.580
#3	7014.084	101556.0	6592.567	5245.681	8554.361

Sample Name: PB169978BL Acquired: 10/8/2025 15:30:21 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001220	-.009142	-.000358	-.000666	-.000838	-.006978
Stddev	.001371	.003372	.000879	.001519	.001360	.011052
%RSD	112.3247	36.88203	245.3871	227.9054	162.3853	158.3734

#1	-.002737	-.005255	-.001329	-.000008	-.002249	.002482
#2	-.000854	-.011283	-.000130	.000412	-.000728	-.004291
#3	-.000070	-.010889	.000384	-.002403	.000465	-.019126

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001065	-.000050	-.000066	-.000687	-.000406	.0000077
Stddev	.000626	.000039	.000072	.004810	.000295	.0000171
%RSD	58.79493	77.89002	109.2190	700.5679	72.72239	223.0117

#1	-.000365	-.000045	-.000111	.004118	-.000338	.0000045
#2	-.001571	-.000091	.000017	-.000674	-.000150	.0000262
#3	-.001257	-.000014	-.000104	-.005503	-.000729	-.000008

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001314	-.000499	.0003656	.0141974	.0000297	.0000182
Stddev	.0003824	.010660	.0002899	.0305155	.0003107	.0005279
%RSD	291.0434	2137.241	79.31248	214.9374	1045.225	2904.099

#1	.0005473	.006734	.0004552	-.014190	.0003862	.0004149
#2	-.000205	.004511	.0000414	.010313	-.000184	-.000581
#3	.000052	-.012741	.0006002	.046469	-.000113	.000221

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3334645	.0009283	-.000051	.6024913	-.008496	-.000029
Stddev	.0146474	.0024969	.000086	.0458652	.000718	.000135
%RSD	4.392496	268.9783	169.3928	7.612591	8.454430	469.1025

#1	.3165524	.0034292	.000028	.5544071	-.007698	-.000104
#2	.3417399	.0009201	-.000038	.6073099	-.009091	-.000109
#3	.3421013	-.001564	-.000142	.6457570	-.008699	.000127

Sample Name: PB169978BL Acquired: 10/8/2025 15:30:21 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.000328	-.001770	.0066033	-.003276	F .0375565	.0001814
Stddev	.000106	.001099	.0068395	.001140	.0007764	.0093599
%RSD	32.28097	62.10519	103.5761	34.79713	2.067357	5158.513

#1	-.000379	-.001667	.0123395	-.004491	.0384477	.0085689
#2	-.000206	-.002918	-.000966	-.002230	.0371955	-.009915
#3	-.000398	-.000726	.008436	-.003106	.0370263	.001891

Elem	Sr4077
Units	ppm
Avg	-.000085
Stddev	.000129
%RSD	151.6443

#1	-.000230
#2	-.000042
#3	.000017

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6615.749	99039.59	6767.737	5076.856	8361.054
Stddev	9.944	465.66	16.670	19.629	20.301
%RSD	.1503090	.4701729	.2463151	.3866358	.2428088

#1	6607.594	99496.74	6761.644	5098.766	8342.165
#2	6612.825	99056.16	6786.596	5070.928	8358.477
#3	6626.827	98565.86	6754.971	5060.875	8382.521

Sample Name: PB169978BS Acquired: 10/8/2025 15:34:40 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7899146	2.247629	.9467336	1.992105	.8009678	2.000392
Stddev	.0037800	.076478	.0013620	.011409	.0013029	.005655
%RSD	.4785307	3.402600	.1438598	.5726913	.1626674	.2827159

#1	.7942590	2.298873	.9481554	2.005184	.8015087	2.006544
#2	.7881074	2.284292	.9454407	1.986929	.8019131	1.995420
#3	.7873775	2.159722	.9466047	1.984202	.7994815	1.999212

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2032508	.2006169	.1896450	1.023984	.4232993	.1928269
Stddev	.0012304	.0009464	.0002659	.003749	.0025249	.0004304
%RSD	.6053623	.4717479	.1402142	.3661180	.5964784	.2231989

#1	.2045679	.2014756	.1899353	1.028077	.4249348	.1932751
#2	.2030537	.1996022	.1894133	1.020716	.4245718	.1924169
#3	.2021309	.2007728	.1895864	1.023159	.4203913	.1927886

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3071039	3.044749	.2086158	2.072551	.4934233	.0706201
Stddev	.0002870	.016708	.0003808	.021142	.0006923	.0003158
%RSD	.0934494	.5487370	.1825312	1.020097	.1402970	.4471303

#1	.3067971	3.039410	.2082268	2.048236	.4942226	.0709180
#2	.3073658	3.063474	.2086330	2.082828	.4930320	.0706531
#3	.3071487	3.031364	.2089878	2.086590	.4930153	.0702891

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.139207	.3041789	.2001995	9.795705	.2954316	.4054289
Stddev	.035164	.0020067	.0011629	.089222	.0026850	.0007377
%RSD	1.120164	.6596966	.5808867	.9108264	.9088289	.1819545

#1	3.099417	.3026055	.2014168	9.741380	.2979846	.4062802
#2	3.152093	.3064387	.2000820	9.898677	.2926317	.4050265
#3	3.166110	.3034925	.1990998	9.747058	.2956787	.4049798

Sample Name: PB169978BS Acquired: 10/8/2025 15:34:40 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6746219	.1970430	.8461634	5.678704	F .0283709	.2004375
Stddev	.0016044	.0009737	.0101755	.034713	.0013113	.0021104
%RSD	.2378223	.4941695	1.202542	.6112833	4.621860	1.052881

#1	.6758347	.1981455	.8513735	5.717638	.0280267	.1987868
#2	.6752283	.1963009	.8344379	5.667491	.0298199	.2028153
#3	.6728026	.1966824	.8526786	5.650984	.0272660	.1997104

Elem	Sr4077
Units	ppm
Avg	.2003720
Stddev	.0003375
%RSD	.1684468

#1	.2007441
#2	.2000856
#3	.2002864

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6760.833	99966.36	6917.873	5173.681	8250.347
Stddev	9.103	515.62	30.184	7.154	12.093
%RSD	.1346439	.5157984	.4363119	.1382691	.1465705

#1	6755.998	99710.08	6883.029	5180.704	8237.727
#2	6755.168	99629.10	6935.970	5166.403	8251.481
#3	6771.334	100559.9	6934.621	5173.935	8261.832

Sample Name: PB169959BL Acquired: 10/8/2025 15:38:42 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001230	-.007722	.0004286	-.001664	.0006549	.0026042
Stddev	.001394	.001114	.0005030	.000695	.0024691	.0121396
%RSD	113.3420	14.42877	117.3588	41.78225	376.9854	466.1463

#1	-.000097	-.006823	-.000092	-.002461	-.002120	.0165938
#2	-.000805	-.008969	.000466	-.001184	.002609	-.003624
#3	-.002786	-.007376	.000912	-.001346	.001476	-.005157

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002845	-.000078	-.000070	-.003067	-.000175	-.000062
Stddev	.002290	.000042	.000031	.006787	.000205	.000055
%RSD	80.48362	54.57076	44.57416	221.2925	117.1850	88.71687

#1	-.001395	-.000127	-.000070	.000528	-.000232	-.000110
#2	-.005485	-.000052	-.000100	.001166	-.000346	-.000074
#3	-.001655	-.000054	-.000038	-.010895	.000053	-.000002

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001929	.0050094	.0010325	.0092266	.0001920	-.000356
Stddev	.0003387	.0071572	.0002166	.0258151	.0002382	.000229
%RSD	175.5810	142.8767	20.97452	279.7913	124.0329	64.29909

#1	.0005771	-.003218	.0009819	.0326808	-.000078	-.000611
#2	.0000639	.008446	.0012699	.0134320	.000370	-.000168
#3	-.000062	.009800	.0008458	-.018433	.000284	-.000289

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2055228	.0031138	-.000026	.3928486	-.010111	-.000100
Stddev	.0159939	.0036836	.000176	.0448775	.000548	.000076
%RSD	7.782040	118.3000	689.0100	11.42361	5.424881	76.64290

#1	.1973197	.0013574	-.000017	.3436266	-.010311	-.000153
#2	.1952948	.0006371	.000146	.4034281	-.010531	-.000012
#3	.2239539	.0073469	-.000206	.4314911	-.009490	-.000133

Sample Name: PB169959BL Acquired: 10/8/2025 15:38:42 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-0.001243	-0.001555	.0114905	-0.001505	F .0212549	.0029658
Stddev	.000374	.000479	.0153395	.000963	.0007712	.0068719
%RSD	30.06827	30.77334	133.4977	64.01571	3.628413	231.7065

#1	-0.001387	-0.002107	-0.004354	-0.002607	.0216940	-0.003289
#2	-0.001523	-0.001269	.012556	-0.001086	.0203644	.001865
#3	-0.000819	-0.001289	.026269	-0.000822	.0217064	.010322

Elem	Sr4077
Units	ppm
Avg	-0.000112
Stddev	.000036
%RSD	32.51762

#1	-0.000085
#2	-0.000153
#3	-0.000097

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7086.886	103993.5	6921.630	5321.864	8950.355
Stddev	7.787	403.5	56.920	18.167	12.094
%RSD	.1098794	.3879575	.8223481	.3413737	.1351194

#1	7085.346	104176.3	6856.570	5310.884	8949.950
#2	7079.985	104273.1	6962.240	5342.834	8938.468
#3	7095.328	103530.9	6946.079	5311.874	8962.646

Sample Name: PB169959BS Acquired: 10/8/2025 15:43:00 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7624476	2.154253	.9181922	1.912905	.7828746	1.945969
Stddev	.0016781	.079591	.0002550	.011001	.0025446	.017182
%RSD	.2200945	3.694615	.0277774	.5750793	.3250329	.8829708

#1	.7608332	2.100631	.9179630	1.901676	.7808434	1.927288
#2	.7641828	2.245704	.9184670	1.923662	.7857289	1.949522
#3	.7623267	2.116425	.9181467	1.913378	.7820516	1.961097

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1994837	.2036030	.1843933	1.010239	.3956859	.1870661
Stddev	.0013219	.0028958	.0002778	.006273	.0020522	.0001932
%RSD	.6626837	1.422274	.1506719	.6208993	.5186516	.1032517

#1	.1980071	.2004511	.1840956	1.012489	.3960237	.1868548
#2	.1998866	.2042123	.1846457	1.003151	.3975482	.1872335
#3	.2005573	.2061457	.1844385	1.015076	.3934857	.1871102

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2980410	2.904535	.2048685	2.005936	.4706561	.0700839
Stddev	.0010183	.031934	.0011362	.033719	.0013881	.0003995
%RSD	.3416745	1.099467	.5546134	1.680983	.2949373	.5701006

#1	.2968929	2.929065	.2036053	1.967891	.4692365	.0699109
#2	.2988351	2.916113	.2051933	2.017787	.4707211	.0705407
#3	.2983950	2.868426	.2058070	2.032130	.4720105	.0697999

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.932254	.2976129	.2000129	9.496200	.3005671	.3979149
Stddev	.032603	.0069825	.0006392	.083958	.0053573	.0008123
%RSD	1.111869	2.346169	.3195535	.8841201	1.782409	.2041423

#1	2.947841	.2908369	.2006330	9.544110	.2947831	.3970677
#2	2.954138	.3047851	.1993563	9.545234	.3015592	.3986871
#3	2.894783	.2972168	.2000494	9.399256	.3053591	.3979898

Sample Name: PB169959BS Acquired: 10/8/2025 15:43:00 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6606796	.1970048	.8215569	5.500466	F .0195582	.1974621
Stddev	.0008182	.0002819	.0060232	.019374	.0020692	.0028599
%RSD	.1238363	.1431044	.7331471	.3522307	10.57948	1.448324

#1	.6597353	.1966798	.8147410	5.491833	.0191158	.1971204
#2	.6611765	.1971518	.8261637	5.522657	.0177460	.2004775
#3	.6611270	.1971829	.8237661	5.486910	.0218127	.1947884

Elem	Sr4077
Units	ppm
Avg	.1958252
Stddev	.0008672
%RSD	.4428650

#1	.1948574
#2	.1965320
#3	.1960861

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6813.144	97999.35	6707.918	5015.744	8302.119
Stddev	15.724	488.74	79.526	14.555	13.696
%RSD	.2307952	.4987214	1.185554	.2901784	.1649757

#1	6825.350	97814.56	6796.033	4999.432	8317.882
#2	6795.400	97629.94	6686.250	5027.403	8293.128
#3	6818.682	98553.54	6641.473	5020.396	8295.346

Sample Name: Q3275-01 Acquired: 10/8/2025 15:47:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0063318	-.021606	.0101858	.0026516	.0032562	4.417222
Stddev	.0020258	.002482	.0021043	.0034767	.0007034	.037107
%RSD	31.99350	11.48654	20.65895	131.1174	21.60254	.8400481

#1	.0063589	-.018832	.0084771	.0018003	.0036004	4.406587
#2	.0083440	-.022371	.0125362	-.000320	.0037213	4.386595
#3	.0042927	-.023615	.0095440	.006475	.0024470	4.458486

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3220706	.0004837	.0045290	270.8913	.0069938	.0072758
Stddev	.0034075	.0000411	.0000701	1.6493	.0002398	.0002704
%RSD	1.057995	8.489095	1.549018	.6088482	3.429146	3.715984

#1	.3229209	.0005097	.0044694	269.6182	.0072055	.0074643
#2	.3183185	.0004364	.0046063	270.3012	.0067333	.0073970
#3	.3249725	.0005051	.0045113	272.7545	.0070425	.0069660

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0948389	77.92647	5.833186	45.05790	.0197078	.0152080
Stddev	.0008487	1.31560	.025688	.32369	.0000773	.0010764
%RSD	.8948441	1.688256	.4403784	.7183965	.3923951	7.077932

#1	.0946400	79.15169	5.827462	44.76491	.0196325	.0163353
#2	.0957693	76.53609	5.810842	45.00340	.0197871	.0141910
#3	.0941073	78.09164	5.861253	45.40538	.0197036	.0150976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	399.0375	.0154378	.2129696	19.98710	.1140081	.0041667
Stddev	4.1207	.0017868	.0036614	.40704	.0029815	.0003820
%RSD	1.032666	11.57392	1.719227	2.036532	2.615138	9.167327

#1	403.4120	.0167749	.2165054	20.39420	.1162466	.0045352
#2	398.4712	.0134085	.2091943	19.58012	.1106237	.0041922
#3	395.2291	.0161301	.2132090	19.98697	.1151540	.0037726

Sample Name: Q3275-01 Acquired: 10/8/2025 15:47:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0346328	.1374608	F 19.20359	1.977672	F 69.50921	.0710354
Stddev	.0007792	.0004680	.31876	.010540	.62232	.0032316
%RSD	2.249879	.3404259	1.659917	.5329500	.8953050	4.549320

#1	.0354648	.1370765	19.49989	1.988108	70.08111	.0673429
#2	.0339201	.1373240	18.86632	1.977878	69.60007	.0724154
#3	.0345136	.1379819	19.24456	1.967031	68.84646	.0733480

Elem	Sr4077
Units	ppm
Avg	.7639135
Stddev	.0042445
%RSD	.5556276

#1	.7645402
#2	.7593905
#3	.7678098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5898.018	94480.02	6483.412	4798.990	6435.013
Stddev	29.355	1099.82	43.530	69.193	33.966
%RSD	.4977061	1.164081	.6714092	1.441816	.5278261

#1	5864.311	93460.91	6533.094	4729.631	6395.800
#2	5911.776	95645.83	6465.173	4868.015	6453.999
#3	5917.968	94333.32	6451.968	4799.324	6455.241

Sample Name: Q3275-02 Acquired: 10/8/2025 15:51:16 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.1041399	-.040254	.3188330	-.000010	.0013702	126.2367
Stddev	.0023312	.013370	.0012122	.002303	.0003416	.1317
%RSD	2.238504	33.21524	.3802013	23378.54	24.93076	.1043466

#1	.1039563	-.052939	.3196827	.002332	.0014803	126.2817
#2	.1019059	-.026290	.3193715	-.002273	.0016432	126.3401
#3	.1065574	-.041533	.3174449	-.000088	.0009871	126.0884

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9301461	.0082868	.0411887	748.8347	.3483585	2.649850
Stddev	.0052900	.0001588	.0003772	4.0396	.0007581	.003774
%RSD	.5687265	1.916247	.9156949	.5394562	.2176354	.1424164

#1	.9352093	.0082780	.0410868	746.7226	.3484867	2.654069
#2	.9305737	.0081326	.0408730	753.4926	.3475444	2.648684
#3	.9246553	.0084498	.0416064	746.2890	.3490443	2.646797

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.285313	298.1655	5.979980	264.0610	1.585738	.0614360
Stddev	.004356	2.8900	.019903	.1615	.002947	.0012857
%RSD	.1325976	.9692490	.3328336	.0611547	.1858285	2.092786

#1	3.289605	301.2188	5.994043	263.8926	1.588521	.0629144
#2	3.280895	297.8050	5.988690	264.2145	1.586040	.0608143
#3	3.285441	295.4727	5.957206	264.0760	1.582651	.0605793

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	296.9828	.4409396	5.220961	41.97289	.2765812	.4362530
Stddev	2.2025	.0013199	.019931	.51245	.0139985	.0013970
%RSD	.7416111	.2993321	.3817564	1.220912	5.061262	.3202228

#1	298.4099	.4397855	5.243967	42.55271	.2923017	.4378524
#2	298.0923	.4406547	5.210011	41.78526	.2719776	.4352719
#3	294.4463	.4423787	5.208904	41.58070	.2654642	.4356346

Sample Name: Q3275-02 Acquired: 10/8/2025 15:51:16 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0148552	9.364434	F 69.91162	F 10.37233	F 36.87495	.4243600
Stddev	.0006573	.033289	.36233	.07654	.27887	.0024144
%RSD	4.424595	.3554859	.5182740	.7379099	.7562469	.5689608

#1	.0146803	9.391389	70.32958	10.44754	37.13260	.4225026
#2	.0143030	9.374689	69.68627	10.29453	36.57886	.4234882
#3	.0155822	9.327224	69.71902	10.37492	36.91339	.4270893

Elem	Sr4077
Units	ppm
Avg	1.759496
Stddev	.008763
%RSD	.4980132

#1	1.768507
#2	1.758974
#3	1.751006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7263.610	106892.9	8380.600	5262.806	6185.988
Stddev	13.426	301.3	50.580	20.556	16.361
%RSD	.1848325	.2818971	.6035421	.3905898	.2644782

#1	7253.852	106626.9	8435.747	5243.020	6174.404
#2	7258.058	107220.2	8369.682	5261.345	6178.856
#3	7278.921	106831.7	8336.370	5284.054	6204.704

Sample Name: Q3275-03 Acquired: 10/8/2025 15:55:33 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0010529	-.035862	.0089621	-.002579	.0064678	11.59606
Stddev	.0059231	.012139	.0014622	.001624	.0052010	.14008
%RSD	562.5468	33.85019	16.31512	62.98026	80.41369	1.208010

#1	-.004446	-.047385	.0083706	-.001495	.0023505	11.73034
#2	.000281	-.023189	.0106274	-.001796	.0047401	11.60704
#3	.007324	-.037011	.0078883	-.004446	.0123127	11.45082

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.579372	.0005462	.0042981	612.0394	.0148630	.0089815
Stddev	.014406	.0000453	.0002292	7.7542	.0003133	.0001985
%RSD	.9121100	8.294048	5.332119	1.266952	2.108168	2.210001

#1	1.593698	.0004939	.0044770	619.4957	.0151223	.0089634
#2	1.579529	.0005716	.0040398	612.6045	.0149520	.0087927
#3	1.564888	.0005731	.0043777	604.0181	.0145148	.0091884

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0426303	110.9553	7.392365	111.1910	.0271522	.0245223
Stddev	.0008809	1.1121	.075669	1.5629	.0007483	.0010615
%RSD	2.066356	1.002340	1.023614	1.405634	2.755905	4.328663

#1	.0433849	110.1147	7.472489	112.6457	.0264252	.0239858
#2	.0416623	110.5349	7.382485	111.3885	.0279201	.0238362
#3	.0428436	112.2164	7.322121	109.5386	.0271112	.0257450

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6449.314	.0232891	.3176239	348.6827	.2073602	.0038899
Stddev	100.478	.0021584	.0034033	21.6342	.0053752	.0005225
%RSD	1.557960	9.267843	1.071483	6.204549	2.592188	13.43188

#1	6496.354	.0207968	.3213385	327.5409	.2034871	.0040186
#2	6517.643	.0245403	.3146559	347.7294	.2050964	.0033150
#3	6333.945	.0245302	.3168773	370.7778	.2134969	.0043359

Sample Name: Q3275-03 Acquired: 10/8/2025 15:55:33 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-0.017855	.4135855	F 38.86160	2.284678	F 100.9378	.4530988
Stddev	.000228	.0025862	.32941	.033419	1.6362	.0070100
%RSD	1.277109	.6253098	.8476444	1.462728	1.620964	1.547116

#1	-0.018052	.4161011	38.55826	2.323257	102.8134	.4454750
#2	-0.017605	.4137214	38.81454	2.264628	99.8033	.4545555
#3	-0.017908	.4109341	39.21201	2.266150	100.1968	.4592660

Elem	Sr4077
Units	ppm
Avg	4.282934
Stddev	.082151
%RSD	1.918098

#1	4.364069
#2	4.284929
#3	4.199803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3322.463	54619.19	5609.059	2499.450	3198.688
Stddev	45.510	132.50	110.769	13.734	41.532
%RSD	1.369754	.2425807	1.974824	.5494669	1.298395

#1	3297.468	54487.14	5501.537	2494.795	3167.751
#2	3374.992	54752.13	5602.829	2514.906	3245.891
#3	3294.928	54618.32	5722.812	2488.649	3182.423

Sample Name: CCV04 Acquired: 10/8/2025 16:11:29 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.872070	5.124750	4.670176	4.906845	4.958628	9.677181	10.04877
Stddev	.031525	.279725	.035400	.027660	.048328	.041080	.11374
%RSD	.6470515	5.458308	.7579983	.5636991	.9746234	.4244997	1.131893

#1	4.907230	4.829311	4.710960	4.938701	5.010410	9.681339	10.15028
#2	4.862654	5.159407	4.652161	4.892907	4.950752	9.716023	10.07019
#3	4.846326	5.385530	4.647408	4.888927	4.914721	9.634180	9.92584

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2353940	2.314314	24.45446	.9647206	2.333388	1.191713	4.814266
Stddev	.0017704	.016370	.11782	.0052892	.019282	.009816	.048755
%RSD	.7520859	.7073347	.4817783	.5482654	.8263546	.8236777	1.012713

#1	.2336645	2.332852	24.49543	.9687663	2.355649	1.202704	4.854203
#2	.2353151	2.301844	24.54632	.9587354	2.321894	1.188618	4.828659
#3	.2372026	2.308246	24.32163	.9666600	2.322621	1.183818	4.759935

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.501191	24.04767	2.341252	1.191401	26.07122	2.468031	2.368015
Stddev	.020944	.10837	.019198	.002146	.49211	.011896	.007681
%RSD	.8373681	.4506581	.8199829	.1801420	1.887552	.4819859	.3243639

#1	2.515371	24.11833	2.363407	1.191271	26.55462	2.475302	2.368275
#2	2.511067	24.10178	2.330845	1.193609	26.08820	2.474489	2.375562
#3	2.477134	23.92290	2.329505	1.189322	25.57084	2.454304	2.360207

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.29209	4.833589	4.863859	4.698213	4.988712	4.697416	4.768279
Stddev	.09653	.038073	.031852	.030180	.041668	.049078	.007476
%RSD	.3671395	.7876709	.6548796	.6423648	.8352529	1.044794	.1567855

#1	26.37832	4.796846	4.900436	4.731318	5.018965	4.700713	4.765947
#2	26.31014	4.831057	4.848919	4.672233	5.005987	4.744763	4.762247
#3	26.18781	4.872865	4.842224	4.691089	4.941185	4.646773	4.776643

Sample Name: CCV04 Acquired: 10/8/2025 16:11:29 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.701845	4.946850	5.016237
Stddev	.015708	.070388	.014254
%RSD	.3340806	1.422887	.2841658

#1	4.691990	5.017117	5.030314
#2	4.693586	4.947092	5.016586
#3	4.719960	4.876342	5.001811

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6790.015	102936.6	7227.215	5201.648	7907.108
Stddev	53.143	100.0	60.884	32.805	65.961
%RSD	.7826604	.0970986	.8424213	.6306606	.8342018

#1	6728.676	103051.6	7281.102	5213.345	7833.215
#2	6822.203	102888.0	7239.373	5164.597	7960.045
#3	6819.165	102870.3	7161.170	5227.000	7928.064

Sample Name: CCB04 Acquired: 10/8/2025 16:15:32 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.003415	-.011728	-.000263	.0011485	.0014949	.0055293	-.002431
Stddev	.001636	.004522	.000919	.0020788	.0010255	.0092326	.001830
%RSD	47.90289	38.55410	349.3214	181.0023	68.59832	166.9772	75.27486

#1	-.003520	-.006533	.000794	-.000499	.0003305	-.004194	-.003640
#2	-.004997	-.014774	-.000716	.000461	.0018908	.014176	-.003327
#3	-.001730	-.013876	-.000868	.003484	.0022633	.006606	-.000326

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000216	-.000148	-.007026	.0000067	-.000118	.0002419	.0031715
Stddev	.000031	.000027	.007896	.0002904	.000107	.0002812	.0052083
%RSD	14.15519	18.06843	112.3794	4334.332	90.30262	116.2372	164.2205

#1	-.000184	-.000140	-.013728	.0002541	-.000178	.0004924	-.000956
#2	-.000244	-.000125	.001679	-.000313	.000005	.0002955	.009023
#3	-.000221	-.000177	-.009030	.000079	-.000182	-.000062	.001447

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002457	.0194464	.0000685	-.000345	.1411215	-.000185	.0006278
Stddev	.0005963	.0216493	.0003079	.000281	.0157489	.001056	.0001396
%RSD	242.6737	111.3277	449.0750	81.53367	11.15983	570.6877	22.24266

#1	.0005020	.0079119	.0004240	-.000510	.1574017	.001028	.0005139
#2	.0006711	.0060067	-.000108	-.000505	.1399988	-.000691	.0005859
#3	-.000436	.0444206	-.000110	-.000020	.1259640	-.000892	.0007836

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.065270	-.010030	.0007042	-.017655	.0007204	.0100935	-.002989
Stddev	.008949	.000044	.0001831	.000861	.0005809	.0070630	.000204
%RSD	13.71093	.4341326	25.99552	4.875388	80.62838	69.97606	6.815844

#1	-.055254	-.010011	.0009061	-.018009	.0004762	.0050370	-.002798
#2	-.072480	-.010079	.0005490	-.018282	.0013835	.0070800	-.002967
#3	-.068075	-.009998	.0006575	-.016674	.0003015	.0181633	-.003203

Sample Name: CCB04 Acquired: 10/8/2025 16:15:32 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0043014	-.002713	-.000134
Stddev	.0016619	.004140	.000036
%RSD	38.63665	152.5840	26.69824

#1	.0027720	-.000790	-.000174
#2	.0060700	-.007466	-.000104
#3	.0040623	.000115	-.000125

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7203.908	106068.5	7436.284	5325.104	9227.412
Stddev	27.413	443.5	61.130	21.139	40.085
%RSD	.3805326	.4181298	.8220546	.3969766	.4344156

#1	7234.154	105651.5	7366.530	5327.473	9267.772
#2	7196.870	106534.4	7480.526	5344.958	9226.857
#3	7180.700	106019.5	7461.797	5302.879	9187.607

Sample Name: Q3275-04 Acquired: 10/8/2025 16:19:51 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0043694	-.018777	.0103519	.0042701	.0019832	10.48448
Stddev	.0013432	.001703	.0007284	.0038060	.0010746	.02023
%RSD	30.74026	9.072111	7.036877	89.13314	54.18267	.1929211

#1	.0054553	-.016824	.0100135	.0085087	.0009804	10.46255
#2	.0028674	-.019545	.0111880	.0031563	.0031174	10.50241
#3	.0047853	-.019961	.0098542	.0011451	.0018518	10.48848

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1881763	.0005650	.0013958	131.6461	.0183922	.0097310
Stddev	.0007784	.0000760	.0001122	.2471	.0003438	.0001478
%RSD	.4136565	13.44602	8.041055	.1877245	1.869271	1.519160

#1	.1874441	.0005291	.0012971	131.4435	.0187892	.0096038
#2	.1880910	.0006523	.0015179	131.9214	.0181936	.0098932
#3	.1889939	.0005137	.0013725	131.5732	.0181938	.0096961

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0440701	23.42862	2.944302	32.44201	.0208770	.0048512
Stddev	.0006287	.12606	.013474	.13296	.0004556	.0002570
%RSD	1.426633	.5380449	.4576453	.4098483	2.182341	5.297263

#1	.0441657	23.52888	2.937052	32.30403	.0207020	.0047366
#2	.0433990	23.46988	2.959849	32.45269	.0205348	.0051456
#3	.0446455	23.28711	2.936005	32.56931	.0213941	.0046715

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	670.8425	.0234599	.1210948	7.398719	.0381077	.0048973
Stddev	6.4017	.0017563	.0004737	.039215	.0007109	.0001733
%RSD	.9542768	7.486396	.3911847	.5300275	1.865460	3.537961

#1	670.9986	.0253953	.1215966	7.420191	.0388221	.0050819
#2	677.1647	.0230170	.1206554	7.422509	.0381005	.0047381
#3	664.3642	.0219674	.1210325	7.353456	.0374004	.0048720

Sample Name: Q3275-04 Acquired: 10/8/2025 16:19:51 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.017018	.3538381	F 20.71648	.8385845	F 13.33647	.0444444
Stddev	.000615	.0031008	.12558	.0039585	.05965	.0037966
%RSD	3.612686	.8763321	.6061651	.4720423	.4472989	8.542442

#1	-.017468	.3513608	20.83994	.8342833	13.28236	.0439941
#2	-.017268	.3573155	20.72061	.8393955	13.32660	.0408931
#3	-.016318	.3528379	20.58889	.8420747	13.40044	.0484462

Elem	Sr4077
Units	ppm
Avg	.3337956
Stddev	.0014917
%RSD	.4468741

#1	.3321761
#2	.3351133
#3	.3340972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6515.037	98996.78	7421.329	5010.195	6830.262
Stddev	30.234	445.26	33.121	26.916	34.295
%RSD	.4640591	.4497704	.4463007	.5372340	.5021037

#1	6524.127	98502.51	7448.238	4982.551	6839.588
#2	6539.684	99366.52	7431.412	5011.715	6858.930
#3	6481.302	99121.30	7384.338	5036.320	6792.269

Sample Name: Q3278-01 Acquired: 10/8/2025 16:24:10 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0303060	-.030927	-.011622	-.001733	-.008681	.4346302
Stddev	.0013251	.002157	.000662	.002152	.002024	.0187061
%RSD	4.372380	6.974124	5.694003	124.1837	23.31315	4.303903

#1	.0306347	-.033328	-.012086	-.003444	-.006498	.4196728
#2	.0288475	-.029154	-.011916	-.002439	-.009050	.4286135
#3	.0314357	-.030299	-.010864	.000683	-.010495	.4556042

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3585236	-.002598	.0015209	159.1306	.0087788	.0116506
Stddev	.0028971	.000021	.0002852	1.0442	.0006581	.0001023
%RSD	.8080539	.8258754	18.75502	.6561878	7.496161	.8777426

#1	.3551784	-.002575	.0011916	157.9249	.0095243	.0116799
#2	.3601792	-.002600	.0016903	159.7401	.0085334	.0115369
#3	.3602131	-.002618	.0016808	159.7269	.0082786	.0117350

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0671351	121.8114	F 56.47194	61.98449	.0103223	.0286248
Stddev	.0018099	2.7350	.64570	.43280	.0001843	.0008140
%RSD	2.695882	2.245285	1.143404	.6982393	1.785787	2.843875

#1	.0650799	124.8373	55.77134	61.48893	.0104670	.0295641
#2	.0684909	119.5152	57.04314	62.28820	.0101148	.0281238
#3	.0678346	121.0819	56.60135	62.17635	.0103852	.0281866

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	745.1341	-.004441	.3685360	6.899913	.1100491	.0006155
Stddev	20.2637	.002315	.0083362	.180517	.0117103	.0002400
%RSD	2.719465	52.13016	2.261978	2.616228	10.64101	38.98459

#1	768.2619	-.001927	.3774239	7.068064	.1229810	.0003565
#2	730.4973	-.006485	.3608911	6.709158	.1001616	.0008302
#3	736.6430	-.004912	.3672930	6.922517	.1070048	.0006599

Sample Name: Q3278-01 Acquired: 10/8/2025 16:24:10 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.019944	.0038391	F 15.53147	.3052042	.6700449	.0552023
Stddev	.000533	.0007045	.38444	.0009873	.0047159	.0017513
%RSD	2.674186	18.34944	2.475211	.3235019	.7038149	3.172526

#1	-.020559	.0031047	15.94772	.3041074	.6677263	.0551666
#2	-.019651	.0045093	15.18977	.3054834	.6669372	.0569711
#3	-.019621	.0039033	15.45691	.3060219	.6754712	.0534690

Elem	Sr4077
Units	ppm
Avg	.6217981
Stddev	.0089796
%RSD	1.444134

#1	.6114689
#2	.6277466
#3	.6261787

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6126.027	94864.81	7104.458	4736.357	6762.315
Stddev	9.121	2136.91	81.574	113.508	7.171
%RSD	.1488900	2.252588	1.148204	2.396535	.1060489

#1	6132.333	92598.04	7198.501	4623.832	6766.433
#2	6130.179	96842.42	7052.822	4850.824	6766.478
#3	6115.569	95153.97	7062.052	4734.414	6754.034

Sample Name: Q3260-02 Acquired: 10/8/2025 16:28:35 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0023333	-.018289	.0343492	.0070144	.0513588	2.049145
Stddev	.0015622	.002483	.0016482	.0019819	.0006242	.012607
%RSD	66.95353	13.57433	4.798260	28.25520	1.215448	.6152157

#1	.0039516	-.020848	.0358870	.0061226	.0515021	2.053740
#2	.0022141	-.018130	.0345514	.0092856	.0506754	2.034885
#3	.0008340	-.015890	.0326093	.0056351	.0518990	2.058810

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0790726	.0000296	.0015984	11.47265	.0298413	.0031729
Stddev	.0022455	.0000348	.0000820	.01860	.0001759	.0000241
%RSD	2.839861	117.6165	5.131116	.1621611	.5893068	.7590448

#1	.0795297	.0000697	.0015089	11.45308	.0300003	.0031501
#2	.0766336	.0000070	.0016162	11.47477	.0296524	.0031703
#3	.0810544	.0000121	.0016700	11.49011	.0298713	.0031981

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2490826	17.56179	.1497117	4.001742	.0372503	.0063940
Stddev	.0009837	.08732	.0006258	.026100	.0002865	.0006059
%RSD	.3949274	.4972206	.4179705	.6522181	.7690753	9.475576

#1	.2483506	17.66257	.1504305	3.971651	.0373803	.0070926
#2	.2486964	17.50868	.1494162	4.018248	.0369219	.0060116
#3	.2502008	17.51412	.1492884	4.015327	.0374488	.0060778

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	616.0753	.0069347	1.166678	19.75961	.1868580	.0265158
Stddev	9.0407	.0018402	.001852	.04311	.0017449	.0002259
%RSD	1.467473	26.53563	.1587209	.2181901	.9338093	.8519691

#1	626.5144	.0054440	1.166079	19.80935	.1849047	.0262591
#2	610.9181	.0063688	1.168756	19.73647	.1882625	.0266042
#3	610.7934	.0089914	1.165200	19.73301	.1874069	.0266842

Sample Name: Q3260-02 Acquired: 10/8/2025 16:28:35 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0135316	.0394142	F 24.29912	6.362672	F 13.03909	.0234638
Stddev	.0010503	.0037021	.18632	.019574	.01724	.0063654
%RSD	7.761484	9.392679	.7667711	.3076373	.1322420	27.12879

#1	.0124519	.0379520	24.46687	6.363373	13.03882	.0307131
#2	.0135930	.0366666	24.33189	6.381886	13.05647	.0208902
#3	.0145497	.0436241	24.09858	6.342757	13.02198	.0187881

Elem	Sr4077
Units	ppm
Avg	.1347199
Stddev	.0010092
%RSD	.7491472

#1	.1340641
#2	.1342136
#3	.1358821

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6463.889	99150.92	7018.779	5031.739	7291.579
Stddev	5.765	357.61	37.173	21.332	3.081
%RSD	.0891869	.3606773	.5296154	.4239506	.0422594

#1	6470.309	98929.66	7055.489	5014.418	7294.969
#2	6462.203	98959.60	7019.687	5025.232	7290.820
#3	6459.156	99563.49	6981.161	5055.567	7288.948

Sample Name: Q3260-02DUP Acquired: 10/8/2025 16:32:51 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0012360	-.013963	.0329286	.0087577	.0501873	1.989047
Stddev	.0025752	.003402	.0005764	.0018663	.0006688	.020314
%RSD	208.3483	24.36149	1.750567	21.31062	1.332654	1.021273

#1	-.000869	-.011316	.0332943	.0074811	.0495514	2.000506
#2	.004107	-.012773	.0322642	.0108997	.0501258	2.001042
#3	.000469	-.017799	.0332275	.0078925	.0508848	1.965593

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0782464	.0000098	.0014030	10.98444	.0289591	.0027958
Stddev	.0006963	.0000599	.0000382	.05594	.0001373	.0001658
%RSD	.8898459	612.3594	2.721797	.5092999	.4740539	5.930197

#1	.0777526	-.000053	.0014454	10.99872	.0291100	.0029839
#2	.0790427	.000066	.0013713	11.03186	.0289257	.0026707
#3	.0779438	.000016	.0013923	10.92274	.0288416	.0027330

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2381233	17.76609	.1428543	3.869191	.0346411	.0054702
Stddev	.0006498	.23108	.0007483	.015512	.0004402	.0002885
%RSD	.2728844	1.300689	.5237900	.4009108	1.270865	5.274051

#1	.2388580	18.02626	.1434021	3.852956	.0351485	.0057835
#2	.2378879	17.58472	.1431591	3.870757	.0343602	.0054117
#3	.2376240	17.68727	.1420018	3.883861	.0344146	.0052155

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	643.3205	.0028971	1.103845	20.57107	.1742681	.0260756
Stddev	5.1741	.0024191	.002082	.20127	.0008393	.0002843
%RSD	.8042743	83.49885	.1885954	.9783966	.4816282	1.090205

#1	645.8373	.0046373	1.101491	20.77581	.1746485	.0257899
#2	646.7548	.0039193	1.104598	20.37347	.1748498	.0260787
#3	637.3696	.0001348	1.105445	20.56393	.1733059	.0263584

Sample Name: Q3260-02DUP Acquired: 10/8/2025 16:32:51 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0051303	.0357193	F 24.51888	6.156795	F 13.16793	.0297240
Stddev	.0002656	.0023961	.15528	.016300	.04889	.0030484
%RSD	5.176285	6.708246	.6333011	.2647523	.3713032	10.25554

#1	.0051386	.0359500	24.67397	6.173049	13.18565	.0320728
#2	.0048608	.0379917	24.36341	6.140449	13.11265	.0262792
#3	.0053917	.0332162	24.51925	6.156886	13.20550	.0308201

Elem	Sr4077
Units	ppm
Avg	.1340320
Stddev	.0006543
%RSD	.4881781

#1	.1343647
#2	.1344532
#3	.1332782

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6657.264	100941.3	7312.288	5150.384	7526.906
Stddev	23.365	41.2	83.558	32.982	33.326
%RSD	.3509770	.0408531	1.142708	.6403708	.4427519

#1	6633.272	100918.2	7380.323	5182.395	7490.334
#2	6658.570	100916.8	7219.022	5116.511	7534.825
#3	6679.948	100988.9	7337.518	5152.248	7555.559

Sample Name: Q3260-02LX5 Acquired: 10/8/2025 16:37:07 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.002288	-.012801	.0075654	.0018191	.0128878	.4179451	.0114030
Stddev	.002409	.002517	.0003303	.0018230	.0014387	.0036918	.0009136
%RSD	105.2872	19.66223	4.366395	100.2180	11.16349	.8833283	8.011824

#1	-.004600	-.014629	.0078794	.0002056	.0112947	.4221931	.0117569
#2	-.002472	-.013845	.0072209	.0014549	.0140923	.4155124	.0120867
#3	.000208	-.009930	.0075960	.0037966	.0132766	.4161297	.0103654

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000103	.0001912	2.320388	.0061753	.0004661	.0511540	3.813487
Stddev	.000005	.0000627	.011987	.0001602	.0002025	.0001636	.023079
%RSD	5.046295	32.78323	.5165763	2.593931	43.43530	.3199261	.6052064

#1	-.000109	.0001826	2.328776	.0063120	.0006945	.0512989	3.788591
#2	-.000099	.0001332	2.325728	.0059991	.0003088	.0509765	3.834170
#3	-.000102	.0002577	2.306659	.0062149	.0003950	.0511866	3.817700

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0308002	.8194598	.0069190	.0013420	150.8309	.0010147	.2325837
Stddev	.0002639	.0278697	.0000788	.0004794	.3311	.0023087	.0010739
%RSD	.8567716	3.400987	1.138613	35.72309	.2195260	227.5150	.4617350

#1	.0305022	.8130305	.0069884	.0016146	151.0329	.0028689	.2318725
#2	.0308943	.8499824	.0068334	.0007884	151.0112	-.001571	.2338191
#3	.0310042	.7953666	.0069351	.0016229	150.4488	.001746	.2320596

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.114771	.0295596	.0051374	.0004554	.0065855	5.069082	1.247099
Stddev	.084793	.0003798	.0002079	.0005167	.0011033	.031047	.008822
%RSD	1.191792	1.284885	4.045767	113.4559	16.75347	.6124696	.7074323

#1	7.019992	.0293633	.0053425	.0000643	.0078560	5.033311	1.254881
#2	7.140883	.0299974	.0049269	.0010411	.0060328	5.084910	1.237514
#3	7.183436	.0293181	.0051428	.0002607	.0058679	5.089024	1.248901

Sample Name: Q3260-02LX5 Acquired: 10/8/2025 16:37:07 Type: Unk
Method: 6010-200.7 NEW(v275) 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	2.518491	.0232650	.0286603
Stddev	.052223	.0013431	.0002641
%RSD	2.073599	5.773131	.9213486

#1	2.578624	.0220165	.0289421
#2	2.484508	.0230925	.0286203
#3	2.492341	.0246861	.0284185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6944.525	104687.2	7748.250	5312.392	8255.845
Stddev	15.954	205.9	68.872	40.964	16.076
%RSD	.2297365	.1966952	.8888723	.7711003	.1947183

#1	6962.933	104892.6	7668.776	5323.066	8272.861
#2	6935.948	104480.7	7785.482	5267.148	8240.913
#3	6934.695	104688.4	7790.491	5346.963	8253.761

Sample Name: Q3260-02MS Acquired: 10/8/2025 16:41:19 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7969921	1.783462	.9026606	1.703432	.8278055	4.121761
Stddev	.0036621	.011242	.0022476	.001809	.0029399	.019269
%RSD	.4594882	.6303579	.2490013	.1062202	.3551430	.4674973

#1	.7953213	1.794892	.9000655	1.701855	.8256488	4.142862
#2	.7944635	1.772418	.9039917	1.703034	.8311542	4.117323
#3	.8011916	1.783076	.9039246	1.705407	.8266135	4.105098

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2831724	.1750871	.1860973	13.86923	.4149674	.1892351
Stddev	.0036247	.0012630	.0004784	.07008	.0014469	.0006816
%RSD	1.280027	.7213288	.2570615	.5052742	.3486870	.3601808

#1	.2855079	.1749861	.1857522	13.92328	.4137747	.1886082
#2	.2850126	.1763975	.1858964	13.89437	.4165770	.1891364
#3	.2789968	.1738777	.1866434	13.79006	.4145503	.1899606

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5474082	25.21212	.3625816	6.271881	.5054034	.0709869
Stddev	.0011720	.03992	.0024188	.096582	.0014821	.0005170
%RSD	.2140966	.1583283	.6670947	1.539916	.2932590	.7282827

#1	.5467223	25.17140	.3653721	6.381539	.5039866	.0706784
#2	.5467409	25.21378	.3612890	6.234640	.5052805	.0715837
#3	.5487614	25.25119	.3610838	6.199464	.5069432	.0706985

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	829.6657	.2892838	1.524799	35.44668	.4564860	.4233724
Stddev	8.3081	.0022427	.004705	.07906	.0031818	.0010123
%RSD	1.001377	.7752744	.3085819	.2230507	.6970213	.2391081

#1	820.9326	.2887293	1.519792	35.47313	.4563836	.4224181
#2	837.4709	.2917517	1.525475	35.50913	.4597177	.4232650
#3	830.5936	.2873702	1.529129	35.35779	.4533566	.4244341

Sample Name: Q3260-02MS Acquired: 10/8/2025 16:41:19 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.5874701	.2296540	F 31.21093	F 12.68966	F 16.67771	.2211005
Stddev	.0026187	.0015304	.06349	.05681	.05801	.0023932
%RSD	.4457525	.6663897	.2034247	.4476959	.3478051	1.082408

#1	.5856406	.2294332	31.18359	12.63318	16.61734	.2201185
#2	.5862999	.2312828	31.16569	12.74680	16.68275	.2238285
#3	.5904698	.2282460	31.28351	12.68898	16.73303	.2193544

Elem	Sr4077
Units	ppm
Avg	.3386133
Stddev	.0027107
%RSD	.8005337

#1	.3405577
#2	.3397654
#3	.3355169

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6270.310	90725.31	7038.427	4670.788	7026.322
Stddev	8.367	325.91	22.083	18.560	14.313
%RSD	.1334372	.3592251	.3137514	.3973547	.2036992

#1	6279.770	91018.43	7028.009	4673.546	7042.358
#2	6263.882	90783.15	7023.481	4687.814	7021.763
#3	6267.279	90374.36	7063.793	4651.004	7014.843

Sample Name: Q3260-02MSD Acquired: 10/8/2025 16:45:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.8252586	1.811795	.9434416	1.697223	.8583657	4.228371
Stddev	.0022791	.022262	.0003006	.005202	.0018831	.042299
%RSD	.2761726	1.228711	.0318613	.3065068	.2193818	1.000359

#1	.8277541	1.819475	.9436545	1.699429	.8564032	4.273197
#2	.8247345	1.829201	.9435724	1.700959	.8601579	4.189159
#3	.8232871	1.786710	.9430977	1.691282	.8585360	4.222759

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2930229	.1857767	.1937381	13.82450	.4373740	.1973591
Stddev	.0020600	.0016641	.0003624	.08276	.0014243	.0001820
%RSD	.7030033	.8957614	.1870778	.5986328	.3256499	.0922326

#1	.2940373	.1863454	.1941008	13.90367	.4365123	.1975552
#2	.2906525	.1839029	.1933759	13.73857	.4365917	.1973265
#3	.2943789	.1870820	.1937376	13.83128	.4390180	.1971955

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5527250	26.01983	.3697367	6.423472	.5242234	.0766126
Stddev	.0003462	.06065	.0029507	.081204	.0000915	.0001863
%RSD	.0626309	.2331086	.7980685	1.264181	.0174546	.2432062

#1	.5524109	26.04772	.3702720	6.487803	.5243075	.0764713
#2	.5526680	26.06153	.3665550	6.332228	.5242368	.0768238
#3	.5530961	25.95025	.3723833	6.450385	.5241259	.0765427

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	837.1894	.3064635	1.549288	37.00531	.4750070	.4469826
Stddev	7.4345	.0031979	.004027	.23919	.0044187	.0010067
%RSD	.8880284	1.043473	.2599428	.6463610	.9302462	.2252283

#1	842.5916	.3085026	1.547427	36.86438	.4780753	.4474029
#2	840.2660	.3081099	1.546527	37.28148	.4699424	.4477111
#3	828.7104	.3027778	1.553909	36.87008	.4770035	.4458338

Sample Name: Q3260-02MSD Acquired: 10/8/2025 16:45:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6036014	.2391244	F 32.28136	F 12.73040	F 15.73821	.2317883
Stddev	.0022755	.0010243	.09919	.04104	.08335	.0040330
%RSD	.3769892	.4283708	.3072559	.3224021	.5296216	1.739959
#1	.6060802	.2401137	32.23848	12.75339	15.76053	.2359970
#2	.6031168	.2380683	32.39477	12.75480	15.80813	.2279575
#3	.6016073	.2391912	32.21082	12.68302	15.64597	.2314105

Elem	Sr4077
Units	ppm
Avg	.3488424
Stddev	.0019934
%RSD	.5714301
#1	.3508647
#2	.3468792
#3	.3487833

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6434.721	88069.35	6962.215	4593.921	7219.185
Stddev	16.829	112.98	66.833	13.203	11.894
%RSD	.2615305	.1282892	.9599419	.2874028	.1647506
#1	6421.066	88113.47	6924.179	4583.447	7205.809
#2	6429.575	88153.61	7039.384	4608.752	7223.179
#3	6453.521	87940.96	6923.080	4589.565	7228.568

Sample Name: Q3260-02A Acquired: 10/8/2025 16:49:31 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.8337175	1.892248	.9434493	2.095111	.8809707	3.857633
Stddev	.0015607	.092356	.0036061	.014245	.0011519	.023385
%RSD	.1871984	4.880743	.3822229	.6799047	.1307501	.6062095

#1	.8320218	1.791671	.9453838	2.082156	.8797178	3.838425
#2	.8340370	1.911832	.9392888	2.092811	.8819838	3.883674
#3	.8350937	1.973241	.9456754	2.110366	.8812104	3.850801

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2610159	.1907837	.1922058	12.19614	.4080419	.1946667
Stddev	.0017449	.0016063	.0006075	.08390	.0033792	.0005680
%RSD	.6685027	.8419303	.3160873	.6878958	.8281389	.2917640

#1	.2593325	.1891712	.1921686	12.09954	.4042683	.1946337
#2	.2628164	.1923836	.1916177	12.25079	.4107882	.1941159
#3	.2608988	.1907962	.1928311	12.23809	.4090691	.1952504

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5304989	20.54746	.3311966	5.797957	.5163051	.0755705
Stddev	.0016050	.12358	.0018647	.010351	.0012233	.0005513
%RSD	.3025404	.6014611	.5630142	.1785232	.2369289	.7295392

#1	.5299005	20.41142	.3291676	5.797272	.5167306	.0749896
#2	.5292790	20.57815	.3328352	5.787966	.5149259	.0756353
#3	.5323170	20.65280	.3315871	5.808633	.5172588	.0760865

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	619.2842	.2903398	1.356407	29.30414	.4602929	.4373914
Stddev	7.2953	.0066009	.008527	.08171	.0056497	.0010386
%RSD	1.178020	2.273508	.6286204	.2788240	1.227403	.2374615

#1	625.2446	.2830722	1.347028	29.27299	.4539442	.4371058
#2	611.1487	.2919842	1.358501	29.24258	.4647671	.4365255
#3	621.4592	.2959631	1.363691	29.39684	.4621673	.4385430

Sample Name: Q3260-02A Acquired: 10/8/2025 16:49:31 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6940109	.2236273	F 25.46046	F 12.34291	F 13.08722	.2020377
Stddev	.0025437	.0017881	.10498	.05478	.12722	.0067707
%RSD	.3665155	.7995845	.4123164	.4438135	.9720872	3.351221
#1	.6922700	.2216370	25.41219	12.28534	12.94309	.1978762
#2	.6928327	.2250981	25.38830	12.34901	13.13469	.2098503
#3	.6969301	.2241468	25.58089	12.39439	13.18388	.1983866

Elem	Sr4077
Units	ppm
Avg	.3142274
Stddev	.0024664
%RSD	.7848925
#1	.3115383
#2	.3163840
#3	.3147599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6304.486	95234.74	6787.075	4824.410	7108.321
Stddev	10.413	265.20	54.719	27.736	14.608
%RSD	.1651627	.2784678	.8062283	.5749047	.2054995
#1	6298.315	95521.19	6841.405	4849.159	7103.349
#2	6316.508	95185.24	6731.974	4829.639	7124.765
#3	6298.635	94997.77	6787.846	4794.431	7096.848

Sample Name: Q3267-01DLX100 Acquired: 10/8/2025 16:53:38 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.000429	-.008610	-.000793	-.001085	.0000853	.0127531
Stddev	.002432	.002399	.001068	.000440	.0005610	.0044107
%RSD	566.4126	27.86483	134.5702	40.57963	657.7082	34.58501

#1	-.002993	-.007975	-.000579	-.000578	.0002497	.0117549
#2	.001845	-.006593	-.001952	-.001304	.0005457	.0175773
#3	-.000141	-.011263	.000151	-.001373	-.000540	.0089270

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003971	-.000082	-.000053	3.553851	.0085579	.0066187
Stddev	.000422	.000045	.000027	.143424	.0004678	.0006005
%RSD	10.61718	54.27470	51.54007	4.035743	5.465868	9.072675

#1	-.003811	-.000036	-.000083	3.702322	.0090601	.0071100
#2	-.003653	-.000125	-.000031	3.543158	.0084788	.0067969
#3	-.004449	-.000086	-.000044	3.416072	.0081347	.0059493

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009158	.0023197	.0000778	.0248707	.0461183	.0004780
Stddev	.0001075	.0022509	.0008318	.0087559	.0035221	.0000658
%RSD	11.73541	97.03360	1068.839	35.20583	7.637107	13.76904

#1	.0010263	.0009845	.0000797	.0180155	.0497168	.0004945
#2	.0009095	.0010561	-.000755	.0347342	.0459602	.0004055
#3	.0008116	.0049184	.000909	.0218624	.0426780	.0005339

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1037.049	-.001474	.0039904	9.991506	-.010737	.0430186
Stddev	36.996	.003556	.0001692	.186078	.000123	.0029338
%RSD	3.567432	241.2273	4.239966	1.862362	1.142606	6.819812

#1	1075.206	-.000562	.0041847	9.825351	-.010841	.0458503
#2	1034.608	-.005397	.0038760	9.956604	-.010767	.0432131
#3	1001.334	.001537	.0039105	10.19257	-.010602	.0399924

Sample Name: Q3267-01DLX100 Acquired: 10/8/2025 16:53:38 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001911	.0010723	.0317462	-.001783	F 15.50094	.0355499
Stddev	.000456	.0005904	.0094782	.001213	1.07839	.0040881
%RSD	23.86380	55.06305	29.85625	68.03440	6.956960	11.49954

#1	-.001674	.0017478	.0353729	-.000397	16.51225	.0353284
#2	-.002437	.0006552	.0388757	-.002300	15.62448	.0315771
#3	-.001622	.0008138	.0209902	-.002653	14.36610	.0397442

Elem	Sr4077
Units	ppm
Avg	.0063712
Stddev	.0003348
%RSD	5.255285

#1	.0067475
#2	.0062599
#3	.0061061

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6586.128	94272.82	7316.043	4782.997	7314.947
Stddev	71.099	405.16	46.908	30.945	107.144
%RSD	1.079524	.4297705	.6411721	.6469871	1.464733

#1	6530.126	93852.77	7367.769	4747.463	7232.550
#2	6562.139	94661.23	7276.262	4804.022	7276.220
#3	6666.118	94304.46	7304.099	4797.505	7436.070

Sample Name: Q3267-01DLX50 Acquired: 10/8/2025 16:58:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001675	-.006058	.0000895	.0008240	.0007258	.0090339
Stddev	.002065	.003609	.0016925	.0021384	.0007317	.0137658
%RSD	123.3278	59.56335	1890.899	259.5285	100.8079	152.3789

#1	-.002154	-.008597	-.000644	-.000700	.0014371	.0033695
#2	.000588	-.007650	.002025	.003269	.0007652	.0247281
#3	-.003458	-.001928	-.001112	-.000097	-.000025	-.000996

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006473	-.000096	-.000148	6.867845	.0181289	.0140598
Stddev	.000980	.000005	.000048	.212209	.0004499	.0007039
%RSD	15.14084	5.282811	32.34094	3.089895	2.481718	5.006429

#1	-.005641	-.000091	-.000202	7.109110	.0184021	.0145398
#2	-.007554	-.000101	-.000115	6.784305	.0183750	.0143879
#3	-.006224	-.000097	-.000126	6.710118	.0176096	.0132518

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014971	.0034945	.0005675	.0668500	.0975550	.0004801
Stddev	.0001474	.0012856	.0001870	.0291471	.0036598	.0001450
%RSD	9.847161	36.78914	32.95805	43.60071	3.751539	30.19972

#1	.0016124	.0026608	.0003980	.0368125	.1008695	.0003302
#2	.0015479	.0049751	.0007682	.0950165	.0981683	.0006196
#3	.0013310	.0028477	.0005363	.0687211	.0936273	.0004906

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1948.821	.0021509	.0078585	17.66928	-.007613	.0900227
Stddev	61.425	.0026619	.0003066	.30288	.000064	.0033348
%RSD	3.151907	123.7582	3.901745	1.714171	.8346745	3.704444

#1	2015.881	.0034807	.0078708	17.32710	-.007596	.0928383
#2	1935.300	-.000914	.0081587	17.77778	-.007559	.0908898
#3	1895.284	.003886	.0075459	17.90297	-.007683	.0863399

Sample Name: Q3267-01DLX50 Acquired: 10/8/2025 16:58:02 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001624	.0021237	.0427318	-.002721	F 33.74402	.0496250
Stddev	.000541	.0006975	.0026828	.000838	1.51076	.0022841
%RSD	33.32003	32.84153	6.278213	30.81114	4.477117	4.602752

#1	-.002018	.0013820	.0408760	-.003643	35.05094	.0520614
#2	-.001007	.0022227	.0415116	-.002004	34.09124	.0475320
#3	-.001846	.0027664	.0458078	-.002517	32.08987	.0492817

Elem	Sr4077
Units	ppm
Avg	.0127367
Stddev	.0003528
%RSD	2.769938

#1	.0131270
#2	.0126427
#3	.0124404

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6312.766	88199.34	7223.341	4563.740	6818.165
Stddev	74.291	138.20	112.962	13.671	86.319
%RSD	1.176845	.1566885	1.563845	.2995612	1.266008

#1	6311.743	88065.15	7173.324	4549.456	6814.753
#2	6238.992	88341.22	7352.677	4565.061	6733.603
#3	6387.564	88191.65	7144.022	4576.702	6906.139

Sample Name: CCV05 Acquired: 10/8/2025 17:02:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.792857	4.889523	4.585372	4.797810	4.915659	9.295749
Stddev	.019896	.175693	.022254	.035121	.020196	.031151
%RSD	.4151183	3.593250	.4853347	.7320218	.4108494	.3351103

#1	4.770952	4.717807	4.563667	4.760827	4.894441	9.297427
#2	4.797811	4.881822	4.584311	4.801890	4.917886	9.263793
#3	4.809807	5.068939	4.608138	4.830713	4.934648	9.326027

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.704795	.2285813	2.281684	23.44717	.9418361	2.308215
Stddev	.047104	.0013642	.010754	.03215	.0021336	.009709
%RSD	.4853689	.5968101	.4713387	.1370991	.2265333	.4206439

#1	9.758233	.2270079	2.271342	23.46769	.9394212	2.298079
#2	9.669297	.2294337	2.280903	23.41012	.9434658	2.309133
#3	9.686856	.2293022	2.292808	23.46370	.9426212	2.317433

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.179410	5.112407	2.404027	22.92521	2.311159	1.233506
Stddev	.004894	.045127	.003651	.10117	.010977	.003007
%RSD	.4149860	.8826869	.1518827	.4413209	.4749404	.2437917

#1	1.174395	5.162838	2.406794	22.84048	2.299437	1.236323
#2	1.179660	5.098549	2.399888	22.89791	2.312843	1.230339
#3	1.184174	5.075836	2.405398	23.03723	2.321196	1.233856

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.91981	2.380467	2.463039	F 27.93186	4.757277	4.846154
Stddev	.33785	.004179	.008784	.25414	.025976	.025489
%RSD	1.255016	.1755694	.3566269	.9098686	.5460215	.5259551

#1	27.30993	2.379390	2.473178	28.19259	4.733196	4.818049
#2	26.72464	2.385079	2.458215	27.68486	4.784804	4.852640
#3	26.72488	2.376932	2.457725	27.91812	4.753832	4.867773

Sample Name: CCV05 Acquired: 10/8/2025 17:02:24 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.616142	4.823620	4.906407	4.500970	4.553792	4.737147
Stddev	.028416	.016293	.026015	.024781	.046077	.046513
%RSD	.6155896	.3377800	.5302272	.5505793	1.011828	.9818726

#1	4.586477	4.836785	4.933281	4.474066	4.505076	4.789607
#2	4.618830	4.805398	4.881346	4.505981	4.559628	4.700946
#3	4.643119	4.828678	4.904594	4.522863	4.596673	4.720890

Elem	Sr4077
Units	ppm
Avg	4.851092
Stddev	.019902
%RSD	.4102485

#1	4.858188
#2	4.866473
#3	4.828615

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7034.840	99818.13	7690.471	4969.927	8209.422
Stddev	23.789	205.88	59.711	7.248	35.365
%RSD	.3381647	.2062545	.7764235	.1458365	.4307854

#1	7058.721	100044.1	7758.563	4963.626	8243.019
#2	7034.656	99769.2	7647.042	4977.848	8212.728
#3	7011.144	99641.1	7665.810	4968.309	8172.521

Sample Name: CCB05 Acquired: 10/8/2025 17:06:27 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002335	-.008648	.0003675	-.001754	.0008180	-.002687
Stddev	.0003734	.000453	.0005668	.001248	.0018678	.007652
%RSD	159.9053	5.243669	154.2342	71.18838	228.3457	284.8393

#1	.0000074	-.008864	.0001024	-.003111	.0011179	-.002768
#2	.0000286	-.008953	.0010183	-.000654	-.001182	-.010298
#3	.0006645	-.008126	-.000018	-.001496	.002518	.005006

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009090	-.000072	.0000405	-.001295	-.000283	.0000732
Stddev	.001219	.000052	.0000278	.004154	.000237	.0000686
%RSD	13.41564	72.62829	68.69996	320.6799	83.73295	93.77963

#1	-.010457	-.000132	.0000664	-.003603	-.000041	.0001524
#2	-.008114	-.000036	.0000440	-.003783	-.000293	.0000358
#3	-.008699	-.000048	.0000111	.003500	-.000514	.0000314

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002159	-.004171	.0006221	.0102918	.0003271	.0001139
Stddev	.0000776	.004524	.0005730	.0198999	.0005321	.0002482
%RSD	35.94461	108.4575	92.11760	193.3563	162.6549	217.9367

#1	.0002896	-.006210	.0009004	-.012363	-.000175	.0000077
#2	.0002232	-.007316	-.000037	.024949	.000885	-.000064
#3	.0001349	.001013	.001003	.018289	.000271	.000398

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1.525770	.0006344	.0002653	F 2.347930	-.010989	.0005343
Stddev	.028499	.0007250	.0001827	.150184	.000321	.0001901
%RSD	1.867862	114.2946	68.87131	6.396464	2.919770	35.57739

#1	1.493399	.0002281	.0001785	2.177312	-.011130	.0006733
#2	1.547087	.0002035	.0001421	2.460121	-.010621	.0003177
#3	1.536823	.0014714	.0004752	2.406356	-.011214	.0006120

Sample Name: CCB05 Acquired: 10/8/2025 17:06:27 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006414	-.003100	.0142217	-.001159	.0058549	F .0102779
Stddev	.0003464	.001730	.0112874	.000379	.0016415	.0008263
%RSD	54.00778	55.81130	79.36729	32.73757	28.03583	8.039677

#1	.0004468	-.005066	.0271641	-.001284	.0074845	.0107812
#2	.0010414	-.001811	.0064181	-.001460	.0058782	.0093242
#3	.0004361	-.002423	.0090828	-.000733	.0042018	.0107281

Elem	Sr4077
Units	ppm
Avg	.0000337
Stddev	.0000528
%RSD	156.3845

#1	-.000006
#2	.000014
#3	.000094

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7054.494	107279.8	7635.263	5382.345	9026.556
Stddev	45.787	752.1	122.744	33.014	55.343
%RSD	.6490433	.7010968	1.607595	.6133836	.6131114

#1	7093.339	107053.4	7603.194	5379.797	9077.664
#2	7066.131	106666.8	7531.737	5350.678	9034.225
#3	7004.011	108119.0	7770.859	5416.559	8967.778

Sample Name: PB170024BL Acquired: 10/8/2025 17:10:44 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001410	-.010770	-.000640	-.001162	.0008877	.0061225
Stddev	.000757	.001423	.000263	.000107	.0005625	.0046151
%RSD	53.72033	13.21045	41.10888	9.229806	63.37157	75.37997

#1	-.000701	-.011939	-.000918	-.001254	.0004643	.0063509
#2	-.002208	-.009186	-.000396	-.001187	.0015260	.0013974
#3	-.001321	-.011185	-.000605	-.001044	.0006728	.0106192

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006945	-.000008	-.000094	.0574316	-.000085	.0001252
Stddev	.000784	.000022	.000012	.0020422	.000162	.0001143
%RSD	11.28567	257.8794	12.32244	3.555839	192.0506	91.29471

#1	-.006685	-.000018	-.000082	.0583629	-.000247	.0002126
#2	-.007826	.000016	-.000105	.0588422	-.000084	.0001672
#3	-.006325	-.000023	-.000097	.0550898	.000078	-.000004

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001341	.0127162	.0016556	.0126876	.0005064	.0000131
Stddev	.0002342	.0008146	.0007263	.0113736	.0002224	.0004207
%RSD	174.7416	6.406040	43.87013	89.64391	43.91480	3201.191

#1	-.000066	.0121727	.0010790	.0251265	.0007632	-.000337
#2	.000076	.0136528	.0024713	.0101169	.0003808	-.000103
#3	.000392	.0123230	.0014165	.0028193	.0003752	.000480

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1.242671	-.001801	.0023426	F 1.920644	-.012062	-.000132
Stddev	.025031	.001383	.0003456	.085475	.000293	.000022
%RSD	2.014273	76.78820	14.75034	4.450312	2.430949	16.68892

#1	1.213929	-.001737	.0019520	1.855194	-.012395	-.000112
#2	1.254406	-.003215	.0024677	1.889391	-.011945	-.000156
#3	1.259678	-.000451	.0026082	2.017347	-.011845	-.000130

Sample Name: PB170024BL Acquired: 10/8/2025 17:10:44 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001333	-.000685	.0140723	F .0380481	F .0101659	.0089108
Stddev	.000628	.001256	.0088890	.0005630	.0017747	.0003507
%RSD	47.12462	183.2705	63.16652	1.479584	17.45702	3.935505
#1	-.001144	-.000824	.0059374	.0379925	.0117364	.0085126
#2	-.002034	-.001866	.0127193	.0386368	.0082407	.0090460
#3	-.000821	.000634	.0235602	.0375150	.0105205	.0091737

Elem	Sr4077
Units	ppm
Avg	-.000109
Stddev	.000005
%RSD	4.707356
#1	-.000105
#2	-.000115
#3	-.000108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7056.856	108732.4	7898.586	5400.556	9012.957
Stddev	8.481	640.4	61.782	7.428	21.537
%RSD	.1201844	.5890095	.7821945	.1375454	.2389530
#1	7047.074	109435.3	7969.636	5392.139	8996.007
#2	7061.342	108580.1	7868.618	5403.333	9005.672
#3	7062.152	108181.8	7857.502	5406.195	9037.191

Sample Name: PB170024BS Acquired: 10/8/2025 17:15:03 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7658058	1.846699	.8931351	1.953769	.8075792	1.882798
Stddev	.0031773	.038853	.0007787	.006182	.0014107	.015525
%RSD	.4148900	2.103942	.0871830	.3164050	.1746851	.8245902

#1	.7657648	1.875931	.8933948	1.956948	.8070155	1.897340
#2	.7626493	1.802609	.8937507	1.946645	.8065374	1.866447
#3	.7690034	1.861557	.8922597	1.957715	.8091846	1.884606

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1793776	.1897419	.1765878	1.108039	.3660794	.1817626
Stddev	.0009889	.0010039	.0002782	.011494	.0005651	.0004458
%RSD	.5512756	.5290685	.1575496	1.037289	.1543743	.2452445

#1	.1797735	.1908518	.1763767	1.121204	.3666931	.1814043
#2	.1801072	.1894764	.1764837	1.100004	.3659644	.1816218
#3	.1782521	.1888975	.1769031	1.102909	.3655806	.1822618

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2946037	2.841565	.1918660	1.896831	.4553624	.0683914
Stddev	.0007353	.010276	.0005002	.035450	.0012495	.0004070
%RSD	.2495811	.3616275	.2607079	1.868901	.2743922	.5951513

#1	.2938809	2.847169	.1922749	1.936745	.4542729	.0680685
#2	.2945794	2.829706	.1913083	1.884736	.4550879	.0688486
#3	.2953508	2.847821	.1920148	1.869011	.4567262	.0682571

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 3.652892	.2864233	.2029204	10.47771	.2838928	.3930007
Stddev	.019151	.0029330	.0004029	.07056	.0014782	.0010257
%RSD	.5242577	1.023990	.1985369	.6733920	.5207041	.2609898

#1	3.656358	.2898072	.2031373	10.41785	.2849460	.3925564
#2	3.632245	.2846130	.2031683	10.45977	.2845294	.3922720
#3	3.670073	.2848497	.2024555	10.55550	.2822029	.3941736

Sample Name: PB170024BS Acquired: 10/8/2025 17:15:03 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.6303810	.1853549	.8305615	5.114601	F .0174299	.1753719
Stddev	.0018165	.0011739	.0029646	.017315	.0026174	.0008479
%RSD	.2881543	.6333442	.3569390	.3385501	15.01687	.4835010

#1	.6297375	.1855706	.8302453	5.131407	.0204313	.1763431
#2	.6289739	.1864060	.8277677	5.096817	.0156217	.1749939
#3	.6324316	.1840880	.8336716	5.115580	.0162367	.1747787

Elem	Sr4077
Units	ppm
Avg	.1842147
Stddev	.0010835
%RSD	.5881714

#1	.1854639
#2	.1835312
#3	.1836489

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7123.791	106928.6	7641.048	5201.736	8875.464
Stddev	1.022	145.7	35.291	20.274	3.667
%RSD	.0143527	.1362208	.4618667	.3897621	.0413154

#1	7124.883	106765.2	7607.707	5185.941	8875.922
#2	7123.634	106975.5	7637.425	5194.669	8871.589
#3	7122.856	107045.0	7678.011	5224.598	8878.880

Sample Name: Q3293-02 Acquired: 10/8/2025 17:19:05 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.004443	-.017716	-.002818	.0023213	.0047226	.2338833	.1339613
Stddev	.000525	.001391	.001209	.0020959	.0012143	.0073508	.0009122
%RSD	11.82296	7.851721	42.90339	90.28904	25.71226	3.142921	.6809821

#1	-.004616	-.017219	-.002693	.0042865	.0047530	.2275126	.1334036
#2	-.004860	-.016641	-.001676	.0001155	.0059213	.2322112	.1350141
#3	-.003853	-.019287	-.004084	.0025619	.0034933	.2419261	.1334663

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000193	-.000115	169.6864	.0162087	.0005070	.0219522	.1227590
Stddev	.000034	.000017	.4900	.0001363	.0001705	.0003491	.0038123
%RSD	17.62268	14.98927	.2887797	.8405699	33.62308	1.590444	3.105480

#1	-.000210	-.000097	169.8211	.0163539	.0004538	.0221135	.1247816
#2	-.000216	-.000132	169.1432	.0161887	.0003695	.0215516	.1251337
#3	-.000154	-.000115	170.0951	.0160836	.0006978	.0221915	.1183617

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045244	.0430135	.0007340	-.000362	332.6980	.0028228	.0170437
Stddev	.0005828	.0220474	.0001824	.000248	4.7977	.0011204	.0003466
%RSD	12.88176	51.25702	24.85399	68.48230	1.442072	39.69131	2.033679

#1	.0047371	.0683947	.0005907	-.000094	335.3829	.0017776	.0172119
#2	.0038651	.0286097	.0006720	-.000583	327.1589	.0026851	.0172741
#3	.0049709	.0320360	.0009394	-.000408	335.5523	.0040057	.0166451

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.20778	-.004616	.0020299	-.016392	-.003294	.4852908	.0110078
Stddev	.13039	.000195	.0001771	.000362	.000776	.0210124	.0012572
%RSD	1.068127	4.217636	8.725614	2.208704	23.56978	4.329861	11.42111

#1	12.22970	-.004829	.0022341	-.016128	-.003628	.5066249	.0122413
#2	12.06781	-.004572	.0019190	-.016243	-.003847	.4646155	.0097282
#3	12.32582	-.004448	.0019365	-.016805	-.002407	.4846319	.0110539

Sample Name: Q3293-02 Acquired: 10/8/2025 17:19:05 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7354888	.0507358	.4285355
Stddev	.0051729	.0041008	.0019190
%RSD	.7033321	8.082599	.4478080

#1	.7361723	.0551934	.4284412
#2	.7300081	.0498901	.4266654
#3	.7402860	.0471237	.4305000

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6449.993	96546.65	7661.020	4733.093	7447.507
Stddev	6.870	357.58	21.073	21.033	7.388
%RSD	.1065127	.3703673	.2750685	.4443807	.0992011

#1	6442.753	96320.10	7655.345	4708.895	7447.464
#2	6450.806	96958.87	7684.350	4746.988	7440.141
#3	6456.420	96360.99	7643.366	4743.397	7454.916

Sample Name: Q3297-10 Acquired: 10/8/2025 17:23:31 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.003132	-.016075	.0002446	.0035295	.0035417	.1637838	.1684289
Stddev	.001132	.002268	.0000351	.0025652	.0002993	.0060035	.0040356
%RSD	36.13078	14.10637	14.34374	72.67921	8.449429	3.665510	2.396036
#1	-.003778	-.014080	.0002655	.0019322	.0036203	.1642928	.1697970
#2	-.003793	-.018541	.0002041	.0021678	.0037939	.1695166	.1638871
#3	-.001826	-.015604	.0002641	.0064884	.0032110	.1575420	.1716027
Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000128	-.000097	7.779001	.0007510	.0000845	.0005038	.0242890
Stddev	.000019	.000026	.055637	.0001682	.0001849	.0002057	.0056480
%RSD	14.83460	26.91691	.7152151	22.39265	218.9701	40.82035	23.25352
#1	-.000108	-.000097	7.824265	.0009154	.0000094	.0007347	.0229035
#2	-.000130	-.000122	7.716887	.0007585	.0002951	.0004367	.0305009
#3	-.000146	-.000070	7.795851	.0005793	-.000051	.0003401	.0194626
Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0519906	1.155856	.0010175	.0000071	265.5909	-.000563	.1296070
Stddev	.0004536	.037355	.0000877	.0002824	4.6895	.002288	.0011309
%RSD	.8725377	3.231782	8.620842	3961.685	1.765674	406.0503	.8725539
#1	.0524310	1.183055	.0010417	.0003179	270.9508	-.002268	.1285024
#2	.0515248	1.113265	.0009202	-.000063	262.2444	.002036	.1295560
#3	.0520161	1.171248	.0010906	-.000234	263.5775	-.001458	.1307625
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.384514	.0422766	.0005209	-.015193	-.000778	.5832123	.0057044
Stddev	.015590	.0007191	.0000903	.000083	.001696	.0136040	.0008020
%RSD	1.125998	1.700853	17.33381	.5469391	217.9836	2.332605	14.05986
#1	1.394634	.0415268	.0005739	-.015106	.000652	.5885780	.0047963
#2	1.366561	.0423425	.0004166	-.015271	-.002652	.5933153	.0060010
#3	1.392347	.0429604	.0005721	-.015201	-.000334	.5677437	.0063159

Sample Name: Q3297-10 Acquired: 10/8/2025 17:23:31 Type: Unk
Method: 6010-200.7 NEW(v275) 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	1.640652	-.000488	.0387925
Stddev	.027849	.001456	.0006956
%RSD	1.697441	298.5620	1.793033

#1	1.609844	-.002108	.0392080
#2	1.648075	-.000068	.0379895
#3	1.664037	.000713	.0391800

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7007.383	105132.7	7791.292	5261.545	8177.122
Stddev	7.988	338.2	48.116	11.090	10.163
%RSD	.1139995	.3216415	.6175669	.2107708	.1242821

#1	7005.224	105104.3	7774.085	5272.364	8182.237
#2	7016.229	105484.2	7845.646	5262.068	8183.711
#3	7000.696	104809.7	7754.144	5250.203	8165.418

Sample Name: Q3297-20 Acquired: 10/8/2025 17:27:54 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.004189	-.016206	.0012697	.0053687	.0028481	.3404564	.1377970
Stddev	.001732	.004588	.0002398	.0030473	.0007216	.0074478	.0025651
%RSD	41.33777	28.30914	18.88389	56.76059	25.33669	2.187582	1.861474

#1	-.002815	-.019705	.0014817	.0019956	.0020770	.3338996	.1351033
#2	-.003618	-.011012	.0013180	.0079229	.0035070	.3389155	.1402104
#3	-.006134	-.017902	.0010095	.0061874	.0029602	.3485541	.1380774

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000084	-.000117	8.169466	.0014474	-.000040	.0005445	.0204584
Stddev	.000037	.000041	.003735	.0004234	.000166	.0000998	.0064884
%RSD	43.89215	34.51213	.0457241	29.25179	414.4920	18.32642	31.71534

#1	-.000086	-.000077	8.166093	.0016924	.000073	.0004294	.0141645
#2	-.000120	-.000117	8.168824	.0009585	-.000230	.0006067	.0271253
#3	-.000046	-.000158	8.173481	.0016913	.000038	.0005974	.0200854

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106168	3.776360	.0008709	.0001842	269.0881	.0008259	.1109865
Stddev	.0008843	.015719	.0001303	.0006328	1.2650	.0028146	.0004693
%RSD	8.329057	.4162593	14.95966	343.4936	.4701185	340.7997	.4228379

#1	.0096196	3.763162	.0010153	-.000545	268.3409	.0026901	.1105598
#2	.0109255	3.772168	.0007621	.000586	268.3746	.0021994	.1114891
#3	.0113054	3.793751	.0008352	.000511	270.5487	-.002412	.1109104

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6343623	.0335814	.0007825	-.015082	-.002208	.3650597	.0074033
Stddev	.0154143	.0010342	.0001174	.000499	.001489	.0153477	.0006310
%RSD	2.429883	3.079546	14.99805	3.307074	67.45154	4.204150	8.523030

#1	.6357713	.0347215	.0009142	-.014675	-.003682	.3618544	.0069150
#2	.6182920	.0327038	.0006891	-.014932	-.002238	.3817568	.0081157
#3	.6490238	.0333189	.0007441	-.015638	-.000704	.3515678	.0071790

Sample Name: Q3297-20 Acquired: 10/8/2025 17:27:54 Type: Unk
Method: 6010-200.7 NEW(v275) 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	1.912355	.0027358	.0122976
Stddev	.002669	.0036221	.0000520
%RSD	.1395499	132.3940	.4225673

#1	1.911314	.0050247	.0122377
#2	1.910364	-.001440	.0123253
#3	1.915387	.004623	.0123299

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7039.746	115385.6	8425.858	5769.090	8018.859
Stddev	11.358	578.7	32.221	25.446	12.617
%RSD	.1613383	.5015640	.3824011	.4410832	.1573423

#1	7051.794	115964.4	8435.308	5798.391	8026.858
#2	7029.235	115385.4	8452.297	5756.343	8004.314
#3	7038.209	114806.9	8389.969	5752.536	8025.405

Sample Name: Q3302-06 Acquired: 10/8/2025 17:32:18 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.005088	-.015784	.0027588	.0076068	.0031549	.0565341	.1369568
Stddev	.001477	.003927	.0009717	.0010229	.0008375	.0108504	.0015276
%RSD	29.03237	24.87962	35.22019	13.44762	26.54465	19.19258	1.115395

#1	-.003382	-.015025	.0016406	.0087880	.0024562	.0651899	.1351991
#2	-.005933	-.020035	.0032382	.0070248	.0040832	.0600508	.1379640
#3	-.005948	-.012292	.0033975	.0070077	.0029253	.0443616	.1377073

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000126	.0000621	7.625582	.0007403	-.000312	.0040746	.0231112
Stddev	.000008	.0000430	.026671	.0002882	.000114	.0000746	.0103959
%RSD	5.968029	69.32945	.3497574	38.93563	36.66791	1.830491	44.98188

#1	-.000133	.0000659	7.616878	.0010201	-.000442	.0039937	.0257519
#2	-.000128	.0001030	7.655517	.0004443	-.000225	.0041406	.0116496
#3	-.000118	.0000172	7.604350	.0007565	-.000269	.0040894	.0319320

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0394741	1.895627	.0012225	-.000245	274.2251	.0001167	.0273770
Stddev	.0006201	.027827	.0001298	.000161	1.6610	.0004268	.0006381
%RSD	1.570790	1.467961	10.62020	65.59598	.6057143	365.7960	2.330869

#1	.0392711	1.914273	.0012426	-.000425	273.2119	.0002482	.0280653
#2	.0401702	1.908967	.0013411	-.000117	276.1420	.0004622	.0268050
#3	.0389810	1.863642	.0010838	-.000193	273.3213	-.000360	.0272608

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6883997	.0009489	.0007463	-.014396	.0010932	.3349141	.0111083
Stddev	.0323236	.0003442	.0000656	.000106	.0007312	.0012352	.0001416
%RSD	4.695463	36.27133	8.784855	.7330763	66.88324	.3688189	1.274546

#1	.6793291	.0013451	.0006712	-.014347	.0010265	.3341746	.0110751
#2	.7242895	.0007770	.0007757	-.014518	.0018555	.3342275	.0112636
#3	.6615804	.0007245	.0007920	-.014324	.0003977	.3363400	.0109863

Sample Name: Q3302-06 Acquired: 10/8/2025 17:32:18 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.2202023	-.003296	.0265250
Stddev	.0025060	.006131	.0002336
%RSD	1.138042	186.0056	.8808066

#1	.2228535	-.001442	.0267920
#2	.2178725	.001693	.0263580
#3	.2198809	-.010140	.0264251

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6513.957	100286.8	7464.521	5004.737	7607.785
Stddev	14.806	71.8	54.793	25.476	10.148
%RSD	.2272989	.0715675	.7340482	.5090424	.1333915

#1	6529.500	100229.8	7409.487	4991.808	7617.586
#2	6512.353	100367.4	7465.004	5034.086	7608.448
#3	6500.019	100263.1	7519.070	4988.318	7597.322

Sample Name: Q3302-06DUP Acquired: 10/8/2025 17:36:43 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.003972	-.013842	.0026106	.0052734	.0019122	.0616056	.1349032
Stddev	.001051	.001151	.0014587	.0014944	.0018718	.0055081	.0022164
%RSD	26.47229	8.314685	55.87652	28.33798	97.89013	8.940932	1.642976

#1	-.003634	-.014033	.0042717	.0038179	-.000075	.0656728	.1325527
#2	-.005151	-.012608	.0020219	.0051984	.002169	.0553373	.1369553
#3	-.003131	-.014886	.0015383	.0068038	.003642	.0638068	.1352016

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000137	.0000822	7.607567	.0005156	-.000237	.0043338	.0232074
Stddev	.000022	.0000618	.032707	.0001573	.000126	.0001498	.0054147
%RSD	16.09497	75.27533	.4299228	30.50744	53.25919	3.455993	23.33165

#1	-.000131	.0001360	7.619365	.0006937	-.000305	.0044524	.0270012
#2	-.000119	.0000146	7.632739	.0003958	-.000316	.0041655	.0170065
#3	-.000162	.0000959	7.570599	.0004572	-.000092	.0043835	.0256145

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0389540	1.941580	.0014991	-.000156	271.5563	.0037160	.0286328
Stddev	.0007602	.008960	.0000512	.000241	2.8919	.0028332	.0003518
%RSD	1.951475	.4614804	3.413359	154.0352	1.064936	76.24294	1.228790

#1	.0385990	1.951920	.0015250	.000024	269.8009	.0040781	.0285642
#2	.0384363	1.936703	.0015322	-.000063	274.8941	.0007192	.0290139
#3	.0398268	1.936115	.0014402	-.000429	269.9739	.0063508	.0283204

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6858142	.0007834	.0008063	-.014509	-.001420	.3503940	.0114070
Stddev	.0340289	.0004026	.0002099	.000643	.000629	.0104171	.0005445
%RSD	4.961820	51.38803	26.03157	4.433424	44.27107	2.972953	4.773776

#1	.6467231	.0008208	.0006270	-.014980	-.002002	.3573655	.0108780
#2	.7088061	.0011659	.0010372	-.013776	-.000754	.3553972	.0119659
#3	.7019134	.0003634	.0007547	-.014772	-.001504	.3384192	.0113772

Sample Name: Q3302-06DUP Acquired: 10/8/2025 17:36:43 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.2138398	.0033393	.0259572
Stddev	.0013487	.0007324	.0001656
%RSD	.6306840	21.93306	.6379363

#1	.2129099	.0025610	.0258473
#2	.2132229	.0040150	.0261477
#3	.2153866	.0034419	.0258767

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6638.465	96961.79	7486.051	4750.088	7797.700
Stddev	8.854	942.30	17.894	39.980	14.438
%RSD	.1333804	.9718298	.2390255	.8416722	.1851569

#1	6629.976	98041.80	7501.139	4794.618	7804.475
#2	6647.644	96307.24	7466.283	4738.371	7807.505
#3	6637.774	96536.33	7490.732	4717.276	7781.121

Sample Name: Q3302-06LX5 Acquired: 10/8/2025 17:41:09 Type: Unk
Method: 6010-200.7 NEW(v275) 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	-.001992	-.012387	.0010216	-.000615	.0009267	.0122601	.0193329
Stddev	.001550	.001543	.0009184	.003313	.0013814	.0052065	.0012764
%RSD	77.81964	12.45730	89.90215	539.0580	149.0536	42.46677	6.602469

#1	-.000205	-.014166	.0000262	-.003912	.0024598	.0178060	.0206663
#2	-.002969	-.011569	.0012024	-.000646	.0005416	.0074772	.0181223
#3	-.002804	-.011424	.0018362	.002714	-.000221	.0114972	.0192102

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000069	-.000064	1.493670	-.000155	-.000139	.0005808	.0034789
Stddev	.000020	.000024	.011569	.000535	.000113	.0001082	.0033264
%RSD	28.65051	37.71138	.7745644	345.7614	81.16923	18.62360	95.61669

#1	-.000053	-.000044	1.500951	.000435	-.000182	.0006989	.0071091
#2	-.000091	-.000058	1.480329	-.000289	-.000223	.0004867	.0027504
#3	-.000063	-.000091	1.499730	-.000610	-.000011	.0005567	.0005771

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080478	.3864483	.0003836	-.000282	55.37358	.0011439	.0054648
Stddev	.0003419	.0323005	.0001056	.000150	.10439	.0020390	.0001868
%RSD	4.248578	8.358304	27.51973	52.97555	.1885260	178.2550	3.418071

#1	.0080060	.3869378	.0004846	-.000454	55.49305	-.000688	.0054875
#2	.0084086	.3539058	.0003922	-.000209	55.32770	.003340	.0056392
#3	.0077286	.4185013	.0002740	-.000184	55.29998	.000780	.0052677

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.158543	-.011669	.0000569	-.004724	-.002011	.0710277	.0019470
Stddev	.116077	.000698	.0003112	.000375	.000519	.0048821	.0003169
%RSD	5.377567	5.981916	547.1430	7.934307	25.79594	6.873571	16.27467

#1	2.027429	-.010873	-.000100	-.004479	-.002490	.0718198	.0020005
#2	2.199999	-.011955	.000415	-.005155	-.001460	.0754653	.0022337
#3	2.248200	-.012178	-.000144	-.004537	-.002083	.0657979	.0016068

Sample Name: Q3302-06LX5 Acquired: 10/8/2025 17:41:09 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.0435550	.0126762	.0050339
Stddev	.0006401	.0017924	.0000372
%RSD	1.469552	14.13980	.7387416

#1	.0428177	.0106127	.0050046
#2	.0438792	.0135690	.0050757
#3	.0439681	.0138468	.0050214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7333.874	107364.9	8112.965	5297.086	8945.541
Stddev	11.142	609.0	31.795	49.070	13.715
%RSD	.1519265	.5672197	.3919070	.9263594	.1533214

#1	7323.134	108004.7	8076.292	5350.349	8931.732
#2	7345.379	107297.6	8132.815	5287.195	8959.161
#3	7333.110	106792.3	8129.787	5253.715	8945.730

Sample Name: Q3302-06MS Acquired: 10/8/2025 17:45:28 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7611775	1.691768	.8345830	1.913321	.7722926	1.811732	.3226925
Stddev	.0014839	.008790	.0014002	.006809	.0015121	.016694	.0065669
%RSD	.1949438	.5195753	.1677741	.3558934	.1957909	.9214477	2.035038

#1	.7617584	1.692328	.8356733	1.921183	.7727187	1.794117	.3156442
#2	.7594910	1.700264	.8350716	1.909485	.7706132	1.827320	.3237947
#3	.7622830	1.682711	.8330039	1.909295	.7735459	1.813758	.3286385

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1635559	.1728575	8.642718	.3575029	.1753992	.2678195	2.866762
Stddev	.0019776	.0004311	.083256	.0007117	.0004081	.0006858	.008081
%RSD	1.209113	.2494245	.9633032	.1990855	.2326685	.2560549	.2818979

#1	.1613254	.1731731	8.546589	.3580820	.1758288	.2685883	2.859418
#2	.1642475	.1730331	8.691715	.3567083	.1753520	.2675993	2.875420
#3	.1650948	.1723662	8.689851	.3577183	.1750168	.2672708	2.865448

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2238039	3.660592	.4409927	.0636313	288.9660	.2738431	.2119460
Stddev	.0045114	.045762	.0007744	.0002782	2.1444	.0040393	.0008481
%RSD	2.015802	1.250132	.1755932	.4372084	.7420803	1.475025	.4001499

#1	.2186464	3.608016	.4415890	.0634741	289.2818	.2692656	.2124486
#2	.2257476	3.691464	.4412715	.0634673	290.9350	.2753572	.2109668
#3	.2270177	3.682295	.4401175	.0639525	286.6813	.2769066	.2124226

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.00510	.2382534	.3890198	.6139840	.1829593	1.142216	5.264709
Stddev	.03710	.0028675	.0004938	.0004718	.0037156	.015205	.011905
%RSD	.3708153	1.203548	.1269318	.0768355	2.030822	1.331156	.2261282

#1	9.98838	.2351287	.3895900	.6145240	.1794088	1.159612	5.267341
#2	10.04761	.2388674	.3887361	.6136523	.1826486	1.135568	5.275078
#3	9.97930	.2407642	.3887333	.6137756	.1868204	1.131467	5.251708

Sample Name: Q3302-06MS Acquired: 10/8/2025 17:45:28 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.2368717	.1754562	.2046082
Stddev	.0023629	.0007405	.0034262
%RSD	.9975293	.4220455	1.674529

#1	.2392786	.1749841	.2006978
#2	.2367812	.1750750	.2060428
#3	.2345555	.1763097	.2070839

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6833.110	106512.5	7976.423	5323.678	7922.872
Stddev	8.682	414.1	87.668	14.143	12.274
%RSD	.1270626	.3888175	1.099086	.2656645	.1549191

#1	6826.006	106433.8	8076.377	5338.871	7914.549
#2	6830.536	106143.3	7940.321	5310.895	7917.099
#3	6842.788	106960.3	7912.571	5321.266	7936.968

Sample Name: Q3302-06MSD Acquired: 10/8/2025 17:49:37 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.7791402	1.599708	.8632081	1.942343	.7944583	1.847894	.3304315
Stddev	.0016680	.077888	.0039584	.014631	.0019087	.009561	.0037294
%RSD	.2140873	4.868899	.4585636	.7532583	.2402453	.5174214	1.128644

#1	.7810264	1.689614	.8656094	1.958960	.7963351	1.837334	.3262497
#2	.7785347	1.552699	.8653756	1.931399	.7945203	1.855964	.3334128
#3	.7778595	1.556812	.8586394	1.936668	.7925193	1.850384	.3316320

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1847445	.1785913	9.128903	.3732662	.1817285	.2757452	2.735125
Stddev	.0025313	.0010744	.064044	.0020046	.0009902	.0011586	.010685
%RSD	1.370144	.6015811	.7015486	.5370516	.5448686	.4201807	.3906760

#1	.1818252	.1796314	9.056635	.3728804	.1827630	.2770013	2.740532
#2	.1863295	.1786570	9.178624	.3754357	.1816329	.2755161	2.742026
#3	.1860788	.1774856	9.151450	.3714825	.1807896	.2747183	2.722816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2307931	3.841380	.4558369	.0661619	267.4036	.2809059	.2216654
Stddev	.0025420	.059133	.0015949	.0002322	1.4228	.0030184	.0006220
%RSD	1.101408	1.539366	.3498938	.3509582	.5320920	1.074516	.2805989

#1	.2283277	3.776045	.4575348	.0664282	266.8615	.2778239	.2222209
#2	.2334053	3.856867	.4556060	.0660554	269.0177	.2838564	.2209934
#3	.2306462	3.891228	.4543701	.0660020	266.3314	.2810375	.2217820

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.432835	.2704747	.4038506	.6354660	.1880996	1.063244	5.364334
Stddev	.047101	.0033053	.0020755	.0024700	.0030428	.014736	.027767
%RSD	.4993308	1.222026	.5139187	.3886972	1.617653	1.385962	.5176210

#1	9.484250	.2667922	.4061979	.6382499	.1846564	1.075193	5.396122
#2	9.422486	.2731845	.4022585	.6335369	.1904269	1.046778	5.344815
#3	9.391769	.2714473	.4030954	.6346112	.1892154	1.067762	5.352065

Sample Name: Q3302-06MSD Acquired: 10/8/2025 17:49:37 Type: Unk
Method: 6010-200.7 NEW(v275) 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	.2405444	.1749727	.2099525
Stddev	.0005324	.0033315	.0021668
%RSD	.2213148	1.904017	1.032035

#1	.2408626	.1736607	.2080798
#2	.2399299	.1787604	.2123258
#3	.2408409	.1724969	.2094518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6832.884	104747.3	7208.116	5250.473	7918.342
Stddev	25.944	194.1	106.185	24.503	32.840
%RSD	.3796873	.1853370	1.473131	.4666813	.4147305

#1	6805.981	104955.0	7329.976	5259.383	7886.030
#2	6834.922	104716.5	7135.441	5269.273	7917.312
#3	6857.749	104570.5	7158.932	5222.761	7951.685

Sample Name: CCV06 Acquired: 10/8/2025 17:53:47 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.839811	F 4.497917	4.679762	4.858285	4.969873	9.571386
Stddev	.008856	.043962	.005732	.006923	.002734	.016461
%RSD	.1829802	.9773945	.1224931	.1425001	.0550154	.1719810

#1	4.848255	4.547177	4.676967	4.856764	4.970752	9.572552
#2	4.830594	4.462666	4.686356	4.852249	4.966807	9.554373
#3	4.840583	4.483910	4.675963	4.865842	4.972059	9.587233

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.643990	F .2210796	2.327433	23.81592	.9492233	2.346464
Stddev	.033652	.0028832	.001529	.07356	.0225222	.000868
%RSD	.3489436	1.304150	.0657126	.3088628	2.372701	.0369955

#1	9.677908	.2195371	2.325669	23.79733	.9389103	2.345607
#2	9.610610	.2192957	2.328240	23.75344	.9337041	2.346442
#3	9.643453	.2244059	2.328390	23.89699	.9750554	2.347343

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.197899	4.986968	2.383595	23.60769	2.351824	1.206271
Stddev	.001984	.071585	.008623	.02133	.001054	.027168
%RSD	.1655835	1.435450	.3617785	.0903372	.0447970	2.252225

#1	1.195827	4.950124	2.389113	23.63211	2.350632	1.189458
#2	1.198089	4.941309	2.373658	23.59275	2.352215	1.191741
#3	1.199781	5.069471	2.388014	23.59821	2.352627	1.237614

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.97468	2.418306	2.409219	26.62752	4.509986	4.886389
Stddev	.21288	.007584	.058001	.31232	.064227	.003840
%RSD	.8195846	.3136091	2.407456	1.172940	1.424102	.0785830

#1	25.95558	2.414191	2.374453	26.48070	4.472290	4.884907
#2	25.77199	2.413669	2.377028	26.41565	4.473522	4.883511
#3	26.19647	2.427058	2.476176	26.98620	4.584145	4.890749

Sample Name: CCV06 Acquired: 10/8/2025 17:53:47 Type: Unk
Method: 6010-200.7 NEW(v275) 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	4.660152	4.833483	4.984613	4.566467	4.540295	4.631170
Stddev	.006842	.011432	.085309	.012342	.007962	.029748
%RSD	.1468289	.2365077	1.711438	.2702692	.1753530	.6423529

#1	4.667962	4.837513	4.908955	4.578407	4.548800	4.665157
#2	4.657284	4.820583	4.967811	4.567234	4.539066	4.609859
#3	4.655211	4.842354	5.077072	4.553759	4.533020	4.618495

Elem	Sr4077
Units	ppm
Avg	4.921617
Stddev	.073409
%RSD	1.491560

#1	5.006234
#2	4.874967
#3	4.883649

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6930.197	103802.6	7910.912	5122.327	8097.722
Stddev	4.093	1870.9	68.751	100.486	11.385
%RSD	.0590668	1.802369	.8690635	1.961721	.1406009

#1	6932.134	104962.0	7945.302	5199.978	8086.060
#2	6932.961	104801.6	7955.681	5158.168	8098.296
#3	6925.494	101644.3	7831.752	5008.835	8108.810

Sample Name: CCB06 Acquired: 10/8/2025 17:57:50 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000819	-.009941	.0001769	.0003101	-.000525	.0000191
Stddev	.001746	.002647	.0004127	.0022864	.002133	.0086759
%RSD	213.2395	26.62203	233.2761	737.3493	406.2669	45522.48

#1	-.002796	-.008073	-.000196	.0027359	-.002651	.0099655
#2	.000511	-.008781	.000107	-.001805	.001615	-.003919
#3	-.000172	-.012970	.000620	-.000001	-.000539	-.005990

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003029	-.000040	-.000036	-.004489	-.000253	.0000990
Stddev	.000584	.000037	.000015	.003574	.000175	.0000866
%RSD	19.28862	91.77010	42.19881	79.62362	69.13868	87.39665

#1	-.002355	.000001	-.000026	-.006037	-.000386	.0001947
#2	-.003350	-.000071	-.000028	-.007028	-.000055	.0000763
#3	-.003382	-.000050	-.000053	-.000402	-.000319	.0000261

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001297	.0043713	.0003468	-.021508	.0004019	.0000482
Stddev	.0002220	.0070100	.0002244	.014080	.0001543	.0005892
%RSD	171.1101	160.3633	64.69270	65.46139	38.39162	1223.501

#1	-.000087	-.001289	.0002486	-.021974	.0005237	-.000591
#2	.000119	.002190	.0006035	-.007202	.0002284	.000569
#3	.000357	.012213	.0001883	-.035350	.0004537	.000167

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1.103259	.0001854	.0000611	F 1.731121	-.012162	.0002834
Stddev	.026455	.0014799	.0000677	.049329	.000644	.0001004
%RSD	2.397906	798.2819	110.8012	2.849529	5.297412	35.41139

#1	1.131714	-.001523	.0001207	1.767236	-.011790	.0002826
#2	1.079409	.001044	.0000749	1.674917	-.012906	.0001834
#3	1.098653	.001036	-.000012	1.751209	-.011791	.0003841

Sample Name: CCB06 Acquired: 10/8/2025 17:57:50 Type: Unk
Method: 6010-200.7 NEW(v275) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001918	-.001685	.0090297	-.001262	.0045428	.0056178
Stddev	.000373	.002054	.0059145	.001431	.0023363	.0042358
%RSD	19.46311	121.9154	65.50075	113.3979	51.42899	75.39937

#1	-.002280	-.003946	.0158538	-.002645	.0020890	.0058165
#2	-.001938	.000067	.0053851	.000212	.0067404	.0097508
#3	-.001535	-.001175	.0058500	-.001353	.0047989	.0012862

Elem	Sr4077
Units	ppm
Avg	-.000084
Stddev	.000082
%RSD	97.41023

#1	-.000014
#2	-.000064
#3	-.000175

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7351.864	102142.1	8325.244	5063.650	9351.860
Stddev	50.174	750.3	92.644	3.109	81.718
%RSD	.6824596	.7345999	1.112809	.0613934	.8738137

#1	7399.991	101358.7	8376.750	5060.126	9428.844
#2	7355.734	102213.3	8380.690	5064.821	9360.622
#3	7299.868	102854.3	8218.292	5066.003	9266.115

SOP ID : M200.7-Trace Elements-22

SDG No : N/A

Matrix : WATER

Pipette ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

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

Start Digest Date: 10/02/2025 Time : 10:10 Temp : 96 °C

End Digest Date: 10/02/2025 Time : 13:15 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SKJ

Supervisor Signature: [Signature]

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6180
LFS-2	0.25	M6181
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	MP87148
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/02/25 14:15	SKJ met d/o	SKJ (metals lab)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169959BL	PBW959	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	1
PB169959BS	LCS959	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	2
Q3260-02MS	COMPMS	<2	50	25	Colorless	Colorless	Cloudy	Cloudy	M6180,M6181	5
Q3260-02MSD	COMPMSD	<2	50	25	Colorless	Colorless	Cloudy	Cloudy	M6180,M6181	6
Q3260-02DUP	COMPDUP	<2	50	25	Colorless	Colorless	Cloudy	Cloudy	N/A	4
Q3260-02	COMP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
Q3267-01	Q4	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	7

WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB169959

Worklist ID : 192246

Department : Digestion

Date : 10-02-2025 09:38:40

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3260-02	COMP	Water	Metals ICP-Group1	1:1 HNO3 to pH < 2	ARAM01	D31	10/01/2025	200.7
Q3267-01	Q4	Water	Metals Groups	1:1 HNO3 to pH < 2	METE01	D31	10/01/2025	200.7

Date/Time 10/02/25 09:38

Raw Sample Received by: SPS mct-dg

Raw Sample Relinquished by: CPCSM

Date/Time 10/02/25 10:50

Raw Sample Received by: CPCSM

Raw Sample Relinquished by: SPS mct-dg

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB137466

Review By	Janvi	Review On	10/10/2025 1:31:26 PM
Supervise By	jaswal	Supervise On	10/10/2025 10:40:09 PM
STD. NAME	STD REF.#		
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032		
ICV Standard	MP87047,MP87038		
CCV Standard	MP87042		
ICSA Standard	MP87040,MP87048		
CRI Standard	MP87038		
LCS Standard			
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/08/25 12:00		Jaswal	OK
2	S1	S1	CAL2	10/08/25 12:04		Jaswal	OK
3	S2	S2	CAL3	10/08/25 12:08		Jaswal	OK
4	S3	S3	CAL4	10/08/25 12:12		Jaswal	OK
5	S4	S4	CAL5	10/08/25 12:16		Jaswal	OK
6	S5	S5	CAL6	10/08/25 12:20		Jaswal	OK
7	ICV01	ICV01	ICV	10/08/25 12:24		Jaswal	OK
8	LLICV01	LLICV01	LLICV	10/08/25 12:32		Jaswal	OK
9	ICB01	ICB01	ICB	10/08/25 12:36		Jaswal	OK
10	CRI01	CRI01	CRDL	10/08/25 12:41		Jaswal	OK
11	ICSA01	ICSA01	ICSA	10/08/25 12:45		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	10/08/25 12:50		Jaswal	OK
13	ICSADL	ICSADL	ICSA	10/08/25 12:54		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	10/08/25 12:59		Jaswal	OK
15	CCV01	CCV01	CCV	10/08/25 13:12		Jaswal	OK
16	CCB01	CCB01	CCB	10/08/25 13:16		Jaswal	OK
17	LR-2	LR-2	HIGH STD	10/08/25 13:25		Jaswal	OK
18	LR-3	LR-3	HIGH STD	10/08/25 13:29		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB137466

Review By	Janvi	Review On	10/10/2025 1:31:26 PM
Supervise By	jaswal	Supervise On	10/10/2025 10:40:09 PM
STD. NAME	STD REF.#		
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032		
ICV Standard	MP87047,MP87038		
CCV Standard	MP87042		
ICSA Standard	MP87040,MP87048		
CRI Standard	MP87038		
LCS Standard			
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049		

19	Q3295-03	EO-02-10062025	SAM	10/08/25 13:34		Jaswal	OK
20	Q3295-01	EO-01-10062025	SAM	10/08/25 13:38		Jaswal	OK
21	Q3295-01L	EO-01-10062025L	SD	10/08/25 13:46		Jaswal	OK
22	Q3295-01MS	EO-01-10062025MS	MS	10/08/25 13:50		Jaswal	OK
23	Q3295-01MSD	EO-01-10062025MSD	MSD	10/08/25 13:54		Jaswal	OK
24	Q3295-01A	EO-01-10062025A	PS	10/08/25 13:58	0.1ML M6008,M6017-10ML SAMPLE	Jaswal	OK
25	LR-1	LR-1	HIGH STD	10/08/25 14:02		Jaswal	OK
26	Q3295-01DUP	EO-01-10062025DUP	DUP	10/08/25 14:08		Jaswal	OK
27	CCV02	CCV02	CCV	10/08/25 14:14		Jaswal	OK
28	CCB02	CCB02	CCB	10/08/25 14:18		Jaswal	OK
29	Q3296-01	SU-04-10062025	SAM	10/08/25 14:23		Jaswal	OK
30	Q3293-01	CONC-STORAGE-PA	SAM	10/08/25 14:27		Jaswal	OK
31	Q3294-01	HD-02-10062025	SAM	10/08/25 14:31		Jaswal	OK
32	Q3297-01	TP1	SAM	10/08/25 14:35		Jaswal	OK
33	Q3297-11	TP2	SAM	10/08/25 14:39		Jaswal	OK
34	Q3268-01	WATER-TREATMENT	SAM	10/08/25 14:43		Jaswal	OK
35	Q3268-01DUP	WATER-TREATMENT	DUP	10/08/25 14:47		Jaswal	OK
36	Q3268-01L	WATER-TREATMENT	SD	10/08/25 14:52		Jaswal	OK
37	Q3268-01MS	WATER-TREATMENT	MS	10/08/25 14:56		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB137466

Review By	Janvi	Review On	10/10/2025 1:31:26 PM
Supervise By	jaswal	Supervise On	10/10/2025 10:40:09 PM
STD. NAME	STD REF.#		
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032		
ICV Standard	MP87047,MP87038		
CCV Standard	MP87042		
ICSA Standard	MP87040,MP87048		
CRI Standard	MP87038		
LCS Standard			
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049		

38	Q3268-01MSD	WATER-TREATMENT	MSD	10/08/25 15:00		Jaswal	OK
39	CCV03	CCV03	CCV	10/08/25 15:04		Jaswal	OK
40	CCB03	CCB03	CCB	10/08/25 15:13		Jaswal	OK
41	Q3268-01A	WATER-TREATMENT	PS	10/08/25 15:17	0.1ML M6008,M6017-10ML SAMPLE	Jaswal	OK
42	PB169978BL	PB169978BL	MB	10/08/25 15:30		Jaswal	OK
43	PB169978BS	PB169978BS	LCS	10/08/25 15:34		Jaswal	OK
44	PB169959BL	PB169959BL	MB	10/08/25 15:38		Jaswal	OK
45	PB169959BS	PB169959BS	LCS	10/08/25 15:43		Jaswal	OK
46	Q3275-01	MW3	SAM	10/08/25 15:47		Jaswal	OK
47	Q3275-02	MW4	SAM	10/08/25 15:51		Jaswal	OK
48	Q3275-03	MW5	SAM	10/08/25 15:55	Na High	Jaswal	Dilution
49	CCV04	CCV04	CCV	10/08/25 16:11		Jaswal	OK
50	CCB04	CCB04	CCB	10/08/25 16:15		Jaswal	OK
51	Q3275-04	MW1	SAM	10/08/25 16:19	Not Use	Jaswal	Not Ok
52	Q3278-01	MW10	SAM	10/08/25 16:24	Not Use	Jaswal	Not Ok
53	Q3260-02	COMP	SAM	10/08/25 16:28		Jaswal	OK
54	Q3260-02DUP	COMP DUP	DUP	10/08/25 16:32		Jaswal	OK
55	Q3260-02L	COMPL	SD	10/08/25 16:37		Jaswal	OK
56	Q3260-02MS	COMPMS	MS	10/08/25 16:41		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB137466

Review By	Janvi	Review On	10/10/2025 1:31:26 PM
Supervise By	jaswal	Supervise On	10/10/2025 10:40:09 PM
STD. NAME	STD REF.#		
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032		
ICV Standard	MP87047,MP87038		
CCV Standard	MP87042		
ICSA Standard	MP87040,MP87048		
CRI Standard	MP87038		
LCS Standard			
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049		

57	Q3260-02MSD	COMPMSD	MSD	10/08/25 16:45		Jaswal	OK
58	Q3260-02A	COMPA	PS	10/08/25 16:49	0.1ML M6008,M6017-10ML SAMPLE	Jaswal	OK
59	Q3267-01DL2	Q4DL2	SAM	10/08/25 16:53	Not Use	Jaswal	Not Ok
60	Q3267-01DL	Q4DL	SAM	10/08/25 16:58	50X Straight Dilution	Jaswal	OK
61	CCV05	CCV05	CCV	10/08/25 17:02		Jaswal	OK
62	CCB05	CCB05	CCB	10/08/25 17:06		Jaswal	OK
63	PB170024BL	PB170024BL	MB	10/08/25 17:10		Jaswal	OK
64	PB170024BS	PB170024BS	LCS	10/08/25 17:15		Jaswal	OK
65	Q3293-02	CONC-STORAGE-PA	SAM	10/08/25 17:19		Jaswal	OK
66	Q3297-10	TP1	SAM	10/08/25 17:23		Jaswal	OK
67	Q3297-20	TP2	SAM	10/08/25 17:27		Jaswal	OK
68	Q3302-06	OR-658-COMP-01	SAM	10/08/25 17:32	NOT USE	Jaswal	Not Ok
69	Q3302-06DUP	OR-658-COMP-01DU	DUP	10/08/25 17:36	NOT USE	Jaswal	Not Ok
70	Q3302-06L	OR-658-COMP-01L	SD	10/08/25 17:41	NOT USE	Jaswal	Not Ok
71	Q3302-06MS	OR-658-COMP-01MS	MS	10/08/25 17:45	NOT USE	Jaswal	Not Ok
72	Q3302-06MSD	OR-658-COMP-01MS	MSD	10/08/25 17:49	NOT USE	Jaswal	Not Ok
73	CCV06	CCV06	CCV	10/08/25 17:53		Jaswal	OK
74	CCB06	CCB06	CCB	10/08/25 17:57		Jaswal	OK

Prep Standard - Chemical Standard Summary

Order ID : Q3267

Test : Metals Group5

Prepbatch ID : PB169959,

Sequence ID/Qc Batch ID: LB137466,

Standard ID :

MP87031,MP87032,MP87033,MP87034,MP87035,MP87036,MP87038,MP87040,MP87042,MP87043,MP87044,MP87045,MP87046,MP87047,MP87048,MP87049,MP87148,

Chemical ID :

M5467,M5658,M5748,M5751,M5798,M5799,M5800,M5801,M5814,M5820,M5962,M5969,M5971,M5979,M5985,M5998,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6058,M6076,M6077,M6128,M6137,M6138,M6140,M6142,M6144,M6145,M6151,M6158,M6159,M6160,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M6187,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>
902	ICP AES CAL BLK (SO/ICB/CCB)	MP87031	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6187 = 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)	MP87032	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5971 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6160 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP87031 = Final Quantity: 500.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
910	ICP AES STD S4	MP87033	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
909	ICP AES STD S3	MP87034	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel
								09/04/2025

FROM 25.00000ml of MP87032 + 75.00000ml of MP87031 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3913	ICP AES STD S2	MP87035	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 16.00000ml of MP87032 + 184.00000ml of MP87031 = Final Quantity: 200.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2950	ICP AES S1/CRI STOCK STD	MP87036	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6160 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5979 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M5969 + 88.29000ml of MP87031 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2951	ICP AES S1/CRI WORK STD	MP87038	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 2.00000ml of MP87036 + 98.00000ml of MP87031 = 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>
904	ICP AES ICSA SOLN	MP87040	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87031 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
911	ICP AES CCV SOLN	MP87042	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = 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	MP87043	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6187 = Final Quantity: 2000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
903	ICP AES RINSE SOLN	MP87044	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel
								09/04/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4225	LR-1	MP87045	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel
								09/04/2025

FROM 11.50000ml of M6138 + 11.50000ml of M6144 + 11.50000ml of M6171 + 15.50000ml of MP87031 = Final Quantity: 50.000 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>
4226	LR-2	MP87046	09/02/2025	10/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87031 = 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>
4163	NEW ICV-060925	MP87047	09/02/2025	10/10/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/04/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP87031 = 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>
3494	ICP AES ICSAB SOLN-1	MP87048	09/02/2025	10/10/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP)	Sarabjit Jaswal
A) FROM 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP87031 = 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>
4227	LR-3	MP87049	09/02/2025	10/10/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025
<u>FROM</u>	1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5751 + 2.50000ml of M6128 + 39.85000ml of MP87031 = Final Quantity: 50.000 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>
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal
								09/10/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 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.	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.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

CHEMICAL RECEIPT LOG BOOK

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.	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.	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 #
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.	57016 / S, 1000 PPM, 125 ml	122923	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

CHEMICAL RECEIPT LOG BOOK

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	06/06/2025 / Janvi	07/01/2024 / Jaswal	M5971

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGT11-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

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-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	07/30/2026	07/30/2025 / Janvi	02/22/2024 / kareem	M5998

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / Janvi	08/05/2024 / Jaswal	M6026

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

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	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

CHEMICAL RECEIPT LOG BOOK

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	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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

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.	58120 / Ca, 10000 PPM, 500 ml	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

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	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

CHEMICAL RECEIPT LOG BOOK

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

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	02/17/2026	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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	10/30/2025	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 #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	03/24/2025 / kareem	10/18/2024 / kareem	M6160

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	06/08/2026	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	06/08/2026	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	06/08/2026	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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 /	02/13/2025 / Janvi	M6171

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	V2-MEB742428	07/31/2026	07/31/2025 / Janvi	05/05/2025 / Janvi	M6174

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	031525	03/15/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6177

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

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	08/05/2026	08/06/2025 / Janvi	06/02/2024 / Janvi	M6179

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	W2-MEB752149	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6180

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	V2-MEB7433480	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6181

CHEMICAL RECEIPT LOG BOOK

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6182

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6184

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	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

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 / lwona	07/03/2024 / lwona	W3112



CERTIFIED WEIGHT REPORT:

Part Number:	57056	Lot #	
Lot Number:	010924	Solvent:	Nitric Acid
Description:	Barium (Ba)		
Expiration Date:	010927	2%	40.0 (mL)
Recommended Storage:	Ambient (20 °C)		Nitric Acid
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

Formulated By: Giovanni Esposito

Reviewed By: Pedro L. Renteria

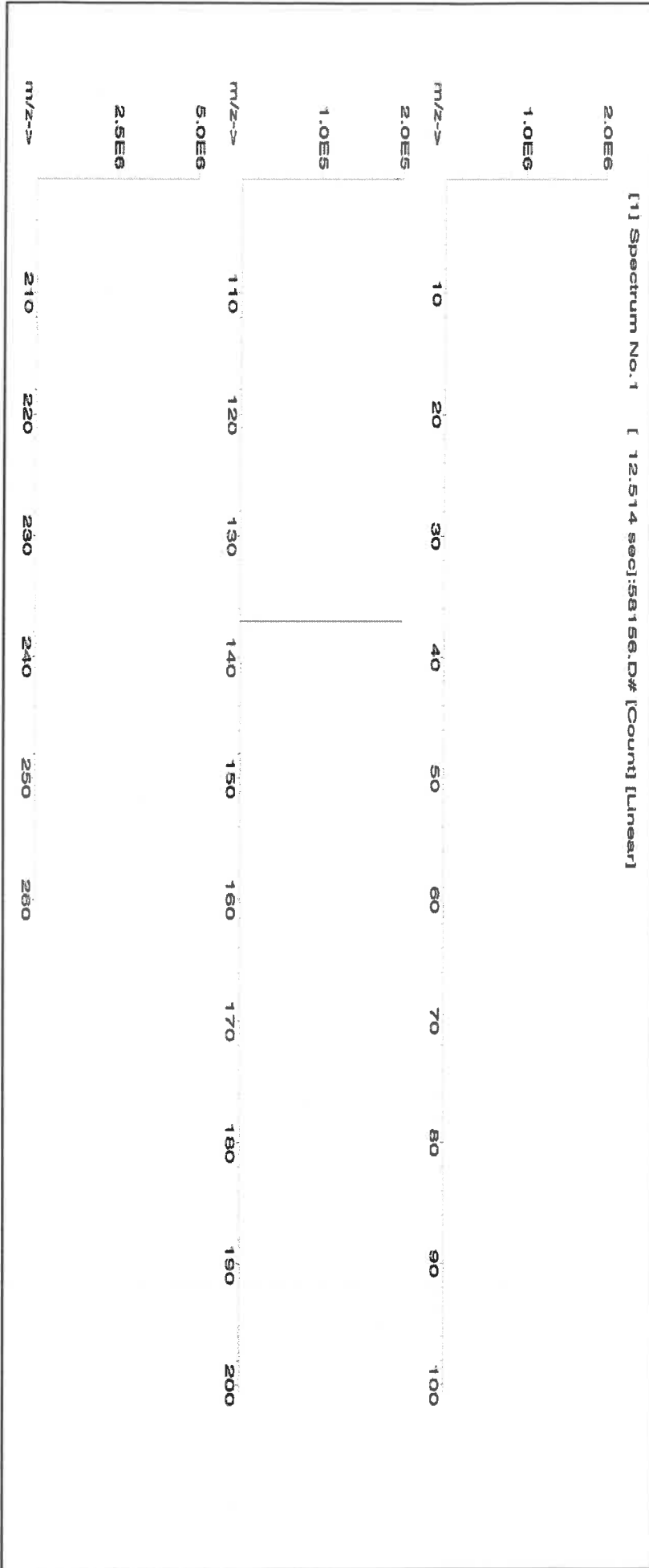
010924

010924

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. 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





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)

Solvent: 24002546 Nitric Acid

Lot #

2% 40.0 Nitric Acid (mL)

Expiration Date: 070127

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

SE-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

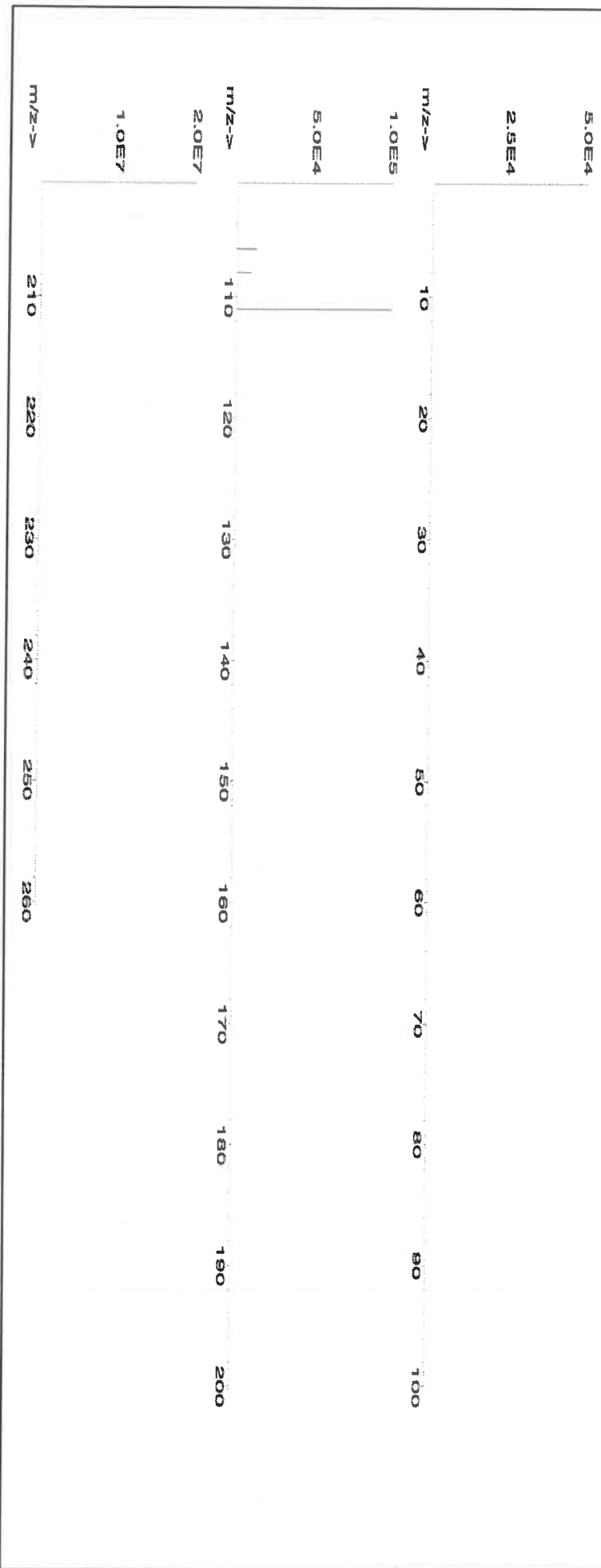
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

SDS Information

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

MC026



CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)
Solvent: Nitric Acid
Lot #

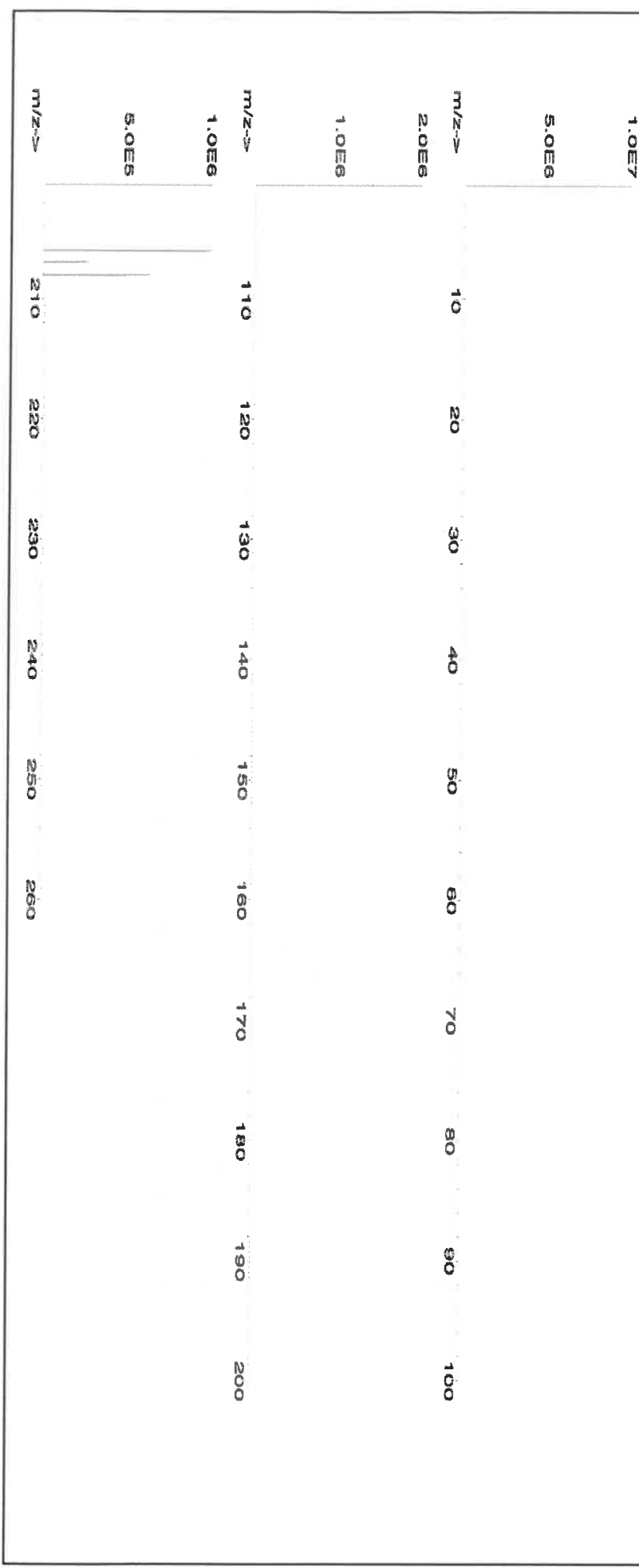
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
110923	

Compound	SDS Information									
	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)

1. Lead(II) nitrate (Pb) IN029 PED12016A1 10000 99.999 0.10 62.5 32.0006 32.0040 10001.1 20.0 10099-74-8 0.05 mg/m3 Inverse rat 83 mg/kg 3128

[1] Spectrum No.1 [17.284 sec]:58182.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	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	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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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).



M5467 R: 03/01/23 (14)

CERTIFIED WEIGHT REPORT:

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

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1000.12

Solvent: 21110221 Nitric Acid

2% 20.0 Nitric Acid (mL)

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

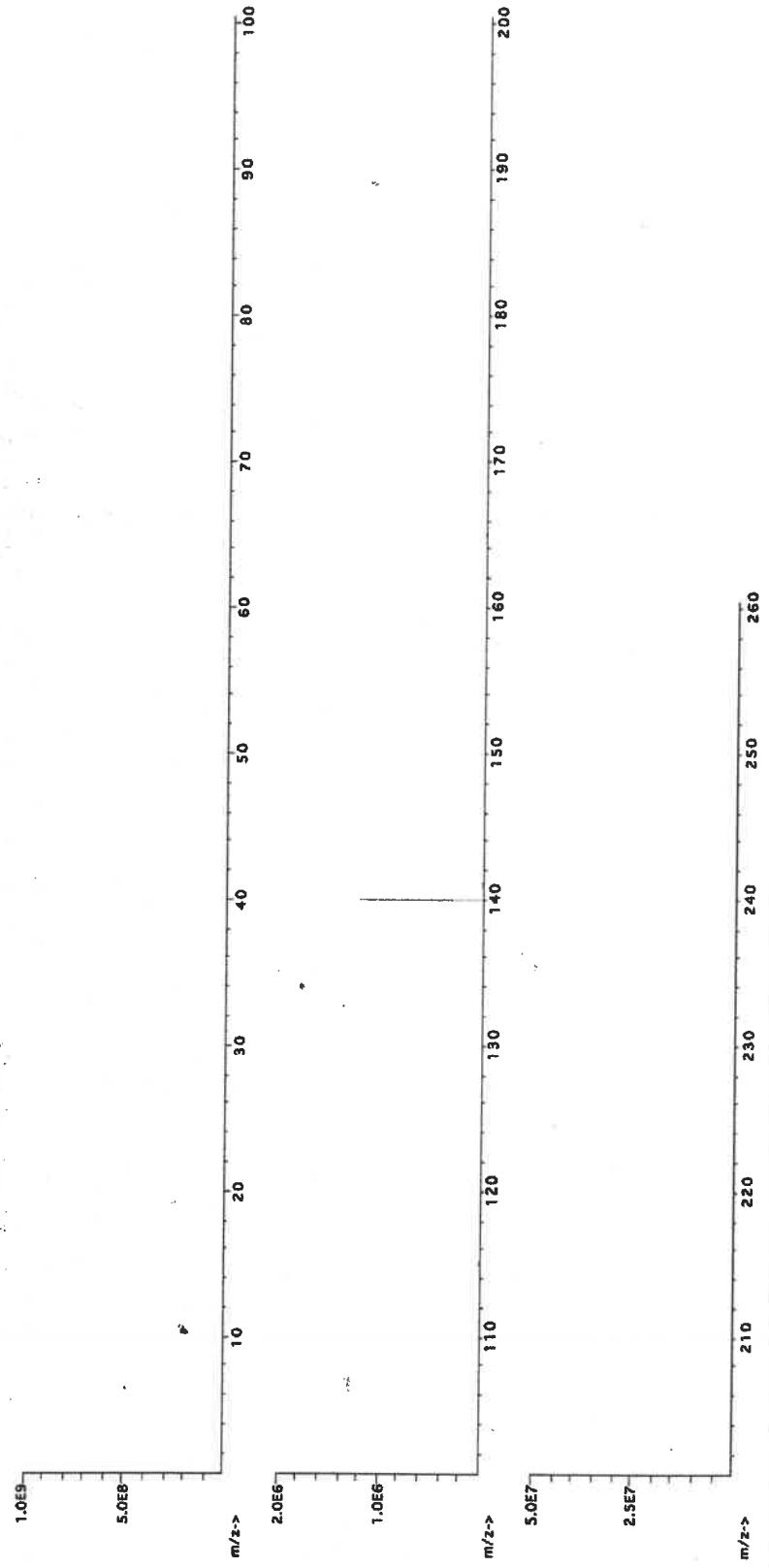
Expanded Uncertainty +/- (µg/mL) 2.0
CAS# 10294-41-4
LD50 NA
SRM NA

SDS Information

(Solvent Safety Info. On Attached pg.)
OSHA PEL (TWA)

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#	LD50	SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA

[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	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

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

Lot #
21110221
Solvent: Nitric Acid

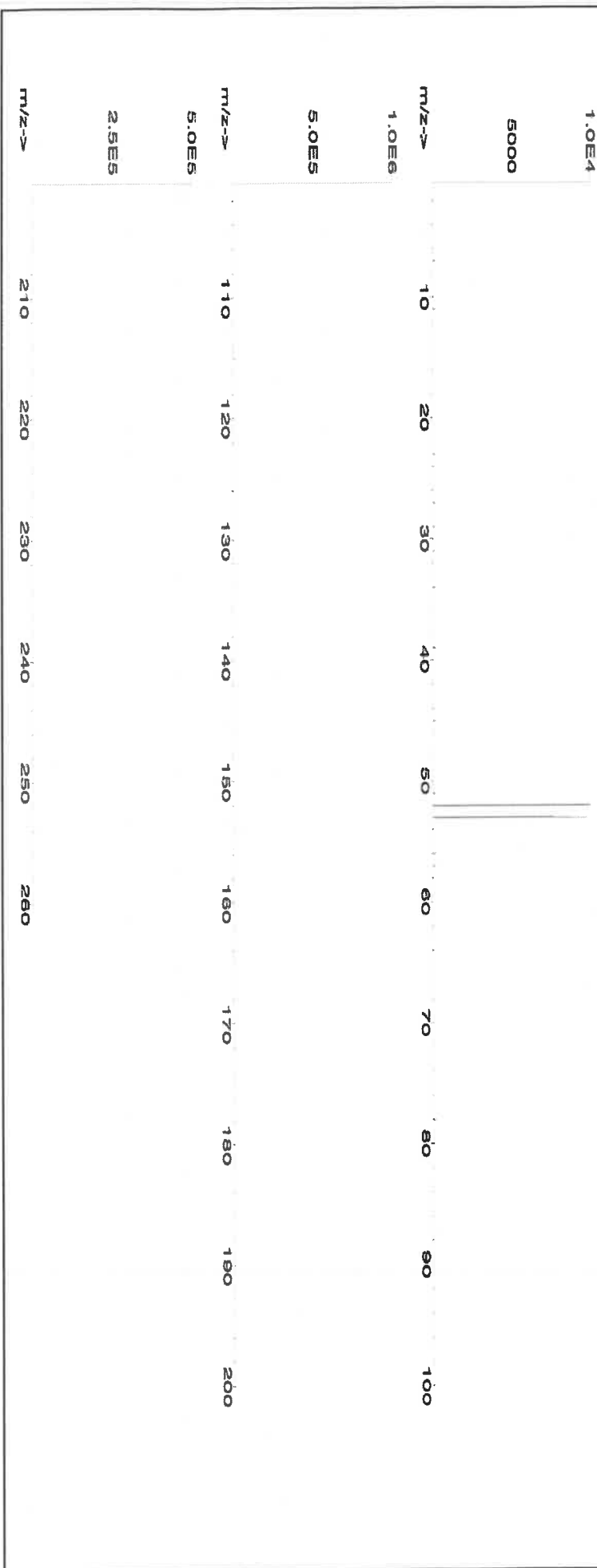
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
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
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1. Chromium(III) nitrate nonahydrate (Cr) 58124 071122 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 7789-02-8 0.5 mg(Cr)/m3 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED 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**

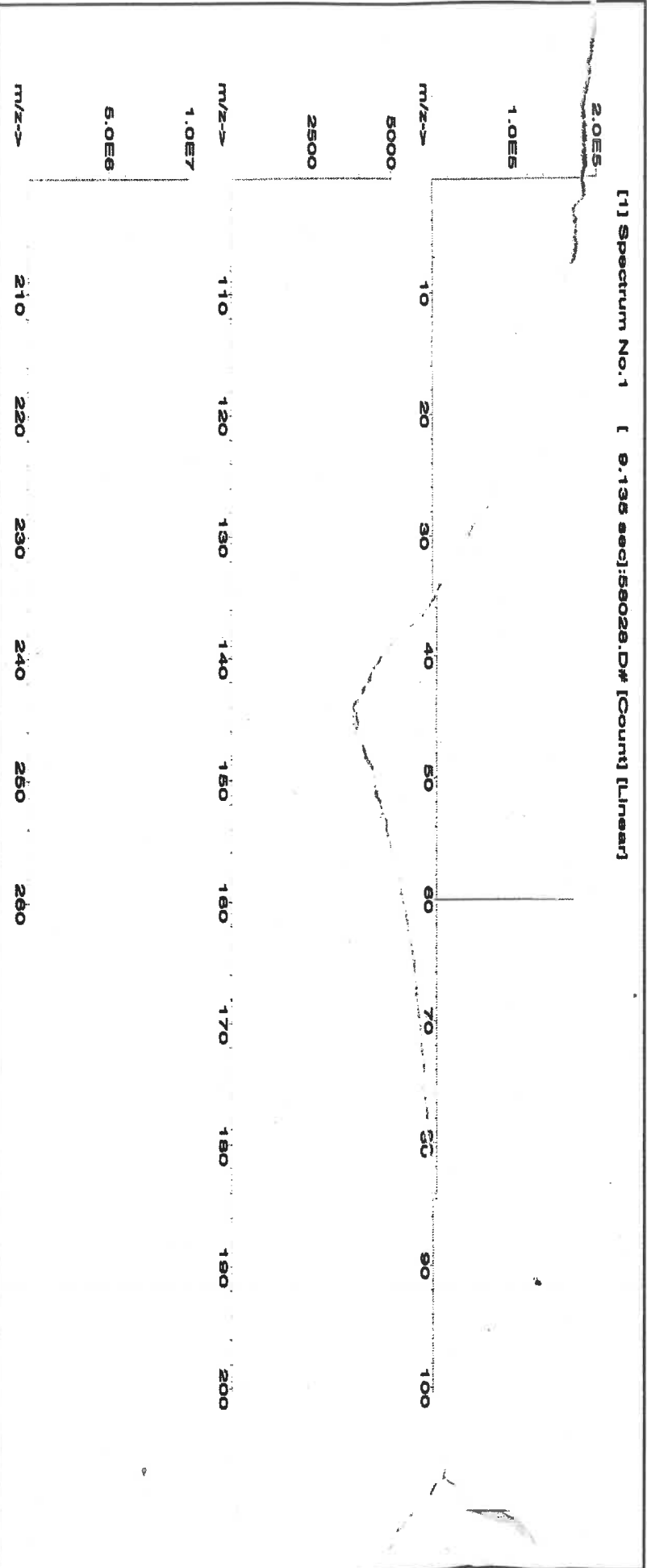
2.0% 40.0 (mL) Nitric Acid

Formulated By:	<i>Lawrence Barry</i>	091223
Reviewed By:	<i>Pedro L. Renteria</i>	091223

NIST Test Number: **6U7B**
Volume shown below was diluted to (mL): **2000.02** Balance Uncertainty: **5E-05** Flask Uncertainty: **0.056**

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.
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **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
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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.
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- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

102526

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

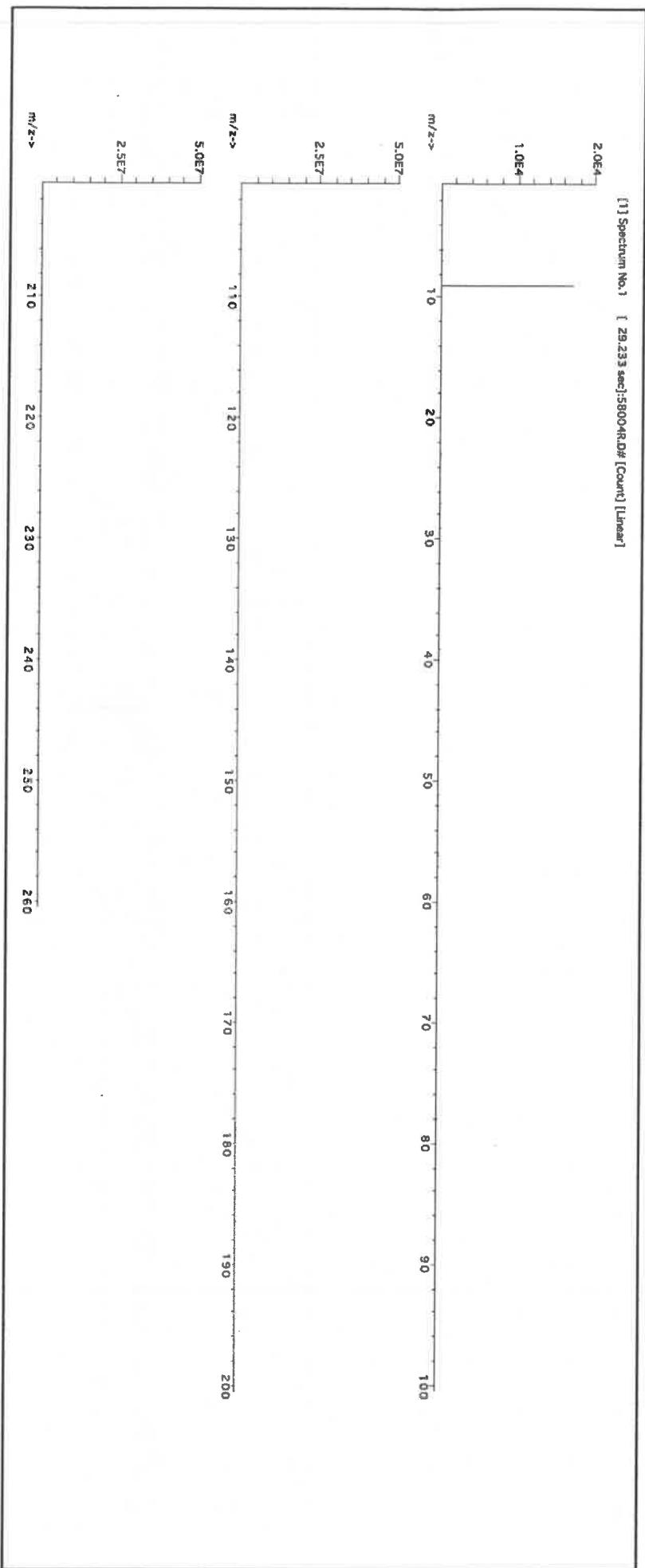
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

SDS Information

Compound	Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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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	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.

* All standard containers are meticulously cleaned prior to use.

* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).

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

* All Standards should be stored with caps tight and under appropriate laboratory conditions.

* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

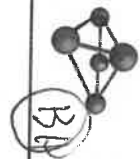
Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot #

R-02509124

M599



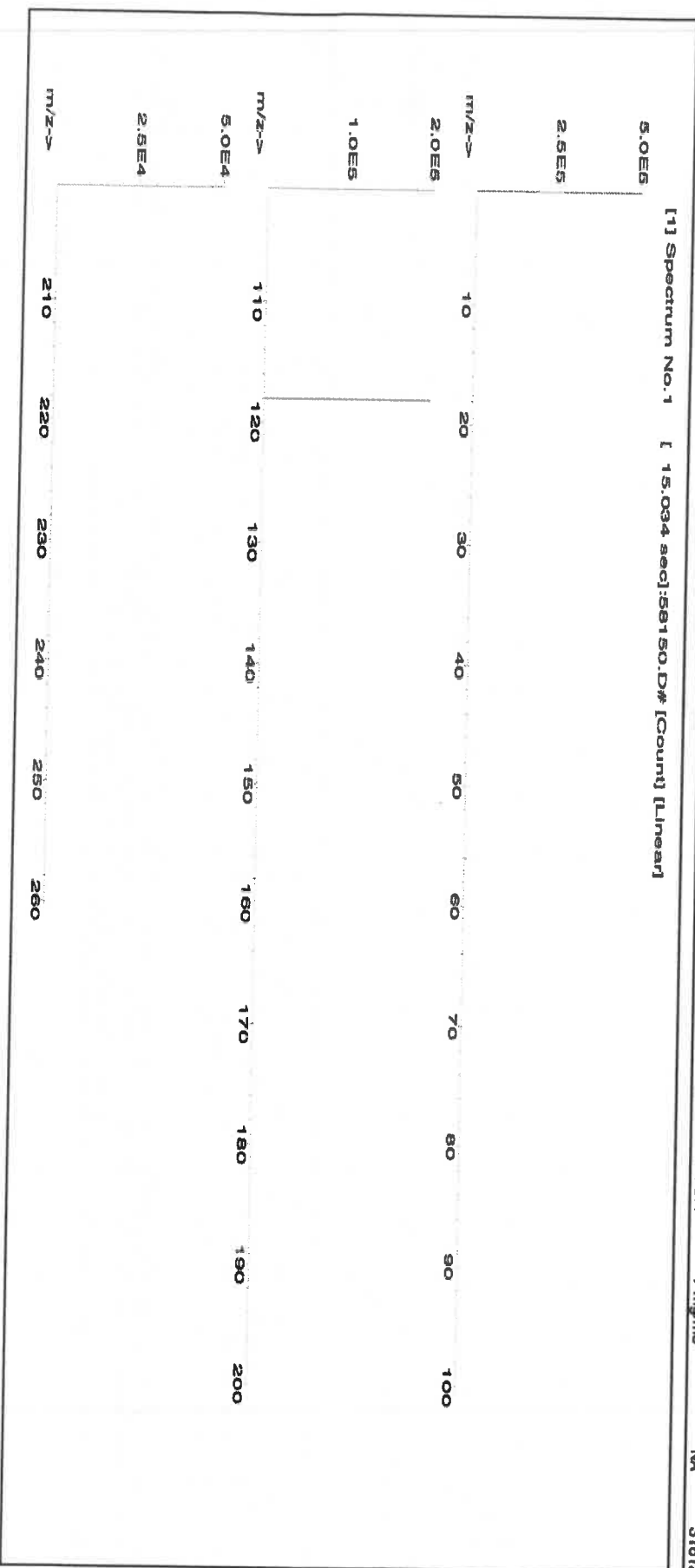
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

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

1. Ammonium hexafluoroantimonate(V) (Sn) IN010 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec]:56150.D# [Coun] [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.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 02/09/24 115800 (54)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

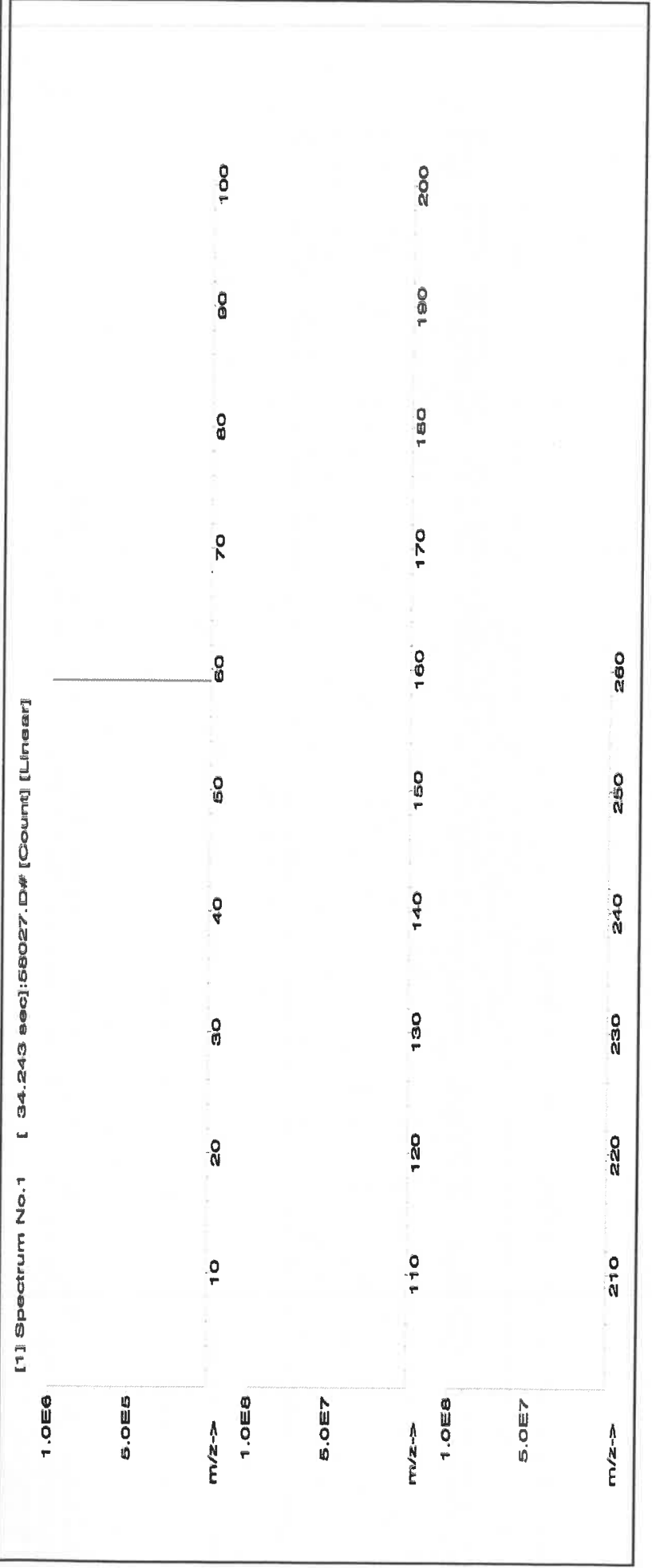
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

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

(Solvent Safety Info. On Attached pg.)
CAS#
OSHA PEL (TWA)
LD50
NIST
SRM

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

Expiration Date:

111326

2.0%
80.0 (mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

4000.0

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

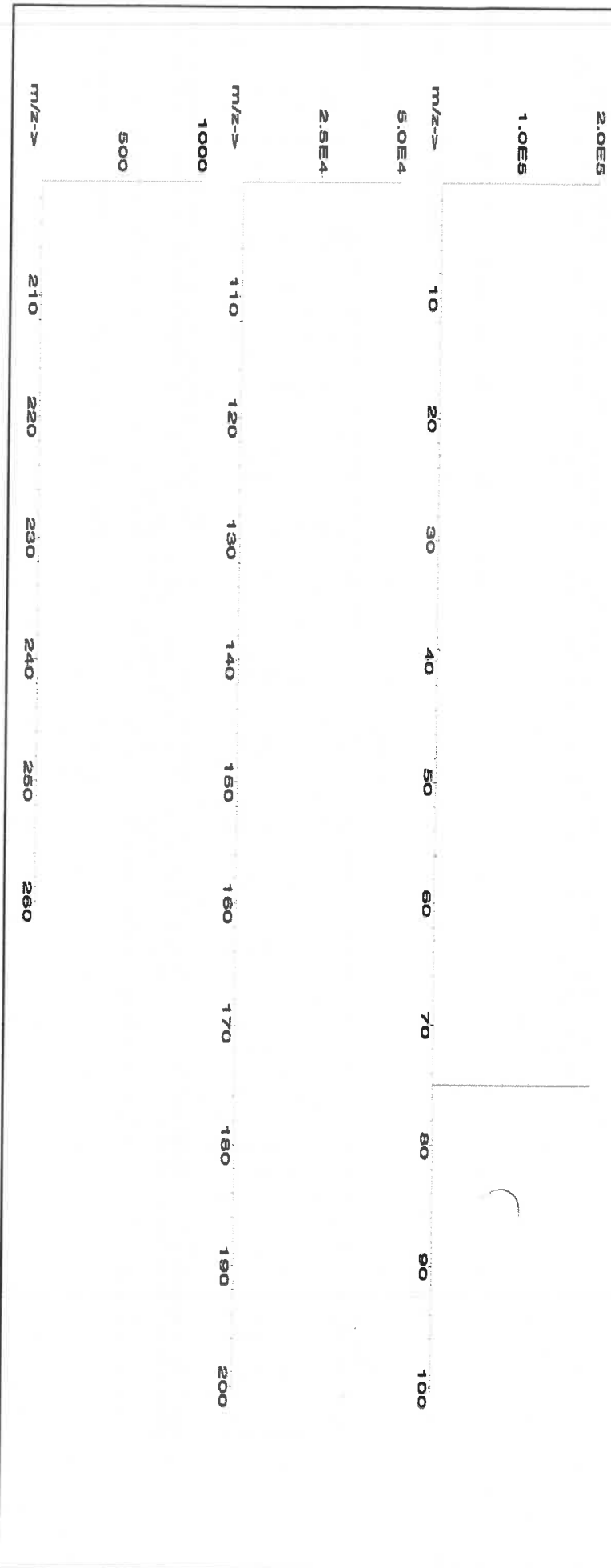
Formulated By:	Lawrence Barry
Reviewed By:	
	Pedro L. Rendas
	111323

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)	SDS Information (Solvent Safety Info. On Attached pg.)	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	<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	Sa	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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CERTIFIED WEIGHT REPORT:

Part Number: **57005**
Lot Number: **071123**
Description: **Boron (B)**

Solvent: MKB0857V Ammonium hydroxide

Lot #

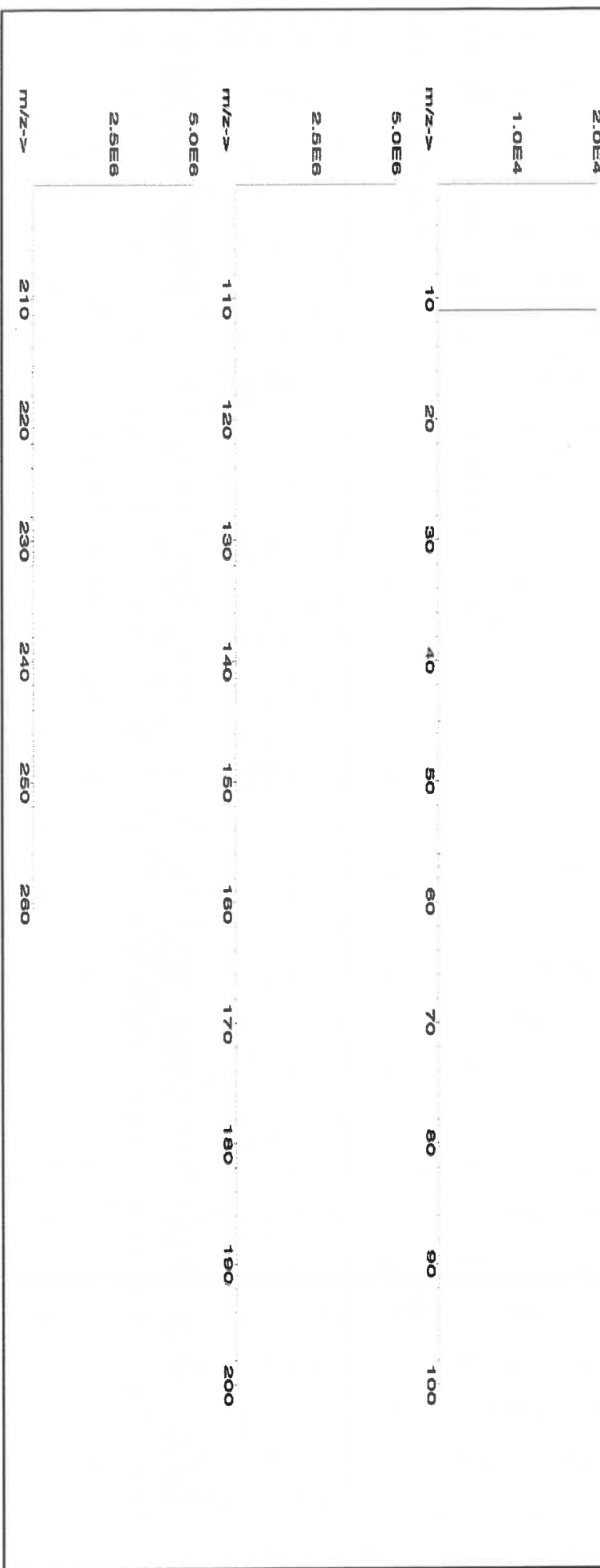
AI: 021009124 M5814

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

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

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	NIST SRM
Boric acid (B)	IN018 BV082018A1	1000	99.999	0.10	17.3	11.55772	11.56201	1000.4	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:

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- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57015
Lot Number: 091123
Description: Phosphorous (P)

Solvent: 24002546 Nitric Acid

Lot #

R: 02109124 M5820

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

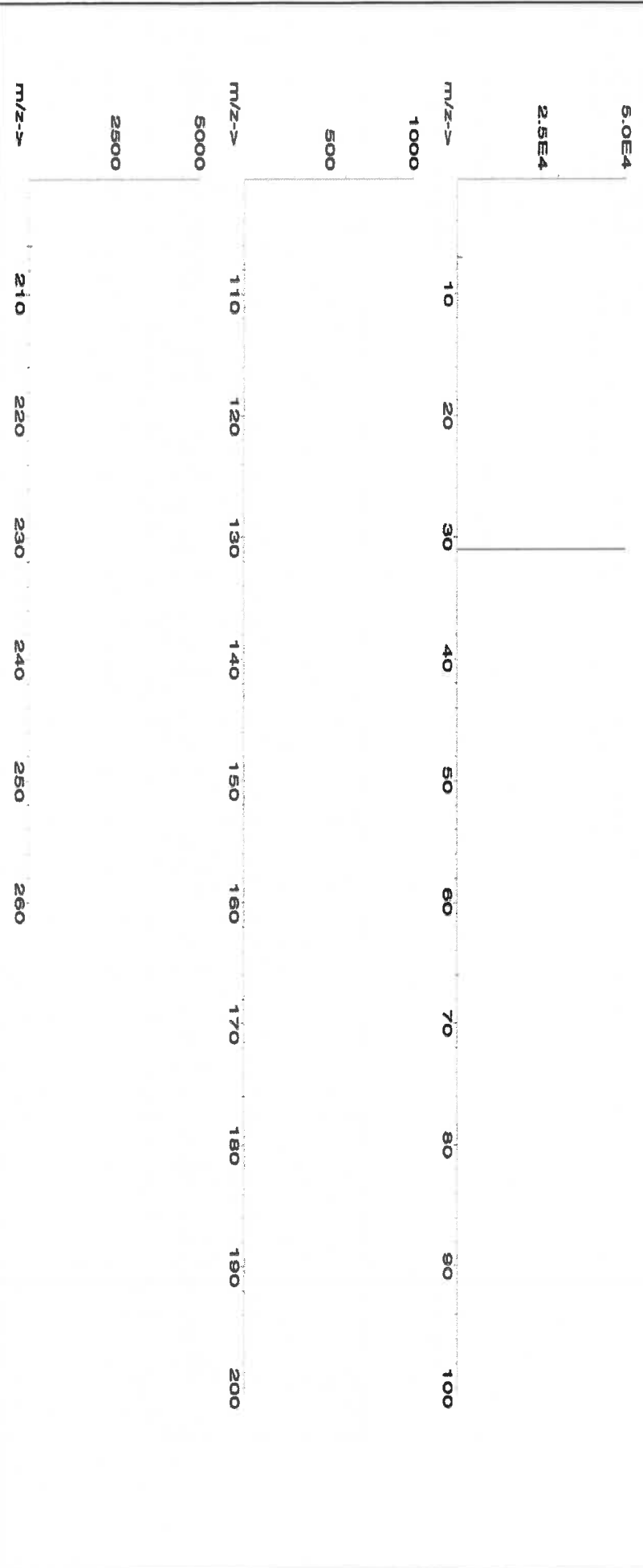
Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

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
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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.
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

MS962 **R10614124**

Lot # **24002546** Solvent: **Nitric Acid**

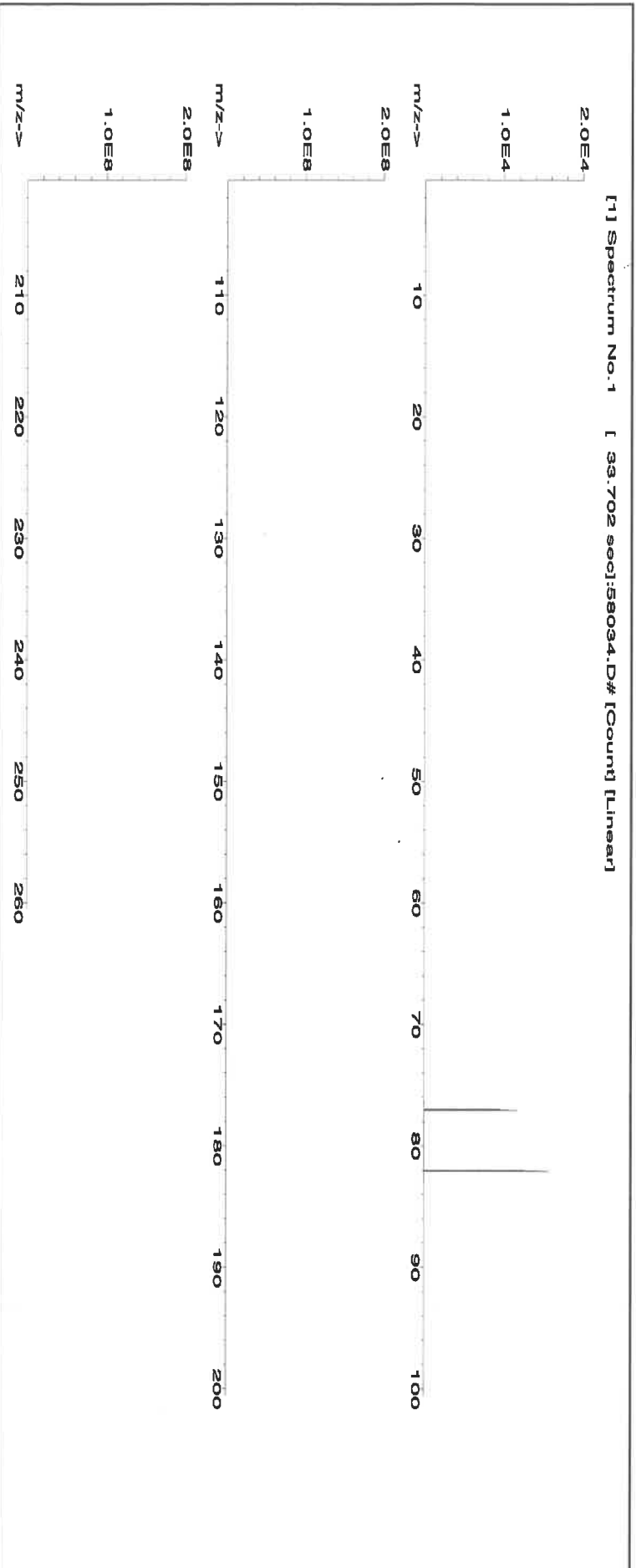
Part Number: **57034**
Lot Number: **060624**
Description: **Selenium (Se)**

2.0% 40.0 (mL) Nitric Acid

Expiration Date: **060627**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.07**
SE-05 Balance Uncertainty **0.100** Flask Uncertainty

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rantas	060624

SDS Information									
Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
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	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * 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: **57016**
Lot Number: **122923**
Description: **Sulfur (S)**

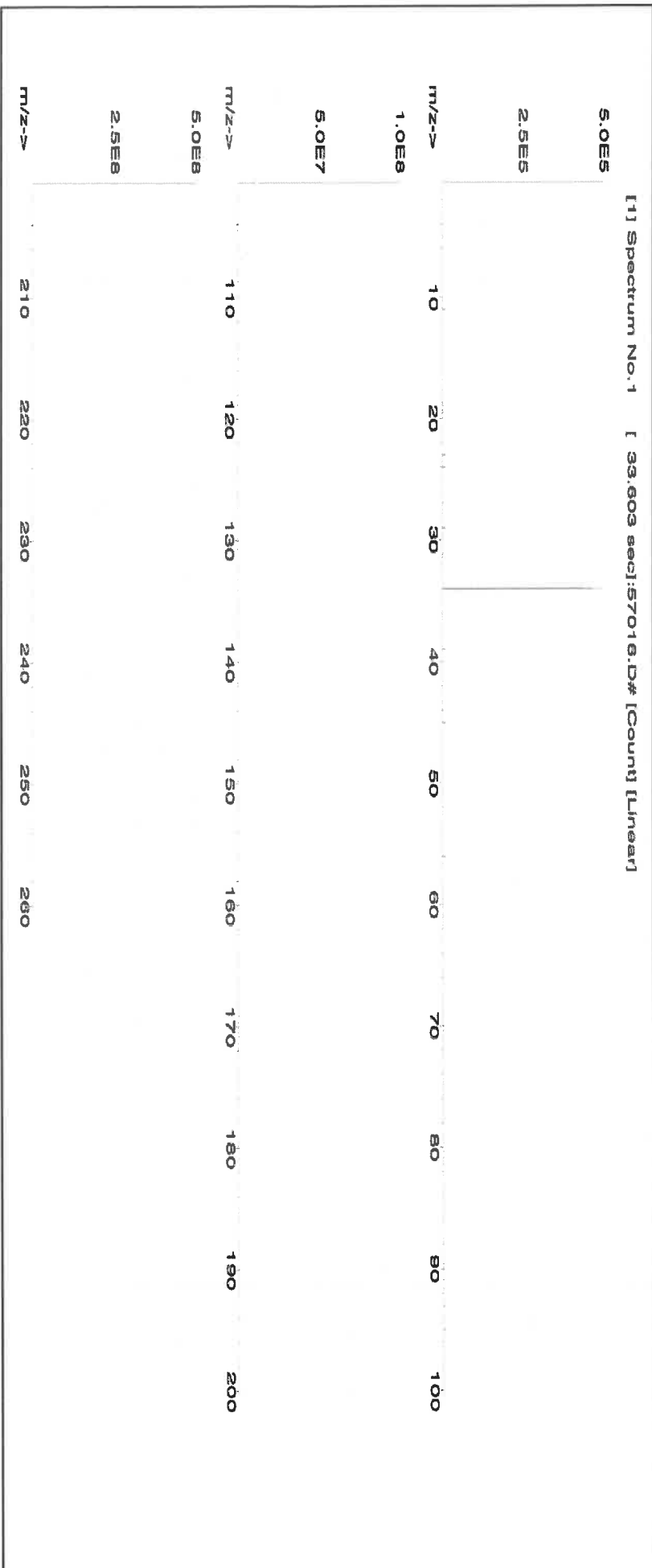
Lot #
Solvent: **122923** ASTM Type 1 Water

Formulated By:	Benson Chan
122923	
Reviewed By:	Pedro L. Rentas
122923	

Expiration Date: **122926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **4000.0**
5E-05 Balance Uncertainty
0.06 Flask Uncertainty

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

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 or-rel 4250mg/kg 3181



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com



Certified Reference Material CRM

M5970 M5971



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

CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 06/12/27
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11
SE-05 Balance Uncertainty
0.016 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

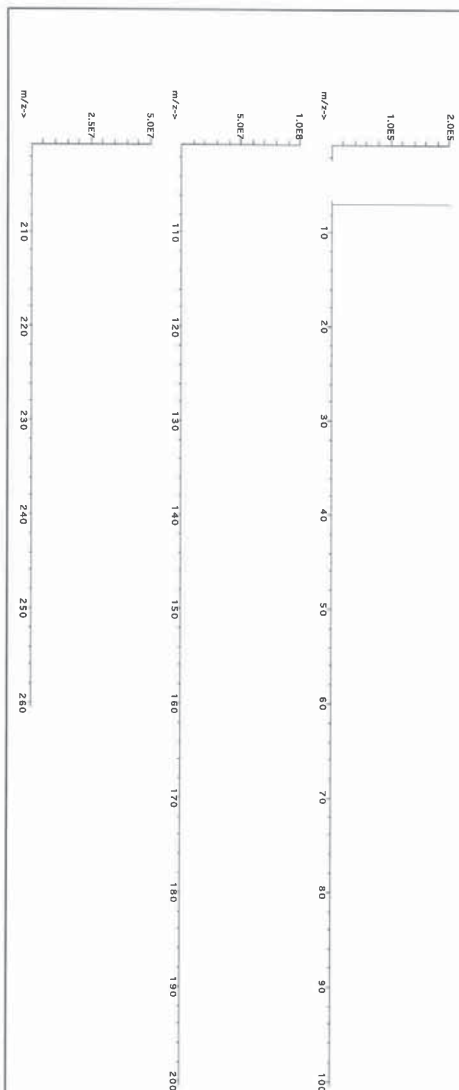
2.0% 5.0 (mL) Nitric Acid

Microvial Capable	
Formulated By:	Giovanni Esposito
	062124
Reviewed By:	Pedro L. Parias
	062124

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

1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	1000.0	2.0	7790-68-4	5 mg/m3	or-hal 1428 mg/kg	NA
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[1] Spectrum No. 1 [32.093 sec; 15000.0Hz Count [Lines]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Ca	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pb	<0.02	Se	<0.02
Sb	<0.02	Ce	<0.2	Er	<0.02	In	<0.02	Mg	<0.02	Nb	<0.02	Rb	<0.02	Si	<0.2
As	<0.2	Ce	<0.02	Eu	<0.02	Ir	<0.02	Mn	<0.02	Os	<0.02	Rh	<0.02	Ag	<0.02
Ba	<0.02	Cr	<0.02	Gd	<0.02	Te	<0.2	Hg	<0.2	Pd	<0.02	Ru	<0.02	Nd	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Ta	<0.02	K	<0.02	P	<0.02	Sn	<0.02	Sr	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Tb	<0.02	Mo	<0.02	Fe	<0.2	Sb	<0.02	Sc	<0.02
B	<0.02	Co	<0.02	Au	<0.02	Ti	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST* (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Certificate of Analysis

MS978, MS979



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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



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).

1.0 ACCREDITATION / REGISTRATION

2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea.

Starting Material: Titanium

Starting Material Lot#: T1 Metal

Starting Material Purity: 2094

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Method #1

1002 ± 4 µg/mL

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods
Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \sum (X_i / U_i)$
 X_i = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

$U_i = (U_{CRM,i} / \sum (U_{CRM,i}^2 / U_i^2))^{1/2}$
 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

$U_{CRM,i} = (U_{CRM,i}^2 / \sum (U_{CRM,i}^2 / U_i^2))^{1/2}$
 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

$U_{CRM,i} = (U_{CRM,i}^2 / \sum (U_{CRM,i}^2 / U_i^2))^{1/2}$
 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

$U_{CRM,i} = (U_{CRM,i}^2 / \sum (U_{CRM,i}^2 / U_i^2))^{1/2}$
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 U_i = the weighting factors for each method calculated using the inverse square of the variance

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

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 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

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 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

$U_{CRM,i} = (U_{CRM,i}^2 / \sum (U_{CRM,i}^2 / U_i^2))^{1/2}$
 $U_{CRM,i}$ = mean of Assay Method i with standard uncertainty $U_{CRM,i}$
 U_i = the weighting factors for each method calculated using the inverse square of the variance

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UHPA-filtered Clean Room. An UHPA-filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	<	0.000536	M Eu	<	0.000268	O Na	<	0.032670	M Se	0.001204	O Zn	<	0.003267
O Al	0.000872	O Fe	<	0.003225	O Nb	<	0.043560	O Si	0.004735	O Zr	<	0.043560	
M As	0.008586	M Ga	<	0.000268	M Nd	<	0.000268	M Sm	<	0.000268			
M Au	0.004577	M Gd	<	0.000268	O Ni	<	0.010890	M Sn	0.000986				
O B	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	0.000986				
M Ba	0.002683	M Hf	<	0.002161	O P	<	0.054450	M Ta	0.010560				
M Be	0.005366	M Hg	<	0.003231	M Pb	<	0.001073	M Tb	0.000268				
M Bi	0.001609	M Ho	<	0.000268	M Pd	<	0.000268	M Th	0.001341				
O Ca	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Tl	0.053663				
M Cd	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Tl	<				
M Co	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Ti	0.000268				
M Cr	0.000752	O Li	<	0.000268	M Re	<	0.000268	M Tm	0.000268				
M Cs	0.000268	M Lu	<	0.000268	M Rh	<	0.000269	M U	0.000268				
O Cu	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146			
M Dy	0.000268	O Mn	<	0.003267	M Sb	<	0.006976	M Yb	<	0.000536			
M Er	0.000268	M Mo	<	0.000774	O Sc	<	0.004900						

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 media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)₆-2 for months in 1% HNO₃ / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)₆-2 chemically stable for years in 2-5% HNO₃ / trace HF in an LDPE container.

TI Containing Samples (Preparation and Solution) - Metal (Soluble in H₂O / HF caution - powder reacts violently). Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H₂O / HF / H₂SO₄); K₂SiO₇ - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 and dissolve by heating with 1:1:1 H₂O / HF / H₂SO₄ or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystaline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	14 ppt
ICP-MS 48 amu	N/A	
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	1
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	1

HF Note: This standard should not be prepared or stored in glass.

W, Mo, Co
Nb, Ta, Cr, U
Ce, Ar, Ni
Ru
(where X = Zr, Mo,
48Ca, [96X=2
14N17N2, 36Ar12C,
14N16O18O,
32S16O, 32S14N,
N/A

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: 800.868.6786; 540.565.3030; Fax: 540.565.3030; Email: info@inorganicventures.com

11.0

CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date:

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlikowski
Manager, Quality Control

80978

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul Gaines

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

M5985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGIN10
Lot Number: U2-IN729349
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 000 µg/mL ea:
Indium
Starting Material: Indium Metal
Starting Material Lot#: 2511
Starting Material Purity: 99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL
Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10021 ± 56 µg/mL ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	10035 ± 25 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	10001 ± 33 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na	0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al	0.003385	O	Fe	0.004462	M	Nb	<	0.000760	O	Si	0.024619	M	Zr	<	0.000760		
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760			
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760			
O	B	0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760			
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb	0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760			
O	Ca	0.004616	s	In	<			M	Pr	<	0.000760	M	Th	<	0.000760			
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100			
M	Ce	<	0.000760	O	K	0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760			
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760			
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600			
M	Cu	<	0.003800	O	Mg	0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn	0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760			

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale. <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 114.82 +3 6 In(H₂O)₆+3

Chemical Compatibility -Soluble in HCl, HNO₃, and H₂SO₄. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

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

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO₃); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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

300 Technology Drive
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MS997

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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



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: CHEM-CLP-4
Lot Number: V2-MEB746172
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: 1.032 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).

<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

August 12, 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

- **August 12, 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





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Certificate of Analysis

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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

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

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





Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

Certificate of Analysis

M6074
M6075
M6076
M6077

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

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.

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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.

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- 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

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10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

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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:
Lot Number:
Description:

58025
101124
Manganese (Mn)

R-71113128

Lot #
Solvent: 24002546 Nitric Acid

Expiration Date:

101127

2% 80.0 (mL) Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

4000.2

0.10 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Renteria</i>
	101124

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. Manganese(II) nitrate hydrate (Mn) IN031 MNM02020A1 1000 99.999 0.10 20.8 19.2322 19.2344 **1000.1** **2.0** 15710-66-4 5 mg/m3 or-rel >300mg/kg 3132

[1] Spectrum No.1 [34.243 sec]:57025.D# [Count] [Linear]

5.0E6													
2.5E6													
m/z->	10	20	30	40	50	60	70	80	90	100			
1.0E6													
5.0E7													
m/z->	110	120	130	140	150	160	170	180	190	200			
1.0E6													
5.0E7													
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	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

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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





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
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02
Be	<0.01	Cr	<0.02	Ga	30	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02
																W	<0.02
																U	<0.02
																V	<0.02
																Yb	<0.02
																Y	<0.02
																Zn	<0.02
																Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58126
011025
Iron (Fe)

R-113125
M6140

Lot #
Solvent: 24012496 Nitric Acid

Expiration Date:

011028

2% 40.0 (mL) Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

6U7B

Weight shown below was diluted to (mL):

2000.07

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

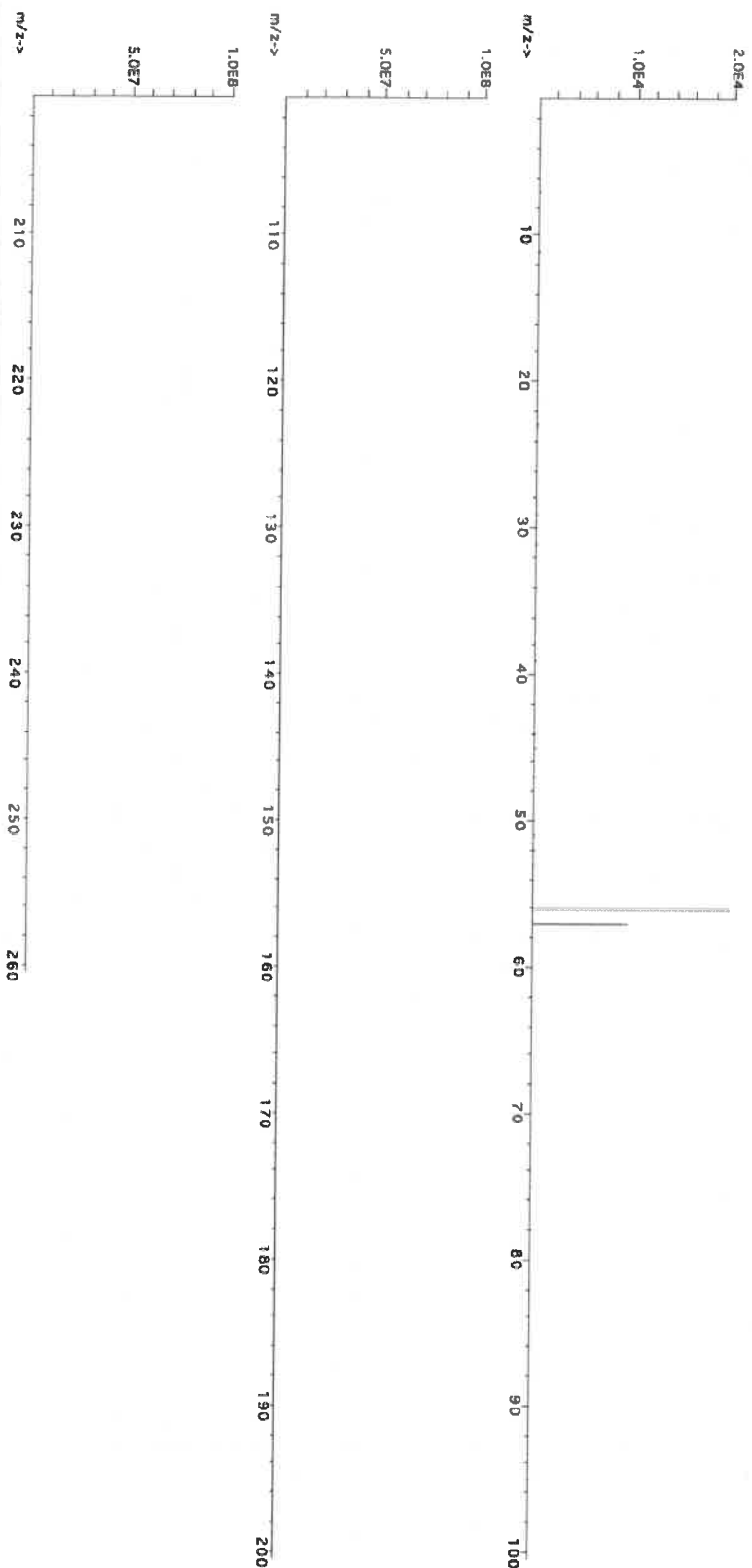
Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Renteria	011025

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.)	SFM

1. Iron(III) nitrate nonahydrate (Fe) IN028 FED082023A1 10000 99.999 0.10 13.0 153.8534 ##### 10000.2 20.0 7782-61-8 1 mg/m³ or-rel 3250mg/kg 3126A

[1] Spectrum No.1 [30.763 sec]58126.D# [Count] [Linear]





CERTIFIED WEIGHT REPORT:

Part Number: 57119
Lot Number: 103024
Description: Potassium (K)

R-2113125

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

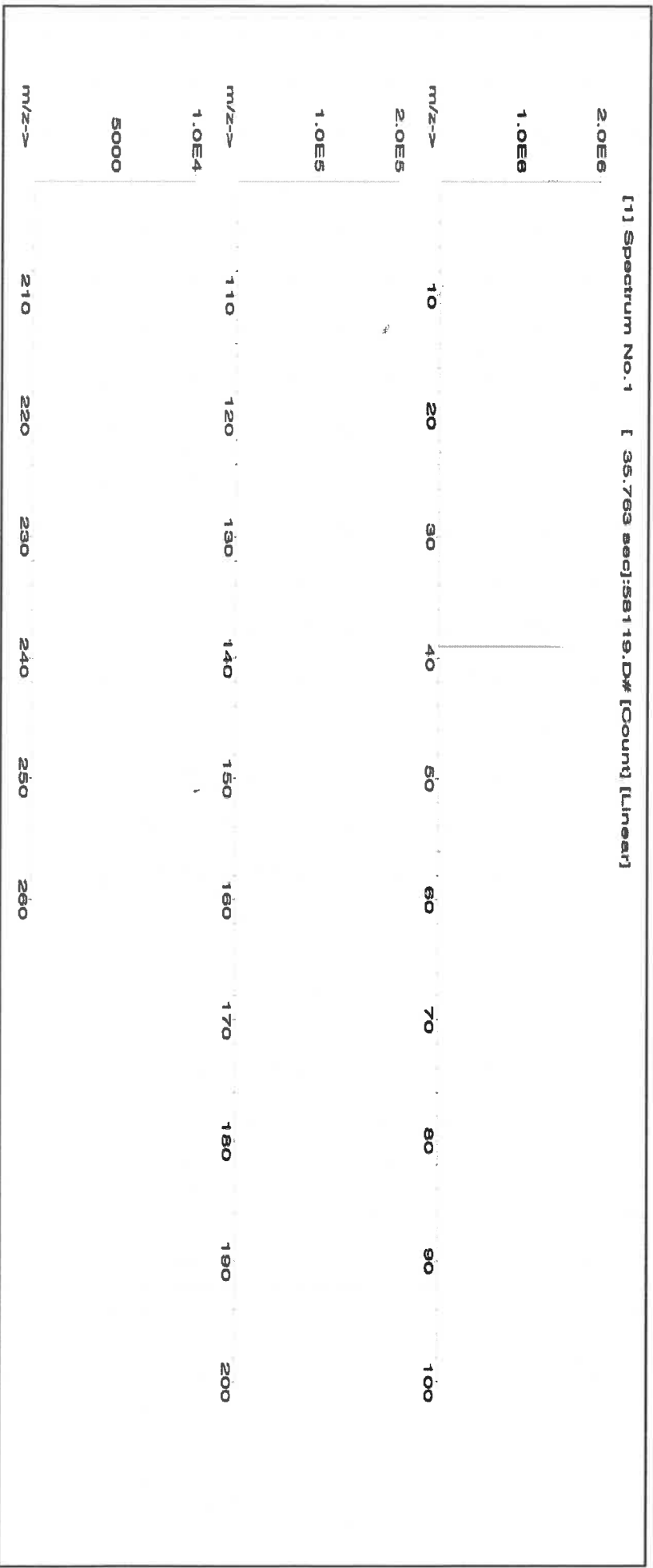
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

<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		CAS#	OSHA PEL (TWA)	LD50	NIST SRM
										±	(µg/mL)				

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-1113125
Solvent: 24002546 Nitric Acid

Expiration Date: 072427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

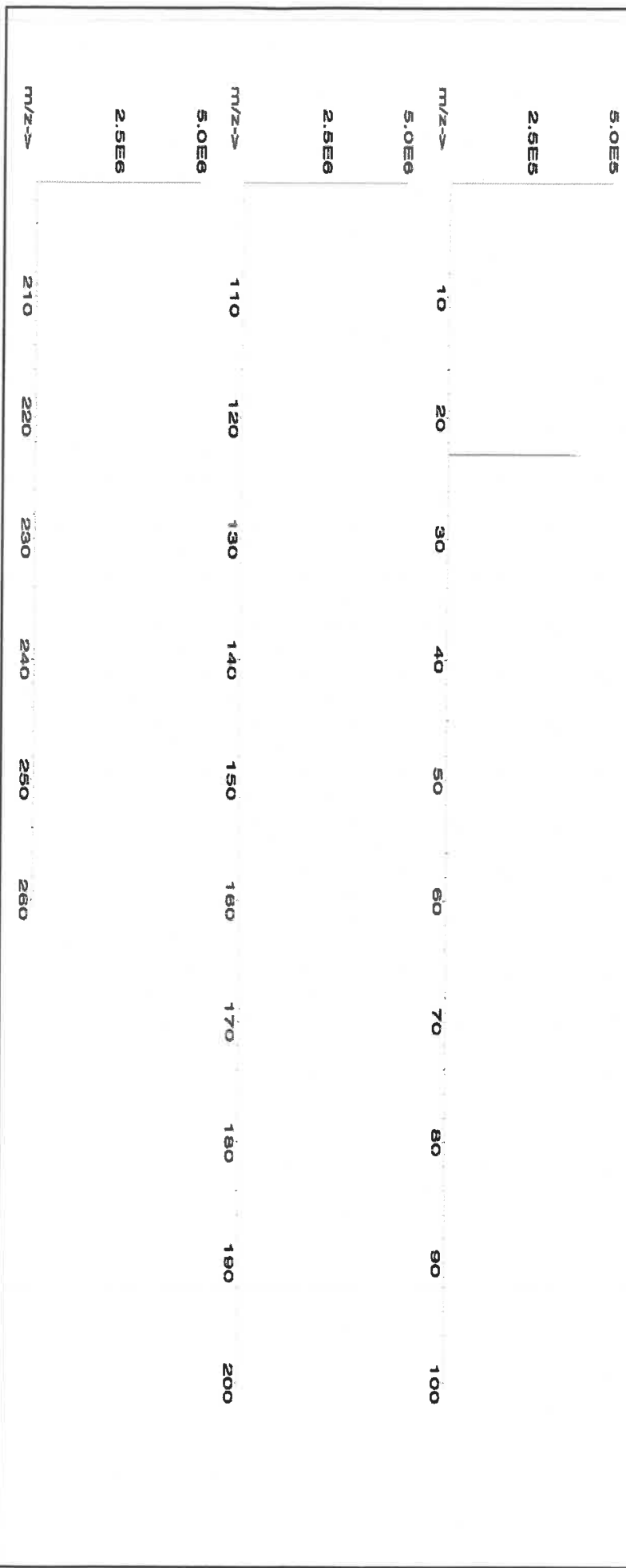
Weight shown below was diluted to (mL): 4000.2
5E-05 Balance Uncertainty
0.10 Flask Uncertainty

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Renteria	072424

Compound	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	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	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	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)
Lot # R → 11/13/25
Solvent: Nitric Acid

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.10

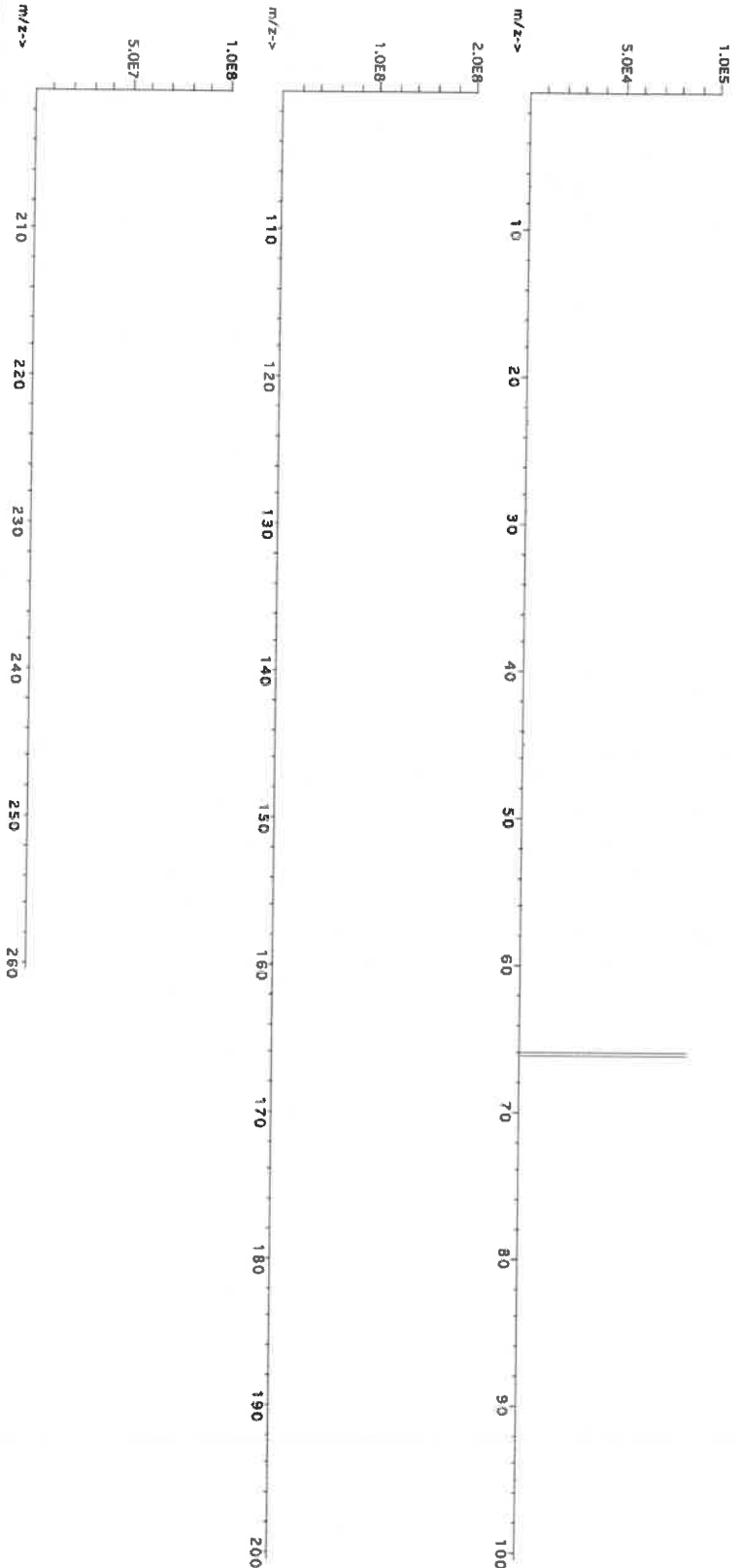
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
Reviewed By:	<i>Pedro L. Rentes</i>
	Pedro L. Rentes
	121724

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. Zinc nitrate hexahydrate (Zn) 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

 **avantorsTM**



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

 **avantor™**



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

300 Technology Drive
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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:	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



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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: 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
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1.0 ACCREDITATION / REGISTRATION

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2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: 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



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

CERTIFIED WEIGHT REPORT:

Part Number: **58112** Lot # **24012496**
Lot Number: **011525** Solvent: **Nitric Acid**
Description: **Magnesium (Mg)**

Expiration Date: **011528** 2%
Recommended Storage: **Ambient (20 °C)** 40.0 (mL)
Nominal Concentration (µg/mL): **10000** Nitric Acid
NIST Test Number: **6UTB** 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): **2000.07** 0.100 Flask Uncertainty

Formulated By: <i>[Signature]</i>	
Benson Chan	011525
Reviewed By: <i>[Signature]</i>	
Pedro L. Rentas	011525

Compound

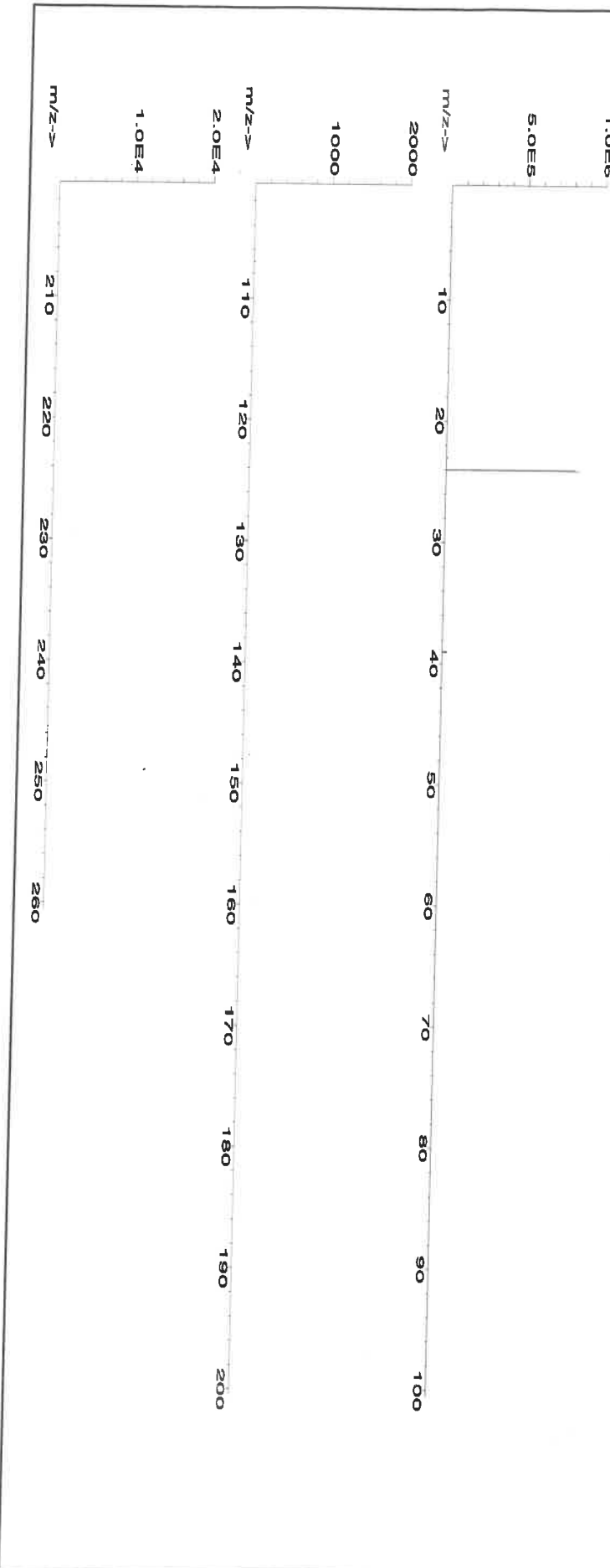
Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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SDS Information

(Solvent Safety Info. On Attached pg.)

1. Magnesium nitrate hexahydrate (Mg) IN030 MGD05023A1 10000 99.999 0.10 8.51 234.9183 234.9195 10000.1 20.0 13446-18-9 NA off-ret 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]: 58112.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ku	<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

M6174
R → S1/S124

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:	V2-MEB742428	
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	50.03 ± 0.30 µg/mL	Calcium, Ca	5 000 ± 16 µg/mL
Chromium, Cr	200.0 ± 1.1 µg/mL	Cobalt, Co	500.0 ± 2.3 µg/mL
Copper, Cu	250.0 ± 1.1 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 22 µg/mL	Manganese, Mn	499.9 ± 2.2 µg/mL
Nickel, Ni	500.1 ± 2.3 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.117 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
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; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 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

- **March 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:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





CERTIFIED WEIGHT REPORT:

Part Number: **57038**
Lot Number: **092724**
Description: **Strontium (Sr)**

57038
092724
Strontium (Sr)

R-5816125

Lot # **24002546** Solvent: **Nitric Acid**

Expiration Date: **092727**

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

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

NIST Test Number: **8UTB**

Weight shown below was diluted to (mL): **2000.07**

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

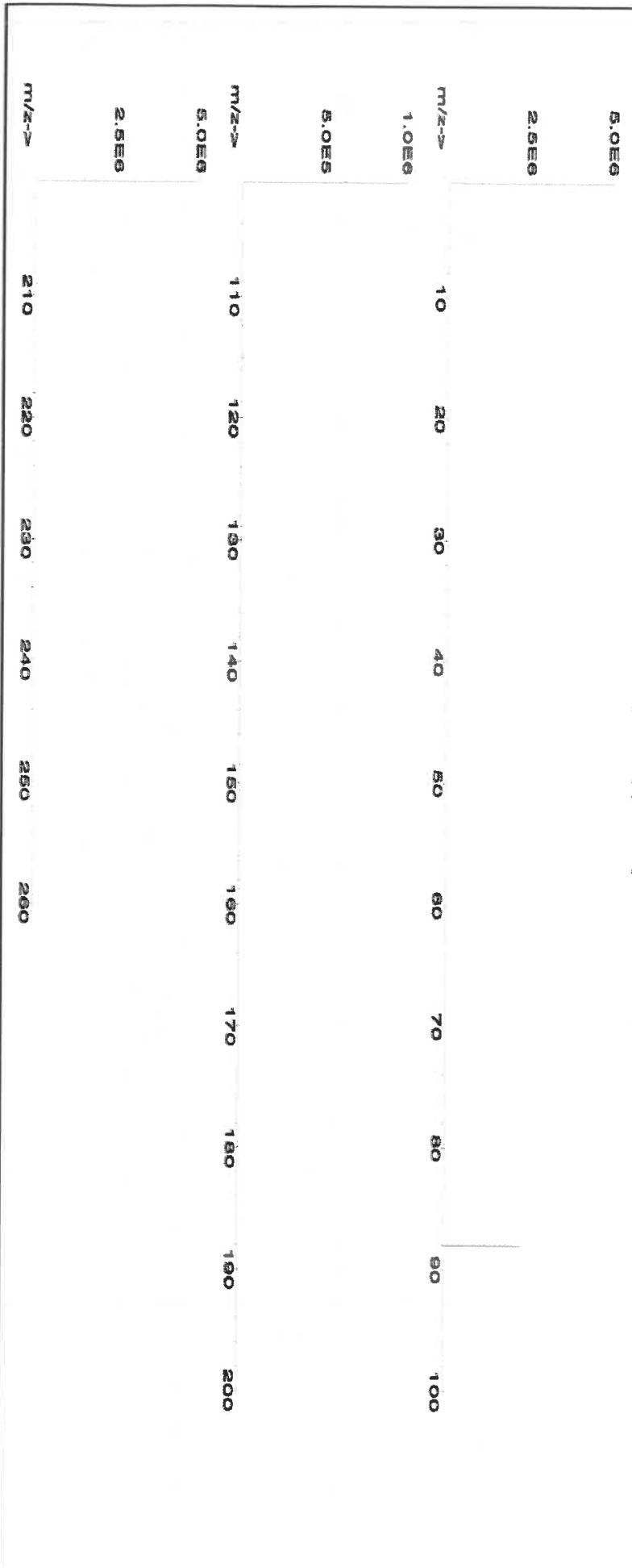
2% **40.0** **Nitric Acid**
(mL)

<i>[Signature]</i>	
Formulated By:	Benson Chan
	092724
<i>[Signature]</i>	
Reviewed By:	Pedro L. Rentas
	092724

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

1. Strontium nitrate (Sr) IN017 SR2022018A1 1000 99.997 0.10 41.2 4.85470 4.85481 1000.0 2.0 10042-76-9 NA or-lat >2000mg/kg 3153a

[1] Spectrum No.1 [14.465 sec]:68138.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	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	T	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:

57042
080525
Molybdenum (Mo)

57042
080525
Molybdenum (Mo)

57042
080525
Molybdenum (Mo)

Solvent:
Ammonium hydroxide
ASTM Type 1 Water

Expiration Date:

080528

Recommended Storage:

Ambient (15 - 30 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL):

1999.41

5E-05

Balance Uncertainty

0.058

Fork Uncertainty

0.5%

10.0

Ammonium hydroxide

[Signature]
Formulated By: Benson Chan
080525

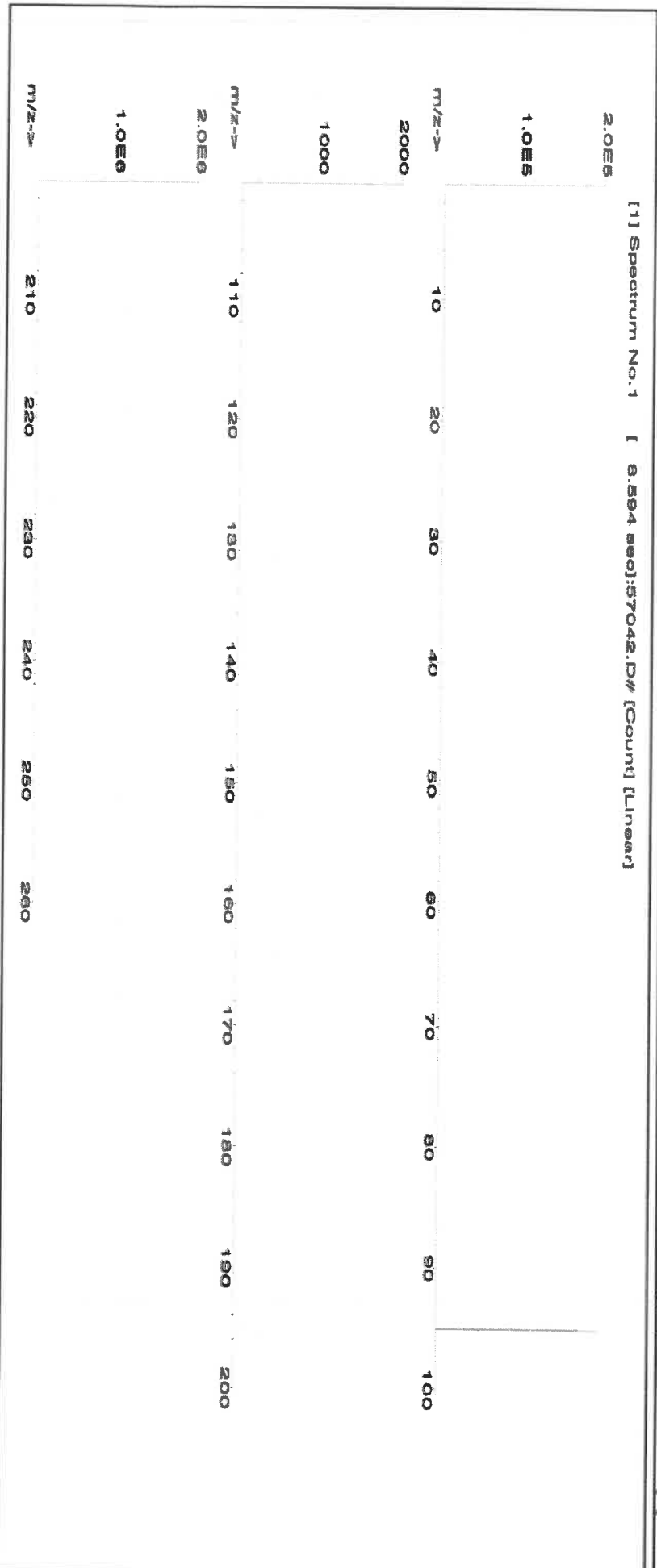
[Signature]
Reviewed By: Pedro L. Renterias
080525

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. Ammonium molybdate (Mo) 58142 112322 0.1000 200.0 0.084 1000 10001.4 1000.5 2.2 13106-76-8 5 mg(Mo)/mL 0.1-0.333 mg/kg 3134

[1] Spectrum No. 1 [8.594 sec]:57042.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
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	Ce	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Te	<0.02
														Tb	<0.02
														Te	<0.02
														Tl	<0.02
														Tm	<0.02
														Sn	<0.02
														Tl	<0.02
														U	<0.02
														V	<0.02
														Yb	<0.02
														Y	<0.02
														Zn	<0.02
														Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware, and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (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).
- Rev 1.0, 2/25/2025



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57082
031525
Lead (Pb)

Lot #

Nitric Acid

Expiration Date:

031528

2%

40.0

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

2000.07

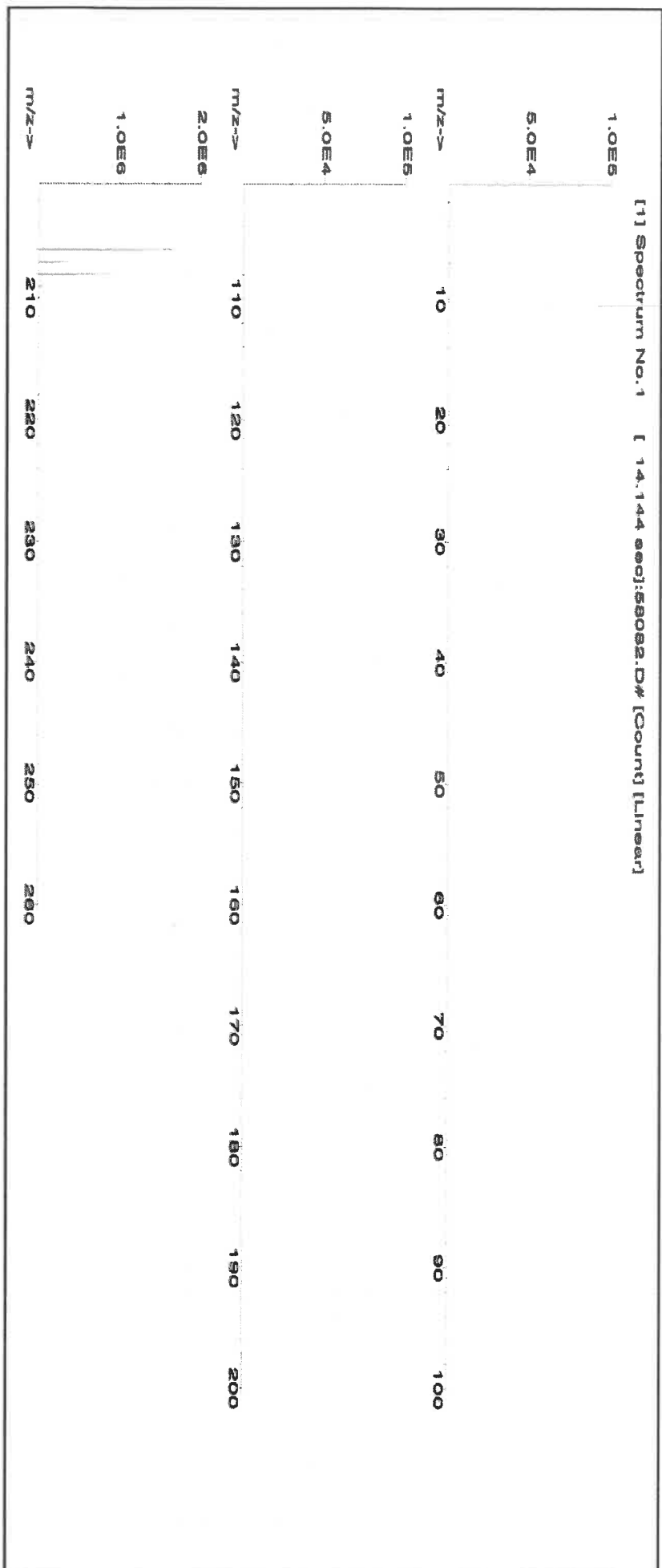
0.10 Flask Uncertainty

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
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1. **Lead(II) nitrate (Pb)** IN029 PBD122016A1 1000 99.999 0.10 62.5 3.20015 3.20067 1000.2 2.0 10099-74-8 0.05 mg/m3 Intrins-ral 93 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	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	Tc	<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	Se	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

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

Assay Information:

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

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

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

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). <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	<u>73Ge16O</u> , <u>178Hf+2</u>
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

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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



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	W2-MEB752149
Matrix:	5% (v/v) HNO ₃

M6180
R-37/22/23

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	200.2 ± 0.7 µg/mL	Arsenic, As	80.1 ± 0.5 µg/mL
Barium, Ba	20.02 ± 0.12 µg/mL	Beryllium, Be	20.02 ± 0.11 µg/mL
Boron, B	30.02 ± 0.15 µg/mL	Cadmium, Cd	20.04 ± 0.09 µg/mL
Calcium, Ca	100.1 ± 0.3 µg/mL	Cerium, Ce	200.2 ± 1.0 µg/mL
Chromium, Cr	40.02 ± 0.26 µg/mL	Cobalt, Co	20.03 ± 0.09 µg/mL
Copper, Cu	30.03 ± 0.13 µg/mL	Iron, Fe	300.3 ± 1.3 µg/mL
Lead, Pb	100.1 ± 0.5 µg/mL	Lithium, Li	20.03 ± 0.09 µg/mL
Magnesium, Mg	200.2 ± 0.9 µg/mL	Manganese, Mn	19.99 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.05 ± 0.22 µg/mL
Phosphorus, P	600.5 ± 2.9 µg/mL	Potassium, K	1 001 ± 4 µg/mL
Selenium, Se	200.2 ± 1.1 µg/mL	Silver, Ag	7.52 ± 0.03 µg/mL
Sodium, Na	300.3 ± 1.3 µg/mL	Strontium, Sr	20.02 ± 0.10 µg/mL
Thallium, Tl	200.2 ± 1.0 µg/mL	Vanadium, V	30.02 ± 0.13 µg/mL
Zinc, Zn	20.05 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 5 °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
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
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	160830
Ce	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
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	3152a	200413
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	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>. 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° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° 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

April 08, 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

- **April 08, 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



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M6181
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: WW-LFS-2
Lot Number: V2-MEB743480
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 ± 0.5 µg/mL	Molybdenum, Mo	40.05 ± 0.22 µg/mL
Silica, SiO ₂	200.3 ± 1.4 µg/mL	Tin, Sn	70.1 ± 0.4 µg/mL
Titanium, Ti	20.03 ± 0.12 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
Sb	ICP Assay	3102a	140911
SiO ₂	Calculated		See Sec. 4.2
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:

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

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

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; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 07, 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 07, 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:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Instructions for QATS Reference Material: ICP-AES ICS

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

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.



M6182

(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"

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.



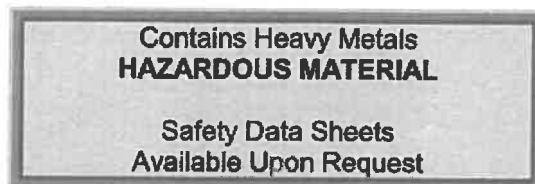
Instructions for QATS Reference Material: ICP-AES ICS

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.



M6184

(A) **SAMPLE DESCRIPTION**

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

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

(B) **BREAKAGE OR MISSING ITEMS**

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) **ANALYSIS OF SAMPLES**

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





Instructions for QATS Reference Material: ICP-AES ICS

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

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

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

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

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

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

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710							
Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

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

Nitric Acid 69%
CMOS



M6187

R.D :- 08/08/25

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
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	< 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



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

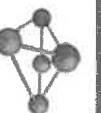


Jamie Croak
Director Quality Operations, Bioscience Production



Certified Reference Material CRM

M6027



CERTIFIED WEIGHT REPORT:

Part Number: **57028**
Lot Number: **062024**
Description: **Nickel (NI)**

Lot # **24002546**
Solvent: **Nitric Acid**

Formulated By: *Benson Chan*
Reviewed By: *Pedro L. Rentes*

062024

Expiration Date: **062027**

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

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

NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.07**

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Compound

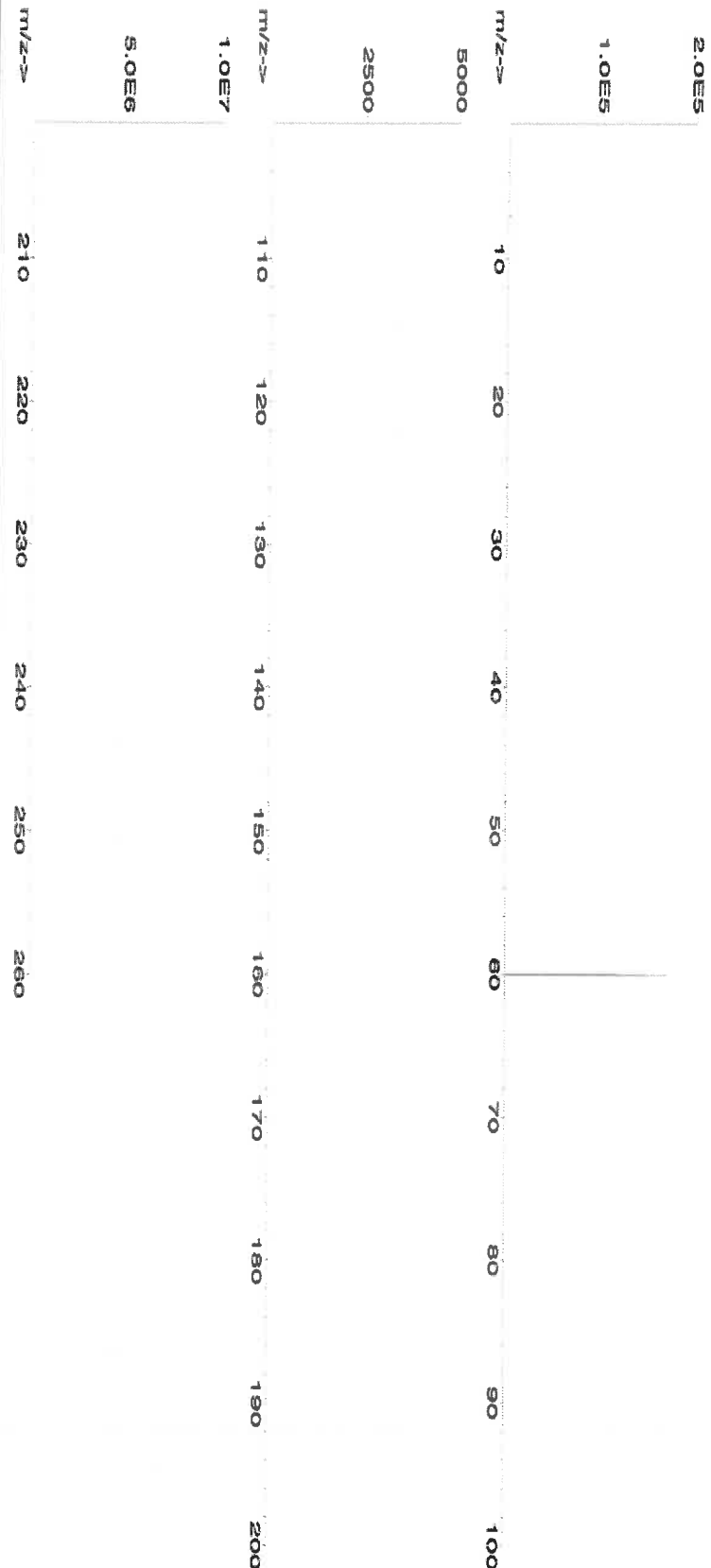
Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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SDS Information

(Solvent Safety Info. On Attached pg.)

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 orl-rat 1620 mg/kg 3136

[1] Spectrum No.1 [9.136 sec]:58028.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	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	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).



M6030



CERTIFIED WEIGHT REPORT:

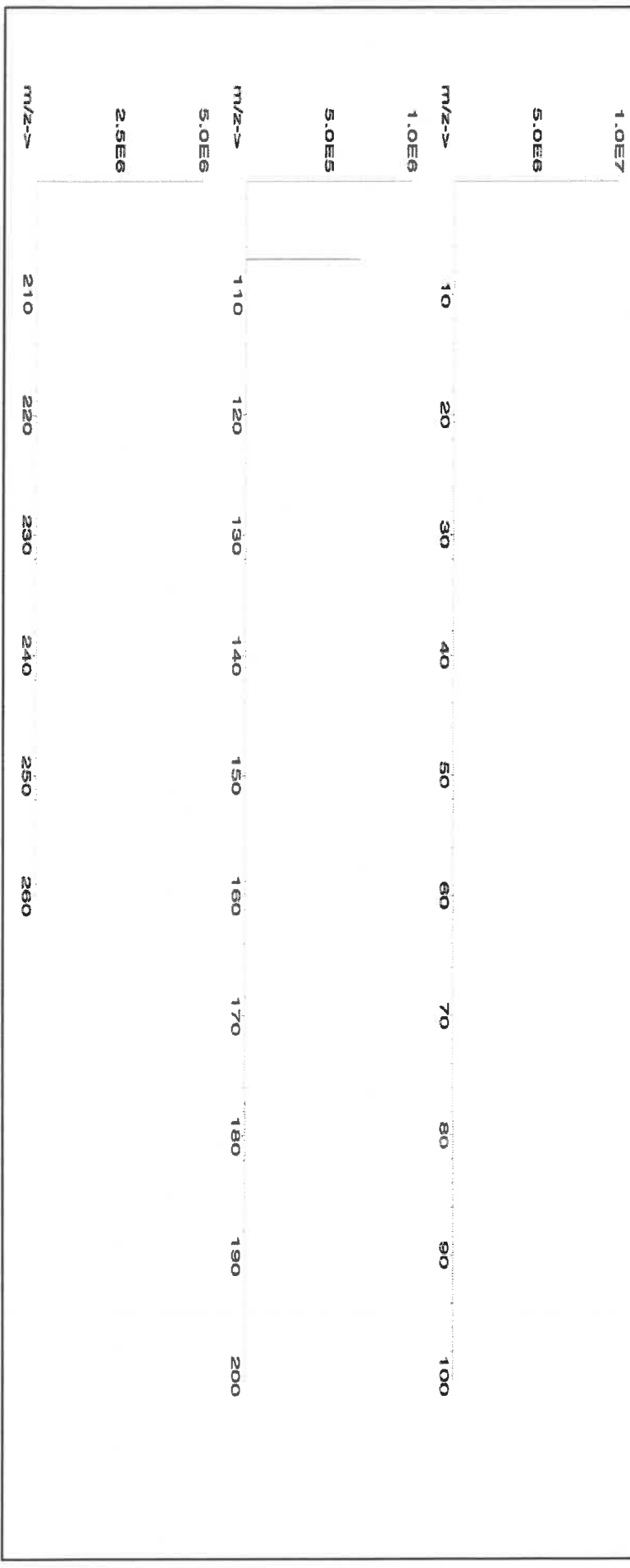
Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**
Solvent: 24002546 Nitric Acid
Lot #

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.30
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122823	

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9996	0.10	63.7	6.27992	6.27998	1000.0
							2.0	7761-88-8	10 µg/mL
									NA
									3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 meghom deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: **57051**
Lot Number: **071724**
Description: **Antimony (Sb)**

Expiration Date: **071727**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.26**

126160

Lot # **24002546**
Solvent: **Nitric Acid**

2.0% **Nitric Acid**
40.0 (mL)

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

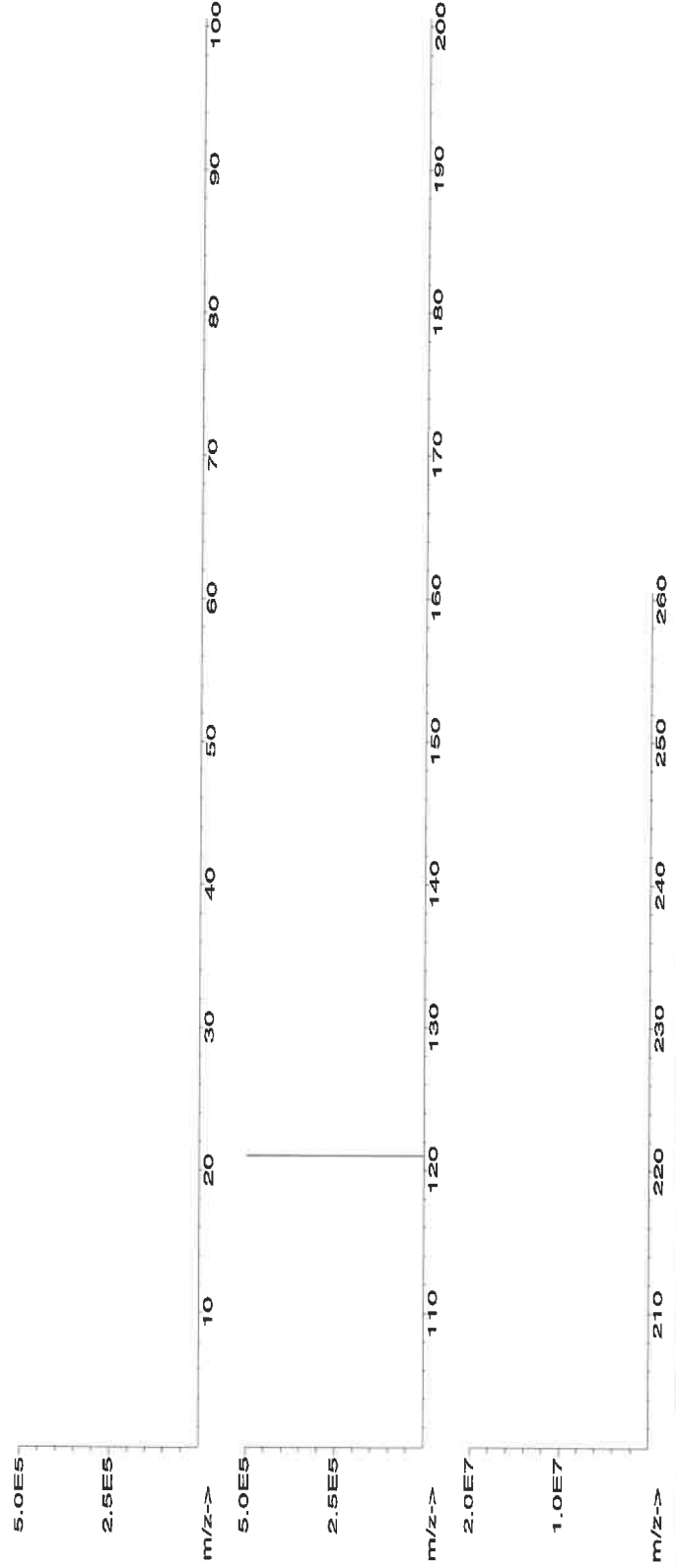
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito 071724
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas 071724

SDS Information

Expanded Uncertainty	(Solvent Safety Info. On Attached pg.)	NIST
+/- (µg/mL)	CAS#	LD50
2.2	7440-36-0	0.5 mg/m3
or-rat 7000 mg/kg	3102a	

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information
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 or-rat 7000 mg/kg 3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.02	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<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	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	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	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.
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Lot #

Solvent: 24002546 Nitric Acid

2% 40.0 Nitric Acid (mL)

Expiration Date:

062727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL): 2000.1

5E-05 Balance Uncertainty
0.10 Flask Uncertainty

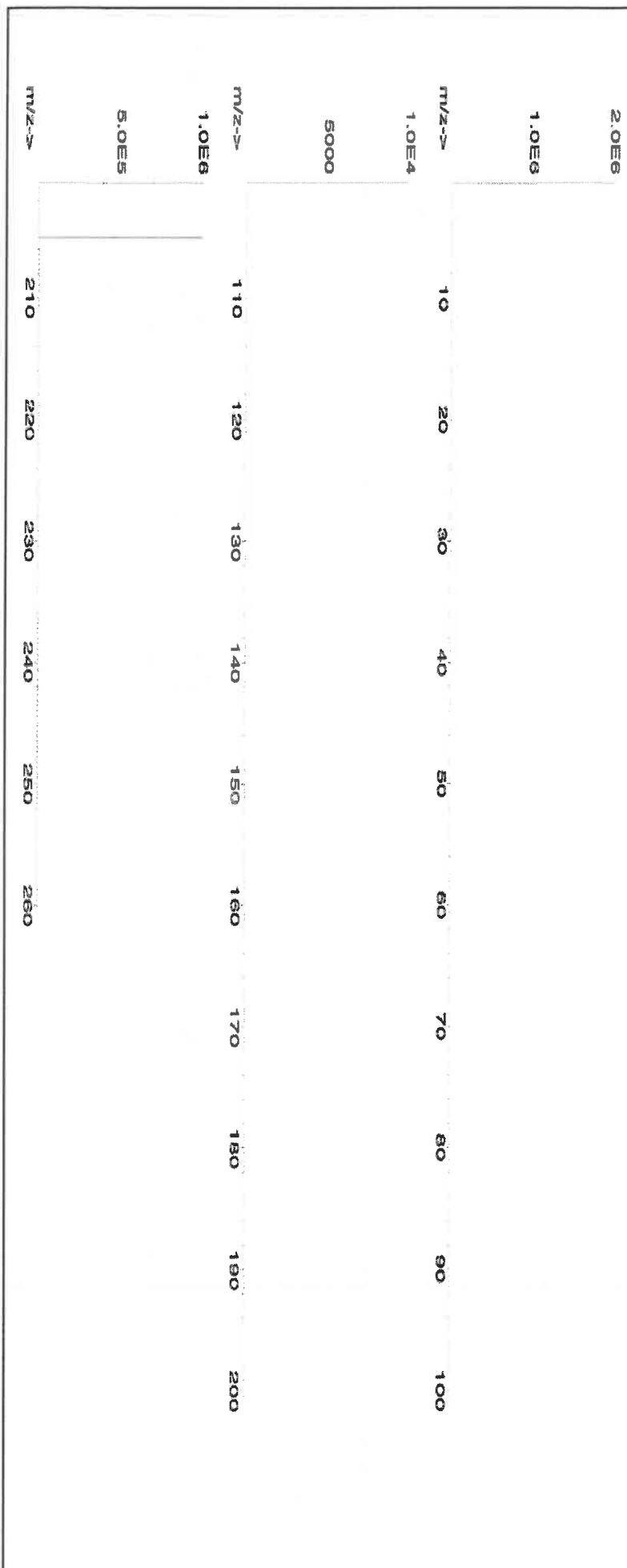
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renias</i>
	Pedro L. Renias
	062724

SDS Information

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

1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 or-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Sn	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<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.

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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<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	Pr	<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
														Th	<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:

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Certified by:

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SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Metcon A GE Power Business
ADDRESS: 700 Parsippany Road
CITY: Parsippany STATE: NJ ZIP: 07054
ATTENTION: Sundas Perez
PHONE: _____ FAX: _____

CLIENT PROJECT INFORMATION

PROJECT NAME: Parsippany wastewater quarterly 2025
PROJECT NO.: _____ LOCATION: _____
PROJECT MANAGER: _____
e-mail: _____
PHONE: _____ FAX: _____

CLIENT BILLING INFORMATION

BILL TO: _____ PO#: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
ATTENTION: _____ PHONE: _____

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT _____

*Metals Grab
Cyanide
Field PH*

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	<u>Q4</u>	<u>W</u>	<u>✓</u>		<u>10-1-25</u>	<u>1500</u>	<u>4</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>							<u>PH 7.64</u>
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>10-1-25 1515</u>	RECEIVED BY: 1. <u>[Signature]</u>	DATE/TIME: <u>10-1-25 1515</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>3.7</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: _____	RECEIVED BY: 2. <u>[Signature]</u>	DATE/TIME: _____	Comments: _____
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>10-1-25 1615</u>	RECEIVED BY: 3. _____	DATE/TIME: _____	Comments: _____

Page _____ of _____

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete
☐ YES ☐ NO

Alliance Technical Group, LLC-Newark

284 Sheffield Street, Mountainside, NJ 07092 Tel. 908-789-8900 Fax 908-107-0722
FIELD SAMPLING LOG

Client Name: Metem AGE power Business

Client Address: 700 Parsippany Road

Client Rep on Site: Sundas Pervez

Sampling Date: 10-1-25

Arrival Time: 1435

Departure Time: 1518

Project Name: Parsippany Wastewater Quarterly 2021

Project Location: Parsippany

Cooler Custody Seal: N/A

Temperature Correction Factor (°C): 0

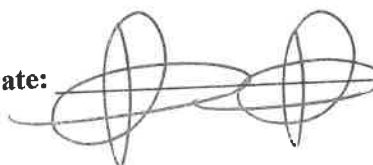
FIELD EQUIPMENT CALIBRATION

FIELD EQUIPMENT CALIBRATION					
pH Calibration (SM4500-H B/9040C)					ICV (± 0.1 pH unit)
Calibration					
	7.00 Buffer	4.00 Buffer	10.00 Buffer	7.00 Buffer	
	W 3217	W 3178	W 3191	W 3093	
Time	1450	1452	1454	1456	
Temp °C	21.6°	21.0°	21.2°	21.5°	
pH	7.06 ^{JD} 7.00	4.00	10.05	7.01	

FIELD EQUIPMENT CALIBRATION

Specific Conductance (mS/cm) (99% -101%)/(mmho/cm) (SM2510 B/120.1/9050A)			ICV (± 1%) (99% -101%)	
Calibration (± 1%) (99% -101%)			WP	
	WP			
Time				
Temp °C				
Reading (mS/cm)				

Sampler Signature/Date:

 10-1-25

Supervisor Review/Date: _____

QA Control# A3041249

Client Name: INETERM H & P CONSULTING
Client Address: 700 Parsippany Road
Client Rep on Site: Sundas Pervez
Sampling Date: 10-1-25
Arrival Time: 1435

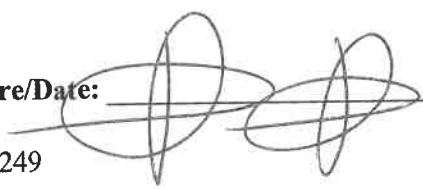
Project Location: Parsippany
Cooler Custody Seal: N/A
Temperature Correction Factor (°C): 0

Departure Time: 1518

FIELD SAMPLING INFORMATION

Sampling Location	Date/Time of sampling	Field Measurements			
		Date/Time of Analysis	pH	Temperature °C	Specific Conductance (mS/cm) (99% -101%)
CCV C3093)	10-1-25 1458	10-1-25 1500	7.00	21.2°	N/A
Q4	1500	1502	7.64	20.4°	I
DUP	1504	1507	7.64	20.5°	
CCV C3093)	1509	1511	7.01	21.3°	

Meter: YSI MPS, Model # 556, Serial # 085A0063

Sampler Signature/Date:  10-1-25

Supervisor Review/Date: _____

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312