

Cover Page

Order ID : Q2904

Project ID : Transfer Station-SPDES

Client : Tully Environmental, Inc

Lab Sample Number

Q2904-01
Q2904-02

Client Sample Number

001 willets Pt Blvd(july)
002 35th Ave (JULY)

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: 8/24/2025

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 #: Q2904

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: 08/24/2025

LAB CHRONICLE

OrderID:	Q2904	OrderDate:	8/20/2025 11:51:00 AM
Client:	Tully Environmental, Inc	Project:	Transfer Station-SPDES
Contact:	Dean Devoe	Location:	J33,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2904-01	001 willets Pt Blvd(july)	Water			08/19/25			08/20/25
			Metals Group 10	200.7		08/20/25	08/22/25	
Q2904-02	002 35th Ave (JULY)	Water			08/19/25			08/20/25
			Metals Group 10	200.7		08/20/25	08/22/25	



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Hit Summary Sheet
SW-846

SDG No.: Q2904

Order ID: Q2904

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(july)								
Q2904-01	001 willets Pt Blvd(july)	Water	Copper	35.7		1.89	10.0	ug/L
Q2904-01	001 willets Pt Blvd(july)	Water	Iron	5340		18.0	50.0	ug/L
Q2904-01	001 willets Pt Blvd(july)	Water	Lead	19.4		1.21	6.00	ug/L
Client ID : 002 35th Ave (JULY)								
Q2904-02	002 35th Ave (JULY)	Water	Copper	42.7		1.89	10.0	ug/L
Q2904-02	002 35th Ave (JULY)	Water	Iron	99.8		18.0	50.0	ug/L



SAMPLE DATA

Report of Analysis

Client:	Tully Environmental, Inc	Date Collected:	08/19/25
Project:	Transfer Station-SPDES	Date Received:	08/20/25
Client Sample ID:	001 willets Pt Blvd(july)	SDG No.:	Q2904
Lab Sample ID:	Q2904-01	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	35.7		1	1.89	10.0	ug/L	08/20/25 13:30	08/22/25 13:52	EPA 200.7	
7439-89-6	Iron	5340	N*	1	18.0	50.0	ug/L	08/20/25 13:30	08/22/25 13:52	EPA 200.7	
7439-92-1	Lead	19.4		1	1.21	6.00	ug/L	08/20/25 13:30	08/22/25 13:52	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:	08/19/25
Project:	Transfer Station-SPDES	Date Received:	08/20/25
Client Sample ID:	002 35th Ave (JULY)	SDG No.:	Q2904
Lab Sample ID:	Q2904-02	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	42.7		1	1.89	10.0	ug/L	08/20/25 13:30	08/22/25 13:56	EPA 200.7	
7439-89-6	Iron	99.8	N*	1	18.0	50.0	ug/L	08/20/25 13:30	08/22/25 13:56	EPA 200.7	
7439-92-1	Lead	1.21	U	1	1.21	6.00	ug/L	08/20/25 13:30	08/22/25 13:56	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



METAL CALIBRATION DATA

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tully Environmental, Inc

SDG No.: Q2904

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	997	1000	100	95 - 105	P	08/22/2025	11:37	LB136940
	Iron	3890	4000	97	95 - 105	P	08/22/2025	11:37	LB136940
	Lead	3920	4000	98	95 - 105	P	08/22/2025	11:37	LB136940

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tully Environmental, Inc

SDG No.: Q2904

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	21.2	20.0	106	80 - 120	P	08/22/2025	11:45	LB136940
	Iron	95.1	100	95	80 - 120	P	08/22/2025	11:45	LB136940
	Lead	13.0	12.0	108	80 - 120	P	08/22/2025	11:45	LB136940

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tully Environmental, Inc

SDG No.: Q2904

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	1270	1250	101	90 - 110	P	08/22/2025	12:18	LB136940
	Iron	5060	5000	101	90 - 110	P	08/22/2025	12:18	LB136940
	Lead	4980	5000	100	90 - 110	P	08/22/2025	12:18	LB136940
CCV02	Copper	1270	1250	102	90 - 110	P	08/22/2025	13:36	LB136940
	Iron	5090	5000	102	90 - 110	P	08/22/2025	13:36	LB136940
	Lead	4980	5000	100	90 - 110	P	08/22/2025	13:36	LB136940
CCV03	Copper	1290	1250	103	90 - 110	P	08/22/2025	14:25	LB136940
	Iron	5200	5000	104	90 - 110	P	08/22/2025	14:25	LB136940
	Lead	5040	5000	101	90 - 110	P	08/22/2025	14:25	LB136940
CCV04	Copper	1240	1250	100	90 - 110	P	08/22/2025	15:44	LB136940
	Iron	4960	5000	99	90 - 110	P	08/22/2025	15:44	LB136940
	Lead	4920	5000	98	90 - 110	P	08/22/2025	15:44	LB136940
CCV05	Copper	1210	1250	97	90 - 110	P	08/22/2025	16:30	LB136940
	Iron	4870	5000	97	90 - 110	P	08/22/2025	16:30	LB136940
	Lead	4760	5000	95	90 - 110	P	08/22/2025	16:30	LB136940



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Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Tully Environmental, Inc

SDG No.: Q2904

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	21.0	20.0	105	65 - 135	P	08/22/2025	11:56	LB136940
	Iron	99.1	100	99	65 - 135	P	08/22/2025	11:56	LB136940
	Lead	12.2	12.0	102	65 - 135	P	08/22/2025	11:56	LB136940



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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

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	08/22/2025	11:50	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	11:50	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	11:50	LB136940

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

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	08/22/2025	12:22	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	12:22	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	12:22	LB136940
CCB02	Copper	4.60	+/-10	U	20.0	P	08/22/2025	13:40	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	13:40	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	13:40	LB136940
CCB03	Copper	4.60	+/-10	U	20.0	P	08/22/2025	14:30	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	14:30	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	14:30	LB136940
CCB04	Copper	4.60	+/-10	U	20.0	P	08/22/2025	15:48	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	15:48	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	15:48	LB136940
CCB05	Copper	4.60	+/-10	U	20.0	P	08/22/2025	16:34	LB136940
	Iron	23.4	+/-50	U	100	P	08/22/2025	16:34	LB136940
	Lead	2.30	+/-6	U	12.0	P	08/22/2025	16:34	LB136940

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169324BL	WATER			Batch Number:	PB169324		Prep Date:	08/20/2025	
	Copper	1.89	<5	U	10.0	P	08/22/2025	12:45	LB136940
	Iron	18.0	<25	U	50.0	P	08/22/2025	12:45	LB136940
	Lead	1.21	<3	U	6.00	P	08/22/2025	12:45	LB136940

Metals

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INTERFERENCE CHECK SAMPLE

Client: Tully Environmental, Inc

SDG No.: Q2904

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	8.67	2.0	434	-18	22	08/22/2025	12:00	LB136940
	Iron	98800	101000	98	85600	116500	08/22/2025	12:00	LB136940
	Lead	-7.23			-12	12	08/22/2025	12:00	LB136940
ICSAB01	Copper	491	511	96	434	588	08/22/2025	12:04	LB136940
	Iron	100000	99300	101	84400	114500	08/22/2025	12:04	LB136940
	Lead	39.7	49.0	81	37	61	08/22/2025	12:04	LB136940
ICSA	Copper	3.62	2.0	181	-18	22	08/22/2025	12:09	LB136940
	Iron	95800	101000	95	85600	116500	08/22/2025	12:09	LB136940
	Lead	-0.88			-12	12	08/22/2025	12:09	LB136940
ICSAB	Copper	507	511	99	434	588	08/22/2025	12:13	LB136940
	Iron	97300	99300	98	84400	114500	08/22/2025	12:13	LB136940
	Lead	82.1	49.0	168	37	61	08/22/2025	12:13	LB136940



METAL QC DATA

metals
- 5a -
MATRIX SPIKE SUMMARY

client: <u>Tully Environmental, Inc</u>	level: <u>low</u>	sdg no.: <u>Q2904</u>
contract: <u>TULL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q2902-04</u>	client id: <u>OUTFALL-DSN-002MS</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2902-04MS</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	192		42.1		150	100		P
Iron	ug/L	75 - 125	1660		3100		1500	-96	N	P
Lead	ug/L	75 - 125	458		11.8		500	89		P

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: <u>Tully Environmental, Inc</u>	level: <u>low</u>	sdg no.: <u>Q2904</u>
contract: <u>TULL01</u>		lab code: <u>ACE</u>
matrix: <u>Water</u>	sample id: <u>Q2902-04</u>	client id: <u>OUTFALL-DSN-002MSD</u>
Percent Solids for Sample: <u>NA</u>	Spiked ID: <u>Q2902-04MSD</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	199		42.1		150	105		P
Iron	ug/L	75 - 125	1730		3100		1500	-91	N	P
Lead	ug/L	75 - 125	472		11.8		500	92		P

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

Contract: TULL01

Lab Code: ACE

Matrix: Water

Level: LOW

Client ID: OUTFALL-DSN-002A

Sample ID: Q2902-04 **Spiked ID:** Q2902-04A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/L	85 - 115	3860		3100		1500	51	N	P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tully Environmental, Inc</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2904</u>
Contract:	<u>TULL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2902-04</u>	Client ID:	<u>OUTFALL-DSN-002DUP</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2902-04DUP	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	42.1		44.7		6		P
Iron	ug/L	20	3100		109		186	*	P
Lead	ug/L	20	11.8		6.00	U	200.0		P

Metals

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DUPLICATE SAMPLE SUMMARY

Client:	<u>Tully Environmental, Inc</u>	Level:	<u>LOW</u>	SDG No.:	<u>Q2904</u>
Contract:	<u>TULL01</u>			Lab Code:	<u>ACE</u>
Matrix:	<u>Water</u>	Sample ID:	<u>Q2902-04MS</u>	Client ID:	<u>OUTFALL-DSN-002MSD</u>
Percent Solids for Sample:	NA	Duplicate ID	Q2902-04MSD	Percent Solids for Spike Sample:	NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Copper	ug/L	20	192		199		4		P
Iron	ug/L	20	1660		1730		4		P
Lead	ug/L	20	458		472		3		P

Metals

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

Contract: TULL01

Lab Code: ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169324BS							
Copper	ug/L	150	159		106	85 - 115	P
Iron	ug/L	1500	1510		101	85 - 115	P
Lead	ug/L	500	487		97	85 - 115	P

Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

OUTFALL-DSN-002L

Lab Name: Alliance

Contract: TULL01

Lab Code: ACE **Lb No.:** lb136940 **Lab Sample ID :** Q2902-04L **SDG No.:** Q2904

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
	C		C				
Copper	42.1		37.3	J	11		P
Iron	3100		5690		84		P
Lead	11.8		20.2	J	72		P



METAL PREPARATION & INSTRUMENT DATA

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2904

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.: Q2904

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



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Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2904

Contract: TULL01

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
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



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Metals

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2904

Contract: TULL01

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
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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tully Environmental, Inc

SDG No.: Q2904

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:				
		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

- 13 -

SAMPLE PREPARATION SUMMARY

Client: Tully Environmental, Inc

SDG No.: Q2904

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: PB169324							
PB169324BL	PB169324BL	MB	WATER	08/20/2025	50.0	25.0	
PB169324BS	PB169324BS	LCS	WATER	08/20/2025	50.0	25.0	
Q2902-04DUP	OUTFALL-DSN-002DUP	DUP	WATER	08/20/2025	50.0	25.0	
Q2902-04MS	OUTFALL-DSN-002MS	MS	WATER	08/20/2025	50.0	25.0	
Q2902-04MSD	OUTFALL-DSN-002MSD	MSD	WATER	08/20/2025	50.0	25.0	
Q2904-01	001 willets Pt Blvd(july)	SAM	WATER	08/20/2025	50.0	25.0	
Q2904-02	002 35th Ave (JULY)	SAM	WATER	08/20/2025	50.0	25.0	

metals
- 14 -
ANALYSIS RUN LOG

Client: Tully Environmental, Inc

Contract: TULL01

Lab code: ACE

Sdg no.: Q2904

Instrument id number: _____

Method: _____

Run number: LB136940

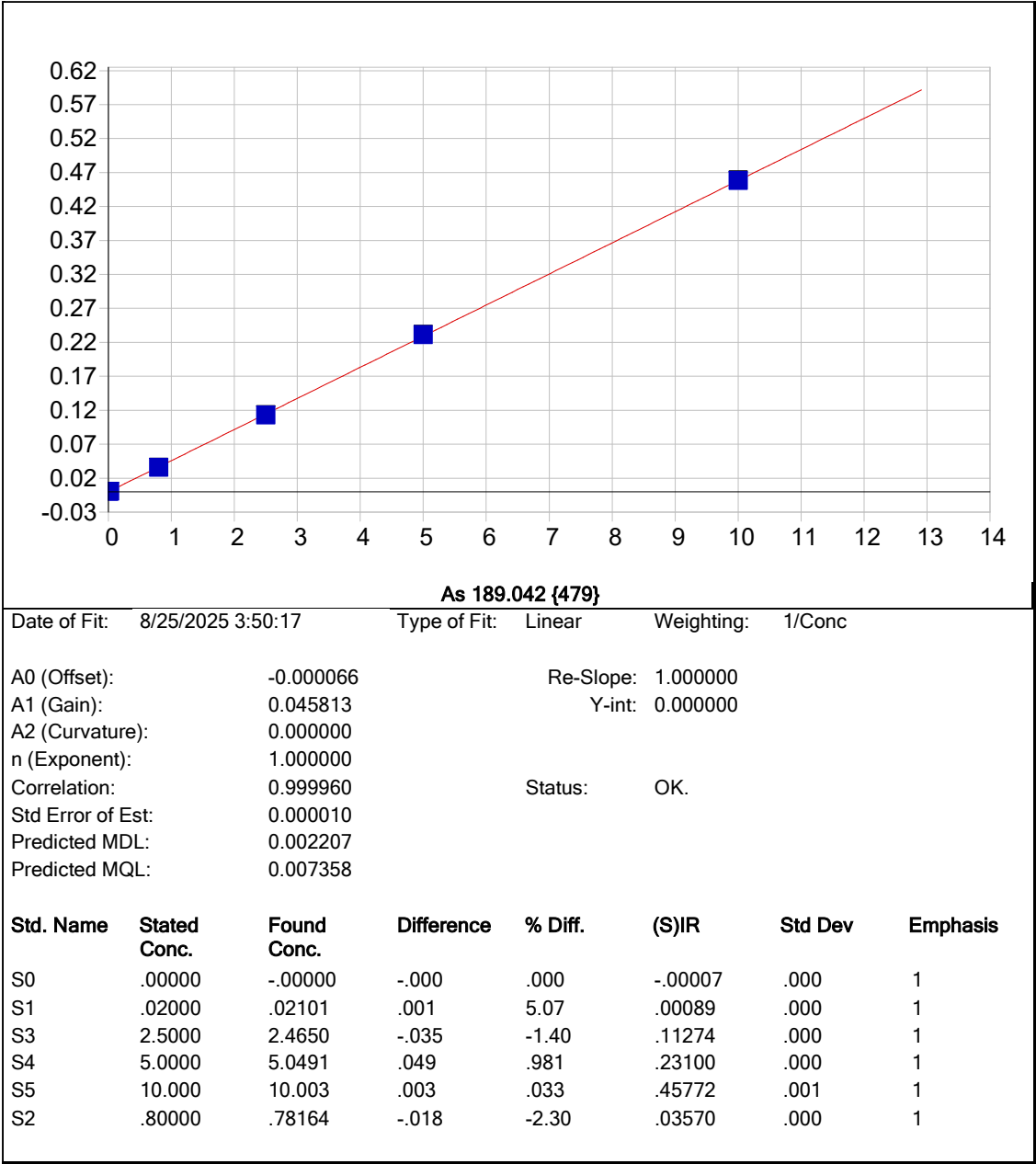
Start date: 08/22/2025

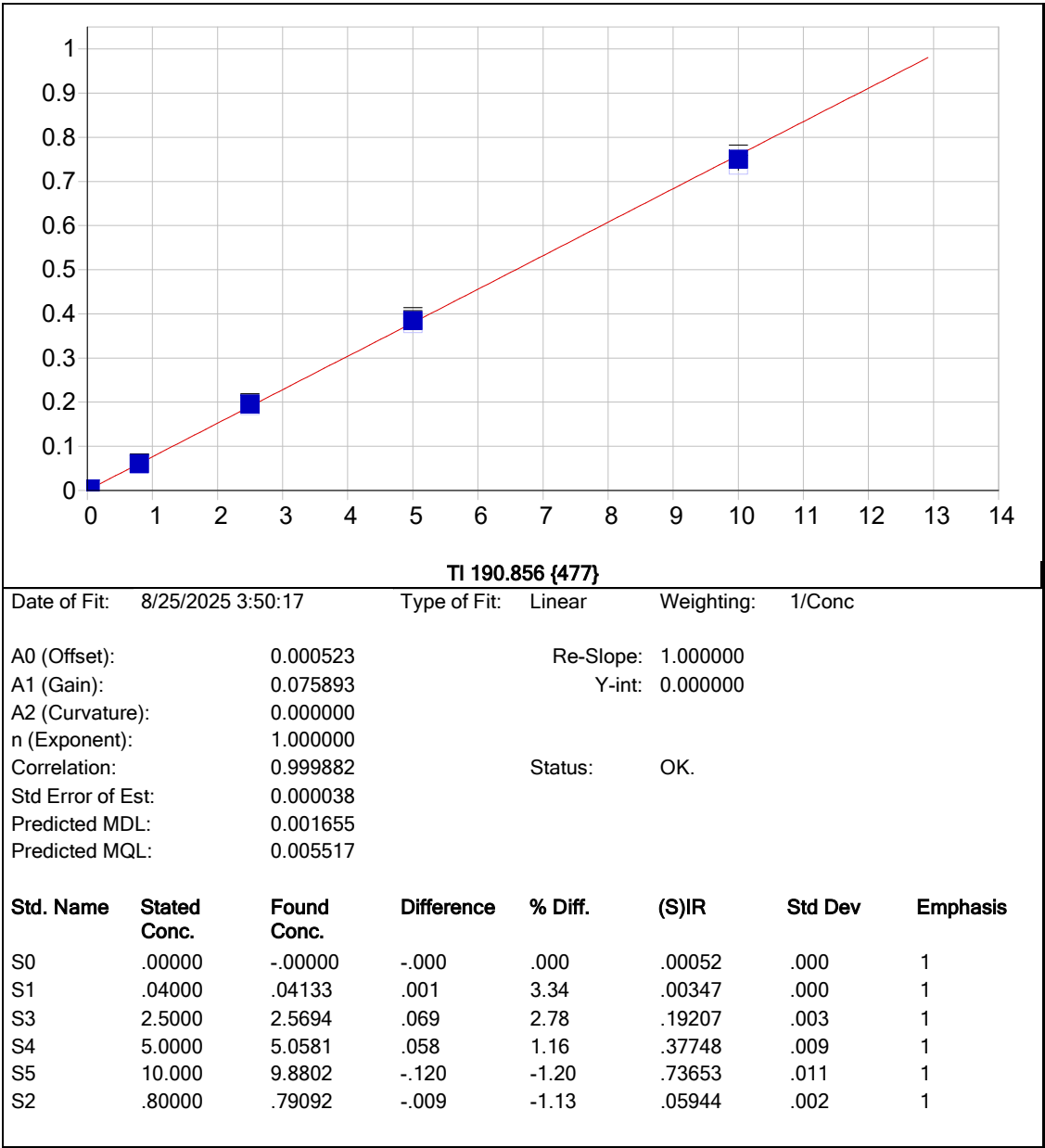
End date: 08/22/2025

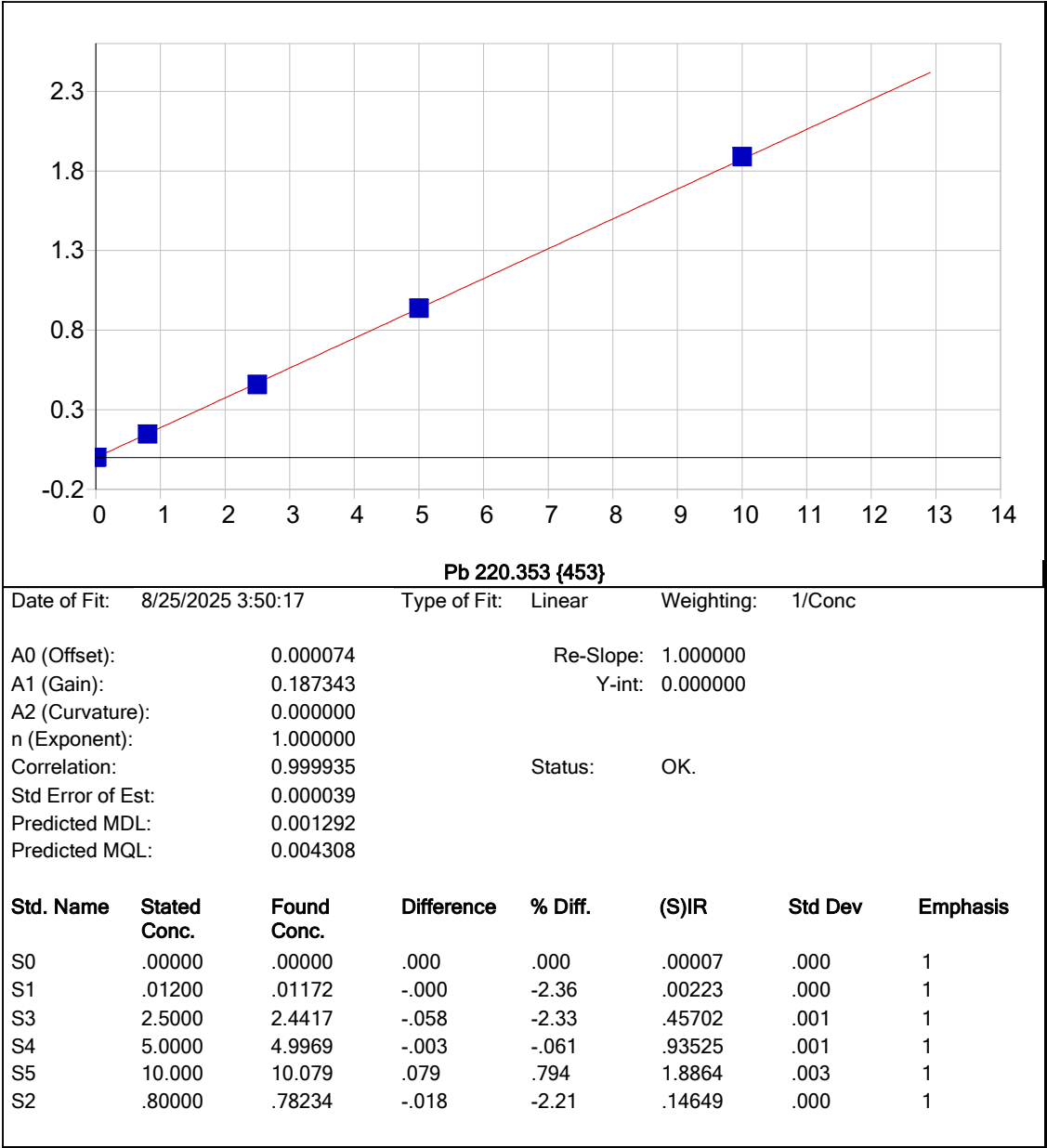
Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1112	Cu,Fe,Pb
S1	S1	1	1116	Cu,Fe,Pb
S2	S2	1	1120	Cu,Fe,Pb
S3	S3	1	1124	Cu,Fe,Pb
S4	S4	1	1128	Cu,Fe,Pb
S5	S5	1	1133	Cu,Fe,Pb
ICV01	ICV01	1	1137	Cu,Fe,Pb
LLICV01	LLICV01	1	1145	Cu,Fe,Pb
ICB01	ICB01	1	1150	Cu,Fe,Pb
CRI01	CRI01	1	1156	Cu,Fe,Pb
ICSA01	ICSA01	1	1200	Cu,Fe,Pb
ICSAB01	ICSAB01	1	1204	Cu,Fe,Pb
ICSA	ICSA	20	1209	Cu,Fe,Pb
ICSAB	ICSAB	20	1213	Cu,Fe,Pb
CCV01	CCV01	1	1218	Cu,Fe,Pb
CCB01	CCB01	1	1222	Cu,Fe,Pb
PB169324BL	PB169324BL	1	1245	Cu,Fe,Pb
Q2902-04DUP	OUTFALL-DSN-002DUP	1	1314	Cu,Fe,Pb
Q2902-04L	OUTFALL-DSN-002L	5	1327	Cu,Fe,Pb
Q2902-04MS	OUTFALL-DSN-002MS	1	1332	Cu,Fe,Pb
CCV02	CCV02	1	1336	Cu,Fe,Pb
CCB02	CCB02	1	1340	Cu,Fe,Pb
Q2902-04MSD	OUTFALL-DSN-002MSD	1	1344	Cu,Fe,Pb
Q2902-04A	OUTFALL-DSN-002A	1	1348	Fe
Q2904-01	001 willets Pt Blvd(july)	1	1352	Cu,Fe,Pb
Q2904-02	002 35th Ave (JULY)	1	1356	Cu,Fe,Pb
PB169324BS	PB169324BS	1	1400	Cu,Fe,Pb
CCV03	CCV03	1	1425	Cu,Fe,Pb
CCB03	CCB03	1	1430	Cu,Fe,Pb
CCV04	CCV04	1	1544	Cu,Fe,Pb
CCB04	CCB04	1	1548	Cu,Fe,Pb
CCV05	CCV05	1	1630	Cu,Fe,Pb
CCB05	CCB05	1	1634	Cu,Fe,Pb

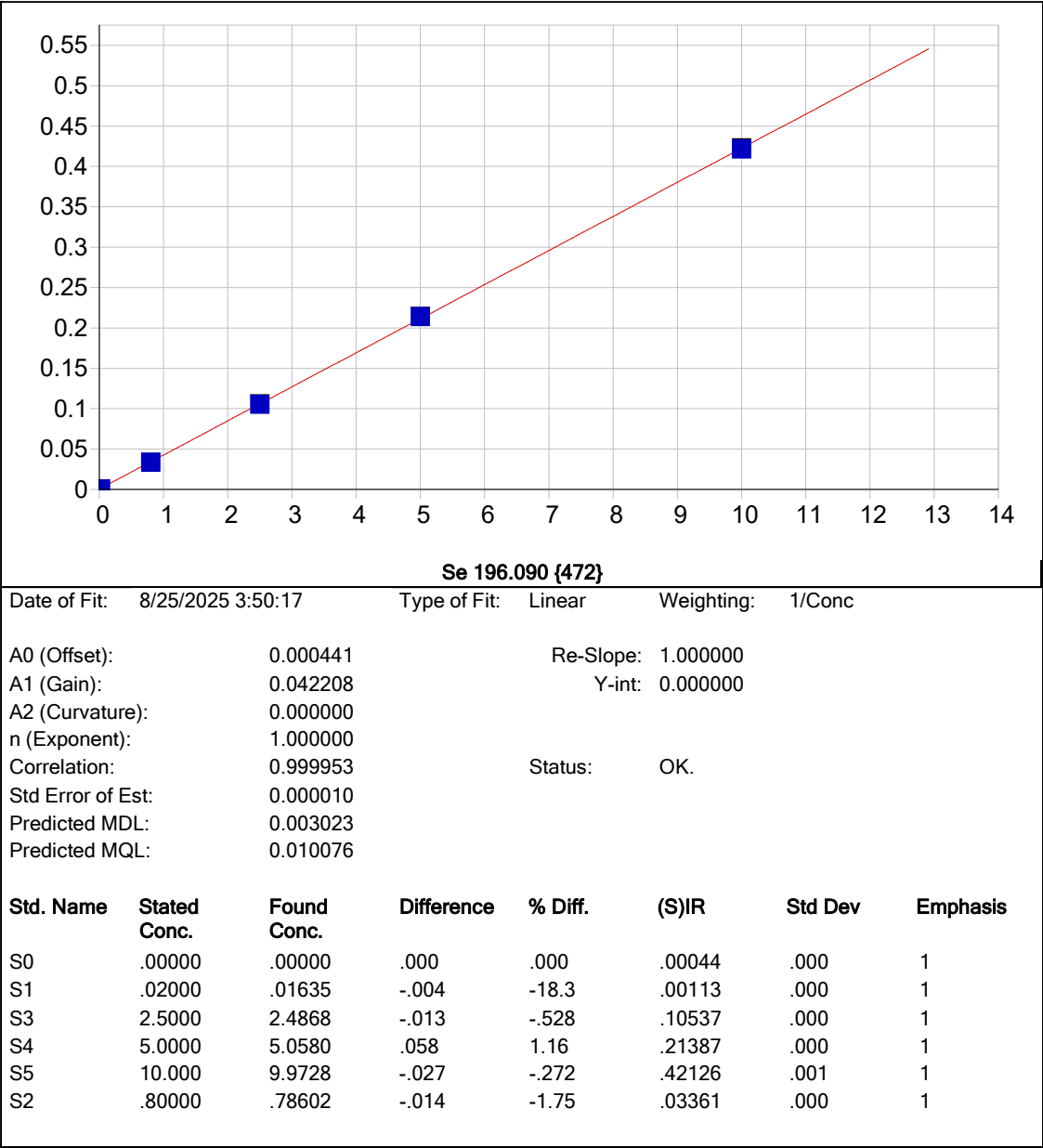


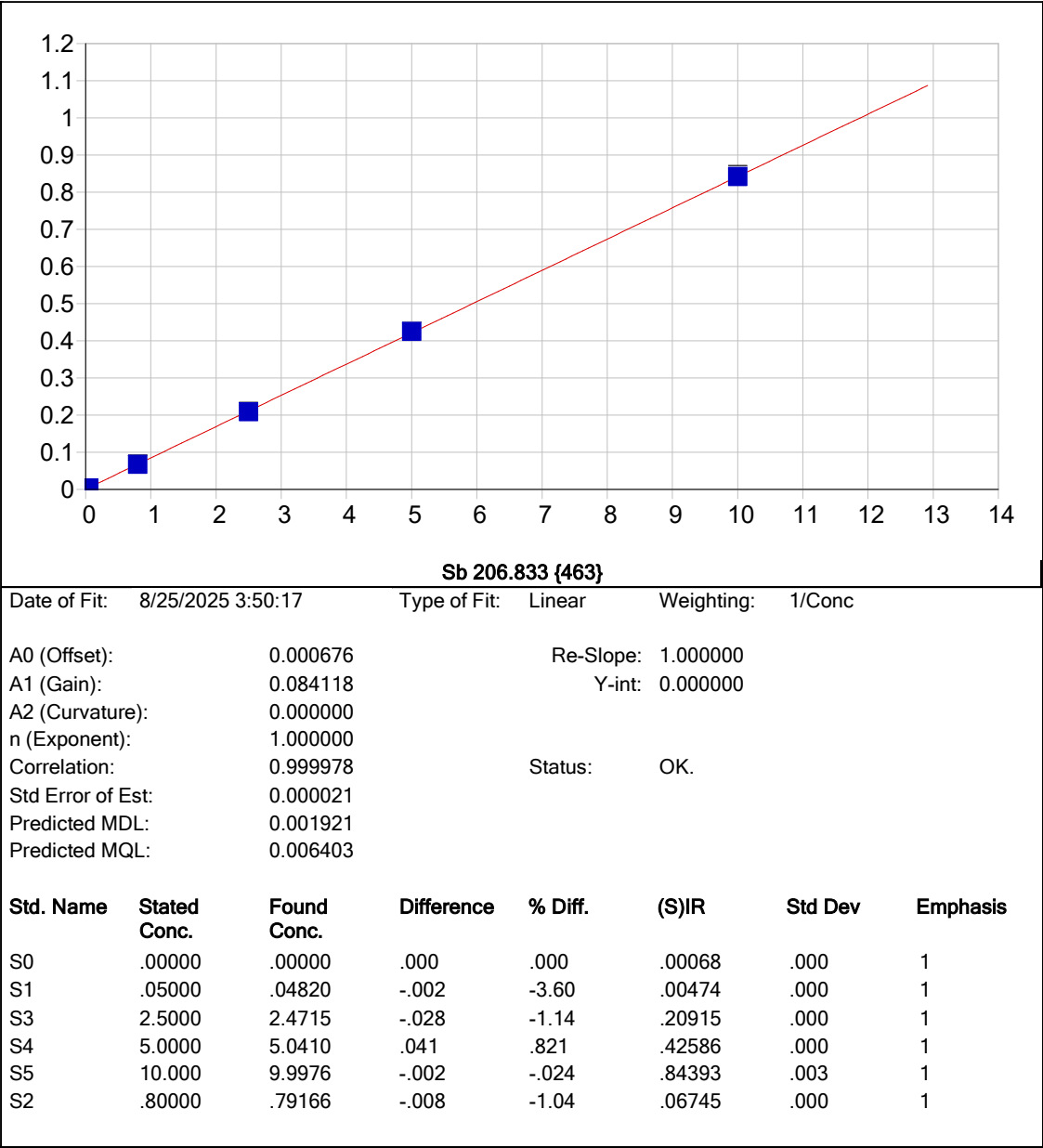
METAL RAW DATA

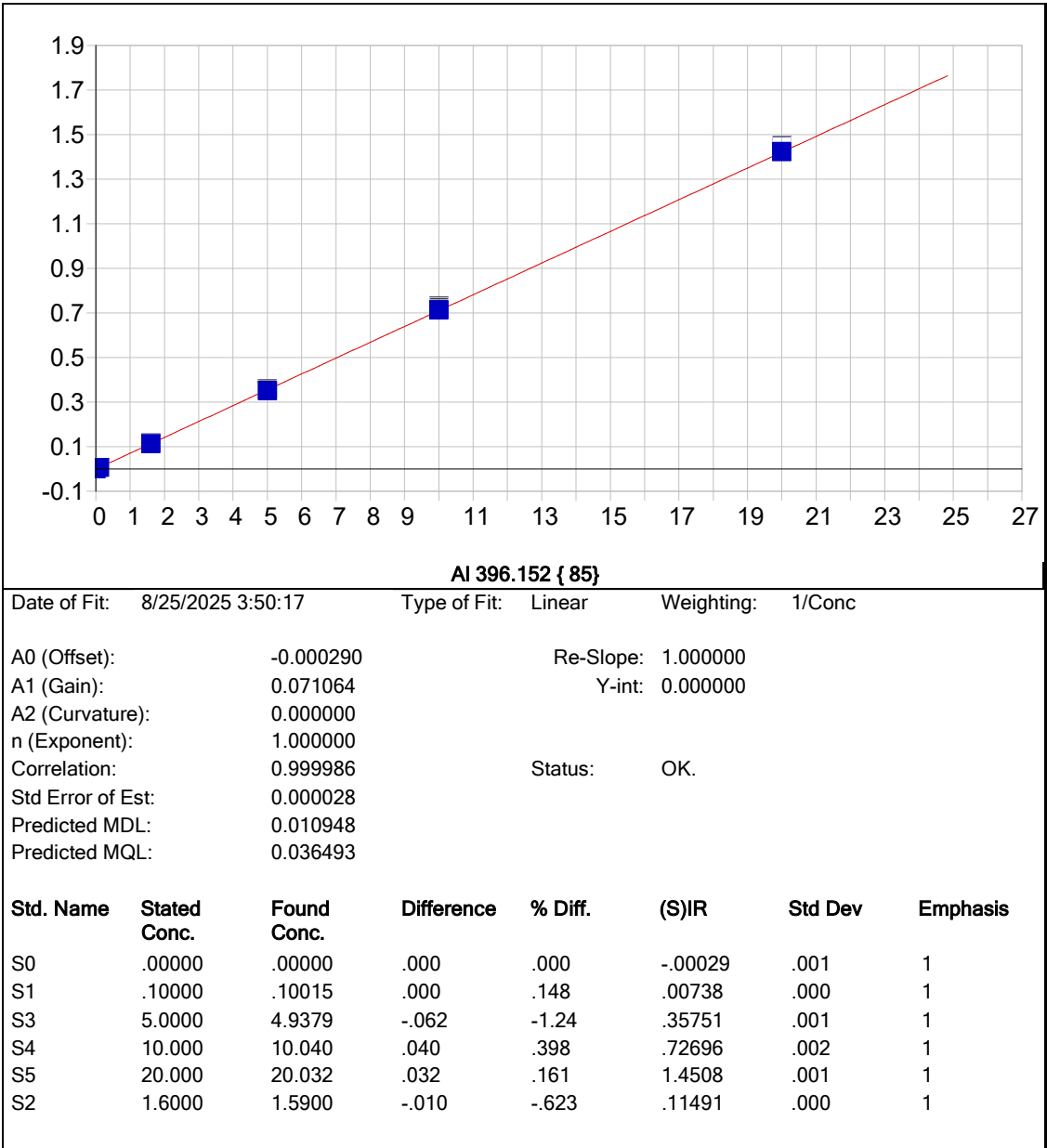


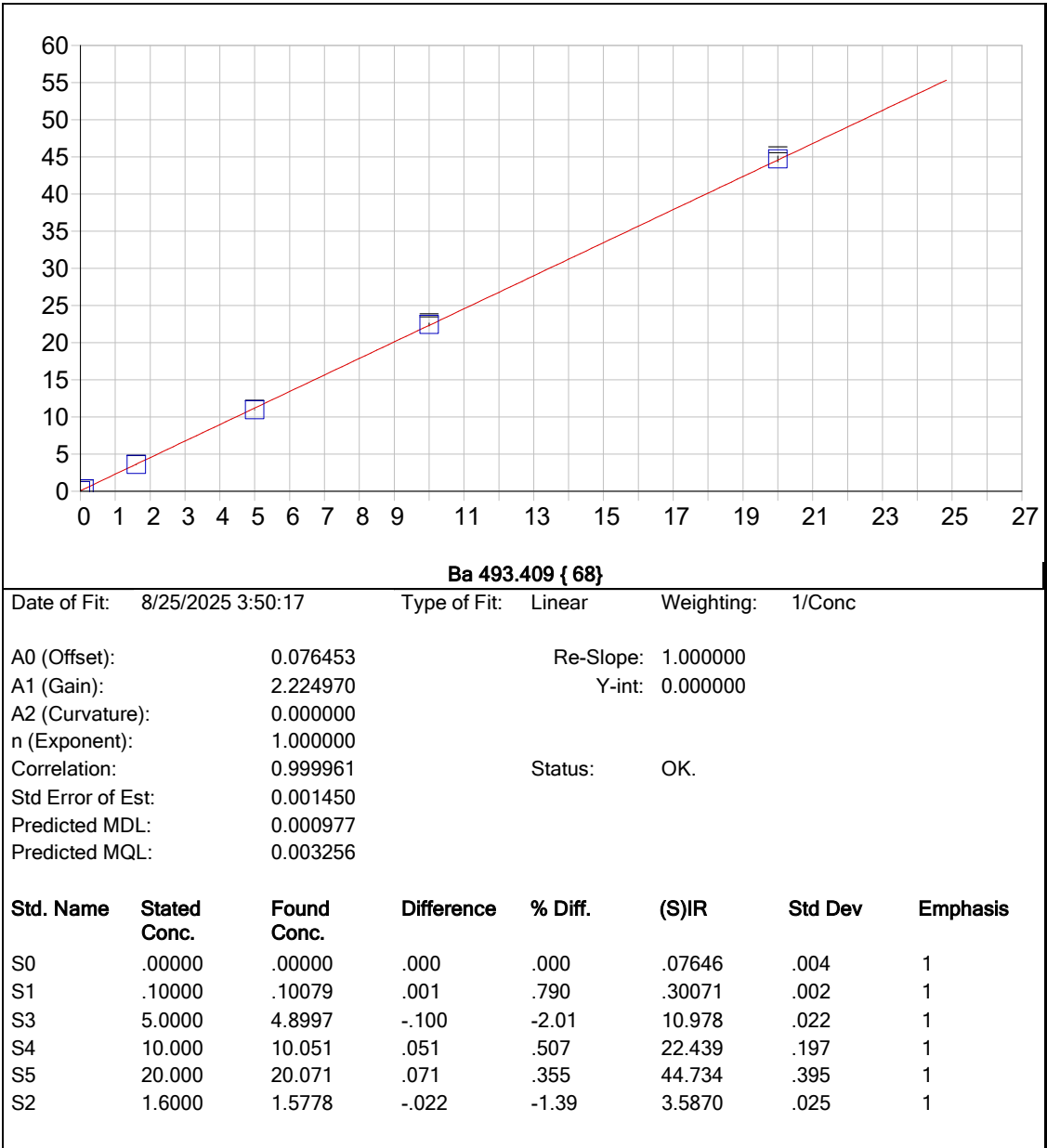


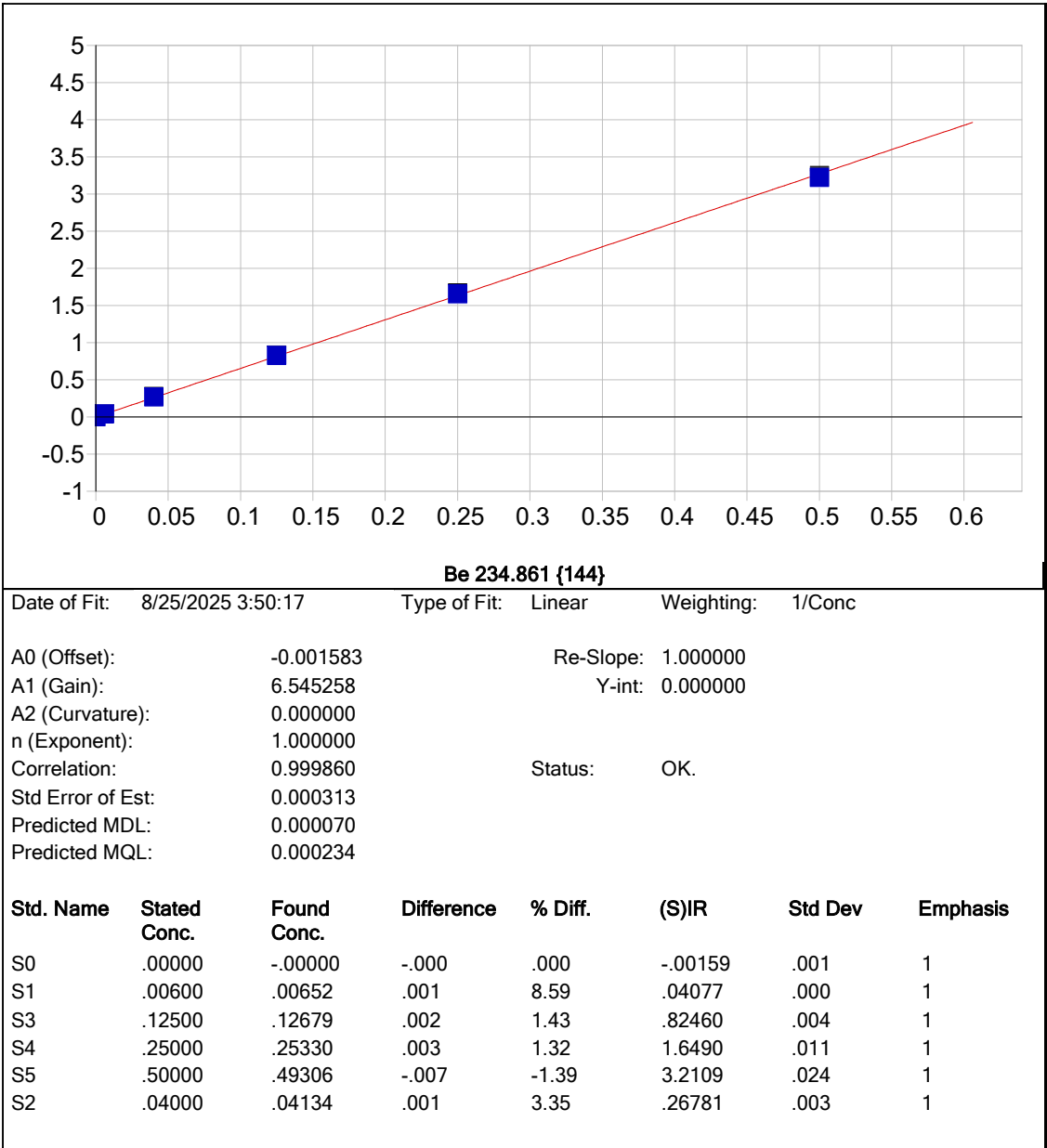


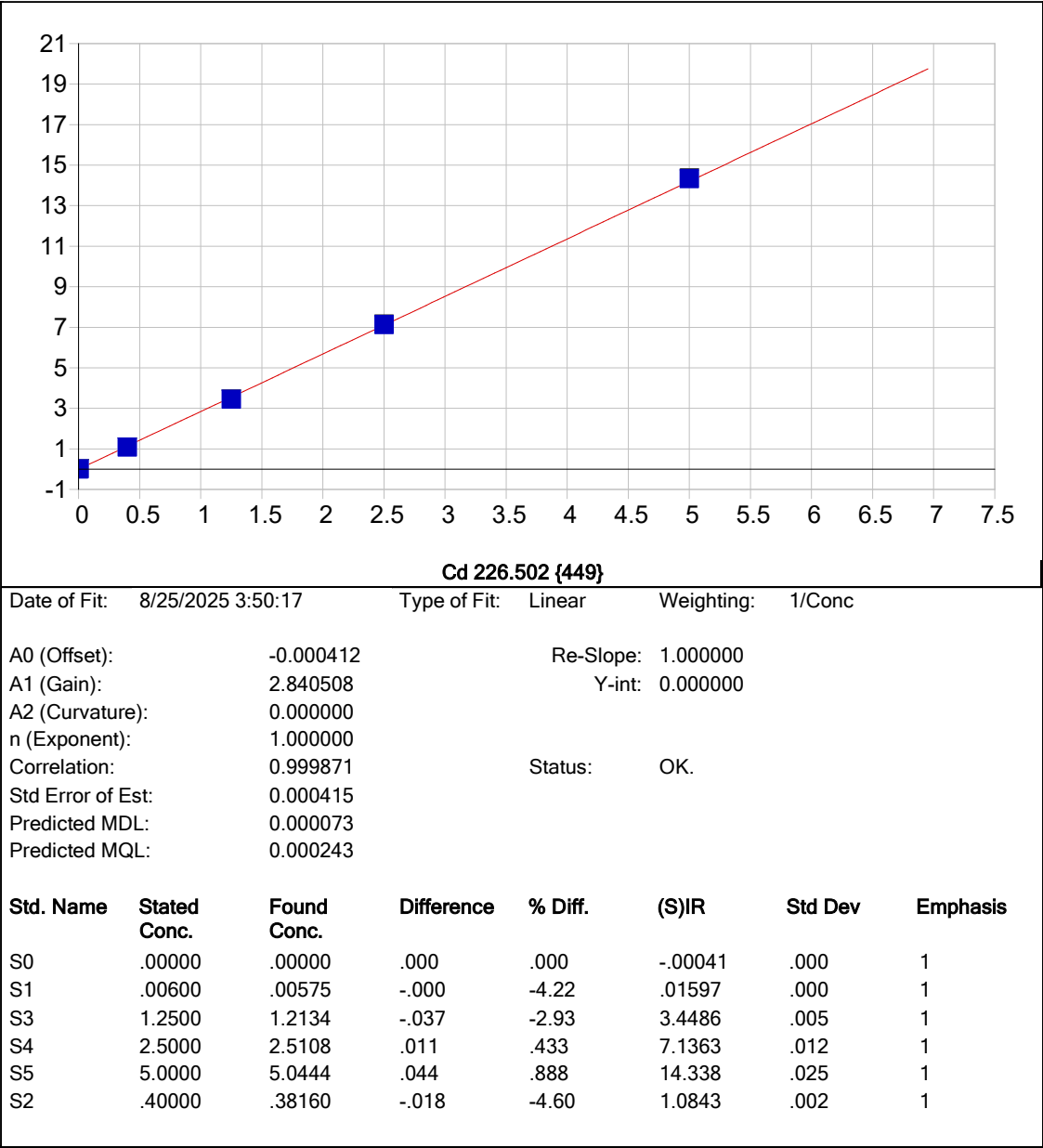


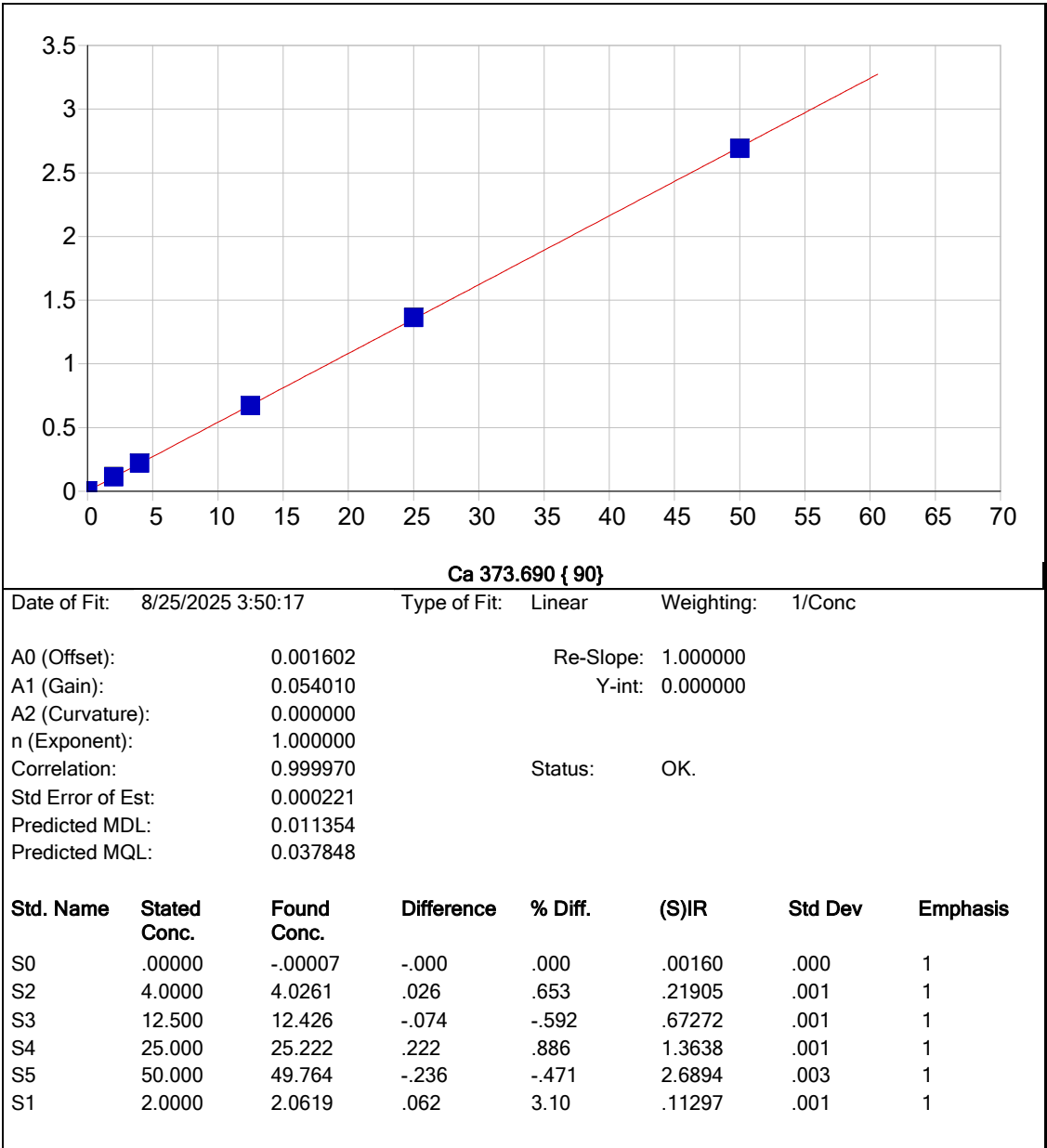


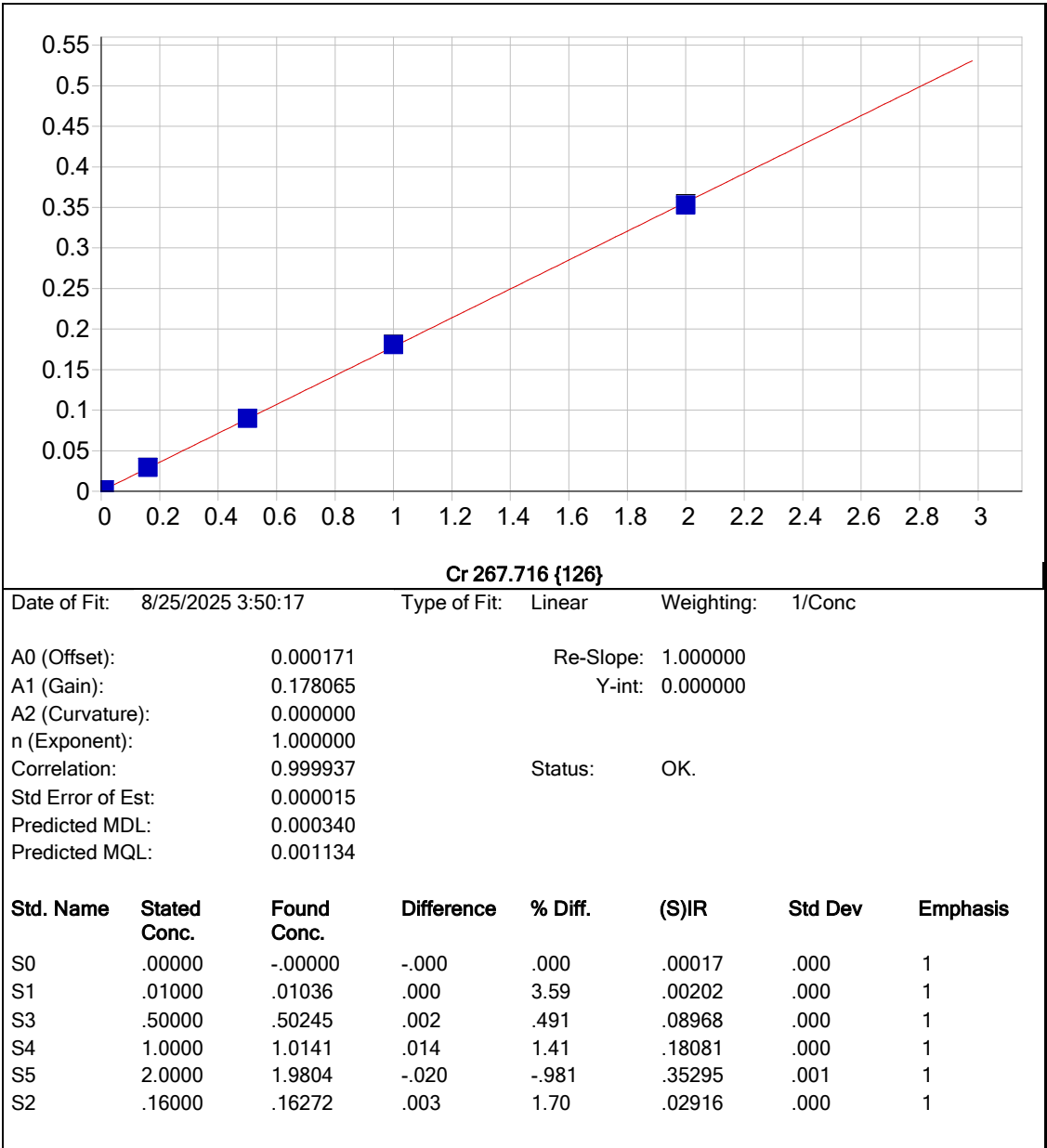


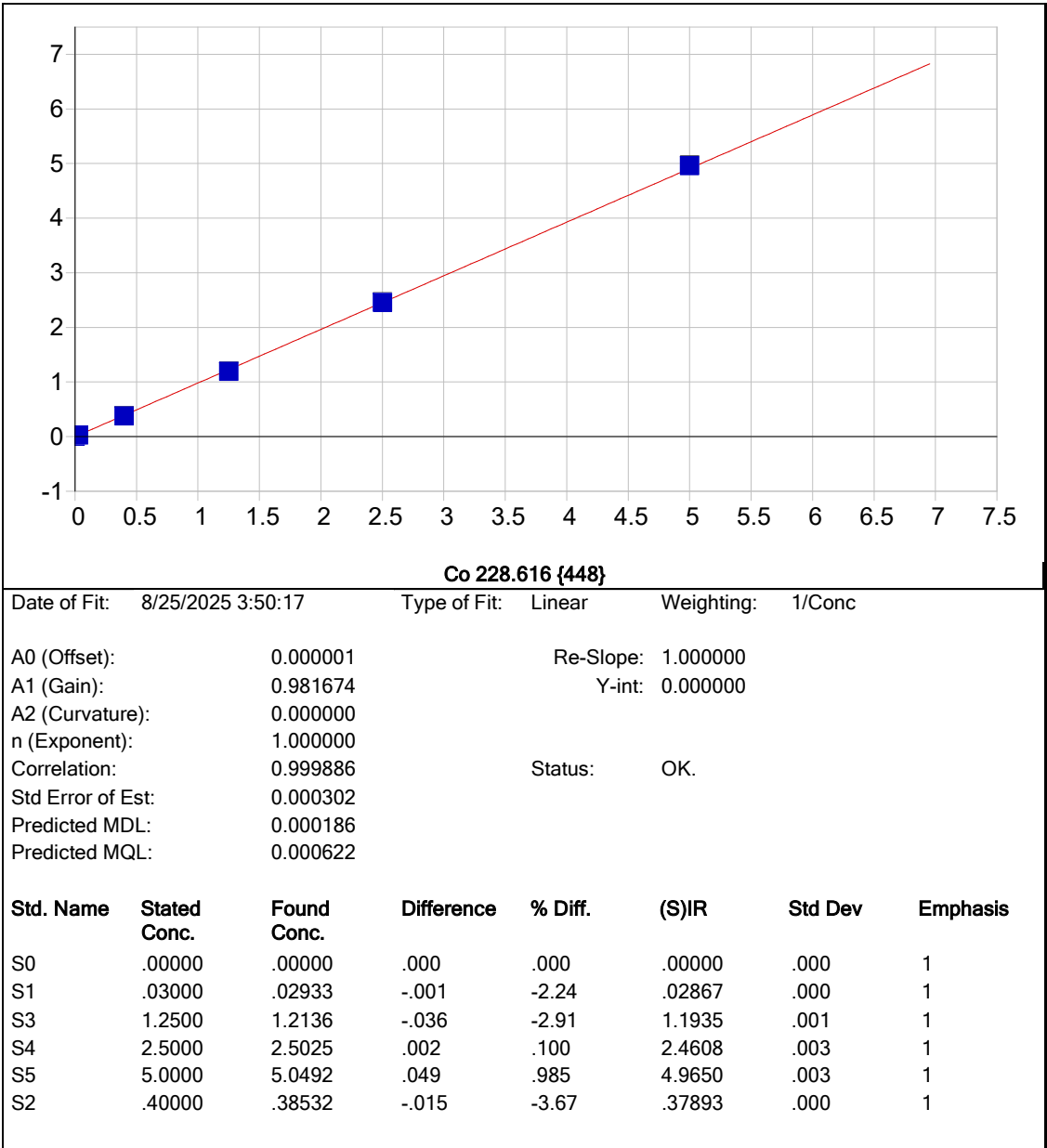


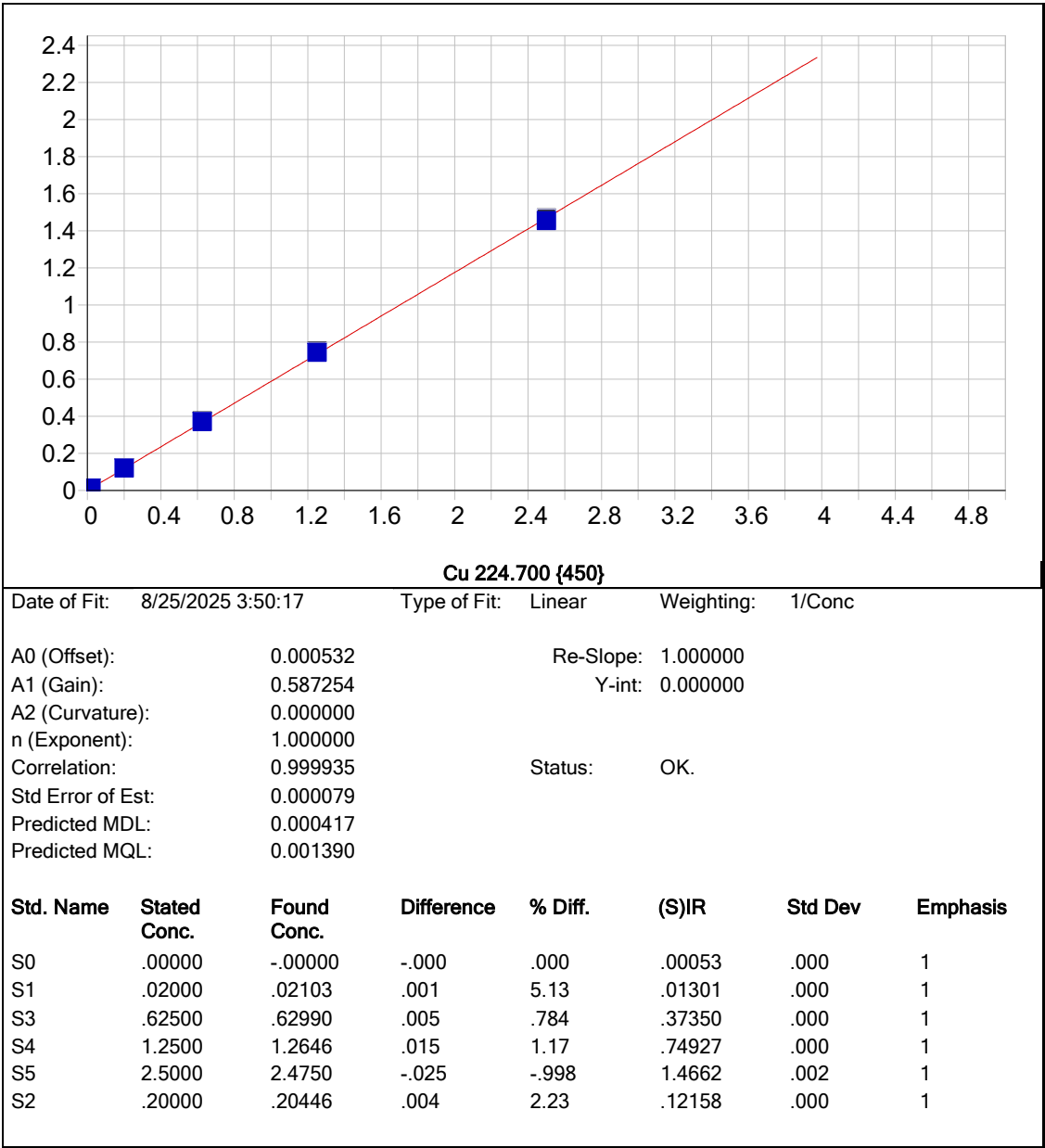


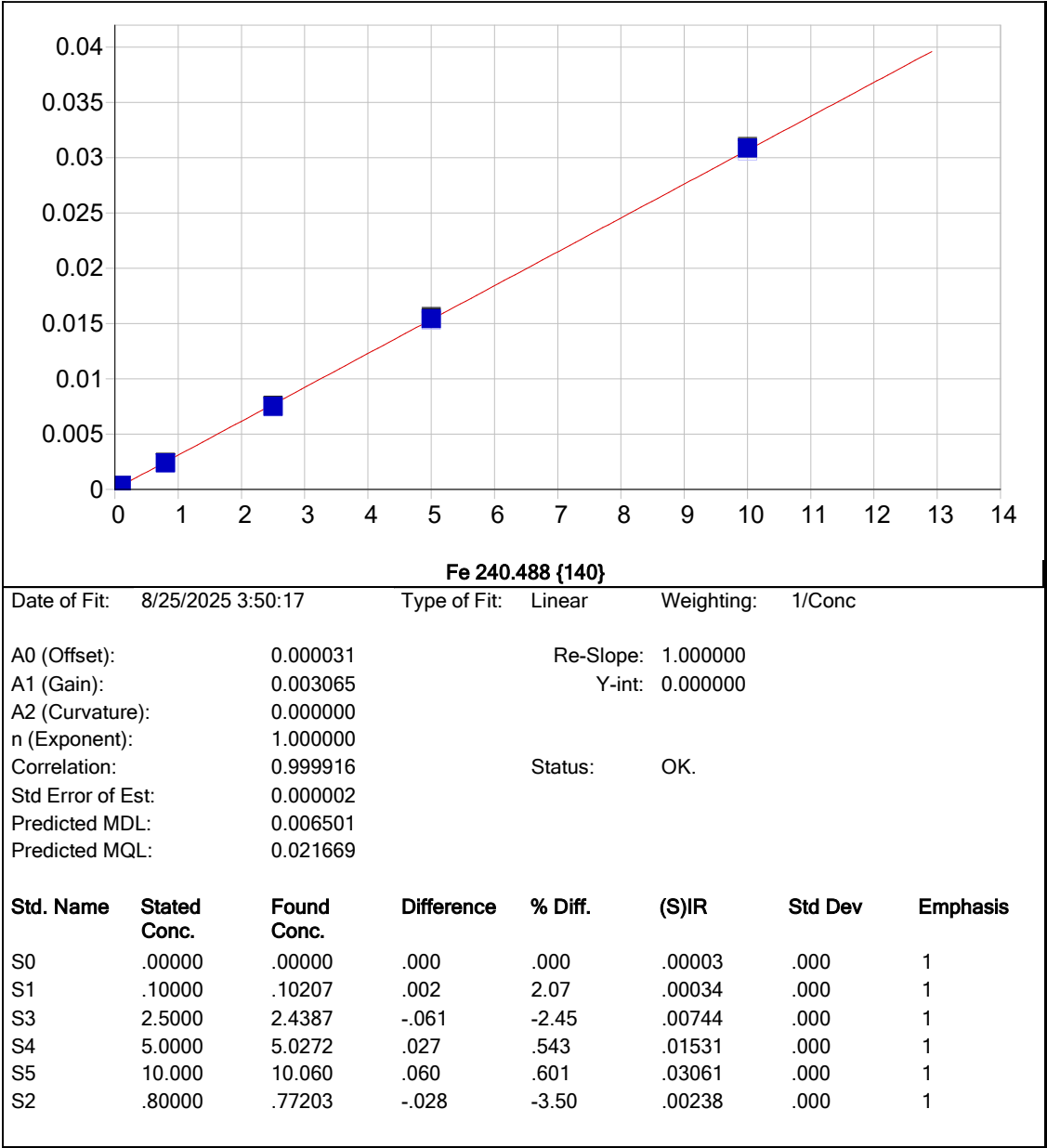


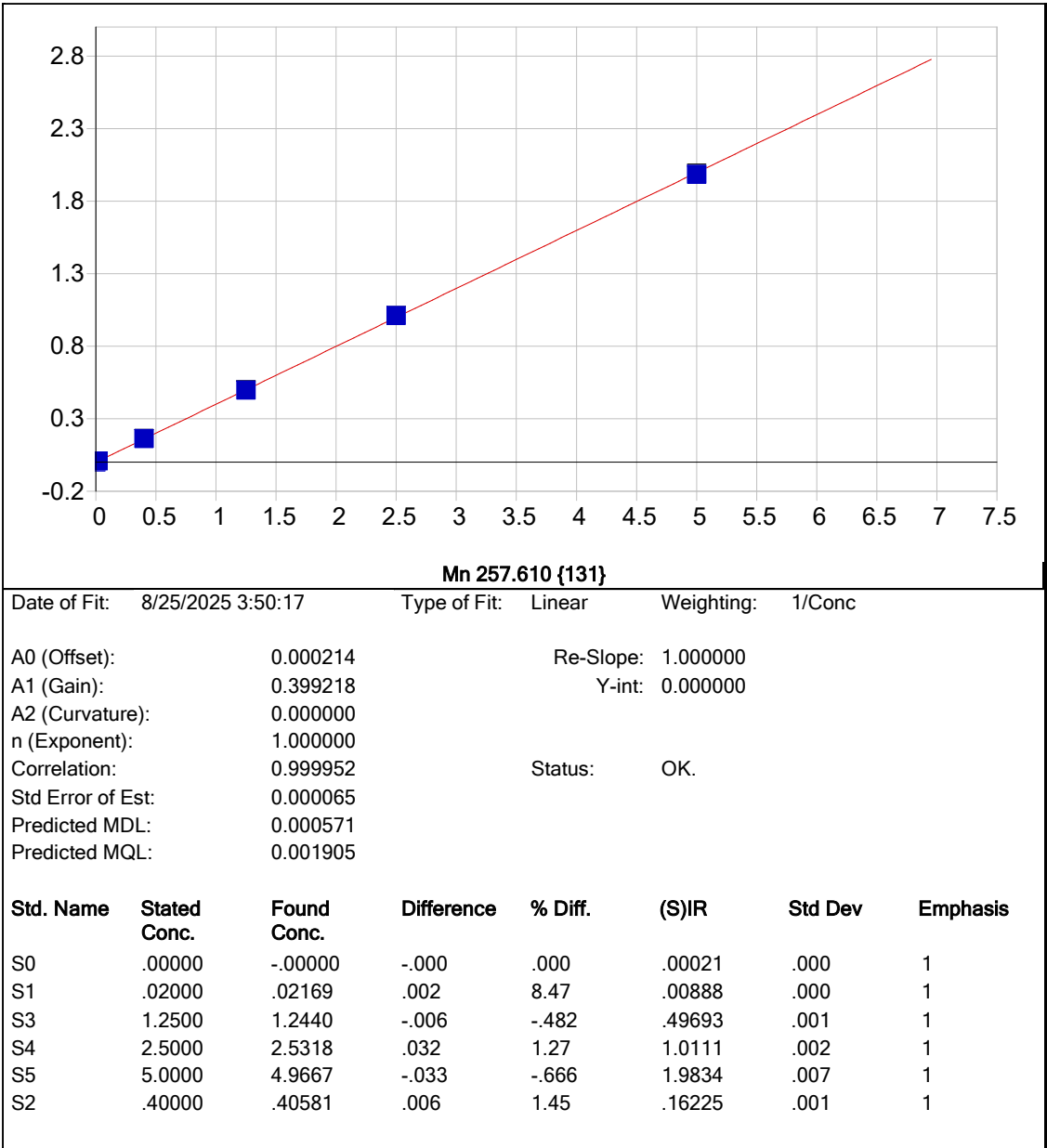


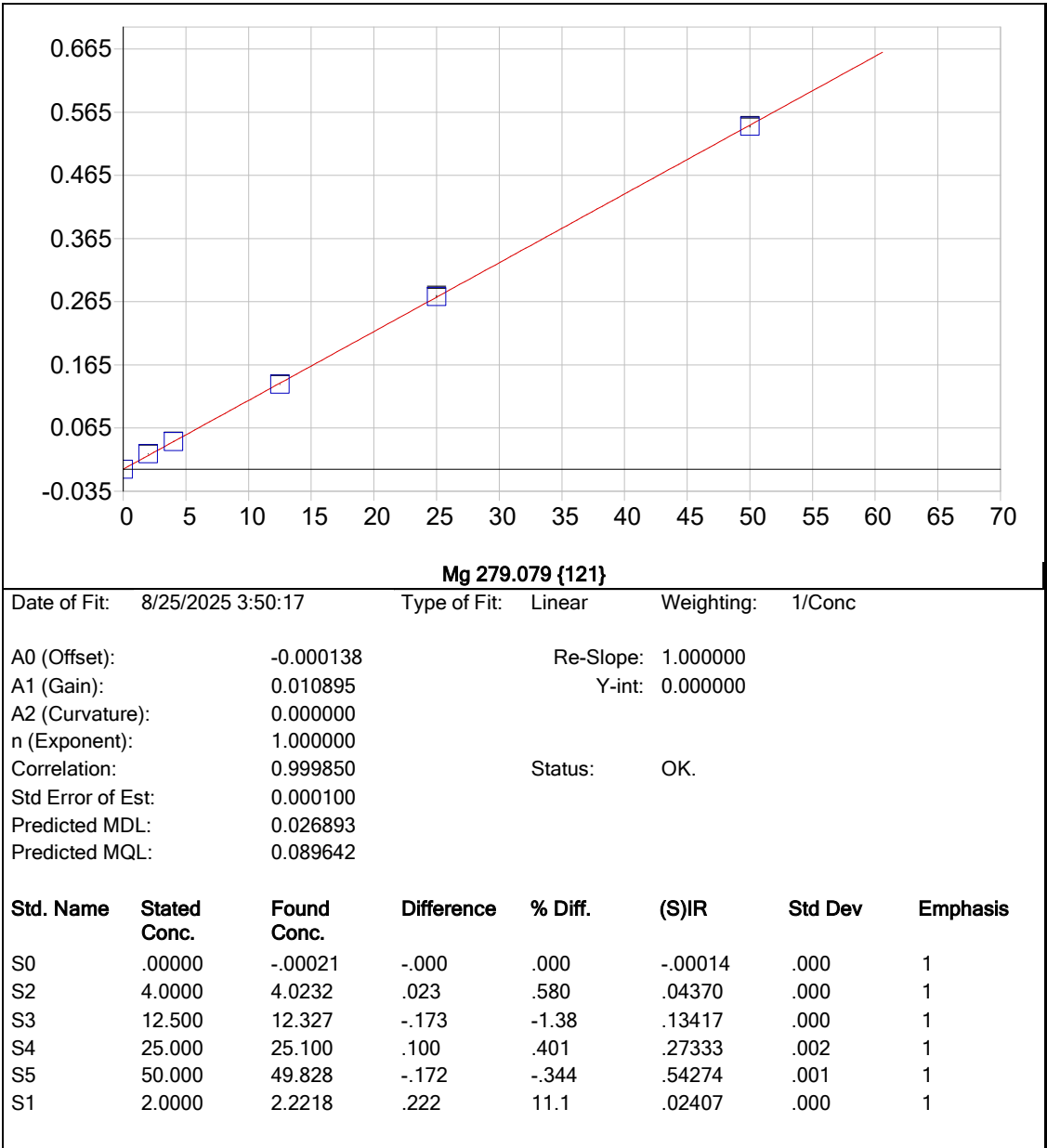


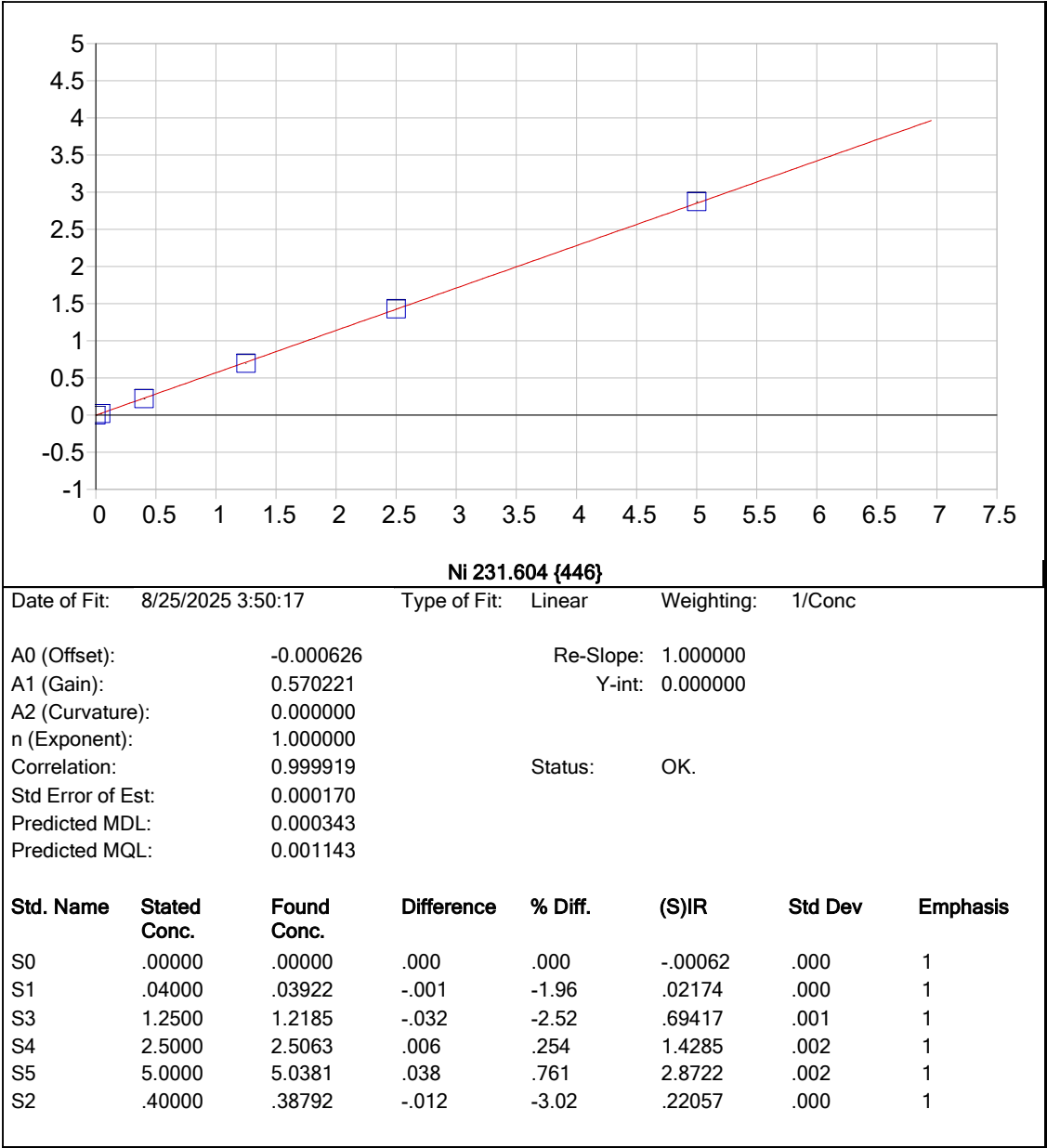


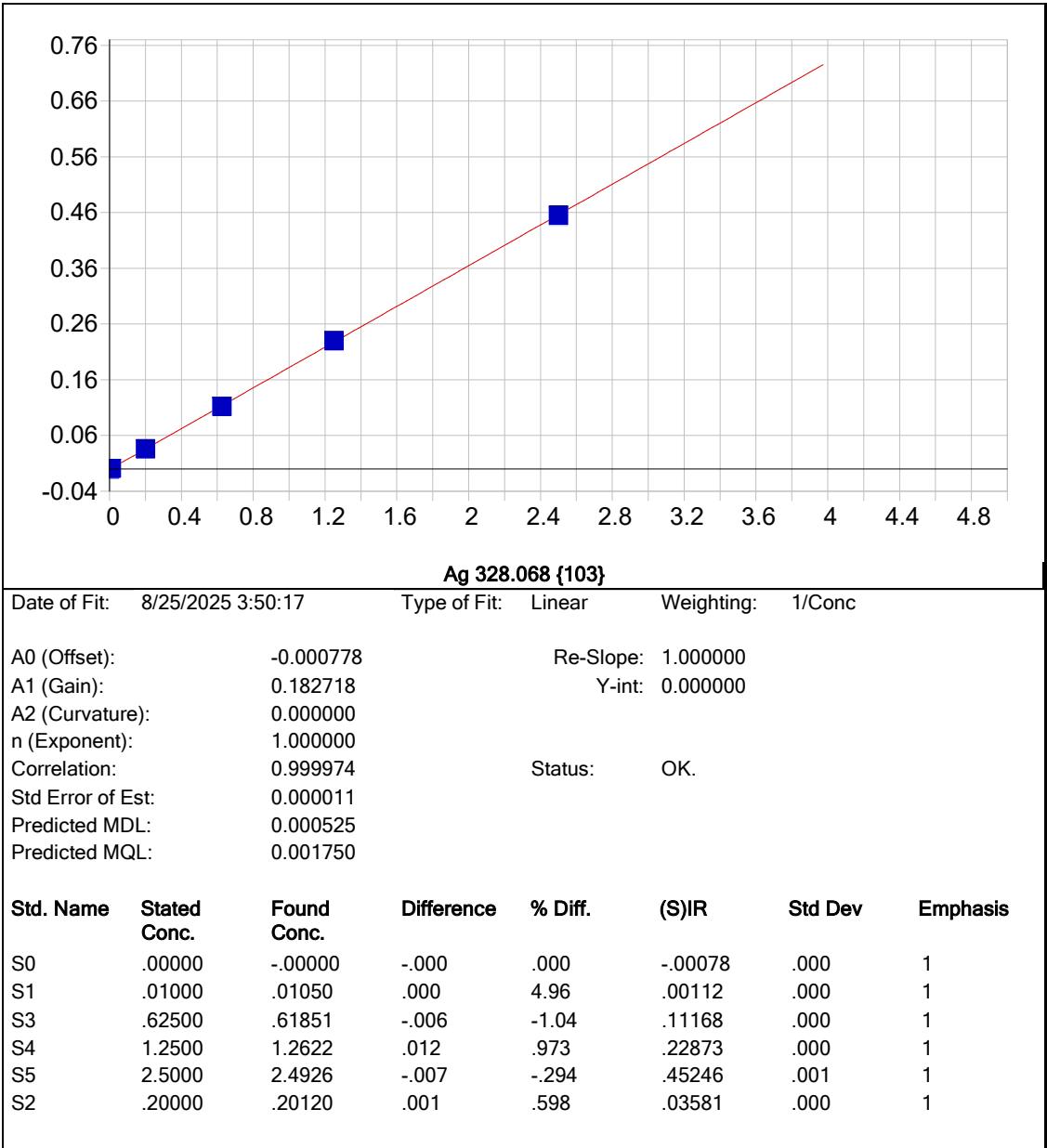


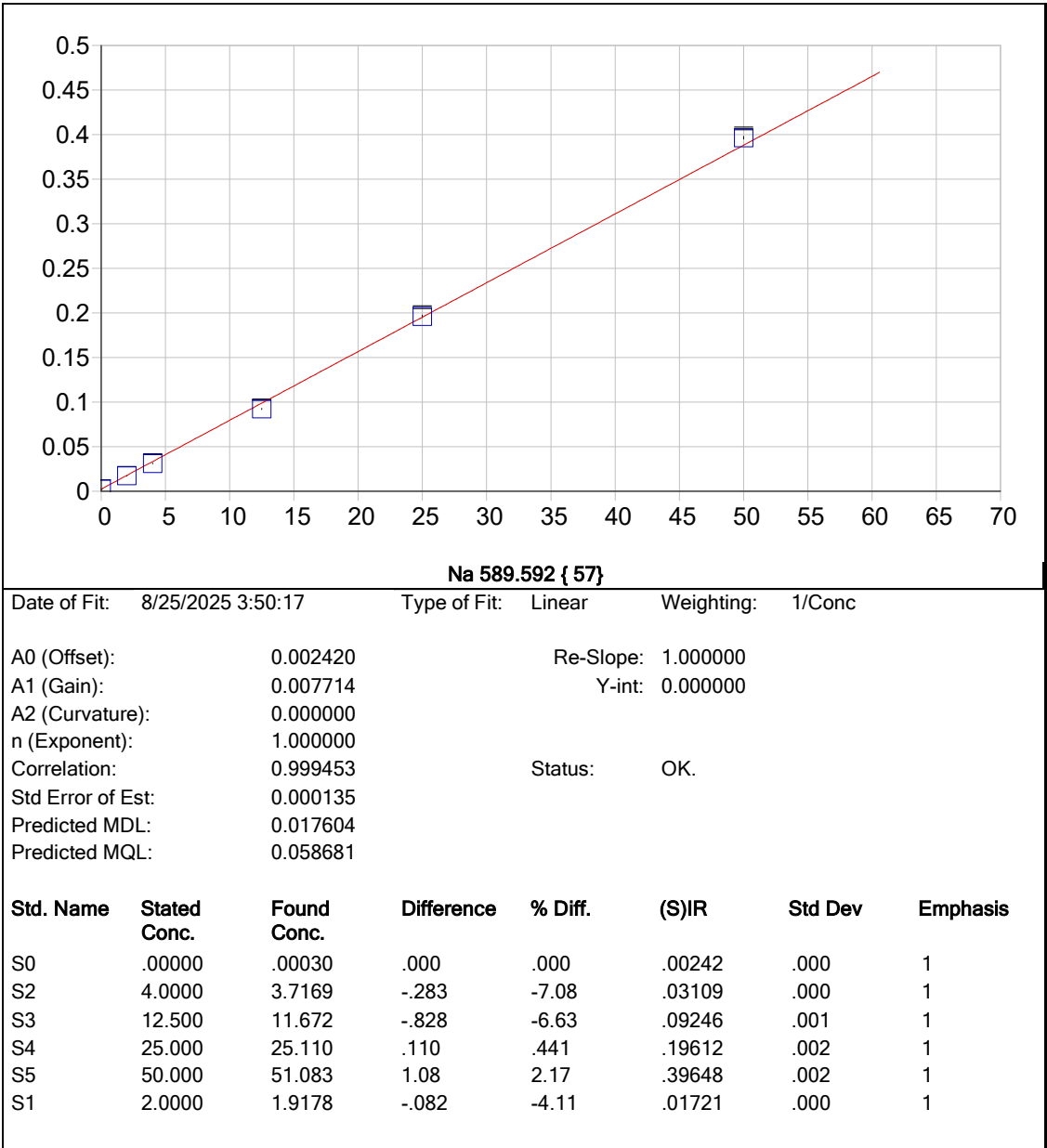


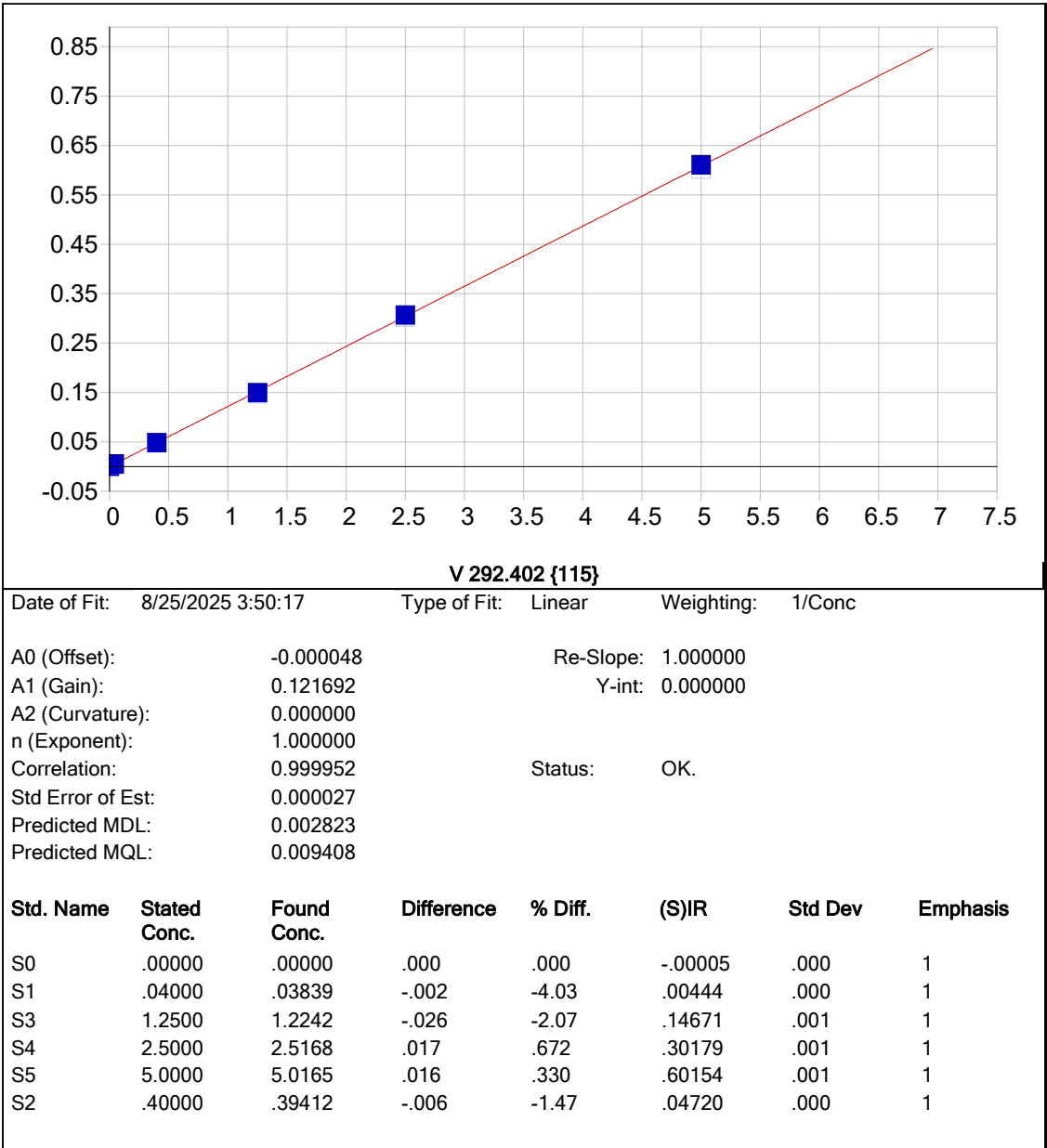


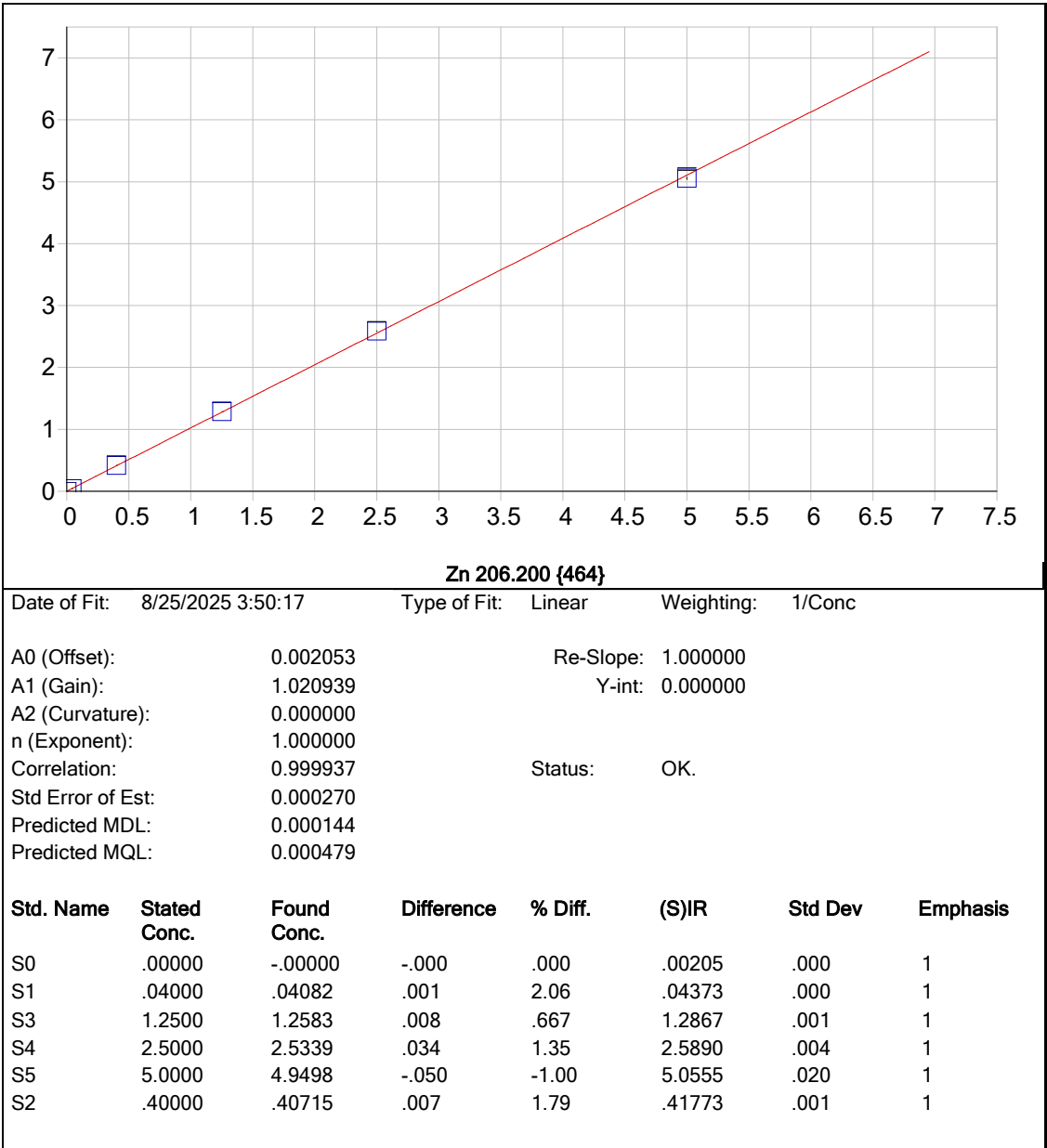






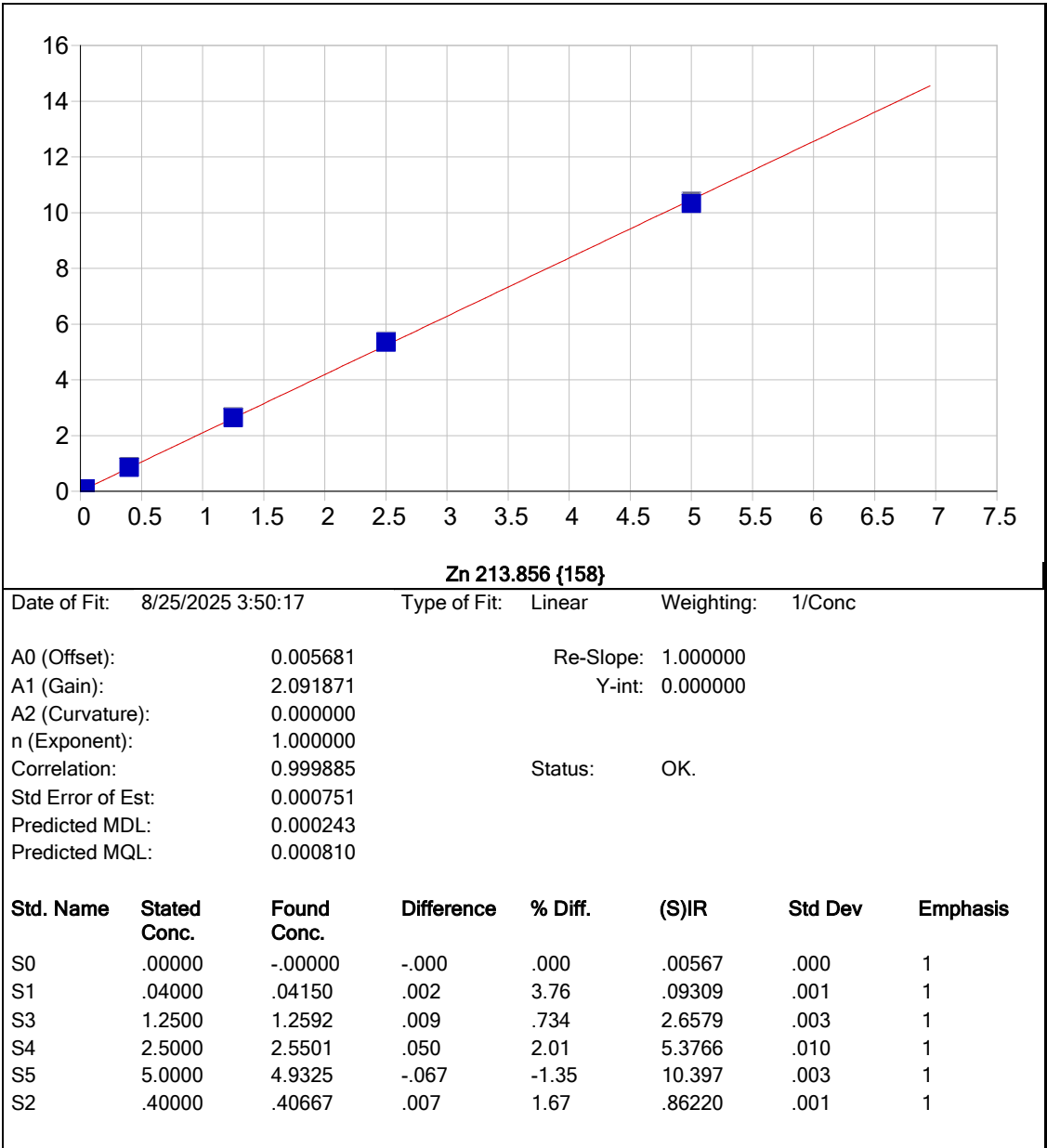


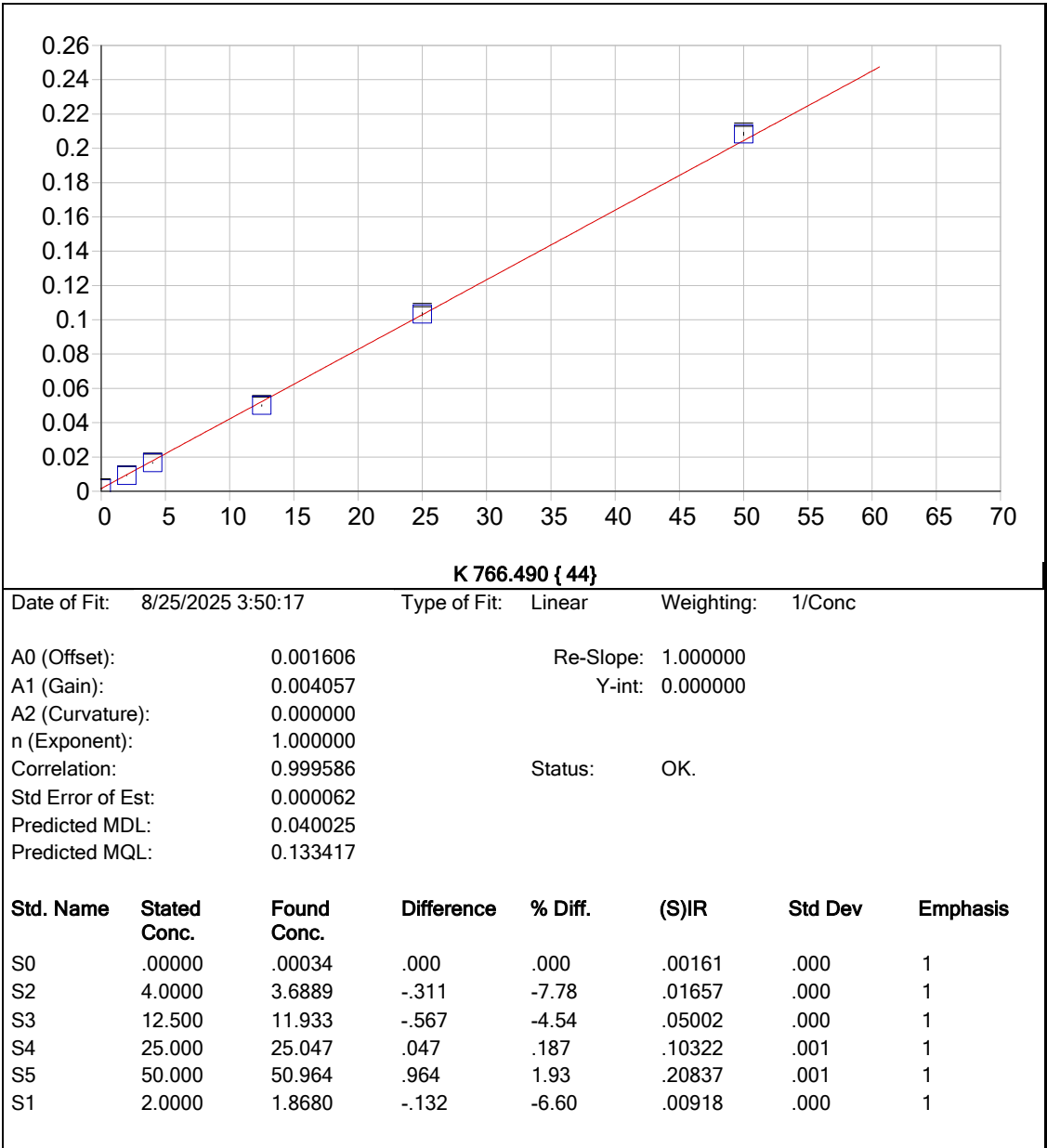


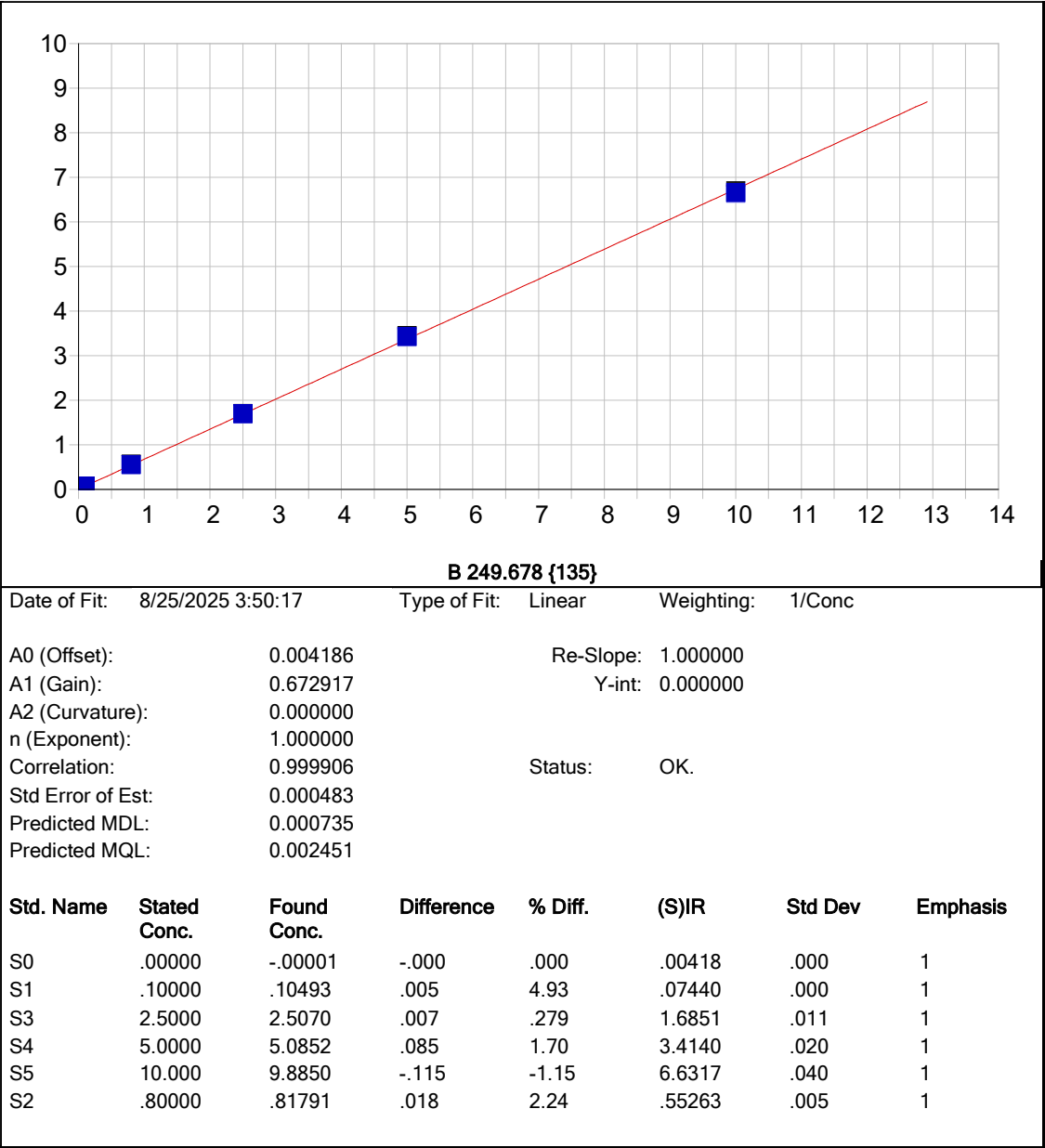


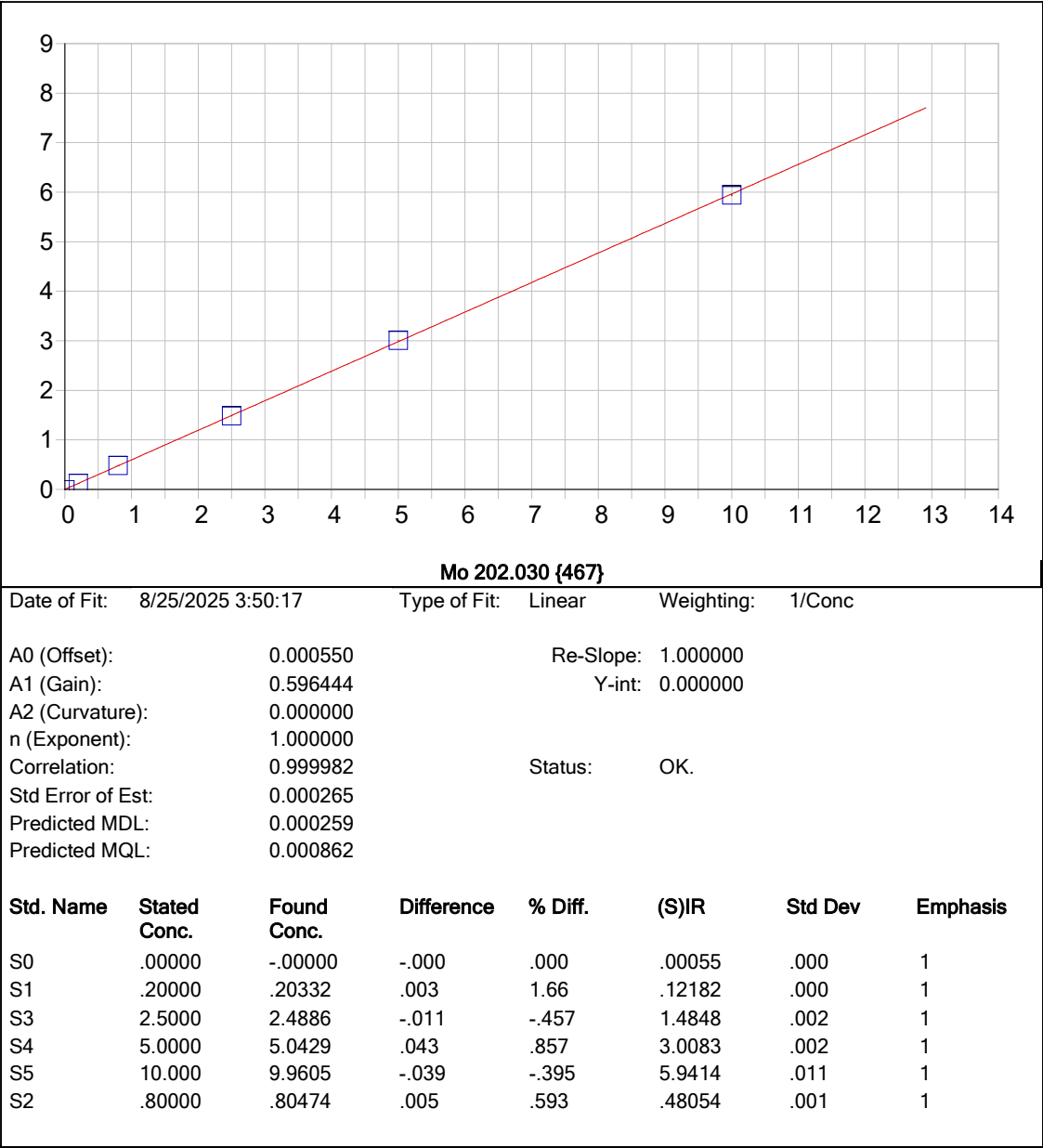
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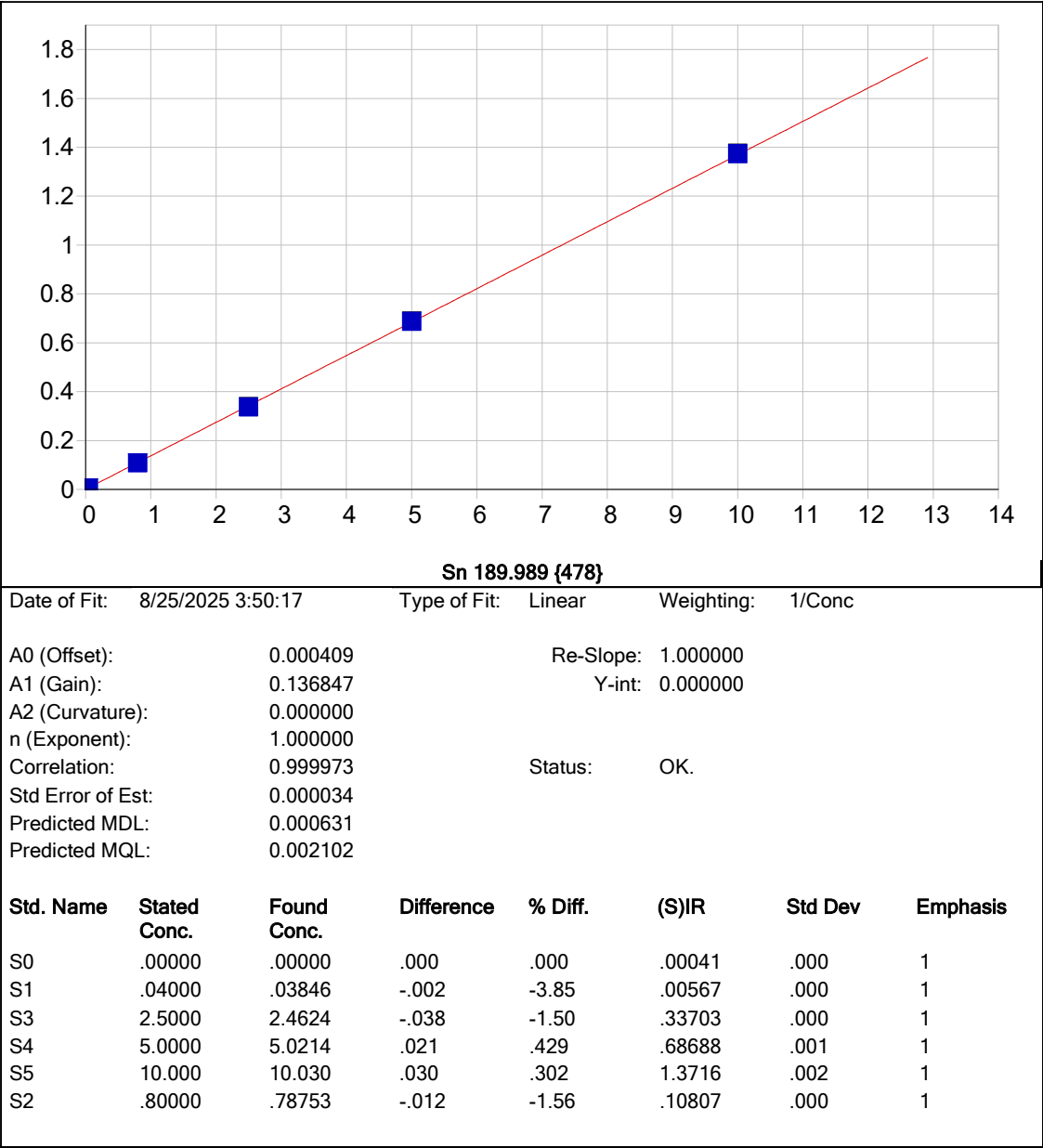
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A1 (Gain): 1.020939 Y-int: 0.000000
A2 (Curvature): 0.000000
n (Exponent): 1.000000
Correlation: 0.999937 Status: OK.
Std Error of Est: 0.000270
Predicted MDL: 0.000144
Predicted MQL: 0.000479

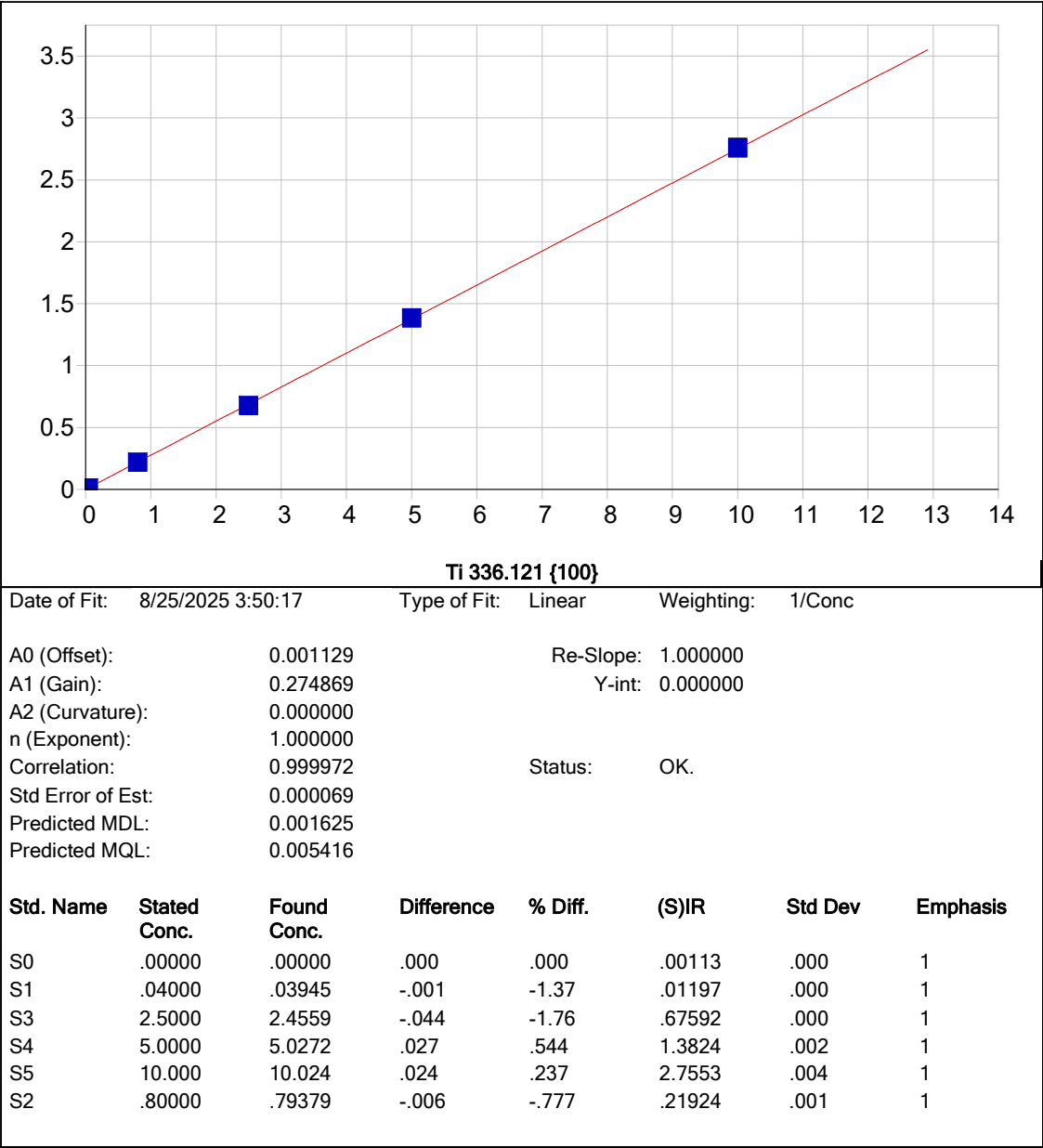


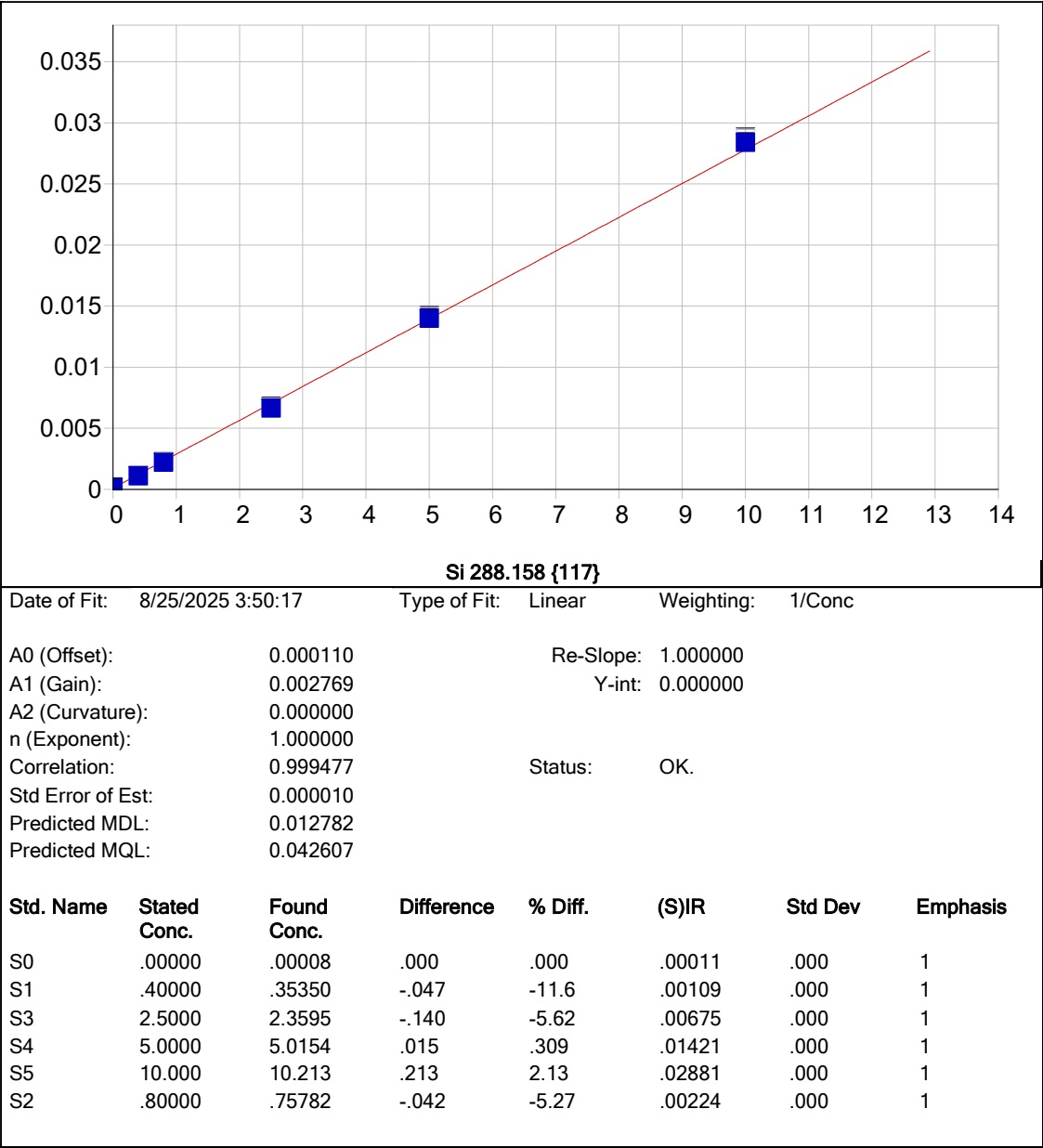


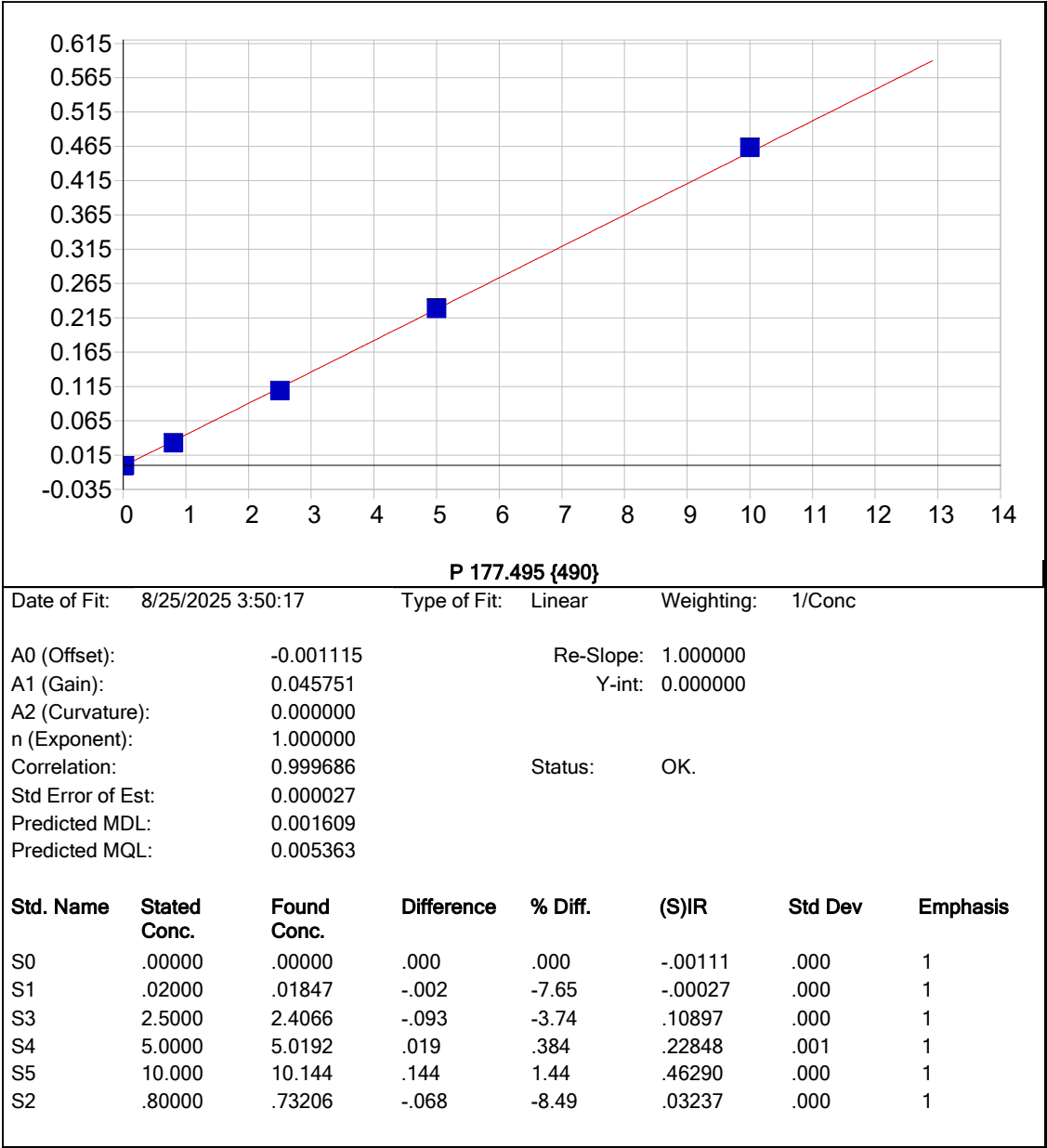


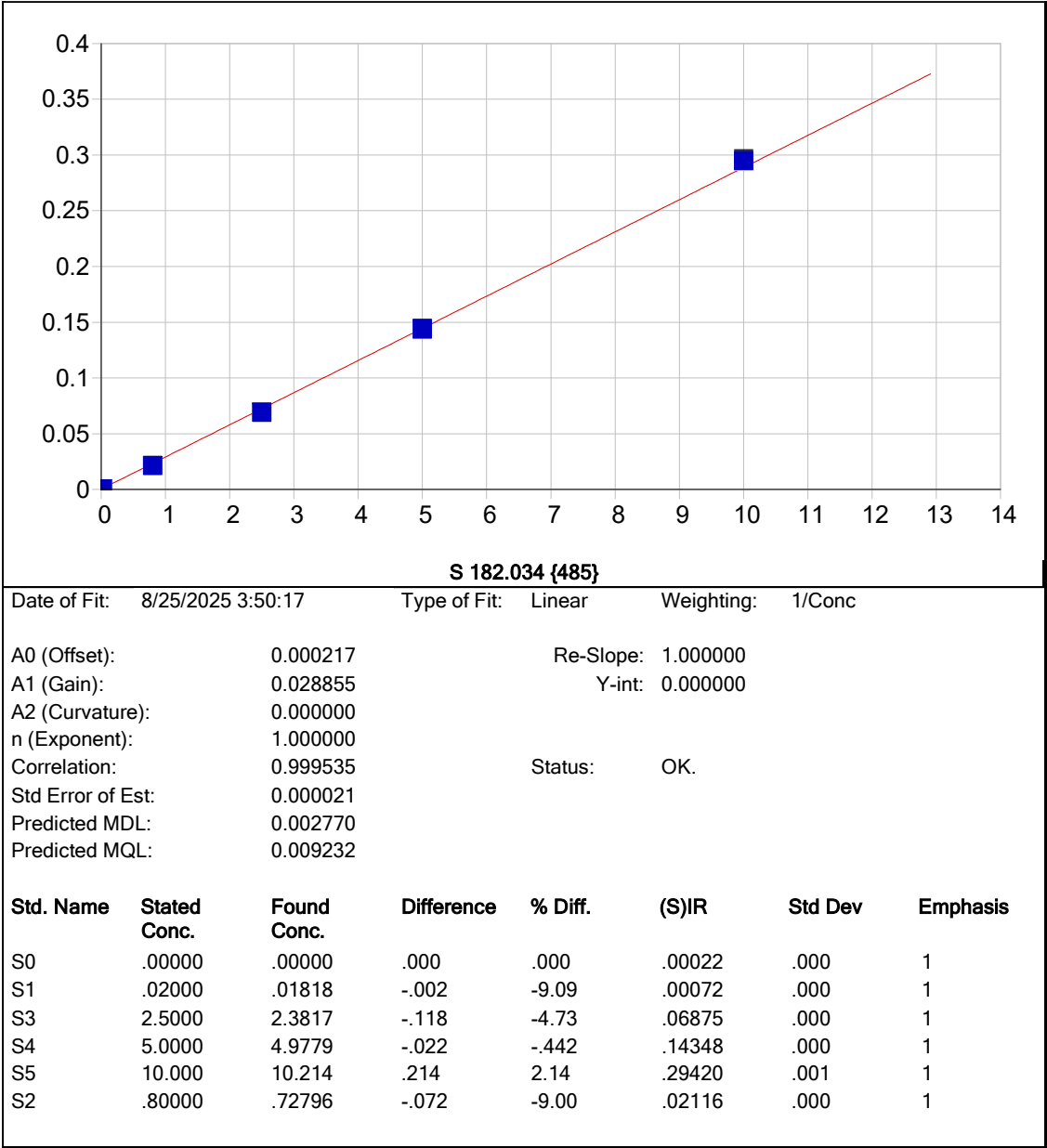


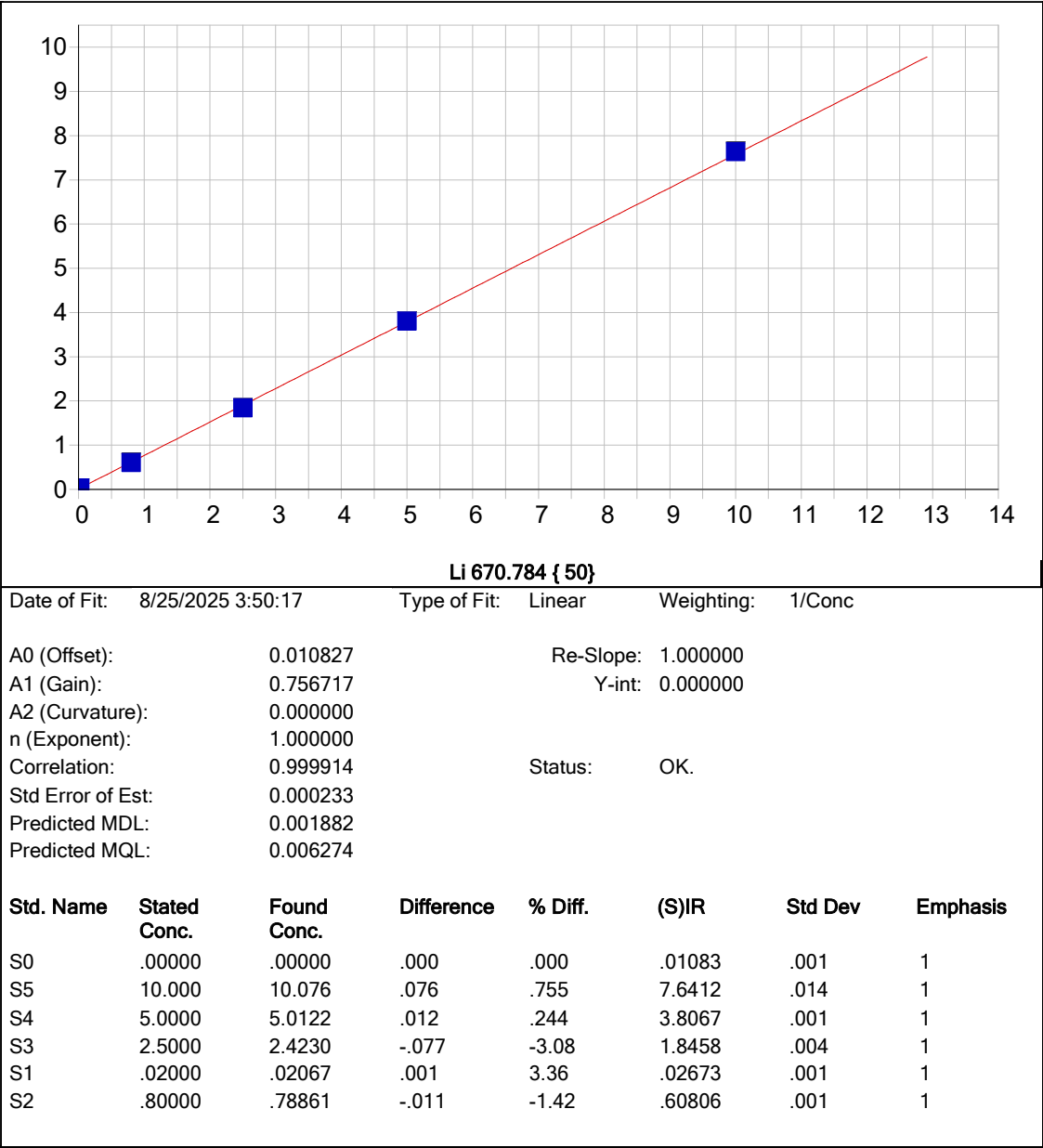


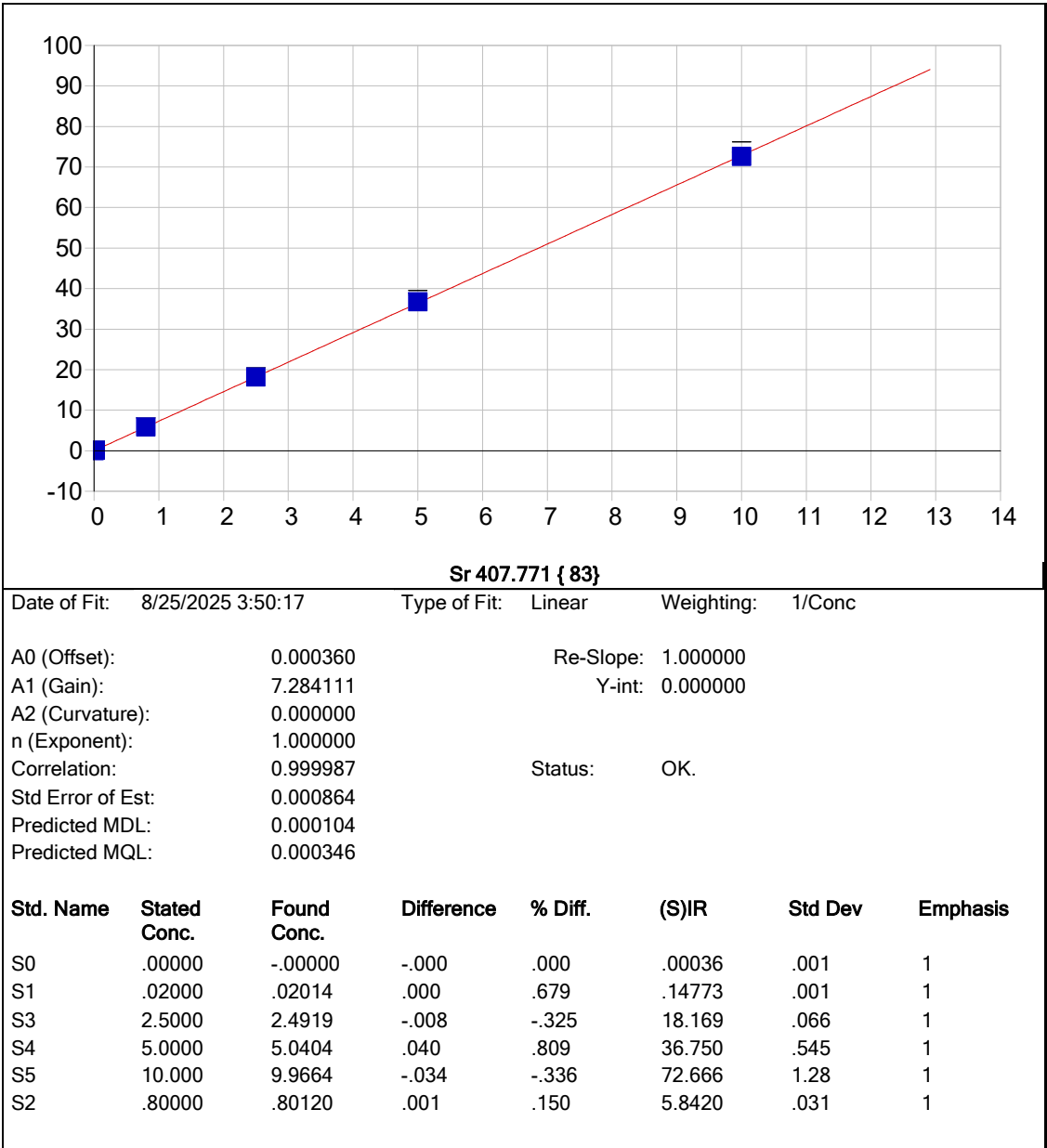


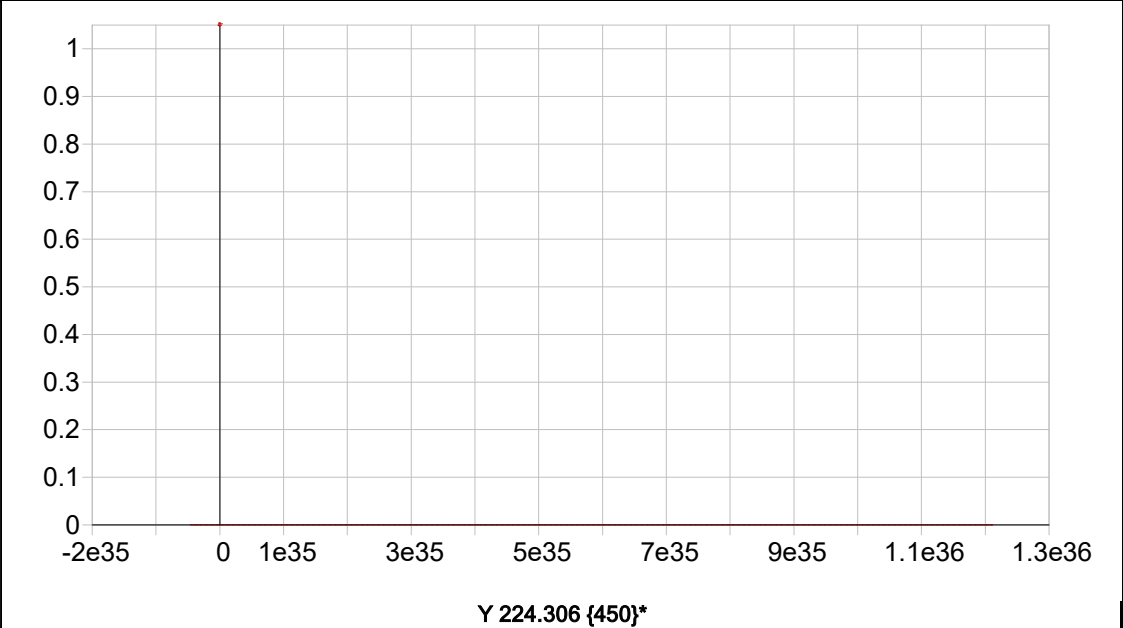






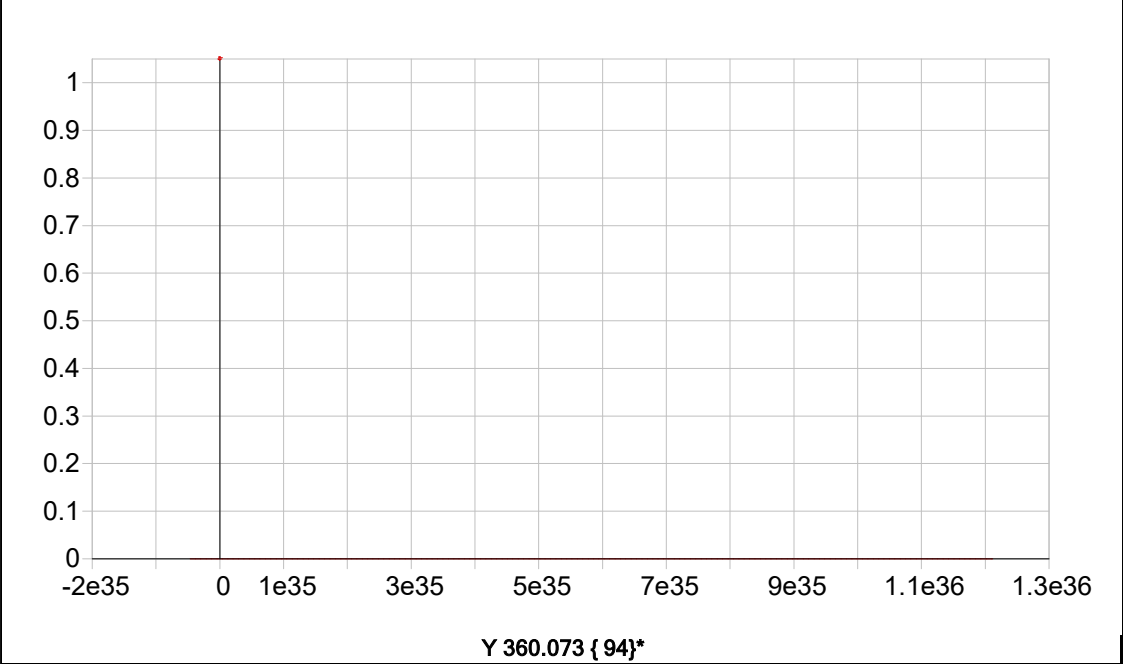




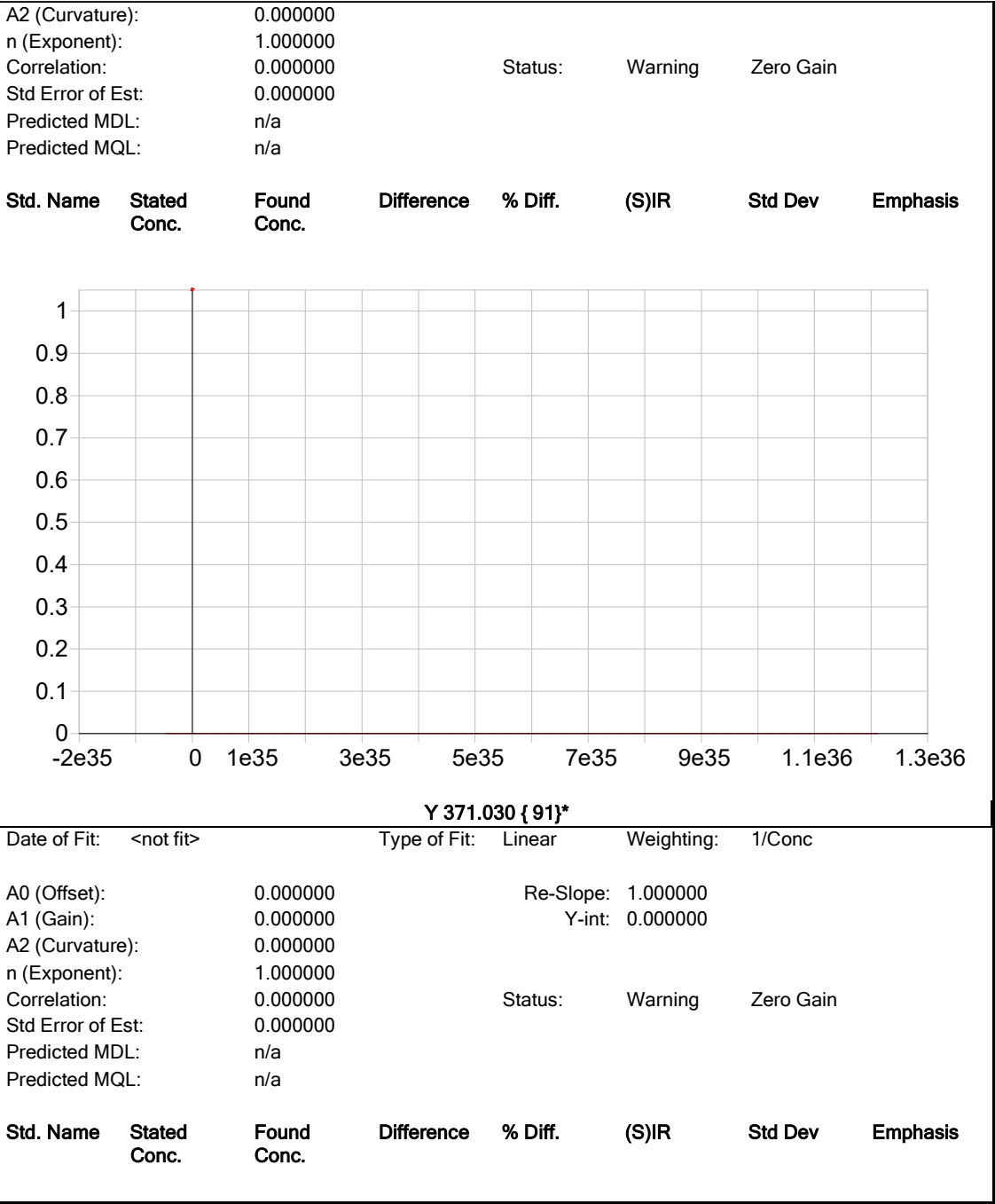


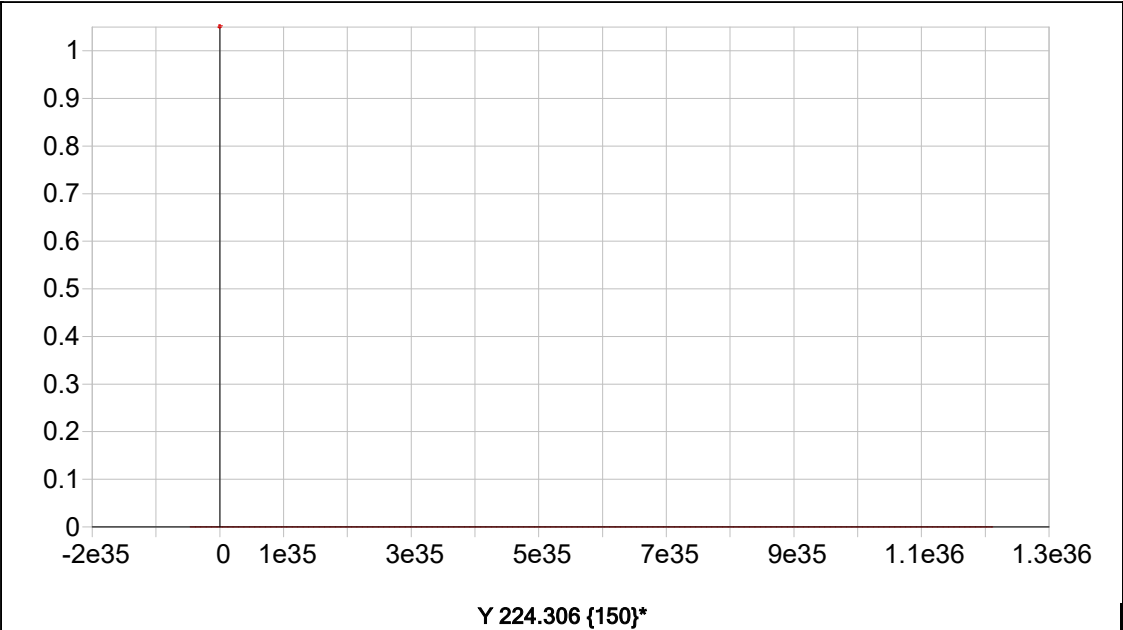
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A1 (Gain):	0.000000	Y-int:	0.000000		
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
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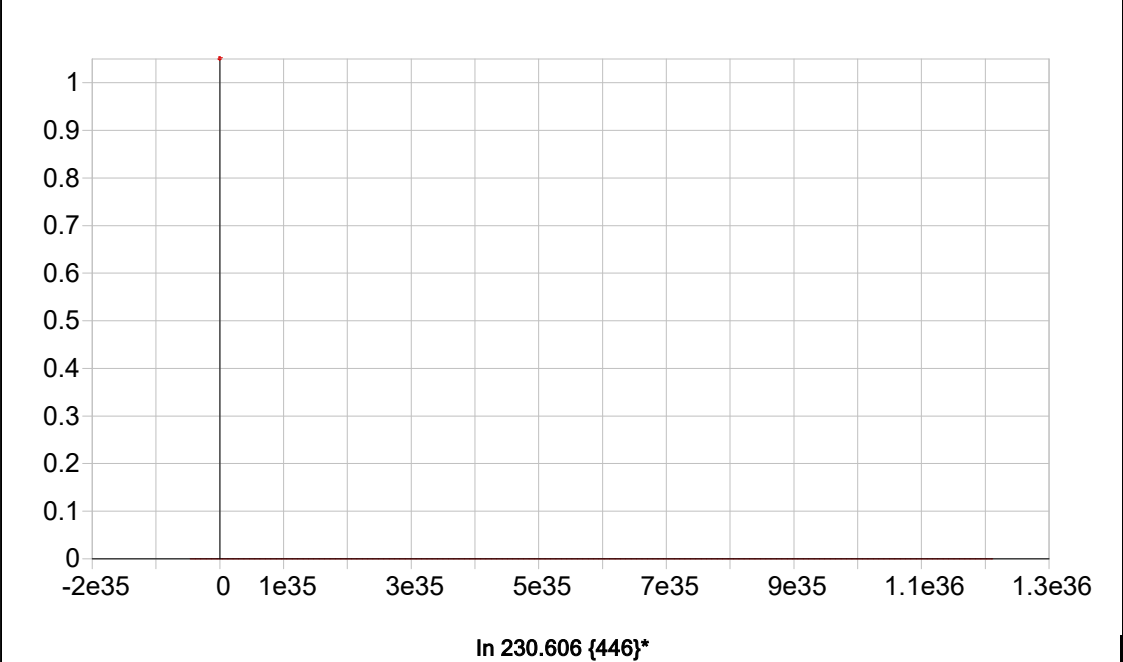
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
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A1 (Gain):	0.000000	Y-int:	0.000000		





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

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

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 : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pipette ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

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

Start Digest Date: 08/20/2025 Time : 13:30 Temp : 96 °C

End Digest Date: 08/20/2025 Time : 16:32 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: *SLV*

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	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
08/20/25 17:32	<i>SLV met d/o</i>	<i>[Signature]</i>
	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
PB169324BL	PBW324	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	12
PB169324BS	LCS324	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	13
Q2902-01	OUTFALL-DSN-001	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	14
Q2902-04	OUTFALL-DSN-002	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	15
Q2902-04MS	OUTFALL-DSN-002MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	17
Q2902-04MSD	OUTFALL-DSN-002MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	18
Q2902-04DUP	OUTFALL-DSN-002DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	16
Q2904-01	001 WILLETS PT BLVD(JULY)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	19
Q2904-02	002 35TH AVE (JULY)	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	20

WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB169324

Worklist ID : 191364

Department : Digestion

Date : 08-20-2025 09:51:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2902-01	OUTFALL-DSN-001	Water	Metals Group3	1:1 HNO3 to pH < 2	TRIS02	J23	08/19/2025	200.7
Q2902-04	OUTFALL-DSN-002	Water	Metals Group3	1:1 HNO3 to pH < 2	TRIS02	J23	08/19/2025	200.7
Q2904-01	001 williets Pt Blvd(July)	Water	Metals Group 10	1:1 HNO3 to pH < 2	TULL01	J33	08/19/2025	200.7
Q2904-02	002 35th Ave (JULY)	Water	Metals Group 10	1:1 HNO3 to pH < 2	TULL01	J33	08/19/2025	200.7

Date/Time 08/20/25 13:15

Raw Sample Received by: S18met dia

Raw Sample Relinquished by: APC sm

Date/Time 08/20/25 14:15

Raw Sample Received by: APC sm

Raw Sample Relinquished by: S18met dia

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136940

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	08/22/25 11:12		Jaswal	OK
2	S1	S1	CAL2	08/22/25 11:16		Jaswal	OK
3	S2	S2	CAL3	08/22/25 11:20		Jaswal	OK
4	S3	S3	CAL4	08/22/25 11:24		Jaswal	OK
5	S4	S4	CAL5	08/22/25 11:28		Jaswal	OK
6	S5	S5	CAL6	08/22/25 11:33		Jaswal	OK
7	ICV01	ICV01	ICV	08/22/25 11:37		Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/22/25 11:45		Jaswal	OK
9	ICB01	ICB01	ICB	08/22/25 11:50		Jaswal	OK
10	CRI01	CRI01	CRDL	08/22/25 11:56		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/22/25 12:00		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/22/25 12:04		Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/22/25 12:09		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/22/25 12:13		Jaswal	OK
15	CCV01	CCV01	CCV	08/22/25 12:18		Jaswal	OK
16	CCB01	CCB01	CCB	08/22/25 12:22		Jaswal	OK
17	LR-2	LR-2	HIGH STD	08/22/25 12:31		Jaswal	OK
18	LR-3	LR-3	HIGH STD	08/22/25 12:35		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136940

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	PB169324BL	PB169324BL	MB	08/22/25 12:45		Jaswal	OK
20	Q2902-04	OUTFALL-DSN-002	SAM	08/22/25 13:07		Jaswal	OK
21	Q2902-04DUP	OUTFALL-DSN-002D	DUP	08/22/25 13:14		Jaswal	OK
22	LR-1	LR-1	HIGH STD	08/22/25 13:19		Jaswal	OK
23	Q2902-04L	OUTFALL-DSN-002L	SD	08/22/25 13:27		Jaswal	OK
24	Q2902-04MS	OUTFALL-DSN-002M	MS	08/22/25 13:32		Jaswal	OK
25	CCV02	CCV02	CCV	08/22/25 13:36		Jaswal	OK
26	CCB02	CCB02	CCB	08/22/25 13:40		Jaswal	OK
27	Q2902-04MSD	OUTFALL-DSN-002M	MSD	08/22/25 13:44		Jaswal	OK
28	Q2902-04A	OUTFALL-DSN-002A	PS	08/22/25 13:48		Jaswal	OK
29	Q2904-01	001 willets Pt Blvd(july	SAM	08/22/25 13:52		Jaswal	OK
30	Q2904-02	002 35th Ave (JULY)	SAM	08/22/25 13:56		Jaswal	OK
31	PB169324BS	PB169324BS	LCS	08/22/25 14:00		Jaswal	OK
32	PB169338BL	PB169338BL	MB	08/22/25 14:04		Jaswal	OK
33	PB169338BS	PB169338BS	LCS	08/22/25 14:09		Jaswal	OK
34	Q2909-03	4066	SAM	08/22/25 14:13		Jaswal	OK
35	Q2909-04	4067	SAM	08/22/25 14:17		Jaswal	OK
36	Q2909-04DUP	4067DUP	DUP	08/22/25 14:21		Jaswal	OK
37	CCV03	CCV03	CCV	08/22/25 14:25		Jaswal	OK
38	CCB03	CCB03	CCB	08/22/25 14:30		Jaswal	OK

Instrument ID: P4

Daily Analysis Runlog For Sequence/QC Batch ID # LB136940

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	Q2909-04L	4067L	SD	08/22/25 14:34		Jaswal	OK
40	Q2909-04A	4067A	PS	08/22/25 14:46		Jaswal	OK
41	PB169332BL	PB169332BL	MB	08/22/25 14:50		Jaswal	OK
42	PB169332BS	PB169332BS	LCS	08/22/25 14:55		Jaswal	OK
43	Q2927-01	A6121M	SAM	08/22/25 14:59		Jaswal	OK
44	Q2934-01	ENV-SW01	SAM	08/22/25 15:03		Jaswal	OK
45	Q2934-03	ENV-SW03	SAM	08/22/25 15:07		Jaswal	OK
46	Q2909-04MS	4067MS	MS	08/22/25 15:12		Jaswal	OK
47	Q2909-04MSD	4067MSD	MSD	08/22/25 15:22		Jaswal	OK
48	Q2934-04	ENV-SW04	SAM	08/22/25 15:26	Na high	Jaswal	Dilution
49	CCV04	CCV04	CCV	08/22/25 15:44		Jaswal	OK
50	CCB04	CCB04	CCB	08/22/25 15:48		Jaswal	OK
51	Q2934-02	ENV-SW02	SAM	08/22/25 15:53	NOT USE	Jaswal	Not Ok
52	Q2934-02DUP	ENV-SW02DUP	DUP	08/22/25 15:57	NOT USE	Jaswal	Not Ok
53	Q2934-02L	ENV-SW02L	SD	08/22/25 16:01	NOT USE	Jaswal	Not Ok
54	Q2934-02MS	ENV-SW02MS	MS	08/22/25 16:05	NOT USE	Jaswal	Not Ok
55	Q2934-02MSD	ENV-SW02MSD	MSD	08/22/25 16:09	NOT USE	Jaswal	Not Ok
56	Q2934-02A	ENV-SW02A	PS	08/22/25 16:13	NOT USE	Jaswal	Not Ok
57	PB169358BL	PB169358BL	MB	08/22/25 16:17	NOT USE	Jaswal	Not Ok
58	PB169358BS	PB169358BS	LCS	08/22/25 16:21	NOT USE	Jaswal	Not Ok

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136940

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	

59	Q2934-04DL	ENV-SW04DL	SAM	08/22/25 16:25	3x for Na	Jaswal	Confirms
60	CCV05	CCV05	CCV	08/22/25 16:30	CCV fail for TI	Jaswal	OK
61	CCB05	CCB05	CCB	08/22/25 16:34		Jaswal	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2904

Test : Metals Group 10

Prepbatch ID : PB169324,

Sequence ID/Qc Batch ID: LB136940, LB136940,

Standard ID :
MP85156,

Chemical ID :
M6151, M6158, M6180, M6181, 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	09/06/2025	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 #
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	09/09/2025	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 #
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

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

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

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Christiansburg, VA 24073 USA
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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

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

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
R → 7/22/28

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





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 2904

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

BTEX	O&G	Cu, Fe, PB							
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		SAMPLE COLLECTION		# of Bottles										
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	001 Willets Pt Blvd (July)	W		X	8/19/25	11:30		X	X	X							
2.	002 35th Ave (July)	W		X	8/19/25	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	DATE/TIME Aug 19, 2025	RECEIVED BY	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp <u>43°C</u> MeOH extraction requires an additional 4oz. Jar for percent solid Ice in Cooler?: <u>y</u> Comments: 001 Willets Pt. Blvd (July) Metals sample RECEIVED OPEN (empty)
1. D Devoe		1. _____	
RELINQUISHED BY	DATE/TIME 8-20-25 1125	RECEIVED BY	
2. FedEx		2. _____	
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	
3. _____		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: Wednesday, August 20, 2025 12:33 PM
Subject: Re: Received Empty sample

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 split with 002

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Wednesday, August 20, 2025 12:19:27 PM
To: Dean Devoe <DDevoe@tullyconstruction.com>
Subject: Re: Received Empty sample

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

no it's different preservations.

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



From: Dean Devoe <DDevoe@tullyconstruction.com>
Sent: Wednesday, August 20, 2025 12:08 PM

To: Deepak Parmar <Deepak.Parmar@alliancetg.com>

Subject: Re: Received Empty sample

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Secured by Check Point

Can extra volume from O&G be used?

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>

Sent: Wednesday, August 20, 2025 11:49:38 AM

To: Dean Devoe <DDevoe@tullyconstruction.com>

Subject: Received Empty sample

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 morning,

Sample 001 Willets Pt Blvd (July) for metals received Empty on 8/20/2025. Can you please confirm that how the lab should proceed with the 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

<https://protect.checkpoint.com/v2/r01/> www.alliancetg.com .YzJ1OnR1bGx5Y29uc3RydV



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	TX-C25-00189
Virginia	460312



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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2904 TULL01
Client Name : Tully Environmental, Inc
Client Contact : Dean Devoe
Invoice Name : Tully Environmental, Inc
Invoice Contact : Dean Devoe

Order Date : 8/20/2025 11:51:00 AM
Project Name : Transfer Station-SPDES
Receive DateTime : 8/20/2025 11:25:00 AM
Purchase Order :

Project Mgr :
Report Type : Results Only
EDD Type : EXCEL NOCLEANUP
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2904-01	001 willets Pt Blvd(july)	Water	08/19/2025	11:30	VOC-BTEX		624.1	5 Bus. Days	
Q2904-02	002 35th Ave (JULY)	Water	08/19/2025	11:30	VOC-BTEX		624.1	5 Bus. Days	

Relinquished By :

Date / Time :

DN
8/20/25 1225

Received By :

Date / Time :

Storage Area : VOA Refridgerator Room

AK
8/20/25 1025