

Cover Page

Order ID : Q2630

Project ID : Transfer Station-SPDES

Client : Tully Environmental, Inc

Lab Sample Number

Q2630-01
Q2630-02

Client Sample Number

001 Willets Pt Blvd (June)
002 35th Ave (JUNE)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 7/20/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- INORGANIC

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

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2630

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: KETAN PATEL

Date: 07/20/2025

LAB CHRONICLE

OrderID:	Q2630	OrderDate:	7/17/2025 10:48:00 AM
Client:	Tully Environmental, Inc	Project:	Transfer Station-SPDES
Contact:	Dean Devoe	Location:	O11,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2630-01	001 Willets Pt Blvd (June)	Water			07/16/25			07/17/25
			Metals Group 10	200.7		07/17/25	07/18/25	
Q2630-02	002 35th Ave (JUNE)	Water			07/16/25			07/17/25
			Metals Group 10	200.7		07/17/25	07/18/25	



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Hit Summary Sheet
SW-846

SDG No.: Q2630

Order ID: Q2630

Client: Tully Environmental, Inc

Project ID: Transfer Station-SPDES

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : 001 Willets Pt Blvd (June)								
Q2630-01	001 Willets Pt Blvd (June)	Water	Copper	77.0		1.89	10.0	ug/L
Q2630-01	001 Willets Pt Blvd (June)	Water	Iron	11000		18.0	50.0	ug/L
Q2630-01	001 Willets Pt Blvd (June)	Water	Lead	61.6		1.21	6.00	ug/L
Client ID : 002 35th Ave (JUNE)								
Q2630-02	002 35th Ave (JUNE)	Water	Copper	94.7		1.89	10.0	ug/L
Q2630-02	002 35th Ave (JUNE)	Water	Iron	9710		18.0	50.0	ug/L
Q2630-02	002 35th Ave (JUNE)	Water	Lead	54.5		1.21	6.00	ug/L



SAMPLE DATA

Report of Analysis

Client:	Tully Environmental, Inc	Date Collected:	07/16/25
Project:	Transfer Station-SPDES	Date Received:	07/17/25
Client Sample ID:	001 Willets Pt Blvd (June)	SDG No.:	Q2630
Lab Sample ID:	Q2630-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-50-8	Copper	77.0		1	1.89	10.0	ug/L	07/17/25 12:05	07/18/25 12:56	EPA 200.7	
7439-89-6	Iron	11000		1	18.0	50.0	ug/L	07/17/25 12:05	07/18/25 12:56	EPA 200.7	
7439-92-1	Lead	61.6		1	1.21	6.00	ug/L	07/17/25 12:05	07/18/25 12:56	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group 10			

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

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

Report of Analysis

Client:	Tully Environmental, Inc	Date Collected:	07/16/25
Project:	Transfer Station-SPDES	Date Received:	07/17/25
Client Sample ID:	002 35th Ave (JUNE)	SDG No.:	Q2630
Lab Sample ID:	Q2630-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-50-8	Copper	94.7		1	1.89	10.0	ug/L	07/17/25 12:05	07/18/25 13:00	EPA 200.7	
7439-89-6	Iron	9710		1	18.0	50.0	ug/L	07/17/25 12:05	07/18/25 13:00	EPA 200.7	
7439-92-1	Lead	54.5		1	1.21	6.00	ug/L	07/17/25 12:05	07/18/25 13:00	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group 10			

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: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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	Copper	1000	1000	100	95 - 105	P	07/18/2025	12:01	LB136546
	Iron	3840	4000	96	95 - 105	P	07/18/2025	12:01	LB136546
	Lead	3960	4000	99	95 - 105	P	07/18/2025	12:01	LB136546

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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	Copper	21.9	20.0	109	80 - 120	P	07/18/2025	12:05	LB136546
	Iron	105	100	105	80 - 120	P	07/18/2025	12:05	LB136546
	Lead	12.0	12.0	100	80 - 120	P	07/18/2025	12:05	LB136546

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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	Copper	1260	1250	101	90 - 110	P	07/18/2025	12:36	LB136546
	Iron	4980	5000	100	90 - 110	P	07/18/2025	12:36	LB136546
	Lead	5010	5000	100	90 - 110	P	07/18/2025	12:36	LB136546
CCV02	Copper	1270	1250	102	90 - 110	P	07/18/2025	13:29	LB136546
	Iron	5070	5000	102	90 - 110	P	07/18/2025	13:29	LB136546
	Lead	4980	5000	100	90 - 110	P	07/18/2025	13:29	LB136546
CCV03	Copper	1280	1250	102	90 - 110	P	07/18/2025	14:31	LB136546
	Iron	5020	5000	100	90 - 110	P	07/18/2025	14:31	LB136546
	Lead	4960	5000	99	90 - 110	P	07/18/2025	14:31	LB136546
CCV04	Copper	1280	1250	102	90 - 110	P	07/18/2025	16:17	LB136546
	Iron	5220	5000	104	90 - 110	P	07/18/2025	16:17	LB136546
	Lead	4930	5000	99	90 - 110	P	07/18/2025	16:17	LB136546
CCV05	Copper	1280	1250	102	90 - 110	P	07/18/2025	16:51	LB136546
	Iron	5240	5000	105	90 - 110	P	07/18/2025	16:51	LB136546
	Lead	4950	5000	99	90 - 110	P	07/18/2025	16:51	LB136546



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Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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	Copper	21.5	20.0	108	65 - 135	P	07/18/2025	12:14	LB136546
	Iron	110	100	110	65 - 135	P	07/18/2025	12:14	LB136546
	Lead	12.3	12.0	102	65 - 135	P	07/18/2025	12:14	LB136546



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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Copper	4.60	+/-10	U	20.0	P	07/18/2025	12:10	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	12:10	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	12:10	LB136546

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Copper	4.60	+/-10	U	20.0	P	07/18/2025	12:43	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	12:43	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	12:43	LB136546
CCB02	Copper	4.60	+/-10	U	20.0	P	07/18/2025	13:33	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	13:33	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	13:33	LB136546
CCB03	Copper	4.60	+/-10	U	20.0	P	07/18/2025	14:36	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	14:36	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	14:36	LB136546
CCB04	Copper	4.60	+/-10	U	20.0	P	07/18/2025	16:21	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	16:21	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	16:21	LB136546
CCB05	Copper	4.60	+/-10	U	20.0	P	07/18/2025	16:56	LB136546
	Iron	23.4	+/-50	U	100	P	07/18/2025	16:56	LB136546
	Lead	2.30	+/-6	U	12.0	P	07/18/2025	16:56	LB136546

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2630

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168908BL	WATER			Batch Number:	PB168908		Prep Date:	07/17/2025	
	Copper	1.89	<5	U	10.0	P	07/18/2025	13:04	LB136546
	Iron	18.0	<25	U	50.0	P	07/18/2025	13:04	LB136546
	Lead	1.21	<3	U	6.00	P	07/18/2025	13:04	LB136546

Metals

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INTERFERENCE CHECK SAMPLE

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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	Copper	14.3	2.0	715	-18	22	07/18/2025	12:18	LB136546
	Iron	95900	101000	95	85600	116500	07/18/2025	12:18	LB136546
	Lead	-6.59			-12	12	07/18/2025	12:18	LB136546
ICSAB01	Copper	483	511	94	434	588	07/18/2025	12:23	LB136546
	Iron	96100	99300	97	84400	114500	07/18/2025	12:23	LB136546
	Lead	41.2	49.0	84	37	61	07/18/2025	12:23	LB136546
ICSA	Copper	13.0	2.0	650	-18	22	07/18/2025	12:28	LB136546
	Iron	94300	101000	93	85600	116500	07/18/2025	12:28	LB136546
	Lead	-7.38			-12	12	07/18/2025	12:28	LB136546
ICSAB	Copper	526	511	103	434	588	07/18/2025	12:32	LB136546
	Iron	93400	99300	94	84400	114500	07/18/2025	12:32	LB136546
	Lead	36.3	49.0	74	37	61	07/18/2025	12:32	LB136546



METAL QC DATA

metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>Tully Environmental, Inc</u>	level: <u>low</u>	sdg no.: <u>Q2630</u>
contract: <u>TULL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q2630-02</u>	client id: <u>002 35th Ave (JUNE)MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2630-02MS</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Copper	ug/L	75 - 125	245		94.7		150	100		P
Iron	ug/L	75 - 125	10900		9710		1500	78		P
Lead	ug/L	75 - 125	540		54.5		500	97		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tully Environmental, Inc</u>	level: <u>low</u>	sdg no.: <u>Q2630</u>
contract: <u>TULL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q2630-02</u>	client id: <u>002 35th Ave (JUNE)MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2630-02MSD</u>	Percent Solids for Spike Sample: <u>NA</u>

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Copper	ug/L	75 - 125	246		94.7		150	101		P
Iron	ug/L	75 - 125	10900		9710		1500	82		P
Lead	ug/L	75 - 125	545		54.5		500	98		P

Metals

- 5b -

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Matrix: _____

Level: LOW

Client ID: _____

Sample ID: _____

Spiked ID: _____

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

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tully Environmental, Inc</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2630</u>
Contract:	<u>TULL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2630-02</u>	Client ID:	<u>002 35th Ave (JUNE)DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2630-02DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	94.7		95.4		1		P
Iron	ug/L	20	9710		9840		1		P
Lead	ug/L	20	54.5		55.3		1		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tully Environmental, Inc</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2630</u>
Contract:	<u>TULL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2630-02MS</u>	Client ID:	<u>002 35th Ave (JUNE)MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2630-02MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	245		246		0		P
Iron	ug/L	20	10900		10900		0		P
Lead	ug/L	20	540		545		1		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tully Environmental, Inc
Contract: TULL01

SDG No.: Q2630
Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168908BS							
Copper	ug/L	150	159		106	85 - 115	P
Iron	ug/L	1500	1510		101	85 - 115	P
Lead	ug/L	500	493		99	85 - 115	P

Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

002 35th Ave (JUNE)L

Lab Name: Alliance

Contract: TULL01

Lab Code: ACE **Lb No.:** lb136546 **Lab Sample ID :** Q2630-02L **SDG No.:** Q2630

Matrix (soil/water): Water **Level (low/med):** LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Differ- ence	Q	M
Copper	94.7		97.3		3		P
Iron	9710		9990		3		P
Lead	54.5		55.3		1		P



METAL PREPARATION & INSTRUMENT DATA



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Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Al	Ca	Fe	Mg	Ag
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		As	Ba	Be	Cd	Co
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000

Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Cr	Cu	K	Mn	Mo
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Instrument ID:

Date:

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Na	Ni	Pb	Sb	Se
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290



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Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

Lab Code: ACE

Instrument ID: _____

Date: _____

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave- Length (nm)	ICP Interement Correction Factors For:				
		Sn	Ti	Tl	V	Zn
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000



METAL PREPARATION & ANALYICAL SUMMARY

Metals

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SAMPLE PREPARATION SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2630

Contract: TULL01

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: PB168908							
PB168908BL	PB168908BL	MB	WATER	07/17/2025	50.0	25.0	
PB168908BS	PB168908BS	LCS	WATER	07/17/2025	50.0	25.0	
Q2630-01	001 Willets Pt Blvd (June)	SAM	WATER	07/17/2025	50.0	25.0	
Q2630-02	002 35th Ave (JUNE)	SAM	WATER	07/17/2025	50.0	25.0	
Q2630-02DUP	002 35th Ave (JUNE)DUP	DUP	WATER	07/17/2025	50.0	25.0	
Q2630-02MS	002 35th Ave (JUNE)MS	MS	WATER	07/17/2025	50.0	25.0	
Q2630-02MSD	002 35th Ave (JUNE)MSD	MSD	WATER	07/17/2025	50.0	25.0	

metals
- 14 -
ANALYSIS RUN LOG

Client: Tully Environmental, Inc

Contract: TULL01

Lab code: ACE

Sdg no.: Q2630

Instrument id number: _____

Method: _____

Run number: LB136546

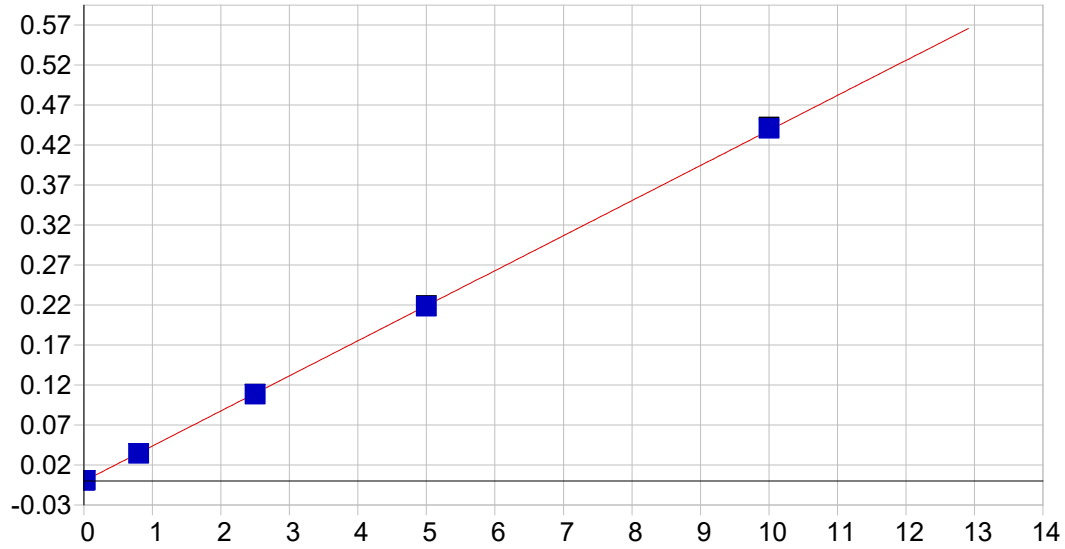
Start date: 07/18/2025

End date: 07/18/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1119	Cu,Fe,Pb
S1	S1	1	1124	Cu,Fe,Pb
S2	S2	1	1128	Cu,Fe,Pb
S3	S3	1	1132	Cu,Fe,Pb
S4	S4	1	1136	Cu,Fe,Pb
S5	S5	1	1140	Cu,Fe,Pb
ICV01	ICV01	1	1201	Cu,Fe,Pb
LLICV01	LLICV01	1	1205	Cu,Fe,Pb
ICB01	ICB01	1	1210	Cu,Fe,Pb
CRI01	CRI01	1	1214	Cu,Fe,Pb
ICSA01	ICSA01	1	1218	Cu,Fe,Pb
ICSAB01	ICSAB01	1	1223	Cu,Fe,Pb
ICSA	ICSA	20	1228	Cu,Fe,Pb
ICSAB	ICSAB	20	1232	Cu,Fe,Pb
CCV01	CCV01	1	1236	Cu,Fe,Pb
CCB01	CCB01	1	1243	Cu,Fe,Pb
Q2630-01	001 Willets Pt Blvd (June)	1	1256	Cu,Fe,Pb
Q2630-02	002 35th Ave (JUNE)	1	1300	Cu,Fe,Pb
PB168908BL	PB168908BL	1	1304	Cu,Fe,Pb
PB168908BS	PB168908BS	1	1308	Cu,Fe,Pb
Q2630-02DUP	002 35th Ave (JUNE)DUP	1	1312	Cu,Fe,Pb
Q2630-02L	002 35th Ave (JUNE)L	5	1316	Cu,Fe,Pb
Q2630-02MS	002 35th Ave (JUNE)MS	1	1321	Cu,Fe,Pb
Q2630-02MSD	002 35th Ave (JUNE)MSD	1	1325	Cu,Fe,Pb
CCV02	CCV02	1	1329	Cu,Fe,Pb
CCB02	CCB02	1	1333	Cu,Fe,Pb
CCV03	CCV03	1	1431	Cu,Fe,Pb
CCB03	CCB03	1	1436	Cu,Fe,Pb
CCV04	CCV04	1	1617	Cu,Fe,Pb
CCB04	CCB04	1	1621	Cu,Fe,Pb
CCV05	CCV05	1	1651	Cu,Fe,Pb
CCB05	CCB05	1	1656	Cu,Fe,Pb



METAL RAW DATA

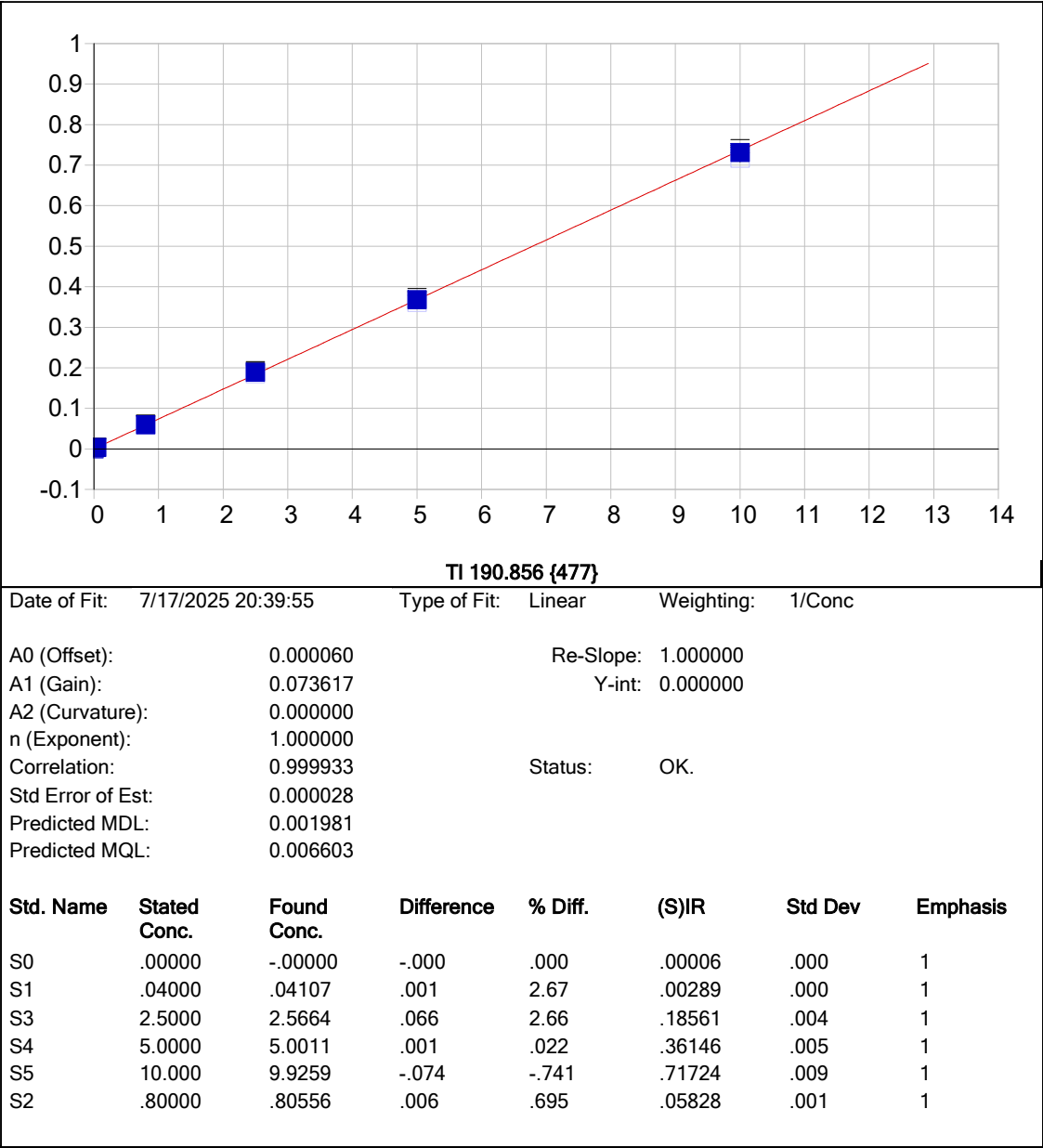


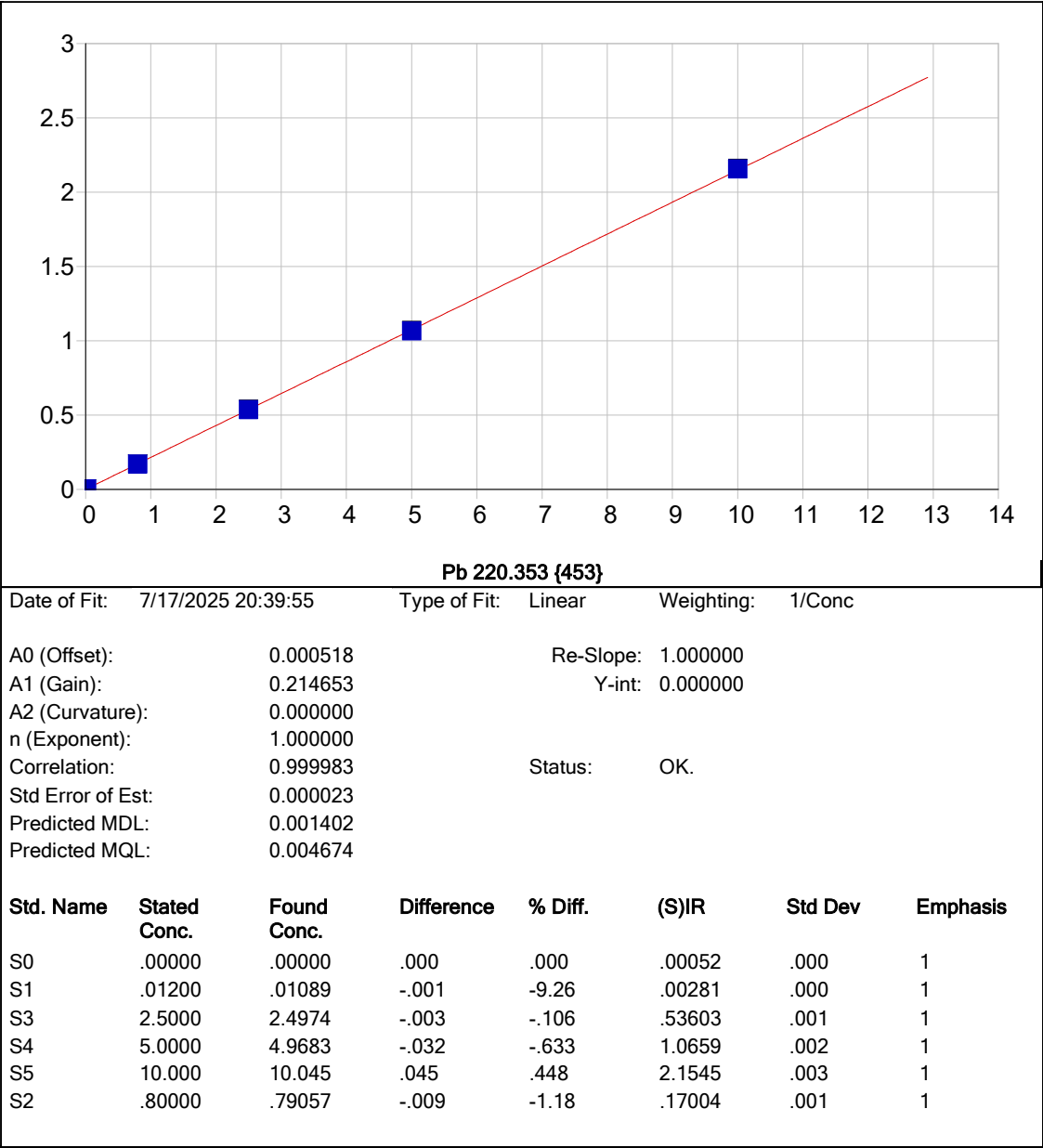
As 189.042 {479}

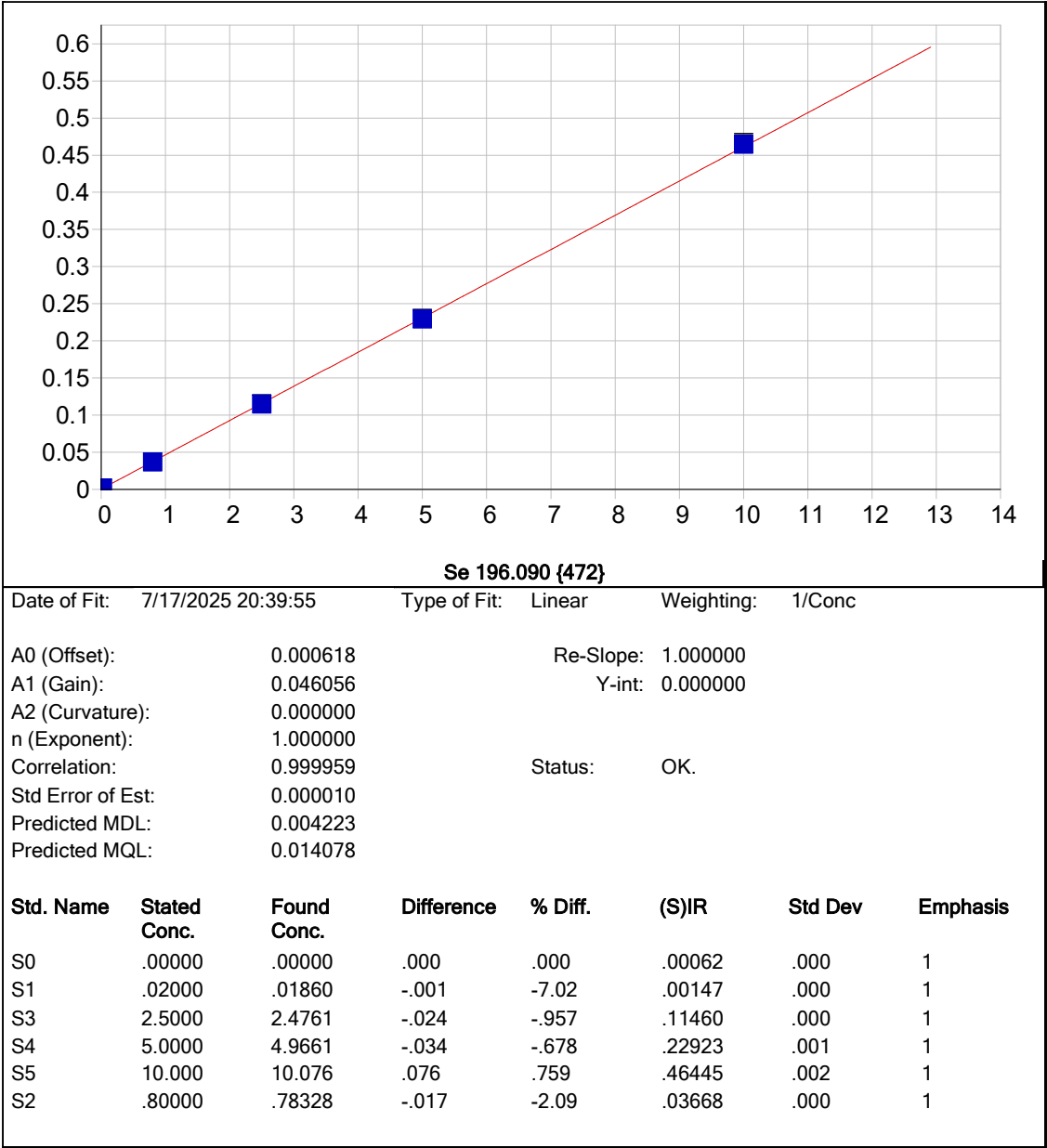
Date of Fit: 7/17/2025 20:39:55 Type of Fit: Linear Weighting: 1/Conc

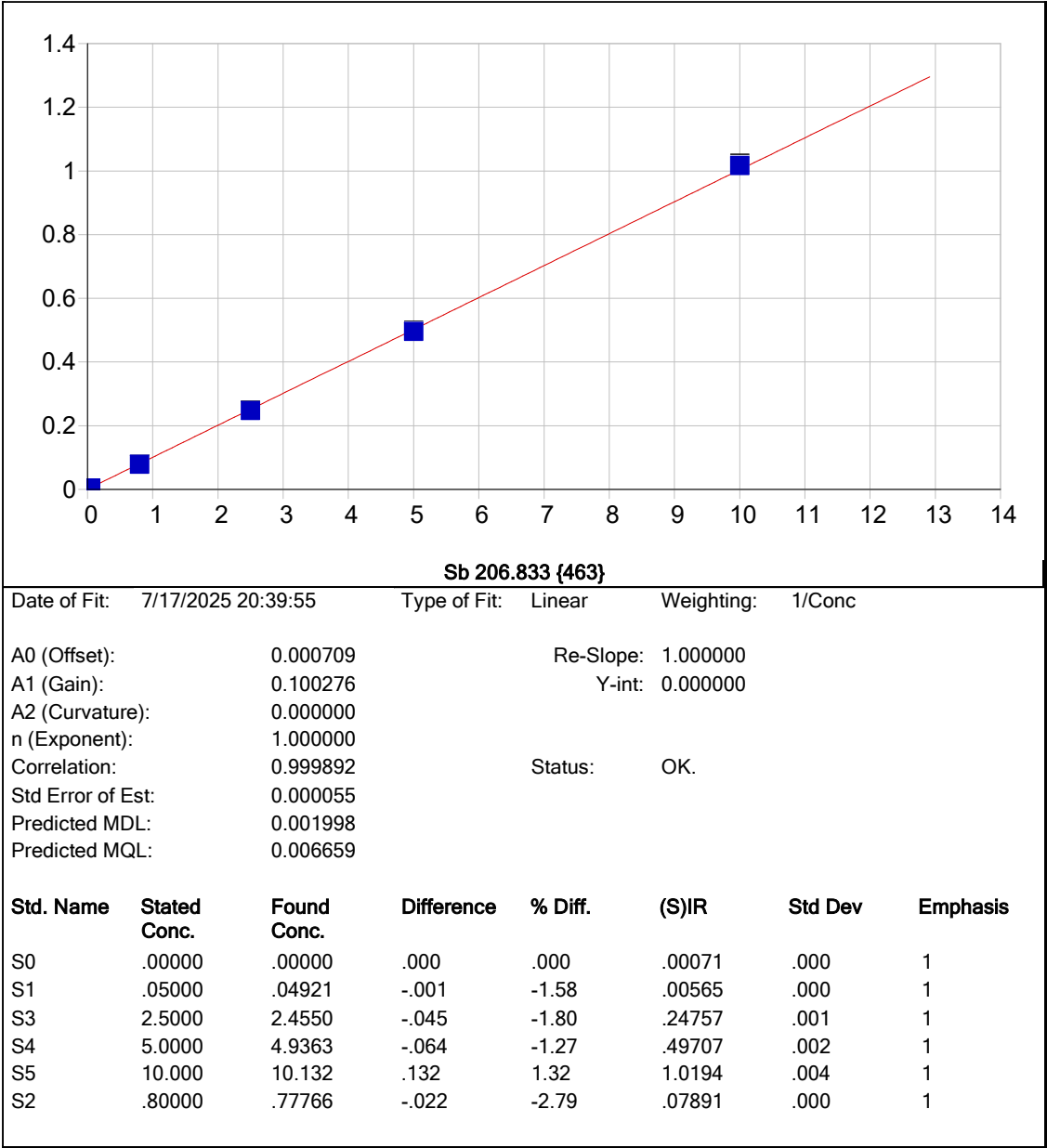
A0 (Offset): -0.000006 Re-Slope: 1.000000
A1 (Gain): 0.043828 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999968 Status: OK.
Std Error of Est: 0.000008
Predicted MDL: 0.002702
Predicted MQL: 0.009007

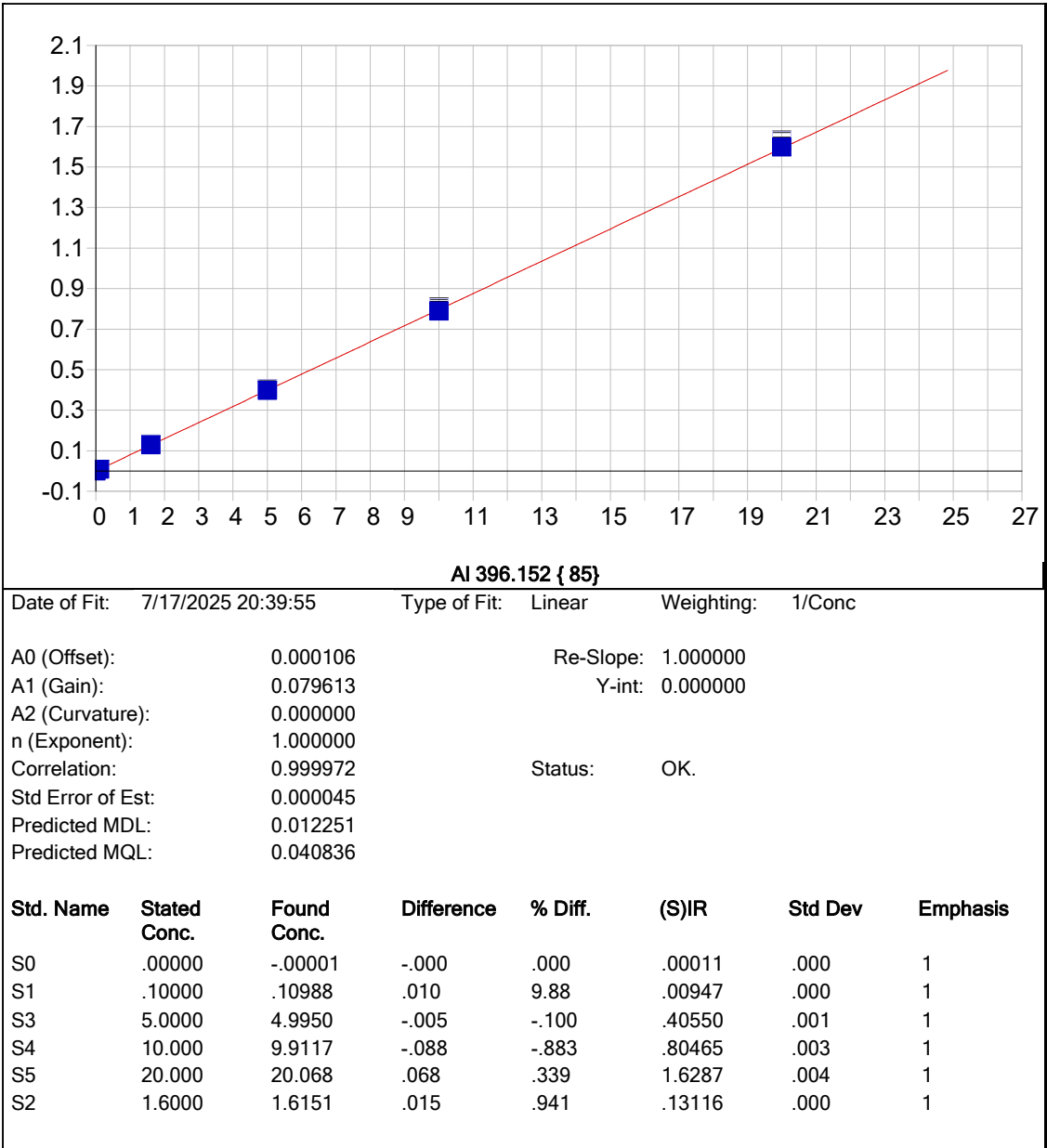
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.02000	.02088	.001	4.40	.00090	.000	1
S3	2.5000	2.4734	-.027	-1.06	.10828	.000	1
S4	5.0000	4.9806	-.019	-.388	.21805	.001	1
S5	10.000	10.063	.063	.627	.44055	.001	1
S2	.80000	.78242	-.018	-2.20	.03425	.000	1

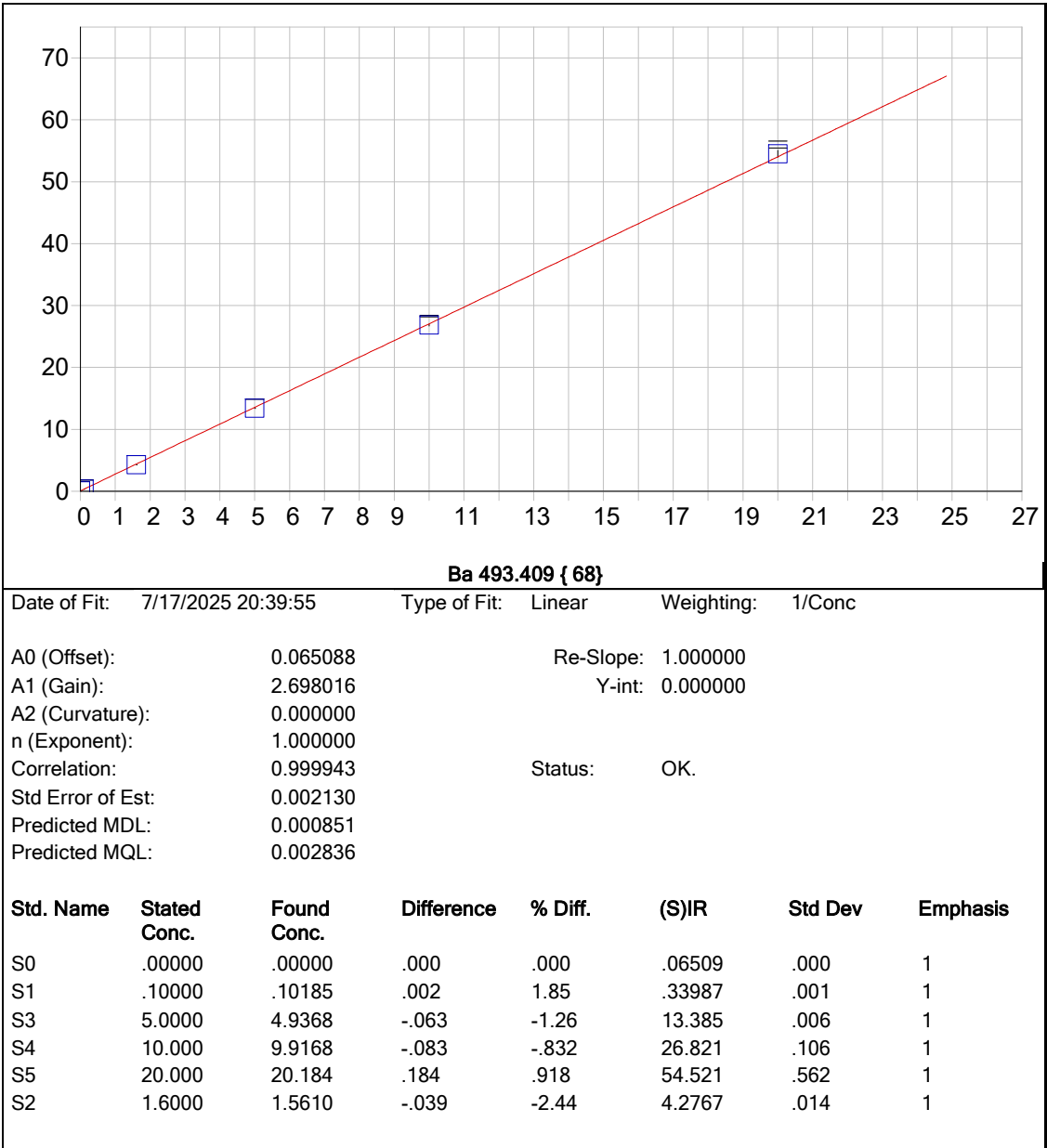


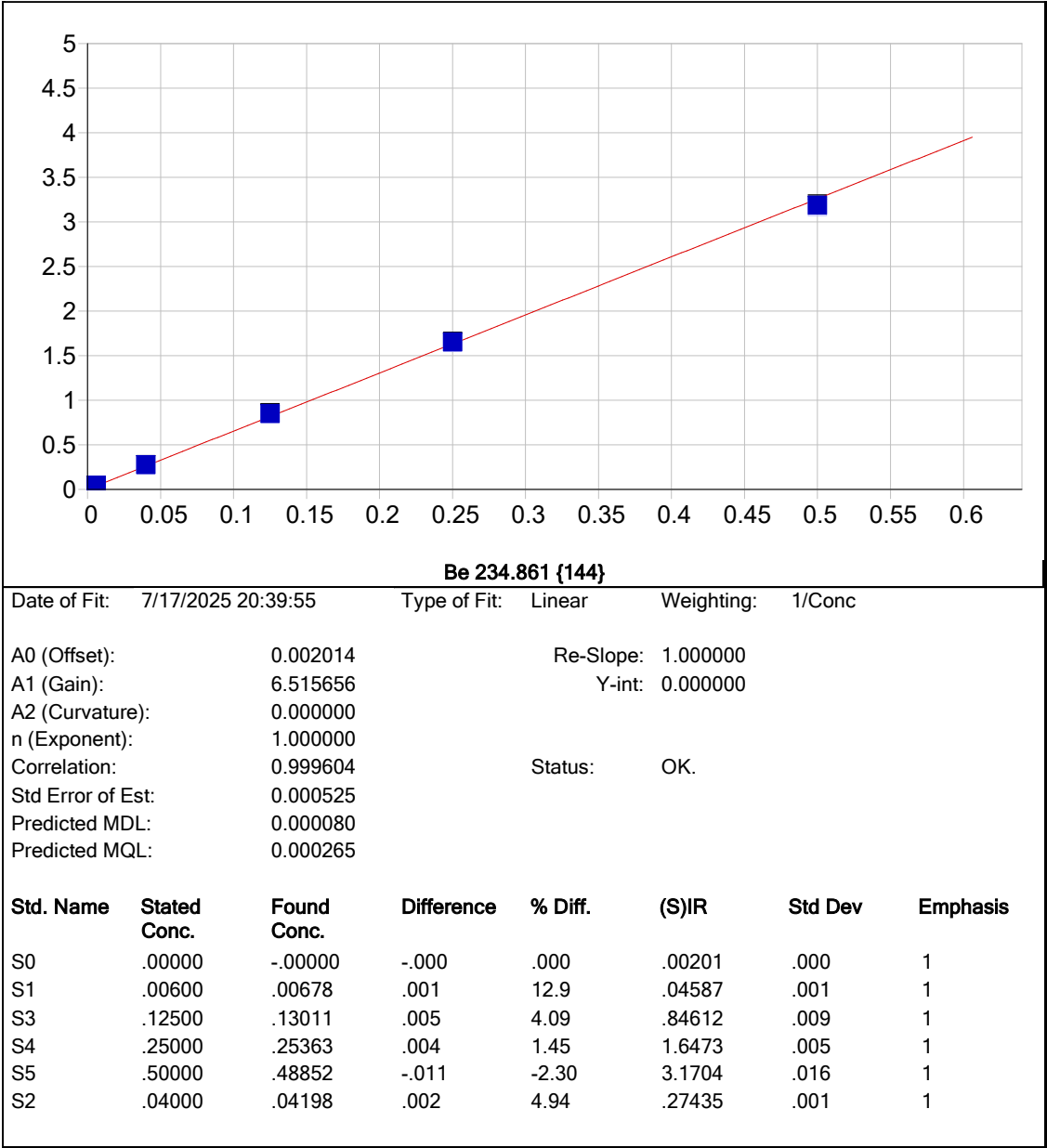


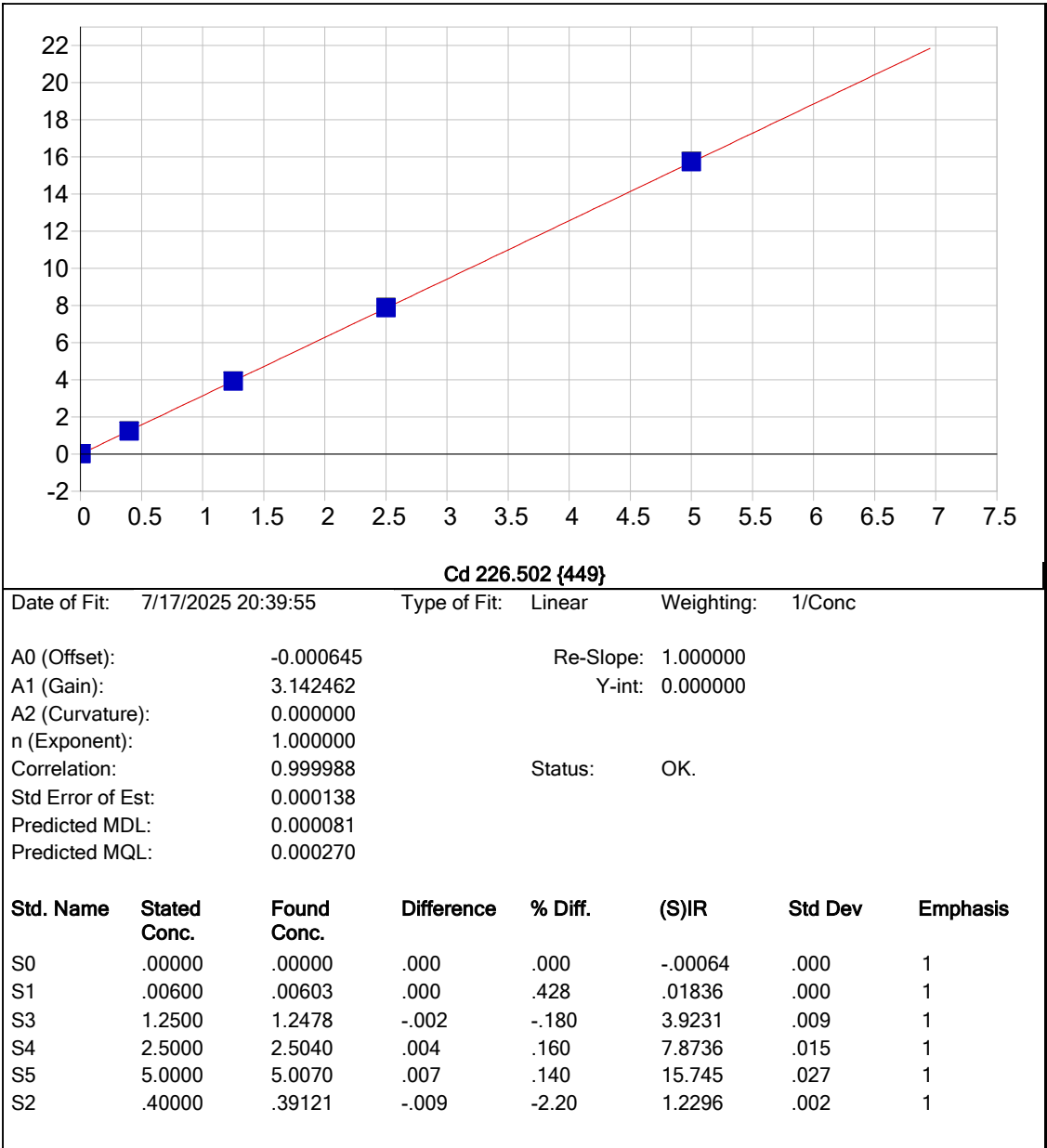


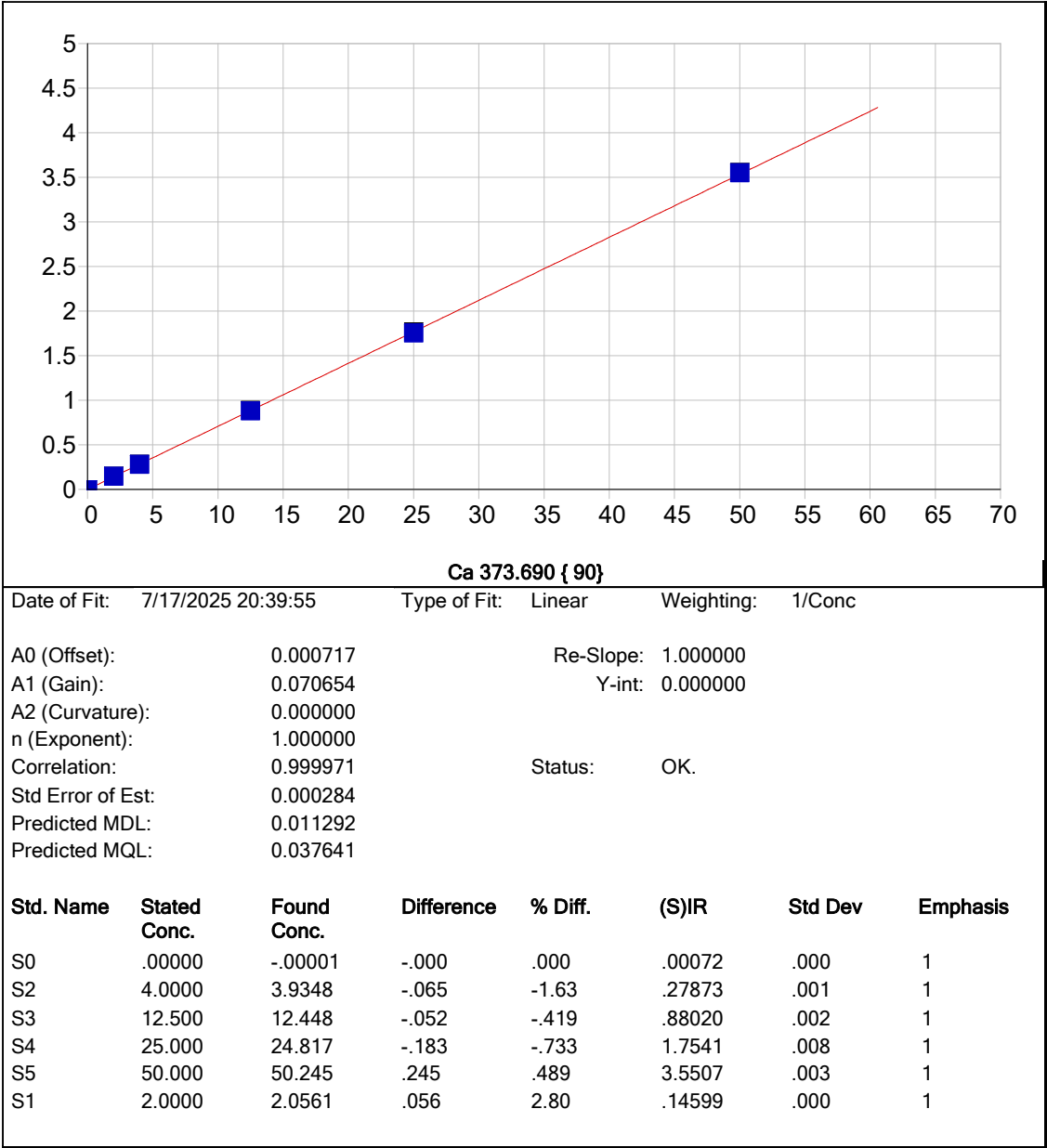


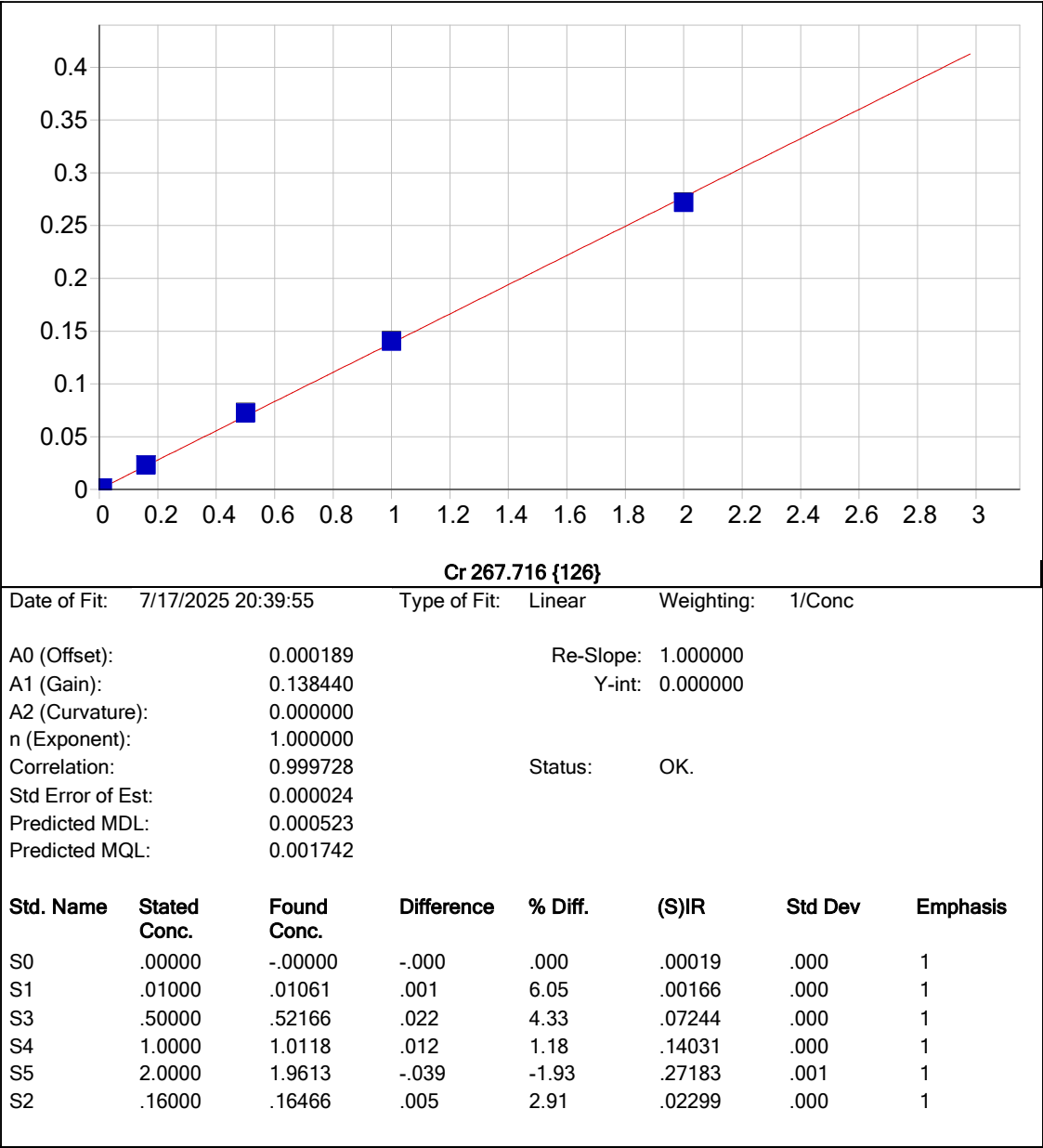


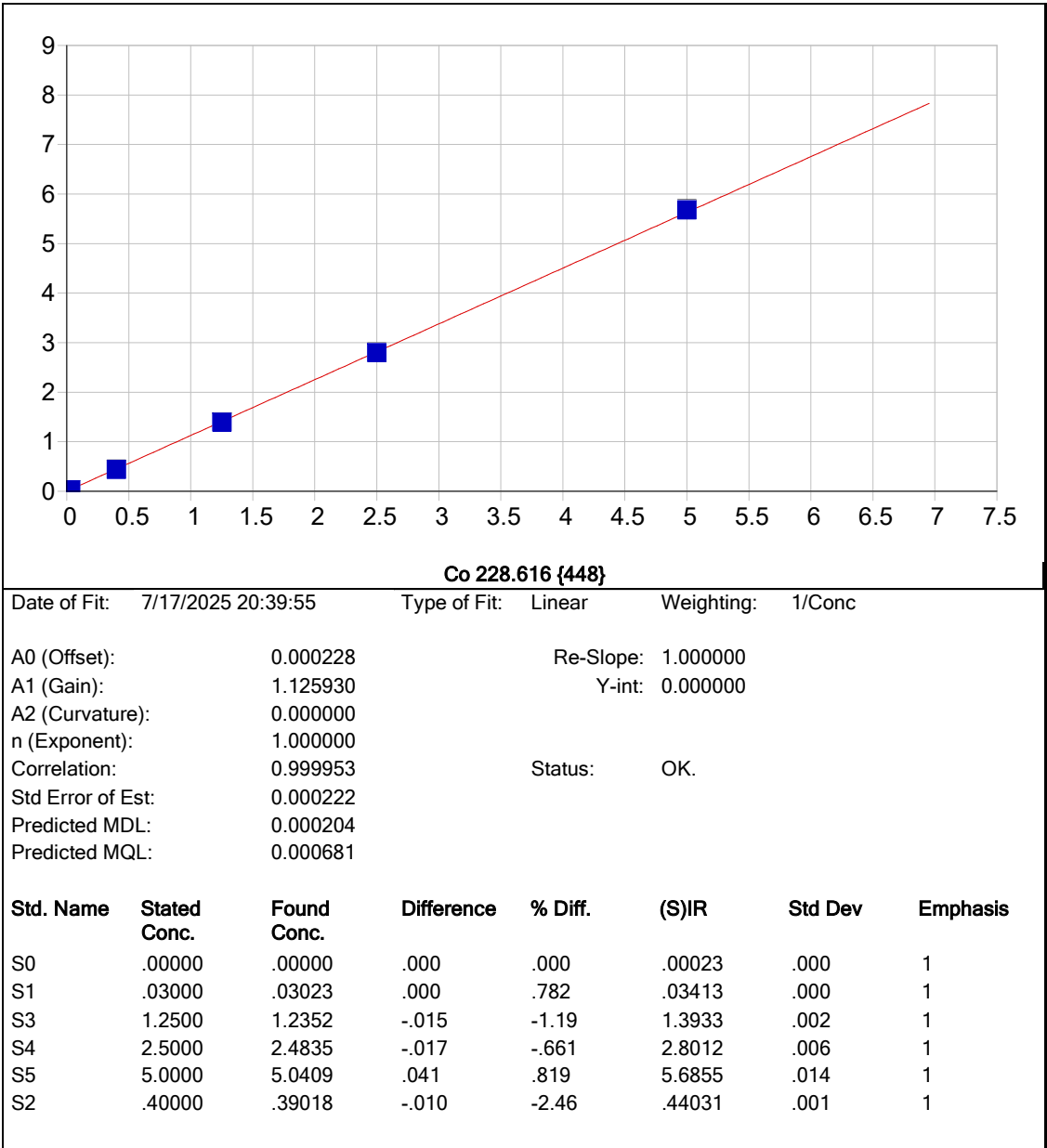


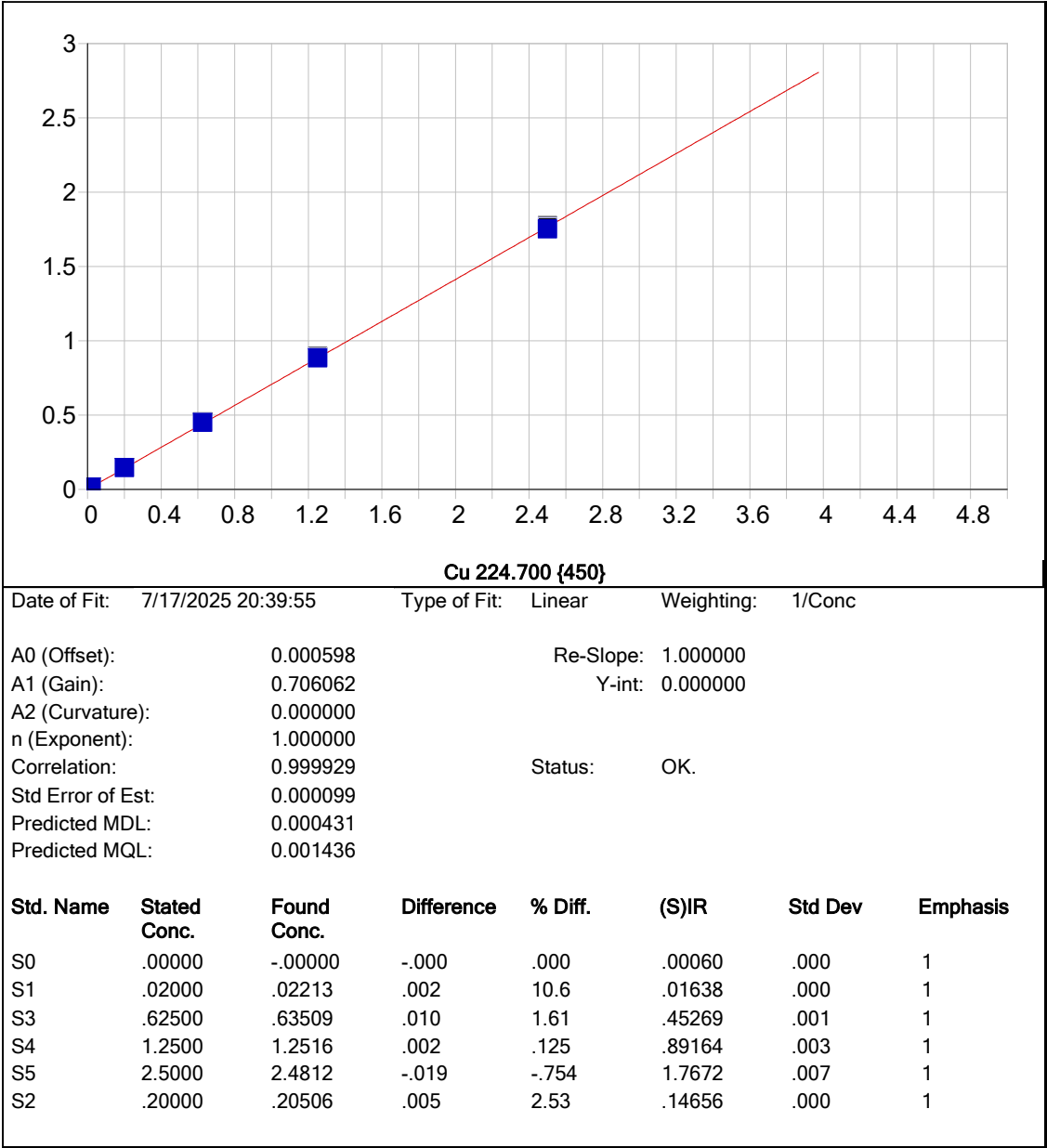


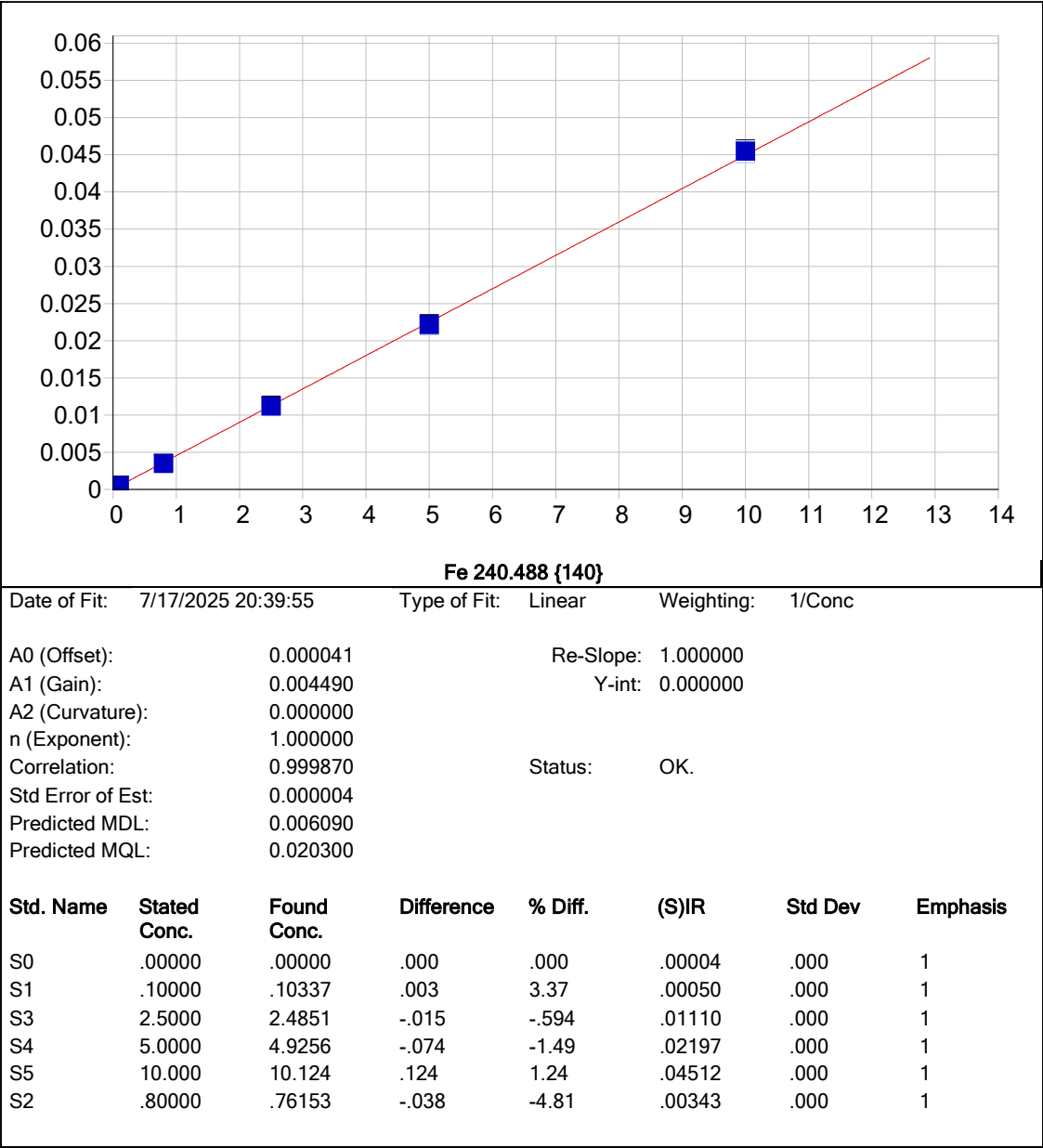


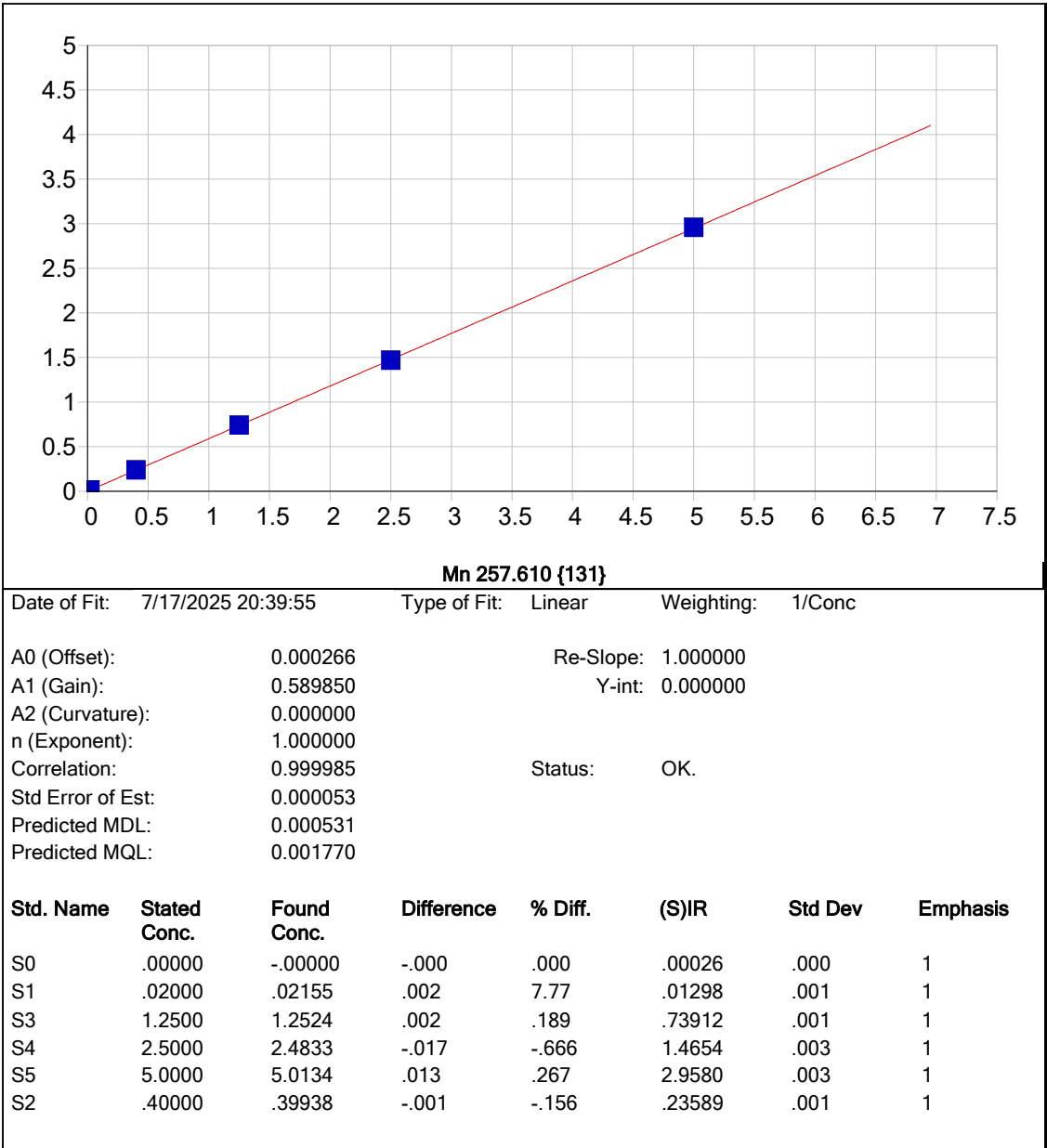


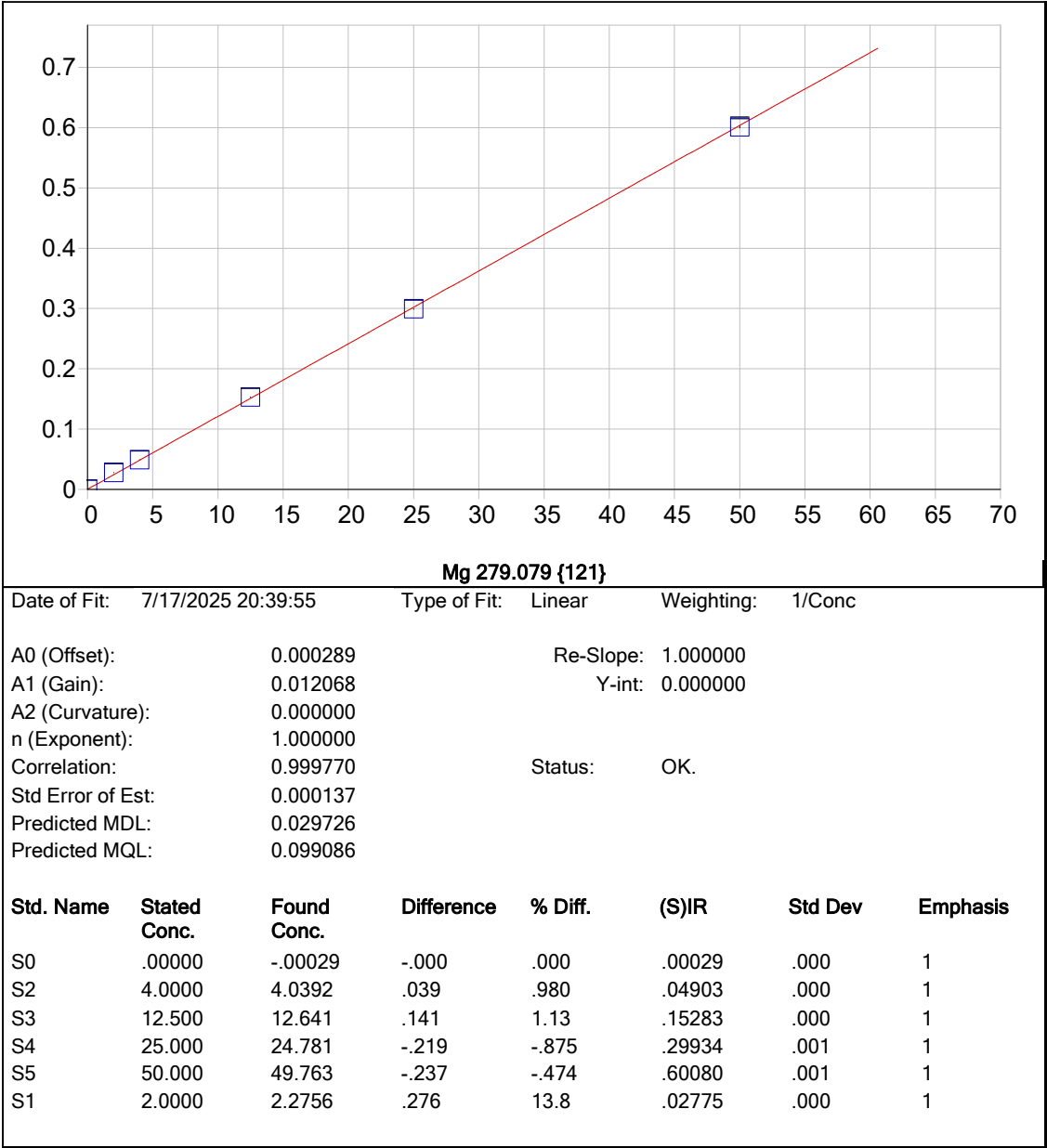


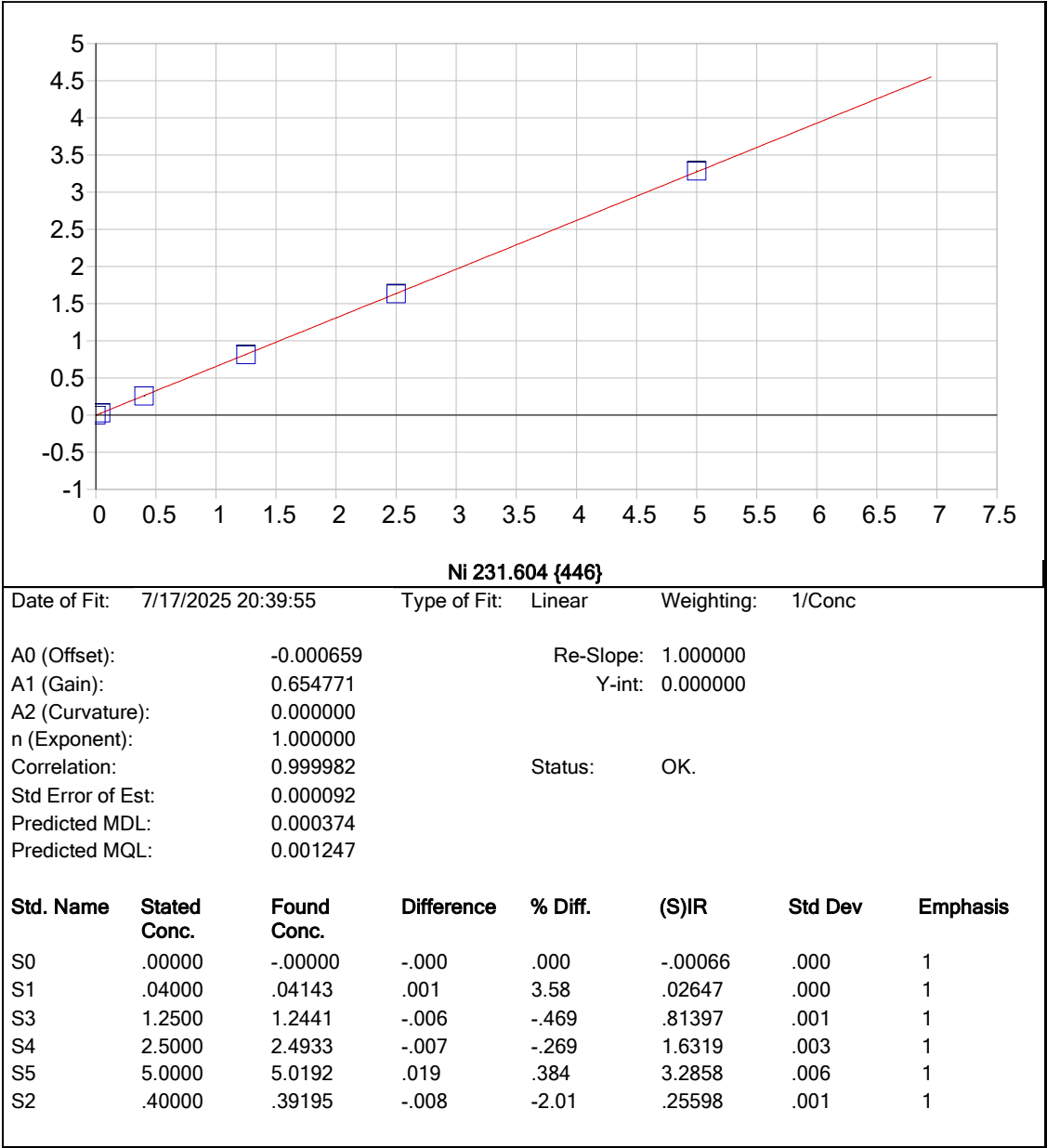


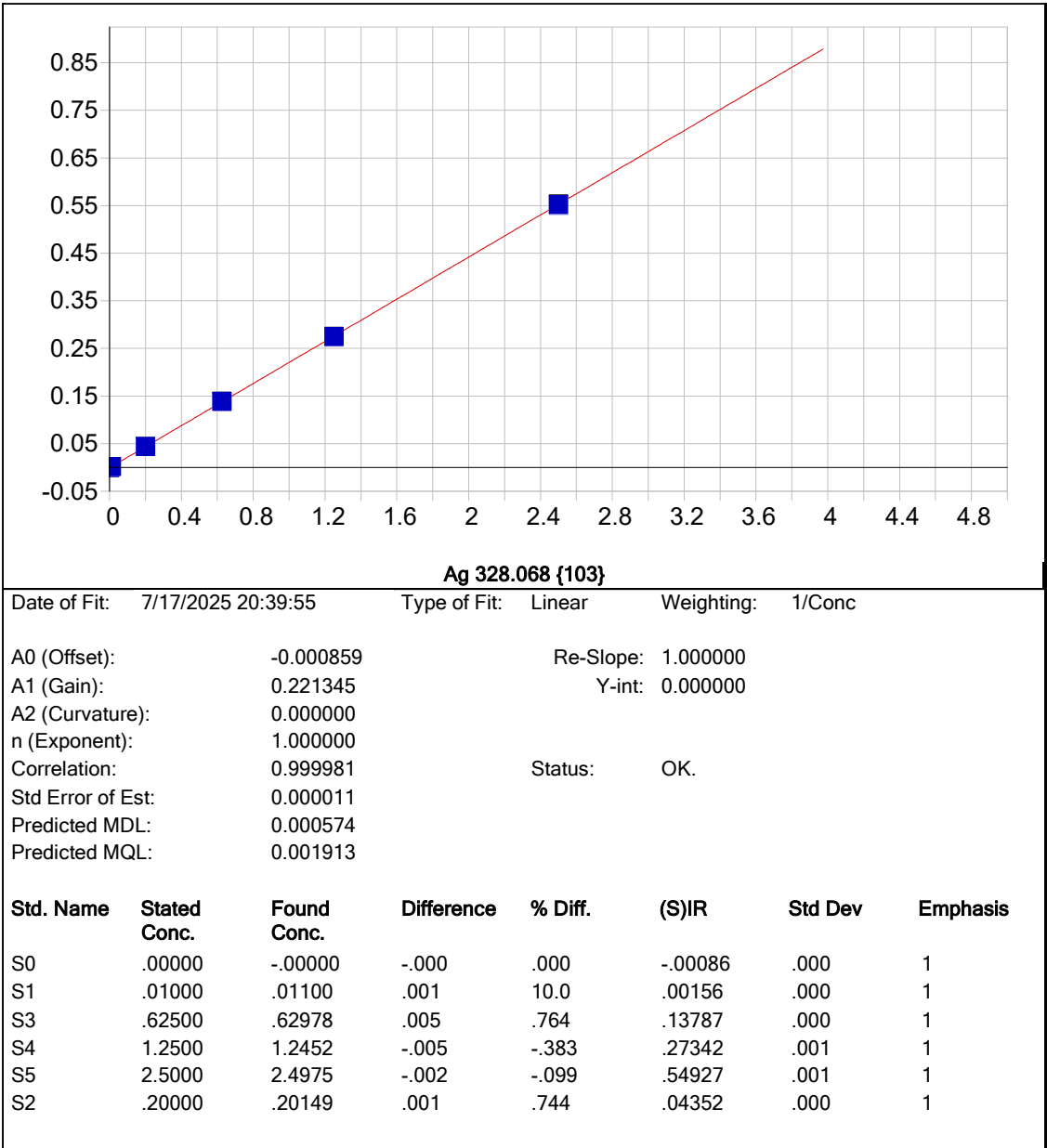


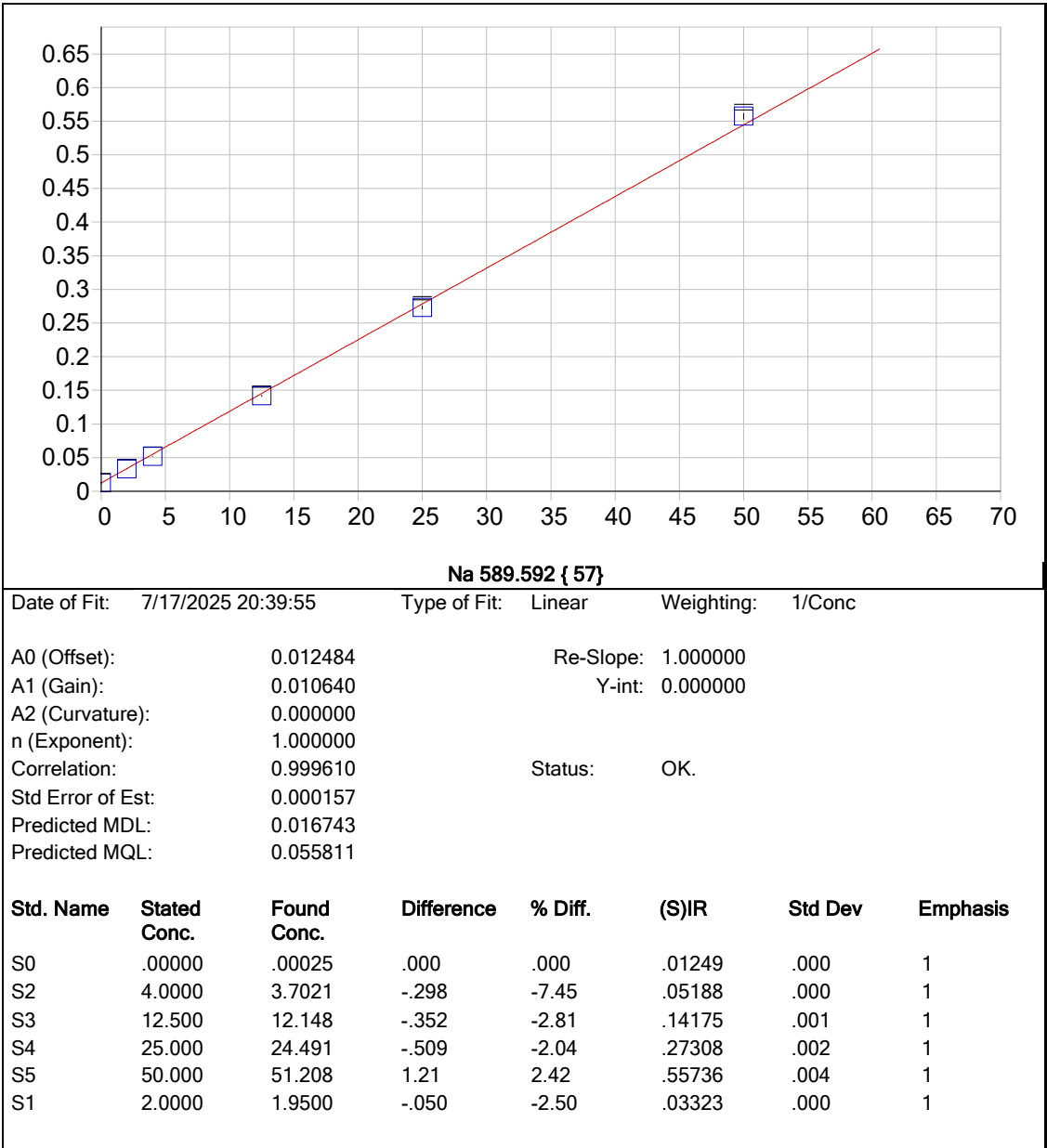


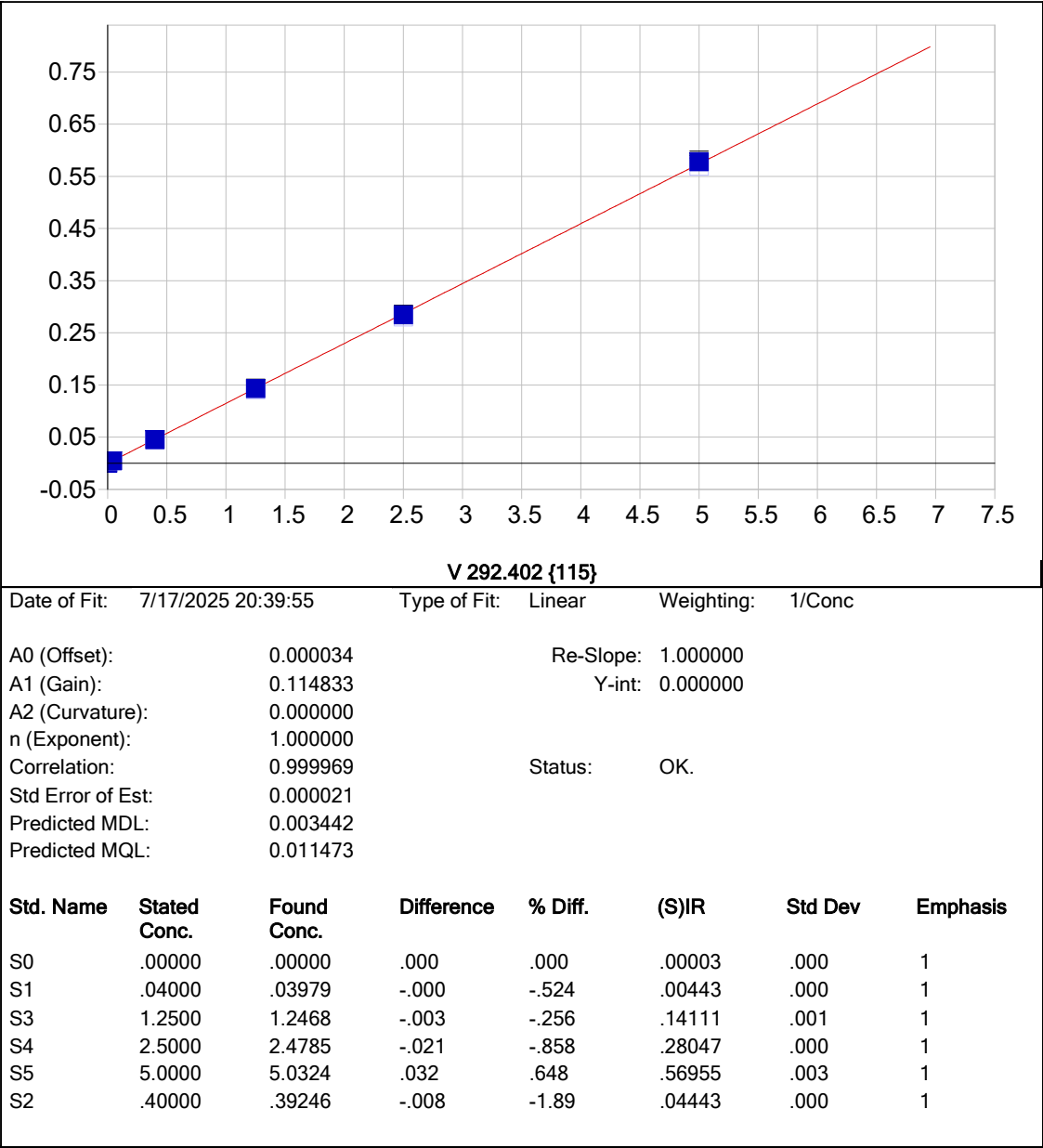


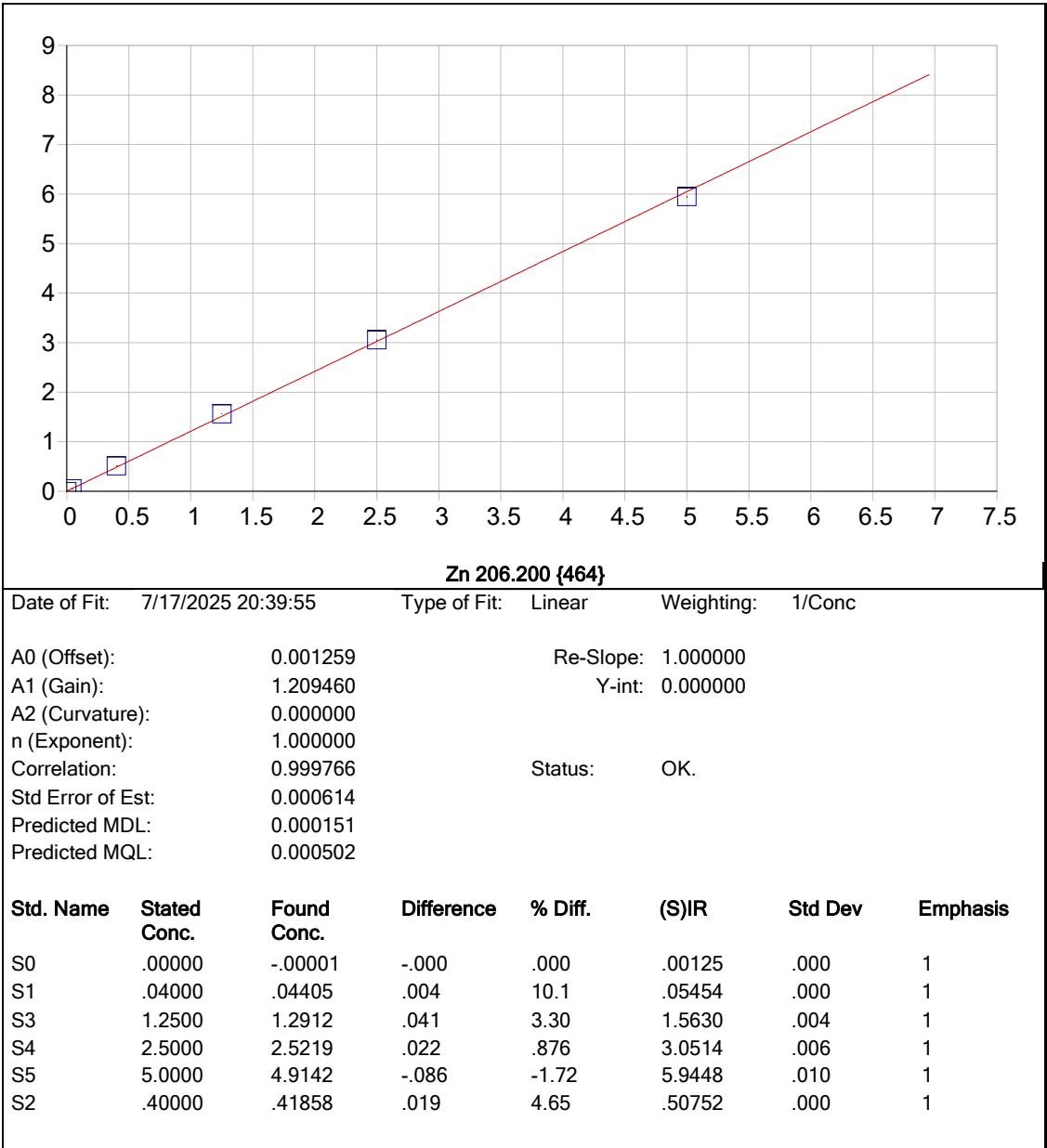


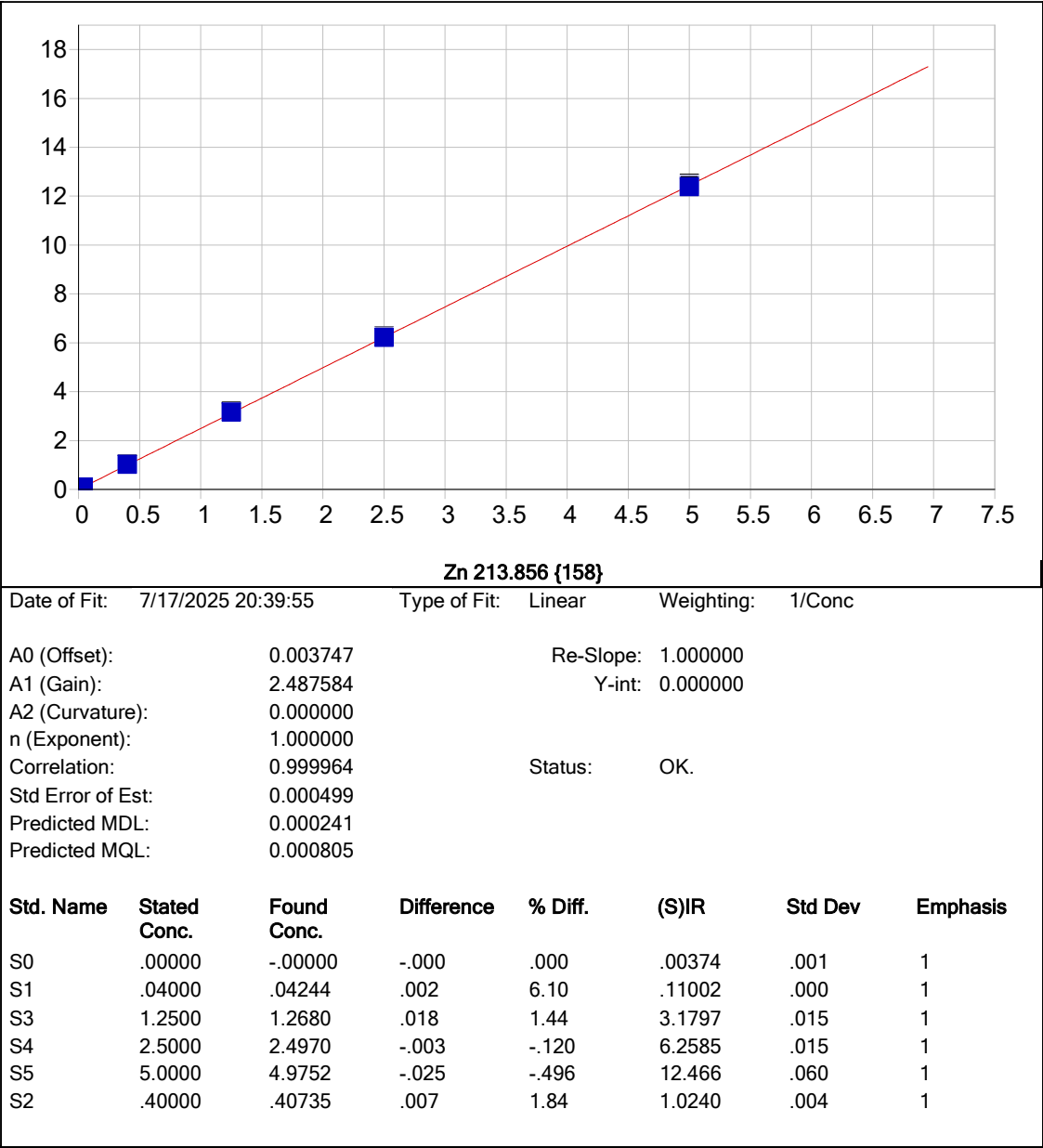


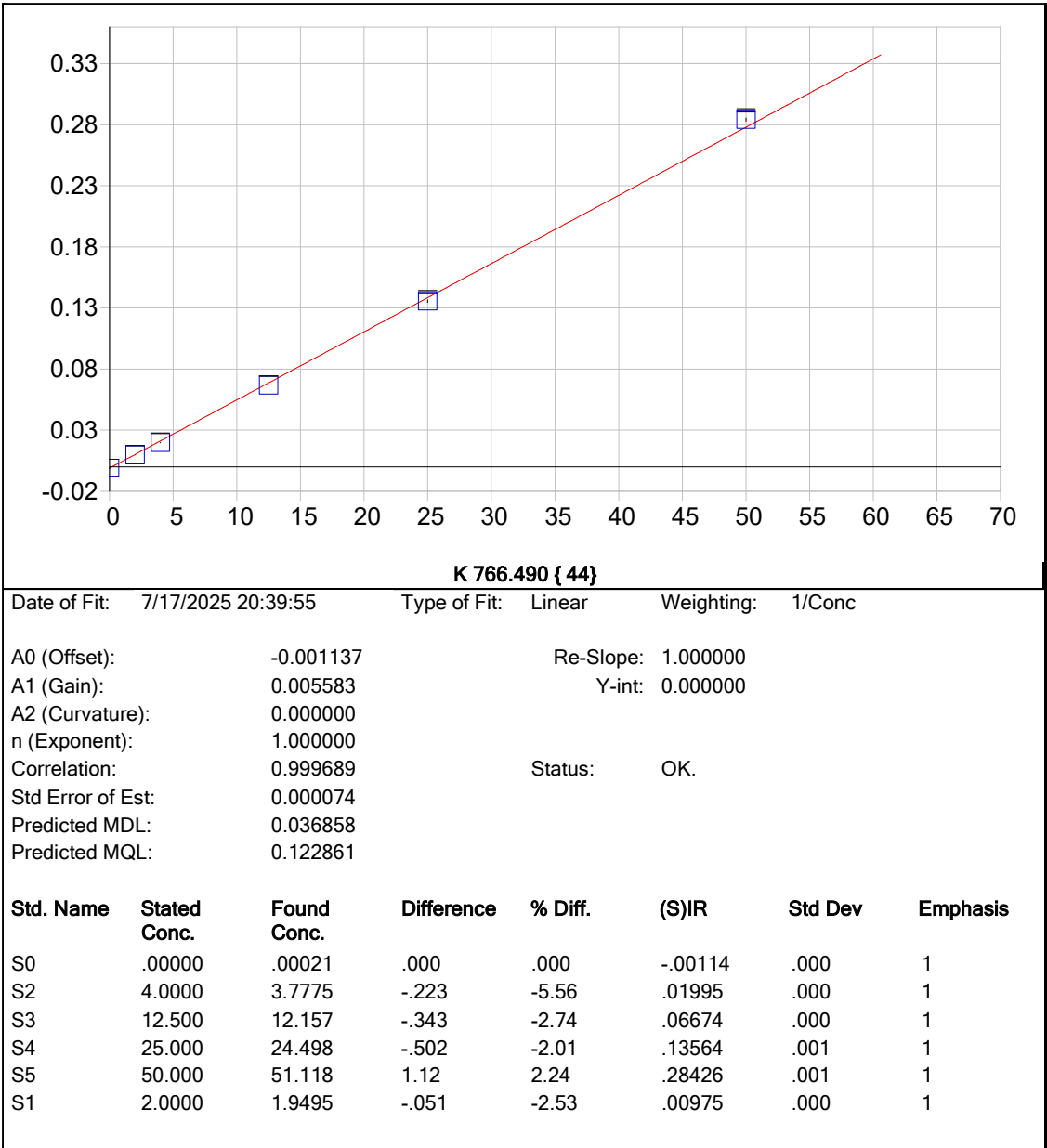


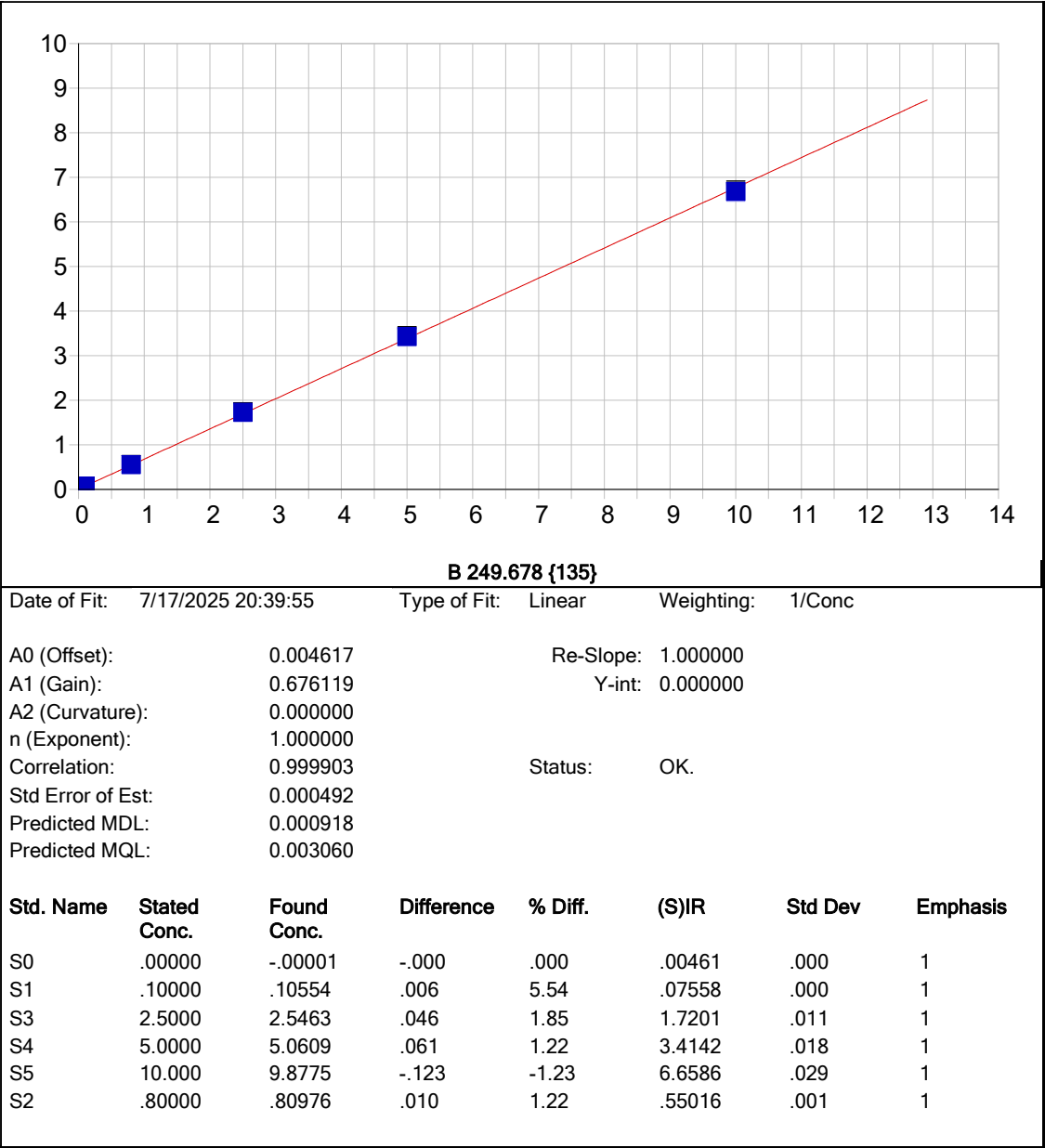


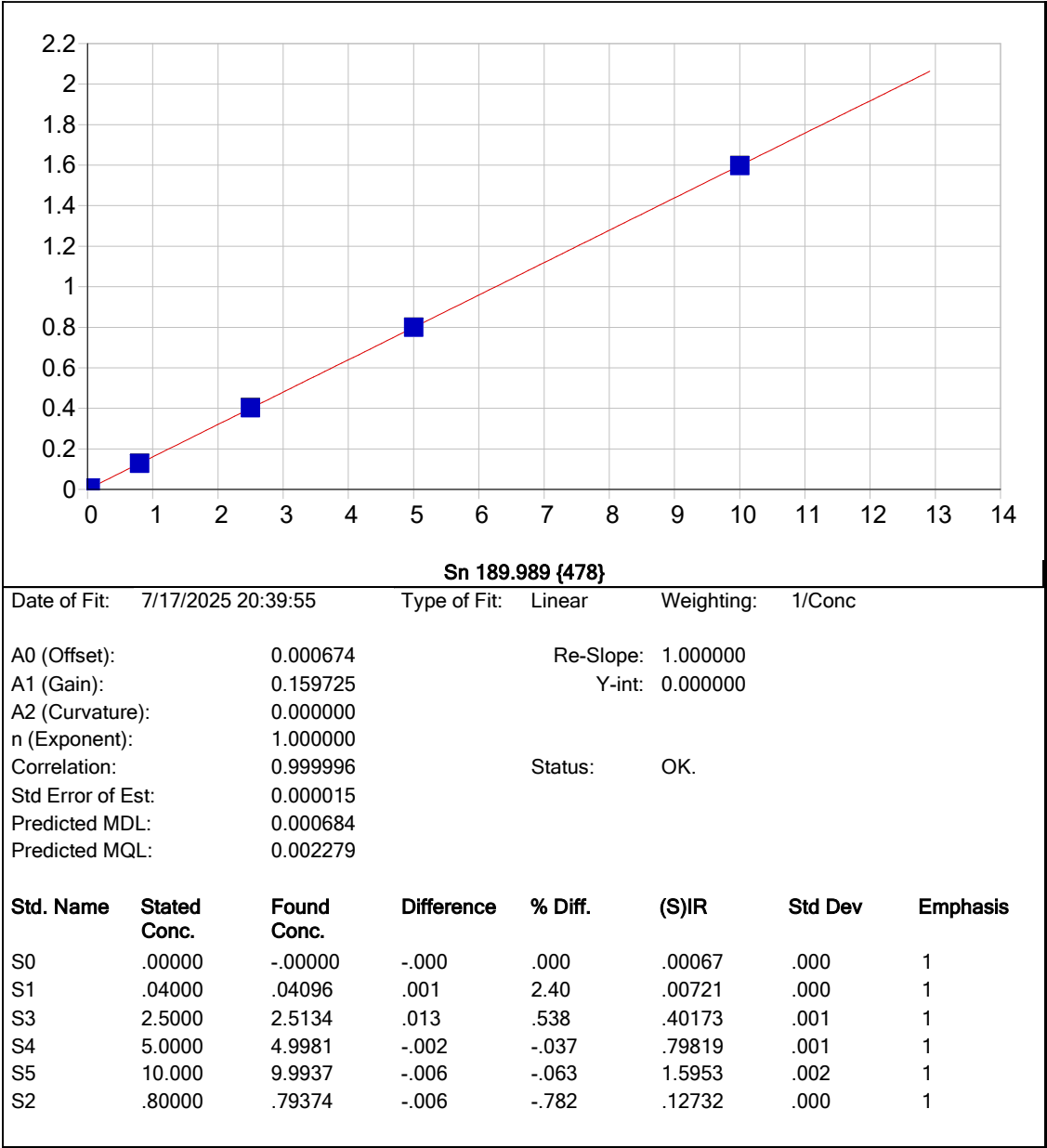


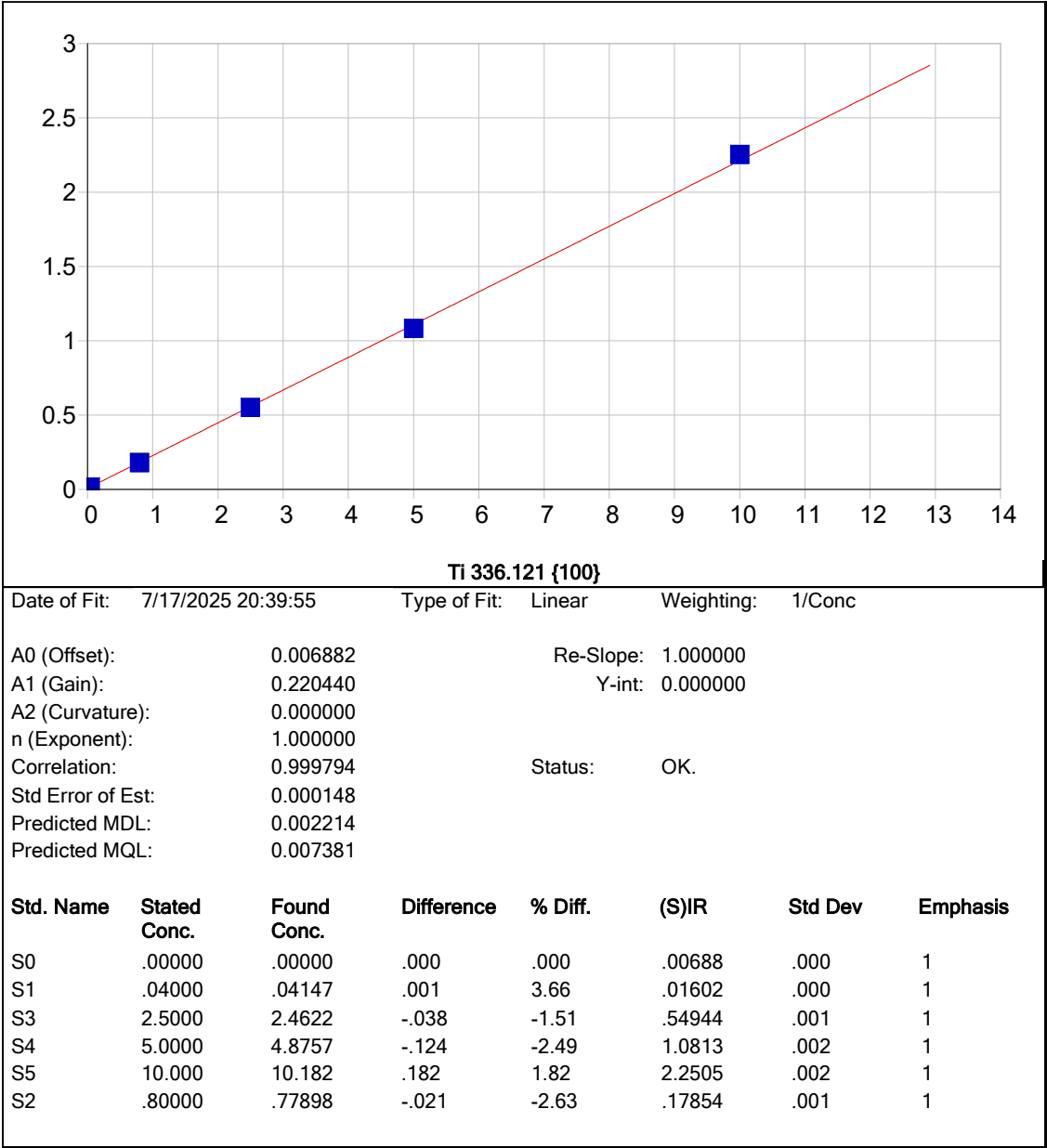


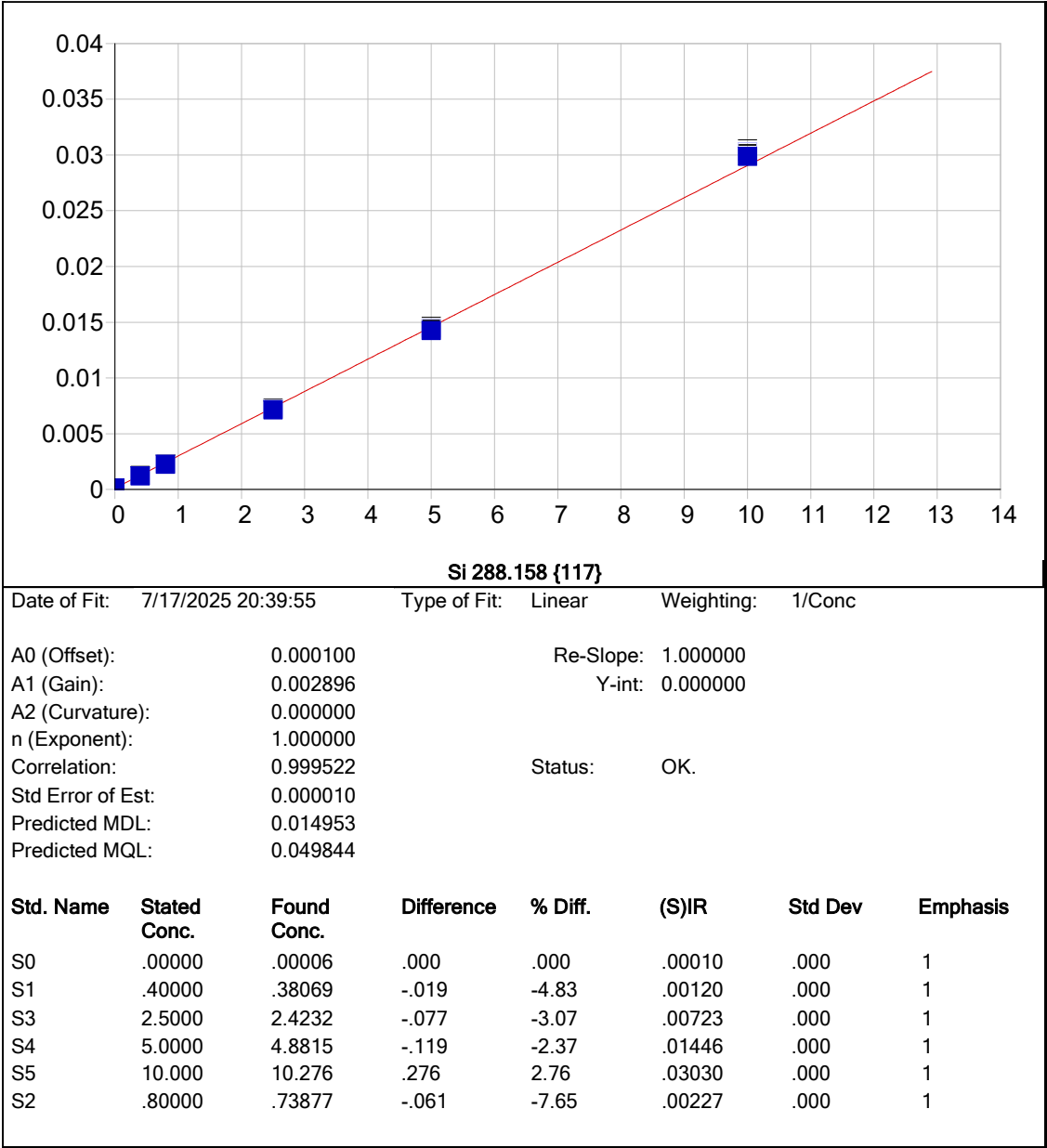


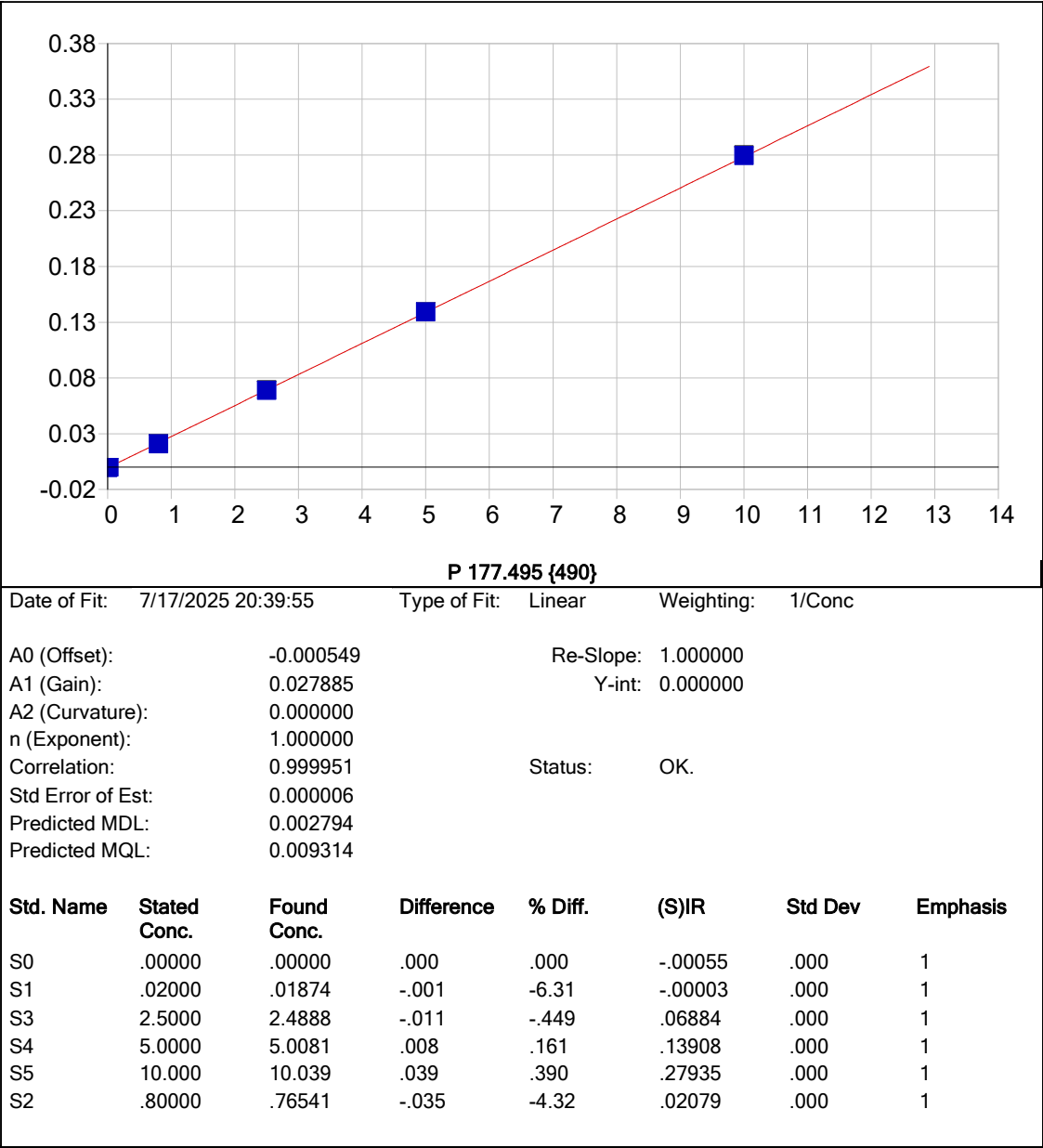


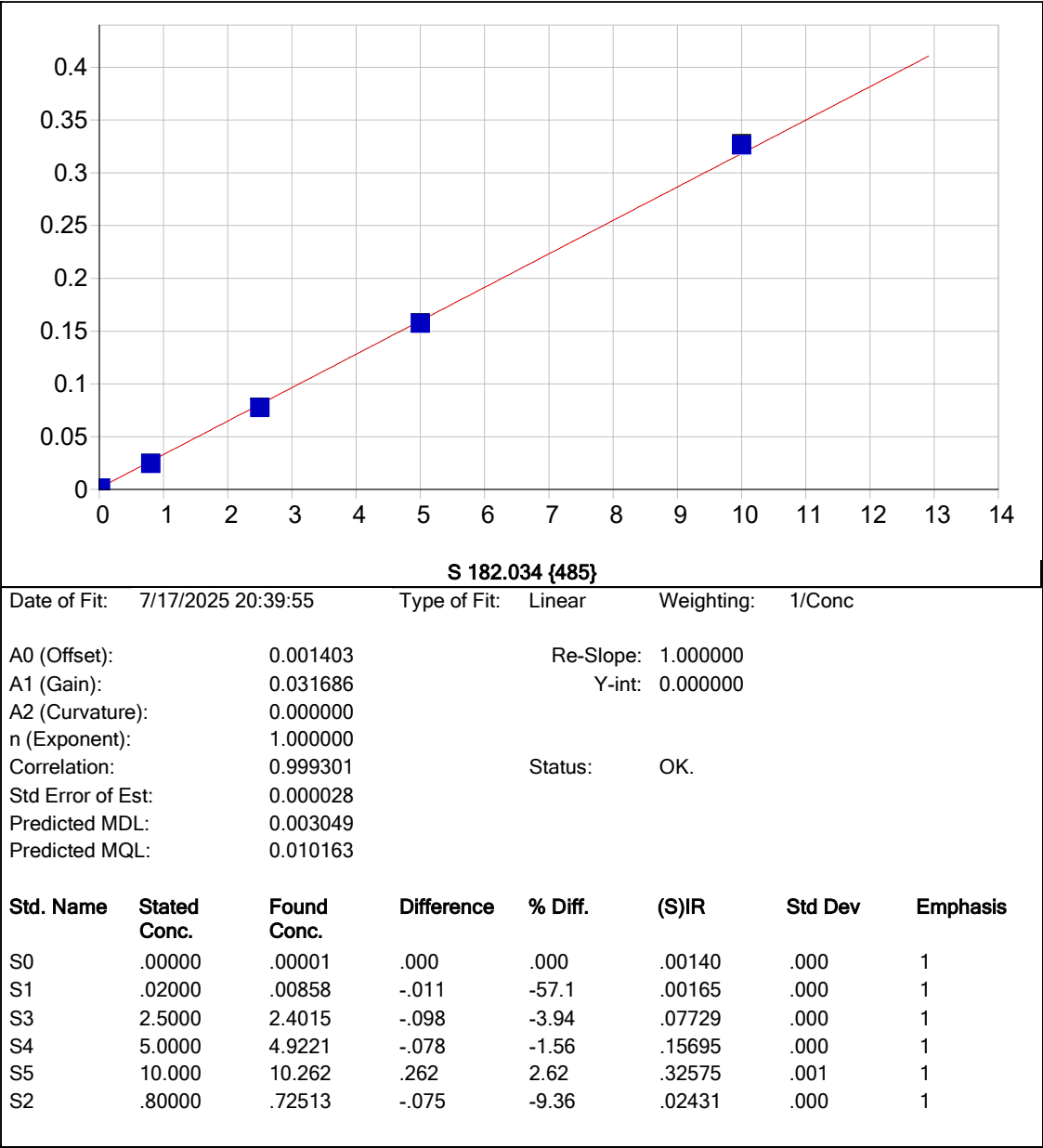


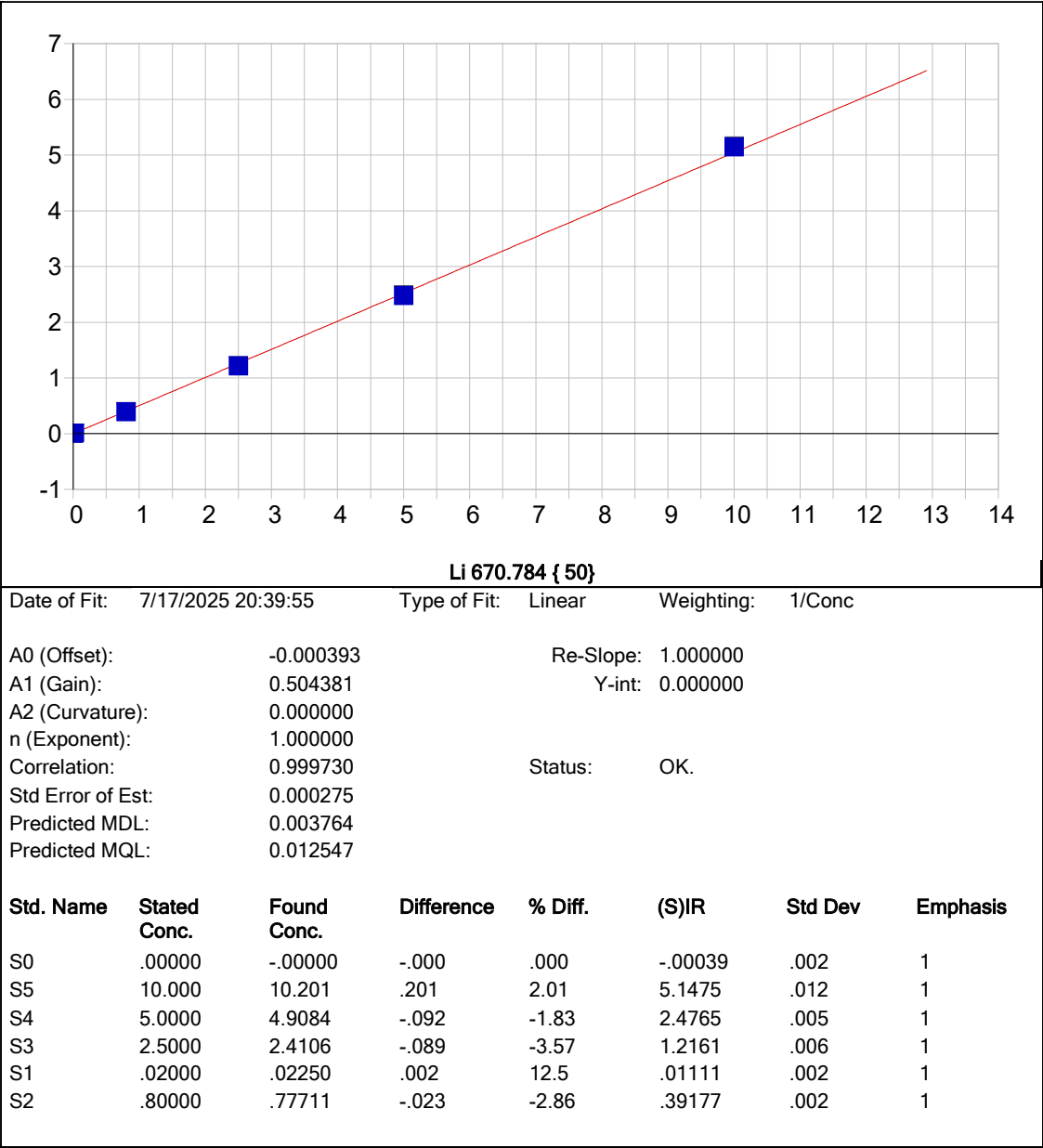


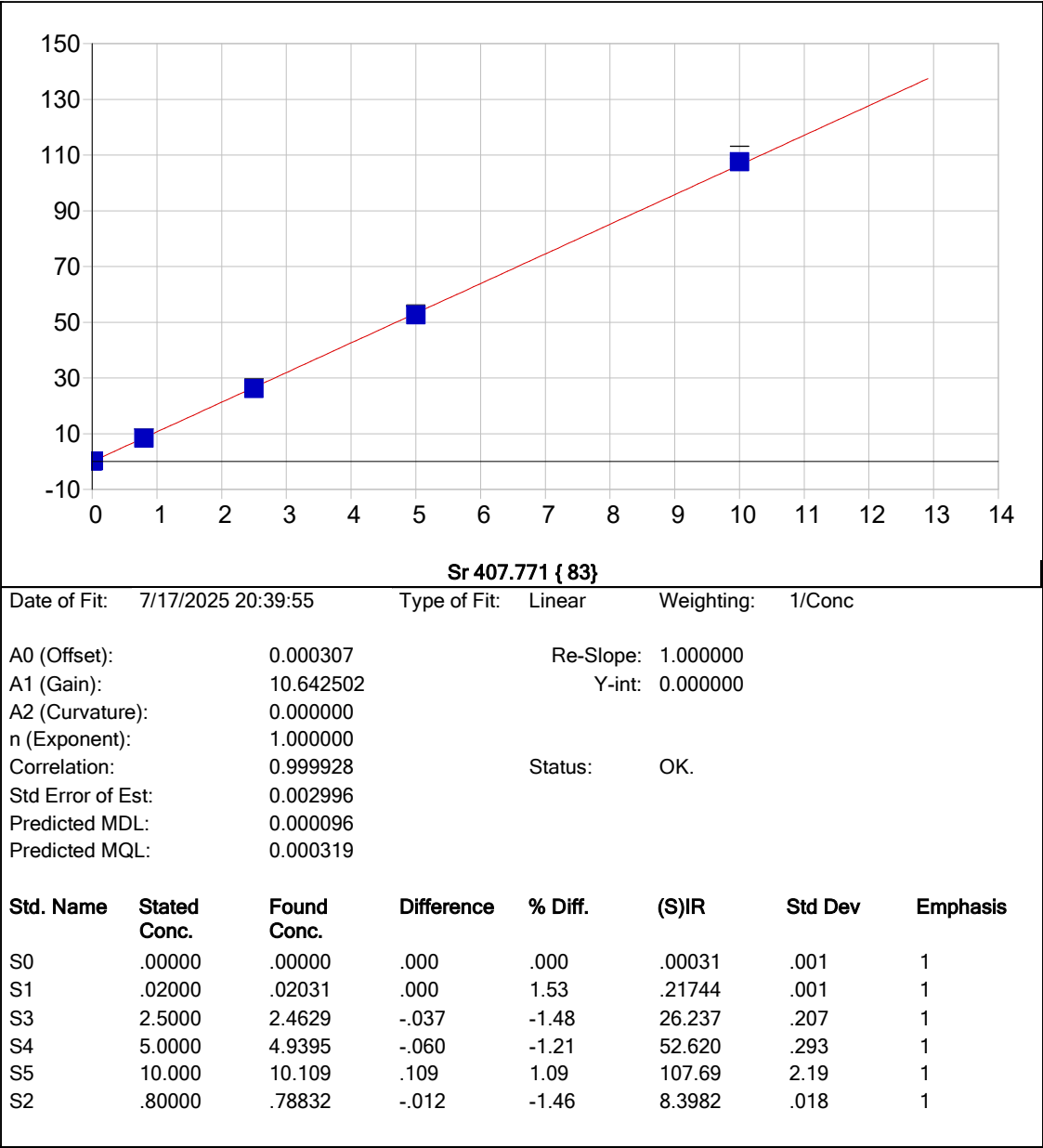


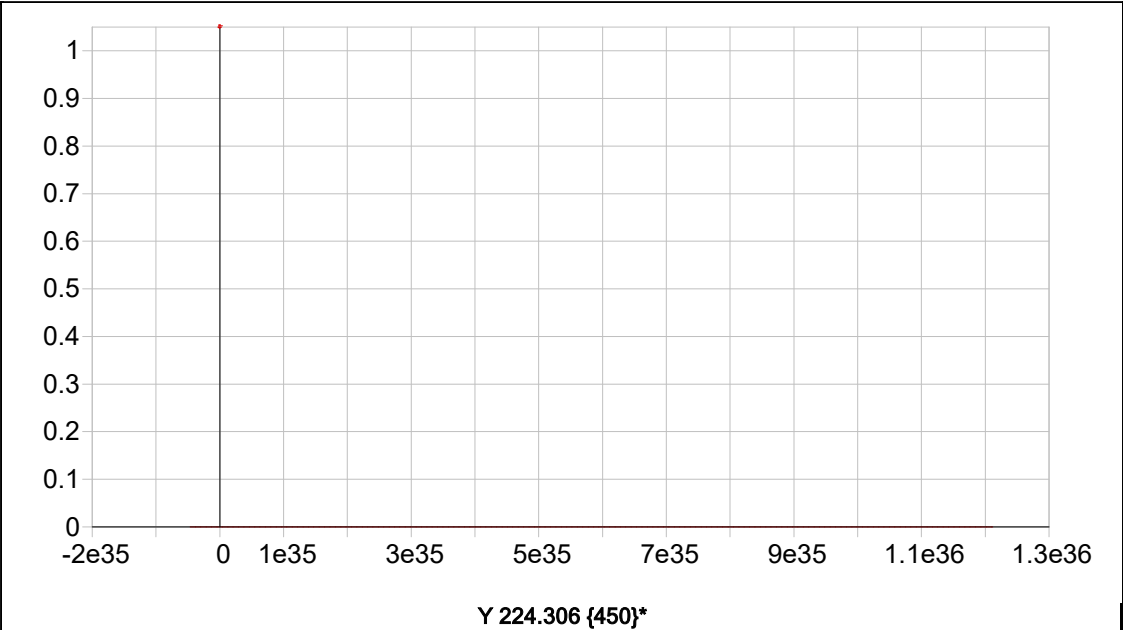






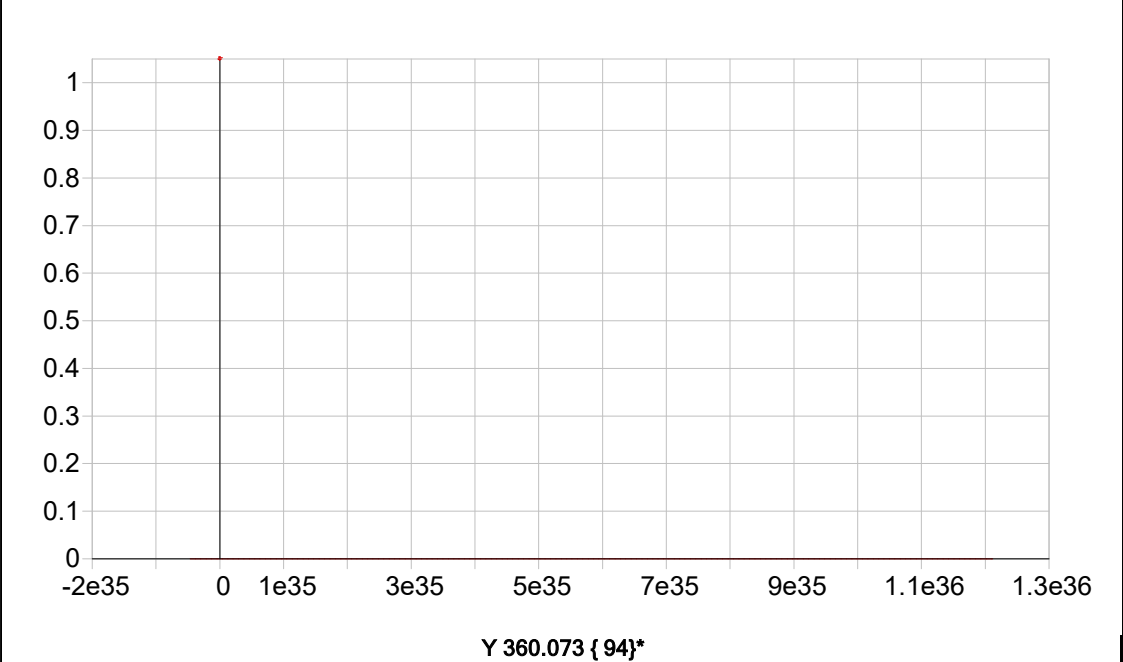




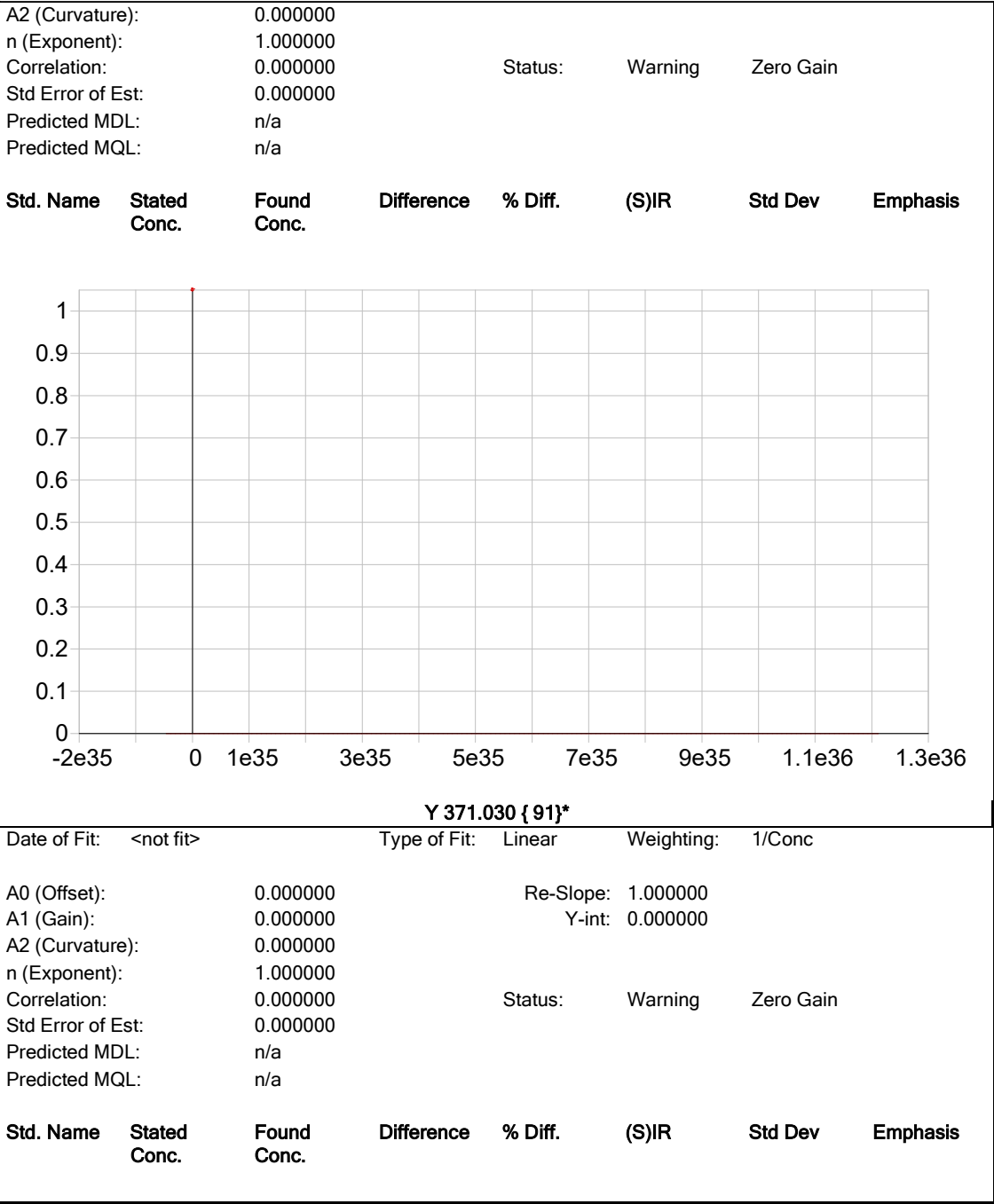


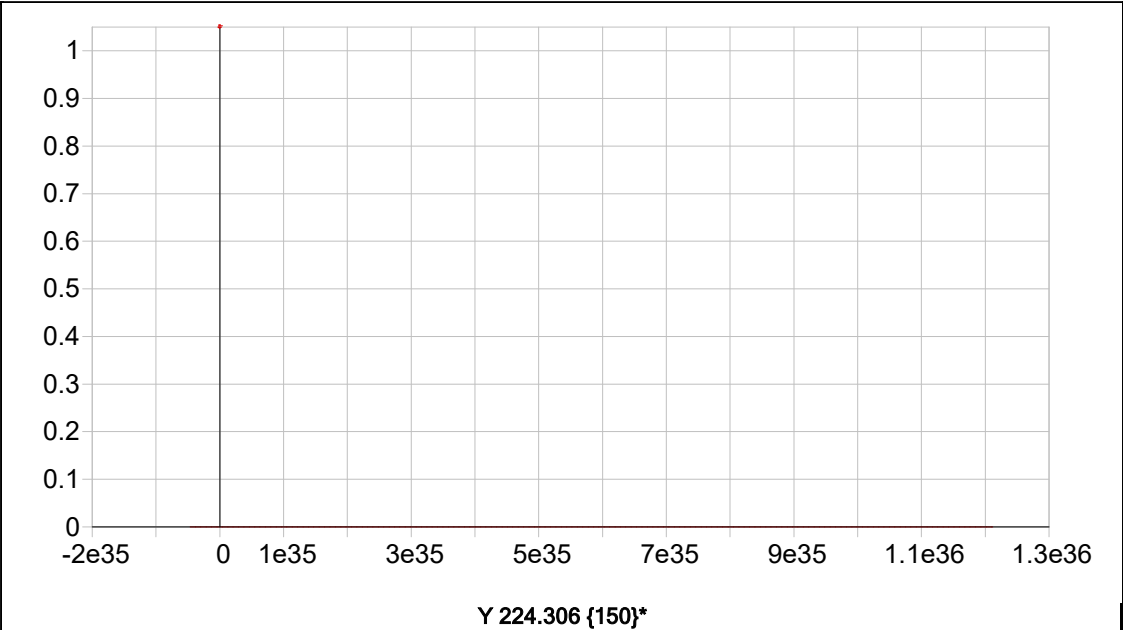
Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000	Re-Slope:	1.000000		
A1 (Gain):	0.000000	Y-int:	0.000000		
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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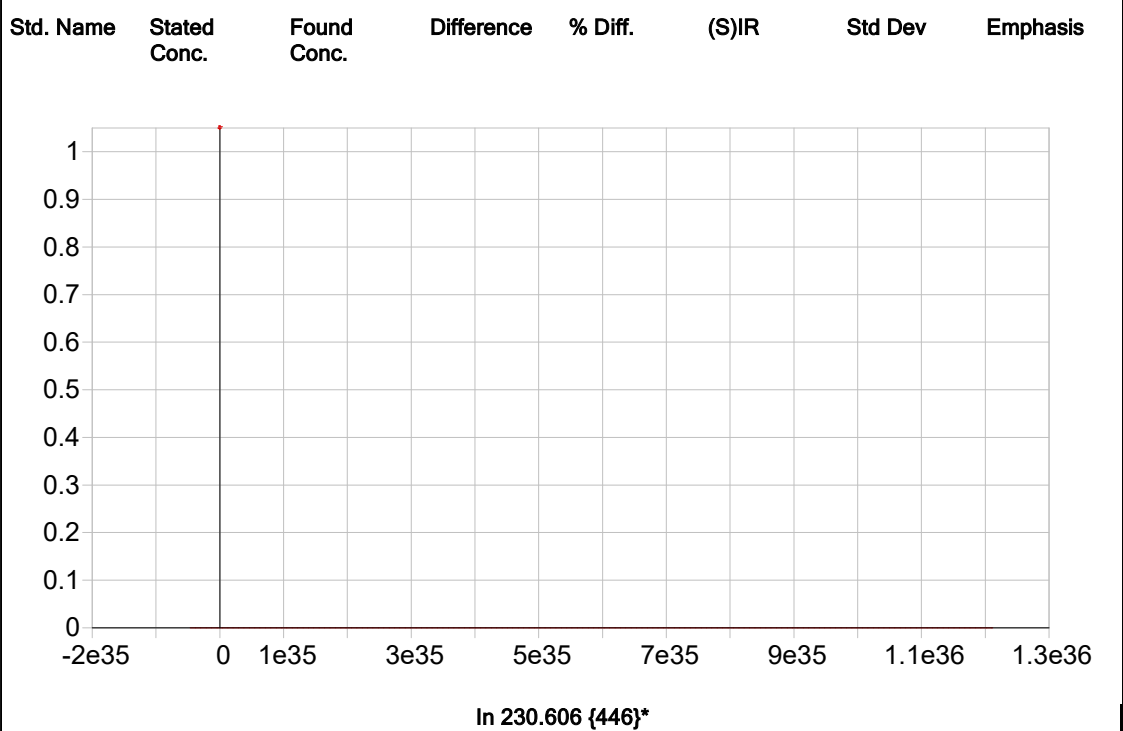


Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000	Re-Slope:	1.000000		
A1 (Gain):	0.000000	Y-int:	0.000000		





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

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

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: 07/17/2025 **Time :** 12:05 **Temp :** 96 °C

End Digest Date: 07/17/2025 **Time :** 15:10 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SKG

Supervisor Signature: [Signature]

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6007
LFS-2	0.25	M6015
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP85156
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/17/25 16:10	SKG.mct dio.	ggo Met 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
PB168908BL	PBW908	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	22
PB168908BS	LCS908	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	23
Q2629-01	011 WILLETS PT BLVD(MAY)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	24
Q2629-02	022 35TH AVE(MAY)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	25
Q2630-01	001 WILLETS PT BLVD (JUNE)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	26
Q2630-02	002 35TH AVE (JUNE)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	27
Q2630-02MS	002 35TH AVE (JUNE)MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	29
Q2630-02MSD	002 35TH AVE (JUNE)MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6007,M6015	30
Q2630-02DUP	002 35TH AVE (JUNE)DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	28

WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB168908

Worklist ID : 190800

Department : Digestion

Date : 07-17-2025 11:19:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2629-01	011 willets Pt Blvd(may)	Water	Metals Group 12	1:1 HNO3 to pH < 2	TULL01	O32	07/16/2025	200.7
Q2629-02	022 35th Ave(may)	Water	Metals Group 12	1:1 HNO3 to pH < 2	TULL01	O32	07/16/2025	200.7
Q2630-01	001 Willets Pt Blvd (June)	Water	Metals Group 10	1:1 HNO3 to pH < 2	TULL01	O11	07/16/2025	200.7
Q2630-02	002 35th Ave (JUNE)	Water	Metals Group 10	1:1 HNO3 to pH < 2	TULL01	O11	07/16/2025	200.7

Date/Time 07/17/25

11:40

Raw Sample Received by:

SKS met. d19

Raw Sample Relinquished by:

SAV SN

Date/Time

07/17/25

12:40

Raw Sample Received by:

SAV SN

Raw Sample Relinquished by:

SKS, met. d19

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136546

Review By	Review On
Supervise By	Supervise On

STD. NAME	STD REF.#
ICAL Standard ICV Standard CCV Standard ICSA Standard CRI Standard LCS Standard Chk Standard	

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/18/25 11:19		Jaswal	OK
2	S1	S1	CAL2	07/18/25 11:24		Jaswal	OK
3	S2	S2	CAL3	07/18/25 11:28		Jaswal	OK
4	S3	S3	CAL4	07/18/25 11:32		Jaswal	OK
5	S4	S4	CAL5	07/18/25 11:36		Jaswal	OK
6	S5	S5	CAL6	07/18/25 11:40		Jaswal	OK
7	ICV01	ICV01	ICV	07/18/25 12:01	ICV fail for Cr,Na,TI (200.7) (95-105)	Jaswal	OK
8	LLICV01	LLICV01	LLICV	07/18/25 12:05		Jaswal	OK
9	ICB01	ICB01	ICB	07/18/25 12:10		Jaswal	OK
10	CRI01	CRI01	CRDL	07/18/25 12:14		Jaswal	OK
11	ICSA01	ICSA01	ICSA	07/18/25 12:18		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	07/18/25 12:23		Jaswal	OK
13	ICSADL	ICSADL	ICSA	07/18/25 12:28		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	07/18/25 12:32		Jaswal	OK
15	CCV01	CCV01	CCV	07/18/25 12:36		Jaswal	OK
16	CCB01	CCB01	CCB	07/18/25 12:43		Jaswal	OK
17	Q2629-01	011 willets Pt Blvd(ma	SAM	07/18/25 12:48		Jaswal	OK
18	Q2629-02	022 35th Ave(may)	SAM	07/18/25 12:52		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136546

Review By	Review On	
Supervise By	Supervise On	

STD. NAME	STD REF.#
ICAL Standard ICV Standard CCV Standard ICSA Standard CRI Standard LCS Standard Chk Standard	

19	Q2630-01	001 Willets Pt Blvd (JULY)	SAM	07/18/25 12:56		Jaswal	OK
20	Q2630-02	002 35th Ave (JUNE)	SAM	07/18/25 13:00		Jaswal	OK
21	PB168908BL	PB168908BL	MB	07/18/25 13:04		Jaswal	OK
22	PB168908BS	PB168908BS	LCS	07/18/25 13:08		Jaswal	OK
23	Q2630-02DUP	002 35th Ave (JUNE)	DUP	07/18/25 13:12		Jaswal	OK
24	Q2630-02L	002 35th Ave (JUNE)	SD	07/18/25 13:16		Jaswal	OK
25	Q2630-02MS	002 35th Ave (JUNE)	MS	07/18/25 13:21		Jaswal	OK
26	Q2630-02MSD	002 35th Ave (JUNE)	MSD	07/18/25 13:25		Jaswal	OK
27	CCV02	CCV02	CCV	07/18/25 13:29		Jaswal	OK
28	CCB02	CCB02	CCB	07/18/25 13:33		Jaswal	OK
29	Q2630-02A	002 35th Ave (JUNE)	PS	07/18/25 13:37		Jaswal	OK
30	PB168901BL	PB168901BL	MB	07/18/25 13:41		Jaswal	OK
31	Q2623-01	3362	SAM	07/18/25 13:49		Jaswal	OK
32	Q2623-02	3363	SAM	07/18/25 13:53		Jaswal	OK
33	Q2624-01	449	SAM	07/18/25 13:58		Jaswal	OK
34	Q2624-02	450	SAM	07/18/25 14:02		Jaswal	OK
35	PB168901BS	PB168901BS	LCS	07/18/25 14:06		Jaswal	OK
36	Q2624-03	451	SAM	07/18/25 14:10		Jaswal	OK
37	Q2624-03DUP	451DUP	DUP	07/18/25 14:14		Jaswal	OK
38	Q2624-03L	451L	SD	07/18/25 14:19		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136546

Review By	Review On
Supervise By	Supervise On

STD. NAME	STD REF.#
ICAL Standard ICV Standard CCV Standard ICSA Standard CRI Standard LCS Standard Chk Standard	

39	CCV03	CCV03	CCV	07/18/25 14:31		Jaswal	OK
40	CCB03	CCB03	CCB	07/18/25 14:36		Jaswal	OK
41	Q2624-03MS	451MS	MS	07/18/25 14:41		Jaswal	OK
42	Q2624-03MSD	451MSD	MSD	07/18/25 14:45		Jaswal	OK
43	Q2624-03A	451A	PS	07/18/25 14:49		Jaswal	OK
44	Q2623-03	3364	SAM	07/18/25 15:26	K,Zn high	Jaswal	Dilution
45	Q2623-03DL	3364DL	SAM	07/18/25 15:30	5x for K,Zn	Jaswal	Confirms
46	PB168913BL	PB168913BL	MB	07/18/25 15:35		Jaswal	OK
47	PB168913BS	PB168913BS	LCS	07/18/25 15:39		Jaswal	OK
48	Q2527-05	ARS20-0015	SAM	07/18/25 15:51	MS/MSD fail for all elements	Jaswal	OK
49	Q2527-05DUP	ARS20-0015DUP	DUP	07/18/25 15:56	MS/MSD fail for all elements	Jaswal	OK
50	Q2527-05L	ARS20-0015L	SD	07/18/25 16:00	MS/MSD fail for all elements	Jaswal	OK
51	CCV04	CCV04	CCV	07/18/25 16:17		Jaswal	OK
52	CCB04	CCB04	CCB	07/18/25 16:21		Jaswal	OK
53	Q2527-05MS	ARS20-0015MS	MS	07/18/25 16:26	MS/MSD fail for all elements	Jaswal	OK
54	Q2527-05MSD	ARS20-0015MSD	MSD	07/18/25 16:30	MS/MSD fail for all elements	Jaswal	OK
55	Q2527-02MSD	ARS20-0015MSD	MSD	07/18/25 16:34	NOT USE	Jaswal	Not Ok
56	Q2527-05A	ARS20-0015A	PS	07/18/25 16:38	MS/MSD fail for all elements	Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136546

Review By	Review On
Supervise By	Supervise On
STD. NAME	STD REF.#
ICAL Standard ICV Standard CCV Standard ICSA Standard CRI Standard LCS Standard Chk Standard	

57	Q2564-09	ARS20-0039	SAM	07/18/25 16:43		Jaswal	OK
58	Q2595-04	CHRT-24849	SAM	07/18/25 16:47		Jaswal	OK
59	CCV05	CCV05	CCV	07/18/25 16:51	CCV fail for K	Jaswal	OK
60	CCB05	CCB05	CCB	07/18/25 16:56		Jaswal	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2630

Test : Metals Group 10

Prepbatch ID : PB168908,

Sequence ID/Qc Batch ID: LB136546, LB136546,

Standard ID :
MP85156,

Chemical ID :
M6007, M6015, M6151, M6158, W3112,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
170	1:1HCL	MP85156	04/07/2025	08/18/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025
<u>FROM</u> 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 #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112



Refine your results. Redefine your industry. RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO ₃

Value / Analyte(s):	1 000 µg/mL ea:	
	Potassium,	
	600 µg/mL ea:	
	Phosphorus,	
	300 µg/mL ea:	
	Sodium,	Iron,
	200 µg/mL ea:	
	Magnesium,	Aluminum,
	Cerium,	Selenium,
	Thallium,	
	100 µg/mL ea:	
	Lead,	Calcium,
	80 µg/mL ea:	
	Arsenic,	
	70 µg/mL ea:	
	Mercury,	
	50 µg/mL ea:	
	Nickel,	
	40 µg/mL ea:	
	Chromium,	
	30 µg/mL ea:	
	Copper,	Boron,
	Vanadium,	
	20 µg/mL ea:	
	Zinc,	Strontium,
	Barium,	Beryllium,
	Cadmium,	Cobalt,
	Manganese,	Lithium,
	7.5 µg/mL ea:	
	Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com; inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 30, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Refine your results. Redefine your industry.

RD:05/14/2024

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: WW-LFS-2
Lot Number: U2-MEB731108
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s):
200 µg/mL ea:
Silica,
80 µg/mL ea:
Antimony,
70 µg/mL ea:
Tin,
40 µg/mL ea:
Molybdenum,
20 µg/mL ea:
Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO ₂	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO ₂	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 17, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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



SHIPPING DOCUMENTS



284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number:

Q 2630

COC Number:

CLIENT INFORMATION

COMPANY: Tully Environmental Inc.
ADDRESS: 57 Seaview Blvd
CITY: Pt Washington STATE: NY ZIP: 11050
ATTENTION: Dean Devoe
PHONE: 718 446 7000 FAX:

PROJECT INFORMATION

PROJECT NAME: Transfer Station SPDES
PROJECT #: 252113 LOCATION:
PROJECT MANAGER:
E-MAIL:
PHONE: FAX:

BILLING INFORMATION

BILL TO: Same PO#
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS*
HARD COPY: _____ DAYS*
EDD _____ DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

* RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD Format _____

ANALYSIS

CU, Fe, Pb	TSS	BTEX							
1	2	3	4	5	6	7	8	9	

PRESERVATIVES

COMMENTS

<- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP GRAB	SAMPLE COLLECTION DATE TIME	# of Bottles	1	2	3	4	5	6	7	8	9
1.	001 Willets Pt Blvd (June)	W		X 7/16/25 11:30		X	X	X						
2.	002 35th Ave (June)	W		X 7/16/25 11:30		X	X	X						
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER 1. D Devoe	DATE/TIME July 16, 2025	RECEIVED BY 1. _____	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp <u>20.5</u> MeOH extraction requires an additional 4oz. Jar for percent solid Comments: <u>IR-Guntel ICE melted</u>	
RELINQUISHED BY 2. _____	DATE/TIME <u>7/17/25</u>	RECEIVED BY 2. _____		
RELINQUISHED BY 3. _____	DATE/TIME _____	RECEIVED FOR LAB BY 3. _____		
Page _____ of _____			SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight ALLIANCE: ☐ Picked Up ☐ Overnight	Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

From: Dean Devoe <DDevoe@tullyconstruction.com>
Sent: Thursday, July 17, 2025 12:13 PM
Subject: RE: melted ice

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Please proceed. Any suggestions on how to prevent ice from melting overnight during the current heat conditions?

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Thursday, July 17, 2025 12:11 PM
To: Dean Devoe <DDevoe@tullyconstruction.com>
Subject: melted ice

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Good afternoon,

sample received with melted ice with Temp 20.5 cel on 7/17/2025 let us know how to proceed with analysis ?

Thanks & Regards,



Deepak Parmar
Sr. Project Manager
An Alliance Technical Group Company
Main: 908-789-8900

Direct: 908-728-3154

Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092

www.alliancetg.com



Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2630	TULL01	Order Date : 7/17/2025 10:48:00 AM	Project Mgr :
Client Name : Tully Environmental, Inc		Project Name : Transfer Station-SPDES	Report Type : Results Only
Client Contact : Dean Devoe		Receive DateTime : 7/17/2025 9:53:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : Tully Environmental, Inc		Purchase Order :	Hard Copy Date :
Invoice Contact : Dean Devoe			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2630-01	001 Willets Pt Blvd (June)	Water	07/16/2025	11:30	VOC-BTEX		624.1	4 Bus. Days	
Q2630-02	002 35th Ave (JUNE)	Water	07/16/2025	11:30	VOC-BTEX		624.1	4 Bus. Days	

Relinquished By :

Date / Time :

Received By :

Date / Time :

Storage Area : VOA Refridgerator Room