

Technical Report No. 26-04

Aquatic Studies at Greens Creek Mine, 2025

by

Greg Albrecht



March 2026

Alaska Department of Fish and Game

Habitat Section



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in reports by the Divisions of Sport Fish and Commercial Fisheries, and the Habitat Section. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figures or figure captions.

Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative Code	AAC	fork length	FL
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	mid-eye-to-fork	MEF
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	mid-eye-to-tail fork	METF
hectare	ha	at	@	standard length	SL
kilogram	kg	compass directions:		total length	TL
kilometer	km	east	E		
liter	L	north	N	Mathematics, statistics	
meter	m	south	S	<i>all standard mathematical signs, symbols and abbreviations</i>	
milliliter	mL	west	W	alternate hypothesis	H _A
millimeter	mm	copyright	©	base of natural logarithm	e
nanometer	nm	corporate suffixes:		catch per unit effort	CPUE
		Company	Co.	coefficient of variation	CV
Weights and measures (English)		Corporation	Corp.	common test statistics	(F, t, χ^2 , etc.)
cubic feet per second	ft ³ /s	Incorporated	Inc.	confidence interval	CI
foot	ft	Limited	Ltd.	correlation coefficient (multiple)	R
gallon	gal	District of Columbia	D.C.	correlation coefficient (simple)	r
inch	in	et alii (and others)	et al.	covariance	cov
mile	mi	et cetera (and so forth)	etc.	degree (angular)	°
nautical mile	nmi	exempli gratia (for example)	e.g.	degrees of freedom	df
ounce	oz	Federal Information Code	FIC	expected value	E
pound	lb	idest (that is)	i.e.	greater than	>
quart	qt	latitude or longitude	lat. or long.	greater than or equal to	≥
yard	yd	monetary symbols (U.S.)	\$, ¢	harvest per unit effort	HPUE
		months (tables and figures): first three letters	Jan,...,Dec	less than	<
Time and temperature		registered trademark	®	less than or equal to	≤
day	d	trademark	™	logarithm (natural)	ln
degrees Celsius	°C	United States (adjective)	U.S.	logarithm (base 10)	log
degrees Fahrenheit	°F	United States of America (noun)	USA	logarithm (specify base)	log ₂ , etc.
degrees kelvin	K	U.S.C.	United States Code	minute (angular)	'
hour	h	U.S. state	use two-letter abbreviations (e.g., AK, WA)	no data	ND
hour	h			not significant	NS
minute	min			null hypothesis	H ₀
second	s			percent	%
				probability	P
Physics and chemistry				probability of a type I error (rejection of the null hypothesis when true)	α
all atomic symbols				probability of a type II error (acceptance of the null hypothesis when false)	β
alternating current	AC			second (angular)	"
ampere	A			standard deviation	SD
calorie	cal			standard error	SE
direct current	DC			variance	
hertz	Hz			population	Var
horsepower	hp			sample	var
hydrogen ion activity (negative log of)	pH				
inch of mercury	inHg				
kilowatt	kW				
Kilopascal	kPa				
Nephelometric Turbidity Unit	NTU				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

TECHNICAL REPORT NO. 26-04

AQUATIC STUDIES AT GREENS CREEK MINE, 2025

by

Greg Albrecht

Alaska Department of Fish and Game
Habitat Section, Southeast Region
P.O. Box 110024, Juneau, Alaska, 99811

March 2026

This investigation was fully financed by Hecla Greens Creek Mining Company.

Cover: Sampling gear staged at Zinc Creek Site 10, 2025.

Technical Reports are available through the Alaska State Library, Alaska Resources Library and Information Services (ARLIS) and on the Internet: http://www.adfg.alaska.gov/index.cfm?adfg=habitat_publications.main. This publication has undergone editorial and peer review.

Note: Product names or specific company names used in this publication are included for completeness but do not constitute product endorsement. The Alaska Department of Fish and Game, in accordance with State of Alaska ethics laws, does not favor one group over another through endorsement or recommendation.

*Alaska Department of Fish and Game, Habitat Section
P.O. Box 110024, Juneau, Alaska, 99811, USA*

This document should be cited as:

Albrecht, G. 2026. Aquatic biomonitoring at Greens Creek Mine, 2025. Alaska Department of Fish and Game, Technical Report No. 26-04, Douglas, AK.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526

U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240

The department's ADA Coordinator can be reached via phone at the following numbers:

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648,

(Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact:

ADF&G Habitat Section, P.O. Box 110024, Juneau, Alaska 99811 907-465-4105

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
LIST OF TABLES.....	ii
LIST OF FIGURES	ii
LIST OF APPENDICES	iv
ACKNOWLEDGEMENTS.....	vi
EXECUTIVE SUMMARY	1
INTRODUCTION	2
Purpose	2
Study Area	4
Greens Creek	4
Tributary Creek.....	7
Zinc Creek	11
Zinc-Greens Creek Delta Site 2239	13
Cannery Creek	14
Fowler Creek	15
Aquatic Studies and Locations	17
METHODS.....	20
Water Quality.....	20
Streamflow.....	20
Periphyton: Chlorophyll Density and Composition.....	20
Benthic Macroinvertebrate Density and Community Composition.....	22
Juvenile Fish Abundance and Condition	23
Juvenile Fish Element Concentrations.....	24
Sediment Composition and Element Concentrations.....	24
RESULTS.....	26
Weather and Stream Flow Data	26
Greens Creek Site 48 and Site 63	27
Greens Creek Site 54	34
Tributary Creek Site 2232.....	41
Tributary Creek Site 9	43
Tributary Creek Site 1847.....	49
Zinc Creek Site 371	53
Zinc Creek Site 10	59
Zinc-Greens Creek Delta Site 2239	65
Cannery Creek Site 37	67
Fowler Creek Site 2233	69
COMPARISONS AMONG SITES	71
REFERENCES CITED	79

LIST OF TABLES

Table	Page
1. Aquatic biomonitoring study sample sites, 2025.....	17
2. Sediment tests, analytes, and methods used in 2025.....	25
3. Greens Creek Site 63 water quality data, 2025.....	27
4. Greens Creek Site 48 and 63 benthic macroinvertebrate data summary, 2001–2025.....	28
5. Greens Creek Site 54 water quality data, 2025.....	34
6. Greens Creek Site 54 benthic macroinvertebrate data summary, 2001–2025.....	35
7. Tributary Creek Site 2232 water quality data, 2025.....	41
8. Tributary Creek Sites 9 water quality data, 2025.....	43
9. Tributary Creek Site 9 benthic macroinvertebrate data summary, 2001–2025.....	44
10. Tributary Creek Site 1847 water quality data, 2025.....	49
11. Tributary Creek Site 1847 benthic macroinvertebrate data summary, 2018–2025.....	50
12. Zinc Creek Site 371 water quality data, 2025.....	53
13. Zinc Creek Site 371 benthic macroinvertebrate data summary, 2024–2025.....	54
14. Zinc Creek Site 10 water quality data, 2025.....	59
15. Zinc Creek Site 10 benthic macroinvertebrate data summary, 2024–2025.....	60
16. Zinc-Greens Creek Delta Site 2239 water quality data, 2025.....	65
17. Cannery Creek Site 37 water quality data, 2025.....	67
18. Fowler Creek Site 2233 water quality data, 2025.....	69

LIST OF FIGURES

Figure	Page
1. Greens Creek Mine area.....	3
2. Greens Creek sampling Sites 48, 63, and 54.....	5
3. Greens Creek Site 63 sample reach, facing upstream July 7, 2025.....	6
4. Upper extent of Greens Creek Site 54, facing downstream, July 7, 2025.....	7
5. Tributary Creek Site 9 and Site 1847.....	8
8. Tributary Creek Site 2232 at the outlet of the beaver pond.....	9
6. Tributary Creek Site 9 sample reach, July 9, 2025.....	10
7. Tributary Creek Site 1847 sample reach.....	10
9. Zinc Creek watershed sample sites.....	11
10. Zinc Creek site 371, July 10, 2025.....	12
11. Zinc Creek Site 10, July 9, 2025.....	13
12. Zinc-Greens Creek Delta Site 2239, July 9, 2025.....	14
13. Cannery Creek Site 37 sediment collection site July 7, 2025.....	15
14. Fowler Creek Site 2233 sediment sampling site July 9, 2025.....	16
15. Greens Creek daily mean discharge three weeks prior to sampling, 2001–2025.....	26
16. Greens Creek daily mean daily discharge, 2025.....	26
17. Greens Cr Site 48 (2001–2017) and Site 63 (2018–2025) mean, min. and max. chlorophyll <i>a</i> densities....	27
18. Greens Cr Site 48 (2001–2017) and Site 63 (2018–2025) mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i>	28
19. Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean EPT and BMI densities.....	29
20. Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean BMI community composition.....	29
21. Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) Dolly Varden and coho salmon captured.	30
22. GC 48 and 63 whole body Dolly Varden Ag, Cd, and Cu conc., 2001–2025, Hg 2010, 2012–2025.....	31
23. Greens Cr. Site 48 and Site 63 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.....	32
24. Greens Creek Site 63 sediment element concentrations, 2018, 2021, 2024–2025.....	33
25. Greens Creek Site 54 mean, minimum, and maximum chlorophyll- <i>a</i> densities, 2001–2025.....	34
26. Greens Creek Site 54 mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i> , 2001–2025.....	35
27. Greens Creek Site 54 mean EPT and BMI densities, 2001–2025.....	36

28.	Greens Creek Site 54 BMI community composition, 2001–2025.	36
29.	Greens Creek Site 54 juvenile fish captured, 2001–2025.	37
30.	GC Site 54 whole body Dolly Varden Ag, Cd, and Cu conc., 2001–2025, Hg 2010, and 2012–2025.	38
31.	Greens Creek Site 54 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.	39
32.	Greens Creek Site 54 sediment element concentrations, 2018, 2021, 2025.	40
33.	Tributary Creek Site 2232 sediment element concentrations, 2021, 2024–2025.	42
34.	Tributary Creek Site 9 mean, minimum, and maximum chlorophyll- <i>a</i> densities, 2001–2025.	43
35.	Tributary Creek Site 9 mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i> , 2001–2025.	43
36.	Tributary Creek Site 9 mean EPT and BMI densities, 2001–2025.	44
37.	Tributary Creek Site 9 mean BMI community composition, 2001–2025.	45
38.	Tributary Creek Site 9 juvenile fish captured, 2001–2025.	45
39.	TC Site 9 whole body Dolly Varden Ag, Cd, and Cu conc., 2001–2025 Hg, 2010, 2012–2025.	46
40.	Tributary Creek Site 9 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.	47
41.	Tributary Creek Site 9 sediment element concentrations, 2013, 2018, 2021–2025.	48
42.	Tributary Creek Site 1847 mean, minimum, and maximum chlorophyll- <i>a</i> densities, 2018–2025.	49
43.	Tributary Creek Site 1847 mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i> (2018–2025).	50
44.	Tributary Creek Site 1847 mean EPT and BMI densities 2018–2025.	50
45.	Tributary Creek Site 1847 mean BMI community composition, 2018–2025.	51
46.	Tributary Creek Site 1847 sediment element concentrations, 2018, 2024–2025.	52
47.	Zinc Creek Site 371 mean, minimum, and maximum chlorophyll- <i>a</i> densities, 2024–2025.	53
48.	Zinc Creek Site 371 mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i> , 2024–2025.	53
49.	Zinc Creek Site 371 mean EPT and BMI densities 2024–2025.	54
50.	Zinc Creek Site 371 mean BMI community composition, 2024–2025.	54
51.	Zinc Creek Site 371 juvenile fish captured, 2024–2025.	55
52.	Zinc Creek Site 371 whole body Dolly Varden Ag, Cd, and Cu concentrations, 2021, 2024–2025.	56
53.	Zinc Creek Site 371 whole body Dolly Varden Pb, Se, and Zn concentrations, 2021, 2024–2025.	57
54.	Zinc Creek Site 371 sediment element concentrations, 2018, 2021, 2024–2025.	58
55.	Zinc Creek Site 10 mean, minimum, and maximum chlorophyll- <i>a</i> densities, 2024–2025.	59
56.	Zinc Creek Site 10 mean proportions of chlorophylls <i>a</i> , <i>b</i> , and <i>c</i> (2024–2025).	59
57.	Zinc Creek Site 10 mean EPT and BMI densities 2024–2025.	60
58.	Zinc Creek Site 10 mean BMI community composition, 2024–2025.	60
59.	Zinc Creek Site 10 juvenile fish captured, 2024–2025.	61
60.	Zinc Creek Site 10 whole body Dolly Varden Ag, Cd, Cu, and Hg concentrations, 2021, 2024–2025.	62
61.	Zinc Creek Site 10 whole body Dolly Varden Pb, Se, and Zn concentrations, 2021, 2024–2025.	63
62.	Zinc Creek Site 10 sediment element concentrations, 2021, 2024–2025.	64
63.	Zinc-Greens Creek Delta Site 2239 sediment element concentrations, 2024–2025.	66
64.	Cannery Creek Site 37 sediment element concentrations, 2018, 2024–2025.	68
65.	Fowler Creek Site 2233 sediment element concentrations, 2024–2025.	70
66.	Greens Creek mean chlorophyll- <i>a</i> densities, 2001–2025.	71
67.	Zinc Creek and Tributary Creek mean chlorophyll- <i>a</i> densities, 2001–2025.	72
68.	Greens Creek, Tributary Creek, and Zinc Creek mean EPT densities, 2001–2025.	72
69.	Greens Creek, Tributary Creek, and Zinc Creek BMI taxa richness, 2001–2025.	73
70.	Greens Creek, Zinc Creek, and Tributary Creek Dolly Varden captured, 2001–2025.	73
71.	Greens Creek, Zinc Creek, and Tributary Creek coho salmon captured, 2001–2025.	74
72.	Greens Cr., Tributary Cr., and Zinc Cr. whole body Dolly Varden element concentrations, 2025.	75
73.	GC and TC whole body Dolly Varden median Ag, Cd, and Cu conc., 2001–2025, Hg, 2012–2025.	76
74.	GC and TC whole body Dolly Varden median Pb, Se, and Zn concentrations, 2001–2025.	77
75.	Greens, Tributary, Zinc, Cannery, and Fowler Creek sediment element concentrations, 2025.	78

LIST OF APPENDICES

APPENDIX A: CHLOROPHYLL DATA

- A.1. Greens Creek Site 48 chlorophylls *a*, *b*, and *c* densities.
- A.2. Greens Creek Site 63 chlorophylls *a*, *b*, and *c* densities.
- A.3. Greens Creek Site 54 chlorophylls *a*, *b*, and *c* densities.
- A.4. Tributary Creek Site 9 chlorophylls *a*, *b*, and *c* densities.
- A.5. Tributary Creek Site 1847 chlorophylls *a*, *b*, and *c* densities.
- A.6. Zinc Creek Site 10 chlorophylls *a*, *b*, and *c* densities.
- A.7. Zinc Creek Site 371 chlorophylls *a*, *b*, and *c* densities.

APPENDIX B: BENTHIC MACROINVERTEBRATE DATA

- B.1. Greens Creek Site 48 and 63 BMI data summary.
- B.2. Greens Creek Site 54 BMI data summary.
- B.3. Tributary Creek Site 9 BMI data summary.
- B.4. Tributary Creek Site 1847 BMI data summary.
- B.5. Zinc Creek Site 10 BMI data summary.
- B.6. Zinc Creek Site 371 BMI data summary.

APPENDIX C: JUVENILE FISH DATA

- C.1. Greens Creek Site 48 and 63 Dolly Varden capture data.
- C.2. Greens Creek Site 48 and 63 coho salmon capture data.
- C.3. Greens Creek Site 54 resident fish capture data.
- C.4. Greens Creek Site 54 coho salmon capture data.
- C.5. Tributary Creek Site 9 resident fish capture data.
- C.6. Tributary Creek Site 9 coho salmon capture data.
- C.7. Zinc Creek Site 371 resident fish capture data.
- C.8. Zinc Creek Site 10 resident fish capture data.
- C.9. Zinc Creek Site 10 coho salmon capture data.
- C.10. Greens Creek Site 48 and 63 Dolly Varden length frequency distributions.
- C.11. Greens Creek Site 48 and 63 coho salmon length frequency distributions.
- C.12. Greens Creek Site 54 Dolly Varden length frequency distributions.
- C.13. Greens Creek Site 54 coho salmon length frequency distributions.
- C.14. Tributary Creek Site 9 Dolly Varden length frequency distributions.
- C.15. Tributary Creek Site 9 coho salmon length frequency distributions.
- C.16. Zinc Creek Site 371 Dolly Varden length frequency distributions.
- C.17. Zinc Creek Site 10 Dolly Varden length frequency distributions.
- C.18. Zinc Creek Site 10 coho salmon length frequency distributions.

APPENDIX D: JUVENILE FISH ELEMENT CONCENTRATIONS DATA AND LAB REPORT

- D.1. Greens Creek Site 48 and 63 Dolly Varden element concentrations.
- D.2. Greens Creek Site 54 Dolly Varden element concentrations.
- D.3. Tributary Creek Site 9 Dolly Varden element concentrations.
- D.4. Zinc Creek Site 10 Dolly Varden element concentrations.
- D.5. Zinc Creek Site 371 Dolly Varden element concentrations.
- D.6. Dolly Varden element concentrations laboratory report.

LIST OF APPENDICIES, CONTINUED

APPENDIX E: SEDIMENT DATA AND LAB REPORT

- E.1. Greens Creek Site 63 sediment composition.
- E.2. Greens Creek Site 54 sediment composition.
- E.3. Tributary Creek Site 2232 sediment composition.
- E.4. Tributary Creek Site 9 sediment composition.
- E.5. Tributary Creek Site 1847 sediment composition.
- E.6. Zinc Creek Site 371 sediment composition.
- E.7. Zinc Creek Site 10 sediment composition.
- E.8. Zinc-Greens Creek Delta Sit 2239 sediment composition.
- E.9. Cannery Creek Site 37 sediment compositions.
- E.10. Fowler Creek Site 2233 sediment composition.
- E.11. Greens Creek Site 63 sediment element concentrations.
- E.12. Greens Creek Site 54 sediment element concentrations.
- E.13. Tributary Creek Site 2232 sediment element concentrations.
- E.14. Tributary Creek Site 9 sediment element concentrations.
- E.15. Tributary Creek Site 1847 sediment element concentrations.
- E.16. Zinc Creek Site 371 sediment element concentrations.
- E.17. Zinc Creek Site 10 sediment element concentrations.
- E.18. Zinc-Greens Creek Delta Site 2239 sediment element concentrations.
- E.19. Cannery Creek Site 37 sediment element concentrations.
- E.20. Fowler Creek Site 2233 sediment element concentrations.
- E.21. Sediment element concentrations laboratory report.

ACKNOWLEDGEMENTS

Hecla Greens Creek Mining Company provided financial support and Greens Creek Mine environmental staff Zack Wrzeszcz, Sean McGowan, Sierra Kryzer, and Randy Jones, provided logistical support. Environmental Manager Paula Lillesve, and Senior Environmental Engineer Jennifer Stoutamore reviewed the draft report.

Alaska Department of Fish and Game Habitat Biologists Claire Delbecq, Nick Jensen, and Dylan Krull, and Fish and Wildlife Technician Kaylee Brown assisted with data collection. Habitat Biologists Claire Delbecq and Takoda Edlund sorted benthic macroinvertebrate samples and assisted with processing of periphyton samples. Fish and Wildlife Technician Ruth Roys and Kaylee sorted benthic macroinvertebrate samples. Habitat Regional Supervisor Kate Kanouse, Operations Manager Dr. Al Ott, and Dylan reviewed and edited the report.

Thank you all for your contribution.

EXECUTIVE SUMMARY

Since 2001, the Alaska Department of Fish and Game Habitat Section completed the aquatic biomonitoring studies required by the U.S. Forest Service and Alaska Department of Environmental Conservation for Hecla Greens Creek Mining Company's Greens Creek Mine. The aquatic studies include sampling periphyton (for algal biomass), benthic macroinvertebrates, sediment element concentrations, and juvenile fish abundance and element concentrations in Greens and Tributary Creeks; several new sampling sites were added in 2025, including in Greens, Zinc, Fowler, and Cannery Creeks per the 2024 U.S. Forest Service Record of Decision (ROD; USFS 2024). The reference sampling sites are Greens Creek Site 63 and Zinc Creek 371 and mine influenced sampling sites include Greens Creek Site 54, Zinc Creek Site 10, and Tributary Creek Sites 9 and 1847. Sediment samples for monitoring water quality trends are collected from Zinc-Greens Creek Delta Site 2239, Tributary Creek Site 2232, Fowler Creek Site 2233 and Cannery Creek Site 37, per the dry-stack tailings disposal facility ROD (USFS 2024).

We completed the 2025 aquatic biomonitoring studies July 7–10. The National Weather Service (2026) reports that prior to sampling in July, the Juneau area received 28.84 cm precipitation May–June (10.2 cm above normal) and experienced an average temperature 1.8 °F below normal, compared to mean values reported 1991–2020, and a lower-than-normal snowpack. Three weeks prior to sampling in July, Greens Creek daily mean discharge was 98.5 ft³/s, within the middle-upper range of mean discharges encountered in prior years (2001–2024).

The 2025 mean algal biomass at each site, measured by chlorophyll-*a* density, ranged 1.07–17.44 mg/m², the widest range observed and due in part to the new sampling sites. Tributary Creek Site 9 samples resulted in a record high mean density, trending away from the sample results at the Greens Creek sites which were generally within the middle range of previous years' results. Zinc Creek periphyton samples had the lowest chlorophyll-*a* densities among all sample sites. All periphyton samples collected generally contained about 90% chlorophyll-*a*, nearly 0% chlorophyll-*b*, and about 10% chlorophyll-*c*, consistent with previous years.

Benthic macroinvertebrate (BMI) mean densities ranged 587–3,673/m² across sites and were within the middle range at Greens Creek, the mid-lower range at Tributary Creek, and low at the Zinc Creek sites. The mean densities of Ephemeroptera, Plecoptera, and Trichoptera (EPT) insects among sites ranged 384–2,744 EPT/m²; EPT insects at Greens and Tributary Creeks composed about 75% of samples and about 60–70% at Zinc Creek sites.

The 2025 Dolly Varden *Salvelinus malma* captures at Greens Creek sites were in the middle ranges observed 2001–2024, similarly at Tributary Creek Site 9. We captured one juvenile coho salmon *Oncorhynchus kisutch* at Greens Creek Site 54—the lowest number since 2017 which were offspring of the first parent year return after the fish pass was rebuilt in 2016—and two juvenile coho salmon at Greens Creek Site 63, confirming successful adult coho passage over the Greens Creek fish pass and infiltration gallery weir. Dolly Varden captures at reference site Zinc Creek Site 371 were double the number in 2025 compared to 2024, and at Site 10 Dolly Varden presence declined slightly while juvenile coho salmon increased two-fold. At all sites and in most years, we captured several age classes of resident Dolly Varden. Mean fish condition ranged 1.0–1.3 for both Dolly Varden and coho salmon.

Several of the 2025 whole body juvenile Dolly Varden mean element concentrations from Tributary Creek Site 9 were elevated to levels seen in 2020, and some were higher in the Zinc

Creek Site 10 samples collected about 1 km downstream. All other mean element concentrations were generally within the middle ranges observed for Greens Creek and other sites.

Mean sediment element concentrations were similar to previous years at Greens Creek sites, with Site 54 concentrations higher than the reference Site 63 and nickel concentrations above the Probable Effects Concentration (PEC) level. At Zinc Creek Site 371 and Fowler Creek Site 2233, mean concentrations for most elements were similar to Greens Creek Site 54, with some above the PEC (As, Cr, and Ni) and Threshold of Effects Concentration (TEC; As, Cd, Cu, Hg, Ni, and Zn). Nickel Concentrations were above the PEC at all sites except Tributary Creek Site 2232 and Cannery Creek Site 2233. Lead concentrations were below the TEC at all sites.

INTRODUCTION

The Greens Creek Mine is located about 29 km southwest of Juneau by air near Hawk Inlet on the west side of Admiralty Island in Southeast Alaska, within the Tongass National Forest and the Admiralty Island National Monument, both administered by the U.S. Forest Service (USFS 2024). The mine has operated since 1989, except between 1993 and 1996 when the mine temporarily closed, and produces lead and zinc concentrates that contain silver and gold. Hecla Greens Creek Mining Company (HGCMC), a subsidiary of Hecla Mining Company of Coeur d'Alene, Idaho, has owned and operated the mine since April 2008.

Most mine infrastructure is located in two drainages that support resident and anadromous fish: Tributary Creek, which contains the dry-stack tailings disposal facility (TDF) at the headwaters; and Greens Creek which contains the mill, mine facilities, and waste rock storage areas (Figure 1). To document conditions to the surrounding environment, annual monitoring requirements are included in the General Plan of Operations Integrated Monitoring Plan (IMP; HGCMC 2020) required by the U.S. Forest Service and Alaska Department of Environmental Conservation (ADEC) Waste Management Permit (WMP) 2020DB0001. Reports summarizing sampling results from previous years are in Weber Scannell and Paustian (2002), Jacobs et al. (2003), Durst and Townsend (2004), Durst et al. (2005), Durst and Jacobs (2006–2010), Kanouse (2011–2012), Kanouse and Brewster (2013–2014), Kanouse (2015), Brewster (2016), Zutz (2017–2018), Kane and Legere (2019), Kane (2020–2022), Lindgren and King (2023, 2024), and Lindgren (2025).

Habitat Section staff has completed the aquatic studies required annually for Greens Creek Mine in Tributary and Greens Creeks since 2001. The WMP and IMP require sampling periphyton, benthic macroinvertebrates (BMI), and juvenile fish in Greens Creek and Tributary Creek. The U.S. Forest Service published a Record of Decision (ROD) in 2024 (USFS 2024) detailing additional aquatic biomonitoring sampling sites in Zinc Creek as well as including sediment element concentrations for all sites and on Cannery Creek, Fowler Creek, the lower-most Tributary Creek beaver pond, and the Zinc-Greens Creek delta, which were incorporated into the 2025 aquatic biomonitoring program. We document stream condition using chlorophyll-*a* density and pigment composition, BMI density and community composition, juvenile fish abundance, juvenile fish element concentrations, and sediment element concentrations.

PURPOSE

This technical report summarizes the 2025 aquatic biomonitoring study data and documents the conditions of biological communities in Greens Creek, Tributary Creek, and Zinc Creek; and sediment elements in Cannery and Fowler Creeks, near mine development and operations. This work satisfies the aquatic biological monitoring requirements included in HGCMC's approved

ADEC Waste Management Permit 2020DB0001 and General Plan of Operations Integrated Monitoring Plan (HGCMC 2020).

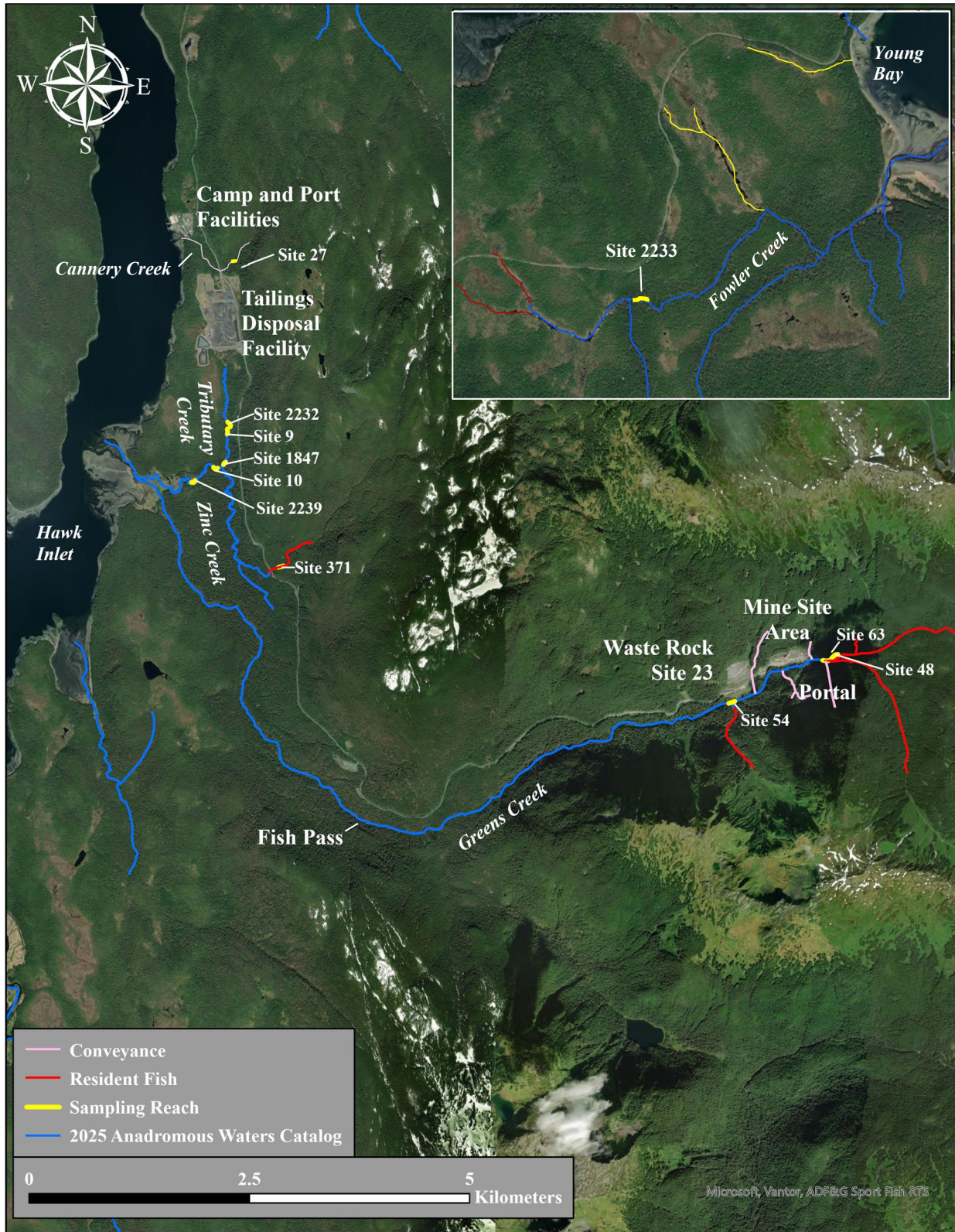


Figure 1.—Greens Creek Mine area.

STUDY AREA

Greens Creek

Greens Creek drains a 58.5 km² watershed with the main channel measuring 16 km from the alpine headwaters to the mouth in Hawk Inlet (USGS 2021). Gradients range from 2 to 4% at sample sites, cobble and gravel are the dominant substrate, and large woody debris is common; characteristic of a medium width moderate grade mixed control channel (Paustian 2010). The creek is fed by snowmelt in the spring and rain throughout the year. Snowpack influences the magnitude of peak discharge in early summer; rain events in the fall often cause peak discharge.

The lower 10.6 km of Greens Creek (ADF&G Stream No. 112-65-10232) provides habitat for chum salmon *O. keta*, coho salmon, pink salmon *O. gorbuscha*, and Dolly Varden (Giefer and Evers 2025). ADF&G Division of Commercial Fisheries staff survey returning chum and pink salmon in Greens Creek as part of their in-season assessment of salmon run strength (S. Forbes, Commercial Fisheries Area Management Biologist, ADF&G, Douglas, personal communication). Juvenile and adult Chinook salmon were documented near the portal in the early 1990s but have not been observed since 1993; in 2017, USFS staff sampled the stream for Chinook salmon eDNA and did not detect Chinook salmon eDNA (M. Johnson, Wildlife and Fisheries Biologist, U.S. Forest Service, Tongass National Forest, Juneau, personal communication).

Greens Creek discharge data are recorded at U.S. Geological Survey (USGS) Gage Site 15101490^a, downstream of sample sites 48 and 63, 1350 Creek, Cub Creek, and Hecla's water withdrawal. The gage is upstream of mining activities and represents about 40% of the watershed draining to Hawk Inlet.

Greens Creek Site 48 and Site 63

Prior to the river avulsion in fall 2017,^b we sampled Greens Creek Site 48 which is located upstream of mining activities, except exploratory drilling, near 265 m elevation and about 0.8 km upstream of the mine portal (Figure 2). Due to the ongoing channel instability upstream, including new streamflow in both channel braids, we completed the aquatic biomonitoring studies beginning about 3 m downstream of the channel braid confluences at Site 63.

Site 63 is located near 265 m elevation, downstream of Big Sore Creek, and upstream of mining activities (Figure 3); unlike Site 48, 1350 Creek flows into the Site 63 sampling reach, which was unavoidable due to the limited suitable sampling areas between Big Sore Creek and the portal. The data collected at Site 48 and Site 63 are used as reference to compare the data collected downstream of mining activities at Site 54. Historically, we captured resident Dolly Varden at Sites 48 and 63; however, we also have captured juvenile coho salmon annually at both sites since 2023.

^a Prior to February 16, 1999, the gage was located 9 m upstream and at 3 m greater elevation (USGS 2022).

^b Greens Creek Site 6, located upstream of Site 54 and the Bruin Creek confluence, was sampled as part of the aquatic biomonitoring program on a 5-year basis in 2001, 2006, and finally in 2011 (Kanouse 2012).

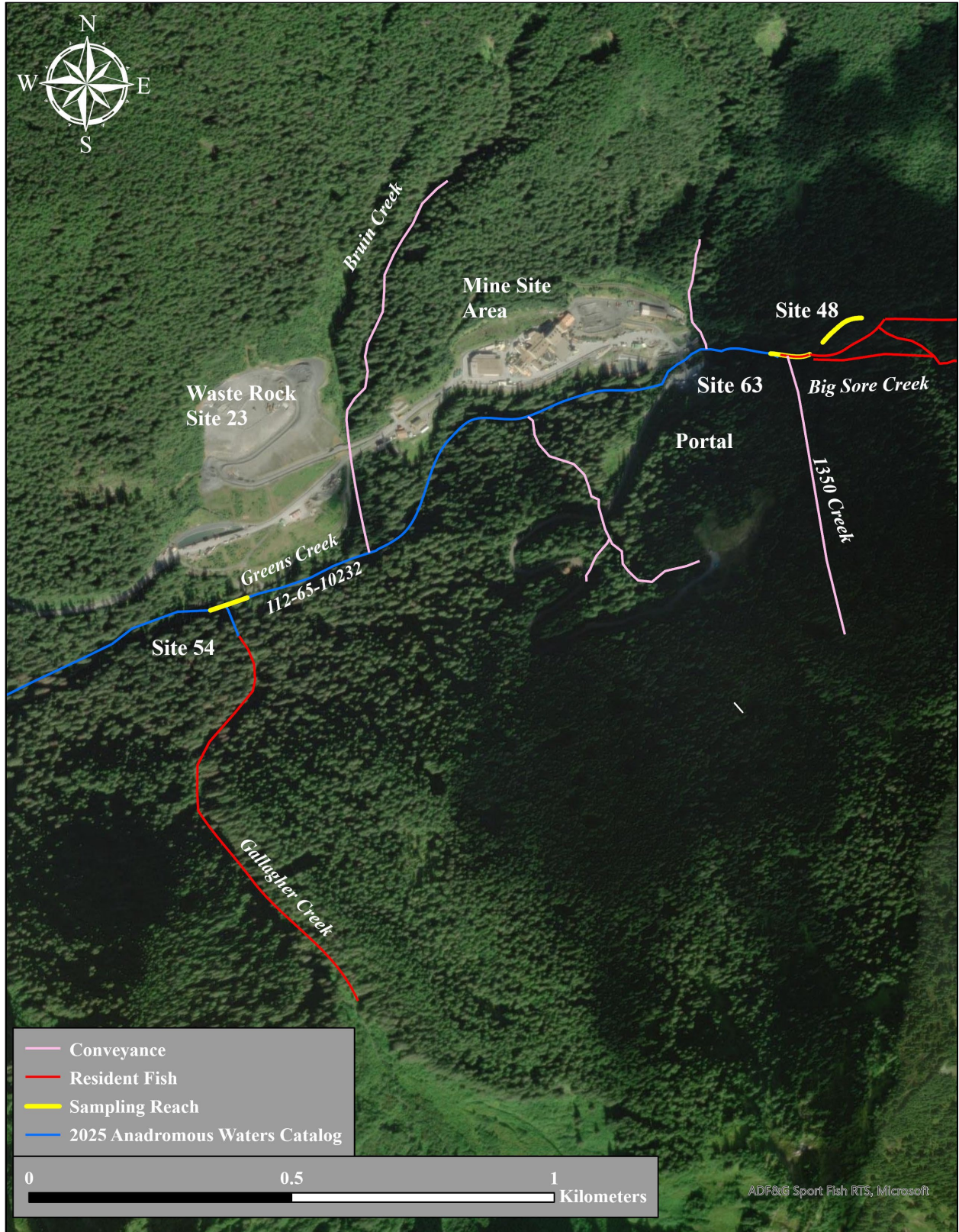


Figure 2.—Greens Creek sampling Sites 48, 63, and 54.



Figure 3.—Greens Creek Site 63 sample reach, facing upstream July 7, 2025.

Greens Creek Site 54

Site 54 is located near 225 m elevation, downstream of the Bruin Creek confluence, adjacent to waste rock storage Site 23, and about 1.8 km downstream of the mine portal (Figure 2). Data collected from 2001 to 2023 at Site 54 are compared to the data at reference Sites 48 and 63 to detect potential changes, such as changes from waste rock storage areas, storm water ponds, and the mine site upstream. Between Sites 48/63 and 54, four tributaries drain to Greens Creek: 1350 Creek, 1350 West Drainage, Cub Creek, and Bruin Creek. Gallagher Creek enters Greens Creek at the upper extent of the Site 54 fish sample reach. Periphyton and benthic macroinvertebrate sampling occur about 30 m upstream of the fish sample reach in riffles.

Since 2001, at Site 54 we documented coho salmon, Dolly Varden, cutthroat trout *O. clarkii*, and rainbow trout *O. mykiss*.^c Since 2017, we have captured juvenile coho salmon, demonstrating successful adult coho salmon passage through the Greens Creek fish pass, located about 5.6 km upriver from the stream mouth, which was repaired in 2016.^d

^c In 2007 and 2008, two cutthroat trout were observed; one rainbow trout was observed in 2020.

^d In 1989, Greens Creek Mining Company installed the engineered fish pass as mitigation for impacts to Tributary Creek from the TDF. Three weirs provide step pools for adult coho salmon passage through a natural bedrock chute that prevents upstream fish migration. In November 2005, flood flows caused by a heavy rainstorm damaged the fish pass, limiting upstream adult fish passage in subsequent years. Hecla repaired and fortified the fish pass in March 2016 and inspects the structure seasonally. We have observed juvenile coho salmon at Site 54 since 2017, demonstrating successful adult coho salmon passage occurred the prior fall spawning season.



Figure 4.—Upper extent of Greens Creek Site 54, facing upstream, July 7, 2025

Tributary Creek

Tributary Creek drains a 1.7 km² watershed (USFS 2013) and the main channel measures about 1.6 km between its headwaters and confluence with Zinc Creek (Figure 5). Tributary Creek (ADF&G Stream No. 112-65-10232-2001-3003) provides habitat for coho and pink salmon and Dolly Varden (Gieffer and Evers 2025).

The TDF occupies the headwaters of the watershed. Tributary Creek is a lowland stream characterized as a small flood plain channel type (Paustian 2010). Stream grade varies from 1 to 2%, organic material and sand are the dominant substrates with gravel and large and small woody debris. Discharge estimates based on field measurements and limited gage data suggest annual mean discharge is less than 3 ft³/s (USFS 2003).



Figure 5.—Tributary Creek Site 9 and Site 1847.

Tributary Creek Site 2232

Site 2232 is located in a 1.5-acre beaver pond in Tributary Creek constructed some time in 2017/2018; the upper extent of which is about 600 m downstream of the TDF at about 30 m elevation (Figure 8). Fish movement into the beaver ponds was flow-dependent due to dam height until 2025; however, a natural channel established around the series of dams that was not blocked by beavers, and appeared to allow free fish passage. Sediment is collected from the lower-most pond for element analysis, as required by the ROD (USFS 2024), to monitor element concentrations in the beaver pond complex which is about 70 m upstream of Site 9.



Figure 6.–Tributary Creek Site 2232 at the outlet of the beaver pond.

Tributary Creek Site 9

Site 9 is located about 1.0 km downstream of the TDF at 25 m elevation and is sampled to detect potential changes. We documented coho salmon, Dolly Varden, cutthroat and rainbow trout, and sculpin *Cottus* sp. at the site. Periphyton and benthic macroinvertebrate sampling occur within the juvenile fish sampling reach.

Greens Creek Mine TDF expansions and beaver activity have changed Tributary Creek streamflow patterns and sediment composition at Site 9 since sampling began in 2001. Tributary Creek discharge appears to be reducing over time, seemingly more so in recent years. Prior to July 2025 sampling, streamflow established a new outlet around the face of the beaver dam immediately upstream of Site 9. All sampling occurs about 70 m downstream of the beaver dam.

Since 2018, we also sampled periphyton and benthic macroinvertebrates at Tributary Creek Site 1847, about 0.5 km downstream of Site 9 near the stream mouth, to investigate those communities in riffle habitats more suitable for sampling than at Site 9.^c Stream discharge does not increase much between sampling sites as there are no surface inputs; the main difference between sampling

^c Kate Kanouse, Habitat Biologist, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: GCM Tributary Creek Sampling Site 1847; dated July 17, 2018. Unpublished document can be obtained from the Southeast Regional Supervisor, ADF&G Habitat Section, 802 3rd Street, Douglas, AK.

sites is gradient which supports gravel substrate for sampling at Site 1847, compared to small gravel, sand, and organics at Site 9.



Figure 7.—Tributary Creek Site 9 sample reach, July 9, 2025.

Tributary Creek Site 1847

Site 1847 is located about 1.4 km downstream of the TDF at about 20 m elevation, and about 20 m upstream of the confluence with Zinc Creek (Figure 7). We sampled periphyton and BMI 2018–2025 and compare the data to data collected at Site 9. We did not sample fish since Site 9 is preferred as the most upstream sampling site for Dolly Varden element concentrations.



Figure 8.—Tributary Creek Site 1847 sample reach.

Zinc Creek

Zinc Creek drains a 12.4 km² watershed (USFS 2024) and the main channel measures about 15 km between its alpine headwaters and confluence with Greens Creek (Figure 9). Zinc Creek (ADF&G Stream No. 112-65-10232-2001) provides habitat for chum, coho and pink salmon and Dolly Varden (Giefer and Evers 2025) up to a barrier falls near the B Road bridge, above which, resident Dolly Varden are present.

Zinc Creek flows under and adjacent to the B-Road for about 1.3 km, joins with Tributary Creek, and flows west joining Greens Creek near the Hawk Inlet tidal delta. Downstream of the road, the stream is characterized as a moderate width flood plain channel type (Paustian 2010). The creek is fed by snowmelt in the spring and rain throughout the year. Snowpack influences the magnitude of peak discharge in early summer; rain events in the fall often cause peak discharge events.

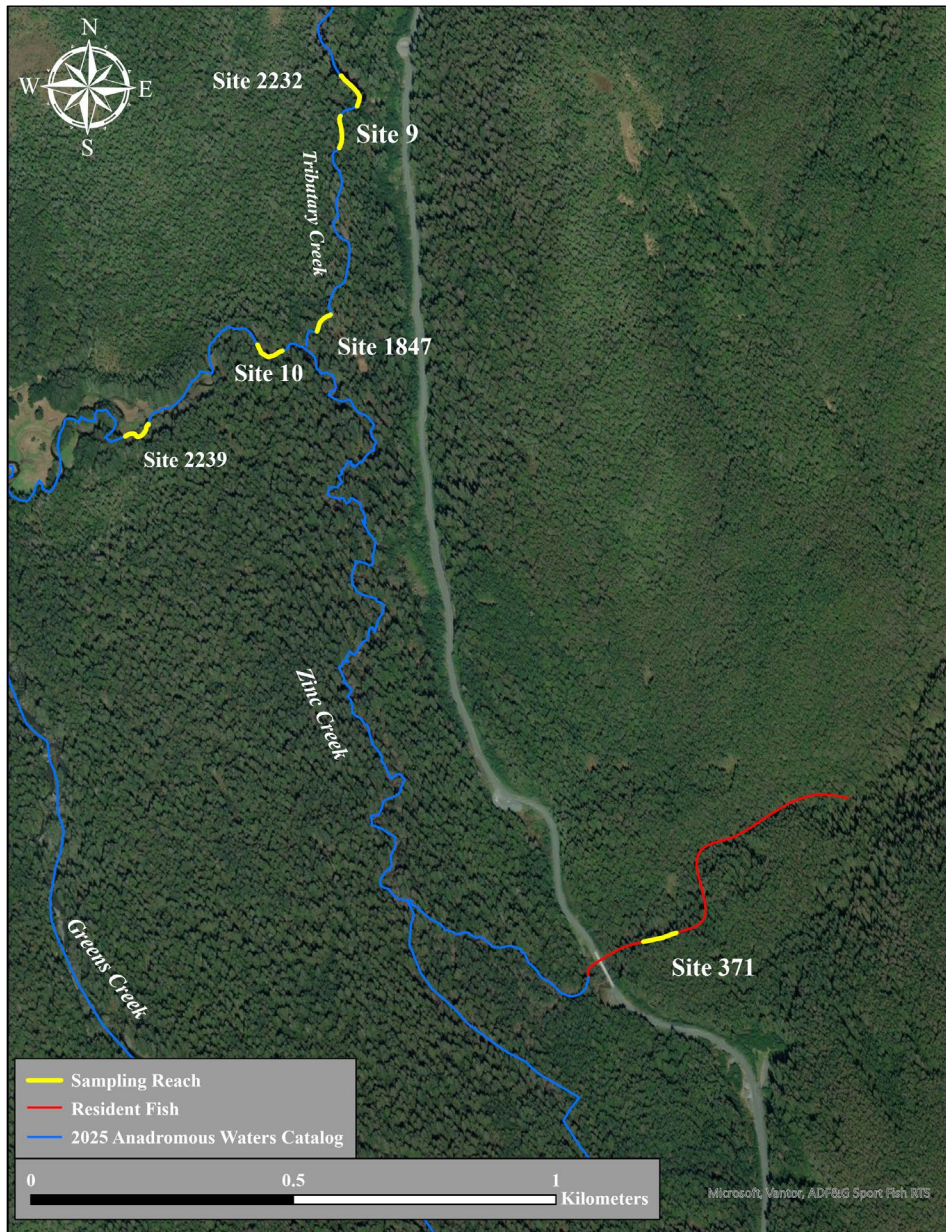


Figure 9.—Zinc Creek watershed sample sites.

Zinc Creek Site 371

Site 371 is 110 m upstream of the B-Road bridge and provides habitat for resident Dolly Varden, above a 10 m high barrier falls near the B-Road bridge. Site 371 was added as an aquatic biomonitoring site in 2025 (USFS 2024) as a reference site to document natural stream conditions. This reach is a moderate gradient mixed control process group channel type (Figure 10; Paustian 2010) and includes several downed trees and log jams with angular cobble and gravel as the dominant substrate.



Figure 10.–Zinc Creek site 371, July 10, 2025.

Zinc Creek Site 10

Site 10 is about 30 m downstream of the confluence of Tributary and Zinc Creeks, at about 19 m elevation, and provides habitat for resident and anadromous fish. Site 10 was added as an aquatic biomonitoring site in 2025 (USFS 2024) to detect potential changes from mining activities. This reach is a moderate width flood plain channel type (Figure 11; Paustian 2010) and includes deep pools, overhanging logs, undercut streambanks, and diverse fish habitat.



Figure 11.–Zinc Creek Site 10, July 9, 2025.

Zinc-Greens Creek Delta Site 2239

The Zinc-Greens Creek Delta Site 2239 is located on Zinc Creek just above tidal influence and about 700 m from the intertidal confluence of Greens Creek and Zinc Creek and provides resident and anadromous fish habitat; the sample site could not be located further downstream as planned due to tidal influence, and the site could become a Greens Creek natural channel through migration over time. Sediment sampling began at this site in 2024 but wasn't required until 2025 (USFS 2024), as part of fugitive dust monitoring upstream of tidal influence in the deposition zone. This reach is a moderate width flood plain channel type (Figure 12; Paustian 2010) which transitions to an estuarine environment with relict channel braids. Riparian vegetation is largely an open canopy with shrubs and herbaceous plants and salmon spawning habitat present.



Figure 12.–Zinc-Greens Creek Delta Site 2239, July 9, 2025.

Cannery Creek

Cannery Creek provides habitat for rearing coho salmon downstream of the barrier falls at the camp boardwalk near mean high tide; also, one adult pink salmon carcass was observed in the intertidal zone in 2018.^f Fish are not present upstream of the barrier falls in the high gradient reach above the barrier, where at least one relict water impoundment structure is present. Cannery Creek provides freshwater for the project and the water supply impoundment is on the east side and upstream of the B-Road; and surface streamflow to the ocean ceases during parts of the year as observed on occasion from camp.

Cannery Creek Site 37

Cannery Creek Site 37 is 75 m upstream of the water supply impoundment on the east side of the B-Road. Sediment sampling began at this location in 2024 and became required in 2025 as outlined in the ROD (USFS 2024) as part of fugitive dust monitoring. This reach is a moderate gradient mixed control channel type (Figure 13; Paustian 2010) with woody debris, pools and cobble substrate.

^f Greg Albrecht, Habitat Biologist, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: Tributary and Cannery Creeks fish resource investigations trip report; dated 10/8/2018.



Figure 13.—Cannery Creek Site 37 sediment collection site July 7, 2025.

Fowler Creek

Fowler Creek originates on the south side of the A-Road; however, streamflow from two tributaries originates north of the road and flows through culverts, eventually draining to Young Bay on the east side of Admiralty Island. The drainage area is 20.6 km² and contains a network of 40.5 km stream channels (USFS 2013). The upper watershed is palustrine channels with beaver activity; however, the lower reaches are moderate width flood plain channel type (Paustian 2010). Habitat staff investigated Fowler Creek in 2013, documenting coho salmon, Dolly Varden, Cutthroat trout, and Brook Lamprey *Lampetra planeri*.^g

Fowler Creek Site 2233

Fowler Creek Site 2233 is about 200 m south of the A-Road and contains resident and anadromous fish habitat. Sediment sampling at this location was added in 2024 as outlined in the ROD (USFS 2024) to detect potential changes from mining activities. This reach is a narrow low gradient flood plain channel type (Figure 14; Paustian 2010) and includes woody debris, depositional bars, spawning and rearing habitat.

^g Ben Brewster, Habitat Biologist, to Jackie Timothy, Southeast Regional Supervisor. ADF&G Division of Habitat. Memorandum: Fowler Creek survey; dated 6/25/2013.



Figure 14.—Fowler Creek Site 2233 sediment sampling site July 9, 2025.

AQUATIC STUDIES AND LOCATIONS

July 7–10, 2025, we completed the Greens Creek Mine aquatic biomonitoring studies required in HCGMC’s approved ADEC Waste Management Permit 2020DB0001, General Plan of Operations Integrated Monitoring Plan (HGCMC 2020), and the U.S. Forest Service ROD (USFS 2024). Sampling locations and aquatic studies for each sample site are detailed in Table 1.

Table 1.–Aquatic biomonitoring study sample sites, 2025.

Location	Biomonitoring reach	Latitude	Longitude	Date Sampled
Greens Creek Site 63 ^a (2018–2025)	Fish – Upper extent	58.0827	-134.6286	7/7
	Fish – Lower extent	58.0832	-134.6295	7/7
	Periphyton and benthic macroinvertebrates	58.0831	-134.6300	7/7
	Sediment	58.0831	-134.6300	7/7
Greens Creek Site 54 (2001–2025)	Fish – Upper extent	58.0785	-134.6469	7/7
	Fish – Lower extent	58.0783	-134.6478	7/7
	Periphyton and benthic macroinvertebrates	58.0783	-134.6466	7/7
	Sediment	58.0783	-134.6466	7/7
Tributary Creek Site 9 (2001–2025)	Fish – Upper extent	58.1055	-134.7450	7/10
	Fish – Lower extent	58.1050	-134.7450	7/10
	Periphyton and benthic macroinvertebrates	58.1054	-134.7452	7/10
	Sediment	58.1054	-134.7452	7/10
Tributary Creek Site 1847 (2018, 2024–2025)	Periphyton and benthic macroinvertebrates	58.1018	-134.7458	7/9
	Sediment	58.1018	-134.7458	7/9
Tributary Creek Site 2232 (2018, 2024–2025)	Sediment	58.1059	-134.7445	7/9
Zinc Creek Site 371 (2018, 2021, 2024–2025)	Fish – Upper extent	58.0917	-134.7341	7/10
	Fish – Lower extent	58.0918	-134.7347	7/10
	Periphyton and benthic macroinvertebrates	58.0918	-134.7347	7/10
	Sediment	58.0918	134.7347	7/10
Zinc Creek Site 10 (2021, 2024–2025)	Fish – Upper extent	58.1014	-134.7470	7/9
	Fish – Lower extent	58.1017	-134.7477	7/9
	Periphyton and benthic macroinvertebrates	58.1015	-134.7468	7/9
	Sediment	58.1015	-134.7468	7/9
Greens Creek Delta Site 2239 (2024–2025)	Sediment	58.0999	-134.7512	7/9
Cannery Creek Site 37 (2024–2025)	Sediment	58.1222	-134.7453	7/7
Fowler Creek Site 2233 (2024–2025)	Sediment	58.1534	-134.7282	7/9

^a Reference samples were collected at Greens Creek Site 48 2001–2017.

Periphyton Chlorophyll Density and Composition Monitoring

The ADEC WMP (2.3.1.2.3) and IMP (6.3) requires annual monitoring of periphyton chlorophyll-*a* density and composition within mining influence at Greens Creek Site 54, Tributary Creek Site 9, Zinc Creek Site 10, and at reference reaches above mine influence at Greens Creek Site 63 and Zinc Creek Site 371 to monitor changes in primary productivity compared to natural variation due

to factors such as mineral seeps, climate, and stream migration and streamflow. Annual periphyton sampling occurs in July and ideally not within three weeks following peak discharge.

Periphyton is composed of primary producing organisms such as algae, cyanobacteria, heterotrophic microbes, and detritus attached to the submerged surfaces of aquatic ecosystems. Algal density and community structure are influenced by water and sediment quality through physical, chemical, and biological factors that change throughout the year (Barbour et al. 1999).

The concentration of chlorophyll-*a* (Chl-*a*) pigment in periphyton samples provides an estimate of active algal biomass (density), while concentrations of chlorophyll-*b* (Chl-*b*) and chlorophyll-*c* (Chl-*c*) pigments estimate the composition of algal organisms present, such as green algae that produce Chl-*b*, and diatoms and brown algae that produce Chl-*c*. The chlorophyll data are used to document primary productivity (e.g., live algal biomass).

Benthic Macroinvertebrate Density and Community Composition Monitoring

The ADEC WMP (2.3.1.2.4) and IMP (6.4) requires annual monitoring of BMI density and community composition within mining influence at Greens Creek Site 54, Tributary Creek Site 9, Zinc Creek Site 10, and at reference reaches above mine influence at Greens Creek Site 63, and Zinc Creek Site 371 to detect changes in secondary productivity compared to natural variation due to factors such as mineral seeps, climate, stream migration, and streamflow. Annual BMI and periphyton sampling occur in July. Sampling targets riffle habitats which support greater densities of EPT taxa than other stream habitat types (Barbour et al. 1999) and generally are sensitive to environmental changes and have short life cycles. The BMI data are used to document secondary productivity (e.g. macroinvertebrate density and diversity).

Benthic macroinvertebrates (BMI) classified in the orders Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies), collectively known as EPT taxa, many of which are sensitive to changes in water and sediment quality (Barbour et al. 1999). These organisms are secondary producers, feed upon periphyton and other macroinvertebrates, and are a food source for fish.

Juvenile Fish Abundance and Condition Monitoring

The ADEC WMP (2.3.1.2.1) and IMP (6.5) require annual monitoring of abundance and condition of juvenile fish by species. Fish condition is affected by age, sex, season, maturation, diet, gut contents, fat reserve, and muscular development (Anderson and Neumann 1996). Length and weight data are used to assess fish condition.

Juvenile Fish Element Concentrations Monitoring

The ADEC WMP (2.3.1.2.2) and IMP (6.6) requires annual monitoring of whole-body element concentrations in juvenile Dolly Varden at Greens Creek Site 54, Tributary Creek Site 9, Zinc Creek Site 10, and at reference reaches above mine influence at Greens Creek Site 63 and Zinc Creek Site 371 to document element concentrations. Element bioavailability and bioaccumulation depends on physical and chemical factors and interactions among biological communities (Tchounwou et al. 2012). Resident Dolly Varden samples are analyzed for whole body concentrations of silver (Ag), cadmium (Cd), copper (Cu), mercury (Hg), lead (Pb), selenium (Se), and zinc (Zn) to document concentrations and variability. These elements were selected based on target elements identified in the ore body. Due to the scarcity of juvenile Dolly Varden of suitable sampling size in Tributary Creek in recent years, we also collect juvenile coho salmon for whole

body elements analysis per Monitoring Measure AR-1 from the ROD (USFS 2024), following the same methods, to build a separate data set.

Sediment Composition and Element Concentrations Monitoring

The ROD (Appendix A, Section SW-1) requires^h annual analysis of five fine sediment samples in Tributary Creek Sites 2232, 9 and 1847; Greens Creek Sites 54 and 63; Cannery Creek Site 37; Fowler Creek Site 2233; and Zinc Creek Sites 371, 10, and the Zinc-Greens Creek Delta Site 2239. Annual sediment sampling occurs in July and samples are analyzed for particle size, total solids, total volatile solids, total sulfide, total organic carbon, and total concentrations of silver (Ag), aluminum (Al), arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), selenium (Se), and zinc (Zn).

Sediment element concentrations are influenced by a variety of factors, such as geochemical composition and weathering within the watershed, sediment grain size, organic content, and development/disturbance (Tchounwou et al. 2012). Subsequently, sediment element concentrations influence benthic aquatic productivity, and elements in sediments can affect BMI taxa richness and alter the composition of BMI communities (Qu et al. 2010).

^h Surface water monitoring requirements, along with other requirements in the ROD, will be incorporated into a new publication of the Waste Management Permit in 2025.

METHODS

We review data sets annually to ensure accuracy and consistency with modifications to the methods; corrections and updates are reported in the document and appendices. The most recent technical report presents the current data sets and should be used to analyze data from previous years.

Water Quality

Basic water quality data (temperature, conductivity, and pH) were collected with a Hanna HI98194 multiparameter meter; the instrument was calibrated per the manufacturer's instructions prior to sampling. In some years, HGCMC measures water quality and we report the data.

Streamflow

Sampling and Analysis

Discharge at sampling sites was measured with a SonTek FlowTracker acoustic doppler velocimeterⁱ following methods described in SonTek (2007). Continuous discharge and temperature are measured by Hecla environmental staff at lower Cannery Creek, near Site 1923 and upper Tributary Creek, near Site 9, per Monitoring Measure SW-1 of the ROD. Discharge and temperature are measured in Zinc Creek between Sites 371 and 10 per Monitoring Measure AR-1. Rating curves for these gages are still under development and will be used when considering biomonitoring, water quality, and sediment monitoring.

Data Presentation

Discharge measurements are presented for each site, including the daily mean discharge data obtained from USGS Site 15101490. Also presented is a figure of Greens Creek daily mean discharges three weeks prior to the sampling event, including daily mean discharges for the period three weeks prior to sampling events 2001–2025,^j and a figure presenting the range of Greens Creek daily mean discharges three weeks prior to sampling, 2001–2025.

Periphyton: Chlorophyll Density and Composition

Sample Collection and Analysis

Sampling methods are adapted from Barbour et al. (1999). Ten smooth, flat, undisturbed, and perennially wetted rocks were collected from riffle habitats in less than 0.45 m water depth at each sample site and submerged in the creek near the work area in the same orientation as initially collected. To collect a sample from each rock, a 5 × 5 cm square of high-density foam was held on the sample area; the area around the foam was scrubbed with a toothbrush to remove algae and other organisms outside the sample area. The rock was rinsed by submerging it in the stream while holding the foam in place; the toothbrush also was rinsed and scrubbed in the stream to remove remnant periphyton.

A 47 mm diameter Type A/E 1 μm glass fiber filter was placed into a Nalgene[®] filter receptacle attached to a vacuum pump with a gauge. The foam square was removed and the underside of the foam and the sample area were gently scrubbed in a circular pattern with the toothbrush into the

ⁱ From 2010–2015, discharge in Greens Creek and Tributary Creek was estimated using a Global Flow Probe Model FP101 flow meter (Kanouse 2015) and a modification of the methods described in Platts et al. (1983).

^j Continuous discharge data are not available for Tributary Creek.

filter receptacle. Stream water in a wash bottle was used to rinse loosened periphyton from the foam, sample area of the rock, toothbrush, and the inside of the filter receptacle onto the filter. The toothbrush was rinsed inside the receptacle, and the sample area was scrubbed a second time and the rinse cycle was repeated. With most of the water pumped through the filter, maintaining pressure less than 34 kPa, a few drops^k of saturated magnesium carbonate solution was added to the filter^l. The glass fiber filter was removed from the receptacle, folded in half with the sample inside, and wrapped in a white coffee filter for additional moisture absorption. The samples were placed in a sealed, labeled plastic bag with desiccant and stored in a light-proof cooler containing frozen icepacks during transportation; the samples were stored in a -20°C freezer in the ADF&G Douglas laboratory until processing.

U.S. Environmental Protection Agency (EPA; 1997) protocol was followed for chlorophyll extraction and measurement, determining instrument and estimated detection limits, and data analysis.^m Samples were removed from the freezer, cut into small pieces, and placed into individual 15 mL screw cap centrifuge tubes containing 10 mL of 90% buffered acetone. The centrifuge tubes were capped and shaken to ensure complete submersion of the sample. Secured in a vial rack covered with aluminum foil to reduce light exposure, the samples were stored in a refrigerator for 18 hours to allow for saturation and chlorophyll extraction.

In a dimly-lit laboratory, the samples were removed from the refrigerator and centrifuged for 20 minutes at 500 relative centrifugal force, using a properly balanced centrifuge. Prior to sample measurement, two cuvettes containing 90% buffered acetone were placed into a Shimadzu UV-1800 spectrophotometer to calibrate absorbance of the solvent at wavelengths 664 nm, 647 nm, 630 nm, and 750 nm. Each sample supernatant was decanted into an individual cuvette and absorbance was measured at each wavelength. Each sample was treated with 80 µL of 0.1 N hydrochloric acid for 90 seconds to convert the chlorophyll to phaeophytin, and absorbance was measured at wavelengths 665 nm and 750 nm. To minimize stray light and improve resolution, sample cuvettes were cleaned with a nonabrasive wipe prior to placement in the spectrophotometer.

Trichromatic equations were used to estimate Chl-*a*, Chl-*b*, and Chl-*c* densities, correcting for turbidity using the 750 nm absorbance value (APHA 2012, EPA 1997). Chl-*a* densities were corrected when phaeophytin was detected. Each year the estimated detection limit (EDL) is determined by analyzing seven replicate spinach dilution samples; the 2025 EDL for Chl-*a* concentration was 0.23 mg/m². When Chl-*a* was not detected in a sample, the concentration is reported as the spectrophotometer EDL and values for Chl-*b* and Chl-*c* are not reported.

Data Presentation

For each site and by year, mean Chl-*a* densities (mg/m²) are presented in a figure. Greens Creek Site 63 data is presented with Site 48 and annual sample data and summaries are provided in Appendix A.

^k This measurement is not exact as the amount of water and magnesium carbonate used to create a saturated solution varies and does not affect sample integrity; supernatant solution was used to avoid magnesium carbonate solids.

^l To prevent acidification and conversion of chlorophyll to phaeophytin.

^m Deviations from EPA (1997) include sample storage longer than 3.5 weeks, and cutting sample filters to reduce acetone exposure for laboratory staff (as opposed to homogenization).

Benthic Macroinvertebrate Density and Community Composition

Sample Collection and Analysis

Eight BMI samplesⁿ were collected from each site using a Hess stream bottom sampler in riffles and runs with gravel and cobble substrate and varying flow velocities—habitats that support greater BMI densities and taxonomic richness (Barbour et al. 1999). Other habitat types (e.g., pools) were excluded to reduce variability.

The Hess stream bottom sampler has a 0.086 m² sample area and material is captured in a 200 mL cod end and constructed with 300 µm mesh net. After securing the frame on the streambed with the opening facing the upstream current, rocks within the sample area were scrubbed with a bristle brush; gravel, sand, and silt were disturbed to about 10 cm depth to dislodge macroinvertebrates into the net. The net was rinsed in the stream to ensure all organisms drifted into the cod end, and each sample was transferred from the cod end to a labeled 500 mL plastic bottle. Samples were preserved in 95% ethanol at a ratio of three parts ethanol to one part sample. Samples exceeding the capacity of the cod end were discarded in the field to minimize detritus and substrate in samples and ensure proper sample preservation.

Entire samples were processed with an elutriator system with a 300 µm sieve to sort macroinvertebrates from debris^o and identified organisms to the lowest practical taxonomic level^p using Merritt and Cummins (1996) and Stewart and Oswood (2006). Habitat biologists provided quality control by verifying macroinvertebrate identification of eight samples (more than 10% of samples).

BMI density was calculated for each sample by dividing the number of macroinvertebrates by 0.086 m²—the Hess sampling area. Mean density was estimated for each site by calculating the mean density among the eight samples. Taxa richness is reported as the number of taxonomic groups identified to the lowest practical level; terrestrial^q organisms were excluded from all calculations.

Data Presentation

For each site and by year, mean BMI and EPT density and community composition are illustrated in figures. Greens Creek Site 63 data are presented with Site 48 and annual data summaries are provided in Appendix B.

ⁿ Prior to 2015, we collected 5 BMI samples each year.

^o Claire Delbecq, Habitat Biologist, to Kate Kanouse, Southeast Regional Supervisor, ADF&G Habitat Section. Memorandum: Region 1 BMI Elutriation Methods; dated 2/4/2026.

^p Insects of the orders Ephemeroptera, Plecoptera, Trichoptera, and Diptera to genus, except nonbiting midges to family Chironomidae, and all others to class or order. Damaged and degraded organisms that cannot be identified are not reported.

^q Including adult terrestrial insects of the orders Ephemeroptera, Plecoptera, Trichoptera, and Diptera.

Juvenile Fish Abundance and Condition

Sample Collection and Analysis

Following methods described in Magnus et al. (2006), two-piece 6.35 mm galvanized steel ¼ inch mesh minnow traps baited with disinfected salmon roe^r were deployed throughout a 50 m sample reach isolated by natural features, such as shallow riffles and debris jams. In areas with high streamflow, rocks were added to the bottom of each trap for weight and to provide refuge for captured fish. Bait was contained in a punctured plastic bag to prevent ingestion and reduce the possibility of sample contamination. Prior to the study, several baited minnow traps were set within 15 m of the upstream and downstream sample reach boundaries to capture potential migrants and improve sample reach isolation.^s After the 1.5-hour trapping event, captured fish were transferred to a plastic bucket containing aerated stream water. Fish captured in the boundary traps were excluded from the abundance estimate. Ten Dolly Varden were retained for whole body element concentration analyses at each sample site, if needed, fish from the boundary traps were retained as samples.

Biologists anesthetized fish using 9 mg/L^t AQUI-S® 20E (10% eugenol), measured and recorded FL to the nearest 1 mm, and species (Pollard et al. 1997). Fish weight was recorded to the nearest 0.1 g. During recovery, fish were retained in a perforated plastic bucket secured in the creek and released to the sample reach upon study completion.

Fulton's condition factor (K) was calculated using the equation given in Anderson and Neumann (1996), where the weight (W) of each fish is divided by the cubed length (L) of the fish, and the product multiplied by 100,000:

$$K = \frac{W}{L^3} \times 100,000$$

Data Presentation

Juvenile fish abundance and condition are compared by species for each site and year with data from the historical initial 1.5-hour trapping events and presented in figures.^u Greens Creek Site 63 data are presented with Site 48. Annual data summaries and length-frequency diagrams are provided in Appendix C.

^r Four oz of Betadyne® was added to 3 gal of tap water to saturate roe for 15 min, stirring frequently, then drained.

^s Greens Creek discharge is usually too high to efficiently and effectively isolate sample reaches using a 6.35 mm (0.25 in) mesh net across the stream. Though a mesh net could effectively isolate the Tributary Creek Site 9 sample reach, baited minnow traps were used all years.

^t The dosage is equivalent to 0.30 mL anesthetic per 1 gal of stream water.

^u Prior to an approved modification of the IMP in 2020, estimating juvenile fish populations was required—achieved with a depletion sampling method involving three sequential 1.5-hour minnow trapping events.

Juvenile Fish Element Concentrations

Sample Collection and Analysis

Wearing latex gloves, 10 juvenile Dolly Varden from the abundance trapping event were retained in individual clean, labeled plastic bags.^{v,w} Fish retained were within the size range 85–125 mm FL;^x an 85 mm fish provides the minimum weight (about 5 g) required for laboratory analyses, while the maximum length of 125 mm improves the probability of sampling 2–3 year old resident fish. FL and weight were measured, correcting for bag weight, and samples were stored in a cooler with ice packs during transportation to the ADF&G Douglas laboratory, where samples were stored in a -20°C freezer.

The samples were shipped in a cooler with ice packs to ALS Environmental in Kelso, WA, maintaining written chain of custody documentation. ALS Environmental individually digested, dried, and analyzed each sample for total silver (Ag), cadmium (Cd), copper (Cu), mercury^y (Hg), lead (Pb), selenium (Se), and zinc (Zn) on a dry weight basis following EPA (2002) method 1631E for Hg, and EPA (1998) method 6020A^z for other elements. ALS Environmental provided Tier II quality control information, including results for matrix spikes, sample blanks, sample duplicates, and standard reference materials.

Data Presentation

For each sample site, a figure presents the minimum, mean, and maximum of whole-body concentrations (mg/kg) for each analyte by year.^{aa,bb} The annual raw data, presenting the mean value for duplicate sample results, and the 2025 laboratory report are provided in Appendix D.

Sediment Composition and Element Concentrations

Sample Collection and Analysis

Wearing latex gloves, one sample of submerged sand and silt were collected by hand grab at each site within actively flowing channels. For each sample, the top 4 cm of sediment was retained in five glass jars provided by the laboratory^{cc}. To preserve sulfide in the sample jar designated for sulfide analyses, 5–10 mL of zinc acetate was added immediately after sample collection to fill the sample jars; all other samples were filled to the top with stream water to minimize air space.^{dd} Samples were stored in a cooler with frozen icepacks during transport and in an ADF&G Douglas laboratory fridge until shipment to the ALS Environmental laboratory in Kelso, WA for analyses.

^v Prior to 2015, 6 samples were collected at each site.

^w Due to scarcity of Dolly Varden captured at Tributary Creek Site 9 2019–2022, all fish samples were collected beyond the sample reach, to achieve a sample size of 10 fish. Six fish were captured via electrofishing on August 15, 2022.

^x To achieve a minimum sample size, when fish were scarce in some years, we retained fish samples measured less than the designated length range; when less than 85 mm, two fish were analyzed as a composite sample. We discontinued this practice.

^y Annual analyses for Hg concentrations began in 2012; Hg data was incidentally received in 2010.

^z EPA (1994) method 200.8 was used for analyses 2001–2010, 2012–2015, and 2018–2019.

^{aa} The 2011 samples were mistakenly homogenized, resulting in one data point for each element analysis.

^{bb} In 2012, laboratory contamination in several samples was suspected due to elevated sample results.

^{cc} In 2015, sieving sediments during collection was discontinued to avoid sample bias.

^{dd} Per laboratory staff instruction (S. Samy, Kelso Laboratory Senior Project Manager, ALS Environmental, Kelso, WA, personal communication).

The samples were shipped in a cooler with frozen icepacks via overnight air freight, maintaining written chain of custody documentation. ALS Environmental measured particle size, total solids, total volatile solids, total sulfide, total organic carbon, and total concentrations of Ag, Al, As, Cd, Cr, Cu, Hg, Ni, Pb, Se, and Zn on a dry-weight basis (Table 2). The laboratory provided Tier IV quality assurance and quality control information, including results for matrix spikes, sample blanks, and sample duplicates.

Table 2.–Sediment tests, analytes, and methods used in 2025.

Test Description	Analyte	Method
Standard test method for particle-size analysis of soils	Particle size determination	ASTM D422M
Puget Sound Estuary Program sediment total organic carbon	Total organic carbon	PSEP TOC
Total solids on liquids, modified for solids	Total solids	EPA 160.3 Modified
Puget Sound Estuary Program sediment sulfide	Total sulfide	PSEP Sulfide
Total volatile solids, modified for solids	Total volatile solids	EPA 160.4 Modified
Mercury in solid or semisolid waste	Hg	EPA 7471B
Determination of trace elements in waters and wastes by ICP/MS	Ag, Al, As, Cd, Cr, Cu, Ni, Pb, Se, Zn	EPA 6020B

Data Presentation

For each site and by year, all sediment element concentration data are presented in a figure, including the mean values. When duplicate data are provided by the lab, we report the mean values. Sediment element concentrations undetected at the method reporting limit are illustrated as an empty circle (◦) and as a solid circle (•) for measured element concentrations.

The data are compared with the threshold effects concentrations (TEC) and the probable effects concentrations (PEC) for inorganics in freshwater sediment guidelines developed by the National Oceanic and Atmospheric Administration (Buchman 2008). The guidelines are based on results of controlled laboratory bioassays, where element concentrations below the TECs rarely affect aquatic life survival and growth, and element concentrations above the PECs can affect aquatic life survival and growth.

Annual data from 2025 and the 2025 laboratory report are provided in Appendix E.

RESULTS

Weather and Stream Flow Data

The National Weather Service (2026) reports that prior to sampling in July, the Juneau area received 28.84 cm precipitation in May–June (10.2 cm above normal) and experienced an average temperature 1.8 °F below normal, and a lower snowpack compared to mean values reported 1991–2020.

Three weeks prior to July 2025 sampling, Greens Creek daily mean discharge was 98.5 ft³/s, within the upper range of mean discharges observed 2001–2024 (Figure 15). Mean daily discharge from May until sampling July 7–10 was above the long term mean 62% of the time, and peaked twice during that period (Figure 16). Peak events generally are defined as streamflow at or near bankfull.

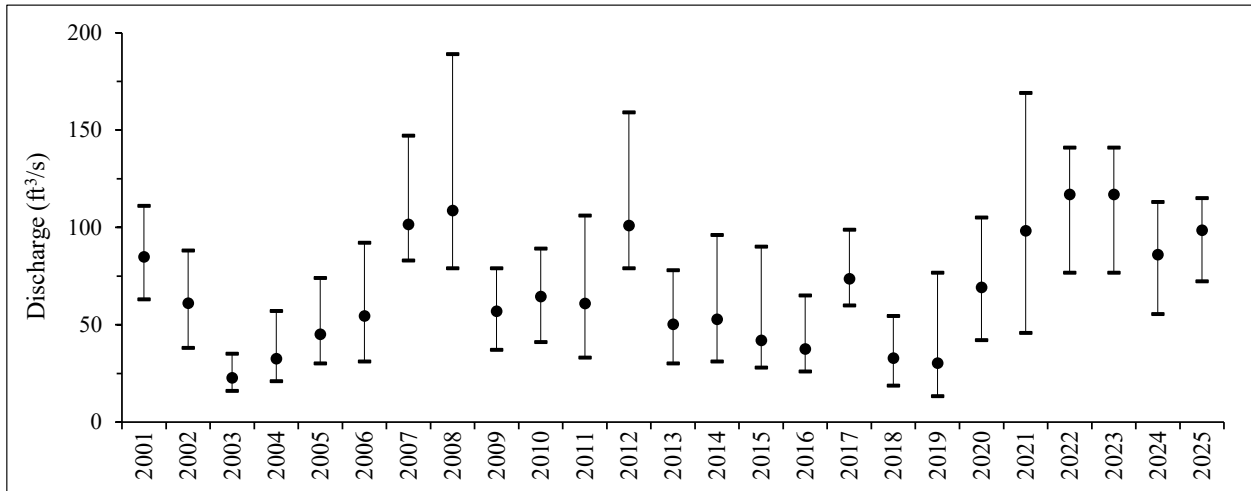


Figure 15.—Greens Creek daily mean discharge three weeks prior to sampling, 2001–2025.

Source: USGS 15101490 (USGS 2026).

Note: Minimum, mean, and maximum discharges presented.

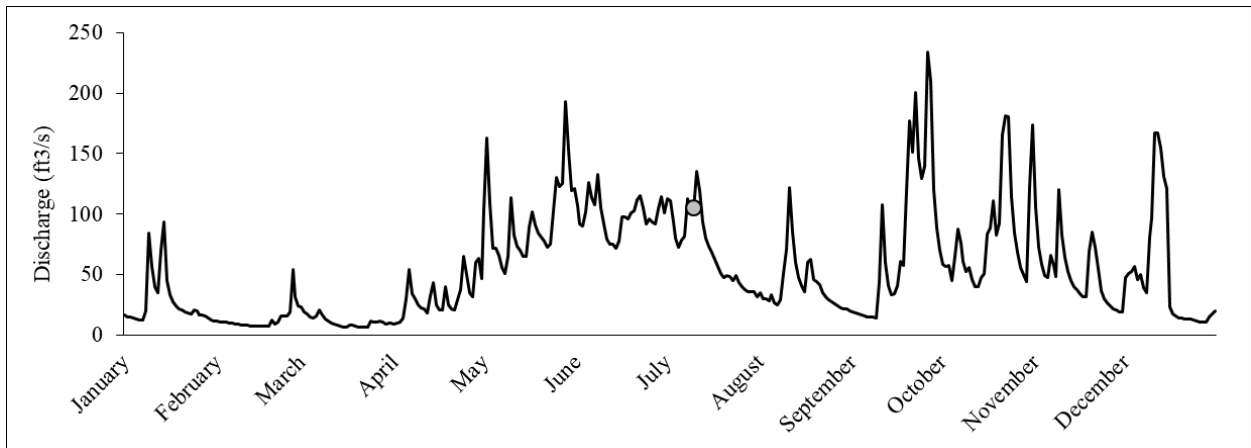


Figure 16.—Greens Creek daily mean daily discharge, 2025.

Source: USGS 15101490 (USGS 2026).

Note: Sampling dates represented by a black and grey-filled circle.

Greens Creek Site 48 and Site 63

On July 7, 2025, we sampled Greens Creek Site 63. Hecla environmental staff measured basic water quality at 0900 hours and the USGS Greens Creek stream gage measured 78.8 ft³/s streamflow (Table 3).

Table 3.—Greens Creek Site 63 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH	Discharge (ft ³ /s)
07/7/2025	6.4	83.8	7.43	78.8

Periphyton: Chlorophyll Density and Composition

The 2025 Greens Creek Site 63 estimate mean density of Chl-*a* was 7.50 mg/m², within the middle range of mean densities 2001–2024 (Figure 17). The samples contained about 87% Chl-*a*, 0% Chl-*b*, and 13% Chl-*c*, consistent with composition observed in previous years (Figure 18).

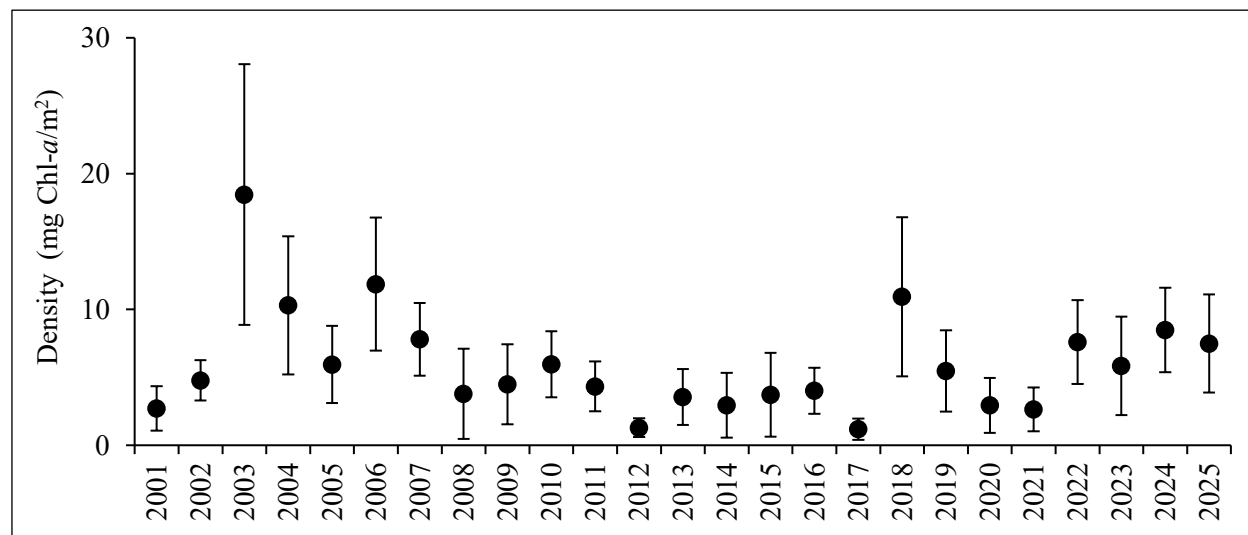


Figure 17.—Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean, minimum and maximum chlorophyll *a* densities.

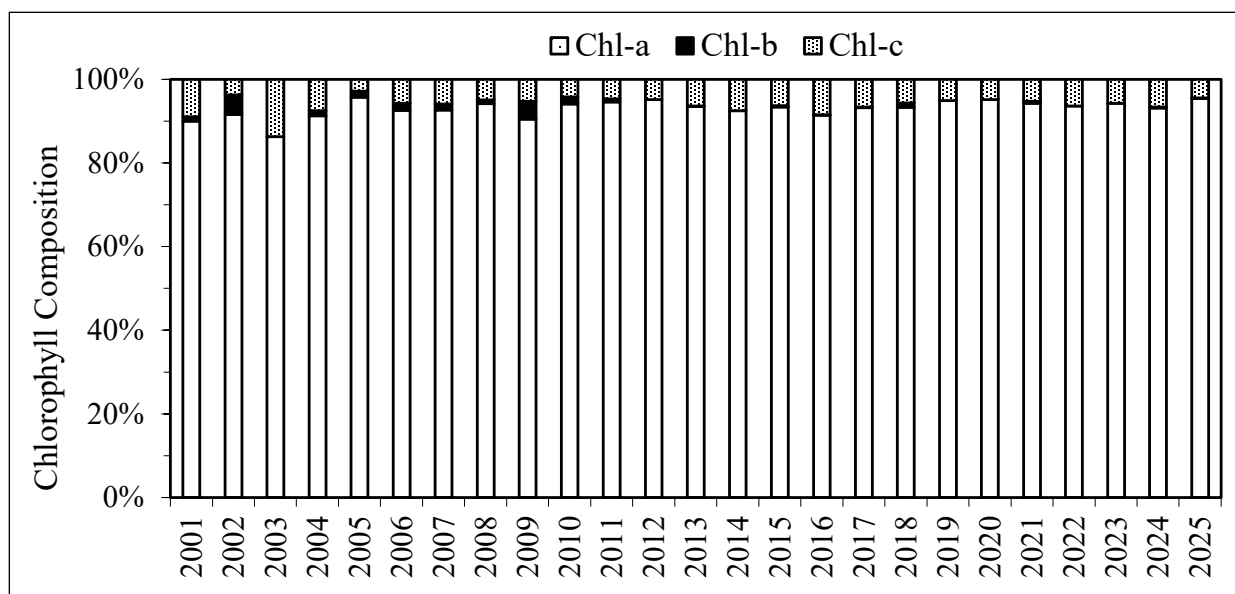


Figure 18.—Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean proportions of chlorophylls *a*, *b*, and *c*.

Benthic Macroinvertebrate Density and Community Composition

The 2025 Greens Creek Site 63 BMI estimate mean density is 3,673 BMI/m² and we identified 32 taxa, within the upper range of BMI densities observed 2001–2024 (Table 4; Figures 19, 20). We estimate mean EPT density was 2,744 EPT/m², within the upper range observed and accounted for 75% of the samples, a healthy proportion of the community. More Diptera and other macroinvertebrates were found in the 2025 samples, influencing the proportion of EPT. Dominant taxa were Ephemeroptera of the genera *Drunella* (19%) and *Baetis* (18%).

Table 4.—Greens Creek Site 48 and 63 benthic macroinvertebrate data summary, 2001–2025.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean EPT Density (per m ²)	2,679	1,509	4,905	3,372	2,937	1,486	1,575	2,833	2,168	2,674	1,676	1,430	1,760
Mean BMI Density (per m ²)	2,753	1,637	5,505	3,905	3,247	1,612	1,705	3,095	2,216	2,884	2,284	1,612	1,988
Number of EPT Taxa	15	19	17	17	18	12	13	11	13	14	16	16	13
Number of BMI Taxa	25	26	27	30	29	21	24	21	18	23	27	22	20
% EPT	97%	92%	89%	86%	90%	92%	92%	92%	98%	93%	73%	89%	89%
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Mean EPT Density (per m ²)	2,223	2,430	2,534	2,111	3,490	4,084	1,956	1,076	1,535	1,574	3,087	2,744	
Mean BMI Density (per m ²)	2,688	2,948	3,086	2,346	3,737	4,435	2,342	1,391	1,690	1,818	3,344	3,673	
Number of EPT Taxa	14	16	15	16	17	19	20	17	20	15	16	18	
Number of BMI Taxa	24	27	25	25	27	28	33	29	26	23	26	32	
% EPT	83%	82%	82%	90%	93%	92%	84%	77%	91%	87%	92%	75%	

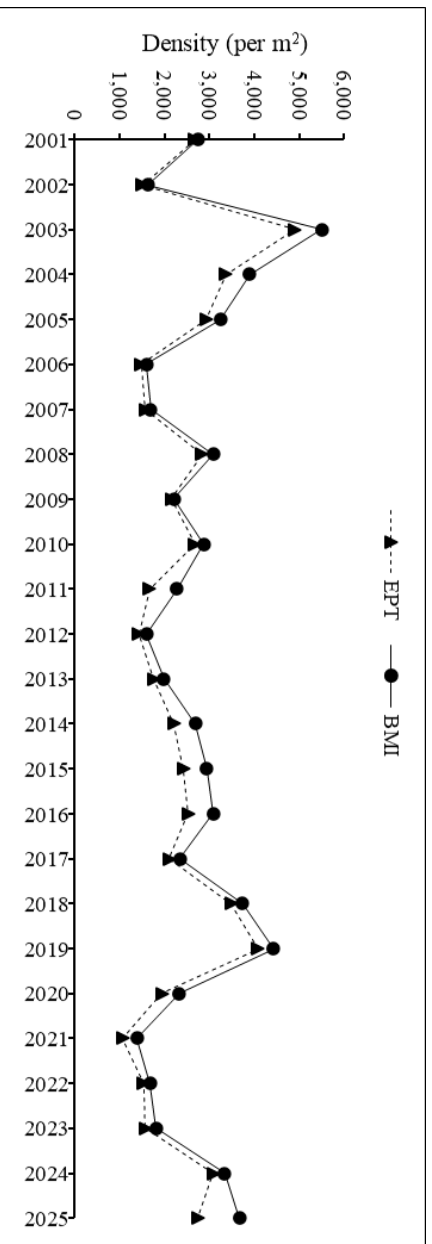


Figure 19.—Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean EPT and BMI densities.

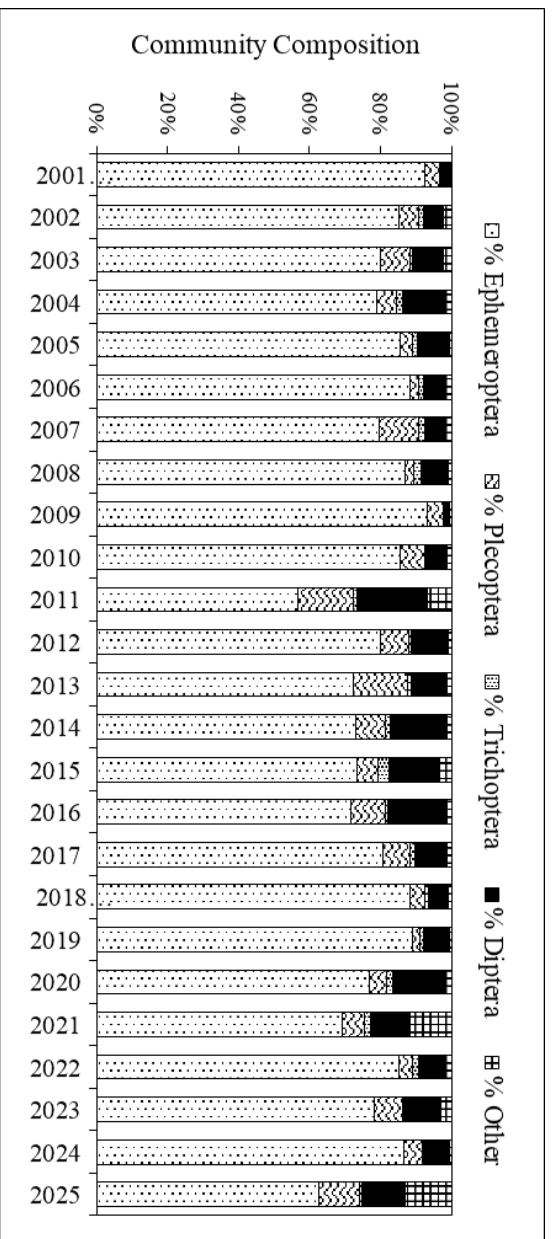


Figure 20.—Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) mean BMI community composition.

Juvenile Fish Abundance and Condition

In 2025 at Greens Creek Site 63, we captured 106 Dolly Varden (50–128 mm FL) and 2 juvenile coho salmon (83–85 mm FL), within the upper range of Dolly Varden captured during a single trapping event 2001–2024 (Figure 21). Historically, we only captured resident Dolly Varden at Sites 48 and 63, however this was the third year in a row we captured juvenile coho salmon above the USGS concrete weir stream gage near the mine portal. Construction of the fish pass lower in the drainage has provided access to the upper watershed and the recent capture of juvenile coho above the weir suggests flow-dependent adult coho salmon passage is now possible.^{ee}

Mean fish condition among the Dolly Varden captured was 1.0, about the same previously observed at Sites 48 and 63. Mean fish condition among the coho salmon captured also was 1.0.

^{ee} Greg Albrecht, Habitat Biologist, to Kate Kanouse, Southeast Regional Supervisor, ADF&G Habitat Section. Trip Report: Upstream habitat and weir fish passage assessments, dated 11/26/2025. Unpublished documents are available at the regional office.

The range of FLs for Dolly Varden suggests at least two age classes present, consistent with previous years. The two coho salmon captured were of similar size and likely of the 1-year age class; the 1/4 inch minnow traps we use for the study generally allow young-of-year (less than about 40 mm) salmonids to escape, including Dolly Varden.

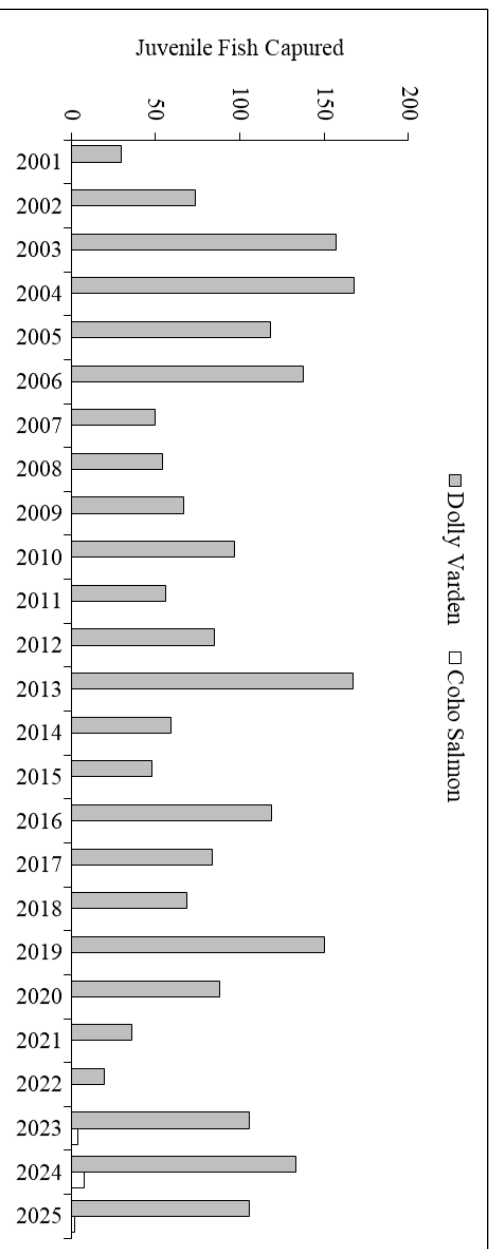


Figure 21.—Greens Creek Site 48 (2001–2017) and Site 63 (2018–2025) Dolly Varden and coho salmon captured.

Juvenile Fish Element Concentrations

In 2025 at Greens Creek Site 63, we retained 10 Dolly Varden (88–115 mm FL) for whole body element analysis. Mean element concentrations were within middle ranges previously observed at Sites 48 and 63 2001–2025 (Figure 22, 23).

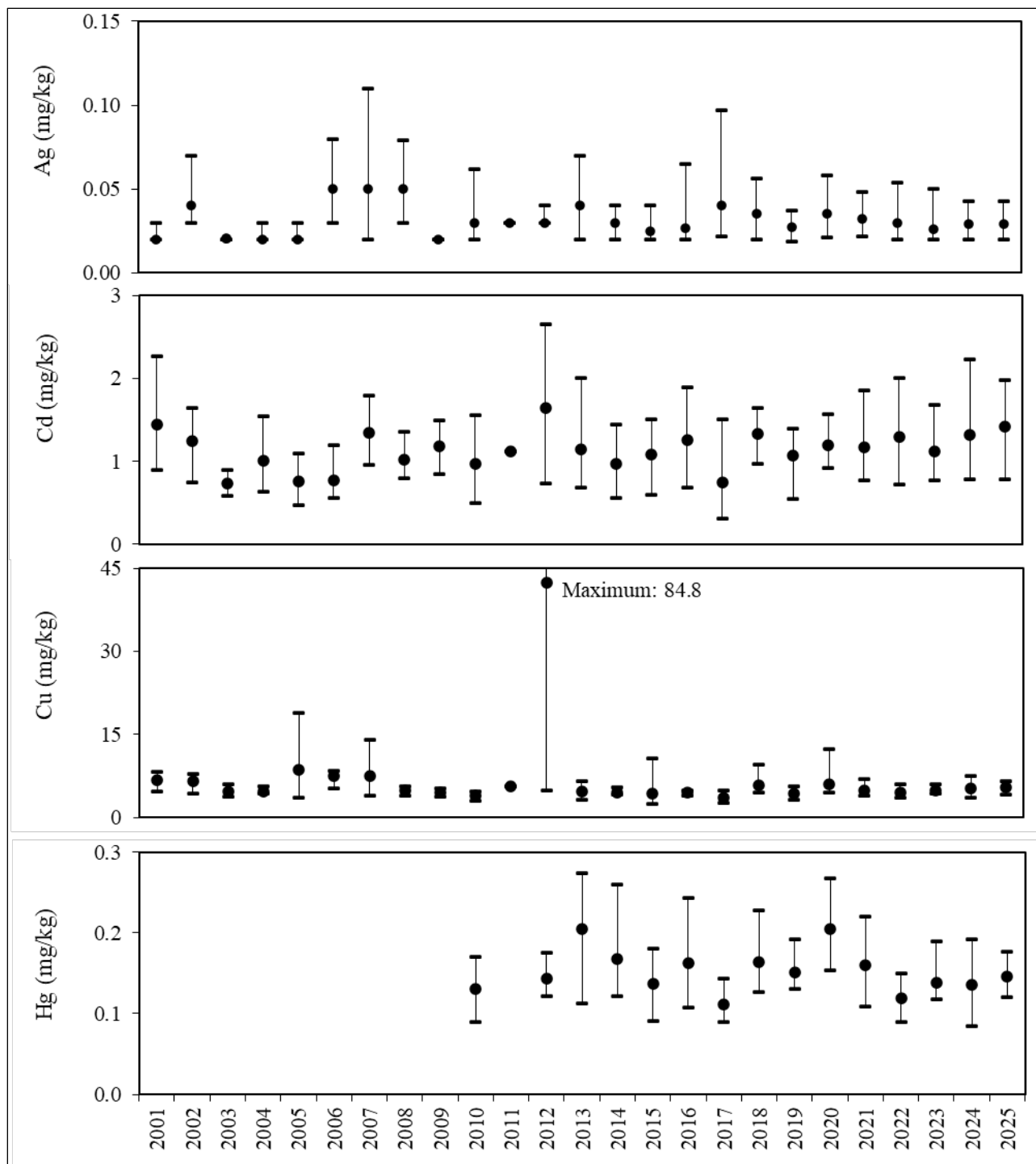


Figure 22.—Greens Creek Site 48 and Site 63 whole body Dolly Varden Ag, Cd, and Cu concentrations, 2001–2025, and Hg concentrations, 2010, 2012–2025.
Note: Minimum, mean, and maximum concentrations presented.

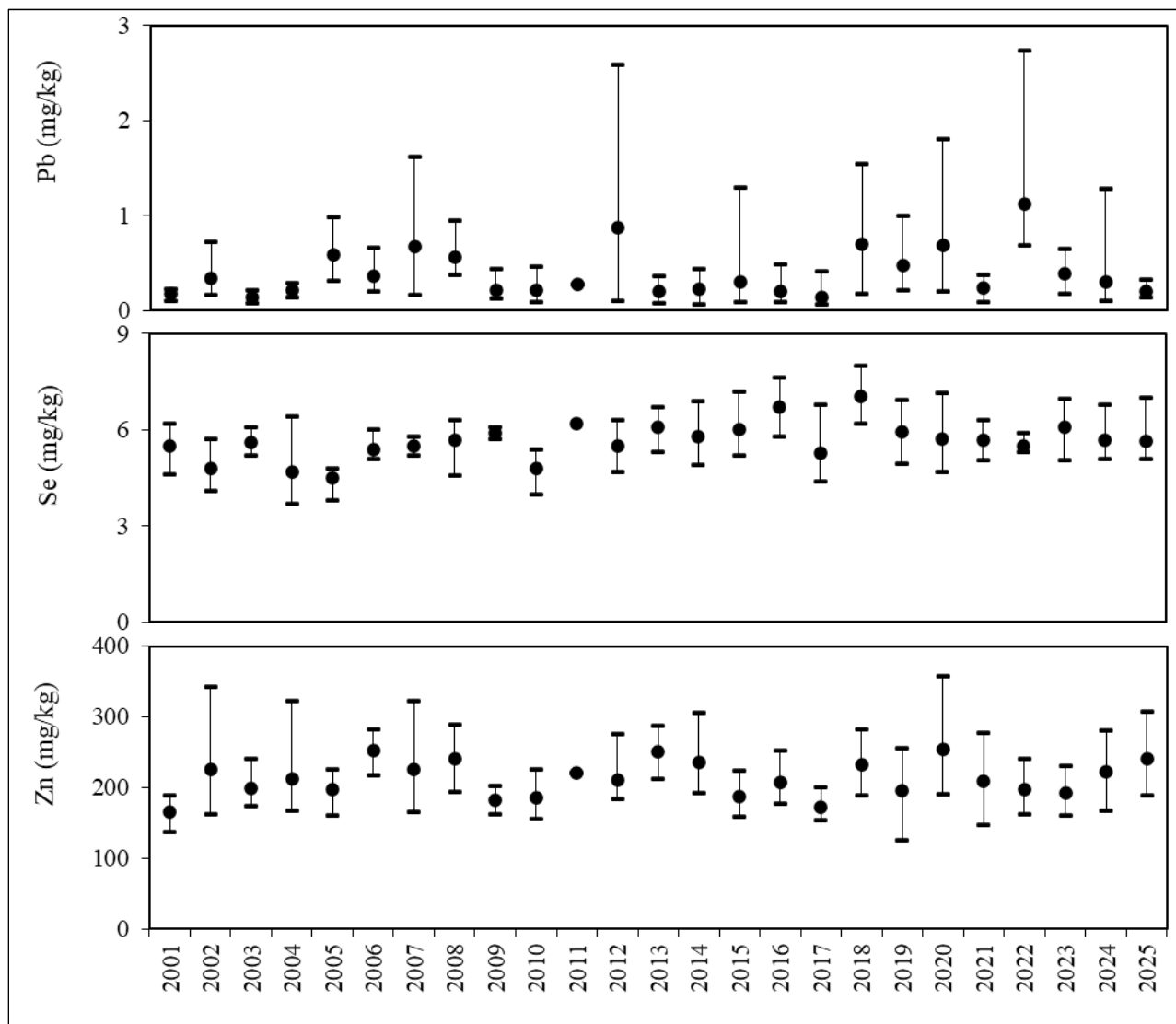


Figure 23.—Greens Creek Site 48 and Site 63 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.

Note: Minimum, mean, and maximum concentrations presented.

Sediment Element Concentrations

The 2025 Greens Creek Site 63 sediment samples contained As, Cd, Cu, Ni, and Zn concentrations above the TEC freshwater sediment toxicity guidelines as in previous years (Figure 24). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

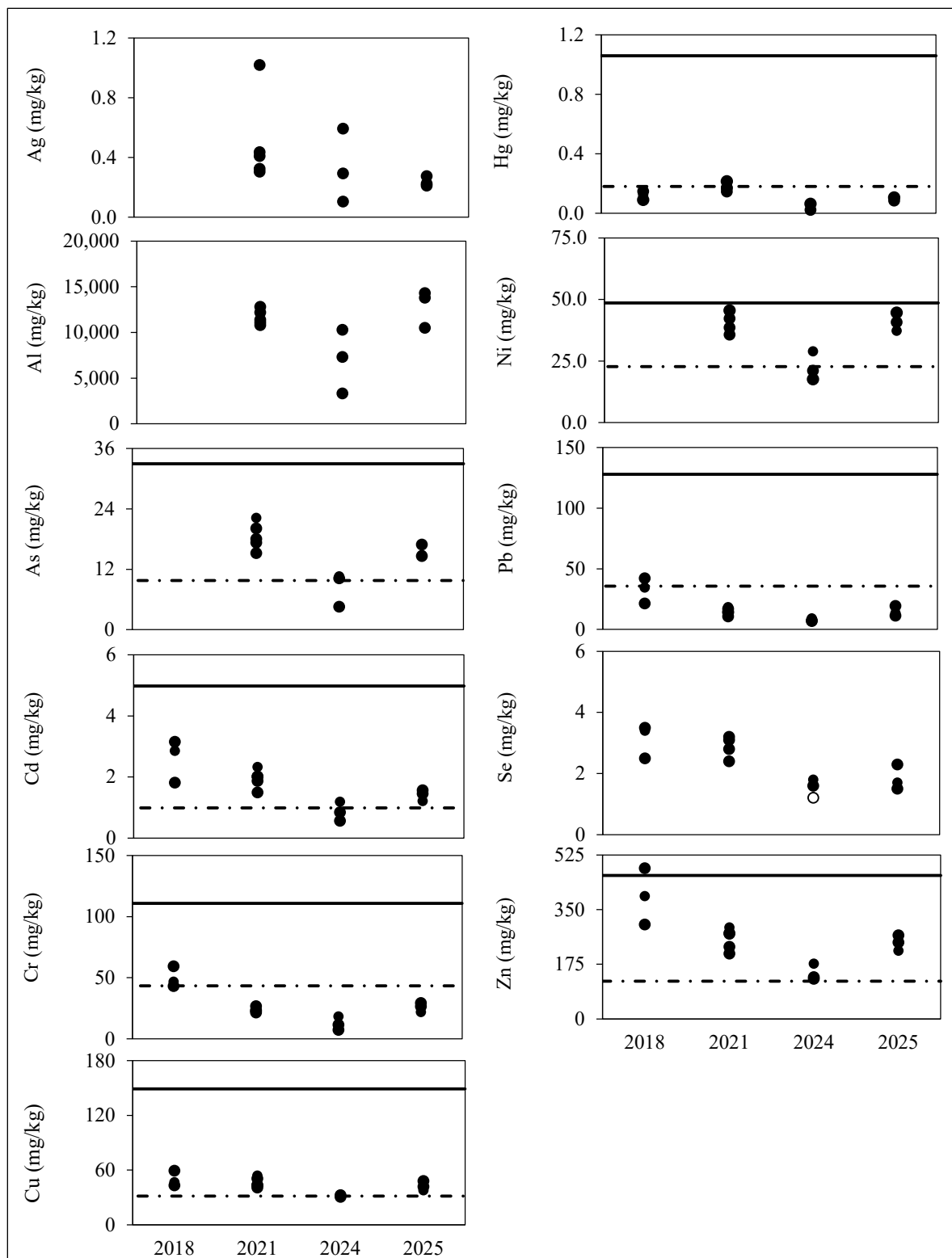


Figure 24.—Greens Creek Site 63 sediment element concentrations, 2018, 2021, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Greens Creek Site 54

On July 7, 2025, we sampled Greens Creek Site 54. We measured stream discharge of 82.8 ft³/s and Hecla environmental staff measured basic water quality at 1230 hours (Table 5).

Table 5.—Greens Creek Site 54 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (µS/cm)	pH	Discharge (ft ³ /s)
07/7/2025	7.5	88.0	7.62	82.8

Periphyton: Chlorophyll Density and Composition

The 2025 Greens Creek Site 54 estimate mean density of Chl-*a* was 5.63 mg/m², within the middle range of mean densities 2001–2024 (Figure 25). The samples contained about 88% Chl-*a*, 0% Chl-*b*, and 12% Chl-*c*, consistent with composition observed in previous years (Figure 26).

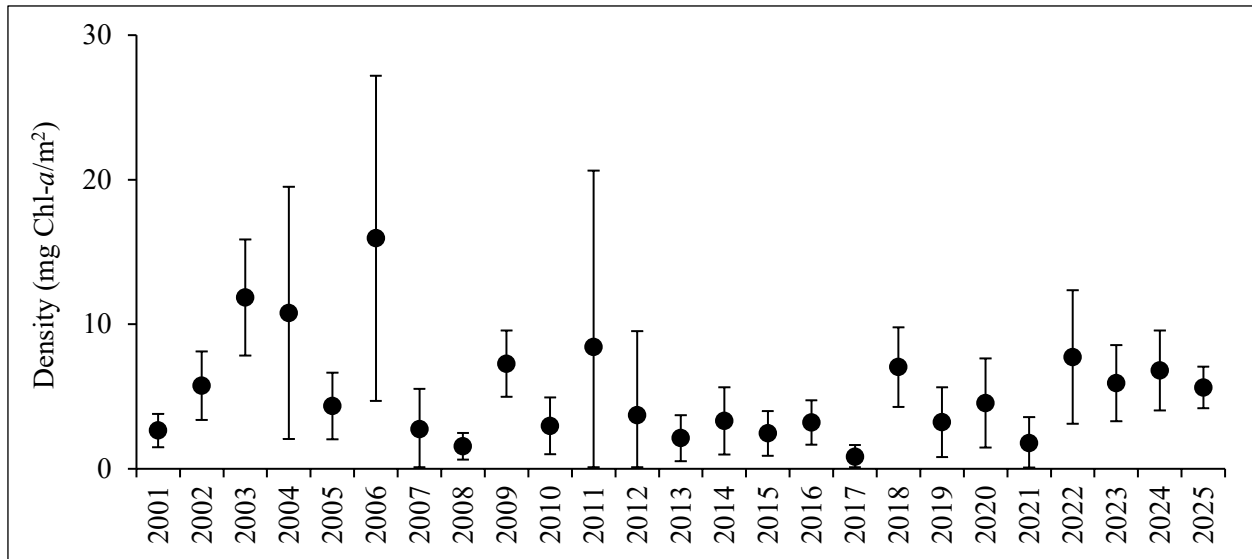


Figure 25.—Greens Creek Site 54 mean, minimum, and maximum chlorophyll-a densities, 2001–2025.

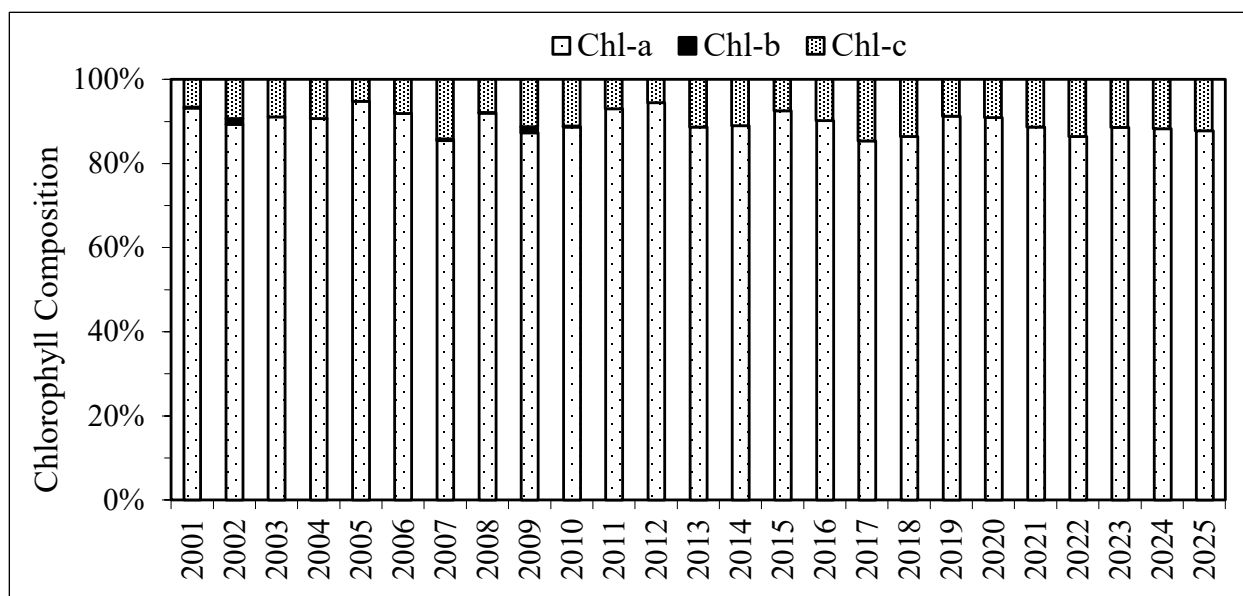


Figure 26.– Greens Creek Site 54 mean proportions of chlorophylls *a*, *b*, and *c*, 2001–2025.

Benthic Macroinvertebrate Density and Community Composition

The 2025 Greens Creek Site 54 BMI estimate mean density is 3,266 BMI/m² and we identified 33 taxa, within the upper range of BMI density and number of taxa observed 2001–2024 (Table 6; Figures 27, 28). We estimate mean EPT density at 2,939 EPT/m², within the middle range observed, accounting for 78% of the samples. Dominant taxa were Ephemeroptera of the genera *Baetis* (28%) and *Drunella* (20%).

Table 6.– Greens Creek Site 54 benthic macroinvertebrate data summary, 2001–2025.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean EPT Density (per m ²)	3,986	3,284	4,895	4,040	3,100	1,188	716	2,741	2,191	3,042	3,871	1,503	849
Mean BMI Density (per m ²)	4,144	3,409	5,430	4,575	3,260	1,221	742	2,970	2,277	3,202	4,449	1,753	1,014
Number of EPT Taxa	16	15	15	19	18	10	10	14	16	13	20	21	12
Number of BMI Taxa	28	30	26	32	25	13	15	22	23	21	34	30	20
% EPT	96%	96%	90%	88%	95%	97%	97%	92%	96%	95%	87%	86%	84%
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Mean EPT Density (per m ²)	3,268	1,547	3,334	1,469	3,437	3,596	3,022	888	1,308	5,506	3,259	2,939	
Mean BMI Density (per m ²)	3,737	1,887	3,658	1,651	3,647	4,032	3,634	1,068	1,427	6,102	3,567	3,266	
Number of EPT Taxa	17	15	17	20	18	19	19	12	15	18	15	15	
Number of BMI Taxa	26	28	30	31	29	29	31	24	22	31	24	33	
% EPT	87%	82%	91%	89%	94%	89%	83%	83%	92%	90%	91%	78%	

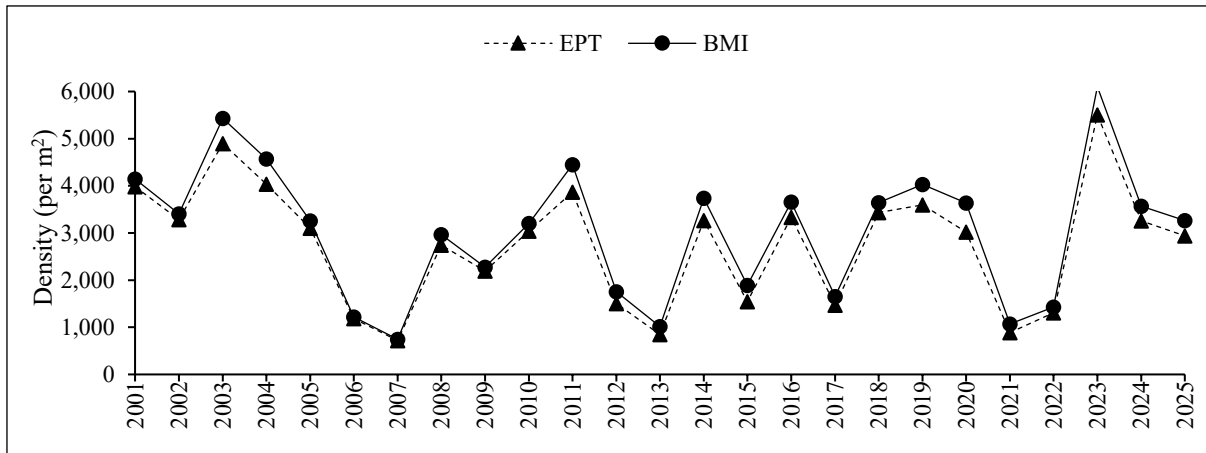


Figure 27.—Greens Creek Site 54 mean EPT and BMI densities, 2001–2025.

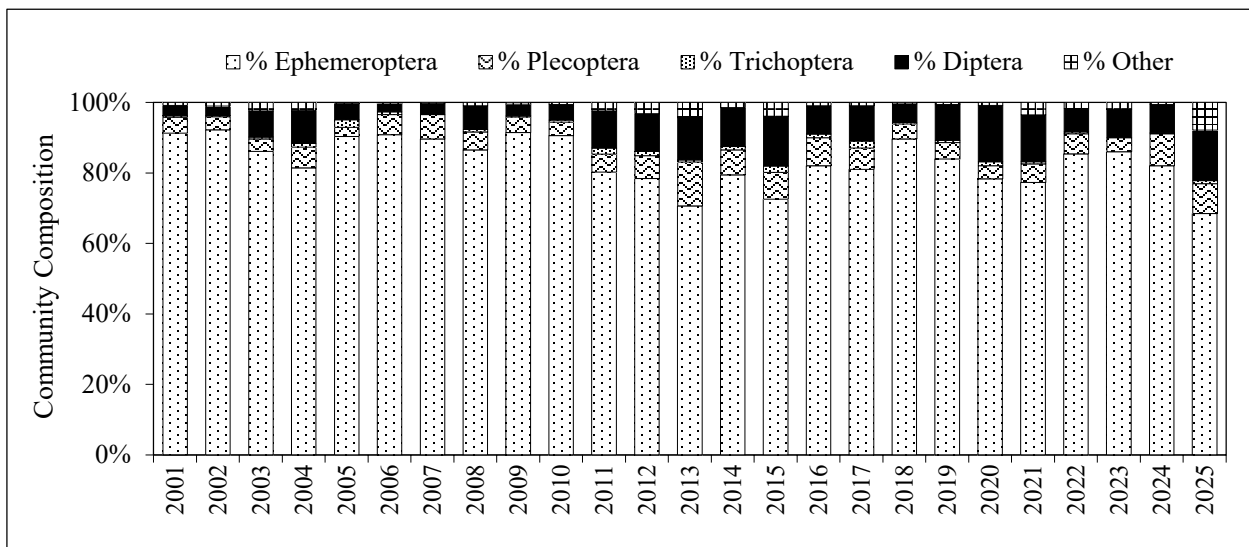


Figure 28.—Greens Creek Site 54 BMI community composition, 2001–2025.

Juvenile Fish Abundance and Condition

In 2025 at Greens Creek Site 54, we captured 118 Dolly Varden (52–139 mm FL), an average catch, and one 75 mm FL juvenile coho salmon (Figure 29) Mean fish condition for Dolly Varden and coho salmon was 1.1, similar to previous fish captured at Site 54. The range of captured fish lengths suggests at least two age classes were present for Dolly Varden and one for coho salmon, consistent with previous years.

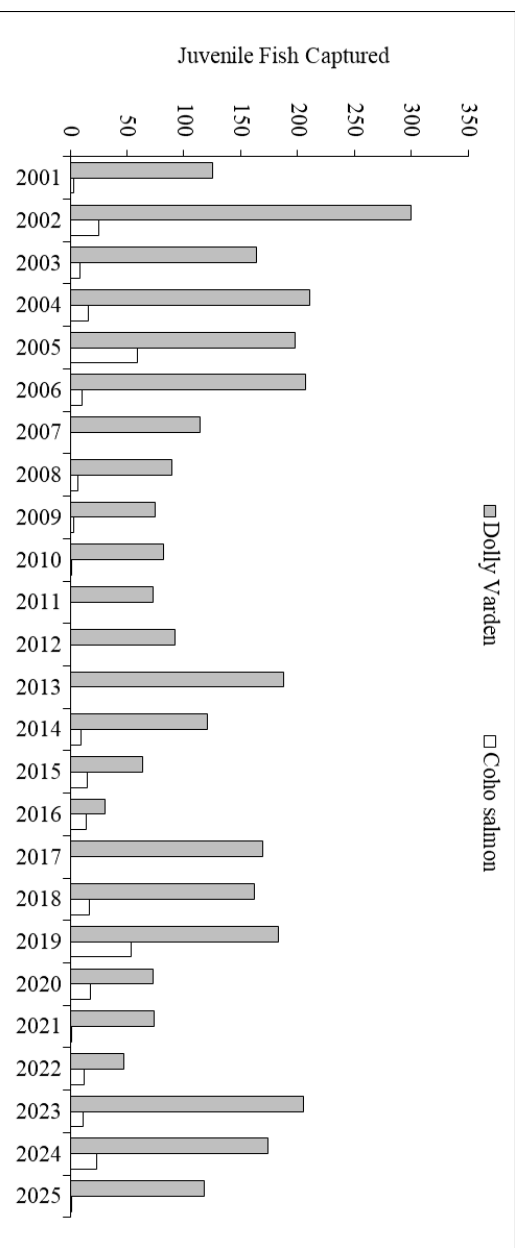


Figure 29.—Greens Creek Site 54 juvenile fish captured, 2001–2025.

Note: 2001–2010 data were from a 28 m reach, while 2011–2025 data were from a 50 m reach. 2001–2010 data are presented as an expansion to 50 m, assuming regular distribution. Other species captured are not illustrated.

Juvenile Fish Element Concentrations

In 2025 at Greens Creek Site 54, we retained 10 Dolly Varden (97–139 mm FL) for whole body element analysis. The median element concentrations were within ranges previously observed 2001–2024 (Figures 30, 31).

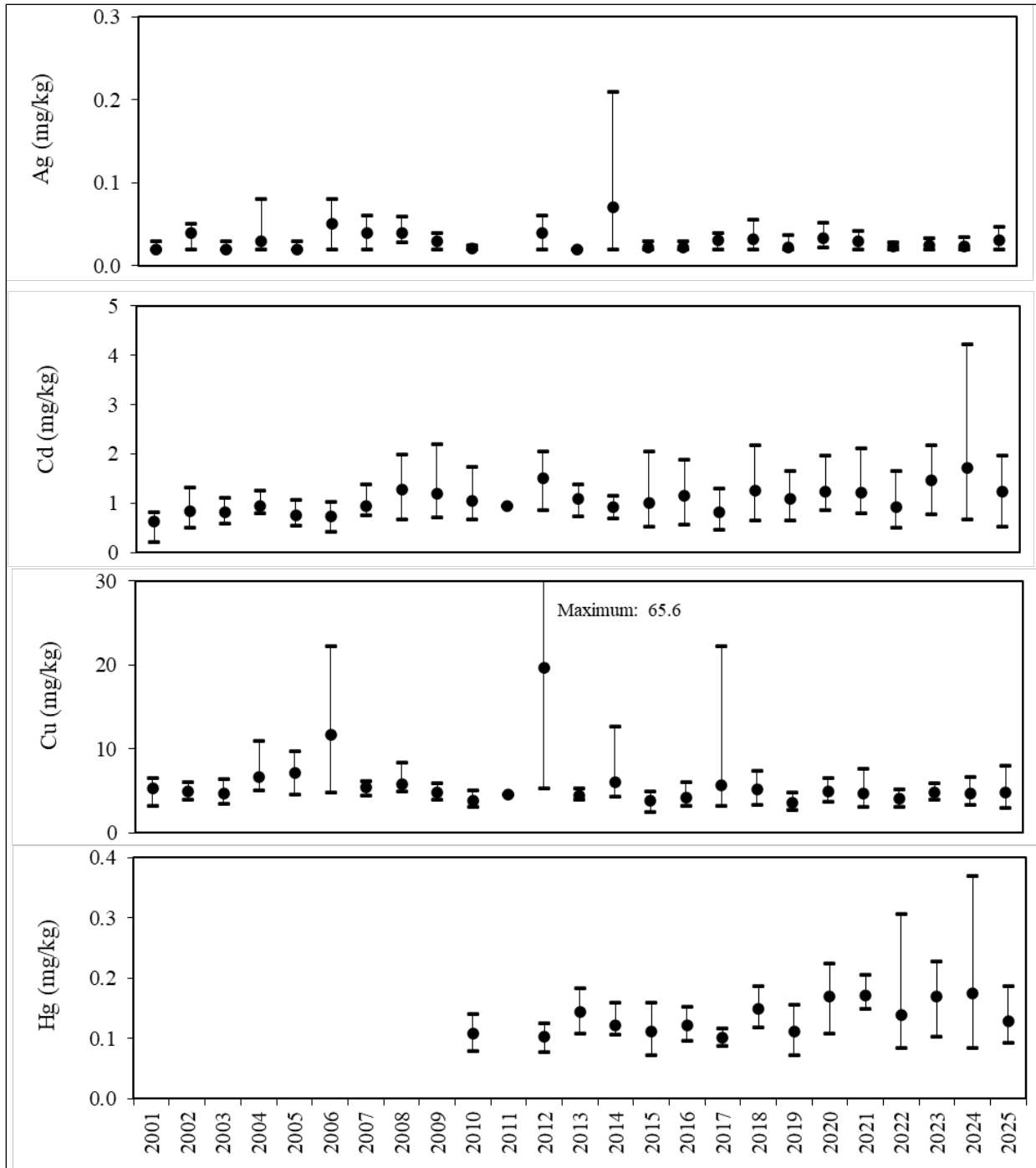


Figure 30.—Greens Creek Site 54 whole body Dolly Varden Ag, Cd, and Cu concentrations, 2001–2025, and Hg concentrations, 2010, and 2012–2025.

Note: Minimum, mean, and maximum concentrations presented.

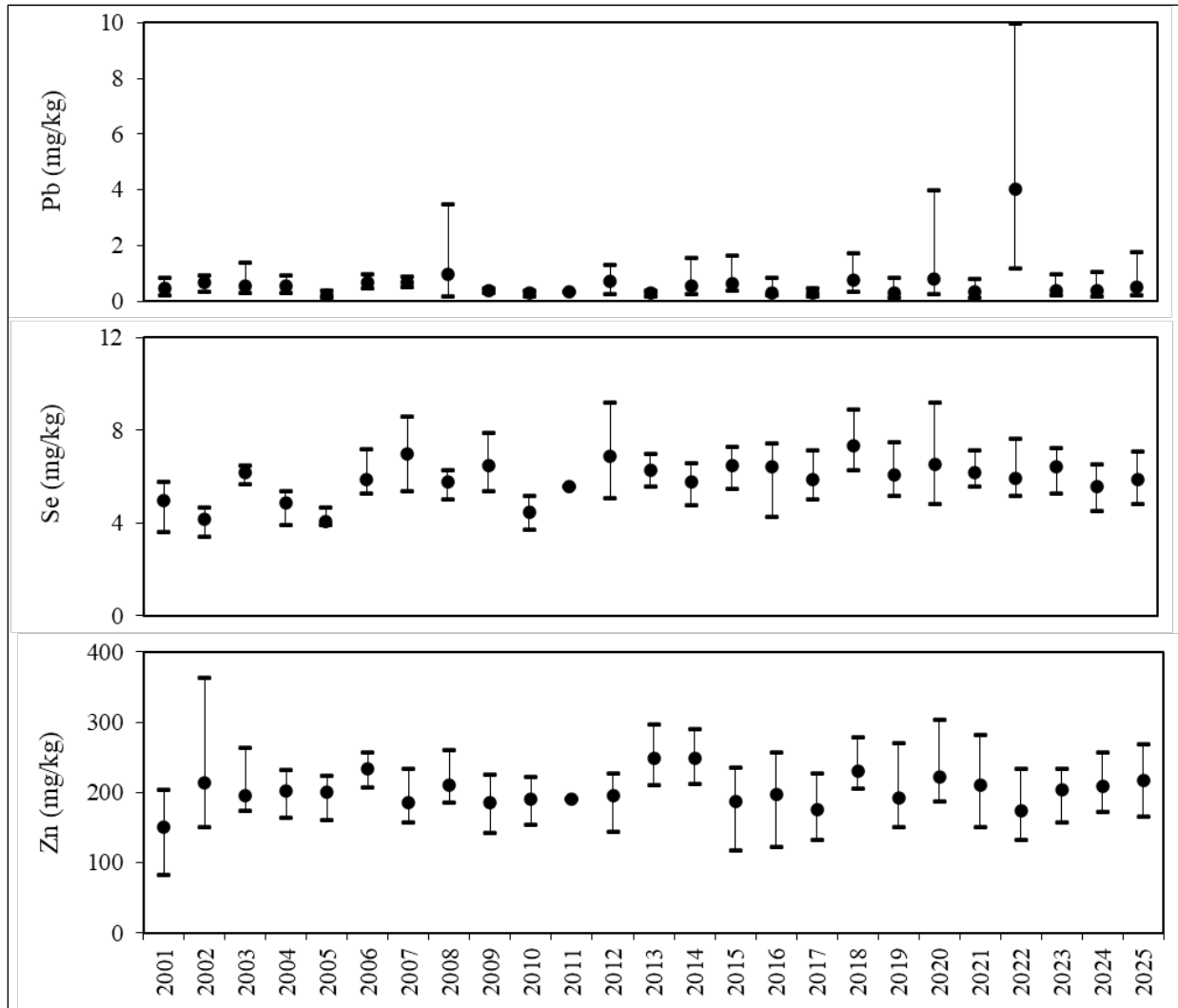


Figure 31.—Greens Creek Site 54 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.

Note: Minimum, mean, and maximum concentrations presented.

Sediment Element Concentrations

We sampled sediment at Greens Creek Site 54 and found samples contained As, Cd, Cu, Hg, and Zn concentrations above the TEC freshwater sediment toxicity guidelines and Ni above the PEC guideline (Figure 32). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

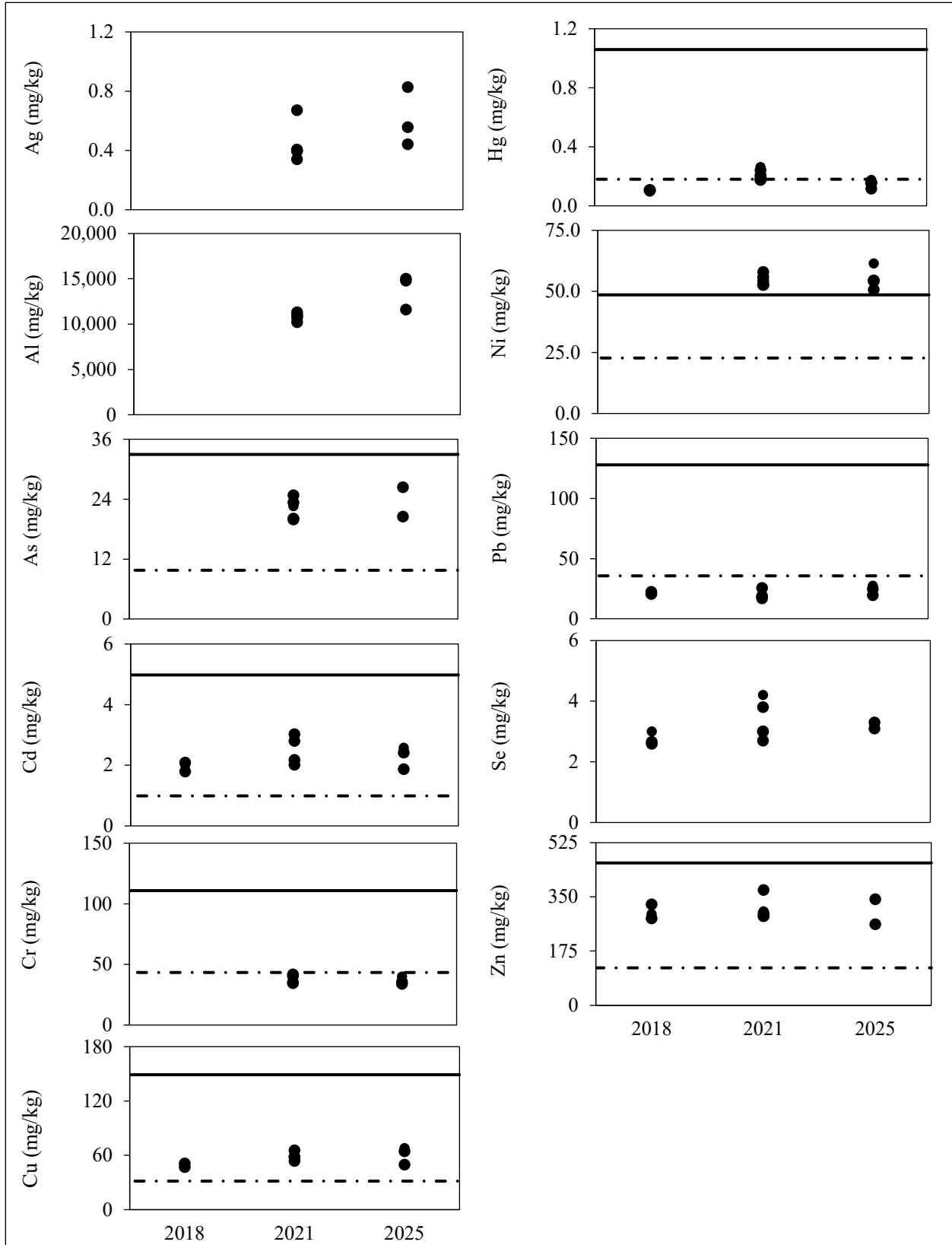


Figure 32.—Greens Creek Site 54 sediment element concentrations, 2018, 2021, 2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Tributary Creek Site 2232

On July 9, 2025, we sampled Tributary Creek Site 2232. Hecla environmental staff measured basic water quality at 1340 hours (Table 7).

Table 7.—Tributary Creek Site 2232 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (µS/cm)	pH
07/09/2025	11.2	54.2	7.04

Sediment element concentrations

The 2025 Tributary Creek Site 2232 sediment samples contained As, Cd, Cr, Cu, Ni, Pb, and Zn concentrations near or above the TEC freshwater sediment toxicity guidelines (Figure 33). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

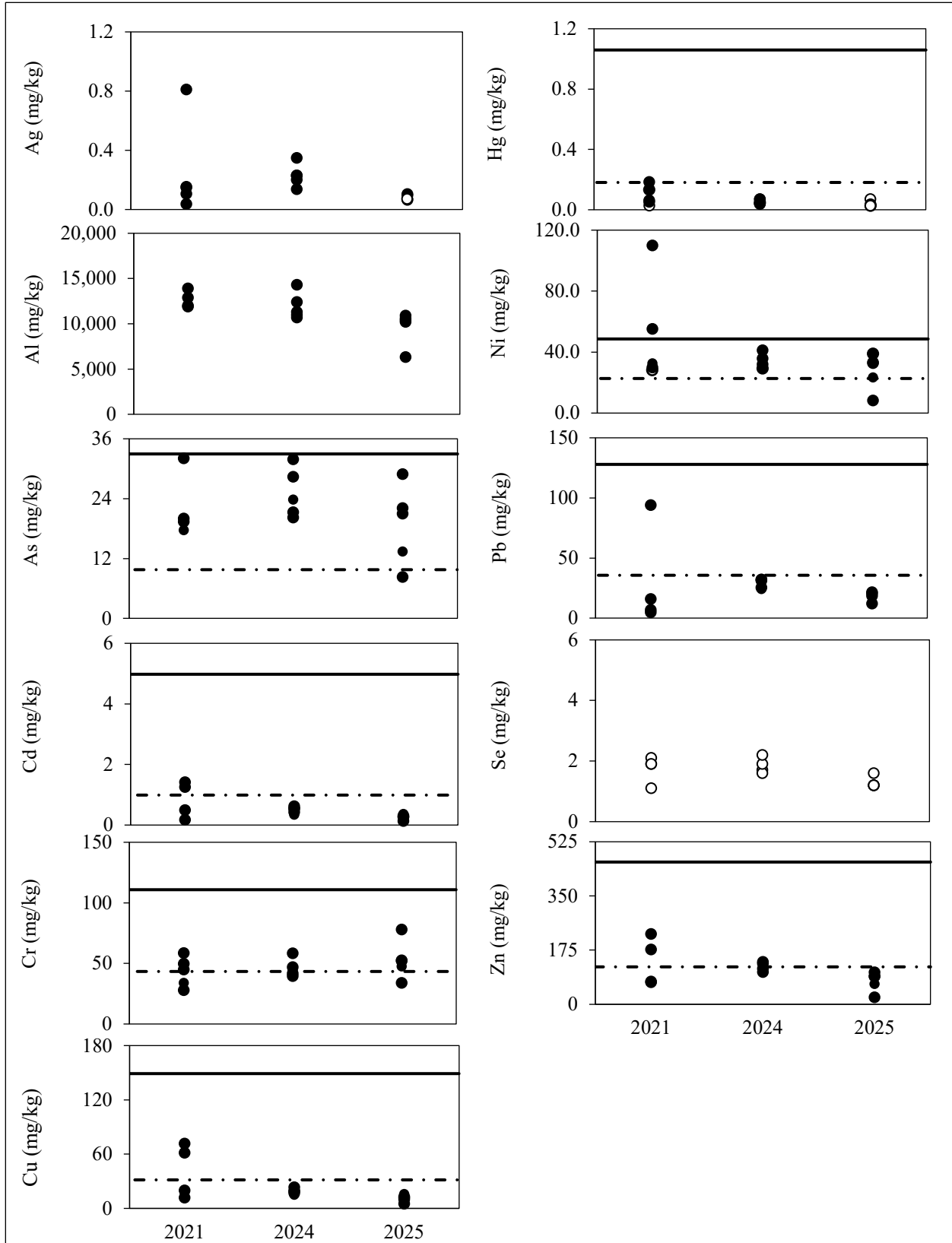


Figure 33.—Tributary Creek Site 2232 sediment element concentrations, 2021, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Tributary Creek Site 9

On July 10, 2025, we sampled Tributary Creek Site 9. We measured stream discharge of 1.3 ft³/s and Hecla environmental staff measured basic water quality at 0930 hours (Table 8).

Table 8.—Tributary Creek Sites 9 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH	Discharge (ft ³ /s)
07/10/2025	10.0	65.8	6.83	1.3

Periphyton: Chlorophyll Density and Composition

The 2025 Tributary Creek Site 9 estimate mean density of Chl-*a* was 17.44 mg/m², the highest mean density observed 2001–2024 (Figure 34). The samples contained about 95% Chl-*a*, 0% Chl-*b*, and 5% Chl-*c* consistent with composition observed in previous years (Figure 35).

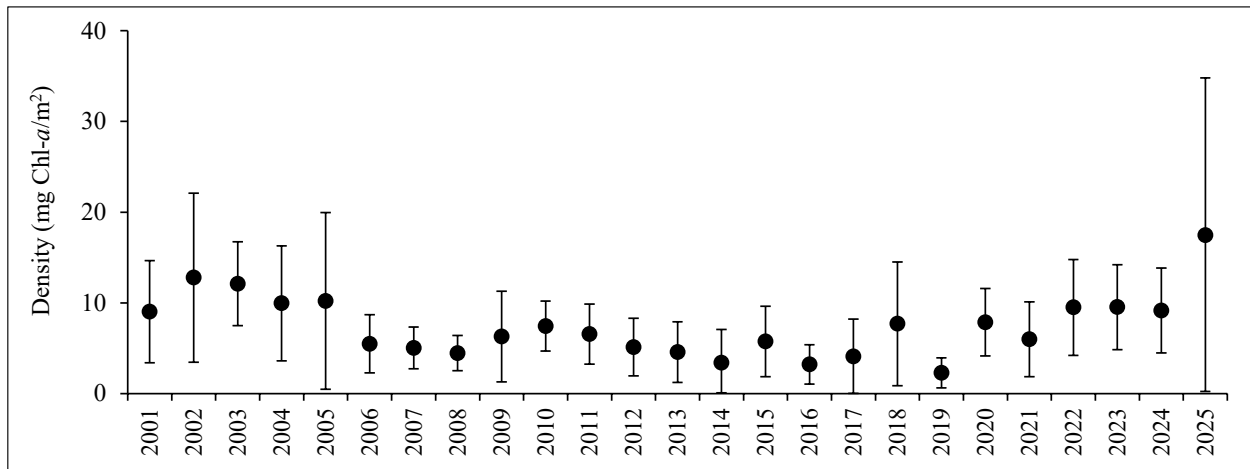


Figure 34.—Tributary Creek Site 9 mean, minimum, and maximum chlorophyll-*a* densities, 2001–2025.

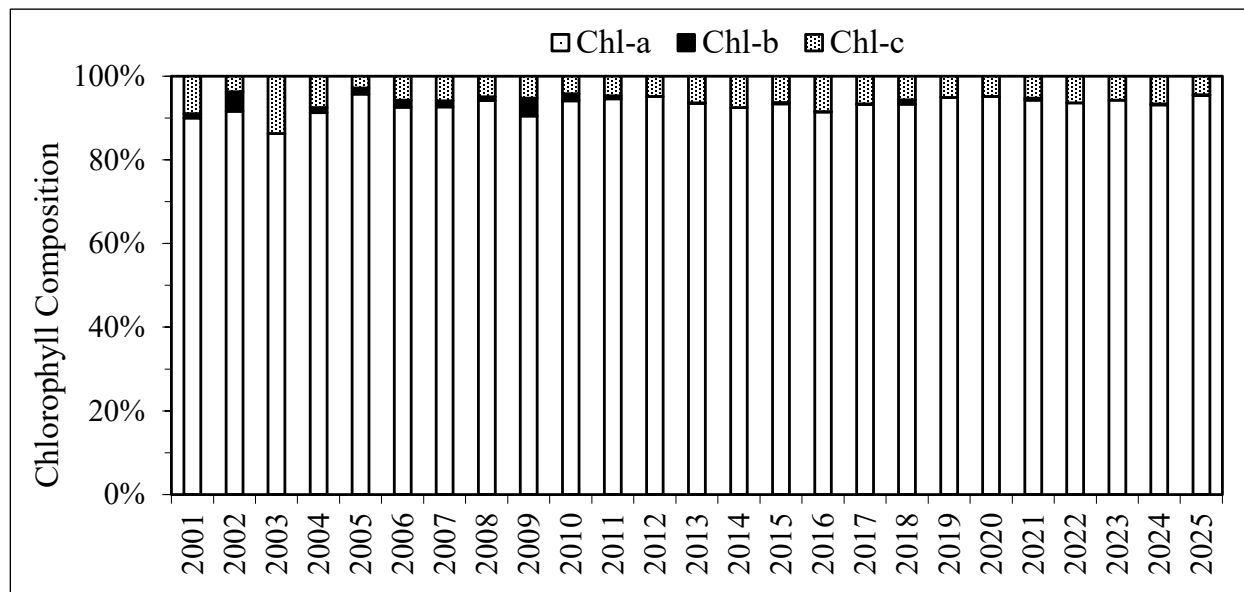


Figure 35.—Tributary Creek Site 9 mean proportions of chlorophylls *a*, *b*, and *c*, 2001–2025.

Benthic Macroinvertebrate Density and Community Composition

The 2025 Tributary Creek Site 9 BMI estimate mean density is 1,788 BMI/m² and we identified 33 taxa, within the middle range of BMI densities and taxa observed 2001–2024 (Table 9; Figures 36, 37). We estimate mean EPT density at 1,390 EPT/m², within the range observed, accounting for 78% of the samples, among the highest EPT percentages observed at the site. Dominant taxa were Ephemeroptera of the genus *Cinygmula* (50%).

Table 9.–Tributary Creek Site 9 benthic macroinvertebrate data summary, 2001–2025.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean EPT Density (per m ²)	634	1,179	3,675	1,705	1,007	1,119	337	1,144	698	246	996	753	1,991
Mean BMI Density (per m ²)	1,148	1,740	5,851	2,400	1,228	1,453	507	1,751	1,114	460	1,991	1,416	2,393
Number of EPT Taxa	11	14	16	14	18	10	10	12	13	12	14	14	12
Number of BMI Taxa	21	24	36	26	30	23	21	20	26	22	26	27	20
% EPT	54%	68%	63%	71%	82%	77%	67%	65%	63%	54%	50%	53%	83%

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Mean EPT Density (per m ²)	1,700	432	2,193	1,208	400	657	794	919	1,108	3,251	1,500	1,390
Mean BMI Density (per m ²)	2,479	749	5,602	2,625	1,243	1,317	2,241	2,304	2,330	5,625	2,407	1,788
Number of EPT Taxa	12	12	16	15	13	14	15	14	14	19	17	17
Number of BMI Taxa	22	23	29	29	25	28	32	28	26	34	30	33
% EPT	69%	58%	39%	46%	32%	50%	35%	40%	48%	58%	62%	78%

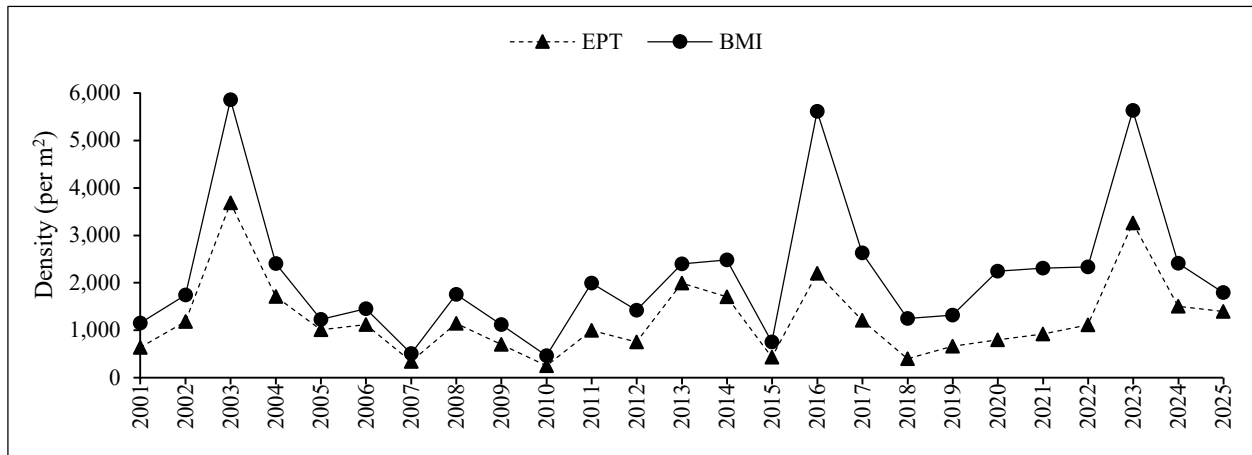


Figure 36.–Tributary Creek Site 9 mean EPT and BMI densities, 2001–2025.

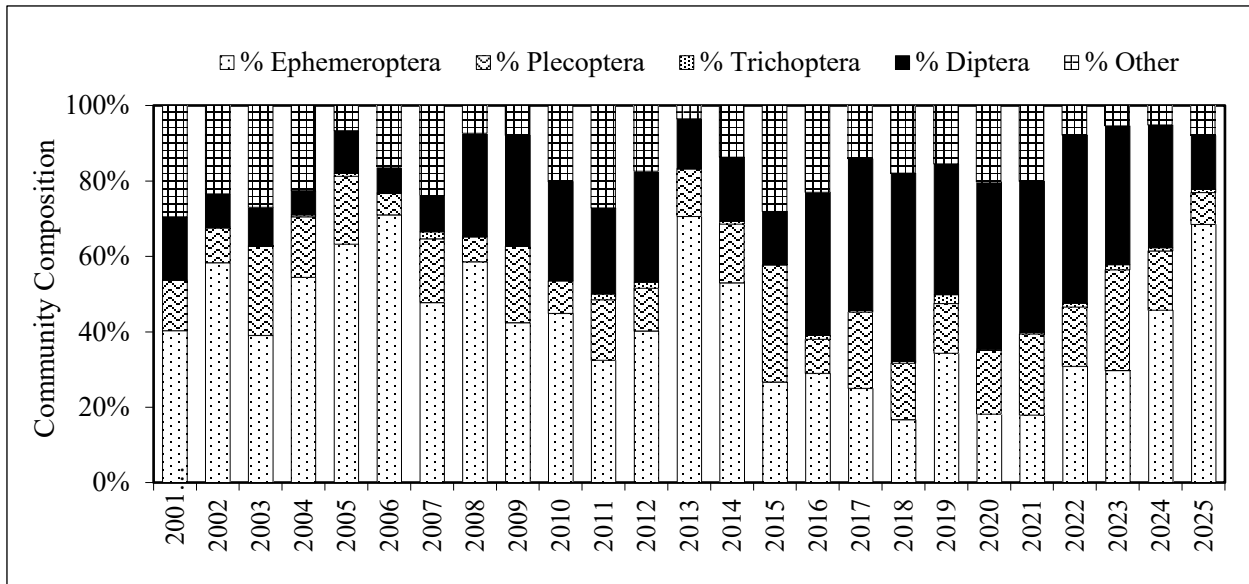


Figure 37.—Tributary Creek Site 9 mean BMI community composition, 2001–2025.

Juvenile Fish Abundance and Condition

In 2025 at Tributary Creek Site 9, we captured 17 Dolly Varden (71–105 mm FL) and 49 juvenile coho salmon (37–95 mm FL), similar numbers for these species during the 2001–2024 period (Figure 38). Mean fish condition for Dolly Varden was 1.3 and for juvenile coho salmon, within the documented range of 0.9–1.4. The range of captured fish lengths suggests at least two age classes were present for Dolly Varden and coho salmon, consistent with previous years. Dolly Varden trap captures at Site 9 appear to follow a 6–8 year cycle of abundance.

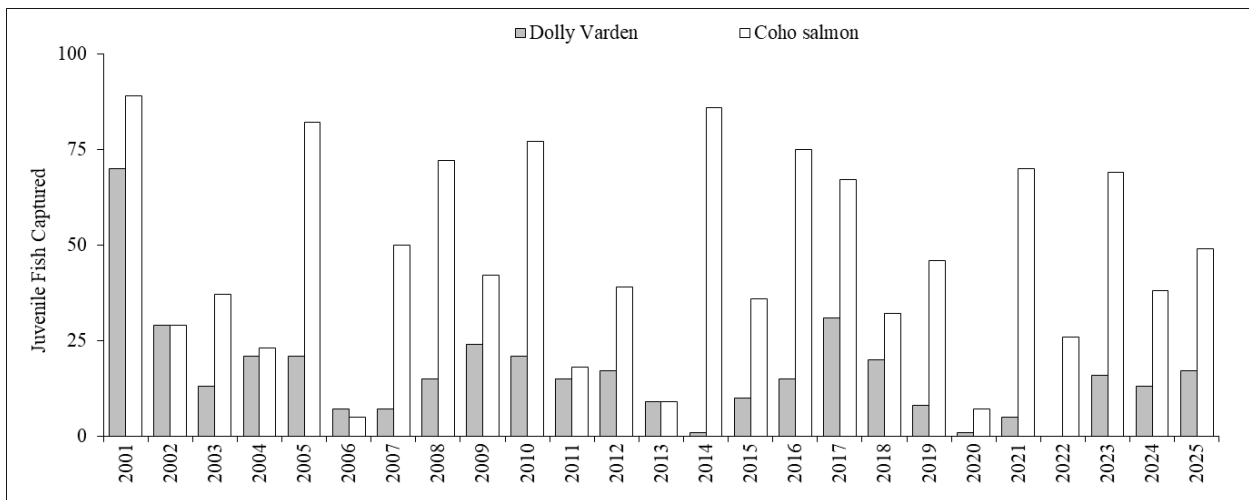


Figure 38.—Tributary Creek Site 9 juvenile fish captured, 2001–2025.

Juvenile Fish Element Concentrations

In 2025 at Tributary Creek Site 9, we retained 10 Dolly Varden (81–105 mm) for whole body element analysis. The mean element concentrations were within ranges previously observed 2001–2024; however, the mean Ag, Cd, Cu, Pb, Se, and Zn concentrations increased to values near or above those observed in 2020 and a few other prior years (Figures 39, 40).

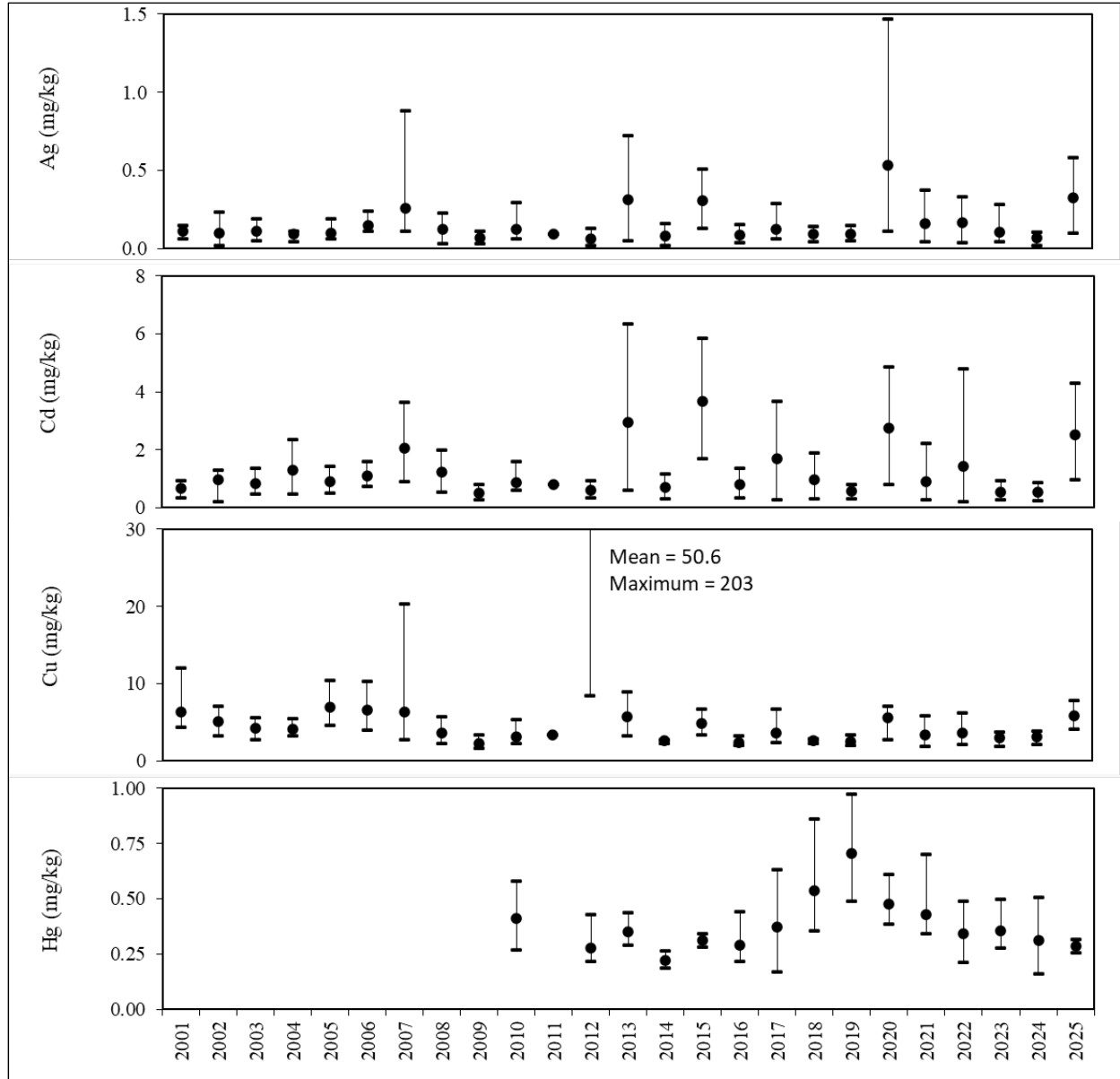


Figure 39.–Tributary Creek Site 9 whole body Dolly Varden Ag, Cd, and Cu concentrations, 2001–2025, and Hg concentrations, 2010, 2012–2025.

Note: Minimum, mean, and maximum concentrations presented.

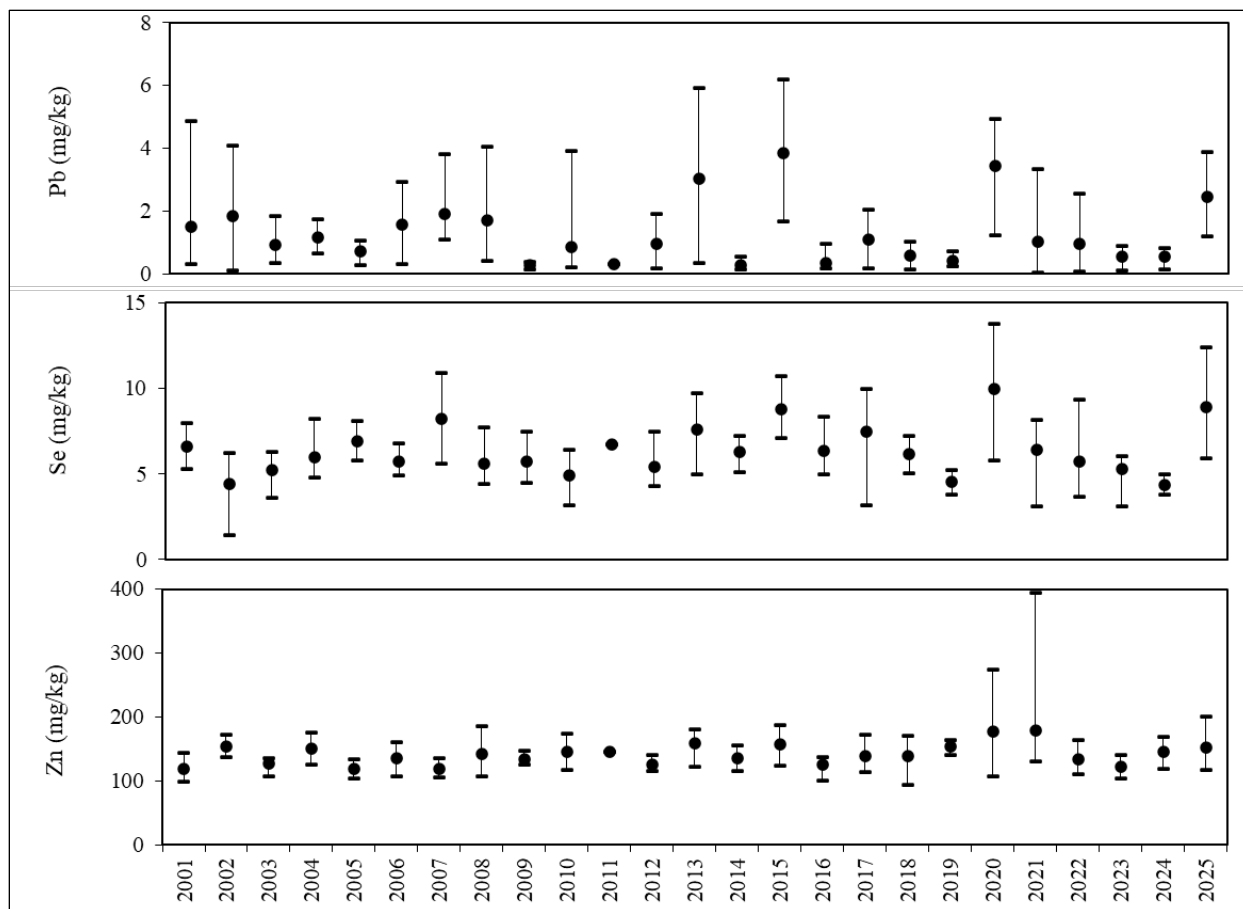


Figure 40.—Tributary Creek Site 9 whole body Dolly Varden Pb, Se, and Zn concentrations, 2001–2025.

Note: Minimum, mean, and maximum concentrations presented.

Sediment Element Concentrations

The 2025 Tributary Creek Site 9 sediment samples contained As, Cr, Cu, and Ni concentrations above the TEC freshwater sediment toxicity guidelines (Figure 41). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

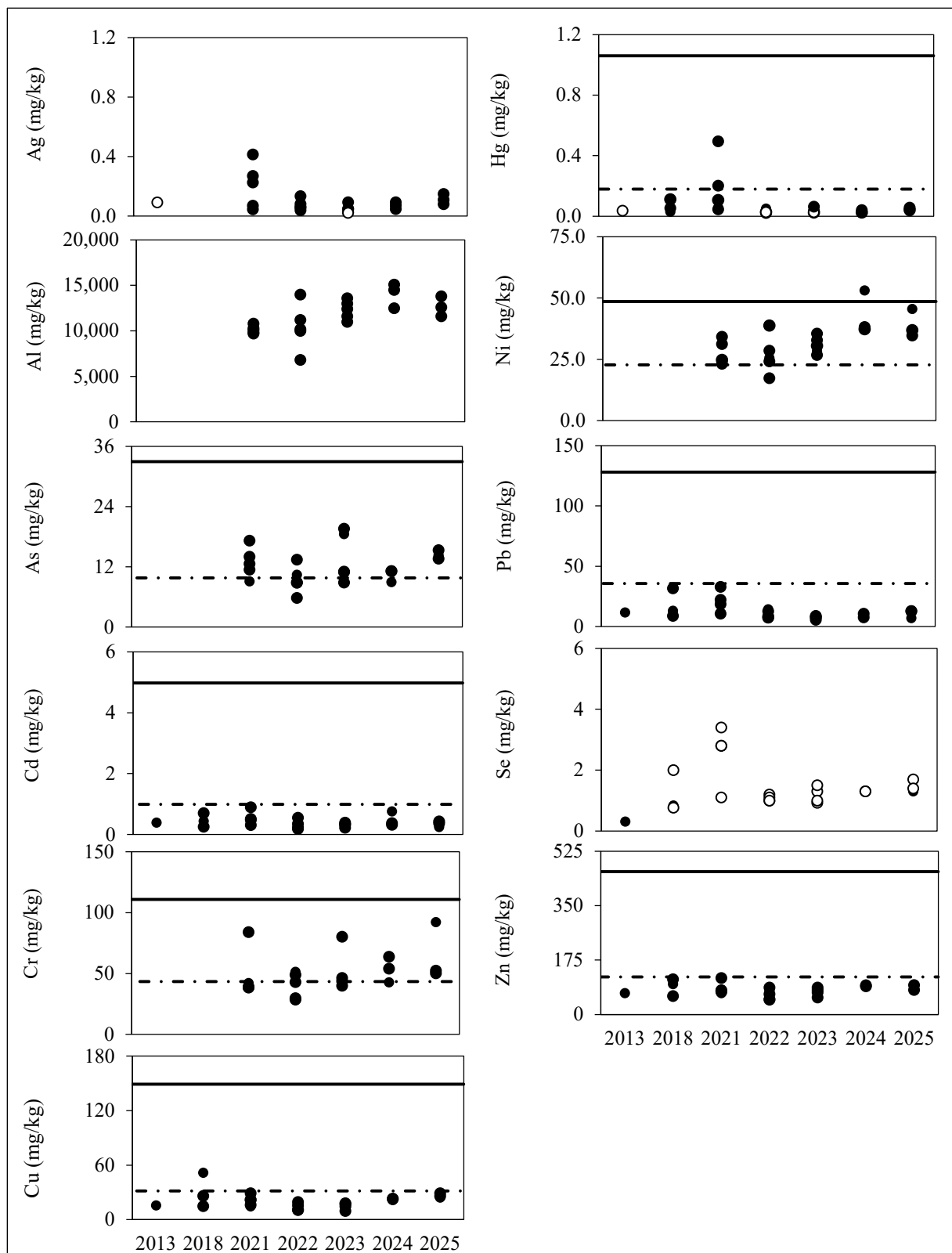


Figure 41.—Tributary Creek Site 9 sediment element concentrations, 2013, 2018, 2021–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Tributary Creek Site 1847

On July 9, 2025, we sampled Tributary Creek Site 1847. We measured stream discharge of 2.9 ft³/s and Hecla environmental staff measured basic water quality at 1240 hours (Table 10).

Table 10.—Tributary Creek Site 1847 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH	Discharge (ft ³ /s)
07/09/2025	10.5	58.4	6.94	2.9

Periphyton: Chlorophyll Density and Composition

The 2025 Tributary Creek Site 1847 estimate mean density of Chl-*a* was 10.36 mg/m², within the middle range of mean densities observed 2018–2024 (Figure 42). The samples contained about 89% Chl-*a*, 5% Chl-*b*, and 6% Chl-*c*, consistent with composition observed in previous years (Figure 43).

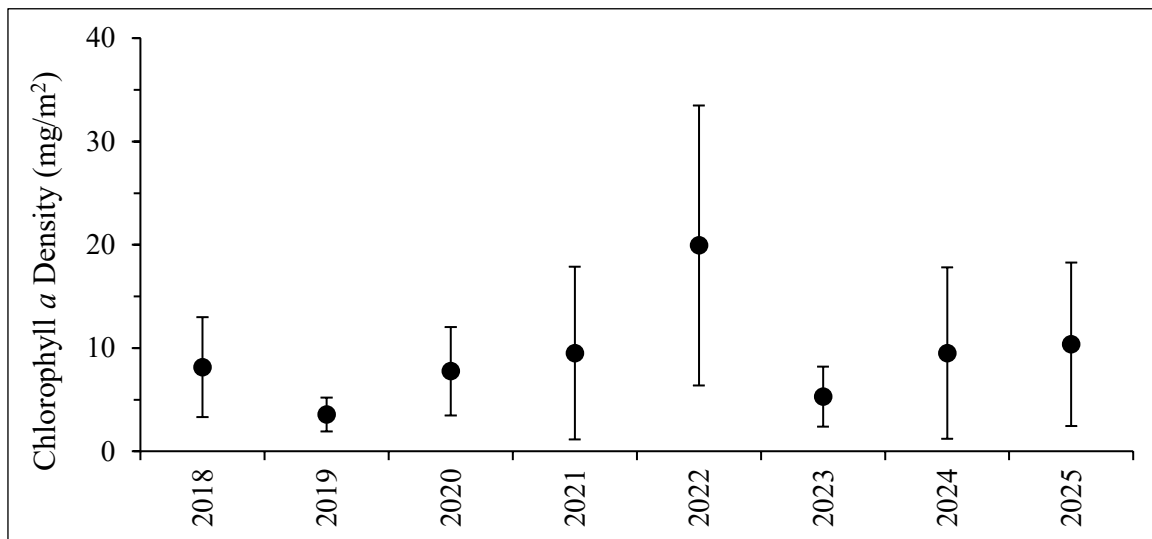


Figure 42.—Tributary Creek Site 1847 mean, minimum, and maximum chlorophyll-*a* densities, 2018–2025.

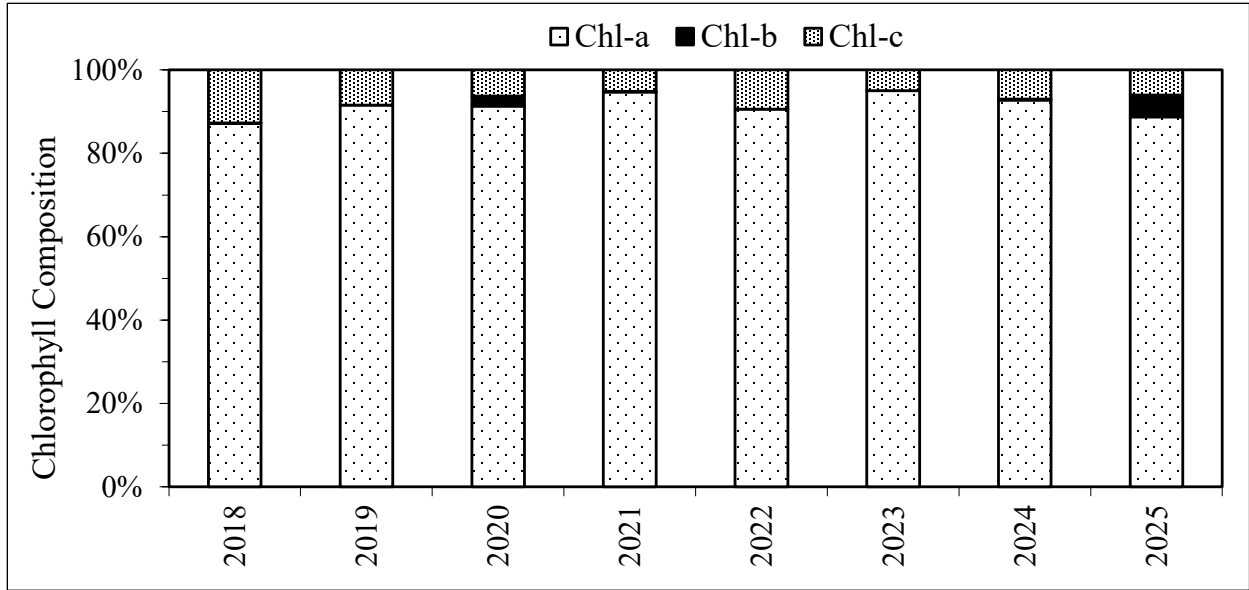


Figure 43.–Tributary Creek Site 1847 mean proportions of chlorophylls *a*, *b*, and *c* (2018–2025).

Benthic Macroinvertebrate Density and Community Composition

The 2025 Tributary Creek Site 1847 BMI estimate mean density is 1,580 BMI/m², the lowest recorded and slightly less than at Site 9, and we identified 33 taxa, the highest number of taxa observed 2018–2024 (Table 11; Figures 44, 45). We estimate mean EPT density at 1,202 EPT/m², within the lower range observed, and EPT accounted for 76% of the samples. Dominant taxa were Ephemeroptera of the genus *Cinygmula* (53%).

Table 11.–Tributary Creek Site 1847 benthic macroinvertebrate data summary, 2018–2025.

	2018	2019	2020	2021	2022	2023	2024	2025
Mean EPT Density (per m ²)	1,161	2,449	1,064	1,932	2,397	2,144	2,243	1,202
Mean BMI Density (per m ²)	2,192	3,555	2,517	2,860	3,653	3,962	3,086	1,580
Number of EPT Taxa	15	13	15	13	16	18	16	17
Number of BMI Taxa	29	28	29	25	28	31	28	33
% EPT	53%	69%	42%	68%	66%	54%	73%	76%

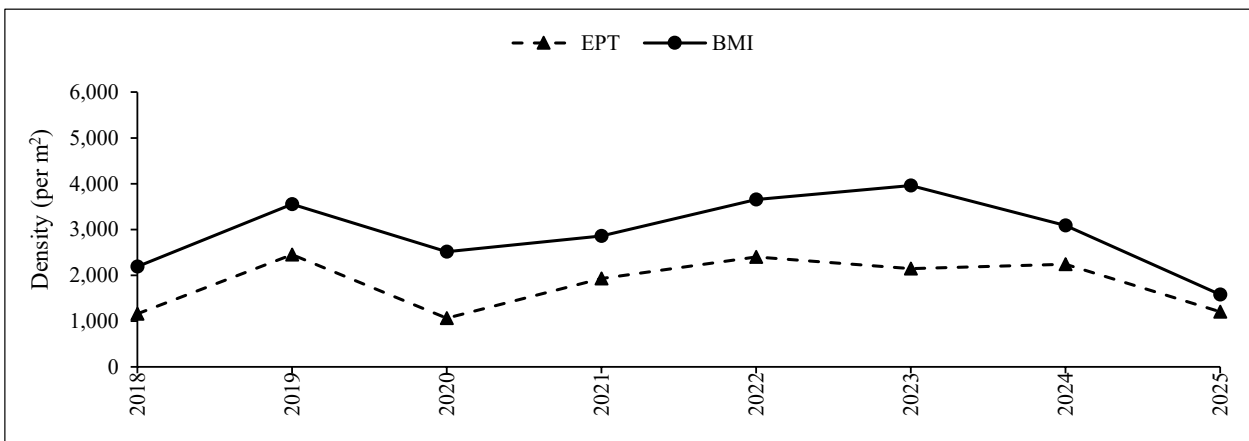


Figure 44.–Tributary Creek Site 1847 mean EPT and BMI densities 2018–2025.

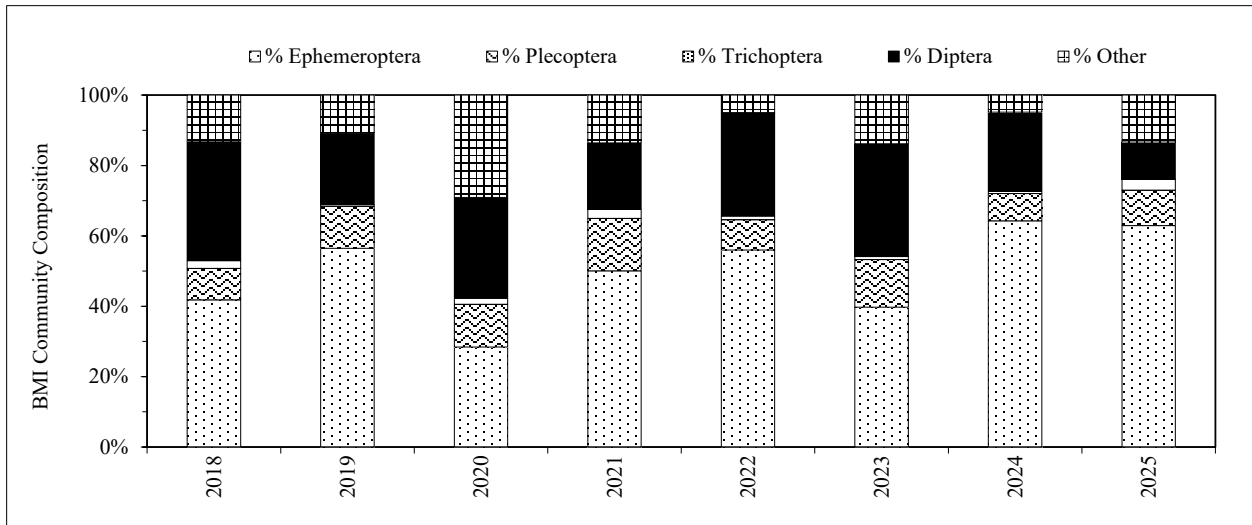


Figure 45.—Tributary Creek Site 1847 mean BMI community composition, 2018–2025.

Sediment Element Concentrations

The 2025 Tributary Creek Site 1847 sediment samples contained As, Cr, Ni, and Zn concentrations above the TEC freshwater sediment toxicity guidelines and one sample contained Ni concentrations above the PEC (Figure 46). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

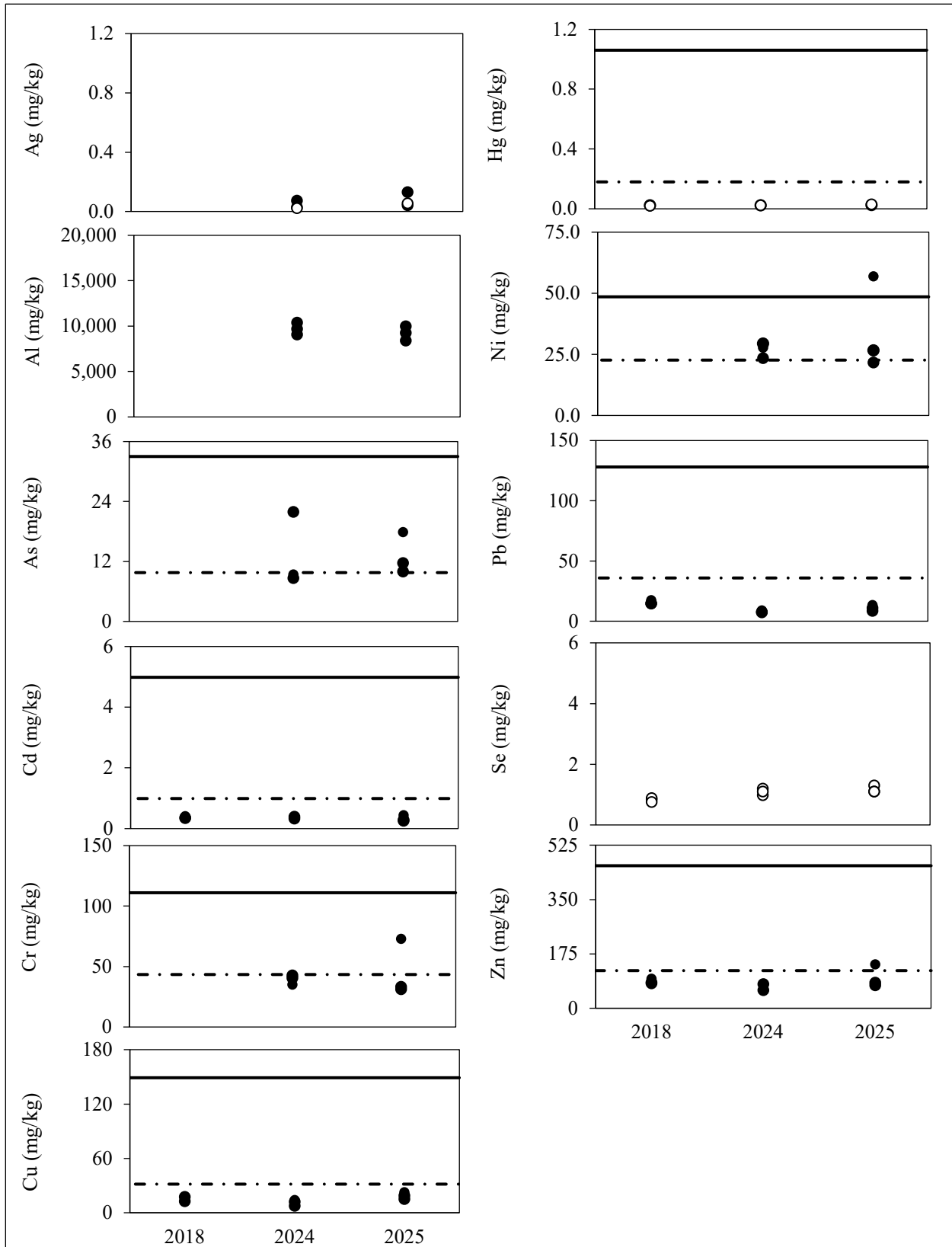


Figure 46.—Tributary Creek Site 1847 sediment element concentrations, 2018, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Zinc Creek Site 371

On July 10, 2025, we sampled Zinc Creek Site 371. We measured discharge at 10.1 ft³/s and Hecla environmental staff measured basic water quality at 1300 hours (Table 12).

Table 12.–Zinc Creek Site 371 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH	Discharge (ft ³ /s)
07/10/2025	9.4	91.4	7.08	10.1

Periphyton: Chlorophyll Density and Composition

The 2025 Zinc Creek Site 371 mean Chl-*a* density was 2.39 mg/m², lower than in 2024 (Figure 47). Samples contained about 90% Chl-*a*, 0% Chl-*b*, and 10% Chl-*c*, consistent with 2024 (Figure 48).

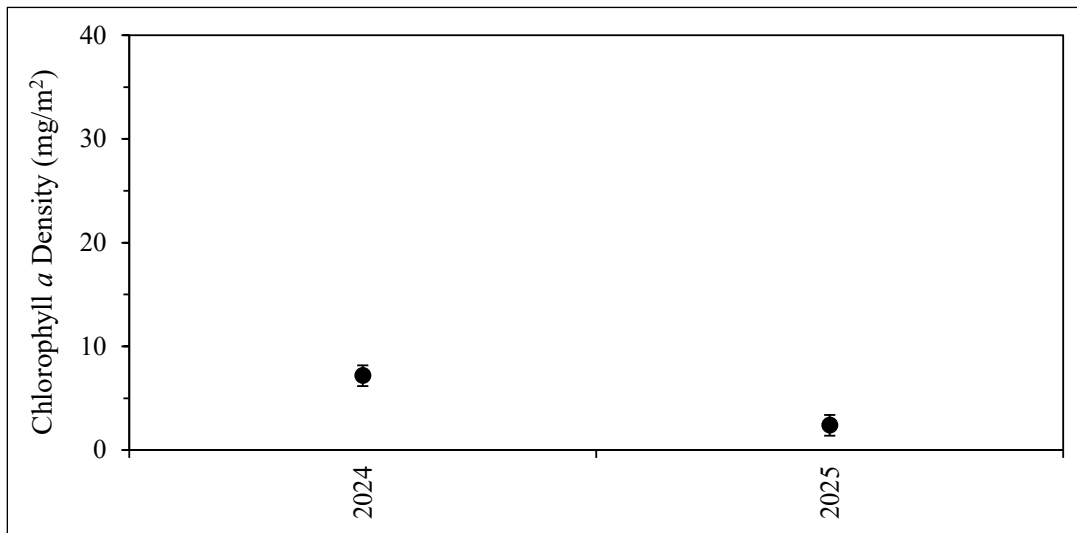


Figure 47.–Zinc Creek Site 371 mean, minimum, and maximum chlorophyll-*a* densities, 2024–2025.

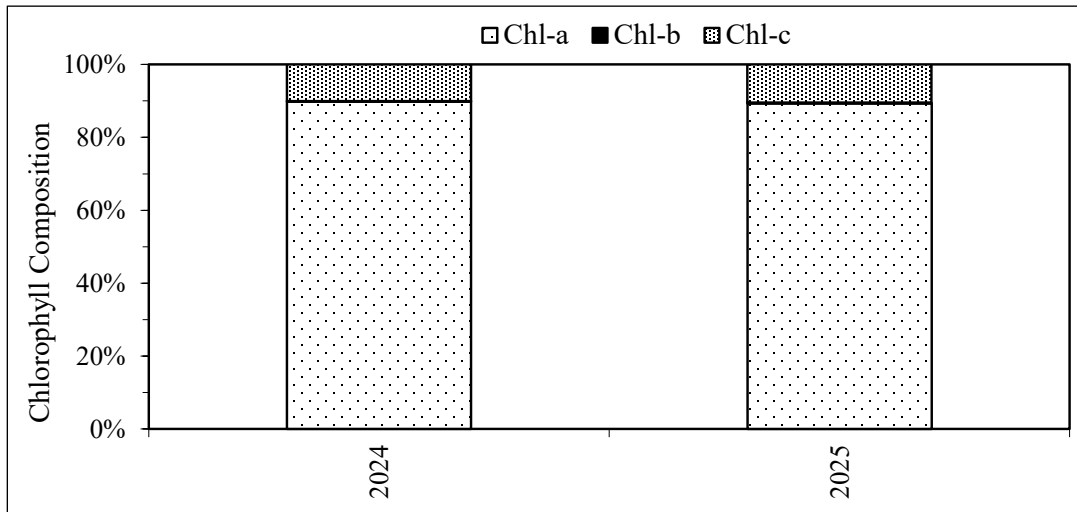


Figure 48.–Zinc Creek Site 371 mean proportions of chlorophylls *a*, *b*, and *c*, 2024–2025.

Benthic Macroinvertebrate Density and Community Composition

The 2025 Zinc Creek Site 371 BMI mean density estimate is 911 BMI/m² and we identified 24 taxa (Table 13; Figures 49, 50). We estimate mean EPT density at 625 EPT/m² accounting for 69% of the samples. Dominant taxa were Ephemeroptera (mayflies) of the genera *Cinygmula* (25%) and *Baetis* (19%).

Table 13.–Zinc Creek Site 371 benthic macroinvertebrate data summary, 2024–2025.

	2024	2025
Mean EPT Density (per m ²)	1,432	625
Mean BMI Density (per m ²)	1,625	911
Number of EPT Taxa	15	15
Number of BMI Taxa	23	24
% EPT	88%	69%

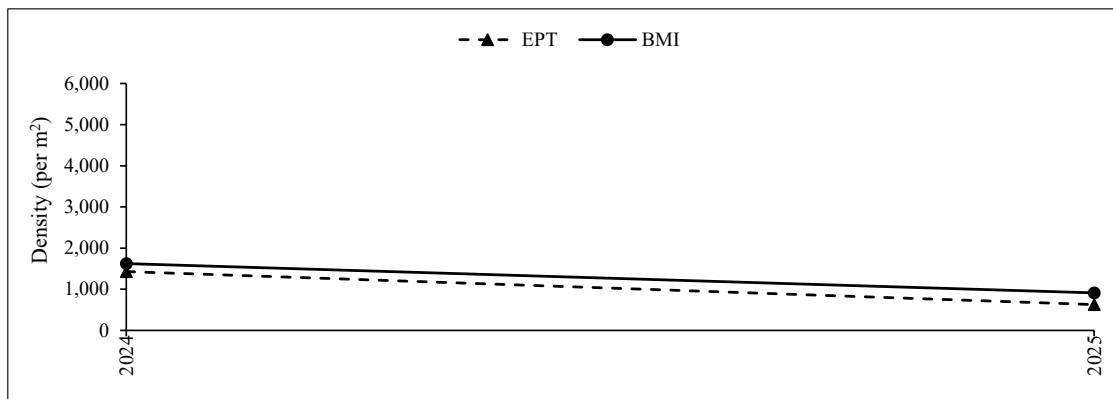


Figure 49.–Zinc Creek Site 371 mean EPT and BMI densities 2024–2025.

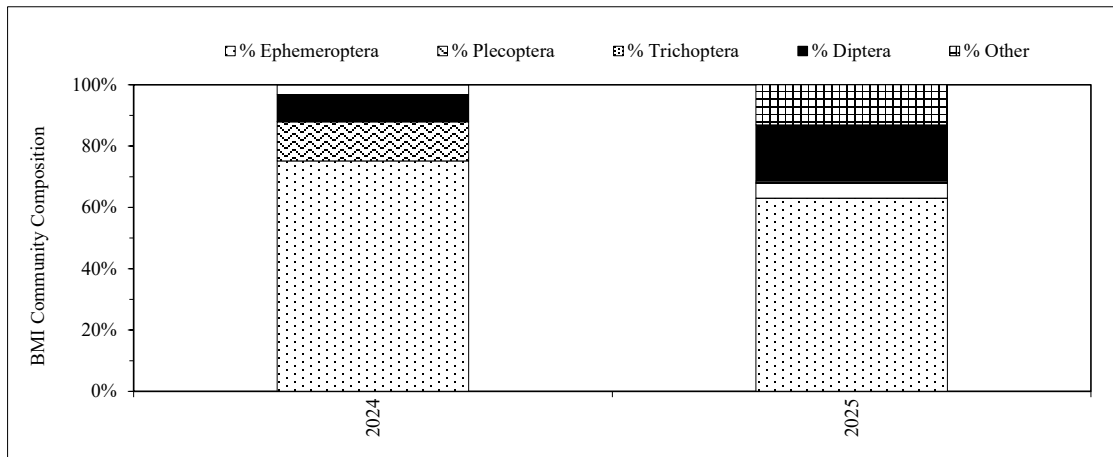


Figure 50.–Zinc Creek Site 371 mean BMI community composition, 2024–2025.

Juvenile Fish Abundance and Condition

In 2025 at Zinc Creek Site 371, we captured 89 Dolly Varden (57–142 mm FL; Figure 51). Mean fish condition factor for Dolly Varden was 1.1. The range of length frequencies observed suggests at least two age classes are present.

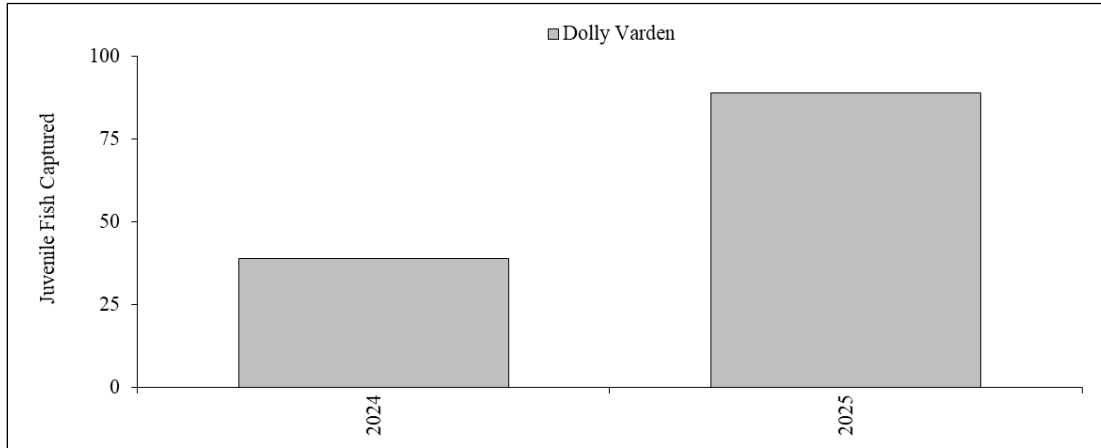


Figure 51.–Zinc Creek Site 371 juvenile fish captured, 2024–2025.

Juvenile Fish Element Concentrations

In 2025 at Zinc Creek Site 371, we retained 10 Dolly Varden (100–123 mm FL) for whole body element analysis (Figures 52, 53).

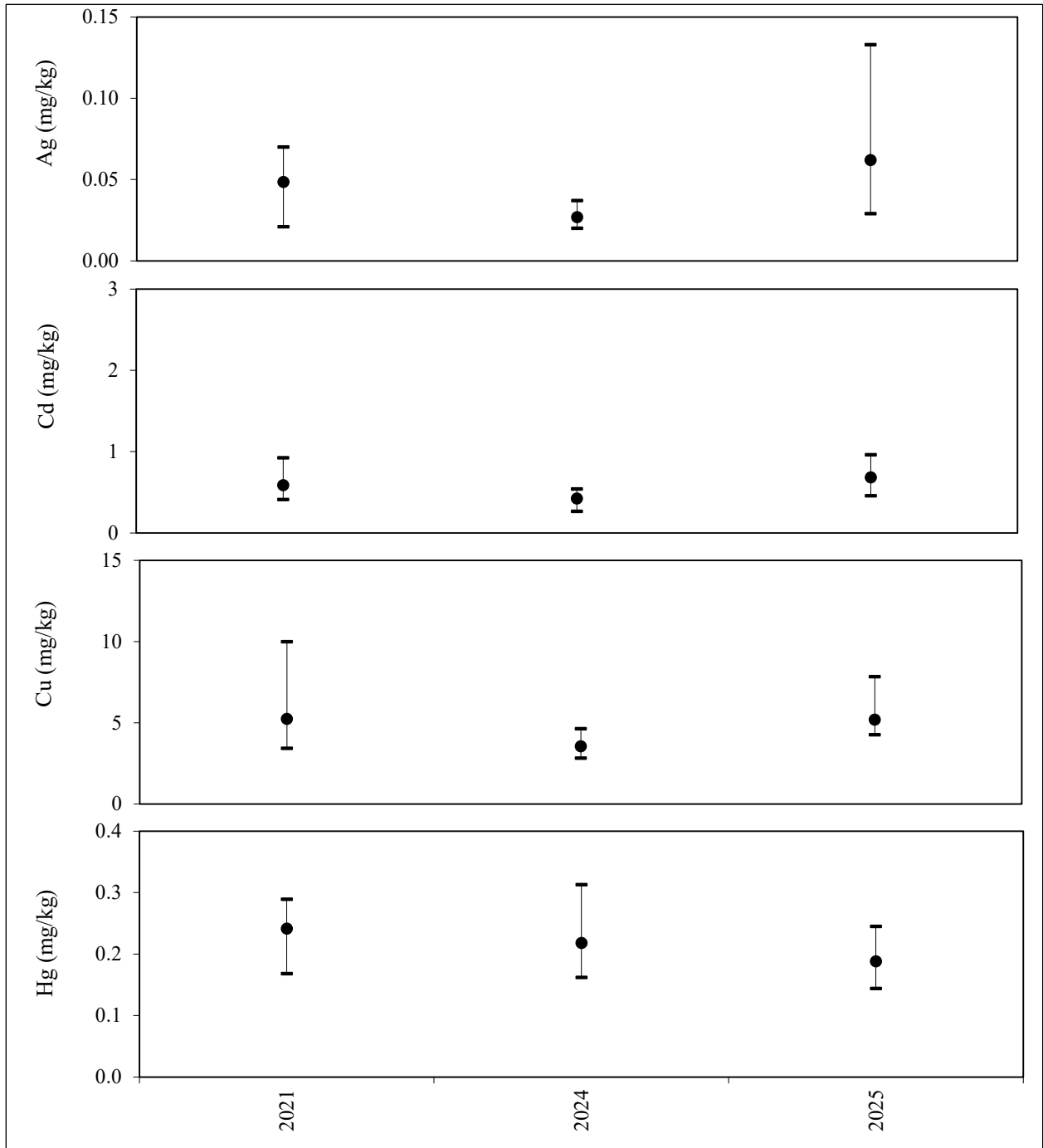


Figure 52.—Zinc Creek Site 371 whole body Dolly Varden Ag, Cd, and Cu concentrations, 2021, 2024–2025.

Note: Minimum, mean, and maximum concentrations presented.

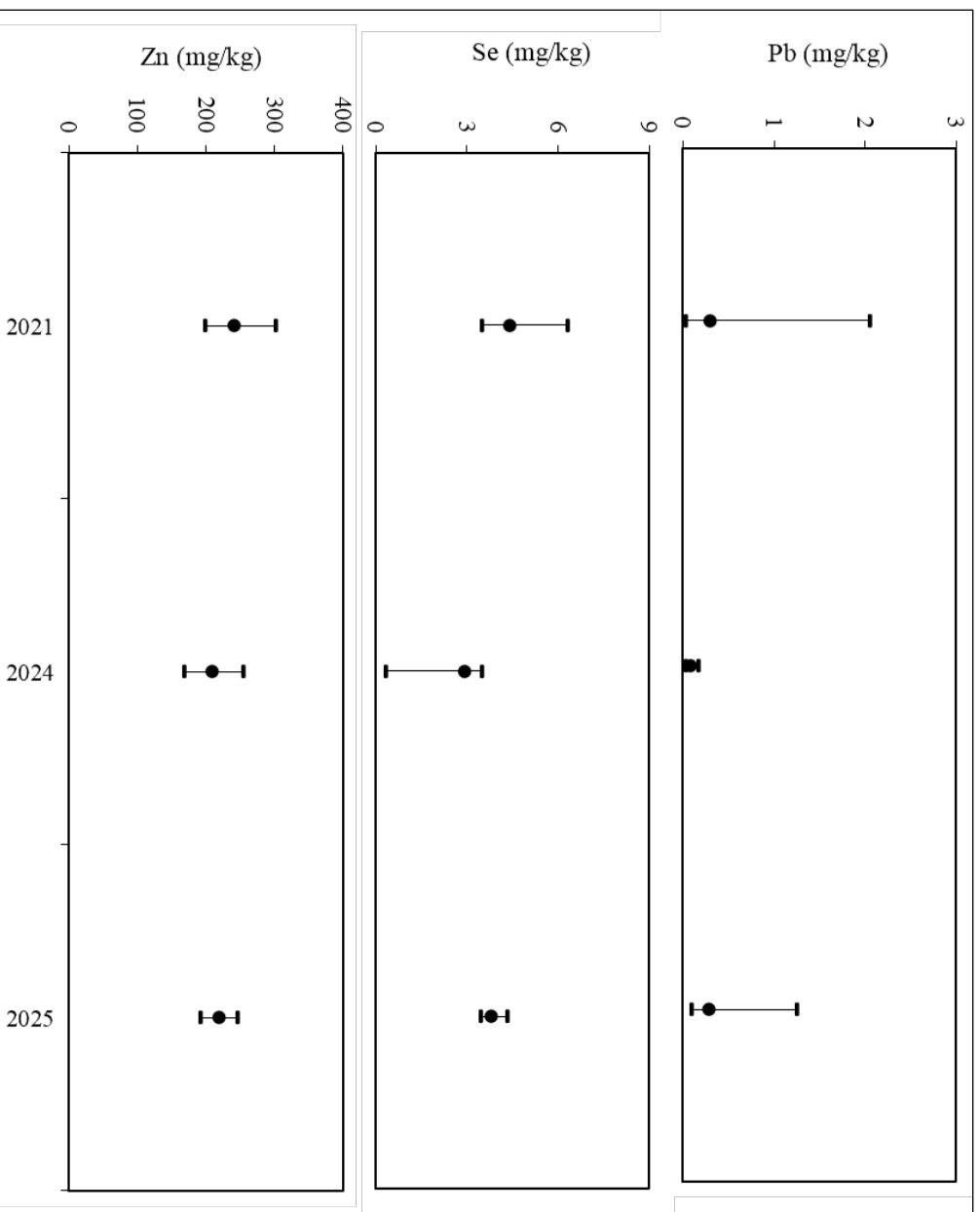


Figure 53. –Zinc Creek Site 371 whole body Dolly Varden Pb, Se, and Zn concentrations, 2021, 2024–2025.

Note: Minimum, mean, and maximum concentrations presented.

Sediment Element Concentrations

The 2025 Zinc Creek Site 371 sediment samples contained Cd, Cu, and Zn concentrations above the TEC freshwater sediment toxicity guidelines and As, Cr, and Ni concentrations were above the PEC (Figure 54). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

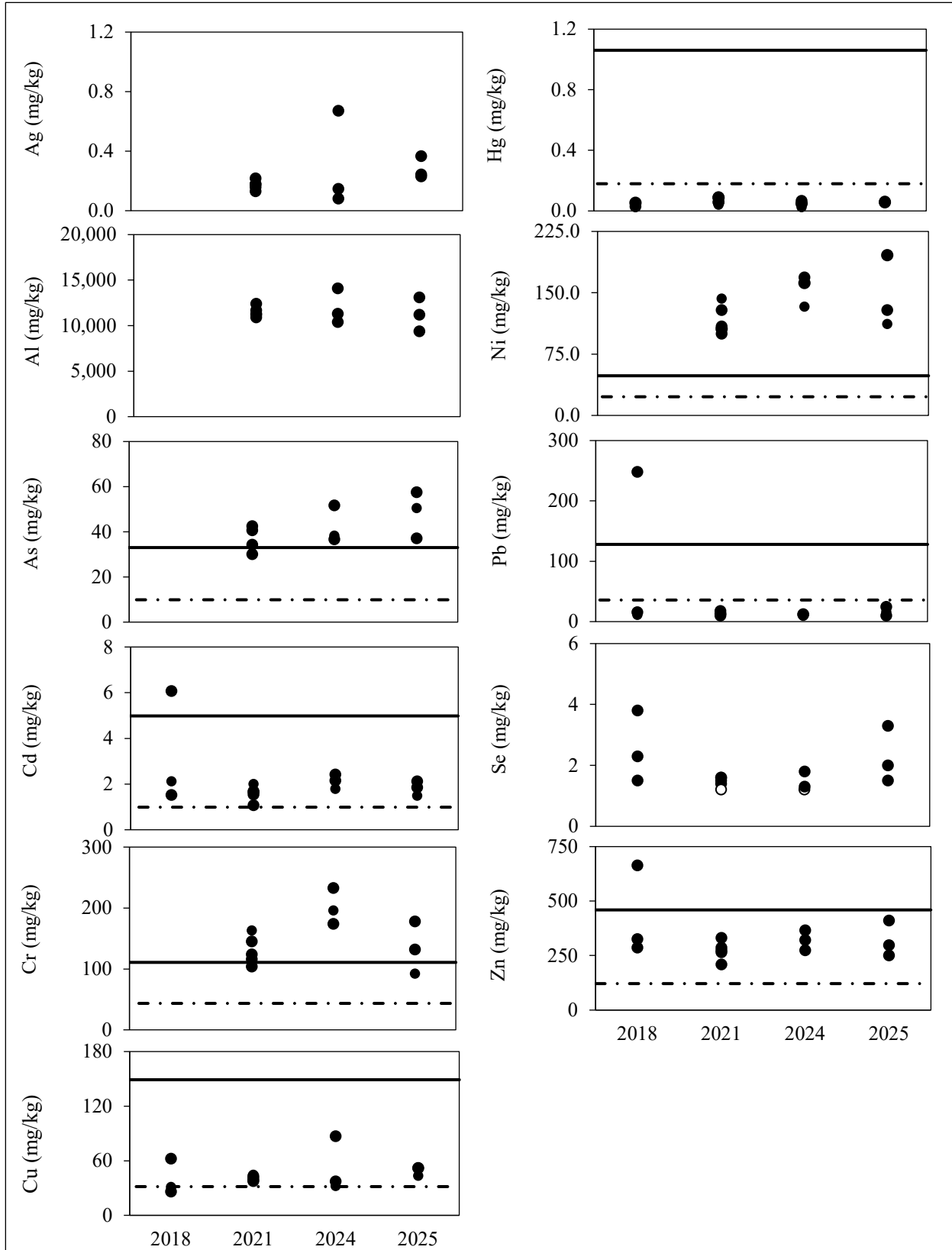


Figure 54.—Zinc Creek Site 371 sediment element concentrations, 2018, 2021, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Zinc Creek Site 10

On July 9, 2025, we sampled Zinc Creek Site 10. We measured a stream discharge of 38.5 ft³/s and Hecla environmental staff measured basic water quality at 0950 hours (Table 14).

Table 14.–Zinc Creek Site 10 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH	Discharge (ft ³ /s)
07/9/2025	9.5	73.9	7.37	38.5

Periphyton: Chlorophyll Density and Composition

The 2025 Zinc Creek Site 10 mean Chl-*a* density was 1.73 mg/m², lower than in 2024 (Figure 55). Samples contained about 91% Chl-*a*, 0% Chl-*b*, and 9% Chl-*c*, consistent with the previous year (Figure 56).

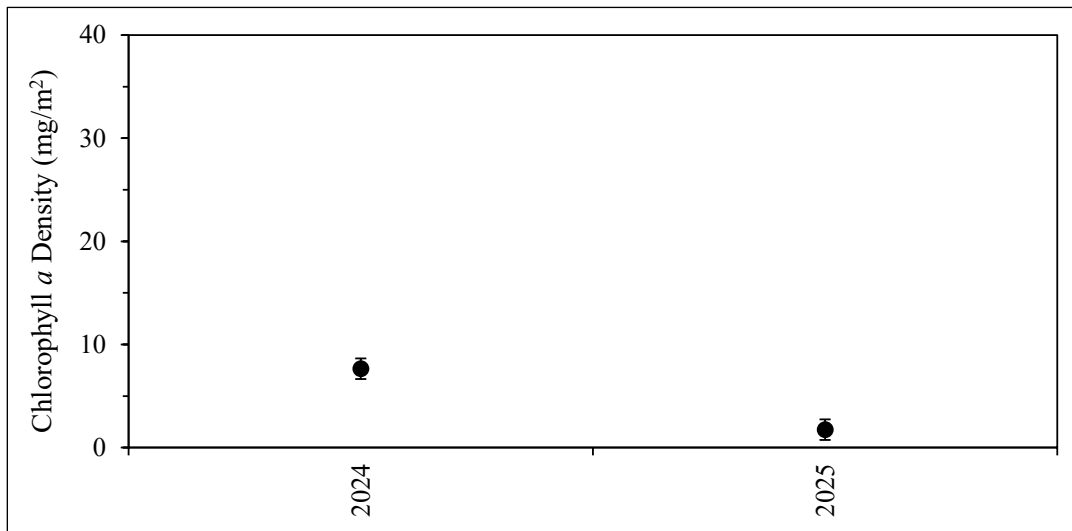


Figure 55.–Zinc Creek Site 10 mean, minimum, and maximum chlorophyll-*a* densities, 2024–2025.

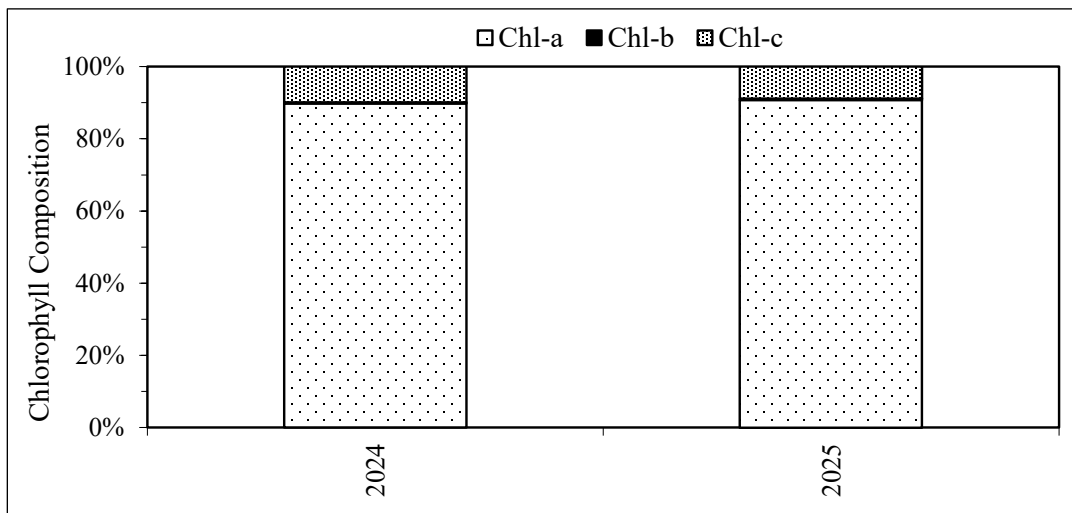


Figure 56.–Zinc Creek Site 10 mean proportions of chlorophylls *a*, *b*, and *c* (2024–2025).

Benthic Macroinvertebrate Density and Community Composition

The 2025 Zinc Creek Site 10 BMI mean density estimate is 587 BMI/m², about 22% of the previous year’s estimate, and we identified 24 taxa (Table 15). We estimate mean EPT density at 384 EPT/m² accounting for 65% of the samples (Figures 57, 58). Dominant taxa were Ephemeroptera (mayflies) of the genera *Cinygmula* (36%) and Oligochaetes (worms) from the class *Clitellata* (19%).

Table 15.–Zinc Creek Site 10 benthic macroinvertebrate data summary, 2024–2025.

	2024	2025
Mean EPT Density (per m ²)	2,374	384
Mean BMI Density (per m ²)	2,637	587
Number of EPT Taxa	14	14
Number of BMI Taxa	24	24
% EPT	90%	65%

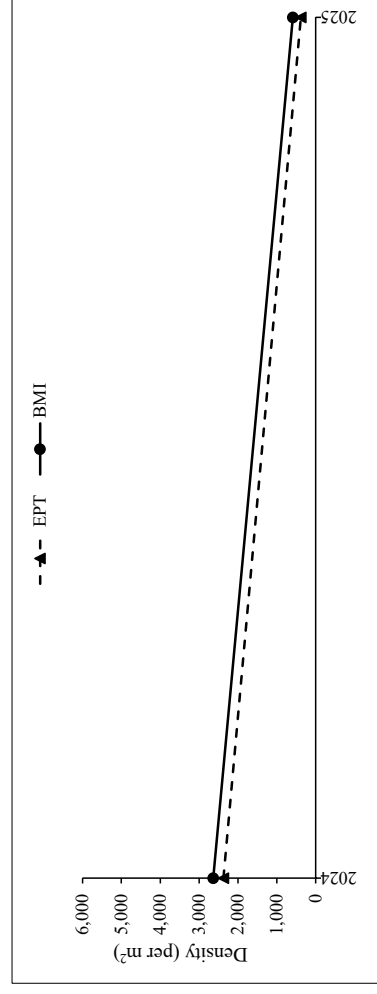


Figure 57.–Zinc Creek Site 10 mean EPT and BMI densities 2024–2025.

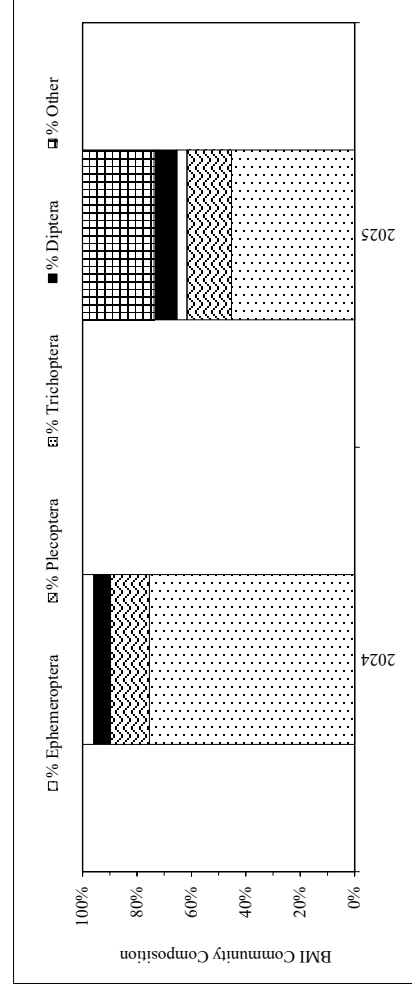


Figure 58.–Zinc Creek Site 10 mean BMI community composition, 2024–2025.

Juvenile Fish Abundance and Condition

In 2025 at Zinc Creek Site 10, we captured 22 Dolly Varden (71–119 mm FL), 92 juvenile coho salmon (38–114 mm FL) and 12 sculpin (44–114 TL; Figure 59). Mean fish condition for Dolly Varden was 1.2 and 1.3 for juvenile coho salmon. The range of length frequencies observed suggests at least two age classes for Dolly Varden, and two age classes of coho salmon.

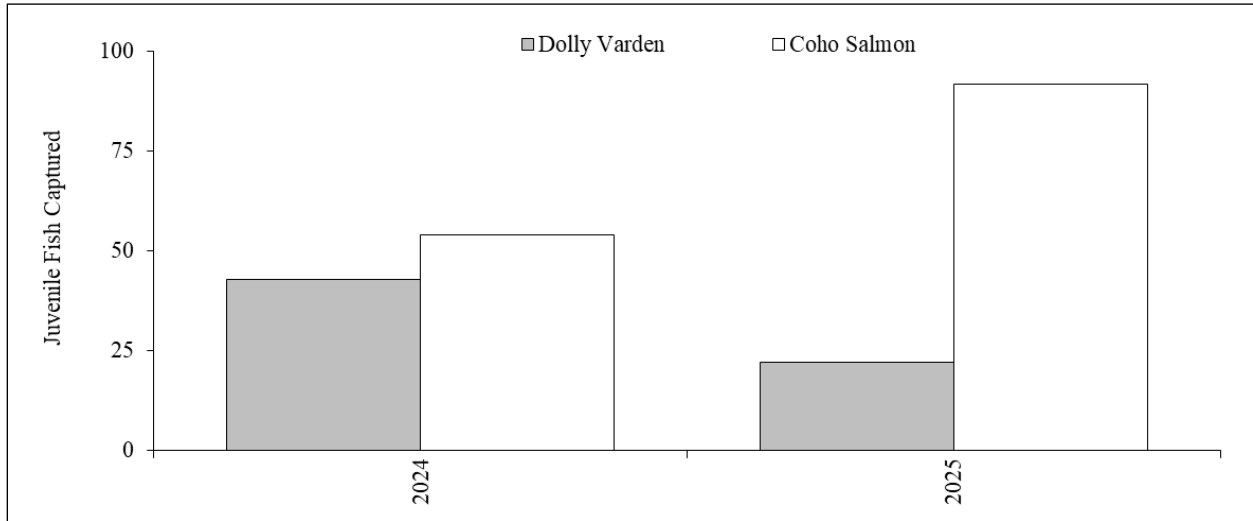


Figure 59.–Zinc Creek Site 10 juvenile fish captured, 2024–2025.

Juvenile Fish Element Concentrations

In 2025 at Zinc Creek Site 10, we retained 10 Dolly Varden (86–109 mm FL) for whole body element analysis (Figures 60, 61). Mean values of all elements were higher in 2025 than 2018 and 2024.

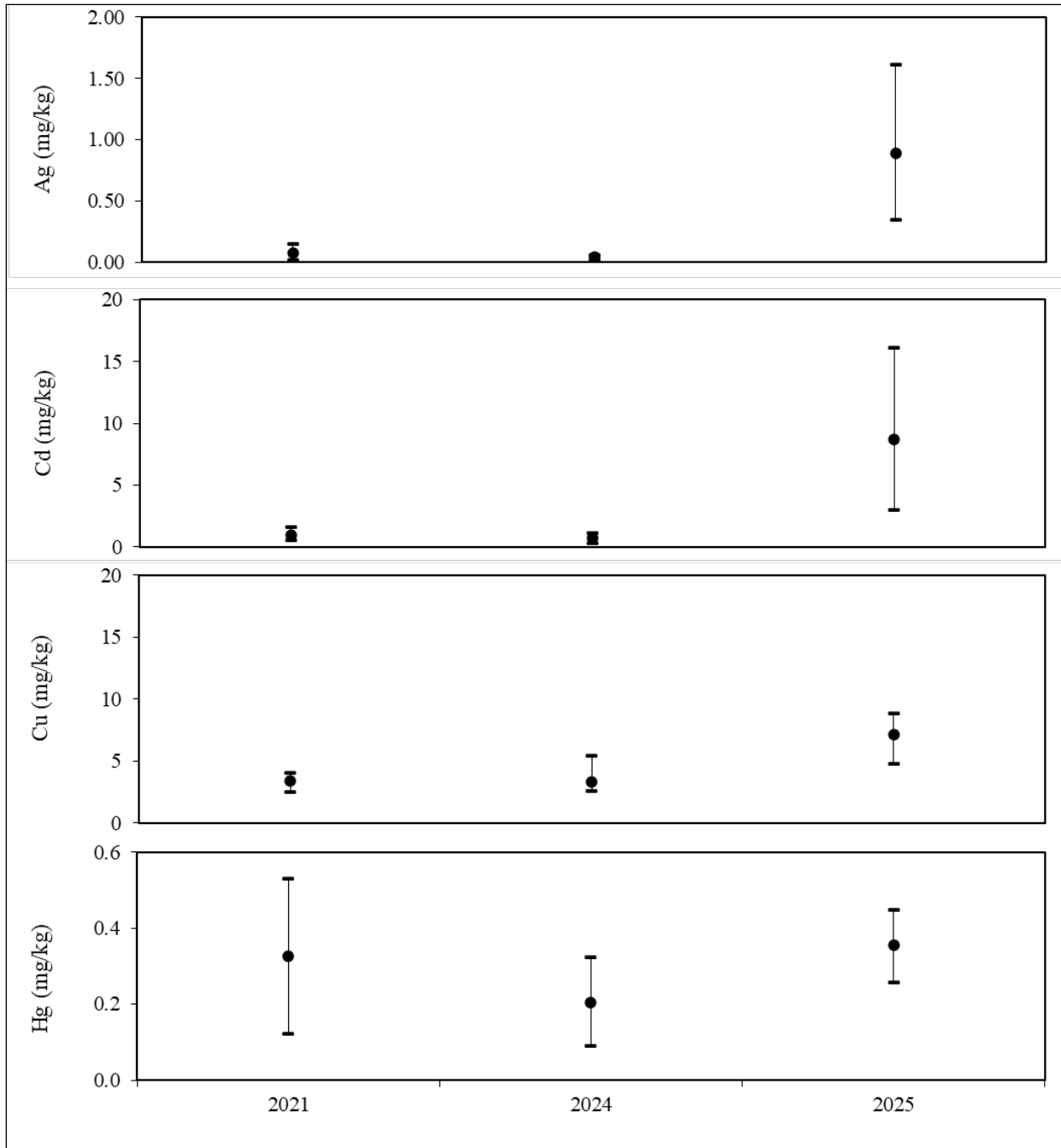


Figure 60.—Zinc Creek Site 10 whole body Dolly Varden Ag, Cd, Cu, and Hg concentrations, 2021, 2024–2025.

Note: Minimum, mean, and maximum concentrations presented.

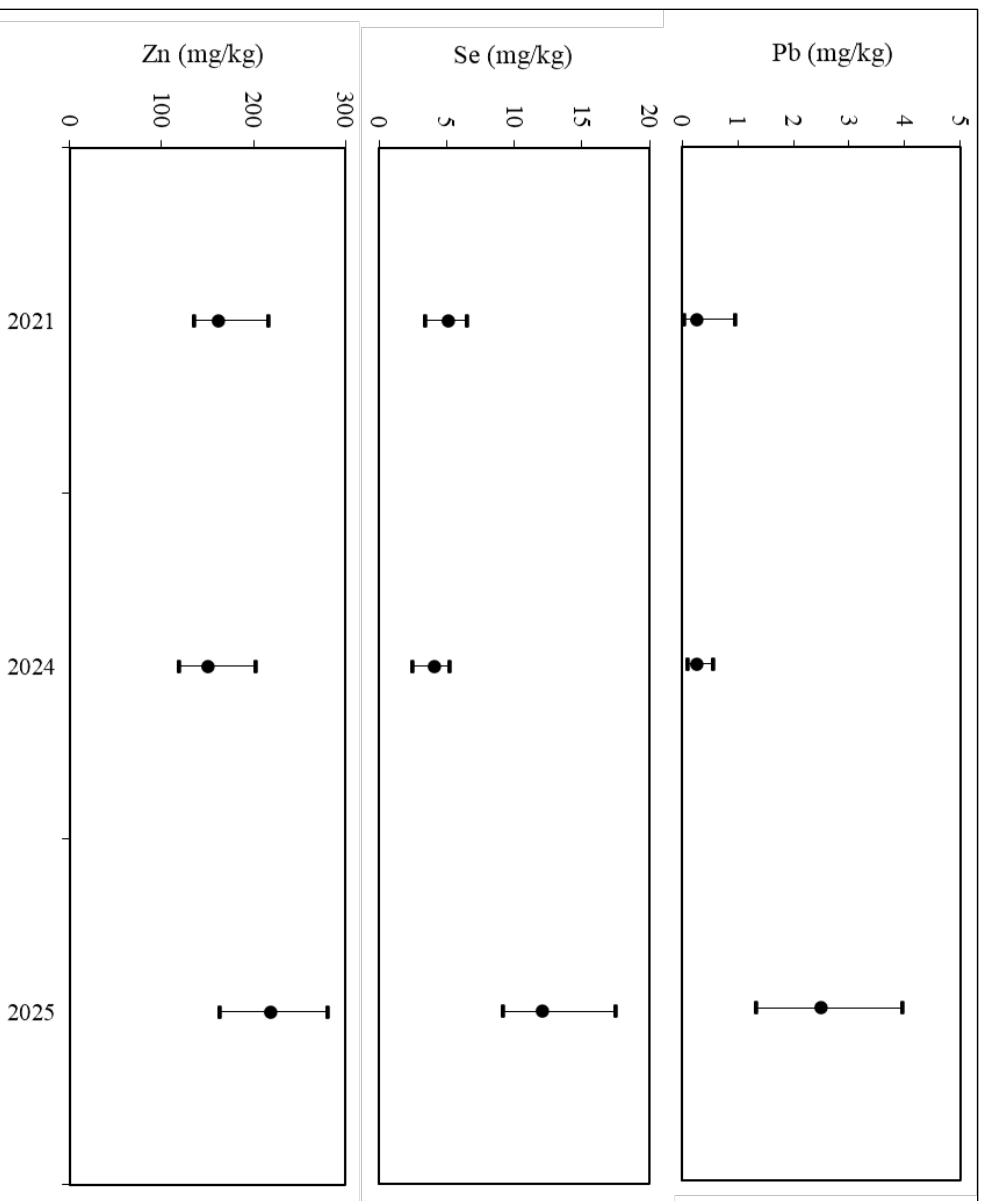


Figure 61. Zinc Creek Site 10 whole body Dolly Varden Pb, Se, and Zn concentrations, 2021, 2024–2025.

Note: Minimum, mean, and maximum concentrations presented.

Sediment Element Concentrations

The 2025 Zinc Creek Site 10 sediment samples contained As, Cd, Cu, and Zn above the TEC freshwater sediment toxicity guidelines and Cr and Ni concentrations above the PEC (Figure 62). All other concentrations of elements were below the TEC and PEC freshwater sediment toxicity guidelines.

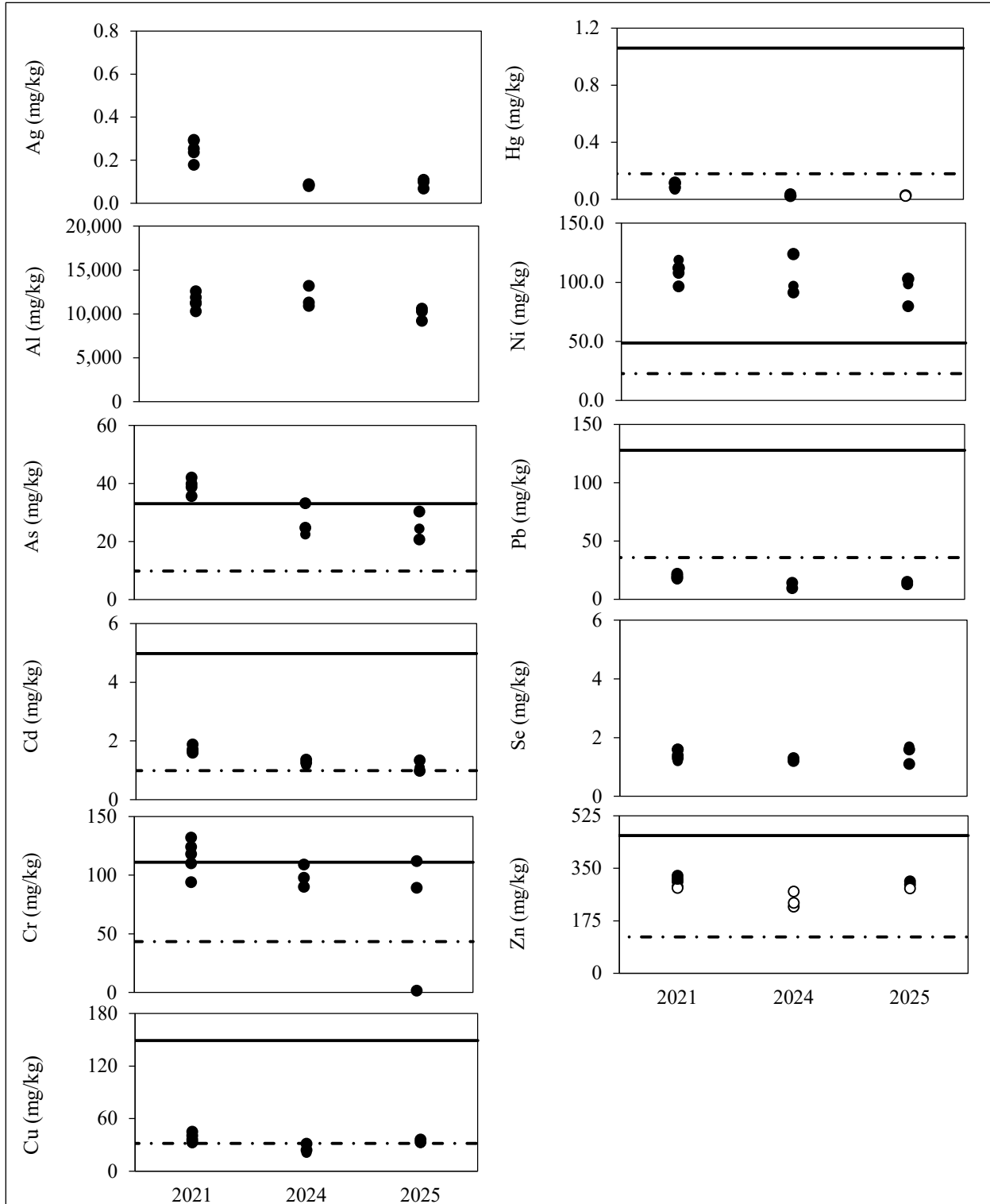


Figure 62.—Zinc Creek Site 10 sediment element concentrations, 2021, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Zinc-Greens Creek Delta Site 2239

On July 9, 2025, we sampled the Zinc-Greens Creek Delta site 2239. Hecla Environmental staff measured basic water quality at 1015 hours (Table 16).

Table 16.–Zinc-Greens Creek Delta Site 2239 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μ S/cm)	pH
07/09/2025	9.7	74.5	7.76

Sediment Element Concentrations

The 2025 Zinc-Greens Creek Delta Site 2239 sediment samples contained Cd, Cu, and Zn concentrations near or above the TEC freshwater sediment toxicity guidelines and As, Cr and Ni above the PEC (Figure 63). Concentrations of other elements were below the TEC and PEC freshwater sediment toxicity guidelines.

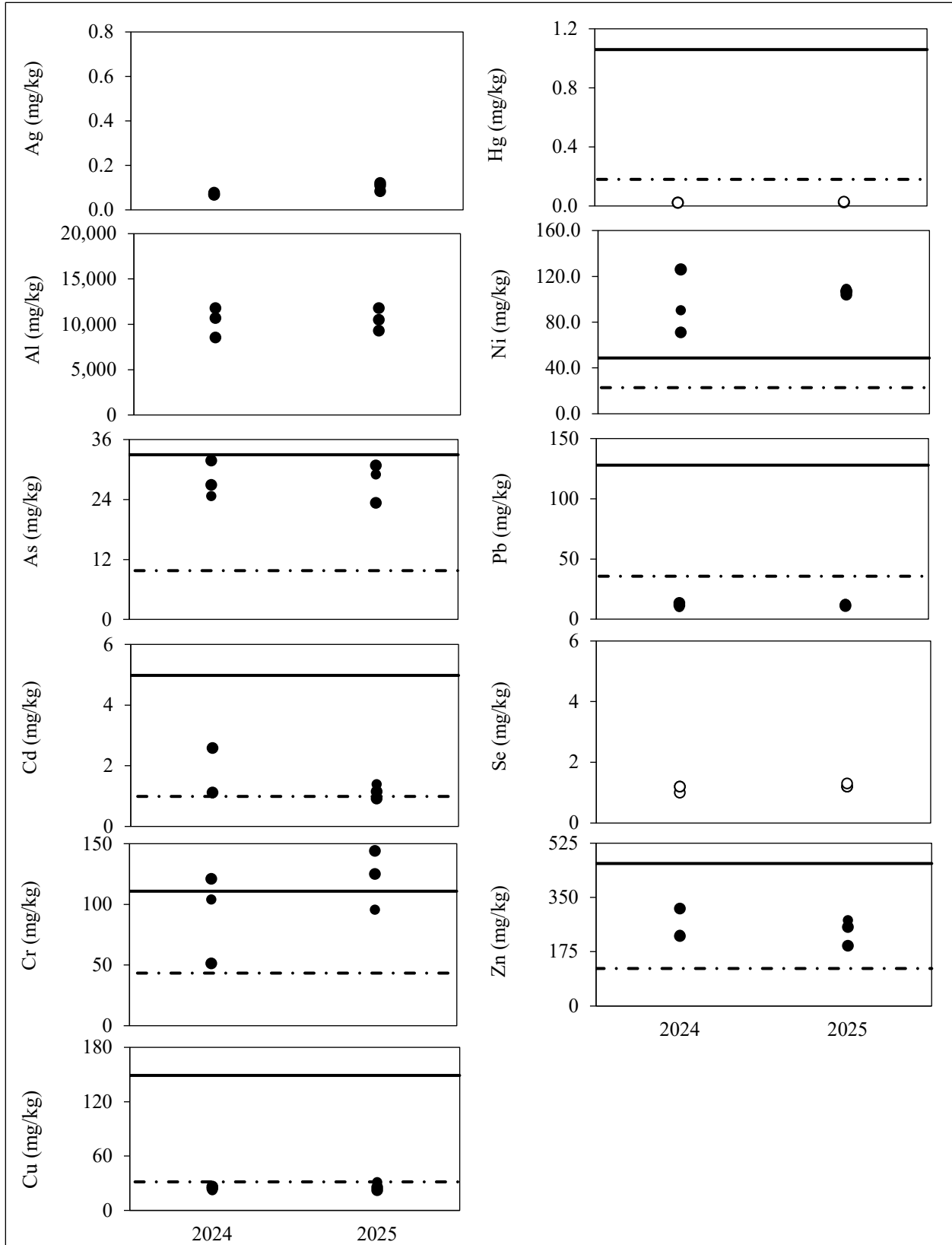


Figure 63.—Zinc-Greens Creek Delta Site 2239 sediment element concentrations, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Cannery Creek Site 37

On July 10, 2024, we sampled Cannery Creek Site 37. Hecla environmental staff measured basic water quality on July 15 at 1535 hours (Table 17).

Table 17.—Cannery Creek Site 37 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH
07/14/2025	1.4	53.4	7.42

Sediment Element Concentrations

The 2025 Cannery Creek Site 37 sediment samples contained As, Cu, Ni, and Zn concentrations near or above the sediment TEC sediment toxicity guidelines (Figure 64). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

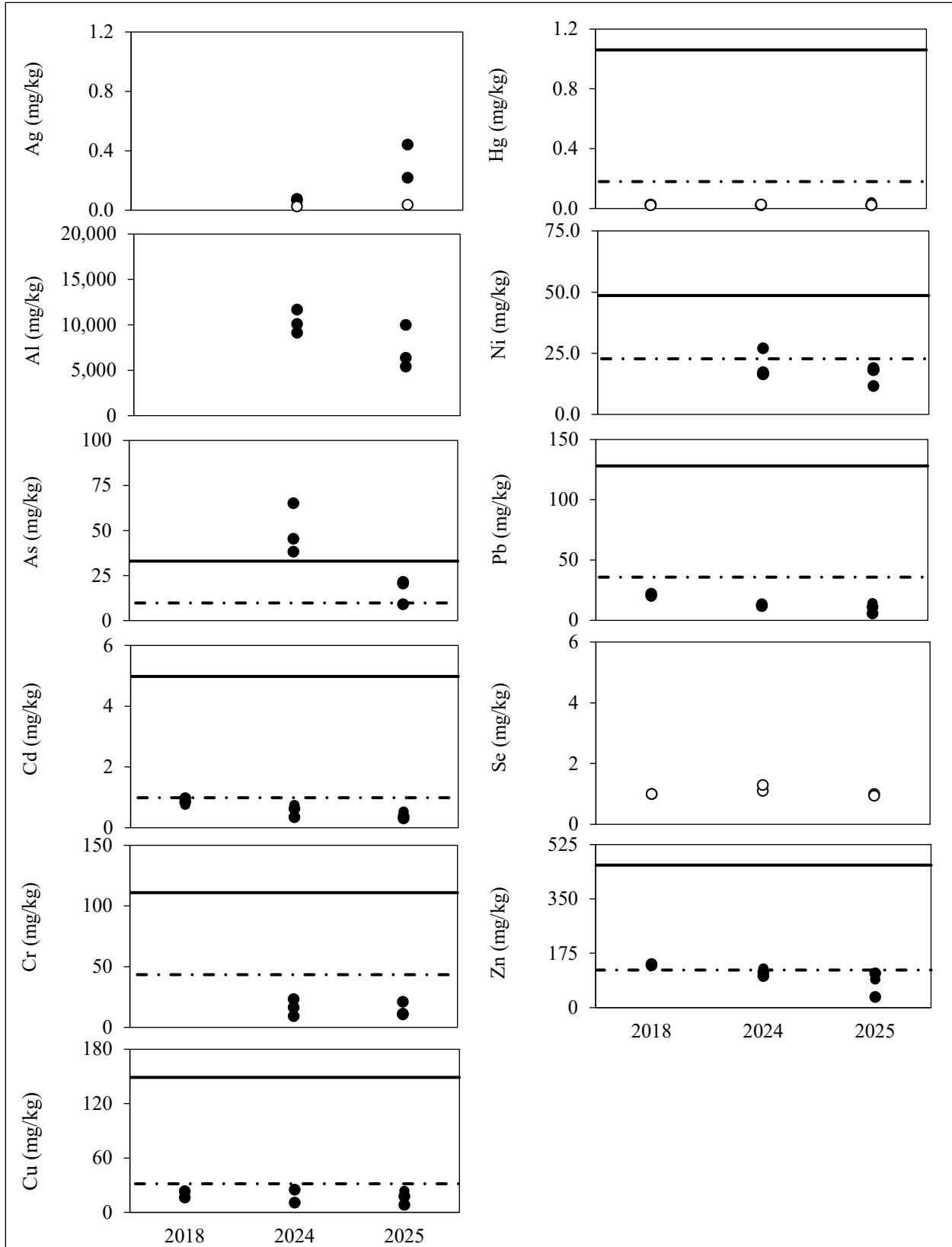


Figure 64.—Cannery Creek Site 37 sediment element concentrations, 2018, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

Fowler Creek Site 2233

On July 9, 2025, we sampled Fowler Creek Site 2233. Hecla environmental staff measured basic water quality at 1440 hours (Table 18).

Table 18.—Fowler Creek Site 2233 water quality data, 2025.

Sample Date	Temperature (°C)	Conductivity (μS/cm)	pH
07/19/2025	11.9	29.0	6.02

Sediment Element Concentrations

The 2025 Fowler Creek Site 2233 sediment samples contained Cd, Cu, and Zn concentrations near or above the TEC sediment toxicity guidelines and As, Cr, and Ni concentrations above the PEC (Figure 65). All other element concentrations were below the TEC and PEC freshwater sediment toxicity guidelines.

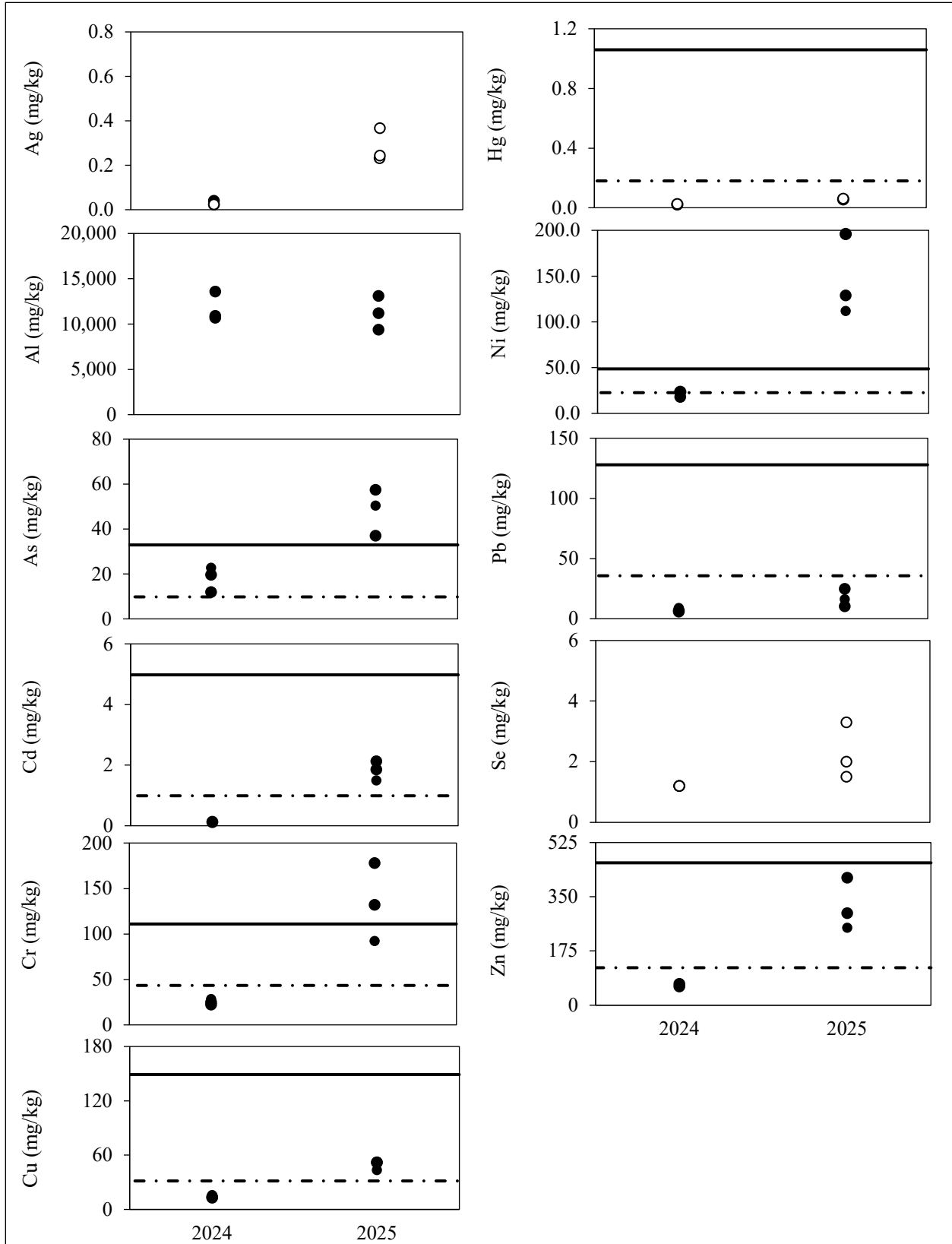


Figure 65.—Fowler Creek Site 2233 sediment element concentrations, 2024–2025.

Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

COMPARISONS AMONG SITES

Periphyton: Chlorophyll Density and Composition

Mean Chl-*a* density varied by drainage in 2025; however, trends were similar at sites within drainages (Figures 66, 67). Mean values at Greens Creek and Zinc Creek sites were lower than in 2024 while values from Tributary Creek sites were higher, constituting a historic peak at Site 9 and the second highest for Site 1847 for the ranges previously observed. Greens Creek mean Chl-*a* densities at Sites 48/63 and 54 followed a similar trend since 2001. Despite the environmental, geomorphic, hydrologic and overall stream characteristic differences between Tributary and Greens Creeks watersheds, the Tributary Creek Site 9 mean Chl-*a* densities generally followed the same trend as the Greens Creek data between 2001 and 2024, but broke from the trend in 2025.

The visual data relationship between precipitation and streamflow three weeks prior to sampling and periphyton abundance in streams monitored at Greens Creek mine is weak and does not explain annual variability. However; it is notable that Tributary Creek often flows at only a few hundred gallons per minute during our sampling and the creek is typically blanketed in a fine organic silt layer that may occlude periphyton growth. Higher flows in the preceding months may have kept rocks cleaner and allowed periphyton to flourish. Additionally, many elements in sediment samples rose to 2020 levels, which could have influenced periphyton growth. Periphyton samples collected at all sites generally contained about 90% Chl-*a*, nearly 0% Chl-*b*, and about 10% Chl-*c* each year.



Figure 66.—Greens Creek mean chlorophyll-a densities, 2001–2025.
Note: Site 48 data collected 2001–2017, and Site 63 data collected 2018–2025.

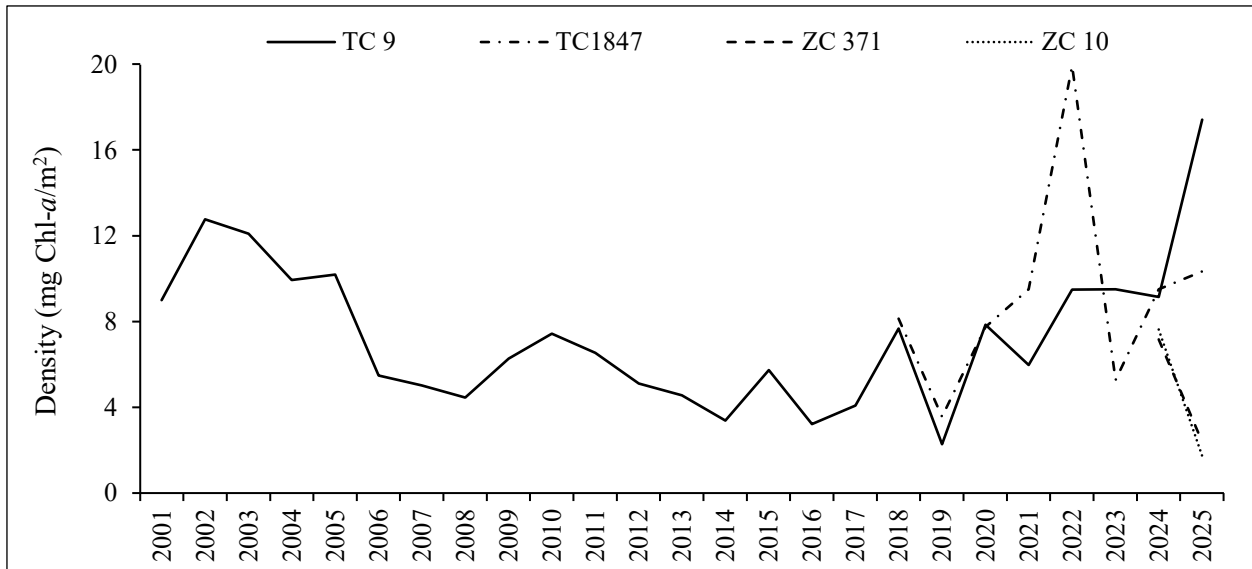


Figure 67.–Zinc Creek and Tributary Creek mean chlorophyll-*a* densities, 2001–2025.
 Note: Site 48 data collected 2001–2017, and Site 63 data collected 2018–2025.

Benthic Macroinvertebrate Density and Community Composition

For all sites sampled in 2025, EPT density and the number of EPT taxa were lower than in 2024, though most within the ranges observed since sampling began at each site, except at Zinc Creek (Figure 68). This was the second year sampling Zinc Creek at two sites, and the 2025 results were lower among all other sites (Figure 69).

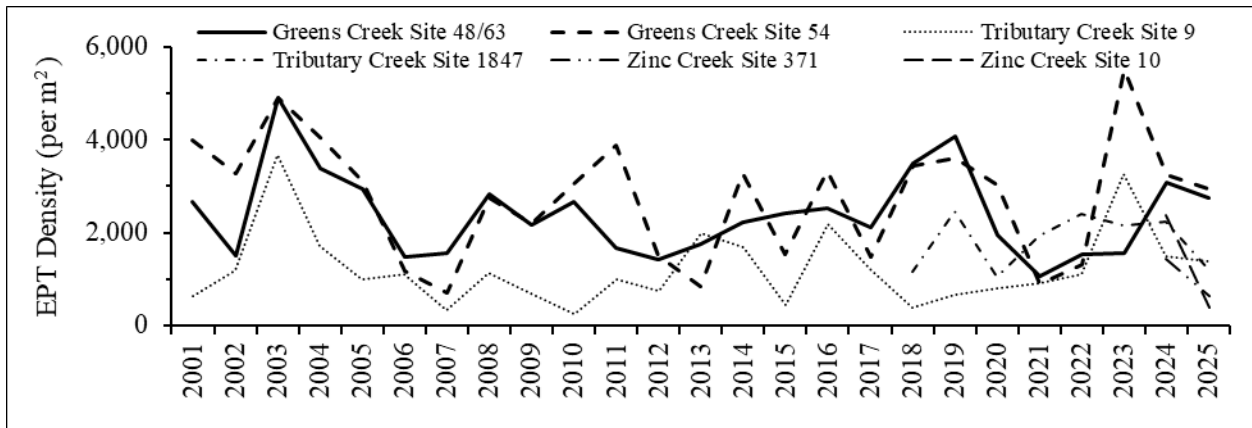


Figure 68.–Greens Creek, Tributary Creek, and Zinc Creek mean EPT densities, 2001–2025.
 Note: Greens Creek Site 48 data were collected 2001–2017, Site 63 data were collected 2018–2025 and Site 54 data were collected 2001–2025. Tributary Creek Site 9 data were collected 2001–2025 and Site 1847 data were collected 2018–2025. Zinc Creek data were collected in 2024 and 2025.

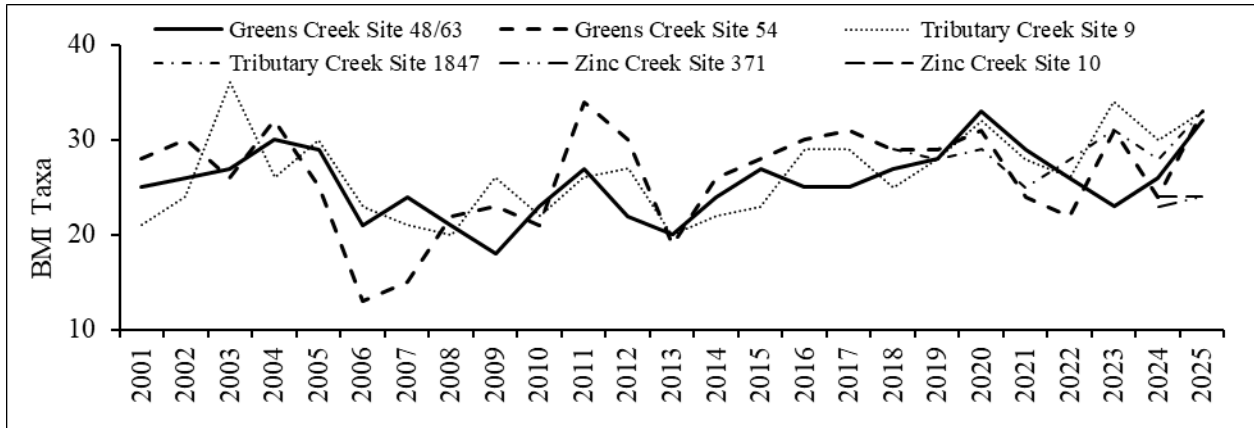


Figure 69.—Greens Creek, Tributary Creek, and Zinc Creek BMI taxa richness, 2001–2025.
 Note: Site 48 data collected 2001–2017; Site 63 data collected 2018–2025.

Juvenile Fish Abundance and Condition

Dolly Varden captures at Greens Creek sites have historically trended together, likely due to their close proximity and similar habitat conditions, and 2025 captures were in the middle range of historic observations (Figure 70). Tributary Creek Site 9 was also in the middle range and the Zinc Creek sites showed opposite trends. Due to difference in elevation, channel type and anadromous fish presence, the Zinc Creek sites are not expected to trend together. Coho salmon captures at Site 9 exceeded Dolly Varden, as is normally the case. Coho salmon captures at Greens Creek sites were low, which has occurred previously and could be a result of flow-dependent passage into the upper river or natural variations in coho abundance throughout the drainage (Figure 71.).

We captured several age classes of Dolly Varden at all sites. Tributary Creek Site 9 Dolly Varden were on the higher end of the range of fish condition (1.3) which may be a result of recent improved access to the beaver ponds just upstream, which are resource rich.

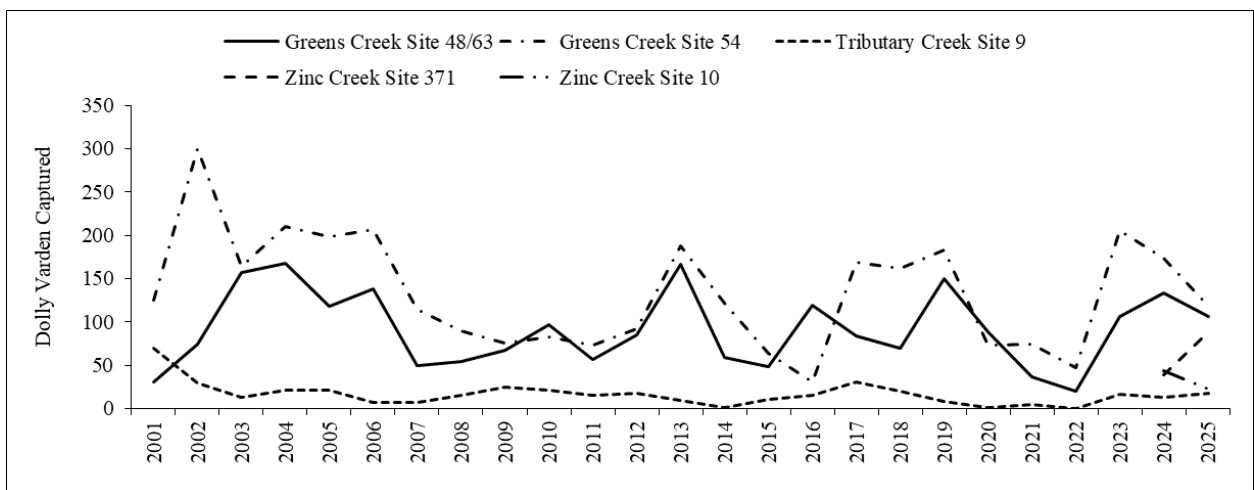


Figure 70.—Greens Creek, Zinc Creek, and Tributary Creek Dolly Varden captured, 2001–2025.
 Note: Site 54 2001–2010 data extrapolated to 50 m sample reach for comparison. Site 48 data collected 2001–2017, and Site 63 data collected 2018–2025.

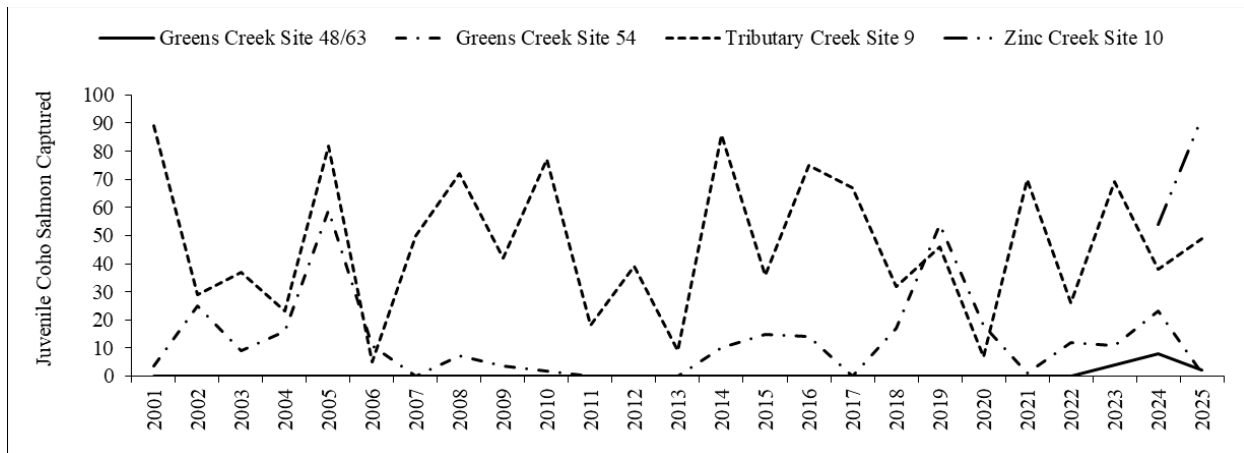


Figure 71.– Greens Creek, Zinc Creek, and Tributary Creek coho salmon captured, 2001–2025.

Note: Site 54 2001–2010 data extrapolated to 50 m sample reach for comparison. Site 48 data collected 2001–2017, and Site 63 data collected 2018–2025.

Juvenile Fish Element Concentrations

In 2025, mean fish element concentrations varied across sites, with higher concentrations of Ag, Cd, Hg, Pb, and Se found in the 2025 Tributary Creek Site 9 fish and Zinc Creek Site 10 fish, which are downstream of mine development (Figure 72). Generally, the greatest mean concentrations and ranges of element concentrations were found in the Zinc Creek Site 10 fish. Mean fish element concentrations over time at Sites 48/63 and 54 generally follow a similar trend. Tributary Creek Site 9 values are similar, though spikes in mean concentrations of Ag, Cd, Hg, Pb, and Se occasionally occurred, as in 2025. Zinc levels are consistently higher at Greens Creek sites than at Tributary Creek (Figure 73, 74).

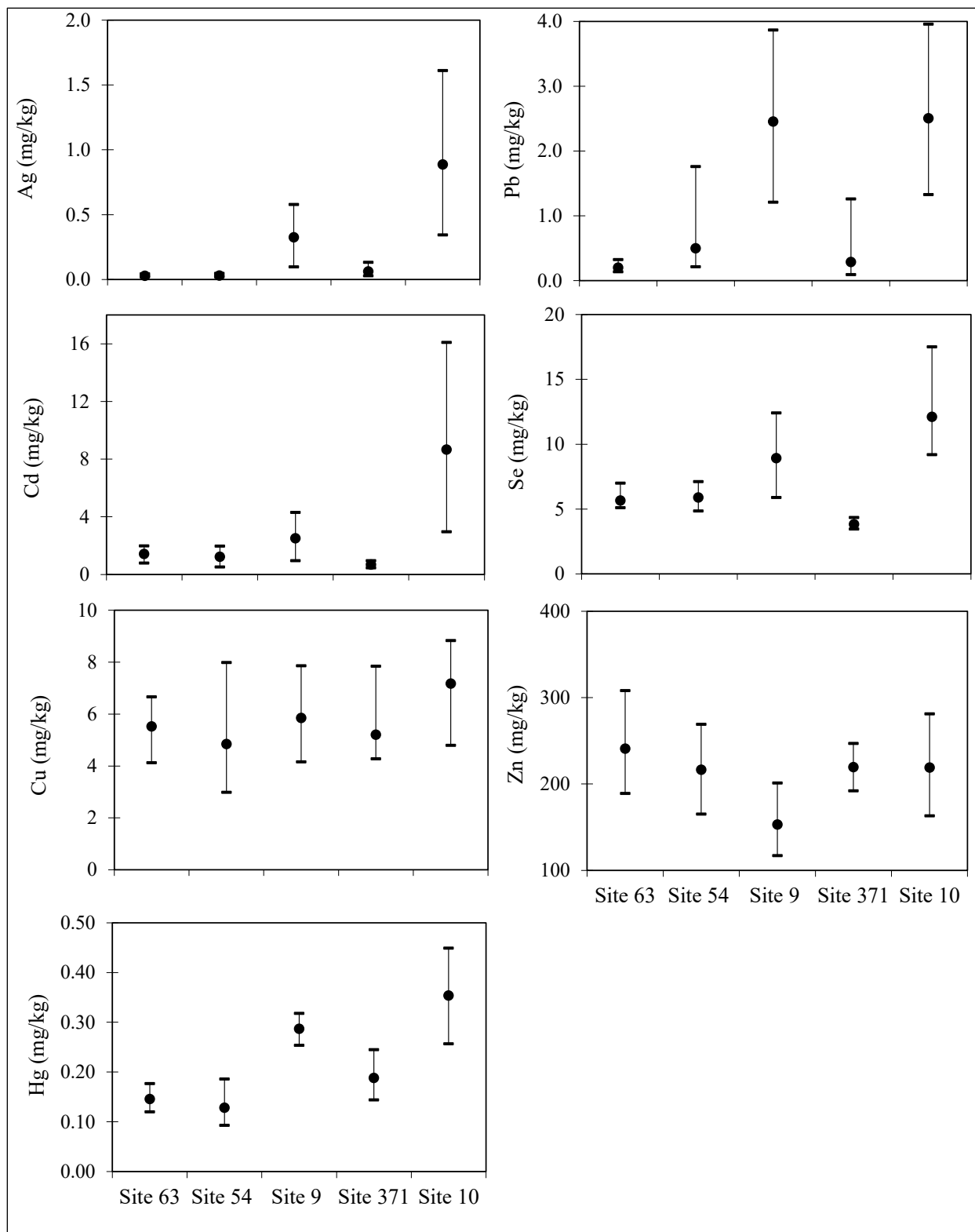


Figure 72.–Greens Creek, Tributary Creek, and Zinc Creek whole body Dolly Varden element concentrations, 2025.

Note: Minimum, mean, and maximum concentrations presented.

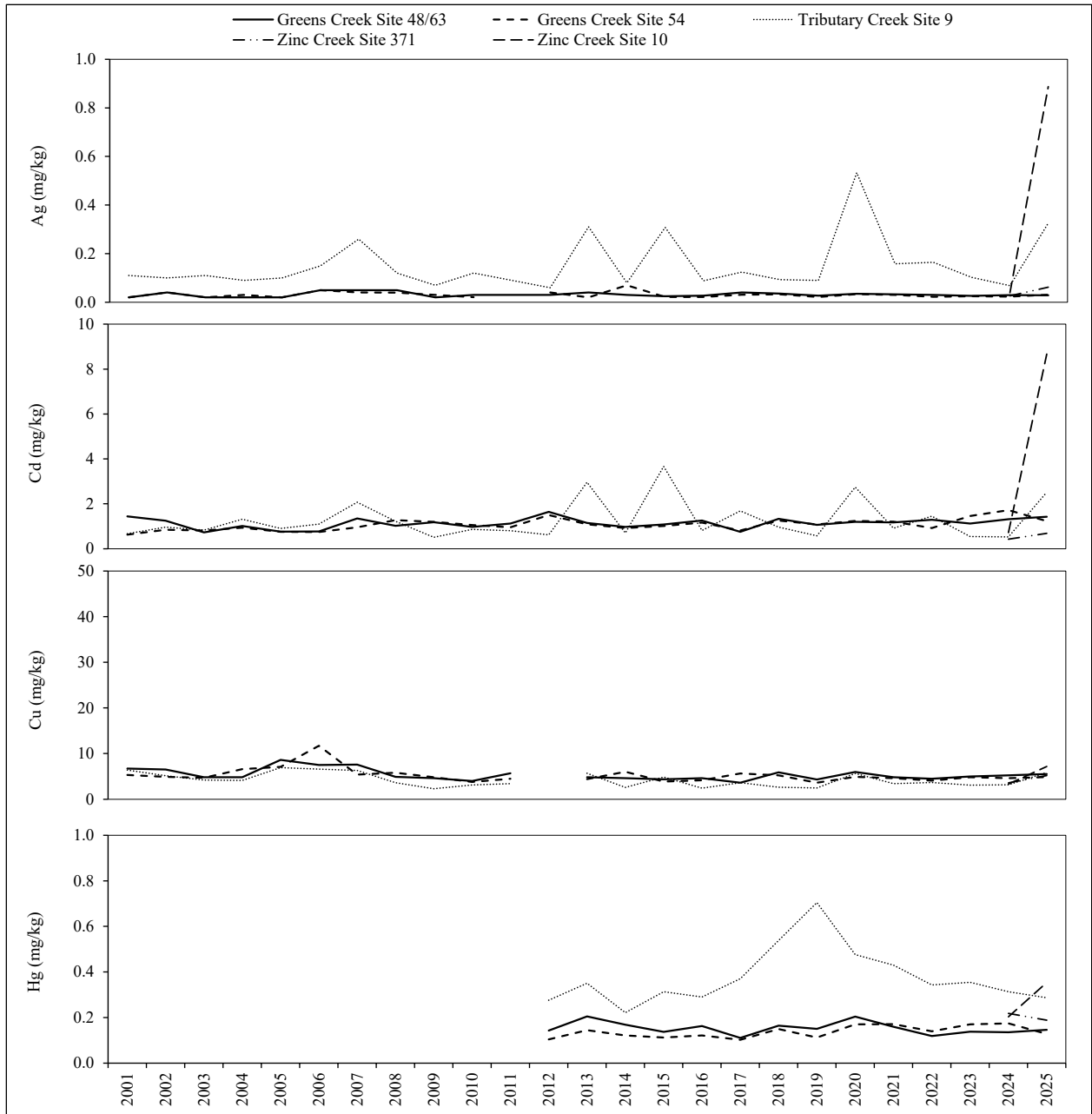


Figure 73.—Greens Creek and Tributary Creek whole body Dolly Varden median Ag, Cd, and Cu concentrations, 2001–2025, and median Hg concentrations, 2012–2025.

Note: Solid line 2001–2017 is Site 48; 2018–2025 is Site 63; data for Cu in 2012 omitted for potential laboratory contamination.

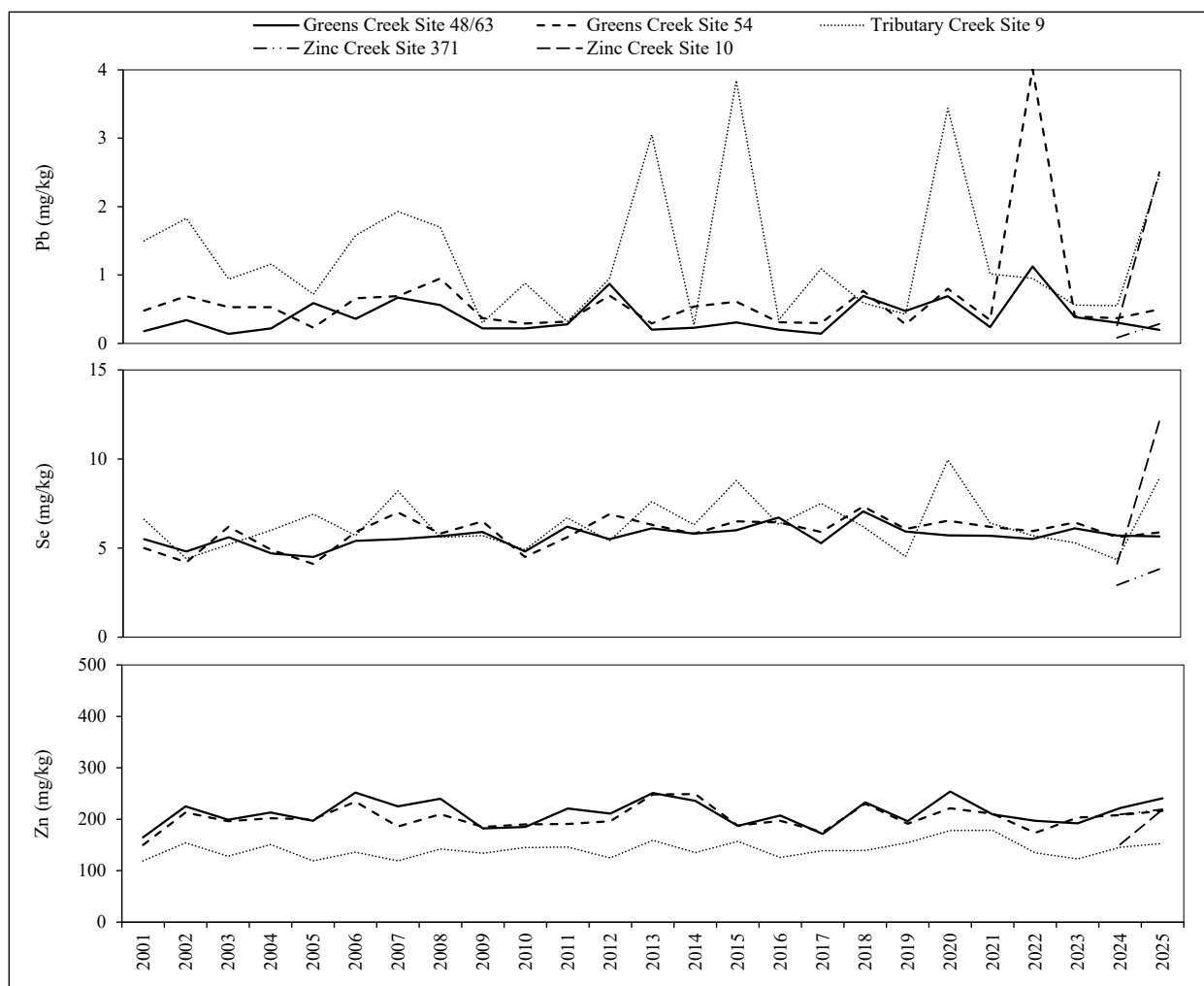


Figure 74.—Greens Creek and Tributary Creek whole body Dolly Varden median Pb, Se, and Zn concentrations, 2001–2025.

Note: Solid line 2001–2017 is Site 48; 2018–2025 is Site 63.

Sediment Element Concentrations

In 2025, among the Greens Creek sites nearly all mean sediment element values were higher at Greens Creek Site 54 than at Site 63, with Ni values exceeding the PEC at Site 54 (Figure 75). Tributary Creek results for both sites showed similar means and ranges that were generally lower than Greens Creek sites, with the exception of Cr, which was higher at Tributary Creek sites and above the TEC. Concentrations of all elements were either similar to Site 54 or higher; concentrations of As, Cr, and Ni exceeded the PEC at multiple locations, including reference sites. Nickel concentrations were above the PEC at all sites except Tributary Creek Site 2232 and Cannery Creek Site 2233. Lead concentrations were low and below the TEC at all sites.

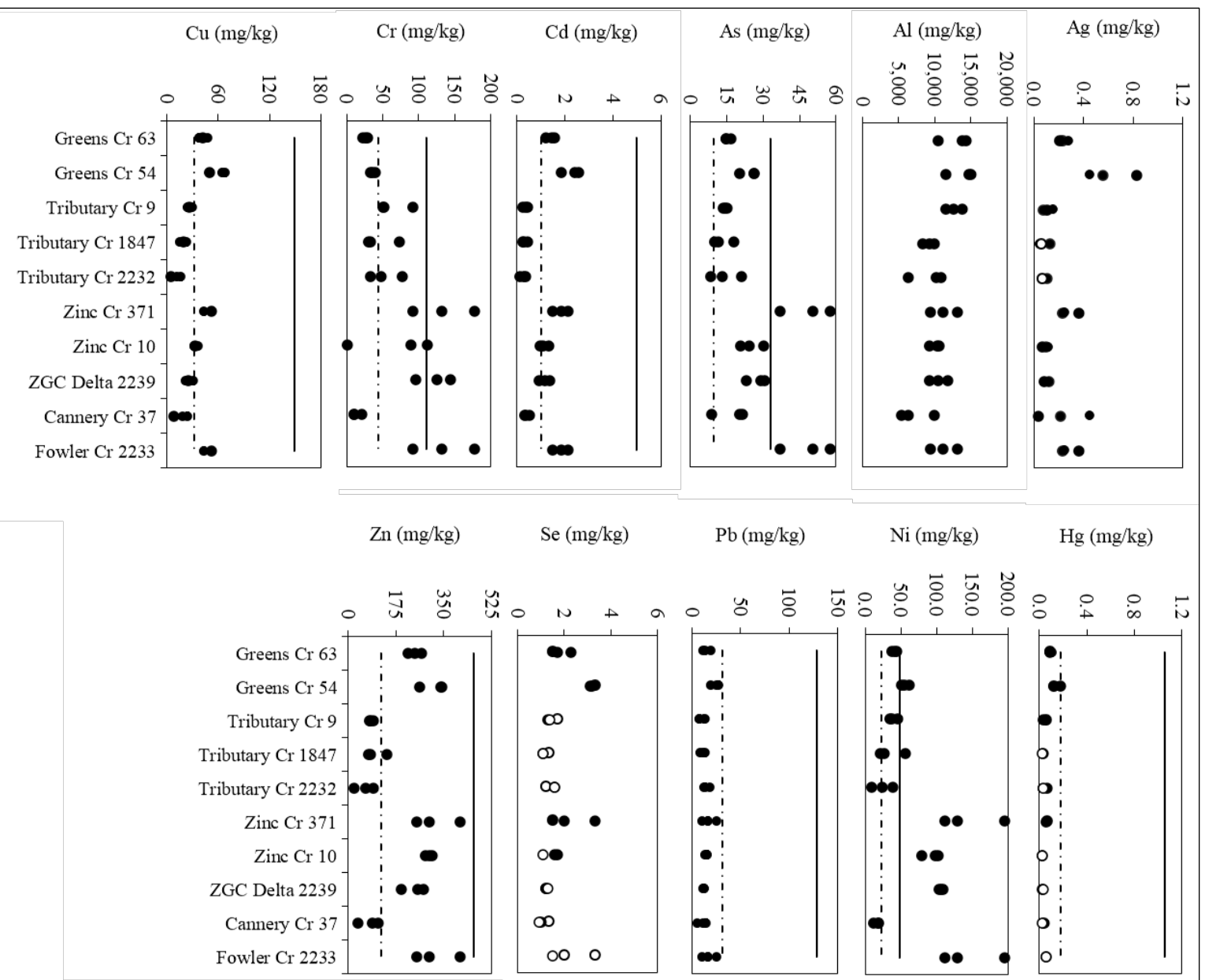


Figure 75.—Greens, Tributary, Zinc, Cannery, and Fowler Creek sediment element concentrations, 2025. Note: Elements undetected (o) are presented at the method reporting limit. TEC and PEC guidelines are not published for Ag, Al, or Se (Buchman 2008).

REFERENCES CITED

- Anderson, R. O. and R. M. Neumann, 1996. Length, weight, and associated structural indices. Pages 447–481 [In] B. R. Murphy and D.W. Willis, editors. Fisheries Techniques. 2nd edition. American Fisheries Society, Bethesda, MD.
- APHA (American Public Health Association). 2012. Standard Methods for the examination of water and wastewater. Section 1020.H.2. 22nd Edition. American Public Health Association, Washington DC.
- Barbour, M. T., J. Gerritsen, B. D. Snyder, and J. B. Stribling. 1999. Rapid bioassessment protocols for use in streams and wadeable rivers: periphyton, benthic macroinvertebrates and fish. 2nd edition. EPA 841-B-99-002. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.
- Brewster, B. P. 2016. Aquatic biomonitoring at Greens Creek Mine, 2015. Alaska Department of Fish and Game, Technical Report No. 16-04, Douglas, AK.
- Buchman, M. F. 2008. NOAA Screening Quick Reference Tables, U.S. National Oceanic and Atmospheric Administration, Office of Response and Restoration Division, Report 08-1, Seattle, WA.
- Durst, J. D., and A. H. Townsend. 2004. Aquatic biomonitoring at Greens Creek Mine, 2003. Alaska Department of Natural Resources, Office of Habitat Management and Permitting, Technical Report No. 04-04, Juneau, AK.
- Durst, J. D., A. H. Townsend, and J. P. Cariello. 2005. Aquatic biomonitoring at Greens Creek Mine, 2004. Alaska Department of Natural Resources, Office of Habitat Management and Permitting, Technical Report No. 05-04, Juneau, AK.
- Durst, J. D., and L. L. Jacobs. 2006. Aquatic biomonitoring at Greens Creek Mine, 2005. Alaska Department of Natural Resources, Office of Habitat Management and Permitting, Technical Report No. 06-01, Juneau, AK.
- Durst, J. D., and L. L. Jacobs. 2007. Aquatic biomonitoring at Greens Creek Mine, 2006. Alaska Department of Natural Resources, Office of Habitat Management and Permitting, Technical Report No. 07-02, Juneau, AK.
- Durst, J. D., and L. L. Jacobs. 2008. Aquatic biomonitoring at Greens Creek Mine, 2007. Alaska Department of Natural Resources, Office of Habitat Management and Permitting, Technical Report No. 08-03, Juneau, AK.
- Durst, J. D., and L. L. Jacobs. 2009. Aquatic biomonitoring at Greens Creek Mine, 2008. Alaska Department of Fish and Game, Technical Report No. 09-02, Juneau, AK.
- Durst, J. D., and L. L. Jacobs. 2010. Aquatic biomonitoring at Greens Creek Mine, 2009. Alaska Department of Fish and Game, Technical Report No. 10-03, Juneau, AK.
- EPA. 1994. Method 200.8, Revision 5.4: Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma – Mass Spectrometry. U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Office of Research and Development, Cincinnati, OH.
- EPA. 1997. Method 446.0: In vitro determination of chlorophylls a, b, c1 + c2 and pheopigments in marine and freshwater algae by visible spectrophotometry. Adapted by Elizabeth J. Arar, Revision 1.2, September 1997. U.S. Environmental Protection Agency, National Exposure Research Laboratory, Cincinnati, OH.
- EPA. 1998. Method 6020A: Inductively Coupled Plasma – Mass Spectrometry. U.S. Environmental Protection Agency.
- EPA. 2002. Method 1631 Revision E: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry. U. S. Environmental Protection Agency, Office of Water, Washington, D.C.
- Giefer, J., and B. Evers. 2025. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southeastern Region, effective June, 2025. Alaska Department of Fish and Game, Special Publication No. 25-01, Anchorage.
- Hecla. 2020. General Plan of Operations. Appendix 1: Integrated Monitoring Plan.
- Jacobs, L. L., P. W. Scannell, and B. Morris. 2003. Aquatic biomonitoring at Greens Creek Mine, 2002. Alaska Department of Fish and Game, Technical Report No. 03-04, Juneau, AK.

REFERENCES CITED, CONTINUED

- Kane, W. J. and N. M. Legere. 2019. Aquatic biomonitoring at Greens Creek Mine, 2018. Alaska Department of Fish and Game, Technical Report No. 19-07, Douglas, AK.
- Kane, W. J. 2020. Aquatic biomonitoring at Greens Creek Mine, 2019. Alaska Department of Fish and Game, Technical Report No. 20-05, Douglas, AK.
- Kane, W. J. 2021. Aquatic biomonitoring at Greens Creek Mine, 2020. Alaska Department of Fish and Game, Technical Report No. 21-06, Douglas, AK.
- Kane, W. J. 2022. Aquatic biomonitoring at Greens Creek Mine, 2021. Alaska Department of Fish and Game, Technical Report No. 22-08, Douglas, AK.
- Kanouse, K. M. 2011. Aquatic biomonitoring at Greens Creek Mine, 2010. Alaska Department of Fish and Game, Technical Report No. 11-02, Douglas, AK.
- Kanouse, K. M. 2012. Aquatic biomonitoring at Greens Creek Mine, 2011. Alaska Department of Fish and Game, Technical Report No. 12-03, Douglas, AK.
- Kanouse, K. M. and B. P. Brewster. 2013. Aquatic biomonitoring at Greens Creek Mine, 2012. Alaska Department of Fish and Game, Technical Report No. 12-11. Douglas, AK.
- Kanouse, K. M. and B. P. Brewster. 2014. Aquatic biomonitoring at Greens Creek Mine, 2013. Alaska Department of Fish and Game, Technical Report No. 14-05, Douglas, AK.
- Kanouse, K. M. 2015. Aquatic biomonitoring at Greens Creek Mine, 2014. Alaska Department of Fish and Game, Technical Report No. 15-03, Douglas, AK.
- Lindgren, J. W., and E. M. King. 2023. Aquatic biomonitoring at Greens Creek Mine, 2022. Alaska Department of Fish and Game, Technical Report No. 23-07, Douglas, AK.
- Lindgren, J. W., and E. M. King. 2024. Aquatic biomonitoring at Greens Creek Mine, 2023. Alaska Department of Fish and Game, Technical Report No. 24-07, Douglas, AK.
- Lindgren, J. W. 2025. Aquatic biomonitoring at Greens Creek Mine, 2024. Alaska Department of Fish and Game, Technical Report No. 25-04, Douglas, AK.
- Magnus, D. L., D. Brandenburger, K. F. Crabtree, K. A. Pahlke, and S. A. McPherson. 2006. Juvenile salmon capture and coded wire tagging manual. Alaska Department of Fish and Game, Special Publication No. 06-31, Anchorage, AK.
- Merritt, R. W. and K. W. Cummins, editors. 1996. An introduction to the aquatic insects of North America. 3rd edition. Kendall/Hunt Publishing Co., Dubuque, IA.
- Neter, J., W. Wasserman, and M. H. Kutner. 1990. Applied linear statistical models: Regression, analysis of variance, and experimental designs. Homewood, IL: Irwin.
- National Weather Service. 2026. NOAA Online Weather Data. National Oceanic Atmospheric and Administration, Juneau Weather Forecast Office. <https://www.weather.gov/wrh/Climate?wfo=ajk> (Accessed January 8, 2026)
- Paustian, S. 2010. Channel type user guide revision 2010. U.S. Department of Agriculture, Forest Service, R-10-TP-26.
- Platts, W. S., W. F. Megahan, and G. W. Minshall. 1983. Methods for evaluating stream, riparian, and biotic conditions. Gen. Tech. Rep. INT-138. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station.
- Pollard, W. R., G. F. Hartman, C. Groot, and P. Edgell. 1997. Field identification of coastal juvenile salmonids. Department of Fisheries and Oceans, Vancouver, BC.
- SonTek YSI Inc. 2007. FlowTracker Handheld ADV Technical Manual. San Diego, CA. https://www.uvm.edu/bwrl/lab_docs/manuals/Flow_Tracker_Manual.pdf. (accessed March 17, 2020).

REFERENCES CITED, CONTINUED

- Stewart, K. W. and M. W. Oswood. 2006. The stoneflies (Plecoptera) of Alaska and Western Canada. The Caddis Press, Columbus, OH.
- Tchounwou, P. B., C. G. Yedjou, A. K. Patlolla, and D. J. Sutton. 2012. Heavy metal toxicity and the environment. Pages 133–164 [In] *Experimentia Supplementum: Molecular, Clinical and Environmental Toxicology: Volume 3: Environmental Toxicology*. Springer Basel.
- USFS. 2003. Greens Creek tailings disposal final environmental impact statement. U.S. Department of Agriculture, Forest Service, Alaska Region.
- USFS. 2013. Greens Creek Mine tailings disposal facility expansion final environmental impact statement and record of decision. U.S. Department of Agriculture, Forest Service, Alaska Region.
- USFS. 2024. Greens Creek Mine north extension project final record of decision. U.S. Department of Agriculture, Forest Service, Alaska Region.
- USGS. 2024. National Water Information System: USGS 15101490 Greens Creek at Greens Creek Mine near Juneau, AK. https://waterdata.usgs.gov/nwis/uv?site_no=15101490 (Accessed January 15, 2024).
- Weber Scannell, P., and S. Paustian. 2002. Aquatic biomonitoring at Greens Creek Mine, 2001. Alaska Department of Fish and Game, Technical Report No. 02-03, Juneau, AK.
- Zutz, J. 2017. Aquatic biomonitoring at Greens Creek Mine, 2016. Alaska Department of Fish and Game, Technical Report No. 17-03, Douglas, AK.
- Zutz, J. 2018. Aquatic biomonitoring at Greens Creek Mine, 2017. Alaska Department of Fish and Game, Technical Report No. 18-01, Douglas, AK.

APPENDIX A: CHLOROPHYLL DATA

Appendix A.1.—Greens Creek Site 48 chlorophylls *a*, *b*, and *c* densities, 2001–2017.

mg/m ²	7/23/2001			7/23/2002			7/22/2003			7/21/2004		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	1.91	0.01	0.14	5.34	0.00	0.29	12.92	0.00	1.26	18.05	0.00	2.03
	1.83	0.00	0.18	4.27	0.00	0.21	8.65	0.03	1.57	6.73	0.00	0.69
	5.61	0.00	0.69	6.62	0.00	0.71	3.84	0.09	0.39	8.97	0.00	0.90
	0.31	0.08	0.06	2.99	0.00	0.25	12.18	0.01	0.64	12.82	0.00	1.45
	2.96	0.04	0.36	5.34	0.00	0.75	17.19	0.00	0.72	5.45	0.00	0.62
	5.44	0.00	0.62	6.62	0.00	0.75	17.19	0.02	0.86	20.40	0.00	2.15
	3.38	0.00	0.47	6.09	0.00	0.73	33.21	0.00	2.14	6.30	0.00	0.45
	1.87	0.03	0.15	ND	ND	ND	24.24	0.13	0.99	11.64	0.00	1.38
	2.63	0.14	0.14	2.99	0.00	0.36	19.76	0.00	0.57	7.48	0.00	0.65
	1.23	0.02	0.16	2.78	0.00	0.15	35.35	0.00	0.89	5.23	0.00	0.55
mean	2.72	0.03	0.30	4.78	0.00	0.47	18.45	0.03	1.00	10.31	0.00	1.09
minimum	0.31	0.00	0.06	2.78	0.00	0.15	3.84	0.00	0.39	5.23	0.00	0.45
maximum	5.61	0.14	0.69	6.62	0.00	0.75	35.35	0.13	2.14	20.40	0.00	2.15

mg/m ²	7/22/2005			7/20/2006			7/20/2007			7/22/2008		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	0.85	0.00	0.01	8.33	0.00	0.80	6.62	0.00	0.16	1.50	0.00	0.09
	4.70	0.00	0.51	11.43	0.00	0.71	5.55	0.00	0.23	4.70	0.00	0.16
	6.62	0.00	0.27	10.68	0.00	1.25	7.48	0.00	0.33	2.67	0.00	0.24
	6.19	0.00	0.51	20.08	0.00	2.04	11.64	0.00	1.39	2.14	0.00	0.17
	11.11	0.00	0.92	10.57	0.00	0.98	6.94	0.00	0.47	0.85	0.00	0.02
	5.66	0.00	0.51	14.10	0.00	1.72	11.11	0.00	0.54	12.60	0.00	0.33
	7.69	0.00	0.53	16.98	0.00	1.76	11.75	0.01	0.60	2.78	0.00	0.19
	5.13	0.00	0.29	5.23	0.00	1.74	4.81	0.00	0.29	6.30	0.00	0.74
	2.46	0.02	0.28	16.87	0.00	1.73	8.12	0.00	1.10	1.28	0.00	0.14
	9.08	0.00	0.63	4.38	0.00	0.54	4.06	0.00	0.43	3.20	0.00	0.37
mean	5.95	0.00	0.45	11.87	0.00	1.33	7.81	0.00	0.55	3.80	0.00	0.25
minimum	0.85	0.00	0.01	4.38	0.00	0.54	4.06	0.00	0.16	0.85	0.00	0.02
maximum	11.11	0.02	0.92	20.08	0.00	2.04	11.75	0.01	1.39	12.60	0.00	0.74

mg/m ²	7/21/2009			7/20/2010			7/21/2011			7/21/2012		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	3.20	0.00	0.49	8.54	0.00	0.44	4.49	0.00	0.50	0.36	ND	ND
	1.50	0.00	0.25	4.59	0.00	0.61	6.51	0.00	0.59	0.69	0.00	0.10
	4.17	0.11	0.59	5.13	0.00	0.27	2.88	0.00	0.30	1.29	0.00	0.12
	5.66	0.07	0.73	3.10	0.00	0.26	2.59	0.17	0.05	2.56	0.00	0.39
	3.42	0.06	0.50	7.58	0.00	0.29	3.31	0.00	0.36	0.85	0.00	0.00
	8.22	0.13	0.95	5.55	0.00	0.55	5.13	0.00	0.55	1.60	0.00	0.26
	0.43	0.11	0.11	10.68	0.00	0.64	7.16	0.00	1.06	1.82	0.00	0.29
	1.39	0.18	0.29	7.69	0.00	0.41	5.66	0.00	0.49	1.92	0.00	0.28
	7.80	0.00	0.89	3.63	0.00	0.25	0.85	0.00	0.11	0.32	0.00	0.08
	9.18	0.17	1.19	3.10	0.02	0.15	4.81	0.00	0.49	1.60	0.00	0.16
mean	4.50	0.08	0.60	5.96	0.00	0.39	4.34	0.02	0.45	1.30	0.00	0.19
minimum	0.43	0.00	0.11	3.10	0.00	0.15	0.85	0.00	0.05	0.32	0.00	0.00
maximum	9.18	0.18	1.19	10.68	0.02	0.64	7.16	0.17	1.06	2.56	0.00	0.39

Note: Bold values are the spectrophotometer estimated detection limit; chlorophyll-a not detected.

-continued-

Appendix A.1.–Page 2 of 2.

mg/m ²	7/24/2013			7/24/2014			7/15/2015			7/12/2016		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	2.03	0.00	0.12	4.81	0.00	0.31	2.14	0.00	0.18	4.38	0.00	0.60
	1.50	0.00	0.11	0.60	0.00	0.12	11.96	0.00	0.90	3.84	0.00	0.43
	4.59	0.00	0.33	1.60	0.00	0.10	4.70	0.00	0.31	7.58	0.00	0.88
	2.03	0.00	0.19	6.62	0.00	0.00	3.31	0.00	0.24	6.51	0.00	0.75
	6.94	0.00	0.38	ND	ND	ND	5.55	0.00	0.25	2.24	0.00	0.26
	6.62	0.00	0.39	5.66	0.00	0.33	2.46	0.00	0.18	2.99	0.00	0.47
	1.60	0.00	0.26	0.55	0.00	0.02	1.38	0.00	0.08	3.20	0.00	0.45
	1.39	0.00	0.07	0.43	0.00	0.07	2.35	0.00	0.05	2.35	0.00	0.31
	3.74	0.00	0.46	1.24	0.00	0.03	2.99	0.00	0.22	2.67	0.00	0.31
	5.23	0.00	0.70	5.02	0.24	0.38	0.43	0.00	0.03	4.49	0.00	0.61
mean	3.57	0.00	0.30	2.95	0.03	0.15	3.73	0.00	0.24	4.03	0.00	0.51
minimum	1.39	0.00	0.07	0.43	0.00	0.00	0.43	0.00	0.03	2.24	0.00	0.26
maximum	6.94	0.00	0.70	6.62	0.24	0.38	11.96	0.00	0.90	7.58	0.00	0.88

mg/m ²	7/12/2017		
	Chl-a	Chl-b	Chl-c
	0.55	0.00	0.02
	0.64	0.00	0.07
	0.43	0.01	0.04
	2.99	0.00	0.39
	0.96	0.00	0.09
	0.64	0.00	0.16
	2.14	0.00	0.28
	1.70	0.00	0.26
	0.96	0.00	0.09
	0.96	0.00	0.10
mean	1.20	0.00	0.15
minimum	0.43	0.00	0.02
maximum	2.99	0.01	0.39

Appendix A.2.—Greens Creek Site 63 chlorophylls *a*, *b*, and *c* densities, 2018–2025.

mg/m ²	7/11/2018			7/9/2019			7/16/2020			7/12/2021		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	ND	ND	ND	4.17	0.00	0.33	3.10	0.00	0.38	1.82	0.00	0.25
	5.45	0.00	0.79	4.59	0.00	0.29	0.25	ND	ND	3.84	0.00	0.59
	9.29	0.00	1.77	2.89	0.00	0.30	2.06	0.00	0.25	6.62	0.00	1.00
	7.37	0.00	0.87	4.73	0.00	0.35	3.44	0.00	0.32	1.60	0.00	0.17
	ND	ND	ND	2.78	0.00	0.13	3.74	0.00	0.58	1.39	0.00	0.12
	23.07	0.00	4.01	5.34	0.00	0.48	0.32	0.00	0.08	3.63	0.00	0.55
	8.22	0.00	0.96	2.88	0.00	0.21	5.66	0.00	0.71	1.60	0.00	0.26
	4.38	0.00	0.64	13.03	0.00	1.09	6.94	0.00	0.52	1.17	0.00	0.13
	15.06	0.00	2.28	5.98	0.00	0.75	1.88	0.00	0.21	1.71	0.00	0.31
	14.63	0.00	2.28	8.33	0.00	0.47	2.02	0.00	0.28	3.10	0.00	0.48
mean	10.93	0.00	1.70	5.47	0.00	0.44	2.94	0.00	0.37	2.65	0.00	0.39
minimum	4.38	0.00	0.64	2.78	0.00	0.13	0.25	0.00	0.08	1.17	0.00	0.12
maximum	23.07	0.00	4.01	13.03	0.00	1.09	6.94	0.00	0.71	6.62	0.00	1.00

mg/m ²	7/12/2022			7/11/2023			7/9/2024			7/7/2025		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	2.94	0.00	0.29	11.11	0.00	1.30	7.12	0.00	0.81	8.54	0.00	1.37
	12.02	0.00	1.56	7.48	0.00	1.29	8.99	0.00	1.28	3.20	0.00	0.36
	8.01	0.00	1.04	5.32	0.00	0.73	7.71	0.00	1.00	8.86	0.00	1.63
	7.52	0.00	1.12	3.85	0.00	0.50	3.11	0.00	0.40	15.70	0.00	2.49
	4.49	0.00	0.44	13.35	0.00	1.79	9.50	0.00	1.28	9.29	0.00	1.49
	6.09	0.00	0.98	3.74	0.00	0.62	14.08	0.00	1.61	2.24	0.00	0.13
	9.61	0.00	1.23	2.44	0.00	0.26	8.86	0.00	1.64	8.76	0.00	1.38
	13.24	0.00	1.90	3.52	0.00	0.54	11.85	0.00	1.45	4.59	0.00	0.72
	6.73	0.00	0.68	6.19	0.00	0.93	4.06	0.00	0.57	7.26	0.00	0.33
	5.34	0.00	1.08	1.50	0.00	0.21	9.68	0.00	1.19	6.51	0.00	1.04
mean	7.60	0.00	1.03	5.85	0.00	0.82	8.50	0.00	1.12	7.50	0.00	1.09
minimum	2.94	0.00	0.29	1.50	0.00	0.21	3.11	0.00	0.40	2.24	0.00	0.13
maximum	13.24	0.00	1.90	13.35	0.00	1.79	14.08	0.00	1.64	15.70	0.00	2.49

Note: Bold values are the spectrophotometer estimated detection limit; chlorophyll-*a* not detected.

Appendix A.3.—Greens Creek Site 54 chlorophylls *a*, *b*, and *c* densities, 2001–2025.

mg/m ²	7/23/2001			7/23/2002			7/22/2003			7/21/2004		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	1.60	0.01	0.15	2.88	0.00	0.30	13.24	0.00	1.05	17.19	0.00	2.02
	3.10	0.05	0.41	9.61	0.00	1.02	8.33	0.00	0.79	9.72	0.00	0.93
	3.61	0.00	0.21	8.12	0.00	0.24	14.20	0.00	1.45	8.76	0.00	0.67
	2.97	0.00	0.29	4.49	0.00	0.38	6.09	0.00	0.62	32.04	0.00	3.66
	1.88	0.00	0.01	5.34	0.00	0.53	15.49	0.00	1.74	5.23	0.00	0.42
	1.78	0.00	0.19	2.46	0.87	1.26	10.68	0.00	1.06	3.74	0.00	0.31
	4.95	0.00	0.22	6.51	0.00	0.64	5.55	0.00	0.39	12.82	0.00	1.35
	1.46	0.00	0.10	4.91	0.00	0.40	16.34	0.00	1.72	1.92	0.03	0.09
	1.69	0.00	0.14	4.81	0.00	0.45	12.60	0.00	1.07	10.47	0.00	1.09
	3.48	0.00	0.16	8.44	0.00	0.79	16.02	0.00	1.75	5.98	0.00	0.53
mean	2.65	0.01	0.19	5.76	0.09	0.60	11.85	0.00	1.16	10.79	0.00	1.11
minimum	1.46	0.00	0.01	2.46	0.00	0.24	5.55	0.00	0.39	1.92	0.00	0.09
maximum	4.95	0.05	0.41	9.61	0.87	1.26	16.34	0.00	1.75	32.04	0.03	3.66

mg/m ²	7/22/2005			7/20/2006			7/20/2007			7/22/2008		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	10.36	0.00	0.54	19.54	0.00	1.62	0.43	0.04	0.04	2.99	0.00	0.29
	2.56	0.00	0.26	5.66	0.00	0.76	0.24	ND	ND	1.17	0.02	0.00
	3.31	0.00	0.17	28.73	0.00	1.19	1.39	0.04	0.11	1.50	0.00	0.19
	2.88	0.00	0.12	23.28	0.00	2.63	4.27	0.00	0.48	1.71	0.00	0.13
	5.66	0.00	0.38	4.59	0.00	0.47	0.24	ND	ND	2.24	0.00	0.09
	2.99	0.00	0.13	27.34	0.00	2.22	3.31	0.00	0.38	2.14	0.00	0.11
	4.27	0.00	0.18	4.27	0.00	0.38	8.01	0.00	0.98	2.46	0.00	0.25
	4.38	0.00	0.31	8.86	0.00	0.94	0.24	ND	ND	0.96	0.00	0.01
	4.06	0.00	0.16	31.72	0.00	3.17	2.99	0.00	0.39	0.24	ND	ND
	3.10	0.00	0.16	5.55	0.00	0.68	6.41	0.00	0.81	0.24	ND	ND
mean	4.36	0.00	0.24	15.95	0.00	1.41	2.75	0.01	0.46	1.57	0.00	0.13
minimum	2.56	0.00	0.12	4.27	0.00	0.38	0.24	0.00	0.04	0.24	0.00	0.00
maximum	10.36	0.00	0.54	31.72	0.00	3.17	8.01	0.04	0.98	2.99	0.02	0.29

mg/m ²	7/21/2009			7/20/2010			7/21/2011			7/21/2012		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	8.01	0.11	1.06	2.67	0.00	0.29	9.61	0.00	0.64	5.54	0.00	0.24
	7.58	0.11	1.13	6.73	0.00	0.69	0.43	0.00	0.06	0.11	0.00	0.04
	6.84	0.07	0.89	4.38	0.00	0.74	3.42	0.00	0.32	2.65	0.00	0.11
	9.18	0.09	0.96	2.14	0.00	0.25	3.42	0.00	0.33	1.82	0.00	0.10
	ND	ND	ND	5.23	0.00	0.67	41.76	0.00	3.02	1.07	0.00	0.04
	8.33	0.15	1.11	1.71	0.04	0.25	5.23	0.00	0.64	1.17	0.00	0.13
	11.32	0.20	1.57	1.39	0.02	0.11	10.36	0.00	0.45	0.75	0.00	0.06
	5.34	0.17	0.66	3.20	0.00	0.46	7.16	0.00	0.53	19.54	0.00	1.10
	4.49	0.10	0.63	2.04	0.00	0.21	0.64	0.00	0.07	4.06	0.00	0.30
	4.38	0.10	0.43	0.21	0.01	0.05	2.24	0.00	0.29	0.43	0.01	0.04
mean	7.27	0.12	0.94	2.97	0.01	0.37	8.43	0.00	0.64	3.71	0.00	0.22
minimum	4.38	0.07	0.43	0.21	0.00	0.05	0.43	0.00	0.06	0.11	0.00	0.04
maximum	11.32	0.20	1.57	6.73	0.04	0.74	41.76	0.00	3.02	19.54	0.01	1.10

-continued-

Appendix A.3.–Page 2 of 2.

mg/m ²	7/12/2017			7/10/2018			7/10/2019			7/16/2020		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	1.17	0.00	0.08	10.57	0.00	2.03	2.56	0.00	0.19	8.44	0.00	0.61
	0.19	ND	ND	7.05	0.00	1.13	0.75	0.00	0.05	6.93	0.00	0.58
	0.64	0.00	0.11	9.93	0.00	1.57	3.72	0.00	0.28	8.26	0.00	1.05
	2.99	0.00	0.38	8.12	0.00	1.55	8.22	0.00	0.80	2.24	0.00	0.27
	0.43	0.00	0.07	6.84	0.00	0.84	4.62	0.00	0.50	4.78	0.00	0.47
	0.96	0.00	0.09	1.51	0.00	0.29	5.98	0.00	0.90	3.74	0.00	0.50
	0.85	0.00	0.11	8.54	0.00	1.03	0.96	0.00	0.09	7.62	0.00	0.78
	0.19	ND	ND	6.09	0.00	0.98	1.82	0.00	0.13	2.02	0.00	0.19
	0.37	0.00	0.18	3.63	0.00	0.50	1.82	0.00	0.05	0.55	0.00	0.02
	0.55	0.00	0.12	8.12	0.00	1.16	1.82	0.00	0.09	0.96	0.00	0.09
mean	0.83	0.00	0.14	7.04	0.00	1.11	3.23	0.00	0.31	4.55	0.00	0.46
minimum	0.19	0.00	0.07	1.51	0.00	0.29	0.75	0.00	0.05	0.55	0.00	0.02
maximum	2.99	0.00	0.38	10.57	0.00	2.03	8.22	0.00	0.90	8.44	0.00	1.05

mg/m ²	7/12/2021			7/12/2022			7/13/2023			7/9/2024		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	0.85	0.00	0.03	2.88	0.00	0.33	11.64	0.00	1.63	10.04	0.00	1.25
	0.56	0.00	0.06	14.74	0.00	1.77	6.41	0.00	0.84	6.28	0.00	0.83
	0.97	0.00	0.13	2.88	0.00	0.67	7.90	0.00	0.99	5.45	0.00	0.75
	2.65	0.00	0.43	14.20	0.00	2.12	5.79	0.00	0.73	3.10	0.00	0.55
	1.07	0.00	0.04	9.40	0.00	1.48	4.96	0.00	0.51	3.85	0.00	0.66
	1.39	0.00	0.13	12.07	0.00	1.68	5.55	0.00	0.89	5.41	0.00	0.68
	1.50	0.00	0.20	6.94	0.00	1.85	2.25	0.00	0.32	8.90	0.00	0.93
	0.75	0.00	0.05	5.98	0.00	0.66	7.05	0.00	0.95	10.68	0.00	1.41
	1.51	0.00	0.22	5.23	0.00	1.04	4.81	0.00	0.52	9.61	0.00	1.36
	6.62	0.00	0.99	2.99	0.00	0.55	2.99	0.00	0.26	4.70	0.00	0.61
mean	1.79	0.00	0.23	7.73	0.00	1.22	5.94	0.00	0.76	6.80	0.00	0.90
minimum	0.56	0.00	0.03	2.88	0.00	0.33	2.25	0.00	0.26	3.10	0.00	0.55
maximum	6.62	0.00	0.99	14.74	0.00	2.12	11.64	0.00	1.63	10.68	0.00	1.41

mg/m ²	7/7/2025		
	Chl-a	Chl-b	Chl-c
	5.82	0.00	0.96
	4.91	0.00	0.78
	4.92	0.00	0.52
	3.90	0.00	0.30
	8.30	0.00	1.21
	6.06	0.00	0.73
	5.05	0.00	0.73
	7.06	0.00	0.99
	6.61	0.00	1.04
	3.67	0.00	0.56
mean	5.63	0.00	0.78
minimum	3.67	0.00	0.30
maximum	8.30	0.00	1.21

Note: Bold values are the spectrophotometer estimated detection limit; chlorophyll-a not detected.

Appendix A.4.—Tributary Creek Site 9 chlorophylls *a*, *b*, and *c* densities, 2001–2025.

mg/m ²	7/23/2001			7/23/2002			7/23/2003			7/21/2004		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	6.62	0.00	0.79	8.91	0.00	0.52	9.61	0.00	1.26	9.40	0.22	0.80
	11.15	0.00	1.20	16.43	0.95	1.28	17.19	0.00	0.79	5.77	0.00	0.42
	15.05	0.00	1.47	12.65	0.17	0.00	7.69	0.00	0.29	5.45	0.00	0.48
	16.58	0.23	1.51	5.44	0.45	0.07	8.76	0.00	1.11	6.09	0.03	0.38
	3.15	0.00	0.33	23.72	1.21	0.84	10.47	0.00	1.92	14.52	0.02	1.40
	2.59	0.06	0.28	12.75	0.40	0.22	10.79	0.00	1.88	6.51	0.17	0.40
	1.61	0.00	0.01	32.53	0.00	1.89	22.64	0.00	3.98	10.36	0.13	0.80
	6.66	0.00	0.43	4.40	1.50	0.00	12.39	0.00	2.43	6.84	0.04	0.36
	15.21	0.81	1.44	2.94	0.30	0.17	8.54	0.00	1.69	26.17	0.51	2.61
	11.55	0.00	1.51	8.01	1.47	0.27	13.03	0.00	3.86	8.44	0.22	0.53
mean	9.02	0.11	0.90	12.78	0.65	0.53	12.11	0.00	1.92	9.96	0.13	0.82
minimum	1.61	0.00	0.01	2.94	0.00	0.00	7.69	0.00	0.29	5.45	0.00	0.36
maximum	16.58	0.81	1.51	32.53	1.50	1.89	22.64	0.00	3.98	26.17	0.51	2.61

mg/m ²	7/23/2005			7/21/2006			7/20/2007			7/23/2008		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	6.09	0.00	0.25	3.42	0.25	0.19	ND	ND	ND	2.35	0.00	0.12
	8.01	1.28	0.18	4.08	0.40	0.20	5.45	0.08	0.23	6.94	0.00	0.27
	1.82	0.13	0.07	6.94	0.00	0.40	7.26	0.00	0.54	6.30	0.24	0.34
	9.08	0.06	0.29	4.11	0.01	0.32	ND	ND	ND	6.41	0.00	0.25
	4.70	0.00	0.10	4.17	0.00	0.39	ND	ND	ND	2.46	0.12	0.19
	4.70	0.00	0.12	4.78	0.00	0.29	0.85	0.16	0.11	6.19	0.05	0.39
	7.80	0.00	0.20	14.16	0.00	0.57	6.41	0.06	0.24	4.06	0.00	0.13
	14.85	0.00	0.46	4.34	0.01	0.21	7.05	0.24	0.65	4.59	0.00	0.37
	36.10	0.10	1.12	5.23	0.00	0.56	5.02	0.00	0.26	1.60	0.00	0.00
	8.97	0.00	0.26	3.66	0.37	0.26	3.20	0.00	0.23	3.74	0.00	0.28
mean	10.21	0.16	0.31	5.49	0.10	0.34	5.03	0.08	0.32	4.46	0.04	0.23
minimum	1.82	0.00	0.07	3.42	0.00	0.19	0.85	0.00	0.11	1.60	0.00	0.00
maximum	36.10	1.28	1.12	14.16	0.40	0.57	7.26	0.24	0.65	6.94	0.24	0.39

mg/m ²	7/22/2009			7/20/2010			7/20/2011			7/26/2012		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	2.03	0.10	0.16	12.82	0.00	0.39	4.81	0.47	0.08	3.63	0.00	0.25
	5.45	0.17	0.38	6.62	0.00	0.39	3.84	0.00	0.12	8.97	0.00	0.33
	4.38	0.24	0.30	7.69	0.00	0.43	4.91	0.00	0.34	10.68	0.00	0.48
	7.05	0.58	0.33	5.66	0.12	0.32	10.47	0.03	0.50	3.74	0.00	0.25
	9.08	0.36	0.49	9.72	0.88	0.40	5.13	0.00	0.37	1.28	0.00	0.04
	8.76	0.41	0.62	5.98	0.00	0.20	1.71	0.00	0.01	1.71	0.00	0.12
	2.14	0.08	0.09	5.55	0.00	0.40	6.30	0.00	0.44	5.66	0.00	0.29
	18.37	0.66	0.78	10.57	0.28	0.34	9.61	0.00	0.35	6.09	0.00	0.26
	2.35	0.18	0.16	4.06	0.05	0.16	12.50	0.00	0.87	2.14	0.00	0.21
	3.20	0.20	0.33	5.77	0.00	0.32	6.30	0.00	0.17	7.37	0.00	0.40
mean	6.28	0.30	0.36	7.44	0.13	0.34	6.56	0.05	0.33	5.13	0.00	0.26
minimum	2.03	0.08	0.09	4.06	0.00	0.16	1.71	0.00	0.01	1.28	0.00	0.04
maximum	18.37	0.66	0.78	12.82	0.88	0.43	12.50	0.47	0.87	10.68	0.00	0.48

-continued-

Appendix A.4.–Page 2 of 2.

mg/m ²	7/11/2017			7/12/2018			7/11/2019			7/15/2020		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	12.82	0.00	1.07	15.59	0.00	1.74	ND	ND	ND	4.91	0.00	0.23
	1.39	0.00	0.02	4.49	0.00	0.51	1.32	0.00	0.15	11.96	0.00	0.51
	1.50	0.00	0.07	20.40	0.00	2.90	0.21	0.00	0.03	5.98	0.00	0.55
	8.44	0.00	0.56	0.21	0.00	0.00	2.75	0.00	0.06	4.38	0.00	0.22
	3.31	0.07	0.15	5.13	0.00	0.61	ND	ND	ND	14.63	0.00	0.77
	1.39	0.00	0.03	10.25	0.00	1.80	4.59	0.00	0.25	6.19	0.00	0.25
	0.43	0.00	0.00	11.64	0.00	1.82	2.56	0.00	0.12	7.80	0.00	0.36
	0.96	0.00	0.06	7.80	0.00	1.31	ND	ND	ND	3.52	0.00	0.11
	3.10	0.00	0.28	0.43	0.01	0.04	ND	ND	ND	7.37	0.00	0.48
	7.58	0.00	0.69	0.96	0.00	0.05	ND	ND	ND	11.85	0.00	0.57
mean	4.09	0.01	0.29	7.69	0.00	1.08	2.29	0.00	0.12	7.86	0.00	0.41
minimum	0.43	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.03	3.52	0.00	0.11
maximum	12.82	0.07	1.07	20.40	0.01	2.90	4.59	0.00	0.25	14.63	0.00	0.77

mg/m ²	7/13/2021			7/11/2022			7/12/2023			7/10/2024		
	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c	Chl-a	Chl-b	Chl-c
	14.31	0.00	0.73	4.91	0.00	0.41	15.06	0.00	0.75	14.42	0.00	1.16
	2.46	0.30	0.40	4.06	0.00	0.37	6.51	0.00	0.58	8.65	0.00	0.62
	11.96	0.00	0.73	17.84	0.00	1.04	10.47	0.00	0.58	16.45	0.00	1.29
	2.99	0.00	0.18	7.69	0.00	0.55	12.39	0.00	0.79	5.13	0.00	0.41
	3.74	0.00	0.21	6.41	0.00	0.60	3.84	0.00	0.23	4.91	0.00	0.19
	5.55	0.00	0.20	4.81	0.00	0.27	5.45	0.00	0.42	9.40	0.00	0.46
	3.20	0.00	0.16	11.32	0.00	0.76	17.19	0.00	0.77	6.19	0.23	0.53
	2.78	0.00	0.14	13.24	0.00	1.12	12.60	0.00	0.83	3.30	0.00	0.34
	5.23	0.00	0.23	17.94	0.00	1.03	7.48	0.00	0.57	15.17	0.00	0.81
	7.69	0.00	0.38	6.84	0.00	0.37	4.27	0.00	0.26	8.01	0.00	0.71
mean	5.99	0.03	0.34	9.51	0.00	0.65	9.53	0.00	0.58	9.16	0.02	0.65
minimum	2.46	0.00	0.14	4.06	0.00	0.27	3.84	0.00	0.23	3.30	0.00	0.19
maximum	14.31	0.30	0.73	17.94	0.00	1.12	17.19	0.00	0.83	16.45	0.23	1.29

mg/m ²	7/10/2025		
	Chl-a	Chl-b	Chl-c
	8.22	0.00	0.40
	10.31	0.00	0.42
	16.87	0.00	0.55
	10.04	0.05	0.71
	53.19	0.00	2.50
	ND	ND	ND
	ND	ND	ND
	1.39	0.14	0.03
	6.09	0.00	0.36
	33.43	0.00	1.55
mean	17.44	0.02	0.82
minimum	1.39	0.00	0.03
maximum	53.19	0.14	2.50

Note: Bold values are the spectrophotometer estimated detection limit; chlorophyll-a not detected.

Appendix A.5.—Tributary Creek Site 1847 chlorophylls *a*, *b*, and *c* densities, 2018–2025.

mg/m ²	7/12/2018			7/11/2019			7/15/2020			7/13/2021		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	16.98	0.00	3.10	3.95	0.00	0.40	15.38	1.55	1.02	16.34	0.00	0.74
	9.29	0.00	1.66	2.78	0.00	0.25	5.23	0.00	0.26	8.04	0.00	0.36
	6.09	0.00	0.70	0.75	0.00	0.05	12.50	0.00	1.28	27.55	0.00	1.40
	3.63	0.00	0.28	4.70	0.00	0.52	2.46	0.51	0.13	6.51	0.00	0.47
	12.82	0.00	2.14	5.77	0.00	0.58	8.12	0.00	0.54	1.07	0.04	0.17
	3.63	0.02	0.57	4.49	0.00	0.43	6.41	0.00	0.30	6.11	0.00	0.46
	2.24	0.00	0.33	1.92	0.00	0.09	8.44	0.00	0.61	1.13	0.16	0.05
	ND	ND	ND	4.17	0.00	0.32	6.41	0.00	0.52	15.17	0.00	0.87
	8.01	0.00	0.66	ND	ND	ND	1.71	0.00	0.11	1.92	0.00	0.08
	10.68	0.00	1.29	ND	ND	ND	10.89	0.00	0.58	11.32	0.00	0.55
mean	8.15	0.00	1.19	3.57	0.00	0.33	7.76	0.21	0.54	9.52	0.02	0.52
minimum	2.24	0.00	0.28	0.75	0.00	0.05	1.71	0.00	0.11	1.07	0.00	0.05
maximum	16.98	0.02	3.10	5.77	0.00	0.58	15.38	1.55	1.28	27.55	0.16	1.40

mg/m ²	7/13/2022			7/12/2023			7/10/2024			7/9/2025		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	34.07	0.00	4.74	4.81	0.00	0.26	0.41	0.00	0.08	0.96	0.04	0.12
	23.39	0.00	1.83	5.87	0.00	0.44	18.16	0.00	1.83	1.17	0.00	0.20
	6.51	0.00	1.01	5.24	0.00	0.24	3.10	0.07	0.21	16.13	4.91	0.48
	15.59	0.00	1.21	8.76	0.00	0.42	18.07	0.00	0.91	21.68	0.00	2.32
	29.48	0.00	3.20	5.43	0.00	0.28	10.47	0.00	0.82	10.47	1.16	0.38
	34.50	0.00	2.97	2.24	0.00	0.10	5.55	0.00	0.53	7.37	0.00	0.23
	2.46	0.00	0.25	3.10	0.00	0.15	16.66	0.00	1.18	9.29	0.00	0.93
	11.43	0.00	1.00	2.25	0.00	0.12	0.60	0.00	0.02	4.50	0.00	0.31
	37.70	0.00	4.14	3.74	0.00	0.15	20.93	0.00	1.55	8.22	0.00	0.31
	4.27	0.00	0.29	11.43	0.00	0.63	1.17	0.13	0.08	23.82	0.00	1.74
mean	19.94	0.00	2.06	5.29	0.00	0.28	9.51	0.02	0.72	10.36	0.61	0.70
minimum	2.46	0.00	0.25	2.24	0.00	0.10	0.41	0.00	0.02	0.96	0.00	0.12
maximum	37.70	0.00	4.74	11.43	0.00	0.63	20.93	0.13	1.83	23.82	4.91	2.32

Note: Bold values are the spectrophotometer estimated detection limit; chlorophyll-*a* not detected.

Appendix A.6.–Zinc Creek Site 10 chlorophylls *a*, *b*, and *c* densities, 2024–2025.

mg/m ²	7/8/2024			7/10/2025		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	6.02	0.00	0.57	6.09	0.00	0.36
	4.21	0.00	0.26	ND	ND	ND
	8.08	0.00	1.11	ND	ND	ND
	10.79	0.00	1.69	1.07	0.00	0.20
	7.90	0.00	0.66	2.73	0.00	0.55
	8.59	0.00	0.78	0.54	0.04	0.09
	1.07	0.03	0.27	3.42	0.00	0.51
	7.74	0.00	0.63	1.46	0.00	0.30
	5.68	0.00	0.39	2.14	0.00	0.09
	11.64	0.00	1.67	1.64	0.00	0.14
mean	7.17	0.00	0.80	2.39	0.01	0.28
minimum	1.07	0.00	0.26	0.54	0.00	0.09
maximum	11.64	0.03	1.69	6.09	0.04	0.55

Appendix A.7.–Zinc Creek Site 371 chlorophylls *a*, *b*, and *c* densities, 2024–2025.

mg/m ²	7/8/2024			7/10/2025		
	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>	Chl- <i>a</i>	Chl- <i>b</i>	Chl- <i>c</i>
	4.70	0.00	0.38	0.23	0.00	0.00
	2.04	0.10	0.16	5.83	0.00	0.53
	1.17	0.00	0.13	0.32	0.08	0.20
	10.79	0.00	1.17	0.23	0.00	0.00
	18.69	0.00	2.09	1.28	0.00	0.09
	8.22	0.00	0.86	0.23	0.00	0.00
	10.03	0.00	1.60	3.62	0.00	0.17
	1.60	0.00	0.07	0.78	0.00	0.06
	5.13	0.00	0.44	2.94	0.00	0.29
	14.10	0.18	1.56	1.82	0.00	0.34
mean	7.65	0.03	0.85	1.73	0.01	0.17
minimum	1.17	0.00	0.07	0.23	0.00	0.00
maximum	18.69	0.18	2.09	5.83	0.08	0.53

APPENDIX B: BENTHIC MACROINVERTEBRATE DATA

Appendix B.1.—Greens Creek Site 48 (2001–2017) and 63 (2018–2025) BMI data summary.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Total BMI Taxa	25	26	27	30	29	21	24	21	18	23	27	22	20	24	27	25	25	27	28	33	29	26	23	26	32	
Mean BMI Taxa / Sample	12	13	18	19	16	11	13	13	10	15	17	13	12	13	17	13	15	14	16	14	16	13	11	14	18	
Total Ephemeroptera Taxa	6	6	7	6	6	6	7	6	7	7	7	7	7	7	8	8	7	8	8	9	8	9	7	8	8	
Total Plecoptera Taxa	7	11	6	9	8	4	5	3	5	6	7	7	5	6	6	5	6	7	6	8	6	7	6	7	6	
Total Trichoptera Taxa	2	2	4	2	4	2	1	2	1	1	2	2	1	1	2	2	3	2	5	3	3	4	1	1	5	
Total Counts																										
Ephemeroptera	1,094	599	1,897	1,034	902	495	428	887	852	937	558	555	618	844	1,488	1,520	1,300	2,271	2,715	1,237	663	993	978	1,996	1,583	
Plecoptera	49	41	191	74	36	10	75	20	40	81	151	55	131	98	122	209	128	110	65	80	61	43	98	117	290	
Trichoptera	7	9	20	22	15	7	8	24	1	4	12	5	8	14	62	14	22	20	30	29	16	20	5	11	15	
Aquatic Diptera	31	39	206	169	101	38	34	79	15	71	193	73	86	184	291	352	146	144	220	234	105	83	132	164	308	
Other	3	16	53	25	5	10	15	11	2	8	68	5	12	16	65	28	18	26	21	31	112	24	36	13	331	
% Ephemeroptera	92%	85%	80%	79%	86%	88%	80%	87%	93%	86%	57%	80%	72%	73%	73%	72%	81%	88%	89%	77%	69%	85%	78%	87%	63%	
% Plecoptera	4%	6%	8%	6%	3%	3%	11%	2%	5%	7%	15%	8%	15%	8%	6%	10%	8%	4%	2%	5%	6%	4%	8%	5%	11%	
% Trichoptera	1%	1%	1%	2%	2%	1%	2%	2%	0%	0%	1%	1%	1%	1%	3%	1%	1%	1%	1%	2%	2%	2%	0%	0%	1%	
% Aquatic Diptera	3%	6%	9%	12%	9%	6%	6%	8%	2%	6%	20%	11%	10%	16%	14%	17%	9%	6%	7%	15%	11%	7%	11%	7%	12%	
% Other	0%	2%	2%	2%	1%	1%	2%	1%	0%	1%	7%	1%	1%	1%	3%	1%	1%	1%	1%	2%	12%	2%	3%	1%	13%	
% EPT	97%	92%	89%	86%	90%	92%	92%	92%	98%	93%	73%	89%	89%	83%	82%	82%	90%	93%	92%	84%	77%	91%	87%	92%	75%	
% Chironomidae	1%	4%	7%	11%	8%	3%	4%	6%	1%	5%	17%	9%	9%	15%	9%	14%	9%	5%	7%	12%	6%	5%	10%	7%	11%	
% Dominant Taxon	41%	35%	30%	28%	30%	37%	36%	58%	46%	31%	21%	37%	25%	31%	28%	27%	24%	39%	38%	39%	32%	43%	36%	36%	24%	
Total BMI	1,184	704	2,367	1,679	1,396	693	733	1,331	953	1,240	982	693	855	1,156	2,028	2,123	1,614	2,571	3,051	1,611	957	1,163	1,249	2,301	2,527	
Total Terrestrial Invertebrates	0	4	5	1	24	5	2	8	2	11	4	0	14	32	6	4	27	4	6	10	0	2	7	4	5	
Total Invertebrates	1,184	708	2,372	1,680	1,420	698	735	1,339	955	1,251	986	693	869	1,188	2,034	2,127	1,641	2,575	3,057	1,621	957	1,165	1,256	2,305	2,532	
% Sample BMI	100%	99%	99%	99%	98%	99%	99%	99%	99%	99%	99%	100%	98%	97%	99%	99%	98%	100%	100%	99%	100%	100%	99%	100%	100%	
% Sample Terrestrial	0%	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%	0%	2%	3%	1%	1%	2%	0%	0%	1%	0%	0%	1%	0%	0%	
Total Sample Area (m ²)	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
Mean Invertebrates / m ²	2,753	1,647	5,516	3,907	3,302	1,623	1,709	3,114	2,221	2,909	2,293	1,612	2,021	2,763	2,956	3,092	2,385	3,743	4,443	2,356	1,391	1,693	1,826	3,350	3,680	
Mean BMI / m ²	2,753	1,637	5,505	3,905	3,247	1,612	1,705	3,095	2,216	2,884	2,284	1,612	1,988	2,688	2,948	3,086	2,346	3,737	4,435	2,342	1,391	1,690	1,815	3,344	3,673	
± 1 SD	1,435	434	1,579	677	1,441	807	648	980	1,939	1,530	630	872	526	1,043	892	1,219	1,034	1,240	1,708	1,899	768	808	489	764	1,064	

Appendix B.2.—Greens Creek Site 54 BMI data summary, 2001–2025.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Total BMI Taxa	28	30	26	32	25	13	15	22	23	21	34	30	19	26	28	30	31	29	29	31	24	22	31	24	24	
Mean BMI Taxa / Sample	15	14	16	19	15	9	8	14	13	13	18	14	9	11	14	15	14	14	15	15	12	11	14.13	14	13.25	
Total Ephemeroptera Taxa	7	6	7	6	8	5	6	8	7	6	8	7	5	7	7	8	8	8	9	8	7	7	8	8	8	
Total Plecoptera Taxa	7	7	7	10	7	3	4	4	7	5	7	10	6	7	6	6	8	7	7	9	4	6	8	6	5	
Total Trichoptera Taxa	2	2	1	3	3	2	0	2	2	2	5	4	1	3	2	3	4	3	3	2	1	2	2	1	2	
Total Counts																										
Ephemeroptera	1,627	1,352	2,011	1,601	1,265	477	286	1,105	895	1,247	1,536	591	308	1,277	941	2,072	917	2,249	2,328	1,959	568	839	3,603	2,013	1,804	
Plecoptera	80	54	82	117	37	30	22	65	43	53	96	49	54	109	99	204	72	105	129	91	39	56	177	223	214	
Trichoptera	7	6	12	19	31	4	0	9	4	8	32	9	3	15	24	18	22	11	17	29	4	5	8	6	4	
Aquatic Diptera	53	39	173	184	65	13	10	85	32	61	203	81	52	177	182	201	111	134	282	399	98	65	330	196	158	
Other	15	15	57	46	4	1	1	13	5	8	46	24	19	24	52	22	14	10	18	22	26	17	80	16	65	
% Ephemeroptera	91%	92%	86%	81%	90%	91%	90%	87%	91%	91%	80%	78%	71%	80%	72%	82%	81%	90%	84%	78%	77%	85%	86%	82%	80%	
% Plecoptera	4%	4%	4%	6%	3%	6%	7%	5%	4%	4%	5%	6%	12%	7%	8%	8%	6%	4%	5%	4%	5%	6%	4%	9%	10%	
% Trichoptera	0%	0%	1%	1%	2%	1%	0%	1%	0%	1%	2%	1%	1%	1%	2%	1%	2%	0%	1%	1%	1%	1%	0%	0%	0%	
% Aquatic Diptera	3%	3%	7%	9%	5%	2%	3%	7%	3%	4%	11%	11%	12%	11%	14%	8%	10%	5%	10%	16%	13%	7%	8%	8%	7%	
% Other	1%	1%	2%	2%	0%	0%	0%	1%	1%	1%	2%	4%	4%	1%	4%	1%	1%	0%	1%	1%	4%	2%	2%	1%	3%	
% EPT	96%	96%	90%	88%	95%	97%	97%	92%	96%	95%	87%	86%	84%	87%	82%	91%	89%	94%	89%	83%	83%	92%	90%	91%	90%	
% Chironomidae	2%	2%	6%	8%	4%	2%	2%	5%	2%	3%	9%	9%	10%	10%	11%	6%	8%	5%	9%	15%	4%	4%	7%	8%	7%	
% Dominant Taxon	52%	43%	40%	38%	40%	31%	34%	53%	40%	35%	43%	30%	30%	35%	32%	25%	23%	37%	43%	39%	45%	53%	33%	29%	31%	
Total BMI	1,782	1,466	2,335	1,967	1,402	525	319	1,277	979	1,377	1,913	754	436	1,607	1,298	2,517	1,136	2,509	2,774	2,500	735	982	4,198	2,454	2,247	
Total Terrestrial Invertebrates	0	4	7	1	3	1	6	1	8	9	14	5	8	12	6	3	24	4	1	3	0	2	10	1	2	
Total Invertebrates	1,782	1,470	2,342	1,968	1,405	526	325	1,278	987	1,386	1,927	759	444	1,619	1,304	2,520	1,160	2,513	2,775	2,503	735	984	4,208	2,455	2,249	
% Sample BMI	100%	99%	99%	99%	99%	99%	98%	100%	99%	99%	99%	99%	98%	99%	99%	99%	98%	100%	100%	100%	100%	100%	100%	100%	100%	
% Sample Terrestrial	0%	1%	1%	1%	1%	1%	2%	0%	1%	1%	1%	1%	2%	1%	1%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	
Total Sample Area (m ²)	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.688	0.688	0.688	
Total Invertebrates / m ²	4,144	3,419	5,447	4,577	3,267	1,223	756	2,972	2,295	3,223	4,481	1,765	1,033	3,765	1,895	3,663	1,686	3,653	4,033	3,638	1,068	1,430	6,116	3,568	3,269	
Total BMI / m ²	4,144	3,409	5,430	4,575	3,260	1,221	742	2,970	2,277	3,202	4,449	1,753	1,014	3,737	1,887	3,658	1,651	3,647	4,032	3,634	1,068	1,427	6,102	3,567	3,266	
± 1 SD	1,464	1,148	1,422	1,540	1,016	345	293	1,855	297	772	2,668	738	642	1,253	1,065	1,139	809	973	978	2,454	553	1,029	2,947	1,031	1,601	

Appendix B.3.—Tributary Creek Site 9 BMI data summary, 2001–2025.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Total BMI Taxa	21	24	36	26	30	23	21	20	26	22	26	27	20	22	23	29	29	25	28	32	28	26	33	30	33	
Mean BMI Taxa / Sample	14	15	21	14	14	11	10	14	13	10	12	15	11	12	11	18	16	14	15	14	15	16	19	18	13	
Total Ephemeroptera Taxa	6	7	8	5	9	7	5	7	8	7	6	5	7	6	6	7	7	8	7	8	7	6	8	8	8	
Total Plecoptera Taxa	5	5	5	6	5	2	3	4	5	5	6	6	4	3	6	4	5	3	4	3	3	4	4	5	4	
Total Trichoptera Taxa	0	2	3	3	4	1	2	1	0	0	2	3	1	3	0	5	3	2	3	4	4	4	5	3	5	
Total Counts																										
Ephemeroptera	205	436	981	562	334	444	104	441	203	89	277	245	726	565	137	1,128	452	143	311	279	283	494	1,150	757	842	
Plecoptera	68	69	593	166	95	35	37	50	97	17	138	69	130	166	160	359	365	128	119	261	342	252	1,033	261	104	
Trichoptera	0	2	7	5	4	2	4	1	0	0	13	10	2	8	0	22	7	4	22	6	7	16	54	14	10	
Aquatic Diptera	86	66	256	66	60	42	21	206	141	52	196	179	135	181	73	1,449	727	427	314	683	634	716	1,422	539	176	
Other	150	175	679	233	35	102	52	55	38	40	232	106	36	146	145	896	255	153	140	313	319	125	209	85	97	
% Ephemeroptera	40%	58%	39%	54%	63%	71%	48%	59%	42%	45%	32%	40%	71%	53%	27%	29%	25%	17%	34%	18%	18%	31%	30%	46%	69%	
% Plecoptera	13%	9%	24%	16%	18%	6%	17%	7%	20%	9%	16%	11%	13%	16%	31%	9%	20%	15%	13%	17%	22%	16%	27%	16%	8%	
% Trichoptera	0%	0%	0%	0%	1%	0%	2%	0%	0%	0%	2%	2%	0%	1%	0%	1%	0%	0%	2%	0%	0%	1%	1%	1%	1%	
% Aquatic Diptera	17%	9%	10%	6%	11%	7%	10%	27%	29%	26%	23%	29%	13%	17%	14%	38%	40%	50%	35%	44%	40%	45%	37%	33%	14%	
% Other	30%	23%	27%	23%	7%	16%	24%	7%	8%	20%	27%	17%	3%	14%	28%	23%	14%	18%	15%	20%	20%	8%	5%	5%	8%	
% EPT	54%	68%	63%	71%	82%	77%	67%	65%	63%	54%	50%	53%	83%	69%	58%	39%	46%	32%	50%	35%	40%	48%	58%	62%	78%	
% Chironomidae	7%	5%	5%	5%	8%	4%	1%	1%	22%	23%	21%	26%	11%	14%	11%	29%	24%	35%	15%	40%	36%	16%	15%	9%	12%	
% Dominant Taxon	26%	29%	26%	44%	37%	40%	26%	33%	32%	32%	24%	30%	38%	30%	28%	29%	24%	45%	31%	43%	37%	35%	28%	25%	52%	
Total BMI	509	748	2,516	1,032	528	625	218	753	479	198	856	609	1,029	1,066	515	3,854	1,806	855	906	1,542	1,585	1,603	3,868	1,656	1,230	
Total Terrestrial Invertebrates	0	5	15	3	12	33	1	5	50	22	2	9	13	13	6	18	3	8	2	4	2	0	15	7	11	
Total Invertebrates	509	753	2,531	1,035	540	658	219	758	529	220	858	618	1,042	1,079	521	3,872	1,809	863	908	1,546	1,587	1,603	3,883	1,663	1,241	
% Sample BMI	100%	99%	99%	99%	98%	95%	99%	99%	91%	90%	99%	99%	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	100%	100%	99%	
% Sample Terrestrial	0%	1%	1%	1%	2%	5%	1%	1%	10%	11%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	
Total Sample Area (m ²)	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
Total Invertebrates / m ²	1,184	1,751	5,886	2,407	1,256	1,530	509	1,763	1,230	512	1,995	1,437	2,423	2,509	757	5,628	2,629	1,254	1,320	2,247	2,307	2,330	5,644	2,417	1,804	
Total BMI / m ²	1,184	1,740	5,851	2,400	1,228	1,453	507	1,751	1,114	460	1,991	1,416	2,393	2,479	749	5,602	2,625	1,243	1,317	2,241	2,304	2,330	5,622	2,407	1,788	
± 1 SD	1,148	620	1,579	851	357	878	268	631	636	463	447	615	1,897	727	348	3,133	1,059	464	855	1,409	879	1,296	2,584	1,126	1,327	

Appendix B.4.–Tributary Creek Site 1847 BMI data summary, 2018–2025.

	2018	2019	2020	2021	2022	2023	2024	2025
Total BMI Taxa	29	28	29	25	26	31	27	33
Mean BMI Taxa / Sample	18	18	16	15	17	16	18	16
Total Ephemeroptera Taxa	7	7	8	5	8	8	8	8
Total Plecoptera Taxa	4	3	4	3	4	6	4	4
Total Trichoptera Taxa	4	3	3	5	3	4	4	5
Total Counts								
Ephemeroptera	631	1,382	492	985	1,406	1,084	1,365	684
Plecoptera	134	291	210	294	217	368	164	109
Trichoptera	34	12	30	50	26	23	14	34
Aquatic Diptera	512	493	496	372	740	875	477	115
Other	197	268	504	267	124	376	103	145
% Ephemeroptera	42%	57%	28%	50%	56%	40%	64%	63%
% Plecoptera	9%	12%	12%	15%	9%	13%	8%	10%
% Trichoptera	2%	0%	2%	3%	1%	1%	1%	3%
% Aquatic Diptera	34%	20%	29%	19%	29%	32%	22%	11%
% Other	13%	11%	29%	14%	5%	14%	5%	13%
% EPT	53%	69%	42%	68%	66%	54%	73%	76%
% Chironomidae	29%	14%	25%	16%	23%	29%	0%	7%
% Dominant Taxon	38%	35%	36%	37%	34%	36%	54%	53%
Total BMI	1,508	2,446	1,732	1,968	2,513	2,726	2,123	1,087
Total Terrestrial Invertebrates	5	1	2	5	3	2	1	6
Total Invertebrates	1,513	2,447	1,734	1,973	2,516	2,728	2,124	1,093
% Sample BMI	100%	100%	100%	100%	100%	100%	100%	99%
% Sample Terrestrial	0%	0%	0%	0%	0%	0%	0%	1%
Total Sample Area (m ²)	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Total Invertebrates / m ²	2,199	3,557	2,520	2,868	3,657	3,965	3,087	1,589
Total BMI / m ²	2,192	3,555	2,517	2,860	3,653	3,962	3,086	1,580
± 1 SD	1,248	2,417	762	1,209	1,581	1,703	1,223	932

Appendix B.5.–Zinc Creek Site 10 BMI data summary, 2024–2025.

	2024	2025
Total BMI Taxa	24	24
Mean BMI Taxa / Sample	16	10
Total Ephemeroptera Taxa	8	9
Total Plecoptera Taxa	4	3
Total Trichoptera Taxa	2	2
Total Counts		
Ephemeroptera	1,369	183
Plecoptera	261	66
Trichoptera	3	15
Aquatic Diptera	107	34
Other	74	106
% Ephemeroptera	75%	45%
% Plecoptera	14%	16%
% Trichoptera	0%	4%
% Aquatic Diptera	6%	8%
% Other	4%	26%
% EPT	90%	65%
% Chironomidae	4%	5%
% Dominant Taxon	44%	48%
Total BMI	1,814	404
Total Terrestrial Invertebrates	5	6
Total Invertebrates	1,819	410
% Sample BMI	100%	99%
% Sample Terrestrial	0%	1%
Total Sample Area (m ²)	0.69	0.69
Total Invertebrates / m ²	2,644	596
Total BMI / m ²	2,637	587
± 1 SD	989	350

Appendix B.6.—Zinc Creek Site 371 BMI data summary, 2024–2025.

	2024	2025
Total BMI Taxa	23	24
Mean BMI Taxa / Sample	16	13
Total Ephemeroptera Taxa	8	9
Total Plecoptera Taxa	5	5
Total Trichoptera Taxa	2	1
Total Counts		
Ephemeroptera	840	395
Plecoptera	143	31
Trichoptera	2	4
Aquatic Diptera	97	115
Other	36	82
% Ephemeroptera	75%	63%
% Plecoptera	13%	5%
% Trichoptera	0%	1%
% Aquatic Diptera	9%	18%
% Other	3%	13%
% EPT	88%	69%
% Chironomidae	6%	16%
% Dominant Taxon	31%	29%
Total BMI	1,118	627
Total Terrestrial Invertebrates	2	4
Total Invertebrates	1,120	631
% Sample BMI	100%	99%
% Sample Terrestrial	0%	1%
Total Sample Area (m ²)	0.69	0.69
Total Invertebrates / m ²	1,628	917
Total BMI / m ²	1,625	911
± 1 SD	766	351

APPENDIX C: JUVENILE FISH DATA

Appendix C.1.–Greens Creek Site 48 (2001-2017) and 63 (2018-2025) Dolly Varden capture data, 2001–2017.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2001	DV	48–139	30	ND
2002	DV	45–160	74	ND
2003	DV	54–153	155	ND
2004	DV	58–156	168	ND
2005	DV	53–149	118	ND
2006	DV	49–150	138	ND
2007	DV	60–154	50	ND
2008	DV	80–137	54	ND
2009	DV	54–142	67	ND
2010	DV	62–163	97	ND
2011	DV	57–155	56	ND
2012	DV	68–156	85	1.0
2013	DV	38–149	167	1.0
2014	DV	52–146	59	1.1
2015	DV	58–146	48	1.0
2016	DV	50–148	119	1.2
2017	DV	52–156	84	1.1
2018	DV	59–144	69	1.0
2019	DV	63–176	150	1.0
2020	DV	59–149	88	0.9
2021	DV	70–136	36	1.0
2022	DV	52–124	20	1.1
2023	DV	49–144	106	1.0
2024	DV	52–142	133	1.0
2025	DV	50–128	106	1.0

Appendix C.2.– Greens Creek Site 48 (2001-2017) and 63 (2018-2025) coho salmon capture data, 2001–2017.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2001	CO	ND	0	ND
2002	CO	ND	0	ND
2003	CO	ND	0	ND
2004	CO	ND	0	ND
2005	CO	ND	0	ND
2006	CO	ND	0	ND
2007	CO	ND	0	ND
2008	CO	ND	0	ND
2009	CO	ND	0	ND
2010	CO	ND	0	ND
2011	CO	ND	0	ND
2012	CO	ND	0	ND
2013	CO	ND	0	ND
2014	CO	ND	0	ND
2015	CO	ND	0	ND
2016	CO	ND	0	ND
2017	CO	ND	0	ND
2018	CO	ND	0	ND
2019	CO	ND	0	ND
2020	CO	ND	0	ND
2021	CO	ND	0	ND
2022	CO	ND	0	ND
2023	CO	76–81	4	1.2
2024	CO	60–79	8	1.2
2025	CO	83–85	2	1.0

Appendix C.3.– Greens Creek Site 54 resident fish capture data, 2001–2025.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2001	DV	27–138	70	ND
2002	DV	43–160	168	ND
2003	DV	54–184	89	ND
2004	DV	55–161	118	ND
2005	DV	56–134	111	ND
2006	DV	50–138	116	ND
2007	DV	58–125	64	ND
	CT	102–104	2	ND
2008	DV	45–131	50	ND
	CT	101–106	2	ND
2009	DV	48–141	42	ND
2010	DV	60–151	46	ND
2011	DV	57–150	73	ND
2012	DV	53–143	92	1.0
2013	DV	50–150	188	1.1
2014	DV	58–158	121	1.0
2015	DV	54–150	64	1.0
2016	DV	59–140	31	1.1
2017	DV	48–150	169	1.1
2018	DV	52–133	162	1.0
2019	DV	61–154	183	1.0
2020	DV	63–158	73	1.0
	RT	135	1	1.0
2021	DV	47–169	74	1.0
2022	DV	58–150	47	1.0
2023	DV	48–143	205	1.0
2024	DV	54–146	174	1.1
2025	DV	52–139	118	1.1

Appendix C.4.– Greens Creek Site 54 coho salmon capture data, 2001–2025.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2001	CO	44–95	2	ND
2002	CO	59–85	14	ND
2003	CO	44–51	5	ND
2004	CO	74–95	9	ND
2005	CO	68–91	33	ND
2006	CO	66–88	6	ND
2007	CO	ND	0	ND
2008	CO	53–69	4	ND
2009	CO	67–71	2	ND
2010	CO	77	1	ND
2011	CO	ND	0	ND
2012	CO	ND	0	ND
2013	CO	ND	0	ND
2014	CO	70–85	10	1.2
2015	CO	45–100	15	1.1
2016	CO	69–88	14	1.2
2017	CO	ND	0	ND
2018	CO	38–90	17	1.2
2019	CO	44–95	54	1.2
2020	CO	64–94	18	1.1
2021	CO	63	1	1.5
2022	CO	61–86	12	1.2
2023	CO	46–90	11	1.1
2024	CO	61–83	23	1.2
2025	CO	75	1	1.2

Appendix C.5.–Tributary Creek Site 9 resident fish capture data, 2001–2025.

Year	Species	FL (mm)	Fish Captured (n)	Condition Factor
2001	DV	61–110	70	ND
	CT	124	1	ND
2002	DV	70–147	29	ND
2003	DV	68–114	13	ND
	CT	122	1	ND
2004	DV	68–109	21	ND
	CT	122	1	ND
	RT	86–106	3	ND
2005	DV	59–131	21	ND
	CT	103	1	ND
2006	DV	85–117	7	ND
2007	DV	81–158	7	ND
2008	DV	60–92	15	ND
	CT	109	1	ND
2009	DV	48–91	24	ND
	CT	97	1	ND
2010	DV	58–108	21	ND
	CT	64–89	4	ND
2011	DV	50–115	15	ND
	CT	115	1	ND
2012	DV	74–122	17	1.0
	CT	63–93	4	1.0
2013	DV	52–92	9	1.2
2014	DV	105	1	1.1
	RT	110	1	0.4
2015	DV	55–80	10	1.2
2016	DV	76–114	15	1.0
2017	DV	55–117	31	1.2
2018	DV	58–106	20	1.0
2019	DV	59–102	8	1.1
2020	DV	87–161	7	1.0
2021	DV	64–77	5	1.1
2022	DV	ND	0	ND
2023	DV	60–95	16	1.1
2024	DV	80–102	13	1.0
2025	DV	71–105	17	1.3

Appendix C.6.–Tributary Creek Site 9 coho salmon capture data, 2001–2025.

Year	Species	FL (mm)	Fish Captured (n)	Condition Factor
2001	CO	40–101	89	ND
2002	CO	34–85	29	ND
2003	CO	46–88	37	ND
2004	CO	42–94	23	ND
2005	CO	39–98	82	ND
2006	CO	82–92	5	ND
2007	CO	39–107	50	ND
2008	CO	48–100	72	ND
2009	CO	38–116	42	ND
2010	CO	41–85	77	ND
2011	CO	42–95	18	ND
2012	CO	46–105	39	1.1
2013	CO	50–90	9	1.4
2014	CO	39–91	86	1.2
2015	CO	38–90	36	1.3
2016	CO	45–95	75	1.3
2017	CO	35–94	67	1.3
2018	CO	39–92	32	1.1
2019	CO	45–85	46	1.2
2020	CO	51–83	7	1.3
2021	CO	40–94	70	1.2
2022	CO	41–95	26	1.2
2023	CO	31–93	69	1.2
2024	CO	45–91	38	1.0
2025	CO	37–95	49	1.3

Appendix C.7.–Zinc Creek Site 371 resident fish capture data, 2024–2025.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2024	DV	60–123	39	1.0
2025	DV	57–142	89	1.1

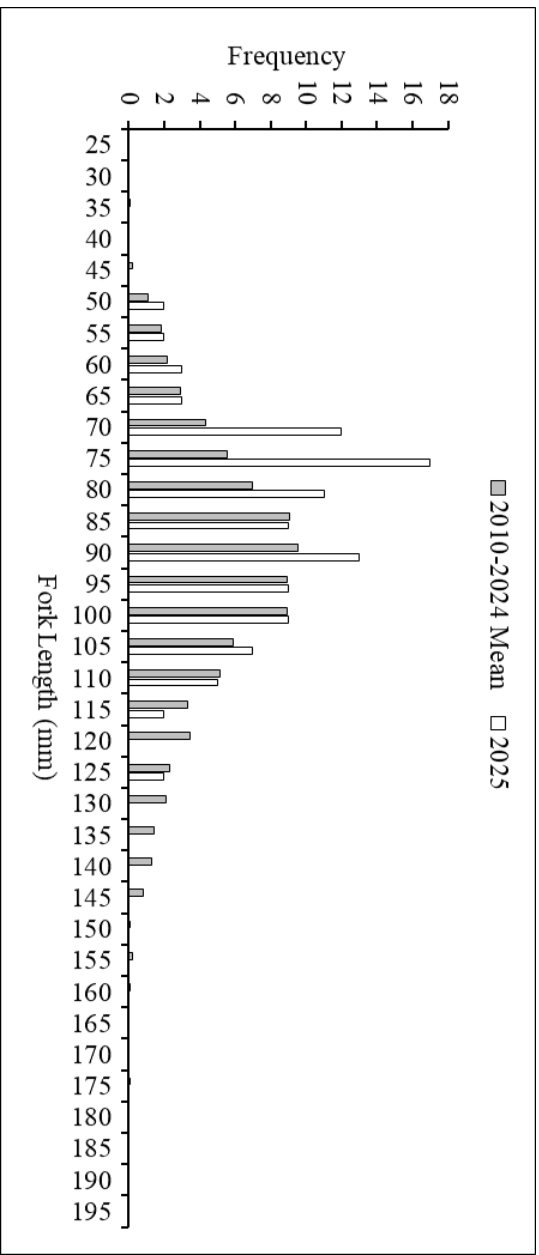
Appendix C.8.–Zinc Creek Site 10 resident fish capture data, 2024–2025.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2024	DV	67–111	43	1.0
2025	DV	71–119	22	1.2

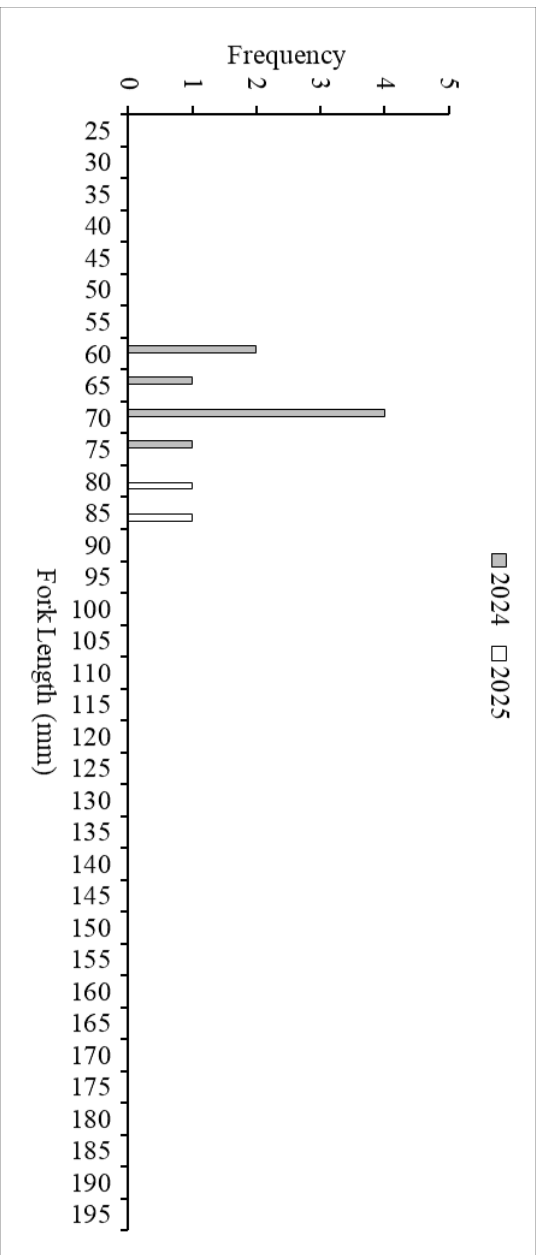
Appendix C.9.–Zinc Creek Site 10 coho salmon capture data, 2024–2025.

Year	Species	Fish Captured		Condition Factor
		FL (mm)	(n)	
2024	CO	39–92	54	1.5
2025	CO	38–114	92	1.3

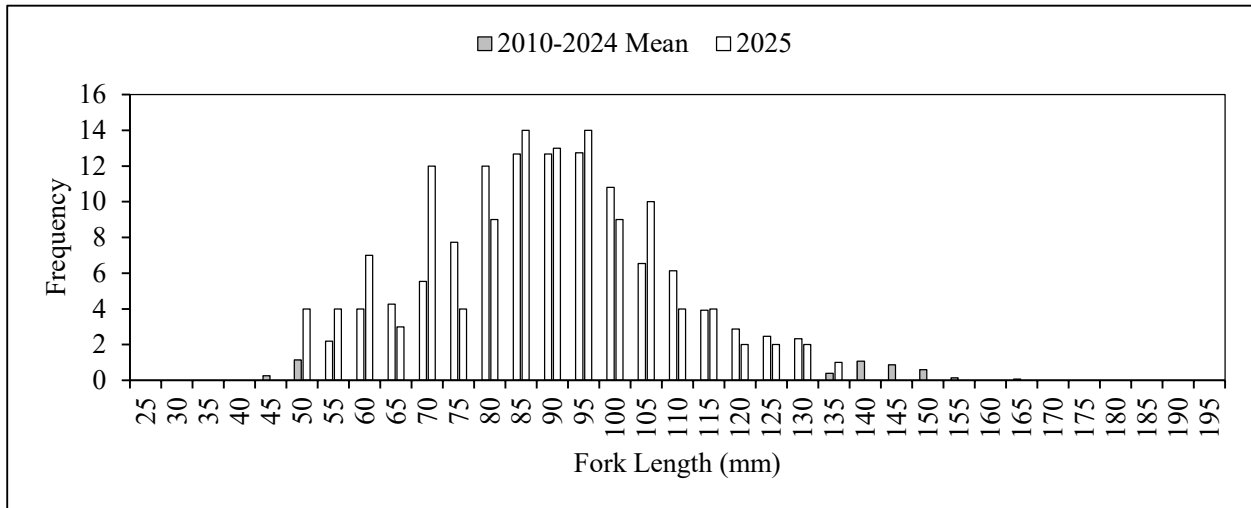
Appendix C.10.—Greens Creek Site 48 and Site 63 Dolly Varden length frequency distributions, 2010–2024 and 2025.



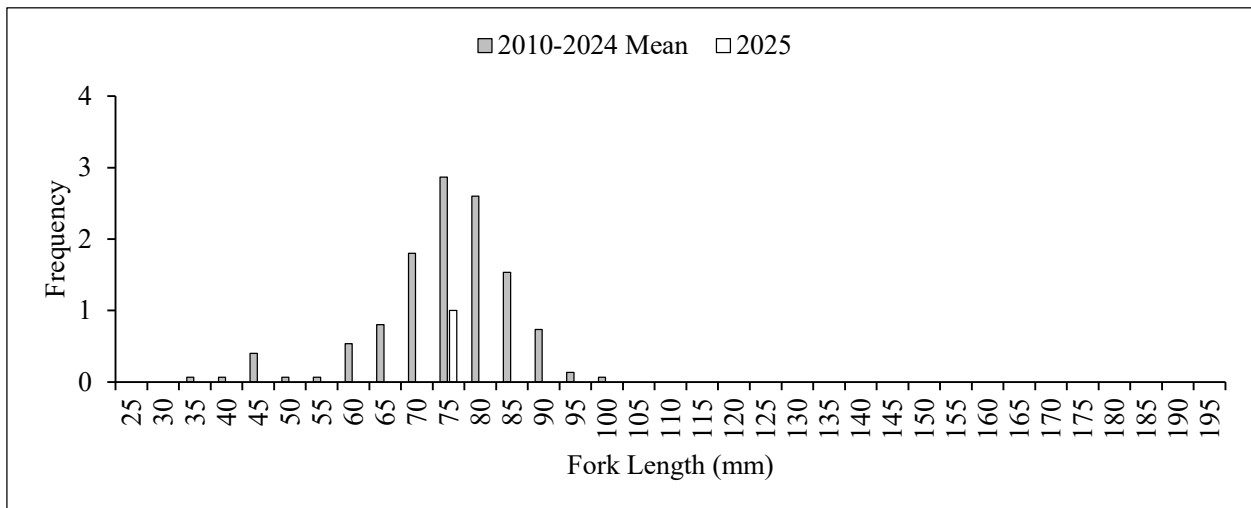
Appendix C.11.—Greens Creek Site 48 and Site 63 coho salmon length frequency distributions, 2010–2024 and 2025.



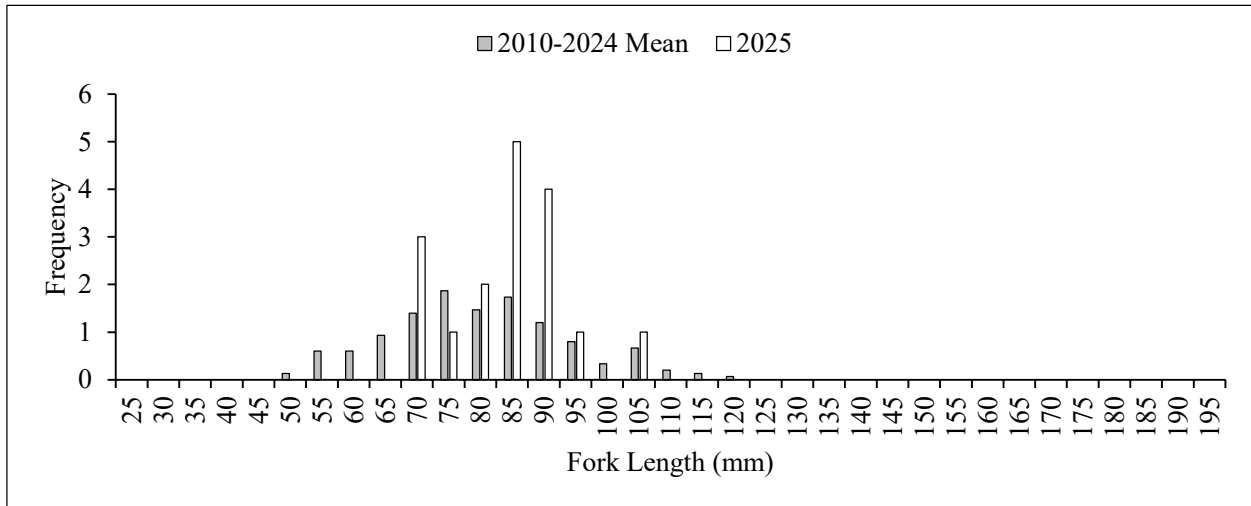
Appendix C.12.—Greens Creek Site 54 Dolly Varden length frequency distributions, 2010–2024 and 2025.



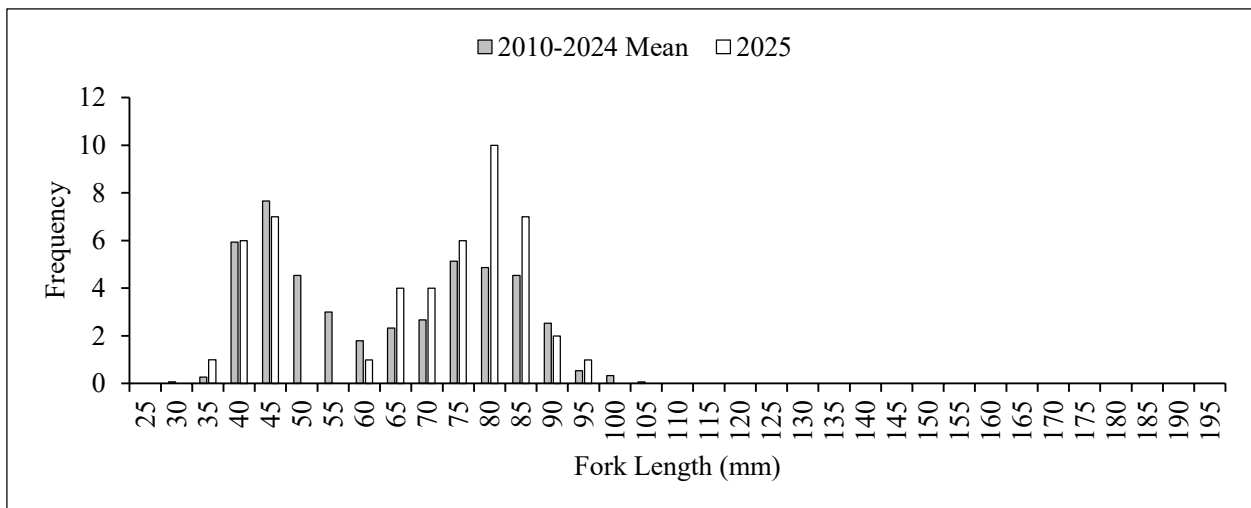
Appendix C.13.—Greens Creek Site 54 coho salmon length frequency distributions, 2010–2024 and 2025.



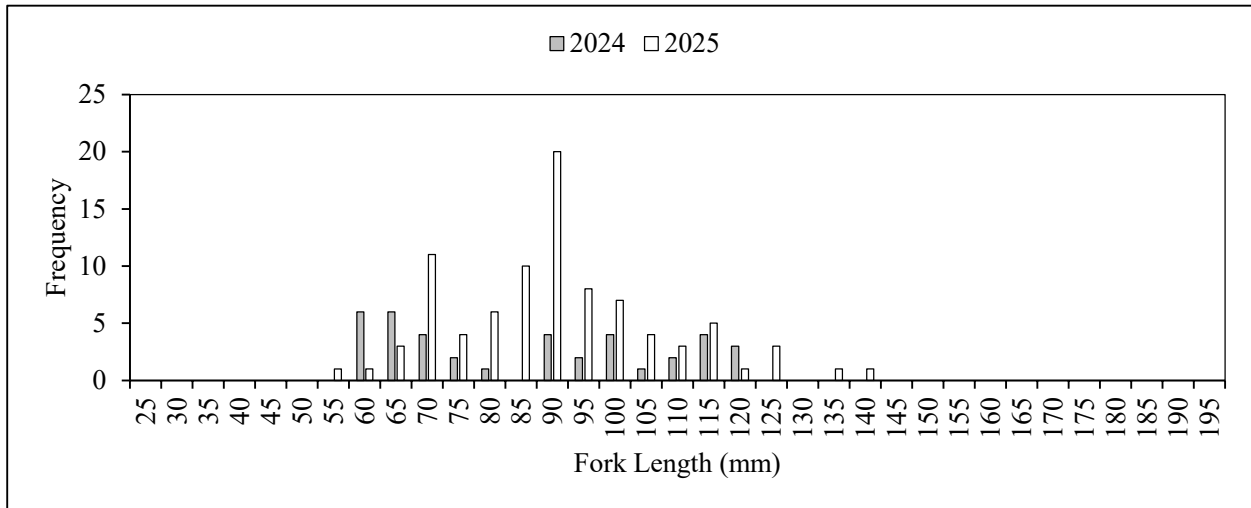
Appendix C.14.–Tributary Creek Site 9 Dolly Varden length frequency distributions, 2010–2024 and 2025.



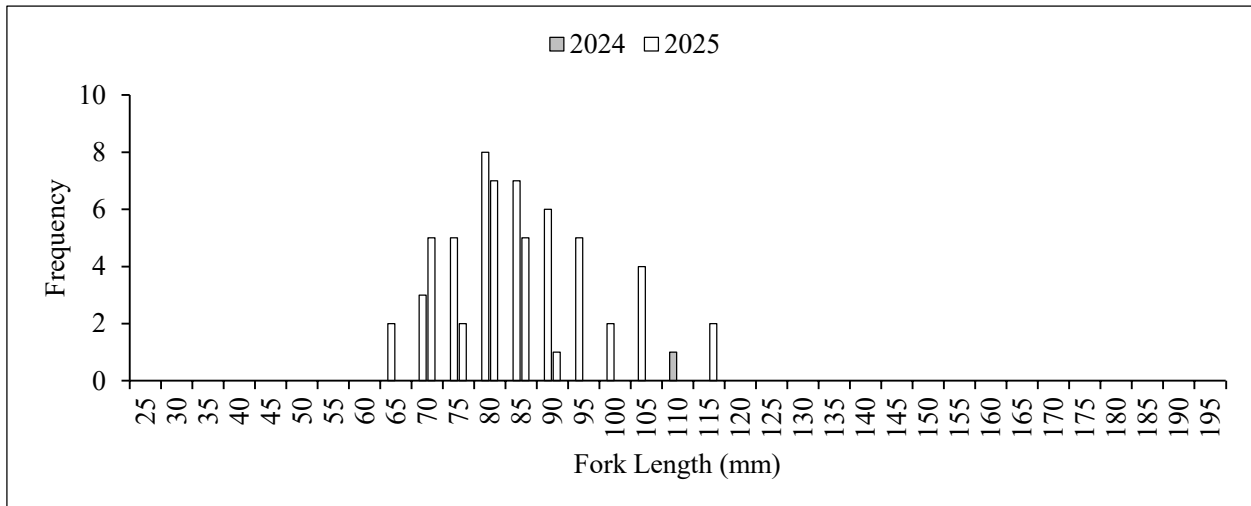
Appendix C.15.–Tributary Creek Site 9 coho salmon length frequency distributions, 2010–2024 and 2025.



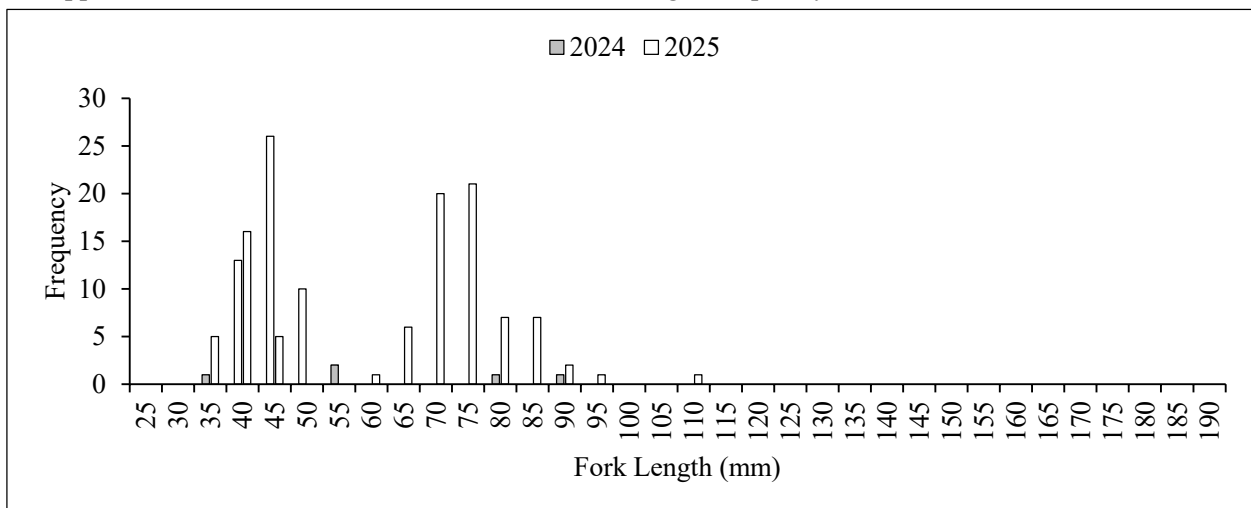
Appendix C.16.–Zinc Creek Site 371 Dolly Varden length frequency distributions, 2010–2024 and 2025.



Appendix C.17.–Zinc Creek Site 10 Dolly Varden length frequency distributions, 2010–2024 and 2025.



Appendix C.18.–Zinc Creek Site 10 coho salmon length frequency distributions, 2010–2024 and 2025.



**APPENDIX D: JUVENILE FISH ELEMENT
CONCENTRATIONS DATA AND LAB REPORT**

Appendix D.1.–Greens Creek Site 48 (2001-2017) and Site 63 (2018-2025) Dolly Varden element concentrations.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/23/2001	131	26	0.020	1.76	8.30	ND	0.200	6.10	180
	137	28.8	0.030	0.89	7.20	ND	0.170	4.60	146
	119	18.8	0.020	2.27	5.70	ND	0.200	6.20	189
	121	21.1	0.020	1.56	6.90	ND	0.170	5.20	182
	111	13.7	0.030	0.89	4.70	ND	0.230	5.40	138
	121	21.1	<0.020	1.26	7.40	ND	0.100	5.60	157
7/24/2002	133	23.2	0.030	1.64	6.80	ND	0.720	4.80	239
	120	15	0.070	0.85	7.00	ND	0.280	4.10	210
	122	17.5	0.030	0.74	4.30	ND	0.170	4.90	162
	127	20.8	0.040	1.40	6.10	ND	0.160	4.70	185
	134	24.8	0.050	1.30	7.90	ND	0.460	4.30	208
	128	21.7	0.040	1.56	6.80	ND	0.220	5.70	343
7/22/2003	90	8.9	<0.020	0.65	4.20	ND	0.140	5.60	191
	98	9.9	<0.020	0.90	5.10	ND	0.220	5.50	180
	103	12.1	<0.020	0.82	5.60	ND	0.160	5.40	241
	112	12.5	<0.020	0.78	6.10	ND	0.110	6.10	192
	108	11.9	<0.020	0.63	3.90	ND	0.140	5.20	174
	100	10.5	<0.020	0.58	3.70	ND	0.080	5.50	218
7/22/2004	96	8.6	<0.020	0.63	4.70	ND	0.150	4.30	206
	88	6.8	<0.020	0.83	5.60	ND	0.260	4.00	175
	101	11.5	<0.020	1.54	4.60	ND	0.210	4.10	183
	98	9.3	<0.020	0.80	5.20	ND	0.280	3.70	168
	93	7.6	<0.020	1.25	4.40	ND	0.140	6.40	220
	91	7.5	0.030	1.01	4.50	ND	0.290	5.60	323
7/22/2005	103	19.7	0.020	0.66	4.40	ND	0.440	4.20	183
	96	13.1	<0.020	0.84	14.50	ND	0.980	4.80	220
	119	15.6	0.020	0.89	4.40	ND	0.660	4.80	226
	114	17.1	0.020	0.59	6.00	ND	0.320	4.80	178
	111	15.3	0.030	1.10	18.80	ND	0.790	4.60	217
	125	16.9	0.030	0.47	3.60	ND	0.360	3.80	161
7/20/2006	110	15.8	0.040	0.56	8.50	ND	0.370	5.40	244
	110	15.4	0.050	1.20	8.30	ND	0.310	6.00	217
	113	16.1	0.040	0.65	6.30	ND	0.240	5.40	264
	132	25	0.060	0.63	8.10	ND	0.660	5.20	232
	104	12.8	0.080	0.96	8.50	ND	0.370	5.10	283
	114	16.7	0.030	0.63	5.30	ND	0.200	5.10	270

-continued-

Appendix D.1.–Page 2 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/21/2007	122	17.9	0.030	1.16	5.50	ND	0.170	5.50	221
	95	10.4	0.020	1.42	3.90	ND	0.290	5.80	165
	135	22.8	0.090	1.35	14.10	ND	1.370	5.30	166
	98	9.9	0.030	0.96	5.70	ND	0.270	5.20	269
	105	13.2	0.110	1.79	11.40	ND	1.620	5.40	323
	99	10	0.040	1.43	5.20	ND	0.310	5.70	208
7/22/2008	112	16.4	0.069	1.23	5.20	ND	0.950	5.72	289
	123	21.3	0.039	0.79	3.90	ND	0.570	4.56	194
	105	14	0.079	0.82	4.60	ND	0.520	5.88	199.5
	124	20.6	0.041	0.87	4.90	ND	0.420	6.31	244
	115	16.9	0.030	1.36	5.30	ND	0.510	5.36	254
	122	19.8	0.037	1.07	5.60	ND	0.380	6.11	260
7/21/2009	120	20.1	<0.020	1.05	5.20	ND	0.220	5.90	186
	121	20.7	<0.020	1.40	5.30	ND	0.440	5.70	173
	119	17.9	0.020	1.10	4.50	ND	0.130	5.90	182
	108	13.6	<0.020	1.20	4.10	ND	0.150	5.70	162
	109	14.6	<0.020	1.50	4.90	ND	0.170	5.90	186
	110	15.2	<0.020	0.84	3.80	ND	0.180	6.10	202
7/21/2010	103	11.9	0.020	1.56	4.80	0.090	0.160	5.00	226
	109	16.1	<0.019	0.51	3.00	0.150	0.200	5.60	168
	108	13.9	0.040	0.91	4.20	0.170	0.300	5.00	180
	105	13.8	<0.020	0.98	3.40	0.130	0.090	4.60	163
	98	10.8	0.062	0.90	4.80	0.140	0.460	4.80	213
	93	9.1	<0.020	0.96	3.60	0.100	0.090	4.00	156
7/22/2011	NA	NA	0.030	1.12	5.70	ND	0.280	6.20	221
7/24/2012	109	11.3	0.030	2.26	ND	0.134	0.160	5.50	186
	123	18.3	0.030	1.37	ND	0.122	0.100	5.70	184
	110	9.8	0.030	1.83	ND	0.159	2.590	5.60	275
	103	10.6	0.030	0.99	ND	0.175	0.300	5.10	189
	104	10.7	0.030	2.66	ND	0.122	1.050	6.30	242
	116	15.8	0.040	0.73	ND	0.148	1.030	4.70	190
7/25/2013	145	20.6	<0.020	0.68	3.70	0.214	0.170	5.30	237
	115	17.9	0.070	0.97	6.10	0.238	0.240	5.80	239
	115	14.3	<0.020	0.81	4.00	0.180	0.080	6.70	258
	105	11.4	<0.020	0.68	3.20	0.213	0.140	6.40	213
	109	13	0.040	2.01	6.60	0.113	0.360	6.20	271
	105	12.4	0.040	1.75	5.70	0.274	0.220	6.20	287

-continued-

Appendix D.1.–Page 3 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/25/2014	110	13	0.040	0.55	4.50	0.146	0.110	5.30	234
	100	10.5	<0.020	0.93	4.20	0.148	0.190	6.90	213
	106	10.7	<0.020	1.22	4.80	0.199	0.380	5.70	232
	105	11.3	<0.020	1.45	4.20	0.122	0.440	6.10	193
	100	10.4	<0.020	0.92	4.50	0.134	0.060	4.90	237
	120	14.8	0.040	0.75	5.50	0.260	0.180	5.90	305
7/16/2015	105	12.4	<0.020	0.60	2.50	0.114	0.130	6.20	159
	104	11.7	0.040	1.11	10.70	0.100	1.300	5.80	205
	100	11.7	0.030	1.05	3.80	0.152	0.140	6.10	187
	105	11.3	0.030	1.39	4.20	0.154	0.360	6.10	198
	105	12.7	<0.020	1.06	4.00	0.128	0.120	5.70	169
	100	10.4	0.020	1.49	3.90	0.165	0.370	5.40	191
	104	9.6	<0.020	0.85	3.10	0.091	0.090	5.20	175
	85	8.6	0.030	0.90	3.60	0.139	0.270	5.90	172
	102	10.3	<0.020	1.51	3.70	0.180	0.150	7.20	192
	120	16.3	<0.020	0.86	4.00	0.150	0.140	6.40	223
7/14/2016	84	7.3	<0.020	1.28	4.72	0.180	0.157	7.63	252
	82	6.1	0.023	0.92	4.82	0.160	0.147	5.83	222
	98	10.1	0.021	1.09	3.99	0.108	0.150	6.30	189
	93	7.9	<0.020	1.44	4.49	0.163	0.205	6.77	197
	88	6.9	0.035	1.50	4.65	0.243	0.493	7.63	185
	84	7.3	0.023	0.68	4.12	0.150	0.088	6.42	200
	94	8.8	0.065	1.21	4.69	0.172	0.143	7.19	194
	86	7.6	0.022	1.89	4.96	0.210	0.295	7.27	251
	93	9.4	<0.020	1.23	4.85	0.127	0.193	5.80	205
	101	9.8	<0.020	1.32	4.72	0.114	0.134	6.28	178
7/13/2017	95	8.7	0.054	0.65	3.74	0.115	0.189	5.79	172
	91	8	0.097	1.51	3.86	0.118	0.417	5.98	169
	102	10	0.024	0.75	3.92	0.092	0.089	5.37	168
	105	13.1	0.022	1.00	4.98	0.143	0.237	6.78	194
	94	8.6	<0.020	0.46	2.81	0.106	0.064	4.50	166
	99	9.9	0.023	1.03	3.93	0.111	0.087	5.39	200
	98	10.8	0.022	0.46	2.68	0.101	0.064	4.40	168
	124	18.8	0.034	0.66	3.77	0.123	0.087	5.02	154
	99	10.7	<0.020	0.67	3.48	0.089	0.067	4.69	165
	95	9.8	0.044	0.30	3.18	0.112	0.126	4.73	159

-continued-

Appendix D.1.–Page 4 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/13/2018	92	7	0.038	1.55	6.52	0.175	0.635	7.50	283
	95	8	0.056	1.13	5.15	0.169	0.906	6.56	236
	105	11.5	0.045	1.63	7.10	0.181	1.290	7.50	250
	87	6.5	0.021	1.65	4.65	0.127	0.263	7.40	244
	97	8.2	0.044	1.44	5.42	0.157	1.540	7.38	244
	90	6.8	0.026	1.18	4.60	0.149	0.324	7.00	195
	105	10.6	0.025	1.10	5.33	0.178	0.172	6.20	247
	95	8.1	<0.020	1.43	4.89	0.134	0.187	8.00	189
	110	13	0.037	0.96	9.61	0.146	0.340	6.60	190
	104	10.1	0.043	1.21	5.57	0.228	1.300	6.40	250
7/9/2019	105	10.3	<0.019	1.22	5.43	0.132	0.594	6.31	255
	121	16.5	0.029	0.89	4.24	0.192	0.537	5.75	209
	95	8.7	0.020	1.02	3.78	0.138	0.382	5.99	203
	110	16.5	0.031	0.55	3.15	0.163	0.327	6.93	126
	101	10.8	0.022	0.80	3.34	0.134	0.266	6.08	169
	99	12.8	0.037	1.40	5.05	0.135	1.000	6.10	207
	100	12	<0.019	1.40	4.64	0.131	0.218	5.44	201
	120	16.8	0.032	1.32	5.63	0.143	0.329	6.27	182
	95	10.1	0.034	1.34	4.10	0.162	0.514	5.46	229
	107	14.2	0.032	0.71	3.94	0.174	0.570	4.93	180
7/16/2020	125	20.6	0.027	1.31	4.70	0.267	0.590	5.90	271
	125	18.1	0.034	0.91	4.90	0.244	0.210	5.40	224
	100	10.5	0.029	1.18	5.20	0.153	0.210	5.20	219
	124	17.4	0.058	1.15	12.40	0.174	1.810	4.70	204
	129	18.8	0.039	1.04	4.90	0.190	0.610	5.20	204
	109	11.4	0.053	1.33	4.70	0.195	1.280	6.30	290
	119	14.3	0.040	1.09	6.40	0.240	0.770	5.80	269
	95	7.8	0.023	1.03	4.60	0.203	0.500	7.20	190
	97	7.5	0.027	1.57	6.00	0.176	0.620	5.30	357
	105	12.7	0.021	1.35	5.80	0.202	0.330	6.20	311
7/12/2021	119	12.6	0.027	0.78	4.41	0.163	0.291	6.30	212
	94	7.5	0.048	1.45	6.35	0.116	0.264	5.20	188
	93	7.6	0.025	1.44	5.07	0.163	0.207	6.04	228
	114	12.7	0.034	0.83	4.12	0.193	0.341	5.79	215
	113	9.9	0.022	0.85	3.91	0.114	0.093	5.05	148
	95	7.3	0.038	1.14	4.10	0.192	0.150	6.16	222
	105	12.1	0.040	0.76	6.99	0.109	0.376	5.28	180
	102	8.2	0.030	1.85	4.86	0.220	0.226	5.47	278
	113	13.8	0.035	0.81	4.04	0.179	0.210	5.97	194
	92	6.5	0.025	1.79	4.28	0.146	0.229	5.62	228

-continued-

Appendix D.1.–Page 5 of 5.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
07/12/22	94	13	0.035	0.78	4.37	0.115	1.330	5.35	209
	94	9	0.034	1.72	4.41	0.117	1.060	5.44	223
	93	9.3	0.028	1.13	4.35	0.144	1.030	5.57	193
	117	15.9	0.036	1.65	6.03	0.150	0.736	5.61	240
	97	9.7	0.020	1.44	4.95	0.099	1.140	5.44	199
	98	10	0.020	0.92	3.57	0.089	0.868	5.89	162
	99	10	0.054	1.76	5.13	0.143	2.740	5.43	235
	98	8.4	0.025	0.76	4.21	0.121	0.682	5.30	163
	95	8.9	0.024	0.72	3.93	0.094	0.781	5.51	168
	124	22.1	0.025	2.01	4.01	0.118	0.882	5.53	180
07/11/23	115	16.3	0.02	1.27	4.32	0.14	0.44	5.55	206
	112	10.1	0.02	1.29	5.12	0.17	0.47	5.98	231
	123	16.3	0.05	1.57	5.98	0.12	0.64	6.08	212
	105	11	0.03	0.89	4.3	0.1	0.29	5.1	160
	110	13.3	0.0	0.96	5.57	0.2	0.3	5.90	218
	98	9.3	0.0	1.68	5.89	0.1	0.4	6.95	179
	114	14.8	0.0	0.91	4.57	0.1	0.2	6.07	175
	100	9.1	0.0	0.99	5.18	0.1	0.5	6.24	180
	95	9.6	0.0	0.85	4.36	0.1	0.3	6.54	168
	93	8.7	0.0	0.77	4.34	0.1	0.3	6.60	193
07/09/24	115	16.7	0.035	1.71	7.57	0.163	1.29	5.55	260
	94	8.5	0.021	1.51	5.05	0.0995	0.193	5.47	194
	90	8.1	0.027	0.78	4.07	0.121	0.163	5.16	209
	97	8.2	0.034	1.23	5.09	0.166	0.41	5.41	254
	97	9.1	0.039	2.23	6.38	0.192	0.244	5.73	272
	90	7.8	0.024	1.19	5.41	0.0847	0.16	6.78	182
	92	8.4	0.024	1.09	3.7	0.1	0.108	5.64	177
	106	13	0.043	1.03	5.39	0.148	0.112	6.57	222
	107	12.7	0.02	0.792	3.53	0.117	0.129	5.08	168
	121	18.3	0.026	1.58	6.21	0.166	0.225	5.56	281
07/07/25	95	8.6	0.023	1.64	5.51	0.142	0.148	5.48	267
	99	9.1	0.036	1.51	6.18	0.153	0.167	5.1	247
	94	6.2	0.027	1.41	4.95	0.164	0.158	5.58	308
	88	5.7	0.02	1.84	6.66	0.177	0.137	5.87	270
	94	8.1	0.037	1.64	6.21	0.152	0.324	6.99	225
	115	11.0	0.028	1.31	6.19	0.15	0.148	5.6	240
	112	14.0	0.043	0.786	4.72	0.136	0.309	5.36	189
	108	10.5	0.02	0.959	4.87	0.137	0.245	5.75	216
	89	7.5	0.024	1.12	4.12	0.12	0.203	5.33	199
	105	9.7	0.032	1.98	5.77	0.128	0.152	5.46	248

Appendix D.2.—Greens Creek Site 54 Dolly Varden element concentrations, 2001–2025.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/23/2001	121	21.5	0.030	0.46	4.30	ND	0.330	5.70	126
	119	19.3	0.020	0.21	3.20	ND	0.220	3.60	82
	107	15.7	0.030	0.73	6.30	ND	0.590	4.70	144
	109	13.6	0.020	0.82	5.40	ND	0.860	4.90	172
	105	13.5	<0.020	0.79	6.50	ND	0.450	5.80	203
	138	27.5	<0.020	0.74	5.80	ND	0.400	5.40	171
7/24/2002	118	18	0.030	0.50	4.40	ND	0.940	3.40	363
	128	22.3	0.030	0.52	4.50	ND	0.350	4.70	150
	115	17.7	0.050	0.95	6.00	ND	0.660	4.40	161
	115	18.9	0.030	1.03	5.20	ND	0.660	4.20	216
	124	21.1	0.050	1.32	5.20	ND	0.740	3.90	194
	123	20.9	0.020	0.70	3.90	ND	0.780	4.40	195
7/22/2003	123	21.1	0.030	0.85	6.40	ND	1.400	6.10	188
	101	10.6	<0.020	0.67	4.20	ND	0.320	6.40	174
	88	9.2	<0.020	0.75	4.30	ND	0.350	6.50	186
	109	14.8	<0.020	1.11	5.80	ND	0.380	5.70	188
	95	10.6	<0.020	0.59	3.50	ND	0.290	5.70	174
	92	9.7	<0.020	0.91	4.10	ND	0.430	6.50	263
7/21/2004	103	9.9	0.020	0.79	11.00	ND	0.570	4.60	232
	104	10	<0.020	0.88	5.50	ND	0.540	5.00	206
	86	6.6	<0.020	1.26	5.10	ND	0.360	5.30	164
	96	9.3	0.030	0.79	5.90	ND	0.280	5.40	191
	93	9.9	<0.020	0.83	5.00	ND	0.480	3.90	202
	104	12.9	0.080	1.12	7.00	ND	0.930	4.90	217
7/22/2005	120	12.3	0.030	0.72	5.00	ND	0.270	4.00	160
	106	12.1	0.020	0.63	4.50	ND	0.130	3.90	200
	113	20.8	<0.020	0.73	8.80	ND	0.170	4.70	223
	114	17.9	<0.020	0.82	9.70	ND	0.170	3.90	222
	112	16.1	0.030	1.06	8.80	ND	0.220	4.40	209
	118	22.3	0.020	0.55	5.50	ND	0.390	3.90	185
7/20/2006	137	27.3	0.060	0.42	4.80	ND	0.510	5.70	208
	112	14.9	0.040	0.75	16.00	ND	0.950	7.20	223
	102	12	0.020	0.93	22.20	ND	0.520	6.30	239
	114	19.6	0.040	1.03	7.60	ND	0.850	5.30	252
	98	12.3	0.080	0.54	10.90	ND	0.480	5.40	223
	115	16.9	0.040	0.78	8.60	ND	0.680	5.60	257

-continued-

Appendix D.2.—Page 2 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/20/2007	102	11.8	0.040	0.88	5.30	ND	0.540	5.60	157
	125	21.1	0.030	0.97	5.20	ND	0.830	7.50	234
	97	10.7	0.060	0.81	5.70	ND	0.890	8.60	185
	123	19.7	0.020	0.75	4.40	ND	0.500	7.10	175
	104	12.5	0.030	0.92	5.60	ND	0.570	7.80	174
	110	15.1	0.040	1.38	6.20	ND	0.820	5.40	191
7/22/2008	123	21.9	0.039	0.66	5.30	ND	0.260	5.53	185
	94	10.8	0.039	1.04	5.10	ND	0.280	6.07	203
	123	21.5	0.028	1.53	4.90	ND	3.460	6.29	261
	97	11.2	0.029	1.34	5.00	ND	0.170	5.90	198.5
	108	16	0.045	1.98	6.30	ND	0.230	5.97	220
	108	14.2	0.059	1.07	8.40	ND	1.310	5.03	195
7/21/2009	132	26.9	0.040	1.10	4.80	ND	0.330	5.40	213
	141	32.3	0.020	0.71	4.50	ND	0.450	7.90	143
	116	17.9	<0.020	0.99	4.20	ND	0.400	6.30	153
	117	17.7	0.030	1.00	5.90	ND	0.390	6.80	200
	119	22.1	<0.020	1.20	4.00	ND	0.280	6.50	176
	103	13	0.020	2.20	5.30	ND	0.350	5.90	226
7/20/2010	115	16	<0.019	0.80	3.40	0.080	0.370	4.60	159
	112	12.8	0.022	0.67	3.10	0.090	0.340	3.70	154
	118	12.6	<0.020	0.98	3.60	0.120	0.250	5.20	190
	108	10.6	<0.019	1.31	3.80	0.100	0.160	4.10	212
	115	12.3	<0.020	1.73	5.00	0.120	0.360	4.40	222
	94	9	0.025	0.77	4.00	0.140	0.310	4.80	199
7/21/2011	NA	NA	<0.020	0.95	4.50	ND	0.320	5.60	191
7/23/2012	132	24.2	0.020	0.85	ND	0.077	0.410	9.20	144
	118	17.3	0.040	1.03	ND	0.109	0.570	6.30	199
	109	13.1	0.060	2.04	ND	0.112	1.320	7.40	215
	97	9.1	0.030	2.04	ND	0.126	0.500	6.20	227
	115	15.4	0.040	1.22	ND	0.123	1.100	6.90	202
	119	18.3	0.030	1.81	ND	0.080	0.270	5.10	191
7/24/2013	117	16.9	<0.020	1.39	4.20	0.131	0.300	5.60	247
	117	17.6	0.020	0.74	3.90	0.183	0.390	7.00	297
	94	11.3	<0.020	1.27	4.30	0.172	0.280	6.60	262
	118	18.9	<0.020	0.89	3.90	0.145	0.330	6.00	211
	105	10.3	0.020	1.18	5.30	0.108	0.270	6.40	245
	116	15.3	0.020	1.07	4.50	0.126	0.180	6.40	225

-continued-

Appendix D.2.–Page 3 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/24/2014	125	21.2	0.080	0.93	12.70	0.121	1.550	5.70	212
7/25/2014	104	10.8	0.040	1.15	4.50	0.111	0.370	4.80	247
	110	11.5	0.210	0.85	4.30	0.119	0.300	6.20	291
	110	14.9	<0.020	0.69	4.80	0.113	0.250	5.90	248
	104	10.5	<0.020	1.03	5.00	0.106	0.280	5.70	250
	135	24.1	0.020	0.86	4.40	0.160	0.490	6.60	243
7/15/2015	110	11.3	0.020	0.92	4.70	0.121	0.590	6.30	236
	105	11.5	<0.020	0.52	2.50	0.116	0.360	7.00	117
	110	11.7	<0.020	0.67	3.00	0.106	0.360	6.40	171
	105	12	0.030	1.16	3.80	0.109	1.620	7.30	221
	100	10.7	<0.020	2.06	4.90	0.106	0.370	6.60	198
	95	8.4	<0.020	0.91	3.40	0.096	0.380	5.50	176
	100	8.2	<0.020	0.60	3.60	0.119	0.490	5.80	219
	92	9.9	0.020	0.84	4.70	0.072	0.470	6.50	153
	90	7.1	0.030	1.32	3.90	0.159	1.080	7.20	204
	88	6.2	0.020	1.13	4.00	0.119	0.390	6.40	179
7/12/2016	127	21.5	<0.020	0.91	3.24	0.096	0.194	4.29	122
	113	16.2	0.024	1.01	3.49	0.130	0.295	6.23	154
	117	15.8	<0.020	1.44	4.22	0.146	0.232	7.03	210
	104	12.1	<0.019	0.63	3.39	0.153	0.220	6.18	173
	101	9	<0.020	1.49	4.57	0.129	0.305	6.66	257
	95	8.7	<0.020	0.56	3.26	0.101	0.226	6.01	194
	99	11.1	0.029	1.89	5.98	0.110	0.820	7.47	210
	86	8.8	0.022	1.52	5.21	0.101	0.359	6.48	226
	107	10	<0.020	0.98	3.60	0.127	0.239	7.10	182
	97	8.9	<0.019	1.18	4.60	0.124	0.215	6.93	244
7/12/2017	103	11.5	0.028	0.74	3.39	0.100	0.189	6.36	173
	96	8.8	0.030	0.77	3.69	0.103	0.327	5.90	160
	93	8.1	0.039	0.49	3.25	0.116	0.468	5.10	133
	96	10.4	0.020	0.67	3.30	0.107	0.173	5.70	177
	84	6.5	0.028	0.72	3.72	0.110	0.403	5.18	192
	109	14.1	0.033	0.45	3.29	0.088	0.212	5.05	150
	90	9	0.035	1.30	5.34	0.093	0.281	7.16	227
	97	9.9	0.029	0.89	3.79	0.090	0.246	6.30	178
	101	10.6	0.031	0.87	4.27	0.104	0.222	6.40	167
	115	14.1	0.039	1.20	22.20	0.109	0.444	5.90	191

-continued-

Appendix D.2.–Page 4 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/12/2018	125	18.7	0.024	1.11	5.65	0.171	0.325	6.30	230
	90	6.3	<0.020	2.17	6.05	0.154	1.150	7.86	260
	90	7.5	0.032	1.75	5.47	0.139	1.080	8.00	225
	95	8.1	0.037	0.73	3.37	0.183	1.700	6.46	278
	110	14.1	0.040	0.64	3.82	0.156	0.568	6.40	208
	95	9.7	0.026	1.28	7.36	0.119	0.769	7.32	258
	95	7.1	0.023	1.31	4.78	0.130	0.452	7.20	234
	85	6.9	0.029	0.73	4.22	0.118	0.675	6.84	206
	100	10.1	0.056	1.35	5.40	0.186	0.421	7.99	241
	105	12.9	0.036	1.45	6.08	0.136	0.538	8.90	217
7/10/2019	100	10.4	0.037	1.28	4.77	0.149	0.828	5.91	201
	90	7.2	<0.020	1.65	4.55	0.142	0.318	6.25	270
	95	8.7	<0.020	1.06	3.53	0.081	0.231	6.05	188
	111	13.4	<0.020	0.98	3.75	0.073	0.274	5.53	150
	89	7.7	<0.020	1.07	3.61	0.116	0.340	6.00	181
	87	4.2	<0.020	1.01	3.62	0.078	0.178	6.40	178
	101	10.3	<0.020	0.64	3.42	0.117	0.114	7.50	168
	103	9.9	<0.020	0.66	2.74	0.156	0.227	5.60	168
	96	9.5	<0.020	1.58	3.09	0.105	0.157	6.28	194
	94	8.5	<0.020	0.86	3.05	0.106	0.114	5.20	216
7/16/2020	92	7.1	0.027	1.97	4.95	0.192	0.279	5.83	304
	98	9.6	0.035	1.88	6.50	0.193	0.322	4.83	241
	100	10.7	0.022	0.87	3.66	0.132	0.330	9.22	198
	126	17.7	0.022	1.05	4.13	0.148	0.729	7.39	211
	116	14.2	0.035	1.61	4.43	0.224	0.581	6.76	193
	92	7.6	0.033	0.88	4.50	0.153	3.970	5.50	207
	112	14.2	0.037	0.96	5.10	0.197	0.352	6.08	212
	110	11.8	0.035	0.90	5.23	0.183	0.257	6.27	251
	104	11.9	0.052	1.23	5.85	0.175	0.721	6.33	210
	102	9.8	0.037	1.02	4.68	0.108	0.463	7.13	188
7/12/2021	88	7.5	0.042	1.26	5.96	0.184	0.418	5.91	227
	93	9.9	0.025	1.08	4.28	0.150	0.291	7.01	183
	83	5.3	0.035	1.04	4.00	0.161	0.797	5.75	222
	105	11.6	0.038	1.43	4.96	0.182	0.334	6.12	230
	90	6.8	0.027	0.79	3.43	0.205	0.272	5.60	157
	99	8	0.020	0.81	3.44	0.175	0.203	5.78	189
	92	7.9	0.028	2.11	7.63	0.163	0.265	7.16	282
	96	8.2	0.020	0.86	3.10	0.161	0.304	5.57	151
	91	6.8	0.031	0.93	4.57	0.165	0.409	5.99	203
	92	7.2	0.035	1.74	4.89	0.161	0.128	6.92	261

-continued-

Appendix D.2.–Page 5 of 5.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/12/22	94	13	0.035	0.78	4.37	0.115	1.330	5.35	209
	94	9	0.034	1.72	4.41	0.117	1.060	5.44	223
	93	9.3	0.028	1.13	4.35	0.144	1.030	5.57	193
	117	15.9	0.036	1.65	6.03	0.150	0.736	5.61	240
	97	9.7	0.020	1.44	4.95	0.099	1.140	5.44	199
	98	10	0.020	0.92	3.57	0.089	0.868	5.89	162
	99	10	0.054	1.76	5.13	0.143	2.740	5.43	235
	98	8.4	0.025	0.76	4.21	0.121	0.682	5.30	163
	95	8.9	0.024	0.72	3.93	0.094	0.781	5.51	168
	124	22.1	0.025	2.01	4.01	0.118	0.882	5.53	180
7/11/23	115	16.3	0.02	1.27	4.32	0.14	0.44	5.55	206
	112	10.1	0.02	1.29	5.12	0.17	0.47	5.98	231
	123	16.3	0.05	1.57	5.98	0.12	0.64	6.08	212
	105	11	0.03	0.89	4.3	0.1	0.29	5.1	160
	110	13.3	0.0	0.96	5.57	0.2	0.3	5.90	218
	98	9.3	0.0	1.68	5.89	0.1	0.4	6.95	179
	114	14.8	0.0	0.91	4.57	0.1	0.2	6.07	175
	100	9.1	0.0	0.99	5.18	0.1	0.5	6.24	180
	95	9.6	0.0	0.85	4.36	0.1	0.3	6.54	168
	93	8.7	0.0	0.77	4.34	0.1	0.3	6.60	193
7/9/24	115	16.7	0.035	1.71	7.57	0.163	1.29	5.55	260
	94	8.5	0.021	1.51	5.05	0.0995	0.193	5.47	194
	90	8.1	0.027	0.78	4.07	0.121	0.163	5.16	209
	97	8.2	0.034	1.23	5.09	0.166	0.41	5.41	254
	97	9.1	0.039	2.23	6.38	0.192	0.244	5.73	272
	90	7.8	0.024	1.19	5.41	0.0847	0.16	6.78	182
	92	8.4	0.024	1.09	3.7	0.1	0.108	5.64	177
	106	13	0.043	1.03	5.39	0.148	0.112	6.57	222
	107	12.7	0.02	0.792	3.53	0.117	0.129	5.08	168
	121	18.3	0.026	1.58	6.21	0.166	0.225	5.56	281
7/7/25	95	8.6	0.023	1.64	5.51	0.142	0.148	5.48	267
	99	9.1	0.036	1.51	6.18	0.153	0.167	5.1	247
	94	6.2	0.027	1.41	4.95	0.164	0.158	5.58	308
	88	5.7	0.02	1.84	6.66	0.177	0.137	5.87	270
	94	8.1	0.037	1.64	6.21	0.152	0.324	6.99	225
	115	11.0	0.028	1.31	6.19	0.15	0.148	5.6	240
	112	14.0	0.043	0.786	4.72	0.136	0.309	5.36	189
	108	10.5	0.02	0.959	4.87	0.137	0.245	5.75	216
	89	7.5	0.024	1.12	4.12	0.12	0.203	5.33	199
	105	9.7	0.032	1.98	5.77	0.128	0.152	5.46	248

Appendix D.3.—Tributary Creek Site 9 Dolly Varden element concentrations, 2001–2025.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/21/2001	97	9.1	0.090	0.35	4.30	ND	0.560	6.80	127
	97	9.7	0.100	0.77	5.20	ND	0.670	8.00	118
	97	9.5	0.150	0.92	5.40	ND	4.880	5.30	144
	98	10.4	0.150	0.86	6.70	ND	2.190	1.00	99
	86	6.4	0.080	0.76	4.90	ND	0.330	6.20	106
	93	7.8	0.060	0.37	12.00	ND	0.380	6.80	122
7/24/2002	103	10.8	0.020	0.22	3.70	ND	0.120	1.40	144
	97	10.4	0.070	1.20	5.50	ND	1.660	3.30	172
	100	11.2	0.130	1.06	6.10	ND	3.400	5.00	138
	90	7.9	0.230	1.29	7.10	ND	4.080	5.20	168
	90	9.2	0.080	1.15	5.20	ND	1.390	6.20	150
	100	9.3	0.040	0.84	3.20	ND	0.330	5.40	152
7/23/2003	106	10.7	0.060	0.46	2.80	ND	0.340	6.30	134
	89	6.8	0.100	1.01	4.00	ND	0.820	6.00	131
	112	17.4	0.160	1.35	4.40	ND	1.850	5.70	108
	95	11.6	0.190	0.69	5.60	ND	1.300	3.60	136
	91	9.5	0.050	0.72	4.40	ND	0.560	4.90	131
	84	8.4	0.120	0.76	3.90	ND	0.780	4.70	125
7/21/2004	84	5.5	0.100	0.96	3.20	ND	1.190	5.40	169
	96	8.5	0.100	1.24	3.80	ND	0.670	5.90	138
	105	14.1	0.100	2.02	4.00	ND	1.760	5.80	125
	85	5.8	0.040	0.47	3.70	ND	0.930	4.80	175
	81	6.4	0.090	2.34	4.30	ND	1.440	8.20	140
	86	10.4	0.110	0.83	5.50	ND	0.970	5.80	161
7/23/2005	97	11.1	0.060	0.70	10.40	ND	0.290	6.40	104
	113	16.8	0.100	0.63	4.70	ND	0.970	6.10	122
	115	18.8	0.070	0.52	6.30	ND	0.530	5.80	109
	117	20.5	0.190	0.79	9.90	ND	1.070	6.70	117
	101	11.7	0.070	1.44	5.20	ND	1.000	8.10	130
	107	13.7	0.100	1.29	4.60	ND	0.460	8.00	134
7/21/2006	99	12.9	0.120	0.74	4.00	ND	0.320	6.30	120
	96	11.6	0.120	0.76	7.70	ND	1.320	6.80	157
	94	10.9	0.180	1.59	10.30	ND	2.480	4.90	160
	100	10.9	0.110	1.34	8.50	ND	1.460	5.20	142
	97	11.7	0.140	0.88	4.60	ND	0.960	5.20	107
	117	20.8	0.240	1.29	4.30	ND	2.920	5.90	130

-continued-

Appendix D.3.–Page 2 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/20/2007	98	12.4	0.110	0.91	2.70	ND	1.100	7.80	106
	89	8.9	0.120	1.72	3.30	ND	1.800	5.60	136
	114	14.1	0.150	2.76	3.40	ND	1.280	8.70	122
	81	7.1	0.140	1.90	4.20	ND	2.030	7.00	114
	114	14.6	0.880	3.63	3.90	ND	1.560	10.90	131
	93	10.6	0.140	1.50	20.30	ND	3.800	9.40	107
7/23/2008	103	12.9	0.224	1.99	4.20	ND	3.470	7.66	169
	108	14.8	0.095	0.96	3.20	ND	0.860	5.82	143
	88	8.9	0.076	0.93	3.30	ND	0.750	4.41	186
	86	9.3	0.220	1.91	5.70	ND	4.060	5.71	119
	92	9.6	0.073	1.01	2.70	ND	0.610	5.20	125
	90	8.7	0.033	0.54	2.20	ND	0.430	4.80	108
7/22/2009	83	6.9	0.040	0.29	1.70	ND	0.240	5.40	127
	91	8.6	0.060	0.55	2.10	ND	0.160	5.10	137
	91	8.5	0.110	0.36	2.00	ND	0.230	7.50	138
	98	10.3	0.090	0.81	3.40	ND	0.380	5.80	147
	91	8.6	0.030	0.47	2.20	ND	0.400	4.50	125
	90	7.8	0.060	0.60	2.20	ND	0.380	5.60	129
7/20/2010	87	7.4	0.293	1.61	5.40	0.430	3.920	6.40	151
	94	10.9	0.124	0.82	2.50	0.580	0.240	5.70	174
	90	8.5	0.084	0.73	2.90	0.350	0.290	5.30	125
	90	8.2	0.059	0.60	2.30	0.270	0.330	4.70	151
	108	13.5	0.081	0.66	2.60	0.540	0.250	3.20	118
	105	11.6	0.076	0.75	3.10	0.270	0.230	3.90	150
7/21/2011	NA	NA	0.090	0.80	3.40	ND	0.320	6.70	146
7/26/2012	89	7.3	<0.020	0.33	ND	0.429	0.180	4.30	123
	122	16.5	0.030	0.60	ND	0.257	0.540	4.80	126
	NA	8.1	0.050	0.76	ND	0.217	1.650	4.90	140
	105	11.7	0.130	0.57	ND	0.241	0.740	7.50	128
	98	9.9	0.070	0.95	ND	0.235	1.900	5.50	115
	NA	20.2	0.060	0.53	ND	0.278	0.670	5.30	116
7/23/2013	90	10.1	0.720	6.36	7.50	0.418	5.930	9.70	179
	92	10.4	0.270	1.57	3.80	0.329	1.600	6.90	122
	85	7.8	0.190	2.41	5.80	0.297	3.900	8.60	153
	NA	8	0.050	0.59	3.30	0.439	0.350	5.00	152
	82	6.6	0.480	4.67	8.90	0.332	4.870	9.60	181
	81	5.5	0.130	2.14	4.60	0.289	1.640	5.60	166

-continued-

Appendix D.3.–Page 3 of 5.

Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/23/2014	105	13.1	0.160	0.82	2.70	0.186	0.160	7.10	145
	105	11.5	0.020	0.69	2.30	0.188	0.180	5.10	140
	104	9.1	0.090	0.69	2.60	0.247	0.220	7.20	116
	94	8.4	0.060	1.16	2.40	0.264	0.330	6.70	156
	95	8.3	0.120	0.54	2.80	0.215	0.550	6.20	135
	105	11.4	0.040	0.30	2.60	0.228	0.190	5.30	117
7/14/2015	NA	12.4	0.220	3.92	3.80	0.285	3.300	7.10	188
	77	5.7	0.330	4.40	5.20	0.321	4.930	9.10	157
	84	7.2	0.220	2.54	5.30	0.338	2.840	7.90	134
	NA	81	0.480	4.73	6.70	0.338	6.200	10.60	173
	82	6.9	0.360	3.76	4.60	0.342	4.800	8.50	153
	NA	7.7	0.250	4.03	5.30	0.280	3.420	7.80	165
	90	9.3	0.280	1.81	3.40	0.304	1.690	9.20	124
	80	6.8	0.300	3.92	5.10	0.312	4.870	9.70	159
	NA	8.9	0.130	1.69	4.20	0.322	1.860	7.20	142
	NA	12.8	0.510	5.86	5.10	0.293	4.540	10.70	175
7/11/2016	97	8.1	0.057	0.34	1.99	0.250	0.222	6.34	136
	90	6.3	0.068	0.90	2.68	0.219	0.493	5.61	115
	105	11.5	0.139	0.44	2.23	0.315	0.333	7.48	124
	94	9.4	0.134	1.30	2.76	0.234	0.982	7.12	134
	94	10.3	0.078	0.78	2.35	0.334	0.189	6.62	125
	114	16.4	0.109	1.03	2.19	0.232	0.285	5.83	131
	87	6.5	0.051	0.49	2.09	0.363	0.190	4.99	101
	89	6.5	0.034	0.58	2.17	0.249	0.198	5.61	138
	102	11.1	0.156	0.89	3.29	0.443	0.368	5.40	127
	87	6.1	0.059	1.35	2.27	0.263	0.179	8.34	125
7/11/2017	109	12.9	0.080	1.15	2.76	0.269	0.484	10.00	114
	78	5.4	0.191	2.78	3.60	0.408	2.040	8.80	145
	78	5.7	0.089	2.34	6.71	0.310	1.570	7.89	160
	109	12.4	0.094	1.29	2.40	0.631	0.413	6.15	122
	84	6.2	0.079	1.16	2.62	0.400	0.412	7.39	121
	117	17.8	0.288	3.68	3.21	0.439	1.720	9.25	148
	87	7.4	0.191	2.02	4.01	0.261	1.300	8.60	126
	94	9.2	0.068	0.29	3.55	0.169	0.183	3.20	163
	73	4.1	0.062	0.82	3.85	0.364	0.988	5.50	172
	83	6.7	0.096	1.33	3.44	0.457	1.800	8.25	118

-continued-

Appendix D.3.–Page 4 of 5.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/12/2018	105	12.4	0.096	0.705	2.31	0.490	0.385	6.3	154
	81	6.7	0.115	1.09	2.80	0.577	0.963	7.2	160
	92	9.4	0.070	0.313	2.90	0.406	0.196	5.03	109
	106	11.9	0.044	0.509	2.32	0.457	0.353	5.40	137
	85	7.5	0.085	1.30	2.80	0.353	1.02	6.00	171
	92	8.3	0.108	0.969	2.84	0.863	0.381	6.70	94.8
	85	6.4	0.093	1.36	2.73	0.364	0.871	6.31	144
	108	11.6	0.084	0.793	2.53	0.435	0.162	6.2	143
	86	5.8	0.096	1.88	2.63	0.771	0.636	6.4	128
	109	12.5	0.139	0.708	2.37	0.664	0.945	6.4	154
7/11/2019	84	12.4	0.048	0.584	2.45	0.710	0.280	4.15	147
	102	6.7	0.078	0.617	2.04	0.727	0.385	4.91	161
	97	9.4	0.114	0.810	3.32	0.489	0.695	3.81	164
	91	11.9	0.093	0.596	2.35	0.775	0.245	5.23	152
	124	7.5	0.147	0.305	2.57	0.550	0.723	4.09	141
	69, 75	8.3	0.058	0.552	2.03	0.975	0.244	4.92	162
7/15/2020	112	13.6	0.113	0.81	2.79	0.611	1.230	7.19	108
	161	41.7	0.262	1.810	3.89	0.476	1.970	5.8	176
	120	16.9	0.616	4.52	6.35	0.383	4.920	10.9	222
	98	10.2	0.381	2.720	5.99	0.462	3.190	11.2	130
	119	19.2	0.517	2.78	7.04	0.489	4.78	13.8	173
	93	7.7	1.47	4.87	6.31	0.487	4.04	11.4	274
	87	6.6	0.357	1.68	6.68	0.425	3.93	9.31	163
7/13/2021	104	11.4	0.239	1.01	3.57	0.348	1.09	6.99	138
	99	10.2	0.373	2.23	3.70	0.442	0.757	8.09	132
	123	13.5	0.056	0.972	4.47	0.358	2.39	3.10	395
	110	13.6	0.084	0.264	1.88	0.438	0.079	7.85	132
	85	7.1	0.321	1.29	5.80	0.457	3.34	7.83	142
7/20/2021	102	10.2	0.059	0.503	2.23	0.340	0.166	6.03	130
	115	11.7	0.044	0.276	2.79	0.700	0.054	3.17	192
	103	10.2	0.092	0.724	2.75	0.357	0.263	8.14	168
7/12/2022	94	8.4	0.039	0.206	2.12	0.213	0.084	3.69	111
	97	8.2	0.147	1.300	3.38	0.287	0.749	6.59	154
	77	4.8	0.041	0.401	3.23	0.346	0.185	4.02	128
	77	4.3	0.218	0.482	2.83	0.364	0.679	3.94	143
8/15/2022	98	15.1	0.332	4.790	5.83	0.490	1.340	9.35	164
	100	10.6	0.186	2.260	2.69	0.297	1.000	6.21	111
	104	13.8	0.103	0.952	3.48	0.325	1.040	5.11	130
	104	13.4	0.101	0.522	3.00	0.328	0.428	4.64	123
	122	23.3	0.221	0.981	6.24	0.330	2.570	7.45	129
	87	9.3	0.260	2.55	3.64	0.452	1.450	5.99	154

-continued-

Appendix D.3.–Page 5 of 5.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/12/2023	95	7.7	0.057	0.525	2.88	0.299	0.502	5.87	128
	104	10.7	0.063	0.26	1.91	0.368	0.114	6.02	104
	94	9.2	0.092	0.547	2.34	0.499	0.881	4.68	119
	86	6.9	0.098	0.556	3.54	0.286	0.797	5.69	131
	92	7.9	0.049	0.471	3.04	0.317	0.299	5.21	118
	100	11.4	0.115	0.714	3.8	0.443	0.445	5.51	140
	90	7.6	0.128	0.925	3.34	0.354	0.857	5.98	128
	85	6.4	0.046	0.506	3.43	0.278	0.724	5.2	125
	86	6	0.284	0.558	3.15	0.357	0.675	5.63	131
	99	8.7	0.095	0.327	3.17	0.347	0.312	3.1	105
7/10/2024	90	7.56	0.05	0.348	3.62	0.322	0.654	4.55	155
	102	11.78	0.107	0.881	3.29	0.505	0.808	4.03	153
	92	7.1	0.098	0.621	3.84	0.335	0.755	4.58	150
	94	8.77	0.095	0.621	3.84	0.334	0.582	4.92	133
	89	7.83	0.053	0.511	2.16	0.29	0.168	3.91	119
	96	9.49	0.054	0.444	2.78	0.31	0.825	3.87	152
	82	5.65	0.046	0.457	2.98	0.325	0.396	4.35	138
	85	6.24	0.02	0.246	2.55	0.265	0.578	3.78	152
	86	5.51	0.099	0.786	3.38	0.16	0.37	4.98	169
	80	4.88	0.064	0.352	3.21	0.286	0.372	4.4	134
7/10/2025	81	5.7	0.176	0.959	5.83	0.254	1.74	7.69	134
	86	7.8	0.297	1.96	4.8	0.278	1.73	8.61	142
	89	10.5	0.526	4.31	6.97	0.306	3.21	12.4	201
	105	15.3	0.579	2.68	6.28	0.318	3.87	9.37	161
	85	10.4	0.325	2.55	7.86	0.305	2.05	10.7	159
	94	13	0.331	4.22	5.98	0.295	3.09	9.91	154
	91	11.4	0.098	0.962	4.16	0.286	2.46	5.89	117
	93	11.7	0.226	3.07	5.43	0.269	1.21	9.56	173
	99	11.7	0.432	2.32	5.62	0.258	2.52	7.93	141
	89	8.7	0.271	2.09	5.54	0.301	2.68	7.06	148

Appendix D.4.–Zinc Creek Site 10 Dolly Varden element concentrations, 2021, 2024–2025.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
7/13/2021	101	12.8	0.081	1.19	3.57	0.368	0.111	5.84	158
	86	7.0	0.041	1.06	3.83	0.219	0.041	6.10	216
	97	9.1	0.052	1.59	3.39	0.305	0.318	4.75	176
	92	9.8	0.021	0.516	2.50	0.122	0.067	3.41	137
	99	12.5	0.106	0.787	2.85	0.510	0.152	6.47	137
	104	13.8	0.148	0.733	3.10	0.531	0.415	5.88	135
	87	7.9	0.035	0.971	3.68	0.157	0.295	3.62	182
7/20/2021	105	12.3	0.122	0.521	3.34	0.476	0.219	5.64	146
	109	11.9	0.038	0.636	3.45	0.208	0.168	3.91	171
	98	9.4	0.122	1.40	4.05	0.352	0.957	6.12	161
7/8/2024	98	8	0.058	0.884	2.99	0.145	0.435	3.49	151
	96	7.7	0.034	0.68	2.89	0.277	0.139	5.25	119
	94	8.1	0.048	0.389	3.21	0.323	0.288	4.2	156
	102	8.5	0.03	0.63	3.2	0.202	0.105	4.33	137
	108	10.4	0.02	0.364	2.66	0.177	0.189	3.33	156
	104	8.5	0.037	0.765	3.87	0.201	0.332	4.36	161
	94	10.6	0.06	0.988	3.15	0.23	0.154	4.92	129
	98	7.4	0.029	1.15	5.46	0.175	0.562	4.36	203
	111	10.3	0.02	0.305	2.57	0.0896	0.131	2.52	150
	109	11.2	0.062	1.04	3.39	0.213	0.31	4.44	145
7/9/2025	91	9.4	0.343	4.75	5.89	0.422	1.59	9.64	190
	115	19.4	0.413	3.96	6.63	0.382	3	9.76	195
	82	5.5	1.21	16.1	8.64	0.403	2.77	15.7	262
	89	7.7	0.528	6.78	8.75	0.265	2.42	9.54	215
	119	19.2	0.452	2.97	5.12	0.449	1.33	9.19	163
	78	7	1.47	15.6	8.62	0.36	3.96	17.5	243
	82	6.1	0.848	7.8	4.79	0.257	1.34	10.3	177
	89	10.4	1.16	11.9	8.83	0.352	3.6	15.1	251
	88	8.6	0.838	7.6	6.7	0.278	2.01	12.6	212
	86	7.7	1.61	9.19	7.72	0.372	3.03	11.8	281

Appendix D.5.—Zinc Creek Site 371 Dolly Varden element concentrations, 2018, 2021, and 2024–2025.

Sample Date	FL (mm)	Weight (g)	Ag (mg/kg)	Cd (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)	Zn (mg/kg)
5/16/2018	119	12.9	ND	1.05	5.92	0.371	0.804	3.20	287
	117	13.0	ND	0.98	9.79	0.285	2.210	2.70	289
	86	6.7	ND	0.48	3.02	0.186	92.000	3.10	161
	88	6.8	ND	0.69	3.15	0.274	0.166	3.20	174
	87	6.4	ND	0.45	3.25	0.178	0.068	3.33	160
	124	13.4	ND	1.04	7.80	0.325	2.040	2.35	276
7/12/2021	104	13.5	0.047	0.504	5.53	0.168	0.071	6.34	203
	110	17.3	0.054	0.599	5.41	0.245	0.060	3.55	233
	105	11.6	0.057	0.451	4.91	0.289	0.060	4.07	221
	111	13.0	0.070	0.646	5.99	0.287	0.056	3.50	254
	94	7.2	0.021	0.455	3.44	0.172	0.048	5.28	256
	114	17.2	0.051	0.557	4.60	0.274	0.058	4.46	229
	97	9.8	0.058	0.834	9.99	0.208	2.05	3.94	263
	106	10.7	0.063	0.410	4.71	0.252	0.034	4.00	199
	103	10.9	0.030	0.497	3.84	0.277	0.518	4.30	246
	98	10.2	0.034	0.925	3.97	0.242	0.088	4.76	303
7/8/2024	119	16.4	0.033	0.472	3.73	0.275	0.142	3.22	242
	104	10.4	0.023	0.392	3.65	0.162	0.167	3.2	204
	113	13.5	0.028	0.458	3.71	0.239	0.083	3.37	255
	121	15.5	0.02	0.264	2.83	0.164	0.042	2.96	168
	120	15.4	0.02	0.419	3.18	0.231	0.09	3.09	209
	103	10.2	0.026	0.54	4.64	0.174	0.029	3.02	208
	116	16.8	0.029	0.327	2.87	0.213	0.044	3.02	170
	123	17.4	0.037	0.479	3.94	0.313	0.121	3.44	233
	108	11.5	0.028	0.417	3.17	0.23	0.052	3.49	207
	100	10.4	0.024	0.46	3.84	0.179	0.058	0.321	196
7/10/2025	94	8.8	0.133	0.902	5.31	0.178	0.411	4.34	211
	93	7.1	0.029	0.663	4.55	0.144	0.11	3.8	206
	101	12.3	0.042	0.698	5.13	0.183	0.094	4.28	210
	115	13.8	0.05	0.456	4.72	0.2	0.118	3.62	218
	96	8.8	0.032	0.657	5.25	0.18	0.128	3.86	236
	125	16.5	0.068	0.641	4.96	0.245	0.224	3.46	247
	114	17.2	0.119	0.962	7.84	0.225	1.26	3.8	236
	93	8.6	0.04	0.658	5.25	0.144	0.179	3.97	192
	102	9.3	0.045	0.588	4.27	0.183	0.139	3.56	232
	113	14.8	0.061	0.586	4.75	0.2	0.2	3.49	206

D.6. Dolly Varden element concentrations laboratory report, 2024.



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

August 29, 2025

Analytical Report for Service Request No: K2508064

Greg Albrecht
Alaska Department of Fish and Game
Division of Habitat
802 3rd Street
P.O. Box 110024
Douglas, AK 99811-0024

RE: 2025 Greens Creek Mine Biomonitoring

Dear Greg,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2025
For your reference, these analyses have been assigned our service request number **K2508064**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Raw Data
 Total Solids
 Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508064
Date Received: 08/13/2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Twenty animal tissue samples were received for analysis at ALS Environmental on 08/13/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 08/29/2025



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2508064

Attachment 1 of 3

Project Name: 2025 Greens Creek Mine Biomonitoring
 Project Manager: Greg Albrecht
 Company Name: Alaska Department of Fish and Game
 Contact Information: greg.albrecht@alaska.gov / 907-465-6384

Sample Type: Whole body juvenile Dolly Varden char
 Analysis: Total metals, dry weight basis, report percent solids

Matrix	Sample Date	Sample Name	Sample ID	Total Metals	Fork Length (mm)	Weight (g)
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #1	2025GCMGC54DV1	Ag, Cd, Cu, Hg, Pb, Se, Zn	100	10.8
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #2	2025GCMGC54DV2	Ag, Cd, Cu, Hg, Pb, Se, Zn	111	15.2
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #3	2025GCMGC54DV3	Ag, Cd, Cu, Hg, Pb, Se, Zn	97	11.8
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #4	2025GCMGC54DV4	Ag, Cd, Cu, Hg, Pb, Se, Zn	97	9.8
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #5	2025GCMGC54DV5	Ag, Cd, Cu, Hg, Pb, Se, Zn	104	12.7
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #6	2025GCMGC54DV6	Ag, Cd, Cu, Hg, Pb, Se, Zn	124	18.3
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #7	2025GCMGC54DV7	Ag, Cd, Cu, Hg, Pb, Se, Zn	101	11.1
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #8	2025GCMGC54DV8	Ag, Cd, Cu, Hg, Pb, Se, Zn	139	26.7
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #9	2025GCMGC54DV9	Ag, Cd, Cu, Hg, Pb, Se, Zn	98	12.0
Whole Body	7/7/2025	Greens Creek Site 54 DV Metals Fish #10	2025GCMGC54DV10	Ag, Cd, Cu, Hg, Pb, Se, Zn	116	16.9
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #1	2025GCMGC63DV1	Ag, Cd, Cu, Hg, Pb, Se, Zn	95	8.6
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #2	2025GCMGC63DV2	Ag, Cd, Cu, Hg, Pb, Se, Zn	99	9.1
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #3	2025GCMGC63DV3	Ag, Cd, Cu, Hg, Pb, Se, Zn	94	6.2
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #4	2025GCMGC63DV4	Ag, Cd, Cu, Hg, Pb, Se, Zn	88	5.7
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #5	2025GCMGC63DV5	Ag, Cd, Cu, Hg, Pb, Se, Zn	94	8.1
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #6	2025GCMGC63DV6	Ag, Cd, Cu, Hg, Pb, Se, Zn	115	11.0
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #7	2025GCMGC63DV7	Ag, Cd, Cu, Hg, Pb, Se, Zn	112	14.0
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #8	2025GCMGC63DV8	Ag, Cd, Cu, Hg, Pb, Se, Zn	108	10.5
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #9	2025GCMGC63DV9	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	7.5
Whole Body	7/7/2025	Greens Creek Site 63 DV Metals Fish #10	2025GCMGC63DV10	Ag, Cd, Cu, Hg, Pb, Se, Zn	105	9.7

PROJECT NAME: 2025 Greens Creek Biomonitoring					NUMBER OF CONTAINERS	SemiVolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/> Volatile Organics 624 <input type="checkbox"/> 8280 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/> Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/> Oil & Grease/TRPH 1664 <input type="checkbox"/> HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/> PCBs Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/> Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8141 <input type="checkbox"/> 8151 <input type="checkbox"/> Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/> Metals, Total or Dissolved (See List below) Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/> (circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NO ₃ , BOD, TSS, TDS, Turb. (circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ +NO ₃ , T-Phos TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/> Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/> Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/> Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/> Hg-1631E
PROJECT NUMBER						
PROJECT MANAGER: Greg Albrecht						
COMPANY NAME: Alaska Department of Fish and Game						
ADDRESS: 802 3rd st						
CITY/STATE/ZIP: Douglas, AK 99824						
E-MAIL ADDRESS: greg.albrecht@alaska.gov						
PHONE # 907-465-6384 FAX #						
SAMPLER'S SIGNATURE: <i>Greg Albrecht</i>						
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	REMARKS	
See attachments					X	

REPORT REQUIREMENTS

- I. Routine Report: Method Blank, Surrogate, as required
- II. Report Dup., MS, MSD as required
- III. CLP Like Summary (no raw data)
- IV. Data Validation Report
- V. EDD

INVOICE INFORMATION

P.O. # Hecla Greens Creek
 Bill To: Paula Lillesve
plillesve@hecla.com

TURNAROUND REQUIREMENTS

24 hr. 48 hr.
 5 day
 Standard (15 working days)
 Provide FAX Results
 Requested Report Date _____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca **Cd** Co Cr **Cu** Fe **Pb** Mg Mn Mo Ni K **Ag** Na **Se** Sr Ti Sn V **Zn** **Hg**
 Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: **AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

Please send report to greg.albrecht@alaska.gov
 Please Bill to Hecla Greens Creek at plillesve@hecla.com

Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:

Greg Albrecht 8/11/25
 Signature Date/Time
 Greg Albrecht ADF&G
 Printed Name Firm

RECEIVED BY:

Neak Peterson 8/13/25 0945
 Signature Date/Time
 Neak Peterson ALS
 Printed Name Firm

RELINQUISHED BY:

Signature Date/Time
 Printed Name Firm

RECEIVED BY:

Signature Date/Time
 Printed Name Firm

Cooler Receipt and Preservation Form

Client Alaska Department of Fish and Game Service Request K25 08064 PM Black
 Received: 8/13/25 Opened: 8/13/25 By: WRP Unloaded: 8/13/25 By: WRP

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Frost
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number	Filed
13.1	7.4	IR02	NA	X		391991503818	

4. Was a Temperature Blank present in cooler? NA Y If yes, note the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken)? NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below NA Y N
14. Was C12/Res negative? NA Y N
15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. NA Y N
16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Samples in freezer



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Analysis Method: Freeze Dry
Prep Method: None

Service Request: K2508064
Date Collected: 07/7/25
Date Received: 08/13/25
Units: Percent
Basis: Wet

Total Solids

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
2025GCMGC54DV1	K2508064-001	22.5	-	-	1	08/20/25 16:34	
2025GCMGC54DV2	K2508064-002	24.5	-	-	1	08/20/25 16:34	
2025GCMGC54DV3	K2508064-003	22.9	-	-	1	08/20/25 16:34	
2025GCMGC54DV4	K2508064-004	21.8	-	-	1	08/20/25 16:34	
2025GCMGC54DV5	K2508064-005	22.8	-	-	1	08/20/25 16:34	
2025GCMGC54DV6	K2508064-006	24.2	-	-	1	08/20/25 16:34	
2025GCMGC54DV7	K2508064-007	22.2	-	-	1	08/20/25 16:34	
2025GCMGC54DV8	K2508064-008	24.2	-	-	1	08/20/25 16:34	
2025GCMGC54DV9	K2508064-009	22.6	-	-	1	08/20/25 16:34	
2025GCMGC54DV10	K2508064-010	24.1	-	-	1	08/20/25 16:34	
2025GCMGC63DV1	K2508064-011	21.2	-	-	1	08/20/25 16:34	
2025GCMGC63DV2	K2508064-012	20.8	-	-	1	08/20/25 16:34	
2025GCMGC63DV3	K2508064-013	21.0	-	-	1	08/20/25 16:34	
2025GCMGC63DV4	K2508064-014	21.0	-	-	1	08/20/25 16:34	
2025GCMGC63DV5	K2508064-015	21.8	-	-	1	08/20/25 16:34	
2025GCMGC63DV6	K2508064-016	21.9	-	-	1	08/20/25 16:34	
2025GCMGC63DV7	K2508064-017	23.1	-	-	1	08/20/25 16:34	
2025GCMGC63DV8	K2508064-018	21.5	-	-	1	08/20/25 16:34	
2025GCMGC63DV9	K2508064-019	22.2	-	-	1	08/20/25 16:34	
2025GCMGC63DV10	K2508064-020	22.8	-	-	1	08/20/25 16:34	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental
Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25

Mercury, Total

Prep Method: METHOD
Analysis Method: 1631E
Test Notes:

Units: ng/g
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
2025GCMGC54DV1	K2508064-001	9.9	2.0	10	08/25/25	08/26/25	112	
2025GCMGC54DV2	K2508064-002	9.9	2.0	10	08/25/25	08/26/25	96.7	
2025GCMGC54DV3	K2508064-003	10	2.0	10	08/25/25	08/26/25	127	
2025GCMGC54DV4	K2508064-004	9.9	2.0	10	08/25/25	08/26/25	93.2	
2025GCMGC54DV5	K2508064-005	9.9	2.0	10	08/25/25	08/26/25	115	
2025GCMGC54DV6	K2508064-006	9.9	2.0	10	08/25/25	08/26/25	100	
2025GCMGC54DV7	K2508064-007	9.9	2.0	10	08/25/25	08/26/25	150	
2025GCMGC54DV8	K2508064-008	9.9	2.0	10	08/25/25	08/26/25	173	
2025GCMGC54DV9	K2508064-009	9.9	2.0	10	08/25/25	08/26/25	186	
2025GCMGC54DV10	K2508064-010	9.9	2.0	10	08/25/25	08/26/25	131	
2025GCMGC63DV1	K2508064-011	10	2.0	10	08/25/25	08/26/25	142	
2025GCMGC63DV2	K2508064-012	9.9	2.0	10	08/25/25	08/26/25	153	
2025GCMGC63DV3	K2508064-013	10	2.0	10	08/25/25	08/26/25	164	
2025GCMGC63DV4	K2508064-014	9.9	2.0	10	08/25/25	08/26/25	177	
2025GCMGC63DV5	K2508064-015	9.9	2.0	10	08/25/25	08/26/25	152	
2025GCMGC63DV6	K2508064-016	10	2.0	10	08/25/25	08/26/25	150	
2025GCMGC63DV7	K2508064-017	10	2.0	10	08/25/25	08/26/25	136	
2025GCMGC63DV8	K2508064-018	9.9	2.0	10	08/25/25	08/26/25	137	
2025GCMGC63DV9	K2508064-019	9.9	2.0	10	08/25/25	08/26/25	120	
2025GCMGC63DV10	K2508064-020	9.9	2.0	10	08/25/25	08/26/25	128	
Method Blank 1	K2508064-MB1	1.0	0.20	1	08/25/25	08/26/25	ND	
Method Blank 2	K2508064-MB2	1.0	0.20	1	08/25/25	08/26/25	ND	
Method Blank 3	K2508064-MB3	1.0	0.20	1	08/25/25	08/26/25	ND	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25
Date Extracted: 08/25/25
Date Analyzed: 08/26/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMGC54DV6 Units: ng/g
 Lab Code: K2508064-006MS, K2508064-006DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	9.9	249	247	100	350	334	100	95	70-130	5	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25
Date Extracted: 08/25/25
Date Analyzed: 08/26/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMGC54DV8 Units: ng/g
 Lab Code: K2508064-008MS, K2508064-008DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	9.9	248	246	173	418	430	99	104	70-130	3	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508064
Date Collected: NA
Date Received: NA
Date Extracted: 08/25/25
Date Analyzed: 08/26/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Initial) Units: ng/g
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	4.98	100	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508064
Date Collected: NA
Date Received: NA
Date Extracted: 08/25/25
Date Analyzed: 08/26/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Final) Units: ng/g
 Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	5.14	103	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Animal tissue

Service Request: K2508064
Date Collected: NA
Date Received: NA
Date Extracted: 08/25/25
Date Analyzed: 08/26/25

Quality Control Sample (QCS) Summary
 Total Metals

Sample Name: Quality Control Sample
Lab Code:
Test Notes: Tort-3 Solids = 97.4%

Units: ng/g
Basis: Dry

Source: TORT-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	292	252	86	70-130	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV1
Lab Code: K2508064-001

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.97	mg/Kg	0.020	0.004	5	08/27/25 11:25	08/25/25	
Copper	6020B	7.98	mg/Kg	0.098	0.035	5	08/27/25 11:25	08/25/25	
Lead	6020B	0.535	mg/Kg	0.020	0.003	5	08/27/25 11:25	08/25/25	
Selenium	6020B	6.04	mg/Kg	0.98	0.03	5	08/27/25 11:25	08/25/25	
Silver	6020B	0.047	mg/Kg	0.020	0.002	5	08/27/25 11:25	08/25/25	
Zinc	6020B	269	mg/Kg	0.49	0.16	5	08/27/25 11:25	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV2
Lab Code: K2508064-002

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.02	mg/Kg	0.020	0.004	5	08/27/25 11:31	08/25/25	
Copper	6020B	4.57	mg/Kg	0.099	0.036	5	08/27/25 11:31	08/25/25	
Lead	6020B	0.215	mg/Kg	0.020	0.003	5	08/27/25 11:31	08/25/25	
Selenium	6020B	5.79	mg/Kg	0.99	0.03	5	08/27/25 11:31	08/25/25	
Silver	6020B	0.033	mg/Kg	0.020	0.002	5	08/27/25 11:31	08/25/25	
Zinc	6020B	189	mg/Kg	0.49	0.16	5	08/27/25 11:31	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV3
Lab Code: K2508064-003

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.43	mg/Kg	0.020	0.004	5	08/27/25 11:33	08/25/25	
Copper	6020B	5.14	mg/Kg	0.099	0.036	5	08/27/25 11:33	08/25/25	
Lead	6020B	0.219	mg/Kg	0.020	0.003	5	08/27/25 11:33	08/25/25	
Selenium	6020B	5.49	mg/Kg	0.99	0.03	5	08/27/25 11:33	08/25/25	
Silver	6020B	0.032	mg/Kg	0.020	0.002	5	08/27/25 11:33	08/25/25	
Zinc	6020B	255	mg/Kg	0.50	0.16	5	08/27/25 11:33	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV4
Lab Code: K2508064-004

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.841	mg/Kg	0.020	0.004	5	08/27/25 11:35	08/25/25	
Copper	6020B	3.58	mg/Kg	0.098	0.035	5	08/27/25 11:35	08/25/25	
Lead	6020B	0.260	mg/Kg	0.020	0.003	5	08/27/25 11:35	08/25/25	
Selenium	6020B	6.23	mg/Kg	0.98	0.03	5	08/27/25 11:35	08/25/25	
Silver	6020B	0.022	mg/Kg	0.020	0.002	5	08/27/25 11:35	08/25/25	
Zinc	6020B	175	mg/Kg	0.49	0.16	5	08/27/25 11:35	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV5
Lab Code: K2508064-005

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.842	mg/Kg	0.020	0.004	5	08/27/25 11:37	08/25/25	
Copper	6020B	3.87	mg/Kg	0.098	0.035	5	08/27/25 11:37	08/25/25	
Lead	6020B	0.259	mg/Kg	0.020	0.003	5	08/27/25 11:37	08/25/25	
Selenium	6020B	5.60	mg/Kg	0.98	0.03	5	08/27/25 11:37	08/25/25	
Silver	6020B	0.036	mg/Kg	0.020	0.002	5	08/27/25 11:37	08/25/25	
Zinc	6020B	212	mg/Kg	0.49	0.16	5	08/27/25 11:37	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV6
Lab Code: K2508064-006

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.845	mg/Kg	0.020	0.004	5	08/27/25 11:39	08/25/25	
Copper	6020B	2.98	mg/Kg	0.10	0.04	5	08/27/25 11:39	08/25/25	
Lead	6020B	0.176	mg/Kg	0.020	0.003	5	08/27/25 11:39	08/25/25	
Selenium	6020B	7.1	mg/Kg	1.0	0.03	5	08/27/25 11:39	08/25/25	
Silver	6020B	0.015 J	mg/Kg	0.020	0.002	5	08/27/25 11:39	08/25/25	
Zinc	6020B	176	mg/Kg	0.50	0.16	5	08/27/25 11:39	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV7
Lab Code: K2508064-007

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.17	mg/Kg	0.020	0.004	5	08/27/25 11:41	08/25/25	
Copper	6020B	4.79	mg/Kg	0.099	0.036	5	08/27/25 11:41	08/25/25	
Lead	6020B	0.355	mg/Kg	0.020	0.003	5	08/27/25 11:41	08/25/25	
Selenium	6020B	5.79	mg/Kg	0.99	0.03	5	08/27/25 11:41	08/25/25	
Silver	6020B	0.019 J	mg/Kg	0.020	0.002	5	08/27/25 11:41	08/25/25	
Zinc	6020B	243	mg/Kg	0.50	0.16	5	08/27/25 11:41	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV8
Lab Code: K2508064-008

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.74	mg/Kg	0.020	0.004	5	08/27/25 11:15	08/25/25	
Copper	6020B	5.64	mg/Kg	0.099	0.036	5	08/27/25 11:15	08/25/25	
Lead	6020B	0.801	mg/Kg	0.020	0.003	5	08/27/25 11:15	08/25/25	
Selenium	6020B	5.93	mg/Kg	0.99	0.03	5	08/27/25 11:15	08/25/25	
Silver	6020B	0.044	mg/Kg	0.020	0.002	5	08/27/25 11:15	08/25/25	
Zinc	6020B	248	mg/Kg	0.50	0.16	5	08/27/25 11:15	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV9
Lab Code: K2508064-009

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.95	mg/Kg	0.020	0.004	5	08/27/25 11:43	08/25/25	
Copper	6020B	6.12	mg/Kg	0.098	0.035	5	08/27/25 11:43	08/25/25	
Lead	6020B	0.327	mg/Kg	0.020	0.003	5	08/27/25 11:43	08/25/25	
Selenium	6020B	5.98	mg/Kg	0.98	0.03	5	08/27/25 11:43	08/25/25	
Silver	6020B	0.038	mg/Kg	0.020	0.002	5	08/27/25 11:43	08/25/25	
Zinc	6020B	233	mg/Kg	0.49	0.16	5	08/27/25 11:43	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC54DV10
Lab Code: K2508064-010

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.525	mg/Kg	0.020	0.004	5	08/27/25 11:46	08/25/25	
Copper	6020B	3.79	mg/Kg	0.099	0.036	5	08/27/25 11:46	08/25/25	
Lead	6020B	0.260	mg/Kg	0.020	0.003	5	08/27/25 11:46	08/25/25	
Selenium	6020B	4.85	mg/Kg	0.99	0.03	5	08/27/25 11:46	08/25/25	
Silver	6020B	0.019 J	mg/Kg	0.020	0.002	5	08/27/25 11:46	08/25/25	
Zinc	6020B	165	mg/Kg	0.49	0.16	5	08/27/25 11:46	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV1
Lab Code: K2508064-011

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.64	mg/Kg	0.020	0.004	5	08/27/25 11:48	08/25/25	
Copper	6020B	5.51	mg/Kg	0.099	0.036	5	08/27/25 11:48	08/25/25	
Lead	6020B	0.148	mg/Kg	0.020	0.003	5	08/27/25 11:48	08/25/25	
Selenium	6020B	5.48	mg/Kg	0.99	0.03	5	08/27/25 11:48	08/25/25	
Silver	6020B	0.023	mg/Kg	0.020	0.002	5	08/27/25 11:48	08/25/25	
Zinc	6020B	267	mg/Kg	0.50	0.16	5	08/27/25 11:48	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV2
Lab Code: K2508064-012

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.51	mg/Kg	0.020	0.004	5	08/27/25 11:50	08/25/25	
Copper	6020B	6.18	mg/Kg	0.10	0.04	5	08/27/25 11:50	08/25/25	
Lead	6020B	0.167	mg/Kg	0.020	0.003	5	08/27/25 11:50	08/25/25	
Selenium	6020B	5.1	mg/Kg	1.0	0.03	5	08/27/25 11:50	08/25/25	
Silver	6020B	0.036	mg/Kg	0.020	0.002	5	08/27/25 11:50	08/25/25	
Zinc	6020B	247	mg/Kg	0.50	0.16	5	08/27/25 11:50	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV3
Lab Code: K2508064-013

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.41	mg/Kg	0.020	0.004	5	08/27/25 12:01	08/25/25	
Copper	6020B	4.95	mg/Kg	0.099	0.036	5	08/27/25 12:01	08/25/25	
Lead	6020B	0.158	mg/Kg	0.020	0.003	5	08/27/25 12:01	08/25/25	
Selenium	6020B	5.58	mg/Kg	0.99	0.03	5	08/27/25 12:01	08/25/25	
Silver	6020B	0.027	mg/Kg	0.020	0.002	5	08/27/25 12:01	08/25/25	
Zinc	6020B	308	mg/Kg	0.50	0.16	5	08/27/25 12:01	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV4
Lab Code: K2508064-014

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.84	mg/Kg	0.020	0.004	5	08/27/25 12:03	08/25/25	
Copper	6020B	6.66	mg/Kg	0.099	0.036	5	08/27/25 12:03	08/25/25	
Lead	6020B	0.137	mg/Kg	0.020	0.003	5	08/27/25 12:03	08/25/25	
Selenium	6020B	5.87	mg/Kg	0.99	0.03	5	08/27/25 12:03	08/25/25	
Silver	6020B	0.018 J	mg/Kg	0.020	0.002	5	08/27/25 12:03	08/25/25	
Zinc	6020B	270	mg/Kg	0.50	0.16	5	08/27/25 12:03	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV5
Lab Code: K2508064-015

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.64	mg/Kg	0.020	0.004	5	08/27/25 12:05	08/25/25	
Copper	6020B	6.21	mg/Kg	0.099	0.036	5	08/27/25 12:05	08/25/25	
Lead	6020B	0.324	mg/Kg	0.020	0.003	5	08/27/25 12:05	08/25/25	
Selenium	6020B	6.99	mg/Kg	0.99	0.03	5	08/27/25 12:05	08/25/25	
Silver	6020B	0.037	mg/Kg	0.020	0.002	5	08/27/25 12:05	08/25/25	
Zinc	6020B	225	mg/Kg	0.50	0.16	5	08/27/25 12:05	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV6
Lab Code: K2508064-016

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.31	mg/Kg	0.020	0.004	5	08/27/25 12:07	08/25/25	
Copper	6020B	6.19	mg/Kg	0.099	0.036	5	08/27/25 12:07	08/25/25	
Lead	6020B	0.148	mg/Kg	0.020	0.003	5	08/27/25 12:07	08/25/25	
Selenium	6020B	5.60	mg/Kg	0.99	0.03	5	08/27/25 12:07	08/25/25	
Silver	6020B	0.028	mg/Kg	0.020	0.002	5	08/27/25 12:07	08/25/25	
Zinc	6020B	240	mg/Kg	0.50	0.16	5	08/27/25 12:07	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV7
Lab Code: K2508064-017

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.786	mg/Kg	0.020	0.004	5	08/27/25 12:09	08/25/25	
Copper	6020B	4.72	mg/Kg	0.098	0.035	5	08/27/25 12:09	08/25/25	
Lead	6020B	0.309	mg/Kg	0.020	0.003	5	08/27/25 12:09	08/25/25	
Selenium	6020B	5.36	mg/Kg	0.98	0.03	5	08/27/25 12:09	08/25/25	
Silver	6020B	0.043	mg/Kg	0.020	0.002	5	08/27/25 12:09	08/25/25	
Zinc	6020B	189	mg/Kg	0.49	0.16	5	08/27/25 12:09	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV8
Lab Code: K2508064-018

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.959	mg/Kg	0.020	0.004	5	08/27/25 12:11	08/25/25	
Copper	6020B	4.87	mg/Kg	0.10	0.04	5	08/27/25 12:11	08/25/25	
Lead	6020B	0.245	mg/Kg	0.020	0.003	5	08/27/25 12:11	08/25/25	
Selenium	6020B	5.75	mg/Kg	1.0	0.03	5	08/27/25 12:11	08/25/25	
Silver	6020B	0.018 J	mg/Kg	0.020	0.002	5	08/27/25 12:11	08/25/25	
Zinc	6020B	216	mg/Kg	0.50	0.16	5	08/27/25 12:11	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV9
Lab Code: K2508064-019

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.12	mg/Kg	0.020	0.004	5	08/27/25 12:13	08/25/25	
Copper	6020B	4.12	mg/Kg	0.099	0.036	5	08/27/25 12:13	08/25/25	
Lead	6020B	0.203	mg/Kg	0.020	0.003	5	08/27/25 12:13	08/25/25	
Selenium	6020B	5.33	mg/Kg	0.99	0.03	5	08/27/25 12:13	08/25/25	
Silver	6020B	0.024	mg/Kg	0.020	0.002	5	08/27/25 12:13	08/25/25	
Zinc	6020B	199	mg/Kg	0.49	0.16	5	08/27/25 12:13	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMGC63DV10
Lab Code: K2508064-020

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.98	mg/Kg	0.020	0.004	5	08/27/25 12:15	08/25/25	
Copper	6020B	5.77	mg/Kg	0.098	0.035	5	08/27/25 12:15	08/25/25	
Lead	6020B	0.152	mg/Kg	0.020	0.003	5	08/27/25 12:15	08/25/25	
Selenium	6020B	5.46	mg/Kg	0.98	0.03	5	08/27/25 12:15	08/25/25	
Silver	6020B	0.032	mg/Kg	0.020	0.002	5	08/27/25 12:15	08/25/25	
Zinc	6020B	248	mg/Kg	0.49	0.16	5	08/27/25 12:15	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: Method Blank
Lab Code: KQ2515045-01

Service Request: K2508064
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.004 J	mg/Kg	0.020	0.004	5	08/27/25 11:06	08/25/25	
Copper	6020B	ND U	mg/Kg	0.10	0.04	5	08/27/25 11:06	08/25/25	
Lead	6020B	0.004 J	mg/Kg	0.020	0.003	5	08/27/25 11:06	08/25/25	
Selenium	6020B	ND U	mg/Kg	1.0	0.03	5	08/27/25 11:06	08/25/25	
Silver	6020B	ND U	mg/Kg	0.020	0.002	5	08/27/25 11:06	08/25/25	
Zinc	6020B	ND U	mg/Kg	0.50	0.16	5	08/27/25 11:06	08/25/25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25
Date Analyzed: 08/27/25

Replicate Sample Summary
Total Metals

Sample Name: 2025GCMGC54DV8
Lab Code: K2508064-008

Units: mg/Kg
Basis: Dry

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2515045-05 Result, Average, RPD, RPD Limit. Rows include Cadmium, Copper, Lead, Selenium, Silver, and Zinc.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508064
Date Collected: 07/07/25
Date Received: 08/13/25
Date Analyzed: 08/27/25
Date Extracted: 08/25/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMGC54DV8
Lab Code: K2508064-008
Analysis Method: 6020B
Prep Method: PSEP Metals

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2515045-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	1.74	6.70	4.95	100	75-125
Copper	5.64	30.5	24.8	101	75-125
Lead	0.801	48.2	49.5	96	75-125
Selenium	5.93	23.0	16.5	103	75-125
Silver	0.044	4.87	4.95	98	75-125
Zinc	248	301	49.5	108 #	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508064
Date Analyzed: 08/27/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2515045-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	6020B	4.83	5.00	97	80-120
Copper	6020B	24.4	25.0	98	80-120
Lead	6020B	49.1	50.0	98	80-120
Selenium	6020B	16.8	16.7	101	80-120
Silver	6020B	4.88	5.00	98	80-120
Zinc	6020B	50.3	50.0	101	80-120

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508064
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515045-03
Test Notes: Dorm-5 Solids = 95.8%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Dorm-5

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	0.148	0.151	102	0.113 - 0.186	
Copper	PSEP Tissue	6020B	3.30	3.24	98	2.58 - 4.04	
Lead	PSEP Tissue	6020B	0.058	0.064	110	0.042 - 0.077	
Selenium	PSEP Tissue	6020B	2.40	2.58	108	1.83 - 3.01	
Silver	PSEP Tissue	6020B	0.135	0.136	101	0.097 - 0.179	
Zinc	PSEP Tissue	6020B	28.7	29.3	102	22.2 - 35.6	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508064
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515045-04
Test Notes: Tort-3 Solids = 97.4%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Tort-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	42.3	40.3	95	32.4-52.9	
Copper	PSEP Tissue	6020B	497	470	95	380-623	
Lead	PSEP Tissue	6020B	0.225	0.203	90	0.166-0.292	
Selenium	PSEP Tissue	6020B	10.9	11.3	104	7.9-14.3	
Zinc	PSEP Tissue	6020B	136	132	97	104-170	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508064

Metals

Prep Method: PSEP Metals
Analytical Method: 6020B

Extraction Lot: 462959
Extraction Date: 08/25/25 15:56

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
2025GCMGC54DV1	K2508064-001	7/7/25	8/13/25	0.30600 g	30 mL	
2025GCMGC54DV2	K2508064-002	7/7/25	8/13/25	0.30400 g	30 mL	
2025GCMGC54DV3	K2508064-003	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC54DV4	K2508064-004	7/7/25	8/13/25	0.3060 g	30 mL	
2025GCMGC54DV5	K2508064-005	7/7/25	8/13/25	0.30700 g	30 mL	
2025GCMGC54DV6	K2508064-006	7/7/25	8/13/25	0.30000 g	30 mL	
2025GCMGC54DV7	K2508064-007	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC54DV8	K2508064-008	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC54DV9	K2508064-009	7/7/25	8/13/25	0.30500 g	30 mL	
2025GCMGC54DV10	K2508064-010	7/7/25	8/13/25	0.30400 g	30 mL	
2025GCMGC63DV1	K2508064-011	7/7/25	8/13/25	0.30300 g	30 mL	
2025GCMGC63DV2	K2508064-012	7/7/25	8/13/25	0.30000 g	30 mL	
2025GCMGC63DV3	K2508064-013	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC63DV4	K2508064-014	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC63DV5	K2508064-015	7/7/25	8/13/25	0.30200 g	30 mL	
2025GCMGC63DV6	K2508064-016	7/7/25	8/13/25	0.30300 g	30 mL	
2025GCMGC63DV7	K2508064-017	7/7/25	8/13/25	0.30500 g	30 mL	
2025GCMGC63DV8	K2508064-018	7/7/25	8/13/25	0.30100 g	30 mL	
2025GCMGC63DV9	K2508064-019	7/7/25	8/13/25	0.30400 g	30 mL	
2025GCMGC63DV10	K2508064-020	7/7/25	8/13/25	0.30600 g	30 mL	
Method Blank	KQ2515045-01MB	NA	NA	0.30000 g	30 mL	
Lab Control Sample	KQ2515045-02LCS	NA	NA	0.30000 g	30 mL	
Standard Reference Material	KQ2515045-03SRM	7/7/25	8/13/25	0.30500 g	30 mL	
Standard Reference Material	KQ2515045-04SRM	7/7/25	8/13/25	0.30000 g	30 mL	
Duplicate	KQ2515045-05DUP	7/7/25	8/13/25	0.30400 g	30 mL	
Matrix Spike	KQ2515045-06MS	7/7/25	8/13/25	0.30300 g	30 mL	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 08/27/25 10:35	Cadmium	6020B	891163	12.7	12.5	102	90-110
	Copper	6020B	891163	12.4	12.5	99	90-110
	Lead	6020B	891163	24.7	25.0	99	90-110
	Selenium	6020B	891163	25.4	25.0	102	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110
CCV 08/27/25 10:37	Cadmium	6020B	891163	25.4	25.0	101	90-110
	Copper	6020B	891163	26.2	25.0	105	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	25.1	25.0	100	90-110
	Silver	6020B	891163	12.7	12.5	101	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110
CCV 08/27/25 11:27	Cadmium	6020B	891163	25.1	25.0	100	90-110
	Copper	6020B	891163	25.5	25.0	102	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	24.9	25.0	100	90-110
	Silver	6020B	891163	12.6	12.5	101	90-110
	Zinc	6020B	891163	25.9	25.0	104	90-110
CCV 08/27/25 11:57	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	24.3	25.0	97	90-110
	Selenium	6020B	891163	25.3	25.0	101	90-110
	Silver	6020B	891163	12.8	12.5	102	90-110
	Zinc	6020B	891163	27.0	25.0	108	90-110
CCV 08/27/25 12:17	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	25.6	25.0	102	90-110
	Lead	6020B	891163	24.0	25.0	96	90-110
	Selenium	6020B	891163	26.0	25.0	104	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
ICB 08/27/25 10:39	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.007	J
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 10:41	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:29	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:59	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.008	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 12:19	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.012	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICVT								
	Cadmium	6020B	891163	0.037	0.04	92	80-120	08/27/25 10:50
	Copper	6020B	891163	0.23	0.2	114	80-120	08/27/25 10:50
	Lead	6020B	891163	0.038	0.04	95	80-120	08/27/25 10:50
	Selenium	6020B	891163	2.1	2.0	103	80-120	08/27/25 10:50
	Silver	6020B	891163	0.041	0.04	102	80-120	08/27/25 10:50
	Zinc	6020B	891163	1.0	1.0	104	80-120	08/27/25 10:50

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	0.415	-	-	-	08/27/25 10:52
Copper	6020B	891163	0.55	-	-	-	08/27/25 10:52
Lead	6020B	891163	0.243	-	-	-	08/27/25 10:52
Selenium	6020B	891163	0.03	-	-	-	08/27/25 10:52
Silver	6020B	891163	0.011	-	-	-	08/27/25 10:52
Zinc	6020B	891163	0.7	-	-	-	08/27/25 10:52

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	25.3	25.0	101	80-120	08/27/25 10:54
Copper	6020B	891163	49.0	50.0	98	80-120	08/27/25 10:54
Lead	6020B	891163	0.231	-	-	-	08/27/25 10:54
Selenium	6020B	891163	25.6	25.0	102	80-120	08/27/25 10:54
Silver	6020B	891163	12.4	12.5	100	80-120	08/27/25 10:54
Zinc	6020B	891163	25.0	25.0	100	80-120	08/27/25 10:54

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K2508064-008A	Cadmium	6020B	891163	3.50	54.4	50.0	102	75-125	08/27/25 11:21
	Copper	6020B	891163	11.3	64.0	50.0	105	75-125	08/27/25 11:21
	Lead	6020B	891163	1.61	51.9	50.0	101	75-125	08/27/25 11:21
	Selenium	6020B	891163	12	66	50	108	75-125	08/27/25 11:21
	Silver	6020B	891163	0.09 J	5.28	5.00	104	75-125	08/27/25 11:21
	Zinc	6020B	891163	499	560	50.0	122 #	75-125	08/27/25 11:21

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508064

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K2508064-008SDL								
	Cadmium	6020B	891163	17.5	17.3	1	10	08/27/25 11:19
	Copper	6020B	891163	56.7	57.8	2	10	08/27/25 11:19
	Lead	6020B	891163	8.1	8.2	1	10	08/27/25 11:19
	Selenium	6020B	891163	60	56	6	10	08/27/25 11:19
	Silver	6020B	891163	0.4	0.5 J	19	10	08/27/25 11:19
	Zinc	6020B	891163	2490	2520	1	10	08/27/25 11:19

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

Detection Limits

Instrument: K-ICP-MS-06

Matrix: Animal Tissue

Analyte	Mass	Units	MRL	MDL	Method
Cadmium	111	ug/L	0.04	0.0076	6020B
Copper	65	ug/L	0.2	0.072	6020B
Lead	208	ug/L	0.04	0.006	6020B
Selenium	78	ug/L	2	0.052	6020B
Silver	107	ug/L	0.04	0.0044	6020B
Zinc	66	ug/L	1	0.32	6020B

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

ICP Linear Range (Quarterly)

Instrument: K-ICP-MS-06

Analyte	Concentration (ug/L)	Method
Cadmium 111	9000	6020B
Copper 65	4500	6020B
Lead 208	4500	6020B
Selenium 78	9000	6020B
Silver 107	450	6020B
Zinc 66	9000	6020B

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	1	08/27/25 10:30						
ZZZZZZ	1	08/27/25 10:32						
ICV	1	08/27/25 10:35	X	X	X	X	X	X
CCV	1	08/27/25 10:37	X	X	X	X	X	X
ICB	1	08/27/25 10:39	X	X	X	X	X	X
CCB	1	08/27/25 10:41	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:43						
LLICVT	1	08/27/25 10:50	X	X	X	X	X	X
ICSA	1	08/27/25 10:52	X	X	X	X	X	X
ICSAB	1	08/27/25 10:54	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:56						
ZZZZZZ	1	08/27/25 10:58						
KQ2515045-01MB	5	08/27/25 11:06	X	X	X	X	X	X
KQ2515045-02LCS	5	08/27/25 11:08	X	X	X	X	X	X
KQ2515045-03SRM	5	08/27/25 11:10	X	X	X	X	X	X
KQ2515045-04SRM	5	08/27/25 11:13	X	X	X	X	X	X
K2508064-008	5	08/27/25 11:15	X	X	X	X	X	X
K2508064-008DUP	5	08/27/25 11:17	X	X	X	X	X	X
K2508064-008SDL	25	08/27/25 11:19	X	X	X	X	X	X
K2508064-008PS	5	08/27/25 11:21	X	X	X	X	X	X
K2508064-008MS	5	08/27/25 11:23	X	X	X	X	X	X
K2508064-001	5	08/27/25 11:25	X	X	X	X	X	X
CCV	1	08/27/25 11:27	X	X	X	X	X	X
CCB	1	08/27/25 11:29	X	X	X	X	X	X
K2508064-002	5	08/27/25 11:31	X	X	X	X	X	X
K2508064-003	5	08/27/25 11:33	X	X	X	X	X	X
K2508064-004	5	08/27/25 11:35	X	X	X	X	X	X
K2508064-005	5	08/27/25 11:37	X	X	X	X	X	X
K2508064-006	5	08/27/25 11:39	X	X	X	X	X	X
K2508064-007	5	08/27/25 11:41	X	X	X	X	X	X
K2508064-009	5	08/27/25 11:43	X	X	X	X	X	X
K2508064-010	5	08/27/25 11:46	X	X	X	X	X	X
K2508064-011	5	08/27/25 11:48	X	X	X	X	X	X
K2508064-012	5	08/27/25 11:50	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 11:52						
CCV	1	08/27/25 11:57	X	X	X	X	X	X
CCB	1	08/27/25 11:59	X	X	X	X	X	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
K2508064-013	5	08/27/25 12:01	X	X	X	X	X	X
K2508064-014	5	08/27/25 12:03	X	X	X	X	X	X
K2508064-015	5	08/27/25 12:05	X	X	X	X	X	X
K2508064-016	5	08/27/25 12:07	X	X	X	X	X	X
K2508064-017	5	08/27/25 12:09	X	X	X	X	X	X
K2508064-018	5	08/27/25 12:11	X	X	X	X	X	X
K2508064-019	5	08/27/25 12:13	X	X	X	X	X	X
K2508064-020	5	08/27/25 12:15	X	X	X	X	X	X
CCV	1	08/27/25 12:17	X	X	X	X	X	X
CCB	1	08/27/25 12:19	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 12:21						
ZZZZZZ	5	08/27/25 12:24						
ZZZZZZ	5	08/27/25 12:26						
ZZZZZZ	5	08/27/25 12:28						
ZZZZZZ	5	08/27/25 12:30						
ZZZZZZ	5	08/27/25 12:32						
ZZZZZZ	25	08/27/25 12:34						
ZZZZZZ	5	08/27/25 12:36						
ZZZZZZ	5	08/27/25 12:38						
ZZZZZZ	5	08/27/25 12:40						
ZZZZZZ	1	08/27/25 12:42						
ZZZZZZ	1	08/27/25 12:44						
ZZZZZZ	5	08/27/25 12:46						
ZZZZZZ	5	08/27/25 12:48						
ZZZZZZ	5	08/27/25 12:50						
ZZZZZZ	5	08/27/25 12:52						
ZZZZZZ	5	08/27/25 12:54						
ZZZZZZ	5	08/27/25 12:56						
ZZZZZZ	5	08/27/25 12:58						
ZZZZZZ	5	08/27/25 13:01						
ZZZZZZ	5	08/27/25 13:03						
ZZZZZZ	5	08/27/25 13:05						
ZZZZZZ	1	08/27/25 13:07						
ZZZZZZ	1	08/27/25 13:09						
ZZZZZZ	5	08/27/25 13:11						
ZZZZZZ	5	08/27/25 13:13						
ZZZZZZ	5	08/27/25 13:15						

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 10:30				
ZZZZZZ	08/27/25 10:32				
ICV	08/27/25 10:35	97	96	97	100
CCV	08/27/25 10:37	95	95	97	99
ICB	08/27/25 10:39	97	97	99	100
CCB	08/27/25 10:41	98	98	100	101
ZZZZZZ	08/27/25 10:43				
LLICVT	08/27/25 10:50	95	100	101	102
ICSA	08/27/25 10:52	89	90	91	94
ICSAB	08/27/25 10:54	88	90	92	97
ZZZZZZ	08/27/25 10:56				
ZZZZZZ	08/27/25 10:58				
KQ2515045-01MB	08/27/25 11:06	93	97	99	99
KQ2515045-02LCS	08/27/25 11:08	93	92	97	98
KQ2515045-03SRM	08/27/25 11:10	92	94	96	99
KQ2515045-04SRM	08/27/25 11:13	88	93	94	98
K2508064-008	08/27/25 11:15	93	93	96	99
K2508064-008DUP	08/27/25 11:17	93	93	96	100
K2508064-008SDL	08/27/25 11:19	93	92	96	98
K2508064-008PS	08/27/25 11:21	92	92	96	98
K2508064-008MS	08/27/25 11:23	93	94	97	101
K2508064-001	08/27/25 11:25	92	94	96	99
CCV	08/27/25 11:27	93	94	96	98
CCB	08/27/25 11:29	94	95	98	98
K2508064-002	08/27/25 11:31	100	93	97	100
K2508064-003	08/27/25 11:33	95	93	97	100
K2508064-004	08/27/25 11:35	93	94	96	100
K2508064-005	08/27/25 11:37	95	95	97	99
K2508064-006	08/27/25 11:39	94	95	98	101
K2508064-007	08/27/25 11:41	94	95	98	101
K2508064-009	08/27/25 11:43	95	95	98	99
K2508064-010	08/27/25 11:46	95	97	98	100
K2508064-011	08/27/25 11:48	93	95	97	100
K2508064-012	08/27/25 11:50	93	93	95	98
ZZZZZZ	08/27/25 11:52				
CCV	08/27/25 11:57	92	90	94	97
CCB	08/27/25 11:59	93	92	95	98

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508064

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
K2508064-013	08/27/25 12:01	92	88	92	95
K2508064-014	08/27/25 12:03	90	90	93	98
K2508064-015	08/27/25 12:05	80	89	92	95
K2508064-016	08/27/25 12:07	91	91	93	98
K2508064-017	08/27/25 12:09	92	90	94	98
K2508064-018	08/27/25 12:11	91	90	91	96
K2508064-019	08/27/25 12:13	88	90	93	98
K2508064-020	08/27/25 12:15	91	88	93	96
CCV	08/27/25 12:17	90	89	91	95
CCB	08/27/25 12:19	91	87	92	95
ZZZZZZ	08/27/25 12:21				
ZZZZZZ	08/27/25 12:24				
ZZZZZZ	08/27/25 12:26				
ZZZZZZ	08/27/25 12:28				
ZZZZZZ	08/27/25 12:30				
ZZZZZZ	08/27/25 12:32				
ZZZZZZ	08/27/25 12:34				
ZZZZZZ	08/27/25 12:36				
ZZZZZZ	08/27/25 12:38				
ZZZZZZ	08/27/25 12:40				
ZZZZZZ	08/27/25 12:42				
ZZZZZZ	08/27/25 12:44				
ZZZZZZ	08/27/25 12:46				
ZZZZZZ	08/27/25 12:48				
ZZZZZZ	08/27/25 12:50				
ZZZZZZ	08/27/25 12:52				
ZZZZZZ	08/27/25 12:54				
ZZZZZZ	08/27/25 12:56				
ZZZZZZ	08/27/25 12:58				
ZZZZZZ	08/27/25 13:01				
ZZZZZZ	08/27/25 13:03				
ZZZZZZ	08/27/25 13:05				
ZZZZZZ	08/27/25 13:07				
ZZZZZZ	08/27/25 13:09				
ZZZZZZ	08/27/25 13:11				
ZZZZZZ	08/27/25 13:13				
ZZZZZZ	08/27/25 13:15				



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K2508064
Test: Frz Dry
Method: Frz Dry

Run #: 890205
Balance ID: K-Balance-53

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Animal Tissue	K2508064-001	84.145	7.690	85.873	1.73	22.5	
Animal Tissue	K2508064-002	83.889	11.308	86.655	2.77	24.5	
Animal Tissue	K2508064-003	84.299	8.142	86.167	1.87	22.9	
Animal Tissue	K2508064-004	84.718	6.752	86.187	1.47	21.8	
Animal Tissue	K2508064-005	84.835	9.138	86.919	2.08	22.8	
Animal Tissue	K2508064-006	84.844	14.699	88.402	3.56	24.2	
Animal Tissue	K2508064-007	83.488	7.485	85.147	1.66	22.2	
Animal Tissue	K2508064-008	83.374	21.897	88.680	5.31	24.2	
Animal Tissue	K2508064-009	85.024	8.419	86.929	1.91	22.6	
Animal Tissue	K2508064-010	83.552	12.919	86.666	3.11	24.1	
Animal Tissue	K2508064-011	85.058	7.502	86.652	1.59	21.2	
Animal Tissue	K2508064-012	84.813	8.471	86.572	1.76	20.8	
Animal Tissue	K2508064-013	85.074	6.200	86.376	1.30	21.0	
Animal Tissue	K2508064-014	84.455	4.780	85.459	1.00	21.0	
Animal Tissue	K2508064-015	85.209	7.168	86.774	1.57	21.8	
Animal Tissue	K2508064-016	84.418	9.507	86.501	2.08	21.9	
Animal Tissue	K2508064-017	84.251	12.432	87.118	2.87	23.1	
Animal Tissue	K2508064-018	85.280	9.730	87.369	2.09	21.5	
Animal Tissue	K2508064-019	84.535	6.425	85.960	1.43	22.2	
Animal Tissue	K2508064-020	84.289	8.720	86.280	1.99	22.8	

FreezeDryer ID	Date In	Time In	Date Out	Time Out	Thermometer ID
FreezeDry	8/20/2025	16:34	8/21/2025	16:19	

Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
-----------------	------------------------	----------------------	-------------------	-------------------	-----------------	-----------------

Comments: CCL 8/19/25, Reviewed 8/26/25 KL



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 462959
 Team: Metals/CLUKKEN

Prep Workflow: MetDigTissMS
 Prep Method: PSEP Metals

Status: Prepped
 Prep Date/Time: 8/25/25 15:56

Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ2515045-01	MB		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
2	KQ2515045-02	LCS		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
3	KQ2515045-03	SRM		6020B/Metals T		Tissue	0.30500g	30.00mL	15% HNO3
4	KQ2515045-04	SRM		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
5	K2508064-001	2025GCMGC54DV1	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
6	K2508064-002	2025GCMGC54DV2	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
7	K2508064-003	2025GCMGC54DV3	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
8	K2508064-004	2025GCMGC54DV4	.02	6020B/Metals T		Animal Tissue	0.3060g	30.00mL	15% HNO3
9	K2508064-005	2025GCMGC54DV5	.02	6020B/Metals T		Animal Tissue	0.30700g	30.00mL	15% HNO3
10	K2508064-006	2025GCMGC54DV6	.02	6020B/Metals T		Animal Tissue	0.30000g	30.00mL	15% HNO3
11	K2508064-007	2025GCMGC54DV7	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
12	K2508064-008	2025GCMGC54DV8	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
13	KQ2515045-05	K2508064-008 DUP	.02	6020B/Metals T		Tissue	0.30400g	30.00mL	15% HNO3
14	KQ2515045-06	K2508064-008 MS	.02	6020B/Metals T		Tissue	0.30300g	30.00mL	15% HNO3
15	K2508064-009	2025GCMGC54DV9	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3
16	K2508064-010	2025GCMGC54DV10	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
17	K2508064-011	2025GCMGC63DV1	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
18	K2508064-012	2025GCMGC63DV2	.02	6020B/Metals T		Animal Tissue	0.30000g	30.00mL	15% HNO3
19	K2508064-013	2025GCMGC63DV3	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
20	K2508064-014	2025GCMGC63DV4	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
21	K2508064-015	2025GCMGC63DV5	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
22	K2508064-016	2025GCMGC63DV6	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
23	K2508064-017	2025GCMGC63DV7	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3
24	K2508064-018	2025GCMGC63DV8	.02	6020B/Metals T		Animal Tissue	0.30100g	30.00mL	15% HNO3
25	K2508064-019	2025GCMGC63DV9	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
26	K2508064-020	2025GCMGC63DV10	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3

Spiking Solutions

Name: K-MET DORM-5	Inventory ID 226265	Logbook Ref: DORM-5	Expires On: 08/01/2026
--------------------	---------------------	---------------------	------------------------

KQ2515045-03 0.30g

Name: K-MET TORT-3	Inventory ID 237236	Logbook Ref: K-MET TORT-3	Expires On: 04/01/2026
--------------------	---------------------	---------------------------	------------------------

KQ2515045-04 0.30g

Preparation Information Benchsheet

Prep Run#: 462959
Team: Metals/CLUKKEN

Prep Workflow: MetDigTissMS
Prep Method: PSEP Metals

Status: Prepped
Prep Date/Time: 8/25/25 15:56

Name: K-MET SS4	Inventory ID 242144	Logbook Ref: K-MET SS4	Expires On: 12/31/2025
-----------------	---------------------	------------------------	------------------------

KQ2515045-02 0.05mL KQ2515045-06 0.05mL

Name: K-MET SS1	Inventory ID 242383	Logbook Ref: MET4-98-F	Expires On: 03/24/2026
-----------------	---------------------	------------------------	------------------------

KQ2515045-02 0.30mL KQ2515045-06 0.30mL

Name: K-MET SS3	Inventory ID 242709	Logbook Ref: MET4-100-A	Expires On: 09/30/2025
-----------------	---------------------	-------------------------	------------------------

KQ2515045-02 0.05mL KQ2515045-06 0.05mL

Preparation Materials

K-MET 50ml Centrifuge Tube P7769389 (243033) K-MET HNO3 24K1862001 (240411)

Preparation Steps

Step: Digestion
Started: 8/25/25 15:56
Finished: 8/26/25 11:42
By: CLUKKEN

Comments

Preparation Equipment

K-Balance-53	Digestion	Date Checked	8/25/25	K-Metals-Oven-01	Digestion	Observed Temperature In	105 deg C
K-Metals-Oven-01	Digestion	Observed Temperature Out	105 deg C	K-Tissue Pipette 2	Digestion		

Comments: _____

Reviewed By: *ML* Date: 8/27/25

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1 *** Add after HNO3 and before ALS-89 when making the solution	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	100	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb***	50.0	1000ml	50	
V	100*	1000ml	50		
Zn	100*	1000ml	50		
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	10.0	500ml	20	
	Hg	6.00	500ml	12	
K-MET SS4	HNO3	25.0	500ml	-	
	B	25.0	500ml	50	
	Mo	50.0	500ml	100	
	U	10.0	500ml	20	
K-MET SS5	HNO3	25.0	500ml	-	
	K**	50.0	500ml	1000	
	Na**	50.0	500ml	1000	
	Mg**	50.0	500ml	1000	
	Ca**	50.0	500ml	1000	

K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.
 ** Denotes 10,000 ppm individual stock standards.

Standard	mLs of standard	ppm	Logbook #	Exp. Date

Preparation Information Benchsheet

Prep Run#: 462959
 Team: Metals/CLUKKEN
 Number of Copies to make: 1

Prep Workflow: MetDigTissMS
 Prep Method:

Status: Draft
 Prep Date/Time: 8/25/25 08:36 AM

#	Lab Code	Client ID	B#	√	Method / Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	KQ2515045-01	MB			6020B / Metals T	Tissue						
2	KQ2515045-02	LCS			6020B / Metals T	Tissue						
3	KQ2515045-03	SRM			6020B / Metals T	Tissue	0.305					
4	KQ2515045-04	SRM			6020B / Metals T	Tissue	0.300					
5	K2508064-001	2025GCMGC54DV1	.02		6020B / Metals T	Animal Tissue	0.306					
6	K2508064-002	2025GCMGC54DV2	.02		6020B / Metals T	Animal Tissue	0.304					
7	K2508064-003	2025GCMGC54DV3	.02		6020B / Metals T	Animal Tissue	0.302					
8	K2508064-004	2025GCMGC54DV4	.02		6020B / Metals T	Animal Tissue	0.306					
9	K2508064-005	2025GCMGC54DV5	.02		6020B / Metals T	Animal Tissue	0.307					
10	K2508064-006	2025GCMGC54DV6	.02		6020B / Metals T	Animal Tissue	0.300					
11	K2508064-007	2025GCMGC54DV7	.02		6020B / Metals T	Animal Tissue	0.302					
12	K2508064-008	2025GCMGC54DV8	.02		6020B / Metals T	Animal Tissue	0.302					
13	KQ2515045-05	K2508064-008 DUP	.02		6020B / Metals T	Tissue	0.304					
14	KQ2515045-06	K2508064-008 MS	.02		6020B / Metals T	Tissue	0.303					
15	K2508064-009	2025GCMGC54DV9	.02		6020B / Metals T	Animal Tissue	0.305					
16	K2508064-010	2025GCMGC54DV10	.02		6020B / Metals T	Animal Tissue	0.304					
17	K2508064-011	2025GCMGC63DV1	.02		6020B / Metals T	Animal Tissue	0.303					
18	K2508064-012	2025GCMGC63DV2	.02		6020B / Metals T	Animal Tissue	0.300					
19	K2508064-013	2025GCMGC63DV3	.02		6020B / Metals T	Animal Tissue	0.302					
20	K2508064-014	2025GCMGC63DV4	.02		6020B / Metals T	Animal Tissue	0.302					
21	K2508064-015	2025GCMGC63DV5	.02		6020B / Metals T	Animal Tissue	0.302					
22	K2508064-016	2025GCMGC63DV6	.02		6020B / Metals T	Animal Tissue	0.303					
23	K2508064-017	2025GCMGC63DV7	.02		6020B / Metals T	Animal Tissue	0.305					
24	K2508064-018	2025GCMGC63DV8	.02		6020B / Metals T	Animal Tissue	0.301					
25	K2508064-019	2025GCMGC63DV9	.02		6020B / Metals T	Animal Tissue	0.304					
26	K2508064-020	2025GCMGC63DV10	.02		6020B / Metals T	Animal Tissue	0.306					

Comments: 0.3mL 551, 0.05mL 553, 554

In 15:56 8/25/25 105
 Out 11:42 8/26/25 105

Surrogate ID: _____

Spike ID: _____

Witnessed By: _____

Analyst: _____

Assisted By: _____

Metals Digestion Sheet

StarLims Number:						462952
Method : 1631EApp.			Analysis for : CVAFS			
Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.408	40	0.02N BrCl
K2508064-001		x		0.404	40	0.02N BrCl
K2508064-002		x		0.403	40	0.02N BrCl
K2508064-003		x		0.402	40	0.02N BrCl
K2508064-004		x		0.406	40	0.02N BrCl
K2508064-005		x		0.404	40	0.02N BrCl
K2508064-006		x		0.405	40	0.02N BrCl
K2508064-006S		x		0.402	40	0.02N BrCl
K2508064-006SD		x		0.405	40	0.02N BrCl
K2508064-007		x		0.404	40	0.02N BrCl
K2508064-008		x		0.405	40	0.02N BrCl
K2508064-008S		x		0.404	40	0.02N BrCl
K2508064-008SD		x		0.406	40	0.02N BrCl
K2508064-009		x		0.405	40	0.02N BrCl
K2508064-010		x		0.406	40	0.02N BrCl
K2508064-011		x		0.402	40	0.02N BrCl
K2508064-012		x		0.406	40	0.02N BrCl
K2508064-013		x		0.401	40	0.02N BrCl
K2508064-014		x		0.403	40	0.02N BrCl
K2508064-015		x		0.402	40	0.02N BrCl
K2508064-016		x		0.402	40	0.02N BrCl
K2508064-017		x		0.401	40	0.02N BrCl
K2508064-018		x		0.403	40	0.02N BrCl
K2508064-019		x		0.403	40	0.02N BrCl
K2508064-020		x		0.403	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

BrCl = AF3-21-F

AF3-25-L (40ppb)

OPR: 0.05mL

Digestion Acid Mixture: AF3-24-D

1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID: 37

Comments: TORT-3 Solids: 97.4%

Fry dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 17

Time Digestion Started: 8:59 Dilution Completed: 13:29

Analyst <u>AA</u>	Date <u>8/25/25</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508064-001	0.4040	10	9.9	1.98
K2508064-002	0.4030	10	9.9	1.99
K2508064-003	0.4020	10	10.0	1.99
K2508064-004	0.4060	10	9.9	1.97
K2508064-005	0.4040	10	9.9	1.98
K2508064-006	0.4050	10	9.9	1.98
K2508064-006S	0.4020	10	10.0	1.99
K2508064-006SD	0.4050	10	9.9	1.98
K2508064-007	0.4040	10	9.9	1.98
K2508064-008	0.4050	10	9.9	1.98
K2508064-008S	0.4040	10	9.9	1.98
K2508064-008SD	0.4060	10	9.9	1.97
K2508064-009	0.4050	10	9.9	1.98
K2508064-010	0.4060	10	9.9	1.97
K2508064-011	0.4020	10	10.0	1.99
K2508064-012	0.4060	10	9.9	1.97
K2508064-013	0.4010	10	10.0	2.00
K2508064-014	0.4030	10	9.9	1.99
K2508064-015	0.4030	10	9.9	1.99
K2508064-016	0.4020	10	10.0	1.99
K2508064-017	0.4010	10	10.0	2.00
K2508064-018	0.4030	10	9.9	1.99
K2508064-019	0.4030	10	9.9	1.99
K2508064-020	0.4030	10	9.9	1.99
Method Blank	0.4000	1	1.0	0.20

Service Request #: K2508064

MS/MSD with #: K2508064-006, -008

StarLims Run #: 891057

VER (100ppt) Standard ID: AF3-25-K Expiration Date: 9/11/2025

OPR (40ppb) Standard ID: AF3-25-L Expiration Date: 9/11/2025

QCS Standard ID: AF3-24-I Expiration Date: 9/11/2025

Parent OPR/VER ID: AF3-24-E Expiration Date: 4/3/2026

Parent QCS ID: AF3-18-B Expiration Date: 11/4/2025

NH2OH: AF3-19-G Expiration Date: 1/2/2026

SnCl: AF3-18-H Expiration Date: 11/7/2025

Pipettors ID: LL 20-200,44382968,45281021 Calibration Due:10/1/25

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	<u>X</u>	<u> </u>	<u> </u>
2. MS/MSD every 10 samples	<u>X</u>	<u> </u>	<u> </u>
3. Current Calibration factor used	<u>X</u>	<u> </u>	<u> </u>
4. Calibration data included	<u>X</u>	<u> </u>	<u> </u>
5. Method blank below MRL	<u>X</u>	<u> </u>	<u> </u>
6. 3 Bubbler Blanks Ran Avg < 25 pg	<u>X</u>	<u> </u>	<u> </u>
7. Bubbler Blanks < 50 pg	<u>X</u>	<u> </u>	<u> </u>
8. Verification Standards Passed (75-123%)	<u>X</u>	<u> </u>	<u> </u>
9. OPR, QCS in control (70-130%)	<u>X</u>	<u> </u>	<u> </u>
10. MS/MSD recovery 70-130%	<u>X</u>	<u> </u>	<u> </u>
11. Spike RPD within 30%	<u>X</u>	<u> </u>	<u> </u>
12. All samples within the linear range	<u>X</u>	<u> </u>	<u> </u>
13. All corresponding charts included	<u>X</u>	<u> </u>	<u> </u>
14. Dilution factors calculated	<u>X</u>	<u> </u>	<u> </u>
15. Bench sheet signed	<u>X</u>	<u> </u>	<u> </u>
16. Reagent Blank below 20 pg	<u>X</u>	<u> </u>	<u> </u>

Comments

Primary Reviewed by SRS Date 8/26/25

Secondary Reviewed by  Date 08/26/25

Batch Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/26/25

Analyst Name: ssoladey

Run Duration:	2.5	Method Blank Type:	Concentration
Heating Duration:	2.5	Integration Mode:	Auto Total Hg
Retention Start Time:	0.4	Integration Type:	Peak Area
Retention Stop Time:	1.3	Result Units:	µg/Kg
Purge Duration:	6.0		
Drying Duration:	6.0		
Calibration File:	This File		

Analyst Comments:

PMT:509
OFFSET:3034
NOISE:36
VOA Vial Lot #051225-3AWA

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	X	CCB	RINSE		1	18,735	0.414		0.414	< 50	accept
2	Y	CCB	RINSE		1	15,612	0.0629		0.0629	< 50	accept
3	X	CB	CB-1		1	14,950	1.68		1.68	< 50	accept
4	Y	CB	CB-2		1	15,591	1.75		1.75	< 50	accept
5	X	CB	CB-3		1	13,828	1.56		1.56	< 50	accept
6	Y	CB	CB-4		1	15,842	1.78		1.78	< 50	accept
7	X	STD	12.5 pg		1	128,388	12.8		102	75-125	accept
8	Y	STD	25 pg		1	234,029	24.6		98.6	75-125	accept
9	X	STD	100 pg		1	922,023	102		102	75-125	accept
10	Y	STD	500 pg		1	4,471,923	502		100.	75-125	accept
11	X	STD	2500 pg		1	21,612,233	2,430		97.2	75-125	accept
12	Y	STD	10000 pg		1	88,860,705	10,000		100.	75-125	accept
13	X	OPR	VER-1		1	1,175,567	131	5.22	104	77-123	accept
14	Y	OPR	OPR-1		1	2,227,401	249	4.98	99.6	77-123	accept
15	X	MBA	MB-1		1	34,500	2.19	0.0438	0.0438	< 0.5	accept
16	Y	MBA	MB-2		1	31,260	1.82	0.0365	0.0365	< 0.5	accept
17	X	QCS	TORT-3		1	22,243,297	2,500	252	86.3	77-123	accept
18	Y	S	K2508064-006		1	4,511,671	506	100.		< HS	accept
19	X	MS	K2508064-006		1	15,631,282	1,760	350.	100.	71-125	accept
20	Y	MSD	K2508064-006		1	15,058,157	1,690	334	94.9	71-125	accept
21	X	S	K2508064-001		1	5,062,582	568	112		< HS	accept
22	Y	S	K2508064-002		1	4,344,829	487	96.7		< HS	accept
23	X	S	K2508064-003		1	5,689,748	639	127		< HS	accept
24	Y	S	K2508064-004		1	4,218,448	473	93.2		< HS	accept
25	X	S	K2508064-005		1	5,165,332	580.	115		< HS	accept
26	Y	S	K2508064-007		1	6,732,547	756	150.		< HS	accept
27	X	S	K2508064-009		1	8,396,512	943	186		< HS	accept
28	Y	S	K2508064-010		1	5,931,845	666	131		< HS	accept
29	X	S	K2508064-011		1	6,386,739	717	142		< HS	accept
30	Y	OPR	VER-2		1	1,135,701	126	5.04	101	77-123	accept
31	X	S	K2508064-008		1	7,792,474	875	173		< HS	accept
32	Y	MS	K2508064-008		1	18,779,453	2,110	418	98.9	71-125	accept
33	X	MSD	K2508064-008		1	19,404,616	2,180	430.	104	71-125	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/26/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
34	Y	S	K2508064-012		1	6,928,522	778	153		< HS	accept
35	X	S	K2508064-013		1	7,321,730	822	164		< HS	accept
36	Y	S	K2508064-014		1	7,921,507	890.	177		< HS	accept
37	X	S	K2508064-015		1	6,836,174	768	152		< HS	accept
38	Y	S	K2508064-016		1	6,729,987	756	150.		< HS	accept
39	X	S	K2508064-017		1	6,084,795	683	136		< HS	accept
40	Y	S	K2508064-018		1	6,142,274	690.	137		< HS	accept
41	X	S	K2508064-019		1	5,381,992	604	120.		< HS	accept
42	Y	S	K2508064-020		1	5,743,216	645	128		< HS	accept
43	X	MBA	MB-3		1	30,387	1.73	0.0345	0.0345	< 0.5	accept
44	Y	OPR	OPR-2		1	2,300,828	257	5.14	103	77-123	accept
45	X	OPR	VER-3		1	1,165,422	129	5.18	104	77-123	accept

Analyst Comments:

PMT:509
OFFSET:3034
NOISE:36
VOA Vial Lot #051225-3AWA

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

Bias and Precision										
Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K2508064-006	350.	µg/Kg	249	100.	100.	71-125			accept
	K2508064-008	418	µg/Kg	248	173	98.9	71-125			accept
MSD	K2508064-006	334	µg/Kg	247	100.	94.9	71-125	4.48	< 24	accept
	K2508064-008	430.	µg/Kg	246	173	104	71-125	2.78	< 24	accept
OPR	VER-1	5.22	µg/Kg	5.0		104	77-123			accept
	OPR-1	4.98	µg/Kg	5.0		99.6	77-123			accept
	VER-2	5.04	µg/Kg	5.0		101	77-123			accept
	OPR-2	5.14	µg/Kg	5.0		103	77-123			accept
	VER-3	5.18	µg/Kg	5.0		104	77-123			accept
QCS	TORT-3	252	µg/Kg	292		86.3	77-123			accept

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

Calibration									
QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	12.5 pg	12.8	pg	12.5	102	75-125			accept
	25 pg	24.6	pg	25	98.6	75-125			accept
	100 pg	102	pg	100	102	75-125			accept
	500 pg	502	pg	500	100.	75-125			accept
	2500 pg	2,430	pg	2500	97.2	75-125			accept
	10000 pg	10,000	pg	10000	100.	75-125			accept
Calibration Factor		0.000113	pg/PA				1.92	< 15	accept
Calibration Date		8/26/25							

1631 Extended Calibration Point Verification

Instruemt: K-AFS-04
 Date: 08/26/25
 Run Number: 891057

	Raw Peak Area	Blank Corrected Peak Area			
CB-1	14,950				
CB-2	15,591				
CB-3	13,828				
CB-4	15,842				
STD 12.5	128,388	113,335	0.0001103		
STD 25	234,039	218,986	0.0001142		
STD 100	922,023	906,970	0.0001103		
STD 500	4,471,923	4,456,870	0.0001122		
STD 2500	21,612,233	21,597,180	0.0001158	0.0001125	0.5 - 100 ng/L Ave. Cal. Factor
STD 10000	88,860,705	88,845,652	0.0001126	0.0	% Difference (Limit ± 15%)

Result: PASS

Cal. Factor 0.0001125

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

Blank Summary							
QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CB-1	1.68	pg	< 50			accept
	CB-2	1.75	pg	< 50			accept
	CB-3	1.56	pg	< 50			accept
	CB-4	1.78	pg	< 50			accept
Average		1.69	pg	< 25	0.101	< 10	accept
MBA	MB-1	0.0438	µg/Kg	< 0.5			accept
	MB-2	0.0365	µg/Kg	< 0.5			accept
	MB-3	0.0345	µg/Kg	< 0.5			accept
Average		0.0383	µg/Kg		0.00490		

QA Comments:

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/26/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
21	K2508064-001	112	accept
22	K2508064-002	96.7	accept
23	K2508064-003	127	accept
24	K2508064-004	93.2	accept
25	K2508064-005	115	accept
18	K2508064-006	100.	accept
26	K2508064-007	150.	accept
31	K2508064-008	173	accept
27	K2508064-009	186	accept
28	K2508064-010	131	accept
29	K2508064-011	142	accept
34	K2508064-012	153	accept
35	K2508064-013	164	accept
36	K2508064-014	177	accept
37	K2508064-015	152	accept
38	K2508064-016	150.	accept
39	K2508064-017	136	accept
40	K2508064-018	137	accept
41	K2508064-019	120.	accept
42	K2508064-020	128	accept

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/26/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	X	CCB	RINSE						
2	Y	CCB	RINSE						
3	X	CB	CB-1						
4	Y	CB	CB-2						
5	X	CB	CB-3						
6	Y	CB	CB-4						
7	X	STD	12.5 pg					12.5	0.125mL AF3-25-K
8	Y	STD	25 pg					25	0.25mL AF3-25-K
9	X	STD	100 pg					100	1.00mL AF3-25-K
10	Y	STD	500 pg					500	0.05mL AF3-25-J
11	X	STD	2500 pg					2500	0.25mL AF3-25-J
12	Y	STD	10000 pg					10000	1.00mL AF3-25-J
13	X	OPR	VER-1		25	25	25	5.0	
14	Y	OPR	OPR-1		400	40	5.0	5.0	
15	X	MBA	MB-1		400	40	5.0		
16	Y	MBA	MB-2		400	40	5.0		
17	X	QCS	TORT-3		397	40	1.0	292	
18	Y	S	K2508064-006		405	40	0.5		10X
19	X	MS	K2508064-006		402	40	0.5	249	10X
20	Y	MSD	K2508064-006		405	40	0.5	247	10X
21	X	S	K2508064-001		404	40	0.5		10X
22	Y	S	K2508064-002		403	40	0.5		10X
23	X	S	K2508064-003		402	40	0.5		10X
24	Y	S	K2508064-004		406	40	0.5		10X
25	X	S	K2508064-005		404	40	0.5		10X
26	Y	S	K2508064-007		404	40	0.5		10X
27	X	S	K2508064-009		405	40	0.5		10X
28	Y	S	K2508064-010		406	40	0.5		10X
29	X	S	K2508064-011		405	40	0.5		10X
30	Y	OPR	VER-2		25	25	25	5.0	
31	X	S	K2508064-008		405	40	0.5		10X
32	Y	MS	K2508064-008		404	40	0.5	248	10X
33	X	MSD	K2508064-008		406	40	0.5	246	10X

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
34	Y	S	K2508064-012		406	40	0.5		10X
35	X	S	K2508064-013		401	40	0.5		10X
36	Y	S	K2508064-014		403	40	0.5		10X
37	X	S	K2508064-015		403	40	0.5		10X
38	Y	S	K2508064-016		402	40	0.5		10X
39	X	S	K2508064-017		401	40	0.5		10X
40	Y	S	K2508064-018		403	40	0.5		10X
41	X	S	K2508064-019		403	40	0.5		10X
42	Y	S	K2508064-020		403	40	0.5		10X
43	X	MBA	MB-3		400	40	5.0		
44	Y	OPR	OPR-2		400	40	5.0	5.0	
45	X	OPR	VER-3		25	25	25	5.0	

Metals Digestion Sheet

StarLims Number:						462952
Method : 1631EApp.			Analysis for : CVAFS			
Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.408	40	0.02N BrCl
K2508064-001		x		0.404	40	0.02N BrCl
K2508064-002		x		0.403	40	0.02N BrCl
K2508064-003		x		0.402	40	0.02N BrCl
K2508064-004		x		0.406	40	0.02N BrCl
K2508064-005		x		0.404	40	0.02N BrCl
K2508064-006		x		0.405	40	0.02N BrCl
K2508064-006S		x		0.402	40	0.02N BrCl
K2508064-006SD		x		0.405	40	0.02N BrCl
K2508064-007		x		0.404	40	0.02N BrCl
K2508064-008		x		0.405	40	0.02N BrCl
K2508064-008S		x		0.404	40	0.02N BrCl
K2508064-008SD		x		0.406	40	0.02N BrCl
K2508064-009		x		0.405	40	0.02N BrCl
K2508064-010		x		0.406	40	0.02N BrCl
K2508064-011		x		0.402	40	0.02N BrCl
K2508064-012		x		0.406	40	0.02N BrCl
K2508064-013		x		0.401	40	0.02N BrCl
K2508064-014		x		0.403	40	0.02N BrCl
K2508064-015		x		0.402	40	0.02N BrCl
K2508064-016		x		0.402	40	0.02N BrCl
K2508064-017		x		0.401	40	0.02N BrCl
K2508064-018		x		0.403	40	0.02N BrCl
K2508064-019		x		0.403	40	0.02N BrCl
K2508064-020		x		0.403	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

BrCl = AF3-21-F

AF3-25-L (40ppb)

OPR: 0.05mL

Digestion Acid Mixture: AF3-24-D

1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID: 37

Comments: TORT-3 Solids: 97.4%

Fry dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 17

Time Digestion Started: 8:59 Dilution Completed: 13:29

Analyst <u>AA</u>	Date <u>8/25/25</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508064-001	0.4040	10	9.9	1.98
K2508064-002	0.4030	10	9.9	1.99
K2508064-003	0.4020	10	10.0	1.99
K2508064-004	0.4060	10	9.9	1.97
K2508064-005	0.4040	10	9.9	1.98
K2508064-006	0.4050	10	9.9	1.98
K2508064-006S	0.4020	10	10.0	1.99
K2508064-006SD	0.4050	10	9.9	1.98
K2508064-007	0.4040	10	9.9	1.98
K2508064-008	0.4050	10	9.9	1.98
K2508064-008S	0.4040	10	9.9	1.98
K2508064-008SD	0.4060	10	9.9	1.97
K2508064-009	0.4050	10	9.9	1.98
K2508064-010	0.4060	10	9.9	1.97
K2508064-011	0.4020	10	10.0	1.99
K2508064-012	0.4060	10	9.9	1.97
K2508064-013	0.4010	10	10.0	2.00
K2508064-014	0.4030	10	9.9	1.99
K2508064-015	0.4030	10	9.9	1.99
K2508064-016	0.4020	10	10.0	1.99
K2508064-017	0.4010	10	10.0	2.00
K2508064-018	0.4030	10	9.9	1.99
K2508064-019	0.4030	10	9.9	1.99
K2508064-020	0.4030	10	9.9	1.99
Method Blank	0.4000	1	1.0	0.20

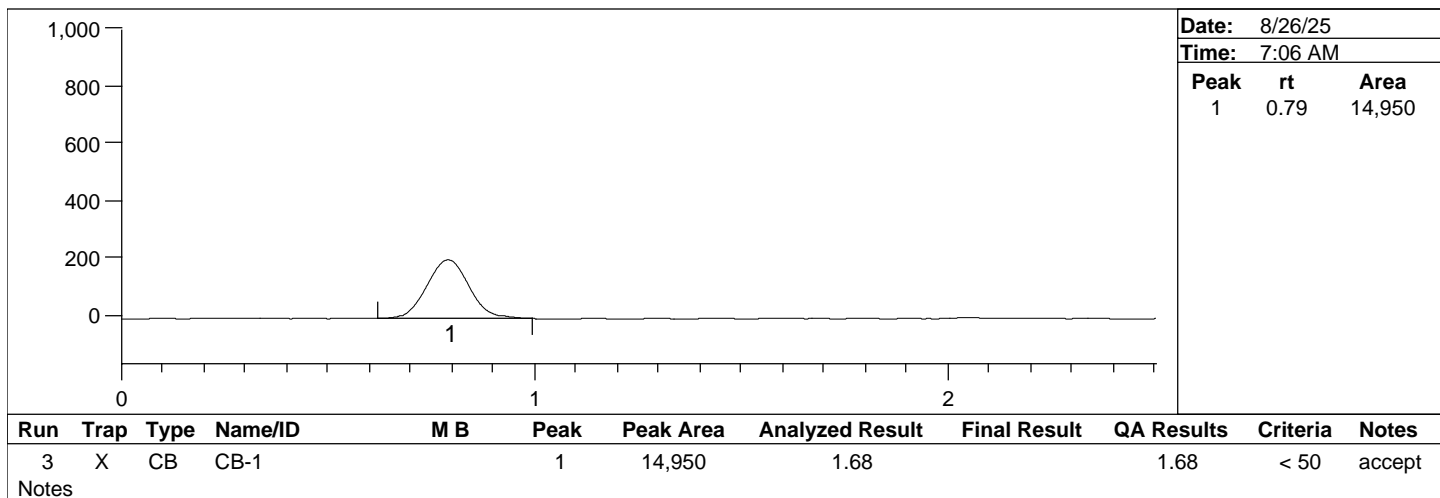
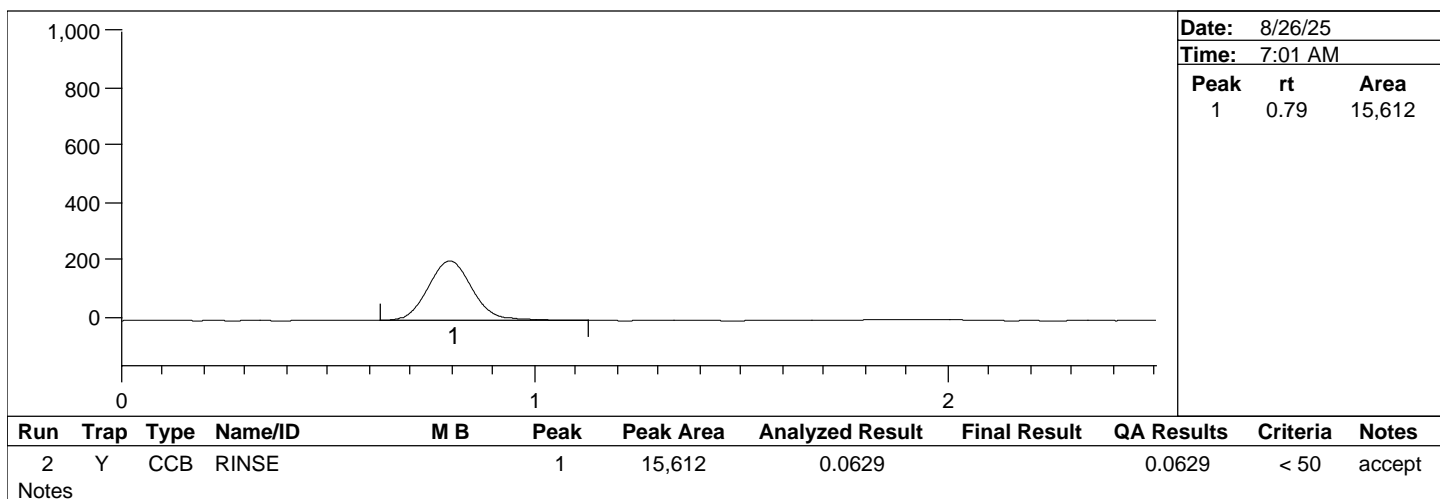
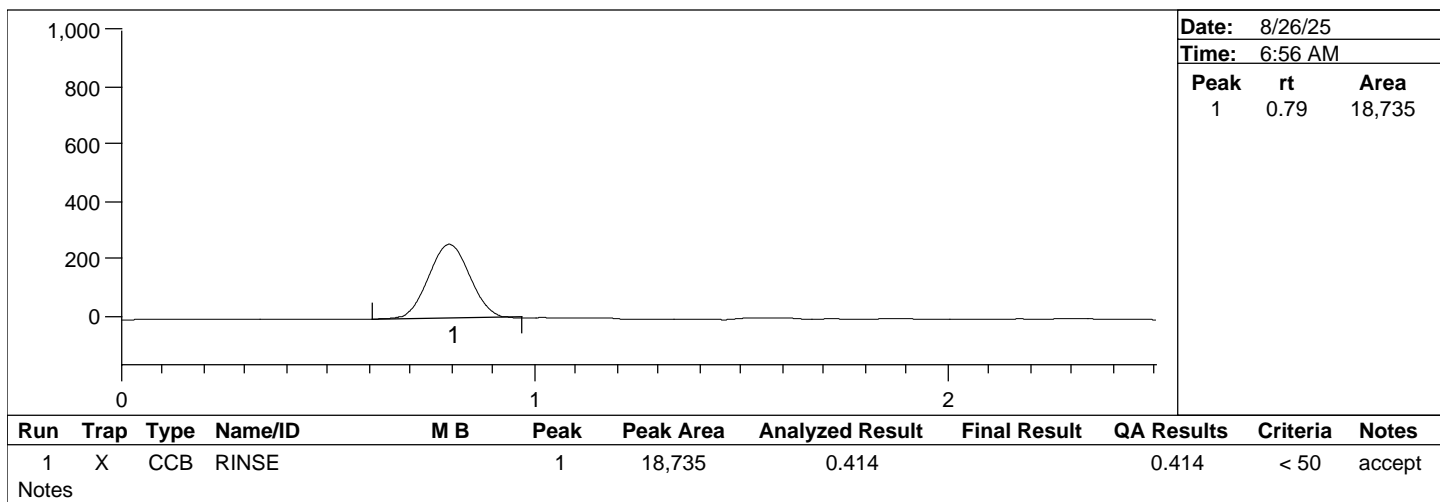
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



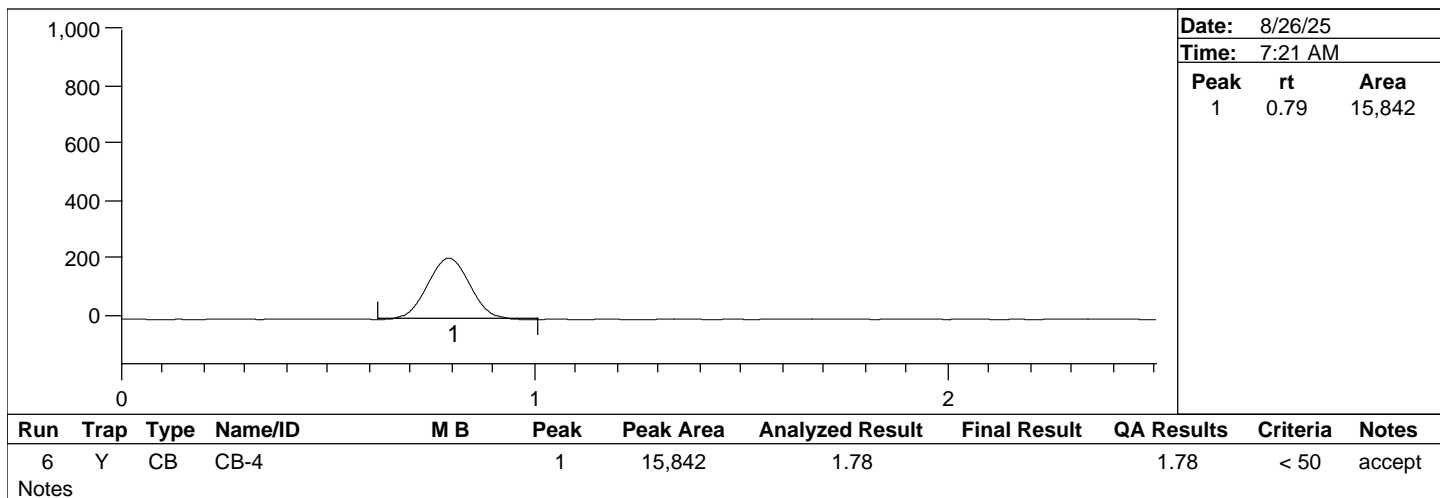
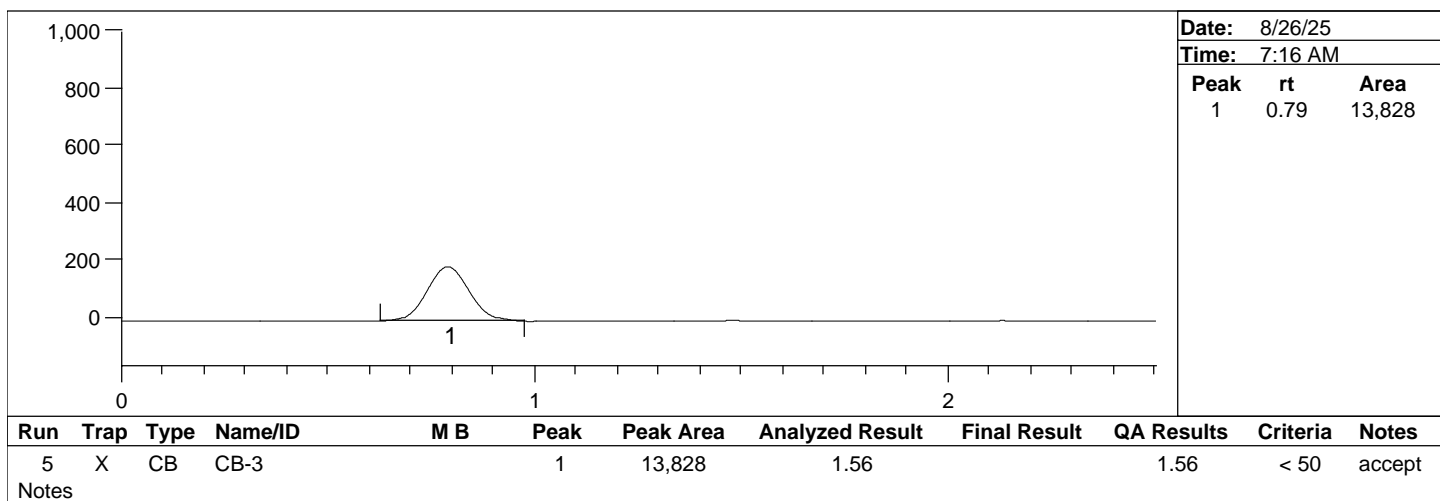
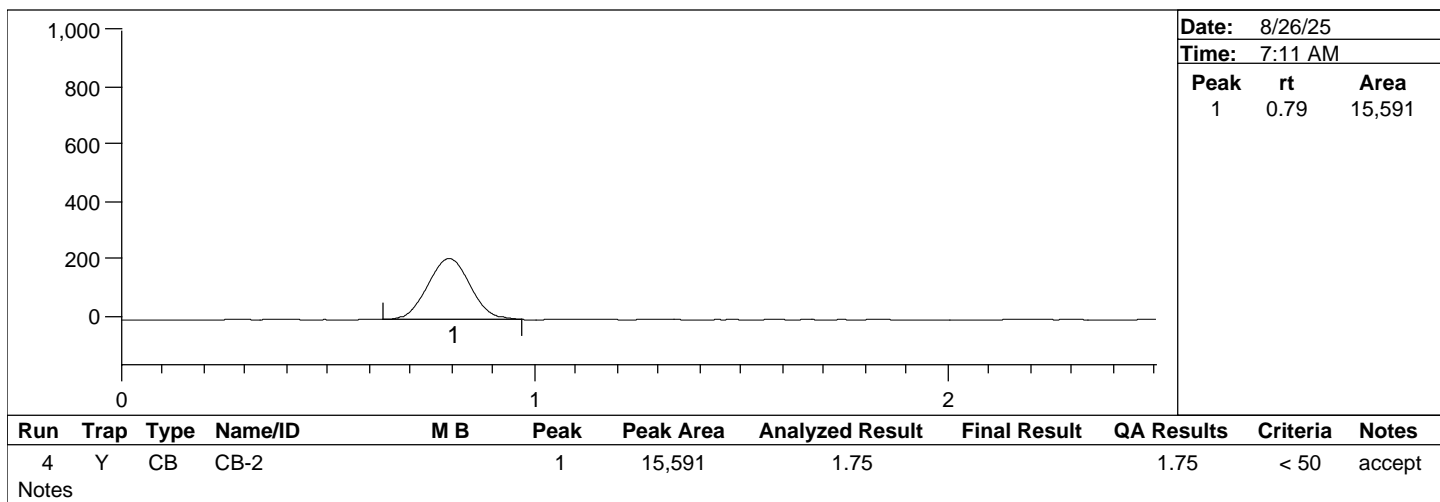
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssladey



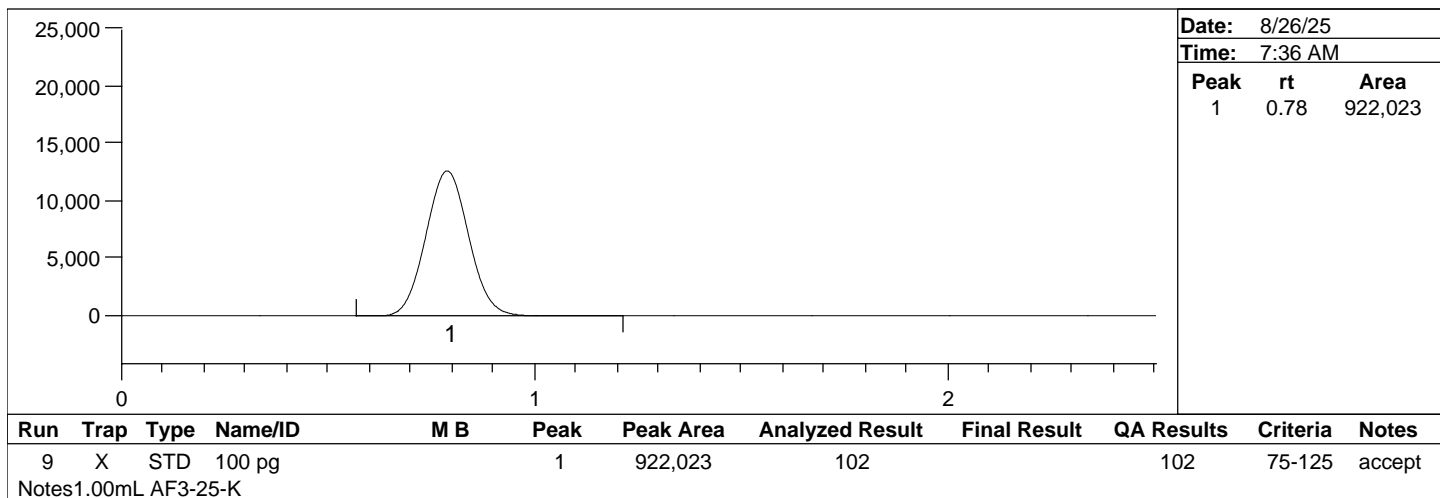
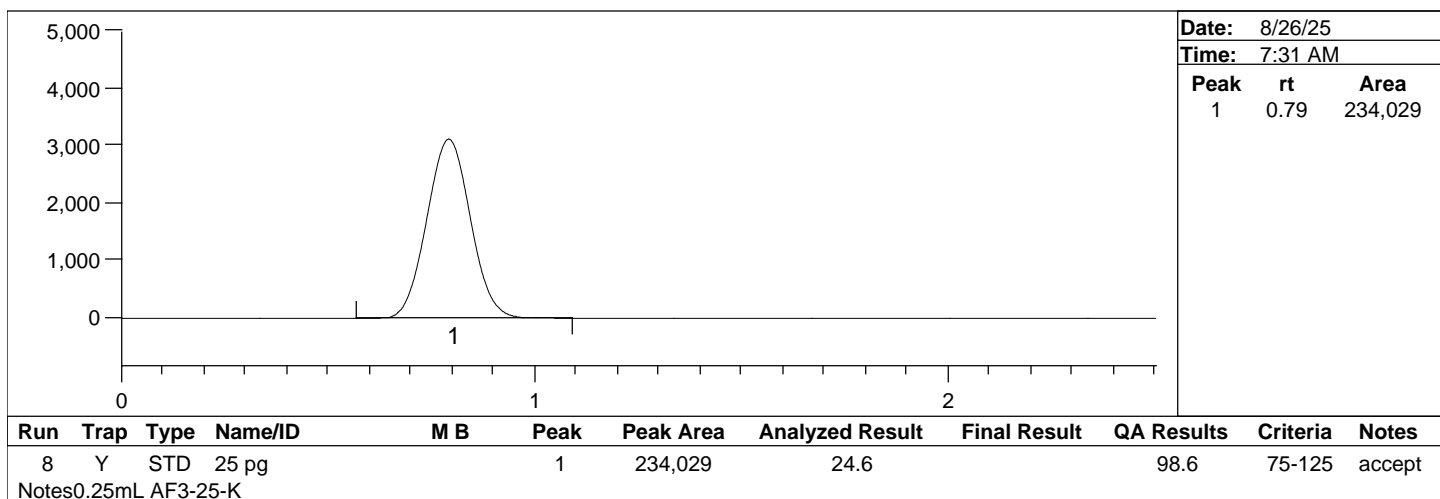
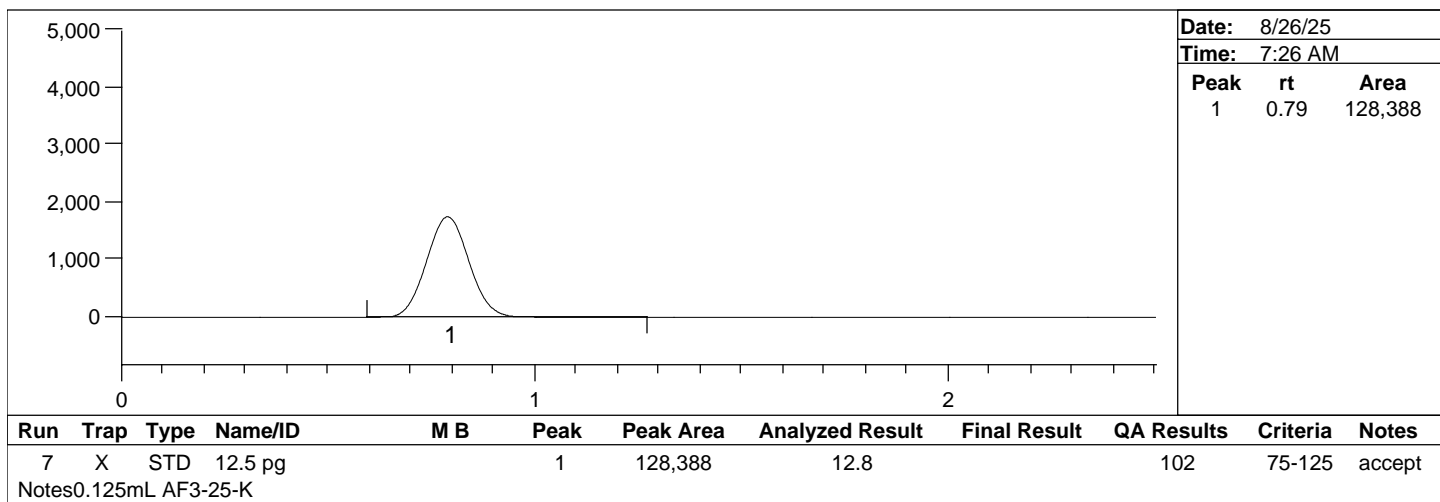
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

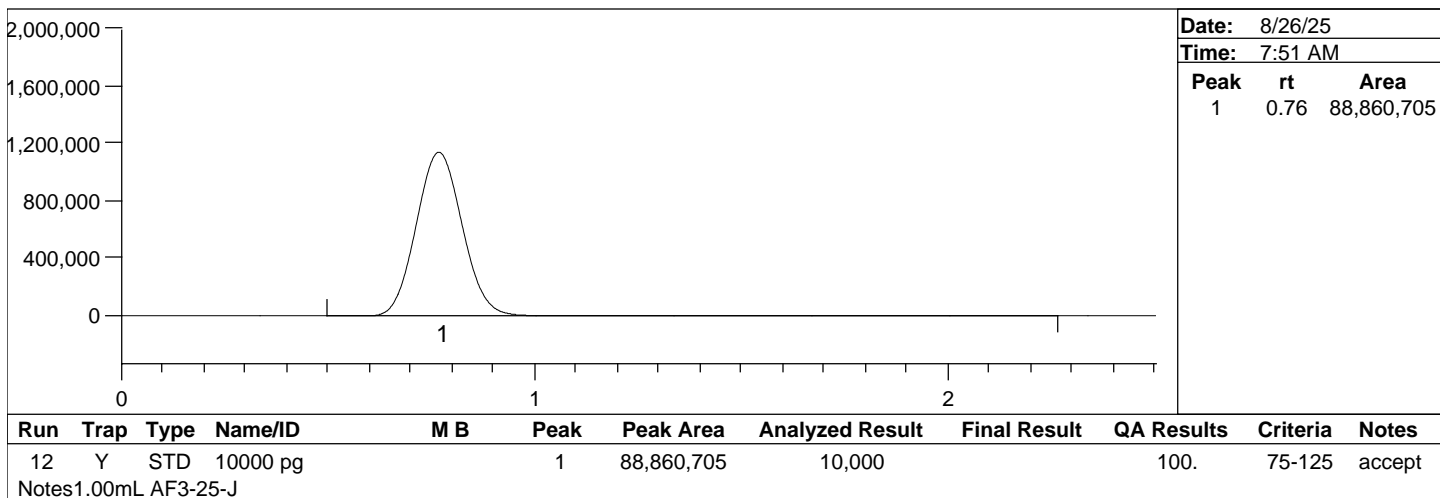
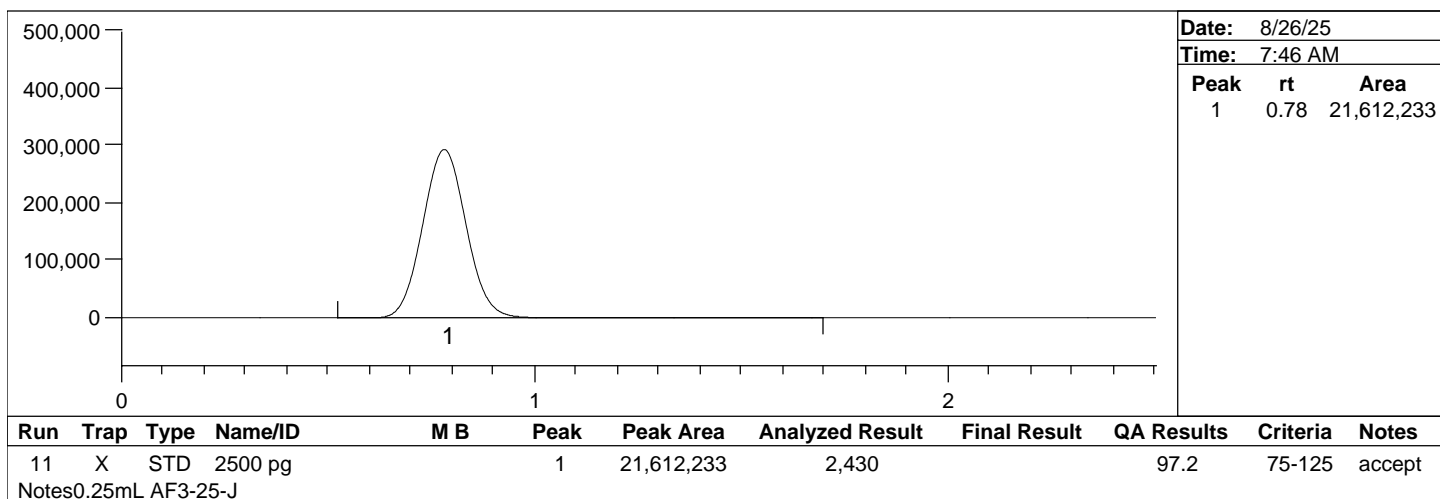
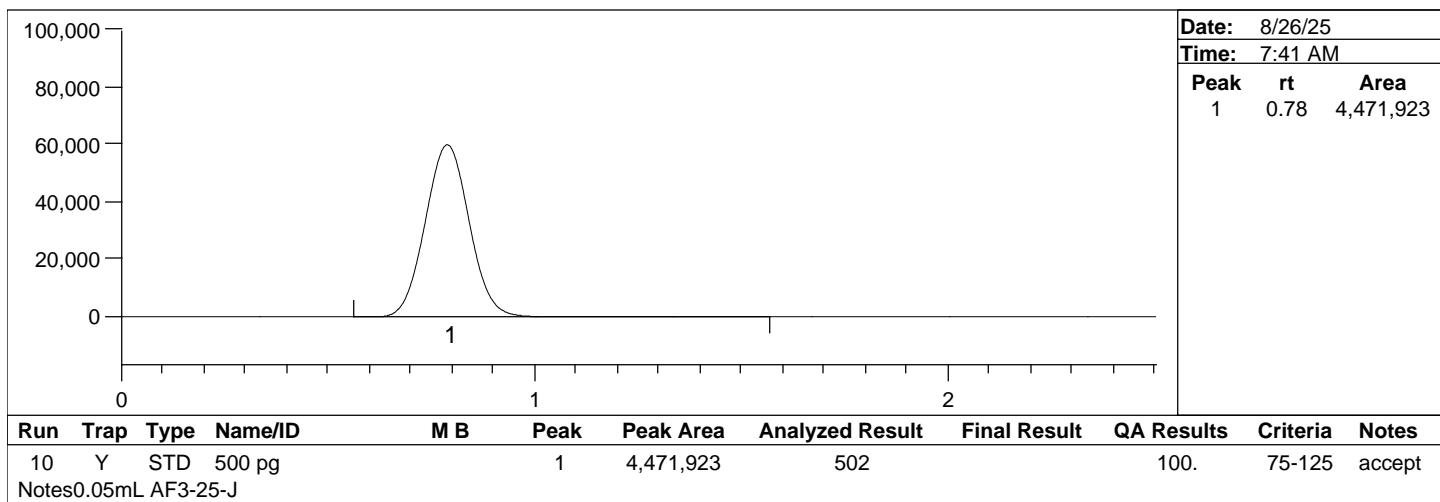


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssladey



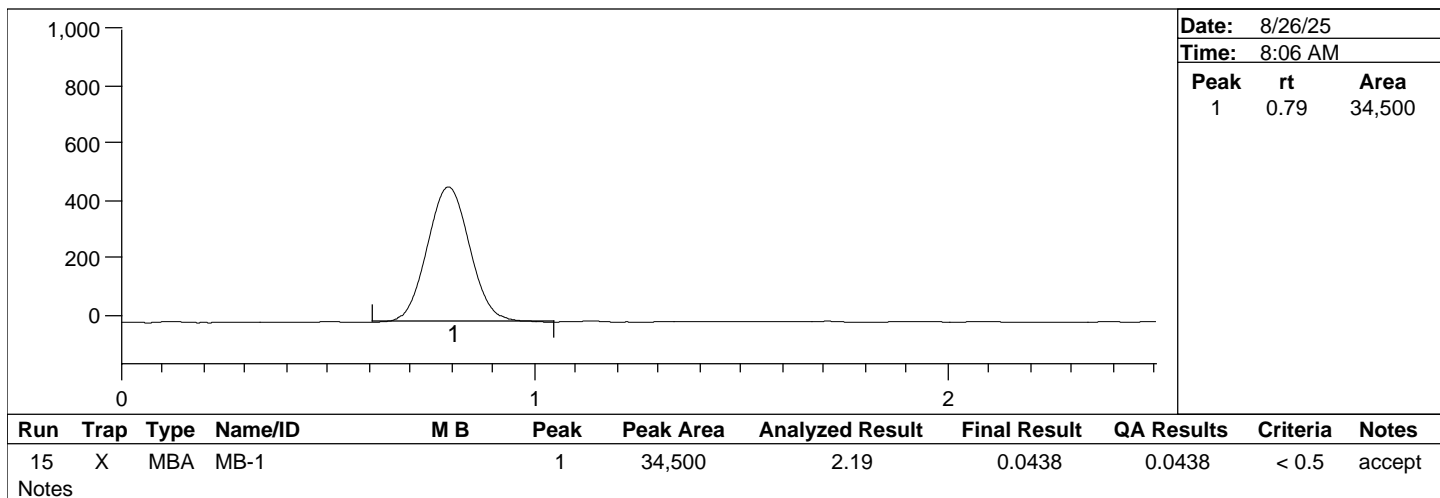
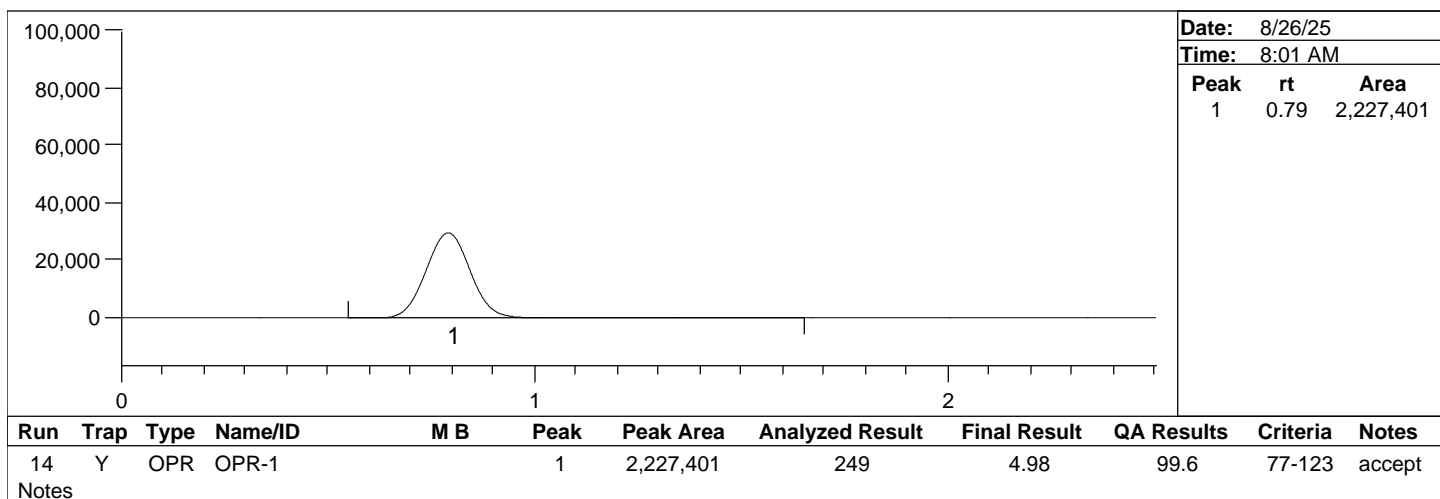
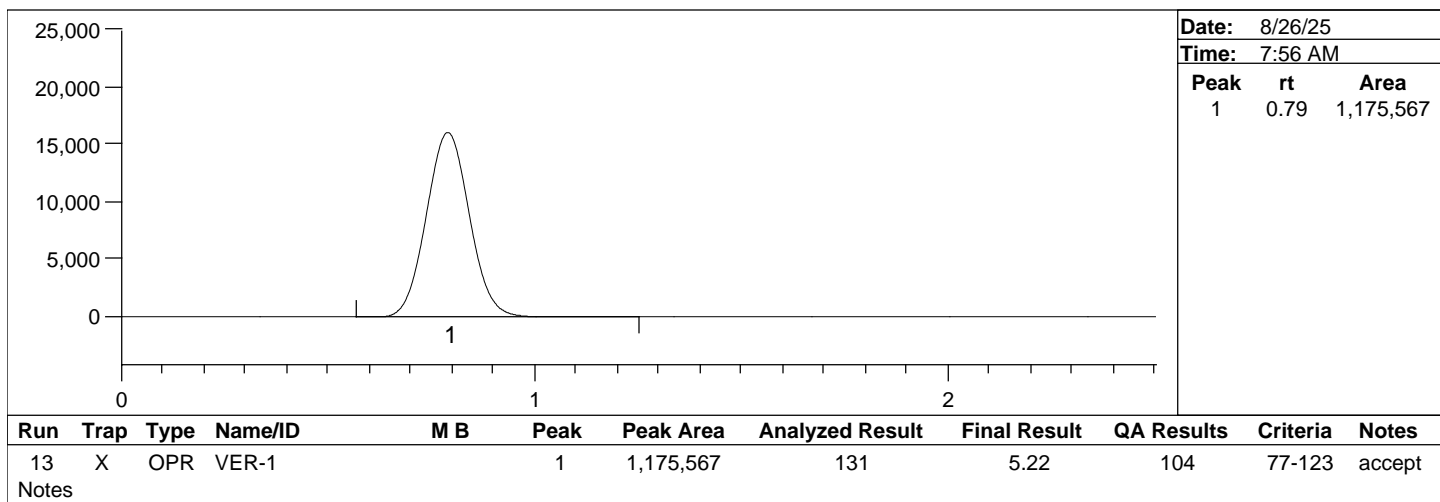
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

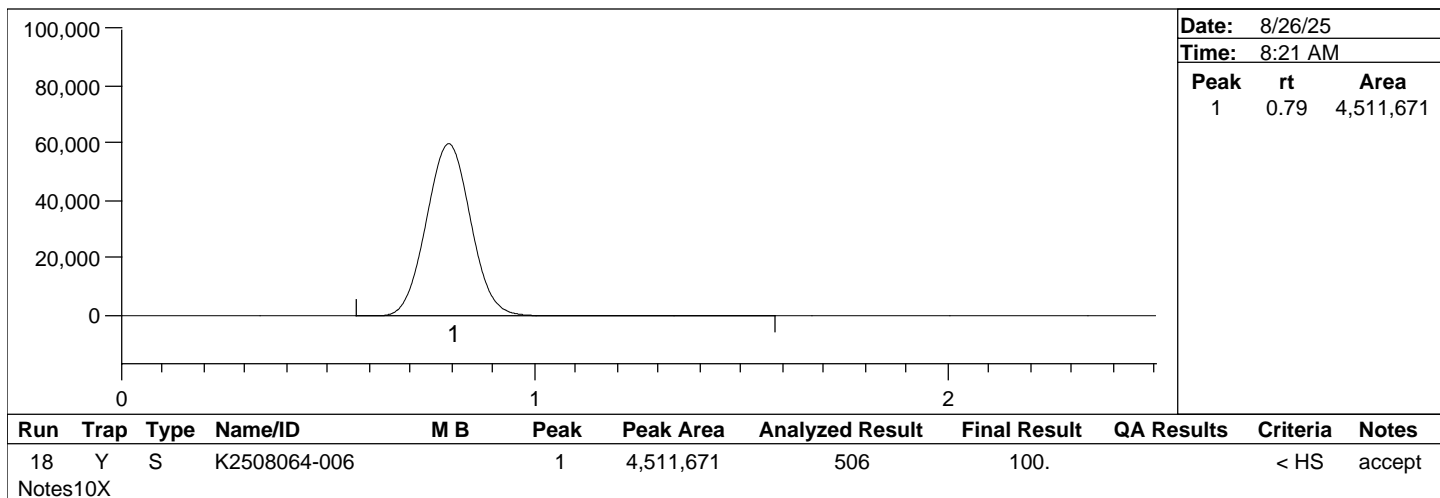
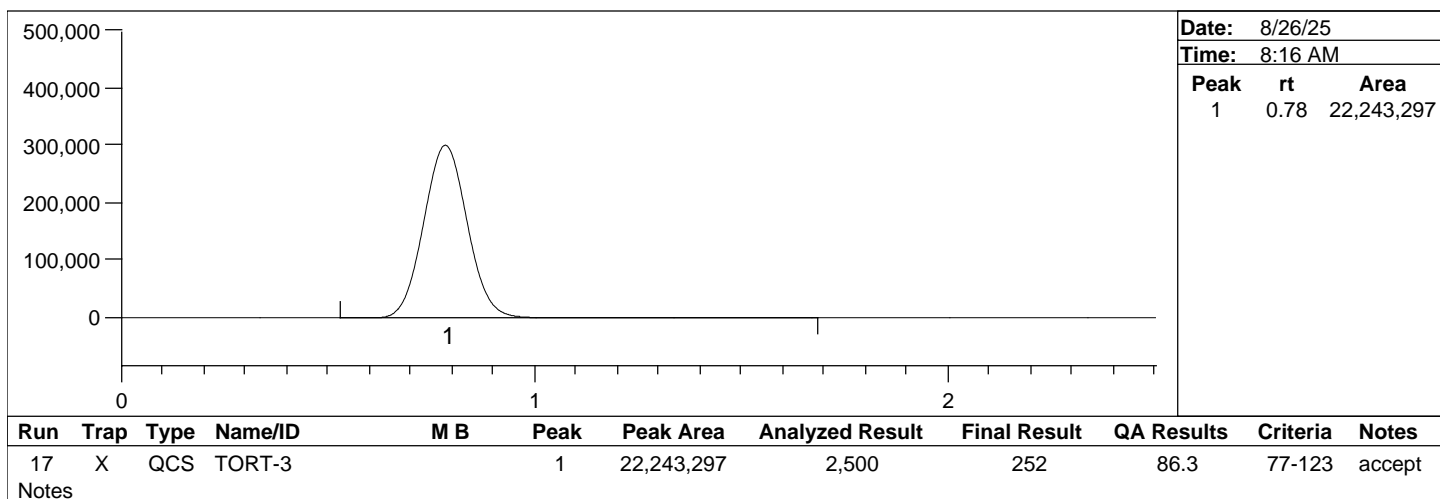
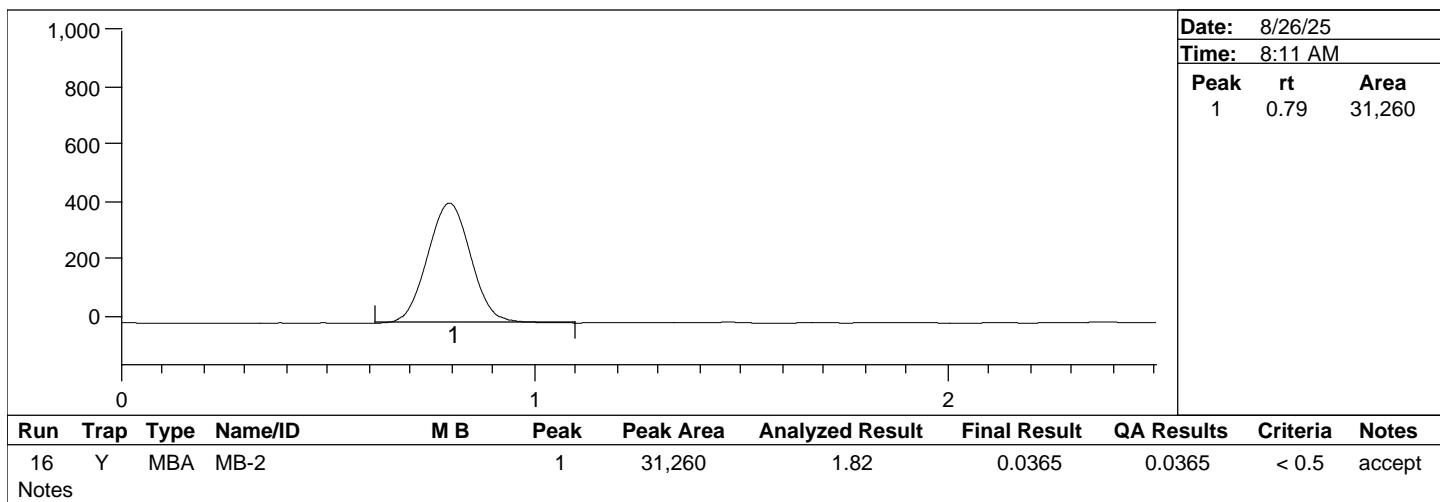


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssladey

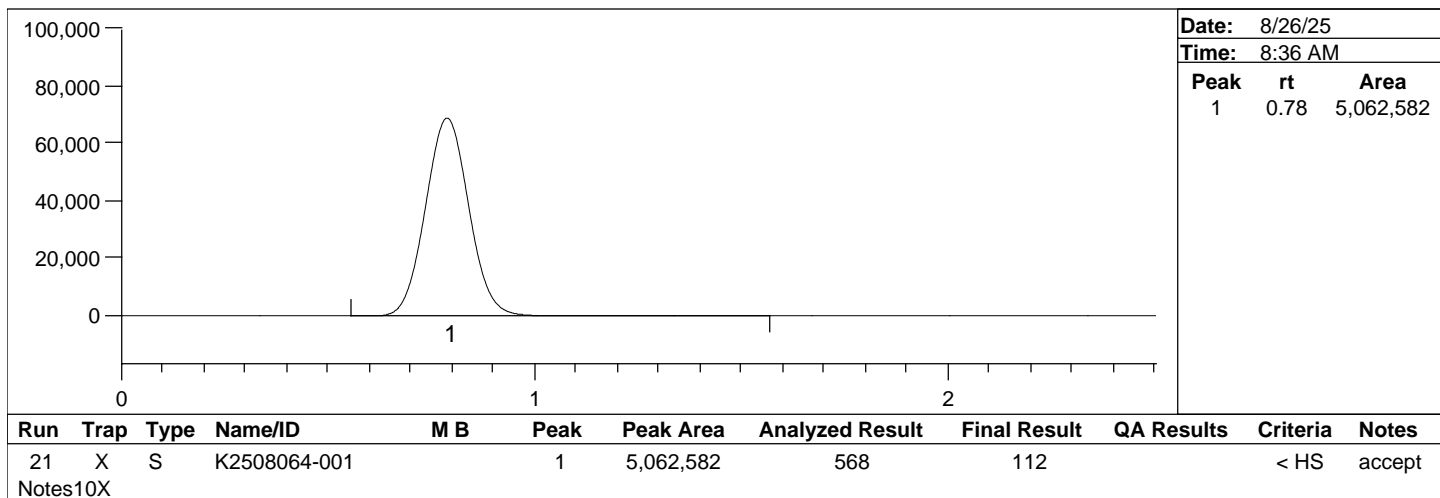
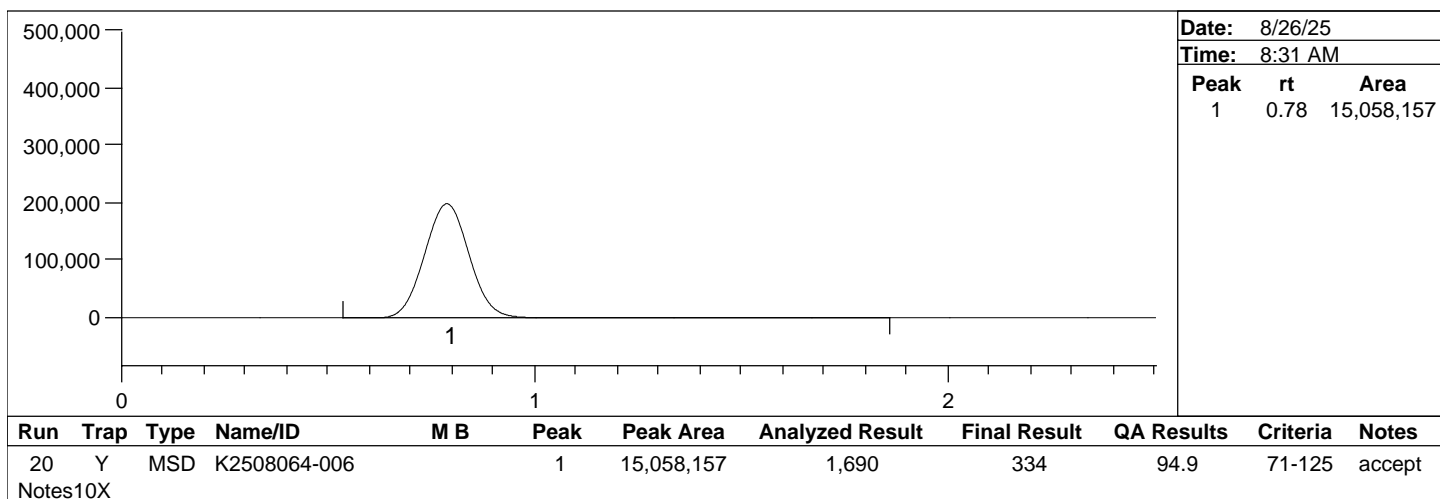
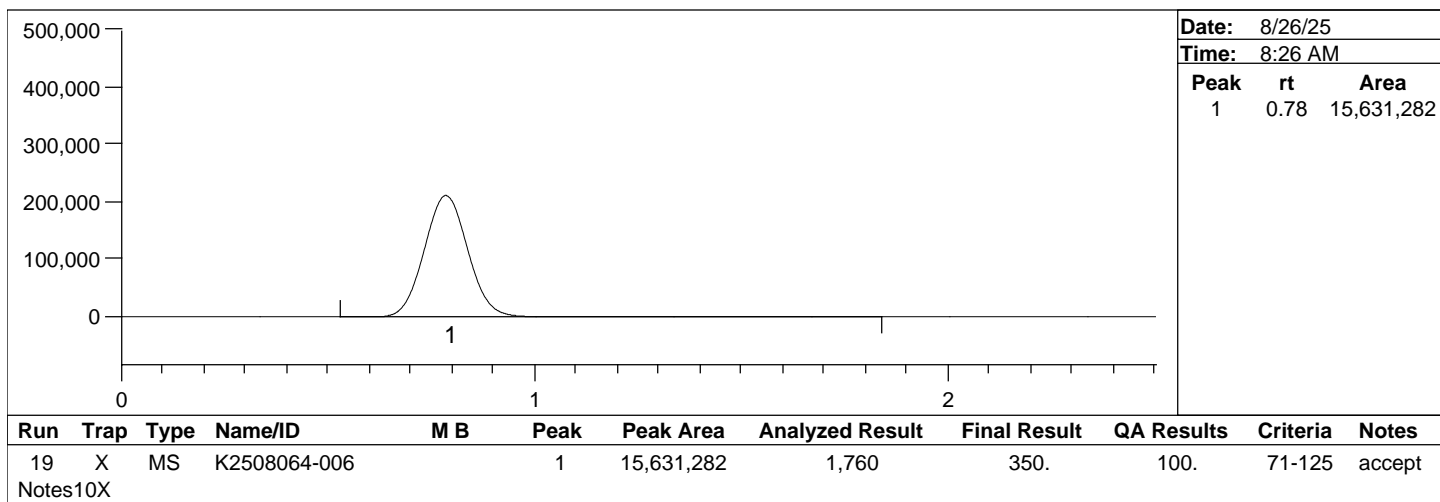


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssladey



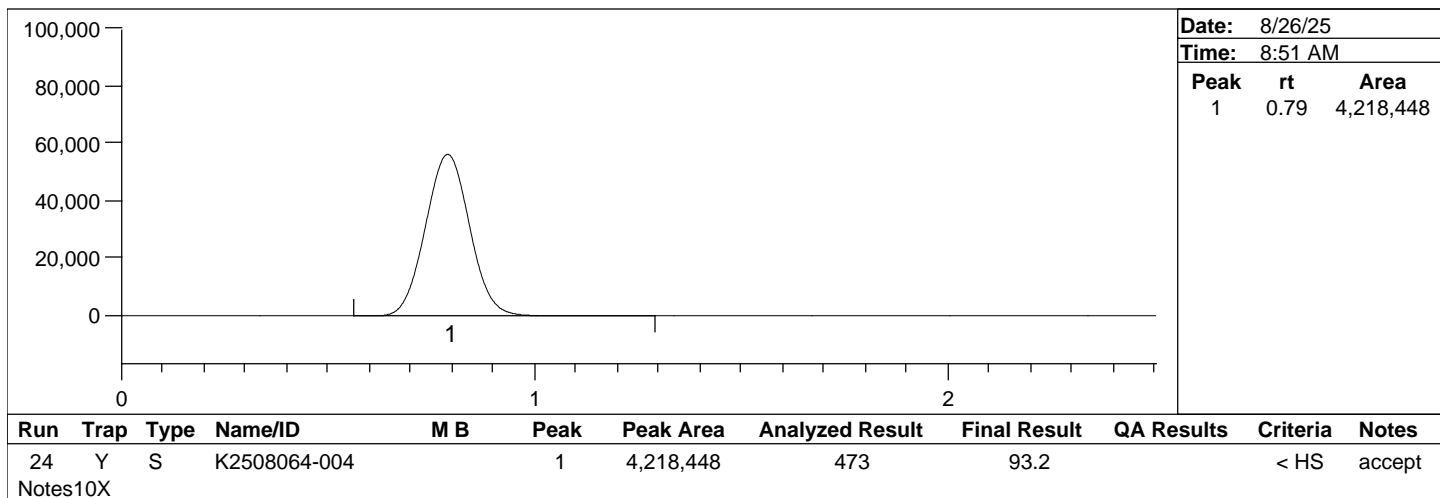
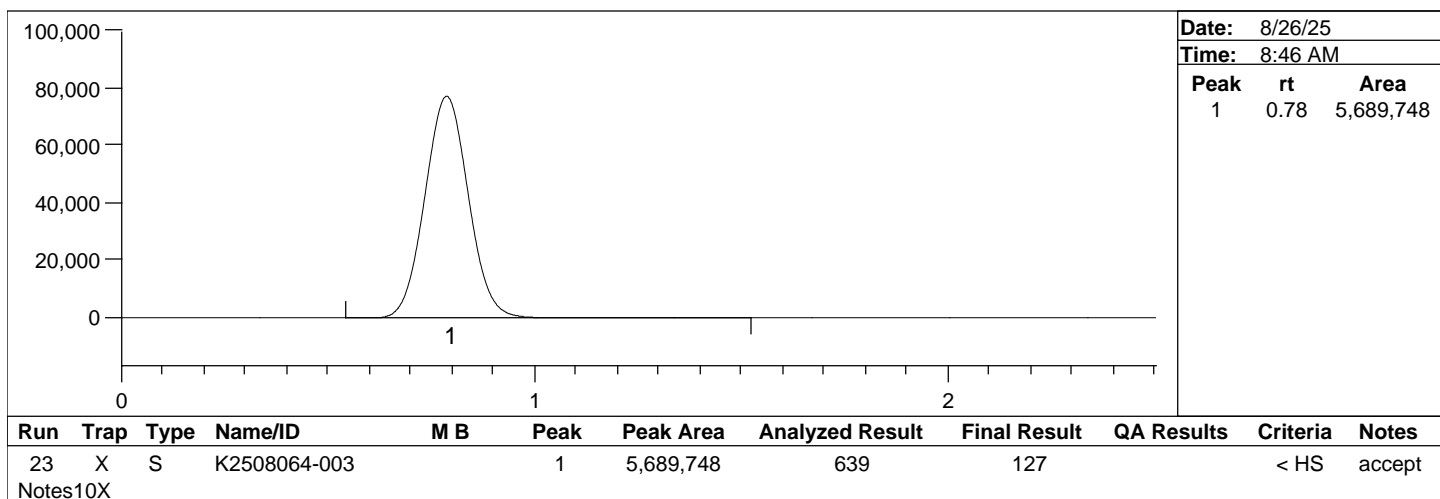
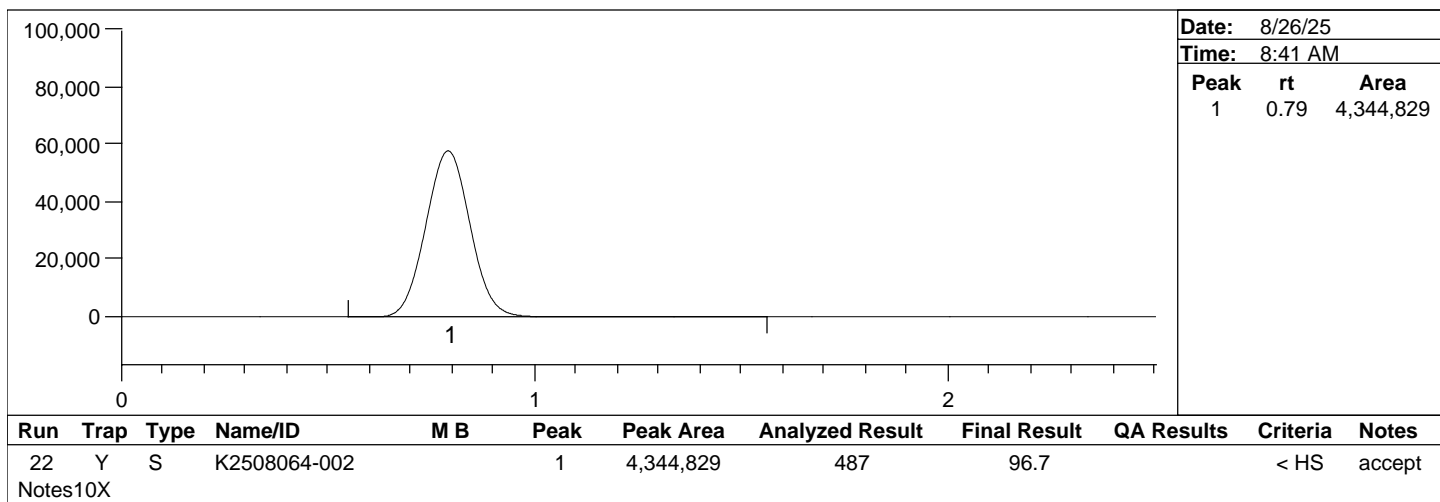
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



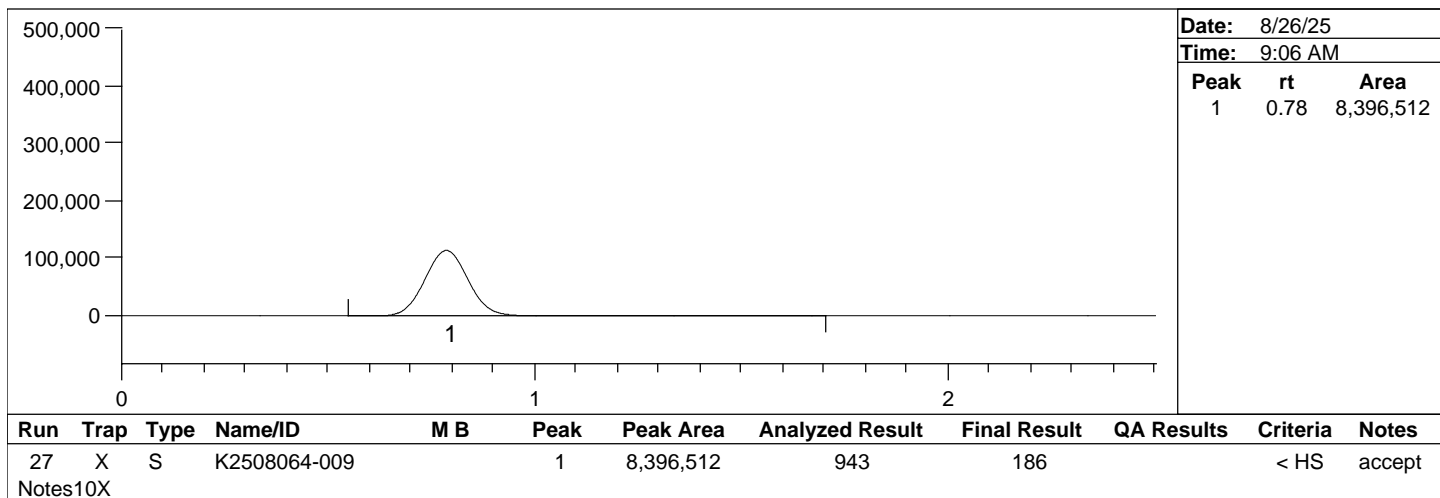
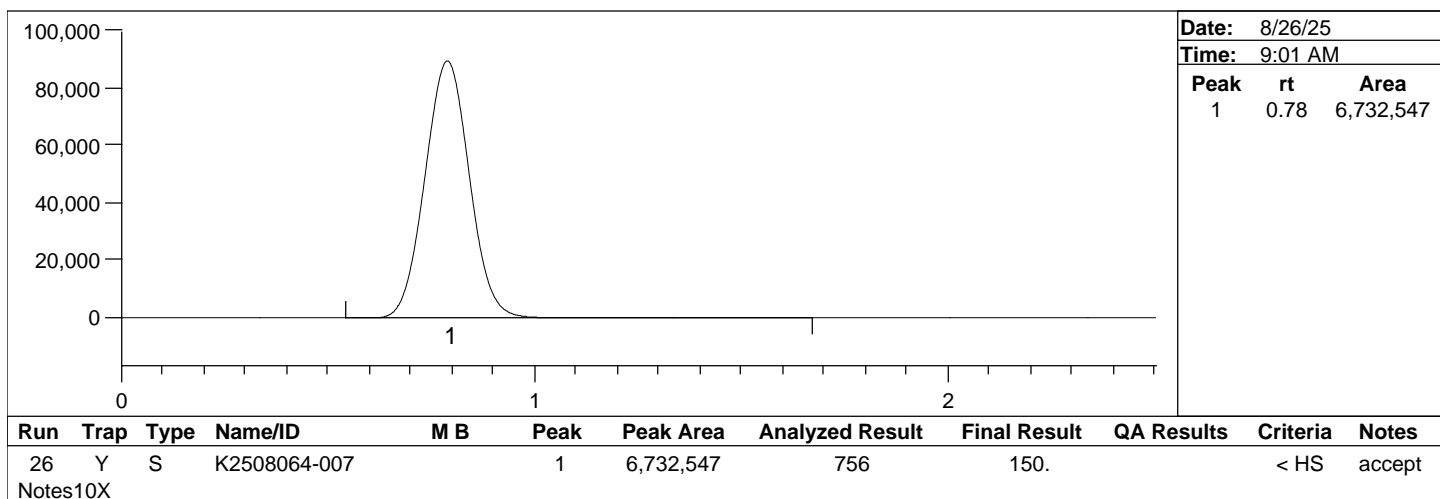
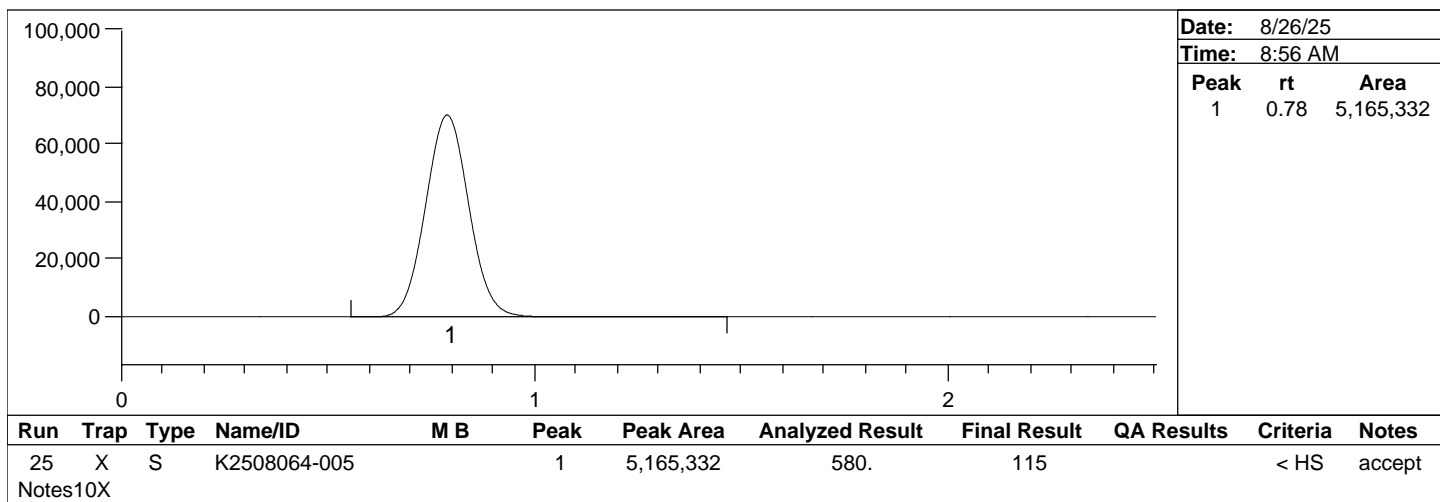
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey

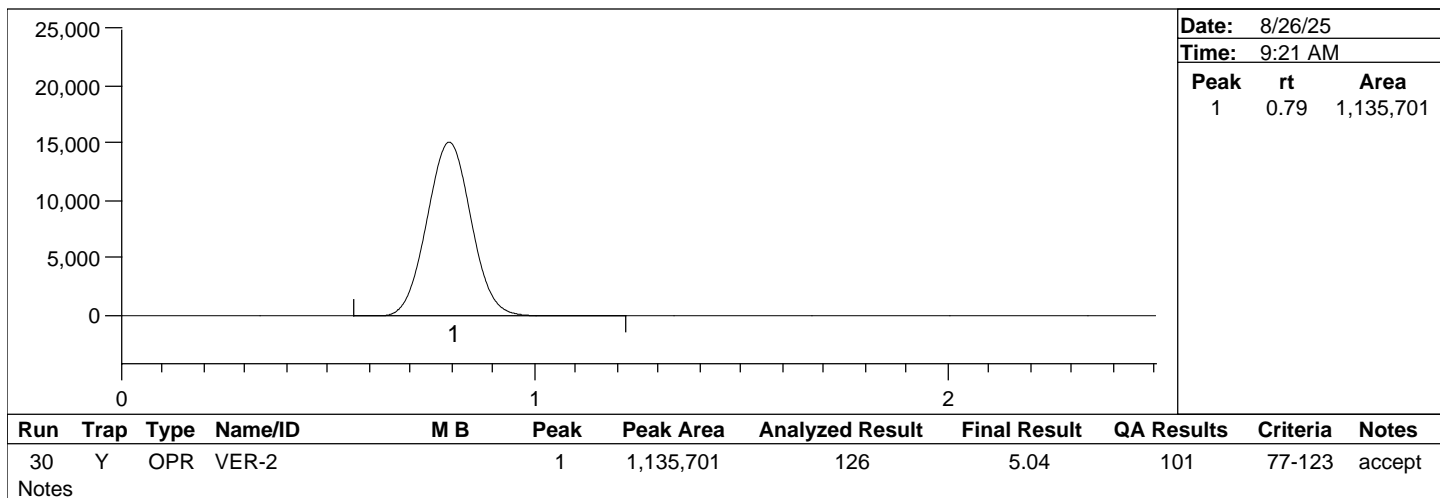
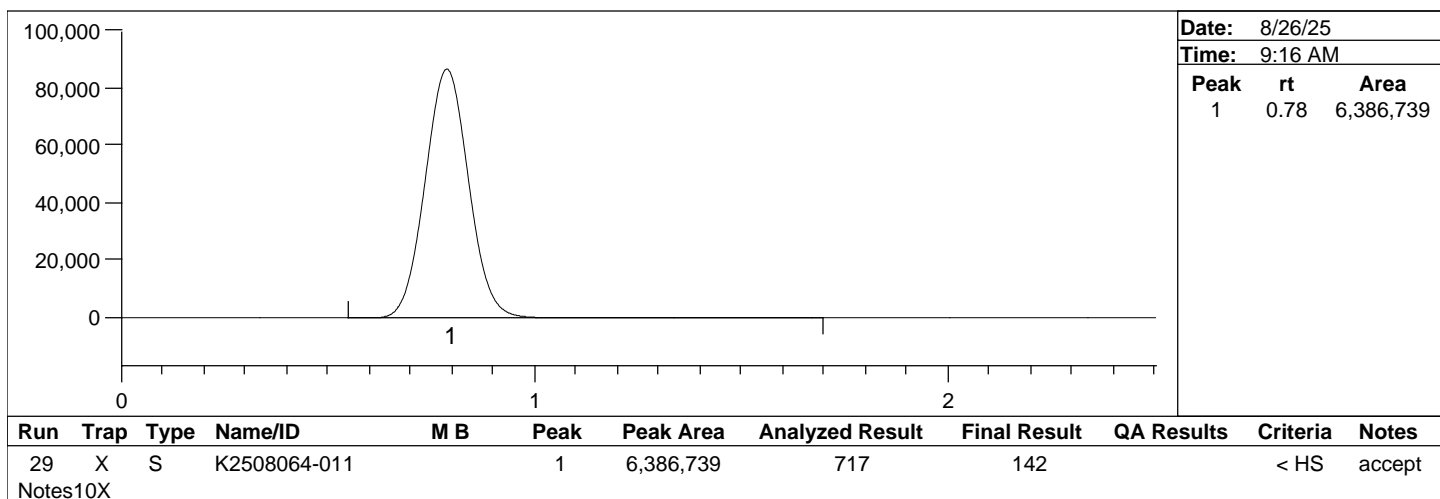
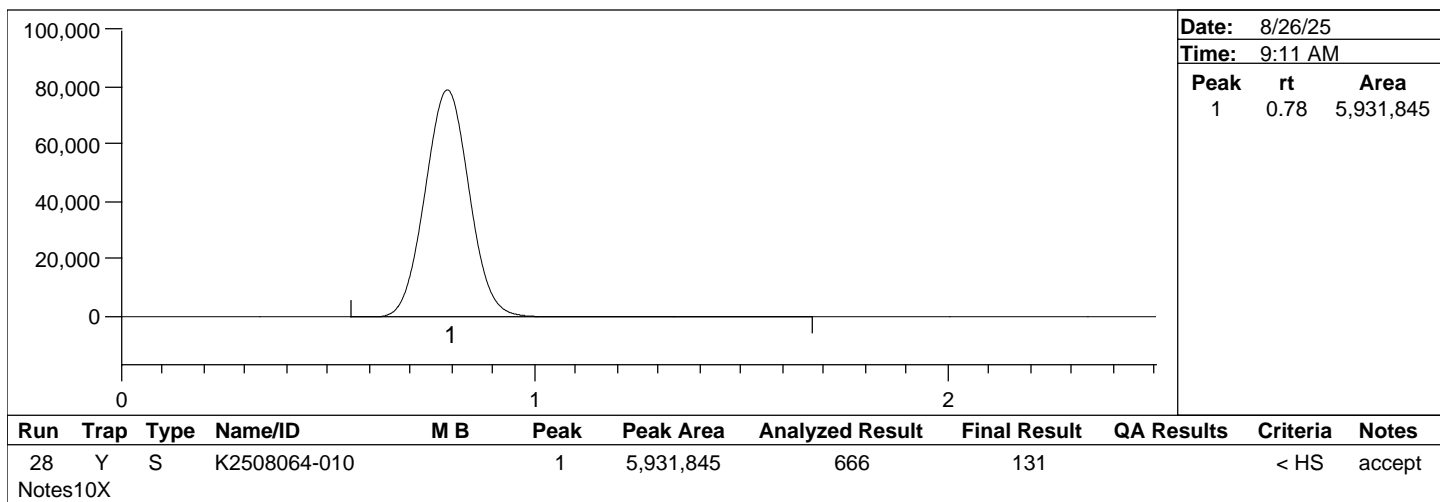


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



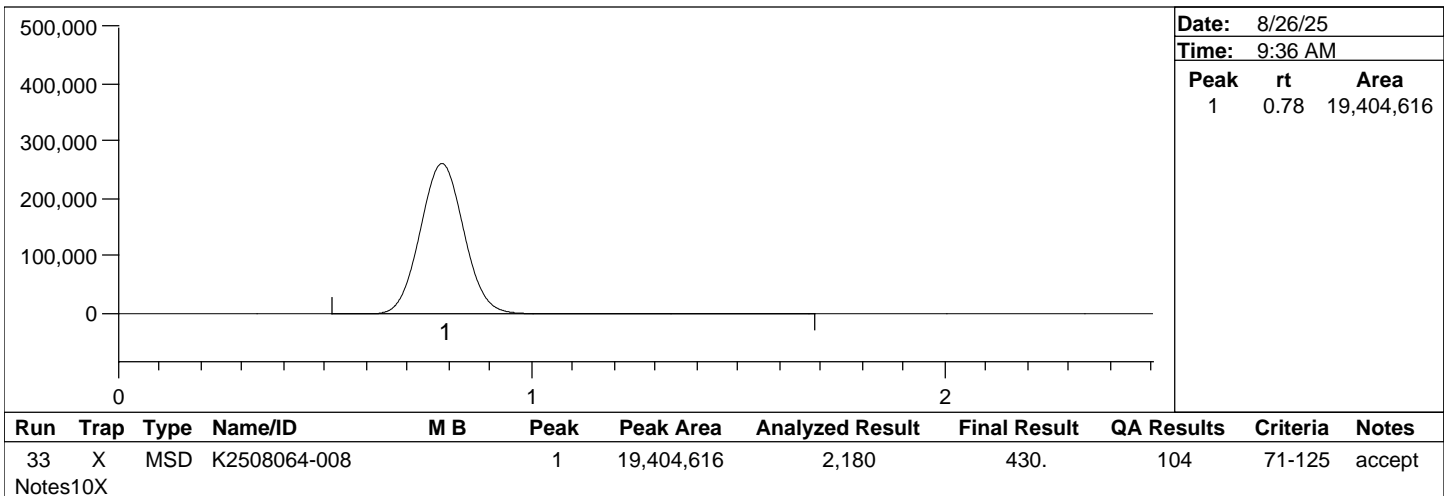
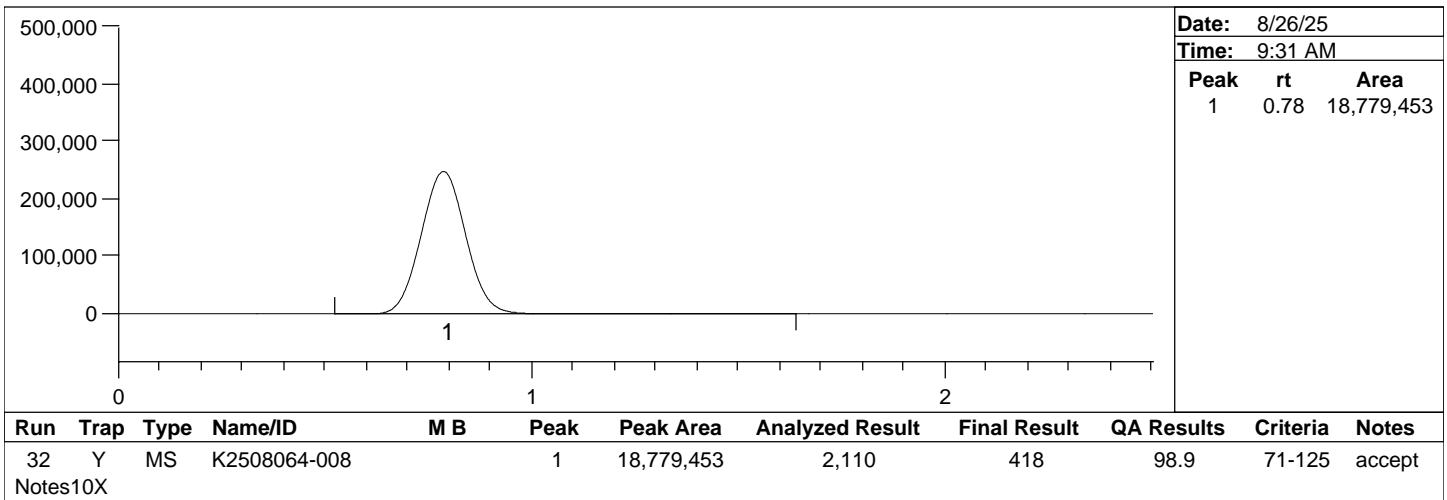
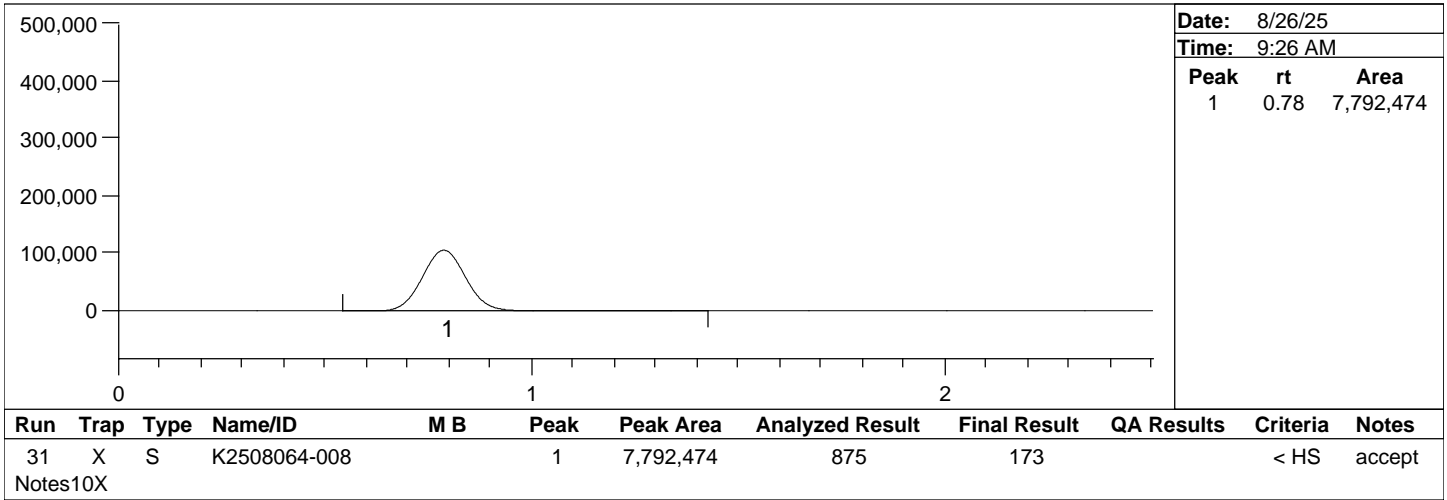
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



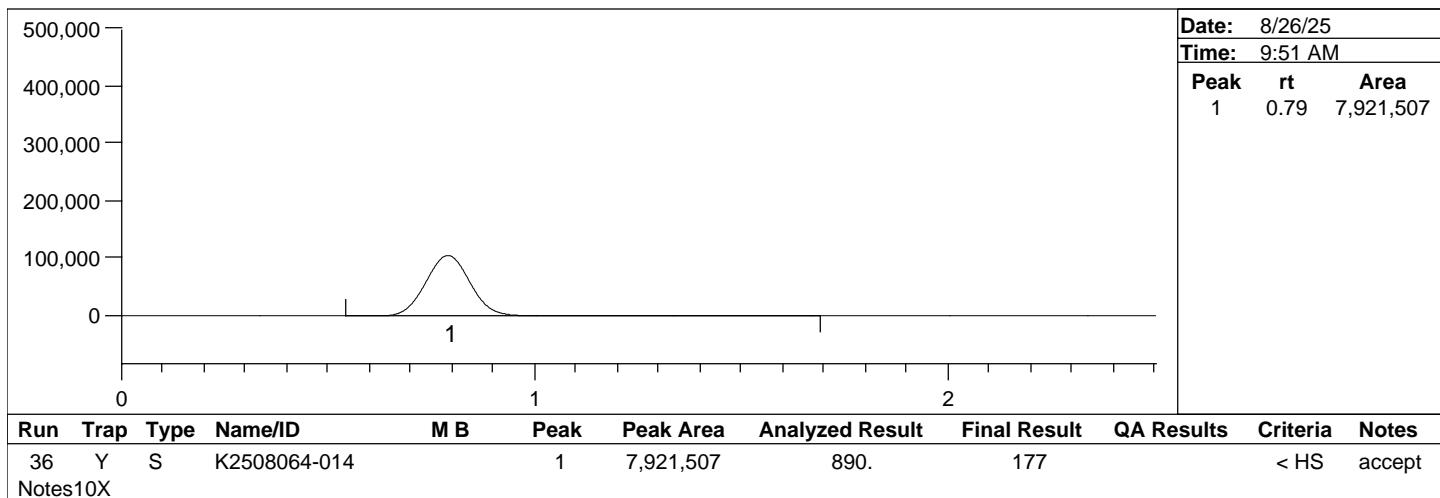
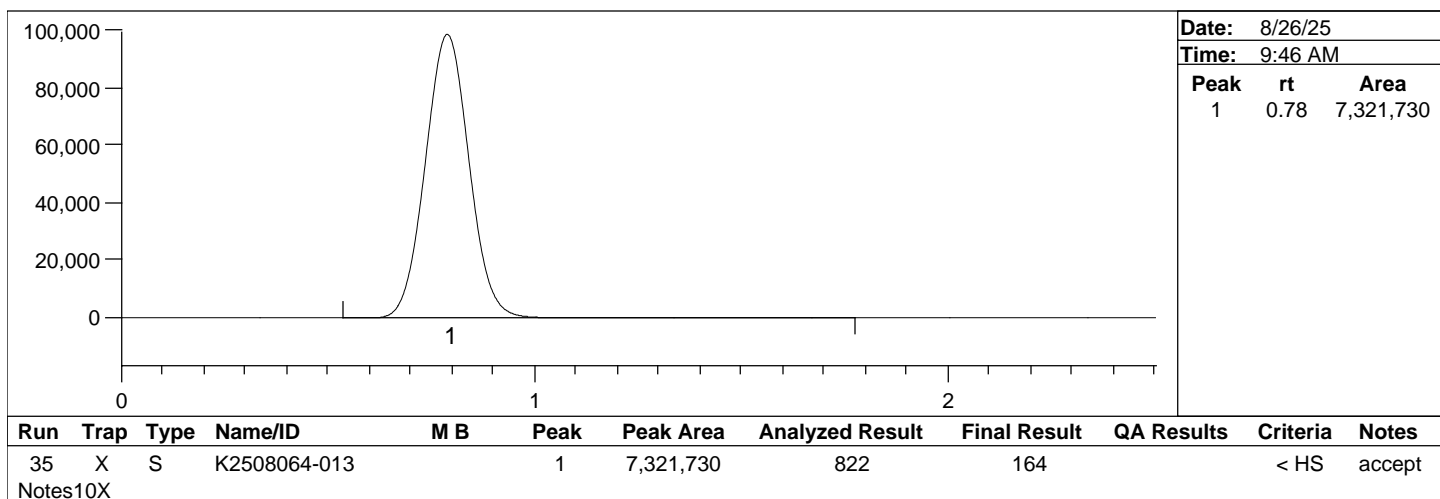
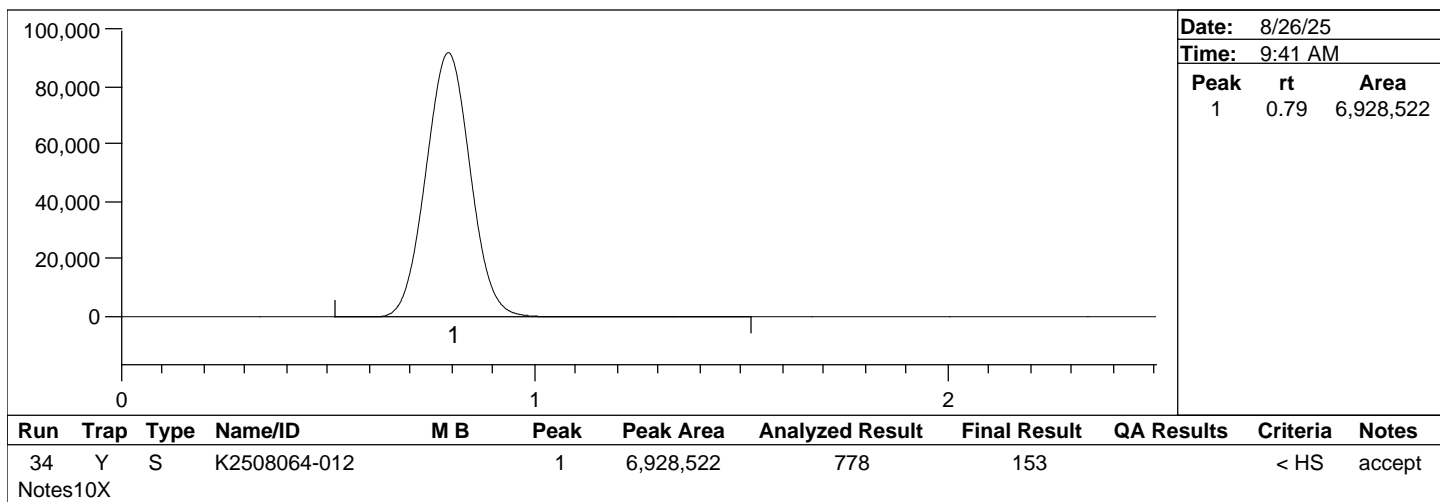
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



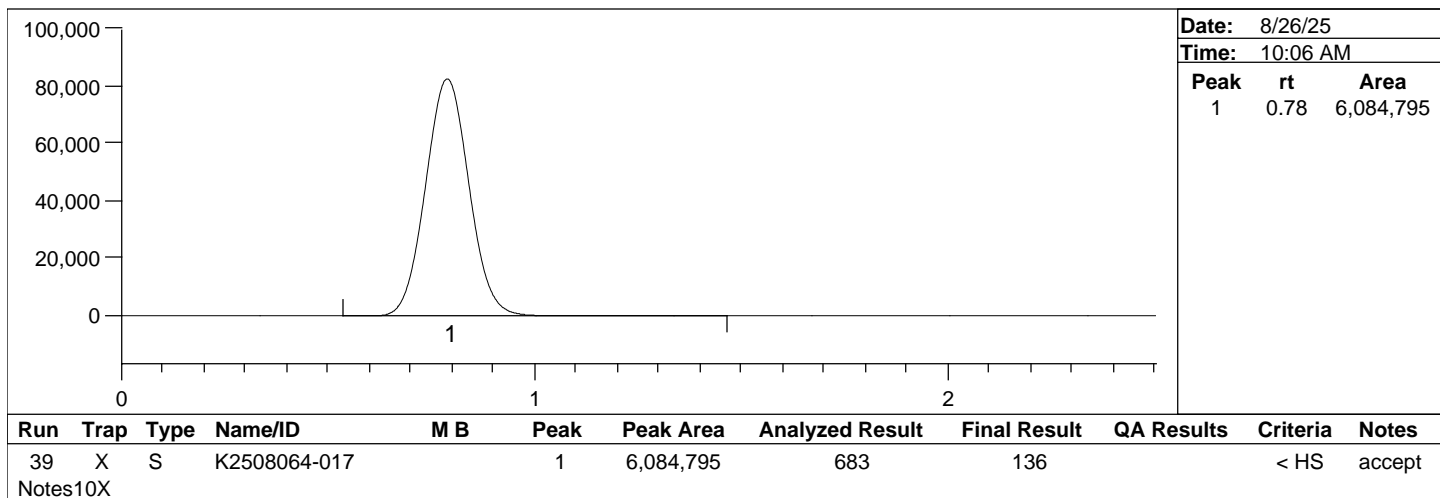
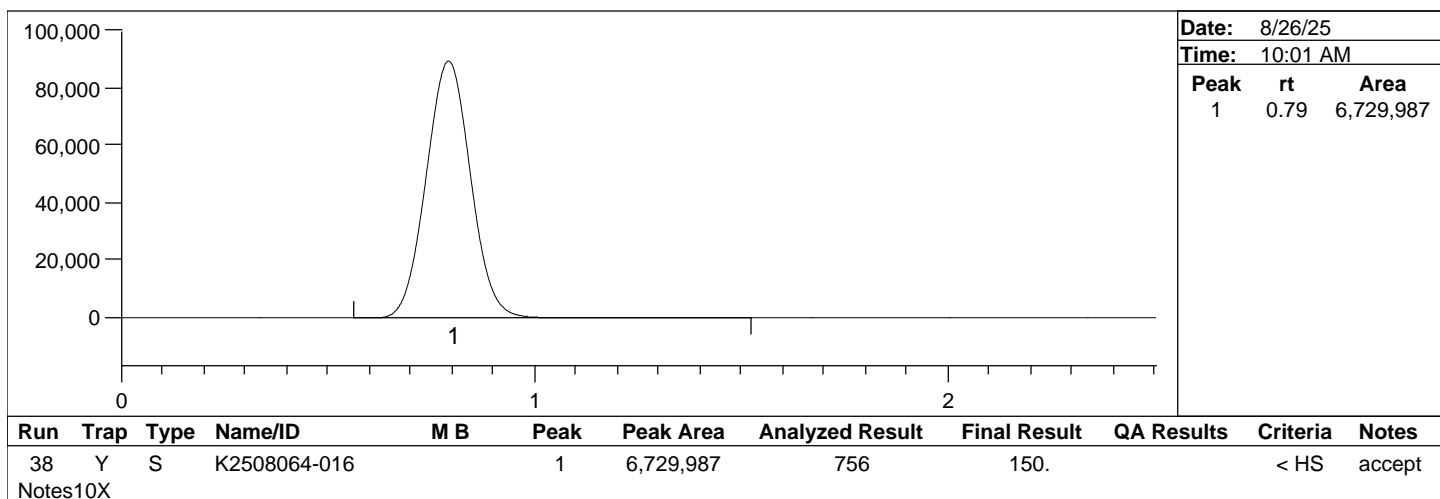
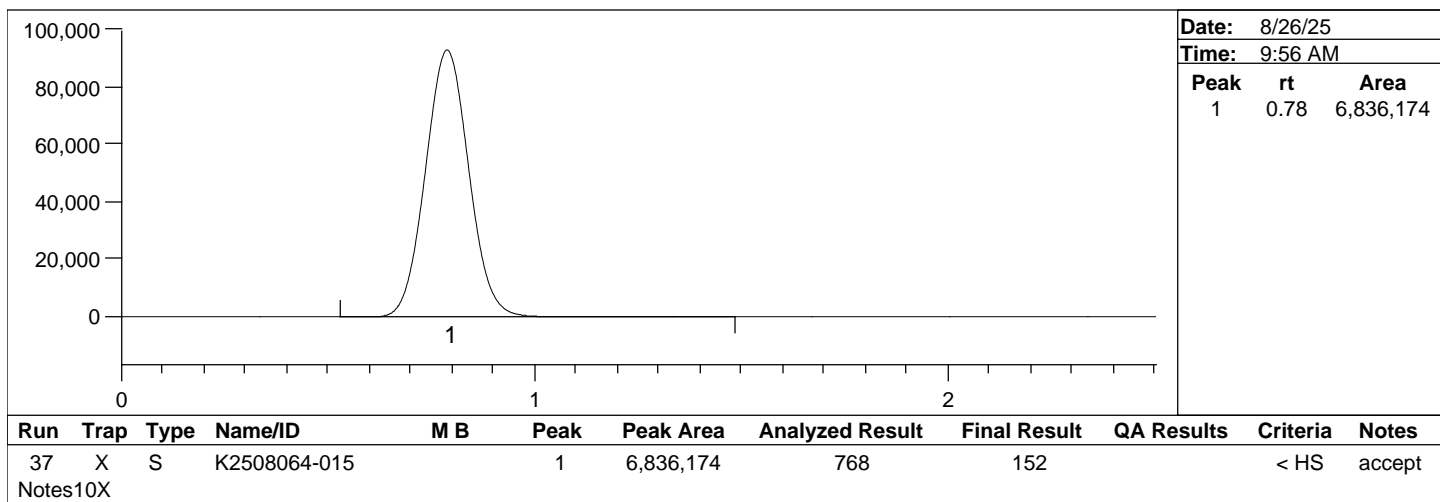
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



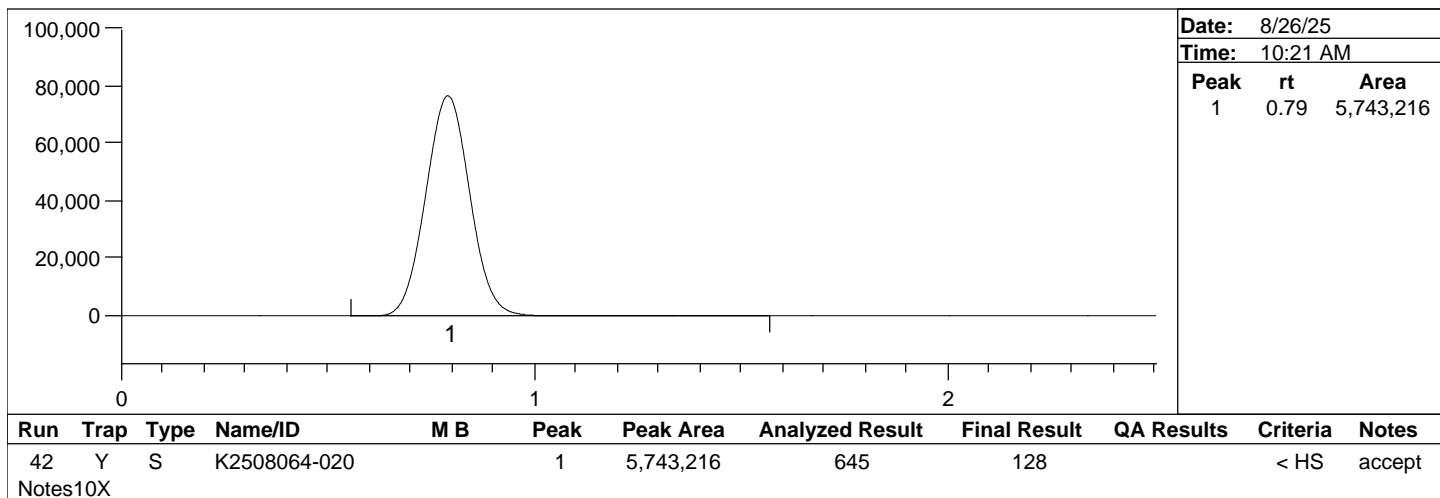
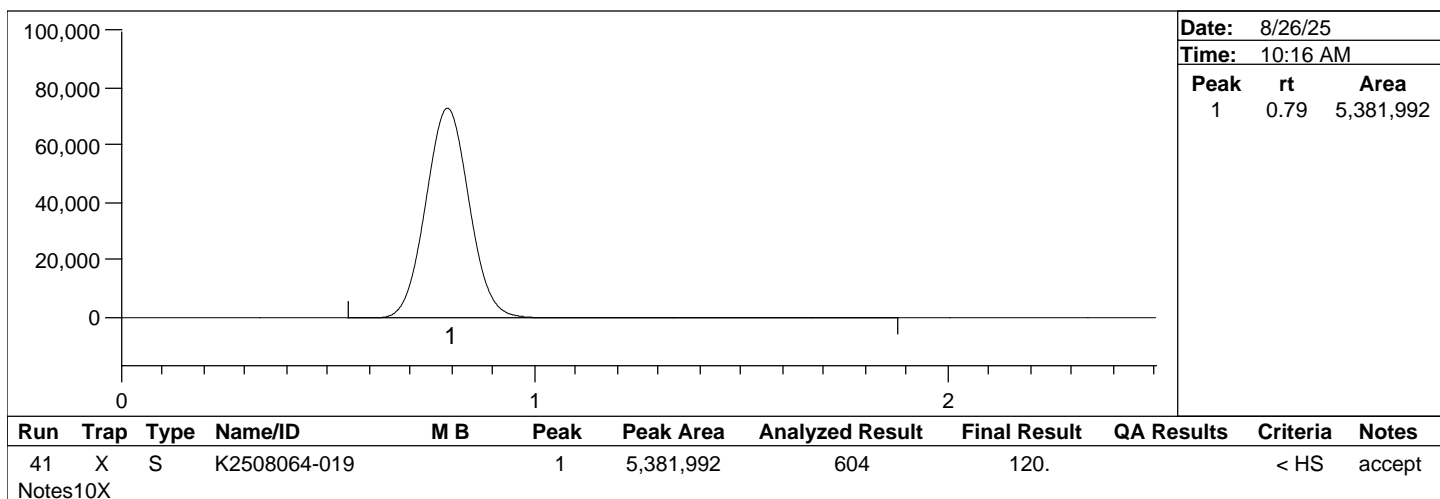
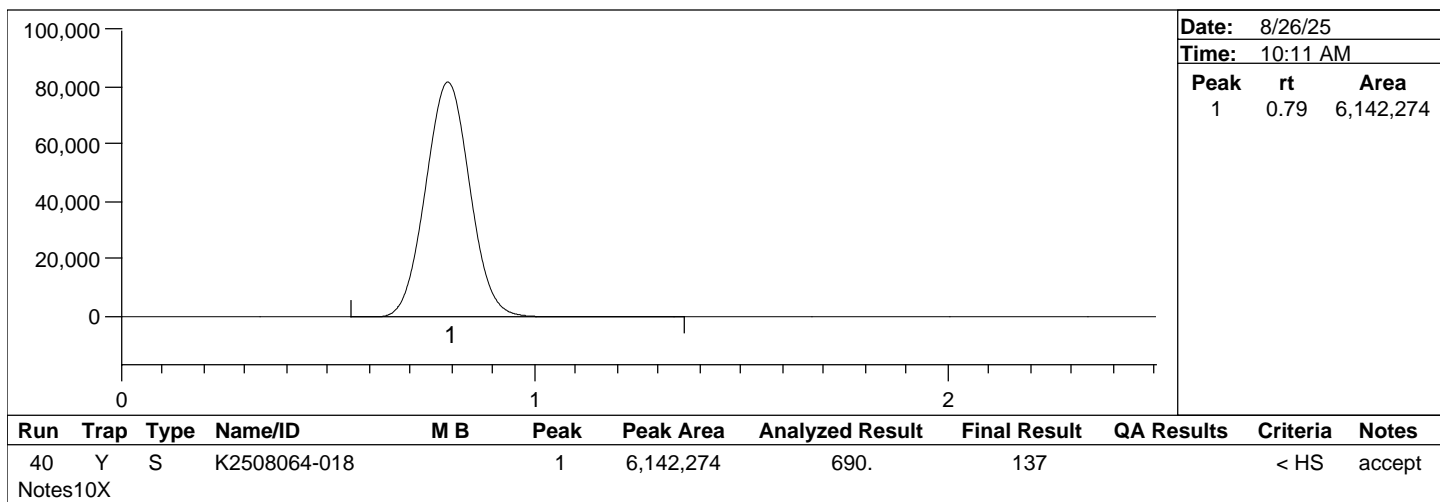
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssoladey



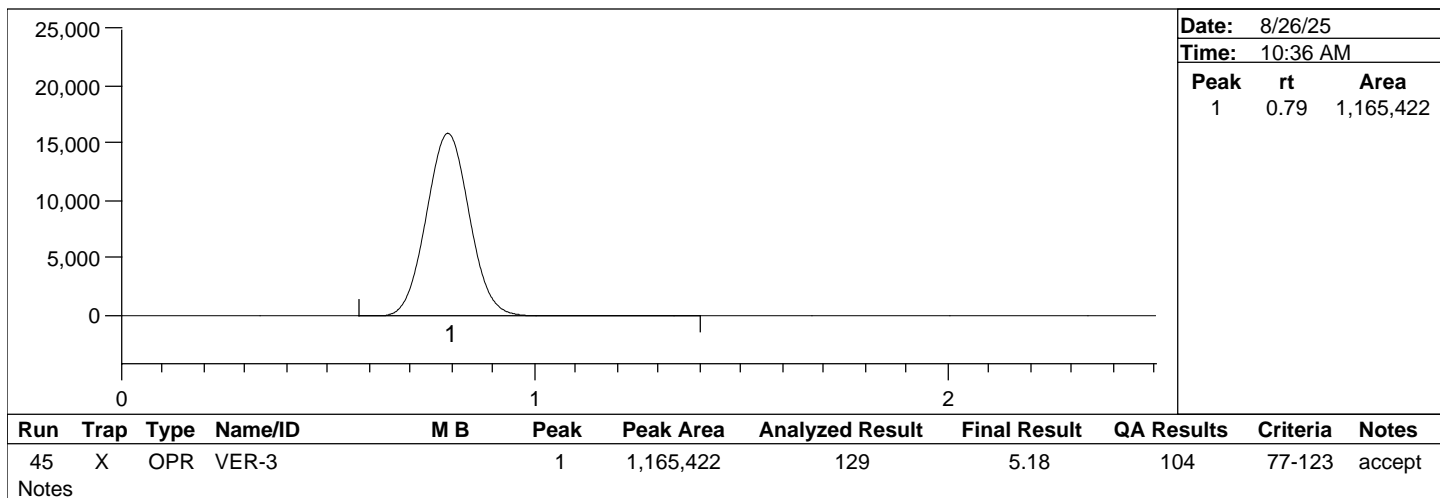
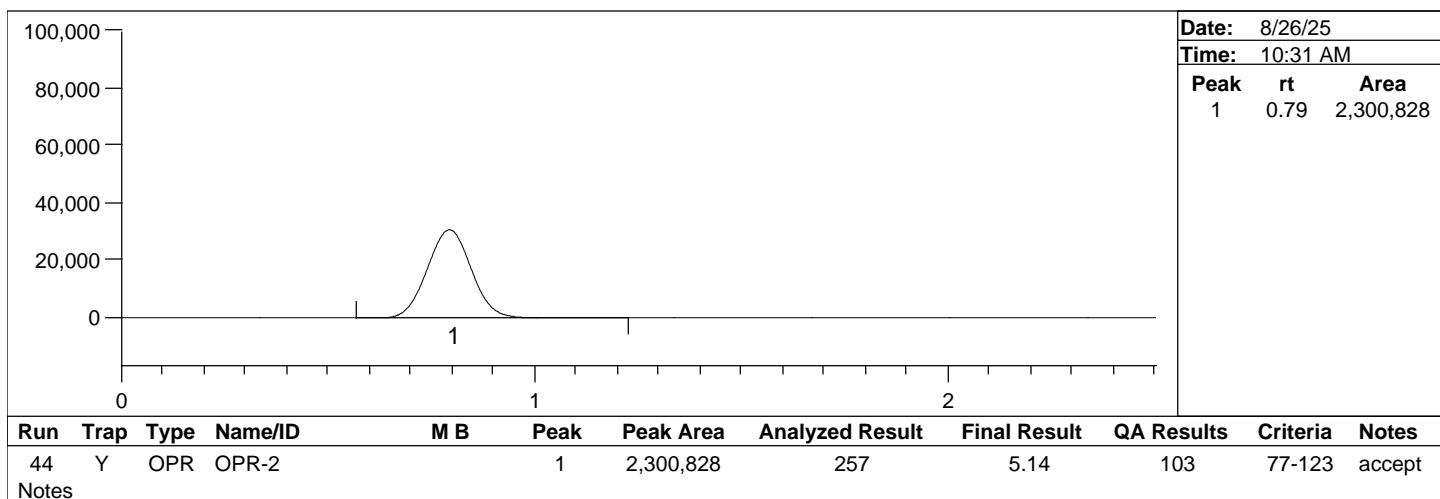
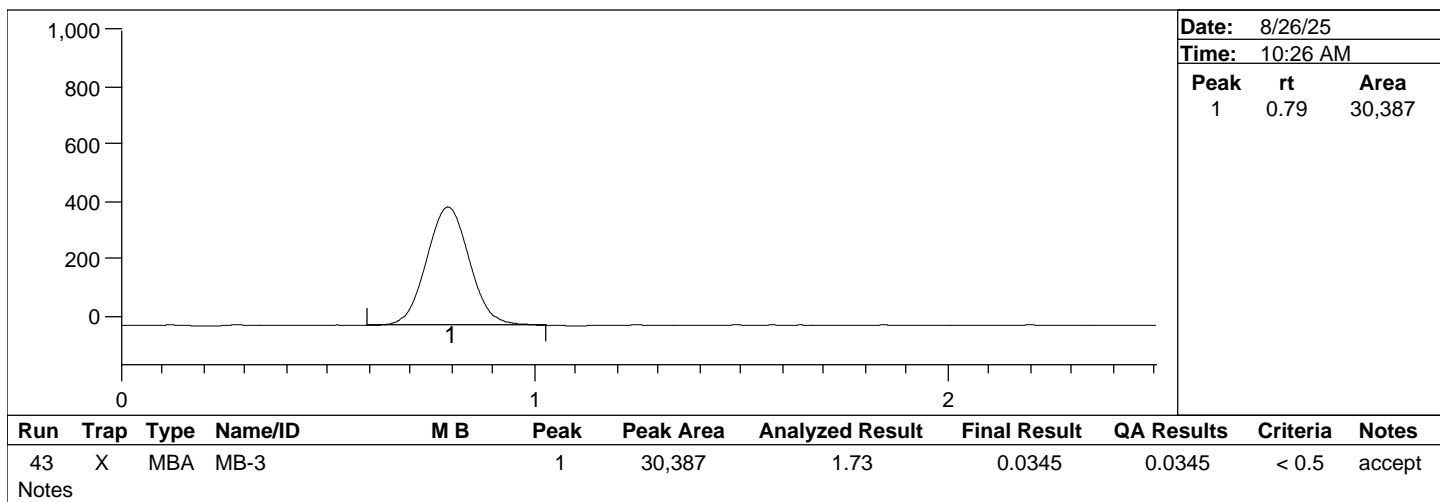
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/26/25
Analyst Name: ssladey



Service Request: K2508064, K2508065, K2508066
 Calibration: 082725AICPMS06
 ALS LIMS Run# 891163
 Pipette IDs: 18010244, 44382052, 43889034
 Cal Std: MS37-40-A
 CCV: MS37-40-B
 ICV Std: MS37-24-A
 LLICV Std: MS37-40-G
 I.S. Solution: MS36-85-C
 Tune Std: MS36-87-C
 ICSA: MS37-40-C
 ICSAB: MS37-40-D

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	<u> X </u>	<u> </u>	<u> </u>
2. ICV in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
3. CCV's in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
4. ICB/CCB's below MRL	<u> X </u>	<u> </u>	<u> </u>
5. LLICV standard analyzed and in control	<u> X </u>	<u> </u>	<u> </u>
6. ICS standards within 20% of true value	<u> X </u>	<u> </u>	<u> </u>
7. All analytes within instrument linear range	<u> X </u>	<u> </u>	<u> </u>
8. Adequate rinse out time allowed	<u> X </u>	<u> </u>	<u> </u>
9. Internal standards in control	<u> X </u>	<u> </u>	<u> </u>
10. Interferences checked	<u> X </u>	<u> </u>	<u> </u>
11. Was the run terminated? If so, why.	<u> </u>	<u> X </u>	<u> </u>

See Benchsheet exception report for sample batch QC information.
 Comments: LRSTD- 1000ppb + 50ppb Ag

Prep Batches: 462959, 462960, 462961

Primary Review by AB Date 8/27/25

Secondary Review by RRM Date 8/27/25

Data Review Form

Instrument ID#: K-ICP-MS-06
DataFile Name: R:\ICP\WIP\DATA\K-ICP-MS-06 (Agilent 7800)\082725A.csv
RUNNO: 891163

K2508064

No exceptions to report.

K2508065

K2508065-012MS - Metals T -

MS Recovery

6020B/Metals T - 66 Zn [He] - Recovery: 126 Limits: 75 - 125 *

K2508066

KQ2515048-04SRM - Metals T -

SRM Recovery

6020B/Metals T - 208 Pb [He] - Recovery: 72 Limits: 80 - 120 *

*okay




Primary Approver: AWB 8/27/25
Secondary Approver: RRM 8/27/25

Sample									
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+	1	<input type="checkbox"/>	001SMPL.	2025-08-27 10:20:33	Sample		PRIMER		2
+	2	<input type="checkbox"/>	002SMPL.	2025-08-27 10:22:38	Sample		RINSE		1
+	3	<input type="checkbox"/>	003SMPL.	2025-08-27 10:24:42	Sample		PRIMER		2
+	4	<input type="checkbox"/>	004SMPL.	2025-08-27 10:26:46	Sample		RINSE		1
+	5	<input type="checkbox"/>	005SMPL.	2025-08-27 10:28:51	Sample		RINSE		1
+	6	<input type="checkbox"/>	006CALB.	2025-08-27 10:30:55	CalBlk	1	Blank		1
+	7	<input type="checkbox"/>	007CAL.S.	2025-08-27 10:32:59	CalStd	2	Cal Std		4
+	8	<input type="checkbox"/>	008_ICV.d	2025-08-27 10:35:04	ICV		ICV		2101
+	9	<input type="checkbox"/>	009_CCV.	2025-08-27 10:37:09	CCV		CCV		2
+	10	<input type="checkbox"/>	010_ICB.d	2025-08-27 10:39:13	ICB		ICB		1
+	11	<input type="checkbox"/>	011_CCB.	2025-08-27 10:41:17	CCB		CCB		1
+	12		012LICV.d	2025-08-27 10:43:22	LLICV		LLICVT		2102
+	13	<input type="checkbox"/>	013LICV.d	2025-08-27 10:50:02	LLICV		LLICVT		2102
+	14	<input type="checkbox"/>	014ICSA.d	2025-08-27 10:52:06	ICSA		ICSA		2103
+	15	<input type="checkbox"/>	015ICSB.d	2025-08-27 10:54:10	ICSB		ICSAB		2104
+	16		016SMPL.	2025-08-27 10:56:15	Sample		LRSTD 1000ppb		1101
+	17	<input type="checkbox"/>	017SMPL.	2025-08-27 10:58:14	Sample		MO STD		2105
+	18	<input type="checkbox"/>	018_PB.d	2025-08-27 11:06:51	PB		KQ2515045-01	5X	1102
+	19	<input type="checkbox"/>	019_LCS.d	2025-08-27 11:08:55	LCS		KQ2515045-02	5X	1103
+	20	<input type="checkbox"/>	020_QC4.	2025-08-27 11:10:59	QC4		KQ2515045-03	5X	1104
+	21	<input type="checkbox"/>	021_QC5.	2025-08-27 11:13:03	QC5		KQ2515045-04	5X	1105
+	22	<input type="checkbox"/>	022_ARF.	2025-08-27 11:15:06	AllRef		K2508064-008	5X	1106
+	23		023_Dup.	2025-08-27 11:17:10	Dup		KQ2515045-05	5X	1107
+	24	<input type="checkbox"/>	024SMPL.	2025-08-27 11:19:14	Sample		K2508064-008L	25X	1108
+	25		025_PDS.	2025-08-27 11:21:18	PDS		K2508064-008A	5X	1109
+	26	<input type="checkbox"/>	026_SPK.	2025-08-27 11:23:22	Spike		KQ2515045-06	5X	1110
+	27	<input type="checkbox"/>	027SMPL.	2025-08-27 11:25:25	Sample		K2508064-001	5X	1111
+	28	<input type="checkbox"/>	028_CCV.	2025-08-27 11:27:29	CCV		CCV		2
+	29	<input type="checkbox"/>	029_CCB.	2025-08-27 11:29:33	CCB		CCB		1
+	30	<input type="checkbox"/>	030SMPL.	2025-08-27 11:31:38	Sample		K2508064-002	5X	1112
+	31	<input type="checkbox"/>	031SMPL.	2025-08-27 11:33:42	Sample		K2508064-003	5X	1201
+	32	<input type="checkbox"/>	032SMPL.	2025-08-27 11:35:44	Sample		K2508064-004	5X	1202

see version
 AB
 8/27/25

Sample									
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+		<input type="checkbox"/>	033SMPL.	2025-08-27 11:37:47	Sample		K2508064-005	5X	1203
+		<input type="checkbox"/>	034SMPL.	2025-08-27 11:39:50	Sample		K2508064-006	5X	1204
+		<input type="checkbox"/>	035SMPL.	2025-08-27 11:41:55	Sample		K2508064-007	5X	1205
+		<input type="checkbox"/>	036SMPL.	2025-08-27 11:43:57	Sample		K2508064-009	5X	1206
+		<input type="checkbox"/>	037SMPL.	2025-08-27 11:46:00	Sample		K2508064-010	5X	1207
+		<input type="checkbox"/>	038SMPL.	2025-08-27 11:48:02	Sample		K2508064-011	5X	1208
+		<input type="checkbox"/>	039SMPL.	2025-08-27 11:50:05	Sample		K2508064-012	5X	1209
+		<input type="checkbox"/>	040_CC.V.	2025-08-27 11:52:09	CCV		CCV		2
+		<input type="checkbox"/>	041_CC.V.	2025-08-27 11:57:16	CCV		CCV		2
+		<input type="checkbox"/>	042_CCB.	2025-08-27 11:59:21	CCB		CCB		1
+		<input type="checkbox"/>	043SMPL.	2025-08-27 12:01:25	Sample		K2508064-013	5X	1210
+		<input type="checkbox"/>	044SMPL.	2025-08-27 12:03:27	Sample		K2508064-014	5X	1211
+		<input type="checkbox"/>	045SMPL.	2025-08-27 12:05:30	Sample		K2508064-015	5X	1212
+		<input type="checkbox"/>	046SMPL.	2025-08-27 12:07:33	Sample		K2508064-016	5X	1301
+		<input type="checkbox"/>	047SMPL.	2025-08-27 12:09:35	Sample		K2508064-017	5X	1302
+		<input type="checkbox"/>	048SMPL.	2025-08-27 12:11:39	Sample		K2508064-018	5X	1303
+		<input type="checkbox"/>	049SMPL.	2025-08-27 12:13:43	Sample		K2508064-019	5X	1304
+		<input type="checkbox"/>	050SMPL.	2025-08-27 12:15:46	Sample		K2508064-020	5X	1305
+		<input type="checkbox"/>	051_CC.V.	2025-08-27 12:17:50	CCV		CCV		2
+		<input type="checkbox"/>	052_CCB.	2025-08-27 12:19:54	CCB		CCB		1
+		<input type="checkbox"/>	053_PB.d	2025-08-27 12:21:59	PB		KQ2515046-01	5X	1306
+		<input type="checkbox"/>	054_LCS.d	2025-08-27 12:24:03	LCS		KQ2515046-02	5X	1307
+		<input type="checkbox"/>	055_QC4.	2025-08-27 12:26:05	QC4		KQ2515046-03	5X	1308
+		<input type="checkbox"/>	056_QC5.	2025-08-27 12:28:08	QC5		KQ2515046-04	5X	1309
+		<input type="checkbox"/>	057_ARF.	2025-08-27 12:30:10	AllRef		K2508065-012	5X	1310
+		<input type="checkbox"/>	058_Dup.	2025-08-27 12:32:14	Dup		KQ2515046-05	5X	1311
+		<input type="checkbox"/>	059SMPL.	2025-08-27 12:34:17	Sample		K2508065-012L	25X	1312
+		<input type="checkbox"/>	060_PDS.	2025-08-27 12:36:19	PDS		K2508065-012A	5X	1401
+		<input type="checkbox"/>	061_SPK.	2025-08-27 12:38:23	Spike		KQ2515046-06	5X	1402
+		<input type="checkbox"/>	062SMPL.	2025-08-27 12:40:26	Sample		K2508065-001	5X	1403
+		<input type="checkbox"/>	063_CC.V.	2025-08-27 12:42:29	CCV		CCV		2
+		<input type="checkbox"/>	064_CCB.	2025-08-27 12:44:32	CCB		CCB		1

See
 rerun
 AB
 5/27/25

Sample										
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...	
+	65	<input type="checkbox"/>	065SMPL.	2025-08-27 12:46:36	Sample		K2508065-002	5X	1404	
+	66	<input type="checkbox"/>	066SMPL.	2025-08-27 12:48:40	Sample		K2508065-003	5X	1405	
+	67	<input type="checkbox"/>	067SMPL.	2025-08-27 12:50:43	Sample		K2508065-004	5X	1406	
+	68	<input type="checkbox"/>	068SMPL.	2025-08-27 12:52:47	Sample		K2508065-005	5X	1407	
+	69	<input type="checkbox"/>	069SMPL.	2025-08-27 12:54:51	Sample		K2508065-006	5X	1408	
+	70	<input type="checkbox"/>	070SMPL.	2025-08-27 12:56:55	Sample		K2508065-007	5X	1409	
+	71	<input type="checkbox"/>	071SMPL.	2025-08-27 12:58:58	Sample		K2508065-008	5X	1410	
+	72	<input type="checkbox"/>	072SMPL.	2025-08-27 13:01:01	Sample		K2508065-009	5X	1411	
+	73	<input type="checkbox"/>	073SMPL.	2025-08-27 13:03:05	Sample		K2508065-010	5X	1412	
+	74	<input type="checkbox"/>	074SMPL.	2025-08-27 13:05:09	Sample		K2508065-011	5X	1501	
+	75	<input type="checkbox"/>	075_CCV.	2025-08-27 13:07:13	CCV		CCV		2	
+	76	<input type="checkbox"/>	076_CCB.	2025-08-27 13:09:17	CCB		CCB		1	
+	77	<input type="checkbox"/>	077SMPL.	2025-08-27 13:11:22	Sample		K2508065-013	5X	1502	
+	78	<input type="checkbox"/>	078SMPL.	2025-08-27 13:13:25	Sample		K2508065-014	5X	1503	
+	79	<input type="checkbox"/>	079SMPL.	2025-08-27 13:15:29	Sample		K2508065-015	5X	1504	
+	80	<input type="checkbox"/>	080SMPL.	2025-08-27 13:17:32	Sample		K2508065-016	5X	1505	
+	81	<input type="checkbox"/>	081SMPL.	2025-08-27 13:19:35	Sample		K2508065-017	5X	1506	
+	82	<input type="checkbox"/>	082SMPL.	2025-08-27 13:21:39	Sample		K2508065-018	5X	1507	
+	83	<input type="checkbox"/>	083SMPL.	2025-08-27 13:23:43	Sample		K2508065-019	5X	1508	
+	84	<input type="checkbox"/>	084SMPL.	2025-08-27 13:25:47	Sample		K2508065-020	5X	1509	
+	85	<input type="checkbox"/>	085_CCV.	2025-08-27 13:27:52	CCV		CCV		2	
+	86	<input type="checkbox"/>	086_CCB.	2025-08-27 13:29:56	CCB		CCB		1	
+	87	<input type="checkbox"/>	087_PB.d	2025-08-27 13:32:01	PB		KQ2515048-01	5X	1510	
+	88	<input type="checkbox"/>	088_LCS.d	2025-08-27 13:34:04	LCS		KQ2515048-02	5X	1511	
+	89	<input type="checkbox"/>	089_QC4.	2025-08-27 13:36:08	QC4		KQ2515048-03	5X	1512	
+	90		<input type="checkbox"/>	090_QC5.	2025-08-27 13:38:11	QC5		KQ2515048-04	5X	3101
+	91	<input type="checkbox"/>	091_ARF.	2025-08-27 13:40:15	AllRef		K2508066-004	5X	3102	
+	92		<input type="checkbox"/>	092_Dup.	2025-08-27 13:42:19	Dup		KQ2515048-05	5X	3103
+	93	<input type="checkbox"/>	093SMPL.	2025-08-27 13:44:22	Sample		K2508066-004L	25X	3104	
+	94	<input type="checkbox"/>	094_PDS.	2025-08-27 13:46:25	PDS		K2508066-004A	5X	3105	
+	95	<input type="checkbox"/>	095_SPK.	2025-08-27 13:48:28	Spike		KQ2515048-06	5X	3106	
+	96	<input type="checkbox"/>	096SMPL.	2025-08-27 13:50:32	Sample		K2508066-001	5X	3107	

Sample								
	Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 97	<input type="checkbox"/>	097_CCV.	2025-08-27 13:52:37	CCV		CCV		2
+ 98	<input type="checkbox"/>	098_CCB.	2025-08-27 13:54:41	CCB		CCB		1
+ 99	<input type="checkbox"/>	099SMPL.	2025-08-27 13:56:46	Sample		K2508066-002	5X	3108
+ 100	<input type="checkbox"/>	100SMPL.	2025-08-27 13:58:51	Sample		K2508066-003	5X	3109
+ 101	<input type="checkbox"/>	101SMPL.	2025-08-27 14:00:55	Sample		K2508066-005	5X	3110
+ 102	<input type="checkbox"/>	102SMPL.	2025-08-27 14:02:59	Sample		K2508066-006	5X	3111
+ 103	<input type="checkbox"/>	103SMPL.	2025-08-27 14:05:02	Sample		K2508066-007	5X	3112
+ 104	<input type="checkbox"/>	104SMPL.	2025-08-27 14:07:06	Sample		K2508066-008	5X	3201
+ 105	<input type="checkbox"/>	105SMPL.	2025-08-27 14:09:09	Sample		K2508066-009	5X	3202
+ 106	<input type="checkbox"/>	106SMPL.	2025-08-27 14:11:13	Sample		K2508066-010	5X	3203
+ 107	<input type="checkbox"/>	107SMPL.	2025-08-27 14:13:17	Sample		K2508066-011	5X	3204
+ 108	<input type="checkbox"/>	108SMPL.	2025-08-27 14:15:20	Sample		K2508066-012	5X	3205
+ 109	<input type="checkbox"/>	109_CCV.	2025-08-27 14:17:26	CCV		CCV		2
+ 110	<input type="checkbox"/>	110_CCB.	2025-08-27 14:19:30	CCB		CCB		1
+ 111	<input type="checkbox"/>	111SMPL.	2025-08-27 14:21:35	Sample		K2508066-013	5X	3206
+ 112	<input type="checkbox"/>	112SMPL.	2025-08-27 14:23:37	Sample		K2508066-014	5X	3207
+ 113	<input type="checkbox"/>	113SMPL.	2025-08-27 14:25:41	Sample		K2508066-015	5X	3208
+ 114	<input type="checkbox"/>	114SMPL.	2025-08-27 14:27:45	Sample		K2508066-016	5X	3209
+ 115	<input type="checkbox"/>	115SMPL.	2025-08-27 14:29:48	Sample		K2508066-017	5X	3210
+ 116	<input type="checkbox"/>	116SMPL.	2025-08-27 14:31:53	Sample		K2508066-018	5X	3211
+ 117	<input type="checkbox"/>	117SMPL.	2025-08-27 14:33:57	Sample		K2508066-019	5X	3212
+ 118	<input type="checkbox"/>	118SMPL.	2025-08-27 14:36:01	Sample		K2508066-020	5X	3301
+ 119	<input type="checkbox"/>	119_CCV.	2025-08-27 14:38:05	CCV		CCV		2
- 120	<input type="checkbox"/>	120_CCB.	2025-08-27 14:40:09	CCB		CCB		1

Analyte					
	Name	Mass	ISTD	Tune Mo...	Replica...
+ 1	Cu	63	72	He	3
+ 2	Cu	65	72	He	3
+ 3	Zn	66	72	He	3
+ 4	Se	77	72	H2	3
+ 5	Se	78	72	H2	3
+ 6	Mo	95	115	He	3

Analyte						
	Name	Mass	ISTD	Tune Mo...	Replica...	
+	7	Mo	98	115	He	3
+	8	Ag	107	115	He	3
+	9	Ag	109	115	He	3
+	10	Cd	111	115	He	3
+	11	[Pb]	206	175	He	3
+	12	[Pb]	207	175	He	3
+	13	Pb	208	175	He	3
+	14	Sc	45		He	3
+	15	Ge	72		H2	3
+	16	Ge	72		He	3
+	17	In	115		He	3
+	18	Lu	175		He	3
+	19	Th	232		He	3

US EPA Tune Check Report

Operator Name ALKLS NoUser
Acq/Data Batch D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725.b
Acq. Date-Time 2025-08-27 10:16:33
Report Comment ---
Instrument Name G8421A JP16310358

[No Gas]

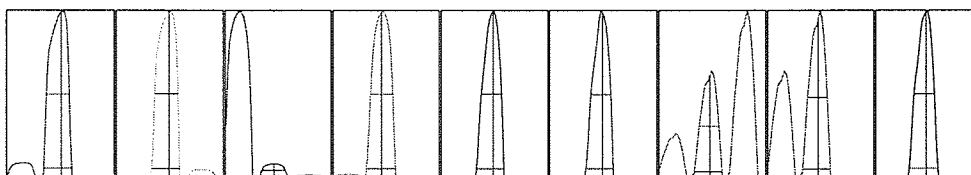
Sensitivity

Mass	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	161341.73	0.338	5.000	
9	40106.81	0.663	5.000	
24	127644.00	0.334	5.000	
59	179444.59	0.218	5.000	
115	268011.81	0.546	5.000	
140	270858.68	0.303	5.000	
208	147026.32	0.701	5.000	
209	230494.40	0.724	5.000	
238	298576.19	0.582	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	16041	16139	16180	16166	16144
9	3991	4013	4043	4028	3978
24	12834	12763	12756	12718	12751
59	17965	17967	17885	17925	17980
115	26811	26964	26893	26580	26759
140	27118	27188	27026	26981	27115
208	14549	14827	14754	14680	14703
209	22797	23252	23047	23025	23126
238	29588	29956	29982	29985	29777

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
7	26761.47	7.05	6.90 - 7.10		0.783		0.900
9	6468.63	9.00	8.90 - 9.10		0.783		0.900
24	20132.63	23.90	23.90 - 24.10		0.790		0.900

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
59	29884.04	58.90	58.90 - 59.10		0.823		0.900
115	50018.31	115.00	114.90 - 115.10		0.772		0.900
140	52169.92	140.00	139.90 - 140.10		0.761		0.900
208	27288.85	207.95	207.90 - 208.10		0.784		0.900
209	42741.86	208.95	208.90 - 209.10		0.785		0.900
238	55385.38	237.95	237.90 - 238.10		0.818		0.900

Integration Time [sec] 0.1
 Acquisition Time [sec] 268.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.59 L/min	Dilution Gas	0.42 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.60 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-30 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	127	Axis Gain	1.0002	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	-0.6 mm	Torch V	0.0 mm
---------	---------	---------	--------

EM

Discriminator	4.5 mV	Analog HV	2552 V	Pulse HV	1859 V
---------------	--------	-----------	--------	----------	--------

Calibration Blank Report

Sample Name Blank
File Name 006CALB.d
Data Path Name D:\Agilent\CPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:30:55
Sample Type CalBlk
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	146.67	14.2
Se	78	72	H2	1.67	91.7
Cu	63	72	He	116.67	48.7
Cu	65	72	He	33.33	8.7
Zn	66	72	He	53.33	21.7
Mo	95	115	He	26.67	69.6
Mo	98	115	He	52.22	68.3
Ag	107	115	He	6.67	43.3
Ag	109	115	He	26.67	28.6
Cd	111	115	He	0.00	N/A
[Pb]	206	175	He	36.67	36.4
[Pb]	207	175	He	23.33	0.0
Pb	208	175	He	127.78	29.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Ge	72	H2	378486.94	2.7
Sc	45	He	74157.35	2.4
Ge	72	He	64995.55	1.2
In	115	He	567443.14	1.4
Lu	175	He	1431992.06	1.9
Th	232	He	2601025.95	0.9

AG 8/27/25

Calibration Standard Report

Sample Name Cal Std
File Name 007CAL.S.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:32:59
Sample Type CalStd
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	4947.63	6.8
Se	78	72	H2	14902.84	1.7
Cu	63	72	He	217010.04	0.3
Cu	65	72	He	108003.30	0.9
Zn	66	72	He	25676.84	1.5
Mo	95	115	He	50012.51	1.5
Mo	98	115	He	86139.93	0.9
Ag	107	115	He	183706.19	0.8
Ag	109	115	He	180411.82	1.1
Cd	111	115	He	41439.34	0.9
[Pb]	206	175	He	246645.46	0.9
[Pb]	207	175	He	210657.72	0.8
Pb	208	175	He	981409.41	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	356613.67	0.7	378486.94	94.22	
Sc	45	He	71812.01	1.9	74157.35	96.84	
Ge	72	He	61794.71	1.5	64995.55	95.08	
In	115	He	541359.35	0.9	567443.14	95.4	
Lu	175	He	1384665.81	0.7	1431992.06	96.7	
Th	232	He	2551040.90	0.9	2601025.95	98.08	

Initial Calibration Verification (ICV) Report

Sample Name ICV
File Name 008_ICV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:35:04
Sample Type ICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8770	ug/L	11.2	2516.93	95.51	
Se	78	72	H2	25.3763	ug/L	1.6	7824.84	101.51	
Cu	63	72	He	12.4021	ug/L	0.1	54668.45	99.22	
Cu	65	72	He	12.4085	ug/L	1.2	27206.01	99.27	
Zn	66	72	He	25.9989	ug/L	4.4	13563.37	104	
Mo	95	115	He	25.4394	ug/L	1.1	51545.80	101.76	
Mo	98	115	He	25.4037	ug/L	1.6	88656.58	101.61	
Ag	107	115	He	12.9261	ug/L	1.1	96213.44	103.41	
Ag	109	115	He	12.6426	ug/L	1.4	92413.28	101.14	
Cd	111	115	He	12.6979	ug/L	1.5	10658.76	101.58	
Pb	208	175	He	24.7198	ug/L	3.2	503038.43	98.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	368913.38	1.6	378486.94	97.47	
Sc	45	He	72833.77	1.4	74157.35	98.22	
Ge	72	He	62651.94	0.6	64995.55	96.39	
In	115	He	548350.79	1.5	567443.14	96.64	
Lu	175	He	1436443.99	3.7	1431992.06	100.31	
Th	232	He	2554818.56	1.0	2601025.95	98.22	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 009_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:37:09
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.7328	ug/L	10.1	2636.96	102.93	
Se	78	72	H2	25.0726	ug/L	2.1	7543.69	100.29	
Cu	63	72	He	25.6206	ug/L	1.4	110660.34	102.48	
Cu	65	72	He	26.1613	ug/L	1.0	56228.96	104.65	
Zn	66	72	He	26.1974	ug/L	1.0	13409.86	104.79	
Mo	95	115	He	12.3998	ug/L	1.1	25242.81	99.2	
Mo	98	115	He	12.4395	ug/L	0.7	43623.54	99.52	
Ag	107	115	He	12.6771	ug/L	1.0	94750.22	101.42	
Ag	109	115	He	12.5908	ug/L	2.2	92408.27	100.73	
Cd	111	115	He	25.3513	ug/L	0.5	21370.26	101.41	
Pb	208	175	He	25.2360	ug/L	1.7	506397.60	100.94	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359938.31	0.5	378486.94	95.1	
Sc	45	He	72666.16	0.5	74157.35	97.99	
Ge	72	He	61463.58	1.7	64995.55	94.57	
In	115	He	550613.02	1.4	567443.14	97.03	
Lu	175	He	1415713.52	2.4	1431992.06	98.86	
Th	232	He	2549004.23	1.1	2601025.95	98	

Initial Calibration Blank (ICB) Report

Sample Name ICB
File Name 010_ICB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:39:13
Sample Type ICB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.2625	ug/L	N/A	116.67	
Se	78	72	H2	0.0077	ug/L	41.2	4.00	
Cu	63	72	He	-0.0151	ug/L	N/A	46.67	
Cu	65	72	He	0.0044	ug/L	155.8	41.67	
Zn	66	72	He	0.0222	ug/L	174.2	63.33	
Mo	95	115	He	0.0103	ug/L	23.5	47.78	
Mo	98	115	He	0.0039	ug/L	27.4	65.55	
Ag	107	115	He	0.0068	ug/L	27.8	58.33	
Ag	109	115	He	0.0050	ug/L	74.9	63.33	
Cd	111	115	He	0.0018	ug/L	33.6	1.50	
Pb	208	175	He	0.0018	ug/L	47.4	164.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367176.94	0.9	378486.94	97.01	
Sc	45	He	72398.65	0.2	74157.35	97.63	
Ge	72	He	62866.13	1.9	64995.55	96.72	
In	115	He	559682.97	0.4	567443.14	98.63	
Lu	175	He	1434242.53	1.7	1431992.06	100.16	
Th	232	He	2535207.77	2.4	2601025.95	97.47	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 011_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:41:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.5602	ug/L	69.6	200.01	
Se	78	72	H2	0.0001	ug/L	6637.0	1.67	
Cu	63	72	He	-0.0130	ug/L	N/A	56.67	
Cu	65	72	He	0.0024	ug/L	494.5	38.33	
Zn	66	72	He	-0.0113	ug/L	N/A	46.67	
Mo	95	115	He	-0.0033	ug/L	N/A	20.00	
Mo	98	115	He	-0.0026	ug/L	N/A	43.34	
Ag	107	115	He	0.0030	ug/L	64.5	30.00	
Ag	109	115	He	-0.0002	ug/L	N/A	25.00	
Cd	111	115	He	0.0011	ug/L	0.1	1.00	
Pb	208	175	He	0.0000	ug/L	4720.4	128.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	371675.83	1.9	378486.94	98.2	
Sc	45	He	73607.40	1.7	74157.35	99.26	
Ge	72	He	63776.81	1.7	64995.55	98.12	
In	115	He	569177.97	0.1	567443.14	100.31	
Lu	175	He	1446710.03	1.1	1431992.06	101.03	
Th	232	He	2538492.67	2.4	2601025.95	97.6	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 012LICV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:43:22
Sample Type LLICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.0584	ug/L	11.4	346.68	-205.84	
Se	78	72	H2	2.0362	ug/L	2.4	627.01	101.81	
Cu	63	72	He	0.2386	ug/L	12.5	1190.07	119.3	
Cu	65	72	He	0.2608	ug/L	4.1	618.35	130.4	LLICV Failed
Zn	66	72	He	2.5872	ug/L	7.8	1430.10	258.72	LLICV Failed
Mo	95	115	He	0.1816	ug/L	10.0	407.79	90.8	
Mo	98	115	He	0.1989	ug/L	5.2	771.14	99.45	
Ag	107	115	He	0.0372	ug/L	20.0	293.34	93	
Ag	109	115	He	0.0397	ug/L	15.5	326.68	99.25	
Cd	111	115	He	0.0476	ug/L	5.2	41.33	119	
[Pb]	206	175	He	0.0465	ug/L	21.7	277.78	116.25	
[Pb]	207	175	He	0.0416	ug/L	15.7	207.78	104	
Pb	208	175	He	0.0440	ug/L	10.2	1035.58	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367587.04	1.1	378486.94	97.12	
Sc	45	He	74354.68	2.7	74157.35	100.27	
Ge	72	He	64225.26	1.9	64995.55	98.81	
In	115	He	567871.91	1.0	567443.14	100.08	
Lu	175	He	1453642.11	2.9	1431992.06	101.51	
Th	232	He	2542116.99	0.2	2601025.95	97.74	

see remake std
 AB
 8/27/25



Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 013LICV.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:50:02
Sample Type LLICV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.2263	ug/L	17.4	353.34	-222.63	
Se	78	72	H2	2.0686	ug/L	5.4	619.34	103.43	
Cu	63	72	He	0.1781	ug/L	11.4	926.71	89.05	
Cu	65	72	He	0.2284	ug/L	9.6	550.02	114.2	
Zn	66	72	He	1.0368	ug/L	12.8	610.03	103.68	
Mo	95	115	He	0.1963	ug/L	9.3	441.12	98.15	
Mo	98	115	He	0.1884	ug/L	6.7	738.92	94.2	
Ag	107	115	He	0.0408	ug/L	8.0	323.34	102	
Ag	109	115	He	0.0377	ug/L	7.4	315.01	94.25	
Cd	111	115	He	0.0369	ug/L	7.8	32.33	92.25	
[Pb]	206	175	He	0.0352	ug/L	16.3	220.00	88	
[Pb]	207	175	He	0.0405	ug/L	18.6	203.34	101.25	
Pb	208	175	He	0.0378	ug/L	3.1	911.13	94.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357939.06	4.6	378486.94	94.57	
Sc	45	He	73215.66	3.3	74157.35	98.73	
Ge	72	He	64764.60	1.1	64995.55	99.64	
In	115	He	572100.82	3.3	567443.14	100.82	
Lu	175	He	1459085.92	2.0	1431992.06	101.89	
Th	232	He	2526382.36	3.8	2601025.95	97.13	

Interference Check Solution A (ICS-A) Report

Sample Name ICSA
File Name 014ICSA.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:52:06
Sample Type ICSA
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	0.6162	ug/L	113.2	-1	186.67	
Se	78	72	H2	0.0327	ug/L	24.1	-1	10.67	
Cu	63	72	He	0.5163	ug/L	9.3	-1	2230.22	
Cu	65	72	He	0.5537	ug/L	2.6	-1	1165.06	
Zn	66	72	He	0.6547	ug/L	3.8	-1	366.68	
Mo	95	115	He	50.3340	ug/L	1.0	50	95935.68	
Mo	98	115	He	50.3523	ug/L	0.3	50	165300.33	
Ag	107	115	He	0.0106	ug/L	17.5	-1	80.00	
Ag	109	115	He	0.0084	ug/L	20.3	-1	81.67	
Cd	111	115	He	0.4146	ug/L	2.3	-1	327.50	
[Pb]	206	175	He	0.2574	ug/L	7.3	-1	1264.51	
[Pb]	207	175	He	0.2506	ug/L	1.9	-1	1045.60	
Pb	208	175	He	0.2434	ug/L	1.8	-1	4751.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336368.85	1.2	378486.94	88.87	
Sc	45	He	68378.74	1.4	74157.35	92.21	
Ge	72	He	58668.19	1.9	64995.55	90.26	
In	115	He	515887.81	0.4	567443.14	90.91	
Lu	175	He	1342589.88	1.1	1431992.06	93.76	
Th	232	He	2434416.58	3.3	2601025.95	93.59	

Interference Check Solution AB (ICS-AB) Report

Sample Name ICSAB
File Name 015ICSB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:54:10
Sample Type ICSB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	24.7881	ug/L	9.5	25	2353.57	
Se	78	72	H2	25.5727	ug/L	1.5	25	7107.79	
Cu	63	72	He	49.2471	ug/L	0.9	50	203092.20	
Cu	65	72	He	48.9887	ug/L	0.8	50	100547.70	
Zn	66	72	He	25.0011	ug/L	3.4	25	12222.10	
Mo	95	115	He	50.1126	ug/L	0.9	50	96790.75	
Mo	98	115	He	49.8623	ug/L	1.3	50	165878.31	
Ag	107	115	He	12.4426	ug/L	1.9	12.5	88302.92	
Ag	109	115	He	12.3310	ug/L	1.3	12.5	85945.17	
Cd	111	115	He	25.2566	ug/L	0.9	25	20215.03	
[Pb]	206	175	He	0.2444	ug/L	5.2	-1	1248.96	
[Pb]	207	175	He	0.2276	ug/L	8.4	-1	986.71	
Pb	208	175	He	0.2313	ug/L	3.2	-1	4691.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332550.78	1.7	378486.94	87.86	
Sc	45	He	68134.19	2.4	74157.35	91.88	
Ge	72	He	58708.15	1.4	64995.55	90.33	
In	115	He	522786.59	0.2	567443.14	92.13	
Lu	175	He	1393616.59	2.1	1431992.06	97.32	
Th	232	He	2413229.08	0.7	2601025.95	92.78	

Sample Report

Sample Name LRSTD 1000ppb + 50ppb Ag
File Name 016SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:56:15
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

1 mL / 10 mL 10ppm Pb
 1 mL / 10 mL 50ppb Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	1010.7952	ug/L	2.6	91592.17	
Se	78	72	H2	1050.5522	ug/L	1.8	294612.24	
Cu	63	72	He	1053.8760	ug/L	1.0	4268491.60	
Cu	65	72	He	1058.8081	ug/L	2.3	2134504.55	
Zn	66	72	He	1055.7809	ug/L	2.0	505261.19	
Mo	95	115	He	1016.3681	ug/L	0.5	1990905.13	
Mo	98	115	He	992.1351	ug/L	1.3	3347121.81	
Ag	107	115	He	53.4393	ug/L	0.8	384699.30	
Ag	109	115	He	53.1186	ug/L	0.8	375479.33	
Cd	111	115	He	1038.6658	ug/L	0.7	843316.96	
Pb	208	175	He	1029.6259	ug/L	2.5	20272495.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	335625.84	1.5	378486.94	88.68	
Sc	45	He	70482.15	0.9	74157.35	95.04	
Ge	72	He	57694.13	2.3	64995.55	88.77	
In	115	He	530338.29	1.0	567443.14	93.46	
Lu	175	He	1389450.34	1.7	1431992.06	97.03	
Th	232	He	2436606.52	2.1	2601025.95	93.68	

Sample Report

Sample Name MO STD
File Name 017SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:58:14
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.3535	ug/L	120.1	166.67	
Se	78	72	H2	0.2888	ug/L	7.7	84.67	
Cu	63	72	He	0.0743	ug/L	18.9	413.35	
Cu	65	72	He	0.0760	ug/L	4.2	186.67	
Zn	66	72	He	0.2622	ug/L	45.1	176.67	
Mo	95	115	He	50.2901	ug/L	1.1	99446.82	
Mo	98	115	He	50.3394	ug/L	0.9	171455.19	
Ag	107	115	He	0.0111	ug/L	15.9	86.67	
Ag	109	115	He	0.0042	ug/L	62.0	55.00	
Cd	111	115	He	0.0687	ug/L	6.0	56.33	
Pb	208	175	He	0.0743	ug/L	6.3	1606.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344386.52	1.3	378486.94	90.99	
Sc	45	He	68220.96	0.9	74157.35	91.99	
Ge	72	He	58902.38	0.6	64995.55	90.63	
In	115	He	535281.13	1.5	567443.14	94.33	
Lu	175	He	1406605.86	1.0	1431992.06	98.23	
Th	232	He	2430354.28	1.1	2601025.95	93.44	

Prep Blank (PB) Report

Sample Name KQ2515045-01
File Name 018_PB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:06:51
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3455	ug/L	N/A	103.33	
Se	78	72	H2	0.0061	ug/L	89.1	3.33	
Cu	63	72	He	0.0152	ug/L	41.8	180.00	
Cu	65	72	He	0.0324	ug/L	21.5	103.33	
Zn	66	72	He	0.0416	ug/L	205.7	73.33	
Mo	95	115	He	0.0119	ug/L	41.0	51.11	
Mo	98	115	He	0.0167	ug/L	72.9	111.11	
Ag	107	115	He	0.0000	ug/L	15964.5	6.67	
Ag	109	115	He	-0.0020	ug/L	N/A	11.67	
Cd	111	115	He	0.0076	ug/L	12.9	6.50	
[Pb]	206	175	He	0.0058	ug/L	12.0	65.55	
[Pb]	207	175	He	0.0122	ug/L	58.7	75.56	
Pb	208	175	He	0.0077	ug/L	20.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350370.80	1.8	378486.94	92.57	
Sc	45	He	71493.52	2.3	74157.35	96.41	
Ge	72	He	62845.95	1.1	64995.55	96.69	
In	115	He	559309.05	0.8	567443.14	98.57	
Lu	175	He	1421105.08	1.0	1431992.06	99.24	
Th	232	He	2444479.29	0.1	2601025.95	93.98	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-02
File Name 019_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:08:55
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.4609	ug/L	0.7	3123.73	33.3	94.48	
Se	78	72	H2	33.6858	ug/L	1.9	9913.81	33.3	101.16	
Cu	63	72	He	49.4509	ug/L	0.9	208495.72	50	98.9	
Cu	65	72	He	48.7860	ug/L	0.7	102380.34	50	97.57	
Zn	66	72	He	100.5725	ug/L	1.1	50128.41	100	100.57	
Mo	95	115	He	31.3298	ug/L	0.5	63779.45	33.3	94.08	
Mo	98	115	He	31.3528	ug/L	1.3	109917.48	33.3	94.15	
Ag	107	115	He	9.7659	ug/L	1.3	73039.82	10	97.66	
Ag	109	115	He	9.6976	ug/L	1.5	71222.22	10	96.98	
Cd	111	115	He	9.6549	ug/L	1.4	8142.56	10	96.55	
[Pb]	206	175	He	100.4949	ug/L	0.5	502038.35	100	100.49	
[Pb]	207	175	He	97.0865	ug/L	0.6	414234.70	100	97.09	
Pb	208	175	He	98.1886	ug/L	0.1	1951786.69	100	98.19	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352114.17	0.5	378486.94	93.03	
Sc	45	He	70337.83	1.4	74157.35	94.85	
Ge	72	He	60020.64	0.8	64995.55	92.35	
In	115	He	550896.79	1.5	567443.14	97.08	
Lu	175	He	1402305.45	1.1	1431992.06	97.93	
Th	232	He	2404754.08	0.9	2601025.95	92.45	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-03
File Name 020_QC4.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:10:59
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	5.1344	ug/L	8.5	616.69	4.8	106.97	
Se	78	72	H2	5.0262	ug/L	2.2	1462.08	4.8	104.71	
Cu	63	72	He	6.4436	ug/L	2.5	27610.31	6.6	97.63	
Cu	65	72	He	6.3183	ug/L	0.7	13456.47	6.6	95.73	
Zn	66	72	He	57.0501	ug/L	1.4	28822.81	57.4	99.39	
Mo	95	115	He	0.2734	ug/L	5.5	573.35	-1	-27.34	
Mo	98	115	He	0.2695	ug/L	4.4	980.04	-1	-26.95	
Ag	107	115	He	0.2645	ug/L	4.5	1953.49	0.27	97.96	
Ag	109	115	He	0.2600	ug/L	13.5	1905.15	0.27	96.3	
Cd	111	115	He	0.2940	ug/L	4.2	244.17	0.296	99.32	
Pb	208	175	He	0.1237	ug/L	4.0	2599.00	0.116	106.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347751.14	1.0	378486.94	91.88	
Sc	45	He	70954.44	2.1	74157.35	95.68	
Ge	72	He	60790.53	0.5	64995.55	93.53	
In	115	He	542387.64	0.2	567443.14	95.58	
Lu	175	He	1410960.81	1.8	1431992.06	98.53	
Th	232	He	2371138.77	0.9	2601025.95	91.16	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-04
File Name 021_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:13:03
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.9338	ug/L	2.8	2000.17	21.8	96.03	
Se	78	72	H2	21.9730	ug/L	1.1	6086.31	21.8	100.79	
Cu	63	72	He	901.4919	ug/L	3.5	3810718.28	994	90.69	
Cu	65	72	He	915.4979	ug/L	1.5	1927241.59	994	92.1	
Zn	66	72	He	257.1535	ug/L	2.8	128509.54	272	94.54	
Mo	95	115	He	6.2374	ug/L	0.6	12371.07	6.88	90.66	
Mo	98	115	He	6.2802	ug/L	0.7	21458.76	6.88	91.28	
Ag	107	115	He	7.6426	ug/L	0.3	55599.54	-1	-764.26	
Ag	109	115	He	7.4675	ug/L	0.6	53359.33	-1	-746.75	
Cd	111	115	He	78.4210	ug/L	0.4	64338.46	84.6	92.7	
Pb	208	175	He	0.3958	ug/L	2.5	7973.23	0.45	87.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	331424.83	2.2	378486.94	87.57	
Sc	45	He	69162.29	2.4	74157.35	93.26	
Ge	72	He	60244.92	2.9	64995.55	92.69	
In	115	He	535874.02	0.4	567443.14	94.44	
Lu	175	He	1399302.95	1.0	1431992.06	97.72	
Th	232	He	2352841.99	0.7	2601025.95	90.46	

Reference Sample Report

Sample Name K2508064-008
File Name 022_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:15:06
Sample Type AIRef
Comment 5X
ISTD Ref FileName 008CALB.d
Sample QC Pass/Fial Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.3520	ug/L	15.0	1213.41	
Se	78	72	H2	11.9409	ug/L	1.7	3515.11	
Cu	63	72	He	11.3317	ug/L	1.9	48342.23	
Cu	65	72	He	11.3454	ug/L	1.4	24072.07	
Zn	66	72	He	498.7541	ug/L	0.1	250928.04	
Mo	95	115	He	0.2386	ug/L	5.7	506.68	
Mo	98	115	He	0.2418	ug/L	9.1	890.03	
Ag	107	115	He	0.0880	ug/L	6.6	658.35	
Ag	109	115	He	0.0870	ug/L	3.7	658.35	
Cd	111	115	He	3.5033	ug/L	0.8	2927.64	
Pb	208	175	He	1.6128	ug/L	1.9	32679.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352129.38	1.1	378486.94	93.04	
Sc	45	He	71058.46	0.8	74157.35	95.82	
Ge	72	He	60629.52	0.9	64995.55	93.28	
In	115	He	545823.14	0.6	567443.14	96.19	
Lu	175	He	1424136.59	1.0	1431992.06	99.45	
Th	232	He	2408246.99	1.3	2601025.95	92.59	

Duplicate Sample Report

Sample Name KQ2515045-05
File Name 023_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:17:10
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 022_
Default Text ARLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	11.9678	ug/L	13.8	1266.75	5.28	
Se	78	72	H2	12.7379	ug/L	2.3	3733.50	6.46	
Cu	63	72	He	12.3746	ug/L	2.0	52801.11	8.8	
Cu	65	72	He	12.3481	ug/L	2.6	26209.20	8.46	
Zn	66	72	He	526.5237	ug/L	0.4	264977.41	5.42	
Mo	95	115	He	0.2862	ug/L	4.7	601.13		<5x MRL
Mo	98	115	He	0.2765	ug/L	6.2	1007.82		<5x MRL
Ag	107	115	He	0.0930	ug/L	1.6	693.35		<5x MRL
Ag	109	115	He	0.0939	ug/L	12.2	706.69		<5x MRL
Cd	111	115	He	3.8799	ug/L	1.4	3233.55	10.2	
[Pb]	206	175	He	1.7091	ug/L	0.5	8744.10	5.04	
[Pb]	207	175	He	1.7261	ug/L	2.4	7534.45	5.42	
Pb	208	175	He	1.7043	ug/L	1.4	34672.71	5.51	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350660.74	1.3	378486.94	92.65	
Sc	45	He	70515.61	1.1	74157.35	95.09	
Ge	72	He	60646.34	1.0	64995.55	93.31	
In	115	He	544348.79	0.5	567443.14	95.93	
Lu	175	He	1430285.39	2.1	1431992.06	99.88	
Th	232	He	2408498.82	0.5	2601025.95	92.6	

Sample Report

Sample Name K2508064-008L
File Name 024SMPL.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:19:14
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	2.8317	ug/L	23.5	406.68	
Se	78	72	H2	2.2414	ug/L	4.3	662.35	
Cu	63	72	He	2.3398	ug/L	2.0	9943.59	
Cu	65	72	He	2.3130	ug/L	2.5	4870.87	
Zn	66	72	He	100.9729	ug/L	1.0	50198.77	
Mo	95	115	He	0.0383	ug/L	23.0	103.33	
Mo	98	115	He	0.0436	ug/L	7.9	202.23	
Ag	107	115	He	0.0209	ug/L	7.4	161.67	
Ag	109	115	He	0.0162	ug/L	17.3	143.33	
Cd	111	115	He	0.6938	ug/L	3.0	580.84	
Pb	208	175	He	0.3264	ug/L	1.5	6610.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352795.48	1.1	378486.94	93.21	
Sc	45	He	70318.10	0.5	74157.35	94.82	
Ge	72	He	59866.27	0.6	64995.55	92.11	
In	115	He	546884.19	0.9	567443.14	96.38	
Lu	175	He	1401817.06	2.3	1431992.06	97.89	
Th	232	He	2396837.52	0.6	2601025.95	92.15	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508064-008A
File Name 025_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:21:18
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_ ARF.
Default Text ALKLS NoUser

+500110ppm PS
 100v1 500ppb Ag
 AB
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	62.9937	ug/L	4.2	6028.07	50	103.28	
Se	78	H2	65.8989	ug/L	0.6	19109.54	50	107.92	
Cu	63	He	63.4863	ug/L	2.0	266097.85	50	104.31	
Cu	65	He	64.0366	ug/L	0.3	133606.21	50	105.38	
Zn	66	He	559.5965	ug/L	1.1	277101.62	50	121.68	PDS Failed
Mo	95	He	49.8474	ug/L	0.8	99858.75	50	99.22	
Mo	98	He	50.2478	ug/L	0.8	173377.82	50	100.01	
Ag	107	He	5.2849	ug/L	1.6	38904.68	5	103.94	
Ag	109	He	5.1941	ug/L	0.6	37562.66	5	102.14	
Cd	111	He	54.4453	ug/L	0.5	45197.87	50	101.88	
[Pb]	206	He	52.2070	ug/L	1.3	261765.26	50	101.16	
[Pb]	207	He	51.8422	ug/L	1.1	222003.62	50	100.41	
Pb	208	He	51.8715	ug/L	1.3	1034849.01	50	100.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346979.63	0.6	378486.94	91.68	
Sc	45	He	69464.10	1.8	74157.35	93.67	
Ge	72	He	59678.92	1.0	64995.55	91.82	
In	115	He	542222.29	0.1	567443.14	95.56	
Lu	175	He	1407451.65	1.4	1431992.06	98.29	
Th	232	He	2410699.76	2.1	2601025.95	92.68	

Matrix Spike Sample (MS) Report

Sample Name KQ2515045-06
File Name 026_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:23:22
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	43.4002	ug/L	3.5	4277.39	33.3	96.24	
Se	78	H2	46.3660	ug/L	1.5	13709.97	33.3	103.38	
Cu	63	He	61.1645	ug/L	1.0	261239.92	50	99.67	
Cu	65	He	61.6481	ug/L	1.5	131046.08	50	100.61	
Zn	66	He	608.8511	ug/L	2.0	307160.61	100	110.1	
Mo	95	He	32.5427	ug/L	1.8	66021.80	33.3	97.01	
Mo	98	He	32.4722	ug/L	1.1	113474.65	33.3	96.79	
Ag	107	He	9.8453	ug/L	1.0	73385.13	10	97.57	
Ag	109	He	9.8611	ug/L	0.2	72192.39	10	97.74	
Cd	111	He	13.5414	ug/L	0.3	11383.50	10	100.38	
[Pb]	206	He	100.3079	ug/L	1.4	515068.36	100	98.68	
[Pb]	207	He	95.6940	ug/L	0.9	419678.85	100	94.06	
Pb	208	He	97.3871	ug/L	0.6	1989772.66	100	95.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353813.12	0.5	378486.94	93.48	
Sc	45	He	71420.06	2.3	74157.35	96.31	
Ge	72	He	60814.09	2.0	64995.55	93.57	
In	115	He	549081.83	0.6	567443.14	96.76	
Lu	175	He	1441388.10	0.5	1431992.06	100.66	
Th	232	He	2438895.02	1.4	2601025.95	93.77	

Sample Report

Sample Name K2508064-001
File Name 027SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:25:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.5681	ug/L	8.4	1320.09	
Se	78	72	H2	12.3304	ug/L	2.3	3603.46	
Cu	63	72	He	16.2712	ug/L	1.5	70102.34	
Cu	65	72	He	16.2842	ug/L	3.0	34894.48	
Zn	66	72	He	547.9987	ug/L	1.0	278566.90	
Mo	95	115	He	0.3394	ug/L	7.1	706.69	
Mo	98	115	He	0.3482	ug/L	2.9	1253.39	
Ag	107	115	He	0.0952	ug/L	9.4	708.36	
Ag	109	115	He	0.0913	ug/L	10.9	686.69	
Cd	111	115	He	4.0269	ug/L	0.6	3349.07	
Pb	208	175	He	1.0905	ug/L	2.6	22011.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349555.62	0.6	378486.94	92.36	
Sc	45	He	70696.15	1.1	74157.35	95.33	
Ge	72	He	61265.75	1.5	64995.55	94.26	
In	115	He	543202.95	0.5	567443.14	95.73	
Lu	175	He	1416176.07	1.4	1431992.06	98.9	
Th	232	He	2462173.87	0.5	2601025.95	94.66	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 028_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:27:29
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.2302	ug/L	12.2	2446.92	96.92	
Se	78	72	H2	24.9030	ug/L	1.2	7360.59	99.61	
Cu	63	72	He	25.4138	ug/L	1.8	108746.21	101.66	
Cu	65	72	He	25.4966	ug/L	1.3	54291.45	101.99	
Zn	66	72	He	25.9344	ug/L	3.3	13149.60	103.74	
Mo	95	115	He	12.3529	ug/L	1.0	24919.98	98.82	
Mo	98	115	He	12.3136	ug/L	0.6	42790.99	98.51	
Ag	107	115	He	12.6398	ug/L	1.4	93612.48	101.12	
Ag	109	115	He	12.6830	ug/L	1.0	92253.78	101.46	
Cd	111	115	He	25.0873	ug/L	0.9	20955.29	100.35	
Pb	208	175	He	25.1698	ug/L	0.9	499771.59	100.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353657.60	1.4	378486.94	93.44	
Sc	45	He	69721.82	2.5	74157.35	94.02	
Ge	72	He	60894.36	1.6	64995.55	93.69	
In	115	He	545609.87	1.2	567443.14	96.15	
Lu	175	He	1400597.74	1.2	1431992.06	97.81	
Th	232	He	2420488.66	1.5	2601025.95	93.06	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 029_CCB.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:29:33
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1600	ug/L	160.9	153.33	
Se	78	72	H2	0.0181	ug/L	102.4	7.00	
Cu	63	72	He	-0.0002	ug/L	N/A	110.00	
Cu	65	72	He	0.0039	ug/L	212.1	40.00	
Zn	66	72	He	-0.0205	ug/L	N/A	40.00	
Mo	95	115	He	0.0164	ug/L	68.8	60.00	
Mo	98	115	He	0.0109	ug/L	25.2	90.00	
Ag	107	115	He	0.0024	ug/L	53.8	25.00	
Ag	109	115	He	0.0001	ug/L	2078.5	26.67	
Cd	111	115	He	0.0025	ug/L	80.9	2.17	
Pb	208	175	He	0.0045	ug/L	20.7	214.44	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355447.39	1.1	378486.94	93.91	
Sc	45	He	70096.65	0.4	74157.35	94.52	
Ge	72	He	61503.62	0.3	64995.55	94.63	
In	115	He	555508.37	0.4	567443.14	97.9	
Lu	175	He	1404848.05	1.0	1431992.06	98.1	
Th	232	He	2394111.06	0.9	2601025.95	92.04	

Sample Report

Sample Name K2508064-002
File Name 030SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:31:38
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.1669	ug/L	27.1	1156.74	
Se	78	72	H2	11.7425	ug/L	19.0	3640.81	
Cu	63	72	He	9.3339	ug/L	1.3	39759.03	
Cu	65	72	He	9.2605	ug/L	3.2	19605.29	
Zn	66	72	He	383.3557	ug/L	1.9	192418.20	
Mo	95	115	He	0.1985	ug/L	12.2	428.90	
Mo	98	115	He	0.1676	ug/L	6.0	636.69	
Ag	107	115	He	0.0668	ug/L	5.1	505.01	
Ag	109	115	He	0.0647	ug/L	12.8	500.01	
Cd	111	115	He	2.0591	ug/L	3.2	1732.44	
Pb	208	175	He	0.4359	ug/L	2.2	8931.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	379559.96	18.1	378486.94	100.28	
Sc	45	He	69413.57	1.6	74157.35	93.6	
Ge	72	He	60498.94	2.0	64995.55	93.08	
In	115	He	549576.83	0.3	567443.14	96.85	
Lu	175	He	1425524.62	1.8	1431992.06	99.55	
Th	232	He	2430737.51	1.7	2601025.95	93.45	

Sample Report

Sample Name K2508064-003
File Name 031SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:33:42
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9475	ug/L	9.1	1196.74	
Se	78	72	H2	11.0453	ug/L	2.4	3310.39	
Cu	63	72	He	10.1994	ug/L	1.2	43426.36	
Cu	65	72	He	10.3451	ug/L	2.7	21900.28	
Zn	66	72	He	512.6946	ug/L	2.4	257302.23	
Mo	95	115	He	0.1853	ug/L	2.6	402.23	
Mo	98	115	He	0.2024	ug/L	9.7	758.91	
Ag	107	115	He	0.0653	ug/L	7.9	493.35	
Ag	109	115	He	0.0595	ug/L	10.1	461.68	
Cd	111	115	He	2.8821	ug/L	1.9	2425.55	
Pb	208	175	He	0.4414	ug/L	1.0	9089.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358451.88	0.8	378486.94	94.71	
Sc	45	He	70140.48	1.4	74157.35	94.58	
Ge	72	He	60499.10	2.1	64995.55	93.08	
In	115	He	549722.82	0.5	567443.14	96.88	
Lu	175	He	1432457.27	1.7	1431992.06	100.03	
Th	232	He	2427025.59	0.9	2601025.95	93.31	

Sample Report

Sample Name K2508064-004
File Name 032SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:35:44
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.9924	ug/L	11.6	1273.42	
Se	78	72	H2	12.7121	ug/L	0.9	3735.83	
Cu	63	72	He	7.3354	ug/L	1.8	31535.13	
Cu	65	72	He	7.3059	ug/L	2.9	15611.97	
Zn	66	72	He	356.9163	ug/L	0.8	180730.29	
Mo	95	115	He	0.1317	ug/L	12.0	291.11	
Mo	98	115	He	0.1338	ug/L	16.6	514.46	
Ag	107	115	He	0.0457	ug/L	16.7	345.01	
Ag	109	115	He	0.0366	ug/L	4.5	291.67	
Cd	111	115	He	1.7162	ug/L	1.5	1432.91	
Pb	208	175	He	0.5306	ug/L	1.3	10869.62	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351507.56	1.3	378486.94	92.87	
Sc	45	He	70961.17	0.7	74157.35	95.69	
Ge	72	He	61018.25	0.5	64995.55	93.88	
In	115	He	545342.66	0.4	567443.14	96.11	
Lu	175	He	1428357.27	1.0	1431992.06	99.75	
Th	232	He	2484795.75	0.6	2601025.95	95.53	

Sample Report

Sample Name K2508064-005
File Name 033SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:37:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.6793	ug/L	8.8	1270.08	
Se	78	72	H2	11.4533	ug/L	0.7	3438.09	
Cu	63	72	He	7.7359	ug/L	4.0	33616.63	
Cu	65	72	He	7.9269	ug/L	2.1	17127.07	
Zn	66	72	He	434.5133	ug/L	0.8	222520.38	
Mo	95	115	He	0.1851	ug/L	8.7	401.12	
Mo	98	115	He	0.1676	ug/L	1.4	635.57	
Ag	107	115	He	0.0739	ug/L	7.2	556.69	
Ag	109	115	He	0.0683	ug/L	1.9	525.01	
Cd	111	115	He	1.7235	ug/L	1.5	1447.41	
Pb	208	175	He	0.5304	ug/L	1.3	10732.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359050.19	0.3	378486.94	94.86	
Sc	45	He	70937.28	1.0	74157.35	95.66	
Ge	72	He	61717.68	2.1	64995.55	94.96	
In	115	He	548539.67	0.9	567443.14	96.67	
Lu	175	He	1411038.99	1.3	1431992.06	98.54	
Th	232	He	2480032.67	2.2	2601025.95	95.35	

Sample Report

Sample Name K2508064-006
File Name 034SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:39:50
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.9327	ug/L	9.1	1576.78	
Se	78	72	H2	14.1391	ug/L	1.5	4222.97	
Cu	63	72	He	5.9508	ug/L	2.6	25904.01	
Cu	65	72	He	5.9572	ug/L	2.2	12885.92	
Zn	66	72	He	352.7133	ug/L	1.0	180730.37	
Mo	95	115	He	0.1049	ug/L	3.8	241.11	
Mo	98	115	He	0.0878	ug/L	1.7	361.12	
Ag	107	115	He	0.0290	ug/L	15.3	225.00	
Ag	109	115	He	0.0242	ug/L	15.8	205.00	
Cd	111	115	He	1.6904	ug/L	1.6	1435.91	
Pb	208	175	He	0.3510	ug/L	1.2	7349.75	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357274.32	1.0	378486.94	94.4	
Sc	45	He	72646.17	1.9	74157.35	97.96	
Ge	72	He	61751.06	2.0	64995.55	95.01	
In	115	He	554825.23	0.3	567443.14	97.78	
Lu	175	He	1451442.27	1.0	1431992.06	101.36	
Th	232	He	2509826.53	1.1	2601025.95	96.49	

Sample Report

Sample Name K2508064-007
File Name 035SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:41:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0528	ug/L	13.8	1196.74	
Se	78	72	H2	11.6664	ug/L	1.8	3465.10	
Cu	63	72	He	9.6665	ug/L	0.5	41918.64	
Cu	65	72	He	9.6360	ug/L	3.2	20770.24	
Zn	66	72	He	488.4756	ug/L	1.5	249640.65	
Mo	95	115	He	0.1845	ug/L	12.5	406.67	
Mo	98	115	He	0.1912	ug/L	8.1	730.02	
Ag	107	115	He	0.0388	ug/L	18.2	300.01	
Ag	109	115	He	0.0279	ug/L	12.5	233.33	
Cd	111	115	He	2.3630	ug/L	1.6	2017.98	
Pb	208	175	He	0.7140	ug/L	2.6	14740.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355189.71	1.8	378486.94	93.84	
Sc	45	He	72515.49	0.8	74157.35	97.79	
Ge	72	He	61597.08	1.7	64995.55	94.77	
In	115	He	557759.87	0.8	567443.14	98.29	
Lu	175	He	1443998.63	1.5	1431992.06	100.84	
Th	232	He	2493818.24	1.6	2601025.95	95.88	

Sample Report

Sample Name K2508064-009
File Name 036SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:43:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9595	ug/L	17.0	1206.74	
Se	78	72	H2	12.1687	ug/L	2.6	3672.48	
Cu	63	72	He	12.4759	ug/L	0.4	54320.14	
Cu	65	72	He	12.4399	ug/L	1.6	26938.90	
Zn	66	72	He	473.8635	ug/L	1.4	243338.70	
Mo	95	115	He	0.2428	ug/L	21.4	523.35	
Mo	98	115	He	0.2539	ug/L	11.0	947.81	
Ag	107	115	He	0.0764	ug/L	8.2	581.69	
Ag	109	115	He	0.0660	ug/L	11.0	513.35	
Cd	111	115	He	3.9560	ug/L	1.0	3359.41	
Pb	208	175	He	0.6647	ug/L	4.0	13536.13	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	360982.58	0.2	378486.94	95.38	
Sc	45	He	70401.68	0.8	74157.35	94.94	
Ge	72	He	61885.31	0.4	64995.55	95.21	
In	115	He	554668.36	1.0	567443.14	97.75	
Lu	175	He	1423487.06	0.6	1431992.06	99.41	
Th	232	He	2498723.71	0.7	2601025.95	96.07	

Sample Report

Sample Name K2508064-010
File Name 037SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:46:00
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9636	ug/L	8.5	1006.72	
Se	78	72	H2	9.8248	ug/L	0.6	2947.98	
Cu	63	72	He	7.6358	ug/L	1.7	33753.62	
Cu	65	72	He	7.6799	ug/L	2.3	16875.11	
Zn	66	72	He	333.8798	ug/L	2.4	173836.25	
Mo	95	115	He	0.1315	ug/L	4.5	296.67	
Mo	98	115	He	0.1446	ug/L	13.0	563.34	
Ag	107	115	He	0.0384	ug/L	16.6	296.67	
Ag	109	115	He	0.0486	ug/L	7.7	386.68	
Cd	111	115	He	1.0631	ug/L	1.2	906.20	
Pb	208	175	He	0.5259	ug/L	2.6	10840.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358872.68	0.7	378486.94	94.82	
Sc	45	He	71959.24	0.7	74157.35	97.04	
Ge	72	He	62755.64	1.8	64995.55	96.55	
In	115	He	556729.45	0.9	567443.14	98.11	
Lu	175	He	1437094.04	1.6	1431992.06	100.36	
Th	232	He	2515509.39	1.8	2601025.95	96.71	

Sample Report

Sample Name K2508064-011
File Name 038SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:48:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.6625	ug/L	11.5	1150.07	
Se	78	72	H2	11.0700	ug/L	6.0	3263.38	
Cu	63	72	He	11.1154	ug/L	1.2	48104.79	
Cu	65	72	He	11.1325	ug/L	2.4	23960.23	
Zn	66	72	He	539.3749	ug/L	1.8	275239.04	
Mo	95	115	He	0.2652	ug/L	10.5	564.46	
Mo	98	115	He	0.2801	ug/L	3.9	1030.05	
Ag	107	115	He	0.0463	ug/L	11.0	351.68	
Ag	109	115	He	0.0384	ug/L	8.0	306.68	
Cd	111	115	He	3.3053	ug/L	2.2	2781.45	
Pb	208	175	He	0.2987	ug/L	2.5	6180.60	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352672.25	1.0	378486.94	93.18	
Sc	45	He	70730.02	1.3	74157.35	95.38	
Ge	72	He	61503.35	1.4	64995.55	94.63	
In	115	He	549791.77	1.9	567443.14	96.89	
Lu	175	He	1429861.23	0.7	1431992.06	99.85	
Th	232	He	2496019.13	2.6	2601025.95	95.96	

Sample Report

Sample Name K2508064-012
File Name 039SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:50:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0024	ug/L	3.5	1083.40	
Se	78	72	H2	10.1962	ug/L	2.6	2992.99	
Cu	63	72	He	12.3423	ug/L	1.3	52426.74	
Cu	65	72	He	12.3605	ug/L	1.9	26112.27	
Zn	66	72	He	493.2385	ug/L	1.1	247123.52	
Mo	95	115	He	0.2128	ug/L	9.2	447.79	
Mo	98	115	He	0.2109	ug/L	8.9	771.14	
Ag	107	115	He	0.0715	ug/L	8.4	528.35	
Ag	109	115	He	0.0733	ug/L	4.6	550.02	
Cd	111	115	He	3.0164	ug/L	1.1	2482.89	
Pb	208	175	He	0.3345	ug/L	1.3	6792.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351054.55	1.5	378486.94	92.75	
Sc	45	He	69741.83	1.7	74157.35	94.05	
Ge	72	He	60381.72	1.8	64995.55	92.9	
In	115	He	537599.80	1.1	567443.14	94.74	
Lu	175	He	1406457.12	1.0	1431992.06	98.22	
Th	232	He	2474021.32	0.6	2601025.95	95.12	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 040_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:52:09
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.1270	ug/L	7.0	2413.58	96.51	
Se	78	72	H2	25.1407	ug/L	0.9	7355.25	100.56	
Cu	63	72	He	26.5405	ug/L	1.7	108688.76	106.16	
Cu	65	72	He	26.8169	ug/L	0.8	54651.19	107.27	
Zn	66	72	He	27.7278	ug/L	1.1	13453.23	110.91	CCV Failed
Mo	95	115	He	12.6705	ug/L	0.7	24876.58	101.36	
Mo	98	115	He	12.6412	ug/L	0.4	42752.02	101.13	
Ag	107	115	He	12.8758	ug/L	0.5	92815.83	103.01	
Ag	109	115	He	12.8477	ug/L	0.9	90952.19	102.78	
Cd	111	115	He	25.5373	ug/L	0.1	20761.33	102.15	
Pb	208	175	He	24.4168	ug/L	1.2	486017.59	97.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350054.24	1.9	378486.94	92.49	
Sc	45	He	68459.02	1.2	74157.35	92.32	
Ge	72	He	58276.42	1.0	64995.55	89.66	
In	115	He	531004.94	0.5	567443.14	93.58	
Lu	175	He	1404055.14	1.1	1431992.06	98.05	
Th	232	He	2450074.55	1.0	2601025.95	94.2	

*See rerun
AS
8/27/25*

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 041_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:57:16
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.5893	ug/L	3.7	2440.24	98.36	
Se	78	72	H2	25.3481	ug/L	1.7	7366.92	101.39	
Cu	63	72	He	26.3479	ug/L	0.1	108403.32	105.39	
Cu	65	72	He	26.3439	ug/L	2.9	53925.11	105.38	
Zn	66	72	He	26.9800	ug/L	3.1	13149.60	107.92	
Mo	95	115	He	12.5514	ug/L	2.1	24622.79	100.41	
Mo	98	115	He	12.4586	ug/L	1.1	42107.82	99.67	
Ag	107	115	He	12.7540	ug/L	0.7	91877.52	102.03	
Ag	109	115	He	12.7917	ug/L	1.5	90489.03	102.33	
Cd	111	115	He	25.4795	ug/L	1.0	20699.91	101.92	
Pb	208	175	He	24.3048	ug/L	0.6	480096.12	97.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347706.01	0.2	378486.94	91.87	
Sc	45	He	68984.68	0.4	74157.35	93.02	
Ge	72	He	58541.02	0.8	64995.55	90.07	
In	115	He	530692.14	1.6	567443.14	93.52	
Lu	175	He	1393266.75	0.7	1431992.06	97.3	
Th	232	He	2453260.90	1.5	2601025.95	94.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 042_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:59:21
Sample Type CCB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0436	ug/L	492.5	140.00	
Se	78	72	H2	0.0096	ug/L	117.6	4.33	
Cu	63	72	He	-0.0091	ug/L	N/A	70.00	
Cu	65	72	He	0.0035	ug/L	330.1	38.33	
Zn	66	72	He	0.0079	ug/L	496.9	53.33	
Mo	95	115	He	0.0000	ug/L	4926.8	25.55	
Mo	98	115	He	0.0023	ug/L	168.9	57.78	
Ag	107	115	He	0.0028	ug/L	16.0	26.67	
Ag	109	115	He	0.0025	ug/L	69.6	43.33	
Cd	111	115	He	0.0018	ug/L	67.7	1.50	
Pb	208	175	He	0.0078	ug/L	31.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350207.37	1.3	378486.94	92.53	
Sc	45	He	68519.59	2.3	74157.35	92.4	
Ge	72	He	59756.13	3.2	64995.55	91.94	
In	115	He	538660.93	1.3	567443.14	94.93	
Lu	175	He	1407453.26	1.3	1431992.06	98.29	
Th	232	He	2485102.36	2.3	2601025.95	95.54	

Sample Report

Sample Name K2508064-013
File Name 043SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:01:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0428	ug/L	20.4	1166.74	
Se	78	72	H2	11.2244	ug/L	0.9	3259.05	
Cu	63	72	He	10.2008	ug/L	3.0	41159.74	
Cu	65	72	He	9.9694	ug/L	1.5	20009.10	
Zn	66	72	He	621.0704	ug/L	2.0	295472.74	
Mo	95	115	He	0.1548	ug/L	3.9	323.34	
Mo	98	115	He	0.1537	ug/L	9.8	560.01	
Ag	107	115	He	0.0541	ug/L	10.7	390.01	
Ag	109	115	He	0.0570	ug/L	2.6	421.68	
Cd	111	115	He	2.8415	ug/L	0.8	2273.52	
Pb	208	175	He	0.3189	ug/L	1.6	6259.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347258.51	1.5	378486.94	91.75	
Sc	45	He	66684.24	1.7	74157.35	89.92	
Ge	72	He	57349.62	2.3	64995.55	88.24	
In	115	He	522664.29	2.1	567443.14	92.11	
Lu	175	He	1357962.32	0.6	1431992.06	94.83	
Th	232	He	2431668.24	0.6	2601025.95	93.49	

Sample Report

Sample Name K2508064-014
File Name 044SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:03:27
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.0388	ug/L	9.3	1243.41	
Se	78	72	H2	11.8147	ug/L	0.9	3379.07	
Cu	63	72	He	13.1971	ug/L	2.0	54437.50	
Cu	65	72	He	13.4063	ug/L	3.5	27486.55	
Zn	66	72	He	543.1706	ug/L	2.6	264148.85	
Mo	95	115	He	0.1971	ug/L	8.8	410.01	
Mo	98	115	He	0.1790	ug/L	8.2	651.13	
Ag	107	115	He	0.0356	ug/L	23.1	261.67	
Ag	109	115	He	0.0346	ug/L	18.0	268.34	
Cd	111	115	He	3.7046	ug/L	1.4	2999.16	
Pb	208	175	He	0.2756	ug/L	4.3	5589.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342111.71	1.1	378486.94	90.39	
Sc	45	He	67705.34	0.7	74157.35	91.3	
Ge	72	He	58634.86	3.1	64995.55	90.21	
In	115	He	528761.76	0.6	567443.14	93.18	
Lu	175	He	1398860.45	0.6	1431992.06	97.69	
Th	232	He	2450972.36	0.6	2601025.95	94.23	

Sample Report

Sample Name K2508064-015
File Name 045SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:05:30
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.0413	ug/L	38.8	1296.75	
Se	78	72	H2	14.0644	ug/L	19.1	3490.10	
Cu	63	72	He	12.3747	ug/L	1.4	50589.89	
Cu	65	72	He	12.5098	ug/L	2.9	25429.43	
Zn	66	72	He	453.3085	ug/L	0.5	218590.89	
Mo	95	115	He	0.2263	ug/L	2.8	462.23	
Mo	98	115	He	0.2084	ug/L	10.0	743.36	
Ag	107	115	He	0.0736	ug/L	15.7	530.01	
Ag	109	115	He	0.0835	ug/L	20.3	608.35	
Cd	111	115	He	3.2959	ug/L	1.6	2641.42	
Pb	208	175	He	0.6518	ug/L	0.7	12744.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	303375.44	16.9	378486.94	80.15	
Sc	45	He	67239.99	1.4	74157.35	90.67	
Ge	72	He	58109.18	1.7	64995.55	89.4	
In	115	He	523544.49	1.7	567443.14	92.26	
Lu	175	He	1366382.64	1.5	1431992.06	95.42	
Th	232	He	2479014.34	1.4	2601025.95	95.31	

Sample Report

Sample Name K2508064-016
File Name 046SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:07:33
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.7804	ug/L	8.8	1140.07	
Se	78	72	H2	11.3033	ug/L	3.7	3264.72	
Cu	63	72	He	12.4655	ug/L	2.7	51774.31	
Cu	65	72	He	12.4989	ug/L	1.0	25825.16	
Zn	66	72	He	485.6824	ug/L	2.5	237914.57	
Mo	95	115	He	0.2151	ug/L	11.4	444.45	
Mo	98	115	He	0.2226	ug/L	10.5	796.70	
Ag	107	115	He	0.0557	ug/L	14.9	405.01	
Ag	109	115	He	0.0615	ug/L	7.5	458.34	
Cd	111	115	He	2.6462	ug/L	2.7	2141.16	
Pb	208	175	He	0.2995	ug/L	4.3	6089.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345633.64	2.3	378486.94	91.32	
Sc	45	He	68245.03	1.2	74157.35	92.03	
Ge	72	He	59049.82	1.9	64995.55	90.85	
In	115	He	528664.13	1.7	567443.14	93.17	
Lu	175	He	1405722.38	2.4	1431992.06	98.17	
Th	232	He	2501242.05	1.6	2601025.95	96.16	

Sample Report

Sample Name K2508064-017
File Name 047SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:09:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	9.3459	ug/L	6.6	1006.72	
Se	78	72	H2	10.9062	ug/L	1.1	3158.69	
Cu	63	72	He	9.8627	ug/L	1.5	40484.58	
Cu	65	72	He	9.5961	ug/L	2.1	19586.87	
Zn	66	72	He	385.1112	ug/L	0.1	186352.27	
Mo	95	115	He	0.1756	ug/L	14.7	370.01	
Mo	98	115	He	0.1628	ug/L	2.8	600.02	
Ag	107	115	He	0.0876	ug/L	10.3	638.36	
Ag	109	115	He	0.0778	ug/L	6.5	576.69	
Cd	111	115	He	1.5972	ug/L	2.4	1301.06	
Pb	208	175	He	0.6280	ug/L	0.1	12600.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346427.43	2.1	378486.94	91.53	
Sc	45	He	68228.05	1.5	74157.35	92	
Ge	72	He	58309.88	0.3	64995.55	89.71	
In	115	He	532082.72	1.1	567443.14	93.77	
Lu	175	He	1401469.36	1.8	1431992.06	97.87	
Th	232	He	2521849.23	1.7	2601025.95	96.96	

Sample Report

Sample Name K2508064-018
File Name 048SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:11:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.2155	ug/L	24.5	1180.08	
Se	78	72	H2	11.5345	ug/L	1.7	3330.39	
Cu	63	72	He	9.5663	ug/L	1.9	39277.65	
Cu	65	72	He	9.7787	ug/L	0.8	19965.80	
Zn	66	72	He	433.6171	ug/L	2.4	209847.81	
Mo	95	115	He	0.3091	ug/L	11.2	616.68	
Mo	98	115	He	0.2949	ug/L	1.2	1021.15	
Ag	107	115	He	0.0361	ug/L	16.7	260.00	
Ag	109	115	He	0.0406	ug/L	2.5	305.01	
Cd	111	115	He	1.9246	ug/L	1.4	1528.58	
Pb	208	175	He	0.4924	ug/L	4.1	9710.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345353.59	1.4	378486.94	91.25	
Sc	45	He	67102.74	1.1	74157.35	90.49	
Ge	72	He	58326.66	0.9	64995.55	89.74	
In	115	He	518751.71	0.7	567443.14	91.42	
Lu	175	He	1374075.92	2.0	1431992.06	95.96	
Th	232	He	2488507.67	1.4	2601025.95	95.67	

Sample Report

Sample Name K2508064-019
File Name 049SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:13:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9852	ug/L	8.2	930.05	
Se	78	72	H2	10.8081	ug/L	6.5	2989.99	
Cu	63	72	He	8.3860	ug/L	2.6	34344.92	
Cu	65	72	He	8.3467	ug/L	0.8	17000.25	
Zn	66	72	He	403.6771	ug/L	1.4	194838.14	
Mo	95	115	He	0.1808	ug/L	7.5	377.78	
Mo	98	115	He	0.1697	ug/L	9.2	620.02	
Ag	107	115	He	0.0495	ug/L	10.6	361.68	
Ag	109	115	He	0.0464	ug/L	1.5	351.68	
Cd	111	115	He	2.2790	ug/L	0.9	1844.79	
Pb	208	175	He	0.4116	ug/L	2.9	8289.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332215.73	9.7	378486.94	87.77	
Sc	45	He	68385.25	0.9	74157.35	92.22	
Ge	72	He	58173.09	2.1	64995.55	89.5	
In	115	He	528748.03	1.5	567443.14	93.18	
Lu	175	He	1400034.98	2.3	1431992.06	97.77	
Th	232	He	2480010.74	1.0	2601025.95	95.35	

Sample Report

Sample Name K2508064-020
File Name 050SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:15:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0937	ug/L	15.2	1070.06	
Se	78	72	H2	11.1410	ug/L	2.3	3205.70	
Cu	63	72	He	11.9419	ug/L	0.9	48178.26	
Cu	65	72	He	11.7721	ug/L	2.6	23621.38	
Zn	66	72	He	505.3667	ug/L	1.4	240441.06	
Mo	95	115	He	0.1940	ug/L	7.7	402.23	
Mo	98	115	He	0.1921	ug/L	1.3	692.24	
Ag	107	115	He	0.0649	ug/L	17.3	470.01	
Ag	109	115	He	0.0438	ug/L	21.6	331.67	
Cd	111	115	He	4.0341	ug/L	1.2	3251.72	
Pb	208	175	He	0.3108	ug/L	3.6	6149.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344184.94	0.8	378486.94	90.94	
Sc	45	He	68143.87	0.7	74157.35	91.89	
Ge	72	He	57336.07	0.7	64995.55	88.22	
In	115	He	526503.24	0.9	567443.14	92.79	
Lu	175	He	1368026.75	0.6	1431992.06	95.53	
Th	232	He	2493489.76	1.5	2601025.95	95.87	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 051_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:17:50
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8684	ug/L	5.5	2333.57	95.47	
Se	78	72	H2	25.9830	ug/L	3.8	7424.29	103.93	
Cu	63	72	He	25.6223	ug/L	0.8	104514.97	102.49	
Cu	65	72	He	25.5729	ug/L	2.1	51897.52	102.29	
Zn	66	72	He	26.0226	ug/L	0.6	12579.08	104.09	
Mo	95	115	He	12.7263	ug/L	0.6	24277.80	101.81	
Mo	98	115	He	12.5861	ug/L	0.6	41360.11	100.69	
Ag	107	115	He	12.9346	ug/L	0.6	90597.85	103.48	
Ag	109	115	He	13.0325	ug/L	2.3	89641.91	104.26	
Cd	111	115	He	25.4874	ug/L	0.6	20134.08	101.95	
Pb	208	175	He	23.9721	ug/L	1.2	461392.31	95.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341869.41	0.9	378486.94	90.33	
Sc	45	He	66027.45	1.4	74157.35	89.04	
Ge	72	He	58042.28	1.7	64995.55	89.3	
In	115	He	515968.06	0.7	567443.14	90.93	
Lu	175	He	1357566.07	0.4	1431992.06	94.8	
Th	232	He	2479288.14	1.5	2601025.95	95.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 052_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:19:54
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.4022	ug/L	N/A	96.67	
Se	78	72	H2	0.0120	ug/L	57.5	5.00	
Cu	63	72	He	-0.0073	ug/L	N/A	73.33	
Cu	65	72	He	-0.0012	ug/L	N/A	26.67	
Zn	66	72	He	0.0142	ug/L	310.9	53.33	
Mo	95	115	He	0.0051	ug/L	14.6	34.44	
Mo	98	115	He	-0.0032	ug/L	N/A	37.78	
Ag	107	115	He	0.0034	ug/L	23.1	30.00	
Ag	109	115	He	0.0013	ug/L	170.7	33.33	
Cd	111	115	He	0.0017	ug/L	21.8	1.33	
Pb	208	175	He	0.0118	ug/L	8.1	346.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345436.10	0.6	378486.94	91.27	
Sc	45	He	65093.73	2.3	74157.35	87.78	
Ge	72	He	56797.38	1.3	64995.55	87.39	
In	115	He	520438.55	1.8	567443.14	91.72	
Lu	175	He	1354174.98	2.8	1431992.06	94.57	
Th	232	He	2475291.53	2.9	2601025.95	95.17	

Prep Blank (PB) Report

Sample Name KQ2515046-01
File Name 053_PB.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:21:59
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1788	ug/L	N/A	116.67	
Se	78	72	H2	0.0086	ug/L	145.8	4.00	
Cu	63	72	He	0.0077	ug/L	61.4	136.67	
Cu	65	72	He	0.0155	ug/L	72.9	61.67	
Zn	66	72	He	0.0116	ug/L	376.7	53.33	
Mo	95	115	He	-0.0049	ug/L	N/A	15.56	
Mo	98	115	He	-0.0089	ug/L	N/A	18.89	
Ag	107	115	He	0.0012	ug/L	114.3	15.00	
Ag	109	115	He	0.0012	ug/L	164.8	33.33	
Cd	111	115	He	0.0006	ug/L	101.0	0.50	
[Pb]	206	175	He	0.0141	ug/L	12.9	104.44	
[Pb]	207	175	He	0.0110	ug/L	19.3	68.89	
Pb	208	175	He	0.0119	ug/L	7.6	356.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343272.12	0.3	378486.94	90.7	
Sc	45	He	66824.67	2.4	74157.35	90.11	
Ge	72	He	58306.62	1.2	64995.55	89.71	
In	115	He	529435.73	1.6	567443.14	93.3	
Lu	175	He	1382377.06	1.0	1431992.06	96.54	
Th	232	He	2454027.36	1.6	2601025.95	94.35	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-02
File Name 054_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:24:03
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.8263	ug/L	2.3	3117.06	33.3	95.57	
Se	78	72	H2	33.3429	ug/L	0.6	9683.98	33.3	100.13	
Cu	63	72	He	48.6796	ug/L	0.8	197832.78	50	97.36	
Cu	65	72	He	48.6762	ug/L	1.5	98442.88	50	97.35	
Zn	66	72	He	96.3199	ug/L	0.8	46275.38	100	96.32	
Mo	95	115	He	31.7337	ug/L	2.0	61047.22	33.3	95.3	
Mo	98	115	He	31.7779	ug/L	1.1	105301.35	33.3	95.43	
Ag	107	115	He	9.8439	ug/L	0.9	69578.88	10	98.44	
Ag	109	115	He	9.8762	ug/L	0.9	68559.00	10	98.76	
Cd	111	115	He	9.7570	ug/L	0.5	7778.18	10	97.57	
[Pb]	206	175	He	97.5492	ug/L	1.3	467539.23	100	97.55	
[Pb]	207	175	He	89.9667	ug/L	0.8	368295.12	100	89.97	
Pb	208	175	He	92.0377	ug/L	1.4	1755191.06	100	92.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347495.40	0.2	378486.94	91.81	
Sc	45	He	64963.16	1.2	74157.35	87.6	
Ge	72	He	57854.85	2.0	64995.55	89.01	
In	115	He	520678.27	1.1	567443.14	91.76	
Lu	175	He	1345470.55	1.1	1431992.06	93.96	
Th	232	He	2461768.71	0.9	2601025.95	94.65	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-03
File Name 055_QC4.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:26:05
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.2042	ug/L	17.8	533.36	4.8	87.59	
Se	78	72	H2	4.8677	ug/L	6.3	1427.74	4.8	101.41	
Cu	63	72	He	6.4000	ug/L	2.4	26468.20	6.6	96.97	
Cu	65	72	He	6.4075	ug/L	1.7	13171.15	6.6	97.08	
Zn	66	72	He	54.7084	ug/L	2.5	26675.28	57.4	95.31	
Mo	95	115	He	0.2490	ug/L	5.1	513.35	-1	-24.9	
Mo	98	115	He	0.2408	ug/L	5.7	862.26	-1	-24.08	
Ag	107	115	He	0.2735	ug/L	3.2	1976.83	0.27	101.3	
Ag	109	115	He	0.2429	ug/L	0.9	1743.46	0.27	89.96	
Cd	111	115	He	0.3070	ug/L	1.2	249.50	0.296	103.72	
Pb	208	175	He	0.1211	ug/L	4.4	2534.56	0.116	104.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350713.85	1.0	378486.94	92.66	
Sc	45	He	68535.79	1.4	74157.35	92.42	
Ge	72	He	58671.39	1.1	64995.55	90.27	
In	115	He	530822.99	0.4	567443.14	93.55	
Lu	175	He	1403827.69	0.2	1431992.06	98.03	
Th	232	He	2552989.96	0.1	2601025.95	98.15	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-04
File Name 056_QC5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:28:08
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.2428	ug/L	4.5	1973.50	21.8	92.86	
Se	78	72	H2	21.3173	ug/L	1.4	6015.95	21.8	97.79	
Cu	63	72	He	916.0032	ug/L	1.9	3767887.65	994	92.15	
Cu	65	72	He	929.1873	ug/L	1.4	1902900.23	994	93.48	
Zn	66	72	He	255.6217	ug/L	3.0	124265.92	272	93.98	
Mo	95	115	He	6.4755	ug/L	1.9	12410.00	6.88	94.12	
Mo	98	115	He	6.5037	ug/L	1.3	21472.12	6.88	94.53	
Ag	107	115	He	5.4442	ug/L	0.8	38274.43	-1	-544.42	
Ag	109	115	He	5.3971	ug/L	1.7	37271.86	-1	-539.71	
Cd	111	115	He	80.2726	ug/L	0.3	63642.33	84.6	94.88	
Pb	208	175	He	0.3854	ug/L	3.5	7429.77	0.45	85.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337658.30	1.2	378486.94	89.21	
Sc	45	He	66677.62	2.2	74157.35	89.91	
Ge	72	He	58607.92	3.3	64995.55	90.17	
In	115	He	517852.05	1.0	567443.14	91.26	
Lu	175	He	1338851.13	2.4	1431992.06	93.5	
Th	232	He	2476123.61	2.3	2601025.95	95.2	

Reference Sample Report

Sample Name K2508065-012
File Name 057_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:30:10
Sample Type AllRef
Comment 5X
ISTD Ref FileName 008CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4967	ug/L	10.7	1833.49	
Se	78	72	H2	19.9746	ug/L	2.2	5693.15	
Cu	63	72	He	13.3438	ug/L	0.4	54484.38	
Cu	65	72	He	13.5613	ug/L	1.3	27541.67	
Zn	66	72	He	398.3975	ug/L	1.1	191898.36	
Mo	95	115	He	0.7039	ug/L	6.7	1395.64	
Mo	98	115	He	0.7427	ug/L	1.4	2540.25	
Ag	107	115	He	0.8445	ug/L	4.5	6051.37	
Ag	109	115	He	0.8333	ug/L	1.8	5881.30	
Cd	111	115	He	8.0973	ug/L	1.7	6536.54	
Pb	208	175	He	6.1425	ug/L	2.3	121793.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340909.63	1.4	378486.94	90.07	
Sc	45	He	68150.85	2.9	74157.35	91.9	
Ge	72	He	58042.34	0.2	64995.55	89.3	
In	115	He	527294.67	1.0	567443.14	92.92	
Lu	175	He	1397875.55	2.3	1431992.06	97.62	
Th	232	He	2544186.42	2.1	2601025.95	97.81	

Duplicate Sample Report

Sample Name KQ2515046-05
File Name 058_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:32:14
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Fail
ISTD Ref FileName Pass
QC Ref File Name 057_
Default Text ~~ACRLS~~
~~NoUser~~

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	20.1405	ug/L	7.2	1996.84	8.51	
Se	78	72	H2	21.1264	ug/L	2.7	6060.64	5.6	
Cu	63	72	He	15.7188	ug/L	1.1	63735.66	16.34	
Cu	65	72	He	15.6568	ug/L	2.3	31578.42	14.34	
Zn	66	72	He	434.9749	ug/L	2.3	208093.97	8.78	
Mo	95	115	He	0.7574	ug/L	4.7	1493.42		<5x MRL
Mo	98	115	He	0.7776	ug/L	1.6	2644.71		<5x MRL
Ag	107	115	He	0.9242	ug/L	1.2	6589.94	9.01	
Ag	109	115	He	0.9165	ug/L	3.3	6434.87	9.51	
Cd	111	115	He	9.0078	ug/L	0.8	7236.89	10.65	
[Pb]	206	175	He	7.8491	ug/L	2.9	38194.67	19.93	
[Pb]	207	175	He	7.3937	ug/L	3.0	30723.97	18.84	
Pb	208	175	He	7.5077	ug/L	2.3	145362.86	20	Dup Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343327.34	2.2	378486.94	90.71	
Sc	45	He	66811.39	0.4	74157.35	90.09	
Ge	72	He	57657.49	0.8	64995.55	88.71	
In	115	He	524782.60	1.1	567443.14	92.48	
Lu	175	He	1365179.46	1.6	1431992.06	95.33	
Th	232	He	2522210.54	2.1	2601025.95	96.97	

Sample Report

Sample Name K2508065-012L
File Name 059SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:34:17
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	4.2088	ug/L	23.9	523.35	
Se	78	72	H2	3.8451	ug/L	1.3	1107.38	
Cu	63	72	He	2.7101	ug/L	2.1	10844.32	
Cu	65	72	He	2.7100	ug/L	3.7	5374.40	
Zn	66	72	He	80.0952	ug/L	1.7	37553.13	
Mo	95	115	He	0.1397	ug/L	2.7	290.00	
Mo	98	115	He	0.1221	ug/L	15.8	446.68	
Ag	107	115	He	0.1802	ug/L	2.0	1265.07	
Ag	109	115	He	0.1754	ug/L	8.3	1226.73	
Cd	111	115	He	1.6252	ug/L	2.2	1280.73	
Pb	208	175	He	1.2473	ug/L	2.0	24057.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344179.76	1.6	378486.94	90.94	
Sc	45	He	65070.05	3.2	74157.35	87.75	
Ge	72	He	56455.99	2.2	64995.55	86.86	
In	115	He	514799.16	1.6	567443.14	90.72	
Lu	175	He	1354249.35	1.4	1431992.06	94.57	
Th	232	He	2468732.67	1.7	2601025.95	94.91	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508065-012A
File Name 060_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:36:19
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 057_
 ARF.
Default Text ALKLS
 NoUser

+5001 10ppm PS
 10001 50ppm Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	72.6070	ug/L	3.1	7005.18	50	108.22	
Se	78	H2	71.7653	ug/L	1.5	21045.94	50	103.58	
Cu	63	He	66.2672	ug/L	1.5	265475.55	50	105.85	
Cu	65	He	66.5929	ug/L	2.1	132779.01	50	106.06	
Zn	66	He	448.4399	ug/L	0.9	212255.34	50	100.08	
Mo	95	He	51.5826	ug/L	1.4	98565.13	50	101.76	
Mo	98	He	51.0574	ug/L	1.1	168041.90	50	100.63	
Ag	107	He	6.1523	ug/L	1.7	43199.02	5	106.16	
Ag	109	He	6.1663	ug/L	0.6	42531.92	5	106.66	
Cd	111	He	59.6281	ug/L	0.7	47216.88	50	103.06	
[Pb]	206	He	54.9033	ug/L	0.7	267277.05	50	96.95	
[Pb]	207	He	52.2707	ug/L	1.4	217315.54	50	92.3	
Pb	208	He	52.9430	ug/L	0.4	1025486.48	50	93.6	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350922.97	1.2	378486.94	92.72	
Sc	45	He	66590.48	2.8	74157.35	89.8	
Ge	72	He	57041.66	1.1	64995.55	87.76	
In	115	He	517217.43	0.4	567443.14	91.15	
Lu	175	He	1366392.32	0.7	1431992.06	95.42	
Th	232	He	2493697.83	1.1	2601025.95	95.87	

Matrix Spike Sample (MS) Report

Sample Name KQ2515046-06
File Name 061_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:38:23
Sample Type Spike
Comment 5X
ISTD Ref FileName 008CALB.d
QC Ref File Name 057_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	53.0657	ug/L	4.0	5027.63	33.3	103.81	
Se	78	H2	55.9867	ug/L	0.4	16008.37	33.3	108.14	
Cu	63	He	66.9119	ug/L	0.6	267781.26	50	107.14	
Cu	65	He	67.3008	ug/L	1.0	134053.93	50	107.48	
Zn	66	He	526.0760	ug/L	0.7	248730.22	100	127.68	Spike Failed
Mo	95	He	33.3268	ug/L	0.8	63970.18	33.3	97.97	
Mo	98	He	33.4983	ug/L	1.1	110749.78	33.3	98.37	
Ag	107	He	10.8544	ug/L	0.5	76545.64	10	100.1	
Ag	109	He	10.8684	ug/L	0.8	75273.67	10	100.35	
Cd	111	He	18.7367	ug/L	0.4	14901.66	10	106.39	
[Pb]	206	He	103.8965	ug/L	2.1	505759.58	100	97.47	
[Pb]	207	He	95.4465	ug/L	2.1	396828.14	100	89.33	
Pb	208	He	98.0670	ug/L	1.9	1899500.21	100	91.92	

4x, N/A
AB
8/27/25

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342124.36	0.4	378486.94	90.39	
Sc	45	He	68194.42	1.1	74157.35	91.96	
Ge	72	He	56978.08	0.8	64995.55	87.66	
In	115	He	519469.10	0.1	567443.14	91.55	
Lu	175	He	1366814.98	2.2	1431992.06	95.45	
Th	232	He	2523250.80	1.7	2601025.95	97.01	

Sample Report

Sample Name K2508065-001
File Name 062SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:40:26
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.1244	ug/L	1.8	880.04	
Se	78	72	H2	8.8634	ug/L	2.4	2528.90	
Cu	63	72	He	10.6663	ug/L	0.8	43563.54	
Cu	65	72	He	10.8288	ug/L	1.5	21993.76	
Zn	66	72	He	429.9725	ug/L	1.3	207033.67	
Mo	95	115	He	0.3297	ug/L	12.4	660.02	
Mo	98	115	He	0.2930	ug/L	4.9	1021.15	
Ag	107	115	He	0.2715	ug/L	1.2	1930.15	
Ag	109	115	He	0.2830	ug/L	3.5	1993.49	
Cd	111	115	He	1.8391	ug/L	1.3	1469.75	
Pb	208	175	He	0.8385	ug/L	0.3	16584.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341242.17	0.5	378486.94	90.16	
Sc	45	He	67511.32	2.9	74157.35	91.04	
Ge	72	He	58028.98	1.2	64995.55	89.28	
In	115	He	522001.87	1.0	567443.14	91.99	
Lu	175	He	1385089.04	1.7	1431992.06	96.72	
Th	232	He	2497968.14	1.6	2601025.95	96.04	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 063_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:42:29
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.2375	ug/L	4.9	2306.90	92.95	
Se	78	72	H2	25.7409	ug/L	1.7	7460.97	102.96	
Cu	63	72	He	26.2497	ug/L	1.9	105565.52	105	
Cu	65	72	He	26.3097	ug/L	1.5	52652.10	105.24	
Zn	66	72	He	26.1415	ug/L	5.2	12465.64	104.57	
Mo	95	115	He	12.6214	ug/L	0.9	24183.19	100.97	
Mo	98	115	He	12.7363	ug/L	1.8	42034.27	101.89	
Ag	107	115	He	13.0177	ug/L	1.3	91575.85	104.14	
Ag	109	115	He	12.9595	ug/L	1.9	89526.37	103.68	
Cd	111	115	He	25.4166	ug/L	1.8	20164.28	101.67	
Pb	208	175	He	23.1244	ug/L	1.0	448004.73	92.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346861.43	2.9	378486.94	91.64	
Sc	45	He	64370.40	0.7	74157.35	86.8	
Ge	72	He	57232.21	1.5	64995.55	88.06	
In	115	He	518246.95	1.3	567443.14	91.33	
Lu	175	He	1366540.03	1.2	1431992.06	95.43	
Th	232	He	2498898.87	1.2	2601025.95	96.07	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 064_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:44:32
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0687	ug/L	750.3	140.00	
Se	78	72	H2	0.0131	ug/L	13.9	5.33	
Cu	63	72	He	-0.0115	ug/L	N/A	56.67	
Cu	65	72	He	0.0021	ug/L	549.7	33.33	
Zn	66	72	He	0.0207	ug/L	293.0	56.67	
Mo	95	115	He	0.0045	ug/L	174.3	33.34	
Mo	98	115	He	0.0049	ug/L	10.8	64.44	
Ag	107	115	He	0.0039	ug/L	20.8	33.33	
Ag	109	115	He	0.0003	ug/L	455.8	26.67	
Cd	111	115	He	0.0025	ug/L	49.7	2.00	
Pb	208	175	He	0.0128	ug/L	15.6	366.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345341.79	1.4	378486.94	91.24	
Sc	45	He	65656.02	0.9	74157.35	88.54	
Ge	72	He	57071.70	0.3	64995.55	87.81	
In	115	He	520303.09	0.6	567443.14	91.69	
Lu	175	He	1357480.91	0.6	1431992.06	94.8	
Th	232	He	2498570.38	1.4	2601025.95	96.06	

Sample Report

Sample Name K2508065-002
File Name 065SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:46:36
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.7281	ug/L	9.7	940.05	
Se	78	72	H2	7.7513	ug/L	2.6	2219.51	
Cu	63	72	He	9.3570	ug/L	1.8	37984.23	
Cu	65	72	He	9.2818	ug/L	1.4	18737.39	
Zn	66	72	He	420.9367	ug/L	1.0	201431.31	
Mo	95	115	He	0.1701	ug/L	12.1	352.23	
Mo	98	115	He	0.1817	ug/L	14.7	650.02	
Ag	107	115	He	0.0588	ug/L	6.9	421.68	
Ag	109	115	He	0.0643	ug/L	10.8	471.68	
Cd	111	115	He	1.3523	ug/L	0.5	1079.54	
Pb	208	175	He	0.2239	ug/L	3.1	4443.65	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342523.40	1.9	378486.94	90.5	
Sc	45	He	66312.65	3.4	74157.35	89.42	
Ge	72	He	57667.55	1.5	64995.55	88.73	
In	115	He	521463.55	2.0	567443.14	91.9	
Lu	175	He	1362050.87	2.1	1431992.06	95.12	
Th	232	He	2465414.91	1.8	2601025.95	94.79	

Sample Report

Sample Name K2508065-003
File Name 066SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:48:40
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.8445	ug/L	8.7	860.04	
Se	78	72	H2	8.6710	ug/L	3.1	2492.89	
Cu	63	72	He	10.3654	ug/L	5.2	42105.84	
Cu	65	72	He	10.4046	ug/L	3.1	21023.91	
Zn	66	72	He	426.5188	ug/L	4.0	204297.63	
Mo	95	115	He	0.1512	ug/L	17.5	317.78	
Mo	98	115	He	0.1781	ug/L	10.9	642.24	
Ag	107	115	He	0.0856	ug/L	8.5	615.02	
Ag	109	115	He	0.0717	ug/L	18.2	525.02	
Cd	111	115	He	1.4154	ug/L	3.2	1135.88	
Pb	208	175	He	0.1909	ug/L	4.5	3864.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343957.47	2.4	378486.94	90.88	
Sc	45	He	67661.96	0.5	74157.35	91.24	
Ge	72	He	57761.48	2.7	64995.55	88.87	
In	115	He	524238.29	0.7	567443.14	92.39	
Lu	175	He	1383291.86	1.8	1431992.06	96.6	
Th	232	He	2489963.97	2.1	2601025.95	95.73	

Sample Report

Sample Name K2508065-004
File Name 067SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:50:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.4092	ug/L	21.0	726.70	
Se	78	72	H2	7.3397	ug/L	3.3	2110.16	
Cu	63	72	He	9.5579	ug/L	2.8	38662.78	
Cu	65	72	He	9.5725	ug/L	1.8	19263.15	
Zn	66	72	He	441.4141	ug/L	1.3	210514.21	
Mo	95	115	He	0.2020	ug/L	8.8	410.01	
Mo	98	115	He	0.1937	ug/L	7.0	684.47	
Ag	107	115	He	0.1018	ug/L	5.4	720.02	
Ag	109	115	He	0.0957	ug/L	4.4	683.36	
Cd	111	115	He	0.9238	ug/L	5.1	730.85	
Pb	208	175	He	0.2384	ug/L	6.8	4693.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343784.24	1.4	378486.94	90.83	
Sc	45	He	66509.87	2.6	74157.35	89.69	
Ge	72	He	57480.04	2.1	64995.55	88.44	
In	115	He	516758.41	0.5	567443.14	91.07	
Lu	175	He	1354143.73	1.8	1431992.06	94.56	
Th	232	He	2496829.39	3.1	2601025.95	95.99	

Sample Report

Sample Name K2508065-005
File Name 068SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:52:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.7983	ug/L	12.5	763.37	
Se	78	72	H2	7.8129	ug/L	4.2	2247.52	
Cu	63	72	He	10.3701	ug/L	0.4	42092.64	
Cu	65	72	He	10.6353	ug/L	1.4	21466.33	
Zn	66	72	He	477.8961	ug/L	0.8	228682.84	
Mo	95	115	He	0.1735	ug/L	30.5	357.78	
Mo	98	115	He	0.1821	ug/L	23.7	647.80	
Ag	107	115	He	0.0642	ug/L	4.3	458.34	
Ag	109	115	He	0.0586	ug/L	15.0	430.01	
Cd	111	115	He	1.3321	ug/L	0.2	1057.71	
Pb	208	175	He	0.2600	ug/L	2.0	5217.10	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344044.35	1.8	378486.94	90.9	
Sc	45	He	66064.64	1.7	74157.35	89.09	
Ge	72	He	57667.44	0.9	64995.55	88.73	
In	115	He	518620.38	1.8	567443.14	91.4	
Lu	175	He	1382320.97	0.8	1431992.06	96.53	
Th	232	He	2498439.02	0.8	2601025.95	96.06	

Sample Report

Sample Name K2508065-006
File Name 069SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:54:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6056	ug/L	9.2	730.03	
Se	78	72	H2	6.9586	ug/L	1.7	1959.47	
Cu	63	72	He	10.3405	ug/L	3.0	41464.02	
Cu	65	72	He	9.9859	ug/L	2.2	19915.69	
Zn	66	72	He	496.7962	ug/L	2.0	234889.30	
Mo	95	115	He	0.2474	ug/L	2.7	496.68	
Mo	98	115	He	0.2389	ug/L	6.0	833.36	
Ag	107	115	He	0.1362	ug/L	1.6	961.71	
Ag	109	115	He	0.1221	ug/L	9.5	865.04	
Cd	111	115	He	1.2907	ug/L	1.0	1021.21	
Pb	208	175	He	0.4515	ug/L	2.9	8814.55	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336748.93	1.3	378486.94	88.97	
Sc	45	He	65666.10	0.8	74157.35	88.55	
Ge	72	He	56991.50	1.9	64995.55	87.69	
In	115	He	516808.16	0.2	567443.14	91.08	
Lu	175	He	1358520.24	1.0	1431992.06	94.87	
Th	232	He	2515914.55	0.9	2601025.95	96.73	

Sample Report

Sample Name K2508065-007
File Name 070SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:56:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.4058	ug/L	19.2	900.05	
Se	78	72	H2	7.7050	ug/L	3.9	2184.17	
Cu	63	72	He	15.7762	ug/L	1.9	63099.81	
Cu	65	72	He	15.8891	ug/L	2.4	31616.88	
Zn	66	72	He	478.1606	ug/L	1.4	225679.28	
Mo	95	115	He	1.4980	ug/L	3.0	2878.08	
Mo	98	115	He	1.5254	ug/L	0.6	5052.05	
Ag	107	115	He	0.2407	ug/L	4.9	1691.79	
Ag	109	115	He	0.2190	ug/L	5.7	1530.10	
Cd	111	115	He	1.9490	ug/L	1.3	1538.92	
Pb	208	175	He	2.5634	ug/L	2.5	49872.82	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338925.24	0.7	378486.94	89.55	
Sc	45	He	65857.04	0.8	74157.35	88.81	
Ge	72	He	56877.68	0.7	64995.55	87.51	
In	115	He	515701.44	0.7	567443.14	90.88	
Lu	175	He	1369492.95	1.4	1431992.06	95.64	
Th	232	He	2471897.15	1.7	2601025.95	95.04	

Sample Report

Sample Name K2508065-008
File Name 071SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:58:58
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6268	ug/L	21.2	833.37	
Se	78	72	H2	7.9884	ug/L	1.4	2273.52	
Cu	63	72	He	10.4148	ug/L	1.7	42346.63	
Cu	65	72	He	10.5701	ug/L	1.0	21369.46	
Zn	66	72	He	387.0515	ug/L	1.7	185510.99	
Mo	95	115	He	0.2245	ug/L	1.3	455.57	
Mo	98	115	He	0.2117	ug/L	2.9	747.80	
Ag	107	115	He	0.0811	ug/L	3.7	578.35	
Ag	109	115	He	0.0867	ug/L	11.5	625.02	
Cd	111	115	He	1.3249	ug/L	1.3	1054.04	
Pb	208	175	He	0.3608	ug/L	1.9	7119.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340370.88	1.3	378486.94	89.93	
Sc	45	He	66145.07	1.3	74157.35	89.2	
Ge	72	He	57767.88	1.9	64995.55	88.88	
In	115	He	519672.26	0.7	567443.14	91.58	
Lu	175	He	1368199.77	0.6	1431992.06	95.55	
Th	232	He	2495679.70	0.7	2601025.95	95.95	

Sample Report

Sample Name K2508065-009
File Name 072SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:01:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6425	ug/L	11.2	740.03	
Se	78	72	H2	7.2357	ug/L	1.3	2054.49	
Cu	63	72	He	8.6232	ug/L	5.4	34826.22	
Cu	65	72	He	8.6893	ug/L	1.2	17455.83	
Zn	66	72	He	470.7990	ug/L	1.7	224125.97	
Mo	95	115	He	0.1829	ug/L	1.7	380.01	
Mo	98	115	He	0.1711	ug/L	8.0	621.13	
Ag	107	115	He	0.0913	ug/L	6.5	658.36	
Ag	109	115	He	0.0866	ug/L	10.7	631.69	
Cd	111	115	He	1.1948	ug/L	2.2	961.70	
Pb	208	175	He	0.2819	ug/L	1.7	5674.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339523.74	0.8	378486.94	89.71	
Sc	45	He	66386.19	0.7	74157.35	89.52	
Ge	72	He	57376.18	1.3	64995.55	88.28	
In	115	He	525787.77	1.1	567443.14	92.66	
Lu	175	He	1389386.23	1.1	1431992.06	97.02	
Th	232	He	2524597.62	0.5	2601025.95	97.06	

Sample Report

Sample Name K2508065-010
File Name 073SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:03:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.5511	ug/L	18.2	733.37	
Se	78	72	H2	7.1586	ug/L	2.6	2036.15	
Cu	63	72	He	9.5621	ug/L	0.8	39358.06	
Cu	65	72	He	9.7431	ug/L	1.6	19939.04	
Zn	66	72	He	423.9270	ug/L	0.6	205664.55	
Mo	95	115	He	0.2301	ug/L	4.3	466.68	
Mo	98	115	He	0.2020	ug/L	7.3	716.69	
Ag	107	115	He	0.1257	ug/L	10.8	893.37	
Ag	109	115	He	0.1217	ug/L	13.5	868.37	
Cd	111	115	He	1.2033	ug/L	3.3	958.37	
Pb	208	175	He	0.4098	ug/L	1.3	8077.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340054.25	1.0	378486.94	89.85	
Sc	45	He	66992.27	1.6	74157.35	90.34	
Ge	72	He	58463.81	0.9	64995.55	89.95	
In	115	He	520206.53	0.1	567443.14	91.68	
Lu	175	He	1369726.86	1.2	1431992.06	95.65	
Th	232	He	2505709.54	0.5	2601025.95	96.34	

Sample Report

Sample Name K2508065-011
File Name 074SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:05:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.5428	ug/L	10.2	1743.47	
Se	78	72	H2	19.4630	ug/L	5.1	5544.09	
Cu	63	72	He	12.1375	ug/L	2.2	48221.77	
Cu	65	72	He	11.9047	ug/L	3.3	23521.23	
Zn	66	72	He	383.6127	ug/L	1.6	179765.40	
Mo	95	115	He	0.5503	ug/L	6.7	1078.94	
Mo	98	115	He	0.5465	ug/L	6.2	1853.47	
Ag	107	115	He	0.6924	ug/L	5.1	4882.57	
Ag	109	115	He	0.6891	ug/L	1.1	4790.87	
Cd	111	115	He	9.5874	ug/L	1.7	7617.26	
Pb	208	175	He	3.2139	ug/L	0.9	63032.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341163.84	3.7	378486.94	90.14	
Sc	45	He	66212.09	2.7	74157.35	89.29	
Ge	72	He	56479.36	1.8	64995.55	86.9	
In	115	He	518995.95	1.4	567443.14	91.46	
Lu	175	He	1380961.02	0.5	1431992.06	96.44	
Th	232	He	2482353.97	0.8	2601025.95	95.44	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 075_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:07:13
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.0825	ug/L	3.5	2336.90	96.33	
Se	78	72	H2	25.4203	ug/L	1.8	7212.85	101.68	
Cu	63	72	He	26.1783	ug/L	2.8	104038.39	104.71	
Cu	65	72	He	26.3420	ug/L	2.6	52093.38	105.37	
Zn	66	72	He	26.1558	ug/L	2.5	12318.86	104.62	
Mo	95	115	He	12.5375	ug/L	0.9	23744.67	100.3	
Mo	98	115	He	12.5761	ug/L	2.5	41014.64	100.61	
Ag	107	115	He	12.9617	ug/L	0.8	90116.37	103.69	
Ag	109	115	He	13.1252	ug/L	2.4	89602.01	105	
Cd	111	115	He	25.4860	ug/L	0.7	19983.69	101.94	
Pb	208	175	He	22.9869	ug/L	0.8	435150.35	91.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339522.48	1.3	378486.94	89.71	
Sc	45	He	64283.08	1.4	74157.35	86.68	
Ge	72	He	56559.64	1.6	64995.55	87.02	
In	115	He	512179.28	1.5	567443.14	90.26	
Lu	175	He	1335233.57	0.9	1431992.06	93.24	
Th	232	He	2496369.55	1.2	2601025.95	95.98	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 076_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:09:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3831	ug/L	N/A	96.67	
Se	78	72	H2	0.0122	ug/L	114.1	5.00	
Cu	63	72	He	-0.0032	ug/L	N/A	90.00	
Cu	65	72	He	0.0129	ug/L	85.9	55.00	
Zn	66	72	He	0.0139	ug/L	471.0	53.33	
Mo	95	115	He	0.0006	ug/L	610.7	25.55	
Mo	98	115	He	-0.0017	ug/L	N/A	42.22	
Ag	107	115	He	0.0020	ug/L	62.6	20.00	
Ag	109	115	He	0.0004	ug/L	660.0	26.67	
Cd	111	115	He	0.0032	ug/L	40.5	2.50	
Pb	208	175	He	0.0114	ug/L	23.2	340.00	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339617.46	0.8	378486.94	89.73	
Sc	45	He	63894.94	1.0	74157.35	86.16	
Ge	72	He	57202.34	1.3	64995.55	88.01	
In	115	He	516489.35	0.6	567443.14	91.02	
Lu	175	He	1360925.97	1.7	1431992.06	95.04	
Th	232	He	2435829.08	0.3	2601025.95	93.65	

Sample Report

Sample Name K2508065-013
File Name 077SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:11:22
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.6700	ug/L	4.4	3053.72	
Se	78	72	H2	31.6143	ug/L	2.3	9042.56	
Cu	63	72	He	17.6052	ug/L	2.6	71097.27	
Cu	65	72	He	17.4504	ug/L	3.1	35056.49	
Zn	66	72	He	528.6438	ug/L	3.4	251909.39	
Mo	95	115	He	0.8128	ug/L	3.3	1600.10	
Mo	98	115	He	0.8564	ug/L	4.1	2906.99	
Ag	107	115	He	2.4540	ug/L	3.1	17487.79	
Ag	109	115	He	2.4260	ug/L	2.1	16993.87	
Cd	111	115	He	32.5179	ug/L	0.7	26129.87	
Pb	208	175	He	5.6002	ug/L	0.4	110145.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342192.57	1.5	378486.94	90.41	
Sc	45	He	67371.02	1.6	74157.35	90.85	
Ge	72	He	57449.71	1.9	64995.55	88.39	
In	115	He	524883.70	1.4	567443.14	92.5	
Lu	175	He	1386036.65	0.6	1431992.06	96.79	
Th	232	He	2513779.34	2.0	2601025.95	96.65	

Sample Report

Sample Name K2508065-014
File Name 078SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:13:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.9195	ug/L	8.0	1816.81	
Se	78	72	H2	19.5978	ug/L	2.1	5703.15	
Cu	63	72	He	17.8973	ug/L	0.8	73650.11	
Cu	65	72	He	17.9703	ug/L	1.3	36787.46	
Zn	66	72	He	442.4505	ug/L	0.6	214874.33	
Mo	95	115	He	0.7514	ug/L	5.9	1473.42	
Mo	98	115	He	0.7691	ug/L	2.7	2602.48	
Ag	107	115	He	1.0834	ug/L	3.4	7682.18	
Ag	109	115	He	1.0440	ug/L	3.0	7288.63	
Cd	111	115	He	13.9221	ug/L	1.1	11126.63	
Pb	208	175	He	4.9785	ug/L	2.0	96094.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348113.99	1.2	378486.94	91.98	
Sc	45	He	66318.96	2.4	74157.35	89.43	
Ge	72	He	58524.44	0.7	64995.55	90.04	
In	115	He	522003.22	0.4	567443.14	91.99	
Lu	175	He	1360331.39	1.5	1431992.06	95	
Th	232	He	2489690.22	2.0	2601025.95	95.72	

Sample Report

Sample Name K2508065-015
File Name 079SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:15:29
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.5706	ug/L	4.8	1823.49	
Se	78	72	H2	18.8037	ug/L	2.6	5312.00	
Cu	63	72	He	10.4246	ug/L	1.8	41918.65	
Cu	65	72	He	10.4846	ug/L	0.4	20968.83	
Zn	66	72	He	332.9498	ug/L	1.7	157861.71	
Mo	95	115	He	0.5054	ug/L	1.5	995.60	
Mo	98	115	He	0.4957	ug/L	7.9	1686.78	
Ag	107	115	He	0.9243	ug/L	2.0	6531.60	
Ag	109	115	He	0.9230	ug/L	2.9	6423.19	
Cd	111	115	He	6.0835	ug/L	1.5	4842.85	
Pb	208	175	He	2.7163	ug/L	1.4	52271.29	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338040.23	1.5	378486.94	89.31	
Sc	45	He	67344.00	2.0	74157.35	90.81	
Ge	72	He	57141.81	1.7	64995.55	87.92	
In	115	He	520060.17	1.9	567443.14	91.65	
Lu	175	He	1354588.94	0.6	1431992.06	94.59	
Th	232	He	2493829.18	2.4	2601025.95	95.88	

Sample Report

Sample Name K2508065-016
File Name 080SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:17:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	33.4120	ug/L	6.8	3047.05	
Se	78	72	H2	35.4121	ug/L	3.1	9594.59	
Cu	63	72	He	17.3453	ug/L	1.3	70269.51	
Cu	65	72	He	17.4636	ug/L	0.9	35198.57	
Zn	66	72	He	493.1345	ug/L	2.4	235743.04	
Mo	95	115	He	0.8811	ug/L	5.3	1727.89	
Mo	98	115	He	0.8179	ug/L	1.5	2771.40	
Ag	107	115	He	2.9821	ug/L	1.9	21189.64	
Ag	109	115	He	2.9485	ug/L	1.6	20590.45	
Cd	111	115	He	31.6393	ug/L	0.8	25349.77	
Pb	208	175	He	8.0292	ug/L	1.8	152699.76	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	324402.50	3.4	378486.94	85.71	
Sc	45	He	66978.90	0.8	74157.35	90.32	
Ge	72	He	57620.75	1.3	64995.55	88.65	
In	115	He	523319.49	0.3	567443.14	92.22	
Lu	175	He	1340950.19	1.8	1431992.06	93.64	
Th	232	He	2512257.36	1.0	2601025.95	96.59	

Sample Report

Sample Name K2508065-017
File Name 081SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:19:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6501	ug/L	9.2	1976.84	
Se	78	72	H2	20.7350	ug/L	2.1	6024.29	
Cu	63	72	He	9.4537	ug/L	2.4	38478.91	
Cu	65	72	He	9.6186	ug/L	2.3	19466.74	
Zn	66	72	He	355.9835	ug/L	2.6	170789.80	
Mo	95	115	He	0.4214	ug/L	5.4	846.70	
Mo	98	115	He	0.4408	ug/L	2.5	1528.98	
Ag	107	115	He	1.7018	ug/L	1.9	12197.08	
Ag	109	115	He	1.7802	ug/L	0.8	12547.43	
Cd	111	115	He	15.6611	ug/L	0.1	12653.77	
Pb	208	175	He	2.6813	ug/L	1.1	52720.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347565.49	0.3	378486.94	91.83	
Sc	45	He	67206.58	0.7	74157.35	90.63	
Ge	72	He	57831.45	2.0	64995.55	88.98	
In	115	He	527740.64	1.3	567443.14	93	
Lu	175	He	1384223.83	2.7	1431992.06	96.66	
Th	232	He	2489175.59	0.9	2601025.95	95.7	

Sample Report

Sample Name K2508065-018
File Name 082SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:21:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.5860	ug/L	3.3	3030.39	
Se	78	72	H2	30.2975	ug/L	2.0	8615.63	
Cu	63	72	He	17.6176	ug/L	2.4	70809.38	
Cu	65	72	He	17.7202	ug/L	1.7	35434.18	
Zn	66	72	He	504.0221	ug/L	0.8	239091.44	
Mo	95	115	He	0.9933	ug/L	0.7	1931.26	
Mo	98	115	He	0.9753	ug/L	2.3	3271.51	
Ag	107	115	He	2.3360	ug/L	0.9	16483.23	
Ag	109	115	He	2.3320	ug/L	3.5	16171.22	
Cd	111	115	He	23.8820	ug/L	1.1	18998.48	
Pb	208	175	He	7.2231	ug/L	1.5	140257.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340268.91	1.1	378486.94	89.9	
Sc	45	He	66958.65	1.9	74157.35	90.29	
Ge	72	He	57172.13	2.2	64995.55	87.96	
In	115	He	519648.23	1.6	567443.14	91.58	
Lu	175	He	1368972.22	1.7	1431992.06	95.6	
Th	232	He	2525922.51	1.4	2601025.95	97.11	

Sample Report

Sample Name K2508065-019
File Name 083SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:23:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	24.1246	ug/L	0.4	2403.58	
Se	78	72	H2	25.5037	ug/L	1.9	7432.63	
Cu	63	72	He	13.7814	ug/L	1.3	56676.07	
Cu	65	72	He	13.5401	ug/L	1.3	27698.62	
Zn	66	72	He	428.3809	ug/L	0.7	207832.03	
Mo	95	115	He	0.6935	ug/L	9.3	1371.19	
Mo	98	115	He	0.7341	ug/L	3.6	2502.46	
Ag	107	115	He	1.6927	ug/L	0.8	12080.33	
Ag	109	115	He	1.6701	ug/L	0.6	11721.70	
Cd	111	115	He	15.3531	ug/L	0.2	12352.16	
Pb	208	175	He	4.0606	ug/L	2.4	79802.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348690.59	0.5	378486.94	92.13	
Sc	45	He	68171.05	1.3	74157.35	91.93	
Ge	72	He	58463.90	0.1	64995.55	89.95	
In	115	He	525494.65	0.5	567443.14	92.61	
Lu	175	He	1384763.42	1.9	1431992.06	96.7	
Th	232	He	2514228.35	2.0	2601025.95	96.66	

Sample Report

Sample Name K2508065-020
File Name 084SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:25:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	25.4063	ug/L	14.2	2540.28	
Se	78	72	H2	24.0478	ug/L	0.5	7059.77	
Cu	63	72	He	15.9610	ug/L	2.8	65279.71	
Cu	65	72	He	15.7045	ug/L	2.7	31954.27	
Zn	66	72	He	572.1350	ug/L	1.4	276161.32	
Mo	95	115	He	0.8213	ug/L	7.3	1620.10	
Mo	98	115	He	0.8512	ug/L	5.3	2894.76	
Ag	107	115	He	3.2809	ug/L	1.9	23419.87	
Ag	109	115	He	3.2915	ug/L	3.2	23084.37	
Cd	111	115	He	18.6819	ug/L	0.3	15035.80	
Pb	208	175	He	6.1662	ug/L	2.4	119229.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351226.97	1.3	378486.94	92.8	
Sc	45	He	68438.87	2.5	74157.35	92.29	
Ge	72	He	58179.68	2.0	64995.55	89.51	
In	115	He	525690.60	0.7	567443.14	92.64	
Lu	175	He	1363355.97	2.8	1431992.06	95.21	
Th	232	He	2551336.53	1.4	2601025.95	98.09	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 085_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:27:52
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.2105	ug/L	12.0	2486.94	100.84	
Se	78	72	H2	25.8529	ug/L	0.4	7477.65	103.41	
Cu	63	72	He	26.2862	ug/L	1.2	107207.44	105.14	
Cu	65	72	He	26.1054	ug/L	1.8	52981.70	104.42	
Zn	66	72	He	26.4142	ug/L	2.1	12769.28	105.66	
Mo	95	115	He	12.5603	ug/L	2.6	24405.77	100.48	
Mo	98	115	He	12.5663	ug/L	1.6	42066.64	100.53	
Ag	107	115	He	12.8489	ug/L	2.5	91666.54	102.79	
Ag	109	115	He	12.9723	ug/L	1.6	90896.91	103.78	
Cd	111	115	He	25.2459	ug/L	2.0	20313.85	100.98	
Pb	208	175	He	22.5209	ug/L	1.1	433396.22	90.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346039.41	2.0	378486.94	91.43	
Sc	45	He	65719.84	1.7	74157.35	88.62	
Ge	72	He	58039.20	1.7	64995.55	89.3	
In	115	He	525685.62	2.0	567443.14	92.64	
Lu	175	He	1357477.69	1.8	1431992.06	94.8	
Th	232	He	2467572.05	1.2	2601025.95	94.87	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 086_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:29:56
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1762	ug/L	N/A	120.00	
Se	78	72	H2	0.0152	ug/L	99.9	6.00	
Cu	63	72	He	-0.0056	ug/L	N/A	83.33	
Cu	65	72	He	0.0030	ug/L	93.0	36.67	
Zn	66	72	He	-0.0038	ug/L	N/A	46.67	
Mo	95	115	He	-0.0043	ug/L	N/A	16.67	
Mo	98	115	He	-0.0046	ug/L	N/A	33.33	
Ag	107	115	He	0.0047	ug/L	14.5	40.00	
Ag	109	115	He	0.0000	ug/L	6814.8	25.00	
Cd	111	115	He	0.0023	ug/L	83.6	1.83	
Pb	208	175	He	0.0069	ug/L	10.0	256.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351904.47	1.2	378486.94	92.98	
Sc	45	He	66714.35	3.0	74157.35	89.96	
Ge	72	He	59274.05	1.3	64995.55	91.2	
In	115	He	528885.23	0.4	567443.14	93.2	
Lu	175	He	1379890.45	1.4	1431992.06	96.36	
Th	232	He	2467966.21	2.2	2601025.95	94.88	

Prep Blank (PB) Report

Sample Name KQ2515048-01
File Name 087_PB.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:32:01
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0857	ug/L	413.8	143.33	
Se	78	72	H2	0.0049	ug/L	2.7	3.00	
Cu	63	72	He	0.0321	ug/L	47.6	240.01	
Cu	65	72	He	0.0489	ug/L	15.7	131.67	
Zn	66	72	He	0.0776	ug/L	42.3	86.67	
Mo	95	115	He	-0.0088	ug/L	N/A	7.78	
Mo	98	115	He	-0.0083	ug/L	N/A	21.11	
Ag	107	115	He	0.0022	ug/L	82.1	21.67	
Ag	109	115	He	-0.0026	ug/L	N/A	6.67	
Cd	111	115	He	0.0006	ug/L	0.7	0.50	
[Pb]	206	175	He	0.0154	ug/L	15.6	107.78	
[Pb]	207	175	He	0.0187	ug/L	27.2	97.78	
Pb	208	175	He	0.0164	ug/L	13.2	428.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348985.44	1.3	378486.94	92.21	
Sc	45	He	65709.35	1.6	74157.35	88.61	
Ge	72	He	59260.61	1.1	64995.55	91.18	
In	115	He	527791.54	0.7	567443.14	93.01	
Lu	175	He	1338170.81	2.1	1431992.06	93.45	
Th	232	He	2479266.21	0.5	2601025.95	95.32	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-02
File Name 088_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:34:04
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	32.9978	ug/L	12.2	3277.12	33.3	99.09	
Se	78	72	H2	33.7789	ug/L	3.2	9954.51	33.3	101.44	
Cu	63	72	He	49.7622	ug/L	2.4	204705.31	50	99.52	
Cu	65	72	He	50.1765	ug/L	2.0	102738.13	50	100.35	
Zn	66	72	He	98.5253	ug/L	3.0	47910.90	100	98.53	
Mo	95	115	He	32.0369	ug/L	1.3	62816.00	33.3	96.21	
Mo	98	115	He	32.0926	ug/L	1.4	108382.48	33.3	96.37	
Ag	107	115	He	9.8018	ug/L	1.3	70607.23	10	98.02	
Ag	109	115	He	9.8502	ug/L	2.2	69686.45	10	98.5	
Cd	111	115	He	9.7533	ug/L	1.0	7923.59	10	97.53	
[Pb]	206	175	He	89.7147	ug/L	1.3	436432.51	100	89.71	
[Pb]	207	175	He	85.7688	ug/L	1.1	356357.27	100	85.77	
Pb	208	175	He	87.1454	ug/L	1.3	1686787.10	100	87.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352581.77	1.2	378486.94	93.16	
Sc	45	He	68181.30	1.5	74157.35	91.94	
Ge	72	He	58581.22	2.4	64995.55	90.13	
In	115	He	530660.32	1.0	567443.14	93.52	
Lu	175	He	1365643.63	1.5	1431992.06	95.37	
Th	232	He	2486777.67	0.8	2601025.95	95.61	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-03
File Name 089_QC4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:36:08
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.8974	ug/L	24.9	580.02	4.8	102.03	
Se	78	72	H2	5.3210	ug/L	18.7	1502.08	4.8	110.85	
Cu	63	72	He	6.6913	ug/L	2.3	28241.61	6.6	101.38	
Cu	65	72	He	6.7092	ug/L	1.6	14073.73	6.6	101.65	
Zn	66	72	He	58.5136	ug/L	0.8	29120.16	57.4	101.94	
Mo	95	115	He	0.2738	ug/L	7.2	570.02	-1	-27.38	
Mo	98	115	He	0.2725	ug/L	8.0	983.37	-1	-27.25	
Ag	107	115	He	0.2731	ug/L	6.4	2003.49	0.27	101.15	
Ag	109	115	He	0.2740	ug/L	1.4	1991.83	0.27	101.48	
Cd	111	115	He	0.3054	ug/L	4.3	251.83	0.296	103.18	
Pb	208	175	He	0.1170	ug/L	1.3	2444.55	0.116	100.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345636.44	18.9	378486.94	91.32	
Sc	45	He	69366.85	2.0	74157.35	93.54	
Ge	72	He	59883.46	0.1	64995.55	92.13	
In	115	He	538584.43	0.3	567443.14	94.91	
Lu	175	He	1398837.79	1.1	1431992.06	97.68	
Th	232	He	2556055.85	0.9	2601025.95	98.27	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-04
File Name 090_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:38:11
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	17.6987	ug/L	2.6	1826.83	21.8	81.19	
Se	78	72	H2	19.2104	ug/L	2.1	5684.81	21.8	88.12	
Cu	63	72	He	862.2349	ug/L	1.5	3538378.91	994	86.74	
Cu	65	72	He	882.8619	ug/L	1.5	1803530.86	994	88.82	
Zn	66	72	He	243.6301	ug/L	1.4	118184.53	272	89.57	
Mo	95	115	He	5.8940	ug/L	1.9	11390.23	6.88	85.67	
Mo	98	115	He	5.9236	ug/L	1.9	19721.78	6.88	86.1	
Ag	107	115	He	6.2675	ug/L	1.5	44424.45	-1	-626.75	
Ag	109	115	He	6.2657	ug/L	0.5	43625.28	-1	-626.57	
Cd	111	115	He	73.7066	ug/L	1.6	58913.57	84.6	87.12	
Pb	208	175	He	0.3274	ug/L	2.3	6441.78	0.45	72.76	QC5 Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	354084.32	1.6	378486.94	93.55	
Sc	45	He	67939.86	1.7	74157.35	91.62	
Ge	72	He	58447.02	0.4	64995.55	89.92	
In	115	He	522092.20	0.4	567443.14	92.01	
Lu	175	He	1362421.23	2.5	1431992.06	95.14	
Th	232	He	2442311.21	0.6	2601025.95	93.9	

Reference Sample Report

Sample Name K2508066-004
File Name 091_ARF.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:40:15
Sample Type AllRef
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6343	ug/L	3.1	2003.51	
Se	78	72	H2	19.0537	ug/L	1.1	5614.45	
Cu	63	72	He	12.9473	ug/L	1.5	54109.50	
Cu	65	72	He	12.7790	ug/L	3.3	26559.86	
Zn	66	72	He	326.9235	ug/L	1.5	161179.66	
Mo	95	115	He	0.6935	ug/L	9.9	1393.41	
Mo	98	115	He	0.6862	ug/L	3.8	2384.66	
Ag	107	115	He	1.1775	ug/L	5.4	8552.71	
Ag	109	115	He	1.1490	ug/L	1.4	8220.83	
Cd	111	115	He	5.4528	ug/L	3.4	4465.55	
Pb	208	175	He	7.8685	ug/L	2.8	155225.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352497.85	1.4	378486.94	93.13	
Sc	45	He	69732.17	3.0	74157.35	94.03	
Ge	72	He	59411.25	1.3	64995.55	91.41	
In	115	He	535339.13	3.6	567443.14	94.34	
Lu	175	He	1391255.60	2.3	1431992.06	97.16	
Th	232	He	2536171.37	3.2	2601025.95	97.51	

Duplicate Sample Report

Sample Name KQ2515048-05
File Name 092_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:42:19
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 091_
Default Text ARRLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	16.9010	ug/L	24.8	1853.48	14.96	
Se	78	72	H2	18.0124	ug/L	12.3	5678.14	5.62	
Cu	63	72	He	12.6640	ug/L	3.7	53038.75	2.21	
Cu	65	72	He	12.8529	ug/L	2.7	26780.23	0.58	
Zn	66	72	He	330.9154	ug/L	2.7	163511.85	1.21	
Mo	95	115	He	0.6392	ug/L	2.9	1270.07		<5x MRL
Mo	98	115	He	0.6512	ug/L	5.1	2233.52		<5x MRL
Ag	107	115	He	1.1340	ug/L	2.2	8124.13	3.77	
Ag	109	115	He	1.1025	ug/L	0.9	7773.91	4.13	
Cd	111	115	He	5.4331	ug/L	1.0	4386.69	0.36	
[Pb]	206	175	He	8.7724	ug/L	1.3	42825.85	9.03	
[Pb]	207	175	He	8.6619	ug/L	1.1	36108.87	10.24	
Pb	208	175	He	8.6987	ug/L	0.8	168955.03	10.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	380773.05	11.7	378486.94	100.6	
Sc	45	He	68632.96	2.0	74157.35	92.55	
Ge	72	He	59568.59	2.7	64995.55	91.65	
In	115	He	527352.45	0.2	567443.14	92.93	
Lu	175	He	1369357.06	0.7	1431992.06	95.63	
Th	232	He	2522998.97	0.9	2601025.95	97	

Sample Report

Sample Name K2508066-004L
File Name 093SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:44:22
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	3.5034	ug/L	14.5	466.69	
Se	78	72	H2	3.8092	ug/L	3.0	1117.38	
Cu	63	72	He	2.6027	ug/L	2.9	10714.26	
Cu	65	72	He	2.5566	ug/L	2.8	5217.66	
Zn	66	72	He	65.4989	ug/L	1.5	31598.79	
Mo	95	115	He	0.1304	ug/L	12.7	277.78	
Mo	98	115	He	0.1180	ug/L	11.6	443.34	
Ag	107	115	He	0.2265	ug/L	8.4	1623.44	
Ag	109	115	He	0.2232	ug/L	9.2	1588.44	
Cd	111	115	He	1.0784	ug/L	3.4	867.86	
Pb	208	175	He	1.6476	ug/L	1.6	31723.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350482.08	1.5	378486.94	92.6	
Sc	45	He	67980.01	1.9	74157.35	91.67	
Ge	72	He	58069.12	1.4	64995.55	89.34	
In	115	He	525689.19	0.9	567443.14	92.64	
Lu	175	He	1353557.27	2.1	1431992.06	94.52	
Th	232	He	2477974.13	0.1	2601025.95	95.27	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508066-004A
File Name 094_PDS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:46:25
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_
 ARF.
Default Text ALKLS
 NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	67.2868	ug/L	10.6	6971.85	50	95.31	
Se	78	H2	68.4992	ug/L	1.9	21556.37	50	98.89	
Cu	63	He	63.7987	ug/L	1.1	268950.76	50	101.7	
Cu	65	He	64.1506	ug/L	0.5	134598.94	50	102.74	
Zn	66	He	368.5091	ug/L	0.6	183529.78	50	83.17	
Mo	95	He	50.1421	ug/L	0.5	99823.02	50	98.9	
Mo	98	He	50.3365	ug/L	0.7	172597.35	50	99.3	
Ag	107	He	6.2383	ug/L	1.2	45636.79	5	101.22	
Ag	109	He	6.2019	ug/L	1.2	44566.59	5	101.06	
Cd	111	He	55.5142	ug/L	0.4	45797.81	50	100.12	
[Pb]	206	He	51.8913	ug/L	1.0	258985.98	50	87.75	
[Pb]	207	He	52.0259	ug/L	1.6	221749.64	50	88.42	
Pb	208	He	52.0184	ug/L	1.5	1032950.76	50	88.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376613.46	1.7	378486.94	99.51	
Sc	45	He	70528.81	1.0	74157.35	95.11	
Ge	72	He	60014.00	0.7	64995.55	92.34	
In	115	He	538842.91	0.7	567443.14	94.96	
Lu	175	He	1401010.66	1.8	1431992.06	97.84	
Th	232	He	2518695.74	0.5	2601025.95	96.83	

Matrix Spike Sample (MS) Report

Sample Name KQ2515048-06
File Name 095_SPK.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:48:28
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	52.5604	ug/L	7.9	5017.65	33.3	98.88	
Se	78	H2	55.8383	ug/L	1.8	16096.81	33.3	110.46	
Cu	63	He	63.3050	ug/L	0.2	263177.33	50	100.72	
Cu	65	He	63.1818	ug/L	1.3	130728.46	50	100.81	
Zn	66	He	433.5926	ug/L	1.5	212945.66	100	106.67	
Mo	95	He	32.8034	ug/L	0.8	64463.61	33.3	96.43	
Mo	98	He	32.9111	ug/L	0.6	111394.98	33.3	96.77	
Ag	107	He	10.7240	ug/L	0.6	77423.51	10	95.47	
Ag	109	He	10.7679	ug/L	1.0	76348.10	10	96.19	
Cd	111	He	15.2050	ug/L	0.6	12380.35	10	97.52	
[Pb]	206	He	96.3623	ug/L	2.0	470687.71	100	88.35	
[Pb]	207	He	93.7112	ug/L	2.8	390905.31	100	85.89	
Pb	208	He	94.7418	ug/L	2.6	1841190.51	100	86.87	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345024.75	2.4	378486.94	91.16	
Sc	45	He	70247.65	1.7	74157.35	94.73	
Ge	72	He	59187.32	0.9	64995.55	91.06	
In	115	He	531825.82	0.7	567443.14	93.72	
Lu	175	He	1371470.08	2.1	1431992.06	95.77	
Th	232	He	2535339.18	1.7	2601025.95	97.47	

Sample Report

Sample Name K2508066-001
File Name 096SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:50:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4266	ug/L	4.6	1630.12	
Se	78	72	H2	15.5334	ug/L	2.2	4654.44	
Cu	63	72	He	11.5128	ug/L	1.3	47920.86	
Cu	65	72	He	11.7740	ug/L	1.7	24372.65	
Zn	66	72	He	270.6286	ug/L	2.5	132842.56	
Mo	95	115	He	0.5361	ug/L	3.1	1086.72	
Mo	98	115	He	0.5600	ug/L	2.0	1959.04	
Ag	107	115	He	0.3559	ug/L	8.4	2595.27	
Ag	109	115	He	0.3418	ug/L	2.1	2466.90	
Cd	111	115	He	1.9371	ug/L	1.0	1589.76	
Pb	208	175	He	3.5173	ug/L	1.2	70182.63	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358389.58	1.4	378486.94	94.69	
Sc	45	He	69138.73	0.9	74157.35	93.23	
Ge	72	He	59156.85	1.3	64995.55	91.02	
In	115	He	536082.78	1.1	567443.14	94.47	
Lu	175	He	1405378.00	1.4	1431992.06	98.14	
Th	232	He	2531572.51	1.3	2601025.95	97.33	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 097_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:52:37
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.7278	ug/L	4.6	2350.23	94.91	
Se	78	72	H2	25.6678	ug/L	1.2	7429.62	102.67	
Cu	63	72	He	26.3486	ug/L	2.8	107201.83	105.39	
Cu	65	72	He	26.6912	ug/L	3.6	54028.96	106.76	
Zn	66	72	He	25.2148	ug/L	4.7	12155.35	100.86	
Mo	95	115	He	12.3183	ug/L	0.5	23833.72	98.55	
Mo	98	115	He	12.5870	ug/L	0.3	41950.73	100.7	
Ag	107	115	He	12.9992	ug/L	1.0	92340.85	103.99	
Ag	109	115	He	13.0281	ug/L	0.6	90891.85	104.22	
Cd	111	115	He	25.4090	ug/L	1.7	20355.40	101.64	
Pb	208	175	He	22.7991	ug/L	1.1	436774.66	91.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346291.26	0.4	378486.94	91.49	
Sc	45	He	67139.79	1.7	74157.35	90.54	
Ge	72	He	57901.75	1.5	64995.55	89.09	
In	115	He	523291.99	0.7	567443.14	92.22	
Lu	175	He	1351319.72	1.2	1431992.06	94.37	
Th	232	He	2486514.86	0.4	2601025.95	95.6	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 098_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:54:41
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0266	ug/L	3220.4	136.67	
Se	78	72	H2	0.0155	ug/L	38.5	6.00	
Cu	63	72	He	0.0083	ug/L	181.4	140.00	
Cu	65	72	He	0.0039	ug/L	142.1	38.33	
Zn	66	72	He	0.0649	ug/L	57.0	80.00	
Mo	95	115	He	0.0059	ug/L	28.1	36.67	
Mo	98	115	He	0.0049	ug/L	142.8	65.56	
Ag	107	115	He	0.0033	ug/L	22.5	30.00	
Ag	109	115	He	-0.0005	ug/L	N/A	21.67	
Cd	111	115	He	0.0018	ug/L	65.9	1.50	
Pb	208	175	He	0.0103	ug/L	19.7	324.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345051.49	0.7	378486.94	91.17	
Sc	45	He	67038.93	1.4	74157.35	90.4	
Ge	72	He	58972.73	1.2	64995.55	90.73	
In	115	He	531178.63	1.4	567443.14	93.61	
Lu	175	He	1383394.77	2.2	1431992.06	96.61	
Th	232	He	2500497.46	2.6	2601025.95	96.14	

Sample Report

Sample Name K2508066-002
File Name 099SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:56:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.7737	ug/L	7.8	1846.82	
Se	78	72	H2	17.4433	ug/L	2.7	5487.07	
Cu	63	72	He	9.6644	ug/L	1.3	40434.31	
Cu	65	72	He	9.7370	ug/L	3.3	20251.17	
Zn	66	72	He	287.9308	ug/L	1.4	142006.85	
Mo	95	115	He	0.4632	ug/L	2.5	927.81	
Mo	98	115	He	0.4592	ug/L	2.8	1590.10	
Ag	107	115	He	0.6022	ug/L	3.5	4319.04	
Ag	109	115	He	0.5976	ug/L	2.4	4227.35	
Cd	111	115	He	3.9703	ug/L	0.4	3207.21	
Pb	208	175	He	3.5071	ug/L	0.8	67952.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376455.68	2.2	378486.94	99.46	
Sc	45	He	67953.51	2.5	74157.35	91.63	
Ge	72	He	59435.00	1.6	64995.55	91.44	
In	115	He	527634.83	0.5	567443.14	92.98	
Lu	175	He	1364520.81	1.5	1431992.06	95.29	
Th	232	He	2515958.35	2.1	2601025.95	96.73	

Sample Report

Sample Name K2508066-003
File Name 100SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:58:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	23.0531	ug/L	8.6	2233.55	
Se	78	72	H2	24.9506	ug/L	3.1	7056.77	
Cu	63	72	He	14.0168	ug/L	0.9	57312.01	
Cu	65	72	He	14.0761	ug/L	1.5	28628.80	
Zn	66	72	He	405.9681	ug/L	0.7	195834.39	
Mo	95	115	He	0.7798	ug/L	3.2	1544.54	
Mo	98	115	He	0.7963	ug/L	2.7	2721.40	
Ag	107	115	He	1.0634	ug/L	2.9	7622.15	
Ag	109	115	He	1.0697	ug/L	1.7	7547.11	
Cd	111	115	He	8.7051	ug/L	0.1	7031.62	
Pb	208	175	He	6.4855	ug/L	1.6	128173.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338387.18	1.0	378486.94	89.41	
Sc	45	He	69460.47	2.4	74157.35	93.67	
Ge	72	He	58129.51	0.2	64995.55	89.44	
In	115	He	527593.92	0.1	567443.14	92.98	
Lu	175	He	1393185.40	1.6	1431992.06	97.29	
Th	232	He	2515903.61	0.3	2601025.95	96.73	

Sample Report

Sample Name K2508066-005
File Name 101SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:00:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6988	ug/L	3.8	1973.51	
Se	78	72	H2	21.8460	ug/L	1.9	6322.75	
Cu	63	72	He	15.9703	ug/L	2.0	65684.72	
Cu	65	72	He	16.0289	ug/L	3.1	32794.46	
Zn	66	72	He	324.4823	ug/L	1.5	157504.52	
Mo	95	115	He	0.6814	ug/L	1.6	1357.85	
Mo	98	115	He	0.7408	ug/L	5.8	2544.69	
Ag	107	115	He	0.6636	ug/L	3.2	4775.86	
Ag	109	115	He	0.6807	ug/L	3.4	4829.22	
Cd	111	115	He	5.1991	ug/L	1.9	4214.97	
Pb	208	175	He	4.1778	ug/L	1.0	80582.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346248.38	0.1	378486.94	91.48	
Sc	45	He	68044.02	2.9	74157.35	91.76	
Ge	72	He	58501.02	2.2	64995.55	90.01	
In	115	He	529547.49	0.4	567443.14	93.32	
Lu	175	He	1358854.93	1.0	1431992.06	94.89	
Th	232	He	2499325.90	1.5	2601025.95	96.09	

Sample Report

Sample Name K2508066-006
File Name 102SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:02:59
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.8353	ug/L	5.0	2103.52	
Se	78	72	H2	20.3526	ug/L	2.2	6230.71	
Cu	63	72	He	12.3031	ug/L	0.3	50362.48	
Cu	65	72	He	12.2701	ug/L	3.3	24980.32	
Zn	66	72	He	315.7283	ug/L	1.5	152437.68	
Mo	95	115	He	0.5514	ug/L	4.1	1091.16	
Mo	98	115	He	0.5664	ug/L	1.4	1935.70	
Ag	107	115	He	0.6805	ug/L	0.4	4844.22	
Ag	109	115	He	0.6937	ug/L	2.0	4867.57	
Cd	111	115	He	8.6576	ug/L	1.2	6942.24	
Pb	208	175	He	6.3528	ug/L	2.6	123740.28	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	366370.19	3.9	378486.94	96.8	
Sc	45	He	68546.10	2.1	74157.35	92.43	
Ge	72	He	58179.49	0.6	64995.55	89.51	
In	115	He	523798.29	1.3	567443.14	92.31	
Lu	175	He	1373449.46	2.6	1431992.06	95.91	
Th	232	He	2490664.76	2.0	2601025.95	95.76	

Sample Report

Sample Name K2508066-007
File Name 103SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:05:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.7926	ug/L	6.8	1340.09	
Se	78	72	H2	11.8539	ug/L	4.6	3722.49	
Cu	63	72	He	8.4339	ug/L	5.0	34993.24	
Cu	65	72	He	8.3795	ug/L	3.5	17290.59	
Zn	66	72	He	235.2062	ug/L	2.8	115066.64	
Mo	95	115	He	0.4854	ug/L	3.3	967.82	
Mo	98	115	He	0.4989	ug/L	4.1	1717.89	
Ag	107	115	He	0.1973	ug/L	4.0	1415.09	
Ag	109	115	He	0.2038	ug/L	4.9	1453.42	
Cd	111	115	He	1.9375	ug/L	1.1	1560.59	
Pb	208	175	He	4.9577	ug/L	3.4	95426.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	375877.52	3.5	378486.94	99.31	
Sc	45	He	68683.69	3.3	74157.35	92.62	
Ge	72	He	58972.64	2.9	64995.55	90.73	
In	115	He	526106.32	1.1	567443.14	92.72	
Lu	175	He	1357379.54	3.7	1431992.06	94.79	
Th	232	He	2518071.63	1.3	2601025.95	96.81	

Sample Report

Sample Name K2508066-008
File Name 104SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:07:06
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.3409	ug/L	9.8	1890.15	
Se	78	72	H2	19.5634	ug/L	0.3	5516.75	
Cu	63	72	He	11.0381	ug/L	1.9	46231.93	
Cu	65	72	He	11.1129	ug/L	1.0	23148.90	
Zn	66	72	He	353.7922	ug/L	1.6	174736.13	
Mo	95	115	He	0.5342	ug/L	0.7	1072.27	
Mo	98	115	He	0.5260	ug/L	4.4	1824.57	
Ag	107	115	He	0.4633	ug/L	2.4	3343.77	
Ag	109	115	He	0.4584	ug/L	2.7	3267.08	
Cd	111	115	He	6.2851	ug/L	0.5	5106.77	
Pb	208	175	He	2.4852	ug/L	1.1	48841.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337354.48	0.2	378486.94	89.13	
Sc	45	He	68355.41	0.2	74157.35	92.18	
Ge	72	He	59524.89	1.7	64995.55	91.58	
In	115	He	530698.53	1.1	567443.14	93.52	
Lu	175	He	1383093.41	0.9	1431992.06	96.59	
Th	232	He	2477350.02	0.8	2601025.95	95.25	

Sample Report

Sample Name K2508066-009
File Name 105SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:09:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.0251	ug/L	8.8	1636.79	
Se	78	72	H2	16.2901	ug/L	2.9	4730.13	
Cu	63	72	He	11.3237	ug/L	2.4	46569.70	
Cu	65	72	He	11.5317	ug/L	2.8	23584.61	
Zn	66	72	He	289.6037	ug/L	0.9	140485.76	
Mo	95	115	He	0.5551	ug/L	5.4	1094.49	
Mo	98	115	He	0.5748	ug/L	8.7	1959.04	
Ag	107	115	He	0.8861	ug/L	1.7	6284.81	
Ag	109	115	He	0.8773	ug/L	2.9	6128.08	
Cd	111	115	He	4.7673	ug/L	1.6	3809.86	
Pb	208	175	He	5.1825	ug/L	1.1	99756.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347393.12	1.0	378486.94	91.78	
Sc	45	He	66452.83	1.4	74157.35	89.61	
Ge	72	He	58447.50	1.2	64995.55	89.93	
In	115	He	522059.56	1.5	567443.14	92	
Lu	175	He	1356462.12	1.1	1431992.06	94.73	
Th	232	He	2463378.30	2.4	2601025.95	94.71	

Sample Report

Sample Name K2508066-010
File Name 106SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:11:13
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.7159	ug/L	12.8	1493.44	
Se	78	72	H2	14.4110	ug/L	2.9	4407.02	
Cu	63	72	He	11.4824	ug/L	1.4	46897.45	
Cu	65	72	He	11.2992	ug/L	0.5	22953.64	
Zn	66	72	He	301.1476	ug/L	1.6	145053.62	
Mo	95	115	He	0.6204	ug/L	3.4	1246.73	
Mo	98	115	He	0.6431	ug/L	1.0	2230.19	
Ag	107	115	He	0.5532	ug/L	2.0	4008.96	
Ag	109	115	He	0.5591	ug/L	3.5	3997.28	
Cd	111	115	He	4.2697	ug/L	1.0	3484.44	
Pb	208	175	He	5.4628	ug/L	1.0	107535.83	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	365959.39	2.2	378486.94	96.69	
Sc	45	He	69497.40	1.4	74157.35	93.72	
Ge	72	He	58045.89	1.5	64995.55	89.31	
In	115	He	533034.40	0.3	567443.14	93.94	
Lu	175	He	1387237.58	0.4	1431992.06	96.87	
Th	232	He	2525823.97	1.2	2601025.95	97.11	

Sample Report

Sample Name K2508066-011
File Name 107SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:13:17
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.2559	ug/L	11.8	1683.47	
Se	78	72	H2	17.1014	ug/L	2.6	5043.90	
Cu	63	72	He	19.1024	ug/L	2.3	80218.27	
Cu	65	72	He	18.6357	ug/L	1.2	38939.90	
Zn	66	72	He	349.9937	ug/L	1.1	173501.89	
Mo	95	115	He	0.7750	ug/L	3.1	1537.87	
Mo	98	115	He	0.7617	ug/L	2.7	2611.37	
Ag	107	115	He	0.4562	ug/L	1.9	3280.42	
Ag	109	115	He	0.4549	ug/L	8.0	3227.07	
Cd	111	115	He	4.3817	ug/L	2.9	3545.29	
Pb	208	175	He	7.4537	ug/L	1.3	147898.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352792.73	0.9	378486.94	93.21	
Sc	45	He	68506.04	0.9	74157.35	92.38	
Ge	72	He	59739.44	1.1	64995.55	91.91	
In	115	He	528665.05	1.8	567443.14	93.17	
Lu	175	He	1398855.55	1.7	1431992.06	97.69	
Th	232	He	2510560.22	0.9	2601025.95	96.52	

Sample Report

Sample Name K2508066-012
File Name 108SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:15:20
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4771	ug/L	17.4	1606.79	
Se	78	72	H2	16.1050	ug/L	2.2	4743.80	
Cu	63	72	He	13.6702	ug/L	1.8	56873.69	
Cu	65	72	He	14.0843	ug/L	2.6	29143.25	
Zn	66	72	He	412.5663	ug/L	3.0	202432.43	
Mo	95	115	He	0.9220	ug/L	1.2	1815.68	
Mo	98	115	He	0.9043	ug/L	0.4	3073.69	
Ag	107	115	He	1.0311	ug/L	4.1	7363.68	
Ag	109	115	He	1.0411	ug/L	3.2	7320.34	
Cd	111	115	He	7.0455	ug/L	2.2	5671.16	
Pb	208	175	He	9.0107	ug/L	1.1	174993.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352351.08	1.7	378486.94	93.09	
Sc	45	He	68509.58	1.1	74157.35	92.38	
Ge	72	He	59167.08	3.4	64995.55	91.03	
In	115	He	525844.81	1.2	567443.14	92.67	
Lu	175	He	1369298.31	1.2	1431992.06	95.62	
Th	232	He	2499676.26	1.2	2601025.95	96.1	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 109_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:17:26
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.4766	ug/L	4.7	2423.59	97.91	
Se	78	72	H2	25.9568	ug/L	0.2	7525.67	103.83	
Cu	63	72	He	26.2089	ug/L	1.4	107356.09	104.84	
Cu	65	72	He	26.6722	ug/L	1.3	54365.14	106.69	
Zn	66	72	He	25.9154	ug/L	2.2	12579.14	103.66	
Mo	95	115	He	12.6177	ug/L	0.5	24192.08	100.94	
Mo	98	115	He	12.7861	ug/L	1.3	42227.14	102.29	
Ag	107	115	He	13.0287	ug/L	1.1	91713.32	104.23	
Ag	109	115	He	13.1258	ug/L	0.4	90747.34	105.01	
Cd	111	115	He	25.5954	ug/L	1.6	20320.69	102.38	
Pb	208	175	He	23.0195	ug/L	0.6	439560.07	92.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346870.92	0.6	378486.94	91.65	
Sc	45	He	66030.96	1.4	74157.35	89.04	
Ge	72	He	58283.31	0.1	64995.55	89.67	
In	115	He	518576.57	1.1	567443.14	91.39	
Lu	175	He	1346815.97	0.6	1431992.06	94.05	
Th	232	He	2445201.94	1.5	2601025.95	94.01	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 110_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:19:30
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1687	ug/L	191.1	153.34	
Se	78	72	H2	0.0082	ug/L	70.8	4.00	
Cu	63	72	He	-0.0062	ug/L	N/A	80.00	
Cu	65	72	He	0.0081	ug/L	14.5	46.67	
Zn	66	72	He	0.0175	ug/L	64.2	56.67	
Mo	95	115	He	0.0055	ug/L	75.6	35.56	
Mo	98	115	He	0.0031	ug/L	285.3	58.89	
Ag	107	115	He	0.0012	ug/L	113.4	15.00	
Ag	109	115	He	0.0008	ug/L	333.5	30.00	
Cd	111	115	He	0.0025	ug/L	66.4	2.00	
Pb	208	175	He	0.0086	ug/L	8.1	284.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353192.21	1.2	378486.94	93.32	
Sc	45	He	67226.90	0.7	74157.35	90.65	
Ge	72	He	58678.49	1.0	64995.55	90.28	
In	115	He	524255.13	0.9	567443.14	92.39	
Lu	175	He	1346741.65	0.3	1431992.06	94.05	
Th	232	He	2473594.29	0.4	2601025.95	95.1	

Sample Report

Sample Name K2508066-013
File Name 111SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:21:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.8661	ug/L	11.3	1316.76	
Se	78	72	H2	12.6008	ug/L	2.1	4169.62	
Cu	63	72	He	10.5899	ug/L	3.3	43994.90	
Cu	65	72	He	10.5715	ug/L	3.5	21843.50	
Zn	66	72	He	279.5361	ug/L	2.0	136978.20	
Mo	95	115	He	0.4536	ug/L	7.9	913.37	
Mo	98	115	He	0.4314	ug/L	7.0	1502.31	
Ag	107	115	He	0.1870	ug/L	5.9	1351.75	
Ag	109	115	He	0.2042	ug/L	1.2	1466.76	
Cd	111	115	He	2.0866	ug/L	2.9	1692.10	
Pb	208	175	He	2.3982	ug/L	0.9	46772.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	395985.53	3.3	378486.94	104.62	
Sc	45	He	70133.69	1.6	74157.35	94.57	
Ge	72	He	59053.27	2.2	64995.55	90.86	
In	115	He	529832.95	1.5	567443.14	93.37	
Lu	175	He	1372426.39	1.8	1431992.06	95.84	
Th	232	He	2499698.19	0.9	2601025.95	96.1	

Sample Report

Sample Name K2508066-014
File Name 112SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:23:37
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.5294	ug/L	1.5	1583.44	
Se	78	72	H2	17.0603	ug/L	1.7	4935.20	
Cu	63	72	He	8.7640	ug/L	2.4	36834.54	
Cu	65	72	He	8.6830	ug/L	2.3	18148.37	
Zn	66	72	He	310.6974	ug/L	2.2	153906.29	
Mo	95	115	He	0.5438	ug/L	3.4	1096.72	
Mo	98	115	He	0.5317	ug/L	3.7	1853.47	
Ag	107	115	He	1.6153	ug/L	5.4	11698.37	
Ag	109	115	He	1.6070	ug/L	0.9	11449.81	
Cd	111	115	He	6.7351	ug/L	0.5	5500.09	
Pb	208	175	He	4.4842	ug/L	3.1	87716.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346108.15	1.6	378486.94	91.45	
Sc	45	He	68596.40	1.5	74157.35	92.5	
Ge	72	He	59702.56	1.9	64995.55	91.86	
In	115	He	533398.16	0.8	567443.14	94	
Lu	175	He	1378891.64	2.7	1431992.06	96.29	
Th	232	He	2457585.95	1.1	2601025.95	94.49	

Sample Report

Sample Name K2508066-015
File Name 113SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:25:41
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.0127	ug/L	8.1	1366.76	
Se	78	72	H2	14.5944	ug/L	3.4	4278.32	
Cu	63	72	He	13.2990	ug/L	2.5	55682.41	
Cu	65	72	He	13.1797	ug/L	2.4	27439.91	
Zn	66	72	He	396.1411	ug/L	0.6	195650.84	
Mo	95	115	He	0.6473	ug/L	6.3	1287.84	
Mo	98	115	He	0.6141	ug/L	4.8	2112.39	
Ag	107	115	He	0.6353	ug/L	4.6	4564.12	
Ag	109	115	He	0.6487	ug/L	3.9	4592.46	
Cd	111	115	He	4.2950	ug/L	2.0	3474.27	
Pb	208	175	He	4.7262	ug/L	1.7	91694.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350553.37	1.4	378486.94	92.62	
Sc	45	He	68382.41	4.0	74157.35	92.21	
Ge	72	He	59518.59	2.0	64995.55	91.57	
In	115	He	528340.33	1.7	567443.14	93.11	
Lu	175	He	1367079.67	1.2	1431992.06	95.47	
Th	232	He	2468656.01	1.1	2601025.95	94.91	

Sample Report

Sample Name K2508066-016
File Name 114SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:27:45
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.8472	ug/L	9.3	1216.74	
Se	78	72	H2	12.1378	ug/L	4.3	3446.76	
Cu	63	72	He	11.2459	ug/L	1.0	47689.91	
Cu	65	72	He	11.1093	ug/L	1.9	23427.64	
Zn	66	72	He	306.0189	ug/L	0.6	153040.78	
Mo	95	115	He	0.5992	ug/L	5.9	1210.06	
Mo	98	115	He	0.5983	ug/L	1.8	2086.83	
Ag	107	115	He	0.2528	ug/L	2.4	1843.48	
Ag	109	115	He	0.2379	ug/L	9.8	1721.79	
Cd	111	115	He	2.0418	ug/L	1.5	1673.27	
Pb	208	175	He	3.7506	ug/L	1.0	74286.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339745.46	0.9	378486.94	89.76	
Sc	45	He	69630.97	0.6	74157.35	93.9	
Ge	72	He	60261.48	0.9	64995.55	92.72	
In	115	He	535269.48	0.4	567443.14	94.33	
Lu	175	He	1395105.50	1.1	1431992.06	97.42	
Th	232	He	2505994.18	0.9	2601025.95	96.35	

Sample Report

Sample Name K2508066-017
File Name 115SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:29:48
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4195	ug/L	5.7	1856.82	
Se	78	72	H2	19.4598	ug/L	1.0	5641.79	
Cu	63	72	He	11.6518	ug/L	2.8	48044.48	
Cu	65	72	He	11.7420	ug/L	2.4	24080.42	
Zn	66	72	He	423.0977	ug/L	1.7	205763.26	
Mo	95	115	He	0.6278	ug/L	2.3	1242.29	
Mo	98	115	He	0.6363	ug/L	1.0	2173.52	
Ag	107	115	He	1.0281	ug/L	2.8	7332.00	
Ag	109	115	He	0.9944	ug/L	1.2	6981.82	
Cd	111	115	He	10.3235	ug/L	0.3	8297.32	
Pb	208	175	He	5.8135	ug/L	1.4	112054.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346856.26	0.8	378486.94	91.64	
Sc	45	He	68070.69	1.0	74157.35	91.79	
Ge	72	He	58618.10	2.0	64995.55	90.19	
In	115	He	524969.24	0.6	567443.14	92.51	
Lu	175	He	1358439.88	0.6	1431992.06	94.86	
Th	232	He	2442322.20	0.5	2601025.95	93.9	

Sample Report

Sample Name K2508066-018
File Name 116SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:31:53
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.3015	ug/L	4.9	1680.13	
Se	78	72	H2	15.8463	ug/L	0.4	4652.11	
Cu	63	72	He	9.1070	ug/L	2.9	37058.53	
Cu	65	72	He	9.2288	ug/L	2.0	18674.05	
Zn	66	72	He	289.4042	ug/L	2.3	138819.52	
Mo	95	115	He	0.4067	ug/L	2.8	817.81	
Mo	98	115	He	0.3837	ug/L	10.1	1337.85	
Ag	107	115	He	1.5173	ug/L	2.4	10874.34	
Ag	109	115	He	1.4556	ug/L	2.7	10262.23	
Cd	111	115	He	4.1560	ug/L	1.4	3357.74	
Pb	208	175	He	3.5744	ug/L	1.1	69905.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351186.23	1.8	378486.94	92.79	
Sc	45	He	67987.04	2.6	74157.35	91.68	
Ge	72	He	57814.80	2.2	64995.55	88.95	
In	115	He	527752.17	1.0	567443.14	93.01	
Lu	175	He	1377386.65	0.7	1431992.06	96.19	
Th	232	He	2570892.56	0.5	2601025.95	98.84	

Sample Report

Sample Name K2508066-019
File Name 117SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:33:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.4360	ug/L	7.7	1496.78	
Se	78	72	H2	14.8898	ug/L	2.9	4352.01	
Cu	63	72	He	10.4698	ug/L	2.4	42911.45	
Cu	65	72	He	10.3996	ug/L	2.6	21197.52	
Zn	66	72	He	442.4837	ug/L	2.2	213829.74	
Mo	95	115	He	0.5215	ug/L	7.8	1040.04	
Mo	98	115	He	0.5504	ug/L	2.7	1893.47	
Ag	107	115	He	0.6666	ug/L	3.9	4772.52	
Ag	109	115	He	0.6678	ug/L	1.4	4714.17	
Cd	111	115	He	3.7484	ug/L	1.7	3023.33	
Pb	208	175	He	8.1874	ug/L	2.0	158378.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349670.69	1.3	378486.94	92.39	
Sc	45	He	68348.77	2.9	74157.35	92.17	
Ge	72	He	58250.04	2.0	64995.55	89.62	
In	115	He	526844.40	1.3	567443.14	92.85	
Lu	175	He	1363904.10	1.3	1431992.06	95.25	
Th	232	He	2489285.12	1.1	2601025.95	95.7	

Sample Report

Sample Name K2508066-020
File Name 118SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:36:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6683	ug/L	21.4	840.04	
Se	78	72	H2	7.4116	ug/L	1.0	2121.16	
Cu	63	72	He	6.5486	ug/L	2.1	27209.59	
Cu	65	72	He	6.5762	ug/L	2.8	13579.91	
Zn	66	72	He	287.5116	ug/L	0.5	140687.25	
Mo	95	115	He	0.3744	ug/L	10.9	755.58	
Mo	98	115	He	0.3811	ug/L	9.1	1330.07	
Ag	107	115	He	0.1313	ug/L	4.7	948.37	
Ag	109	115	He	0.1183	ug/L	9.6	858.37	
Cd	111	115	He	2.2501	ug/L	0.5	1820.95	
Pb	208	175	He	1.6305	ug/L	0.5	32051.21	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342236.23	0.4	378486.94	90.42	
Sc	45	He	68016.90	1.2	74157.35	91.72	
Ge	72	He	58962.89	1.9	64995.55	90.72	
In	115	He	528591.85	0.8	567443.14	93.15	
Lu	175	He	1381513.52	0.9	1431992.06	96.47	
Th	232	He	2455144.23	0.7	2601025.95	94.39	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 119_CC.V.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:38:05
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	26.5057	ug/L	2.6	2573.62	106.02	
Se	78	72	H2	26.1046	ug/L	2.2	7451.30	104.42	
Cu	63	72	He	26.2982	ug/L	1.2	107331.65	105.19	
Cu	65	72	He	26.4083	ug/L	1.7	53632.44	105.63	
Zn	66	72	He	26.1976	ug/L	5.4	12669.17	104.79	
Mo	95	115	He	12.7876	ug/L	1.7	24468.09	102.3	
Mo	98	115	He	12.5889	ug/L	0.6	41498.25	100.71	
Ag	107	115	He	13.0430	ug/L	0.7	91637.94	104.34	
Ag	109	115	He	13.0144	ug/L	1.0	89796.45	104.12	
Cd	111	115	He	25.5061	ug/L	0.8	20210.86	102.02	
Pb	208	175	He	23.1967	ug/L	2.3	439683.29	92.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341602.03	2.0	378486.94	90.25	
Sc	45	He	66483.73	1.7	74157.35	89.65	
Ge	72	He	58072.53	0.1	64995.55	89.35	
In	115	He	517560.87	0.8	567443.14	91.21	
Lu	175	He	1337335.87	2.2	1431992.06	93.39	
Th	232	He	2436026.21	0.7	2601025.95	93.66	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 120_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:40:09
Sample Type CCB
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1796	ug/L	225.6	150.00	
Se	78	72	H2	0.0180	ug/L	13.9	6.67	
Cu	63	72	He	-0.0043	ug/L	N/A	86.67	
Cu	65	72	He	0.0027	ug/L	271.8	35.00	
Zn	66	72	He	-0.0149	ug/L	N/A	40.00	
Mo	95	115	He	0.0004	ug/L	1270.9	25.55	
Mo	98	115	He	-0.0045	ug/L	N/A	33.33	
Ag	107	115	He	0.0024	ug/L	16.7	23.33	
Ag	109	115	He	-0.0002	ug/L	N/A	23.33	
Cd	111	115	He	0.0029	ug/L	13.2	2.33	
Pb	208	175	He	0.0110	ug/L	8.9	327.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342787.12	2.3	378486.94	90.57	
Sc	45	He	66446.57	2.2	74157.35	89.6	
Ge	72	He	57526.95	1.5	64995.55	88.51	
In	115	He	521891.92	1.0	567443.14	91.97	
Lu	175	He	1339070.50	0.5	1431992.06	93.51	
Th	232	He	2397976.27	0.7	2601025.95	92.19	



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

August 29, 2025

Analytical Report for Service Request No: K2508065

Greg Albrecht
Alaska Department of Fish and Game
802 3rd St.,
P.O. Box 110024
Juneau, AK 99811-0024

RE: 2025 Greens Creek Mine Biomonitoring

Dear Greg,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2025
For your reference, these analyses have been assigned our service request number **K2508065**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Raw Data
 Total Solids
 Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508065
Date Received: 08/13/2025

CASE NARRATIVE

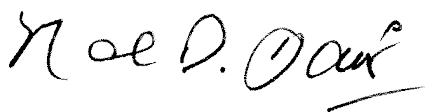
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Twenty animal tissue samples were received for analysis at ALS Environmental on 08/13/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 6020B, 08/27/2025: The matrix spike recovery of Zinc for sample 2025GCMZC10DV2 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was appropriate.

Approved by 

Date 08/29/2025



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2508065

Attachment 3 of 3

Project Name: 2025 Greens Creek Mine Biomonitoring
 Project Manager: Greg Albrecht
 Company Name: Alaska Department of Fish and Game
 Contact Information: greg.albrecht@alaska.gov / 907-465-6384

Sample Type: Whole body juvenile Dolly Varden char and Coho Salmon
 Analysis: Total metals, dry weight basis, report percent solids

Matrix	Sample Date	Sample Name	Sample ID	Total Metals	Fork Length (mm)	Weight (g)
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #1	2025GCMZC371DV1	Ag, Cd, Cu, Hg, Pb, Se, Zn	94	8.8
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #2	2025GCMZC371DV2	Ag, Cd, Cu, Hg, Pb, Se, Zn	93	7.1
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #3	2025GCMZC371DV3	Ag, Cd, Cu, Hg, Pb, Se, Zn	101	12.3
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #4	2025GCMZC371DV4	Ag, Cd, Cu, Hg, Pb, Se, Zn	115	13.8
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #5	2025GCMZC371DV5	Ag, Cd, Cu, Hg, Pb, Se, Zn	96	8.8
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #6	2025GCMZC371DV6	Ag, Cd, Cu, Hg, Pb, Se, Zn	125	16.5
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #7	2025GCMZC371DV7	Ag, Cd, Cu, Hg, Pb, Se, Zn	114	17.2
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #8	2025GCMZC371DV8	Ag, Cd, Cu, Hg, Pb, Se, Zn	93	8.6
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #9	2025GCMZC371DV9	Ag, Cd, Cu, Hg, Pb, Se, Zn	102	9.3
Whole Body	7/10/2025	Zinc Creek Site 371 DV Metals Fish #10	2025GCMZC371DV10	Ag, Cd, Cu, Hg, Pb, Se, Zn	113	14.8
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #1	2025GCMZC10DV1	Ag, Cd, Cu, Hg, Pb, Se, Zn	91	9.4
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #2	2025GCMZC10DV2	Ag, Cd, Cu, Hg, Pb, Se, Zn	115	19.4
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #3	2025GCMZC10DV3	Ag, Cd, Cu, Hg, Pb, Se, Zn	82	5.5
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #4	2025GCMZC10DV4	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	7.7
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #5	2025GCMZC10DV5	Ag, Cd, Cu, Hg, Pb, Se, Zn	119	19.2
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #6	2025GCMZC10DV6	Ag, Cd, Cu, Hg, Pb, Se, Zn	78	7.0
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #7	2025GCMZC10DV7	Ag, Cd, Cu, Hg, Pb, Se, Zn	82	6.1
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #8	2025GCMZC10DV8	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	10.4
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #9	2025GCMZC10DV9	Ag, Cd, Cu, Hg, Pb, Se, Zn	88	8.6
Whole Body	7/9/2025	Zinc Creek Site 10 DV Metals Fish #10	2025GCMZC10DV10	Ag, Cd, Cu, Hg, Pb, Se, Zn	86	7.7

PROJECT NAME 2025 Greens Creek Biomonitoring					NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 623 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8280 <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) PCP <input type="checkbox"/>	Cyanide <input type="checkbox"/>	Hex-Chrom <input type="checkbox"/>	(circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , DOC, NO ₂ +NO ₃ , TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 16500 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	Hg-1631E <input type="checkbox"/>	REMARKS
PROJECT NUMBER _____																					
PROJECT MANAGER Greg Albrecht																					
COMPANY NAME Alaska Department of Fish and Game																					
ADDRESS 802 3rd st																					
CITY/STATE/ZIP Douglas, AK 99824																					
E-MAIL ADDRESS greg.albrecht@alaska.gov																					
PHONE # 907-465-6384 FAX # _____																					
SAMPLER'S SIGNATURE <i>Greg Albrecht</i>																					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX																	
See attachments																					

<p>REPORT REQUIREMENTS</p> <p><input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required</p> <p><input checked="" type="checkbox"/> II. Report Dup., MS, MSD as required</p> <p><input type="checkbox"/> III. CLP Like Summary (no raw data)</p> <p><input type="checkbox"/> IV. Data Validation Report</p> <p><input type="checkbox"/> V. EDD</p>	<p>INVOICE INFORMATION</p> <p>P.O. # <u>Hecla Greens Creek</u></p> <p>Bill To: <u>Paula Lillesve</u></p> <p><u>plillesve@hecla.com</u></p>	<p>Circle which metals are to be analyzed:</p> <p>Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg</p> <p>Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg</p> <p>*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)</p> <p>SPECIAL INSTRUCTIONS/COMMENTS:</p> <p>Please send report to greg.albrecht@alaska.gov</p> <p>Please Bill to Hecla Greens Creek at plillesve@hecla.com</p> <p><input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)</p>
<p>TURNAROUND REQUIREMENTS</p> <p>____ 24 hr. ____ 48 hr.</p> <p>____ 5 day</p> <p><input checked="" type="checkbox"/> Standard (15 working days)</p> <p>____ Provide FAX Results</p> <p>Requested Report Date _____</p>		

<p>RELINQUISHED BY:</p> <p><i>Greg Albrecht</i></p> <p>Signature _____ Date/Time <u>8/11/25</u></p> <p>Printed Name <u>Greg Albrecht</u> Firm <u>ADF&G</u></p>	<p>RECEIVED BY:</p> <p><i>Norak Patterson</i></p> <p>Signature _____ Date/Time <u>8/13/25 0945</u></p> <p>Printed Name <u>Norak Patterson</u> Firm <u>ALS</u></p>	<p>RELINQUISHED BY:</p> <p>Signature _____ Date/Time _____</p> <p>Printed Name _____ Firm _____</p>	<p>RECEIVED BY:</p> <p>Signature _____ Date/Time _____</p> <p>Printed Name _____ Firm _____</p>
---	--	--	--

Cooler Receipt and Preservation Form

PM Black

Client Alaska Department of Fish and Game Service Request K25 08065
 Received: 8/13/25 Opened: 8/13/25 By: WRP Unloaded: 8/13/25 By: WRP

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other _____ NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number	Filed
B.1	7.4	IR02		X		391991503818	

4. Was a Temperature Blank present in cooler? NA Y If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y NA Y
- If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below NA Y N
14. Was C12/Res negative? NA Y N
15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. NA Y N
16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Samples in freezer



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Analysis Method: Freeze Dry
Prep Method: None

Service Request: K2508065
Date Collected: 07/09/25 - 07/10/25
Date Received: 08/13/25
Units: Percent
Basis: Wet

Total Solids

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
2025GCMZC371DV1	K2508065-001	21.5	-	-	1	08/20/25 16:34	
2025GCMZC371DV2	K2508065-002	23.4	-	-	1	08/20/25 16:34	
2025GCMZC371DV3	K2508065-003	22.4	-	-	1	08/20/25 16:34	
2025GCMZC371DV4	K2508065-004	23.1	-	-	1	08/20/25 16:34	
2025GCMZC371DV5	K2508065-005	22.7	-	-	1	08/20/25 16:34	
2025GCMZC371DV6	K2508065-006	21.7	-	-	1	08/20/25 16:34	
2025GCMZC371DV7	K2508065-007	23.5	-	-	1	08/20/25 16:34	
2025GCMZC371DV8	K2508065-008	22.6	-	-	1	08/20/25 16:34	
2025GCMZC371DV9	K2508065-009	23.0	-	-	1	08/20/25 16:34	
2025GCMZC371DV10	K2508065-010	23.1	-	-	1	08/20/25 16:34	
2025GCMZC10DV1	K2508065-011	23.9	-	-	1	08/20/25 16:34	
2025GCMZC10DV2	K2508065-012	24.6	-	-	1	08/20/25 16:34	
2025GCMZC10DV3	K2508065-013	25.1	-	-	1	08/20/25 16:34	
2025GCMZC10DV4	K2508065-014	22.5	-	-	1	08/20/25 16:34	
2025GCMZC10DV5	K2508065-015	23.7	-	-	1	08/20/25 16:34	
2025GCMZC10DV6	K2508065-016	24.2	-	-	1	08/20/25 16:34	
2025GCMZC10DV7	K2508065-017	22.8	-	-	1	08/20/25 16:34	
2025GCMZC10DV8	K2508065-018	25.0	-	-	1	08/20/25 16:34	
2025GCMZC10DV9	K2508065-019	24.5	-	-	1	08/20/25 16:34	
2025GCMZC10DV10	K2508065-020	24.8	-	-	1	08/20/25 16:34	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental
Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25

Mercury, Total

Prep Method: METHOD
Analysis Method: 1631E
Test Notes:

Units: ng/g
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
2025GCMZC371DV1	K2508065-001	9.9	2.0	10	08/26/25	08/28/25	178	
2025GCMZC371DV2	K2508065-002	9.9	2.0	10	08/26/25	08/28/25	144	
2025GCMZC371DV3	K2508065-003	9.9	2.0	10	08/26/25	08/28/25	183	
2025GCMZC371DV4	K2508065-004	9.9	2.0	10	08/26/25	08/28/25	200	
2025GCMZC371DV5	K2508065-005	9.9	2.0	10	08/26/25	08/28/25	180	
2025GCMZC371DV6	K2508065-006	9.9	2.0	10	08/26/25	08/28/25	245	
2025GCMZC371DV7	K2508065-007	9.9	2.0	10	08/26/25	08/28/25	225	
2025GCMZC371DV8	K2508065-008	9.9	2.0	10	08/26/25	08/28/25	144	
2025GCMZC371DV9	K2508065-009	10	2.0	10	08/26/25	08/28/25	183	
2025GCMZC371DV10	K2508065-010	9.9	2.0	10	08/26/25	08/28/25	200	
2025GCMZC10DV1	K2508065-011	10	2.0	10	08/26/25	08/28/25	422	
2025GCMZC10DV2	K2508065-012	9.9	2.0	10	08/26/25	08/28/25	382	
2025GCMZC10DV3	K2508065-013	9.9	2.0	10	08/26/25	08/28/25	403	
2025GCMZC10DV4	K2508065-014	9.9	2.0	10	08/26/25	08/28/25	265	
2025GCMZC10DV5	K2508065-015	9.9	2.0	10	08/26/25	08/28/25	449	
2025GCMZC10DV6	K2508065-016	9.9	2.0	10	08/26/25	08/28/25	360	
2025GCMZC10DV7	K2508065-017	9.9	2.0	10	08/26/25	08/28/25	257	
2025GCMZC10DV8	K2508065-018	9.9	2.0	10	8/26/2025	8/28/2025	352	
2025GCMZC10DV9	K2508065-019	10	2.0	10	8/26/2025	8/28/2025	278	
2025GCMZC10DV10	K2508065-020	10	2.0	10	8/26/2025	8/28/2025	372	
Method Blank 1	K2508065-MB1	1.0	0.20	1	8/26/2025	8/28/2025	ND	
Method Blank 2	K2508065-MB2	1.0	0.20	1	8/26/2025	8/28/2025	ND	
Method Blank 3	K2508065-MB3	1.0	0.20	1	8/26/2025	8/28/2025	ND	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMZC371DV7 Units: ng/g
 Lab Code: K2508065-007MS, K2508065-007DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	9.9	246	247	225	458	456	95	94	70-130	<1	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMZC10DV2 Units: ng/g
 Lab Code: K2508065-012MS, K2508065-012DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	10.0	249	249	382	638	610	103	92	70-130	4	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508065
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Initial) Units: ng/g
 Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	4.96	99	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508065
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Final) Units: ng/g
 Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	5.02	100	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Animal tissue

Service Request: K2508065
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Quality Control Sample (QCS) Summary
 Total Metals

Sample Name: Quality Control Sample
Lab Code:
Test Notes: Tort-3 Solids = 97.4%

Units: ng/g
Basis: Dry

Source: TORT-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	292	242	83	70-130	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV1
Lab Code: K2508065-001

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.902	mg/Kg	0.020	0.004	5	08/27/25 12:40	08/25/25	
Copper	6020B	5.31	mg/Kg	0.098	0.035	5	08/27/25 12:40	08/25/25	
Lead	6020B	0.411	mg/Kg	0.020	0.003	5	08/27/25 12:40	08/25/25	
Selenium	6020B	4.34	mg/Kg	0.98	0.03	5	08/27/25 12:40	08/25/25	
Silver	6020B	0.133	mg/Kg	0.020	0.002	5	08/27/25 12:40	08/25/25	
Zinc	6020B	211	mg/Kg	0.49	0.16	5	08/27/25 12:40	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV2
Lab Code: K2508065-002

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.663	mg/Kg	0.020	0.004	5	08/27/25 12:46	08/25/25	
Copper	6020B	4.55	mg/Kg	0.098	0.035	5	08/27/25 12:46	08/25/25	
Lead	6020B	0.110	mg/Kg	0.020	0.003	5	08/27/25 12:46	08/25/25	
Selenium	6020B	3.80	mg/Kg	0.98	0.03	5	08/27/25 12:46	08/25/25	
Silver	6020B	0.029	mg/Kg	0.020	0.002	5	08/27/25 12:46	08/25/25	
Zinc	6020B	206	mg/Kg	0.49	0.16	5	08/27/25 12:46	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV3
Lab Code: K2508065-003

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.698	mg/Kg	0.020	0.004	5	08/27/25 12:48	08/25/25	
Copper	6020B	5.13	mg/Kg	0.099	0.036	5	08/27/25 12:48	08/25/25	
Lead	6020B	0.094	mg/Kg	0.020	0.003	5	08/27/25 12:48	08/25/25	
Selenium	6020B	4.28	mg/Kg	0.99	0.03	5	08/27/25 12:48	08/25/25	
Silver	6020B	0.042	mg/Kg	0.020	0.002	5	08/27/25 12:48	08/25/25	
Zinc	6020B	210	mg/Kg	0.49	0.16	5	08/27/25 12:48	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV4
Lab Code: K2508065-004

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.456	mg/Kg	0.020	0.004	5	08/27/25 12:50	08/25/25	
Copper	6020B	4.72	mg/Kg	0.099	0.036	5	08/27/25 12:50	08/25/25	
Lead	6020B	0.118	mg/Kg	0.020	0.003	5	08/27/25 12:50	08/25/25	
Selenium	6020B	3.62	mg/Kg	0.99	0.03	5	08/27/25 12:50	08/25/25	
Silver	6020B	0.050	mg/Kg	0.020	0.002	5	08/27/25 12:50	08/25/25	
Zinc	6020B	218	mg/Kg	0.49	0.16	5	08/27/25 12:50	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV5
Lab Code: K2508065-005

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.657	mg/Kg	0.020	0.004	5	08/27/25 12:52	08/25/25	
Copper	6020B	5.25	mg/Kg	0.099	0.036	5	08/27/25 12:52	08/25/25	
Lead	6020B	0.128	mg/Kg	0.020	0.003	5	08/27/25 12:52	08/25/25	
Selenium	6020B	3.86	mg/Kg	0.99	0.03	5	08/27/25 12:52	08/25/25	
Silver	6020B	0.032	mg/Kg	0.020	0.002	5	08/27/25 12:52	08/25/25	
Zinc	6020B	236	mg/Kg	0.49	0.16	5	08/27/25 12:52	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV6
Lab Code: K2508065-006

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.641	mg/Kg	0.020	0.004	5	08/27/25 12:54	08/25/25	
Copper	6020B	4.96	mg/Kg	0.099	0.036	5	08/27/25 12:54	08/25/25	
Lead	6020B	0.224	mg/Kg	0.020	0.003	5	08/27/25 12:54	08/25/25	
Selenium	6020B	3.46	mg/Kg	0.99	0.03	5	08/27/25 12:54	08/25/25	
Silver	6020B	0.068	mg/Kg	0.020	0.002	5	08/27/25 12:54	08/25/25	
Zinc	6020B	247	mg/Kg	0.50	0.16	5	08/27/25 12:54	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV7
Lab Code: K2508065-007

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.962	mg/Kg	0.020	0.004	5	08/27/25 12:56	08/25/25	
Copper	6020B	7.84	mg/Kg	0.099	0.036	5	08/27/25 12:56	08/25/25	
Lead	6020B	1.26	mg/Kg	0.020	0.003	5	08/27/25 12:56	08/25/25	
Selenium	6020B	3.80	mg/Kg	0.99	0.03	5	08/27/25 12:56	08/25/25	
Silver	6020B	0.119	mg/Kg	0.020	0.002	5	08/27/25 12:56	08/25/25	
Zinc	6020B	236	mg/Kg	0.49	0.16	5	08/27/25 12:56	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV8
Lab Code: K2508065-008

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.658	mg/Kg	0.020	0.004	5	08/27/25 12:58	08/25/25	
Copper	6020B	5.25	mg/Kg	0.099	0.036	5	08/27/25 12:58	08/25/25	
Lead	6020B	0.179	mg/Kg	0.020	0.003	5	08/27/25 12:58	08/25/25	
Selenium	6020B	3.97	mg/Kg	0.99	0.03	5	08/27/25 12:58	08/25/25	
Silver	6020B	0.040	mg/Kg	0.020	0.002	5	08/27/25 12:58	08/25/25	
Zinc	6020B	192	mg/Kg	0.50	0.16	5	08/27/25 12:58	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV9
Lab Code: K2508065-009

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.588	mg/Kg	0.020	0.004	5	08/27/25 13:01	08/25/25	
Copper	6020B	4.27	mg/Kg	0.098	0.035	5	08/27/25 13:01	08/25/25	
Lead	6020B	0.139	mg/Kg	0.020	0.003	5	08/27/25 13:01	08/25/25	
Selenium	6020B	3.56	mg/Kg	0.98	0.03	5	08/27/25 13:01	08/25/25	
Silver	6020B	0.045	mg/Kg	0.020	0.002	5	08/27/25 13:01	08/25/25	
Zinc	6020B	232	mg/Kg	0.49	0.16	5	08/27/25 13:01	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC371DV10
Lab Code: K2508065-010

Service Request: K2508065
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.586	mg/Kg	0.019	0.004	5	08/27/25 13:03	08/25/25	
Copper	6020B	4.75	mg/Kg	0.097	0.035	5	08/27/25 13:03	08/25/25	
Lead	6020B	0.200	mg/Kg	0.019	0.003	5	08/27/25 13:03	08/25/25	
Selenium	6020B	3.49	mg/Kg	0.97	0.03	5	08/27/25 13:03	08/25/25	
Silver	6020B	0.061	mg/Kg	0.019	0.002	5	08/27/25 13:03	08/25/25	
Zinc	6020B	206	mg/Kg	0.49	0.16	5	08/27/25 13:03	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV1
Lab Code: K2508065-011

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	4.75	mg/Kg	0.020	0.004	5	08/27/25 13:05	08/25/25	
Copper	6020B	5.89	mg/Kg	0.099	0.036	5	08/27/25 13:05	08/25/25	
Lead	6020B	1.59	mg/Kg	0.020	0.003	5	08/27/25 13:05	08/25/25	
Selenium	6020B	9.64	mg/Kg	0.99	0.03	5	08/27/25 13:05	08/25/25	
Silver	6020B	0.343	mg/Kg	0.020	0.002	5	08/27/25 13:05	08/25/25	
Zinc	6020B	190	mg/Kg	0.50	0.16	5	08/27/25 13:05	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV2
Lab Code: K2508065-012

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	3.96	mg/Kg	0.020	0.004	5	08/27/25 12:30	08/25/25	
Copper	6020B	6.63	mg/Kg	0.098	0.035	5	08/27/25 12:30	08/25/25	
Lead	6020B	3.00	mg/Kg	0.020	0.003	5	08/27/25 12:30	08/25/25	
Selenium	6020B	9.76	mg/Kg	0.98	0.03	5	08/27/25 12:30	08/25/25	
Silver	6020B	0.413	mg/Kg	0.020	0.002	5	08/27/25 12:30	08/25/25	
Zinc	6020B	195	mg/Kg	0.49	0.16	5	08/27/25 12:30	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV3
Lab Code: K2508065-013

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	16.1	mg/Kg	0.020	0.004	5	08/27/25 13:11	08/25/25	
Copper	6020B	8.64	mg/Kg	0.099	0.036	5	08/27/25 13:11	08/25/25	
Lead	6020B	2.77	mg/Kg	0.020	0.003	5	08/27/25 13:11	08/25/25	
Selenium	6020B	15.7	mg/Kg	0.99	0.03	5	08/27/25 13:11	08/25/25	
Silver	6020B	1.21	mg/Kg	0.020	0.002	5	08/27/25 13:11	08/25/25	
Zinc	6020B	262	mg/Kg	0.50	0.16	5	08/27/25 13:11	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV4
Lab Code: K2508065-014

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	6.78	mg/Kg	0.019	0.004	5	08/27/25 13:13	08/25/25	
Copper	6020B	8.75	mg/Kg	0.097	0.035	5	08/27/25 13:13	08/25/25	
Lead	6020B	2.42	mg/Kg	0.019	0.003	5	08/27/25 13:13	08/25/25	
Selenium	6020B	9.54	mg/Kg	0.97	0.03	5	08/27/25 13:13	08/25/25	
Silver	6020B	0.528	mg/Kg	0.019	0.002	5	08/27/25 13:13	08/25/25	
Zinc	6020B	215	mg/Kg	0.49	0.16	5	08/27/25 13:13	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV5
Lab Code: K2508065-015

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.97	mg/Kg	0.020	0.004	5	08/27/25 13:15	08/25/25	
Copper	6020B	5.12	mg/Kg	0.098	0.035	5	08/27/25 13:15	08/25/25	
Lead	6020B	1.33	mg/Kg	0.020	0.003	5	08/27/25 13:15	08/25/25	
Selenium	6020B	9.19	mg/Kg	0.98	0.03	5	08/27/25 13:15	08/25/25	
Silver	6020B	0.452	mg/Kg	0.020	0.002	5	08/27/25 13:15	08/25/25	
Zinc	6020B	163	mg/Kg	0.49	0.16	5	08/27/25 13:15	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV6
Lab Code: K2508065-016

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	15.6	mg/Kg	0.020	0.004	5	08/27/25 13:17	08/25/25	
Copper	6020B	8.62	mg/Kg	0.099	0.036	5	08/27/25 13:17	08/25/25	
Lead	6020B	3.96	mg/Kg	0.020	0.003	5	08/27/25 13:17	08/25/25	
Selenium	6020B	17.5	mg/Kg	0.99	0.03	5	08/27/25 13:17	08/25/25	
Silver	6020B	1.47	mg/Kg	0.020	0.002	5	08/27/25 13:17	08/25/25	
Zinc	6020B	243	mg/Kg	0.49	0.16	5	08/27/25 13:17	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV7
Lab Code: K2508065-017

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	7.80	mg/Kg	0.020	0.004	5	08/27/25 13:19	08/25/25	
Copper	6020B	4.79	mg/Kg	0.10	0.04	5	08/27/25 13:19	08/25/25	
Lead	6020B	1.34	mg/Kg	0.020	0.003	5	08/27/25 13:19	08/25/25	
Selenium	6020B	10.3	mg/Kg	1.0	0.03	5	08/27/25 13:19	08/25/25	
Silver	6020B	0.848	mg/Kg	0.020	0.002	5	08/27/25 13:19	08/25/25	
Zinc	6020B	177	mg/Kg	0.50	0.16	5	08/27/25 13:19	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV8
Lab Code: K2508065-018

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	11.9	mg/Kg	0.020	0.004	5	08/27/25 13:21	08/25/25	
Copper	6020B	8.83	mg/Kg	0.10	0.04	5	08/27/25 13:21	08/25/25	
Lead	6020B	3.60	mg/Kg	0.020	0.003	5	08/27/25 13:21	08/25/25	
Selenium	6020B	15.1	mg/Kg	1.0	0.03	5	08/27/25 13:21	08/25/25	
Silver	6020B	1.16	mg/Kg	0.020	0.002	5	08/27/25 13:21	08/25/25	
Zinc	6020B	251	mg/Kg	0.50	0.16	5	08/27/25 13:21	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV9
Lab Code: K2508065-019

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	7.60	mg/Kg	0.020	0.004	5	08/27/25 13:23	08/25/25	
Copper	6020B	6.70	mg/Kg	0.099	0.036	5	08/27/25 13:23	08/25/25	
Lead	6020B	2.01	mg/Kg	0.020	0.003	5	08/27/25 13:23	08/25/25	
Selenium	6020B	12.6	mg/Kg	0.99	0.03	5	08/27/25 13:23	08/25/25	
Silver	6020B	0.838	mg/Kg	0.020	0.002	5	08/27/25 13:23	08/25/25	
Zinc	6020B	212	mg/Kg	0.50	0.16	5	08/27/25 13:23	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMZC10DV10
Lab Code: K2508065-020

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	9.19	mg/Kg	0.020	0.004	5	08/27/25 13:25	08/25/25	
Copper	6020B	7.72	mg/Kg	0.098	0.035	5	08/27/25 13:25	08/25/25	
Lead	6020B	3.03	mg/Kg	0.020	0.003	5	08/27/25 13:25	08/25/25	
Selenium	6020B	11.8	mg/Kg	0.98	0.03	5	08/27/25 13:25	08/25/25	
Silver	6020B	1.61	mg/Kg	0.020	0.002	5	08/27/25 13:25	08/25/25	
Zinc	6020B	281	mg/Kg	0.49	0.16	5	08/27/25 13:25	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: Method Blank
Lab Code: KQ2515046-01

Service Request: K2508065
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	ND U	mg/Kg	0.020	0.004	5	08/27/25 12:21	08/25/25	
Copper	6020B	ND U	mg/Kg	0.10	0.04	5	08/27/25 12:21	08/25/25	
Lead	6020B	0.006 J	mg/Kg	0.020	0.003	5	08/27/25 12:21	08/25/25	
Selenium	6020B	ND U	mg/Kg	1.0	0.03	5	08/27/25 12:21	08/25/25	
Silver	6020B	ND U	mg/Kg	0.020	0.002	5	08/27/25 12:21	08/25/25	
Zinc	6020B	ND U	mg/Kg	0.50	0.16	5	08/27/25 12:21	08/25/25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25
Date Analyzed: 08/27/25

Replicate Sample Summary
Total Metals

Sample Name: 2025GCMZC10DV2
Lab Code: K2508065-012

Units: mg/Kg
Basis: Dry

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2515046-05 Result, Average, RPD, RPD Limit. Rows include Cadmium, Copper, Lead, Selenium, Silver, and Zinc.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508065
Date Collected: 07/09/25
Date Received: 08/13/25
Date Analyzed: 08/27/25
Date Extracted: 08/25/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC10DV2
Lab Code: K2508065-012
Analysis Method: 6020B
Prep Method: PSEP Metals

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2515046-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	3.96	9.13	4.87	106	75-125
Copper	6.63	32.8	24.4	107	75-125
Lead	3.00	47.8	48.7	92	75-125
Selenium	9.76	27.3	16.2	108	75-125
Silver	0.413	5.29	4.87	100	75-125
Zinc	195	256	48.7	126 N	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508065
Date Analyzed: 08/27/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2515046-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	6020B	4.88	5.00	98	80-120
Copper	6020B	24.3	25.0	97	80-120
Lead	6020B	46.0	50.0	92	80-120
Selenium	6020B	16.7	16.7	100	80-120
Silver	6020B	4.92	5.00	98	80-120
Zinc	6020B	48.2	50.0	96	80-120

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508065
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515046-03
Test Notes: Dorm-5 Solids = 95.8%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Dorm-5

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	0.148	0.157	106	0.113 - 0.186	
Copper	PSEP Tissue	6020B	3.30	3.27	99	2.58 - 4.04	
Lead	PSEP Tissue	6020B	0.058	0.062	107	0.042 - 0.077	
Selenium	PSEP Tissue	6020B	2.40	2.48	103	1.83 - 3.01	
Silver	PSEP Tissue	6020B	0.135	0.139	103	0.097 - 0.179	
Zinc	PSEP Tissue	6020B	28.7	27.9	97	22.2 - 35.6	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508065
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515046-04
Test Notes: Tort-3 Solids = 97.4%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Tort-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	42.3	40.9	97	32.4-52.9	
Copper	PSEP Tissue	6020B	497	474	95	380-623	
Lead	PSEP Tissue	6020B	0.225	0.197	88	0.166-0.292	
Selenium	PSEP Tissue	6020B	10.9	10.9	100	7.9-14.3	
Zinc	PSEP Tissue	6020B	136	130	96	104-170	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508065

Metals

Prep Method: PSEP Metals
Analytical Method: 6020B

Extraction Lot: 462960
Extraction Date: 08/25/25 15:56

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
2025GCMZC371DV1	K2508065-001	7/10/25	8/13/25	0.30600 g	30 mL	
2025GCMZC371DV2	K2508065-002	7/10/25	8/13/25	0.30600 g	30 mL	
2025GCMZC371DV3	K2508065-003	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMZC371DV4	K2508065-004	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMZC371DV5	K2508065-005	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMZC371DV6	K2508065-006	7/10/25	8/13/25	0.30200 g	30 mL	
2025GCMZC371DV7	K2508065-007	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMZC371DV8	K2508065-008	7/10/25	8/13/25	0.30200 g	30 mL	
2025GCMZC371DV9	K2508065-009	7/10/25	8/13/25	0.30500 g	30 mL	
2025GCMZC371DV10	K2508065-010	7/10/25	8/13/25	0.30800 g	30 mL	
2025GCMZC10DV1	K2508065-011	7/9/25	8/13/25	0.30300 g	30 mL	
2025GCMZC10DV2	K2508065-012	7/9/25	8/13/25	0.30700 g	30 mL	
2025GCMZC10DV3	K2508065-013	7/9/25	8/13/25	0.30300 g	30 mL	
2025GCMZC10DV4	K2508065-014	7/9/25	8/13/25	0.30800 g	30 mL	
2025GCMZC10DV5	K2508065-015	7/9/25	8/13/25	0.30700 g	30 mL	
2025GCMZC10DV6	K2508065-016	7/9/25	8/13/25	0.30400 g	30 mL	
2025GCMZC10DV7	K2508065-017	7/9/25	8/13/25	0.30100 g	30 mL	
2025GCMZC10DV8	K2508065-018	7/9/25	8/13/25	0.30100 g	30 mL	
2025GCMZC10DV9	K2508065-019	7/9/25	8/13/25	0.30300 g	30 mL	
2025GCMZC10DV10	K2508065-020	7/9/25	8/13/25	0.30500 g	30 mL	
Method Blank	KQ2515046-01MB	NA	NA	0.30000 g	30 mL	
Lab Control Sample	KQ2515046-02LCS	NA	NA	0.30000 g	30 mL	
Standard Reference Material	KQ2515046-03SRM	7/10/25	8/13/25	0.30700 g	30 mL	
Standard Reference Material	KQ2515046-04SRM	7/10/25	8/13/25	0.30200 g	30 mL	
Duplicate	KQ2515046-05DUP	7/9/25	8/13/25	0.30600 g	30 mL	
Matrix Spike	KQ2515046-06MS	7/9/25	8/13/25	0.30800 g	30 mL	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 08/27/25 10:35	Cadmium	6020B	891163	12.7	12.5	102	90-110
	Copper	6020B	891163	12.4	12.5	99	90-110
	Lead	6020B	891163	24.7	25.0	99	90-110
	Selenium	6020B	891163	25.4	25.0	102	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110
CCV 08/27/25 10:37	Cadmium	6020B	891163	25.4	25.0	101	90-110
	Copper	6020B	891163	26.2	25.0	105	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	25.1	25.0	100	90-110
	Silver	6020B	891163	12.7	12.5	101	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110
CCV 08/27/25 11:27	Cadmium	6020B	891163	25.1	25.0	100	90-110
	Copper	6020B	891163	25.5	25.0	102	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	24.9	25.0	100	90-110
	Silver	6020B	891163	12.6	12.5	101	90-110
	Zinc	6020B	891163	25.9	25.0	104	90-110
CCV 08/27/25 11:57	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	24.3	25.0	97	90-110
	Selenium	6020B	891163	25.3	25.0	101	90-110
	Silver	6020B	891163	12.8	12.5	102	90-110
	Zinc	6020B	891163	27.0	25.0	108	90-110
CCV 08/27/25 12:17	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	25.6	25.0	102	90-110
	Lead	6020B	891163	24.0	25.0	96	90-110
	Selenium	6020B	891163	26.0	25.0	104	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110
CCV 08/27/25 12:42	Cadmium	6020B	891163	25.4	25.0	102	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 08/27/25 12:42	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	23.1	25.0	92	90-110
	Selenium	6020B	891163	25.7	25.0	103	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	26.1	25.0	105	90-110
CCV 08/27/25 13:07	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	23.0	25.0	92	90-110
	Selenium	6020B	891163	25.4	25.0	102	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110
CCV 08/27/25 13:27	Cadmium	6020B	891163	25.2	25.0	101	90-110
	Copper	6020B	891163	26.1	25.0	104	90-110
	Lead	6020B	891163	22.5	25.0	90	90-110
	Selenium	6020B	891163	25.9	25.0	103	90-110
	Silver	6020B	891163	12.8	12.5	103	90-110
	Zinc	6020B	891163	26.4	25.0	106	90-110

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
ICB 08/27/25 10:39	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.007	J
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 10:41	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:29	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:59	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.008	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 12:19	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.012	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 12:44	Cadmium	6020B	891163	0.008	U

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 08/27/25 12:44	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.013	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 13:09	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.011	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 13:29	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.007	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.005	J
	Zinc	6020B	891163	0.3	U

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICVT								
	Cadmium	6020B	891163	0.037	0.04	92	80-120	08/27/25 10:50
	Copper	6020B	891163	0.23	0.2	114	80-120	08/27/25 10:50
	Lead	6020B	891163	0.038	0.04	95	80-120	08/27/25 10:50
	Selenium	6020B	891163	2.1	2.0	103	80-120	08/27/25 10:50
	Silver	6020B	891163	0.041	0.04	102	80-120	08/27/25 10:50
	Zinc	6020B	891163	1.0	1.0	104	80-120	08/27/25 10:50

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	0.415	-	-	-	08/27/25 10:52
Copper	6020B	891163	0.55	-	-	-	08/27/25 10:52
Lead	6020B	891163	0.243	-	-	-	08/27/25 10:52
Selenium	6020B	891163	0.03	-	-	-	08/27/25 10:52
Silver	6020B	891163	0.011	-	-	-	08/27/25 10:52
Zinc	6020B	891163	0.7	-	-	-	08/27/25 10:52

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	25.3	25.0	101	80-120	08/27/25 10:54
Copper	6020B	891163	49.0	50.0	98	80-120	08/27/25 10:54
Lead	6020B	891163	0.231	-	-	-	08/27/25 10:54
Selenium	6020B	891163	25.6	25.0	102	80-120	08/27/25 10:54
Silver	6020B	891163	12.4	12.5	100	80-120	08/27/25 10:54
Zinc	6020B	891163	25.0	25.0	100	80-120	08/27/25 10:54

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K2508065-012A	Cadmium	6020B	891163	8.10	59.6	50.0	103	75-125	08/27/25 12:36
	Copper	6020B	891163	13.6	66.6	50.0	106	75-125	08/27/25 12:36
	Lead	6020B	891163	6.14	52.9	50.0	94	75-125	08/27/25 12:36
	Selenium	6020B	891163	20	72	50	104	75-125	08/27/25 12:36
	Silver	6020B	891163	0.84	6.15	5.00	106	75-125	08/27/25 12:36
	Zinc	6020B	891163	398	448	50.0	100 #	75-125	08/27/25 12:36

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508065

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K2508065-012SDL								
	Cadmium	6020B	891163	40.5	40.6	0	10	08/27/25 12:34
	Copper	6020B	891163	67.8	67.8	0	10	08/27/25 12:34
	Lead	6020B	891163	30.7	31.2	2	10	08/27/25 12:34
	Selenium	6020B	891163	100	96	4	10	08/27/25 12:34
	Silver	6020B	891163	4.2	4.5	7	10	08/27/25 12:34
	Zinc	6020B	891163	1990	2000	1	10	08/27/25 12:34

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

Detection Limits

Instrument: K-ICP-MS-06

Matrix: Animal Tissue

Analyte	Mass	Units	MRL	MDL	Method
Cadmium	111	ug/L	0.04	0.0076	6020B
Copper	65	ug/L	0.2	0.072	6020B
Lead	208	ug/L	0.04	0.006	6020B
Selenium	78	ug/L	2	0.052	6020B
Silver	107	ug/L	0.04	0.0044	6020B
Zinc	66	ug/L	1	0.32	6020B

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

ICP Linear Range (Quarterly)

Instrument: K-ICP-MS-06

Analyte	Concentration (ug/L)	Method
Cadmium 111	9000	6020B
Copper 65	4500	6020B
Lead 208	4500	6020B
Selenium 78	9000	6020B
Silver 107	450	6020B
Zinc 66	9000	6020B

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	1	08/27/25 10:30						
ZZZZZZ	1	08/27/25 10:32						
ICV	1	08/27/25 10:35	X	X	X	X	X	X
CCV	1	08/27/25 10:37	X	X	X	X	X	X
ICB	1	08/27/25 10:39	X	X	X	X	X	X
CCB	1	08/27/25 10:41	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:43						
LLICVT	1	08/27/25 10:50	X	X	X	X	X	X
ICSA	1	08/27/25 10:52	X	X	X	X	X	X
ICSAB	1	08/27/25 10:54	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:56						
ZZZZZZ	1	08/27/25 10:58						
ZZZZZZ	5	08/27/25 11:06						
ZZZZZZ	5	08/27/25 11:08						
ZZZZZZ	5	08/27/25 11:10						
ZZZZZZ	5	08/27/25 11:13						
ZZZZZZ	5	08/27/25 11:15						
ZZZZZZ	5	08/27/25 11:17						
ZZZZZZ	25	08/27/25 11:19						
ZZZZZZ	5	08/27/25 11:21						
ZZZZZZ	5	08/27/25 11:23						
ZZZZZZ	5	08/27/25 11:25						
CCV	1	08/27/25 11:27	X	X	X	X	X	X
CCB	1	08/27/25 11:29	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 11:31						
ZZZZZZ	5	08/27/25 11:33						
ZZZZZZ	5	08/27/25 11:35						
ZZZZZZ	5	08/27/25 11:37						
ZZZZZZ	5	08/27/25 11:39						
ZZZZZZ	5	08/27/25 11:41						
ZZZZZZ	5	08/27/25 11:43						
ZZZZZZ	5	08/27/25 11:46						
ZZZZZZ	5	08/27/25 11:48						
ZZZZZZ	5	08/27/25 11:50						
ZZZZZZ	1	08/27/25 11:52						
CCV	1	08/27/25 11:57	X	X	X	X	X	X
CCB	1	08/27/25 11:59	X	X	X	X	X	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	5	08/27/25 12:01						
ZZZZZZ	5	08/27/25 12:03						
ZZZZZZ	5	08/27/25 12:05						
ZZZZZZ	5	08/27/25 12:07						
ZZZZZZ	5	08/27/25 12:09						
ZZZZZZ	5	08/27/25 12:11						
ZZZZZZ	5	08/27/25 12:13						
ZZZZZZ	5	08/27/25 12:15						
CCV	1	08/27/25 12:17	X	X	X	X	X	X
CCB	1	08/27/25 12:19	X	X	X	X	X	X
KQ2515046-01MB	5	08/27/25 12:21	X	X	X	X	X	X
KQ2515046-02LCS	5	08/27/25 12:24	X	X	X	X	X	X
KQ2515046-03SRM	5	08/27/25 12:26	X	X	X	X	X	X
KQ2515046-04SRM	5	08/27/25 12:28	X	X	X	X	X	X
K2508065-012	5	08/27/25 12:30	X	X	X	X	X	X
K2508065-012DUP	5	08/27/25 12:32	X	X	X	X	X	X
K2508065-012SDL	25	08/27/25 12:34	X	X	X	X	X	X
K2508065-012PS	5	08/27/25 12:36	X	X	X	X	X	X
K2508065-012MS	5	08/27/25 12:38	X	X	X	X	X	X
K2508065-001	5	08/27/25 12:40	X	X	X	X	X	X
CCV	1	08/27/25 12:42	X	X	X	X	X	X
CCB	1	08/27/25 12:44	X	X	X	X	X	X
K2508065-002	5	08/27/25 12:46	X	X	X	X	X	X
K2508065-003	5	08/27/25 12:48	X	X	X	X	X	X
K2508065-004	5	08/27/25 12:50	X	X	X	X	X	X
K2508065-005	5	08/27/25 12:52	X	X	X	X	X	X
K2508065-006	5	08/27/25 12:54	X	X	X	X	X	X
K2508065-007	5	08/27/25 12:56	X	X	X	X	X	X
K2508065-008	5	08/27/25 12:58	X	X	X	X	X	X
K2508065-009	5	08/27/25 13:01	X	X	X	X	X	X
K2508065-010	5	08/27/25 13:03	X	X	X	X	X	X
K2508065-011	5	08/27/25 13:05	X	X	X	X	X	X
CCV	1	08/27/25 13:07	X	X	X	X	X	X
CCB	1	08/27/25 13:09	X	X	X	X	X	X
K2508065-013	5	08/27/25 13:11	X	X	X	X	X	X
K2508065-014	5	08/27/25 13:13	X	X	X	X	X	X
K2508065-015	5	08/27/25 13:15	X	X	X	X	X	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
K2508065-016	5	08/27/25 13:17	X	X	X	X	X	X
K2508065-017	5	08/27/25 13:19	X	X	X	X	X	X
K2508065-018	5	08/27/25 13:21	X	X	X	X	X	X
K2508065-019	5	08/27/25 13:23	X	X	X	X	X	X
K2508065-020	5	08/27/25 13:25	X	X	X	X	X	X
CCV	1	08/27/25 13:27	X	X	X	X	X	X
CCB	1	08/27/25 13:29	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 13:32						
ZZZZZZ	5	08/27/25 13:34						
ZZZZZZ	5	08/27/25 13:36						
ZZZZZZ	5	08/27/25 13:38						
ZZZZZZ	5	08/27/25 13:40						
ZZZZZZ	5	08/27/25 13:42						
ZZZZZZ	25	08/27/25 13:44						
ZZZZZZ	5	08/27/25 13:46						
ZZZZZZ	5	08/27/25 13:48						
ZZZZZZ	5	08/27/25 13:50						
ZZZZZZ	1	08/27/25 13:52						
ZZZZZZ	1	08/27/25 13:54						
ZZZZZZ	5	08/27/25 13:56						
ZZZZZZ	5	08/27/25 13:58						
ZZZZZZ	5	08/27/25 14:00						
ZZZZZZ	5	08/27/25 14:02						
ZZZZZZ	5	08/27/25 14:05						
ZZZZZZ	5	08/27/25 14:07						
ZZZZZZ	5	08/27/25 14:09						
ZZZZZZ	5	08/27/25 14:11						
ZZZZZZ	5	08/27/25 14:13						
ZZZZZZ	5	08/27/25 14:15						
ZZZZZZ	1	08/27/25 14:17						
ZZZZZZ	1	08/27/25 14:19						
ZZZZZZ	5	08/27/25 14:21						
ZZZZZZ	5	08/27/25 14:23						
ZZZZZZ	5	08/27/25 14:25						
ZZZZZZ	5	08/27/25 14:27						
ZZZZZZ	5	08/27/25 14:29						
ZZZZZZ	5	08/27/25 14:31						

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 10:30				
ZZZZZZ	08/27/25 10:32				
ICV	08/27/25 10:35	97	96	97	100
CCV	08/27/25 10:37	95	95	97	99
ICB	08/27/25 10:39	97	97	99	100
CCB	08/27/25 10:41	98	98	100	101
ZZZZZZ	08/27/25 10:43				
LLICVT	08/27/25 10:50	95	100	101	102
ICSA	08/27/25 10:52	89	90	91	94
ICSAB	08/27/25 10:54	88	90	92	97
ZZZZZZ	08/27/25 10:56				
ZZZZZZ	08/27/25 10:58				
ZZZZZZ	08/27/25 11:06				
ZZZZZZ	08/27/25 11:08				
ZZZZZZ	08/27/25 11:10				
ZZZZZZ	08/27/25 11:13				
ZZZZZZ	08/27/25 11:15				
ZZZZZZ	08/27/25 11:17				
ZZZZZZ	08/27/25 11:19				
ZZZZZZ	08/27/25 11:21				
ZZZZZZ	08/27/25 11:23				
ZZZZZZ	08/27/25 11:25				
CCV	08/27/25 11:27	93	94	96	98
CCB	08/27/25 11:29	94	95	98	98
ZZZZZZ	08/27/25 11:31				
ZZZZZZ	08/27/25 11:33				
ZZZZZZ	08/27/25 11:35				
ZZZZZZ	08/27/25 11:37				
ZZZZZZ	08/27/25 11:39				
ZZZZZZ	08/27/25 11:41				
ZZZZZZ	08/27/25 11:43				
ZZZZZZ	08/27/25 11:46				
ZZZZZZ	08/27/25 11:48				
ZZZZZZ	08/27/25 11:50				
ZZZZZZ	08/27/25 11:52				
CCV	08/27/25 11:57	92	90	94	97
CCB	08/27/25 11:59	93	92	95	98

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 12:01				
ZZZZZZ	08/27/25 12:03				
ZZZZZZ	08/27/25 12:05				
ZZZZZZ	08/27/25 12:07				
ZZZZZZ	08/27/25 12:09				
ZZZZZZ	08/27/25 12:11				
ZZZZZZ	08/27/25 12:13				
ZZZZZZ	08/27/25 12:15				
CCV	08/27/25 12:17	90	89	91	95
CCB	08/27/25 12:19	91	87	92	95
KQ2515046-01MB	08/27/25 12:21	91	90	93	97
KQ2515046-02LCS	08/27/25 12:24	92	89	92	94
KQ2515046-03SRM	08/27/25 12:26	93	90	94	98
KQ2515046-04SRM	08/27/25 12:28	89	90	91	93
K2508065-012	08/27/25 12:30	90	89	93	98
K2508065-012DUP	08/27/25 12:32	91	89	92	95
K2508065-012SDL	08/27/25 12:34	91	87	91	95
K2508065-012PS	08/27/25 12:36	93	88	91	95
K2508065-012MS	08/27/25 12:38	90	88	92	95
K2508065-001	08/27/25 12:40	90	89	92	97
CCV	08/27/25 12:42	92	88	91	95
CCB	08/27/25 12:44	91	88	92	95
K2508065-002	08/27/25 12:46	90	89	92	95
K2508065-003	08/27/25 12:48	91	89	92	97
K2508065-004	08/27/25 12:50	91	88	91	95
K2508065-005	08/27/25 12:52	91	89	91	97
K2508065-006	08/27/25 12:54	89	88	91	95
K2508065-007	08/27/25 12:56	90	88	91	96
K2508065-008	08/27/25 12:58	90	89	92	96
K2508065-009	08/27/25 13:01	90	88	93	97
K2508065-010	08/27/25 13:03	90	90	92	96
K2508065-011	08/27/25 13:05	90	87	91	96
CCV	08/27/25 13:07	90	87	90	93
CCB	08/27/25 13:09	90	88	91	95
K2508065-013	08/27/25 13:11	90	88	92	97
K2508065-014	08/27/25 13:13	92	90	92	95
K2508065-015	08/27/25 13:15	89	88	92	95

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508065

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
K2508065-016	08/27/25 13:17	86	89	92	94
K2508065-017	08/27/25 13:19	92	89	93	97
K2508065-018	08/27/25 13:21	90	88	92	96
K2508065-019	08/27/25 13:23	92	90	93	97
K2508065-020	08/27/25 13:25	93	90	93	95
CCV	08/27/25 13:27	91	89	93	95
CCB	08/27/25 13:29	93	91	93	96
ZZZZZZ	08/27/25 13:32				
ZZZZZZ	08/27/25 13:34				
ZZZZZZ	08/27/25 13:36				
ZZZZZZ	08/27/25 13:38				
ZZZZZZ	08/27/25 13:40				
ZZZZZZ	08/27/25 13:42				
ZZZZZZ	08/27/25 13:44				
ZZZZZZ	08/27/25 13:46				
ZZZZZZ	08/27/25 13:48				
ZZZZZZ	08/27/25 13:50				
ZZZZZZ	08/27/25 13:52				
ZZZZZZ	08/27/25 13:54				
ZZZZZZ	08/27/25 13:56				
ZZZZZZ	08/27/25 13:58				
ZZZZZZ	08/27/25 14:00				
ZZZZZZ	08/27/25 14:02				
ZZZZZZ	08/27/25 14:05				
ZZZZZZ	08/27/25 14:07				
ZZZZZZ	08/27/25 14:09				
ZZZZZZ	08/27/25 14:11				
ZZZZZZ	08/27/25 14:13				
ZZZZZZ	08/27/25 14:15				
ZZZZZZ	08/27/25 14:17				
ZZZZZZ	08/27/25 14:19				
ZZZZZZ	08/27/25 14:21				
ZZZZZZ	08/27/25 14:23				
ZZZZZZ	08/27/25 14:25				
ZZZZZZ	08/27/25 14:27				
ZZZZZZ	08/27/25 14:29				
ZZZZZZ	08/27/25 14:31				



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K2508065
Test: Frz Dry
Method: Frz Dry

Run #: 890206
Balance ID: K-Balance-53

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Animal Tissue	K2508065-001	85.360	7.529	86.979	1.62	21.5	
Animal Tissue	K2508065-002	84.121	6.415	85.625	1.50	23.4	
Animal Tissue	K2508065-003	84.941	10.527	87.295	2.35	22.4	
Animal Tissue	K2508065-004	84.828	12.487	87.708	2.88	23.1	
Animal Tissue	K2508065-005	84.863	7.576	86.583	1.72	22.7	
Animal Tissue	K2508065-006	85.177	15.046	88.439	3.26	21.7	
Animal Tissue	K2508065-007	85.128	15.885	88.866	3.74	23.5	
Animal Tissue	K2508065-008	84.666	7.890	86.452	1.79	22.6	
Animal Tissue	K2508065-009	84.183	8.658	86.172	1.99	23.0	
Animal Tissue	K2508065-010	84.702	12.600	87.616	2.91	23.1	
Animal Tissue	K2508065-011	85.054	7.686	86.888	1.83	23.9	
Animal Tissue	K2508065-012	84.397	16.461	88.449	4.05	24.6	
Animal Tissue	K2508065-013	84.411	4.527	85.548	1.14	25.1	
Animal Tissue	K2508065-014	84.615	6.511	86.077	1.46	22.5	
Animal Tissue	K2508065-015	84.671	16.618	88.611	3.94	23.7	
Animal Tissue	K2508065-016	84.788	5.448	86.108	1.32	24.2	
Animal Tissue	K2508065-017	84.769	4.893	85.886	1.12	22.8	
Animal Tissue	K2508065-018	85.148	8.384	87.242	2.09	25.0	
Animal Tissue	K2508065-019	84.333	6.701	85.976	1.64	24.5	
Animal Tissue	K2508065-020	84.467	5.827	85.912	1.45	24.8	

FreezeDryer ID	Date In	Time In	Date Out	Time Out	Thermometer ID
FreezeDry	8/20/2025	16:34	8/21/2025	16:19	

Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
-----------------	------------------------	----------------------	-------------------	-------------------	-----------------	-----------------

Comments: CCL 8/19/25, Reviewed 8/26/25 KL



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 462960
 Team: Metals/CLUKKEN
 Number of Copies to make: 1

Prep Workflow: MetDigTissMS
 Prep Method: PSEP Metals

Status: Prepped
 Prep Date/Time: 8/25/25 15:56

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ2515046-01	MB		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
2	KQ2515046-02	LCS		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
3	KQ2515046-03	SRM		6020B/Metals T		Tissue	0.30700g	30.00mL	15% HNO3
4	KQ2515046-04	SRM		6020B/Metals T		Tissue	0.30200g	30.00mL	15% HNO3
5	K2508065-001	2025GCMZC371DV1	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
6	K2508065-002	2025GCMZC371DV2	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
7	K2508065-003	2025GCMZC371DV3	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
8	K2508065-004	2025GCMZC371DV4	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
9	K2508065-005	2025GCMZC371DV5	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
10	K2508065-006	2025GCMZC371DV6	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
11	K2508065-007	2025GCMZC371DV7	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
12	K2508065-008	2025GCMZC371DV8	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
13	K2508065-009	2025GCMZC371DV9	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3
14	K2508065-010	2025GCMZC371DV10	.02	6020B/Metals T		Animal Tissue	0.30800g	30.00mL	15% HNO3
15	K2508065-011	2025GCMZC10DV1	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
16	K2508065-012	2025GCMZC10DV2	.02	6020B/Metals T		Animal Tissue	0.30700g	30.00mL	15% HNO3
17	KQ2515046-05	K2508065-012 DUP	.02	6020B/Metals T		Tissue	0.30600g	30.00mL	15% HNO3
18	KQ2515046-06	K2508065-012 MS	.02	6020B/Metals T		Tissue	0.30800g	30.00mL	15% HNO3
19	K2508065-013	2025GCMZC10DV3	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
20	K2508065-014	2025GCMZC10DV4	.02	6020B/Metals T		Animal Tissue	0.30800g	30.00mL	15% HNO3
21	K2508065-015	2025GCMZC10DV5	.02	6020B/Metals T		Animal Tissue	0.30700g	30.00mL	15% HNO3
22	K2508065-016	2025GCMZC10DV6	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
23	K2508065-017	2025GCMZC10DV7	.02	6020B/Metals T		Animal Tissue	0.30100g	30.00mL	15% HNO3
24	K2508065-018	2025GCMZC10DV8	.02	6020B/Metals T		Animal Tissue	0.30100g	30.00mL	15% HNO3
25	K2508065-019	2025GCMZC10DV9	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
26	K2508065-020	2025GCMZC10DV10	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3

Spiking Solutions

Name: K-MET DORM-5	Inventory ID: 226265	Logbook Ref: DORM-5	Expires On: 08/01/2026
--------------------	----------------------	---------------------	------------------------

KQ2515046-03 0.30g

Name: K-MET TORT-3	Inventory ID: 237236	Logbook Ref: K-MET TORT-3	Expires On: 04/01/2026
--------------------	----------------------	---------------------------	------------------------

KQ2515046-04 0.30g

Preparation Information Benchsheet

Prep Run#: 462960
Team: Metals/CLUKKEN

Prep Workflow: MetDigTissMS
Prep Method: PSEP Metals

Status: Prepped
Prep Date/Time: 8/25/25 15:56

Name: K-MET SS4	Inventory ID 242144	Logbook Ref: K-MET SS4	Expires On: 12/31/2025
-----------------	---------------------	------------------------	------------------------

KQ2515046-02 0.05mL KQ2515046-06 0.05mL

Name: K-MET SS1	Inventory ID 242383	Logbook Ref: MET4-98-F	Expires On: 03/24/2026
-----------------	---------------------	------------------------	------------------------

KQ2515046-02 0.30mL KQ2515046-06 0.30mL

Name: K-MET SS3	Inventory ID 242709	Logbook Ref: MET4-100-A	Expires On: 09/30/2025
-----------------	---------------------	-------------------------	------------------------

KQ2515046-02 0.05mL KQ2515046-06 0.05mL

Preparation Materials

K-MET 50ml Centrifuge Tube P7769389 (243033) K-MET HNO3 24K1862001 (240411)

Preparation Steps

Step: Digestion
Started: 8/25/25 15:56
Finished: 8/26/25 11:42
By: CLUKKEN

Comments

Preparation Equipment

K-Balance-53	Digestion	Date Checked	8/25/25	K-Metals-Oven-01	Digestion	Observed Temperature In	105 deg C
K-Metals-Oven-01	Digestion	Observed Temperature Out	105 deg C	K-Tissue Pipette 2	Digestion		

Comments: _____

Reviewed By: WL Date: 8/27/25

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1 *** Add after HNO3 and before ALS-89 when making the solution	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	100	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb***	50.0	1000ml	50	
V	100*	1000ml	50		
Zn	100*	1000ml	50		
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	10.0	500ml	20	
	Hg	6.00	500ml	12	
K-MET SS4	HNO3	25.0	500ml	-	
	B	25.0	500ml	50	
	Mo	50.0	500ml	100	
	U	10.0	500ml	20	
K-MET SS5	HNO3	25.0	500ml	-	
	K**	50.0	500ml	1000	
	Na**	50.0	500ml	1000	
	Mg**	50.0	500ml	1000	
	Ca**	50.0	500ml	1000	

K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.
** Denotes 10,000 ppm individual stock standards.

Standard	mLs of standard	ppm	Logbook #	Exp. Date

Preparation Information Benchsheet

Prep Run#: 462960

Prep Workflow: MetDigTissMS

Status: Draft

Team: Metals/CLUKKEN

Prep Method:

Prep Date/Time: 8/25/25 08:36 AM

Number of Copies to make: 1

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	KQ2515046-01	MB			6020B / Metals T	Tissue						
2	KQ2515046-02	LCS			6020B / Metals T	Tissue						
3	KQ2515046-03	SRM			6020B / Metals T	Tissue	0.307					
4	KQ2515046-04	SRM			6020B / Metals T	Tissue	0.302					
5	K2508065-001	2025GCMZC371DV1	.02		6020B / Metals T	Animal Tissue	0.306					
6	K2508065-002	2025GCMZC371DV2	.02		6020B / Metals T	Animal Tissue	0.306					
7	K2508065-003	2025GCMZC371DV3	.02		6020B / Metals T	Animal Tissue	0.304					
8	K2508065-004	2025GCMZC371DV4	.02		6020B / Metals T	Animal Tissue	0.304					
9	K2508065-005	2025GCMZC371DV5	.02		6020B / Metals T	Animal Tissue	0.304					
10	K2508065-006	2025GCMZC371DV6	.02		6020B / Metals T	Animal Tissue	0.302					
11	K2508065-007	2025GCMZC371DV7	.02		6020B / Metals T	Animal Tissue	0.304					
12	K2508065-008	2025GCMZC371DV8	.02		6020B / Metals T	Animal Tissue	0.302					
13	K2508065-009	2025GCMZC371DV9	.02		6020B / Metals T	Animal Tissue	0.305					
14	K2508065-010	2025GCMZC371DV10	.02		6020B / Metals T	Animal Tissue	0.308					
15	K2508065-011	2025GCMZC10DV1	.02		6020B / Metals T	Animal Tissue	0.303					
16	K2508065-012	2025GCMZC10DV2	.02		6020B / Metals T	Animal Tissue	0.307					
17	KQ2515046-05	K2508065-012 DUP	.02		6020B / Metals T	Tissue	0.306					
18	KQ2515046-06	K2508065-012 MS	.02		6020B / Metals T	Tissue	0.308					
19	K2508065-013	2025GCMZC10DV3	.02		6020B / Metals T	Animal Tissue	0.303					
20	K2508065-014	2025GCMZC10DV4	.02		6020B / Metals T	Animal Tissue	0.308					
21	K2508065-015	2025GCMZC10DV5	.02		6020B / Metals T	Animal Tissue	0.307					
22	K2508065-016	2025GCMZC10DV6	.02		6020B / Metals T	Animal Tissue	0.304					
23	K2508065-017	2025GCMZC10DV7	.02		6020B / Metals T	Animal Tissue	0.301					
24	K2508065-018	2025GCMZC10DV8	.02		6020B / Metals T	Animal Tissue	0.301					
25	K2508065-019	2025GCMZC10DV9	.02		6020B / Metals T	Animal Tissue	0.303					
26	K2508065-020	2025GCMZC10DV10	.02		6020B / Metals T	Animal Tissue	0.305					

Comments: 0.3 mL SS1, 0.05 mL SS3, SS4

In 15:56 8/25/25 105
out 11:42 8/26/25 105

Surrogate ID: _____

Spike ID: _____

Witnessed By: _____

Analyst: _____

Assisted By: _____

Service Request #: K2508065, K2508066

MS/MSD with #: K2508065-007, -012; K2508066-006, -009

StarLims Run #: 891449

VER (100ppt) Standard ID: AF3-25-K Expiration Date: 9/11/2025

OPR (40ppb) Standard ID: AF3-25-L Expiration Date: 9/11/2025

QCS Standard ID: AF3-24-I Expiration Date: 9/11/2025

Parent OPR/VER ID: AF3-24-E Expiration Date: 4/3/2026

Parent QCS ID: AF3-18-B Expiration Date: 11/4/2025

NH2OH: AF3-19-G Expiration Date: 1/2/2026

SnCl: AF3-18-H Expiration Date: 11/7/2025

Pipettors ID: LL 20-200,44382968,45281021 Calibration Due:10/1/25

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	<u>X</u>	<u> </u>	<u> </u>
2. MS/MSD every 10 samples	<u>X</u>	<u> </u>	<u> </u>
3. Current Calibration factor used	<u>X</u>	<u> </u>	<u> </u>
4. Calibration data included	<u>X</u>	<u> </u>	<u> </u>
5. Method blank below MRL	<u>X</u>	<u> </u>	<u> </u>
6. 3 Bubbler Blanks Ran Avg < 25 pg	<u>X</u>	<u> </u>	<u> </u>
7. Bubbler Blanks < 50 pg	<u>X</u>	<u> </u>	<u> </u>
8. Verification Standards Passed (75-123%)	<u>X</u>	<u> </u>	<u> </u>
9. OPR, QCS in control (70-130%)	<u>X</u>	<u> </u>	<u> </u>
10. MS/MSD recovery 70-130%	<u>X</u>	<u> </u>	<u> </u>
11. Spike RPD within 30%	<u>X</u>	<u> </u>	<u> </u>
12. All samples within the linear range	<u>X</u>	<u> </u>	<u> </u>
13. All corresponding charts included	<u>X</u>	<u> </u>	<u> </u>
14. Dilution factors calculated	<u>X</u>	<u> </u>	<u> </u>
15. Bench sheet signed	<u>X</u>	<u> </u>	<u> </u>
16. Reagent Blank below 20 pg	<u>X</u>	<u> </u>	<u> </u>

Comments

Primary Reviewed by SRS Date 8/28/25

Secondary Reviewed by  Date 08/28/25

Batch Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run Duration:	2.5	Method Blank Type:	Concentration
Heating Duration:	2.5	Integration Mode:	Auto Total Hg
Retention Start Time:	0.4	Integration Type:	Peak Area
Retention Stop Time:	1.3	Result Units:	µg/Kg
Purge Duration:	6.0		
Drying Duration:	6.0		
Calibration File:	This File		

Analyst Comments:

PMT:509
OFFSET:3029
NOISE:36
VOA Vial Lot #051225-3AWA

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	X	CCB	RINSE		1	32,672	2.21		2.21	< 50	accept
2	Y	CCB	RINSE		1	11,526	-0.0972		-0.0972	< 50	accept
3	X	CB	CB-1		1	11,278	1.23		1.23	< 50	accept
4	Y	CB	CB-2		1	11,279	1.23		1.23	< 50	accept
5	X	CB	CB-3		1	13,825	1.51		1.51	< 50	accept
6	Y	CB	CB-4		1	13,290	1.45		1.45	< 50	accept
7	X	STD	12.5 pg		1	128,942	12.7		102	75-125	accept
8	Y	STD	25 pg		1	230,751	23.8		95.1	75-125	accept
9	X	STD	100 pg		1	936,381	101		101	75-125	accept
10	Y	STD	500 pg		1	4,529,904	492		98.4	75-125	accept
11	X	STD	2500 pg		1	25,699,932	2,800		112	75-125	accept
12	Y	STD	10000 pg		1	86,601,765	9,430		94.3	75-125	accept
13	X	OPR	OPR-1		1	1,166,884	126	5.03	101	77-123	accept
14	Y	QCS	QCS-1		1	1,057,777	114	4.55	91.1	77-123	accept
15	X	MBA	MB-1		1	47,486	3.82	0.153	0.153	< 0.5	accept
16	Y	S	K2508306-009		1	11,382,576	1,240	49.5		< HS	accept
17	X	MS	K2508306-009		1	23,126,008	2,520	101	102	71-125	accept
18	Y	MSD	K2508306-009		1	22,859,959	2,490	99.5	100.	71-125	accept
19	X	S	K2508306-001		1	3,476,549	377	15.1		< HS	accept
20	Y	S	K2508306-002		1	1,998,536	216	8.65		< HS	accept
21	X	S	K2508306-003		1	4,891,754	531	21.3		< HS	accept
22	Y	S	K2508306-004		1	140,759	14.0	0.559		< HS	accept
23	X	S	K2508306-005		1	10,310,678	1,120	44.9		< HS	accept
24	Y	S	K2508306-006		1	940,351	101	4.04		< HS	accept
25	X	S	K2508306-007		1	24,256,304	2,640	106		< HS	accept
26	Y	S	K2508306-008		1	441,984	46.8	1.87		< HS	accept
27	X	S	K2508306-010		1	15,202,953	1,650	66.2		< HS	accept
28	Y	MBA	MB-2		1	45,672	3.62	0.145	0.145	< 0.5	accept
29	X	S	K2508306-013		1	686,201	73.4	2.94		< HS	accept
30	Y	MS	K2508306-013		1	11,677,077	1,270	50.8	95.8	71-125	accept
31	X	MSD	K2508306-013		1	11,908,583	1,300	51.8	97.8	71-125	accept
32	Y	S	K2508306-011		1	64,466,824	7,020	281		< HS	accept
33	X	S	K2508306-012		1	38,531,942	4,200	168		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
34	Y	S	K2508306-014		1	286,446	29.8	1.19		< HS	accept
35	X	S	K2508306-015		1	300,829	31.4	1.26		< HS	accept
36	Y	S	K2508306-016		1	352,239	37.0	1.48		< HS	accept
37	X	S	K2508306-017		1	204,477	20.9	0.837		< HS	accept
38	Y	S	K2508425-001		1	8,431,459	917	36.7		< HS	accept
39	X	S	K2508425-004		1	218,090	22.4	0.896		< HS	accept
40	Y	S	K2508431-001		1	1,669,949	181	7.22		< HS	accept
41	X	MBA	MB-3		1	34,272	2.38	0.0952	0.0952	< 0.5	accept
42	Y	OPR	OPR-2/VER		1	1,137,977	123	4.90	98.1	77-123	accept
43	X	OPR	OPR-1		1	2,291,622	248	4.96	99.3	77-123	accept
44	Y	MBA	MB-1		1	30,823	2.00	0.0401	0.0401	< 0.5	accept
45	X	MBA	MB-2		1	27,932	1.69	0.0338	0.0338	< 0.5	accept
46	Y	QCS	TORT-3		1	22,272,243	2,420	242	83.0	77-123	accept
47	X	S	K2508065-007		1	10,448,906	1,140	225		< HS	accept
48	Y	MS	K2508065-007		1	21,341,282	2,320	458	94.6	71-125	accept
49	X	MSD	K2508065-007		1	21,223,207	2,310	456	93.6	71-125	accept
50	Y	S	K2508065-001		1	8,278,330	900.	178		< HS	accept
51	X	S	K2508065-002		1	6,691,194	727	144		< HS	accept
52	Y	S	K2508065-003		1	8,547,388	930.	183		< HS	accept
53	X	S	K2508065-004		1	9,298,199	1,010	200.		< HS	accept
54	Y	S	K2508065-005		1	8,344,665	908	180.		< HS	accept
55	X	S	K2508065-006		1	11,353,044	1,240	245		< HS	accept
56	Y	S	K2508065-008		1	6,714,646	730.	144		< HS	accept
57	X	S	K2508065-009		1	8,466,755	921	183		< HS	accept
58	Y	S	K2508065-010		1	9,331,742	1,020	200.		< HS	accept
59	X	OPR	VER-3		1	1,175,306	127	5.07	101	77-123	accept
60	Y	S	K2508065-012		1	17,830,082	1,940	382		< HS	accept
61	X	MS	K2508065-012		1	29,463,169	3,210	638	103	71-125	accept
62	Y	MSD	K2508065-012		1	28,072,468	3,060	610.	91.3	71-125	accept
63	X	S	K2508065-011		1	19,439,563	2,120	422		< HS	accept
64	Y	S	K2508065-013		1	18,729,786	2,040	403		< HS	accept
65	X	S	K2508065-014		1	12,343,938	1,340	265		< HS	accept
66	Y	S	K2508065-015		1	20,956,790	2,280	449		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
67	X	S	K2508065-016		1	16,800,495	1,830	360.		< HS	accept
68	Y	S	K2508065-017		1	11,909,420	1,300	257		< HS	accept
69	X	S	K2508065-018		1	16,269,035	1,770	352		< HS	accept
70	Y	S	K2508065-019		1	12,826,961	1,400	278		< HS	accept
71	X	S	K2508065-020		1	17,149,867	1,870	372		< HS	accept
72	Y	MBA	MB-3		1	43,279	3.36	0.0672	0.0672	< 0.5	accept
73	X	OPR	OPR-2		1	2,316,616	251	5.02	100.	77-123	accept
74	Y	OPR	VER-4		1	1,163,611	125	5.02	100.	77-123	accept
75	X	OPR	OPR-1		1	2,338,794	253	5.07	101	77-123	accept
76	Y	MBA	MB-1		1	30,463	1.97	0.0393	0.0393	< 0.5	accept
77	X	MBA	MB-2		1	26,170	1.50	0.0300	0.0300	< 0.5	accept
78	Y	QCS	TORT-3		1	22,740,972	2,480	247	84.6	77-123	accept
79	X	S	K2508066-006		1	13,587,942	1,480	295		< HS	accept
80	Y	MS	K2508066-006		1	23,851,556	2,600	518	89.6	71-125	accept
81	X	MSD	K2508066-006		1	24,971,970	2,720	542	99.3	71-125	accept
82	Y	S	K2508066-001		1	11,792,531	1,280	254		< HS	accept
83	X	S	K2508066-002		1	12,815,997	1,390	278		< HS	accept
84	Y	S	K2508066-003		1	14,252,999	1,550	306		< HS	accept
85	X	S	K2508066-004		1	14,715,230	1,600	318		< HS	accept
86	Y	S	K2508066-005		1	14,110,475	1,540	305		< HS	accept
87	X	S	K2508066-007		1	13,155,004	1,430	286		< HS	accept
88	Y	S	K2508066-008		1	12,426,251	1,350	269		< HS	accept
89	X	S	K2508066-010		1	13,853,056	1,510	301		< HS	accept
90	Y	S	K2508066-011		1	17,606,666	1,920	381		< HS	accept
91	X	OPR	VER-5		1	1,177,457	127	5.08	102	77-123	accept
92	Y	S	K2508066-009		1	11,923,483	1,300	258		< HS	accept
93	X	MS	K2508066-009		1	23,731,641	2,580	509	102	71-125	accept
94	Y	MSD	K2508066-009		1	22,042,748	2,400	472	87.0	71-125	accept
95	X	S	K2508066-012		1	14,080,404	1,530	304		< HS	accept
96	Y	S	K2508066-013		1	13,981,177	1,520	301		< HS	accept
97	X	S	K2508066-014		1	13,130,715	1,430	283		< HS	accept
98	Y	S	K2508066-015		1	10,126,929	1,100	218		< HS	accept
99	X	S	K2508066-016		1	9,124,076	992	198		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
100	Y	S	K2508066-017		1	12,577,809	1,370	273		< HS	accept
101	X	S	K2508066-018		1	10,893,861	1,190	236		< HS	accept
102	Y	S	K2508066-019		1	13,611,183	1,480	295		< HS	accept
103	X	S	K2508066-020		1	9,203,691	1,000	200.		< HS	accept
104	Y	MBA	MB-3		1	38,885	2.88	0.0577	0.0577	< 0.5	accept
105	X	OPR	OPR-2		1	2,323,688	252	5.03	101	77-123	accept
106	Y	OPR	VER-6		1	1,149,795	124	4.96	99.1	77-123	accept

Analyst Comments:

PMT:509
OFFSET:3029
NOISE:36
VOA Vial Lot #051225-3AWA

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey

Bias and Precision										
Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K2508306-009	101	µg/Kg	50.0	49.5	102	71-125			accept
	K2508306-013	50.8	µg/Kg	50.0	2.94	95.8	71-125			accept
	K2508065-007	458	µg/Kg	246	225	94.6	71-125			accept
	K2508065-012	638	µg/Kg	249	382	103	71-125			accept
	K2508066-006	518	µg/Kg	249	295	89.6	71-125			accept
	K2508066-009	509	µg/Kg	246	258	102	71-125			accept
MSD	K2508306-009	99.5	µg/Kg	50.0	49.5	100.	71-125	1.16	< 24	accept
	K2508306-013	51.8	µg/Kg	50.0	2.94	97.8	71-125	1.97	< 24	accept
	K2508065-007	456	µg/Kg	247	225	93.6	71-125	0.309	< 24	accept
	K2508065-012	610.	µg/Kg	249	382	91.3	71-125	4.59	< 24	accept
	K2508066-006	542	µg/Kg	249	295	99.3	71-125	4.59	< 24	accept
	K2508066-009	472	µg/Kg	246	258	87.0	71-125			accept
OPR	OPR-1	5.03	µg/Kg	5.0		101	77-123			accept
	OPR-2/VER	4.90	µg/Kg	5.0		98.1	77-123			accept
	OPR-1	4.96	µg/Kg	5.0		99.3	77-123			accept
	VER-3	5.07	µg/Kg	5.0		101	77-123			accept
	OPR-2	5.02	µg/Kg	5.0		100.	77-123			accept
	VER-4	5.02	µg/Kg	5.0		100.	77-123			accept
	OPR-1	5.07	µg/Kg	5.0		101	77-123			accept
	VER-5	5.08	µg/Kg	5.0		102	77-123			accept
	OPR-2	5.03	µg/Kg	5.0		101	77-123			accept
	VER-6	4.96	µg/Kg	5.0		99.1	77-123			accept

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Bias and Precision										
Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
QCS	QCS-1	4.55	µg/Kg	5.0		91.1	77-123			accept
	TORT-3	242	µg/Kg	292		83.0	77-123			accept
	TORT-3	247	µg/Kg	292		84.6	77-123			accept

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Calibration									
QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	12.5 pg	12.7	pg	12.5	102	75-125			accept
	25 pg	23.8	pg	25	95.1	75-125			accept
	100 pg	101	pg	100	101	75-125			accept
	500 pg	492	pg	500	98.4	75-125			accept
	2500 pg	2,800	pg	2500	112	75-125			accept
	10000 pg	9,430	pg	10000	94.3	75-125			accept
Calibration Factor		0.000109	pg/PA				6.02	< 15	accept
Calibration Date		8/28/25							

1631 Extended Calibration Point Verification

Instruemt: K-AFS-04
 Date: 08/28/25
 Run Number: 891449

	Raw Peak Area	Blank Corrected Peak Area			
CB-1	11,278				
CB-2	11,279				
CB-3	13,825				
CB-4	13,290				
STD 12.5	128,942	116,524	0.0001073		
STD 25	230,751	218,333	0.0001145		
STD 100	936,381	923,963	0.0001082		
STD 500	4,529,904	4,517,486	0.0001107		
STD 2500	25,699,932	25,687,514	0.0000973	0.0001076	0.5 - 100 ng/L Ave. Cal. Factor
STD 10000	86,601,765	86,589,347	0.0001155	-7.3	% Difference (Limit ± 15%)

Result: PASS

Cal. Factor 0.0001089

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Blank Summary							
QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CB-1	1.23	pg	< 50			accept
	CB-2	1.23	pg	< 50			accept
	CB-3	1.51	pg	< 50			accept
	CB-4	1.45	pg	< 50			accept
Average		1.35	pg	< 25	0.145	< 10	accept
MBA	MB-1	0.153	µg/Kg	< 0.5			accept
	MB-2	0.145	µg/Kg	< 0.5			accept
	MB-3	0.0952	µg/Kg	< 0.5			accept
	MB-1	0.0401	µg/Kg	< 0.5			accept
	MB-2	0.0338	µg/Kg	< 0.5			accept
	MB-3	0.0672	µg/Kg	< 0.5			accept
	MB-1	0.0393	µg/Kg	< 0.5			accept
	MB-2	0.0300	µg/Kg	< 0.5			accept
	MB-3	0.0577	µg/Kg	< 0.5			accept
Average		0.0735	µg/Kg		0.0474		

QA Comments:

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
50	K2508065-001	178	accept
51	K2508065-002	144	accept
52	K2508065-003	183	accept
53	K2508065-004	200.	accept
54	K2508065-005	180.	accept
55	K2508065-006	245	accept
47	K2508065-007	225	accept
56	K2508065-008	144	accept
57	K2508065-009	183	accept
58	K2508065-010	200.	accept
63	K2508065-011	422	accept
60	K2508065-012	382	accept
64	K2508065-013	403	accept
65	K2508065-014	265	accept
66	K2508065-015	449	accept
67	K2508065-016	360.	accept
68	K2508065-017	257	accept
69	K2508065-018	352	accept
70	K2508065-019	278	accept
71	K2508065-020	372	accept
82	K2508066-001	254	accept
83	K2508066-002	278	accept
84	K2508066-003	306	accept
85	K2508066-004	318	accept
86	K2508066-005	305	accept
79	K2508066-006	295	accept
87	K2508066-007	286	accept
88	K2508066-008	269	accept
92	K2508066-009	258	accept

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
89	K2508066-010	301	accept
90	K2508066-011	381	accept
95	K2508066-012	304	accept
96	K2508066-013	301	accept
97	K2508066-014	283	accept
98	K2508066-015	218	accept
99	K2508066-016	198	accept
100	K2508066-017	273	accept
101	K2508066-018	236	accept
102	K2508066-019	295	accept
103	K2508066-020	200.	accept
19	K2508306-001	15.1	accept
20	K2508306-002	8.65	accept
21	K2508306-003	21.3	accept
22	K2508306-004	0.559	accept
23	K2508306-005	44.9	accept
24	K2508306-006	4.04	accept
25	K2508306-007	106	accept
26	K2508306-008	1.87	accept
16	K2508306-009	49.5	accept
27	K2508306-010	66.2	accept
32	K2508306-011	281	accept
33	K2508306-012	168	accept
29	K2508306-013	2.94	accept
34	K2508306-014	1.19	accept
35	K2508306-015	1.26	accept
36	K2508306-016	1.48	accept
37	K2508306-017	0.837	accept
38	K2508425-001	36.7	accept

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
39	K2508425-004	0.896	accept
40	K2508431-001	7.22	accept

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	X	CCB	RINSE						
2	Y	CCB	RINSE						
3	X	CB	CB-1						
4	Y	CB	CB-2						
5	X	CB	CB-3						
6	Y	CB	CB-4						
7	X	STD	12.5 pg					12.5	0.125mL AF3-25-K
8	Y	STD	25 pg					25	0.25mL AF3-25-K
9	X	STD	100 pg					100	1.00mL AF3-25-K
10	Y	STD	500 pg					500	0.05mL AF3-25-J
11	X	STD	2500 pg					2500	0.25mL AF3-25-J
12	Y	STD	10000 pg					10000	1.00mL AF3-25-J
13	X	OPR	OPR-1		25	25	25	5.0	
14	Y	QCS	QCS-1		125	125	25	5.0	
15	X	MBA	MB-1		125	125	25		
16	Y	S	K2508306-009		125	125	25		
17	X	MS	K2508306-009		125	125	25	50.0	
18	Y	MSD	K2508306-009		125	125	25	50.0	
19	X	S	K2508306-001		125	125	25		
20	Y	S	K2508306-002		125	125	25		
21	X	S	K2508306-003		125	125	25		
22	Y	S	K2508306-004		125	125	25		
23	X	S	K2508306-005		125	125	25		
24	Y	S	K2508306-006		125	125	25		
25	X	S	K2508306-007		125	125	25		
26	Y	S	K2508306-008		125	125	25		
27	X	S	K2508306-010		125	125	25		
28	Y	MBA	MB-2		125	125	25		
29	X	S	K2508306-013		125	125	25		
30	Y	MS	K2508306-013		125	125	25	50.0	
31	X	MSD	K2508306-013		125	125	25	50.0	
32	Y	S	K2508306-011		125	125	25		
33	X	S	K2508306-012		125	125	25		

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
34	Y	S	K2508306-014		125	125	25		
35	X	S	K2508306-015		125	125	25		
36	Y	S	K2508306-016		125	125	25		
37	X	S	K2508306-017		125	125	25		
38	Y	S	K2508425-001		125	125	25		
39	X	S	K2508425-004		125	125	25		
40	Y	S	K2508431-001		125	125	25		
41	X	MBA	MB-3		125	125	25		
42	Y	OPR	OPR-2/VER		25	25	25	5.0	
43	X	OPR	OPR-1		400	40	5.0	5.0	
44	Y	MBA	MB-1		400	40	5.0		
45	X	MBA	MB-2		400	40	5.0		
46	Y	QCS	TORT-3		400	40	1.0	292	
47	X	S	K2508065-007		404	40	0.5		10X
48	Y	MS	K2508065-007		406	40	0.5	246	10X
49	X	MSD	K2508065-007		405	40	0.5	247	10X
50	Y	S	K2508065-001		405	40	0.5		10X
51	X	S	K2508065-002		405	40	0.5		10X
52	Y	S	K2508065-003		406	40	0.5		10X
53	X	S	K2508065-004		404	40	0.5		10X
54	Y	S	K2508065-005		404	40	0.5		10X
55	X	S	K2508065-006		404	40	0.5		10X
56	Y	S	K2508065-008		406	40	0.5		10X
57	X	S	K2508065-009		402	40	0.5		10X
58	Y	S	K2508065-010		406	40	0.5		10X
59	X	OPR	VER-3		25	25	25	5.0	
60	Y	S	K2508065-012		406	40	0.5		10X
61	X	MS	K2508065-012		402	40	0.5	249	10X
62	Y	MSD	K2508065-012		401	40	0.5	249	10X
63	X	S	K2508065-011		401	40	0.5		10X
64	Y	S	K2508065-013		405	40	0.5		10X
65	X	S	K2508065-014		406	40	0.5		10X
66	Y	S	K2508065-015		406	40	0.5		10X

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
67	X	S	K2508065-016		406	40	0.5		10X
68	Y	S	K2508065-017		404	40	0.5		10X
69	X	S	K2508065-018		402	40	0.5		10X
70	Y	S	K2508065-019		401	40	0.5		10X
71	X	S	K2508065-020		401	40	0.5		10X
72	Y	MBA	MB-3		400	40	5.0		
73	X	OPR	OPR-2		400	40	5.0	5.0	
74	Y	OPR	VER-4		25	25	25	5.0	
75	X	OPR	OPR-1		400	40	5.0	5.0	
76	Y	MBA	MB-1		400	40	5.0		
77	X	MBA	MB-2		400	40	5.0		
78	Y	QCS	TORT-3		401	40	1.0	292	
79	X	S	K2508066-006		401	40	0.5		10X
80	Y	MS	K2508066-006		401	40	0.5	249	10X
81	X	MSD	K2508066-006		401	40	0.5	249	10X
82	Y	S	K2508066-001		404	40	0.5		10X
83	X	S	K2508066-002		401	40	0.5		10X
84	Y	S	K2508066-003		405	40	0.5		10X
85	X	S	K2508066-004		403	40	0.5		10X
86	Y	S	K2508066-005		403	40	0.5		10X
87	X	S	K2508066-007		401	40	0.5		10X
88	Y	S	K2508066-008		402	40	0.5		10X
89	X	S	K2508066-010		401	40	0.5		10X
90	Y	S	K2508066-011		402	40	0.5		10X
91	X	OPR	VER-5		25	25	25	5.0	
92	Y	S	K2508066-009		403	40	0.5		10X
93	X	MS	K2508066-009		406	40	0.5	246	10X
94	Y	MSD	K2508066-009		407	40	0.5	246	10X
95	X	S	K2508066-012		403	40	0.5		10X
96	Y	S	K2508066-013		404	40	0.5		10X
97	X	S	K2508066-014		404	40	0.5		10X
98	Y	S	K2508066-015		405	40	0.5		10X
99	X	S	K2508066-016		401	40	0.5		10X

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
100	Y	S	K2508066-017		401	40	0.5		10X
101	X	S	K2508066-018		401	40	0.5		10X
102	Y	S	K2508066-019		401	40	0.5		10X
103	X	S	K2508066-020		401	40	0.5		10X
104	Y	MBA	MB-3		400	40	5.0		
105	X	OPR	OPR-2		400	40	5.0	5.0	
106	Y	OPR	VER-6		25	25	25	5.0	

StarLims Number: 462972

Method : **1631EApp.** Analysis for : **CVAFS**

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.411	40	0.02N BrCl
K2508065-001		x		0.405	40	0.02N BrCl
K2508065-002		x		0.405	40	0.02N BrCl
K2508065-003		x		0.406	40	0.02N BrCl
K2508065-004		x		0.404	40	0.02N BrCl
K2508065-005		x		0.404	40	0.02N BrCl
K2508065-006		x		0.404	40	0.02N BrCl
K2508065-007		x		0.404	40	0.02N BrCl
K2508065-007S		x		0.406	40	0.02N BrCl
K2508065-007SD		x		0.405	40	0.02N BrCl
K2508065-008		x		0.406	40	0.02N BrCl
K2508065-009		x		0.402	40	0.02N BrCl
K2508065-010		x		0.406	40	0.02N BrCl
K2508065-011		x		0.401	40	0.02N BrCl
K2508065-012		x		0.406	40	0.02N BrCl
K2508065-012S		x		0.402	40	0.02N BrCl
K2508065-012SD		x		0.401	40	0.02N BrCl
K2508065-013		x		0.405	40	0.02N BrCl
K2508065-014		x		0.406	40	0.02N BrCl
K2508065-015		x		0.406	40	0.02N BrCl
K2508065-016		x		0.406	40	0.02N BrCl
K2508065-017		x		0.404	40	0.02N BrCl
K2508065-018		x		0.403	40	0.02N BrCl
K2508065-019		x		0.401	40	0.02N BrCl
K2508065-020		x		0.401	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

AF3-25-L (40ppb)

OPR: 0.05mL

BrCl = AF3-21-F

Digestion Acid Mixture: AF3-24-D

1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID:

37 ss 8/25/25

Comments: TORT-3 Solids: 97.4%

free dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 18
 Time Digestion Started: 7:01 Dilution Completed: 12:29

Analyst <u>AL</u>	Date <u>8/26/25</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508065-001	0.4050	10	9.9	1.98
K2508065-002	0.4050	10	9.9	1.98
K2508065-003	0.4060	10	9.9	1.97
K2508065-004	0.4040	10	9.9	1.98
K2508065-005	0.4040	10	9.9	1.98
K2508065-006	0.4040	10	9.9	1.98
K2508065-007	0.4040	10	9.9	1.98
K2508065-007S	0.4060	10	9.9	1.97
K2508065-007SD	0.4050	10	9.9	1.98
K2508065-008	0.4060	10	9.9	1.97
K2508065-009	0.4020	10	10.0	1.99
K2508065-010	0.4060	10	9.9	1.97
K2508065-011	0.4010	10	10.0	2.00
K2508065-012	0.4060	10	9.9	1.97
K2508065-012S	0.4020	10	10.0	1.99
K2508065-012D	0.4010	10	10.0	2.00
K2508065-013	0.4050	10	9.9	1.98
K2508065-014	0.4060	10	9.9	1.97
K2508065-015	0.4060	10	9.9	1.97
K2508065-016	0.4060	10	9.9	1.97
K2508065-017	0.4040	10	9.9	1.98
K2508065-018	0.4030	10	9.9	1.99
K2508065-019	0.4010	10	10.0	2.00
K2508065-020	0.4010	10	10.0	2.00
Method Blank	0.4000	1	1.0	0.20

StarLims Number:	462978
Method : 1631EApp.	Analysis for : CVAFS

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.412	40	0.02N BrCl
K2508066-001		↓		0.404	40	0.02N BrCl
K2508066-002			0.401	40	0.02N BrCl	
K2508066-003			0.405	40	0.02N BrCl	
K2508066-004			0.403	40	0.02N BrCl	
K2508066-005			0.403	40	0.02N BrCl	
K2508066-006			0.401	40	0.02N BrCl	
K2508066-006S			0.401	40	0.02N BrCl	
K2508066-006SD			0.401	40	0.02N BrCl	
K2508066-007			0.401	40	0.02N BrCl	
K2508066-008			0.402	40	0.02N BrCl	
K2508066-009			0.403	40	0.02N BrCl	
K2508066-009S			0.406	40	0.02N BrCl	
K2508066-009SD			0.407	40	0.02N BrCl	
K2508066-010			0.401	40	0.02N BrCl	
K2508066-011			0.402	40	0.02N BrCl	
K2508066-012			0.403	40	0.02N BrCl	
K2508066-013			0.404	40	0.02N BrCl	
K2508066-014			0.404	40	0.02N BrCl	
K2508066-015			0.405	40	0.02N BrCl	
K2508066-016			0.401	40	0.02N BrCl	
K2508066-017		0.401	40	0.02N BrCl		
K2508066-018		0.401	40	0.02N BrCl		
K2508066-019		0.401	40	0.02N BrCl		
K2508066-020		↓		0.401	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

BrCl = AF3-21-F

AF3-25-L (40ppb)

OPR: 0.05mL

Digestion Acid Mixture: AF3-24-D

- 1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
- 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID:

37

Comments: TORT-3 Solids: 97.4%

frz dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 18

Time Digestion Started: 10:01 Dilution Completed: 14:23

Analyst <u>AA</u>	Date <u>8/26/75</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508066-001	0.4040	10	9.9	1.98
K2508066-002	0.4010	10	10.0	2.00
K2508066-003	0.4050	10	9.9	1.98
K2508066-004	0.4030	10	9.9	1.99
K2508066-005	0.4030	10	9.9	1.99
K2508066-006	0.4010	10	10.0	2.00
K2508066-006S	0.4010	10	10.0	2.00
K2508066-006SD	0.4010	10	10.0	2.00
K2508066-007	0.4010	10	10.0	2.00
K2508066-008	0.4020	10	10.0	1.99
K2508066-009	0.4030	10	9.9	1.99
K2508066-009S	0.4060	10	9.9	1.97
K2508066-009SD	0.4070	10	9.8	1.97
K2508066-010	0.4010	10	10.0	2.00
K2508066-011	0.4020	10	10.0	1.99
K2508066-012	0.4030	10	9.9	1.99
K2508066-013	0.4040	10	9.9	1.98
K2508066-014	0.4040	10	9.9	1.98
K2508066-015	0.4050	10	9.9	1.98
K2508066-016	0.4010	10	10.0	2.00
K2508066-017	0.4010	10	10.0	2.00
K2508066-018	0.4010	10	10.0	2.00
K2508066-019	0.4010	10	10.0	2.00
K2508066-020	0.4010	10	10.0	2.00
Method Blank	0.4000	1	1.0	0.20

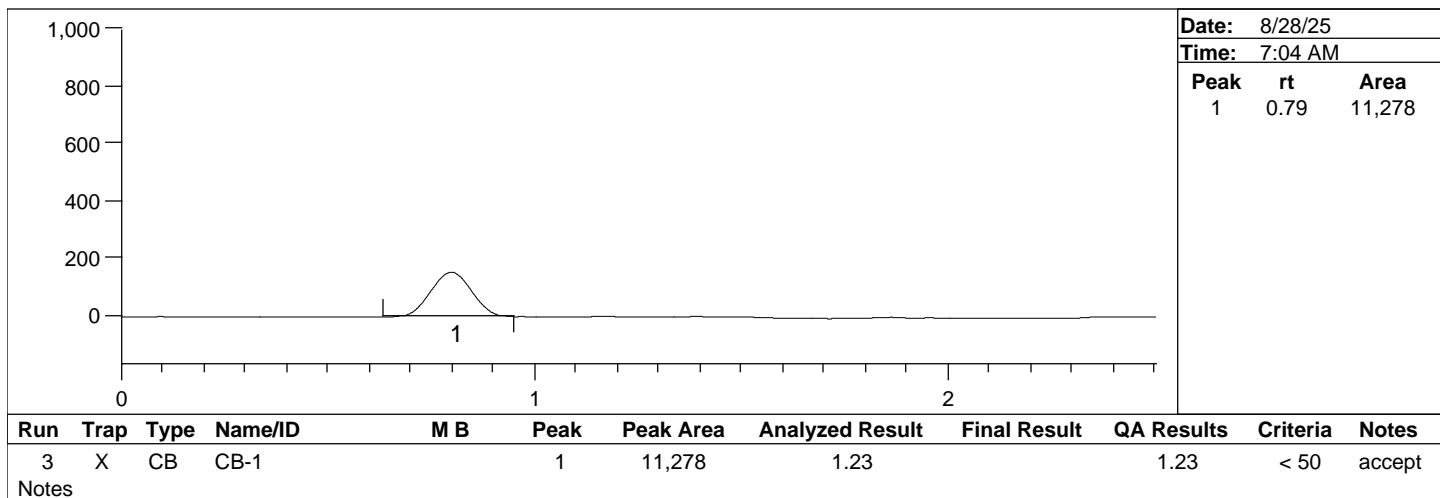
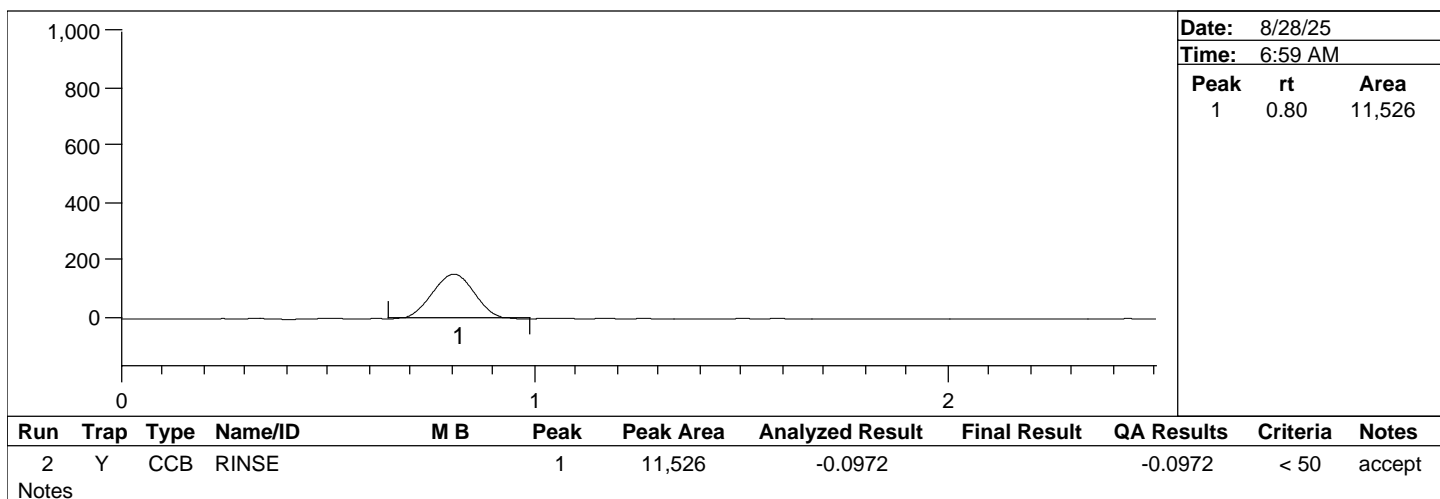
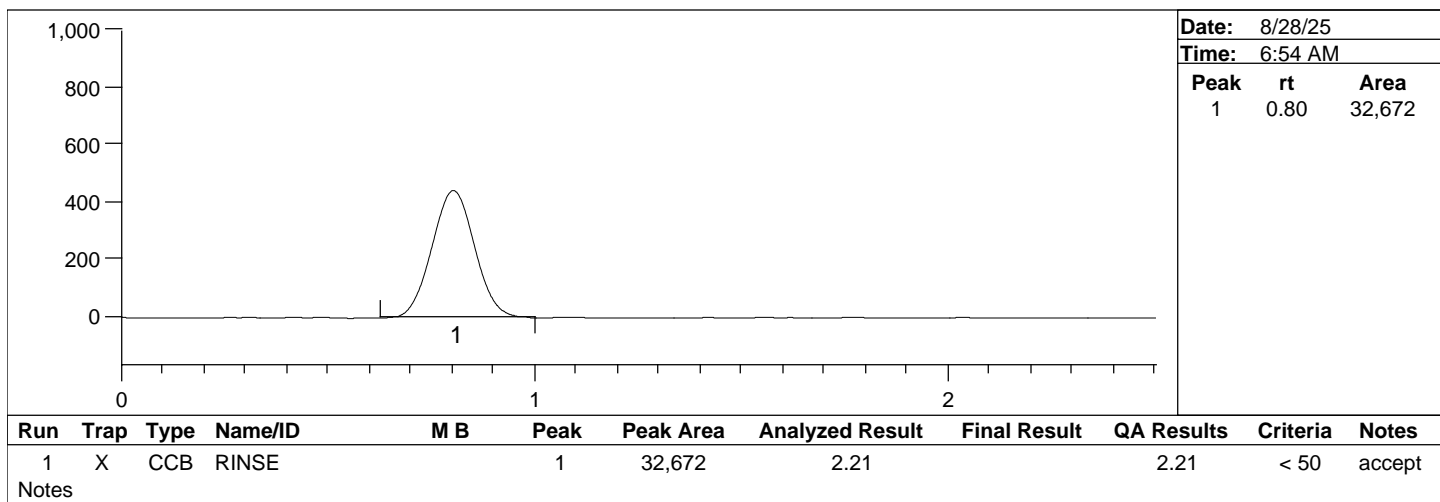
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



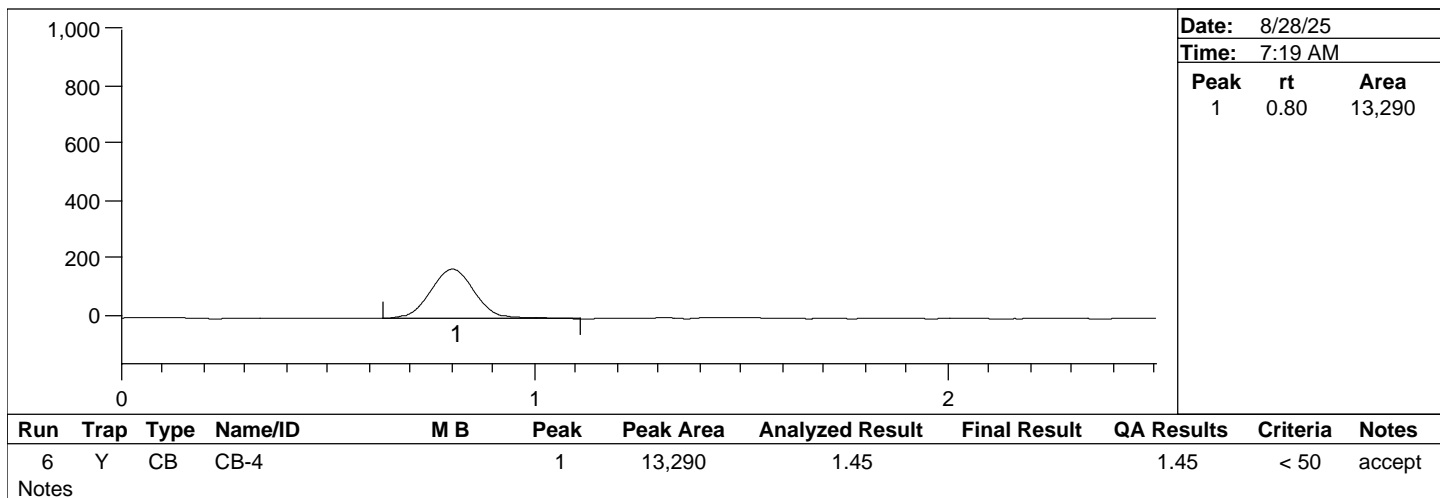
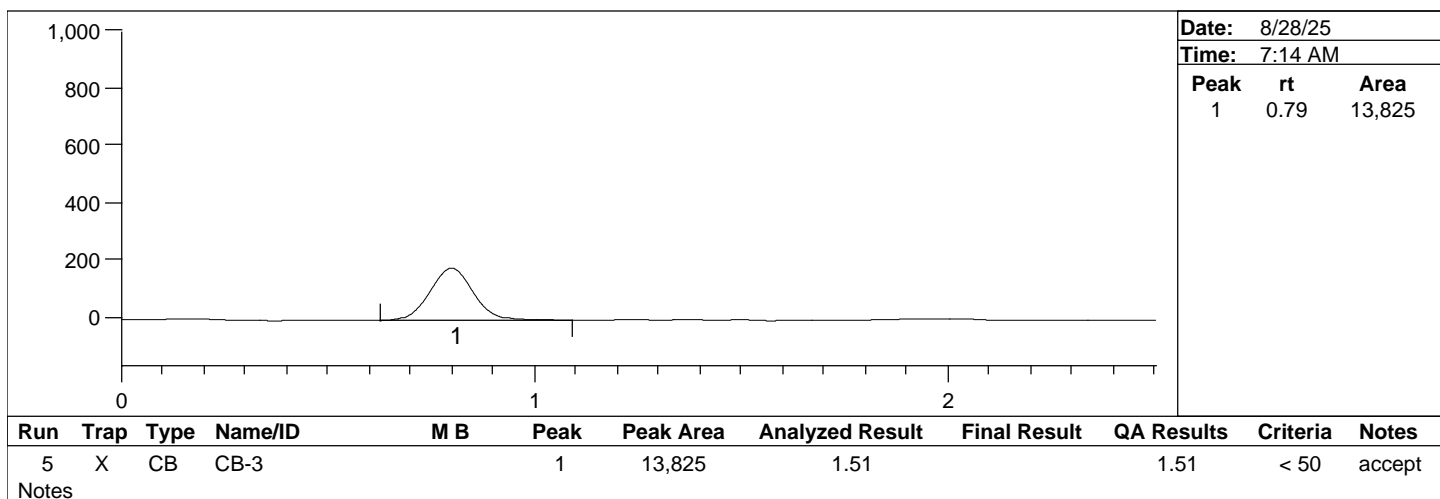
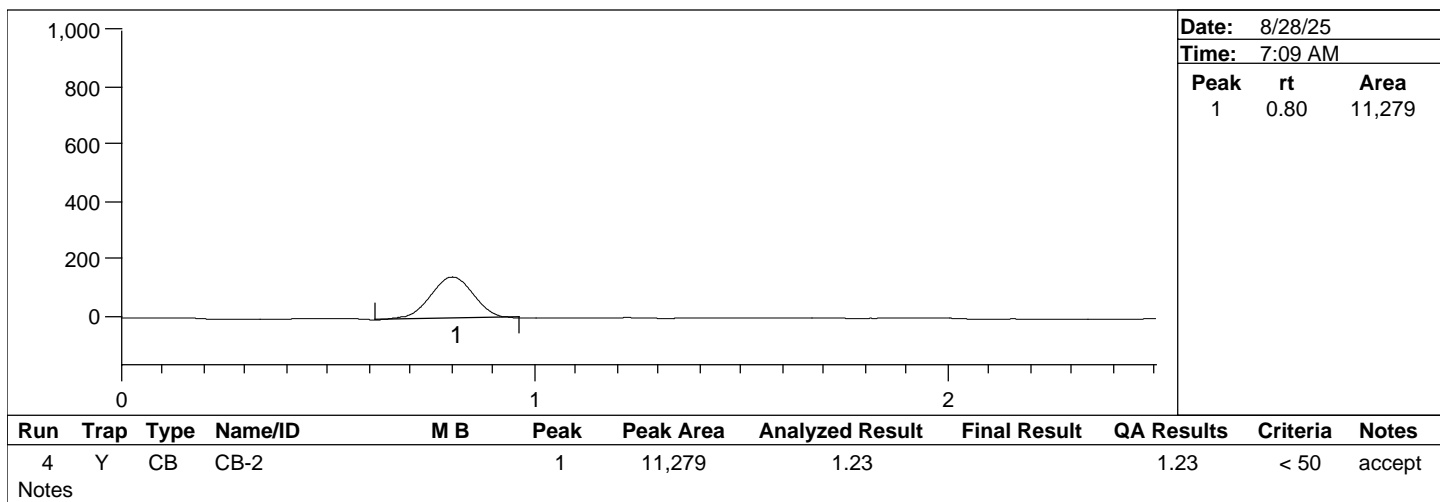
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



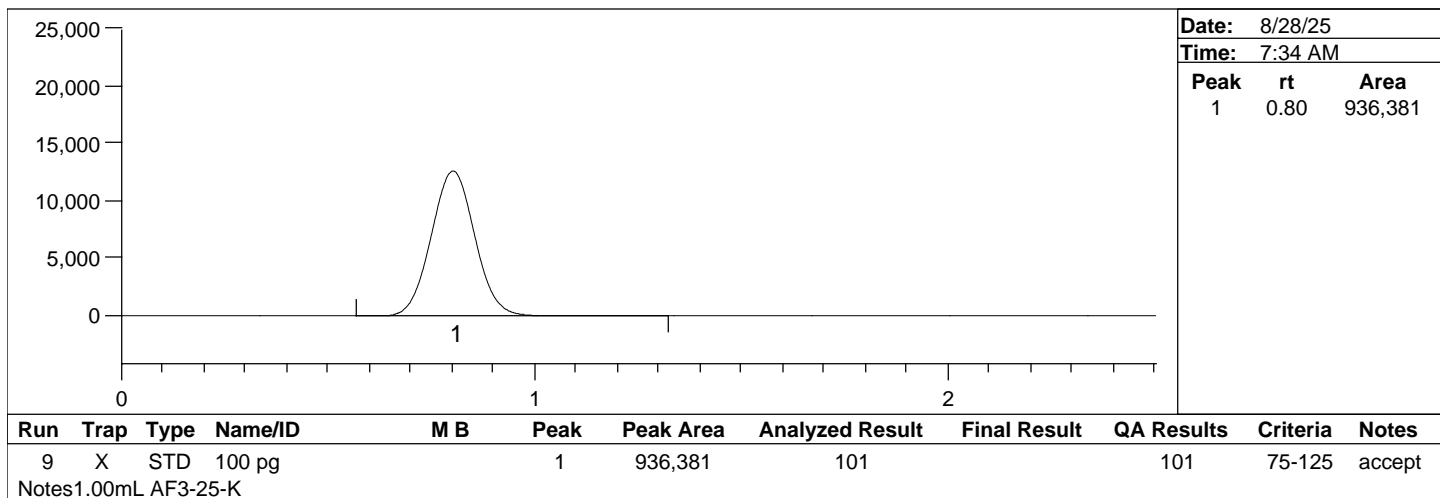
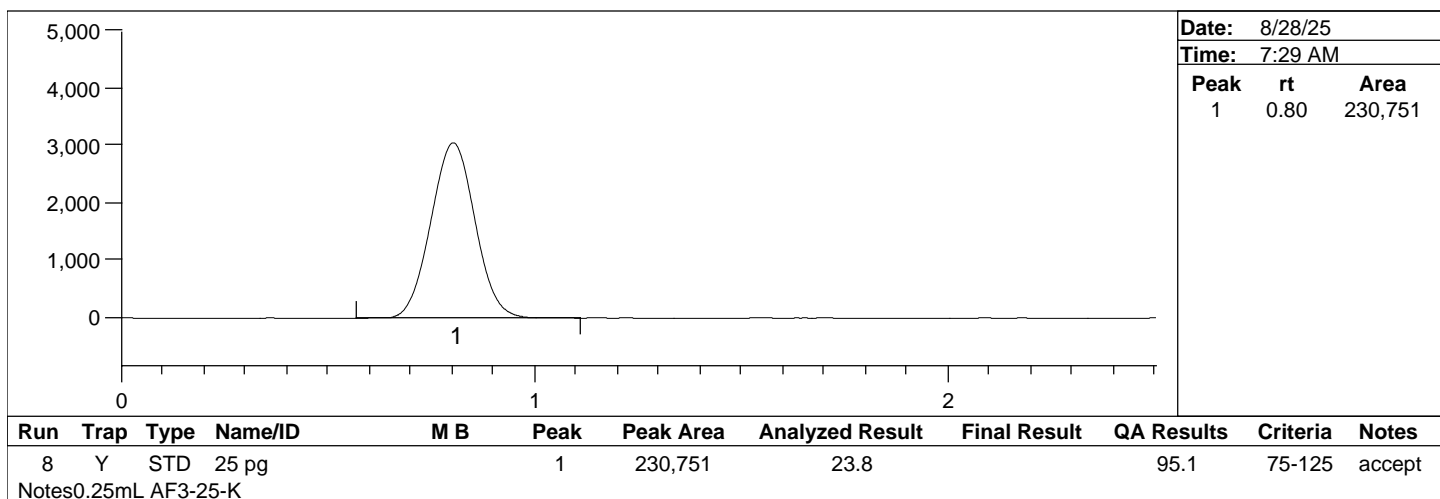
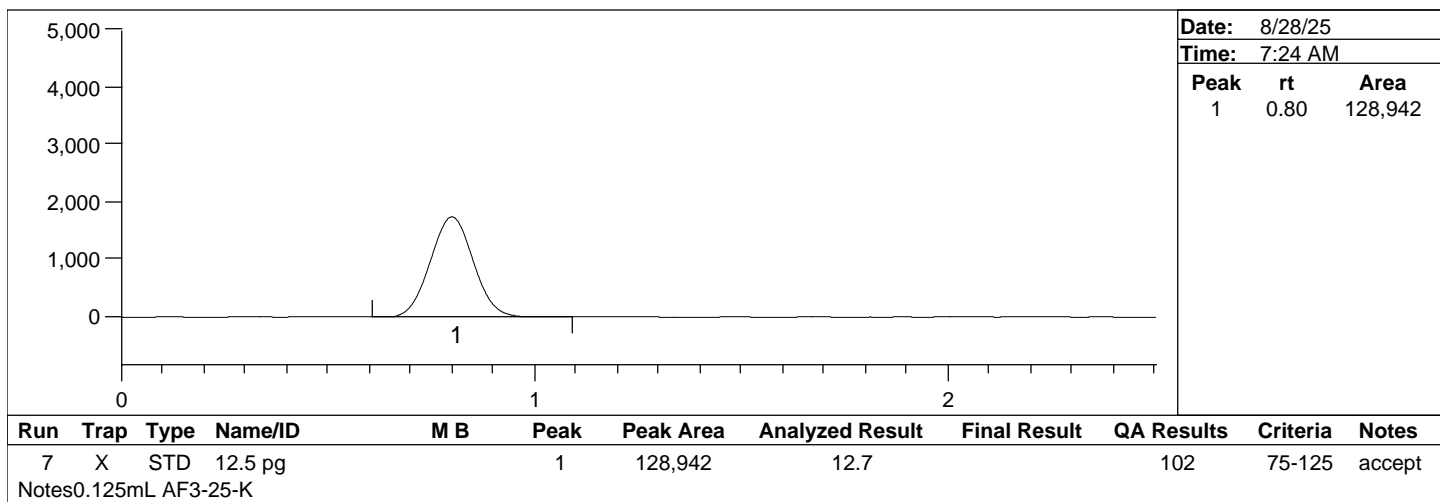
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



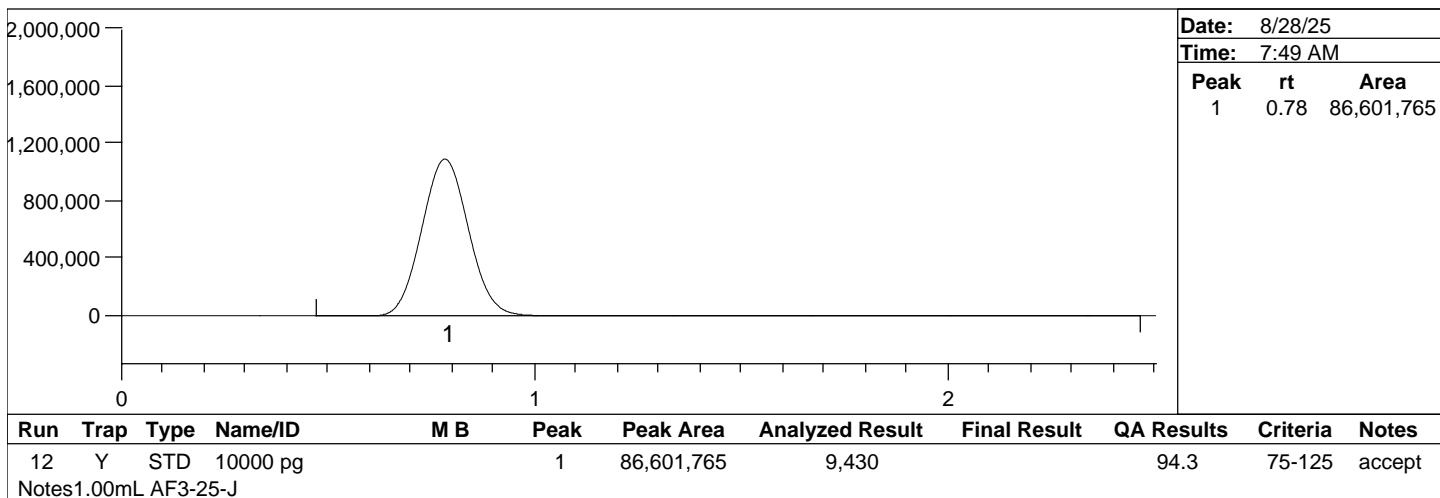
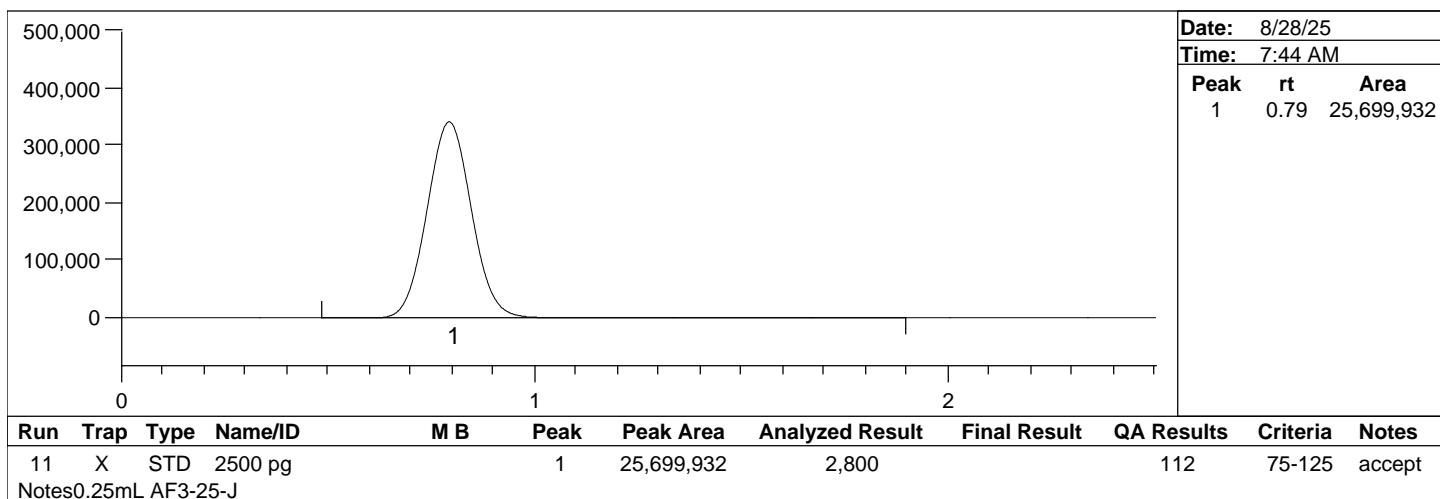
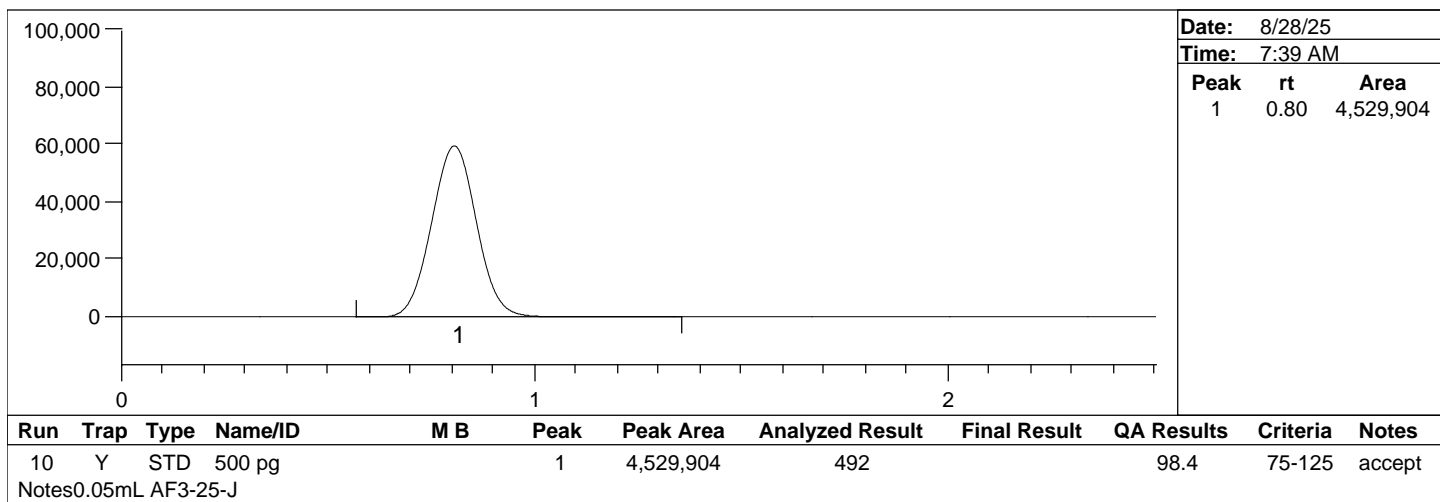
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

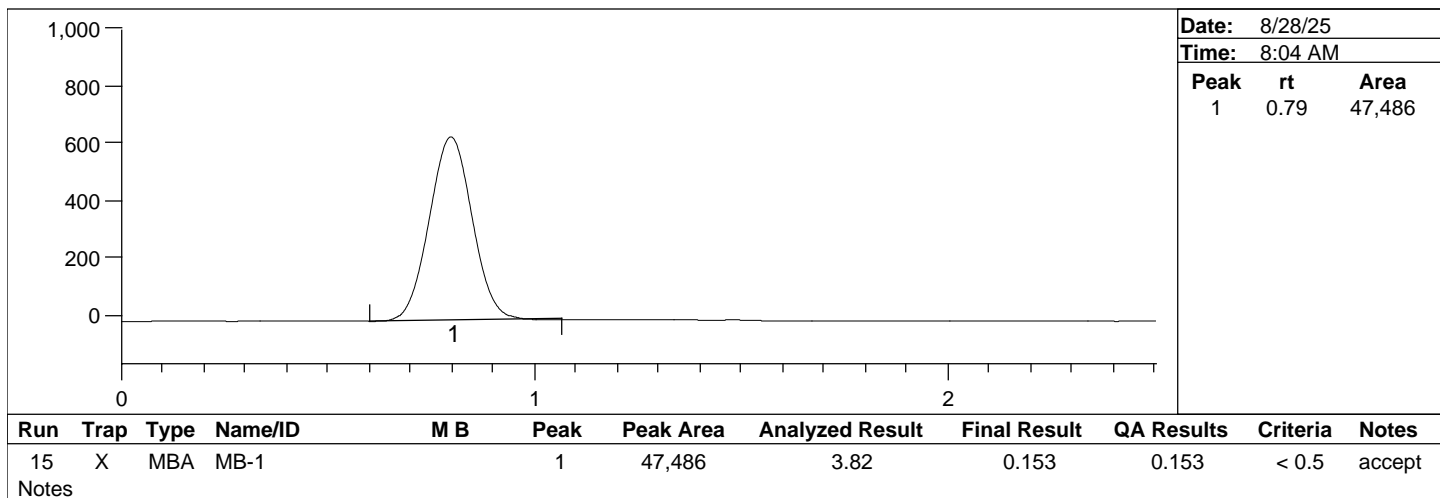
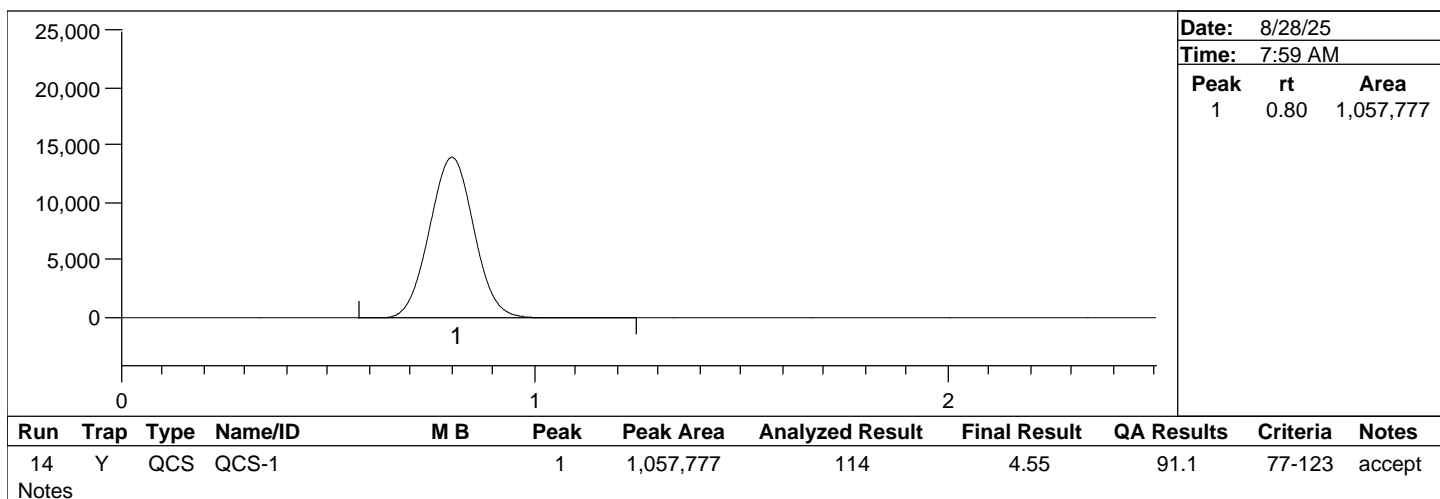
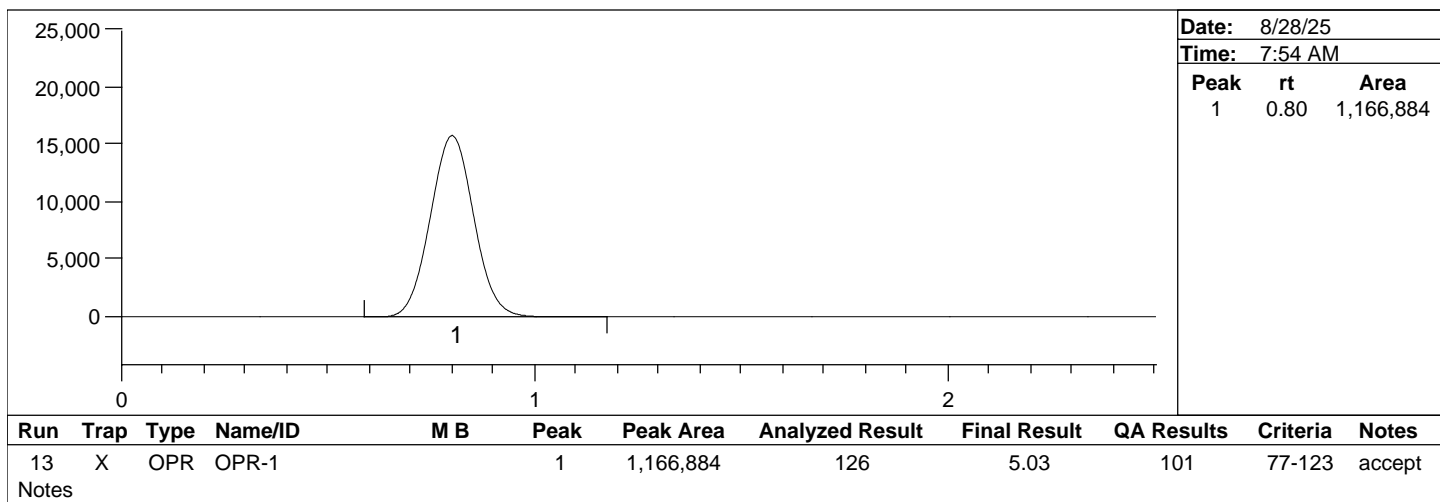


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



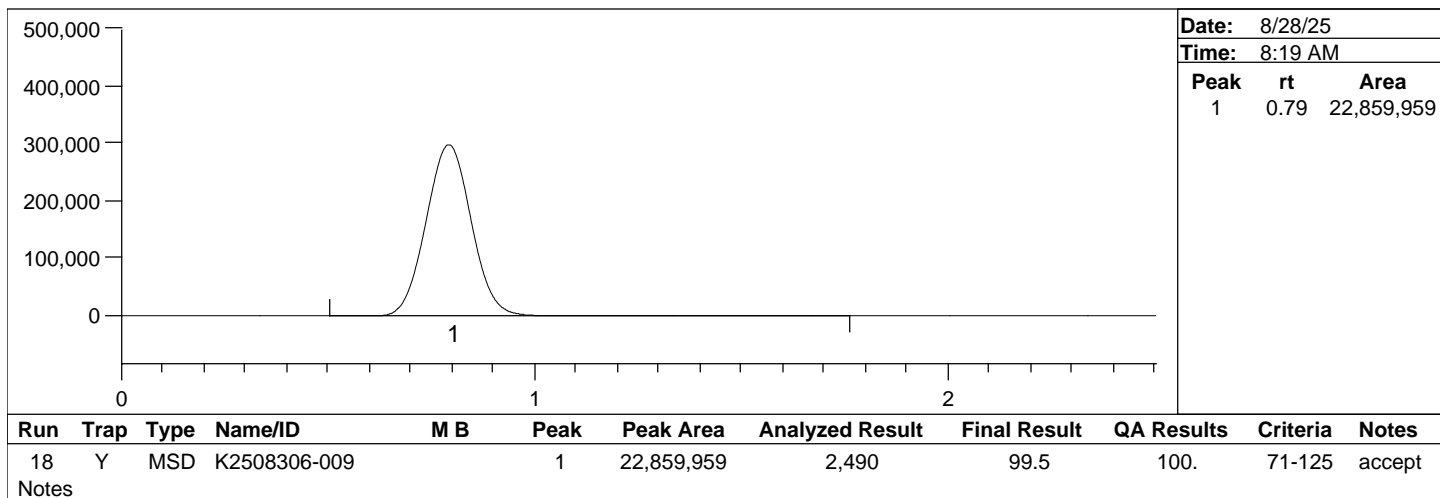
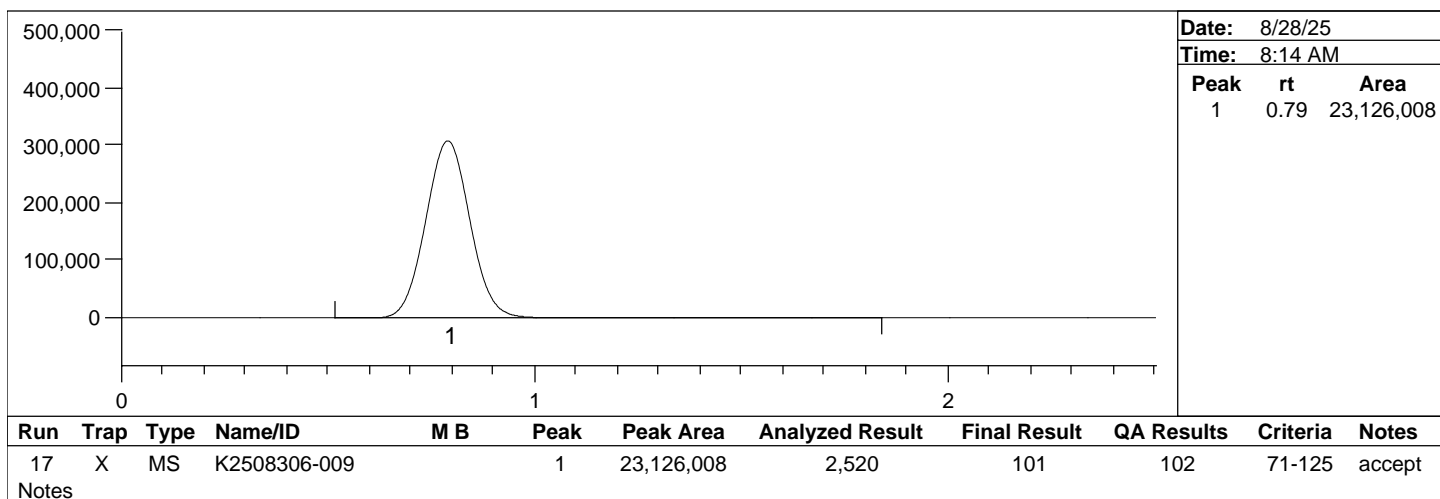
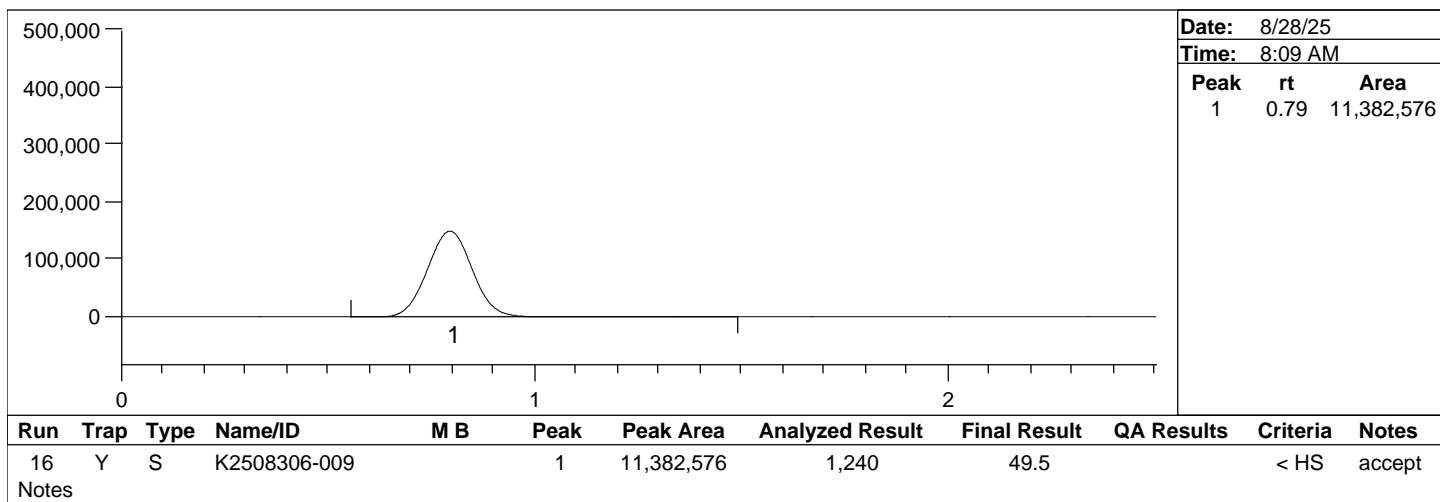
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



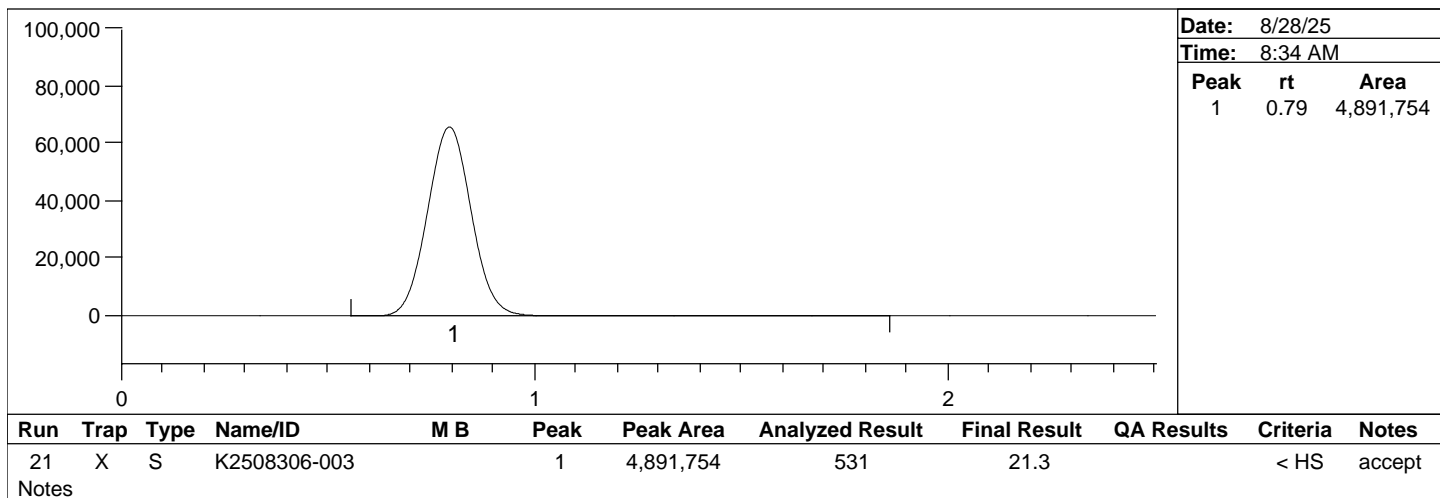
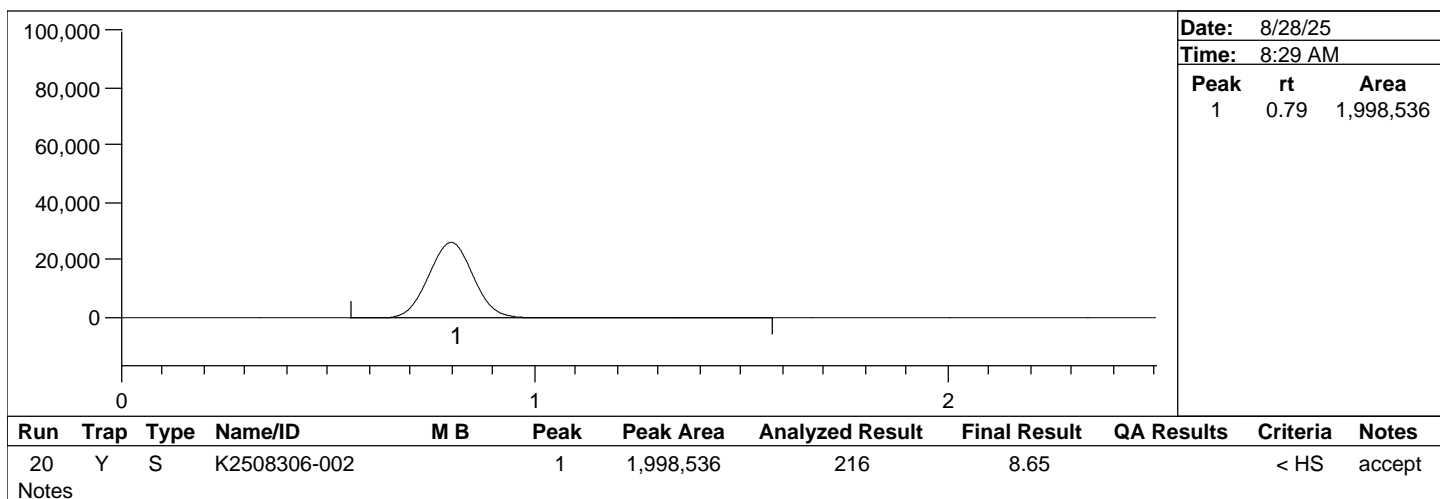
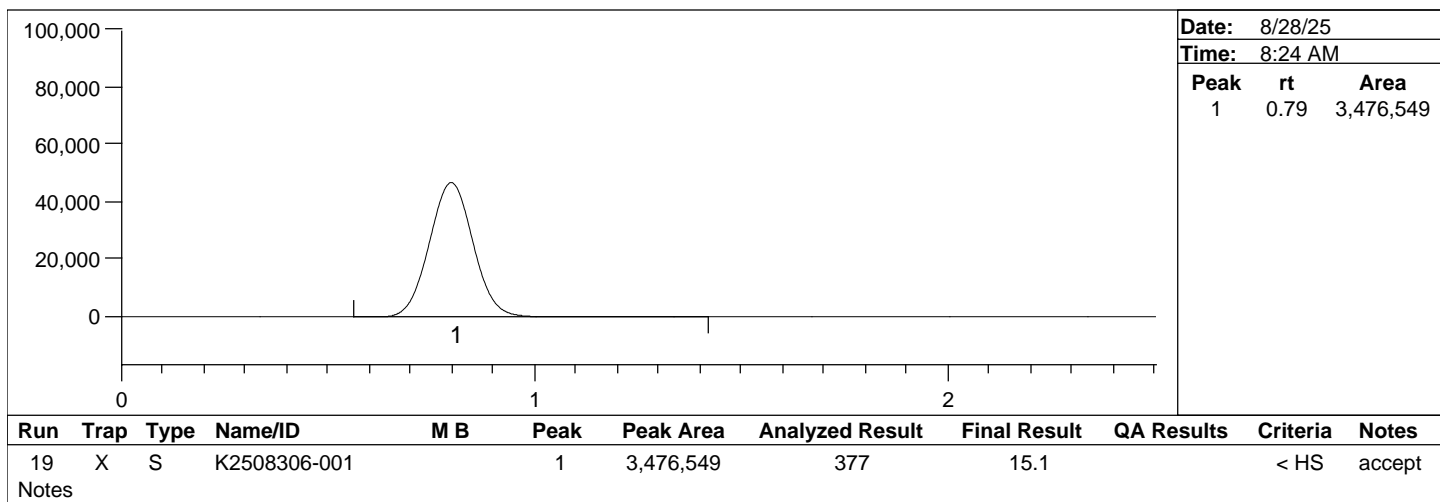
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



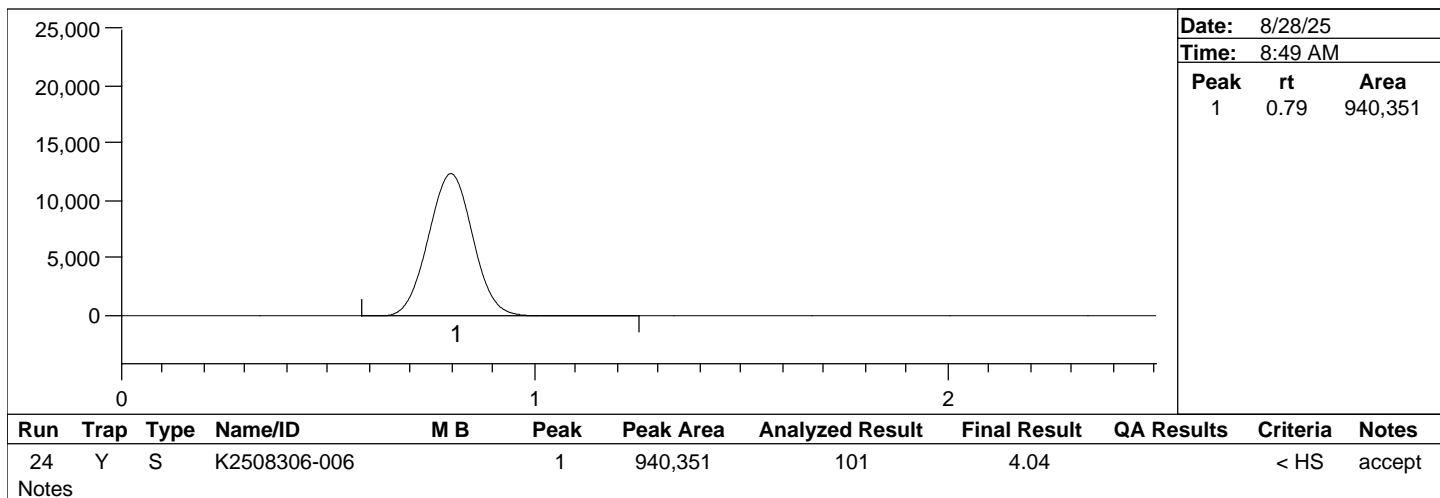
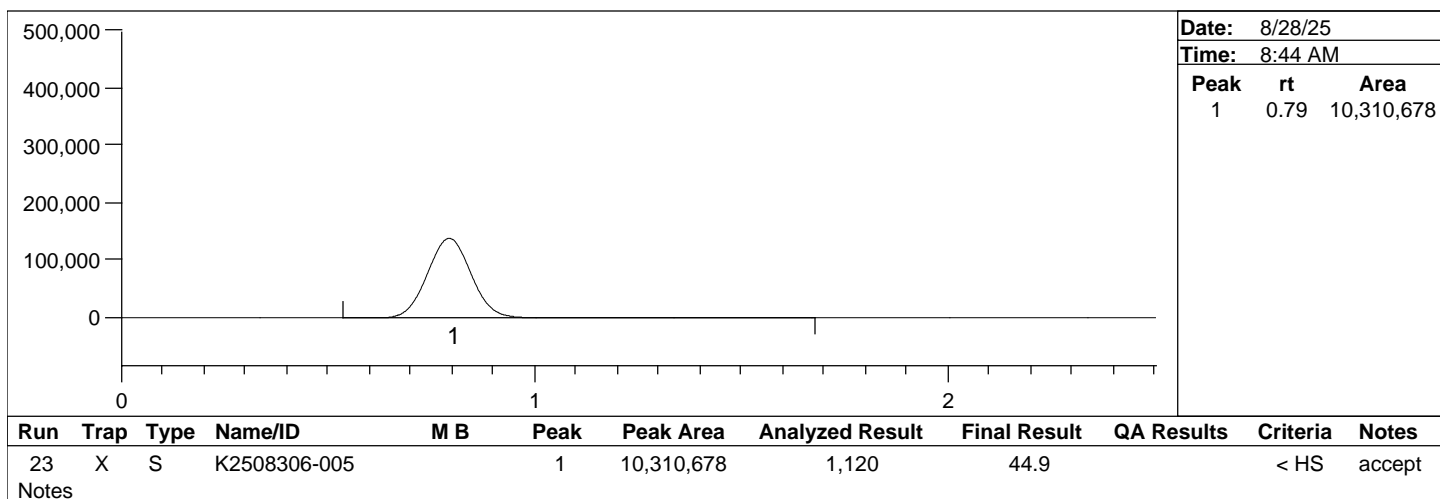
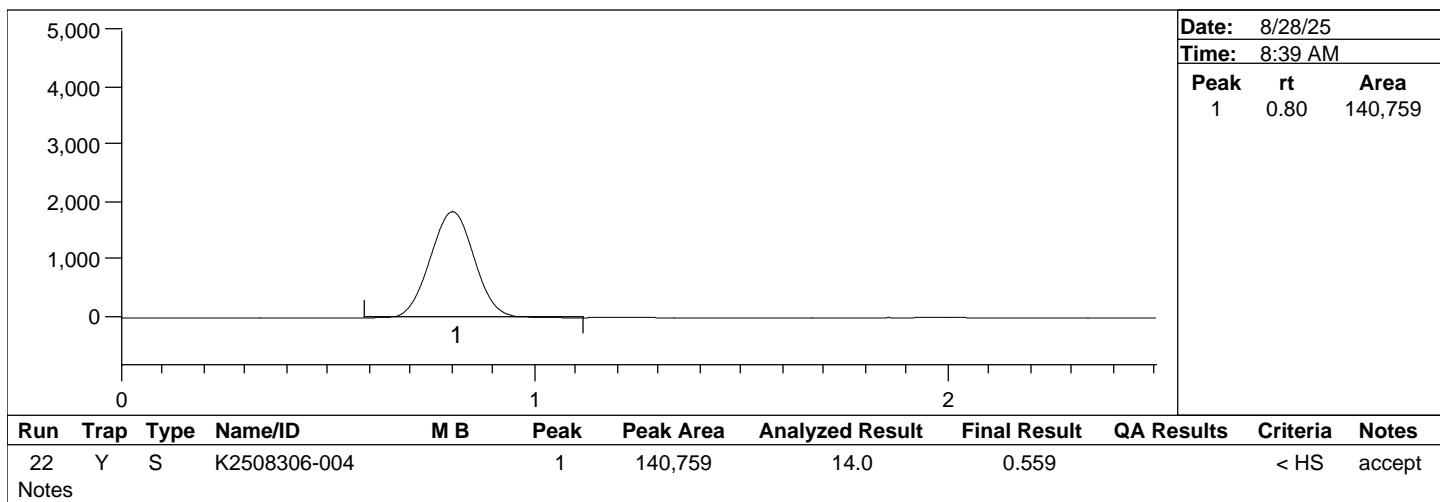
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



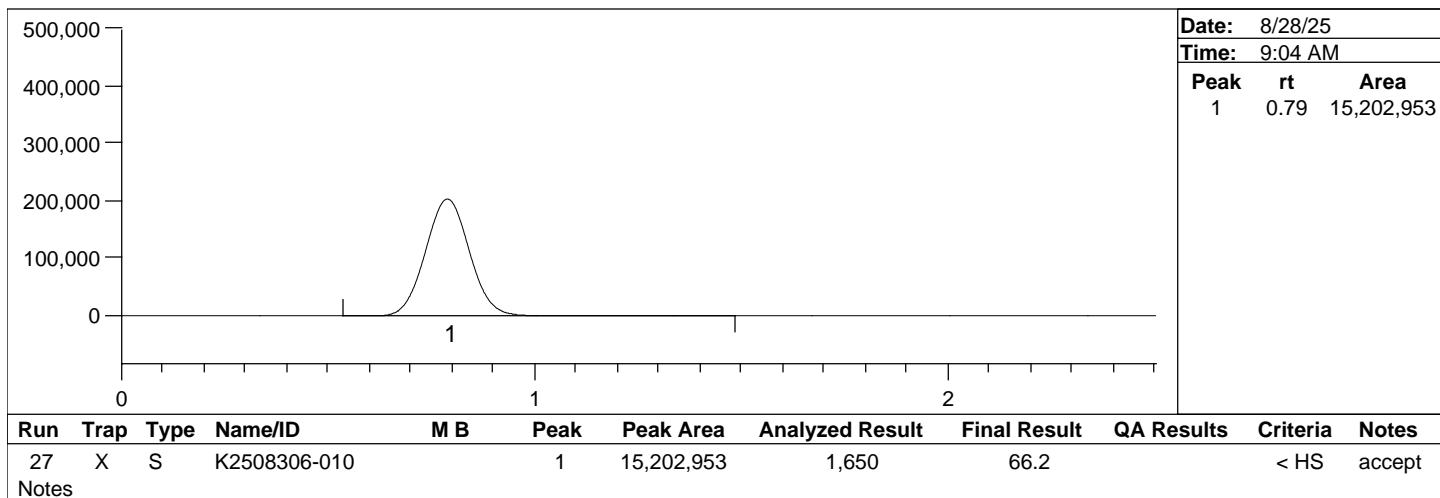
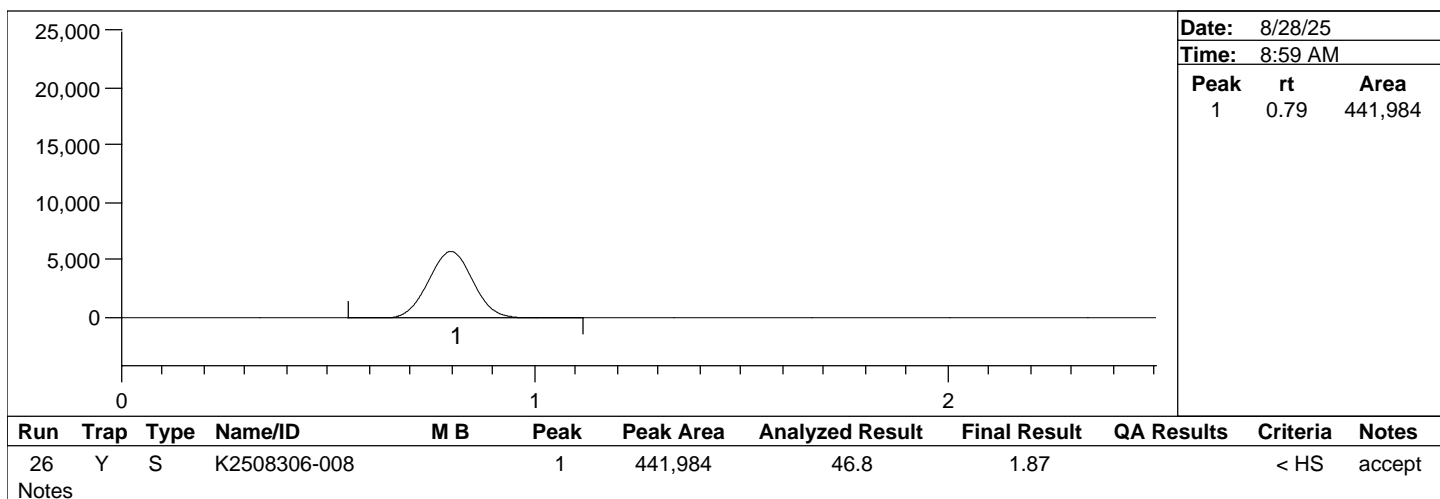
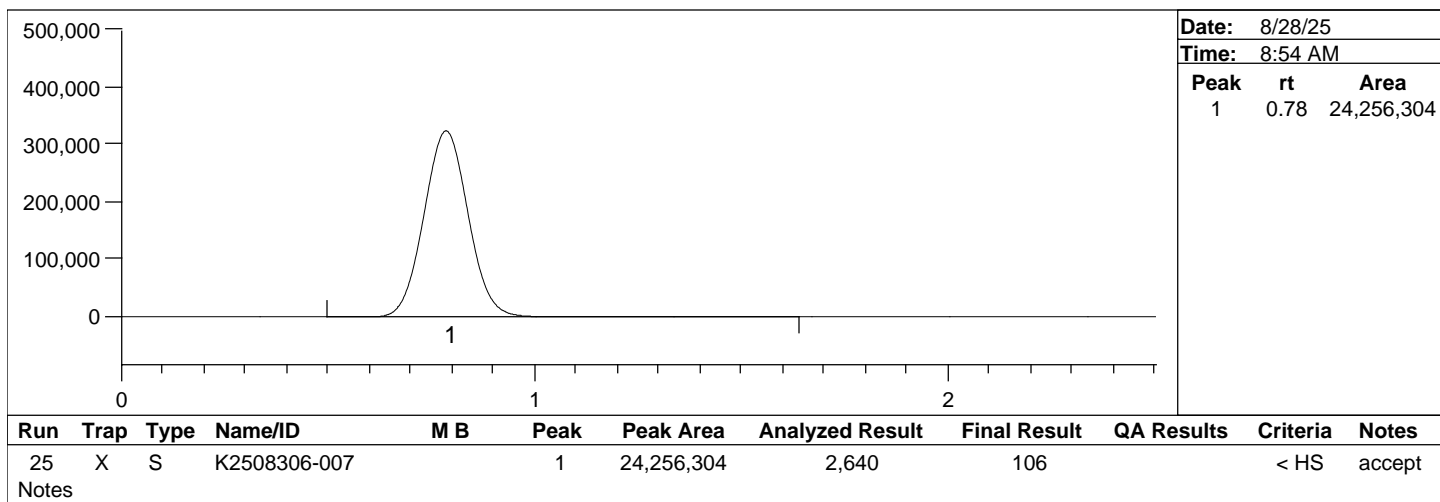
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

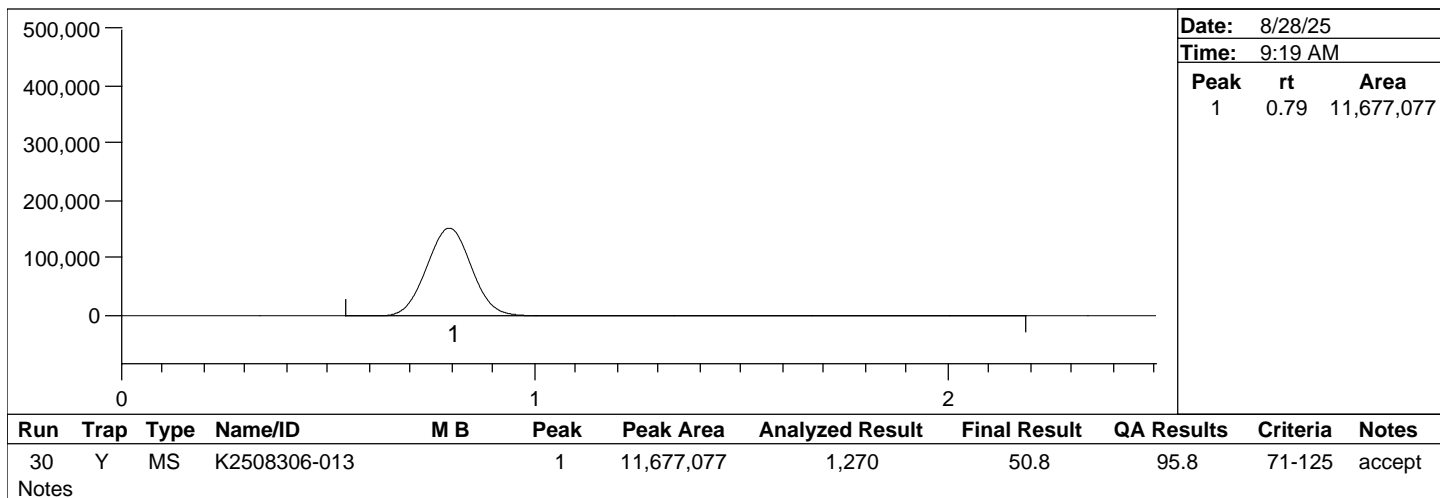
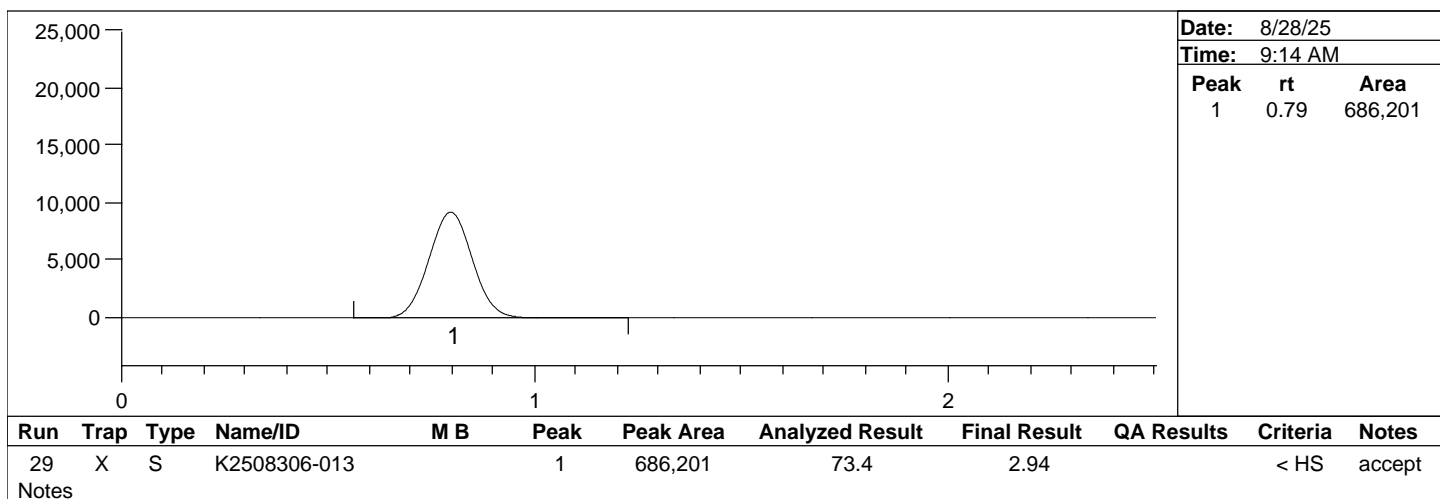
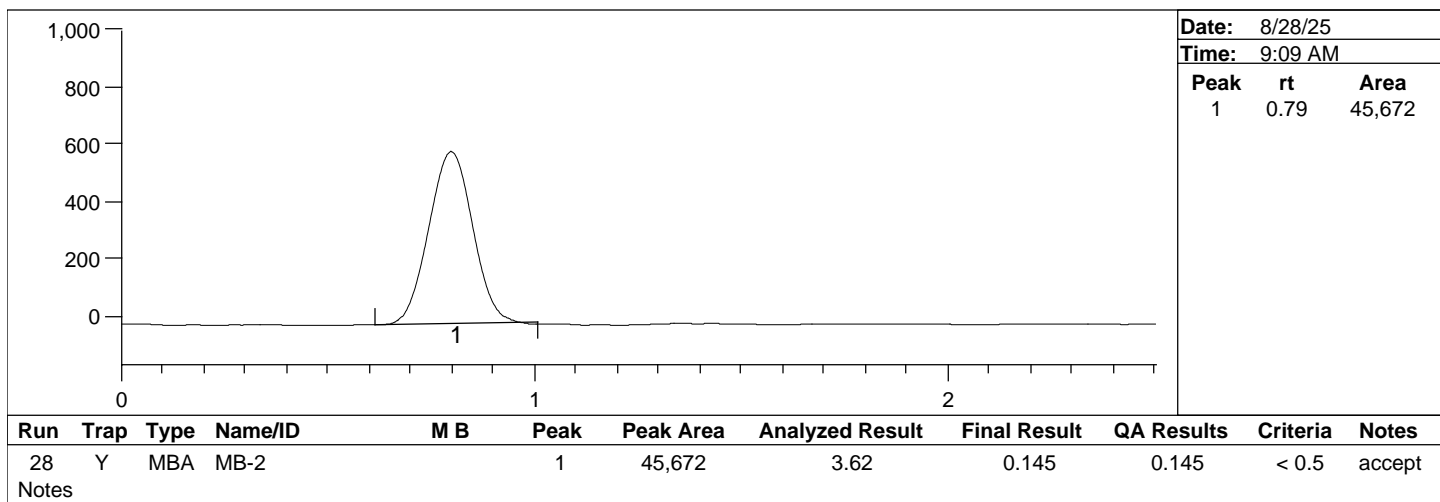


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



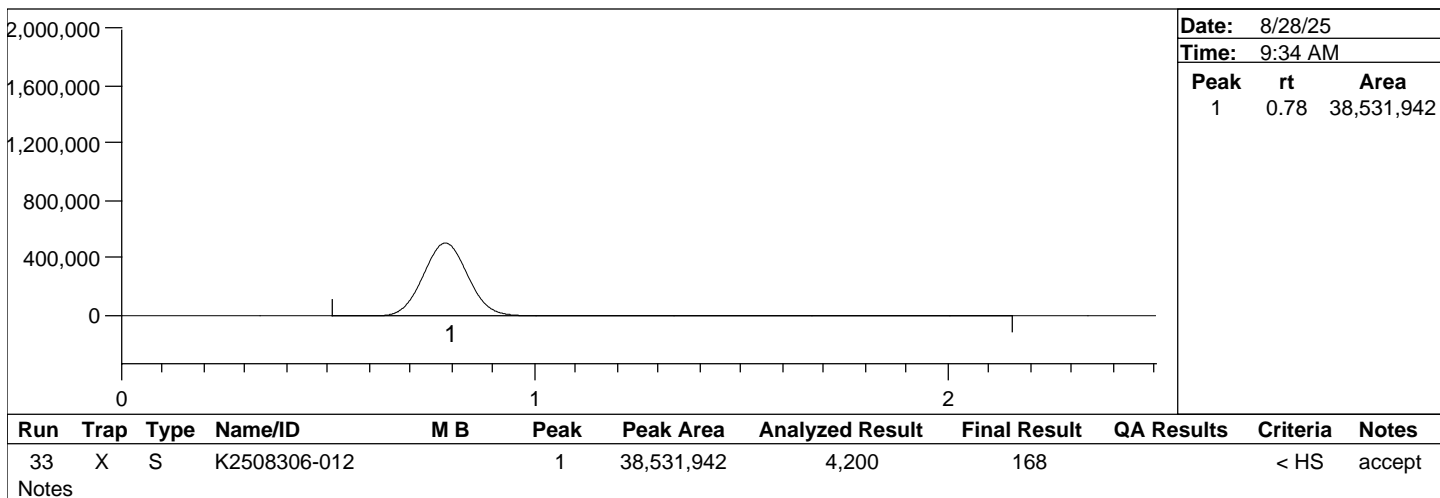
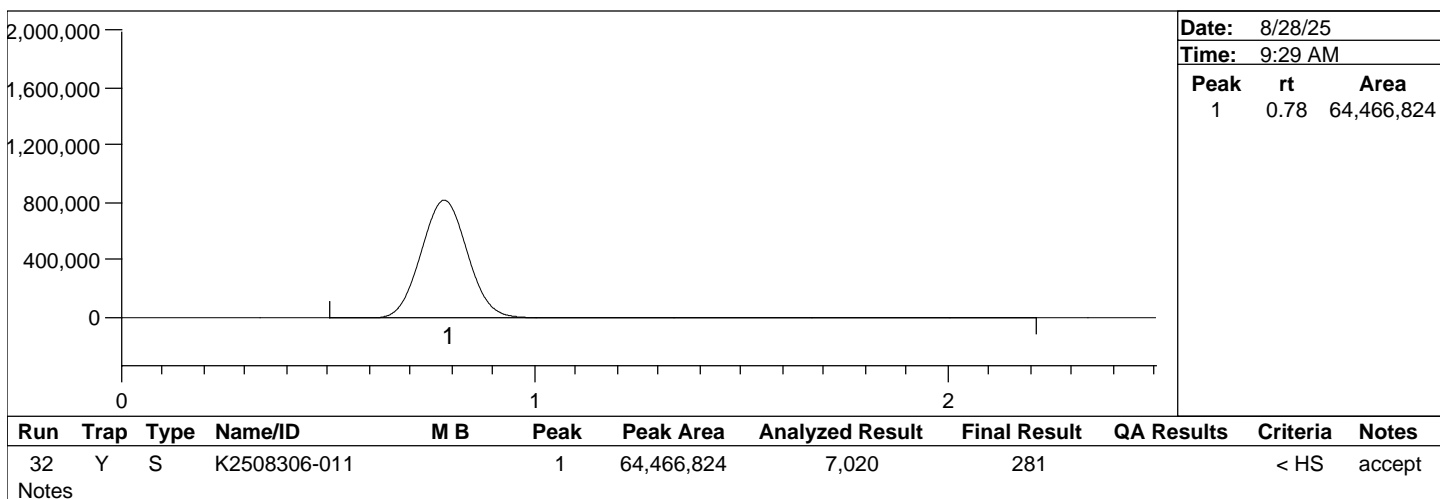
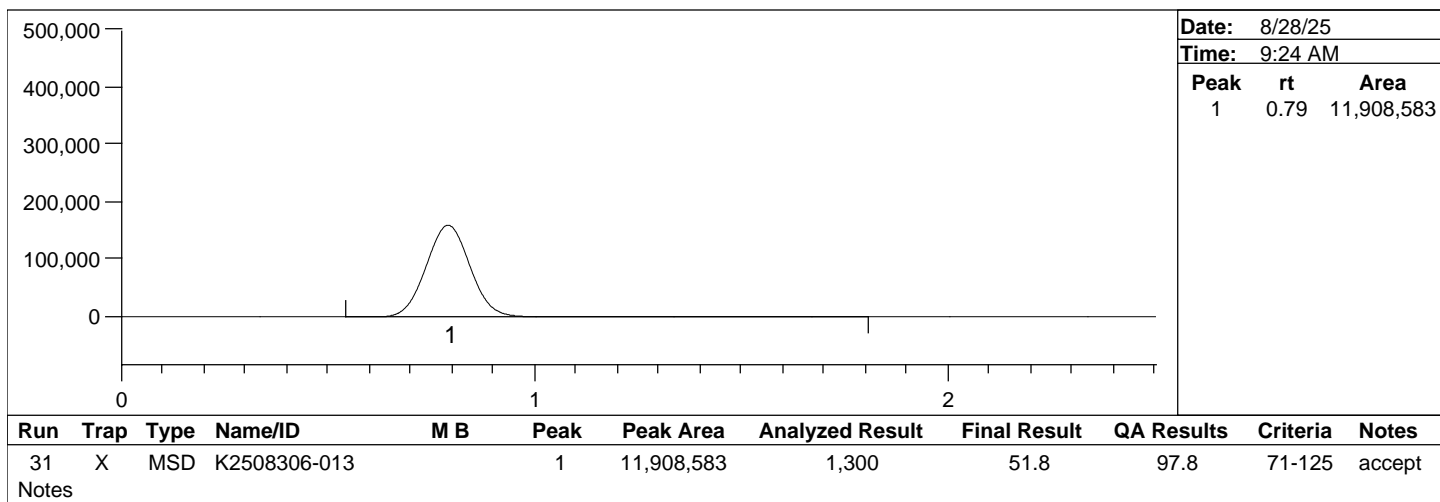
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



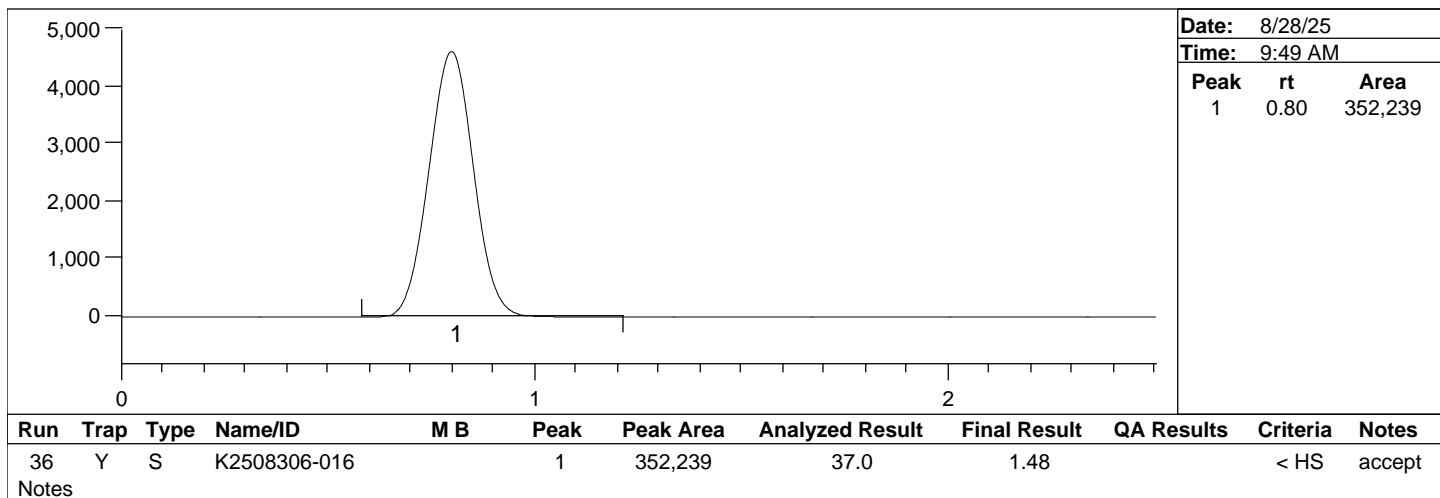
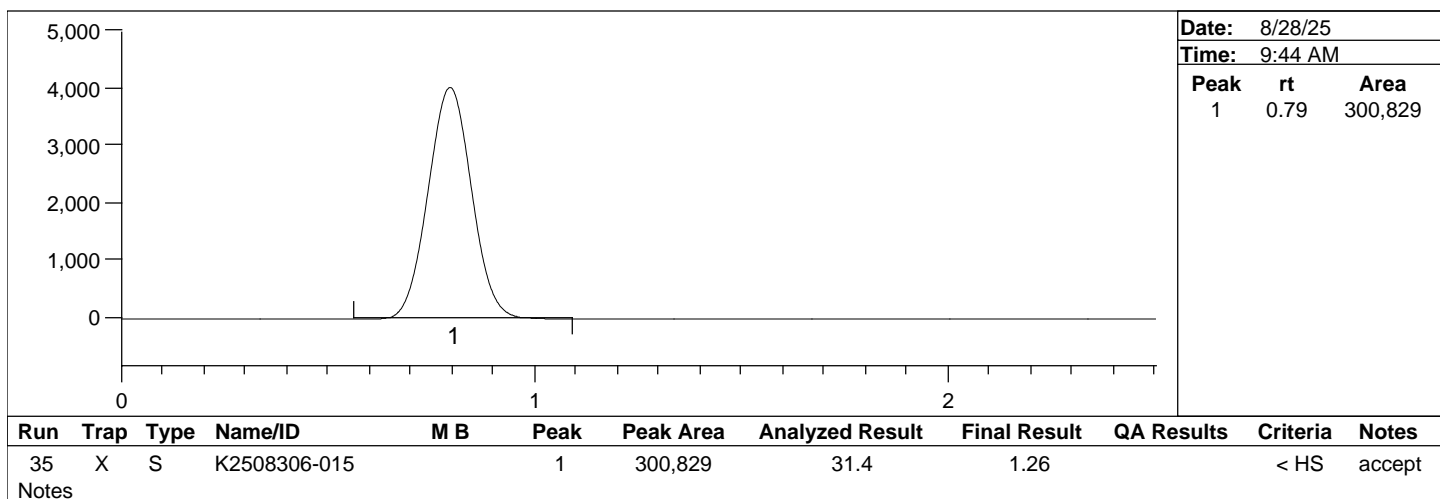
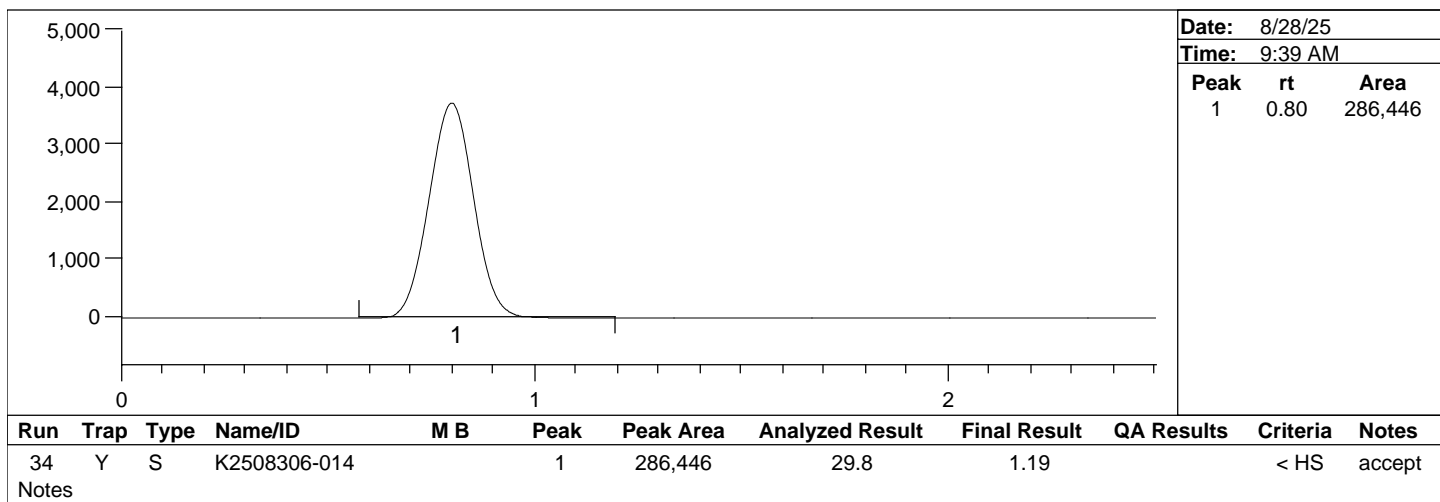
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



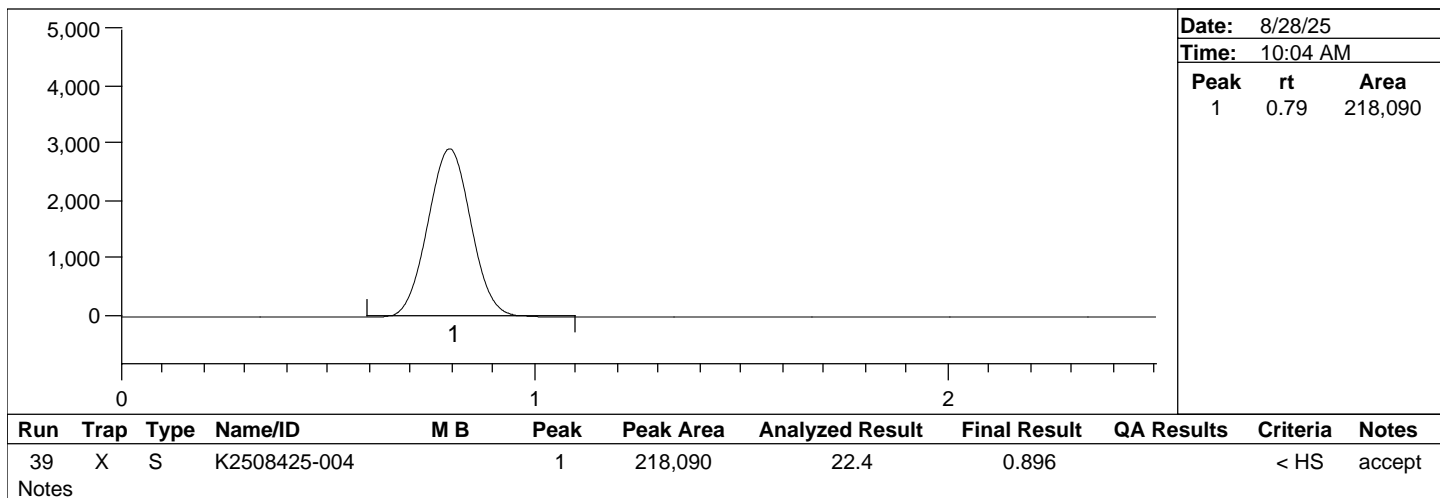
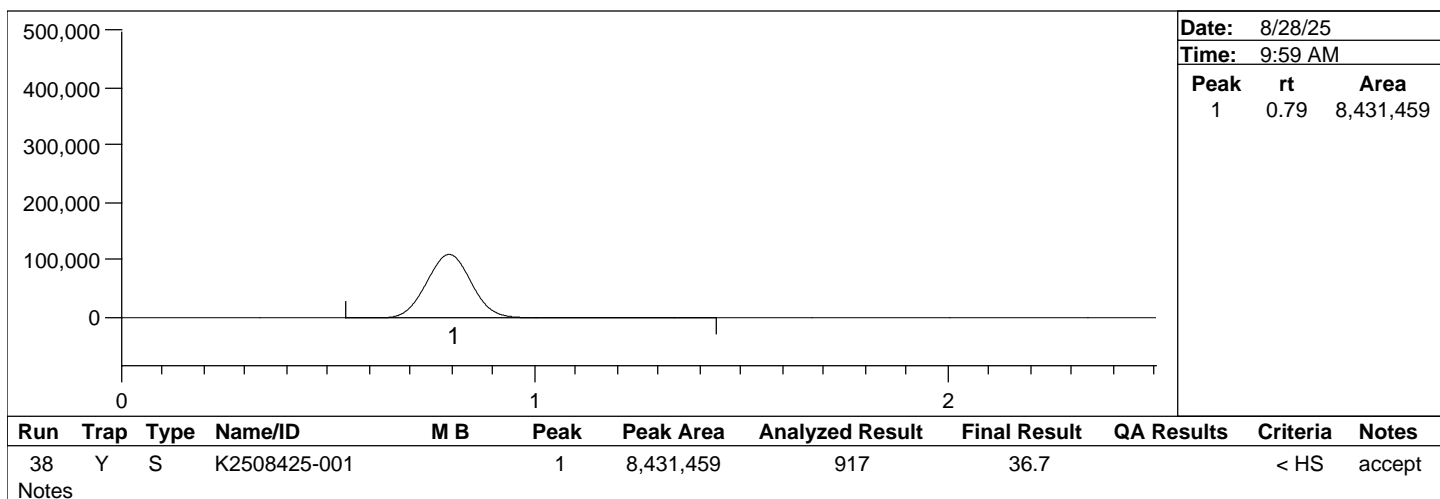
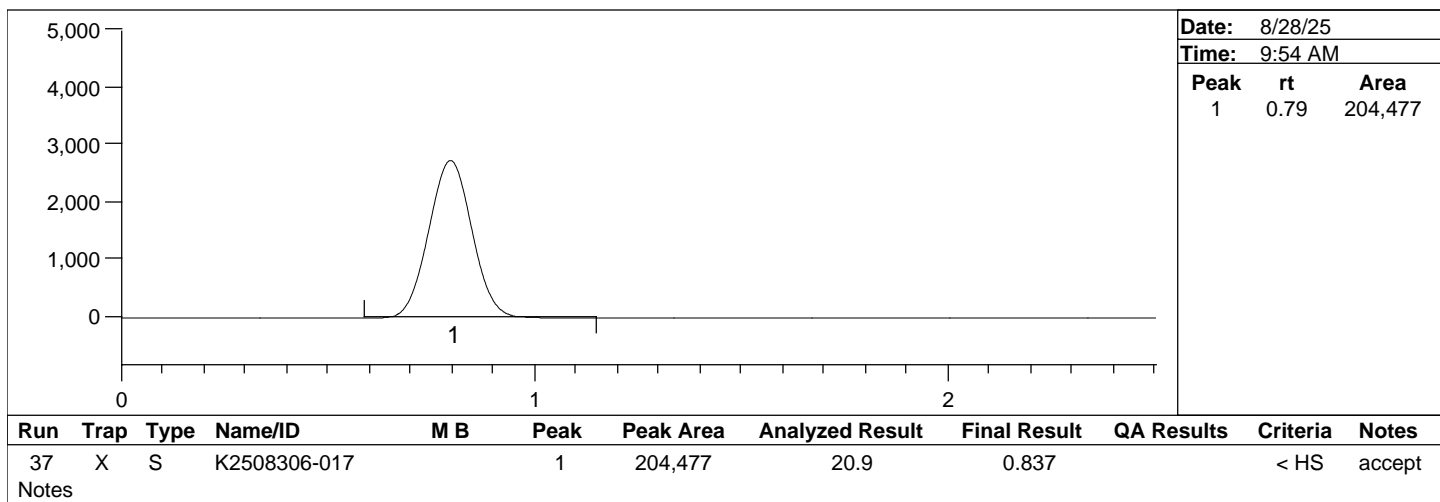
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

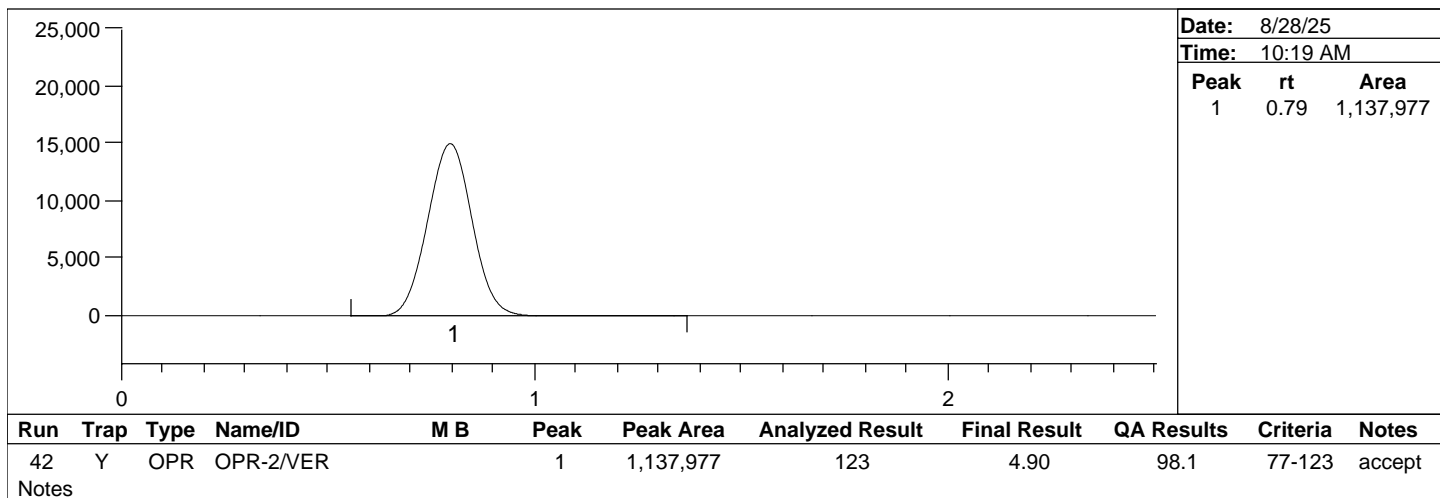
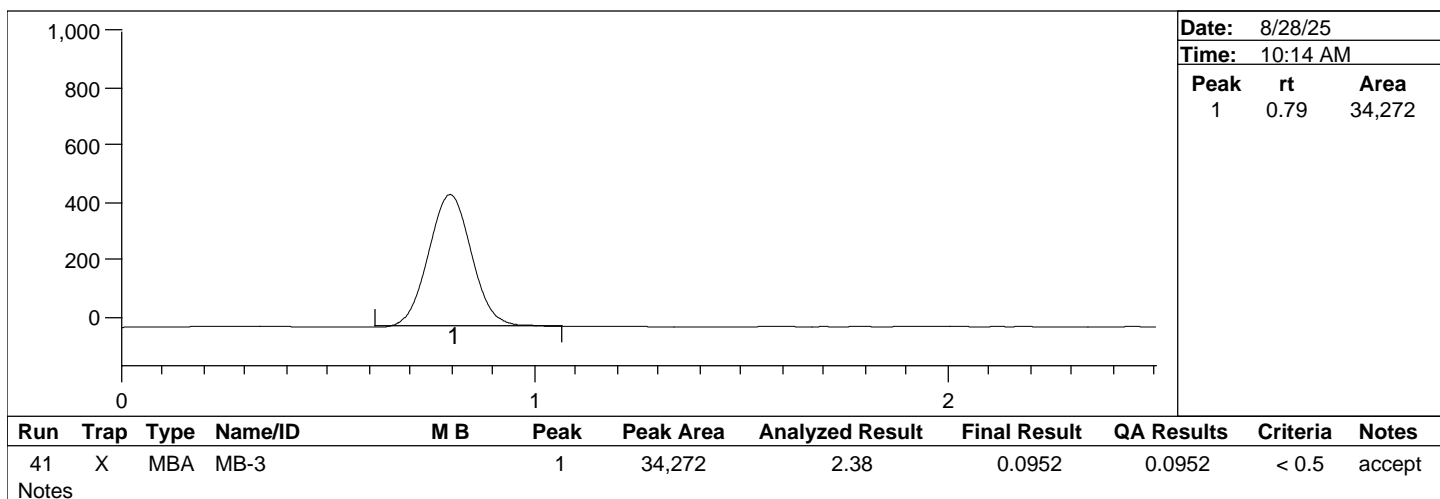
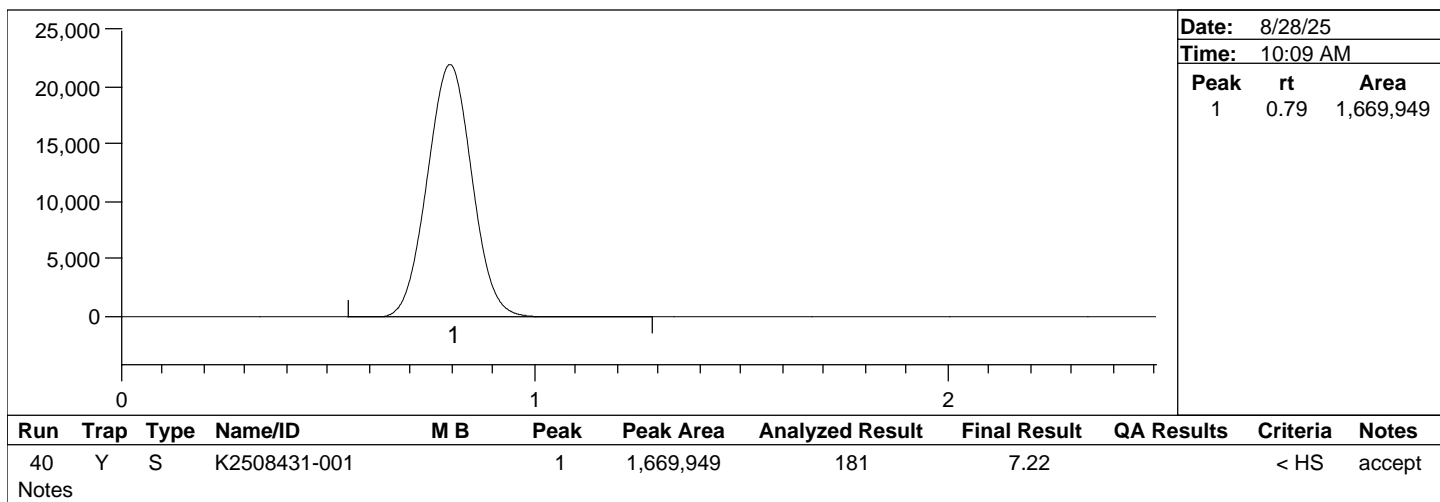


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



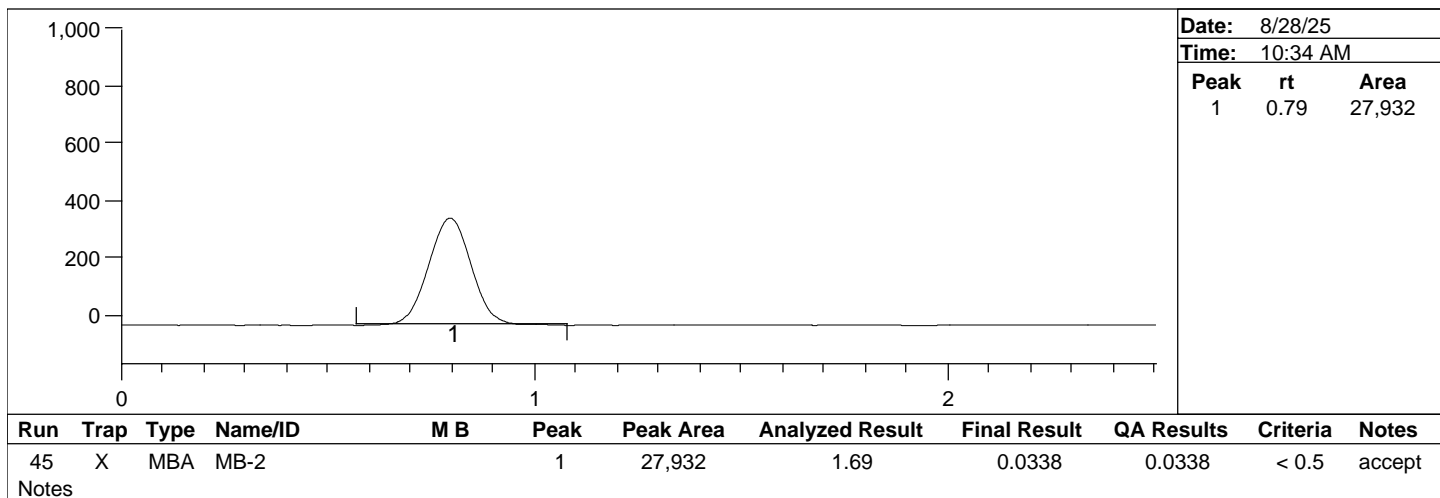
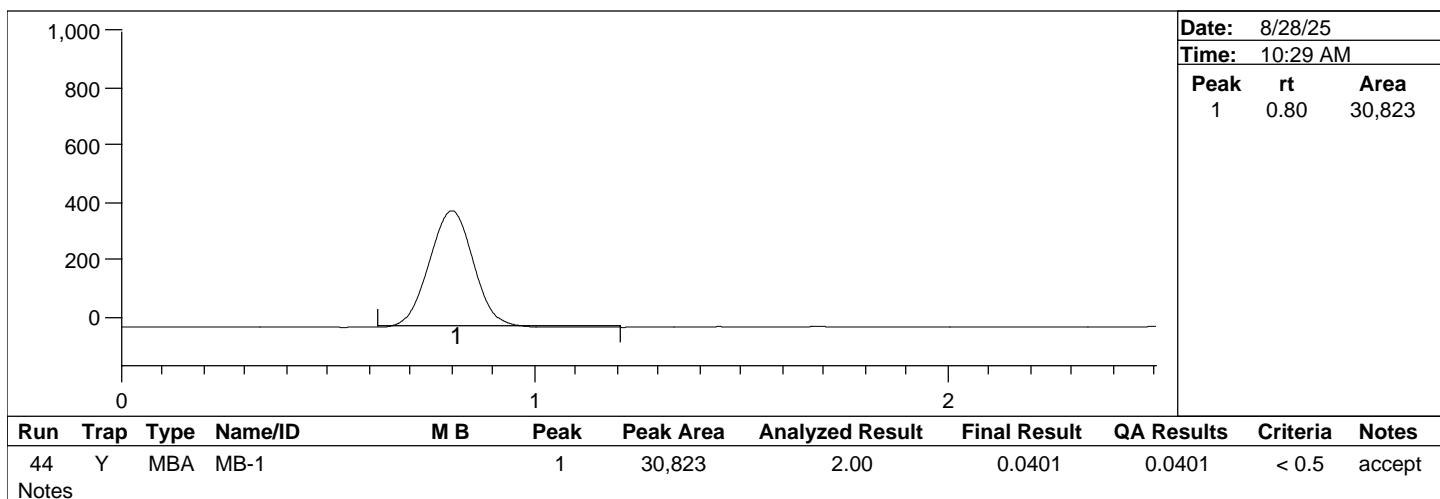
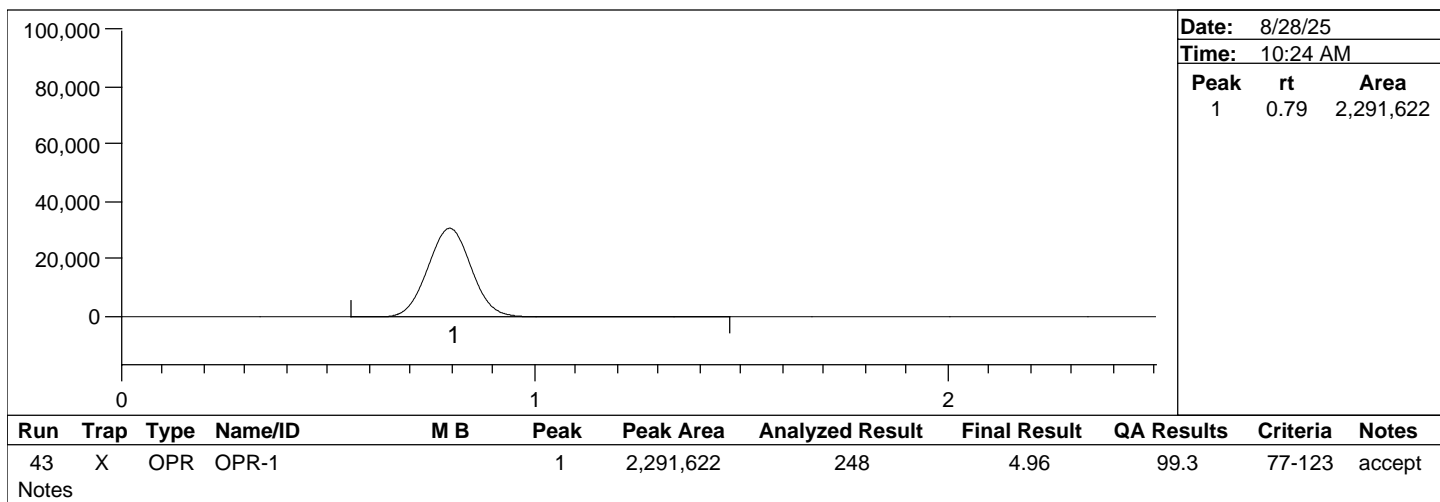
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



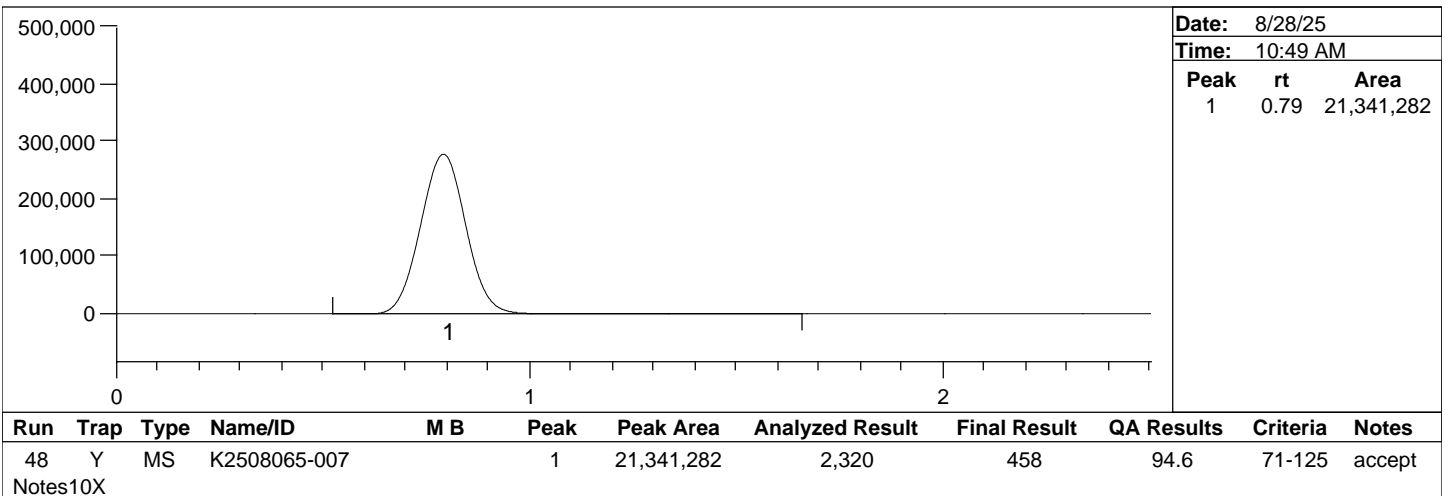
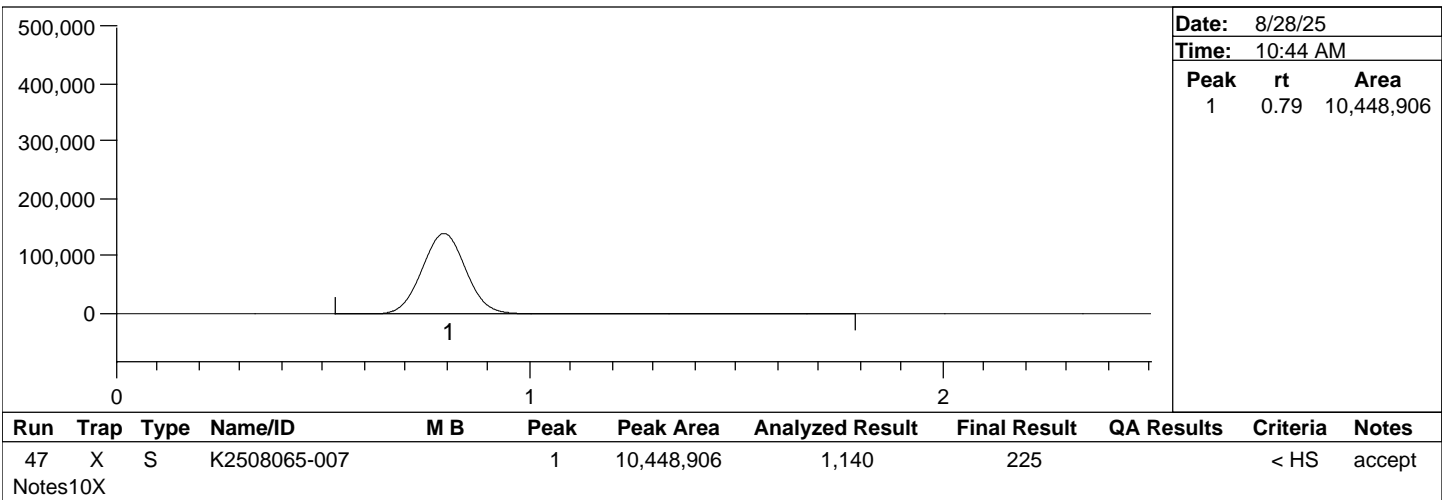
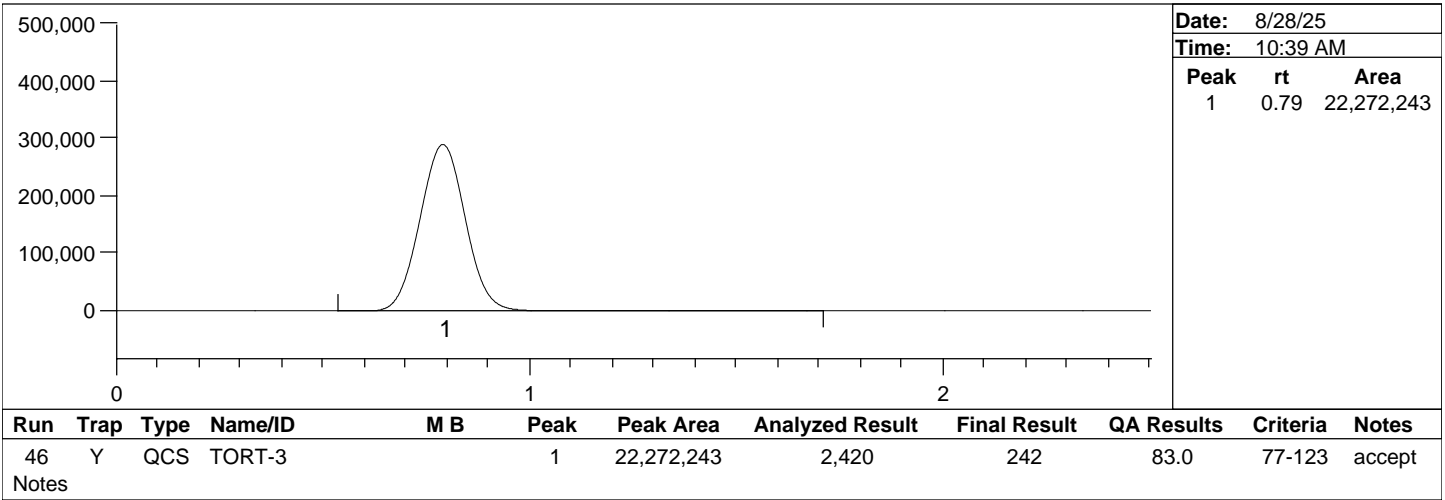
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



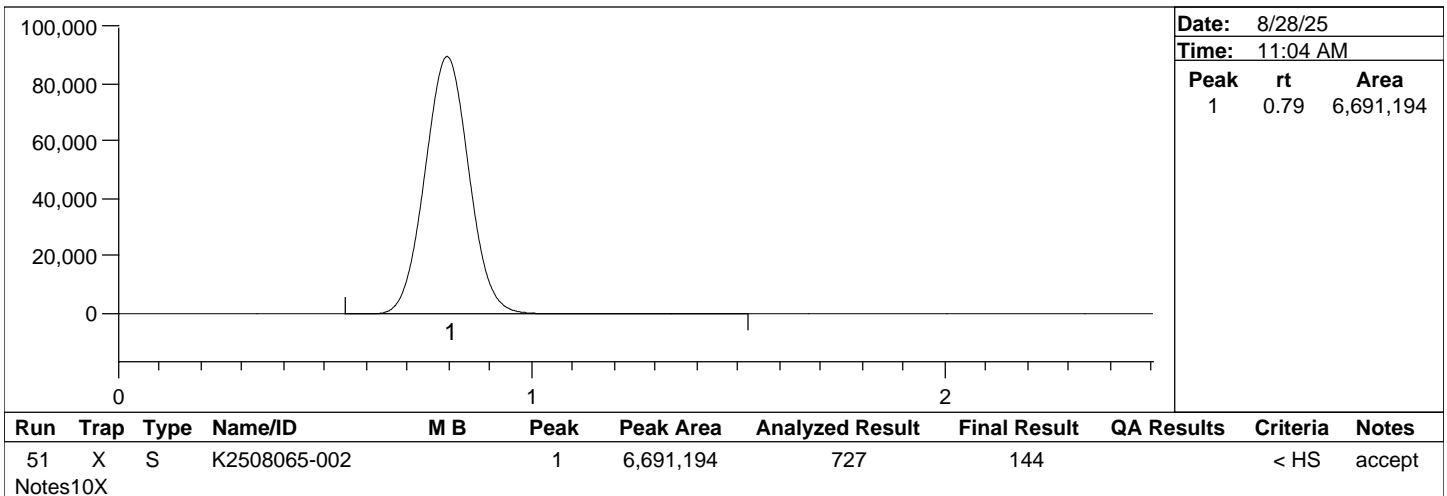
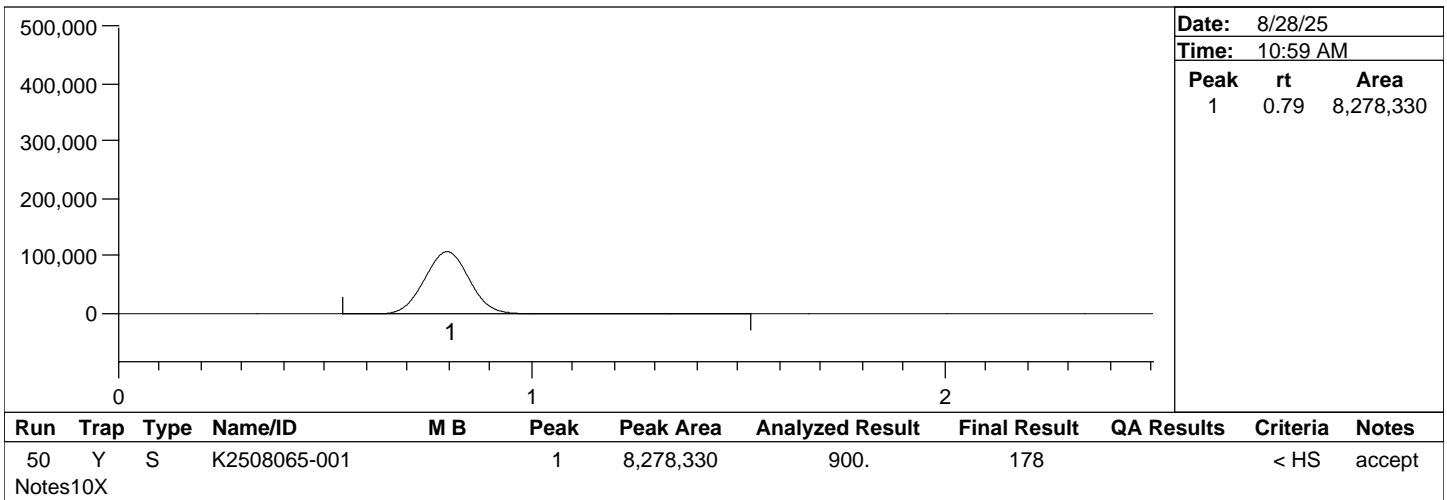
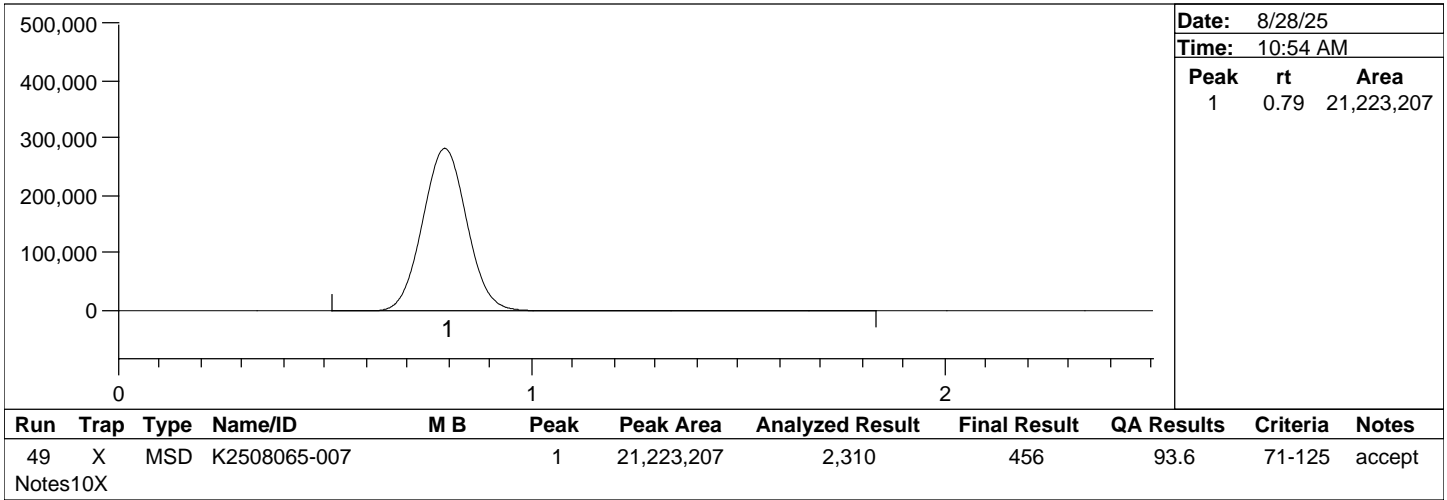
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



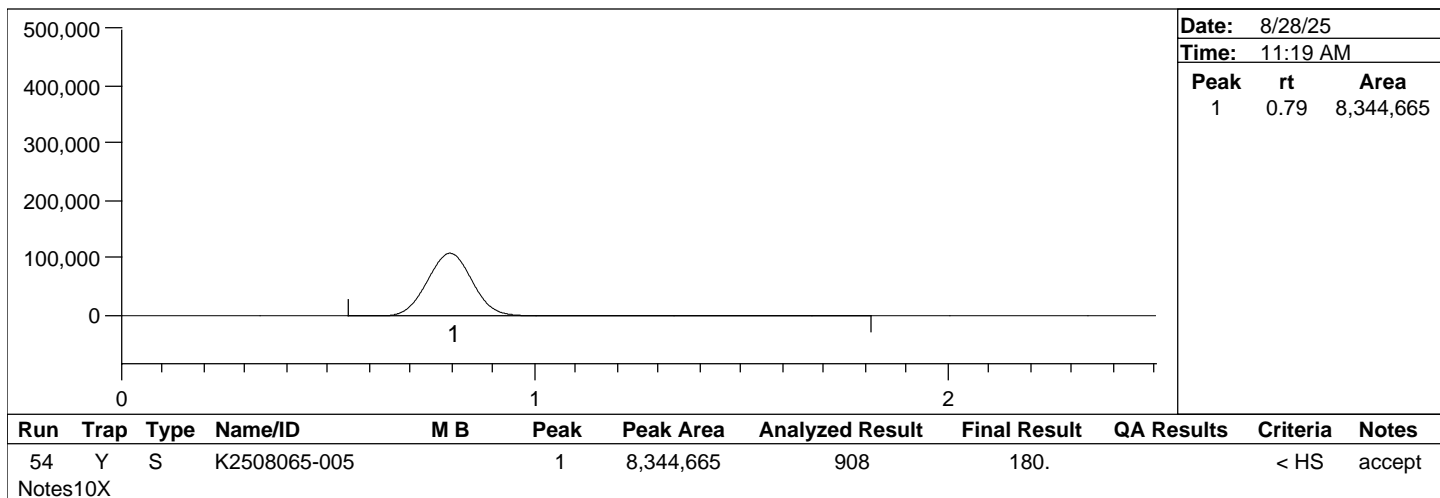
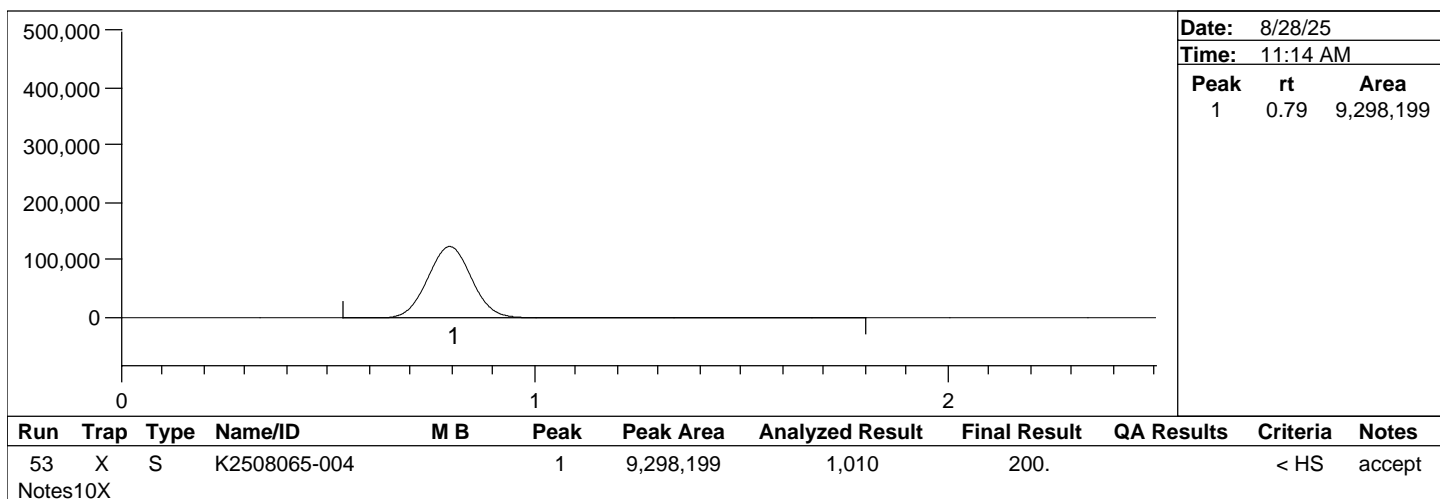
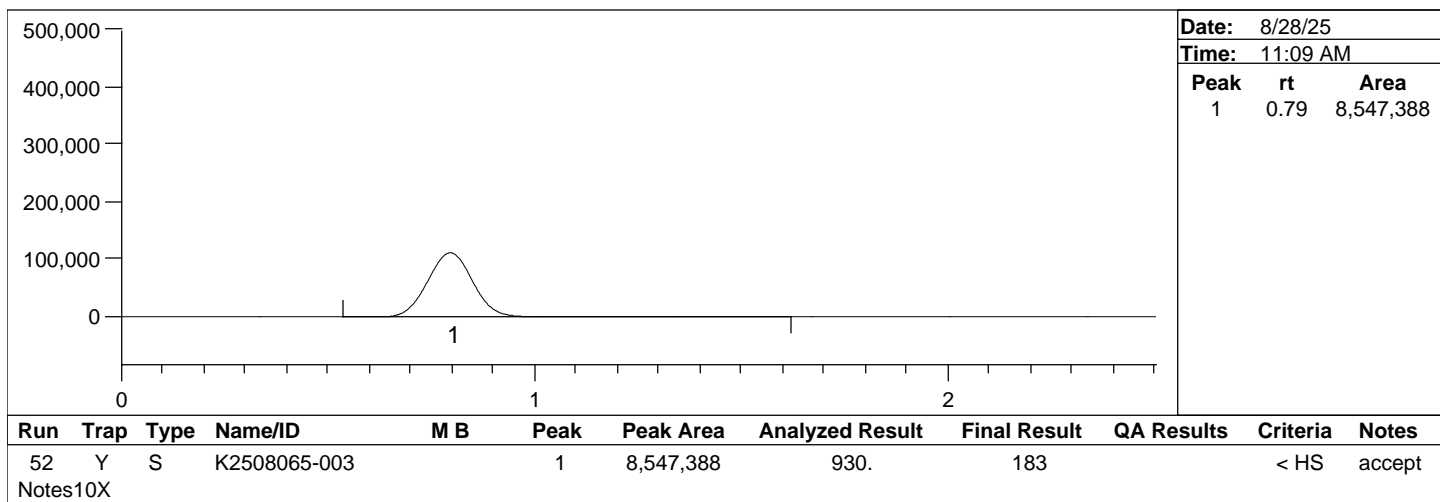
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



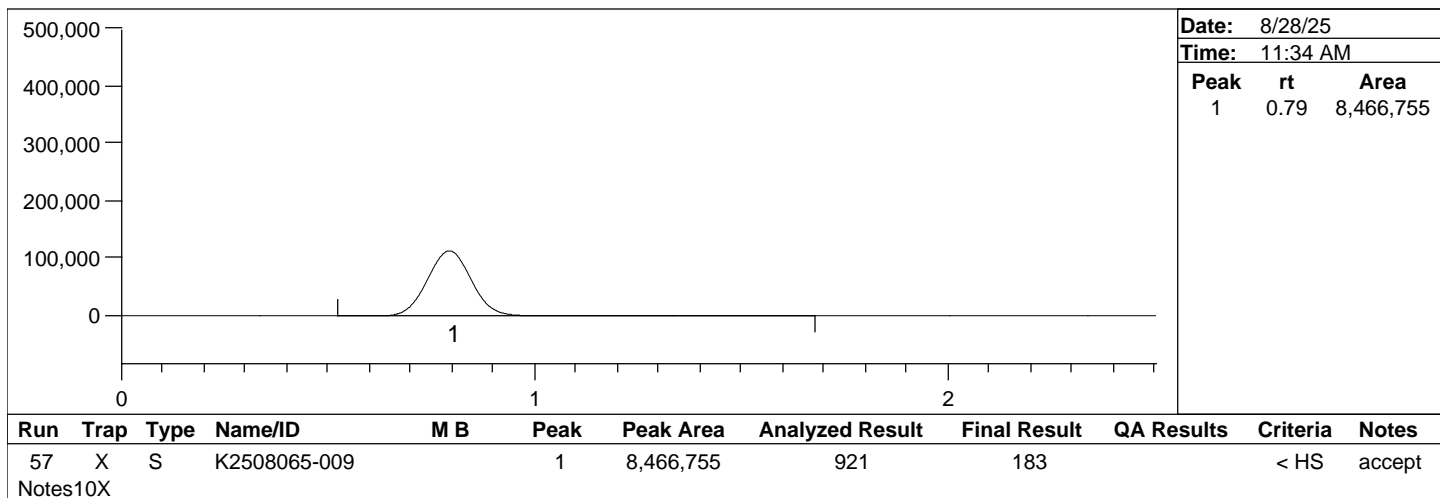
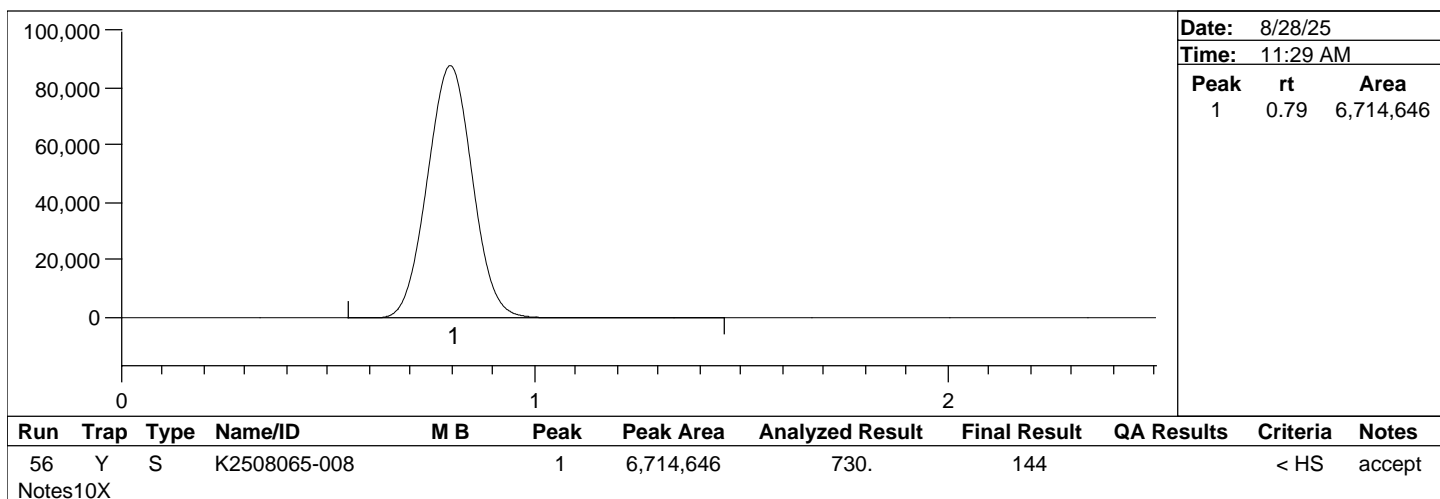
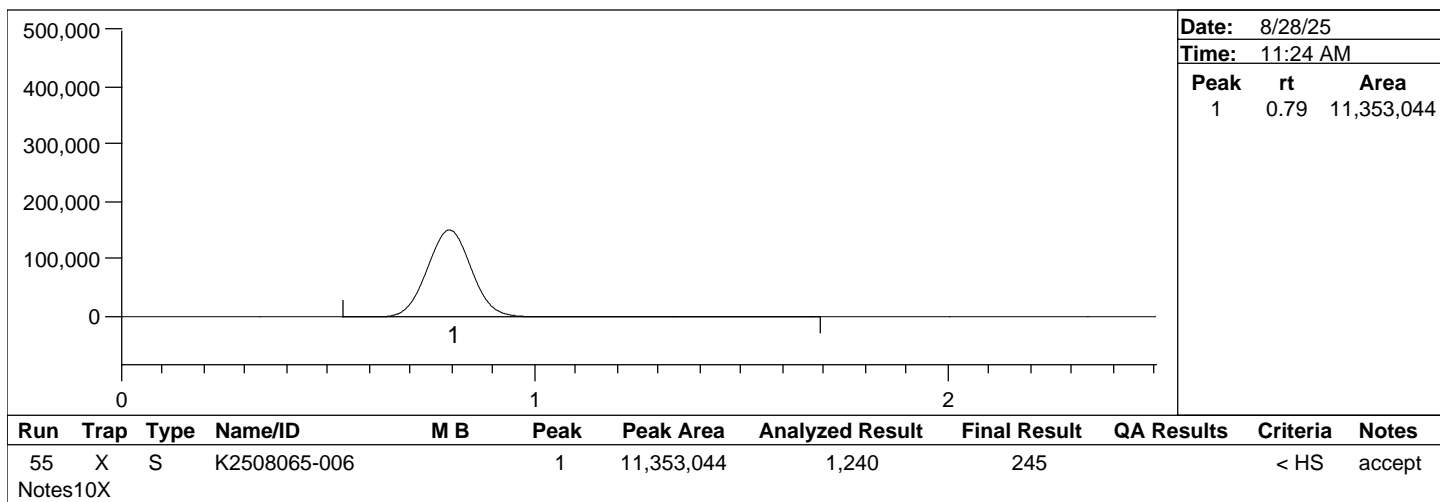
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



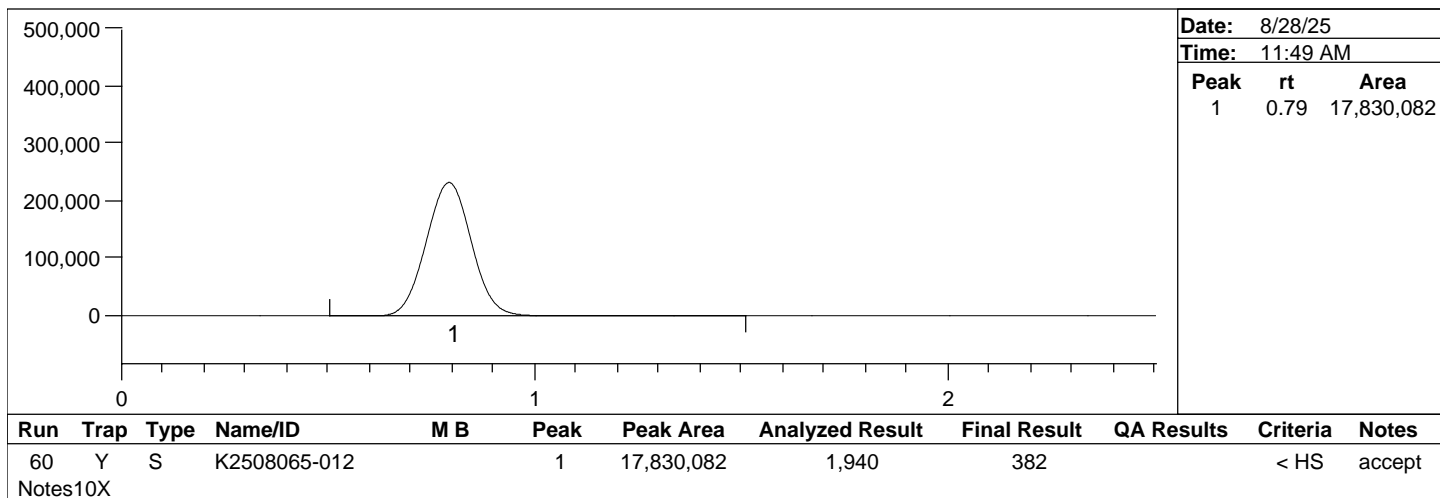
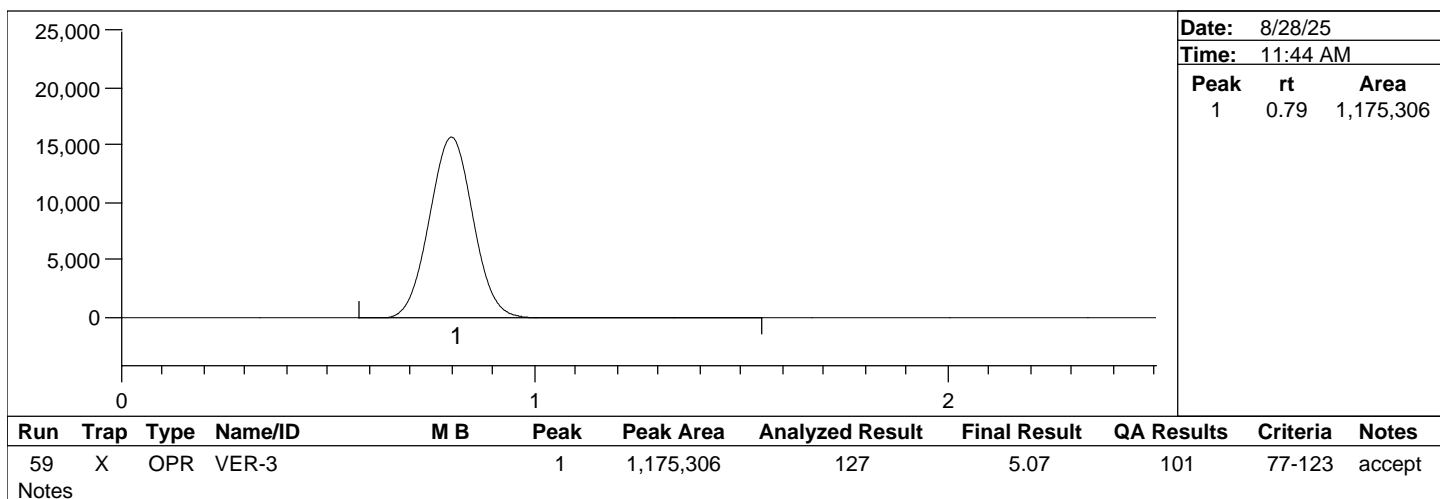
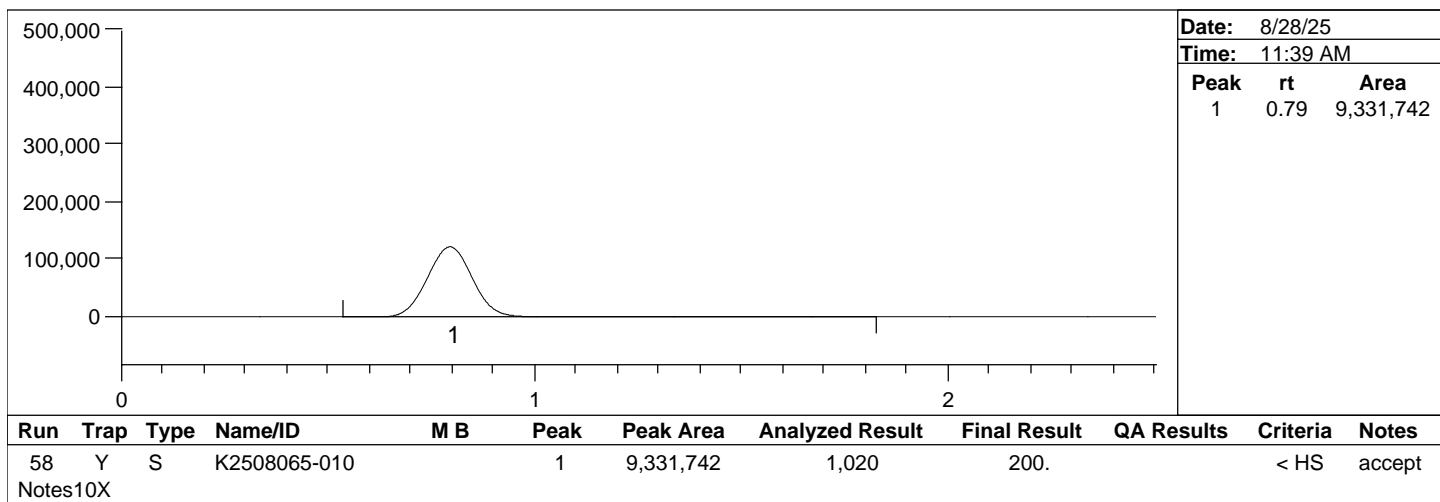
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



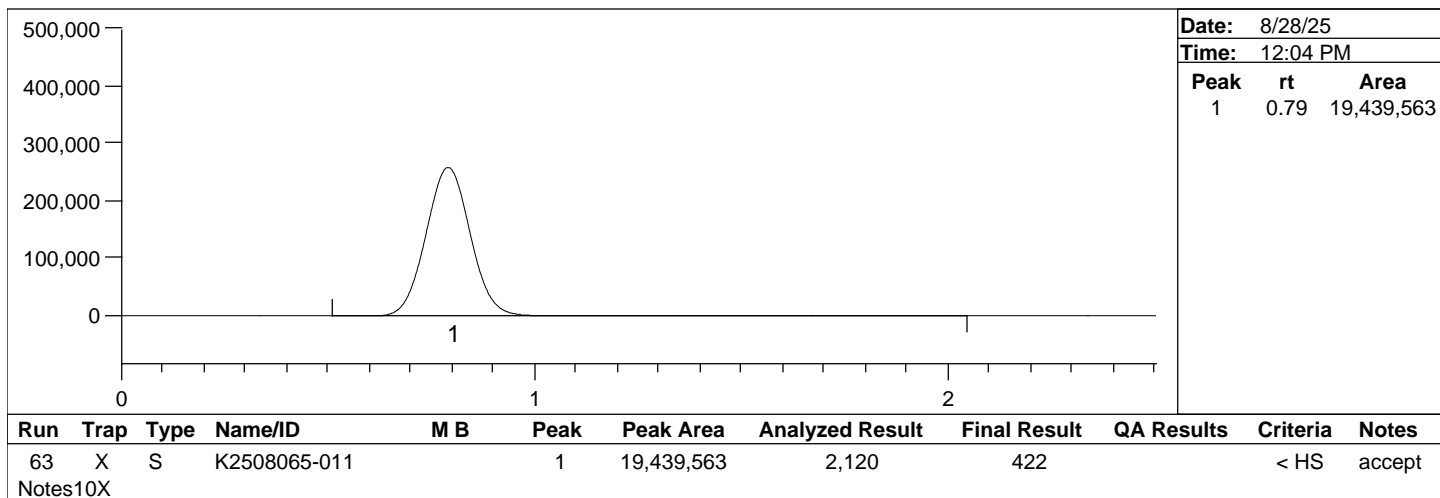
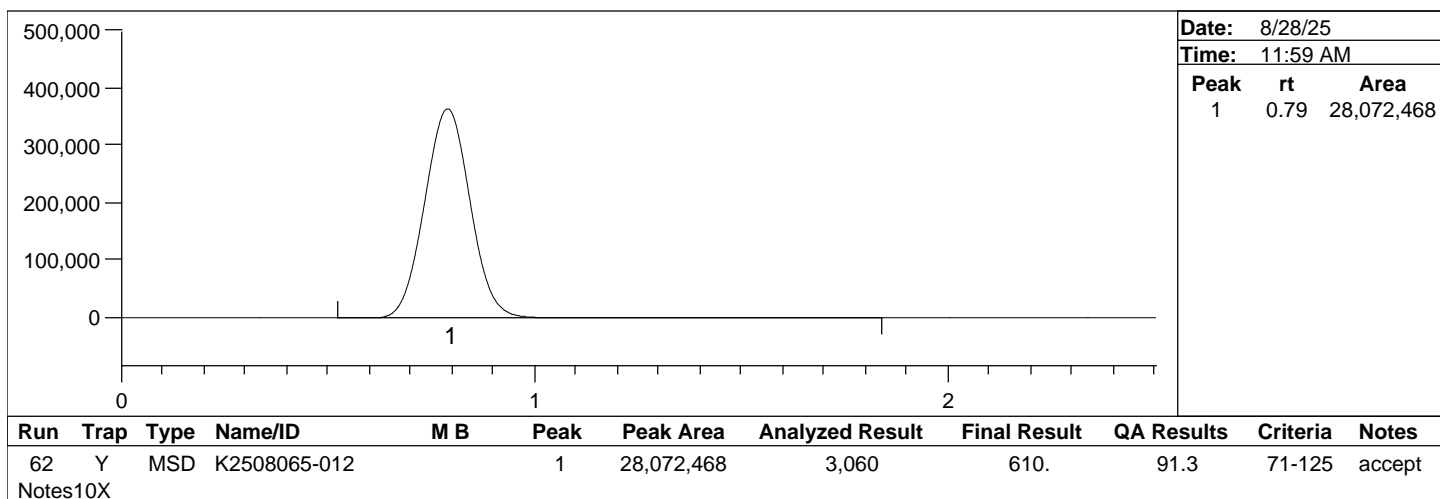
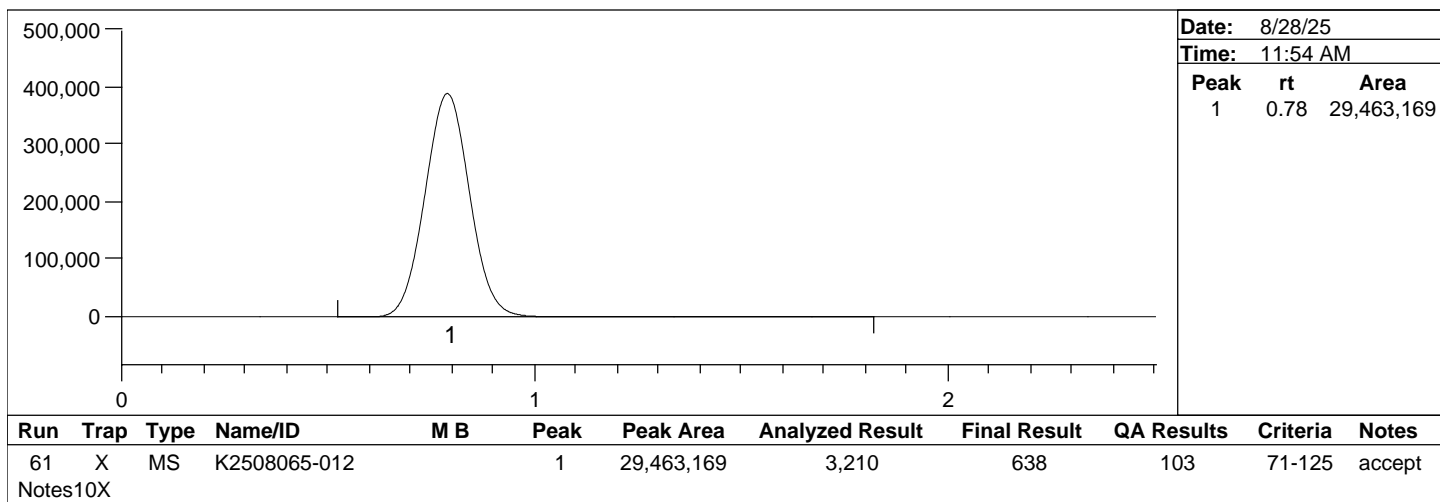
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



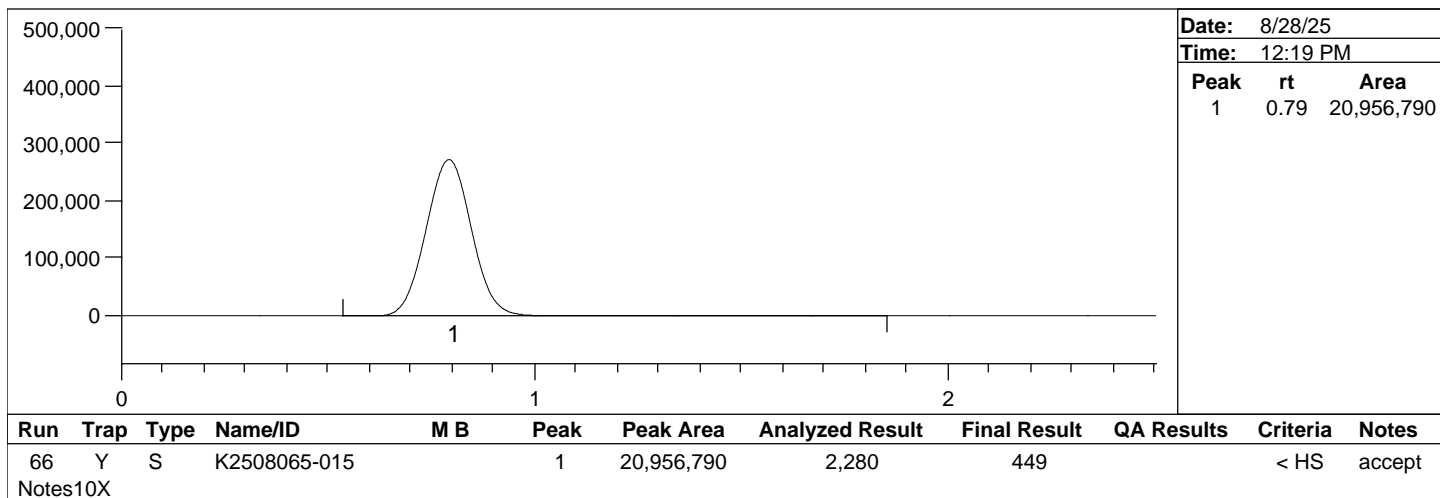
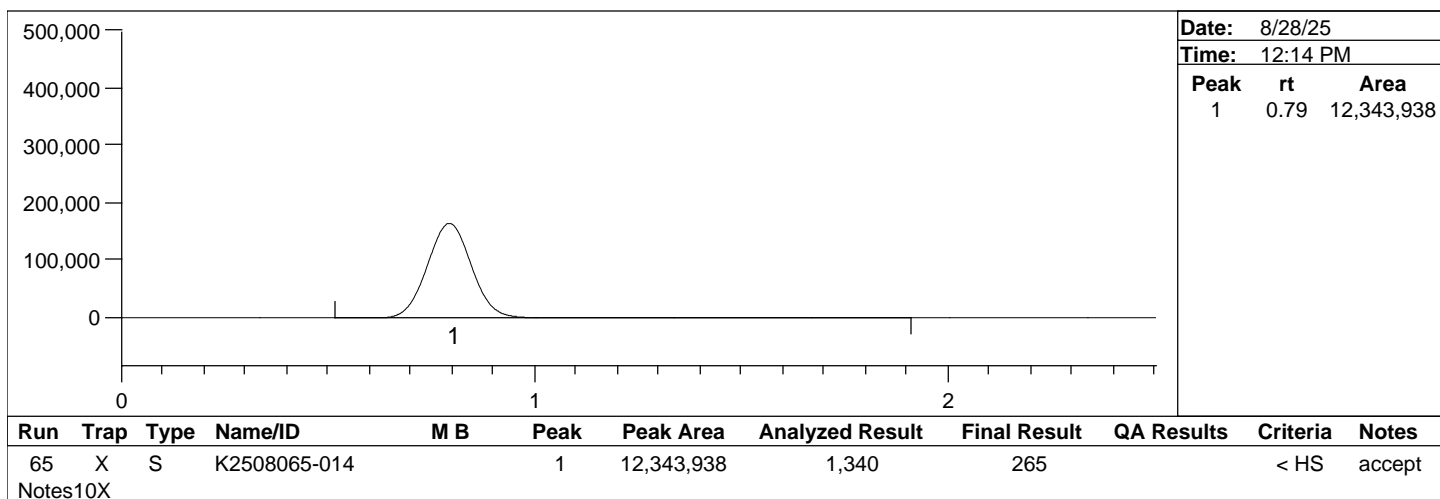
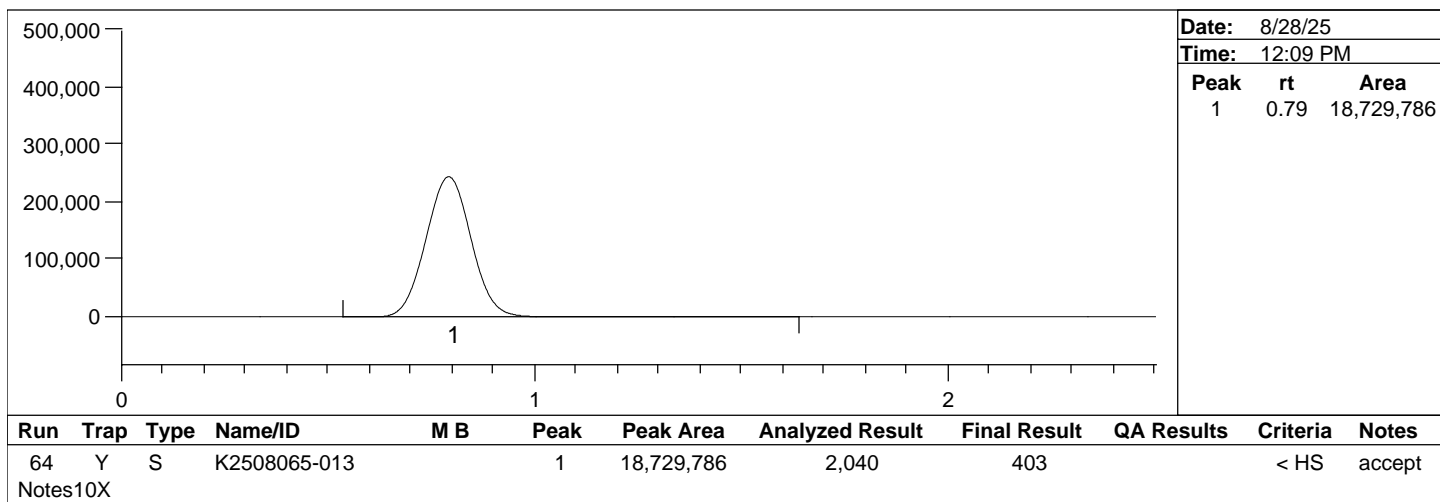
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



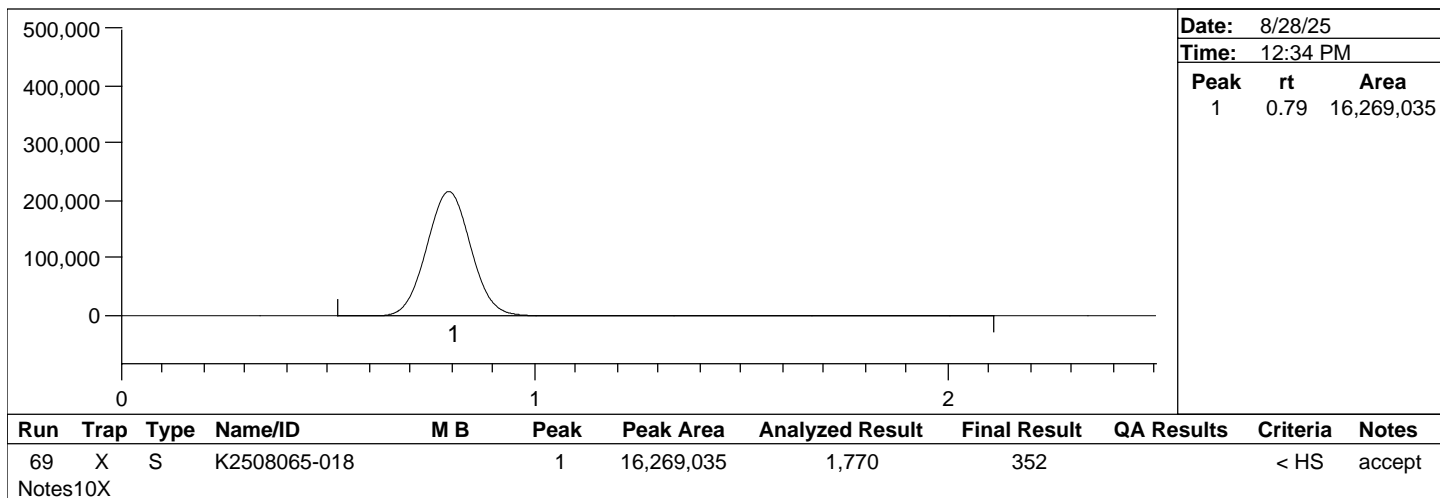
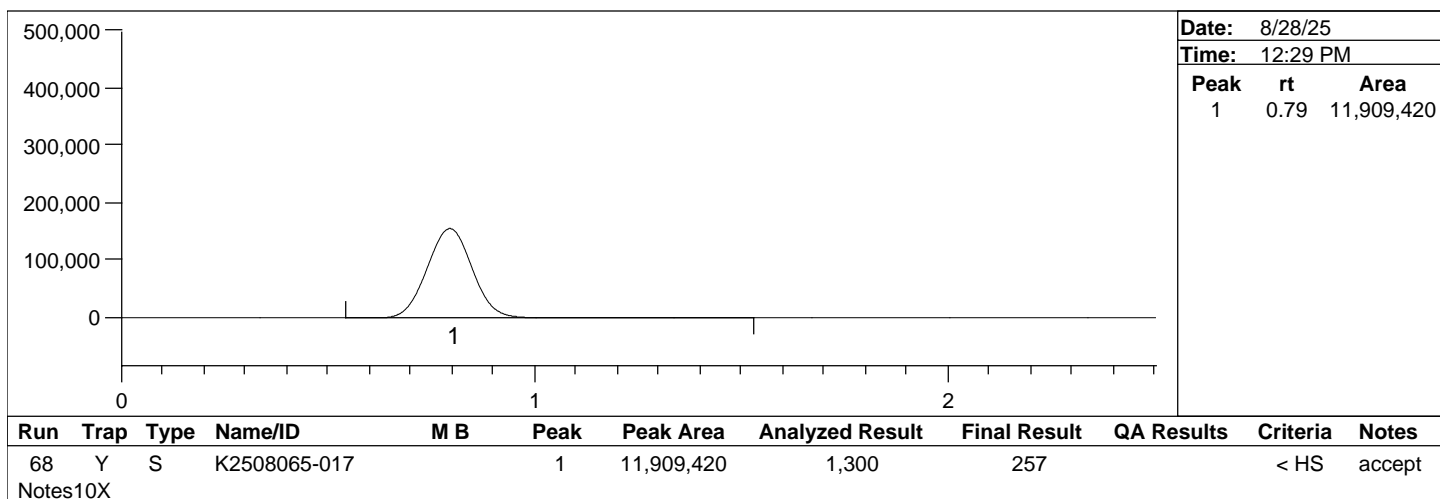
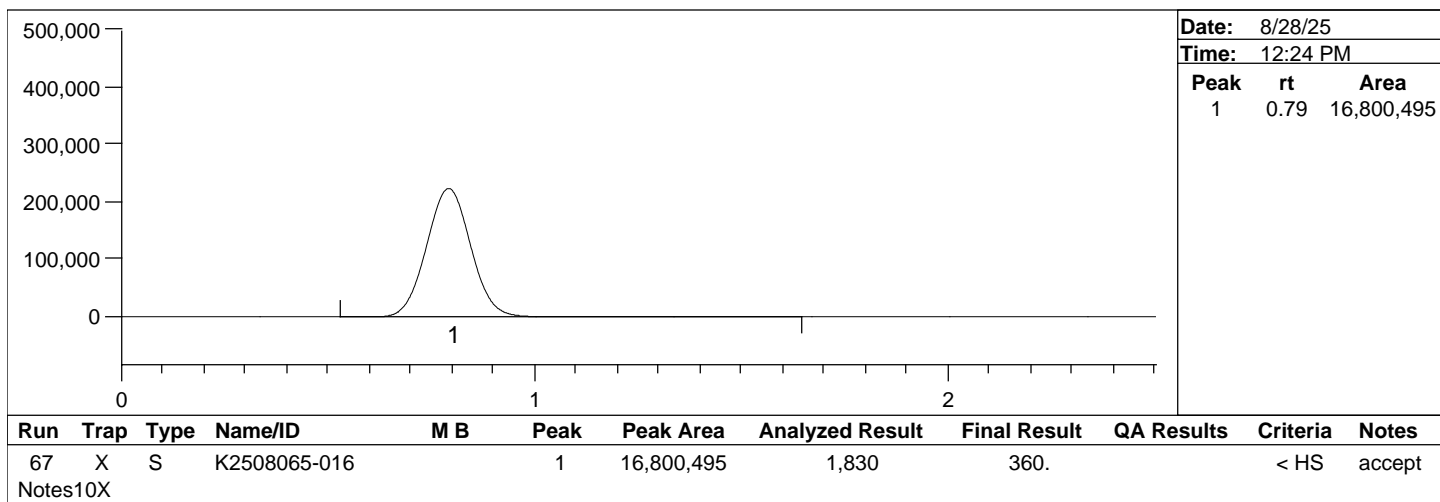
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

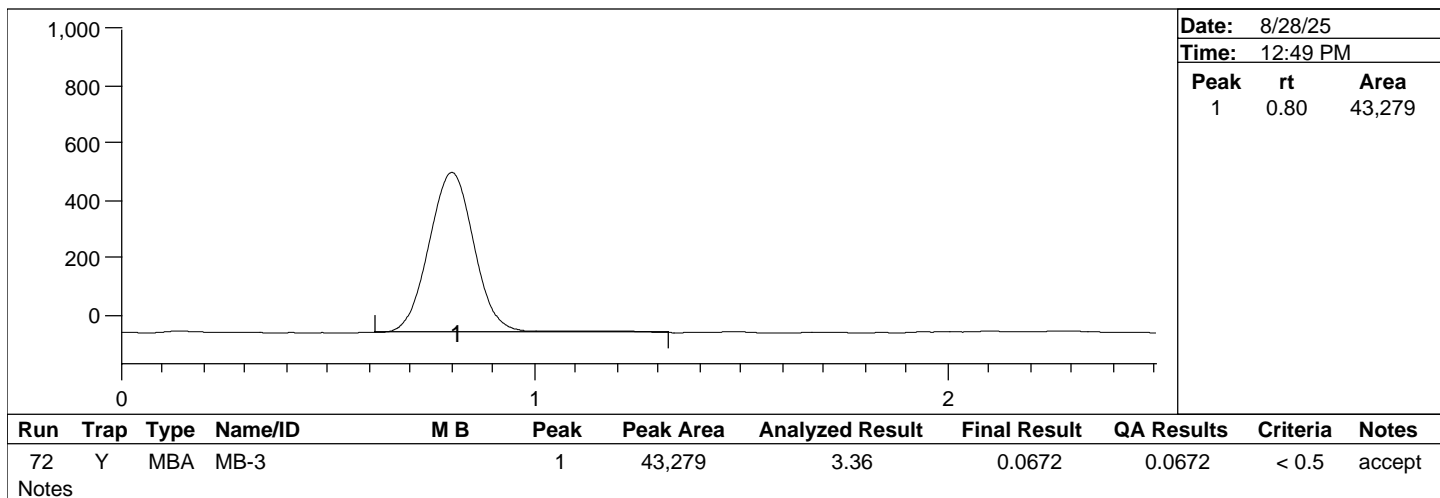
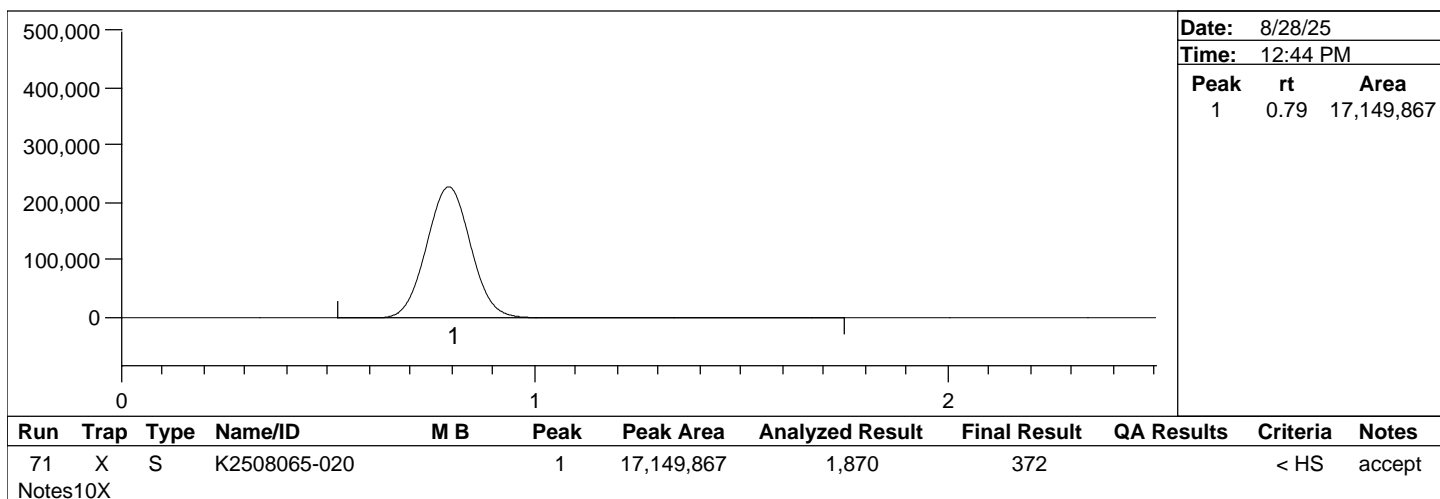
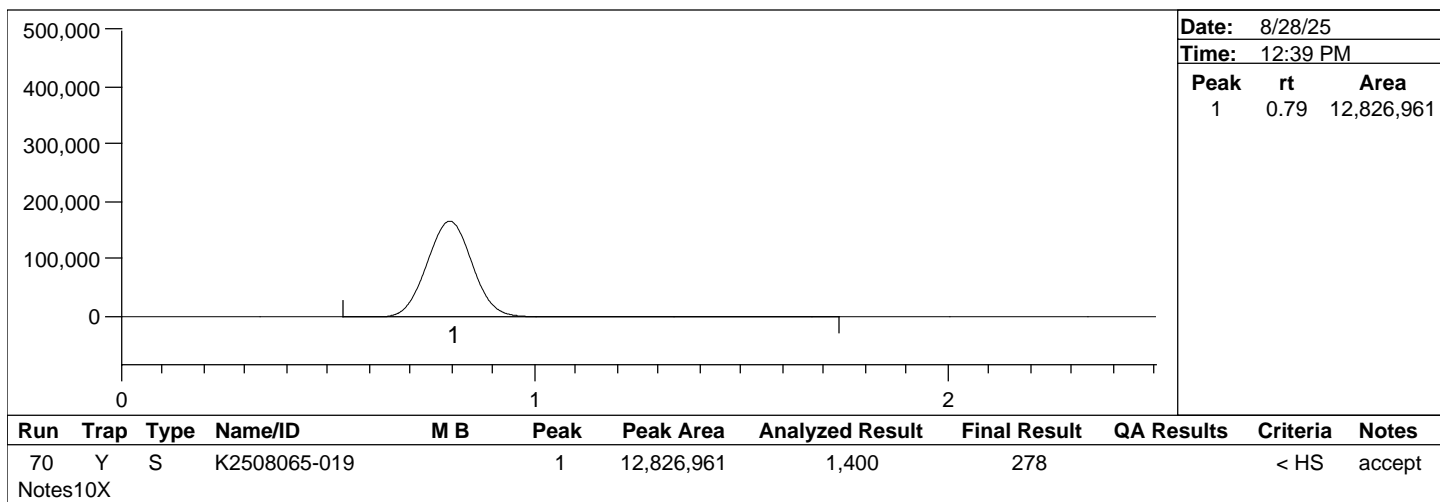


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



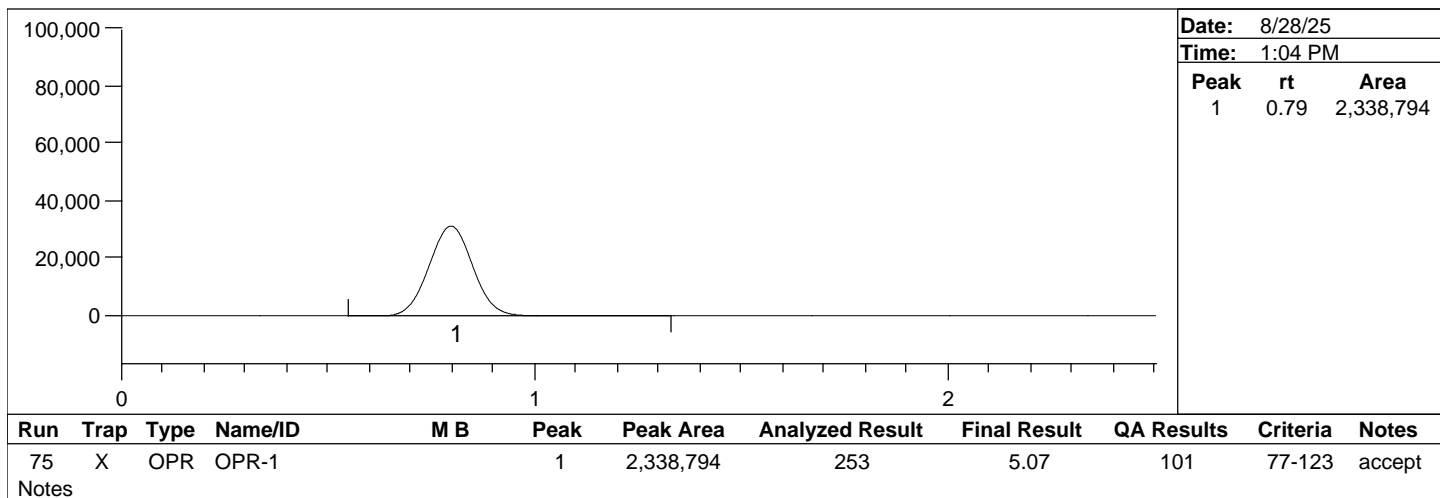
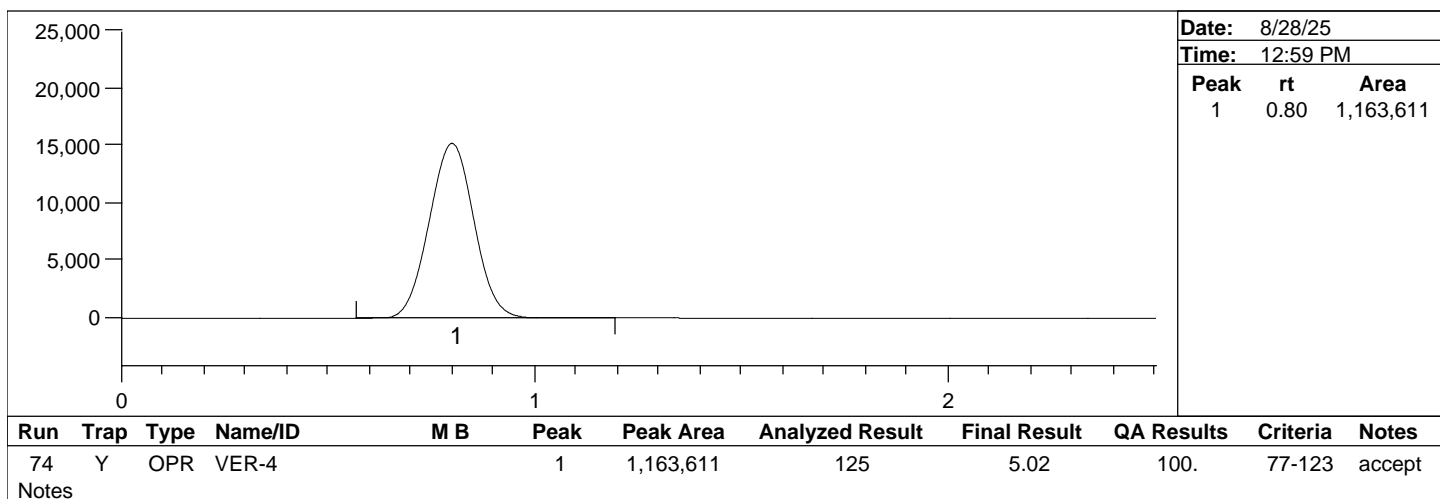
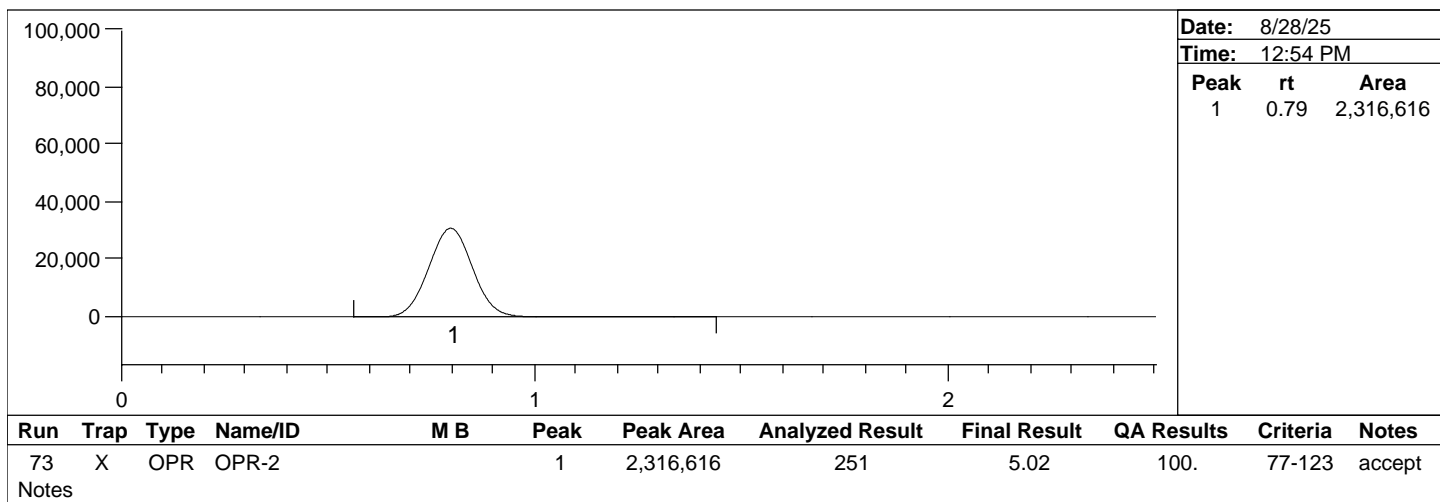
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



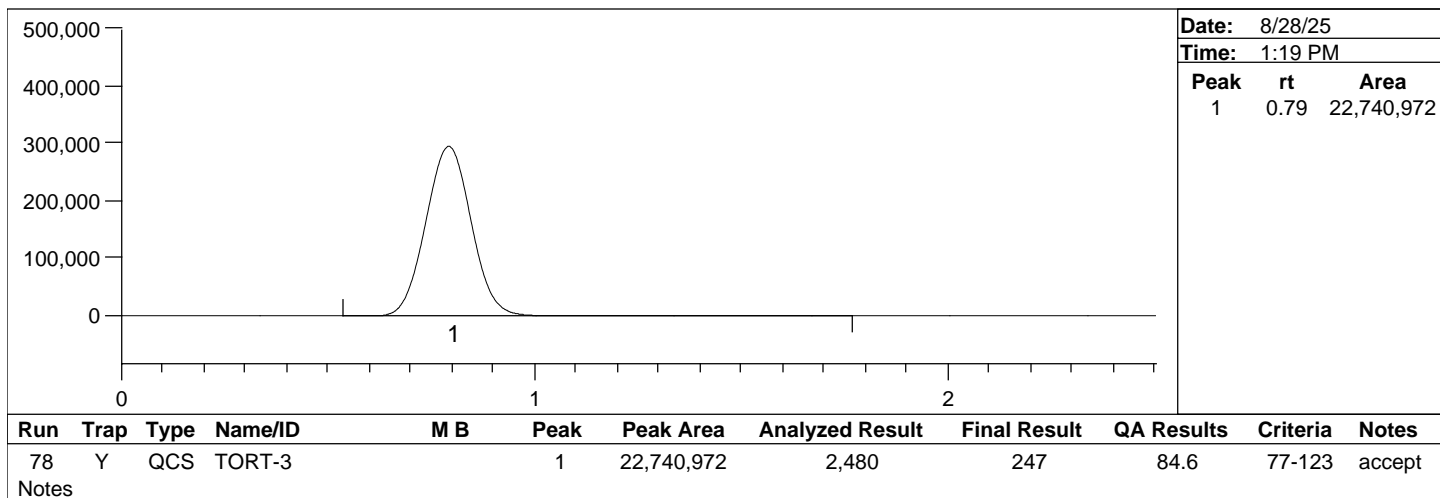
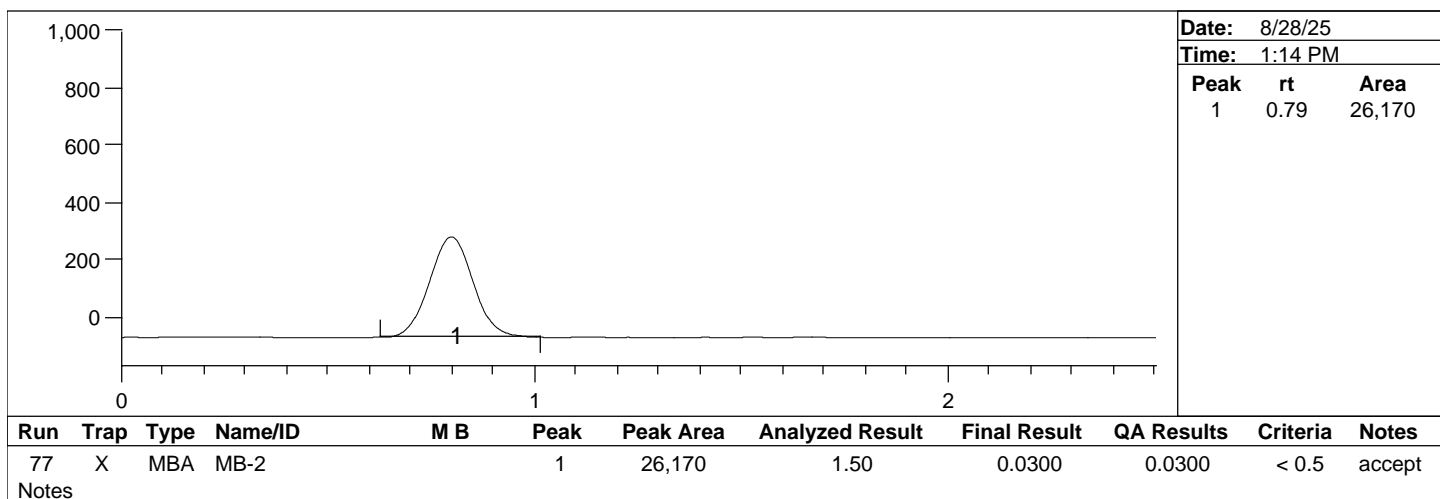
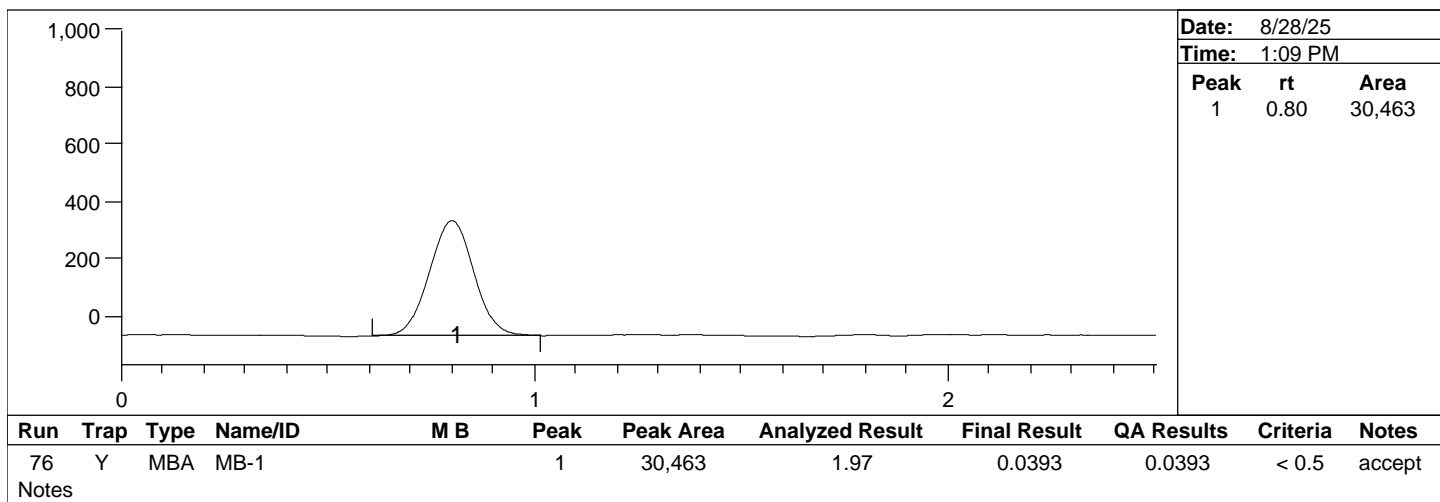
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



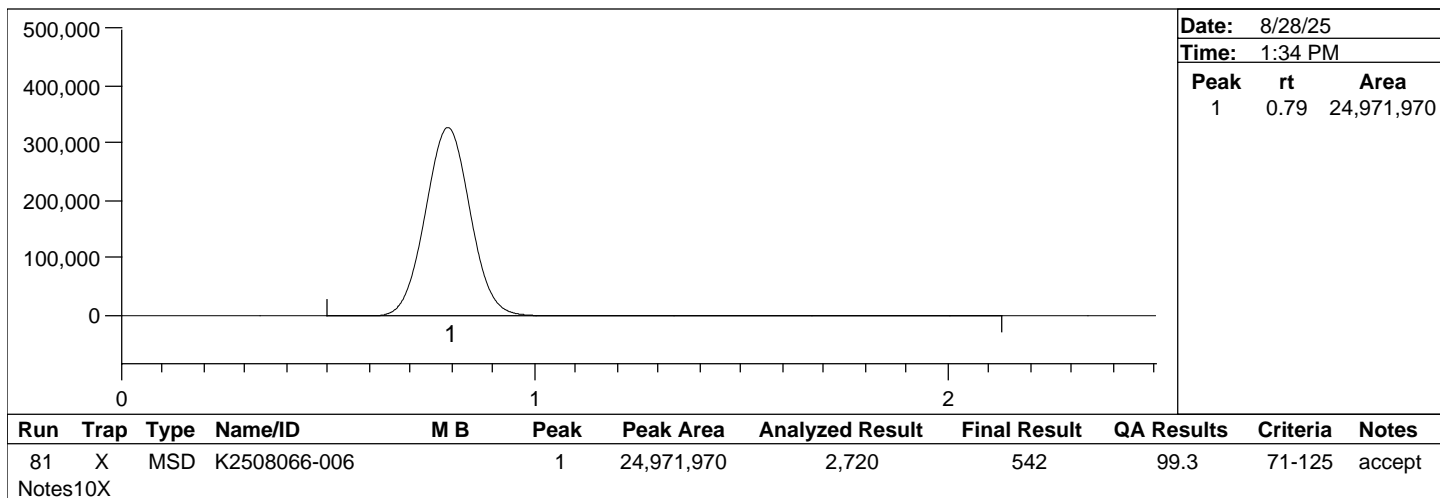
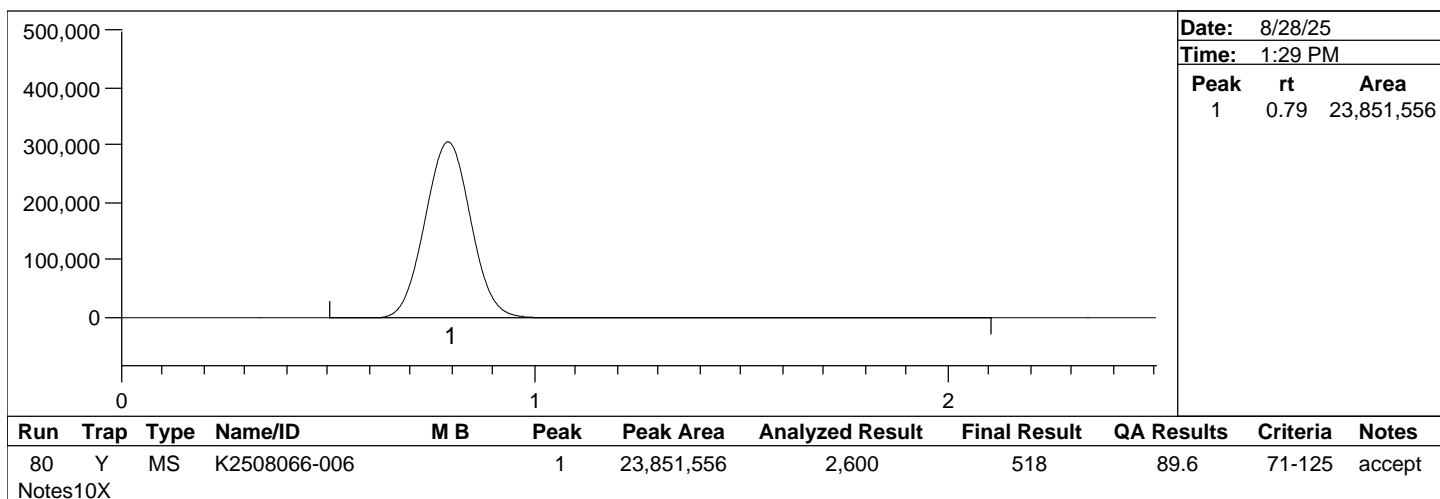
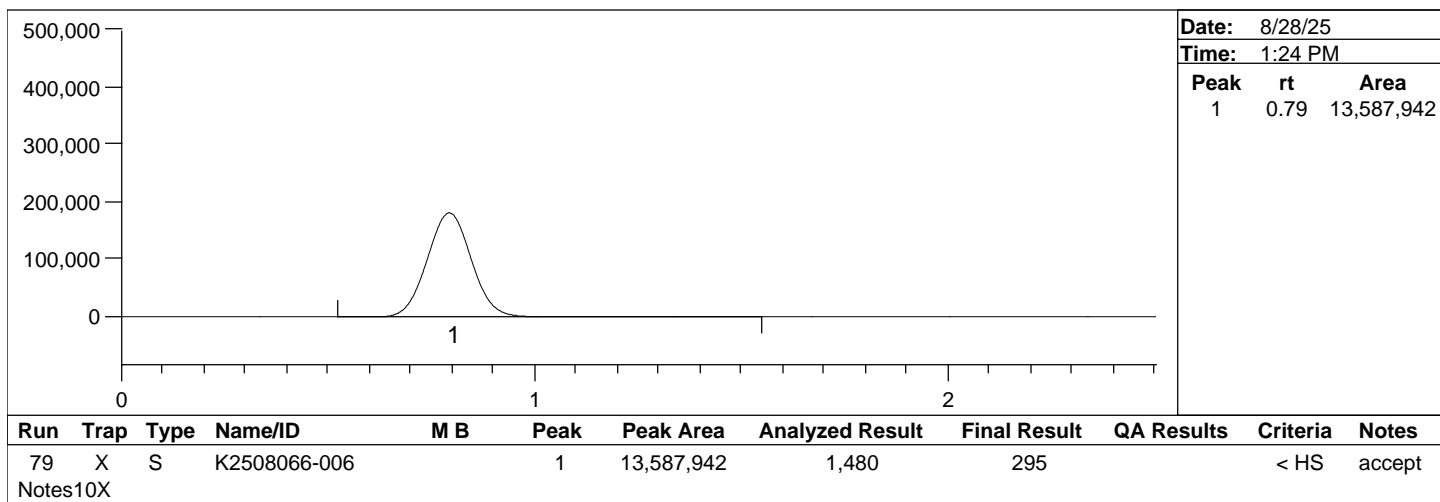
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

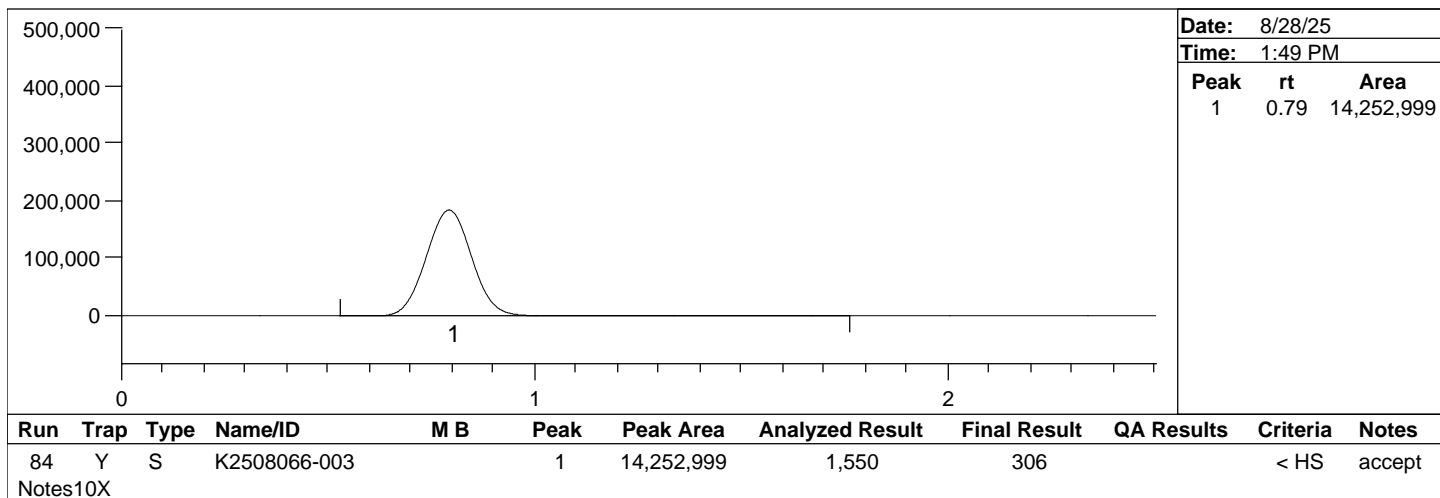
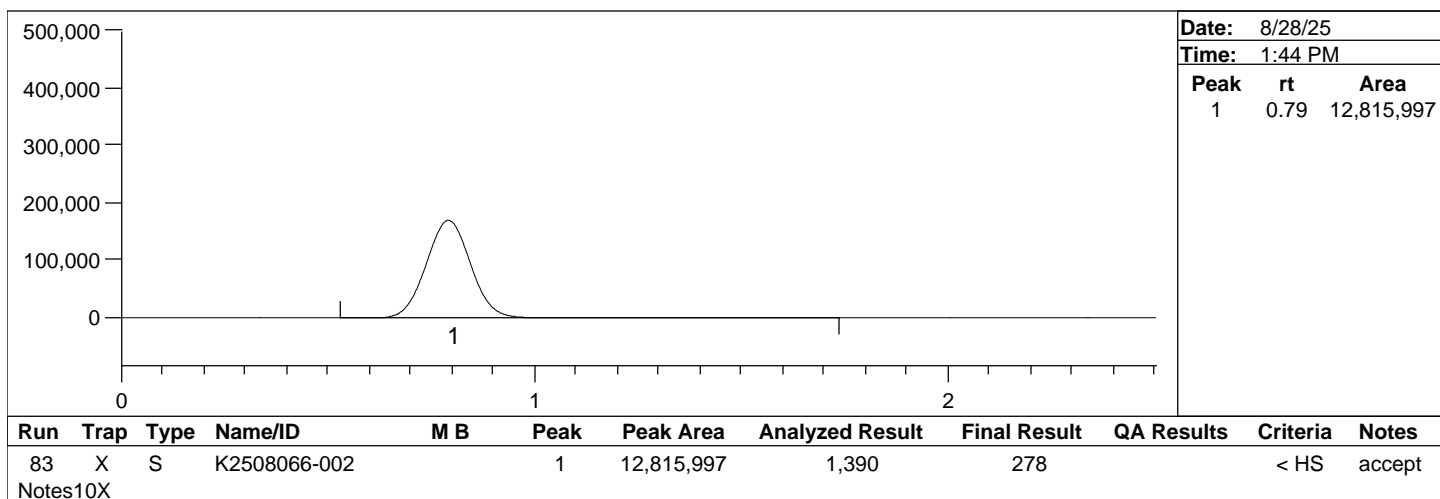
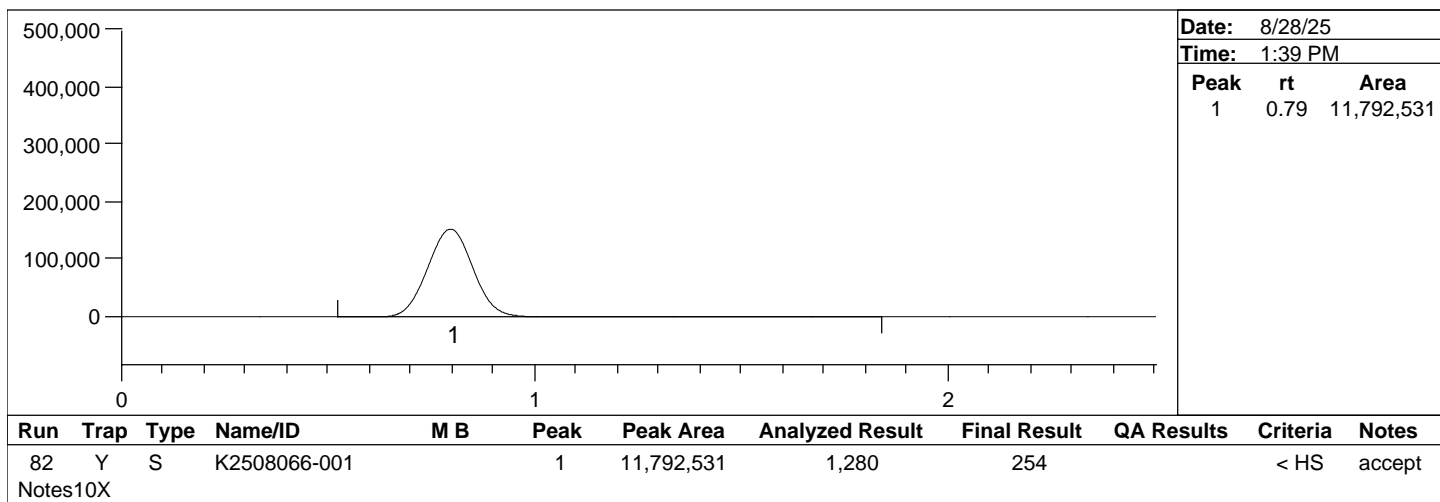


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



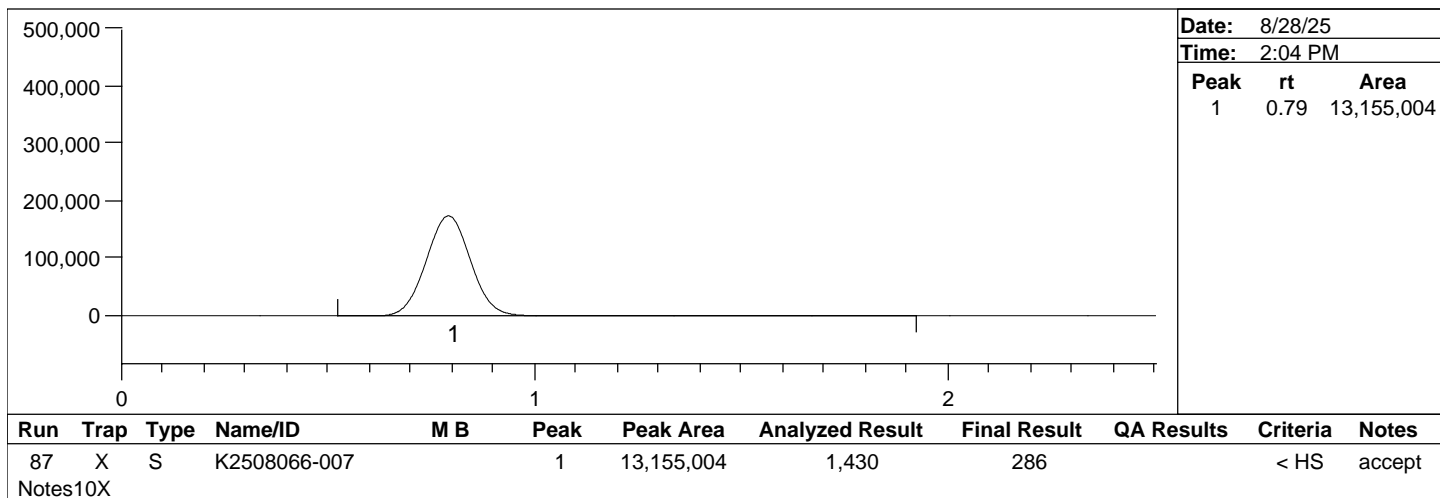
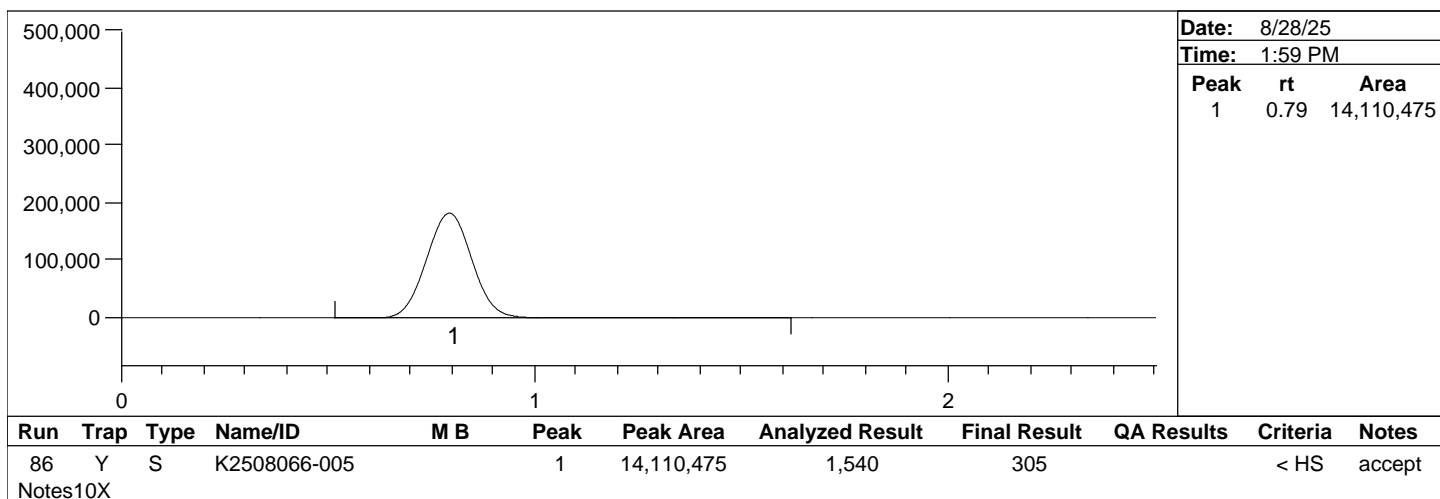
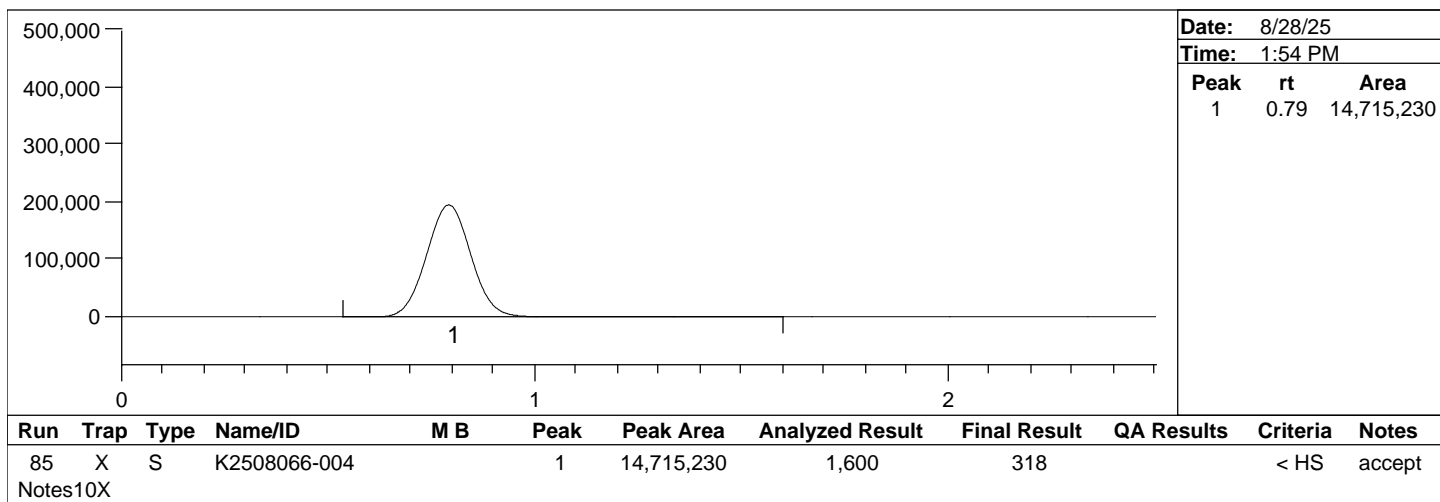
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



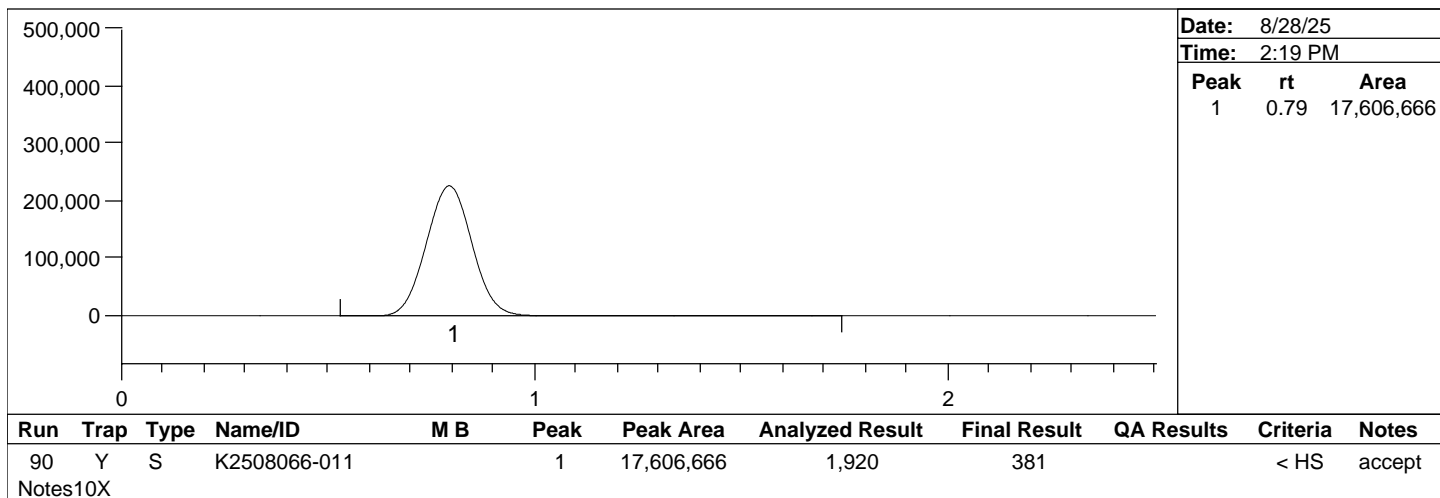
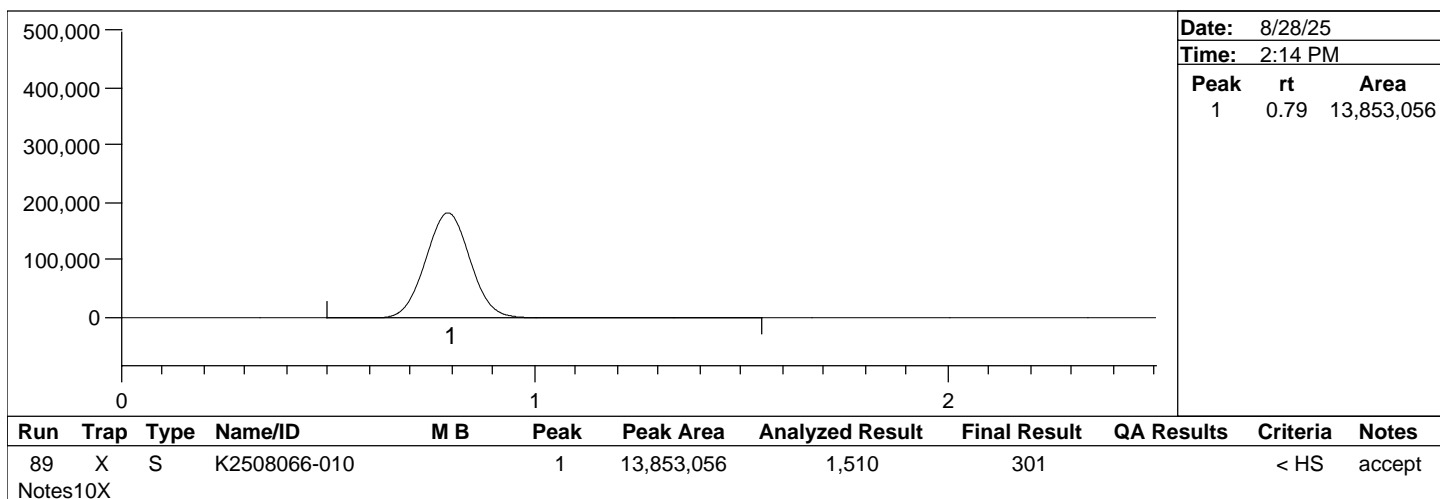
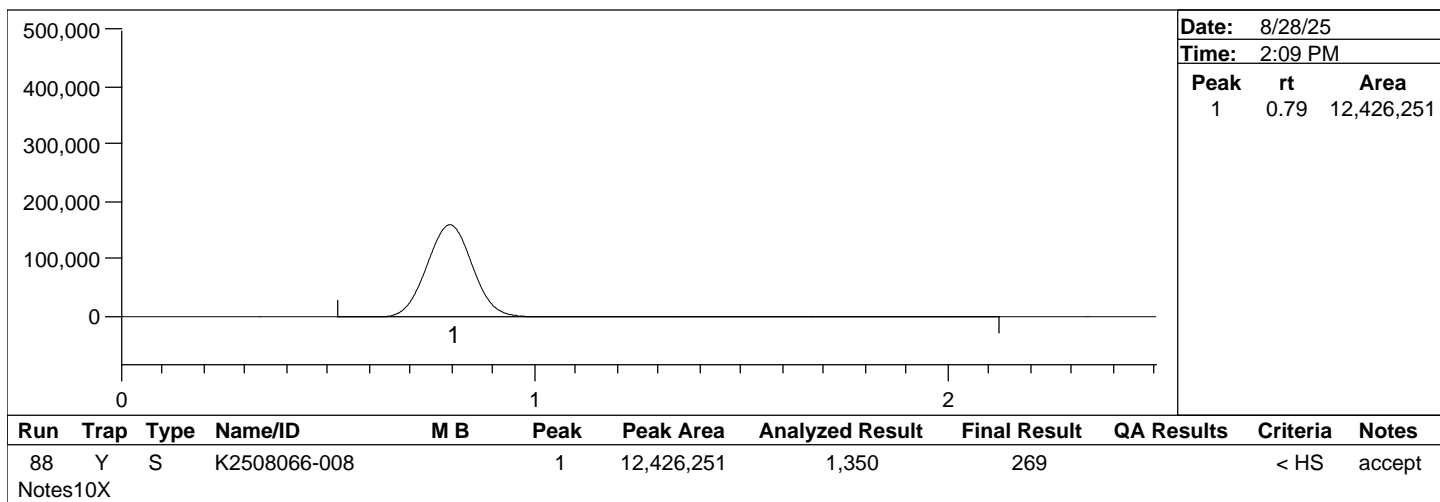
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



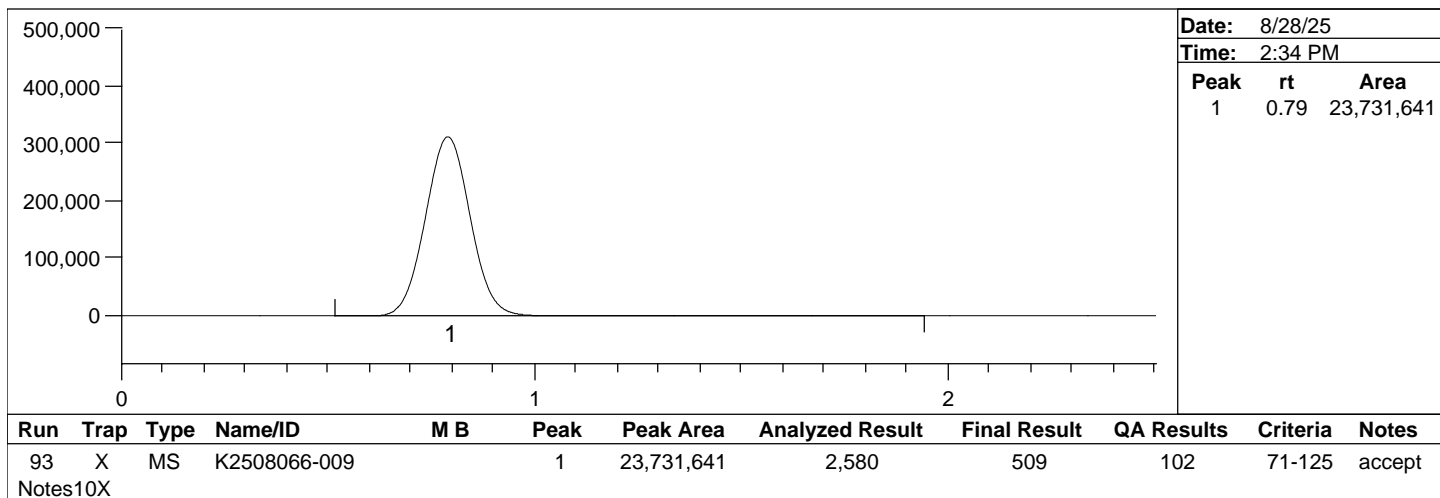
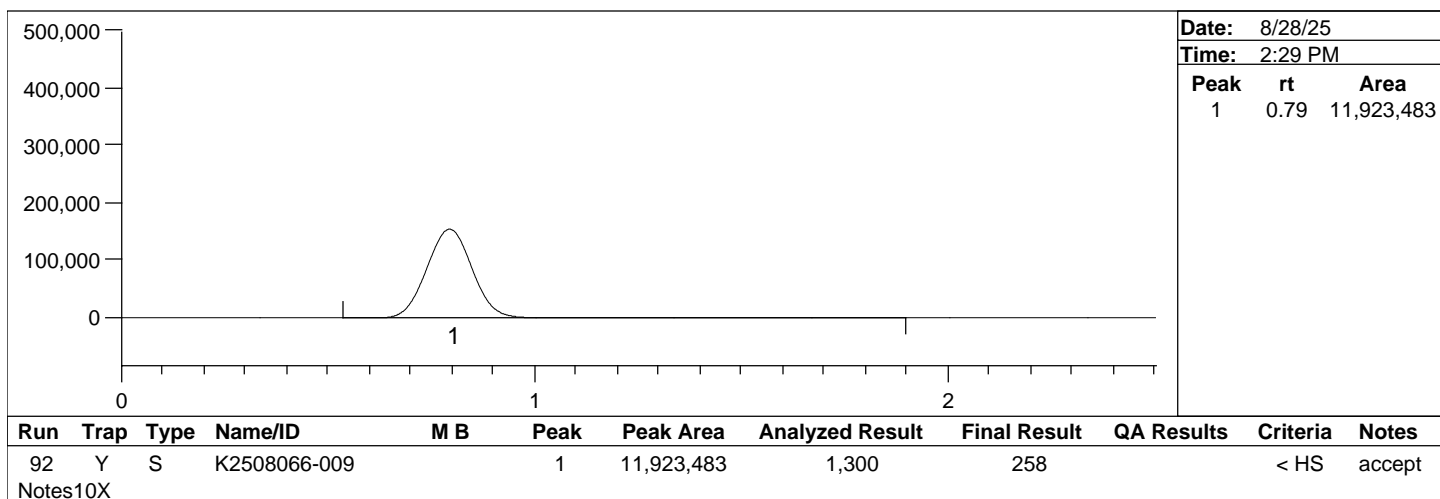
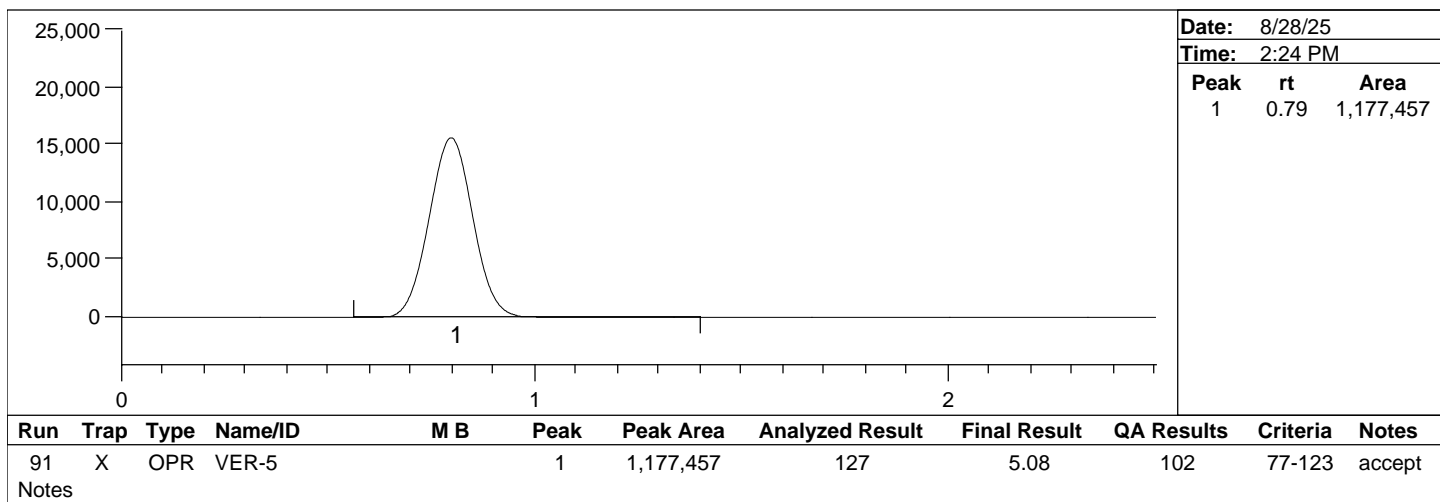
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



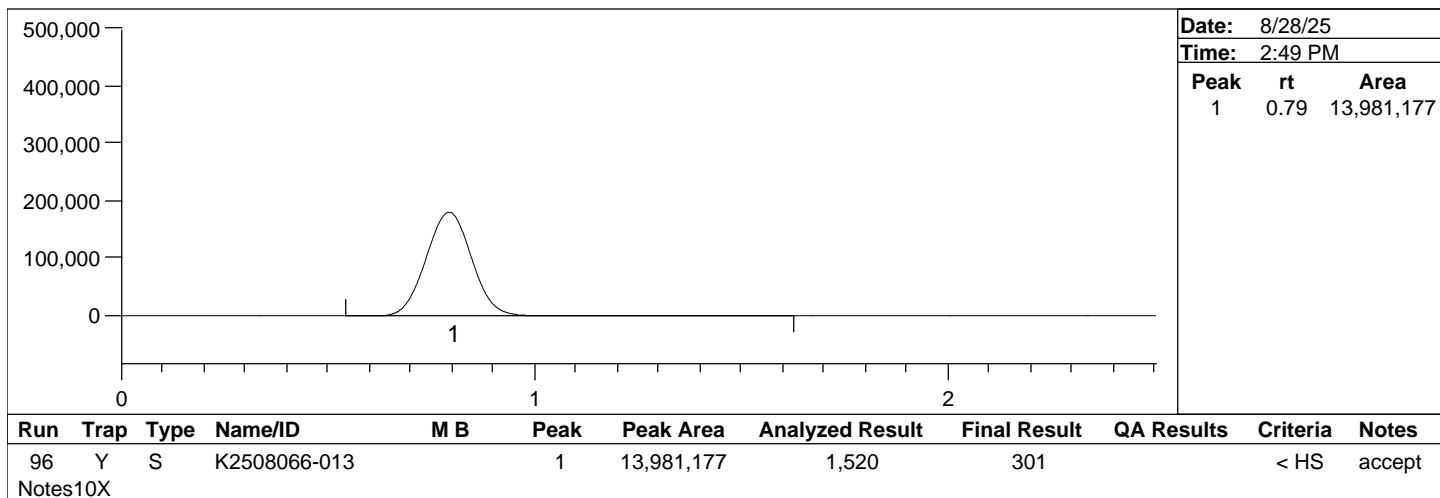
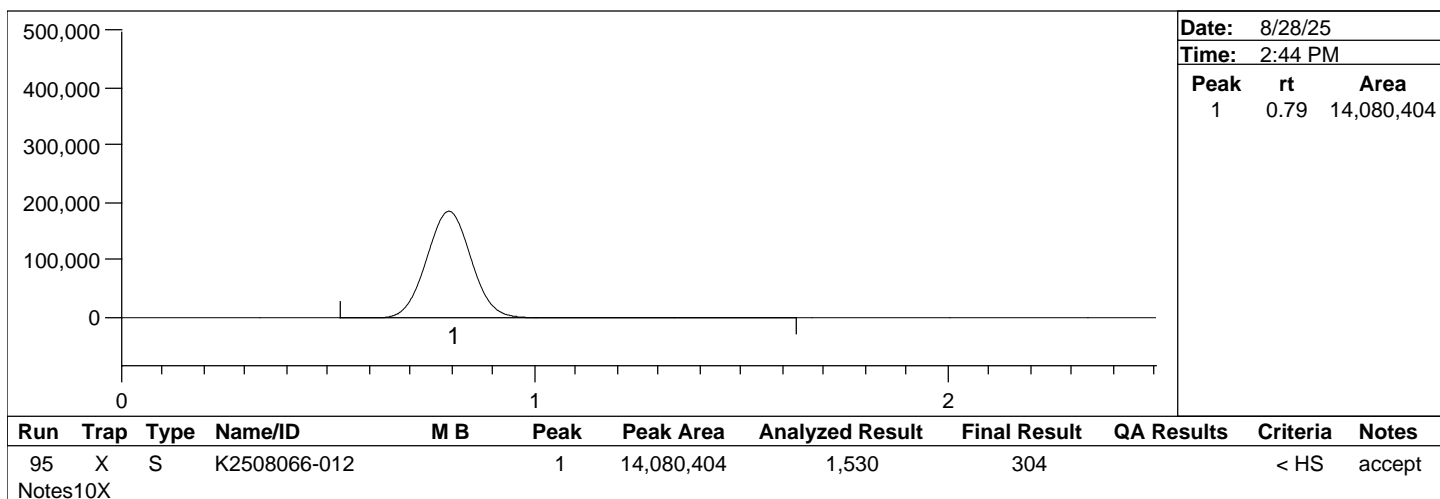
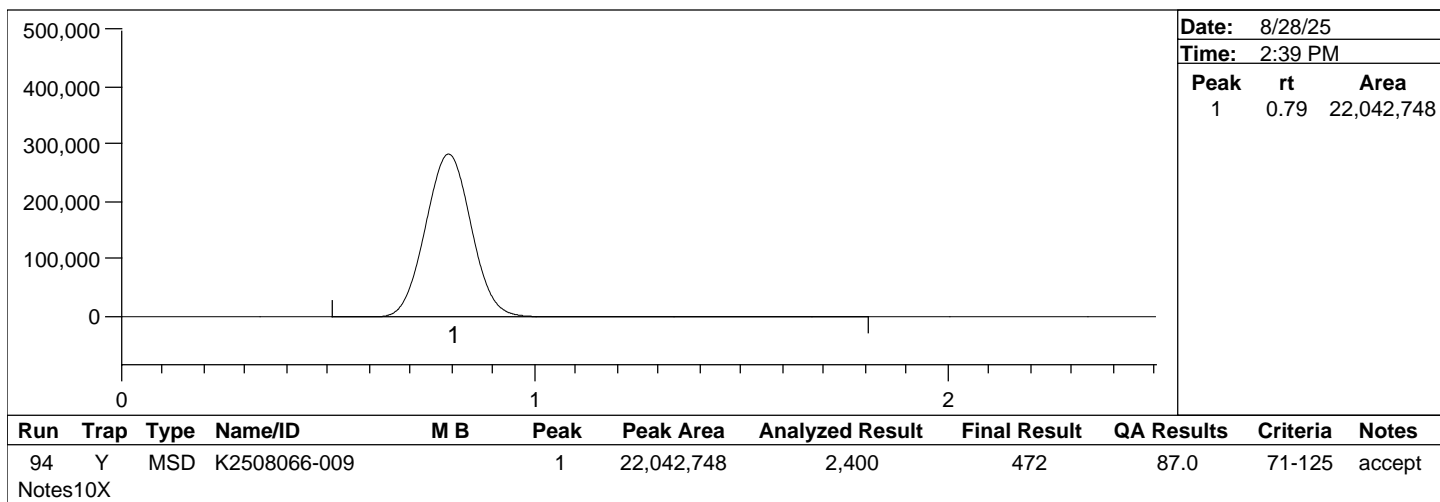
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



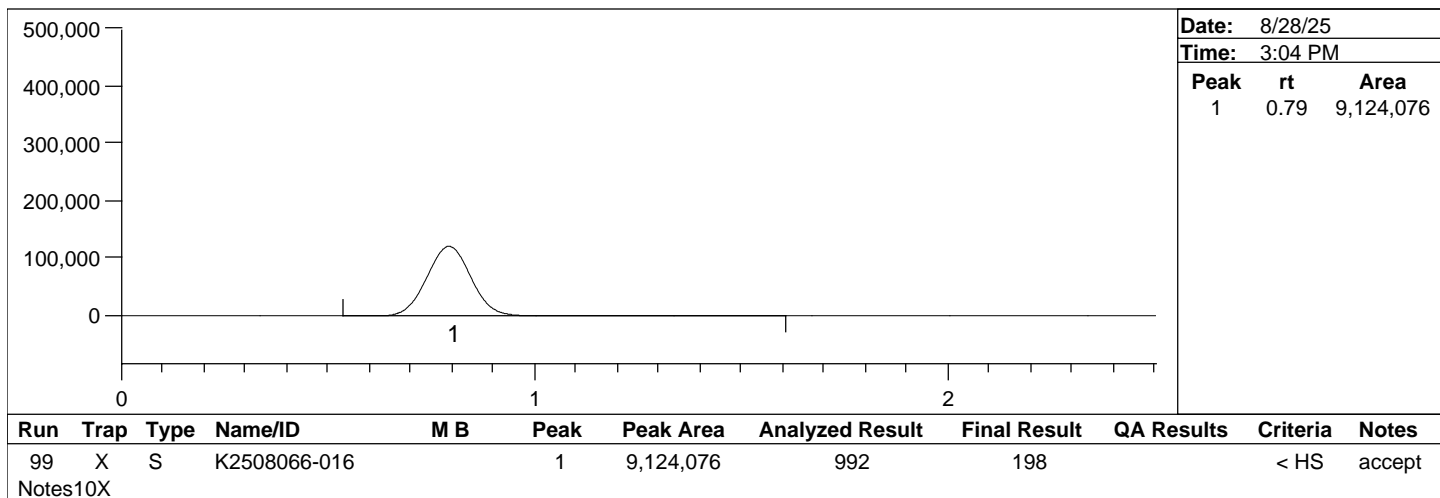
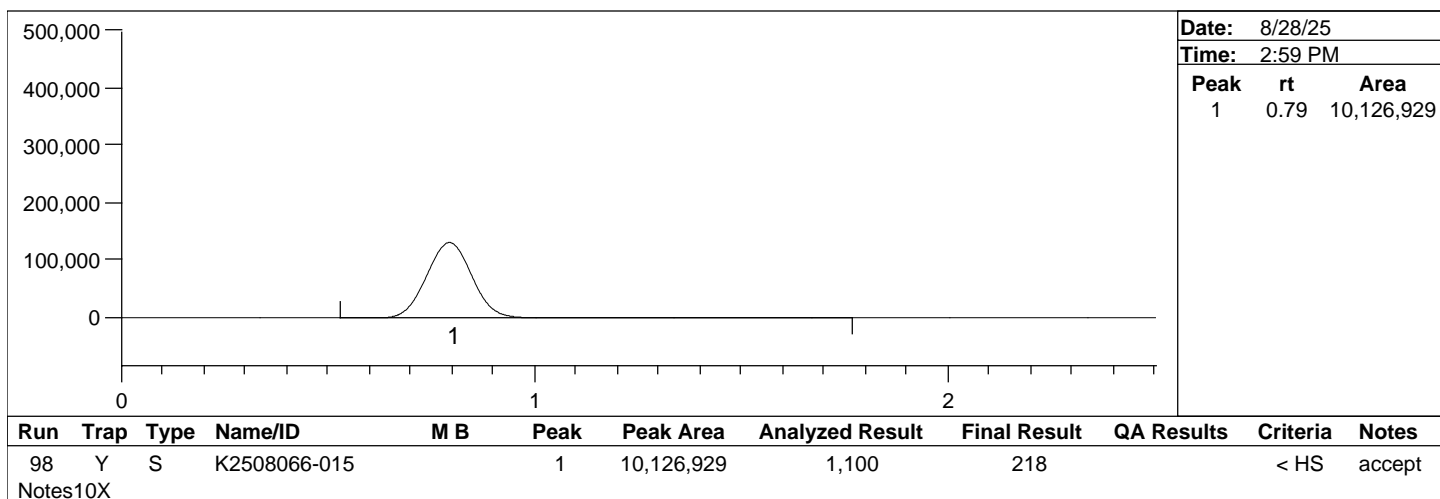
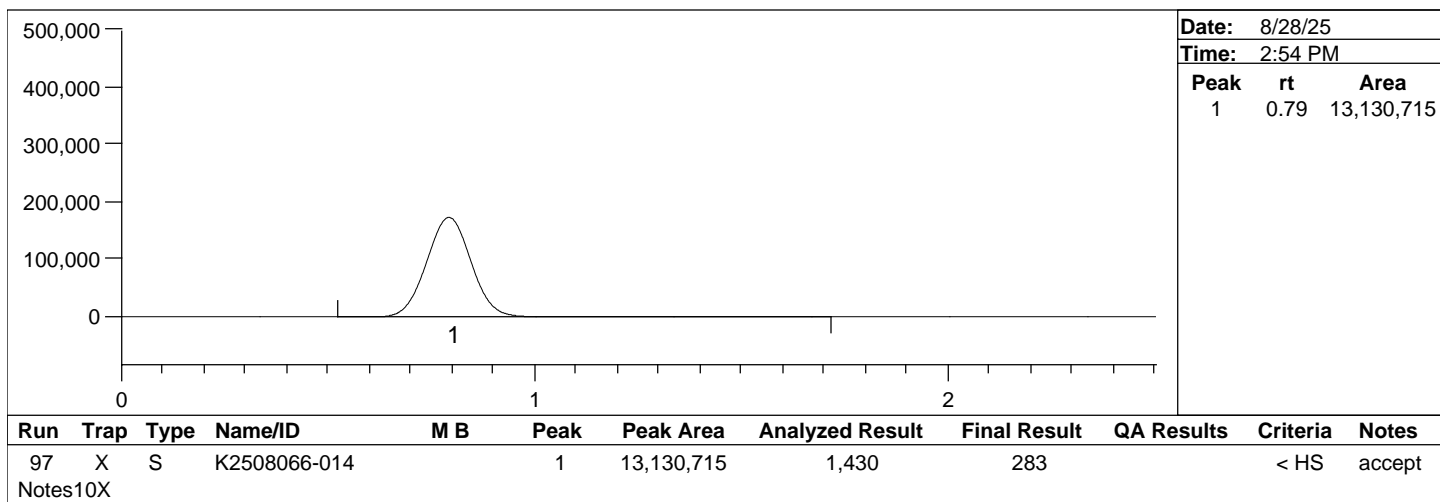
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



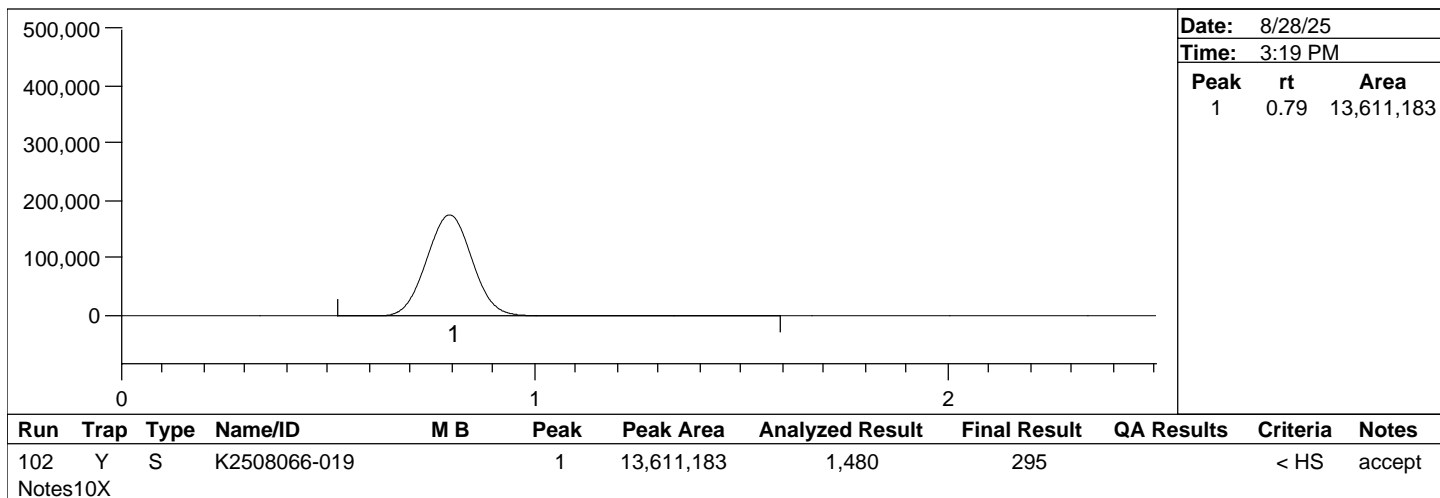
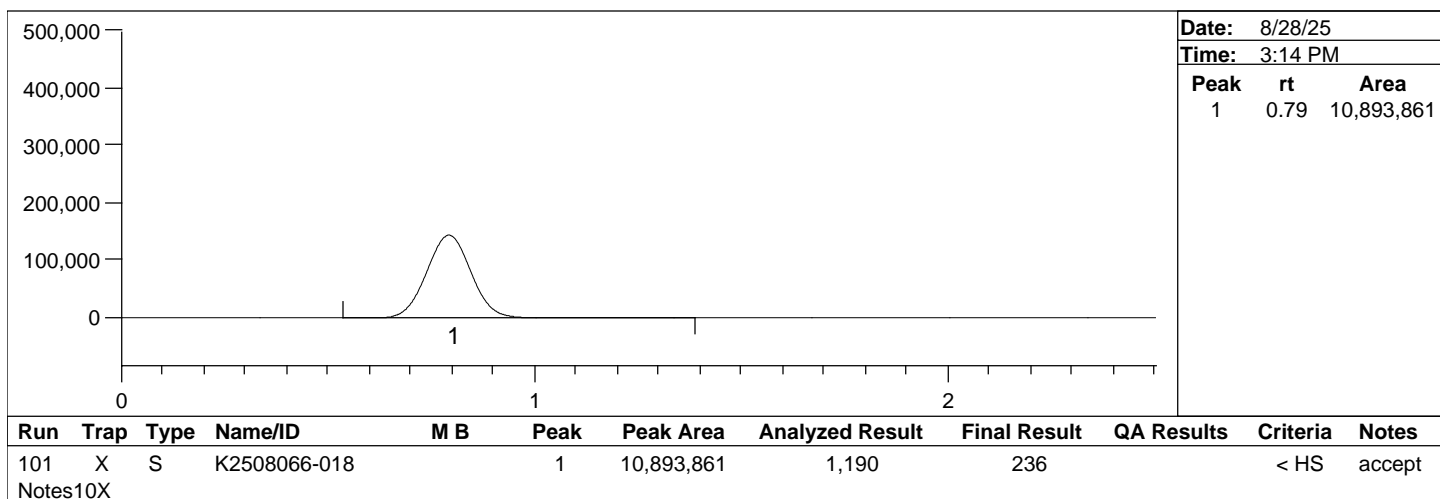
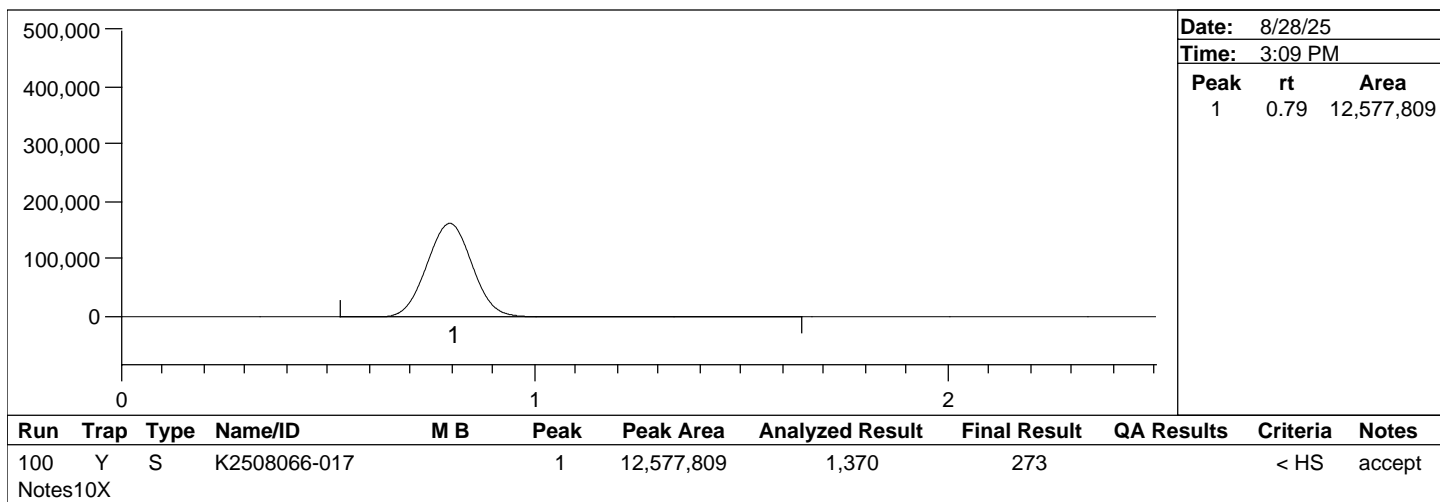
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



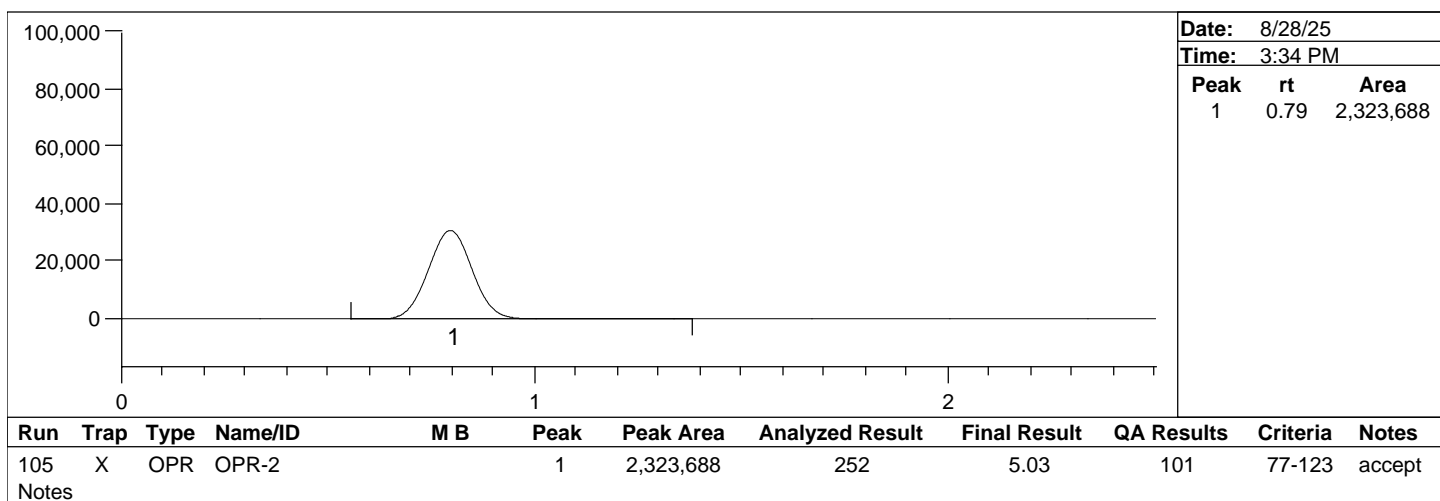
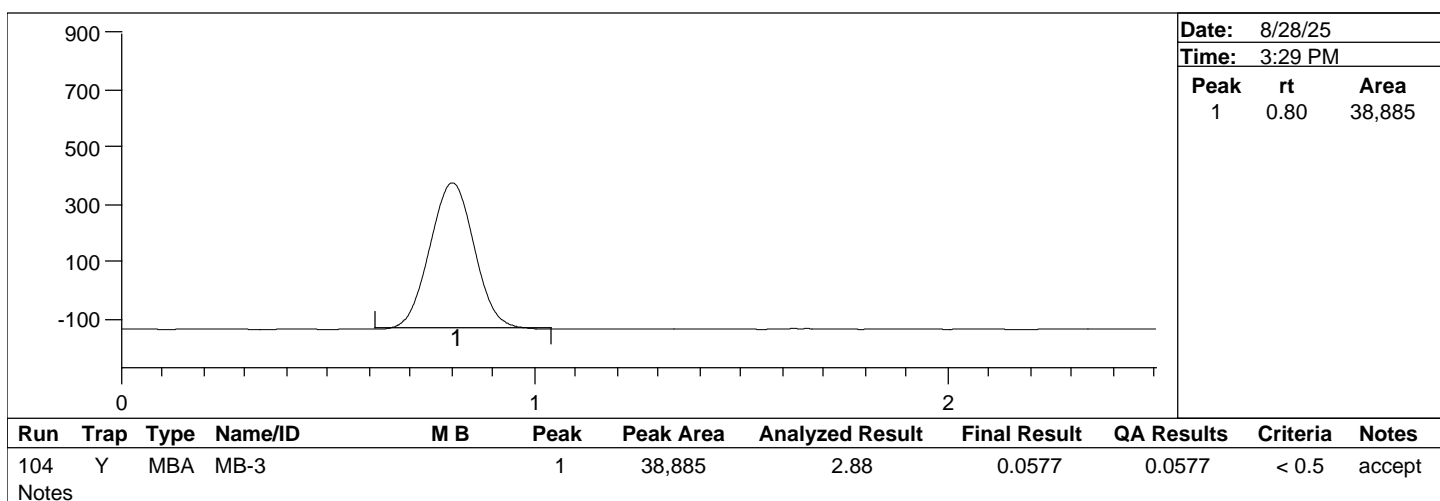
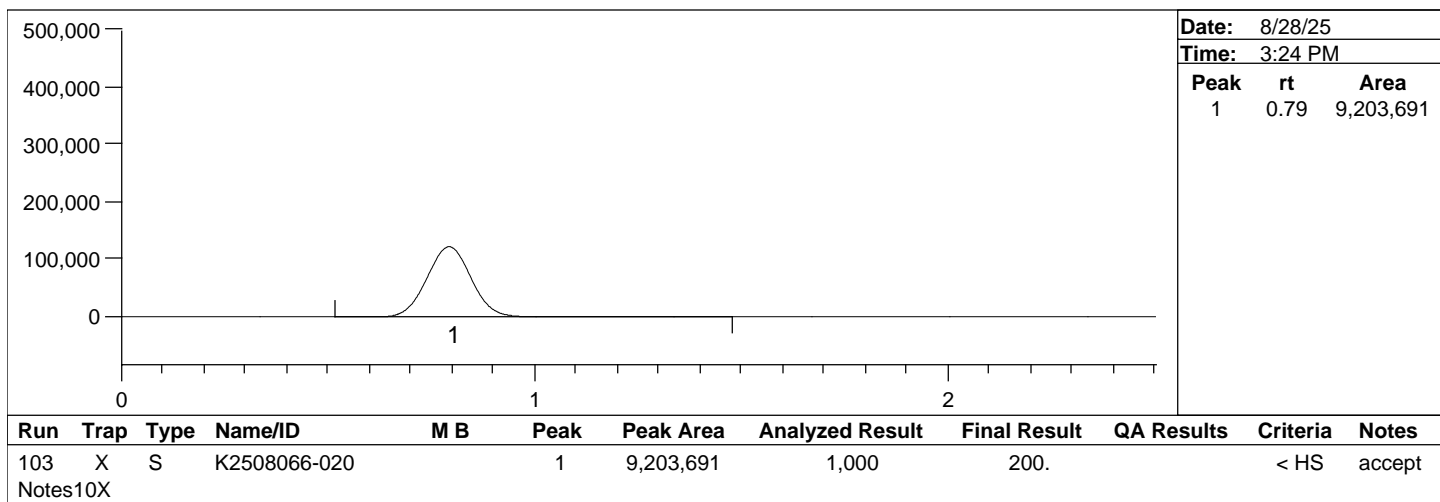
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



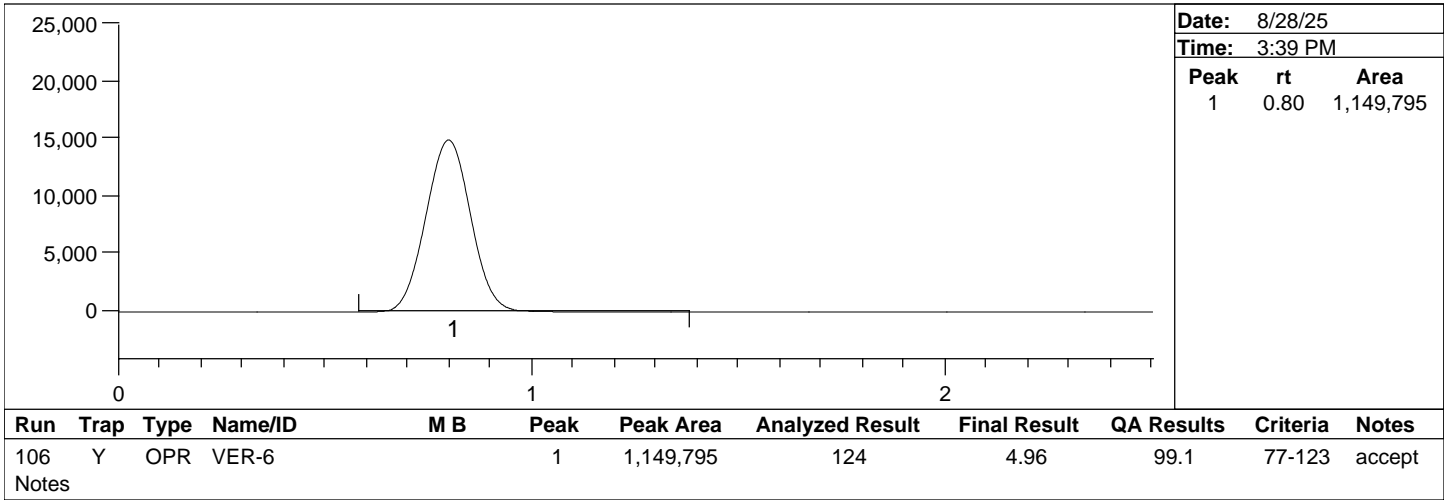
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



Service Request: K2508064, K2508065, K2508066
 Calibration: 082725AICPMS06
 ALS LIMS Run# 891163
 Pipette IDs: 18010244, 44382052, 43889034
 Cal Std: MS37-40-A
 CCV: MS37-40-B
 ICV Std: MS37-24-A
 LLICV Std: MS37-40-G
 I.S. Solution: MS36-85-C
 Tune Std: MS36-87-C

ICSA: MS37-40-C
 ICSAB: MS37-40-D

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	<u> X </u>	<u> </u>	<u> </u>
2. ICV in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
3. CCV's in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
4. ICB/CCB's below MRL	<u> X </u>	<u> </u>	<u> </u>
5. LLICV standard analyzed and in control	<u> X </u>	<u> </u>	<u> </u>
6. ICS standards within 20% of true value	<u> X </u>	<u> </u>	<u> </u>
7. All analytes within instrument linear range	<u> X </u>	<u> </u>	<u> </u>
8. Adequate rinse out time allowed	<u> X </u>	<u> </u>	<u> </u>
9. Internal standards in control	<u> X </u>	<u> </u>	<u> </u>
10. Interferences checked	<u> X </u>	<u> </u>	<u> </u>
11. Was the run terminated? If so, why.	<u> </u>	<u> X </u>	<u> </u>

See Benchsheet exception report for sample batch QC information.
 Comments: LRSTD- 1000ppb + 50ppb Ag

Prep Batches: 462959, 462960, 462961

Primary Review by AB Date 8/27/25

Secondary Review by RRM Date 8/27/25

Data Review Form

Instrument ID#: K-ICP-MS-06
DataFile Name: R:\ICP\WIP\DATA\K-ICP-MS-06 (Agilent 7800)\082725A.csv
RUNNO: 891163

K2508064

No exceptions to report.

K2508065

K2508065-012MS - Metals T -

MS Recovery

6020B/Metals T - 66 Zn [He] - Recovery: 126 Limits: 75 - 125 *

K2508066

KQ2515048-04SRM - Metals T -

SRM Recovery

6020B/Metals T - 208 Pb [He] - Recovery: 72 Limits: 80 - 120 *

*okay




Primary Approver: AWB 8/27/25
Secondary Approver: RRM 8/27/25

Sample									
	<input type="checkbox"/>	Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 1	<input type="checkbox"/>		001SMPL.	2025-08-27 10:20:33	Sample		PRIMER		2
+ 2	<input type="checkbox"/>		002SMPL.	2025-08-27 10:22:38	Sample		RINSE		1
+ 3	<input type="checkbox"/>		003SMPL.	2025-08-27 10:24:42	Sample		PRIMER		2
+ 4	<input type="checkbox"/>		004SMPL.	2025-08-27 10:26:46	Sample		RINSE		1
+ 5	<input type="checkbox"/>		005SMPL.	2025-08-27 10:28:51	Sample		RINSE		1
+ 6	<input type="checkbox"/>		006CALB.	2025-08-27 10:30:55	CalBlk	1	Blank		1
+ 7	<input type="checkbox"/>		007CAL.S.	2025-08-27 10:32:59	CalStd	2	Cal Std		4
+ 8	<input type="checkbox"/>		008_ICV.d	2025-08-27 10:35:04	ICV		ICV		2101
+ 9	<input type="checkbox"/>		009_CCV.	2025-08-27 10:37:09	CCV		CCV		2
+ 10	<input type="checkbox"/>		010_ICB.d	2025-08-27 10:39:13	ICB		ICB		1
+ 11	<input type="checkbox"/>		011_CCB.	2025-08-27 10:41:17	CCB		CCB		1
+ 12	<input checked="" type="checkbox"/>		012LICV.d	2025-08-27 10:43:22	LLICV		LLICVT		2102
+ 13	<input type="checkbox"/>		013LICV.d	2025-08-27 10:50:02	LLICV		LLICVT		2102
+ 14	<input type="checkbox"/>		014ICSA.d	2025-08-27 10:52:06	ICSA		ICSA		2103
+ 15	<input type="checkbox"/>		015ICSB.d	2025-08-27 10:54:10	ICSB		ICSAB		2104
+ 16	<input checked="" type="checkbox"/>		016SMPL.	2025-08-27 10:56:15	Sample		LRSTD 1000ppb		1101
+ 17	<input type="checkbox"/>		017SMPL.	2025-08-27 10:58:14	Sample		MO STD		2105
+ 18	<input type="checkbox"/>		018_PB.d	2025-08-27 11:06:51	PB		KQ2515045-01	5X	1102
+ 19	<input type="checkbox"/>		019_LCS.d	2025-08-27 11:08:55	LCS		KQ2515045-02	5X	1103
+ 20	<input type="checkbox"/>		020_QC4.	2025-08-27 11:10:59	QC4		KQ2515045-03	5X	1104
+ 21	<input type="checkbox"/>		021_QC5.	2025-08-27 11:13:03	QC5		KQ2515045-04	5X	1105
+ 22	<input type="checkbox"/>		022_ARF.	2025-08-27 11:15:06	AllRef		K2508064-008	5X	1106
+ 23	<input checked="" type="checkbox"/>		023_Dup.	2025-08-27 11:17:10	Dup		KQ2515045-05	5X	1107
+ 24	<input type="checkbox"/>		024SMPL.	2025-08-27 11:19:14	Sample		K2508064-008L	25X	1108
+ 25	<input checked="" type="checkbox"/>		025_PDS.	2025-08-27 11:21:18	PDS		K2508064-008A	5X	1109
+ 26	<input type="checkbox"/>		026_SPK.	2025-08-27 11:23:22	Spike		KQ2515045-06	5X	1110
+ 27	<input type="checkbox"/>		027SMPL.	2025-08-27 11:25:25	Sample		K2508064-001	5X	1111
+ 28	<input type="checkbox"/>		028_CCV.	2025-08-27 11:27:29	CCV		CCV		2
+ 29	<input type="checkbox"/>		029_CCB.	2025-08-27 11:29:33	CCB		CCB		1
+ 30	<input type="checkbox"/>		030SMPL.	2025-08-27 11:31:38	Sample		K2508064-002	5X	1112
+ 31	<input type="checkbox"/>		031SMPL.	2025-08-27 11:33:42	Sample		K2508064-003	5X	1201
+ 32	<input type="checkbox"/>		032SMPL.	2025-08-27 11:35:44	Sample		K2508064-004	5X	1202

see version
 AB
 8/27/25

Sample									
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+		<input type="checkbox"/>	033SMPL.	2025-08-27 11:37:47	Sample		K2508064-005	5X	1203
+		<input type="checkbox"/>	034SMPL.	2025-08-27 11:39:50	Sample		K2508064-006	5X	1204
+		<input type="checkbox"/>	035SMPL.	2025-08-27 11:41:55	Sample		K2508064-007	5X	1205
+		<input type="checkbox"/>	036SMPL.	2025-08-27 11:43:57	Sample		K2508064-009	5X	1206
+		<input type="checkbox"/>	037SMPL.	2025-08-27 11:46:00	Sample		K2508064-010	5X	1207
+		<input type="checkbox"/>	038SMPL.	2025-08-27 11:48:02	Sample		K2508064-011	5X	1208
+		<input type="checkbox"/>	039SMPL.	2025-08-27 11:50:05	Sample		K2508064-012	5X	1209
+		<input type="checkbox"/>	040_CC.V.	2025-08-27 11:52:09	CCV		CCV		2
+		<input type="checkbox"/>	041_CC.V.	2025-08-27 11:57:16	CCV		CCV		2
+		<input type="checkbox"/>	042_CCB.	2025-08-27 11:59:21	CCB		CCB		1
+		<input type="checkbox"/>	043SMPL.	2025-08-27 12:01:25	Sample		K2508064-013	5X	1210
+		<input type="checkbox"/>	044SMPL.	2025-08-27 12:03:27	Sample		K2508064-014	5X	1211
+		<input type="checkbox"/>	045SMPL.	2025-08-27 12:05:30	Sample		K2508064-015	5X	1212
+		<input type="checkbox"/>	046SMPL.	2025-08-27 12:07:33	Sample		K2508064-016	5X	1301
+		<input type="checkbox"/>	047SMPL.	2025-08-27 12:09:35	Sample		K2508064-017	5X	1302
+		<input type="checkbox"/>	048SMPL.	2025-08-27 12:11:39	Sample		K2508064-018	5X	1303
+		<input type="checkbox"/>	049SMPL.	2025-08-27 12:13:43	Sample		K2508064-019	5X	1304
+		<input type="checkbox"/>	050SMPL.	2025-08-27 12:15:46	Sample		K2508064-020	5X	1305
+		<input type="checkbox"/>	051_CC.V.	2025-08-27 12:17:50	CCV		CCV		2
+		<input type="checkbox"/>	052_CCB.	2025-08-27 12:19:54	CCB		CCB		1
+		<input type="checkbox"/>	053_PB.d	2025-08-27 12:21:59	PB		KQ2515046-01	5X	1306
+		<input type="checkbox"/>	054_LCS.d	2025-08-27 12:24:03	LCS		KQ2515046-02	5X	1307
+		<input type="checkbox"/>	055_QC4.	2025-08-27 12:26:05	QC4		KQ2515046-03	5X	1308
+		<input type="checkbox"/>	056_QC5.	2025-08-27 12:28:08	QC5		KQ2515046-04	5X	1309
+		<input type="checkbox"/>	057_ARF.	2025-08-27 12:30:10	AllRef		K2508065-012	5X	1310
+		<input type="checkbox"/>	058_Dup.	2025-08-27 12:32:14	Dup		KQ2515046-05	5X	1311
+		<input type="checkbox"/>	059SMPL.	2025-08-27 12:34:17	Sample		K2508065-012L	25X	1312
+		<input type="checkbox"/>	060_PDS.	2025-08-27 12:36:19	PDS		K2508065-012A	5X	1401
+		<input type="checkbox"/>	061_SPK.	2025-08-27 12:38:23	Spike		KQ2515046-06	5X	1402
+		<input type="checkbox"/>	062SMPL.	2025-08-27 12:40:26	Sample		K2508065-001	5X	1403
+		<input type="checkbox"/>	063_CC.V.	2025-08-27 12:42:29	CCV		CCV		2
+		<input type="checkbox"/>	064_CCB.	2025-08-27 12:44:32	CCB		CCB		1

See
 rerun
 AB
 5/27/25

Sample										
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...	
+	65	<input type="checkbox"/>	065SMPL.	2025-08-27 12:46:36	Sample		K2508065-002	5X	1404	
+	66	<input type="checkbox"/>	066SMPL.	2025-08-27 12:48:40	Sample		K2508065-003	5X	1405	
+	67	<input type="checkbox"/>	067SMPL.	2025-08-27 12:50:43	Sample		K2508065-004	5X	1406	
+	68	<input type="checkbox"/>	068SMPL.	2025-08-27 12:52:47	Sample		K2508065-005	5X	1407	
+	69	<input type="checkbox"/>	069SMPL.	2025-08-27 12:54:51	Sample		K2508065-006	5X	1408	
+	70	<input type="checkbox"/>	070SMPL.	2025-08-27 12:56:55	Sample		K2508065-007	5X	1409	
+	71	<input type="checkbox"/>	071SMPL.	2025-08-27 12:58:58	Sample		K2508065-008	5X	1410	
+	72	<input type="checkbox"/>	072SMPL.	2025-08-27 13:01:01	Sample		K2508065-009	5X	1411	
+	73	<input type="checkbox"/>	073SMPL.	2025-08-27 13:03:05	Sample		K2508065-010	5X	1412	
+	74	<input type="checkbox"/>	074SMPL.	2025-08-27 13:05:09	Sample		K2508065-011	5X	1501	
+	75	<input type="checkbox"/>	075_CCV.	2025-08-27 13:07:13	CCV		CCV		2	
+	76	<input type="checkbox"/>	076_CCB.	2025-08-27 13:09:17	CCB		CCB		1	
+	77	<input type="checkbox"/>	077SMPL.	2025-08-27 13:11:22	Sample		K2508065-013	5X	1502	
+	78	<input type="checkbox"/>	078SMPL.	2025-08-27 13:13:25	Sample		K2508065-014	5X	1503	
+	79	<input type="checkbox"/>	079SMPL.	2025-08-27 13:15:29	Sample		K2508065-015	5X	1504	
+	80	<input type="checkbox"/>	080SMPL.	2025-08-27 13:17:32	Sample		K2508065-016	5X	1505	
+	81	<input type="checkbox"/>	081SMPL.	2025-08-27 13:19:35	Sample		K2508065-017	5X	1506	
+	82	<input type="checkbox"/>	082SMPL.	2025-08-27 13:21:39	Sample		K2508065-018	5X	1507	
+	83	<input type="checkbox"/>	083SMPL.	2025-08-27 13:23:43	Sample		K2508065-019	5X	1508	
+	84	<input type="checkbox"/>	084SMPL.	2025-08-27 13:25:47	Sample		K2508065-020	5X	1509	
+	85	<input type="checkbox"/>	085_CCV.	2025-08-27 13:27:52	CCV		CCV		2	
+	86	<input type="checkbox"/>	086_CCB.	2025-08-27 13:29:56	CCB		CCB		1	
+	87	<input type="checkbox"/>	087_PB.d	2025-08-27 13:32:01	PB		KQ2515048-01	5X	1510	
+	88	<input type="checkbox"/>	088_LCS.d	2025-08-27 13:34:04	LCS		KQ2515048-02	5X	1511	
+	89	<input type="checkbox"/>	089_QC4.	2025-08-27 13:36:08	QC4		KQ2515048-03	5X	1512	
+	90		<input type="checkbox"/>	090_QC5.	2025-08-27 13:38:11	QC5		KQ2515048-04	5X	3101
+	91	<input type="checkbox"/>	091_ARF.	2025-08-27 13:40:15	AllRef		K2508066-004	5X	3102	
+	92		<input type="checkbox"/>	092_Dup.	2025-08-27 13:42:19	Dup		KQ2515048-05	5X	3103
+	93	<input type="checkbox"/>	093SMPL.	2025-08-27 13:44:22	Sample		K2508066-004L	25X	3104	
+	94	<input type="checkbox"/>	094_PDS.	2025-08-27 13:46:25	PDS		K2508066-004A	5X	3105	
+	95	<input type="checkbox"/>	095_SPK.	2025-08-27 13:48:28	Spike		KQ2515048-06	5X	3106	
+	96	<input type="checkbox"/>	096SMPL.	2025-08-27 13:50:32	Sample		K2508066-001	5X	3107	

Sample								
	Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 97	<input type="checkbox"/>	097_CCV.	2025-08-27 13:52:37	CCV		CCV		2
+ 98	<input type="checkbox"/>	098_CCB.	2025-08-27 13:54:41	CCB		CCB		1
+ 99	<input type="checkbox"/>	099SMPL.	2025-08-27 13:56:46	Sample		K2508066-002	5X	3108
+ 100	<input type="checkbox"/>	100SMPL.	2025-08-27 13:58:51	Sample		K2508066-003	5X	3109
+ 101	<input type="checkbox"/>	101SMPL.	2025-08-27 14:00:55	Sample		K2508066-005	5X	3110
+ 102	<input type="checkbox"/>	102SMPL.	2025-08-27 14:02:59	Sample		K2508066-006	5X	3111
+ 103	<input type="checkbox"/>	103SMPL.	2025-08-27 14:05:02	Sample		K2508066-007	5X	3112
+ 104	<input type="checkbox"/>	104SMPL.	2025-08-27 14:07:06	Sample		K2508066-008	5X	3201
+ 105	<input type="checkbox"/>	105SMPL.	2025-08-27 14:09:09	Sample		K2508066-009	5X	3202
+ 106	<input type="checkbox"/>	106SMPL.	2025-08-27 14:11:13	Sample		K2508066-010	5X	3203
+ 107	<input type="checkbox"/>	107SMPL.	2025-08-27 14:13:17	Sample		K2508066-011	5X	3204
+ 108	<input type="checkbox"/>	108SMPL.	2025-08-27 14:15:20	Sample		K2508066-012	5X	3205
+ 109	<input type="checkbox"/>	109_CCV.	2025-08-27 14:17:26	CCV		CCV		2
+ 110	<input type="checkbox"/>	110_CCB.	2025-08-27 14:19:30	CCB		CCB		1
+ 111	<input type="checkbox"/>	111SMPL.	2025-08-27 14:21:35	Sample		K2508066-013	5X	3206
+ 112	<input type="checkbox"/>	112SMPL.	2025-08-27 14:23:37	Sample		K2508066-014	5X	3207
+ 113	<input type="checkbox"/>	113SMPL.	2025-08-27 14:25:41	Sample		K2508066-015	5X	3208
+ 114	<input type="checkbox"/>	114SMPL.	2025-08-27 14:27:45	Sample		K2508066-016	5X	3209
+ 115	<input type="checkbox"/>	115SMPL.	2025-08-27 14:29:48	Sample		K2508066-017	5X	3210
+ 116	<input type="checkbox"/>	116SMPL.	2025-08-27 14:31:53	Sample		K2508066-018	5X	3211
+ 117	<input type="checkbox"/>	117SMPL.	2025-08-27 14:33:57	Sample		K2508066-019	5X	3212
+ 118	<input type="checkbox"/>	118SMPL.	2025-08-27 14:36:01	Sample		K2508066-020	5X	3301
+ 119	<input type="checkbox"/>	119_CCV.	2025-08-27 14:38:05	CCV		CCV		2
- 120	<input type="checkbox"/>	120_CCB.	2025-08-27 14:40:09	CCB		CCB		1

Analyte					
	Name	Mass	ISTD	Tune Mo...	Replica...
+ 1	Cu	63	72	He	3
+ 2	Cu	65	72	He	3
+ 3	Zn	66	72	He	3
+ 4	Se	77	72	H2	3
+ 5	Se	78	72	H2	3
+ 6	Mo	95	115	He	3

Analyte						
	Name	Mass	ISTD	Tune Mo...	Replica...	
+	7	Mo	98	115	He	3
+	8	Ag	107	115	He	3
+	9	Ag	109	115	He	3
+	10	Cd	111	115	He	3
+	11	[Pb]	206	175	He	3
+	12	[Pb]	207	175	He	3
+	13	Pb	208	175	He	3
+	14	Sc	45		He	3
+	15	Ge	72		H2	3
+	16	Ge	72		He	3
+	17	In	115		He	3
+	18	Lu	175		He	3
+	19	Th	232		He	3

US EPA Tune Check Report

Operator Name ALKLS NoUser
 Acq/Data Batch D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725.b
 Acq. Date-Time 2025-08-27 10:16:33
 Report Comment ---
 Instrument Name G8421A JP16310358

[No Gas]

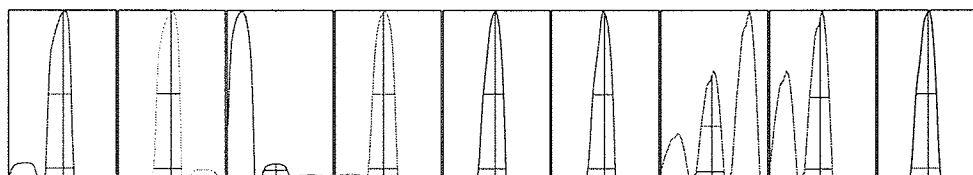
Sensitivity

Mass	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	161341.73	0.338	5.000	
9	40106.81	0.663	5.000	
24	127644.00	0.334	5.000	
59	179444.59	0.218	5.000	
115	268011.81	0.546	5.000	
140	270858.68	0.303	5.000	
208	147026.32	0.701	5.000	
209	230494.40	0.724	5.000	
238	298576.19	0.582	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	16041	16139	16180	16166	16144
9	3991	4013	4043	4028	3978
24	12834	12763	12756	12718	12751
59	17965	17967	17885	17925	17980
115	26811	26964	26893	26580	26759
140	27118	27188	27026	26981	27115
208	14549	14827	14754	14680	14703
209	22797	23252	23047	23025	23126
238	29588	29956	29982	29985	29777

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
7	26761.47	7.05	6.90 - 7.10		0.783		0.900
9	6468.63	9.00	8.90 - 9.10		0.783		0.900
24	20132.63	23.90	23.90 - 24.10		0.790		0.900

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
59	29884.04	58.90	58.90 - 59.10		0.823		0.900
115	50018.31	115.00	114.90 - 115.10		0.772		0.900
140	52169.92	140.00	139.90 - 140.10		0.761		0.900
208	27288.85	207.95	207.90 - 208.10		0.784		0.900
209	42741.86	208.95	208.90 - 209.10		0.785		0.900
238	55385.38	237.95	237.90 - 238.10		0.818		0.900

Integration Time [sec] 0.1
 Acquisition Time [sec] 268.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.59 L/min	Dilution Gas	0.42 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.60 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-30 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	127	Axis Gain	1.0002	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	-0.6 mm	Torch V	0.0 mm
---------	---------	---------	--------

EM

Discriminator	4.5 mV	Analog HV	2552 V	Pulse HV	1859 V
---------------	--------	-----------	--------	----------	--------

Calibration Blank Report

Sample Name Blank
File Name 006CALB.d
Data Path Name D:\Agilent\CPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:30:55
Sample Type CalBlk
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	146.67	14.2
Se	78	72	H2	1.67	91.7
Cu	63	72	He	116.67	48.7
Cu	65	72	He	33.33	8.7
Zn	66	72	He	53.33	21.7
Mo	95	115	He	26.67	69.6
Mo	98	115	He	52.22	68.3
Ag	107	115	He	6.67	43.3
Ag	109	115	He	26.67	28.6
Cd	111	115	He	0.00	N/A
[Pb]	206	175	He	36.67	36.4
[Pb]	207	175	He	23.33	0.0
Pb	208	175	He	127.78	29.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Ge	72	H2	378486.94	2.7
Sc	45	He	74157.35	2.4
Ge	72	He	64995.55	1.2
In	115	He	567443.14	1.4
Lu	175	He	1431992.06	1.9
Th	232	He	2601025.95	0.9

AG 8/27/25

Calibration Standard Report

Sample Name Cal Std
File Name 007CAL.S.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:32:59
Sample Type CalStd
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	4947.63	6.8
Se	78	72	H2	14902.84	1.7
Cu	63	72	He	217010.04	0.3
Cu	65	72	He	108003.30	0.9
Zn	66	72	He	25676.84	1.5
Mo	95	115	He	50012.51	1.5
Mo	98	115	He	86139.93	0.9
Ag	107	115	He	183706.19	0.8
Ag	109	115	He	180411.82	1.1
Cd	111	115	He	41439.34	0.9
[Pb]	206	175	He	246645.46	0.9
[Pb]	207	175	He	210657.72	0.8
Pb	208	175	He	981409.41	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	356613.67	0.7	378486.94	94.22	
Sc	45	He	71812.01	1.9	74157.35	96.84	
Ge	72	He	61794.71	1.5	64995.55	95.08	
In	115	He	541359.35	0.9	567443.14	95.4	
Lu	175	He	1384665.81	0.7	1431992.06	96.7	
Th	232	He	2551040.90	0.9	2601025.95	98.08	

Initial Calibration Verification (ICV) Report

Sample Name ICV
File Name 008_ICV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:35:04
Sample Type ICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8770	ug/L	11.2	2516.93	95.51	
Se	78	72	H2	25.3763	ug/L	1.6	7824.84	101.51	
Cu	63	72	He	12.4021	ug/L	0.1	54668.45	99.22	
Cu	65	72	He	12.4085	ug/L	1.2	27206.01	99.27	
Zn	66	72	He	25.9989	ug/L	4.4	13563.37	104	
Mo	95	115	He	25.4394	ug/L	1.1	51545.80	101.76	
Mo	98	115	He	25.4037	ug/L	1.6	88656.58	101.61	
Ag	107	115	He	12.9261	ug/L	1.1	96213.44	103.41	
Ag	109	115	He	12.6426	ug/L	1.4	92413.28	101.14	
Cd	111	115	He	12.6979	ug/L	1.5	10658.76	101.58	
Pb	208	175	He	24.7198	ug/L	3.2	503038.43	98.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	368913.38	1.6	378486.94	97.47	
Sc	45	He	72833.77	1.4	74157.35	98.22	
Ge	72	He	62651.94	0.6	64995.55	96.39	
In	115	He	548350.79	1.5	567443.14	96.64	
Lu	175	He	1436443.99	3.7	1431992.06	100.31	
Th	232	He	2554818.56	1.0	2601025.95	98.22	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 009_CCV.d
Data Path Name D:\Agilent\ICPMH1\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:37:09
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.7328	ug/L	10.1	2636.96	102.93	
Se	78	72	H2	25.0726	ug/L	2.1	7543.69	100.29	
Cu	63	72	He	25.6206	ug/L	1.4	110660.34	102.48	
Cu	65	72	He	26.1613	ug/L	1.0	56228.96	104.65	
Zn	66	72	He	26.1974	ug/L	1.0	13409.86	104.79	
Mo	95	115	He	12.3998	ug/L	1.1	25242.81	99.2	
Mo	98	115	He	12.4395	ug/L	0.7	43623.54	99.52	
Ag	107	115	He	12.6771	ug/L	1.0	94750.22	101.42	
Ag	109	115	He	12.5908	ug/L	2.2	92408.27	100.73	
Cd	111	115	He	25.3513	ug/L	0.5	21370.26	101.41	
Pb	208	175	He	25.2360	ug/L	1.7	506397.60	100.94	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359938.31	0.5	378486.94	95.1	
Sc	45	He	72666.16	0.5	74157.35	97.99	
Ge	72	He	61463.58	1.7	64995.55	94.57	
In	115	He	550613.02	1.4	567443.14	97.03	
Lu	175	He	1415713.52	2.4	1431992.06	98.86	
Th	232	He	2549004.23	1.1	2601025.95	98	

Initial Calibration Blank (ICB) Report

Sample Name ICB
File Name 010_ICB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:39:13
Sample Type ICB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.2625	ug/L	N/A	116.67	
Se	78	72	H2	0.0077	ug/L	41.2	4.00	
Cu	63	72	He	-0.0151	ug/L	N/A	46.67	
Cu	65	72	He	0.0044	ug/L	155.8	41.67	
Zn	66	72	He	0.0222	ug/L	174.2	63.33	
Mo	95	115	He	0.0103	ug/L	23.5	47.78	
Mo	98	115	He	0.0039	ug/L	27.4	65.55	
Ag	107	115	He	0.0068	ug/L	27.8	58.33	
Ag	109	115	He	0.0050	ug/L	74.9	63.33	
Cd	111	115	He	0.0018	ug/L	33.6	1.50	
Pb	208	175	He	0.0018	ug/L	47.4	164.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367176.94	0.9	378486.94	97.01	
Sc	45	He	72398.65	0.2	74157.35	97.63	
Ge	72	He	62866.13	1.9	64995.55	96.72	
In	115	He	559682.97	0.4	567443.14	98.63	
Lu	175	He	1434242.53	1.7	1431992.06	100.16	
Th	232	He	2535207.77	2.4	2601025.95	97.47	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 011_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:41:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.5602	ug/L	69.6	200.01	
Se	78	72	H2	0.0001	ug/L	6637.0	1.67	
Cu	63	72	He	-0.0130	ug/L	N/A	56.67	
Cu	65	72	He	0.0024	ug/L	494.5	38.33	
Zn	66	72	He	-0.0113	ug/L	N/A	46.67	
Mo	95	115	He	-0.0033	ug/L	N/A	20.00	
Mo	98	115	He	-0.0026	ug/L	N/A	43.34	
Ag	107	115	He	0.0030	ug/L	64.5	30.00	
Ag	109	115	He	-0.0002	ug/L	N/A	25.00	
Cd	111	115	He	0.0011	ug/L	0.1	1.00	
Pb	208	175	He	0.0000	ug/L	4720.4	128.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	371675.83	1.9	378486.94	98.2	
Sc	45	He	73607.40	1.7	74157.35	99.26	
Ge	72	He	63776.81	1.7	64995.55	98.12	
In	115	He	569177.97	0.1	567443.14	100.31	
Lu	175	He	1446710.03	1.1	1431992.06	101.03	
Th	232	He	2538492.67	2.4	2601025.95	97.6	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 012LICV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:43:22
Sample Type LLICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.0584	ug/L	11.4	346.68	-205.84	
Se	78	72	H2	2.0362	ug/L	2.4	627.01	101.81	
Cu	63	72	He	0.2386	ug/L	12.5	1190.07	119.3	
Cu	65	72	He	0.2608	ug/L	4.1	618.35	130.4	LLICV Failed
Zn	66	72	He	2.5872	ug/L	7.8	1430.10	258.72	LLICV Failed
Mo	95	115	He	0.1816	ug/L	10.0	407.79	90.8	
Mo	98	115	He	0.1989	ug/L	5.2	771.14	99.45	
Ag	107	115	He	0.0372	ug/L	20.0	293.34	93	
Ag	109	115	He	0.0397	ug/L	15.5	326.68	99.25	
Cd	111	115	He	0.0476	ug/L	5.2	41.33	119	
[Pb]	206	175	He	0.0465	ug/L	21.7	277.78	116.25	
[Pb]	207	175	He	0.0416	ug/L	15.7	207.78	104	
Pb	208	175	He	0.0440	ug/L	10.2	1035.58	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367587.04	1.1	378486.94	97.12	
Sc	45	He	74354.68	2.7	74157.35	100.27	
Ge	72	He	64225.26	1.9	64995.55	98.81	
In	115	He	567871.91	1.0	567443.14	100.08	
Lu	175	He	1453642.11	2.9	1431992.06	101.51	
Th	232	He	2542116.99	0.2	2601025.95	97.74	

see remake std
 AB
 8/27/25

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 013LICV.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:50:02
Sample Type LLICV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.2263	ug/L	17.4	353.34	-222.63	
Se	78	72	H2	2.0686	ug/L	5.4	619.34	103.43	
Cu	63	72	He	0.1781	ug/L	11.4	926.71	89.05	
Cu	65	72	He	0.2284	ug/L	9.6	550.02	114.2	
Zn	66	72	He	1.0368	ug/L	12.8	610.03	103.68	
Mo	95	115	He	0.1963	ug/L	9.3	441.12	98.15	
Mo	98	115	He	0.1884	ug/L	6.7	738.92	94.2	
Ag	107	115	He	0.0408	ug/L	8.0	323.34	102	
Ag	109	115	He	0.0377	ug/L	7.4	315.01	94.25	
Cd	111	115	He	0.0369	ug/L	7.8	32.33	92.25	
[Pb]	206	175	He	0.0352	ug/L	16.3	220.00	88	
[Pb]	207	175	He	0.0405	ug/L	18.6	203.34	101.25	
Pb	208	175	He	0.0378	ug/L	3.1	911.13	94.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357939.06	4.6	378486.94	94.57	
Sc	45	He	73215.66	3.3	74157.35	98.73	
Ge	72	He	64764.60	1.1	64995.55	99.64	
In	115	He	572100.82	3.3	567443.14	100.82	
Lu	175	He	1459085.92	2.0	1431992.06	101.89	
Th	232	He	2526382.36	3.8	2601025.95	97.13	

Interference Check Solution A (ICS-A) Report

Sample Name ICSA
File Name 014ICSA.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:52:06
Sample Type ICSA
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	0.6162	ug/L	113.2	-1	186.67	
Se	78	72	H2	0.0327	ug/L	24.1	-1	10.67	
Cu	63	72	He	0.5163	ug/L	9.3	-1	2230.22	
Cu	65	72	He	0.5537	ug/L	2.6	-1	1165.06	
Zn	66	72	He	0.6547	ug/L	3.8	-1	366.68	
Mo	95	115	He	50.3340	ug/L	1.0	50	95935.68	
Mo	98	115	He	50.3523	ug/L	0.3	50	165300.33	
Ag	107	115	He	0.0106	ug/L	17.5	-1	80.00	
Ag	109	115	He	0.0084	ug/L	20.3	-1	81.67	
Cd	111	115	He	0.4146	ug/L	2.3	-1	327.50	
[Pb]	206	175	He	0.2574	ug/L	7.3	-1	1264.51	
[Pb]	207	175	He	0.2506	ug/L	1.9	-1	1045.60	
Pb	208	175	He	0.2434	ug/L	1.8	-1	4751.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336368.85	1.2	378486.94	88.87	
Sc	45	He	68378.74	1.4	74157.35	92.21	
Ge	72	He	58668.19	1.9	64995.55	90.26	
In	115	He	515887.81	0.4	567443.14	90.91	
Lu	175	He	1342589.88	1.1	1431992.06	93.76	
Th	232	He	2434416.58	3.3	2601025.95	93.59	

Interference Check Solution AB (ICS-AB) Report

Sample Name ICSAB
File Name 015ICSB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:54:10
Sample Type ICSB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	24.7881	ug/L	9.5	25	2353.57	
Se	78	72	H2	25.5727	ug/L	1.5	25	7107.79	
Cu	63	72	He	49.2471	ug/L	0.9	50	203092.20	
Cu	65	72	He	48.9887	ug/L	0.8	50	100547.70	
Zn	66	72	He	25.0011	ug/L	3.4	25	12222.10	
Mo	95	115	He	50.1126	ug/L	0.9	50	96790.75	
Mo	98	115	He	49.8623	ug/L	1.3	50	165878.31	
Ag	107	115	He	12.4426	ug/L	1.9	12.5	88302.92	
Ag	109	115	He	12.3310	ug/L	1.3	12.5	85945.17	
Cd	111	115	He	25.2566	ug/L	0.9	25	20215.03	
[Pb]	206	175	He	0.2444	ug/L	5.2	-1	1248.96	
[Pb]	207	175	He	0.2276	ug/L	8.4	-1	986.71	
Pb	208	175	He	0.2313	ug/L	3.2	-1	4691.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332550.78	1.7	378486.94	87.86	
Sc	45	He	68134.19	2.4	74157.35	91.88	
Ge	72	He	58708.15	1.4	64995.55	90.33	
In	115	He	522786.59	0.2	567443.14	92.13	
Lu	175	He	1393616.59	2.1	1431992.06	97.32	
Th	232	He	2413229.08	0.7	2601025.95	92.78	

Sample Report

Sample Name LRSTD 1000ppb + 50ppb Ag
File Name 016SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:56:15
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

1 mL / 10 mL 10ppm Pb
 1 mL / 10 mL 500ppb Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	1010.7952	ug/L	2.6	91592.17	
Se	78	72	H2	1050.5522	ug/L	1.8	294612.24	
Cu	63	72	He	1053.8760	ug/L	1.0	4268491.60	
Cu	65	72	He	1058.8081	ug/L	2.3	2134504.55	
Zn	66	72	He	1055.7809	ug/L	2.0	505261.19	
Mo	95	115	He	1016.3681	ug/L	0.5	1990905.13	
Mo	98	115	He	992.1351	ug/L	1.3	3347121.81	
Ag	107	115	He	53.4393	ug/L	0.8	384699.30	
Ag	109	115	He	53.1186	ug/L	0.8	375479.33	
Cd	111	115	He	1038.6658	ug/L	0.7	843316.96	
Pb	208	175	He	1029.6259	ug/L	2.5	20272495.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	335625.84	1.5	378486.94	88.68	
Sc	45	He	70482.15	0.9	74157.35	95.04	
Ge	72	He	57694.13	2.3	64995.55	88.77	
In	115	He	530338.29	1.0	567443.14	93.46	
Lu	175	He	1389450.34	1.7	1431992.06	97.03	
Th	232	He	2436606.52	2.1	2601025.95	93.68	

Sample Report

Sample Name MO STD
File Name 017SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:58:14
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.3535	ug/L	120.1	166.67	
Se	78	72	H2	0.2888	ug/L	7.7	84.67	
Cu	63	72	He	0.0743	ug/L	18.9	413.35	
Cu	65	72	He	0.0760	ug/L	4.2	186.67	
Zn	66	72	He	0.2622	ug/L	45.1	176.67	
Mo	95	115	He	50.2901	ug/L	1.1	99446.82	
Mo	98	115	He	50.3394	ug/L	0.9	171455.19	
Ag	107	115	He	0.0111	ug/L	15.9	86.67	
Ag	109	115	He	0.0042	ug/L	62.0	55.00	
Cd	111	115	He	0.0687	ug/L	6.0	56.33	
Pb	208	175	He	0.0743	ug/L	6.3	1606.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344386.52	1.3	378486.94	90.99	
Sc	45	He	68220.96	0.9	74157.35	91.99	
Ge	72	He	58902.38	0.6	64995.55	90.63	
In	115	He	535281.13	1.5	567443.14	94.33	
Lu	175	He	1406605.86	1.0	1431992.06	98.23	
Th	232	He	2430354.28	1.1	2601025.95	93.44	

Prep Blank (PB) Report

Sample Name KQ2515045-01
File Name 018_PB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:06:51
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3455	ug/L	N/A	103.33	
Se	78	72	H2	0.0061	ug/L	89.1	3.33	
Cu	63	72	He	0.0152	ug/L	41.8	180.00	
Cu	65	72	He	0.0324	ug/L	21.5	103.33	
Zn	66	72	He	0.0416	ug/L	205.7	73.33	
Mo	95	115	He	0.0119	ug/L	41.0	51.11	
Mo	98	115	He	0.0167	ug/L	72.9	111.11	
Ag	107	115	He	0.0000	ug/L	15964.5	6.67	
Ag	109	115	He	-0.0020	ug/L	N/A	11.67	
Cd	111	115	He	0.0076	ug/L	12.9	6.50	
[Pb]	206	175	He	0.0058	ug/L	12.0	65.55	
[Pb]	207	175	He	0.0122	ug/L	58.7	75.56	
Pb	208	175	He	0.0077	ug/L	20.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350370.80	1.8	378486.94	92.57	
Sc	45	He	71493.52	2.3	74157.35	96.41	
Ge	72	He	62845.95	1.1	64995.55	96.69	
In	115	He	559309.05	0.8	567443.14	98.57	
Lu	175	He	1421105.08	1.0	1431992.06	99.24	
Th	232	He	2444479.29	0.1	2601025.95	93.98	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-02
File Name 019_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:08:55
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.4609	ug/L	0.7	3123.73	33.3	94.48	
Se	78	72	H2	33.6858	ug/L	1.9	9913.81	33.3	101.16	
Cu	63	72	He	49.4509	ug/L	0.9	208495.72	50	98.9	
Cu	65	72	He	48.7860	ug/L	0.7	102380.34	50	97.57	
Zn	66	72	He	100.5725	ug/L	1.1	50128.41	100	100.57	
Mo	95	115	He	31.3298	ug/L	0.5	63779.45	33.3	94.08	
Mo	98	115	He	31.3528	ug/L	1.3	109917.48	33.3	94.15	
Ag	107	115	He	9.7659	ug/L	1.3	73039.82	10	97.66	
Ag	109	115	He	9.6976	ug/L	1.5	71222.22	10	96.98	
Cd	111	115	He	9.6549	ug/L	1.4	8142.56	10	96.55	
[Pb]	206	175	He	100.4949	ug/L	0.5	502038.35	100	100.49	
[Pb]	207	175	He	97.0865	ug/L	0.6	414234.70	100	97.09	
Pb	208	175	He	98.1886	ug/L	0.1	1951786.69	100	98.19	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352114.17	0.5	378486.94	93.03	
Sc	45	He	70337.83	1.4	74157.35	94.85	
Ge	72	He	60020.64	0.8	64995.55	92.35	
In	115	He	550896.79	1.5	567443.14	97.08	
Lu	175	He	1402305.45	1.1	1431992.06	97.93	
Th	232	He	2404754.08	0.9	2601025.95	92.45	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-03
File Name 020_QC4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:10:59
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	5.1344	ug/L	8.5	616.69	4.8	106.97	
Se	78	72	H2	5.0262	ug/L	2.2	1462.08	4.8	104.71	
Cu	63	72	He	6.4436	ug/L	2.5	27610.31	6.6	97.63	
Cu	65	72	He	6.3183	ug/L	0.7	13456.47	6.6	95.73	
Zn	66	72	He	57.0501	ug/L	1.4	28822.81	57.4	99.39	
Mo	95	115	He	0.2734	ug/L	5.5	573.35	-1	-27.34	
Mo	98	115	He	0.2695	ug/L	4.4	980.04	-1	-26.95	
Ag	107	115	He	0.2645	ug/L	4.5	1953.49	0.27	97.96	
Ag	109	115	He	0.2600	ug/L	13.5	1905.15	0.27	96.3	
Cd	111	115	He	0.2940	ug/L	4.2	244.17	0.296	99.32	
Pb	208	175	He	0.1237	ug/L	4.0	2599.00	0.116	106.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347751.14	1.0	378486.94	91.88	
Sc	45	He	70954.44	2.1	74157.35	95.68	
Ge	72	He	60790.53	0.5	64995.55	93.53	
In	115	He	542387.64	0.2	567443.14	95.58	
Lu	175	He	1410960.81	1.8	1431992.06	98.53	
Th	232	He	2371138.77	0.9	2601025.95	91.16	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-04
File Name 021_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:13:03
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.9338	ug/L	2.8	2000.17	21.8	96.03	
Se	78	72	H2	21.9730	ug/L	1.1	6086.31	21.8	100.79	
Cu	63	72	He	901.4919	ug/L	3.5	3810718.28	994	90.69	
Cu	65	72	He	915.4979	ug/L	1.5	1927241.59	994	92.1	
Zn	66	72	He	257.1535	ug/L	2.8	128509.54	272	94.54	
Mo	95	115	He	6.2374	ug/L	0.6	12371.07	6.88	90.66	
Mo	98	115	He	6.2802	ug/L	0.7	21458.76	6.88	91.28	
Ag	107	115	He	7.6426	ug/L	0.3	55599.54	-1	-764.26	
Ag	109	115	He	7.4675	ug/L	0.6	53359.33	-1	-746.75	
Cd	111	115	He	78.4210	ug/L	0.4	64338.46	84.6	92.7	
Pb	208	175	He	0.3958	ug/L	2.5	7973.23	0.45	87.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	331424.83	2.2	378486.94	87.57	
Sc	45	He	69162.29	2.4	74157.35	93.26	
Ge	72	He	60244.92	2.9	64995.55	92.69	
In	115	He	535874.02	0.4	567443.14	94.44	
Lu	175	He	1399302.95	1.0	1431992.06	97.72	
Th	232	He	2352841.99	0.7	2601025.95	90.46	

Reference Sample Report

Sample Name K2508064-008
File Name 022_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:15:06
Sample Type AIRef
Comment 5X
ISTD Ref FileName 008CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.3520	ug/L	15.0	1213.41	
Se	78	72	H2	11.9409	ug/L	1.7	3515.11	
Cu	63	72	He	11.3317	ug/L	1.9	48342.23	
Cu	65	72	He	11.3454	ug/L	1.4	24072.07	
Zn	66	72	He	498.7541	ug/L	0.1	250928.04	
Mo	95	115	He	0.2386	ug/L	5.7	506.68	
Mo	98	115	He	0.2418	ug/L	9.1	890.03	
Ag	107	115	He	0.0880	ug/L	6.6	658.35	
Ag	109	115	He	0.0870	ug/L	3.7	658.35	
Cd	111	115	He	3.5033	ug/L	0.8	2927.64	
Pb	208	175	He	1.6128	ug/L	1.9	32679.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352129.38	1.1	378486.94	93.04	
Sc	45	He	71058.46	0.8	74157.35	95.82	
Ge	72	He	60629.52	0.9	64995.55	93.28	
In	115	He	545823.14	0.6	567443.14	96.19	
Lu	175	He	1424136.59	1.0	1431992.06	99.45	
Th	232	He	2408246.99	1.3	2601025.95	92.59	

Duplicate Sample Report

Sample Name KQ2515045-05
File Name 023_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:17:10
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 022_
Default Text ARLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	11.9678	ug/L	13.8	1266.75	5.28	
Se	78	72	H2	12.7379	ug/L	2.3	3733.50	6.46	
Cu	63	72	He	12.3746	ug/L	2.0	52801.11	8.8	
Cu	65	72	He	12.3481	ug/L	2.6	26209.20	8.46	
Zn	66	72	He	526.5237	ug/L	0.4	264977.41	5.42	
Mo	95	115	He	0.2862	ug/L	4.7	601.13		<5x MRL
Mo	98	115	He	0.2765	ug/L	6.2	1007.82		<5x MRL
Ag	107	115	He	0.0930	ug/L	1.6	693.35		<5x MRL
Ag	109	115	He	0.0939	ug/L	12.2	706.69		<5x MRL
Cd	111	115	He	3.8799	ug/L	1.4	3233.55	10.2	
[Pb]	206	175	He	1.7091	ug/L	0.5	8744.10	5.04	
[Pb]	207	175	He	1.7261	ug/L	2.4	7534.45	5.42	
Pb	208	175	He	1.7043	ug/L	1.4	34672.71	5.51	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350660.74	1.3	378486.94	92.65	
Sc	45	He	70515.61	1.1	74157.35	95.09	
Ge	72	He	60646.34	1.0	64995.55	93.31	
In	115	He	544348.79	0.5	567443.14	95.93	
Lu	175	He	1430285.39	2.1	1431992.06	99.88	
Th	232	He	2408498.82	0.5	2601025.95	92.6	

Sample Report

Sample Name K2508064-008L
File Name 024SMPL.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:19:14
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	2.8317	ug/L	23.5	406.68	
Se	78	72	H2	2.2414	ug/L	4.3	662.35	
Cu	63	72	He	2.3398	ug/L	2.0	9943.59	
Cu	65	72	He	2.3130	ug/L	2.5	4870.87	
Zn	66	72	He	100.9729	ug/L	1.0	50198.77	
Mo	95	115	He	0.0383	ug/L	23.0	103.33	
Mo	98	115	He	0.0436	ug/L	7.9	202.23	
Ag	107	115	He	0.0209	ug/L	7.4	161.67	
Ag	109	115	He	0.0162	ug/L	17.3	143.33	
Cd	111	115	He	0.6938	ug/L	3.0	580.84	
Pb	208	175	He	0.3264	ug/L	1.5	6610.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352795.48	1.1	378486.94	93.21	
Sc	45	He	70318.10	0.5	74157.35	94.82	
Ge	72	He	59866.27	0.6	64995.55	92.11	
In	115	He	546884.19	0.9	567443.14	96.38	
Lu	175	He	1401817.06	2.3	1431992.06	97.89	
Th	232	He	2396837.52	0.6	2601025.95	92.15	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508064-008A
File Name 025_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:21:18
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_ ARF.
Default Text ALKLS NoUser

+500110ppm PS
 100v1 500ppb Ag
 AB
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	62.9937	ug/L	4.2	6028.07	50	103.28	
Se	78	H2	65.8989	ug/L	0.6	19109.54	50	107.92	
Cu	63	He	63.4863	ug/L	2.0	266097.85	50	104.31	
Cu	65	He	64.0366	ug/L	0.3	133606.21	50	105.38	
Zn	66	He	559.5965	ug/L	1.1	277101.62	50	121.68	PDS Failed
Mo	95	He	49.8474	ug/L	0.8	99858.75	50	99.22	
Mo	98	He	50.2478	ug/L	0.8	173377.82	50	100.01	
Ag	107	He	5.2849	ug/L	1.6	38904.68	5	103.94	
Ag	109	He	5.1941	ug/L	0.6	37562.66	5	102.14	
Cd	111	He	54.4453	ug/L	0.5	45197.87	50	101.88	
[Pb]	206	He	52.2070	ug/L	1.3	261765.26	50	101.16	
[Pb]	207	He	51.8422	ug/L	1.1	222003.62	50	100.41	
Pb	208	He	51.8715	ug/L	1.3	1034849.01	50	100.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346979.63	0.6	378486.94	91.68	
Sc	45	He	69464.10	1.8	74157.35	93.67	
Ge	72	He	59678.92	1.0	64995.55	91.82	
In	115	He	542222.29	0.1	567443.14	95.56	
Lu	175	He	1407451.65	1.4	1431992.06	98.29	
Th	232	He	2410699.76	2.1	2601025.95	92.68	

Matrix Spike Sample (MS) Report

Sample Name KQ2515045-06
File Name 026_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:23:22
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	43.4002	ug/L	3.5	4277.39	33.3	96.24	
Se	78	H2	46.3660	ug/L	1.5	13709.97	33.3	103.38	
Cu	63	He	61.1645	ug/L	1.0	261239.92	50	99.67	
Cu	65	He	61.6481	ug/L	1.5	131046.08	50	100.61	
Zn	66	He	608.8511	ug/L	2.0	307160.61	100	110.1	
Mo	95	He	32.5427	ug/L	1.8	66021.80	33.3	97.01	
Mo	98	He	32.4722	ug/L	1.1	113474.65	33.3	96.79	
Ag	107	He	9.8453	ug/L	1.0	73385.13	10	97.57	
Ag	109	He	9.8611	ug/L	0.2	72192.39	10	97.74	
Cd	111	He	13.5414	ug/L	0.3	11383.50	10	100.38	
[Pb]	206	He	100.3079	ug/L	1.4	515068.36	100	98.68	
[Pb]	207	He	95.6940	ug/L	0.9	419678.85	100	94.06	
Pb	208	He	97.3871	ug/L	0.6	1989772.66	100	95.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353813.12	0.5	378486.94	93.48	
Sc	45	He	71420.06	2.3	74157.35	96.31	
Ge	72	He	60814.09	2.0	64995.55	93.57	
In	115	He	549081.83	0.6	567443.14	96.76	
Lu	175	He	1441388.10	0.5	1431992.06	100.66	
Th	232	He	2438895.02	1.4	2601025.95	93.77	

Sample Report

Sample Name K2508064-001
File Name 027SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:25:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.5681	ug/L	8.4	1320.09	
Se	78	72	H2	12.3304	ug/L	2.3	3603.46	
Cu	63	72	He	16.2712	ug/L	1.5	70102.34	
Cu	65	72	He	16.2842	ug/L	3.0	34894.48	
Zn	66	72	He	547.9987	ug/L	1.0	278566.90	
Mo	95	115	He	0.3394	ug/L	7.1	706.69	
Mo	98	115	He	0.3482	ug/L	2.9	1253.39	
Ag	107	115	He	0.0952	ug/L	9.4	708.36	
Ag	109	115	He	0.0913	ug/L	10.9	686.69	
Cd	111	115	He	4.0269	ug/L	0.6	3349.07	
Pb	208	175	He	1.0905	ug/L	2.6	22011.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349555.62	0.6	378486.94	92.36	
Sc	45	He	70696.15	1.1	74157.35	95.33	
Ge	72	He	61265.75	1.5	64995.55	94.26	
In	115	He	543202.95	0.5	567443.14	95.73	
Lu	175	He	1416176.07	1.4	1431992.06	98.9	
Th	232	He	2462173.87	0.5	2601025.95	94.66	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 028_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:27:29
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.2302	ug/L	12.2	2446.92	96.92	
Se	78	72	H2	24.9030	ug/L	1.2	7360.59	99.61	
Cu	63	72	He	25.4138	ug/L	1.8	108746.21	101.66	
Cu	65	72	He	25.4966	ug/L	1.3	54291.45	101.99	
Zn	66	72	He	25.9344	ug/L	3.3	13149.60	103.74	
Mo	95	115	He	12.3529	ug/L	1.0	24919.98	98.82	
Mo	98	115	He	12.3136	ug/L	0.6	42790.99	98.51	
Ag	107	115	He	12.6398	ug/L	1.4	93612.48	101.12	
Ag	109	115	He	12.6830	ug/L	1.0	92253.78	101.46	
Cd	111	115	He	25.0873	ug/L	0.9	20955.29	100.35	
Pb	208	175	He	25.1698	ug/L	0.9	499771.59	100.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353657.60	1.4	378486.94	93.44	
Sc	45	He	69721.82	2.5	74157.35	94.02	
Ge	72	He	60894.36	1.6	64995.55	93.69	
In	115	He	545609.87	1.2	567443.14	96.15	
Lu	175	He	1400597.74	1.2	1431992.06	97.81	
Th	232	He	2420488.66	1.5	2601025.95	93.06	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 029_CCB.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:29:33
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1600	ug/L	160.9	153.33	
Se	78	72	H2	0.0181	ug/L	102.4	7.00	
Cu	63	72	He	-0.0002	ug/L	N/A	110.00	
Cu	65	72	He	0.0039	ug/L	212.1	40.00	
Zn	66	72	He	-0.0205	ug/L	N/A	40.00	
Mo	95	115	He	0.0164	ug/L	68.8	60.00	
Mo	98	115	He	0.0109	ug/L	25.2	90.00	
Ag	107	115	He	0.0024	ug/L	53.8	25.00	
Ag	109	115	He	0.0001	ug/L	2078.5	26.67	
Cd	111	115	He	0.0025	ug/L	80.9	2.17	
Pb	208	175	He	0.0045	ug/L	20.7	214.44	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355447.39	1.1	378486.94	93.91	
Sc	45	He	70096.65	0.4	74157.35	94.52	
Ge	72	He	61503.62	0.3	64995.55	94.63	
In	115	He	555508.37	0.4	567443.14	97.9	
Lu	175	He	1404848.05	1.0	1431992.06	98.1	
Th	232	He	2394111.06	0.9	2601025.95	92.04	

Sample Report

Sample Name K2508064-002
File Name 030SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:31:38
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.1669	ug/L	27.1	1156.74	
Se	78	72	H2	11.7425	ug/L	19.0	3640.81	
Cu	63	72	He	9.3339	ug/L	1.3	39759.03	
Cu	65	72	He	9.2605	ug/L	3.2	19605.29	
Zn	66	72	He	383.3557	ug/L	1.9	192418.20	
Mo	95	115	He	0.1985	ug/L	12.2	428.90	
Mo	98	115	He	0.1676	ug/L	6.0	636.69	
Ag	107	115	He	0.0668	ug/L	5.1	505.01	
Ag	109	115	He	0.0647	ug/L	12.8	500.01	
Cd	111	115	He	2.0591	ug/L	3.2	1732.44	
Pb	208	175	He	0.4359	ug/L	2.2	8931.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	379559.96	18.1	378486.94	100.28	
Sc	45	He	69413.57	1.6	74157.35	93.6	
Ge	72	He	60498.94	2.0	64995.55	93.08	
In	115	He	549576.83	0.3	567443.14	96.85	
Lu	175	He	1425524.62	1.8	1431992.06	99.55	
Th	232	He	2430737.51	1.7	2601025.95	93.45	

Sample Report

Sample Name K2508064-003
File Name 031SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:33:42
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9475	ug/L	9.1	1196.74	
Se	78	72	H2	11.0453	ug/L	2.4	3310.39	
Cu	63	72	He	10.1994	ug/L	1.2	43426.36	
Cu	65	72	He	10.3451	ug/L	2.7	21900.28	
Zn	66	72	He	512.6946	ug/L	2.4	257302.23	
Mo	95	115	He	0.1853	ug/L	2.6	402.23	
Mo	98	115	He	0.2024	ug/L	9.7	758.91	
Ag	107	115	He	0.0653	ug/L	7.9	493.35	
Ag	109	115	He	0.0595	ug/L	10.1	461.68	
Cd	111	115	He	2.8821	ug/L	1.9	2425.55	
Pb	208	175	He	0.4414	ug/L	1.0	9089.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358451.88	0.8	378486.94	94.71	
Sc	45	He	70140.48	1.4	74157.35	94.58	
Ge	72	He	60499.10	2.1	64995.55	93.08	
In	115	He	549722.82	0.5	567443.14	96.88	
Lu	175	He	1432457.27	1.7	1431992.06	100.03	
Th	232	He	2427025.59	0.9	2601025.95	93.31	

Sample Report

Sample Name K2508064-004
File Name 032SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:35:44
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.9924	ug/L	11.6	1273.42	
Se	78	72	H2	12.7121	ug/L	0.9	3735.83	
Cu	63	72	He	7.3354	ug/L	1.8	31535.13	
Cu	65	72	He	7.3059	ug/L	2.9	15611.97	
Zn	66	72	He	356.9163	ug/L	0.8	180730.29	
Mo	95	115	He	0.1317	ug/L	12.0	291.11	
Mo	98	115	He	0.1338	ug/L	16.6	514.46	
Ag	107	115	He	0.0457	ug/L	16.7	345.01	
Ag	109	115	He	0.0366	ug/L	4.5	291.67	
Cd	111	115	He	1.7162	ug/L	1.5	1432.91	
Pb	208	175	He	0.5306	ug/L	1.3	10869.62	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351507.56	1.3	378486.94	92.87	
Sc	45	He	70961.17	0.7	74157.35	95.69	
Ge	72	He	61018.25	0.5	64995.55	93.88	
In	115	He	545342.66	0.4	567443.14	96.11	
Lu	175	He	1428357.27	1.0	1431992.06	99.75	
Th	232	He	2484795.75	0.6	2601025.95	95.53	

Sample Report

Sample Name K2508064-005
File Name 033SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:37:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.6793	ug/L	8.8	1270.08	
Se	78	72	H2	11.4533	ug/L	0.7	3438.09	
Cu	63	72	He	7.7359	ug/L	4.0	33616.63	
Cu	65	72	He	7.9269	ug/L	2.1	17127.07	
Zn	66	72	He	434.5133	ug/L	0.8	222520.38	
Mo	95	115	He	0.1851	ug/L	8.7	401.12	
Mo	98	115	He	0.1676	ug/L	1.4	635.57	
Ag	107	115	He	0.0739	ug/L	7.2	556.69	
Ag	109	115	He	0.0683	ug/L	1.9	525.01	
Cd	111	115	He	1.7235	ug/L	1.5	1447.41	
Pb	208	175	He	0.5304	ug/L	1.3	10732.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359050.19	0.3	378486.94	94.86	
Sc	45	He	70937.28	1.0	74157.35	95.66	
Ge	72	He	61717.68	2.1	64995.55	94.96	
In	115	He	548539.67	0.9	567443.14	96.67	
Lu	175	He	1411038.99	1.3	1431992.06	98.54	
Th	232	He	2480032.67	2.2	2601025.95	95.35	

Sample Report

Sample Name K2508064-006
File Name 034SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:39:50
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.9327	ug/L	9.1	1576.78	
Se	78	72	H2	14.1391	ug/L	1.5	4222.97	
Cu	63	72	He	5.9508	ug/L	2.6	25904.01	
Cu	65	72	He	5.9572	ug/L	2.2	12885.92	
Zn	66	72	He	352.7133	ug/L	1.0	180730.37	
Mo	95	115	He	0.1049	ug/L	3.8	241.11	
Mo	98	115	He	0.0878	ug/L	1.7	361.12	
Ag	107	115	He	0.0290	ug/L	15.3	225.00	
Ag	109	115	He	0.0242	ug/L	15.8	205.00	
Cd	111	115	He	1.6904	ug/L	1.6	1435.91	
Pb	208	175	He	0.3510	ug/L	1.2	7349.75	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357274.32	1.0	378486.94	94.4	
Sc	45	He	72646.17	1.9	74157.35	97.96	
Ge	72	He	61751.06	2.0	64995.55	95.01	
In	115	He	554825.23	0.3	567443.14	97.78	
Lu	175	He	1451442.27	1.0	1431992.06	101.36	
Th	232	He	2509826.53	1.1	2601025.95	96.49	

Sample Report

Sample Name K2508064-007
File Name 035SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:41:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0528	ug/L	13.8	1196.74	
Se	78	72	H2	11.6664	ug/L	1.8	3465.10	
Cu	63	72	He	9.6665	ug/L	0.5	41918.64	
Cu	65	72	He	9.6360	ug/L	3.2	20770.24	
Zn	66	72	He	488.4756	ug/L	1.5	249640.65	
Mo	95	115	He	0.1845	ug/L	12.5	406.67	
Mo	98	115	He	0.1912	ug/L	8.1	730.02	
Ag	107	115	He	0.0388	ug/L	18.2	300.01	
Ag	109	115	He	0.0279	ug/L	12.5	233.33	
Cd	111	115	He	2.3630	ug/L	1.6	2017.98	
Pb	208	175	He	0.7140	ug/L	2.6	14740.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355189.71	1.8	378486.94	93.84	
Sc	45	He	72515.49	0.8	74157.35	97.79	
Ge	72	He	61597.08	1.7	64995.55	94.77	
In	115	He	557759.87	0.8	567443.14	98.29	
Lu	175	He	1443998.63	1.5	1431992.06	100.84	
Th	232	He	2493818.24	1.6	2601025.95	95.88	

Sample Report

Sample Name K2508064-009
File Name 036SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:43:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9595	ug/L	17.0	1206.74	
Se	78	72	H2	12.1687	ug/L	2.6	3672.48	
Cu	63	72	He	12.4759	ug/L	0.4	54320.14	
Cu	65	72	He	12.4399	ug/L	1.6	26938.90	
Zn	66	72	He	473.8635	ug/L	1.4	243338.70	
Mo	95	115	He	0.2428	ug/L	21.4	523.35	
Mo	98	115	He	0.2539	ug/L	11.0	947.81	
Ag	107	115	He	0.0764	ug/L	8.2	581.69	
Ag	109	115	He	0.0660	ug/L	11.0	513.35	
Cd	111	115	He	3.9560	ug/L	1.0	3359.41	
Pb	208	175	He	0.6647	ug/L	4.0	13536.13	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	360982.58	0.2	378486.94	95.38	
Sc	45	He	70401.68	0.8	74157.35	94.94	
Ge	72	He	61885.31	0.4	64995.55	95.21	
In	115	He	554668.36	1.0	567443.14	97.75	
Lu	175	He	1423487.06	0.6	1431992.06	99.41	
Th	232	He	2498723.71	0.7	2601025.95	96.07	

Sample Report

Sample Name K2508064-010
File Name 037SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:46:00
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9636	ug/L	8.5	1006.72	
Se	78	72	H2	9.8248	ug/L	0.6	2947.98	
Cu	63	72	He	7.6358	ug/L	1.7	33753.62	
Cu	65	72	He	7.6799	ug/L	2.3	16875.11	
Zn	66	72	He	333.8798	ug/L	2.4	173836.25	
Mo	95	115	He	0.1315	ug/L	4.5	296.67	
Mo	98	115	He	0.1446	ug/L	13.0	563.34	
Ag	107	115	He	0.0384	ug/L	16.6	296.67	
Ag	109	115	He	0.0486	ug/L	7.7	386.68	
Cd	111	115	He	1.0631	ug/L	1.2	906.20	
Pb	208	175	He	0.5259	ug/L	2.6	10840.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358872.68	0.7	378486.94	94.82	
Sc	45	He	71959.24	0.7	74157.35	97.04	
Ge	72	He	62755.64	1.8	64995.55	96.55	
In	115	He	556729.45	0.9	567443.14	98.11	
Lu	175	He	1437094.04	1.6	1431992.06	100.36	
Th	232	He	2515509.39	1.8	2601025.95	96.71	

Sample Report

Sample Name K2508064-011
File Name 038SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:48:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.6625	ug/L	11.5	1150.07	
Se	78	72	H2	11.0700	ug/L	6.0	3263.38	
Cu	63	72	He	11.1154	ug/L	1.2	48104.79	
Cu	65	72	He	11.1325	ug/L	2.4	23960.23	
Zn	66	72	He	539.3749	ug/L	1.8	275239.04	
Mo	95	115	He	0.2652	ug/L	10.5	564.46	
Mo	98	115	He	0.2801	ug/L	3.9	1030.05	
Ag	107	115	He	0.0463	ug/L	11.0	351.68	
Ag	109	115	He	0.0384	ug/L	8.0	306.68	
Cd	111	115	He	3.3053	ug/L	2.2	2781.45	
Pb	208	175	He	0.2987	ug/L	2.5	6180.60	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352672.25	1.0	378486.94	93.18	
Sc	45	He	70730.02	1.3	74157.35	95.38	
Ge	72	He	61503.35	1.4	64995.55	94.63	
In	115	He	549791.77	1.9	567443.14	96.89	
Lu	175	He	1429861.23	0.7	1431992.06	99.85	
Th	232	He	2496019.13	2.6	2601025.95	95.96	

Sample Report

Sample Name K2508064-012
File Name 039SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:50:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0024	ug/L	3.5	1083.40	
Se	78	72	H2	10.1962	ug/L	2.6	2992.99	
Cu	63	72	He	12.3423	ug/L	1.3	52426.74	
Cu	65	72	He	12.3605	ug/L	1.9	26112.27	
Zn	66	72	He	493.2385	ug/L	1.1	247123.52	
Mo	95	115	He	0.2128	ug/L	9.2	447.79	
Mo	98	115	He	0.2109	ug/L	8.9	771.14	
Ag	107	115	He	0.0715	ug/L	8.4	528.35	
Ag	109	115	He	0.0733	ug/L	4.6	550.02	
Cd	111	115	He	3.0164	ug/L	1.1	2482.89	
Pb	208	175	He	0.3345	ug/L	1.3	6792.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351054.55	1.5	378486.94	92.75	
Sc	45	He	69741.83	1.7	74157.35	94.05	
Ge	72	He	60381.72	1.8	64995.55	92.9	
In	115	He	537599.80	1.1	567443.14	94.74	
Lu	175	He	1406457.12	1.0	1431992.06	98.22	
Th	232	He	2474021.32	0.6	2601025.95	95.12	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 040_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:52:09
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.1270	ug/L	7.0	2413.58	96.51	
Se	78	72	H2	25.1407	ug/L	0.9	7355.25	100.56	
Cu	63	72	He	26.5405	ug/L	1.7	108688.76	106.16	
Cu	65	72	He	26.8169	ug/L	0.8	54651.19	107.27	
Zn	66	72	He	27.7278	ug/L	1.1	13453.23	110.91	CCV Failed
Mo	95	115	He	12.6705	ug/L	0.7	24876.58	101.36	
Mo	98	115	He	12.6412	ug/L	0.4	42752.02	101.13	
Ag	107	115	He	12.8758	ug/L	0.5	92815.83	103.01	
Ag	109	115	He	12.8477	ug/L	0.9	90952.19	102.78	
Cd	111	115	He	25.5373	ug/L	0.1	20761.33	102.15	
Pb	208	175	He	24.4168	ug/L	1.2	486017.59	97.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350054.24	1.9	378486.94	92.49	
Sc	45	He	68459.02	1.2	74157.35	92.32	
Ge	72	He	58276.42	1.0	64995.55	89.66	
In	115	He	531004.94	0.5	567443.14	93.58	
Lu	175	He	1404055.14	1.1	1431992.06	98.05	
Th	232	He	2450074.55	1.0	2601025.95	94.2	

*See rerun
 MS
 8/27/25*

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 041_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:57:16
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.5893	ug/L	3.7	2440.24	98.36	
Se	78	72	H2	25.3481	ug/L	1.7	7366.92	101.39	
Cu	63	72	He	26.3479	ug/L	0.1	108403.32	105.39	
Cu	65	72	He	26.3439	ug/L	2.9	53925.11	105.38	
Zn	66	72	He	26.9800	ug/L	3.1	13149.60	107.92	
Mo	95	115	He	12.5514	ug/L	2.1	24622.79	100.41	
Mo	98	115	He	12.4586	ug/L	1.1	42107.82	99.67	
Ag	107	115	He	12.7540	ug/L	0.7	91877.52	102.03	
Ag	109	115	He	12.7917	ug/L	1.5	90489.03	102.33	
Cd	111	115	He	25.4795	ug/L	1.0	20699.91	101.92	
Pb	208	175	He	24.3048	ug/L	0.6	480096.12	97.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347706.01	0.2	378486.94	91.87	
Sc	45	He	68984.68	0.4	74157.35	93.02	
Ge	72	He	58541.02	0.8	64995.55	90.07	
In	115	He	530692.14	1.6	567443.14	93.52	
Lu	175	He	1393266.75	0.7	1431992.06	97.3	
Th	232	He	2453260.90	1.5	2601025.95	94.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 042_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:59:21
Sample Type CCB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0436	ug/L	492.5	140.00	
Se	78	72	H2	0.0096	ug/L	117.6	4.33	
Cu	63	72	He	-0.0091	ug/L	N/A	70.00	
Cu	65	72	He	0.0035	ug/L	330.1	38.33	
Zn	66	72	He	0.0079	ug/L	496.9	53.33	
Mo	95	115	He	0.0000	ug/L	4926.8	25.55	
Mo	98	115	He	0.0023	ug/L	168.9	57.78	
Ag	107	115	He	0.0028	ug/L	16.0	26.67	
Ag	109	115	He	0.0025	ug/L	69.6	43.33	
Cd	111	115	He	0.0018	ug/L	67.7	1.50	
Pb	208	175	He	0.0078	ug/L	31.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350207.37	1.3	378486.94	92.53	
Sc	45	He	68519.59	2.3	74157.35	92.4	
Ge	72	He	59756.13	3.2	64995.55	91.94	
In	115	He	538660.93	1.3	567443.14	94.93	
Lu	175	He	1407453.26	1.3	1431992.06	98.29	
Th	232	He	2485102.36	2.3	2601025.95	95.54	

Sample Report

Sample Name K2508064-013
File Name 043SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:01:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0428	ug/L	20.4	1166.74	
Se	78	72	H2	11.2244	ug/L	0.9	3259.05	
Cu	63	72	He	10.2008	ug/L	3.0	41159.74	
Cu	65	72	He	9.9694	ug/L	1.5	20009.10	
Zn	66	72	He	621.0704	ug/L	2.0	295472.74	
Mo	95	115	He	0.1548	ug/L	3.9	323.34	
Mo	98	115	He	0.1537	ug/L	9.8	560.01	
Ag	107	115	He	0.0541	ug/L	10.7	390.01	
Ag	109	115	He	0.0570	ug/L	2.6	421.68	
Cd	111	115	He	2.8415	ug/L	0.8	2273.52	
Pb	208	175	He	0.3189	ug/L	1.6	6259.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347258.51	1.5	378486.94	91.75	
Sc	45	He	66684.24	1.7	74157.35	89.92	
Ge	72	He	57349.62	2.3	64995.55	88.24	
In	115	He	522664.29	2.1	567443.14	92.11	
Lu	175	He	1357962.32	0.6	1431992.06	94.83	
Th	232	He	2431668.24	0.6	2601025.95	93.49	

Sample Report

Sample Name K2508064-014
File Name 044SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:03:27
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.0388	ug/L	9.3	1243.41	
Se	78	72	H2	11.8147	ug/L	0.9	3379.07	
Cu	63	72	He	13.1971	ug/L	2.0	54437.50	
Cu	65	72	He	13.4063	ug/L	3.5	27486.55	
Zn	66	72	He	543.1706	ug/L	2.6	264148.85	
Mo	95	115	He	0.1971	ug/L	8.8	410.01	
Mo	98	115	He	0.1790	ug/L	8.2	651.13	
Ag	107	115	He	0.0356	ug/L	23.1	261.67	
Ag	109	115	He	0.0346	ug/L	18.0	268.34	
Cd	111	115	He	3.7046	ug/L	1.4	2999.16	
Pb	208	175	He	0.2756	ug/L	4.3	5589.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342111.71	1.1	378486.94	90.39	
Sc	45	He	67705.34	0.7	74157.35	91.3	
Ge	72	He	58634.86	3.1	64995.55	90.21	
In	115	He	528761.76	0.6	567443.14	93.18	
Lu	175	He	1398860.45	0.6	1431992.06	97.69	
Th	232	He	2450972.36	0.6	2601025.95	94.23	

Sample Report

Sample Name K2508064-015
File Name 045SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:05:30
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.0413	ug/L	38.8	1296.75	
Se	78	72	H2	14.0644	ug/L	19.1	3490.10	
Cu	63	72	He	12.3747	ug/L	1.4	50589.89	
Cu	65	72	He	12.5098	ug/L	2.9	25429.43	
Zn	66	72	He	453.3085	ug/L	0.5	218590.89	
Mo	95	115	He	0.2263	ug/L	2.8	462.23	
Mo	98	115	He	0.2084	ug/L	10.0	743.36	
Ag	107	115	He	0.0736	ug/L	15.7	530.01	
Ag	109	115	He	0.0835	ug/L	20.3	608.35	
Cd	111	115	He	3.2959	ug/L	1.6	2641.42	
Pb	208	175	He	0.6518	ug/L	0.7	12744.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	303375.44	16.9	378486.94	80.15	
Sc	45	He	67239.99	1.4	74157.35	90.67	
Ge	72	He	58109.18	1.7	64995.55	89.4	
In	115	He	523544.49	1.7	567443.14	92.26	
Lu	175	He	1366382.64	1.5	1431992.06	95.42	
Th	232	He	2479014.34	1.4	2601025.95	95.31	

Sample Report

Sample Name K2508064-016
File Name 046SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:07:33
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.7804	ug/L	8.8	1140.07	
Se	78	72	H2	11.3033	ug/L	3.7	3264.72	
Cu	63	72	He	12.4655	ug/L	2.7	51774.31	
Cu	65	72	He	12.4989	ug/L	1.0	25825.16	
Zn	66	72	He	485.6824	ug/L	2.5	237914.57	
Mo	95	115	He	0.2151	ug/L	11.4	444.45	
Mo	98	115	He	0.2226	ug/L	10.5	796.70	
Ag	107	115	He	0.0557	ug/L	14.9	405.01	
Ag	109	115	He	0.0615	ug/L	7.5	458.34	
Cd	111	115	He	2.6462	ug/L	2.7	2141.16	
Pb	208	175	He	0.2995	ug/L	4.3	6089.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345633.64	2.3	378486.94	91.32	
Sc	45	He	68245.03	1.2	74157.35	92.03	
Ge	72	He	59049.82	1.9	64995.55	90.85	
In	115	He	528664.13	1.7	567443.14	93.17	
Lu	175	He	1405722.38	2.4	1431992.06	98.17	
Th	232	He	2501242.05	1.6	2601025.95	96.16	

Sample Report

Sample Name K2508064-017
File Name 047SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:09:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	9.3459	ug/L	6.6	1006.72	
Se	78	72	H2	10.9062	ug/L	1.1	3158.69	
Cu	63	72	He	9.8627	ug/L	1.5	40484.58	
Cu	65	72	He	9.5961	ug/L	2.1	19586.87	
Zn	66	72	He	385.1112	ug/L	0.1	186352.27	
Mo	95	115	He	0.1756	ug/L	14.7	370.01	
Mo	98	115	He	0.1628	ug/L	2.8	600.02	
Ag	107	115	He	0.0876	ug/L	10.3	638.36	
Ag	109	115	He	0.0778	ug/L	6.5	576.69	
Cd	111	115	He	1.5972	ug/L	2.4	1301.06	
Pb	208	175	He	0.6280	ug/L	0.1	12600.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346427.43	2.1	378486.94	91.53	
Sc	45	He	68228.05	1.5	74157.35	92	
Ge	72	He	58309.88	0.3	64995.55	89.71	
In	115	He	532082.72	1.1	567443.14	93.77	
Lu	175	He	1401469.36	1.8	1431992.06	97.87	
Th	232	He	2521849.23	1.7	2601025.95	96.96	

Sample Report

Sample Name K2508064-018
File Name 048SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:11:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.2155	ug/L	24.5	1180.08	
Se	78	72	H2	11.5345	ug/L	1.7	3330.39	
Cu	63	72	He	9.5663	ug/L	1.9	39277.65	
Cu	65	72	He	9.7787	ug/L	0.8	19965.80	
Zn	66	72	He	433.6171	ug/L	2.4	209847.81	
Mo	95	115	He	0.3091	ug/L	11.2	616.68	
Mo	98	115	He	0.2949	ug/L	1.2	1021.15	
Ag	107	115	He	0.0361	ug/L	16.7	260.00	
Ag	109	115	He	0.0406	ug/L	2.5	305.01	
Cd	111	115	He	1.9246	ug/L	1.4	1528.58	
Pb	208	175	He	0.4924	ug/L	4.1	9710.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345353.59	1.4	378486.94	91.25	
Sc	45	He	67102.74	1.1	74157.35	90.49	
Ge	72	He	58326.66	0.9	64995.55	89.74	
In	115	He	518751.71	0.7	567443.14	91.42	
Lu	175	He	1374075.92	2.0	1431992.06	95.96	
Th	232	He	2488507.67	1.4	2601025.95	95.67	

Sample Report

Sample Name K2508064-019
File Name 049SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:13:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9852	ug/L	8.2	930.05	
Se	78	72	H2	10.8081	ug/L	6.5	2989.99	
Cu	63	72	He	8.3860	ug/L	2.6	34344.92	
Cu	65	72	He	8.3467	ug/L	0.8	17000.25	
Zn	66	72	He	403.6771	ug/L	1.4	194838.14	
Mo	95	115	He	0.1808	ug/L	7.5	377.78	
Mo	98	115	He	0.1697	ug/L	9.2	620.02	
Ag	107	115	He	0.0495	ug/L	10.6	361.68	
Ag	109	115	He	0.0464	ug/L	1.5	351.68	
Cd	111	115	He	2.2790	ug/L	0.9	1844.79	
Pb	208	175	He	0.4116	ug/L	2.9	8289.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332215.73	9.7	378486.94	87.77	
Sc	45	He	68385.25	0.9	74157.35	92.22	
Ge	72	He	58173.09	2.1	64995.55	89.5	
In	115	He	528748.03	1.5	567443.14	93.18	
Lu	175	He	1400034.98	2.3	1431992.06	97.77	
Th	232	He	2480010.74	1.0	2601025.95	95.35	

Sample Report

Sample Name K2508064-020
File Name 050SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:15:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0937	ug/L	15.2	1070.06	
Se	78	72	H2	11.1410	ug/L	2.3	3205.70	
Cu	63	72	He	11.9419	ug/L	0.9	48178.26	
Cu	65	72	He	11.7721	ug/L	2.6	23621.38	
Zn	66	72	He	505.3667	ug/L	1.4	240441.06	
Mo	95	115	He	0.1940	ug/L	7.7	402.23	
Mo	98	115	He	0.1921	ug/L	1.3	692.24	
Ag	107	115	He	0.0649	ug/L	17.3	470.01	
Ag	109	115	He	0.0438	ug/L	21.6	331.67	
Cd	111	115	He	4.0341	ug/L	1.2	3251.72	
Pb	208	175	He	0.3108	ug/L	3.6	6149.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344184.94	0.8	378486.94	90.94	
Sc	45	He	68143.87	0.7	74157.35	91.89	
Ge	72	He	57336.07	0.7	64995.55	88.22	
In	115	He	526503.24	0.9	567443.14	92.79	
Lu	175	He	1368026.75	0.6	1431992.06	95.53	
Th	232	He	2493489.76	1.5	2601025.95	95.87	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 051_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:17:50
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8684	ug/L	5.5	2333.57	95.47	
Se	78	72	H2	25.9830	ug/L	3.8	7424.29	103.93	
Cu	63	72	He	25.6223	ug/L	0.8	104514.97	102.49	
Cu	65	72	He	25.5729	ug/L	2.1	51897.52	102.29	
Zn	66	72	He	26.0226	ug/L	0.6	12579.08	104.09	
Mo	95	115	He	12.7263	ug/L	0.6	24277.80	101.81	
Mo	98	115	He	12.5861	ug/L	0.6	41360.11	100.69	
Ag	107	115	He	12.9346	ug/L	0.6	90597.85	103.48	
Ag	109	115	He	13.0325	ug/L	2.3	89641.91	104.26	
Cd	111	115	He	25.4874	ug/L	0.6	20134.08	101.95	
Pb	208	175	He	23.9721	ug/L	1.2	461392.31	95.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341869.41	0.9	378486.94	90.33	
Sc	45	He	66027.45	1.4	74157.35	89.04	
Ge	72	He	58042.28	1.7	64995.55	89.3	
In	115	He	515968.06	0.7	567443.14	90.93	
Lu	175	He	1357566.07	0.4	1431992.06	94.8	
Th	232	He	2479288.14	1.5	2601025.95	95.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 052_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:19:54
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.4022	ug/L	N/A	96.67	
Se	78	72	H2	0.0120	ug/L	57.5	5.00	
Cu	63	72	He	-0.0073	ug/L	N/A	73.33	
Cu	65	72	He	-0.0012	ug/L	N/A	26.67	
Zn	66	72	He	0.0142	ug/L	310.9	53.33	
Mo	95	115	He	0.0051	ug/L	14.6	34.44	
Mo	98	115	He	-0.0032	ug/L	N/A	37.78	
Ag	107	115	He	0.0034	ug/L	23.1	30.00	
Ag	109	115	He	0.0013	ug/L	170.7	33.33	
Cd	111	115	He	0.0017	ug/L	21.8	1.33	
Pb	208	175	He	0.0118	ug/L	8.1	346.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345436.10	0.6	378486.94	91.27	
Sc	45	He	65093.73	2.3	74157.35	87.78	
Ge	72	He	56797.38	1.3	64995.55	87.39	
In	115	He	520438.55	1.8	567443.14	91.72	
Lu	175	He	1354174.98	2.8	1431992.06	94.57	
Th	232	He	2475291.53	2.9	2601025.95	95.17	

Prep Blank (PB) Report

Sample Name KQ2515046-01
File Name 053_PB.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:21:59
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1788	ug/L	N/A	116.67	
Se	78	72	H2	0.0086	ug/L	145.8	4.00	
Cu	63	72	He	0.0077	ug/L	61.4	136.67	
Cu	65	72	He	0.0155	ug/L	72.9	61.67	
Zn	66	72	He	0.0116	ug/L	376.7	53.33	
Mo	95	115	He	-0.0049	ug/L	N/A	15.56	
Mo	98	115	He	-0.0089	ug/L	N/A	18.89	
Ag	107	115	He	0.0012	ug/L	114.3	15.00	
Ag	109	115	He	0.0012	ug/L	164.8	33.33	
Cd	111	115	He	0.0006	ug/L	101.0	0.50	
[Pb]	206	175	He	0.0141	ug/L	12.9	104.44	
[Pb]	207	175	He	0.0110	ug/L	19.3	68.89	
Pb	208	175	He	0.0119	ug/L	7.6	356.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343272.12	0.3	378486.94	90.7	
Sc	45	He	66824.67	2.4	74157.35	90.11	
Ge	72	He	58306.62	1.2	64995.55	89.71	
In	115	He	529435.73	1.6	567443.14	93.3	
Lu	175	He	1382377.06	1.0	1431992.06	96.54	
Th	232	He	2454027.36	1.6	2601025.95	94.35	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-02
File Name 054_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:24:03
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.8263	ug/L	2.3	3117.06	33.3	95.57	
Se	78	72	H2	33.3429	ug/L	0.6	9683.98	33.3	100.13	
Cu	63	72	He	48.6796	ug/L	0.8	197832.78	50	97.36	
Cu	65	72	He	48.6762	ug/L	1.5	98442.88	50	97.35	
Zn	66	72	He	96.3199	ug/L	0.8	46275.38	100	96.32	
Mo	95	115	He	31.7337	ug/L	2.0	61047.22	33.3	95.3	
Mo	98	115	He	31.7779	ug/L	1.1	105301.35	33.3	95.43	
Ag	107	115	He	9.8439	ug/L	0.9	69578.88	10	98.44	
Ag	109	115	He	9.8762	ug/L	0.9	68559.00	10	98.76	
Cd	111	115	He	9.7570	ug/L	0.5	7778.18	10	97.57	
[Pb]	206	175	He	97.5492	ug/L	1.3	467539.23	100	97.55	
[Pb]	207	175	He	89.9667	ug/L	0.8	368295.12	100	89.97	
Pb	208	175	He	92.0377	ug/L	1.4	1755191.06	100	92.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347495.40	0.2	378486.94	91.81	
Sc	45	He	64963.16	1.2	74157.35	87.6	
Ge	72	He	57854.85	2.0	64995.55	89.01	
In	115	He	520678.27	1.1	567443.14	91.76	
Lu	175	He	1345470.55	1.1	1431992.06	93.96	
Th	232	He	2461768.71	0.9	2601025.95	94.65	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-03
File Name 055_QC4.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:26:05
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.2042	ug/L	17.8	533.36	4.8	87.59	
Se	78	72	H2	4.8677	ug/L	6.3	1427.74	4.8	101.41	
Cu	63	72	He	6.4000	ug/L	2.4	26468.20	6.6	96.97	
Cu	65	72	He	6.4075	ug/L	1.7	13171.15	6.6	97.08	
Zn	66	72	He	54.7084	ug/L	2.5	26675.28	57.4	95.31	
Mo	95	115	He	0.2490	ug/L	5.1	513.35	-1	-24.9	
Mo	98	115	He	0.2408	ug/L	5.7	862.26	-1	-24.08	
Ag	107	115	He	0.2735	ug/L	3.2	1976.83	0.27	101.3	
Ag	109	115	He	0.2429	ug/L	0.9	1743.46	0.27	89.96	
Cd	111	115	He	0.3070	ug/L	1.2	249.50	0.296	103.72	
Pb	208	175	He	0.1211	ug/L	4.4	2534.56	0.116	104.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350713.85	1.0	378486.94	92.66	
Sc	45	He	68535.79	1.4	74157.35	92.42	
Ge	72	He	58671.39	1.1	64995.55	90.27	
In	115	He	530822.99	0.4	567443.14	93.55	
Lu	175	He	1403827.69	0.2	1431992.06	98.03	
Th	232	He	2552989.96	0.1	2601025.95	98.15	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-04
File Name 056_QC5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:28:08
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.2428	ug/L	4.5	1973.50	21.8	92.86	
Se	78	72	H2	21.3173	ug/L	1.4	6015.95	21.8	97.79	
Cu	63	72	He	916.0032	ug/L	1.9	3767887.65	994	92.15	
Cu	65	72	He	929.1873	ug/L	1.4	1902900.23	994	93.48	
Zn	66	72	He	255.6217	ug/L	3.0	124265.92	272	93.98	
Mo	95	115	He	6.4755	ug/L	1.9	12410.00	6.88	94.12	
Mo	98	115	He	6.5037	ug/L	1.3	21472.12	6.88	94.53	
Ag	107	115	He	5.4442	ug/L	0.8	38274.43	-1	-544.42	
Ag	109	115	He	5.3971	ug/L	1.7	37271.86	-1	-539.71	
Cd	111	115	He	80.2726	ug/L	0.3	63642.33	84.6	94.88	
Pb	208	175	He	0.3854	ug/L	3.5	7429.77	0.45	85.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337658.30	1.2	378486.94	89.21	
Sc	45	He	66677.62	2.2	74157.35	89.91	
Ge	72	He	58607.92	3.3	64995.55	90.17	
In	115	He	517852.05	1.0	567443.14	91.26	
Lu	175	He	1338851.13	2.4	1431992.06	93.5	
Th	232	He	2476123.61	2.3	2601025.95	95.2	

Reference Sample Report

Sample Name K2508065-012
File Name 057_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:30:10
Sample Type AllRef
Comment 5X
ISTD Ref FileName 008CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4967	ug/L	10.7	1833.49	
Se	78	72	H2	19.9746	ug/L	2.2	5693.15	
Cu	63	72	He	13.3438	ug/L	0.4	54484.38	
Cu	65	72	He	13.5613	ug/L	1.3	27541.67	
Zn	66	72	He	398.3975	ug/L	1.1	191898.36	
Mo	95	115	He	0.7039	ug/L	6.7	1395.64	
Mo	98	115	He	0.7427	ug/L	1.4	2540.25	
Ag	107	115	He	0.8445	ug/L	4.5	6051.37	
Ag	109	115	He	0.8333	ug/L	1.8	5881.30	
Cd	111	115	He	8.0973	ug/L	1.7	6536.54	
Pb	208	175	He	6.1425	ug/L	2.3	121793.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340909.63	1.4	378486.94	90.07	
Sc	45	He	68150.85	2.9	74157.35	91.9	
Ge	72	He	58042.34	0.2	64995.55	89.3	
In	115	He	527294.67	1.0	567443.14	92.92	
Lu	175	He	1397875.55	2.3	1431992.06	97.62	
Th	232	He	2544186.42	2.1	2601025.95	97.81	

Duplicate Sample Report

Sample Name KQ2515046-05
File Name 058_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:32:14
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Fail
ISTD Ref FileName Pass
QC Ref File Name 057_
Default Text ~~ACRLS~~
~~NoUser~~

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	20.1405	ug/L	7.2	1996.84	8.51	
Se	78	72	H2	21.1264	ug/L	2.7	6060.64	5.6	
Cu	63	72	He	15.7188	ug/L	1.1	63735.66	16.34	
Cu	65	72	He	15.6568	ug/L	2.3	31578.42	14.34	
Zn	66	72	He	434.9749	ug/L	2.3	208093.97	8.78	
Mo	95	115	He	0.7574	ug/L	4.7	1493.42		<5x MRL
Mo	98	115	He	0.7776	ug/L	1.6	2644.71		<5x MRL
Ag	107	115	He	0.9242	ug/L	1.2	6589.94	9.01	
Ag	109	115	He	0.9165	ug/L	3.3	6434.87	9.51	
Cd	111	115	He	9.0078	ug/L	0.8	7236.89	10.65	
[Pb]	206	175	He	7.8491	ug/L	2.9	38194.67	19.93	
[Pb]	207	175	He	7.3937	ug/L	3.0	30723.97	18.84	
Pb	208	175	He	7.5077	ug/L	2.3	145362.86	20	Dup Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343327.34	2.2	378486.94	90.71	
Sc	45	He	66811.39	0.4	74157.35	90.09	
Ge	72	He	57657.49	0.8	64995.55	88.71	
In	115	He	524782.60	1.1	567443.14	92.48	
Lu	175	He	1365179.46	1.6	1431992.06	95.33	
Th	232	He	2522210.54	2.1	2601025.95	96.97	



Sample Report

Sample Name K2508065-012L
File Name 059SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:34:17
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	4.2088	ug/L	23.9	523.35	
Se	78	72	H2	3.8451	ug/L	1.3	1107.38	
Cu	63	72	He	2.7101	ug/L	2.1	10844.32	
Cu	65	72	He	2.7100	ug/L	3.7	5374.40	
Zn	66	72	He	80.0952	ug/L	1.7	37553.13	
Mo	95	115	He	0.1397	ug/L	2.7	290.00	
Mo	98	115	He	0.1221	ug/L	15.8	446.68	
Ag	107	115	He	0.1802	ug/L	2.0	1265.07	
Ag	109	115	He	0.1754	ug/L	8.3	1226.73	
Cd	111	115	He	1.6252	ug/L	2.2	1280.73	
Pb	208	175	He	1.2473	ug/L	2.0	24057.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344179.76	1.6	378486.94	90.94	
Sc	45	He	65070.05	3.2	74157.35	87.75	
Ge	72	He	56455.99	2.2	64995.55	86.86	
In	115	He	514799.16	1.6	567443.14	90.72	
Lu	175	He	1354249.35	1.4	1431992.06	94.57	
Th	232	He	2468732.67	1.7	2601025.95	94.91	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508065-012A
File Name 060_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:36:19
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 057_
 ARF.
Default Text ALKLS
 NoUser

+5001 10ppm PS
 10001 50ppm Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	72.6070	ug/L	3.1	7005.18	50	108.22	
Se	78	H2	71.7653	ug/L	1.5	21045.94	50	103.58	
Cu	63	He	66.2672	ug/L	1.5	265475.55	50	105.85	
Cu	65	He	66.5929	ug/L	2.1	132779.01	50	106.06	
Zn	66	He	448.4399	ug/L	0.9	212255.34	50	100.08	
Mo	95	He	51.5826	ug/L	1.4	98565.13	50	101.76	
Mo	98	He	51.0574	ug/L	1.1	168041.90	50	100.63	
Ag	107	He	6.1523	ug/L	1.7	43199.02	5	106.16	
Ag	109	He	6.1663	ug/L	0.6	42531.92	5	106.66	
Cd	111	He	59.6281	ug/L	0.7	47216.88	50	103.06	
[Pb]	206	He	54.9033	ug/L	0.7	267277.05	50	96.95	
[Pb]	207	He	52.2707	ug/L	1.4	217315.54	50	92.3	
Pb	208	He	52.9430	ug/L	0.4	1025486.48	50	93.6	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350922.97	1.2	378486.94	92.72	
Sc	45	He	66590.48	2.8	74157.35	89.8	
Ge	72	He	57041.66	1.1	64995.55	87.76	
In	115	He	517217.43	0.4	567443.14	91.15	
Lu	175	He	1366392.32	0.7	1431992.06	95.42	
Th	232	He	2493697.83	1.1	2601025.95	95.87	

Matrix Spike Sample (MS) Report

Sample Name KQ2515046-06
File Name 061_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:38:23
Sample Type Spike
Comment 5X
ISTD Ref FileName 008CALB.d
QC Ref File Name 057_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	53.0657	ug/L	4.0	5027.63	33.3	103.81	
Se	78	H2	55.9867	ug/L	0.4	16008.37	33.3	108.14	
Cu	63	He	66.9119	ug/L	0.6	267781.26	50	107.14	
Cu	65	He	67.3008	ug/L	1.0	134053.93	50	107.48	
Zn	66	He	526.0760	ug/L	0.7	248730.22	100	127.68	Spike Failed
Mo	95	He	33.3268	ug/L	0.8	63970.18	33.3	97.97	
Mo	98	He	33.4983	ug/L	1.1	110749.78	33.3	98.37	
Ag	107	He	10.8544	ug/L	0.5	76545.64	10	100.1	
Ag	109	He	10.8684	ug/L	0.8	75273.67	10	100.35	
Cd	111	He	18.7367	ug/L	0.4	14901.66	10	106.39	
[Pb]	206	He	103.8965	ug/L	2.1	505759.58	100	97.47	
[Pb]	207	He	95.4465	ug/L	2.1	396828.14	100	89.33	
Pb	208	He	98.0670	ug/L	1.9	1899500.21	100	91.92	

4x, N/A
AB
8/27/25

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342124.36	0.4	378486.94	90.39	
Sc	45	He	68194.42	1.1	74157.35	91.96	
Ge	72	He	56978.08	0.8	64995.55	87.66	
In	115	He	519469.10	0.1	567443.14	91.55	
Lu	175	He	1366814.98	2.2	1431992.06	95.45	
Th	232	He	2523250.80	1.7	2601025.95	97.01	

Sample Report

Sample Name K2508065-001
File Name 062SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:40:26
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.1244	ug/L	1.8	880.04	
Se	78	72	H2	8.8634	ug/L	2.4	2528.90	
Cu	63	72	He	10.6663	ug/L	0.8	43563.54	
Cu	65	72	He	10.8288	ug/L	1.5	21993.76	
Zn	66	72	He	429.9725	ug/L	1.3	207033.67	
Mo	95	115	He	0.3297	ug/L	12.4	660.02	
Mo	98	115	He	0.2930	ug/L	4.9	1021.15	
Ag	107	115	He	0.2715	ug/L	1.2	1930.15	
Ag	109	115	He	0.2830	ug/L	3.5	1993.49	
Cd	111	115	He	1.8391	ug/L	1.3	1469.75	
Pb	208	175	He	0.8385	ug/L	0.3	16584.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341242.17	0.5	378486.94	90.16	
Sc	45	He	67511.32	2.9	74157.35	91.04	
Ge	72	He	58028.98	1.2	64995.55	89.28	
In	115	He	522001.87	1.0	567443.14	91.99	
Lu	175	He	1385089.04	1.7	1431992.06	96.72	
Th	232	He	2497968.14	1.6	2601025.95	96.04	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 063_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:42:29
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.2375	ug/L	4.9	2306.90	92.95	
Se	78	72	H2	25.7409	ug/L	1.7	7460.97	102.96	
Cu	63	72	He	26.2497	ug/L	1.9	105565.52	105	
Cu	65	72	He	26.3097	ug/L	1.5	52652.10	105.24	
Zn	66	72	He	26.1415	ug/L	5.2	12465.64	104.57	
Mo	95	115	He	12.6214	ug/L	0.9	24183.19	100.97	
Mo	98	115	He	12.7363	ug/L	1.8	42034.27	101.89	
Ag	107	115	He	13.0177	ug/L	1.3	91575.85	104.14	
Ag	109	115	He	12.9595	ug/L	1.9	89526.37	103.68	
Cd	111	115	He	25.4166	ug/L	1.8	20164.28	101.67	
Pb	208	175	He	23.1244	ug/L	1.0	448004.73	92.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346861.43	2.9	378486.94	91.64	
Sc	45	He	64370.40	0.7	74157.35	86.8	
Ge	72	He	57232.21	1.5	64995.55	88.06	
In	115	He	518246.95	1.3	567443.14	91.33	
Lu	175	He	1366540.03	1.2	1431992.06	95.43	
Th	232	He	2498898.87	1.2	2601025.95	96.07	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 064_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:44:32
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0687	ug/L	750.3	140.00	
Se	78	72	H2	0.0131	ug/L	13.9	5.33	
Cu	63	72	He	-0.0115	ug/L	N/A	56.67	
Cu	65	72	He	0.0021	ug/L	549.7	33.33	
Zn	66	72	He	0.0207	ug/L	293.0	56.67	
Mo	95	115	He	0.0045	ug/L	174.3	33.34	
Mo	98	115	He	0.0049	ug/L	10.8	64.44	
Ag	107	115	He	0.0039	ug/L	20.8	33.33	
Ag	109	115	He	0.0003	ug/L	455.8	26.67	
Cd	111	115	He	0.0025	ug/L	49.7	2.00	
Pb	208	175	He	0.0128	ug/L	15.6	366.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345341.79	1.4	378486.94	91.24	
Sc	45	He	65656.02	0.9	74157.35	88.54	
Ge	72	He	57071.70	0.3	64995.55	87.81	
In	115	He	520303.09	0.6	567443.14	91.69	
Lu	175	He	1357480.91	0.6	1431992.06	94.8	
Th	232	He	2498570.38	1.4	2601025.95	96.06	

Sample Report

Sample Name K2508065-002
File Name 065SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:46:36
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.7281	ug/L	9.7	940.05	
Se	78	72	H2	7.7513	ug/L	2.6	2219.51	
Cu	63	72	He	9.3570	ug/L	1.8	37984.23	
Cu	65	72	He	9.2818	ug/L	1.4	18737.39	
Zn	66	72	He	420.9367	ug/L	1.0	201431.31	
Mo	95	115	He	0.1701	ug/L	12.1	352.23	
Mo	98	115	He	0.1817	ug/L	14.7	650.02	
Ag	107	115	He	0.0588	ug/L	6.9	421.68	
Ag	109	115	He	0.0643	ug/L	10.8	471.68	
Cd	111	115	He	1.3523	ug/L	0.5	1079.54	
Pb	208	175	He	0.2239	ug/L	3.1	4443.65	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342523.40	1.9	378486.94	90.5	
Sc	45	He	66312.65	3.4	74157.35	89.42	
Ge	72	He	57667.55	1.5	64995.55	88.73	
In	115	He	521463.55	2.0	567443.14	91.9	
Lu	175	He	1362050.87	2.1	1431992.06	95.12	
Th	232	He	2465414.91	1.8	2601025.95	94.79	

Sample Report

Sample Name K2508065-003
File Name 066SMPL.d
Data Path Name D:\Agilent\CPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:48:40
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.8445	ug/L	8.7	860.04	
Se	78	72	H2	8.6710	ug/L	3.1	2492.89	
Cu	63	72	He	10.3654	ug/L	5.2	42105.84	
Cu	65	72	He	10.4046	ug/L	3.1	21023.91	
Zn	66	72	He	426.5188	ug/L	4.0	204297.63	
Mo	95	115	He	0.1512	ug/L	17.5	317.78	
Mo	98	115	He	0.1781	ug/L	10.9	642.24	
Ag	107	115	He	0.0856	ug/L	8.5	615.02	
Ag	109	115	He	0.0717	ug/L	18.2	525.02	
Cd	111	115	He	1.4154	ug/L	3.2	1135.88	
Pb	208	175	He	0.1909	ug/L	4.5	3864.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343957.47	2.4	378486.94	90.88	
Sc	45	He	67661.96	0.5	74157.35	91.24	
Ge	72	He	57761.48	2.7	64995.55	88.87	
In	115	He	524238.29	0.7	567443.14	92.39	
Lu	175	He	1383291.86	1.8	1431992.06	96.6	
Th	232	He	2489963.97	2.1	2601025.95	95.73	

Sample Report

Sample Name K2508065-004
File Name 067SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:50:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.4092	ug/L	21.0	726.70	
Se	78	72	H2	7.3397	ug/L	3.3	2110.16	
Cu	63	72	He	9.5579	ug/L	2.8	38662.78	
Cu	65	72	He	9.5725	ug/L	1.8	19263.15	
Zn	66	72	He	441.4141	ug/L	1.3	210514.21	
Mo	95	115	He	0.2020	ug/L	8.8	410.01	
Mo	98	115	He	0.1937	ug/L	7.0	684.47	
Ag	107	115	He	0.1018	ug/L	5.4	720.02	
Ag	109	115	He	0.0957	ug/L	4.4	683.36	
Cd	111	115	He	0.9238	ug/L	5.1	730.85	
Pb	208	175	He	0.2384	ug/L	6.8	4693.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343784.24	1.4	378486.94	90.83	
Sc	45	He	66509.87	2.6	74157.35	89.69	
Ge	72	He	57480.04	2.1	64995.55	88.44	
In	115	He	516758.41	0.5	567443.14	91.07	
Lu	175	He	1354143.73	1.8	1431992.06	94.56	
Th	232	He	2496829.39	3.1	2601025.95	95.99	

Sample Report

Sample Name K2508065-005
File Name 068SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:52:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.7983	ug/L	12.5	763.37	
Se	78	72	H2	7.8129	ug/L	4.2	2247.52	
Cu	63	72	He	10.3701	ug/L	0.4	42092.64	
Cu	65	72	He	10.6353	ug/L	1.4	21466.33	
Zn	66	72	He	477.8961	ug/L	0.8	228682.84	
Mo	95	115	He	0.1735	ug/L	30.5	357.78	
Mo	98	115	He	0.1821	ug/L	23.7	647.80	
Ag	107	115	He	0.0642	ug/L	4.3	458.34	
Ag	109	115	He	0.0586	ug/L	15.0	430.01	
Cd	111	115	He	1.3321	ug/L	0.2	1057.71	
Pb	208	175	He	0.2600	ug/L	2.0	5217.10	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344044.35	1.8	378486.94	90.9	
Sc	45	He	66064.64	1.7	74157.35	89.09	
Ge	72	He	57667.44	0.9	64995.55	88.73	
In	115	He	518620.38	1.8	567443.14	91.4	
Lu	175	He	1382320.97	0.8	1431992.06	96.53	
Th	232	He	2498439.02	0.8	2601025.95	96.06	

Sample Report

Sample Name K2508065-006
File Name 069SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:54:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6056	ug/L	9.2	730.03	
Se	78	72	H2	6.9586	ug/L	1.7	1959.47	
Cu	63	72	He	10.3405	ug/L	3.0	41464.02	
Cu	65	72	He	9.9859	ug/L	2.2	19915.69	
Zn	66	72	He	496.7962	ug/L	2.0	234889.30	
Mo	95	115	He	0.2474	ug/L	2.7	496.68	
Mo	98	115	He	0.2389	ug/L	6.0	833.36	
Ag	107	115	He	0.1362	ug/L	1.6	961.71	
Ag	109	115	He	0.1221	ug/L	9.5	865.04	
Cd	111	115	He	1.2907	ug/L	1.0	1021.21	
Pb	208	175	He	0.4515	ug/L	2.9	8814.55	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336748.93	1.3	378486.94	88.97	
Sc	45	He	65666.10	0.8	74157.35	88.55	
Ge	72	He	56991.50	1.9	64995.55	87.69	
In	115	He	516808.16	0.2	567443.14	91.08	
Lu	175	He	1358520.24	1.0	1431992.06	94.87	
Th	232	He	2515914.55	0.9	2601025.95	96.73	

Sample Report

Sample Name K2508065-007
File Name 070SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:56:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.4058	ug/L	19.2	900.05	
Se	78	72	H2	7.7050	ug/L	3.9	2184.17	
Cu	63	72	He	15.7762	ug/L	1.9	63099.81	
Cu	65	72	He	15.8891	ug/L	2.4	31616.88	
Zn	66	72	He	478.1606	ug/L	1.4	225679.28	
Mo	95	115	He	1.4980	ug/L	3.0	2878.08	
Mo	98	115	He	1.5254	ug/L	0.6	5052.05	
Ag	107	115	He	0.2407	ug/L	4.9	1691.79	
Ag	109	115	He	0.2190	ug/L	5.7	1530.10	
Cd	111	115	He	1.9490	ug/L	1.3	1538.92	
Pb	208	175	He	2.5634	ug/L	2.5	49872.82	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338925.24	0.7	378486.94	89.55	
Sc	45	He	65857.04	0.8	74157.35	88.81	
Ge	72	He	56877.68	0.7	64995.55	87.51	
In	115	He	515701.44	0.7	567443.14	90.88	
Lu	175	He	1369492.95	1.4	1431992.06	95.64	
Th	232	He	2471897.15	1.7	2601025.95	95.04	

Sample Report

Sample Name K2508065-008
File Name 071SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:58:58
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6268	ug/L	21.2	833.37	
Se	78	72	H2	7.9884	ug/L	1.4	2273.52	
Cu	63	72	He	10.4148	ug/L	1.7	42346.63	
Cu	65	72	He	10.5701	ug/L	1.0	21369.46	
Zn	66	72	He	387.0515	ug/L	1.7	185510.99	
Mo	95	115	He	0.2245	ug/L	1.3	455.57	
Mo	98	115	He	0.2117	ug/L	2.9	747.80	
Ag	107	115	He	0.0811	ug/L	3.7	578.35	
Ag	109	115	He	0.0867	ug/L	11.5	625.02	
Cd	111	115	He	1.3249	ug/L	1.3	1054.04	
Pb	208	175	He	0.3608	ug/L	1.9	7119.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340370.88	1.3	378486.94	89.93	
Sc	45	He	66145.07	1.3	74157.35	89.2	
Ge	72	He	57767.88	1.9	64995.55	88.88	
In	115	He	519672.26	0.7	567443.14	91.58	
Lu	175	He	1368199.77	0.6	1431992.06	95.55	
Th	232	He	2495679.70	0.7	2601025.95	95.95	

Sample Report

Sample Name K2508065-009
File Name 072SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:01:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6425	ug/L	11.2	740.03	
Se	78	72	H2	7.2357	ug/L	1.3	2054.49	
Cu	63	72	He	8.6232	ug/L	5.4	34826.22	
Cu	65	72	He	8.6893	ug/L	1.2	17455.83	
Zn	66	72	He	470.7990	ug/L	1.7	224125.97	
Mo	95	115	He	0.1829	ug/L	1.7	380.01	
Mo	98	115	He	0.1711	ug/L	8.0	621.13	
Ag	107	115	He	0.0913	ug/L	6.5	658.36	
Ag	109	115	He	0.0866	ug/L	10.7	631.69	
Cd	111	115	He	1.1948	ug/L	2.2	961.70	
Pb	208	175	He	0.2819	ug/L	1.7	5674.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339523.74	0.8	378486.94	89.71	
Sc	45	He	66386.19	0.7	74157.35	89.52	
Ge	72	He	57376.18	1.3	64995.55	88.28	
In	115	He	525787.77	1.1	567443.14	92.66	
Lu	175	He	1389386.23	1.1	1431992.06	97.02	
Th	232	He	2524597.62	0.5	2601025.95	97.06	

Sample Report

Sample Name K2508065-010
File Name 073SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:03:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.5511	ug/L	18.2	733.37	
Se	78	72	H2	7.1586	ug/L	2.6	2036.15	
Cu	63	72	He	9.5621	ug/L	0.8	39358.06	
Cu	65	72	He	9.7431	ug/L	1.6	19939.04	
Zn	66	72	He	423.9270	ug/L	0.6	205664.55	
Mo	95	115	He	0.2301	ug/L	4.3	466.68	
Mo	98	115	He	0.2020	ug/L	7.3	716.69	
Ag	107	115	He	0.1257	ug/L	10.8	893.37	
Ag	109	115	He	0.1217	ug/L	13.5	868.37	
Cd	111	115	He	1.2033	ug/L	3.3	958.37	
Pb	208	175	He	0.4098	ug/L	1.3	8077.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340054.25	1.0	378486.94	89.85	
Sc	45	He	66992.27	1.6	74157.35	90.34	
Ge	72	He	58463.81	0.9	64995.55	89.95	
In	115	He	520206.53	0.1	567443.14	91.68	
Lu	175	He	1369726.86	1.2	1431992.06	95.65	
Th	232	He	2505709.54	0.5	2601025.95	96.34	

Sample Report

Sample Name K2508065-011
File Name 074SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:05:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.5428	ug/L	10.2	1743.47	
Se	78	72	H2	19.4630	ug/L	5.1	5544.09	
Cu	63	72	He	12.1375	ug/L	2.2	48221.77	
Cu	65	72	He	11.9047	ug/L	3.3	23521.23	
Zn	66	72	He	383.6127	ug/L	1.6	179765.40	
Mo	95	115	He	0.5503	ug/L	6.7	1078.94	
Mo	98	115	He	0.5465	ug/L	6.2	1853.47	
Ag	107	115	He	0.6924	ug/L	5.1	4882.57	
Ag	109	115	He	0.6891	ug/L	1.1	4790.87	
Cd	111	115	He	9.5874	ug/L	1.7	7617.26	
Pb	208	175	He	3.2139	ug/L	0.9	63032.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341163.84	3.7	378486.94	90.14	
Sc	45	He	66212.09	2.7	74157.35	89.29	
Ge	72	He	56479.36	1.8	64995.55	86.9	
In	115	He	518995.95	1.4	567443.14	91.46	
Lu	175	He	1380961.02	0.5	1431992.06	96.44	
Th	232	He	2482353.97	0.8	2601025.95	95.44	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 075_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:07:13
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.0825	ug/L	3.5	2336.90	96.33	
Se	78	72	H2	25.4203	ug/L	1.8	7212.85	101.68	
Cu	63	72	He	26.1783	ug/L	2.8	104038.39	104.71	
Cu	65	72	He	26.3420	ug/L	2.6	52093.38	105.37	
Zn	66	72	He	26.1558	ug/L	2.5	12318.86	104.62	
Mo	95	115	He	12.5375	ug/L	0.9	23744.67	100.3	
Mo	98	115	He	12.5761	ug/L	2.5	41014.64	100.61	
Ag	107	115	He	12.9617	ug/L	0.8	90116.37	103.69	
Ag	109	115	He	13.1252	ug/L	2.4	89602.01	105	
Cd	111	115	He	25.4860	ug/L	0.7	19983.69	101.94	
Pb	208	175	He	22.9869	ug/L	0.8	435150.35	91.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339522.48	1.3	378486.94	89.71	
Sc	45	He	64283.08	1.4	74157.35	86.68	
Ge	72	He	56559.64	1.6	64995.55	87.02	
In	115	He	512179.28	1.5	567443.14	90.26	
Lu	175	He	1335233.57	0.9	1431992.06	93.24	
Th	232	He	2496369.55	1.2	2601025.95	95.98	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 076_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:09:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3831	ug/L	N/A	96.67	
Se	78	72	H2	0.0122	ug/L	114.1	5.00	
Cu	63	72	He	-0.0032	ug/L	N/A	90.00	
Cu	65	72	He	0.0129	ug/L	85.9	55.00	
Zn	66	72	He	0.0139	ug/L	471.0	53.33	
Mo	95	115	He	0.0006	ug/L	610.7	25.55	
Mo	98	115	He	-0.0017	ug/L	N/A	42.22	
Ag	107	115	He	0.0020	ug/L	62.6	20.00	
Ag	109	115	He	0.0004	ug/L	660.0	26.67	
Cd	111	115	He	0.0032	ug/L	40.5	2.50	
Pb	208	175	He	0.0114	ug/L	23.2	340.00	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339617.46	0.8	378486.94	89.73	
Sc	45	He	63894.94	1.0	74157.35	86.16	
Ge	72	He	57202.34	1.3	64995.55	88.01	
In	115	He	516489.35	0.6	567443.14	91.02	
Lu	175	He	1360925.97	1.7	1431992.06	95.04	
Th	232	He	2435829.08	0.3	2601025.95	93.65	

Sample Report

Sample Name K2508065-013
File Name 077SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:11:22
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.6700	ug/L	4.4	3053.72	
Se	78	72	H2	31.6143	ug/L	2.3	9042.56	
Cu	63	72	He	17.6052	ug/L	2.6	71097.27	
Cu	65	72	He	17.4504	ug/L	3.1	35056.49	
Zn	66	72	He	528.6438	ug/L	3.4	251909.39	
Mo	95	115	He	0.8128	ug/L	3.3	1600.10	
Mo	98	115	He	0.8564	ug/L	4.1	2906.99	
Ag	107	115	He	2.4540	ug/L	3.1	17487.79	
Ag	109	115	He	2.4260	ug/L	2.1	16993.87	
Cd	111	115	He	32.5179	ug/L	0.7	26129.87	
Pb	208	175	He	5.6002	ug/L	0.4	110145.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342192.57	1.5	378486.94	90.41	
Sc	45	He	67371.02	1.6	74157.35	90.85	
Ge	72	He	57449.71	1.9	64995.55	88.39	
In	115	He	524883.70	1.4	567443.14	92.5	
Lu	175	He	1386036.65	0.6	1431992.06	96.79	
Th	232	He	2513779.34	2.0	2601025.95	96.65	

Sample Report

Sample Name K2508065-014
File Name 078SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:13:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.9195	ug/L	8.0	1816.81	
Se	78	72	H2	19.5978	ug/L	2.1	5703.15	
Cu	63	72	He	17.8973	ug/L	0.8	73650.11	
Cu	65	72	He	17.9703	ug/L	1.3	36787.46	
Zn	66	72	He	442.4505	ug/L	0.6	214874.33	
Mo	95	115	He	0.7514	ug/L	5.9	1473.42	
Mo	98	115	He	0.7691	ug/L	2.7	2602.48	
Ag	107	115	He	1.0834	ug/L	3.4	7682.18	
Ag	109	115	He	1.0440	ug/L	3.0	7288.63	
Cd	111	115	He	13.9221	ug/L	1.1	11126.63	
Pb	208	175	He	4.9785	ug/L	2.0	96094.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348113.99	1.2	378486.94	91.98	
Sc	45	He	66318.96	2.4	74157.35	89.43	
Ge	72	He	58524.44	0.7	64995.55	90.04	
In	115	He	522003.22	0.4	567443.14	91.99	
Lu	175	He	1360331.39	1.5	1431992.06	95	
Th	232	He	2489690.22	2.0	2601025.95	95.72	

Sample Report

Sample Name K2508065-015
File Name 079SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:15:29
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.5706	ug/L	4.8	1823.49	
Se	78	72	H2	18.8037	ug/L	2.6	5312.00	
Cu	63	72	He	10.4246	ug/L	1.8	41918.65	
Cu	65	72	He	10.4846	ug/L	0.4	20968.83	
Zn	66	72	He	332.9498	ug/L	1.7	157861.71	
Mo	95	115	He	0.5054	ug/L	1.5	995.60	
Mo	98	115	He	0.4957	ug/L	7.9	1686.78	
Ag	107	115	He	0.9243	ug/L	2.0	6531.60	
Ag	109	115	He	0.9230	ug/L	2.9	6423.19	
Cd	111	115	He	6.0835	ug/L	1.5	4842.85	
Pb	208	175	He	2.7163	ug/L	1.4	52271.29	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338040.23	1.5	378486.94	89.31	
Sc	45	He	67344.00	2.0	74157.35	90.81	
Ge	72	He	57141.81	1.7	64995.55	87.92	
In	115	He	520060.17	1.9	567443.14	91.65	
Lu	175	He	1354588.94	0.6	1431992.06	94.59	
Th	232	He	2493829.18	2.4	2601025.95	95.88	

Sample Report

Sample Name K2508065-016
File Name 080SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:17:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	33.4120	ug/L	6.8	3047.05	
Se	78	72	H2	35.4121	ug/L	3.1	9594.59	
Cu	63	72	He	17.3453	ug/L	1.3	70269.51	
Cu	65	72	He	17.4636	ug/L	0.9	35198.57	
Zn	66	72	He	493.1345	ug/L	2.4	235743.04	
Mo	95	115	He	0.8811	ug/L	5.3	1727.89	
Mo	98	115	He	0.8179	ug/L	1.5	2771.40	
Ag	107	115	He	2.9821	ug/L	1.9	21189.64	
Ag	109	115	He	2.9485	ug/L	1.6	20590.45	
Cd	111	115	He	31.6393	ug/L	0.8	25349.77	
Pb	208	175	He	8.0292	ug/L	1.8	152699.76	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	324402.50	3.4	378486.94	85.71	
Sc	45	He	66978.90	0.8	74157.35	90.32	
Ge	72	He	57620.75	1.3	64995.55	88.65	
In	115	He	523319.49	0.3	567443.14	92.22	
Lu	175	He	1340950.19	1.8	1431992.06	93.64	
Th	232	He	2512257.36	1.0	2601025.95	96.59	

Sample Report

Sample Name K2508065-017
File Name 081SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:19:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6501	ug/L	9.2	1976.84	
Se	78	72	H2	20.7350	ug/L	2.1	6024.29	
Cu	63	72	He	9.4537	ug/L	2.4	38478.91	
Cu	65	72	He	9.6186	ug/L	2.3	19466.74	
Zn	66	72	He	355.9835	ug/L	2.6	170789.80	
Mo	95	115	He	0.4214	ug/L	5.4	846.70	
Mo	98	115	He	0.4408	ug/L	2.5	1528.98	
Ag	107	115	He	1.7018	ug/L	1.9	12197.08	
Ag	109	115	He	1.7802	ug/L	0.8	12547.43	
Cd	111	115	He	15.6611	ug/L	0.1	12653.77	
Pb	208	175	He	2.6813	ug/L	1.1	52720.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347565.49	0.3	378486.94	91.83	
Sc	45	He	67206.58	0.7	74157.35	90.63	
Ge	72	He	57831.45	2.0	64995.55	88.98	
In	115	He	527740.64	1.3	567443.14	93	
Lu	175	He	1384223.83	2.7	1431992.06	96.66	
Th	232	He	2489175.59	0.9	2601025.95	95.7	

Sample Report

Sample Name K2508065-018
File Name 082SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:21:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.5860	ug/L	3.3	3030.39	
Se	78	72	H2	30.2975	ug/L	2.0	8615.63	
Cu	63	72	He	17.6176	ug/L	2.4	70809.38	
Cu	65	72	He	17.7202	ug/L	1.7	35434.18	
Zn	66	72	He	504.0221	ug/L	0.8	239091.44	
Mo	95	115	He	0.9933	ug/L	0.7	1931.26	
Mo	98	115	He	0.9753	ug/L	2.3	3271.51	
Ag	107	115	He	2.3360	ug/L	0.9	16483.23	
Ag	109	115	He	2.3320	ug/L	3.5	16171.22	
Cd	111	115	He	23.8820	ug/L	1.1	18998.48	
Pb	208	175	He	7.2231	ug/L	1.5	140257.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340268.91	1.1	378486.94	89.9	
Sc	45	He	66958.65	1.9	74157.35	90.29	
Ge	72	He	57172.13	2.2	64995.55	87.96	
In	115	He	519648.23	1.6	567443.14	91.58	
Lu	175	He	1368972.22	1.7	1431992.06	95.6	
Th	232	He	2525922.51	1.4	2601025.95	97.11	

Sample Report

Sample Name K2508065-019
File Name 083SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:23:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	24.1246	ug/L	0.4	2403.58	
Se	78	72	H2	25.5037	ug/L	1.9	7432.63	
Cu	63	72	He	13.7814	ug/L	1.3	56676.07	
Cu	65	72	He	13.5401	ug/L	1.3	27698.62	
Zn	66	72	He	428.3809	ug/L	0.7	207832.03	
Mo	95	115	He	0.6935	ug/L	9.3	1371.19	
Mo	98	115	He	0.7341	ug/L	3.6	2502.46	
Ag	107	115	He	1.6927	ug/L	0.8	12080.33	
Ag	109	115	He	1.6701	ug/L	0.6	11721.70	
Cd	111	115	He	15.3531	ug/L	0.2	12352.16	
Pb	208	175	He	4.0606	ug/L	2.4	79802.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348690.59	0.5	378486.94	92.13	
Sc	45	He	68171.05	1.3	74157.35	91.93	
Ge	72	He	58463.90	0.1	64995.55	89.95	
In	115	He	525494.65	0.5	567443.14	92.61	
Lu	175	He	1384763.42	1.9	1431992.06	96.7	
Th	232	He	2514228.35	2.0	2601025.95	96.66	

Sample Report

Sample Name K2508065-020
File Name 084SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:25:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	25.4063	ug/L	14.2	2540.28	
Se	78	72	H2	24.0478	ug/L	0.5	7059.77	
Cu	63	72	He	15.9610	ug/L	2.8	65279.71	
Cu	65	72	He	15.7045	ug/L	2.7	31954.27	
Zn	66	72	He	572.1350	ug/L	1.4	276161.32	
Mo	95	115	He	0.8213	ug/L	7.3	1620.10	
Mo	98	115	He	0.8512	ug/L	5.3	2894.76	
Ag	107	115	He	3.2809	ug/L	1.9	23419.87	
Ag	109	115	He	3.2915	ug/L	3.2	23084.37	
Cd	111	115	He	18.6819	ug/L	0.3	15035.80	
Pb	208	175	He	6.1662	ug/L	2.4	119229.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351226.97	1.3	378486.94	92.8	
Sc	45	He	68438.87	2.5	74157.35	92.29	
Ge	72	He	58179.68	2.0	64995.55	89.51	
In	115	He	525690.60	0.7	567443.14	92.64	
Lu	175	He	1363355.97	2.8	1431992.06	95.21	
Th	232	He	2551336.53	1.4	2601025.95	98.09	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 085_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:27:52
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.2105	ug/L	12.0	2486.94	100.84	
Se	78	72	H2	25.8529	ug/L	0.4	7477.65	103.41	
Cu	63	72	He	26.2862	ug/L	1.2	107207.44	105.14	
Cu	65	72	He	26.1054	ug/L	1.8	52981.70	104.42	
Zn	66	72	He	26.4142	ug/L	2.1	12769.28	105.66	
Mo	95	115	He	12.5603	ug/L	2.6	24405.77	100.48	
Mo	98	115	He	12.5663	ug/L	1.6	42066.64	100.53	
Ag	107	115	He	12.8489	ug/L	2.5	91666.54	102.79	
Ag	109	115	He	12.9723	ug/L	1.6	90896.91	103.78	
Cd	111	115	He	25.2459	ug/L	2.0	20313.85	100.98	
Pb	208	175	He	22.5209	ug/L	1.1	433396.22	90.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346039.41	2.0	378486.94	91.43	
Sc	45	He	65719.84	1.7	74157.35	88.62	
Ge	72	He	58039.20	1.7	64995.55	89.3	
In	115	He	525685.62	2.0	567443.14	92.64	
Lu	175	He	1357477.69	1.8	1431992.06	94.8	
Th	232	He	2467572.05	1.2	2601025.95	94.87	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 086_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:29:56
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1762	ug/L	N/A	120.00	
Se	78	72	H2	0.0152	ug/L	99.9	6.00	
Cu	63	72	He	-0.0056	ug/L	N/A	83.33	
Cu	65	72	He	0.0030	ug/L	93.0	36.67	
Zn	66	72	He	-0.0038	ug/L	N/A	46.67	
Mo	95	115	He	-0.0043	ug/L	N/A	16.67	
Mo	98	115	He	-0.0046	ug/L	N/A	33.33	
Ag	107	115	He	0.0047	ug/L	14.5	40.00	
Ag	109	115	He	0.0000	ug/L	6814.8	25.00	
Cd	111	115	He	0.0023	ug/L	83.6	1.83	
Pb	208	175	He	0.0069	ug/L	10.0	256.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351904.47	1.2	378486.94	92.98	
Sc	45	He	66714.35	3.0	74157.35	89.96	
Ge	72	He	59274.05	1.3	64995.55	91.2	
In	115	He	528885.23	0.4	567443.14	93.2	
Lu	175	He	1379890.45	1.4	1431992.06	96.36	
Th	232	He	2467966.21	2.2	2601025.95	94.88	

Prep Blank (PB) Report

Sample Name KQ2515048-01
File Name 087_PB.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:32:01
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0857	ug/L	413.8	143.33	
Se	78	72	H2	0.0049	ug/L	2.7	3.00	
Cu	63	72	He	0.0321	ug/L	47.6	240.01	
Cu	65	72	He	0.0489	ug/L	15.7	131.67	
Zn	66	72	He	0.0776	ug/L	42.3	86.67	
Mo	95	115	He	-0.0088	ug/L	N/A	7.78	
Mo	98	115	He	-0.0083	ug/L	N/A	21.11	
Ag	107	115	He	0.0022	ug/L	82.1	21.67	
Ag	109	115	He	-0.0026	ug/L	N/A	6.67	
Cd	111	115	He	0.0006	ug/L	0.7	0.50	
[Pb]	206	175	He	0.0154	ug/L	15.6	107.78	
[Pb]	207	175	He	0.0187	ug/L	27.2	97.78	
Pb	208	175	He	0.0164	ug/L	13.2	428.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348985.44	1.3	378486.94	92.21	
Sc	45	He	65709.35	1.6	74157.35	88.61	
Ge	72	He	59260.61	1.1	64995.55	91.18	
In	115	He	527791.54	0.7	567443.14	93.01	
Lu	175	He	1338170.81	2.1	1431992.06	93.45	
Th	232	He	2479266.21	0.5	2601025.95	95.32	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-02
File Name 088_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:34:04
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	32.9978	ug/L	12.2	3277.12	33.3	99.09	
Se	78	72	H2	33.7789	ug/L	3.2	9954.51	33.3	101.44	
Cu	63	72	He	49.7622	ug/L	2.4	204705.31	50	99.52	
Cu	65	72	He	50.1765	ug/L	2.0	102738.13	50	100.35	
Zn	66	72	He	98.5253	ug/L	3.0	47910.90	100	98.53	
Mo	95	115	He	32.0369	ug/L	1.3	62816.00	33.3	96.21	
Mo	98	115	He	32.0926	ug/L	1.4	108382.48	33.3	96.37	
Ag	107	115	He	9.8018	ug/L	1.3	70607.23	10	98.02	
Ag	109	115	He	9.8502	ug/L	2.2	69686.45	10	98.5	
Cd	111	115	He	9.7533	ug/L	1.0	7923.59	10	97.53	
[Pb]	206	175	He	89.7147	ug/L	1.3	436432.51	100	89.71	
[Pb]	207	175	He	85.7688	ug/L	1.1	356357.27	100	85.77	
Pb	208	175	He	87.1454	ug/L	1.3	1686787.10	100	87.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352581.77	1.2	378486.94	93.16	
Sc	45	He	68181.30	1.5	74157.35	91.94	
Ge	72	He	58581.22	2.4	64995.55	90.13	
In	115	He	530660.32	1.0	567443.14	93.52	
Lu	175	He	1365643.63	1.5	1431992.06	95.37	
Th	232	He	2486777.67	0.8	2601025.95	95.61	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-03
File Name 089_QC4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:36:08
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.8974	ug/L	24.9	580.02	4.8	102.03	
Se	78	72	H2	5.3210	ug/L	18.7	1502.08	4.8	110.85	
Cu	63	72	He	6.6913	ug/L	2.3	28241.61	6.6	101.38	
Cu	65	72	He	6.7092	ug/L	1.6	14073.73	6.6	101.65	
Zn	66	72	He	58.5136	ug/L	0.8	29120.16	57.4	101.94	
Mo	95	115	He	0.2738	ug/L	7.2	570.02	-1	-27.38	
Mo	98	115	He	0.2725	ug/L	8.0	983.37	-1	-27.25	
Ag	107	115	He	0.2731	ug/L	6.4	2003.49	0.27	101.15	
Ag	109	115	He	0.2740	ug/L	1.4	1991.83	0.27	101.48	
Cd	111	115	He	0.3054	ug/L	4.3	251.83	0.296	103.18	
Pb	208	175	He	0.1170	ug/L	1.3	2444.55	0.116	100.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345636.44	18.9	378486.94	91.32	
Sc	45	He	69366.85	2.0	74157.35	93.54	
Ge	72	He	59883.46	0.1	64995.55	92.13	
In	115	He	538584.43	0.3	567443.14	94.91	
Lu	175	He	1398837.79	1.1	1431992.06	97.68	
Th	232	He	2556055.85	0.9	2601025.95	98.27	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-04
File Name 090_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:38:11
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	17.6987	ug/L	2.6	1826.83	21.8	81.19	
Se	78	72	H2	19.2104	ug/L	2.1	5684.81	21.8	88.12	
Cu	63	72	He	862.2349	ug/L	1.5	3538378.91	994	86.74	
Cu	65	72	He	882.8619	ug/L	1.5	1803530.86	994	88.82	
Zn	66	72	He	243.6301	ug/L	1.4	118184.53	272	89.57	
Mo	95	115	He	5.8940	ug/L	1.9	11390.23	6.88	85.67	
Mo	98	115	He	5.9236	ug/L	1.9	19721.78	6.88	86.1	
Ag	107	115	He	6.2675	ug/L	1.5	44424.45	-1	-626.75	
Ag	109	115	He	6.2657	ug/L	0.5	43625.28	-1	-626.57	
Cd	111	115	He	73.7066	ug/L	1.6	58913.57	84.6	87.12	
Pb	208	175	He	0.3274	ug/L	2.3	6441.78	0.45	72.76	QC5 Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	354084.32	1.6	378486.94	93.55	
Sc	45	He	67939.86	1.7	74157.35	91.62	
Ge	72	He	58447.02	0.4	64995.55	89.92	
In	115	He	522092.20	0.4	567443.14	92.01	
Lu	175	He	1362421.23	2.5	1431992.06	95.14	
Th	232	He	2442311.21	0.6	2601025.95	93.9	

Reference Sample Report

Sample Name K2508066-004
File Name 091_ARF.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:40:15
Sample Type AllRef
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6343	ug/L	3.1	2003.51	
Se	78	72	H2	19.0537	ug/L	1.1	5614.45	
Cu	63	72	He	12.9473	ug/L	1.5	54109.50	
Cu	65	72	He	12.7790	ug/L	3.3	26559.86	
Zn	66	72	He	326.9235	ug/L	1.5	161179.66	
Mo	95	115	He	0.6935	ug/L	9.9	1393.41	
Mo	98	115	He	0.6862	ug/L	3.8	2384.66	
Ag	107	115	He	1.1775	ug/L	5.4	8552.71	
Ag	109	115	He	1.1490	ug/L	1.4	8220.83	
Cd	111	115	He	5.4528	ug/L	3.4	4465.55	
Pb	208	175	He	7.8685	ug/L	2.8	155225.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352497.85	1.4	378486.94	93.13	
Sc	45	He	69732.17	3.0	74157.35	94.03	
Ge	72	He	59411.25	1.3	64995.55	91.41	
In	115	He	535339.13	3.6	567443.14	94.34	
Lu	175	He	1391255.60	2.3	1431992.06	97.16	
Th	232	He	2536171.37	3.2	2601025.95	97.51	

Duplicate Sample Report

Sample Name KQ2515048-05
File Name 092_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:42:19
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 091_
Default Text ARRLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	16.9010	ug/L	24.8	1853.48	14.96	
Se	78	72	H2	18.0124	ug/L	12.3	5678.14	5.62	
Cu	63	72	He	12.6640	ug/L	3.7	53038.75	2.21	
Cu	65	72	He	12.8529	ug/L	2.7	26780.23	0.58	
Zn	66	72	He	330.9154	ug/L	2.7	163511.85	1.21	
Mo	95	115	He	0.6392	ug/L	2.9	1270.07		<5x MRL
Mo	98	115	He	0.6512	ug/L	5.1	2233.52		<5x MRL
Ag	107	115	He	1.1340	ug/L	2.2	8124.13	3.77	
Ag	109	115	He	1.1025	ug/L	0.9	7773.91	4.13	
Cd	111	115	He	5.4331	ug/L	1.0	4386.69	0.36	
[Pb]	206	175	He	8.7724	ug/L	1.3	42825.85	9.03	
[Pb]	207	175	He	8.6619	ug/L	1.1	36108.87	10.24	
Pb	208	175	He	8.6987	ug/L	0.8	168955.03	10.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	380773.05	11.7	378486.94	100.6	
Sc	45	He	68632.96	2.0	74157.35	92.55	
Ge	72	He	59568.59	2.7	64995.55	91.65	
In	115	He	527352.45	0.2	567443.14	92.93	
Lu	175	He	1369357.06	0.7	1431992.06	95.63	
Th	232	He	2522998.97	0.9	2601025.95	97	



Sample Report

Sample Name K2508066-004L
File Name 093SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:44:22
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	3.5034	ug/L	14.5	466.69	
Se	78	72	H2	3.8092	ug/L	3.0	1117.38	
Cu	63	72	He	2.6027	ug/L	2.9	10714.26	
Cu	65	72	He	2.5566	ug/L	2.8	5217.66	
Zn	66	72	He	65.4989	ug/L	1.5	31598.79	
Mo	95	115	He	0.1304	ug/L	12.7	277.78	
Mo	98	115	He	0.1180	ug/L	11.6	443.34	
Ag	107	115	He	0.2265	ug/L	8.4	1623.44	
Ag	109	115	He	0.2232	ug/L	9.2	1588.44	
Cd	111	115	He	1.0784	ug/L	3.4	867.86	
Pb	208	175	He	1.6476	ug/L	1.6	31723.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350482.08	1.5	378486.94	92.6	
Sc	45	He	67980.01	1.9	74157.35	91.67	
Ge	72	He	58069.12	1.4	64995.55	89.34	
In	115	He	525689.19	0.9	567443.14	92.64	
Lu	175	He	1353557.27	2.1	1431992.06	94.52	
Th	232	He	2477974.13	0.1	2601025.95	95.27	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508066-004A
File Name 094_PDS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:46:25
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_
 ARF.
Default Text ALKLS
 NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	67.2868	ug/L	10.6	6971.85	50	95.31	
Se	78	H2	68.4992	ug/L	1.9	21556.37	50	98.89	
Cu	63	He	63.7987	ug/L	1.1	268950.76	50	101.7	
Cu	65	He	64.1506	ug/L	0.5	134598.94	50	102.74	
Zn	66	He	368.5091	ug/L	0.6	183529.78	50	83.17	
Mo	95	He	50.1421	ug/L	0.5	99823.02	50	98.9	
Mo	98	He	50.3365	ug/L	0.7	172597.35	50	99.3	
Ag	107	He	6.2383	ug/L	1.2	45636.79	5	101.22	
Ag	109	He	6.2019	ug/L	1.2	44566.59	5	101.06	
Cd	111	He	55.5142	ug/L	0.4	45797.81	50	100.12	
[Pb]	206	He	51.8913	ug/L	1.0	258985.98	50	87.75	
[Pb]	207	He	52.0259	ug/L	1.6	221749.64	50	88.42	
Pb	208	He	52.0184	ug/L	1.5	1032950.76	50	88.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376613.46	1.7	378486.94	99.51	
Sc	45	He	70528.81	1.0	74157.35	95.11	
Ge	72	He	60014.00	0.7	64995.55	92.34	
In	115	He	538842.91	0.7	567443.14	94.96	
Lu	175	He	1401010.66	1.8	1431992.06	97.84	
Th	232	He	2518695.74	0.5	2601025.95	96.83	

Matrix Spike Sample (MS) Report

Sample Name KQ2515048-06
File Name 095_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:48:28
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	52.5604	ug/L	7.9	5017.65	33.3	98.88	
Se	78	H2	55.8383	ug/L	1.8	16096.81	33.3	110.46	
Cu	63	He	63.3050	ug/L	0.2	263177.33	50	100.72	
Cu	65	He	63.1818	ug/L	1.3	130728.46	50	100.81	
Zn	66	He	433.5926	ug/L	1.5	212945.66	100	106.67	
Mo	95	He	32.8034	ug/L	0.8	64463.61	33.3	96.43	
Mo	98	He	32.9111	ug/L	0.6	111394.98	33.3	96.77	
Ag	107	He	10.7240	ug/L	0.6	77423.51	10	95.47	
Ag	109	He	10.7679	ug/L	1.0	76348.10	10	96.19	
Cd	111	He	15.2050	ug/L	0.6	12380.35	10	97.52	
[Pb]	206	He	96.3623	ug/L	2.0	470687.71	100	88.35	
[Pb]	207	He	93.7112	ug/L	2.8	390905.31	100	85.89	
Pb	208	He	94.7418	ug/L	2.6	1841190.51	100	86.87	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345024.75	2.4	378486.94	91.16	
Sc	45	He	70247.65	1.7	74157.35	94.73	
Ge	72	He	59187.32	0.9	64995.55	91.06	
In	115	He	531825.82	0.7	567443.14	93.72	
Lu	175	He	1371470.08	2.1	1431992.06	95.77	
Th	232	He	2535339.18	1.7	2601025.95	97.47	

Sample Report

Sample Name K2508066-001
File Name 096SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:50:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4266	ug/L	4.6	1630.12	
Se	78	72	H2	15.5334	ug/L	2.2	4654.44	
Cu	63	72	He	11.5128	ug/L	1.3	47920.86	
Cu	65	72	He	11.7740	ug/L	1.7	24372.65	
Zn	66	72	He	270.6286	ug/L	2.5	132842.56	
Mo	95	115	He	0.5361	ug/L	3.1	1086.72	
Mo	98	115	He	0.5600	ug/L	2.0	1959.04	
Ag	107	115	He	0.3559	ug/L	8.4	2595.27	
Ag	109	115	He	0.3418	ug/L	2.1	2466.90	
Cd	111	115	He	1.9371	ug/L	1.0	1589.76	
Pb	208	175	He	3.5173	ug/L	1.2	70182.63	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358389.58	1.4	378486.94	94.69	
Sc	45	He	69138.73	0.9	74157.35	93.23	
Ge	72	He	59156.85	1.3	64995.55	91.02	
In	115	He	536082.78	1.1	567443.14	94.47	
Lu	175	He	1405378.00	1.4	1431992.06	98.14	
Th	232	He	2531572.51	1.3	2601025.95	97.33	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 097_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:52:37
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.7278	ug/L	4.6	2350.23	94.91	
Se	78	72	H2	25.6678	ug/L	1.2	7429.62	102.67	
Cu	63	72	He	26.3486	ug/L	2.8	107201.83	105.39	
Cu	65	72	He	26.6912	ug/L	3.6	54028.96	106.76	
Zn	66	72	He	25.2148	ug/L	4.7	12155.35	100.86	
Mo	95	115	He	12.3183	ug/L	0.5	23833.72	98.55	
Mo	98	115	He	12.5870	ug/L	0.3	41950.73	100.7	
Ag	107	115	He	12.9992	ug/L	1.0	92340.85	103.99	
Ag	109	115	He	13.0281	ug/L	0.6	90891.85	104.22	
Cd	111	115	He	25.4090	ug/L	1.7	20355.40	101.64	
Pb	208	175	He	22.7991	ug/L	1.1	436774.66	91.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346291.26	0.4	378486.94	91.49	
Sc	45	He	67139.79	1.7	74157.35	90.54	
Ge	72	He	57901.75	1.5	64995.55	89.09	
In	115	He	523291.99	0.7	567443.14	92.22	
Lu	175	He	1351319.72	1.2	1431992.06	94.37	
Th	232	He	2486514.86	0.4	2601025.95	95.6	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 098_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:54:41
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0266	ug/L	3220.4	136.67	
Se	78	72	H2	0.0155	ug/L	38.5	6.00	
Cu	63	72	He	0.0083	ug/L	181.4	140.00	
Cu	65	72	He	0.0039	ug/L	142.1	38.33	
Zn	66	72	He	0.0649	ug/L	57.0	80.00	
Mo	95	115	He	0.0059	ug/L	28.1	36.67	
Mo	98	115	He	0.0049	ug/L	142.8	65.56	
Ag	107	115	He	0.0033	ug/L	22.5	30.00	
Ag	109	115	He	-0.0005	ug/L	N/A	21.67	
Cd	111	115	He	0.0018	ug/L	65.9	1.50	
Pb	208	175	He	0.0103	ug/L	19.7	324.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345051.49	0.7	378486.94	91.17	
Sc	45	He	67038.93	1.4	74157.35	90.4	
Ge	72	He	58972.73	1.2	64995.55	90.73	
In	115	He	531178.63	1.4	567443.14	93.61	
Lu	175	He	1383394.77	2.2	1431992.06	96.61	
Th	232	He	2500497.46	2.6	2601025.95	96.14	

Sample Report

Sample Name K2508066-002
File Name 099SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:56:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.7737	ug/L	7.8	1846.82	
Se	78	72	H2	17.4433	ug/L	2.7	5487.07	
Cu	63	72	He	9.6644	ug/L	1.3	40434.31	
Cu	65	72	He	9.7370	ug/L	3.3	20251.17	
Zn	66	72	He	287.9308	ug/L	1.4	142006.85	
Mo	95	115	He	0.4632	ug/L	2.5	927.81	
Mo	98	115	He	0.4592	ug/L	2.8	1590.10	
Ag	107	115	He	0.6022	ug/L	3.5	4319.04	
Ag	109	115	He	0.5976	ug/L	2.4	4227.35	
Cd	111	115	He	3.9703	ug/L	0.4	3207.21	
Pb	208	175	He	3.5071	ug/L	0.8	67952.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376455.68	2.2	378486.94	99.46	
Sc	45	He	67953.51	2.5	74157.35	91.63	
Ge	72	He	59435.00	1.6	64995.55	91.44	
In	115	He	527634.83	0.5	567443.14	92.98	
Lu	175	He	1364520.81	1.5	1431992.06	95.29	
Th	232	He	2515958.35	2.1	2601025.95	96.73	

Sample Report

Sample Name K2508066-003
File Name 100SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:58:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	23.0531	ug/L	8.6	2233.55	
Se	78	72	H2	24.9506	ug/L	3.1	7056.77	
Cu	63	72	He	14.0168	ug/L	0.9	57312.01	
Cu	65	72	He	14.0761	ug/L	1.5	28628.80	
Zn	66	72	He	405.9681	ug/L	0.7	195834.39	
Mo	95	115	He	0.7798	ug/L	3.2	1544.54	
Mo	98	115	He	0.7963	ug/L	2.7	2721.40	
Ag	107	115	He	1.0634	ug/L	2.9	7622.15	
Ag	109	115	He	1.0697	ug/L	1.7	7547.11	
Cd	111	115	He	8.7051	ug/L	0.1	7031.62	
Pb	208	175	He	6.4855	ug/L	1.6	128173.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338387.18	1.0	378486.94	89.41	
Sc	45	He	69460.47	2.4	74157.35	93.67	
Ge	72	He	58129.51	0.2	64995.55	89.44	
In	115	He	527593.92	0.1	567443.14	92.98	
Lu	175	He	1393185.40	1.6	1431992.06	97.29	
Th	232	He	2515903.61	0.3	2601025.95	96.73	

Sample Report

Sample Name K2508066-005
File Name 101SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:00:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6988	ug/L	3.8	1973.51	
Se	78	72	H2	21.8460	ug/L	1.9	6322.75	
Cu	63	72	He	15.9703	ug/L	2.0	65684.72	
Cu	65	72	He	16.0289	ug/L	3.1	32794.46	
Zn	66	72	He	324.4823	ug/L	1.5	157504.52	
Mo	95	115	He	0.6814	ug/L	1.6	1357.85	
Mo	98	115	He	0.7408	ug/L	5.8	2544.69	
Ag	107	115	He	0.6636	ug/L	3.2	4775.86	
Ag	109	115	He	0.6807	ug/L	3.4	4829.22	
Cd	111	115	He	5.1991	ug/L	1.9	4214.97	
Pb	208	175	He	4.1778	ug/L	1.0	80582.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346248.38	0.1	378486.94	91.48	
Sc	45	He	68044.02	2.9	74157.35	91.76	
Ge	72	He	58501.02	2.2	64995.55	90.01	
In	115	He	529547.49	0.4	567443.14	93.32	
Lu	175	He	1358854.93	1.0	1431992.06	94.89	
Th	232	He	2499325.90	1.5	2601025.95	96.09	

Sample Report

Sample Name K2508066-006
File Name 102SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:02:59
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.8353	ug/L	5.0	2103.52	
Se	78	72	H2	20.3526	ug/L	2.2	6230.71	
Cu	63	72	He	12.3031	ug/L	0.3	50362.48	
Cu	65	72	He	12.2701	ug/L	3.3	24980.32	
Zn	66	72	He	315.7283	ug/L	1.5	152437.68	
Mo	95	115	He	0.5514	ug/L	4.1	1091.16	
Mo	98	115	He	0.5664	ug/L	1.4	1935.70	
Ag	107	115	He	0.6805	ug/L	0.4	4844.22	
Ag	109	115	He	0.6937	ug/L	2.0	4867.57	
Cd	111	115	He	8.6576	ug/L	1.2	6942.24	
Pb	208	175	He	6.3528	ug/L	2.6	123740.28	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	366370.19	3.9	378486.94	96.8	
Sc	45	He	68546.10	2.1	74157.35	92.43	
Ge	72	He	58179.49	0.6	64995.55	89.51	
In	115	He	523798.29	1.3	567443.14	92.31	
Lu	175	He	1373449.46	2.6	1431992.06	95.91	
Th	232	He	2490664.76	2.0	2601025.95	95.76	

Sample Report

Sample Name K2508066-007
File Name 103SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:05:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.7926	ug/L	6.8	1340.09	
Se	78	72	H2	11.8539	ug/L	4.6	3722.49	
Cu	63	72	He	8.4339	ug/L	5.0	34993.24	
Cu	65	72	He	8.3795	ug/L	3.5	17290.59	
Zn	66	72	He	235.2062	ug/L	2.8	115066.64	
Mo	95	115	He	0.4854	ug/L	3.3	967.82	
Mo	98	115	He	0.4989	ug/L	4.1	1717.89	
Ag	107	115	He	0.1973	ug/L	4.0	1415.09	
Ag	109	115	He	0.2038	ug/L	4.9	1453.42	
Cd	111	115	He	1.9375	ug/L	1.1	1560.59	
Pb	208	175	He	4.9577	ug/L	3.4	95426.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	375877.52	3.5	378486.94	99.31	
Sc	45	He	68683.69	3.3	74157.35	92.62	
Ge	72	He	58972.64	2.9	64995.55	90.73	
In	115	He	526106.32	1.1	567443.14	92.72	
Lu	175	He	1357379.54	3.7	1431992.06	94.79	
Th	232	He	2518071.63	1.3	2601025.95	96.81	

Sample Report

Sample Name K2508066-008
File Name 104SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:07:06
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.3409	ug/L	9.8	1890.15	
Se	78	72	H2	19.5634	ug/L	0.3	5516.75	
Cu	63	72	He	11.0381	ug/L	1.9	46231.93	
Cu	65	72	He	11.1129	ug/L	1.0	23148.90	
Zn	66	72	He	353.7922	ug/L	1.6	174736.13	
Mo	95	115	He	0.5342	ug/L	0.7	1072.27	
Mo	98	115	He	0.5260	ug/L	4.4	1824.57	
Ag	107	115	He	0.4633	ug/L	2.4	3343.77	
Ag	109	115	He	0.4584	ug/L	2.7	3267.08	
Cd	111	115	He	6.2851	ug/L	0.5	5106.77	
Pb	208	175	He	2.4852	ug/L	1.1	48841.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337354.48	0.2	378486.94	89.13	
Sc	45	He	68355.41	0.2	74157.35	92.18	
Ge	72	He	59524.89	1.7	64995.55	91.58	
In	115	He	530698.53	1.1	567443.14	93.52	
Lu	175	He	1383093.41	0.9	1431992.06	96.59	
Th	232	He	2477350.02	0.8	2601025.95	95.25	

Sample Report

Sample Name K2508066-009
File Name 105SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:09:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.0251	ug/L	8.8	1636.79	
Se	78	72	H2	16.2901	ug/L	2.9	4730.13	
Cu	63	72	He	11.3237	ug/L	2.4	46569.70	
Cu	65	72	He	11.5317	ug/L	2.8	23584.61	
Zn	66	72	He	289.6037	ug/L	0.9	140485.76	
Mo	95	115	He	0.5551	ug/L	5.4	1094.49	
Mo	98	115	He	0.5748	ug/L	8.7	1959.04	
Ag	107	115	He	0.8861	ug/L	1.7	6284.81	
Ag	109	115	He	0.8773	ug/L	2.9	6128.08	
Cd	111	115	He	4.7673	ug/L	1.6	3809.86	
Pb	208	175	He	5.1825	ug/L	1.1	99756.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347393.12	1.0	378486.94	91.78	
Sc	45	He	66452.83	1.4	74157.35	89.61	
Ge	72	He	58447.50	1.2	64995.55	89.93	
In	115	He	522059.56	1.5	567443.14	92	
Lu	175	He	1356462.12	1.1	1431992.06	94.73	
Th	232	He	2463378.30	2.4	2601025.95	94.71	

Sample Report

Sample Name K2508066-010
File Name 106SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:11:13
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.7159	ug/L	12.8	1493.44	
Se	78	72	H2	14.4110	ug/L	2.9	4407.02	
Cu	63	72	He	11.4824	ug/L	1.4	46897.45	
Cu	65	72	He	11.2992	ug/L	0.5	22953.64	
Zn	66	72	He	301.1476	ug/L	1.6	145053.62	
Mo	95	115	He	0.6204	ug/L	3.4	1246.73	
Mo	98	115	He	0.6431	ug/L	1.0	2230.19	
Ag	107	115	He	0.5532	ug/L	2.0	4008.96	
Ag	109	115	He	0.5591	ug/L	3.5	3997.28	
Cd	111	115	He	4.2697	ug/L	1.0	3484.44	
Pb	208	175	He	5.4628	ug/L	1.0	107535.83	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	365959.39	2.2	378486.94	96.69	
Sc	45	He	69497.40	1.4	74157.35	93.72	
Ge	72	He	58045.89	1.5	64995.55	89.31	
In	115	He	533034.40	0.3	567443.14	93.94	
Lu	175	He	1387237.58	0.4	1431992.06	96.87	
Th	232	He	2525823.97	1.2	2601025.95	97.11	

Sample Report

Sample Name K2508066-011
File Name 107SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:13:17
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.2559	ug/L	11.8	1683.47	
Se	78	72	H2	17.1014	ug/L	2.6	5043.90	
Cu	63	72	He	19.1024	ug/L	2.3	80218.27	
Cu	65	72	He	18.6357	ug/L	1.2	38939.90	
Zn	66	72	He	349.9937	ug/L	1.1	173501.89	
Mo	95	115	He	0.7750	ug/L	3.1	1537.87	
Mo	98	115	He	0.7617	ug/L	2.7	2611.37	
Ag	107	115	He	0.4562	ug/L	1.9	3280.42	
Ag	109	115	He	0.4549	ug/L	8.0	3227.07	
Cd	111	115	He	4.3817	ug/L	2.9	3545.29	
Pb	208	175	He	7.4537	ug/L	1.3	147898.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352792.73	0.9	378486.94	93.21	
Sc	45	He	68506.04	0.9	74157.35	92.38	
Ge	72	He	59739.44	1.1	64995.55	91.91	
In	115	He	528665.05	1.8	567443.14	93.17	
Lu	175	He	1398855.55	1.7	1431992.06	97.69	
Th	232	He	2510560.22	0.9	2601025.95	96.52	

Sample Report

Sample Name K2508066-012
File Name 108SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:15:20
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4771	ug/L	17.4	1606.79	
Se	78	72	H2	16.1050	ug/L	2.2	4743.80	
Cu	63	72	He	13.6702	ug/L	1.8	56873.69	
Cu	65	72	He	14.0843	ug/L	2.6	29143.25	
Zn	66	72	He	412.5663	ug/L	3.0	202432.43	
Mo	95	115	He	0.9220	ug/L	1.2	1815.68	
Mo	98	115	He	0.9043	ug/L	0.4	3073.69	
Ag	107	115	He	1.0311	ug/L	4.1	7363.68	
Ag	109	115	He	1.0411	ug/L	3.2	7320.34	
Cd	111	115	He	7.0455	ug/L	2.2	5671.16	
Pb	208	175	He	9.0107	ug/L	1.1	174993.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352351.08	1.7	378486.94	93.09	
Sc	45	He	68509.58	1.1	74157.35	92.38	
Ge	72	He	59167.08	3.4	64995.55	91.03	
In	115	He	525844.81	1.2	567443.14	92.67	
Lu	175	He	1369298.31	1.2	1431992.06	95.62	
Th	232	He	2499676.26	1.2	2601025.95	96.1	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 109_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:17:26
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.4766	ug/L	4.7	2423.59	97.91	
Se	78	72	H2	25.9568	ug/L	0.2	7525.67	103.83	
Cu	63	72	He	26.2089	ug/L	1.4	107356.09	104.84	
Cu	65	72	He	26.6722	ug/L	1.3	54365.14	106.69	
Zn	66	72	He	25.9154	ug/L	2.2	12579.14	103.66	
Mo	95	115	He	12.6177	ug/L	0.5	24192.08	100.94	
Mo	98	115	He	12.7861	ug/L	1.3	42227.14	102.29	
Ag	107	115	He	13.0287	ug/L	1.1	91713.32	104.23	
Ag	109	115	He	13.1258	ug/L	0.4	90747.34	105.01	
Cd	111	115	He	25.5954	ug/L	1.6	20320.69	102.38	
Pb	208	175	He	23.0195	ug/L	0.6	439560.07	92.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346870.92	0.6	378486.94	91.65	
Sc	45	He	66030.96	1.4	74157.35	89.04	
Ge	72	He	58283.31	0.1	64995.55	89.67	
In	115	He	518576.57	1.1	567443.14	91.39	
Lu	175	He	1346815.97	0.6	1431992.06	94.05	
Th	232	He	2445201.94	1.5	2601025.95	94.01	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 110_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:19:30
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1687	ug/L	191.1	153.34	
Se	78	72	H2	0.0082	ug/L	70.8	4.00	
Cu	63	72	He	-0.0062	ug/L	N/A	80.00	
Cu	65	72	He	0.0081	ug/L	14.5	46.67	
Zn	66	72	He	0.0175	ug/L	64.2	56.67	
Mo	95	115	He	0.0055	ug/L	75.6	35.56	
Mo	98	115	He	0.0031	ug/L	285.3	58.89	
Ag	107	115	He	0.0012	ug/L	113.4	15.00	
Ag	109	115	He	0.0008	ug/L	333.5	30.00	
Cd	111	115	He	0.0025	ug/L	66.4	2.00	
Pb	208	175	He	0.0086	ug/L	8.1	284.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353192.21	1.2	378486.94	93.32	
Sc	45	He	67226.90	0.7	74157.35	90.65	
Ge	72	He	58678.49	1.0	64995.55	90.28	
In	115	He	524255.13	0.9	567443.14	92.39	
Lu	175	He	1346741.65	0.3	1431992.06	94.05	
Th	232	He	2473594.29	0.4	2601025.95	95.1	

Sample Report

Sample Name K2508066-013
File Name 111SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:21:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.8661	ug/L	11.3	1316.76	
Se	78	72	H2	12.6008	ug/L	2.1	4169.62	
Cu	63	72	He	10.5899	ug/L	3.3	43994.90	
Cu	65	72	He	10.5715	ug/L	3.5	21843.50	
Zn	66	72	He	279.5361	ug/L	2.0	136978.20	
Mo	95	115	He	0.4536	ug/L	7.9	913.37	
Mo	98	115	He	0.4314	ug/L	7.0	1502.31	
Ag	107	115	He	0.1870	ug/L	5.9	1351.75	
Ag	109	115	He	0.2042	ug/L	1.2	1466.76	
Cd	111	115	He	2.0866	ug/L	2.9	1692.10	
Pb	208	175	He	2.3982	ug/L	0.9	46772.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	395985.53	3.3	378486.94	104.62	
Sc	45	He	70133.69	1.6	74157.35	94.57	
Ge	72	He	59053.27	2.2	64995.55	90.86	
In	115	He	529832.95	1.5	567443.14	93.37	
Lu	175	He	1372426.39	1.8	1431992.06	95.84	
Th	232	He	2499698.19	0.9	2601025.95	96.1	

Sample Report

Sample Name K2508066-014
File Name 112SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:23:37
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.5294	ug/L	1.5	1583.44	
Se	78	72	H2	17.0603	ug/L	1.7	4935.20	
Cu	63	72	He	8.7640	ug/L	2.4	36834.54	
Cu	65	72	He	8.6830	ug/L	2.3	18148.37	
Zn	66	72	He	310.6974	ug/L	2.2	153906.29	
Mo	95	115	He	0.5438	ug/L	3.4	1096.72	
Mo	98	115	He	0.5317	ug/L	3.7	1853.47	
Ag	107	115	He	1.6153	ug/L	5.4	11698.37	
Ag	109	115	He	1.6070	ug/L	0.9	11449.81	
Cd	111	115	He	6.7351	ug/L	0.5	5500.09	
Pb	208	175	He	4.4842	ug/L	3.1	87716.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346108.15	1.6	378486.94	91.45	
Sc	45	He	68596.40	1.5	74157.35	92.5	
Ge	72	He	59702.56	1.9	64995.55	91.86	
In	115	He	533398.16	0.8	567443.14	94	
Lu	175	He	1378891.64	2.7	1431992.06	96.29	
Th	232	He	2457585.95	1.1	2601025.95	94.49	

Sample Report

Sample Name K2508066-015
File Name 113SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:25:41
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.0127	ug/L	8.1	1366.76	
Se	78	72	H2	14.5944	ug/L	3.4	4278.32	
Cu	63	72	He	13.2990	ug/L	2.5	55682.41	
Cu	65	72	He	13.1797	ug/L	2.4	27439.91	
Zn	66	72	He	396.1411	ug/L	0.6	195650.84	
Mo	95	115	He	0.6473	ug/L	6.3	1287.84	
Mo	98	115	He	0.6141	ug/L	4.8	2112.39	
Ag	107	115	He	0.6353	ug/L	4.6	4564.12	
Ag	109	115	He	0.6487	ug/L	3.9	4592.46	
Cd	111	115	He	4.2950	ug/L	2.0	3474.27	
Pb	208	175	He	4.7262	ug/L	1.7	91694.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350553.37	1.4	378486.94	92.62	
Sc	45	He	68382.41	4.0	74157.35	92.21	
Ge	72	He	59518.59	2.0	64995.55	91.57	
In	115	He	528340.33	1.7	567443.14	93.11	
Lu	175	He	1367079.67	1.2	1431992.06	95.47	
Th	232	He	2468656.01	1.1	2601025.95	94.91	

Sample Report

Sample Name K2508066-016
File Name 114SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:27:45
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.8472	ug/L	9.3	1216.74	
Se	78	72	H2	12.1378	ug/L	4.3	3446.76	
Cu	63	72	He	11.2459	ug/L	1.0	47689.91	
Cu	65	72	He	11.1093	ug/L	1.9	23427.64	
Zn	66	72	He	306.0189	ug/L	0.6	153040.78	
Mo	95	115	He	0.5992	ug/L	5.9	1210.06	
Mo	98	115	He	0.5983	ug/L	1.8	2086.83	
Ag	107	115	He	0.2528	ug/L	2.4	1843.48	
Ag	109	115	He	0.2379	ug/L	9.8	1721.79	
Cd	111	115	He	2.0418	ug/L	1.5	1673.27	
Pb	208	175	He	3.7506	ug/L	1.0	74286.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339745.46	0.9	378486.94	89.76	
Sc	45	He	69630.97	0.6	74157.35	93.9	
Ge	72	He	60261.48	0.9	64995.55	92.72	
In	115	He	535269.48	0.4	567443.14	94.33	
Lu	175	He	1395105.50	1.1	1431992.06	97.42	
Th	232	He	2505994.18	0.9	2601025.95	96.35	

Sample Report

Sample Name K2508066-017
File Name 115SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:29:48
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4195	ug/L	5.7	1856.82	
Se	78	72	H2	19.4598	ug/L	1.0	5641.79	
Cu	63	72	He	11.6518	ug/L	2.8	48044.48	
Cu	65	72	He	11.7420	ug/L	2.4	24080.42	
Zn	66	72	He	423.0977	ug/L	1.7	205763.26	
Mo	95	115	He	0.6278	ug/L	2.3	1242.29	
Mo	98	115	He	0.6363	ug/L	1.0	2173.52	
Ag	107	115	He	1.0281	ug/L	2.8	7332.00	
Ag	109	115	He	0.9944	ug/L	1.2	6981.82	
Cd	111	115	He	10.3235	ug/L	0.3	8297.32	
Pb	208	175	He	5.8135	ug/L	1.4	112054.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346856.26	0.8	378486.94	91.64	
Sc	45	He	68070.69	1.0	74157.35	91.79	
Ge	72	He	58618.10	2.0	64995.55	90.19	
In	115	He	524969.24	0.6	567443.14	92.51	
Lu	175	He	1358439.88	0.6	1431992.06	94.86	
Th	232	He	2442322.20	0.5	2601025.95	93.9	

Sample Report

Sample Name K2508066-018
File Name 116SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:31:53
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.3015	ug/L	4.9	1680.13	
Se	78	72	H2	15.8463	ug/L	0.4	4652.11	
Cu	63	72	He	9.1070	ug/L	2.9	37058.53	
Cu	65	72	He	9.2288	ug/L	2.0	18674.05	
Zn	66	72	He	289.4042	ug/L	2.3	138819.52	
Mo	95	115	He	0.4067	ug/L	2.8	817.81	
Mo	98	115	He	0.3837	ug/L	10.1	1337.85	
Ag	107	115	He	1.5173	ug/L	2.4	10874.34	
Ag	109	115	He	1.4556	ug/L	2.7	10262.23	
Cd	111	115	He	4.1560	ug/L	1.4	3357.74	
Pb	208	175	He	3.5744	ug/L	1.1	69905.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351186.23	1.8	378486.94	92.79	
Sc	45	He	67987.04	2.6	74157.35	91.68	
Ge	72	He	57814.80	2.2	64995.55	88.95	
In	115	He	527752.17	1.0	567443.14	93.01	
Lu	175	He	1377386.65	0.7	1431992.06	96.19	
Th	232	He	2570892.56	0.5	2601025.95	98.84	

Sample Report

Sample Name K2508066-019
File Name 117SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:33:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.4360	ug/L	7.7	1496.78	
Se	78	72	H2	14.8898	ug/L	2.9	4352.01	
Cu	63	72	He	10.4698	ug/L	2.4	42911.45	
Cu	65	72	He	10.3996	ug/L	2.6	21197.52	
Zn	66	72	He	442.4837	ug/L	2.2	213829.74	
Mo	95	115	He	0.5215	ug/L	7.8	1040.04	
Mo	98	115	He	0.5504	ug/L	2.7	1893.47	
Ag	107	115	He	0.6666	ug/L	3.9	4772.52	
Ag	109	115	He	0.6678	ug/L	1.4	4714.17	
Cd	111	115	He	3.7484	ug/L	1.7	3023.33	
Pb	208	175	He	8.1874	ug/L	2.0	158378.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349670.69	1.3	378486.94	92.39	
Sc	45	He	68348.77	2.9	74157.35	92.17	
Ge	72	He	58250.04	2.0	64995.55	89.62	
In	115	He	526844.40	1.3	567443.14	92.85	
Lu	175	He	1363904.10	1.3	1431992.06	95.25	
Th	232	He	2489285.12	1.1	2601025.95	95.7	

Sample Report

Sample Name K2508066-020
File Name 118SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:36:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6683	ug/L	21.4	840.04	
Se	78	72	H2	7.4116	ug/L	1.0	2121.16	
Cu	63	72	He	6.5486	ug/L	2.1	27209.59	
Cu	65	72	He	6.5762	ug/L	2.8	13579.91	
Zn	66	72	He	287.5116	ug/L	0.5	140687.25	
Mo	95	115	He	0.3744	ug/L	10.9	755.58	
Mo	98	115	He	0.3811	ug/L	9.1	1330.07	
Ag	107	115	He	0.1313	ug/L	4.7	948.37	
Ag	109	115	He	0.1183	ug/L	9.6	858.37	
Cd	111	115	He	2.2501	ug/L	0.5	1820.95	
Pb	208	175	He	1.6305	ug/L	0.5	32051.21	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342236.23	0.4	378486.94	90.42	
Sc	45	He	68016.90	1.2	74157.35	91.72	
Ge	72	He	58962.89	1.9	64995.55	90.72	
In	115	He	528591.85	0.8	567443.14	93.15	
Lu	175	He	1381513.52	0.9	1431992.06	96.47	
Th	232	He	2455144.23	0.7	2601025.95	94.39	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 119_CC.V.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:38:05
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	26.5057	ug/L	2.6	2573.62	106.02	
Se	78	72	H2	26.1046	ug/L	2.2	7451.30	104.42	
Cu	63	72	He	26.2982	ug/L	1.2	107331.65	105.19	
Cu	65	72	He	26.4083	ug/L	1.7	53632.44	105.63	
Zn	66	72	He	26.1976	ug/L	5.4	12669.17	104.79	
Mo	95	115	He	12.7876	ug/L	1.7	24468.09	102.3	
Mo	98	115	He	12.5889	ug/L	0.6	41498.25	100.71	
Ag	107	115	He	13.0430	ug/L	0.7	91637.94	104.34	
Ag	109	115	He	13.0144	ug/L	1.0	89796.45	104.12	
Cd	111	115	He	25.5061	ug/L	0.8	20210.86	102.02	
Pb	208	175	He	23.1967	ug/L	2.3	439683.29	92.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341602.03	2.0	378486.94	90.25	
Sc	45	He	66483.73	1.7	74157.35	89.65	
Ge	72	He	58072.53	0.1	64995.55	89.35	
In	115	He	517560.87	0.8	567443.14	91.21	
Lu	175	He	1337335.87	2.2	1431992.06	93.39	
Th	232	He	2436026.21	0.7	2601025.95	93.66	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 120_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:40:09
Sample Type CCB
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1796	ug/L	225.6	150.00	
Se	78	72	H2	0.0180	ug/L	13.9	6.67	
Cu	63	72	He	-0.0043	ug/L	N/A	86.67	
Cu	65	72	He	0.0027	ug/L	271.8	35.00	
Zn	66	72	He	-0.0149	ug/L	N/A	40.00	
Mo	95	115	He	0.0004	ug/L	1270.9	25.55	
Mo	98	115	He	-0.0045	ug/L	N/A	33.33	
Ag	107	115	He	0.0024	ug/L	16.7	23.33	
Ag	109	115	He	-0.0002	ug/L	N/A	23.33	
Cd	111	115	He	0.0029	ug/L	13.2	2.33	
Pb	208	175	He	0.0110	ug/L	8.9	327.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342787.12	2.3	378486.94	90.57	
Sc	45	He	66446.57	2.2	74157.35	89.6	
Ge	72	He	57526.95	1.5	64995.55	88.51	
In	115	He	521891.92	1.0	567443.14	91.97	
Lu	175	He	1339070.50	0.5	1431992.06	93.51	
Th	232	He	2397976.27	0.7	2601025.95	92.19	



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

August 29, 2025

Analytical Report for Service Request No: K2508066

Greg Albrecht
Alaska Department of Fish and Game
802 3rd St.,
P.O. Box 110024
Juneau, AK 99811-0024

RE: 2025 Greens Creek Mine Biomonitoring

Dear Greg,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2025
For your reference, these analyses have been assigned our service request number **K2508066**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Raw Data
 Total Solids
 Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508066
Date Received: 08/13/2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Twenty animal tissue samples were received for analysis at ALS Environmental on 08/13/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 08/29/2025



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2508066
Attachment 2 of 3

Project Name: 2025 Greens Creek Mine Biomonitoring
 Project Manager: Greg Albrecht
 Company Name: Alaska Department of Fish and Game
 Contact Information: greg.albrecht@alaska.gov / 907-465-6384

Sample Type: Whole body juvenile Dolly Varden char and Coho Salmon
 Analysis: Total metals, dry weight basis, report percent solids

Matrix	Sample Date	Sample Name	Sample ID	Total Metals	Fork Length (mm)	Weight (g)
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #1	2025GCMTC9DV1	Ag, Cd, Cu, Hg, Pb, Se, Zn	81	5.70
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #2	2025GCMTC9DV2	Ag, Cd, Cu, Hg, Pb, Se, Zn	86	7.80
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #3	2025GCMTC9DV3	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	10.50
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #4	2025GCMTC9DV4	Ag, Cd, Cu, Hg, Pb, Se, Zn	105	15.30
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #5	2025GCMTC9DV5	Ag, Cd, Cu, Hg, Pb, Se, Zn	85	10.40
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #6	2025GCMTC9DV6	Ag, Cd, Cu, Hg, Pb, Se, Zn	94	13.00
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #7	2025GCMTC9DV7	Ag, Cd, Cu, Hg, Pb, Se, Zn	91	11.40
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #8	2025GCMTC9DV8	Ag, Cd, Cu, Hg, Pb, Se, Zn	93	11.70
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #9	2025GCMTC9DV9	Ag, Cd, Cu, Hg, Pb, Se, Zn	99	11.70
Whole Body	7/10/2025	Tributary Creek Site 9 DV Metals Fish #10	2025GCMTC9DV10	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	8.70
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #1	2025GCMTC9CO1	Ag, Cd, Cu, Hg, Pb, Se, Zn	84	9.20
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #2	2025GCMTC9CO2	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	11.70
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #3	2025GCMTC9CO3	Ag, Cd, Cu, Hg, Pb, Se, Zn	95	11.50
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #4	2025GCMTC9CO4	Ag, Cd, Cu, Hg, Pb, Se, Zn	90	11.10
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #5	2025GCMTC9CO5	Ag, Cd, Cu, Hg, Pb, Se, Zn	89	10.50
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #6	2025GCMTC9CO6	Ag, Cd, Cu, Hg, Pb, Se, Zn	86	6.80
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #7	2025GCMTC9CO7	Ag, Cd, Cu, Hg, Pb, Se, Zn	74	5.40
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #8	2025GCMTC9CO8	Ag, Cd, Cu, Hg, Pb, Se, Zn	84	7.00
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #9	2025GCMTC9CO9	Ag, Cd, Cu, Hg, Pb, Se, Zn	82	5.20
Whole Body	7/10/2025	Tributary Creek Site 9 CO Metals Fish #10	2025GCMTC9CO10	Ag, Cd, Cu, Hg, Pb, Se, Zn	81	5.20

PROJECT NAME 2025 Greens Creek Biomonitoring				
PROJECT NUMBER _____				
PROJECT MANAGER Greg Albrecht				
COMPANY NAME Alaska Department of Fish and Game				
ADDRESS 802 3rd st				
CITY/STATE/ZIP Douglas, AK 99824				
E-MAIL ADDRESS greg.albrecht@alaska.gov				
PHONE # 907-465-6384 FAX # _____				
SAMPLER'S SIGNATURE <i>Greg Albrecht</i>				

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8091 <input type="checkbox"/> 8141 <input type="checkbox"/>	Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> 8151 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) Cyanide <input type="checkbox"/>	Hex-Chrom (circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , DOC, NH ₃ -N, COD, TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	Hg-1631E <input type="checkbox"/>	REMARKS
See attachments												X						X	

<p>REPORT REQUIREMENTS</p> <p><input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required</p> <p><input checked="" type="checkbox"/> II. Report Dup., MS, MSD as required</p> <p><input type="checkbox"/> III. CLP Like Summary (no raw data)</p> <p><input type="checkbox"/> IV. Data Validation Report</p> <p><input type="checkbox"/> V. EDD</p>	<p>INVOICE INFORMATION</p> <p>P.O. # <u>Hecla Greens Creek</u></p> <p>Bill To: <u>Paula Lillesve</u></p> <p><u>plillesve@hecla.com</u></p>	<p>Circle which metals are to be analyzed:</p> <p>Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg</p> <p>Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg</p> <p>*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)</p> <p>SPECIAL INSTRUCTIONS/COMMENTS:</p> <p>Please send report to greg.albrecht@alaska.gov</p> <p>Please Bill to Hecla Greens Creek at plillesve@hecla.com</p> <p><input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)</p>
<p>TURNAROUND REQUIREMENTS</p> <p><input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr.</p> <p><input type="checkbox"/> 5 day</p> <p><input checked="" type="checkbox"/> Standard (15 working days)</p> <p><input type="checkbox"/> Provide FAX Results</p> <p>Requested Report Date _____</p>		

<p>RELINQUISHED BY:</p> <p><i>Greg Albrecht</i></p> <p>Signature _____ Date/Time <u>8/11/25</u></p> <p>Printed Name <u>Greg Albrecht</u> Firm <u>ADF&G</u></p>	<p>RECEIVED BY:</p> <p><i>Noah Peterson</i></p> <p>Signature _____ Date/Time <u>8/13/25 0945</u></p> <p>Printed Name <u>Noah Peterson</u> Firm <u>ALS</u></p>	<p>RELINQUISHED BY:</p> <p>Signature _____ Date/Time _____</p> <p>Printed Name _____ Firm _____</p>	<p>RECEIVED BY:</p> <p>Signature _____ Date/Time _____</p> <p>Printed Name _____ Firm _____</p>
---	--	--	--

Cooler Receipt and Preservation Form

08066 PM Black

Client Alaska Department of Fish and Game Service Request K25 08066
 Received: 8/13/25 Opened: 8/13/25 By: WRP Unloaded: 8/13/25 By: WRP

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / <u>NA</u>	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number <u>NA</u>	Filed
<u>13.1</u>	<u>7.4</u>	<u>IR02</u>		<u>X</u>		<u>391991503818</u>	

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? NA Y N

If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves

7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N

8. Were samples received in good condition (unbroken) NA Y N

9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N

10. Did all sample labels and tags agree with custody papers? NA Y N

11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N

12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N

13. Were VOA vials received without headspace? Indicate in the table below NA Y N

14. Was C12/Res negative? NA Y N

15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. NA Y N

16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Samples in freezer



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Analysis Method: Freeze Dry
Prep Method: None

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25
Units: Percent
Basis: Wet

Total Solids

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
2025GCMTC9DV1	K2508066-001	24.5	-	-	1	08/20/25 16:34	
2025GCMTC9DV2	K2508066-002	24.6	-	-	1	08/20/25 16:34	
2025GCMTC9DV3	K2508066-003	24.7	-	-	1	08/20/25 16:34	
2025GCMTC9DV4	K2508066-004	24.7	-	-	1	08/20/25 16:34	
2025GCMTC9DV5	K2508066-005	26.6	-	-	1	08/20/25 16:34	
2025GCMTC9DV6	K2508066-006	24.4	-	-	1	08/20/25 16:34	
2025GCMTC9DV7	K2508066-007	25.0	-	-	1	08/20/25 16:34	
2025GCMTC9DV8	K2508066-008	24.7	-	-	1	08/20/25 16:34	
2025GCMTC9DV9	K2508066-009	25.2	-	-	1	08/20/25 16:34	
2025GCMTC9DV10	K2508066-010	25.3	-	-	1	08/20/25 16:34	
2025GCMTC9CO1	K2508066-011	25.9	-	-	1	08/20/25 16:34	
2025GCMTC9CO2	K2508066-012	25.2	-	-	1	08/20/25 16:34	
2025GCMTC9CO3	K2508066-013	24.1	-	-	1	08/20/25 16:34	
2025GCMTC9CO4	K2508066-014	23.6	-	-	1	08/20/25 16:34	
2025GCMTC9CO5	K2508066-015	25.1	-	-	1	08/20/25 16:34	
2025GCMTC9CO6	K2508066-016	24.5	-	-	1	08/20/25 16:34	
2025GCMTC9CO7	K2508066-017	22.7	-	-	1	08/20/25 16:34	
2025GCMTC9CO8	K2508066-018	24.3	-	-	1	08/20/25 16:34	
2025GCMTC9CO9	K2508066-019	22.8	-	-	1	08/20/25 16:34	
2025GCMTC9CO10	K2508066-020	22.3	-	-	1	08/20/25 16:34	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental
Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25

Mercury, Total

Prep Method: METHOD
Analysis Method: 1631E
Test Notes:

Units: ng/g
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
2025GCMTC9DV1	K2508066-001	9.9	2.0	10	08/26/25	08/28/25	254	
2025GCMTC9DV2	K2508066-002	10	2.0	10	08/26/25	08/28/25	278	
2025GCMTC9DV3	K2508066-003	9.9	2.0	10	08/26/25	08/28/25	306	
2025GCMTC9DV4	K2508066-004	9.9	2.0	10	08/26/25	08/28/25	318	
2025GCMTC9DV5	K2508066-005	9.9	2.0	10	08/26/25	08/28/25	305	
2025GCMTC9DV6	K2508066-006	10	2.0	10	08/26/25	08/28/25	295	
2025GCMTC9DV7	K2508066-007	10	2.0	10	08/26/25	08/28/25	286	
2025GCMTC9DV8	K2508066-008	10	2.0	10	08/26/25	08/28/25	269	
2025GCMTC9DV9	K2508066-009	9.9	2.0	10	08/26/25	08/28/25	258	
2025GCMTC9DV10	K2508066-010	10	2.0	10	08/26/25	08/28/25	301	
2025GCMTC9CO1	K2508066-011	10	2.0	10	08/26/25	08/28/25	381	
2025GCMTC9CO2	K2508066-012	9.9	2.0	10	08/26/25	08/28/25	304	
2025GCMTC9CO3	K2508066-013	9.9	2.0	10	08/26/25	08/28/25	301	
2025GCMTC9CO4	K2508066-014	9.9	2.0	10	08/26/25	08/28/25	283	
2025GCMTC9CO5	K2508066-015	9.9	2.0	10	08/26/25	08/28/25	218	
2025GCMTC9CO6	K2508066-016	10	2.0	10	08/26/25	08/28/25	198	
2025GCMTC9CO7	K2508066-017	10	2.0	10	08/26/25	08/28/25	273	
2025GCMTC9CO8	K2508066-018	10	2.0	10	8/26/2025	8/28/2025	236	
2025GCMTC9CO9	K2508066-019	10	2.0	10	8/26/2025	8/28/2025	295	
2025GCMTC9CO10	K2508066-020	10	2.0	10	8/26/2025	8/28/2025	200	
Method Blank 1	K2508066-MB1	1.0	0.20	1	8/26/2025	8/28/2025	ND	
Method Blank 2	K2508066-MB2	1.0	0.20	1	8/26/2025	8/28/2025	ND	
Method Blank 3	K2508066-MB3	1.0	0.20	1	8/26/2025	8/28/2025	ND	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMTC9DV6 Units: ng/g
 Lab Code: K2508066-006MS, K2508066-006DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	10	249	249	295	518	542	90	99	70-130	5	

ALS Group USA, Corp.
dba ALS Environmental
 QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal tissue

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Matrix Spike/Duplicate Matrix Spike Summary
 Total Metals

Sample Name: 2025GCMTC9DV6 Units: ng/g
 Lab Code: K2508066-009MS, K2508066-009DMS Basis: Dry
 Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		ALS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Mercury	METHOD	1631E	9.8	246	246	258	509	472	102	87	70-130	8	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508066
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Initial) Units: ng/g
 Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	5.07	101	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Water

Service Request: K2508066
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Ongoing Precision and Recovery (OPR) Sample Summary
 Total Metals

Sample Name: Ongoing Precision and Recovery (Final) Units: ng/g
 Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	5.00	5.03	101	70-130	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Animal tissue

Service Request: K2508066
Date Collected: NA
Date Received: NA
Date Extracted: 08/26/25
Date Analyzed: 08/28/25

Quality Control Sample (QCS) Summary
 Total Metals

Sample Name: Quality Control Sample Units: ng/g
 Lab Code: Basis: Dry
 Test Notes: Tort-3 Solids = 97.4%

Source: TORT-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS	Result Notes
						Percent Recovery Acceptance Limits	
Mercury	METHOD	1631E	292	247	85	70-130	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV1
Lab Code: K2508066-001

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.959	mg/Kg	0.020	0.004	5	08/27/25 13:50	08/25/25	
Copper	6020B	5.83	mg/Kg	0.099	0.036	5	08/27/25 13:50	08/25/25	
Lead	6020B	1.74	mg/Kg	0.020	0.003	5	08/27/25 13:50	08/25/25	
Selenium	6020B	7.69	mg/Kg	0.99	0.03	5	08/27/25 13:50	08/25/25	
Silver	6020B	0.176	mg/Kg	0.020	0.002	5	08/27/25 13:50	08/25/25	
Zinc	6020B	134	mg/Kg	0.50	0.16	5	08/27/25 13:50	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV2
Lab Code: K2508066-002

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.96	mg/Kg	0.020	0.004	5	08/27/25 13:56	08/25/25	
Copper	6020B	4.80	mg/Kg	0.099	0.036	5	08/27/25 13:56	08/25/25	
Lead	6020B	1.73	mg/Kg	0.020	0.003	5	08/27/25 13:56	08/25/25	
Selenium	6020B	8.61	mg/Kg	0.99	0.03	5	08/27/25 13:56	08/25/25	
Silver	6020B	0.297	mg/Kg	0.020	0.002	5	08/27/25 13:56	08/25/25	
Zinc	6020B	142	mg/Kg	0.49	0.16	5	08/27/25 13:56	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV3
Lab Code: K2508066-003

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	4.31	mg/Kg	0.020	0.004	5	08/27/25 13:58	08/25/25	
Copper	6020B	6.97	mg/Kg	0.099	0.036	5	08/27/25 13:58	08/25/25	
Lead	6020B	3.21	mg/Kg	0.020	0.003	5	08/27/25 13:58	08/25/25	
Selenium	6020B	12.4	mg/Kg	0.99	0.03	5	08/27/25 13:58	08/25/25	
Silver	6020B	0.526	mg/Kg	0.020	0.002	5	08/27/25 13:58	08/25/25	
Zinc	6020B	201	mg/Kg	0.50	0.16	5	08/27/25 13:58	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV4
Lab Code: K2508066-004

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.68	mg/Kg	0.020	0.004	5	08/27/25 13:40	08/25/25	
Copper	6020B	6.28	mg/Kg	0.098	0.035	5	08/27/25 13:40	08/25/25	
Lead	6020B	3.87	mg/Kg	0.020	0.003	5	08/27/25 13:40	08/25/25	
Selenium	6020B	9.37	mg/Kg	0.98	0.03	5	08/27/25 13:40	08/25/25	
Silver	6020B	0.579	mg/Kg	0.020	0.002	5	08/27/25 13:40	08/25/25	
Zinc	6020B	161	mg/Kg	0.49	0.16	5	08/27/25 13:40	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV5
Lab Code: K2508066-005

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.55	mg/Kg	0.020	0.004	5	08/27/25 14:00	08/25/25	
Copper	6020B	7.86	mg/Kg	0.098	0.035	5	08/27/25 14:00	08/25/25	
Lead	6020B	2.05	mg/Kg	0.020	0.003	5	08/27/25 14:00	08/25/25	
Selenium	6020B	10.7	mg/Kg	0.98	0.03	5	08/27/25 14:00	08/25/25	
Silver	6020B	0.325	mg/Kg	0.020	0.002	5	08/27/25 14:00	08/25/25	
Zinc	6020B	159	mg/Kg	0.49	0.16	5	08/27/25 14:00	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV6
Lab Code: K2508066-006

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	4.22	mg/Kg	0.019	0.004	5	08/27/25 14:02	08/25/25	
Copper	6020B	5.98	mg/Kg	0.097	0.035	5	08/27/25 14:02	08/25/25	
Lead	6020B	3.09	mg/Kg	0.019	0.003	5	08/27/25 14:02	08/25/25	
Selenium	6020B	9.91	mg/Kg	0.97	0.03	5	08/27/25 14:02	08/25/25	
Silver	6020B	0.331	mg/Kg	0.019	0.002	5	08/27/25 14:02	08/25/25	
Zinc	6020B	154	mg/Kg	0.49	0.16	5	08/27/25 14:02	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV7
Lab Code: K2508066-007

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	0.962	mg/Kg	0.020	0.004	5	08/27/25 14:05	08/25/25	
Copper	6020B	4.16	mg/Kg	0.099	0.036	5	08/27/25 14:05	08/25/25	
Lead	6020B	2.46	mg/Kg	0.020	0.003	5	08/27/25 14:05	08/25/25	
Selenium	6020B	5.89	mg/Kg	0.99	0.03	5	08/27/25 14:05	08/25/25	
Silver	6020B	0.098	mg/Kg	0.020	0.002	5	08/27/25 14:05	08/25/25	
Zinc	6020B	117	mg/Kg	0.50	0.16	5	08/27/25 14:05	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV8
Lab Code: K2508066-008

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	3.07	mg/Kg	0.020	0.004	5	08/27/25 14:07	08/25/25	
Copper	6020B	5.43	mg/Kg	0.098	0.035	5	08/27/25 14:07	08/25/25	
Lead	6020B	1.21	mg/Kg	0.020	0.003	5	08/27/25 14:07	08/25/25	
Selenium	6020B	9.56	mg/Kg	0.98	0.03	5	08/27/25 14:07	08/25/25	
Silver	6020B	0.226	mg/Kg	0.020	0.002	5	08/27/25 14:07	08/25/25	
Zinc	6020B	173	mg/Kg	0.49	0.16	5	08/27/25 14:07	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV9
Lab Code: K2508066-009

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.32	mg/Kg	0.019	0.004	5	08/27/25 14:09	08/25/25	
Copper	6020B	5.62	mg/Kg	0.097	0.035	5	08/27/25 14:09	08/25/25	
Lead	6020B	2.52	mg/Kg	0.019	0.003	5	08/27/25 14:09	08/25/25	
Selenium	6020B	7.93	mg/Kg	0.97	0.03	5	08/27/25 14:09	08/25/25	
Silver	6020B	0.432	mg/Kg	0.019	0.002	5	08/27/25 14:09	08/25/25	
Zinc	6020B	141	mg/Kg	0.49	0.16	5	08/27/25 14:09	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9DV10
Lab Code: K2508066-010

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.09	mg/Kg	0.020	0.004	5	08/27/25 14:11	08/25/25	
Copper	6020B	5.54	mg/Kg	0.098	0.035	5	08/27/25 14:11	08/25/25	
Lead	6020B	2.68	mg/Kg	0.020	0.003	5	08/27/25 14:11	08/25/25	
Selenium	6020B	7.06	mg/Kg	0.98	0.03	5	08/27/25 14:11	08/25/25	
Silver	6020B	0.271	mg/Kg	0.020	0.002	5	08/27/25 14:11	08/25/25	
Zinc	6020B	148	mg/Kg	0.49	0.16	5	08/27/25 14:11	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO1
Lab Code: K2508066-011

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.18	mg/Kg	0.020	0.004	5	08/27/25 14:13	08/25/25	
Copper	6020B	9.26	mg/Kg	0.099	0.036	5	08/27/25 14:13	08/25/25	
Lead	6020B	3.70	mg/Kg	0.020	0.003	5	08/27/25 14:13	08/25/25	
Selenium	6020B	8.49	mg/Kg	0.99	0.03	5	08/27/25 14:13	08/25/25	
Silver	6020B	0.227	mg/Kg	0.020	0.002	5	08/27/25 14:13	08/25/25	
Zinc	6020B	174	mg/Kg	0.50	0.16	5	08/27/25 14:13	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO2
Lab Code: K2508066-012

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	3.45	mg/Kg	0.020	0.004	5	08/27/25 14:15	08/25/25	
Copper	6020B	6.90	mg/Kg	0.098	0.035	5	08/27/25 14:15	08/25/25	
Lead	6020B	4.42	mg/Kg	0.020	0.003	5	08/27/25 14:15	08/25/25	
Selenium	6020B	7.89	mg/Kg	0.98	0.03	5	08/27/25 14:15	08/25/25	
Silver	6020B	0.505	mg/Kg	0.020	0.002	5	08/27/25 14:15	08/25/25	
Zinc	6020B	202	mg/Kg	0.49	0.16	5	08/27/25 14:15	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO3
Lab Code: K2508066-013

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.03	mg/Kg	0.020	0.004	5	08/27/25 14:21	08/25/25	
Copper	6020B	5.22	mg/Kg	0.099	0.036	5	08/27/25 14:21	08/25/25	
Lead	6020B	1.18	mg/Kg	0.020	0.003	5	08/27/25 14:21	08/25/25	
Selenium	6020B	6.22	mg/Kg	0.99	0.03	5	08/27/25 14:21	08/25/25	
Silver	6020B	0.092	mg/Kg	0.020	0.002	5	08/27/25 14:21	08/25/25	
Zinc	6020B	138	mg/Kg	0.49	0.16	5	08/27/25 14:21	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO4
Lab Code: K2508066-014

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	3.31	mg/Kg	0.020	0.004	5	08/27/25 14:23	08/25/25	
Copper	6020B	4.27	mg/Kg	0.098	0.035	5	08/27/25 14:23	08/25/25	
Lead	6020B	2.21	mg/Kg	0.020	0.003	5	08/27/25 14:23	08/25/25	
Selenium	6020B	8.39	mg/Kg	0.98	0.03	5	08/27/25 14:23	08/25/25	
Silver	6020B	0.794	mg/Kg	0.020	0.002	5	08/27/25 14:23	08/25/25	
Zinc	6020B	153	mg/Kg	0.49	0.16	5	08/27/25 14:23	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO5
Lab Code: K2508066-015

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.13	mg/Kg	0.020	0.004	5	08/27/25 14:25	08/25/25	
Copper	6020B	6.52	mg/Kg	0.099	0.036	5	08/27/25 14:25	08/25/25	
Lead	6020B	2.34	mg/Kg	0.020	0.003	5	08/27/25 14:25	08/25/25	
Selenium	6020B	7.23	mg/Kg	0.99	0.03	5	08/27/25 14:25	08/25/25	
Silver	6020B	0.315	mg/Kg	0.020	0.002	5	08/27/25 14:25	08/25/25	
Zinc	6020B	196	mg/Kg	0.50	0.16	5	08/27/25 14:25	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO6
Lab Code: K2508066-016

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.01	mg/Kg	0.020	0.004	5	08/27/25 14:27	08/25/25	
Copper	6020B	5.52	mg/Kg	0.099	0.036	5	08/27/25 14:27	08/25/25	
Lead	6020B	1.86	mg/Kg	0.020	0.003	5	08/27/25 14:27	08/25/25	
Selenium	6020B	6.03	mg/Kg	0.99	0.03	5	08/27/25 14:27	08/25/25	
Silver	6020B	0.126	mg/Kg	0.020	0.002	5	08/27/25 14:27	08/25/25	
Zinc	6020B	152	mg/Kg	0.50	0.16	5	08/27/25 14:27	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO7
Lab Code: K2508066-017

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	5.04	mg/Kg	0.020	0.004	5	08/27/25 14:29	08/25/25	
Copper	6020B	5.74	mg/Kg	0.098	0.035	5	08/27/25 14:29	08/25/25	
Lead	6020B	2.84	mg/Kg	0.020	0.003	5	08/27/25 14:29	08/25/25	
Selenium	6020B	9.51	mg/Kg	0.98	0.03	5	08/27/25 14:29	08/25/25	
Silver	6020B	0.502	mg/Kg	0.020	0.002	5	08/27/25 14:29	08/25/25	
Zinc	6020B	207	mg/Kg	0.49	0.16	5	08/27/25 14:29	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO8
Lab Code: K2508066-018

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	2.07	mg/Kg	0.020	0.004	5	08/27/25 14:31	08/25/25	
Copper	6020B	4.60	mg/Kg	0.10	0.04	5	08/27/25 14:31	08/25/25	
Lead	6020B	1.78	mg/Kg	0.020	0.003	5	08/27/25 14:31	08/25/25	
Selenium	6020B	7.90	mg/Kg	1.0	0.03	5	08/27/25 14:31	08/25/25	
Silver	6020B	0.756	mg/Kg	0.020	0.002	5	08/27/25 14:31	08/25/25	
Zinc	6020B	144	mg/Kg	0.50	0.16	5	08/27/25 14:31	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO9
Lab Code: K2508066-019

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.85	mg/Kg	0.020	0.004	5	08/27/25 14:33	08/25/25	
Copper	6020B	5.13	mg/Kg	0.099	0.036	5	08/27/25 14:33	08/25/25	
Lead	6020B	4.04	mg/Kg	0.020	0.003	5	08/27/25 14:33	08/25/25	
Selenium	6020B	7.35	mg/Kg	0.99	0.03	5	08/27/25 14:33	08/25/25	
Silver	6020B	0.329	mg/Kg	0.020	0.002	5	08/27/25 14:33	08/25/25	
Zinc	6020B	218	mg/Kg	0.49	0.16	5	08/27/25 14:33	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: 2025GCMTC9CO10
Lab Code: K2508066-020

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25 09:45
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	1.12	mg/Kg	0.020	0.004	5	08/27/25 14:36	08/25/25	
Copper	6020B	3.28	mg/Kg	0.10	0.04	5	08/27/25 14:36	08/25/25	
Lead	6020B	0.813	mg/Kg	0.020	0.003	5	08/27/25 14:36	08/25/25	
Selenium	6020B	3.69	mg/Kg	1.0	0.03	5	08/27/25 14:36	08/25/25	
Silver	6020B	0.065	mg/Kg	0.020	0.002	5	08/27/25 14:36	08/25/25	
Zinc	6020B	143	mg/Kg	0.50	0.16	5	08/27/25 14:36	08/25/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue
Sample Name: Method Blank
Lab Code: KQ2515048-01

Service Request: K2508066
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Cadmium	6020B	ND U	mg/Kg	0.020	0.004	5	08/27/25 13:32	08/25/25	
Copper	6020B	ND U	mg/Kg	0.10	0.04	5	08/27/25 13:32	08/25/25	
Lead	6020B	0.008 J	mg/Kg	0.020	0.003	5	08/27/25 13:32	08/25/25	
Selenium	6020B	ND U	mg/Kg	1.0	0.03	5	08/27/25 13:32	08/25/25	
Silver	6020B	ND U	mg/Kg	0.020	0.002	5	08/27/25 13:32	08/25/25	
Zinc	6020B	ND U	mg/Kg	0.50	0.16	5	08/27/25 13:32	08/25/25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25
Date Analyzed: 08/27/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMTC9DV4
Lab Code: K2508066-004

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2515048-05 Result			
Cadmium	6020B	0.020	0.004	2.68	2.67	2.68	<1	20
Copper	6020B	0.098	0.035	6.28	6.32	6.30	<1	20
Lead	6020B	0.020	0.003	3.87	4.28	4.08	10	20
Selenium	6020B	0.98	0.03	9.37	8.86	9.12	6	20
Silver	6020B	0.020	0.002	0.579	0.558	0.569	4	20
Zinc	6020B	0.49	0.16	161	163	162	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508066
Date Collected: 07/10/25
Date Received: 08/13/25
Date Analyzed: 08/27/25
Date Extracted: 08/25/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMTC9DV4
Lab Code: K2508066-004
Analysis Method: 6020B
Prep Method: PSEP Metals

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2515048-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	2.68	7.50	4.93	98	75-125
Copper	6.28	31.2	24.7	101	75-125
Lead	3.87	46.7	49.3	87	75-125
Selenium	9.37	27.6	16.4	111	75-125
Silver	0.579	5.29	4.93	96	75-125
Zinc	161	214	49.3	108	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508066
Date Analyzed: 08/27/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2515048-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Cadmium	6020B	4.88	5.00	98	80-120
Copper	6020B	25.1	25.0	100	80-120
Lead	6020B	43.6	50.0	87	80-120
Selenium	6020B	16.9	16.7	101	80-120
Silver	6020B	4.90	5.00	98	80-120
Zinc	6020B	49.3	50.0	99	80-120

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508066
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515048-03
Test Notes: Dorm-5 Solids = 95.8%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Dorm-5

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	0.148	0.157	106	0.113 - 0.186	
Copper	PSEP Tissue	6020B	3.30	3.44	104	2.58 - 4.04	
Lead	PSEP Tissue	6020B	0.058	0.060	103	0.042 - 0.077	
Selenium	PSEP Tissue	6020B	2.40	2.73	114	1.83 - 3.01	
Silver	PSEP Tissue	6020B	0.135	0.140	104	0.097 - 0.179	
Zinc	PSEP Tissue	6020B	28.7	30.0	105	22.2 - 35.6	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
LCS Matrix: Tissue

Service Request: K2508066
Date Collected: NA
Date Received: NA
Date Extracted: 8/25/2025
Date Analyzed: 8/27/2025

Standard Reference Material Summary
 Total Metals

Sample Name: Standard Reference Material
Lab Code: KQ2515048-04
Test Notes: Tort-3 Solids = 97.4%

Units: mg/Kg (ppm)
Basis: Dry

Source: N.R.C.C. Tort-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Cadmium	PSEP Tissue	6020B	42.3	37.3	88	32.4-52.9	
Copper	PSEP Tissue	6020B	497	447	90	380-623	
Lead	PSEP Tissue	6020B	0.225	0.166	74	0.166-0.292	
Selenium	PSEP Tissue	6020B	10.9	9.7	89	7.9-14.3	
Zinc	PSEP Tissue	6020B	136	123	90	104-170	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring
Sample Matrix: Animal Tissue

Service Request: K2508066

Metals

Prep Method: PSEP Metals
Analytical Method: 6020B

Extraction Lot: 462961
Extraction Date: 08/25/25 15:56

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
2025GCMTC9DV1	K2508066-001	7/10/25	8/13/25	0.30300 g	30 mL	
2025GCMTC9DV2	K2508066-002	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMTC9DV3	K2508066-003	7/10/25	8/13/25	0.30300 g	30 mL	
2025GCMTC9DV4	K2508066-004	7/10/25	8/13/25	0.30500 g	30 mL	
2025GCMTC9DV5	K2508066-005	7/10/25	8/13/25	0.30600 g	30 mL	
2025GCMTC9DV6	K2508066-006	7/10/25	8/13/25	0.30800 g	30 mL	
2025GCMTC9DV7	K2508066-007	7/10/25	8/13/25	0.30200 g	30 mL	
2025GCMTC9DV8	K2508066-008	7/10/25	8/13/25	0.30700 g	30 mL	
2025GCMTC9DV9	K2508066-009	7/10/25	8/13/25	0.30800 g	30 mL	
2025GCMTC9DV10	K2508066-010	7/10/25	8/13/25	0.30600 g	30 mL	
2025GCMTC9CO1	K2508066-011	7/10/25	8/13/25	0.30200 g	30 mL	
2025GCMTC9CO2	K2508066-012	7/10/25	8/13/25	0.30600 g	30 mL	
2025GCMTC9CO3	K2508066-013	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMTC9CO4	K2508066-014	7/10/25	8/13/25	0.30500 g	30 mL	
2025GCMTC9CO5	K2508066-015	7/10/25	8/13/25	0.30300 g	30 mL	
2025GCMTC9CO6	K2508066-016	7/10/25	8/13/25	0.30200 g	30 mL	
2025GCMTC9CO7	K2508066-017	7/10/25	8/13/25	0.30700 g	30 mL	
2025GCMTC9CO8	K2508066-018	7/10/25	8/13/25	0.30100 g	30 mL	
2025GCMTC9CO9	K2508066-019	7/10/25	8/13/25	0.30400 g	30 mL	
2025GCMTC9CO10	K2508066-020	7/10/25	8/13/25	0.30100 g	30 mL	
Method Blank	KQ2515048-01MB	NA	NA	0.30000 g	30 mL	
Lab Control Sample	KQ2515048-02LCS	NA	NA	0.30000 g	30 mL	
Standard Reference Material	KQ2515048-03SRM	7/10/25	8/13/25	0.30500 g	30 mL	
Standard Reference Material	KQ2515048-04SRM	7/10/25	8/13/25	0.30400 g	30 mL	
Duplicate	KQ2515048-05DUP	7/10/25	8/13/25	0.30500 g	30 mL	
Matrix Spike	KQ2515048-06MS	7/10/25	8/13/25	0.30400 g	30 mL	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 08/27/25 10:35	Cadmium	6020B	891163	12.7	12.5	102	90-110
	Copper	6020B	891163	12.4	12.5	99	90-110
	Lead	6020B	891163	24.7	25.0	99	90-110
	Selenium	6020B	891163	25.4	25.0	102	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110
CCV 08/27/25 10:37	Cadmium	6020B	891163	25.4	25.0	101	90-110
	Copper	6020B	891163	26.2	25.0	105	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	25.1	25.0	100	90-110
	Silver	6020B	891163	12.7	12.5	101	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110
CCV 08/27/25 11:27	Cadmium	6020B	891163	25.1	25.0	100	90-110
	Copper	6020B	891163	25.5	25.0	102	90-110
	Lead	6020B	891163	25.2	25.0	101	90-110
	Selenium	6020B	891163	24.9	25.0	100	90-110
	Silver	6020B	891163	12.6	12.5	101	90-110
	Zinc	6020B	891163	25.9	25.0	104	90-110
CCV 08/27/25 11:57	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	24.3	25.0	97	90-110
	Selenium	6020B	891163	25.3	25.0	101	90-110
	Silver	6020B	891163	12.8	12.5	102	90-110
	Zinc	6020B	891163	27.0	25.0	108	90-110
CCV 08/27/25 12:17	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	25.6	25.0	102	90-110
	Lead	6020B	891163	24.0	25.0	96	90-110
	Selenium	6020B	891163	26.0	25.0	104	90-110
	Silver	6020B	891163	12.9	12.5	103	90-110
	Zinc	6020B	891163	26.0	25.0	104	90-110
CCV 08/27/25 12:42	Cadmium	6020B	891163	25.4	25.0	102	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 08/27/25 12:42	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	23.1	25.0	92	90-110
	Selenium	6020B	891163	25.7	25.0	103	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	26.1	25.0	105	90-110
CCV 08/27/25 13:07	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.3	25.0	105	90-110
	Lead	6020B	891163	23.0	25.0	92	90-110
	Selenium	6020B	891163	25.4	25.0	102	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110
CCV 08/27/25 13:27	Cadmium	6020B	891163	25.2	25.0	101	90-110
	Copper	6020B	891163	26.1	25.0	104	90-110
	Lead	6020B	891163	22.5	25.0	90	90-110
	Selenium	6020B	891163	25.9	25.0	103	90-110
	Silver	6020B	891163	12.8	12.5	103	90-110
	Zinc	6020B	891163	26.4	25.0	106	90-110
CCV 08/27/25 13:52	Cadmium	6020B	891163	25.4	25.0	102	90-110
	Copper	6020B	891163	26.7	25.0	107	90-110
	Lead	6020B	891163	22.8	25.0	91	90-110
	Selenium	6020B	891163	25.7	25.0	103	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	25.2	25.0	101	90-110
CCV 08/27/25 14:17	Cadmium	6020B	891163	25.6	25.0	102	90-110
	Copper	6020B	891163	26.7	25.0	107	90-110
	Lead	6020B	891163	23.0	25.0	92	90-110
	Selenium	6020B	891163	26.0	25.0	104	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	25.9	25.0	104	90-110
CCV 08/27/25 14:38	Cadmium	6020B	891163	25.5	25.0	102	90-110
	Copper	6020B	891163	26.4	25.0	106	90-110

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCV 08/27/25 14:38	Lead	6020B	891163	23.2	25.0	93	90-110
	Selenium	6020B	891163	26.1	25.0	104	90-110
	Silver	6020B	891163	13.0	12.5	104	90-110
	Zinc	6020B	891163	26.2	25.0	105	90-110

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
ICB 08/27/25 10:39	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.007	J
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 10:41	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:29	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.006	U
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 11:59	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.008	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 12:19	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.012	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 12:44	Cadmium	6020B	891163	0.008	U

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	C
CCB 08/27/25 12:44	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.013	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 13:09	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.011	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 13:29	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.007	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.005	J
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 13:54	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.010	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 14:19	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U
	Lead	6020B	891163	0.009	J
	Selenium	6020B	891163	0.05	U
	Silver	6020B	891163	0.004	U
	Zinc	6020B	891163	0.3	U
CCB 08/27/25 14:40	Cadmium	6020B	891163	0.008	U
	Copper	6020B	891163	0.07	U

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID

Analyte	Method	Analysis Batch:	Result	C
CCB 08/27/25 14:40				
Lead	6020B	891163	0.011	J
Selenium	6020B	891163	0.05	U
Silver	6020B	891163	0.004	U
Zinc	6020B	891163	0.3	U

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICVT								
	Cadmium	6020B	891163	0.037	0.04	92	80-120	08/27/25 10:50
	Copper	6020B	891163	0.23	0.2	114	80-120	08/27/25 10:50
	Lead	6020B	891163	0.038	0.04	95	80-120	08/27/25 10:50
	Selenium	6020B	891163	2.1	2.0	103	80-120	08/27/25 10:50
	Silver	6020B	891163	0.041	0.04	102	80-120	08/27/25 10:50
	Zinc	6020B	891163	1.0	1.0	104	80-120	08/27/25 10:50

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	0.415	-	-	-	08/27/25 10:52
Copper	6020B	891163	0.55	-	-	-	08/27/25 10:52
Lead	6020B	891163	0.243	-	-	-	08/27/25 10:52
Selenium	6020B	891163	0.03	-	-	-	08/27/25 10:52
Silver	6020B	891163	0.011	-	-	-	08/27/25 10:52
Zinc	6020B	891163	0.7	-	-	-	08/27/25 10:52

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB

Concentration Units: ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Cadmium	6020B	891163	25.3	25.0	101	80-120	08/27/25 10:54
Copper	6020B	891163	49.0	50.0	98	80-120	08/27/25 10:54
Lead	6020B	891163	0.231	-	-	-	08/27/25 10:54
Selenium	6020B	891163	25.6	25.0	102	80-120	08/27/25 10:54
Silver	6020B	891163	12.4	12.5	100	80-120	08/27/25 10:54
Zinc	6020B	891163	25.0	25.0	100	80-120	08/27/25 10:54

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K2508066-004A	Cadmium	6020B	891163	5.45	55.5	50.0	100	75-125	08/27/25 13:46
	Copper	6020B	891163	12.8	64.2	50.0	103	75-125	08/27/25 13:46
	Lead	6020B	891163	7.87	52.0	50.0	88	75-125	08/27/25 13:46
	Selenium	6020B	891163	19	68	50	99	75-125	08/27/25 13:46
	Silver	6020B	891163	1.18	6.24	5.00	101	75-125	08/27/25 13:46
	Zinc	6020B	891163	327	369	50.0	83 #	75-125	08/27/25 13:46

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring

Service Request: K2508066

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K2508066-004SDL								
	Cadmium	6020B	891163	27.3	27.0	1	10	08/27/25 13:44
	Copper	6020B	891163	63.9	63.9	0	10	08/27/25 13:44
	Lead	6020B	891163	39.3	41.2	5	10	08/27/25 13:44
	Selenium	6020B	891163	95	95	0	10	08/27/25 13:44
	Silver	6020B	891163	5.9	5.7	4	10	08/27/25 13:44
	Zinc	6020B	891163	1630	1640	0	10	08/27/25 13:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

Detection Limits

Instrument: K-ICP-MS-06

Matrix: Animal Tissue

Analyte	Mass	Units	MRL	MDL	Method
Cadmium	111	ug/L	0.04	0.0076	6020B
Copper	65	ug/L	0.2	0.072	6020B
Lead	208	ug/L	0.04	0.006	6020B
Selenium	78	ug/L	2	0.052	6020B
Silver	107	ug/L	0.04	0.0044	6020B
Zinc	66	ug/L	1	0.32	6020B

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

ICP Linear Range (Quarterly)

Instrument: K-ICP-MS-06

Analyte	Concentration (ug/L)	Method
Cadmium 111	9000	6020B
Copper 65	4500	6020B
Lead 208	4500	6020B
Selenium 78	9000	6020B
Silver 107	450	6020B
Zinc 66	9000	6020B

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	1	08/27/25 10:30						
ZZZZZZ	1	08/27/25 10:32						
ICV	1	08/27/25 10:35	X	X	X	X	X	X
CCV	1	08/27/25 10:37	X	X	X	X	X	X
ICB	1	08/27/25 10:39	X	X	X	X	X	X
CCB	1	08/27/25 10:41	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:43						
LLICVT	1	08/27/25 10:50	X	X	X	X	X	X
ICSA	1	08/27/25 10:52	X	X	X	X	X	X
ICSAB	1	08/27/25 10:54	X	X	X	X	X	X
ZZZZZZ	1	08/27/25 10:56						
ZZZZZZ	1	08/27/25 10:58						
ZZZZZZ	5	08/27/25 11:06						
ZZZZZZ	5	08/27/25 11:08						
ZZZZZZ	5	08/27/25 11:10						
ZZZZZZ	5	08/27/25 11:13						
ZZZZZZ	5	08/27/25 11:15						
ZZZZZZ	5	08/27/25 11:17						
ZZZZZZ	25	08/27/25 11:19						
ZZZZZZ	5	08/27/25 11:21						
ZZZZZZ	5	08/27/25 11:23						
ZZZZZZ	5	08/27/25 11:25						
CCV	1	08/27/25 11:27	X	X	X	X	X	X
CCB	1	08/27/25 11:29	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 11:31						
ZZZZZZ	5	08/27/25 11:33						
ZZZZZZ	5	08/27/25 11:35						
ZZZZZZ	5	08/27/25 11:37						
ZZZZZZ	5	08/27/25 11:39						
ZZZZZZ	5	08/27/25 11:41						
ZZZZZZ	5	08/27/25 11:43						
ZZZZZZ	5	08/27/25 11:46						
ZZZZZZ	5	08/27/25 11:48						
ZZZZZZ	5	08/27/25 11:50						
ZZZZZZ	1	08/27/25 11:52						
CCV	1	08/27/25 11:57	X	X	X	X	X	X
CCB	1	08/27/25 11:59	X	X	X	X	X	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	5	08/27/25 12:01						
ZZZZZZ	5	08/27/25 12:03						
ZZZZZZ	5	08/27/25 12:05						
ZZZZZZ	5	08/27/25 12:07						
ZZZZZZ	5	08/27/25 12:09						
ZZZZZZ	5	08/27/25 12:11						
ZZZZZZ	5	08/27/25 12:13						
ZZZZZZ	5	08/27/25 12:15						
CCV	1	08/27/25 12:17	X	X	X	X	X	X
CCB	1	08/27/25 12:19	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 12:21						
ZZZZZZ	5	08/27/25 12:24						
ZZZZZZ	5	08/27/25 12:26						
ZZZZZZ	5	08/27/25 12:28						
ZZZZZZ	5	08/27/25 12:30						
ZZZZZZ	5	08/27/25 12:32						
ZZZZZZ	25	08/27/25 12:34						
ZZZZZZ	5	08/27/25 12:36						
ZZZZZZ	5	08/27/25 12:38						
ZZZZZZ	5	08/27/25 12:40						
CCV	1	08/27/25 12:42	X	X	X	X	X	X
CCB	1	08/27/25 12:44	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 12:46						
ZZZZZZ	5	08/27/25 12:48						
ZZZZZZ	5	08/27/25 12:50						
ZZZZZZ	5	08/27/25 12:52						
ZZZZZZ	5	08/27/25 12:54						
ZZZZZZ	5	08/27/25 12:56						
ZZZZZZ	5	08/27/25 12:58						
ZZZZZZ	5	08/27/25 13:01						
ZZZZZZ	5	08/27/25 13:03						
ZZZZZZ	5	08/27/25 13:05						
CCV	1	08/27/25 13:07	X	X	X	X	X	X
CCB	1	08/27/25 13:09	X	X	X	X	X	X
ZZZZZZ	5	08/27/25 13:11						
ZZZZZZ	5	08/27/25 13:13						
ZZZZZZ	5	08/27/25 13:15						

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	Cd	Cu	Pb	Se	Ag	Zn
ZZZZZZ	5	08/27/25 13:17						
ZZZZZZ	5	08/27/25 13:19						
ZZZZZZ	5	08/27/25 13:21						
ZZZZZZ	5	08/27/25 13:23						
ZZZZZZ	5	08/27/25 13:25						
CCV	1	08/27/25 13:27	X	X	X	X	X	X
CCB	1	08/27/25 13:29	X	X	X	X	X	X
KQ2515048-01MB	5	08/27/25 13:32	X	X	X	X	X	X
KQ2515048-02LCS	5	08/27/25 13:34	X	X	X	X	X	X
KQ2515048-03SRM	5	08/27/25 13:36	X	X	X	X	X	X
KQ2515048-04SRM	5	08/27/25 13:38	X	X	X	X	X	X
K2508066-004	5	08/27/25 13:40	X	X	X	X	X	X
K2508066-004DUP	5	08/27/25 13:42	X	X	X	X	X	X
K2508066-004SDL	25	08/27/25 13:44	X	X	X	X	X	X
K2508066-004PS	5	08/27/25 13:46	X	X	X	X	X	X
K2508066-004MS	5	08/27/25 13:48	X	X	X	X	X	X
K2508066-001	5	08/27/25 13:50	X	X	X	X	X	X
CCV	1	08/27/25 13:52	X	X	X	X	X	X
CCB	1	08/27/25 13:54	X	X	X	X	X	X
K2508066-002	5	08/27/25 13:56	X	X	X	X	X	X
K2508066-003	5	08/27/25 13:58	X	X	X	X	X	X
K2508066-005	5	08/27/25 14:00	X	X	X	X	X	X
K2508066-006	5	08/27/25 14:02	X	X	X	X	X	X
K2508066-007	5	08/27/25 14:05	X	X	X	X	X	X
K2508066-008	5	08/27/25 14:07	X	X	X	X	X	X
K2508066-009	5	08/27/25 14:09	X	X	X	X	X	X
K2508066-010	5	08/27/25 14:11	X	X	X	X	X	X
K2508066-011	5	08/27/25 14:13	X	X	X	X	X	X
K2508066-012	5	08/27/25 14:15	X	X	X	X	X	X
CCV	1	08/27/25 14:17	X	X	X	X	X	X
CCB	1	08/27/25 14:19	X	X	X	X	X	X
K2508066-013	5	08/27/25 14:21	X	X	X	X	X	X
K2508066-014	5	08/27/25 14:23	X	X	X	X	X	X
K2508066-015	5	08/27/25 14:25	X	X	X	X	X	X
K2508066-016	5	08/27/25 14:27	X	X	X	X	X	X
K2508066-017	5	08/27/25 14:29	X	X	X	X	X	X
K2508066-018	5	08/27/25 14:31	X	X	X	X	X	X

ALS Group USA, Corp.
 dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

Analysis Run Log

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Dilution Factor	Date/Time	C	C	P	S	A	Z
			d	u	b	e	g	n
K2508066-019	5	08/27/25 14:33	X	X	X	X	X	X
K2508066-020	5	08/27/25 14:36	X	X	X	X	X	X
CCV	1	08/27/25 14:38	X	X	X	X	X	X
CCB	1	08/27/25 14:40	X	X	X	X	X	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 10:30				
ZZZZZZ	08/27/25 10:32				
ICV	08/27/25 10:35	97	96	97	100
CCV	08/27/25 10:37	95	95	97	99
ICB	08/27/25 10:39	97	97	99	100
CCB	08/27/25 10:41	98	98	100	101
ZZZZZZ	08/27/25 10:43				
LLICVT	08/27/25 10:50	95	100	101	102
ICSA	08/27/25 10:52	89	90	91	94
ICSAB	08/27/25 10:54	88	90	92	97
ZZZZZZ	08/27/25 10:56				
ZZZZZZ	08/27/25 10:58				
ZZZZZZ	08/27/25 11:06				
ZZZZZZ	08/27/25 11:08				
ZZZZZZ	08/27/25 11:10				
ZZZZZZ	08/27/25 11:13				
ZZZZZZ	08/27/25 11:15				
ZZZZZZ	08/27/25 11:17				
ZZZZZZ	08/27/25 11:19				
ZZZZZZ	08/27/25 11:21				
ZZZZZZ	08/27/25 11:23				
ZZZZZZ	08/27/25 11:25				
CCV	08/27/25 11:27	93	94	96	98
CCB	08/27/25 11:29	94	95	98	98
ZZZZZZ	08/27/25 11:31				
ZZZZZZ	08/27/25 11:33				
ZZZZZZ	08/27/25 11:35				
ZZZZZZ	08/27/25 11:37				
ZZZZZZ	08/27/25 11:39				
ZZZZZZ	08/27/25 11:41				
ZZZZZZ	08/27/25 11:43				
ZZZZZZ	08/27/25 11:46				
ZZZZZZ	08/27/25 11:48				
ZZZZZZ	08/27/25 11:50				
ZZZZZZ	08/27/25 11:52				
CCV	08/27/25 11:57	92	90	94	97
CCB	08/27/25 11:59	93	92	95	98

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 12:01				
ZZZZZZ	08/27/25 12:03				
ZZZZZZ	08/27/25 12:05				
ZZZZZZ	08/27/25 12:07				
ZZZZZZ	08/27/25 12:09				
ZZZZZZ	08/27/25 12:11				
ZZZZZZ	08/27/25 12:13				
ZZZZZZ	08/27/25 12:15				
CCV	08/27/25 12:17	90	89	91	95
CCB	08/27/25 12:19	91	87	92	95
ZZZZZZ	08/27/25 12:21				
ZZZZZZ	08/27/25 12:24				
ZZZZZZ	08/27/25 12:26				
ZZZZZZ	08/27/25 12:28				
ZZZZZZ	08/27/25 12:30				
ZZZZZZ	08/27/25 12:32				
ZZZZZZ	08/27/25 12:34				
ZZZZZZ	08/27/25 12:36				
ZZZZZZ	08/27/25 12:38				
ZZZZZZ	08/27/25 12:40				
CCV	08/27/25 12:42	92	88	91	95
CCB	08/27/25 12:44	91	88	92	95
ZZZZZZ	08/27/25 12:46				
ZZZZZZ	08/27/25 12:48				
ZZZZZZ	08/27/25 12:50				
ZZZZZZ	08/27/25 12:52				
ZZZZZZ	08/27/25 12:54				
ZZZZZZ	08/27/25 12:56				
ZZZZZZ	08/27/25 12:58				
ZZZZZZ	08/27/25 13:01				
ZZZZZZ	08/27/25 13:03				
ZZZZZZ	08/27/25 13:05				
CCV	08/27/25 13:07	90	87	90	93
CCB	08/27/25 13:09	90	88	91	95
ZZZZZZ	08/27/25 13:11				
ZZZZZZ	08/27/25 13:13				
ZZZZZZ	08/27/25 13:15				

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	08/27/25 13:17				
ZZZZZZ	08/27/25 13:19				
ZZZZZZ	08/27/25 13:21				
ZZZZZZ	08/27/25 13:23				
ZZZZZZ	08/27/25 13:25				
CCV	08/27/25 13:27	91	89	93	95
CCB	08/27/25 13:29	93	91	93	96
KQ2515048-01MB	08/27/25 13:32	92	91	93	93
KQ2515048-02LCS	08/27/25 13:34	93	90	94	95
KQ2515048-03SRM	08/27/25 13:36	91	92	95	98
KQ2515048-04SRM	08/27/25 13:38	94	90	92	95
K2508066-004	08/27/25 13:40	93	91	94	97
K2508066-004DUP	08/27/25 13:42	101	92	93	96
K2508066-004SDL	08/27/25 13:44	93	89	93	95
K2508066-004PS	08/27/25 13:46	100	92	95	98
K2508066-004MS	08/27/25 13:48	91	91	94	96
K2508066-001	08/27/25 13:50	95	91	94	98
CCV	08/27/25 13:52	91	89	92	94
CCB	08/27/25 13:54	91	91	94	97
K2508066-002	08/27/25 13:56	99	91	93	95
K2508066-003	08/27/25 13:58	89	89	93	97
K2508066-005	08/27/25 14:00	91	90	93	95
K2508066-006	08/27/25 14:02	97	90	92	96
K2508066-007	08/27/25 14:05	99	91	93	95
K2508066-008	08/27/25 14:07	89	92	94	97
K2508066-009	08/27/25 14:09	92	90	92	95
K2508066-010	08/27/25 14:11	97	89	94	97
K2508066-011	08/27/25 14:13	93	92	93	98
K2508066-012	08/27/25 14:15	93	91	93	96
CCV	08/27/25 14:17	92	90	91	94
CCB	08/27/25 14:19	93	90	92	94
K2508066-013	08/27/25 14:21	105	91	93	96
K2508066-014	08/27/25 14:23	91	92	94	96
K2508066-015	08/27/25 14:25	93	92	93	95
K2508066-016	08/27/25 14:27	90	93	94	97
K2508066-017	08/27/25 14:29	92	90	93	95
K2508066-018	08/27/25 14:31	93	89	93	96

Client: Alaska Department of Fish and Game
Project: 2025 Greens Creek Mine Biomonitoring/

Service Request: K2508066

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: K-ICP-MS-06

Analytical BatchID: 891163

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
K2508066-019	08/27/25 14:33	92	90	93	95
K2508066-020	08/27/25 14:36	90	91	93	96
CCV	08/27/25 14:38	90	89	91	93
CCB	08/27/25 14:40	91	89	92	94



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K2508066
Test: Frz Dry
Method: Frz Dry

Run #: 890208
Balance ID: K-Balance-53

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Animal Tissue	K2508066-001	85.423	4.134	86.434	1.01	24.5	
Animal Tissue	K2508066-002	83.908	5.839	85.343	1.44	24.6	
Animal Tissue	K2508066-003	84.294	7.009	86.026	1.73	24.7	
Animal Tissue	K2508066-004	85.587	10.940	88.291	2.70	24.7	
Animal Tissue	K2508066-005	85.543	7.693	87.592	2.05	26.6	
Animal Tissue	K2508066-006	84.188	9.085	86.407	2.22	24.4	
Animal Tissue	K2508066-007	85.417	7.753	87.354	1.94	25.0	
Animal Tissue	K2508066-008	85.394	8.411	87.468	2.07	24.7	
Animal Tissue	K2508066-009	85.602	9.727	88.053	2.45	25.2	
Animal Tissue	K2508066-010	86.138	6.932	87.890	1.75	25.3	
Animal Tissue	K2508066-011	85.642	5.924	87.177	1.54	25.9	
Animal Tissue	K2508066-012	83.970	8.395	86.087	2.12	25.2	
Animal Tissue	K2508066-013	84.378	8.105	86.334	1.96	24.1	
Animal Tissue	K2508066-014	85.551	8.181	87.485	1.93	23.6	
Animal Tissue	K2508066-015	85.443	7.366	87.291	1.85	25.1	
Animal Tissue	K2508066-016	84.344	4.127	85.355	1.01	24.5	
Animal Tissue	K2508066-017	84.252	4.207	85.207	0.955	22.7	
Animal Tissue	K2508066-018	84.806	5.594	86.165	1.36	24.3	
Animal Tissue	K2508066-019	84.189	4.145	85.132	0.943	22.8	
Animal Tissue	K2508066-020	83.904	3.963	84.786	0.882	22.3	

FreezeDryer ID	Date In	Time In	Date Out	Time Out	Thermometer ID
FreezeDry	8/20/2025	16:34	8/21/2025	16:19	

Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
-----------------	------------------------	----------------------	-------------------	-------------------	-----------------	-----------------

Comments: CCL 8/19/25, Reviewed 8/26/25 KL



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 462961

Prep Workflow: MetDigTissMS

Status: Prepped

Team: Metals/CLUKKEN

Prep Method: PSEP Metals

Prep Date/Time: 8/25/25 15:56

Number of Copies to make: 1

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ2515048-01	MB		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
2	KQ2515048-02	LCS		6020B/Metals T		Tissue	0.30000g	30.00mL	15% HNO3
3	KQ2515048-03	SRM		6020B/Metals T		Tissue	0.30500g	30.00mL	15% HNO3
4	KQ2515048-04	SRM		6020B/Metals T		Tissue	0.30400g	30.00mL	15% HNO3
5	K2508066-001	2025GCMTC9DV1	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
6	K2508066-002	2025GCMTC9DV2	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
7	K2508066-003	2025GCMTC9DV3	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
8	K2508066-004	2025GCMTC9DV4	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3
9	KQ2515048-05	K2508066-004 DUP	.02	6020B/Metals T		Tissue	0.30500g	30.00mL	15% HNO3
10	KQ2515048-06	K2508066-004 MS	.02	6020B/Metals T		Tissue	0.30400g	30.00mL	15% HNO3
11	K2508066-005	2025GCMTC9DV5	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
12	K2508066-006	2025GCMTC9DV6	.02	6020B/Metals T		Animal Tissue	0.30800g	30.00mL	15% HNO3
13	K2508066-007	2025GCMTC9DV7	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
14	K2508066-008	2025GCMTC9DV8	.02	6020B/Metals T		Animal Tissue	0.30700g	30.00mL	15% HNO3
15	K2508066-009	2025GCMTC9DV9	.02	6020B/Metals T		Animal Tissue	0.30800g	30.00mL	15% HNO3
16	K2508066-010	2025GCMTC9DV10	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
17	K2508066-011	2025GCMTC9CO1	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
18	K2508066-012	2025GCMTC9CO2	.02	6020B/Metals T		Animal Tissue	0.30600g	30.00mL	15% HNO3
19	K2508066-013	2025GCMTC9CO3	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
20	K2508066-014	2025GCMTC9CO4	.02	6020B/Metals T		Animal Tissue	0.30500g	30.00mL	15% HNO3
21	K2508066-015	2025GCMTC9CO5	.02	6020B/Metals T		Animal Tissue	0.30300g	30.00mL	15% HNO3
22	K2508066-016	2025GCMTC9CO6	.02	6020B/Metals T		Animal Tissue	0.30200g	30.00mL	15% HNO3
23	K2508066-017	2025GCMTC9CO7	.02	6020B/Metals T		Animal Tissue	0.30700g	30.00mL	15% HNO3
24	K2508066-018	2025GCMTC9CO8	.02	6020B/Metals T		Animal Tissue	0.30100g	30.00mL	15% HNO3
25	K2508066-019	2025GCMTC9CO9	.02	6020B/Metals T		Animal Tissue	0.30400g	30.00mL	15% HNO3
26	K2508066-020	2025GCMTC9CO10	.02	6020B/Metals T		Animal Tissue	0.30100g	30.00mL	15% HNO3

Spiking Solutions

Name: K-MET DORM-5	Inventory ID 226265	Logbook Ref: DORM-5	Expires On: 08/01/2026
--------------------	---------------------	---------------------	------------------------

KQ2515048-03 0.30g

Name: K-MET TORT-3	Inventory ID 237236	Logbook Ref: K-MET TORT-3	Expires On: 04/01/2026
--------------------	---------------------	---------------------------	------------------------

KQ2515048-04 0.30g

Preparation Information Benchsheet

Prep Run#: 462961
Team: Metals/CLUKKEN

Prep Workflow: MetDigTissMS
Prep Method: PSEP Metals

Status: Prepped
Prep Date/Time: 8/25/25 15:56

Name: K-MET SS4	Inventory ID 242144	Logbook Ref: K-MET SS4	Expires On: 12/31/2025
-----------------	---------------------	------------------------	------------------------

KQ2515048-02 0.05mL KQ2515048-06 0.05mL

Name: K-MET SS1	Inventory ID 242383	Logbook Ref: MET4-98-F	Expires On: 03/24/2026
-----------------	---------------------	------------------------	------------------------

KQ2515048-02 0.30mL KQ2515048-06 0.30mL

Name: K-MET SS3	Inventory ID 242709	Logbook Ref: MET4-100-A	Expires On: 09/30/2025
-----------------	---------------------	-------------------------	------------------------

KQ2515048-02 0.05mL KQ2515048-06 0.05mL

Preparation Materials

K-MET 50ml Centrifuge Tube P7769389 (243033) K-MET HNO3 24K1862001 (240411)

Preparation Steps

Step: Digestion
Started: 8/25/25 15:56
Finished: 8/26/25 11:42
By: CLUKKEN
Comments

Preparation Equipment

K-Balance-53	Digestion	Date Checked	8/25/25	K-Metals-Oven-01	Digestion	Observed Temperature In	105 deg C
K-Metals-Oven-01	Digestion	Observed Temperature Out	105 deg C	K-Tissue Pipette 2	Digestion		

Comments: _____

Reviewed By: *ML* Date: 8/27/25

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1 *** Add after HNO3 and before ALS-89 when making the solution	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	100	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb***	50.0	1000ml	50	
V	100*	1000ml	50		
Zn	100*	1000ml	50		
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	10.0	500ml	20	
	Hg	6.00	500ml	12	
K-MET SS4	HNO3	25.0	500ml	-	
	B	25.0	500ml	50	
	Mo	50.0	500ml	100	
	U	10.0	500ml	20	
K-MET SS5	HNO3	25.0	500ml	-	
	K**	50.0	500ml	1000	
	Na**	50.0	500ml	1000	
	Mg**	50.0	500ml	1000	
	Ca**	50.0	500ml	1000	

K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Preparation Information Benchsheet

Prep Run#: 462961

Prep Workflow: MetDigTissMS

Status: Draft

Team: Metals/CLUKKEN

Prep Method:

Prep Date/Time: 8/25/25 08:36 AM

Number of Copies to make: 1

#	Lab Code	Client ID	B#	✓	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	KQ2515048-01	MB			6020B / Metals T	Tissue						
2	KQ2515048-02	LCS			6020B / Metals T	Tissue						
3	KQ2515048-03	SRM			6020B / Metals T	Tissue	0.305					
4	KQ2515048-04	SRM			6020B / Metals T	Tissue	0.304					
5	K2508066-001	2025GCMTC9DV1	.02		6020B / Metals T	Animal Tissue	0.303					
6	K2508066-002	2025GCMTC9DV2	.02		6020B / Metals T	Animal Tissue	0.304					
7	K2508066-003	2025GCMTC9DV3	.02		6020B / Metals T	Animal Tissue	0.303					
8	K2508066-004	2025GCMTC9DV4	.02		6020B / Metals T	Animal Tissue	0.305					
9	KQ2515048-05	K2508066-004 DUP	.02		6020B / Metals T	Tissue	0.305					
10	KQ2515048-06	K2508066-004 MS	.02		6020B / Metals T	Tissue	0.304					
11	K2508066-005	2025GCMTC9DV5	.02		6020B / Metals T	Animal Tissue	0.306					
12	K2508066-006	2025GCMTC9DV6	.02		6020B / Metals T	Animal Tissue	0.308					
13	K2508066-007	2025GCMTC9DV7	.02		6020B / Metals T	Animal Tissue	0.302					
14	K2508066-008	2025GCMTC9DV8	.02		6020B / Metals T	Animal Tissue	0.307					
15	K2508066-009	2025GCMTC9DV9	.02		6020B / Metals T	Animal Tissue	0.308					
16	K2508066-010	2025GCMTC9DV10	.02		6020B / Metals T	Animal Tissue	0.306					
17	K2508066-011	2025GCMTC9CO1	.02		6020B / Metals T	Animal Tissue	0.302					
18	K2508066-012	2025GCMTC9CO2	.02		6020B / Metals T	Animal Tissue	0.306					
19	K2508066-013	2025GCMTC9CO3	.02		6020B / Metals T	Animal Tissue	0.304					
20	K2508066-014	2025GCMTC9CO4	.02		6020B / Metals T	Animal Tissue	0.305					
21	K2508066-015	2025GCMTC9CO5	.02		6020B / Metals T	Animal Tissue	0.303					
22	K2508066-016	2025GCMTC9CO6	.02		6020B / Metals T	Animal Tissue	0.302					
23	K2508066-017	2025GCMTC9CO7	.02		6020B / Metals T	Animal Tissue	0.307					
24	K2508066-018	2025GCMTC9CO8	.02		6020B / Metals T	Animal Tissue	0.301					
25	K2508066-019	2025GCMTC9CO9	.02		6020B / Metals T	Animal Tissue	0.304					
26	K2508066-020	2025GCMTC9CO10	.02		6020B / Metals T	Animal Tissue	0.301					

Comments: 0.3mL SS1, 0.05mL SS3, SS4

In 8/15/56 8/25/25 105
Out 11:42 8/26/25 105

Surrogate ID: _____

Spike ID: _____

Witnessed By: _____

Analyst: _____

Assisted By: _____

Service Request #: K2508065, K2508066

MS/MSD with #: K2508065-007, -012; K2508066-006, -009

StarLims Run #: 891449

VER (100ppt) Standard ID: AF3-25-K Expiration Date: 9/11/2025

OPR (40ppb) Standard ID: AF3-25-L Expiration Date: 9/11/2025

QCS Standard ID: AF3-24-I Expiration Date: 9/11/2025

Parent OPR/VER ID: AF3-24-E Expiration Date: 4/3/2026

Parent QCS ID: AF3-18-B Expiration Date: 11/4/2025

NH2OH: AF3-19-G Expiration Date: 1/2/2026

SnCl: AF3-18-H Expiration Date: 11/7/2025

Pipettors ID: LL 20-200,44382968,45281021 Calibration Due:10/1/25

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	<u>X</u>	<u> </u>	<u> </u>
2. MS/MSD every 10 samples	<u>X</u>	<u> </u>	<u> </u>
3. Current Calibration factor used	<u>X</u>	<u> </u>	<u> </u>
4. Calibration data included	<u>X</u>	<u> </u>	<u> </u>
5. Method blank below MRL	<u>X</u>	<u> </u>	<u> </u>
6. 3 Bubbler Blanks Ran Avg < 25 pg	<u>X</u>	<u> </u>	<u> </u>
7. Bubbler Blanks < 50 pg	<u>X</u>	<u> </u>	<u> </u>
8. Verification Standards Passed (75-123%)	<u>X</u>	<u> </u>	<u> </u>
9. OPR, QCS in control (70-130%)	<u>X</u>	<u> </u>	<u> </u>
10. MS/MSD recovery 70-130%	<u>X</u>	<u> </u>	<u> </u>
11. Spike RPD within 30%	<u>X</u>	<u> </u>	<u> </u>
12. All samples within the linear range	<u>X</u>	<u> </u>	<u> </u>
13. All corresponding charts included	<u>X</u>	<u> </u>	<u> </u>
14. Dilution factors calculated	<u>X</u>	<u> </u>	<u> </u>
15. Bench sheet signed	<u>X</u>	<u> </u>	<u> </u>
16. Reagent Blank below 20 pg	<u>X</u>	<u> </u>	<u> </u>

Comments

Primary Reviewed by SRS Date 8/28/25

Secondary Reviewed by  Date 08/28/25

Batch Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run Duration:	2.5	Method Blank Type:	Concentration
Heating Duration:	2.5	Integration Mode:	Auto Total Hg
Retention Start Time:	0.4	Integration Type:	Peak Area
Retention Stop Time:	1.3	Result Units:	µg/Kg
Purge Duration:	6.0		
Drying Duration:	6.0		
Calibration File:	This File		

Analyst Comments:

PMT:509
OFFSET:3029
NOISE:36
VOA Vial Lot #051225-3AWA

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	X	CCB	RINSE		1	32,672	2.21		2.21	< 50	accept
2	Y	CCB	RINSE		1	11,526	-0.0972		-0.0972	< 50	accept
3	X	CB	CB-1		1	11,278	1.23		1.23	< 50	accept
4	Y	CB	CB-2		1	11,279	1.23		1.23	< 50	accept
5	X	CB	CB-3		1	13,825	1.51		1.51	< 50	accept
6	Y	CB	CB-4		1	13,290	1.45		1.45	< 50	accept
7	X	STD	12.5 pg		1	128,942	12.7		102	75-125	accept
8	Y	STD	25 pg		1	230,751	23.8		95.1	75-125	accept
9	X	STD	100 pg		1	936,381	101		101	75-125	accept
10	Y	STD	500 pg		1	4,529,904	492		98.4	75-125	accept
11	X	STD	2500 pg		1	25,699,932	2,800		112	75-125	accept
12	Y	STD	10000 pg		1	86,601,765	9,430		94.3	75-125	accept
13	X	OPR	OPR-1		1	1,166,884	126	5.03	101	77-123	accept
14	Y	QCS	QCS-1		1	1,057,777	114	4.55	91.1	77-123	accept
15	X	MBA	MB-1		1	47,486	3.82	0.153	0.153	< 0.5	accept
16	Y	S	K2508306-009		1	11,382,576	1,240	49.5		< HS	accept
17	X	MS	K2508306-009		1	23,126,008	2,520	101	102	71-125	accept
18	Y	MSD	K2508306-009		1	22,859,959	2,490	99.5	100.	71-125	accept
19	X	S	K2508306-001		1	3,476,549	377	15.1		< HS	accept
20	Y	S	K2508306-002		1	1,998,536	216	8.65		< HS	accept
21	X	S	K2508306-003		1	4,891,754	531	21.3		< HS	accept
22	Y	S	K2508306-004		1	140,759	14.0	0.559		< HS	accept
23	X	S	K2508306-005		1	10,310,678	1,120	44.9		< HS	accept
24	Y	S	K2508306-006		1	940,351	101	4.04		< HS	accept
25	X	S	K2508306-007		1	24,256,304	2,640	106		< HS	accept
26	Y	S	K2508306-008		1	441,984	46.8	1.87		< HS	accept
27	X	S	K2508306-010		1	15,202,953	1,650	66.2		< HS	accept
28	Y	MBA	MB-2		1	45,672	3.62	0.145	0.145	< 0.5	accept
29	X	S	K2508306-013		1	686,201	73.4	2.94		< HS	accept
30	Y	MS	K2508306-013		1	11,677,077	1,270	50.8	95.8	71-125	accept
31	X	MSD	K2508306-013		1	11,908,583	1,300	51.8	97.8	71-125	accept
32	Y	S	K2508306-011		1	64,466,824	7,020	281		< HS	accept
33	X	S	K2508306-012		1	38,531,942	4,200	168		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
34	Y	S	K2508306-014		1	286,446	29.8	1.19		< HS	accept
35	X	S	K2508306-015		1	300,829	31.4	1.26		< HS	accept
36	Y	S	K2508306-016		1	352,239	37.0	1.48		< HS	accept
37	X	S	K2508306-017		1	204,477	20.9	0.837		< HS	accept
38	Y	S	K2508425-001		1	8,431,459	917	36.7		< HS	accept
39	X	S	K2508425-004		1	218,090	22.4	0.896		< HS	accept
40	Y	S	K2508431-001		1	1,669,949	181	7.22		< HS	accept
41	X	MBA	MB-3		1	34,272	2.38	0.0952	0.0952	< 0.5	accept
42	Y	OPR	OPR-2/VER		1	1,137,977	123	4.90	98.1	77-123	accept
43	X	OPR	OPR-1		1	2,291,622	248	4.96	99.3	77-123	accept
44	Y	MBA	MB-1		1	30,823	2.00	0.0401	0.0401	< 0.5	accept
45	X	MBA	MB-2		1	27,932	1.69	0.0338	0.0338	< 0.5	accept
46	Y	QCS	TORT-3		1	22,272,243	2,420	242	83.0	77-123	accept
47	X	S	K2508065-007		1	10,448,906	1,140	225		< HS	accept
48	Y	MS	K2508065-007		1	21,341,282	2,320	458	94.6	71-125	accept
49	X	MSD	K2508065-007		1	21,223,207	2,310	456	93.6	71-125	accept
50	Y	S	K2508065-001		1	8,278,330	900.	178		< HS	accept
51	X	S	K2508065-002		1	6,691,194	727	144		< HS	accept
52	Y	S	K2508065-003		1	8,547,388	930.	183		< HS	accept
53	X	S	K2508065-004		1	9,298,199	1,010	200.		< HS	accept
54	Y	S	K2508065-005		1	8,344,665	908	180.		< HS	accept
55	X	S	K2508065-006		1	11,353,044	1,240	245		< HS	accept
56	Y	S	K2508065-008		1	6,714,646	730.	144		< HS	accept
57	X	S	K2508065-009		1	8,466,755	921	183		< HS	accept
58	Y	S	K2508065-010		1	9,331,742	1,020	200.		< HS	accept
59	X	OPR	VER-3		1	1,175,306	127	5.07	101	77-123	accept
60	Y	S	K2508065-012		1	17,830,082	1,940	382		< HS	accept
61	X	MS	K2508065-012		1	29,463,169	3,210	638	103	71-125	accept
62	Y	MSD	K2508065-012		1	28,072,468	3,060	610.	91.3	71-125	accept
63	X	S	K2508065-011		1	19,439,563	2,120	422		< HS	accept
64	Y	S	K2508065-013		1	18,729,786	2,040	403		< HS	accept
65	X	S	K2508065-014		1	12,343,938	1,340	265		< HS	accept
66	Y	S	K2508065-015		1	20,956,790	2,280	449		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
67	X	S	K2508065-016		1	16,800,495	1,830	360.		< HS	accept
68	Y	S	K2508065-017		1	11,909,420	1,300	257		< HS	accept
69	X	S	K2508065-018		1	16,269,035	1,770	352		< HS	accept
70	Y	S	K2508065-019		1	12,826,961	1,400	278		< HS	accept
71	X	S	K2508065-020		1	17,149,867	1,870	372		< HS	accept
72	Y	MBA	MB-3		1	43,279	3.36	0.0672	0.0672	< 0.5	accept
73	X	OPR	OPR-2		1	2,316,616	251	5.02	100.	77-123	accept
74	Y	OPR	VER-4		1	1,163,611	125	5.02	100.	77-123	accept
75	X	OPR	OPR-1		1	2,338,794	253	5.07	101	77-123	accept
76	Y	MBA	MB-1		1	30,463	1.97	0.0393	0.0393	< 0.5	accept
77	X	MBA	MB-2		1	26,170	1.50	0.0300	0.0300	< 0.5	accept
78	Y	QCS	TORT-3		1	22,740,972	2,480	247	84.6	77-123	accept
79	X	S	K2508066-006		1	13,587,942	1,480	295		< HS	accept
80	Y	MS	K2508066-006		1	23,851,556	2,600	518	89.6	71-125	accept
81	X	MSD	K2508066-006		1	24,971,970	2,720	542	99.3	71-125	accept
82	Y	S	K2508066-001		1	11,792,531	1,280	254		< HS	accept
83	X	S	K2508066-002		1	12,815,997	1,390	278		< HS	accept
84	Y	S	K2508066-003		1	14,252,999	1,550	306		< HS	accept
85	X	S	K2508066-004		1	14,715,230	1,600	318		< HS	accept
86	Y	S	K2508066-005		1	14,110,475	1,540	305		< HS	accept
87	X	S	K2508066-007		1	13,155,004	1,430	286		< HS	accept
88	Y	S	K2508066-008		1	12,426,251	1,350	269		< HS	accept
89	X	S	K2508066-010		1	13,853,056	1,510	301		< HS	accept
90	Y	S	K2508066-011		1	17,606,666	1,920	381		< HS	accept
91	X	OPR	VER-5		1	1,177,457	127	5.08	102	77-123	accept
92	Y	S	K2508066-009		1	11,923,483	1,300	258		< HS	accept
93	X	MS	K2508066-009		1	23,731,641	2,580	509	102	71-125	accept
94	Y	MSD	K2508066-009		1	22,042,748	2,400	472	87.0	71-125	accept
95	X	S	K2508066-012		1	14,080,404	1,530	304		< HS	accept
96	Y	S	K2508066-013		1	13,981,177	1,520	301		< HS	accept
97	X	S	K2508066-014		1	13,130,715	1,430	283		< HS	accept
98	Y	S	K2508066-015		1	10,126,929	1,100	218		< HS	accept
99	X	S	K2508066-016		1	9,124,076	992	198		< HS	accept

Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
100	Y	S	K2508066-017		1	12,577,809	1,370	273		< HS	accept
101	X	S	K2508066-018		1	10,893,861	1,190	236		< HS	accept
102	Y	S	K2508066-019		1	13,611,183	1,480	295		< HS	accept
103	X	S	K2508066-020		1	9,203,691	1,000	200.		< HS	accept
104	Y	MBA	MB-3		1	38,885	2.88	0.0577	0.0577	< 0.5	accept
105	X	OPR	OPR-2		1	2,323,688	252	5.03	101	77-123	accept
106	Y	OPR	VER-6		1	1,149,795	124	4.96	99.1	77-123	accept

Analyst Comments:

PMT:509
OFFSET:3029
NOISE:36
VOA Vial Lot #051225-3AWA

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Bias and Precision										
Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K2508306-009	101	µg/Kg	50.0	49.5	102	71-125			accept
	K2508306-013	50.8	µg/Kg	50.0	2.94	95.8	71-125			accept
	K2508065-007	458	µg/Kg	246	225	94.6	71-125			accept
	K2508065-012	638	µg/Kg	249	382	103	71-125			accept
	K2508066-006	518	µg/Kg	249	295	89.6	71-125			accept
	K2508066-009	509	µg/Kg	246	258	102	71-125			accept
MSD	K2508306-009	99.5	µg/Kg	50.0	49.5	100.	71-125	1.16	< 24	accept
	K2508306-013	51.8	µg/Kg	50.0	2.94	97.8	71-125	1.97	< 24	accept
	K2508065-007	456	µg/Kg	247	225	93.6	71-125	0.309	< 24	accept
	K2508065-012	610.	µg/Kg	249	382	91.3	71-125	4.59	< 24	accept
	K2508066-006	542	µg/Kg	249	295	99.3	71-125	4.59	< 24	accept
	K2508066-009	472	µg/Kg	246	258	87.0	71-125			accept
OPR	OPR-1	5.03	µg/Kg	5.0		101	77-123			accept
	OPR-2/VER	4.90	µg/Kg	5.0		98.1	77-123			accept
	OPR-1	4.96	µg/Kg	5.0		99.3	77-123			accept
	VER-3	5.07	µg/Kg	5.0		101	77-123			accept
	OPR-2	5.02	µg/Kg	5.0		100.	77-123			accept
	VER-4	5.02	µg/Kg	5.0		100.	77-123			accept
	OPR-1	5.07	µg/Kg	5.0		101	77-123			accept
	VER-5	5.08	µg/Kg	5.0		102	77-123			accept
	OPR-2	5.03	µg/Kg	5.0		101	77-123			accept
	VER-6	4.96	µg/Kg	5.0		99.1	77-123			accept

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Bias and Precision										
Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
QCS	QCS-1	4.55	µg/Kg	5.0		91.1	77-123			accept
	TORT-3	242	µg/Kg	292		83.0	77-123			accept
	TORT-3	247	µg/Kg	292		84.6	77-123			accept

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Calibration									
QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	12.5 pg	12.7	pg	12.5	102	75-125			accept
	25 pg	23.8	pg	25	95.1	75-125			accept
	100 pg	101	pg	100	101	75-125			accept
	500 pg	492	pg	500	98.4	75-125			accept
	2500 pg	2,800	pg	2500	112	75-125			accept
	10000 pg	9,430	pg	10000	94.3	75-125			accept
Calibration Factor		0.000109	pg/PA				6.02	< 15	accept
Calibration Date		8/28/25							

1631 Extended Calibration Point Verification

Instruemt: K-AFS-04
 Date: 08/28/25
 Run Number: 891449

	Raw Peak Area	Blank Corrected Peak Area			
CB-1	11,278				
CB-2	11,279				
CB-3	13,825				
CB-4	13,290				
STD 12.5	128,942	116,524	0.0001073		
STD 25	230,751	218,333	0.0001145		
STD 100	936,381	923,963	0.0001082		
STD 500	4,529,904	4,517,486	0.0001107		
STD 2500	25,699,932	25,687,514	0.0000973	0.0001076	0.5 - 100 ng/L Ave. Cal. Factor
STD 10000	86,601,765	86,589,347	0.0001155	-7.3	% Difference (Limit ± 15%)

Result: PASS

Cal. Factor 0.0001089

QA Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Blank Summary							
QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CB-1	1.23	pg	< 50			accept
	CB-2	1.23	pg	< 50			accept
	CB-3	1.51	pg	< 50			accept
	CB-4	1.45	pg	< 50			accept
Average		1.35	pg	< 25	0.145	< 10	accept
MBA	MB-1	0.153	µg/Kg	< 0.5			accept
	MB-2	0.145	µg/Kg	< 0.5			accept
	MB-3	0.0952	µg/Kg	< 0.5			accept
	MB-1	0.0401	µg/Kg	< 0.5			accept
	MB-2	0.0338	µg/Kg	< 0.5			accept
	MB-3	0.0672	µg/Kg	< 0.5			accept
	MB-1	0.0393	µg/Kg	< 0.5			accept
	MB-2	0.0300	µg/Kg	< 0.5			accept
	MB-3	0.0577	µg/Kg	< 0.5			accept
	Average		0.0735	µg/Kg		0.0474	

QA Comments:

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
50	K2508065-001	178	accept
51	K2508065-002	144	accept
52	K2508065-003	183	accept
53	K2508065-004	200.	accept
54	K2508065-005	180.	accept
55	K2508065-006	245	accept
47	K2508065-007	225	accept
56	K2508065-008	144	accept
57	K2508065-009	183	accept
58	K2508065-010	200.	accept
63	K2508065-011	422	accept
60	K2508065-012	382	accept
64	K2508065-013	403	accept
65	K2508065-014	265	accept
66	K2508065-015	449	accept
67	K2508065-016	360.	accept
68	K2508065-017	257	accept
69	K2508065-018	352	accept
70	K2508065-019	278	accept
71	K2508065-020	372	accept
82	K2508066-001	254	accept
83	K2508066-002	278	accept
84	K2508066-003	306	accept
85	K2508066-004	318	accept
86	K2508066-005	305	accept
79	K2508066-006	295	accept
87	K2508066-007	286	accept
88	K2508066-008	269	accept
92	K2508066-009	258	accept

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
89	K2508066-010	301	accept
90	K2508066-011	381	accept
95	K2508066-012	304	accept
96	K2508066-013	301	accept
97	K2508066-014	283	accept
98	K2508066-015	218	accept
99	K2508066-016	198	accept
100	K2508066-017	273	accept
101	K2508066-018	236	accept
102	K2508066-019	295	accept
103	K2508066-020	200.	accept
19	K2508306-001	15.1	accept
20	K2508306-002	8.65	accept
21	K2508306-003	21.3	accept
22	K2508306-004	0.559	accept
23	K2508306-005	44.9	accept
24	K2508306-006	4.04	accept
25	K2508306-007	106	accept
26	K2508306-008	1.87	accept
16	K2508306-009	49.5	accept
27	K2508306-010	66.2	accept
32	K2508306-011	281	accept
33	K2508306-012	168	accept
29	K2508306-013	2.94	accept
34	K2508306-014	1.19	accept
35	K2508306-015	1.26	accept
36	K2508306-016	1.48	accept
37	K2508306-017	0.837	accept
38	K2508425-001	36.7	accept

Sample Results Summary Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Name/ID	Final Result (µg/Kg)	Notes
39	K2508425-004	0.896	accept
40	K2508431-001	7.22	accept

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	X	CCB	RINSE						
2	Y	CCB	RINSE						
3	X	CB	CB-1						
4	Y	CB	CB-2						
5	X	CB	CB-3						
6	Y	CB	CB-4						
7	X	STD	12.5 pg					12.5	0.125mL AF3-25-K
8	Y	STD	25 pg					25	0.25mL AF3-25-K
9	X	STD	100 pg					100	1.00mL AF3-25-K
10	Y	STD	500 pg					500	0.05mL AF3-25-J
11	X	STD	2500 pg					2500	0.25mL AF3-25-J
12	Y	STD	10000 pg					10000	1.00mL AF3-25-J
13	X	OPR	OPR-1		25	25	25	5.0	
14	Y	QCS	QCS-1		125	125	25	5.0	
15	X	MBA	MB-1		125	125	25		
16	Y	S	K2508306-009		125	125	25		
17	X	MS	K2508306-009		125	125	25	50.0	
18	Y	MSD	K2508306-009		125	125	25	50.0	
19	X	S	K2508306-001		125	125	25		
20	Y	S	K2508306-002		125	125	25		
21	X	S	K2508306-003		125	125	25		
22	Y	S	K2508306-004		125	125	25		
23	X	S	K2508306-005		125	125	25		
24	Y	S	K2508306-006		125	125	25		
25	X	S	K2508306-007		125	125	25		
26	Y	S	K2508306-008		125	125	25		
27	X	S	K2508306-010		125	125	25		
28	Y	MBA	MB-2		125	125	25		
29	X	S	K2508306-013		125	125	25		
30	Y	MS	K2508306-013		125	125	25	50.0	
31	X	MSD	K2508306-013		125	125	25	50.0	
32	Y	S	K2508306-011		125	125	25		
33	X	S	K2508306-012		125	125	25		

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
34	Y	S	K2508306-014		125	125	25		
35	X	S	K2508306-015		125	125	25		
36	Y	S	K2508306-016		125	125	25		
37	X	S	K2508306-017		125	125	25		
38	Y	S	K2508425-001		125	125	25		
39	X	S	K2508425-004		125	125	25		
40	Y	S	K2508431-001		125	125	25		
41	X	MBA	MB-3		125	125	25		
42	Y	OPR	OPR-2/VER		25	25	25	5.0	
43	X	OPR	OPR-1		400	40	5.0	5.0	
44	Y	MBA	MB-1		400	40	5.0		
45	X	MBA	MB-2		400	40	5.0		
46	Y	QCS	TORT-3		400	40	1.0	292	
47	X	S	K2508065-007		404	40	0.5		10X
48	Y	MS	K2508065-007		406	40	0.5	246	10X
49	X	MSD	K2508065-007		405	40	0.5	247	10X
50	Y	S	K2508065-001		405	40	0.5		10X
51	X	S	K2508065-002		405	40	0.5		10X
52	Y	S	K2508065-003		406	40	0.5		10X
53	X	S	K2508065-004		404	40	0.5		10X
54	Y	S	K2508065-005		404	40	0.5		10X
55	X	S	K2508065-006		404	40	0.5		10X
56	Y	S	K2508065-008		406	40	0.5		10X
57	X	S	K2508065-009		402	40	0.5		10X
58	Y	S	K2508065-010		406	40	0.5		10X
59	X	OPR	VER-3		25	25	25	5.0	
60	Y	S	K2508065-012		406	40	0.5		10X
61	X	MS	K2508065-012		402	40	0.5	249	10X
62	Y	MSD	K2508065-012		401	40	0.5	249	10X
63	X	S	K2508065-011		401	40	0.5		10X
64	Y	S	K2508065-013		405	40	0.5		10X
65	X	S	K2508065-014		406	40	0.5		10X
66	Y	S	K2508065-015		406	40	0.5		10X

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):

Instrument ID: K-AFS-04

Date Analyzed: 8/28/25

Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
67	X	S	K2508065-016		406	40	0.5		10X
68	Y	S	K2508065-017		404	40	0.5		10X
69	X	S	K2508065-018		402	40	0.5		10X
70	Y	S	K2508065-019		401	40	0.5		10X
71	X	S	K2508065-020		401	40	0.5		10X
72	Y	MBA	MB-3		400	40	5.0		
73	X	OPR	OPR-2		400	40	5.0	5.0	
74	Y	OPR	VER-4		25	25	25	5.0	
75	X	OPR	OPR-1		400	40	5.0	5.0	
76	Y	MBA	MB-1		400	40	5.0		
77	X	MBA	MB-2		400	40	5.0		
78	Y	QCS	TORT-3		401	40	1.0	292	
79	X	S	K2508066-006		401	40	0.5		10X
80	Y	MS	K2508066-006		401	40	0.5	249	10X
81	X	MSD	K2508066-006		401	40	0.5	249	10X
82	Y	S	K2508066-001		404	40	0.5		10X
83	X	S	K2508066-002		401	40	0.5		10X
84	Y	S	K2508066-003		405	40	0.5		10X
85	X	S	K2508066-004		403	40	0.5		10X
86	Y	S	K2508066-005		403	40	0.5		10X
87	X	S	K2508066-007		401	40	0.5		10X
88	Y	S	K2508066-008		402	40	0.5		10X
89	X	S	K2508066-010		401	40	0.5		10X
90	Y	S	K2508066-011		402	40	0.5		10X
91	X	OPR	VER-5		25	25	25	5.0	
92	Y	S	K2508066-009		403	40	0.5		10X
93	X	MS	K2508066-009		406	40	0.5	246	10X
94	Y	MSD	K2508066-009		407	40	0.5	246	10X
95	X	S	K2508066-012		403	40	0.5		10X
96	Y	S	K2508066-013		404	40	0.5		10X
97	X	S	K2508066-014		404	40	0.5		10X
98	Y	S	K2508066-015		405	40	0.5		10X
99	X	S	K2508066-016		401	40	0.5		10X

Run Information Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
100	Y	S	K2508066-017		401	40	0.5		10X
101	X	S	K2508066-018		401	40	0.5		10X
102	Y	S	K2508066-019		401	40	0.5		10X
103	X	S	K2508066-020		401	40	0.5		10X
104	Y	MBA	MB-3		400	40	5.0		
105	X	OPR	OPR-2		400	40	5.0	5.0	
106	Y	OPR	VER-6		25	25	25	5.0	

StarLims Number: 462972

Method : **1631EApp.** Analysis for : **CVAFS**

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.411	40	0.02N BrCl
K2508065-001		x		0.405	40	0.02N BrCl
K2508065-002		x		0.405	40	0.02N BrCl
K2508065-003		x		0.406	40	0.02N BrCl
K2508065-004		x		0.404	40	0.02N BrCl
K2508065-005		x		0.404	40	0.02N BrCl
K2508065-006		x		0.404	40	0.02N BrCl
K2508065-007		x		0.404	40	0.02N BrCl
K2508065-007S		x		0.406	40	0.02N BrCl
K2508065-007SD		x		0.405	40	0.02N BrCl
K2508065-008		x		0.406	40	0.02N BrCl
K2508065-009		x		0.402	40	0.02N BrCl
K2508065-010		x		0.406	40	0.02N BrCl
K2508065-011		x		0.401	40	0.02N BrCl
K2508065-012		x		0.406	40	0.02N BrCl
K2508065-012S		x		0.402	40	0.02N BrCl
K2508065-012SD		x		0.401	40	0.02N BrCl
K2508065-013		x		0.405	40	0.02N BrCl
K2508065-014		x		0.406	40	0.02N BrCl
K2508065-015		x		0.406	40	0.02N BrCl
K2508065-016		x		0.406	40	0.02N BrCl
K2508065-017		x		0.404	40	0.02N BrCl
K2508065-018		x		0.403	40	0.02N BrCl
K2508065-019		x		0.401	40	0.02N BrCl
K2508065-020		x		0.401	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

AF3-25-L (40ppb)

OPR: 0.05mL

BrCl = AF3-21-F

Digestion Acid Mixture: AF3-24-D

1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID:

37 ss 8/25/25

Comments: TORT-3 Solids: 97.4%

free dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 18
 Time Digestion Started: 7:01 Dilution Completed: 12:29

Analyst <u>AL</u>	Date <u>8/26/25</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508065-001	0.4050	10	9.9	1.98
K2508065-002	0.4050	10	9.9	1.98
K2508065-003	0.4060	10	9.9	1.97
K2508065-004	0.4040	10	9.9	1.98
K2508065-005	0.4040	10	9.9	1.98
K2508065-006	0.4040	10	9.9	1.98
K2508065-007	0.4040	10	9.9	1.98
K2508065-007S	0.4060	10	9.9	1.97
K2508065-007SD	0.4050	10	9.9	1.98
K2508065-008	0.4060	10	9.9	1.97
K2508065-009	0.4020	10	10.0	1.99
K2508065-010	0.4060	10	9.9	1.97
K2508065-011	0.4010	10	10.0	2.00
K2508065-012	0.4060	10	9.9	1.97
K2508065-012S	0.4020	10	10.0	1.99
K2508065-012D	0.4010	10	10.0	2.00
K2508065-013	0.4050	10	9.9	1.98
K2508065-014	0.4060	10	9.9	1.97
K2508065-015	0.4060	10	9.9	1.97
K2508065-016	0.4060	10	9.9	1.97
K2508065-017	0.4040	10	9.9	1.98
K2508065-018	0.4030	10	9.9	1.99
K2508065-019	0.4010	10	10.0	2.00
K2508065-020	0.4010	10	10.0	2.00
Method Blank	0.4000	1	1.0	0.20

StarLims Number:	462978
Method : 1631EApp.	Analysis for : CVAFS

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	25ml	25ml	0.5% BrCl
VER-2	Water		x	25ml	25ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
TORT-3		x		0.412	40	0.02N BrCl
K2508066-001		T		0.404	40	0.02N BrCl
K2508066-002		T		0.401	40	0.02N BrCl
K2508066-003		T		0.405	40	0.02N BrCl
K2508066-004		T		0.403	40	0.02N BrCl
K2508066-005		T		0.403	40	0.02N BrCl
K2508066-006		T		0.401	40	0.02N BrCl
K2508066-006S		T		0.401	40	0.02N BrCl
K2508066-006SD		T		0.401	40	0.02N BrCl
K2508066-007		T		0.401	40	0.02N BrCl
K2508066-008		T		0.402	40	0.02N BrCl
K2508066-009		T		0.403	40	0.02N BrCl
K2508066-009S		T		0.406	40	0.02N BrCl
K2508066-009SD		T		0.407	40	0.02N BrCl
K2508066-010		T		0.401	40	0.02N BrCl
K2508066-011		T		0.402	40	0.02N BrCl
K2508066-012		T		0.403	40	0.02N BrCl
K2508066-013		T		0.404	40	0.02N BrCl
K2508066-014		T		0.404	40	0.02N BrCl
K2508066-015		T		0.405	40	0.02N BrCl
K2508066-016		T		0.401	40	0.02N BrCl
K2508066-017		T		0.401	40	0.02N BrCl
K2508066-018		T		0.401	40	0.02N BrCl
K2508066-019		T		0.401	40	0.02N BrCl
K2508066-020		T		0.401	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	25ml	25ml	0.5% BrCl

VOA Vial Lot # 051225-3AWA

BrCl = AF3-21-F

AF3-25-L (40ppb)

OPR: 0.05mL

Digestion Acid Mixture: AF3-24-D

- 1st MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-I)
- 2nd MS / DMS: 0.1ml 1ppm QCS Parent (AF3-18-B)

Balance ID:

37

Comments: TORT-3 Solids: 97.4%

frz dry to dry

HotBlock: K-BlockDigester: 19 IR Thermometer ID: IR03 Temp: 105°C Temp Check Location: 18

Time Digestion Started: 10:01 Dilution Completed: 14:23

Analyst <u>AA</u>	Date <u>8/26/75</u>
-------------------	---------------------

1631Dig.XLS
6/17/2004

Tissue Dry Wt. MRL and MDL Calculations:

Standard MRL = 1.0
 Standard MDL = 0.2
 Standard Dilution = 1
 Standard Sample Mass = 0.40

Weight & Dilution Adjuste

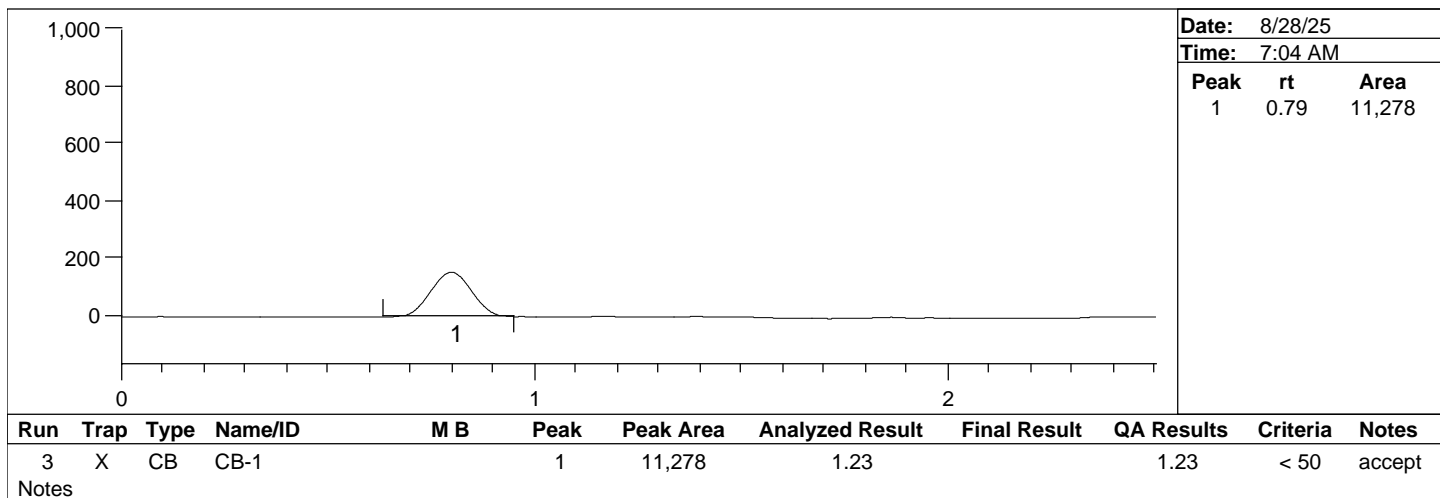
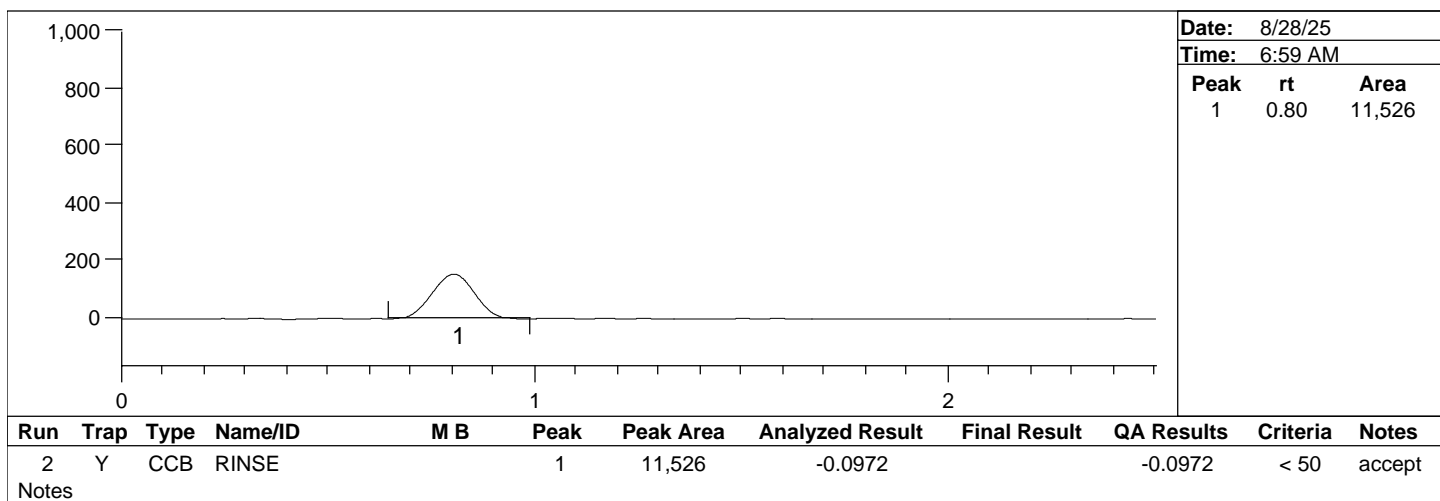
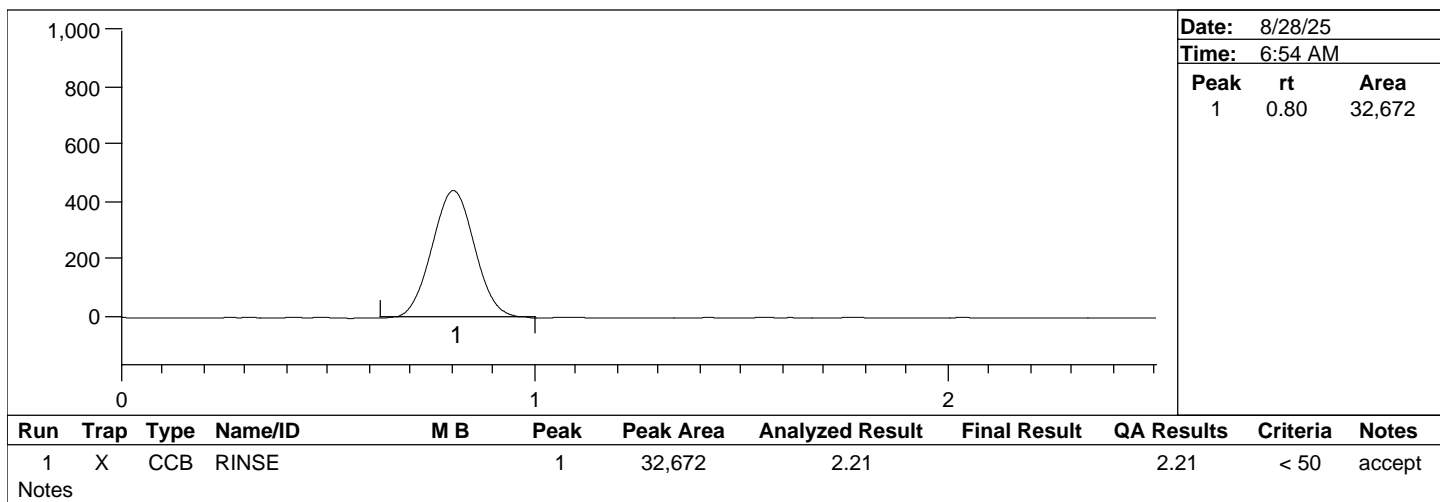
Sample I.D.	Dry Weight	Dilution	MRL	MDL
K2508066-001	0.4040	10	9.9	1.98
K2508066-002	0.4010	10	10.0	2.00
K2508066-003	0.4050	10	9.9	1.98
K2508066-004	0.4030	10	9.9	1.99
K2508066-005	0.4030	10	9.9	1.99
K2508066-006	0.4010	10	10.0	2.00
K2508066-006S	0.4010	10	10.0	2.00
K2508066-006SD	0.4010	10	10.0	2.00
K2508066-007	0.4010	10	10.0	2.00
K2508066-008	0.4020	10	10.0	1.99
K2508066-009	0.4030	10	9.9	1.99
K2508066-009S	0.4060	10	9.9	1.97
K2508066-009SD	0.4070	10	9.8	1.97
K2508066-010	0.4010	10	10.0	2.00
K2508066-011	0.4020	10	10.0	1.99
K2508066-012	0.4030	10	9.9	1.99
K2508066-013	0.4040	10	9.9	1.98
K2508066-014	0.4040	10	9.9	1.98
K2508066-015	0.4050	10	9.9	1.98
K2508066-016	0.4010	10	10.0	2.00
K2508066-017	0.4010	10	10.0	2.00
K2508066-018	0.4010	10	10.0	2.00
K2508066-019	0.4010	10	10.0	2.00
K2508066-020	0.4010	10	10.0	2.00
Method Blank	0.4000	1	1.0	0.20

Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

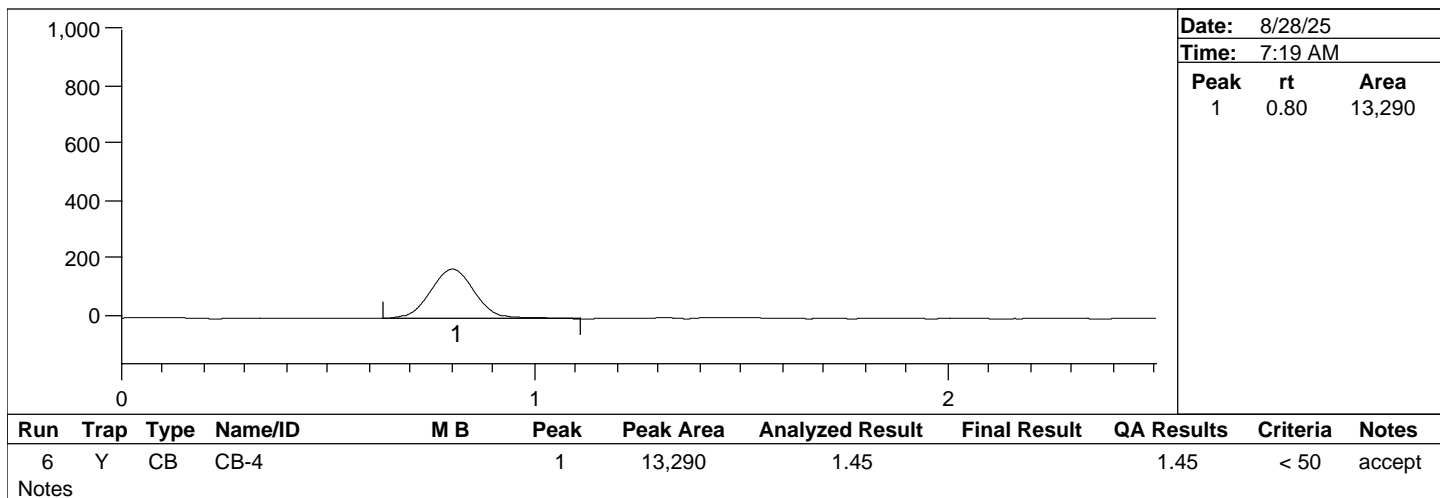
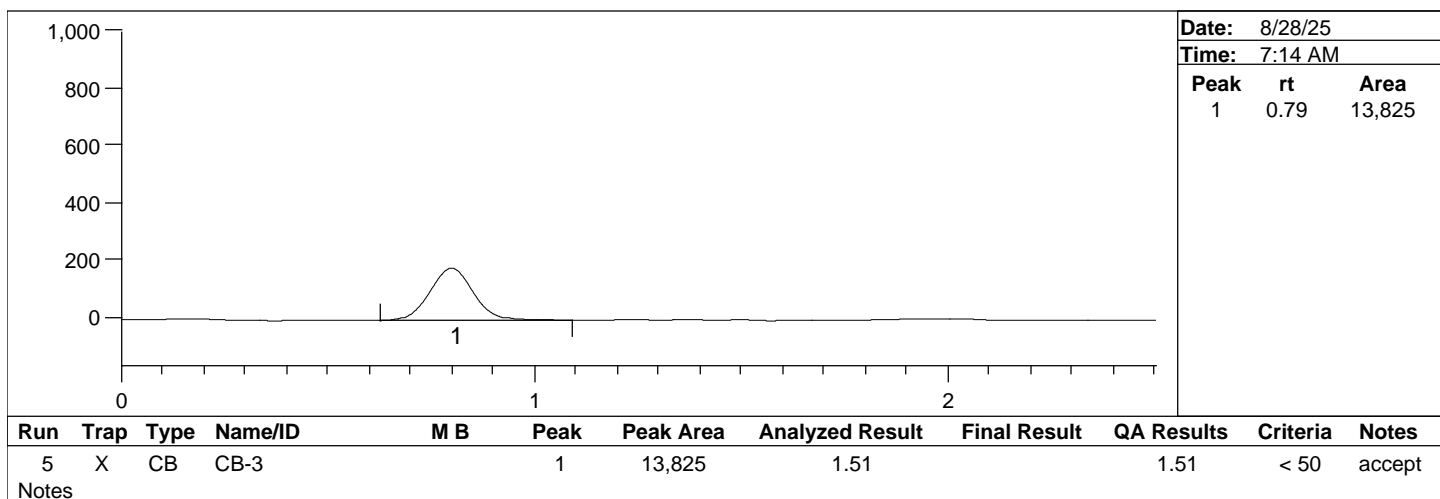
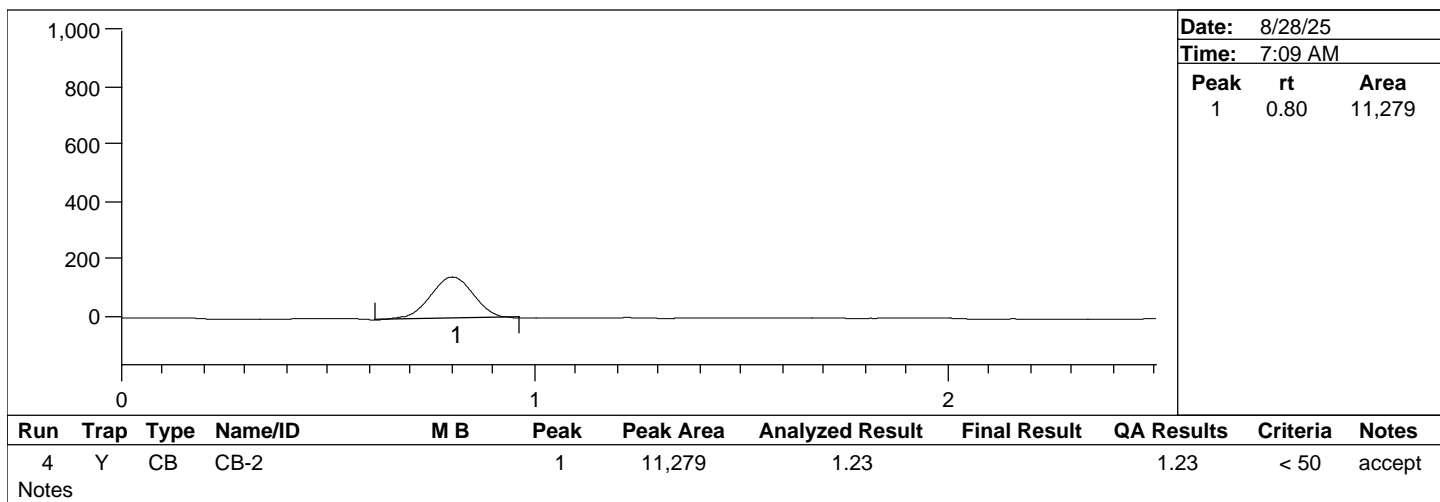


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



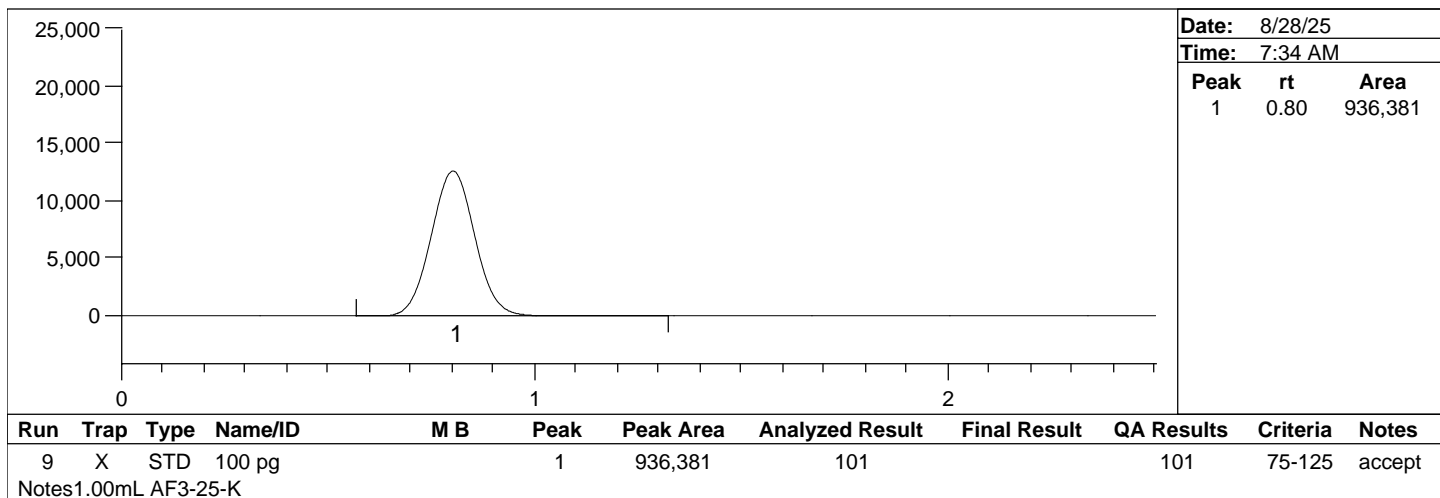
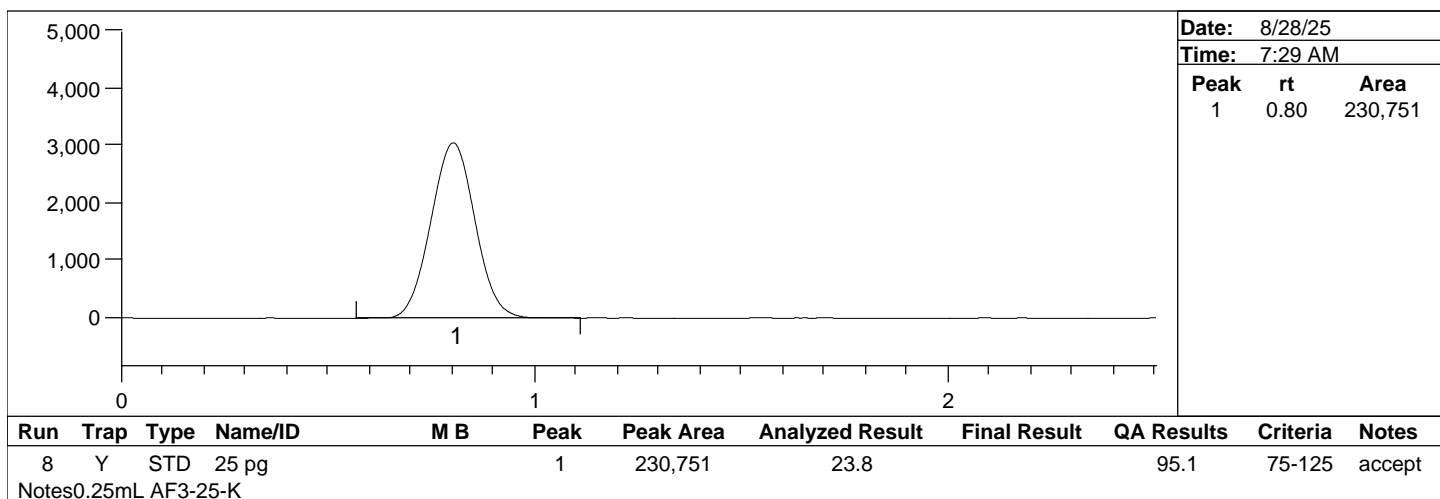
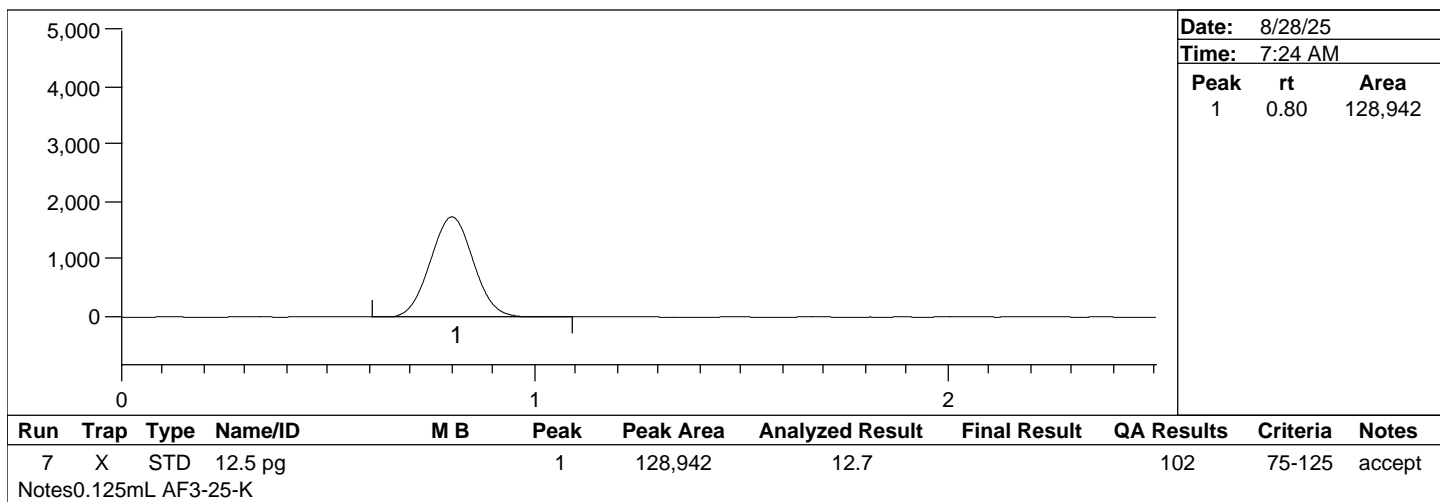
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



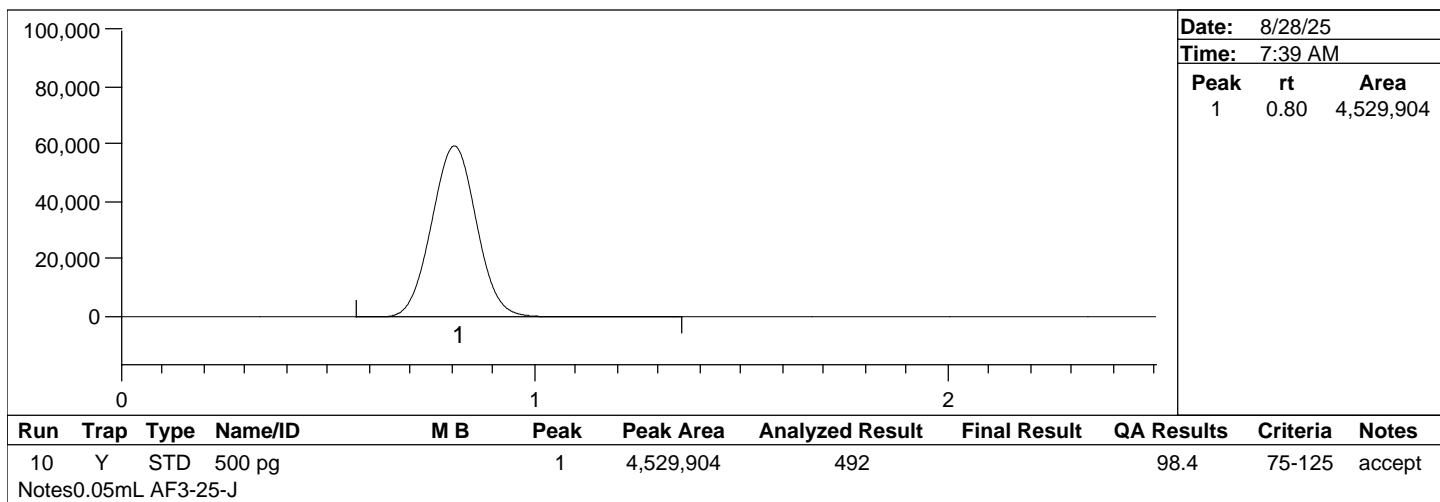
Peak Report

Batch Number:

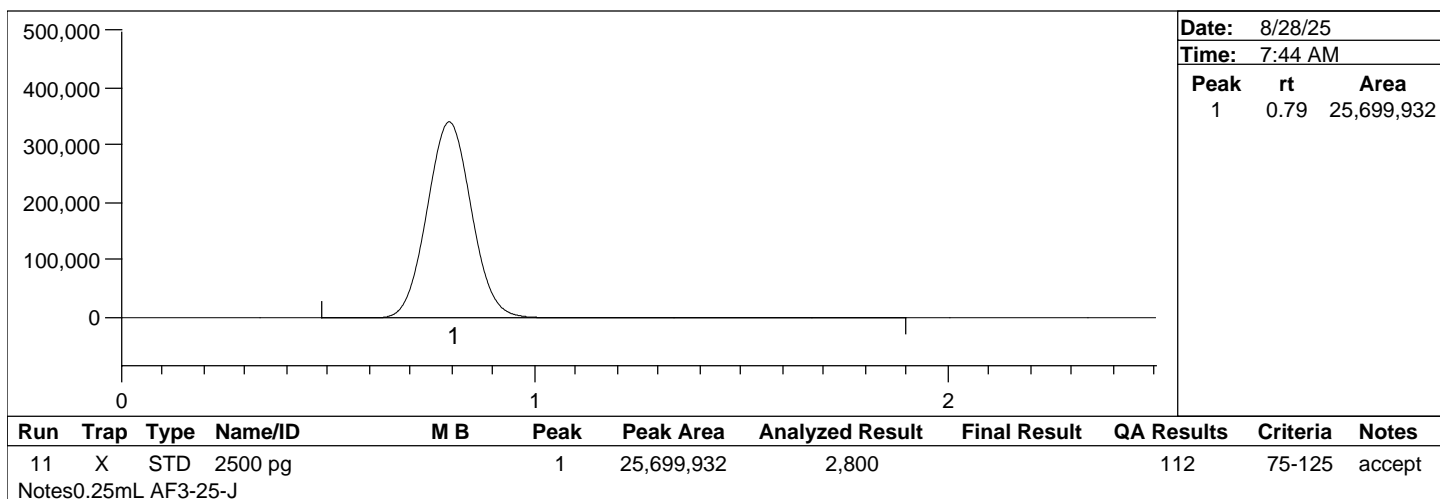
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

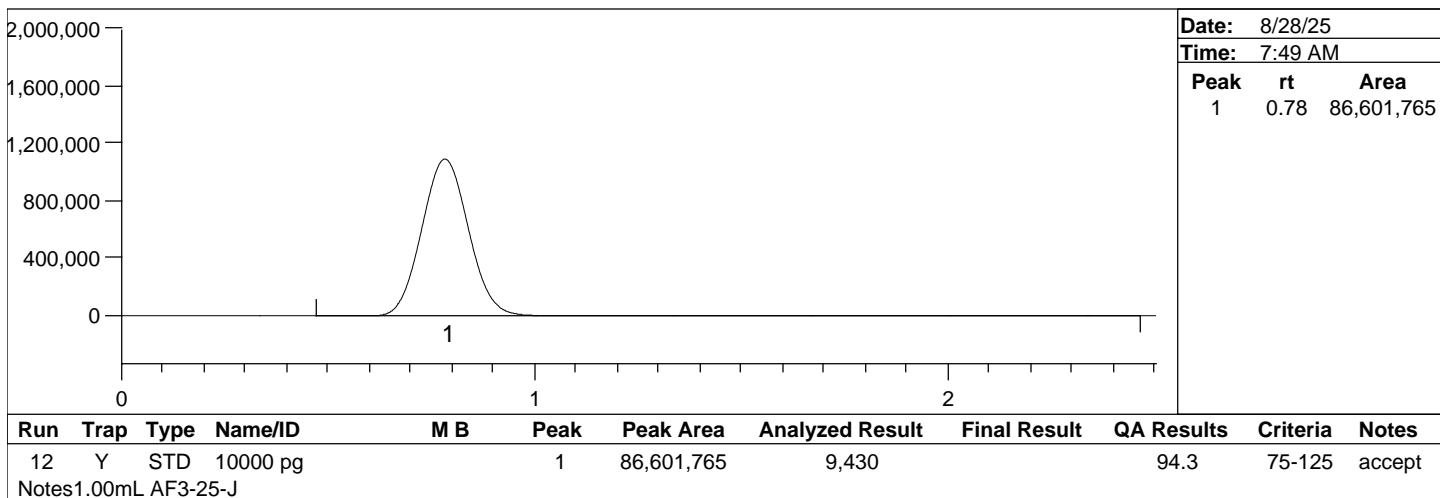
Date Analyzed: 8/28/25
Analyst Name: ssladey



Date:	8/28/25	
Time:	7:39 AM	
Peak	rt	Area
1	0.80	4,529,904



Date:	8/28/25	
Time:	7:44 AM	
Peak	rt	Area
1	0.79	25,699,932



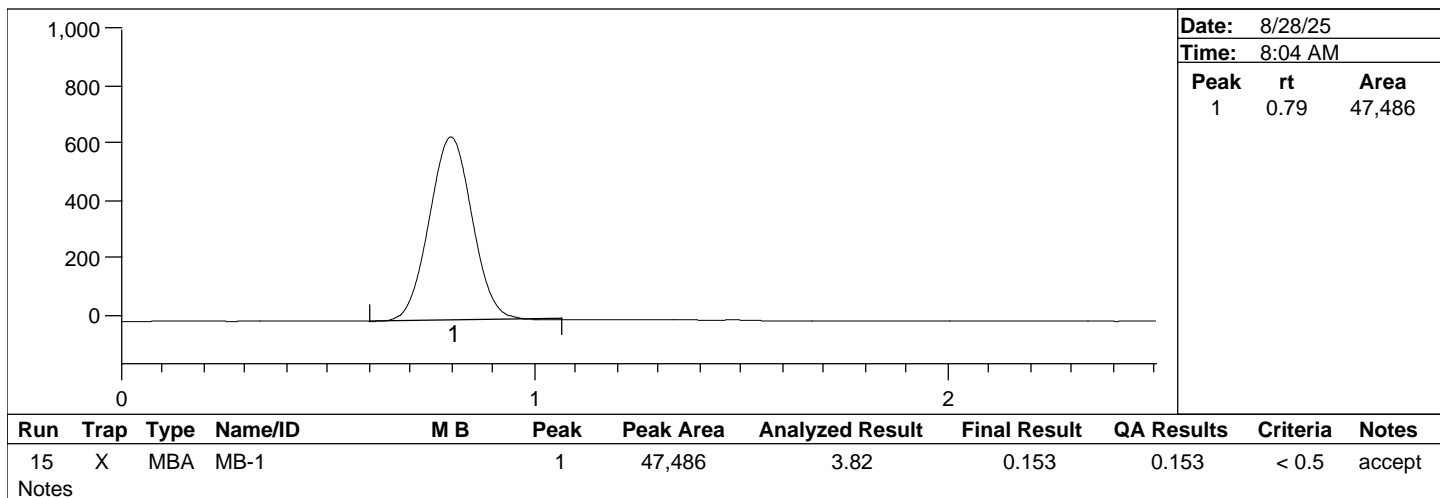
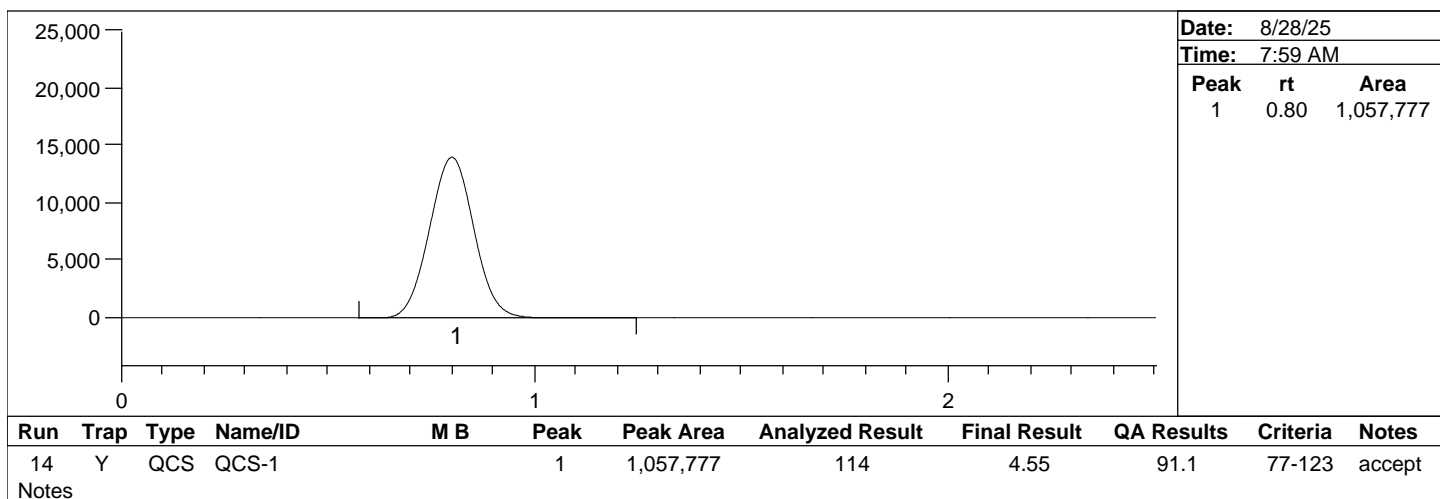
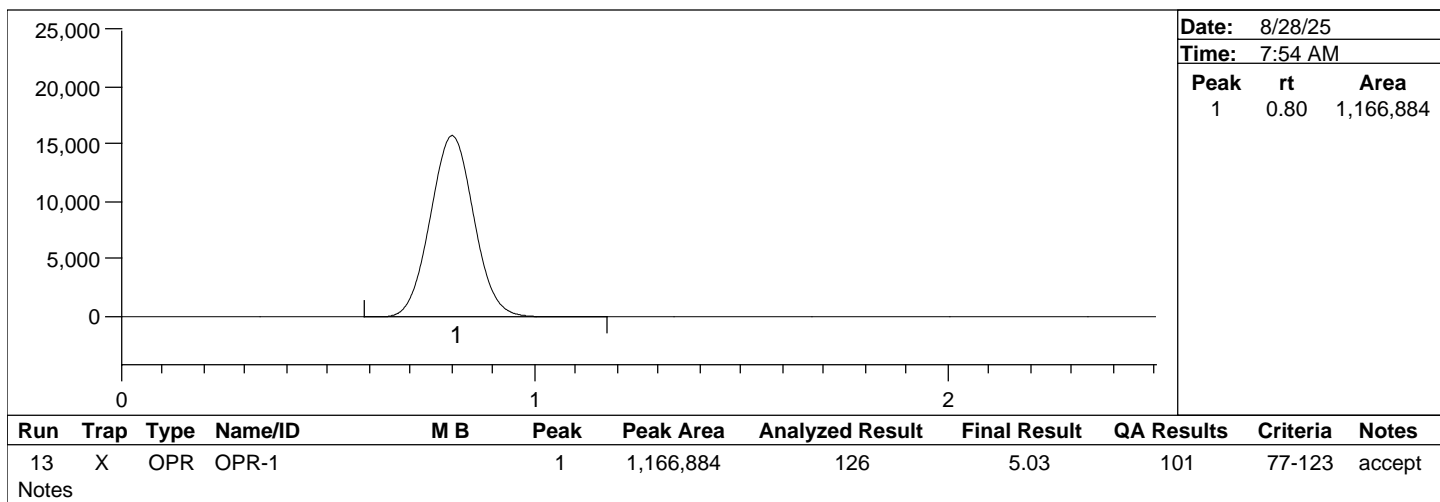
Date:	8/28/25	
Time:	7:49 AM	
Peak	rt	Area
1	0.78	86,601,765

Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



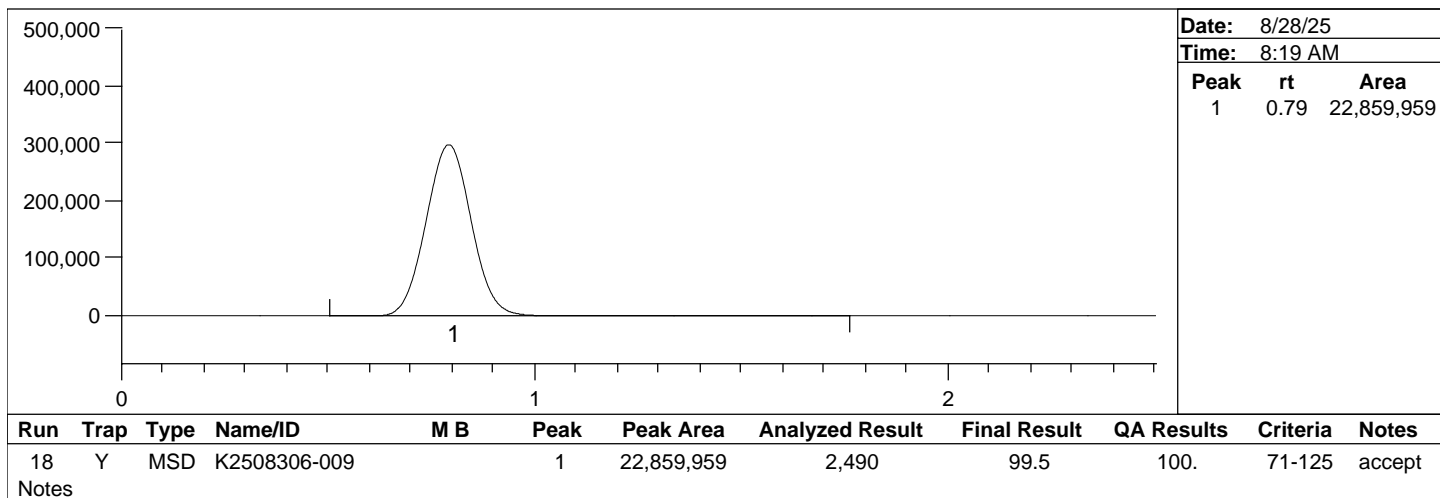
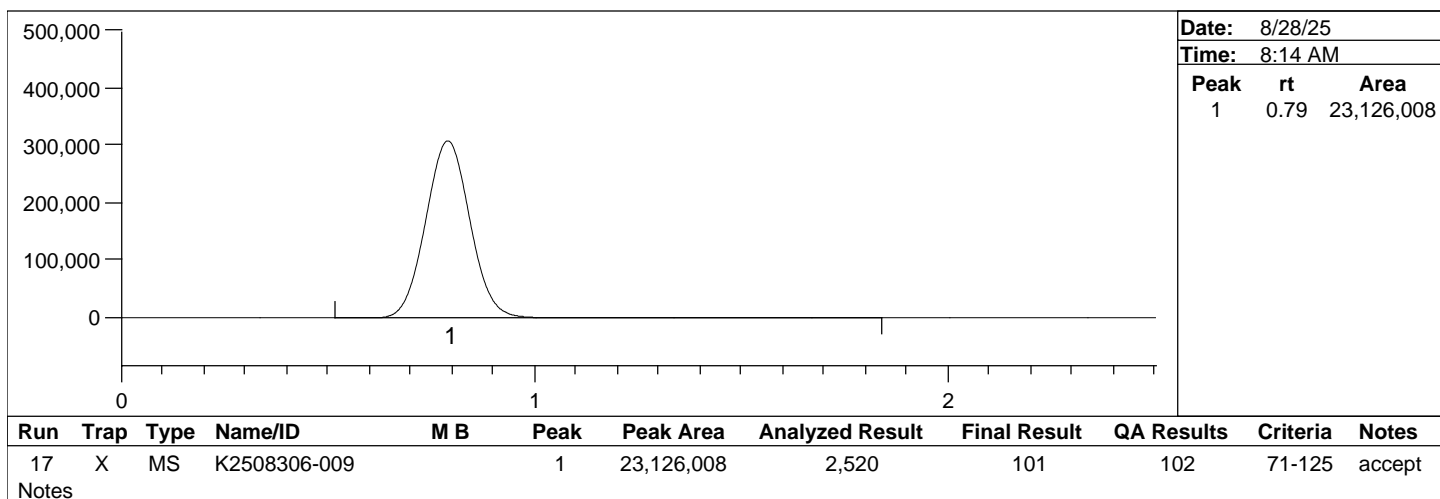
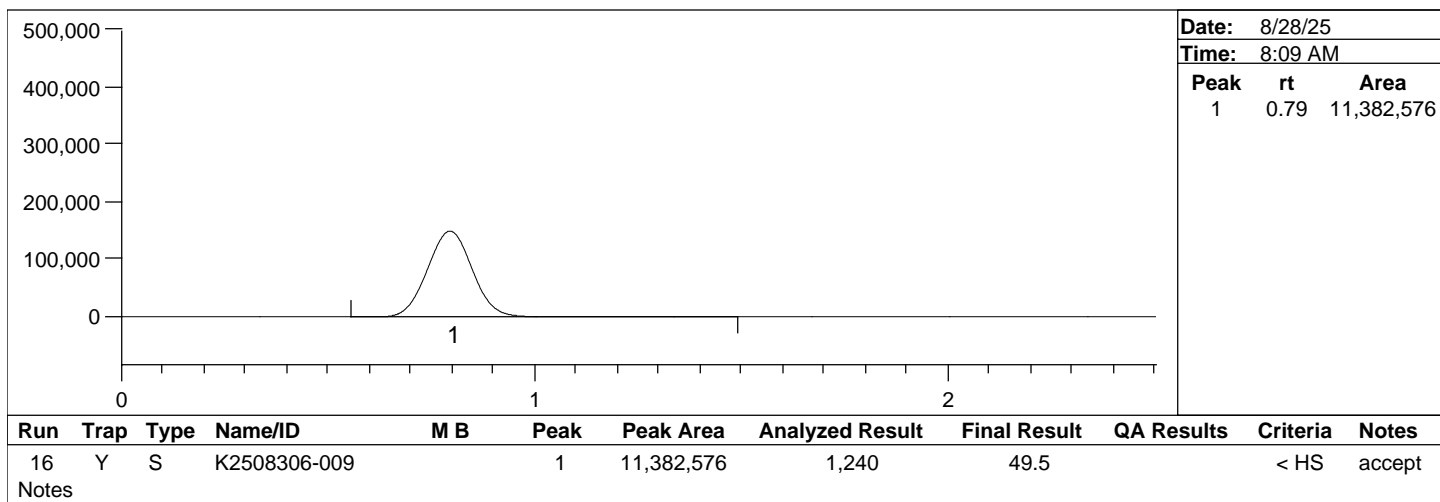
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



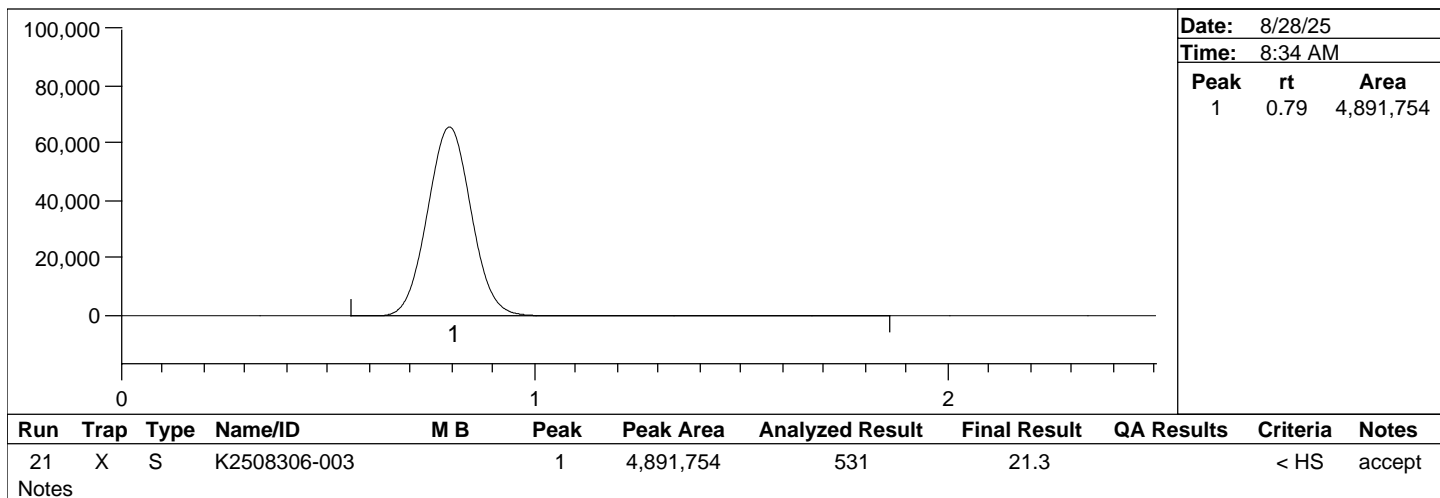
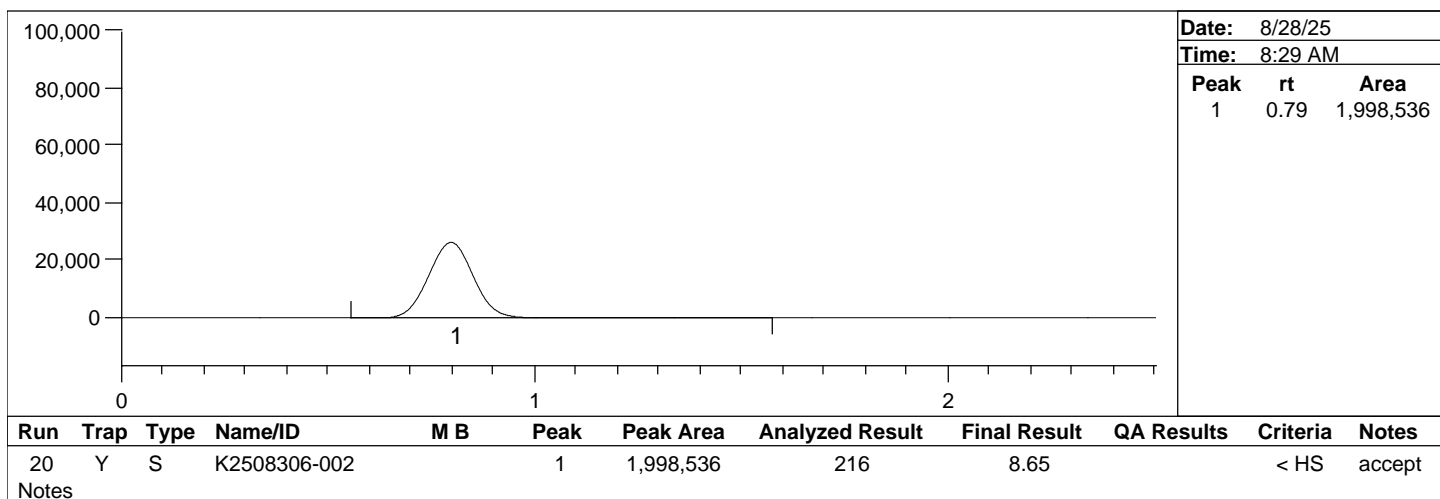
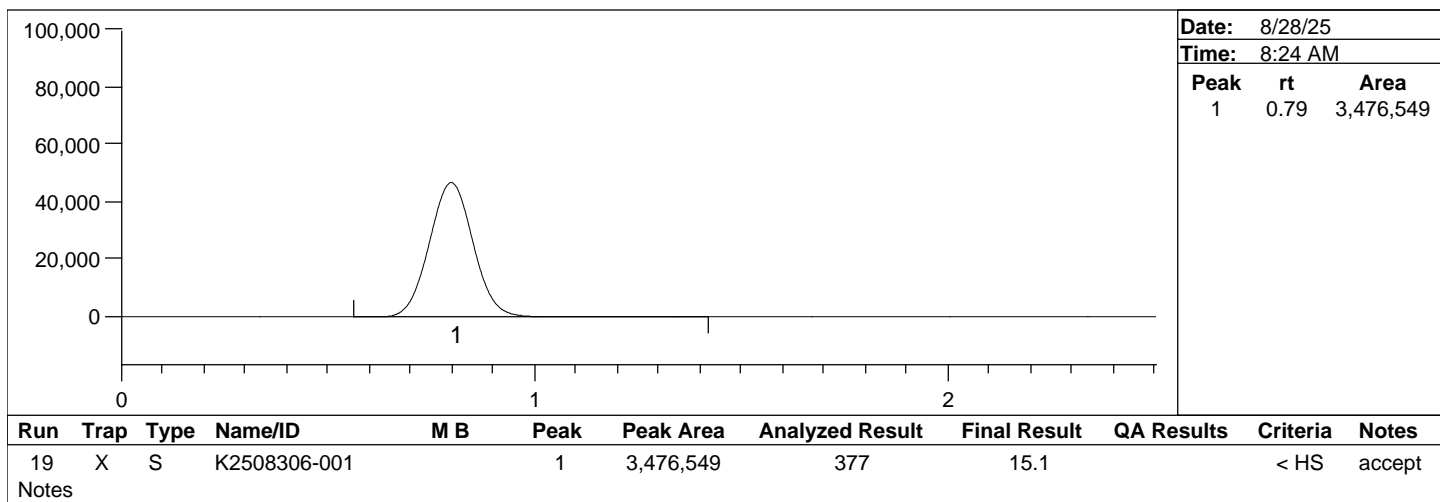
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



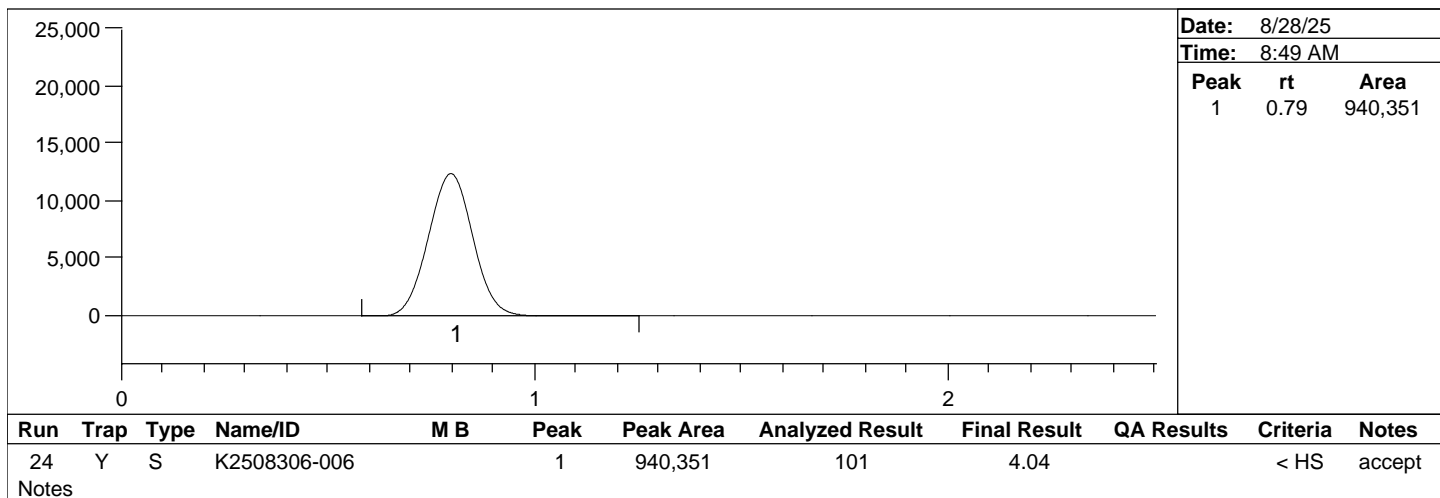
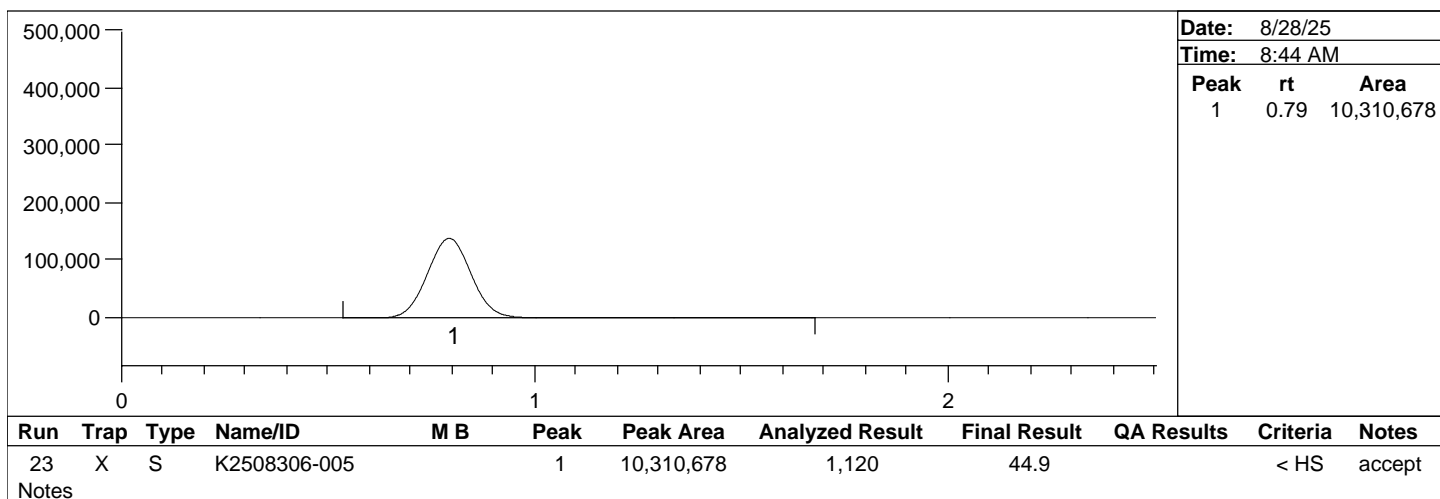
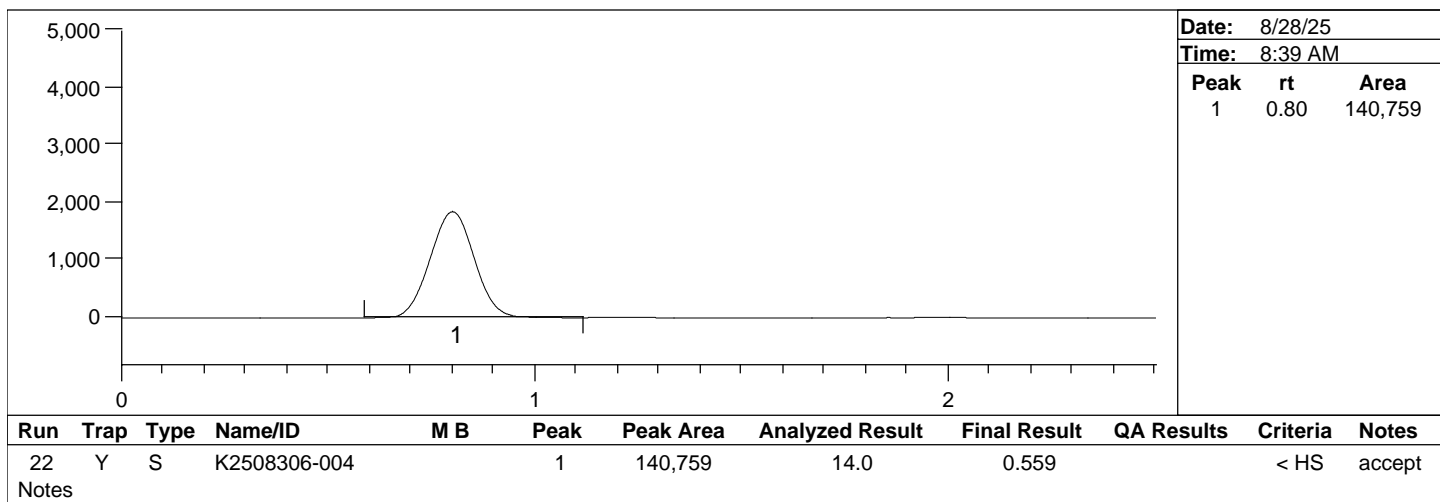
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



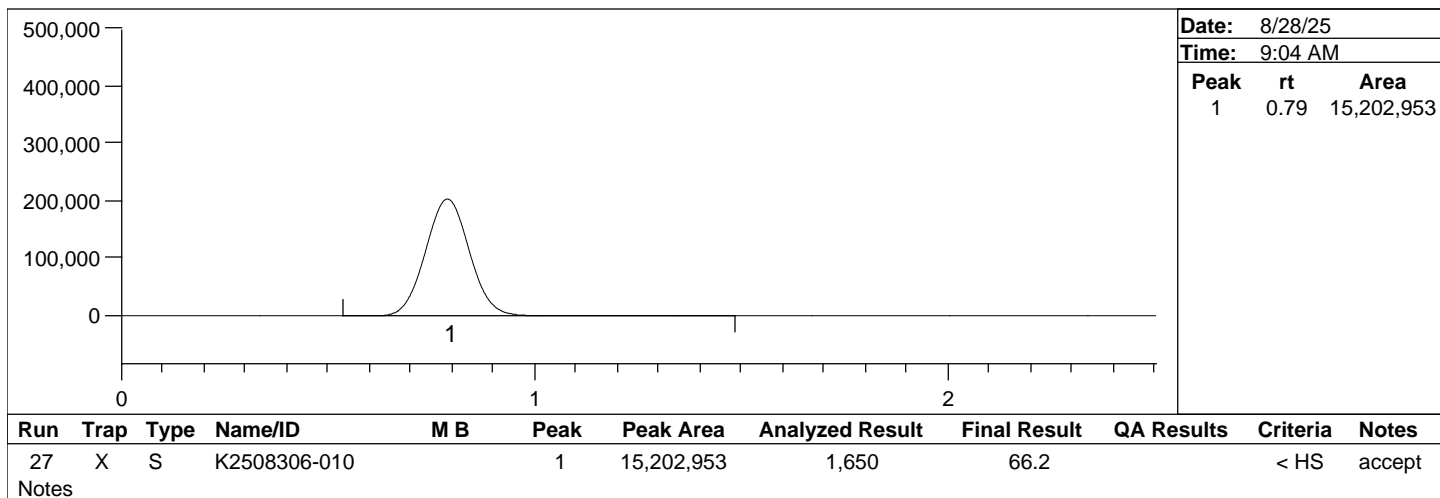
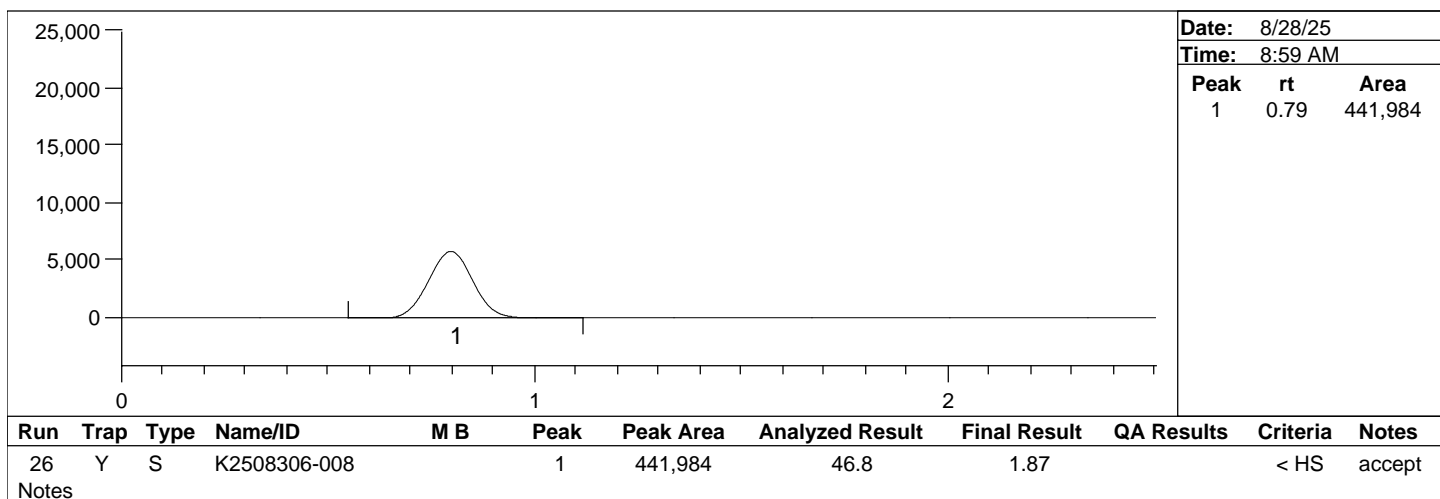
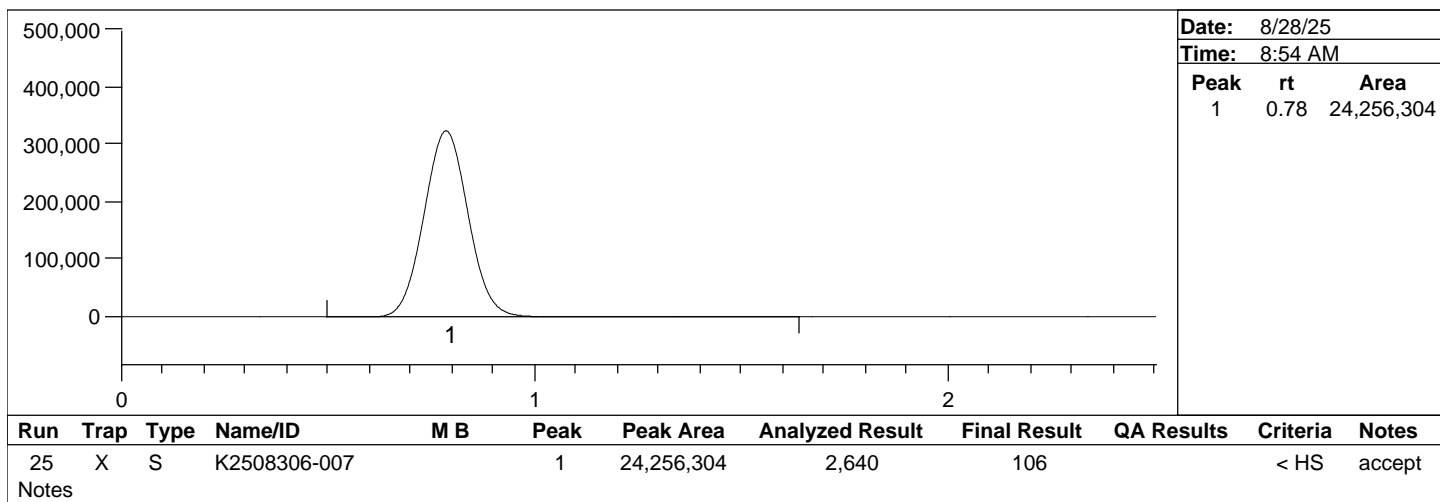
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



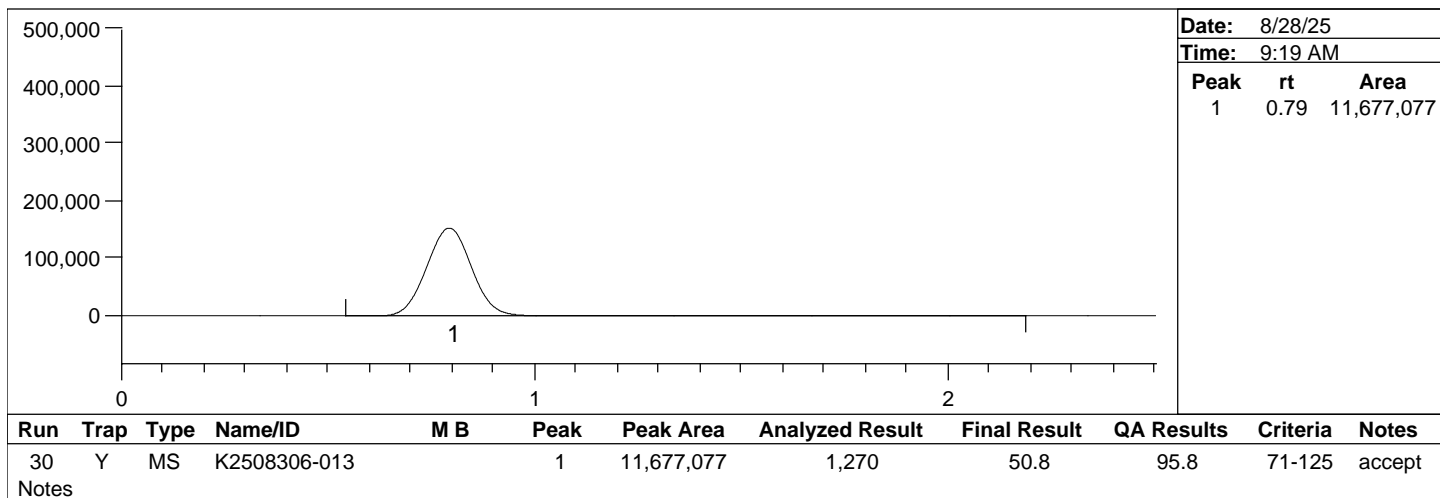
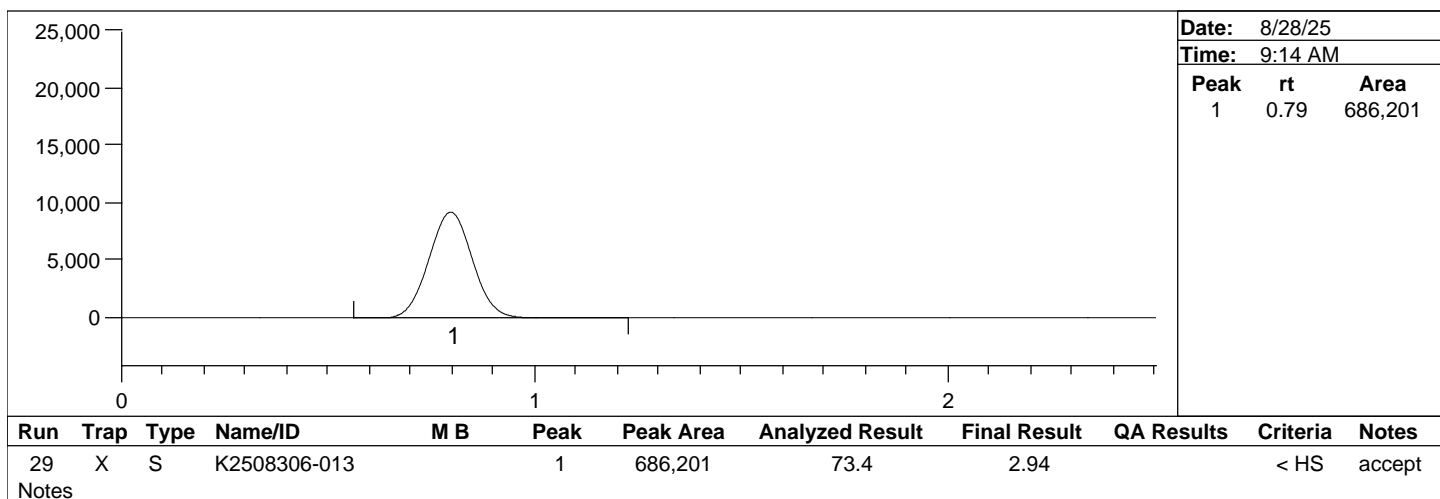
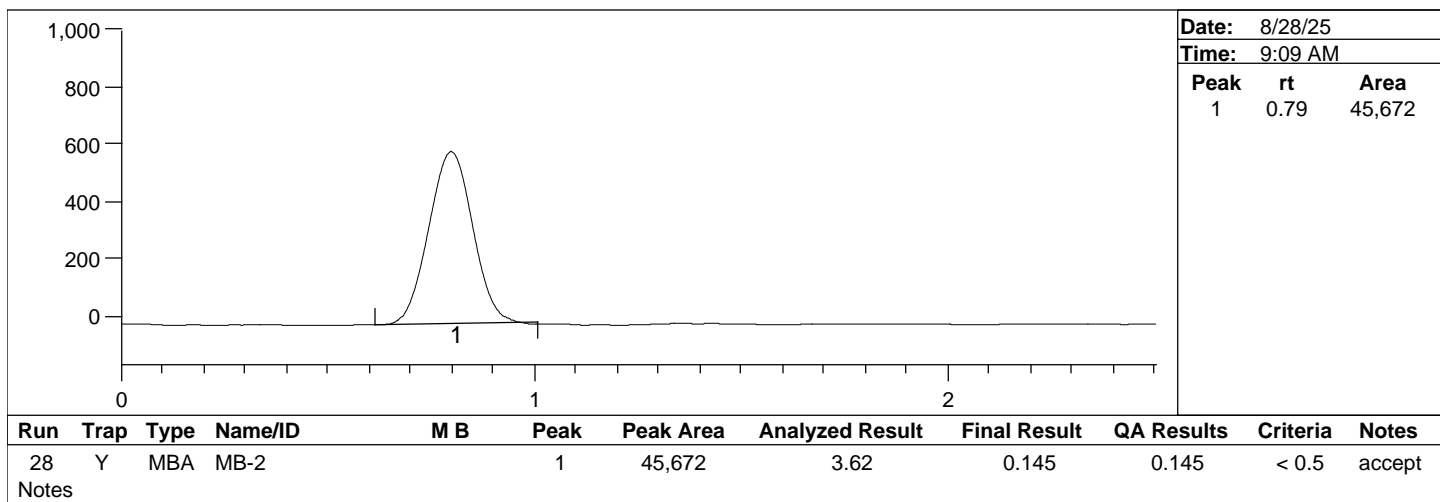
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



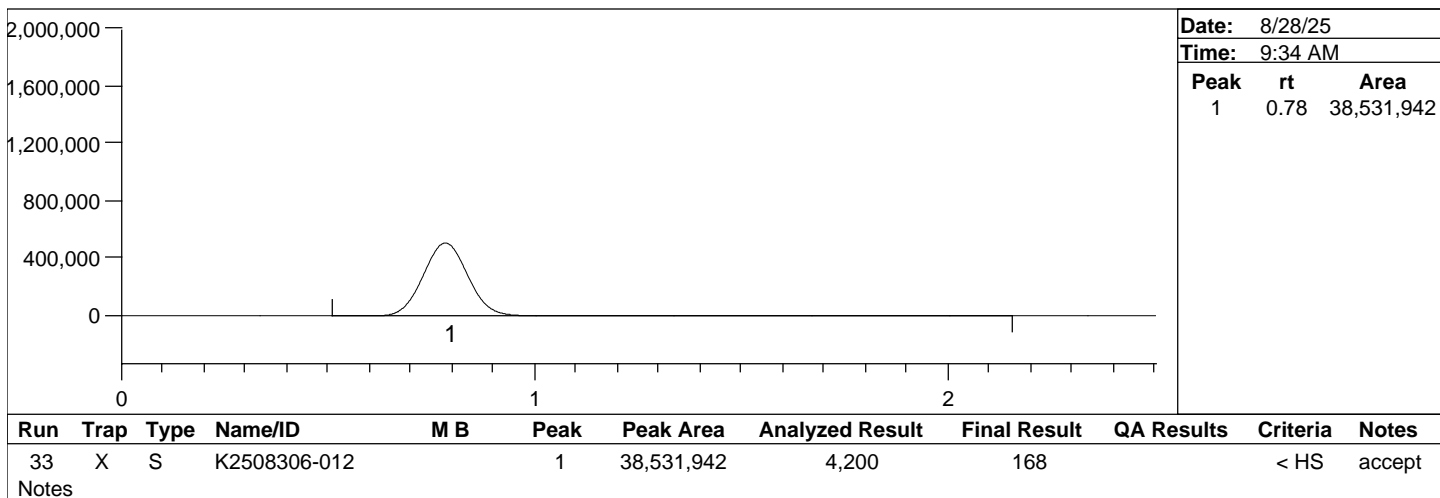
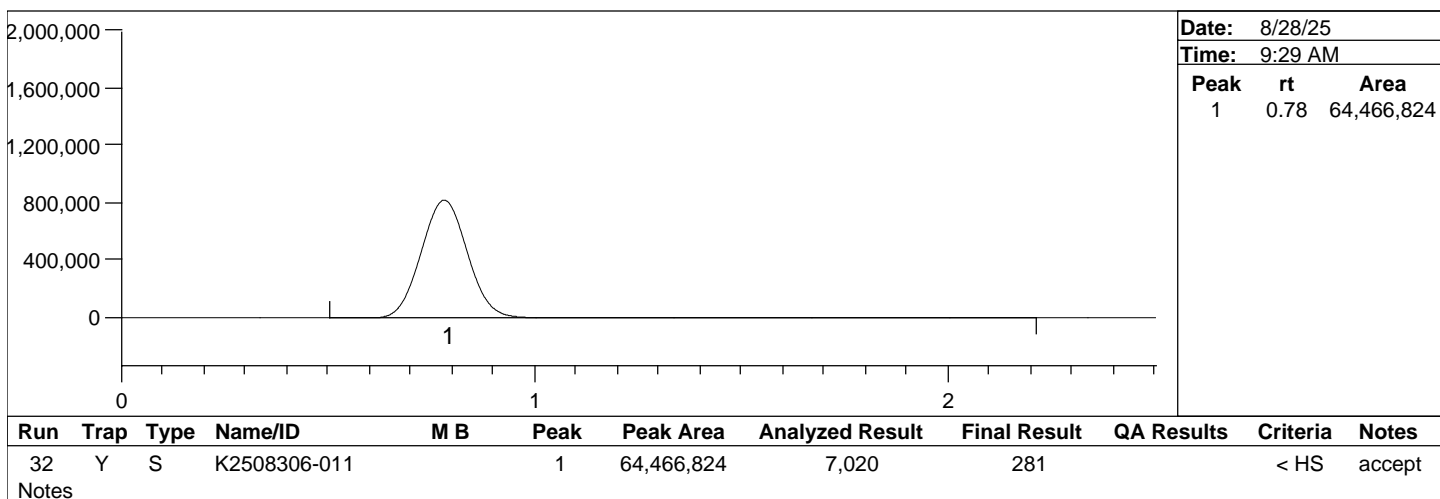
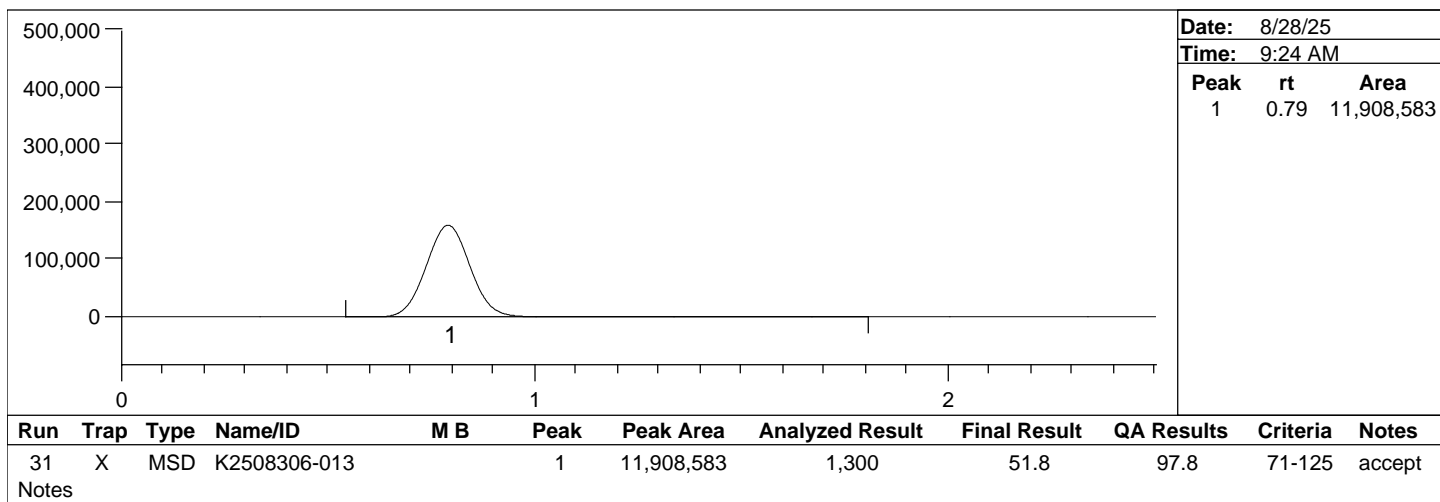
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



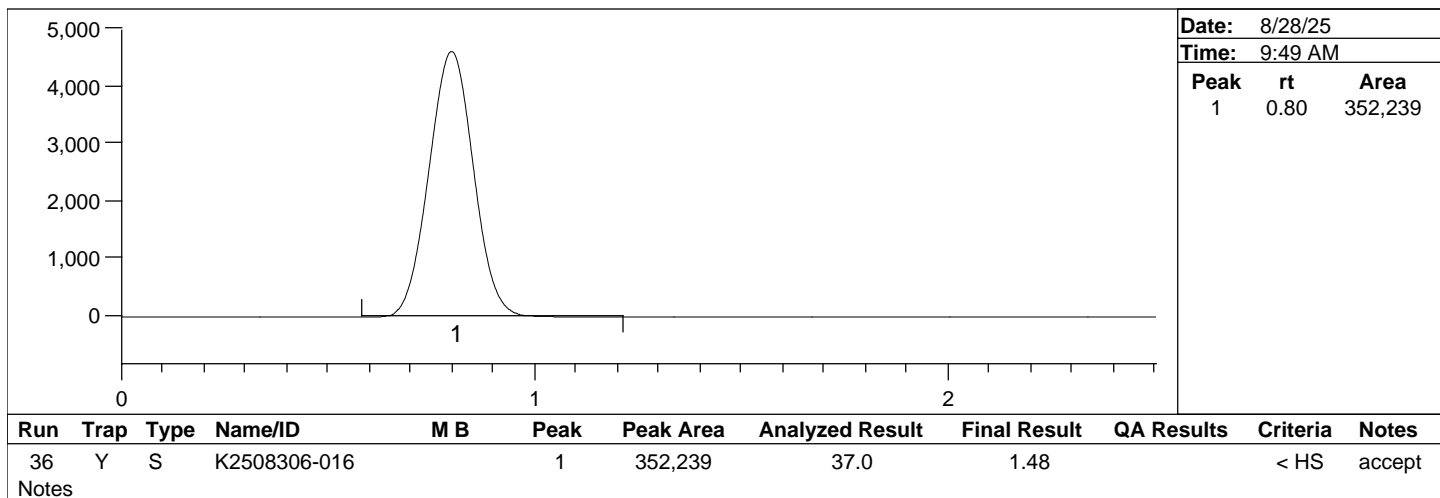
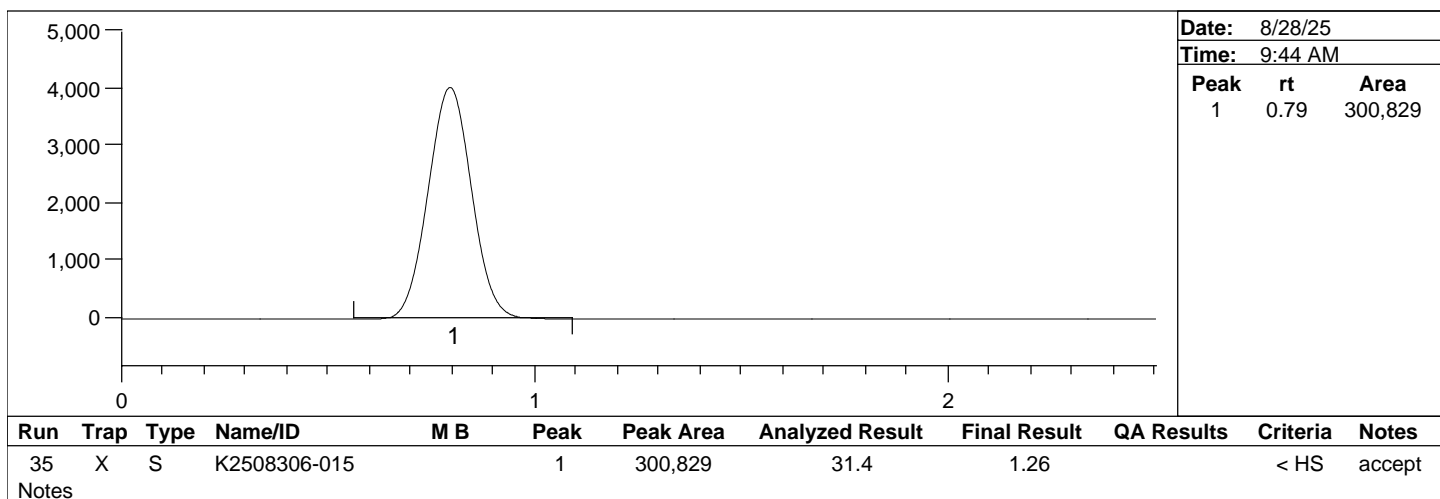
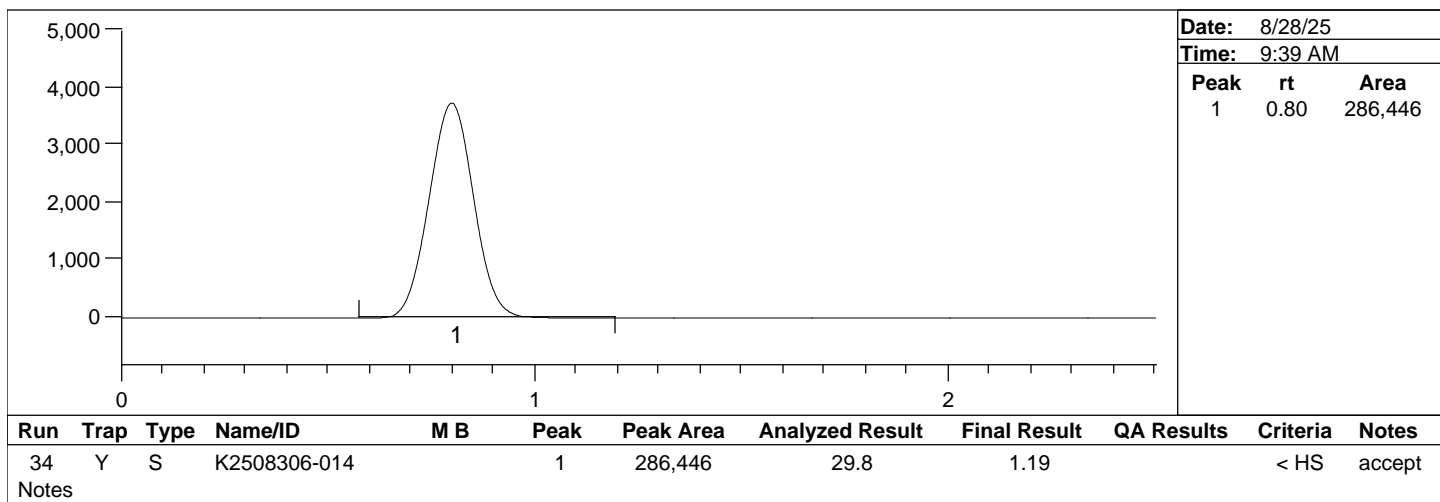
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



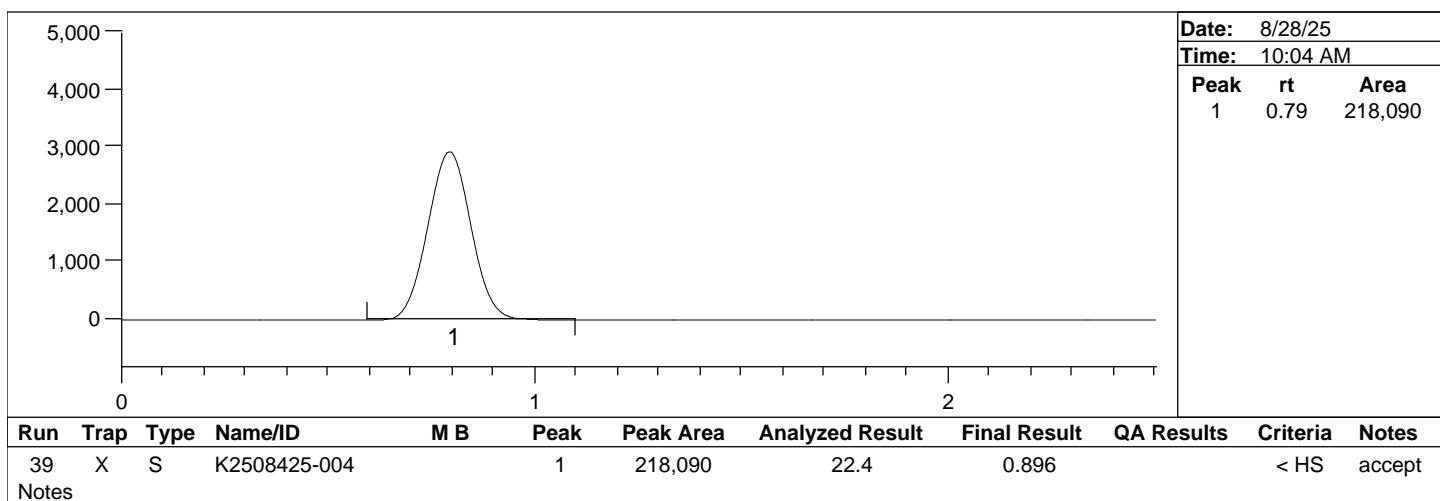
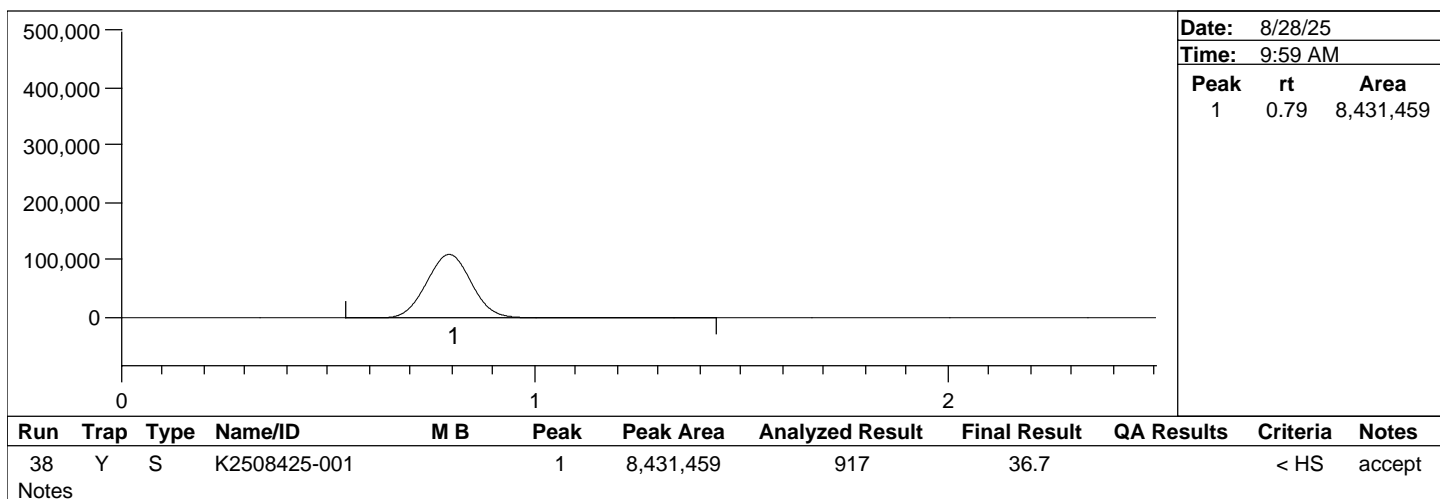
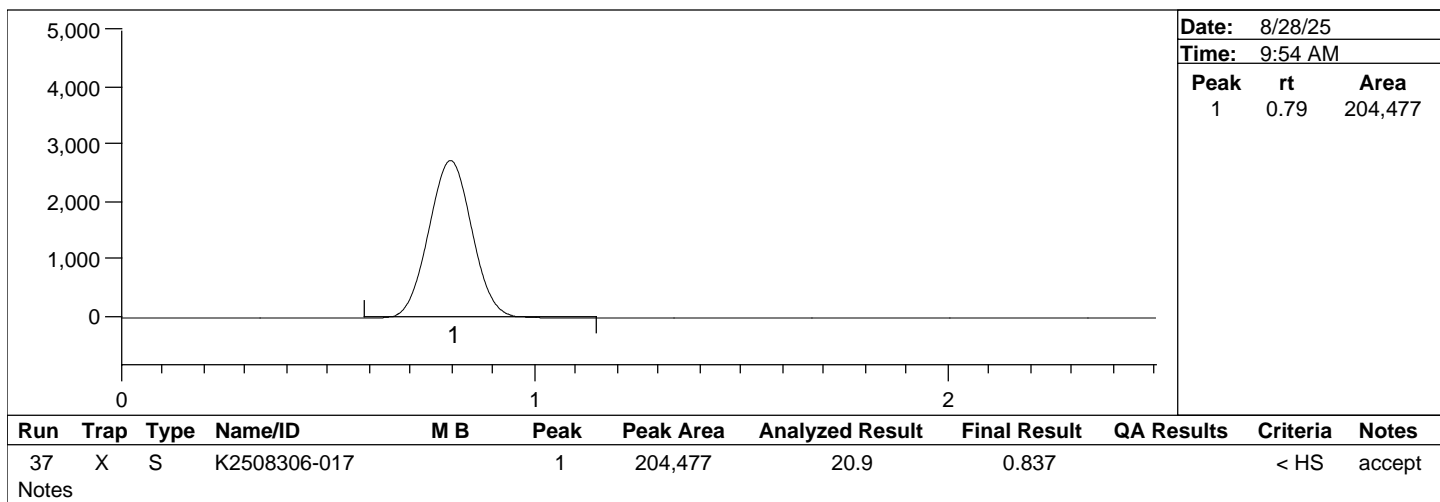
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



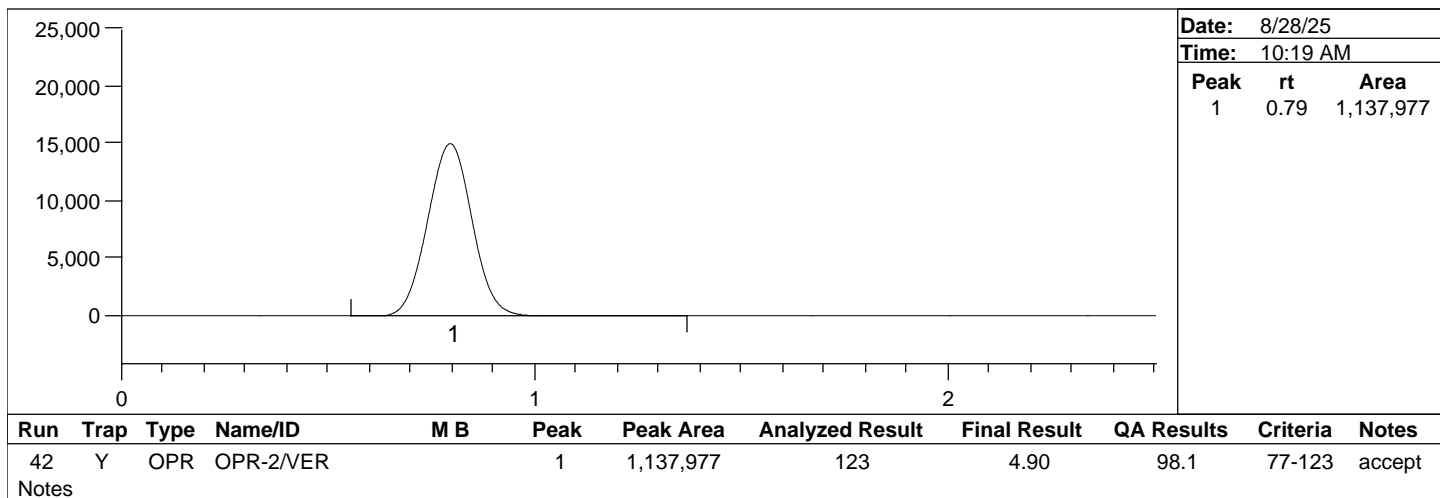
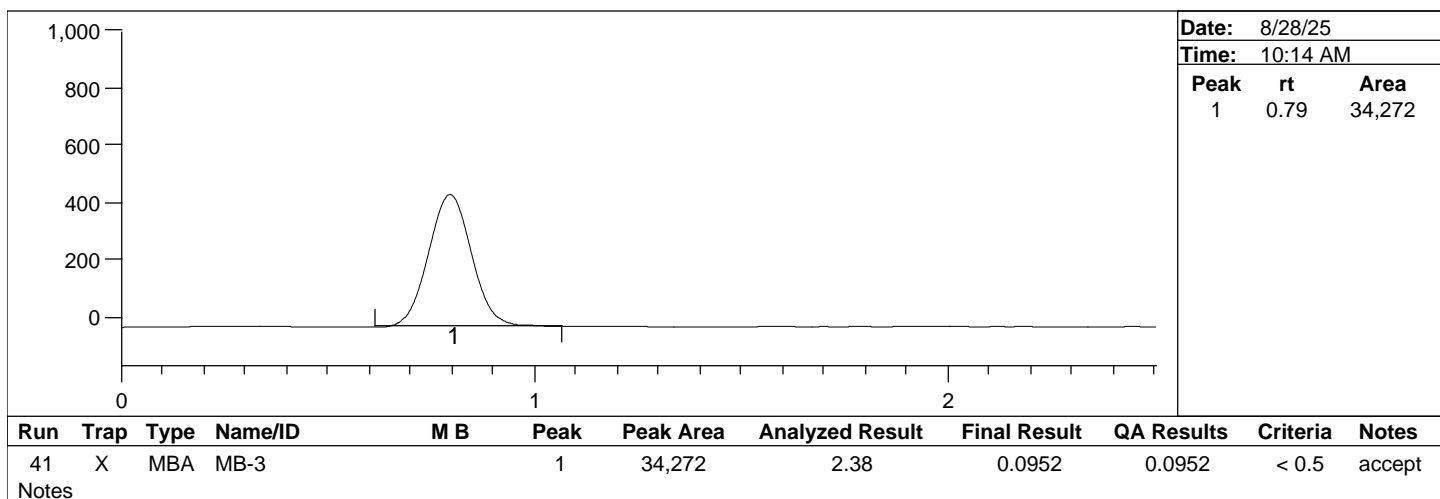
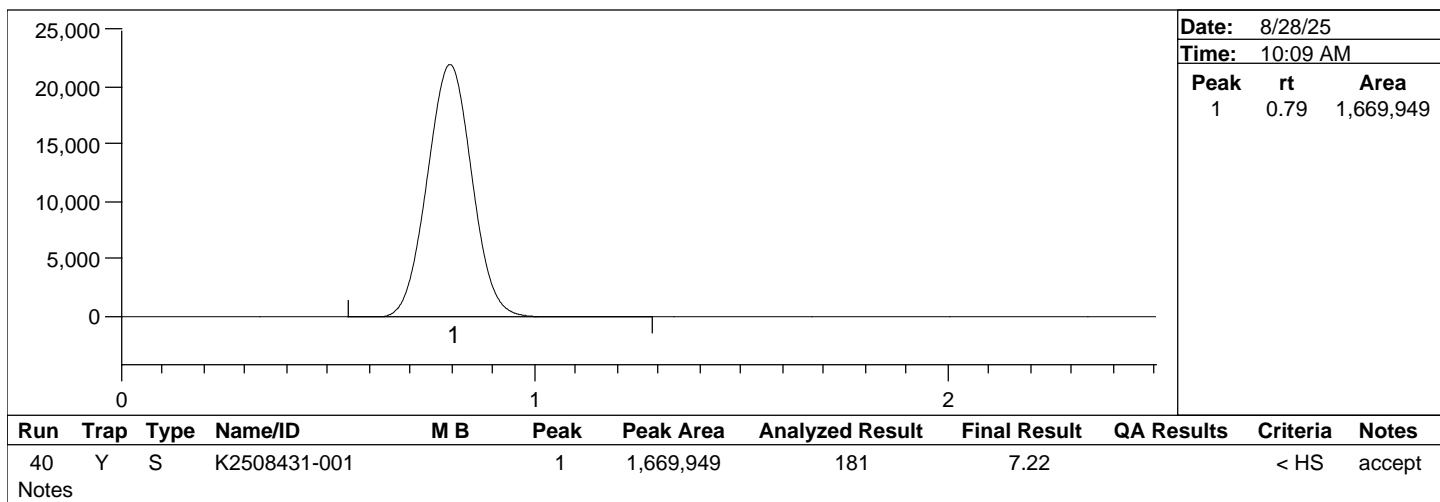
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



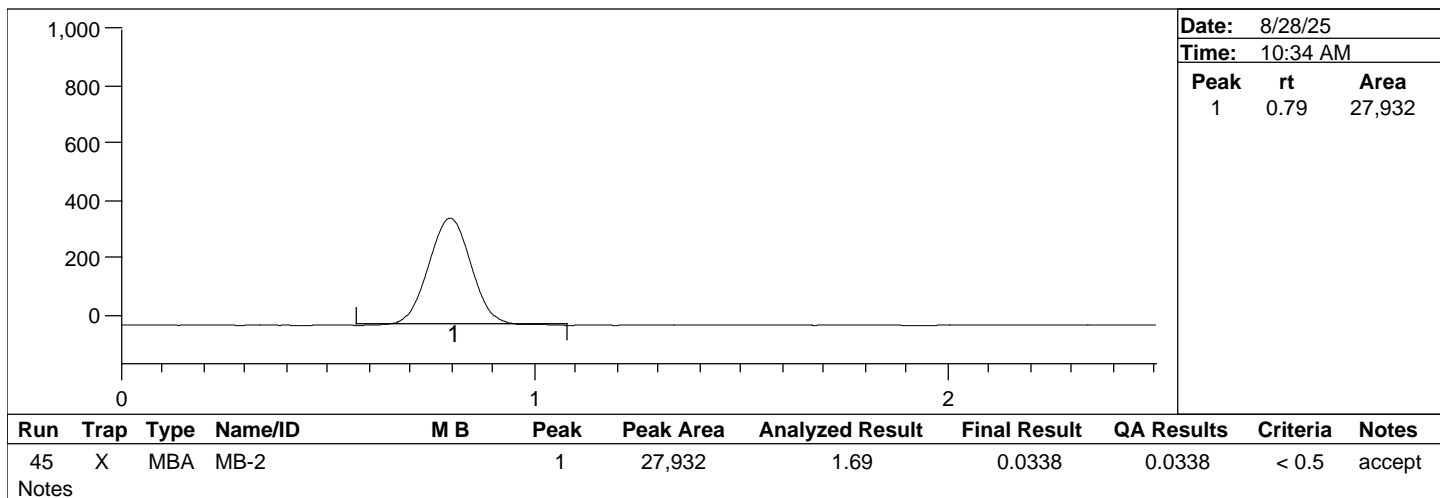
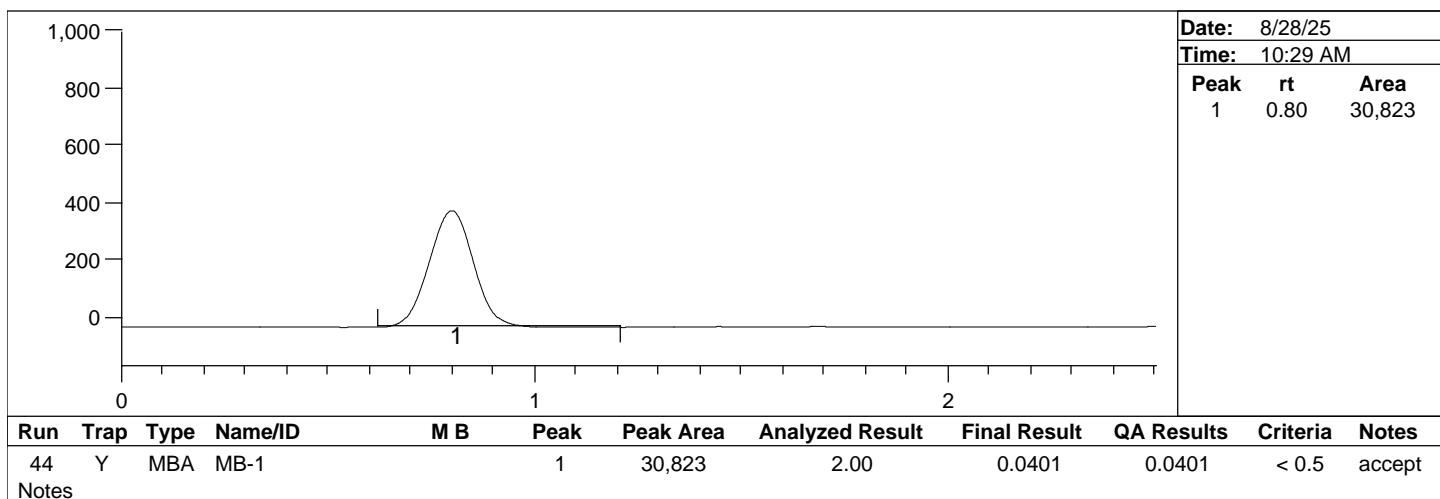
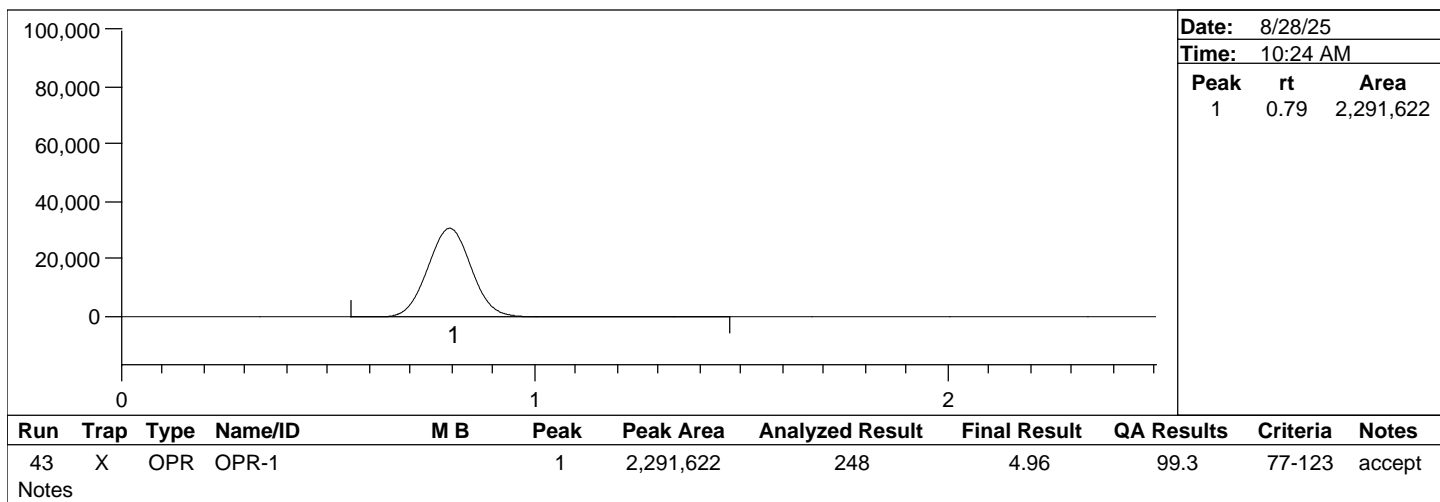
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



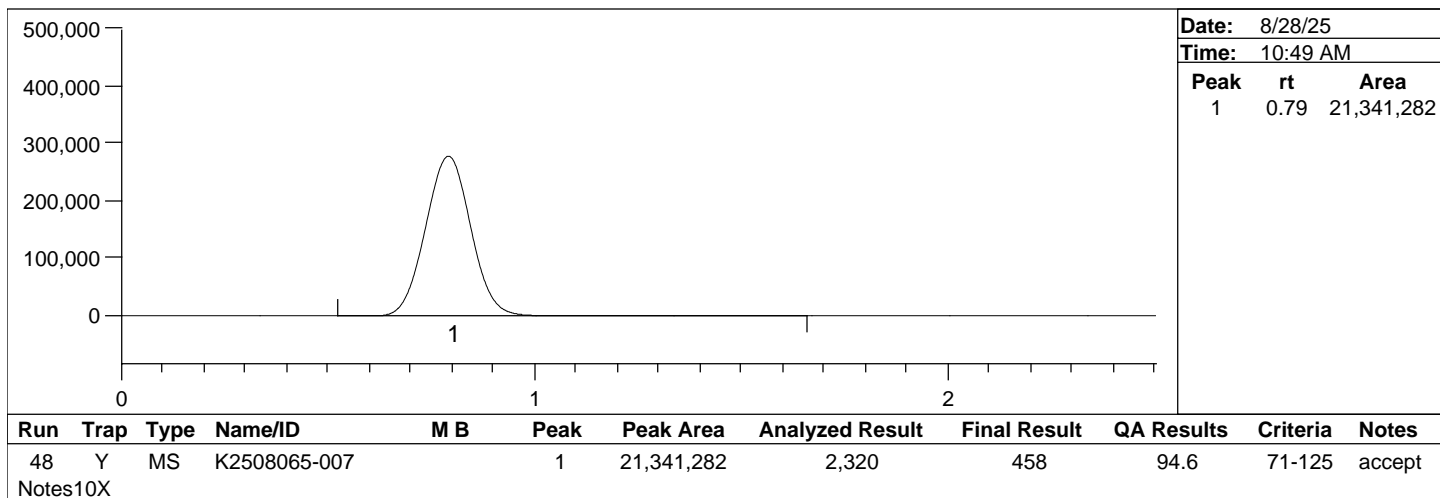
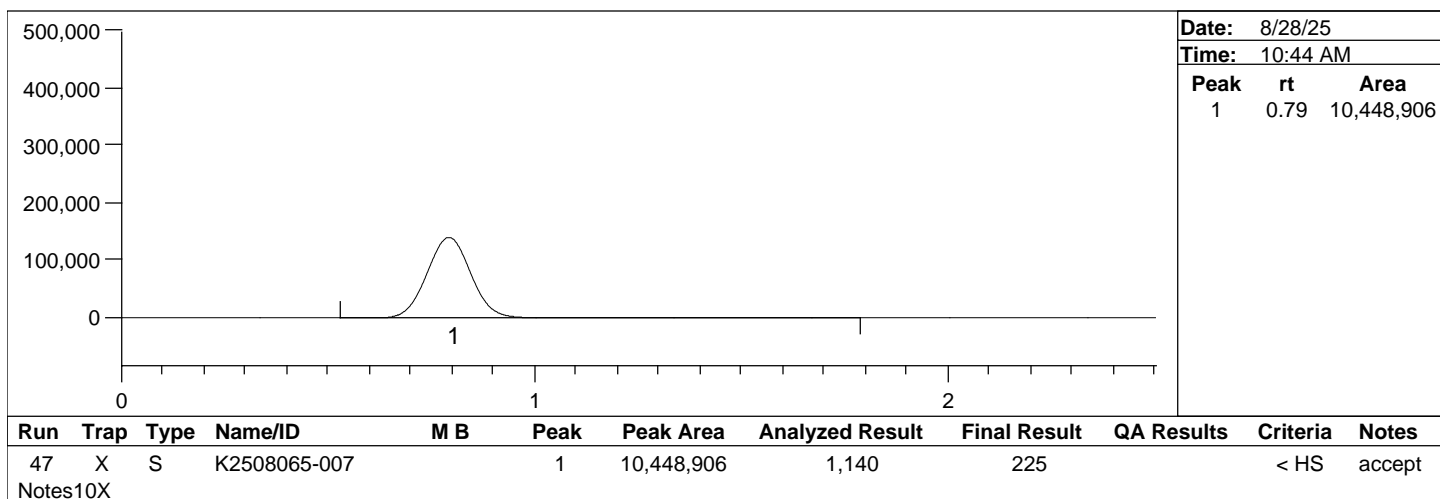
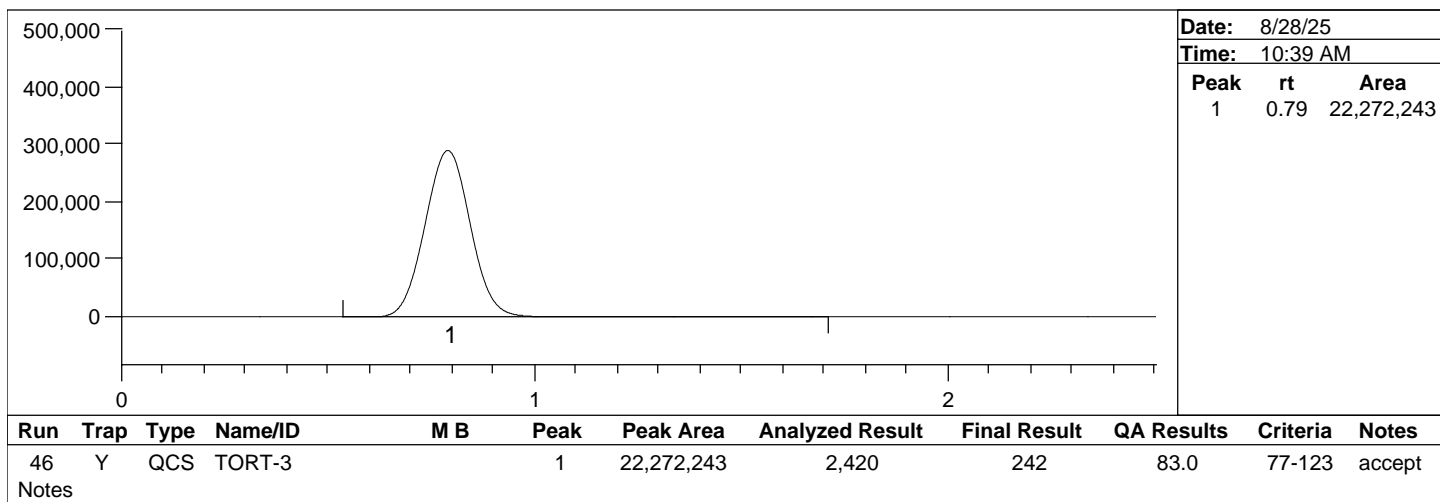
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



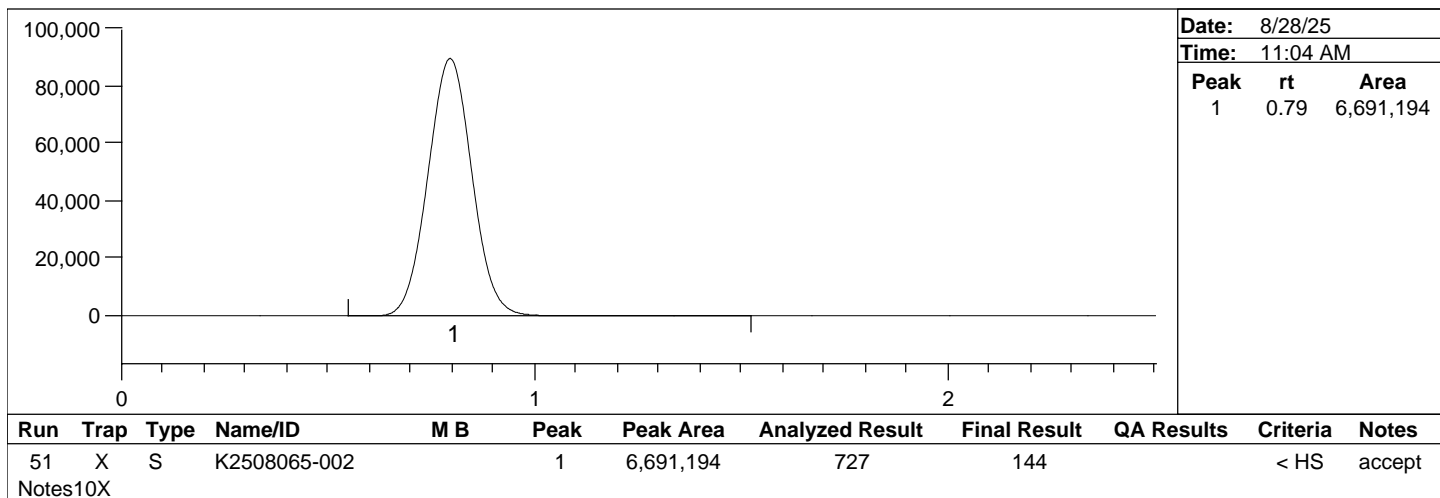
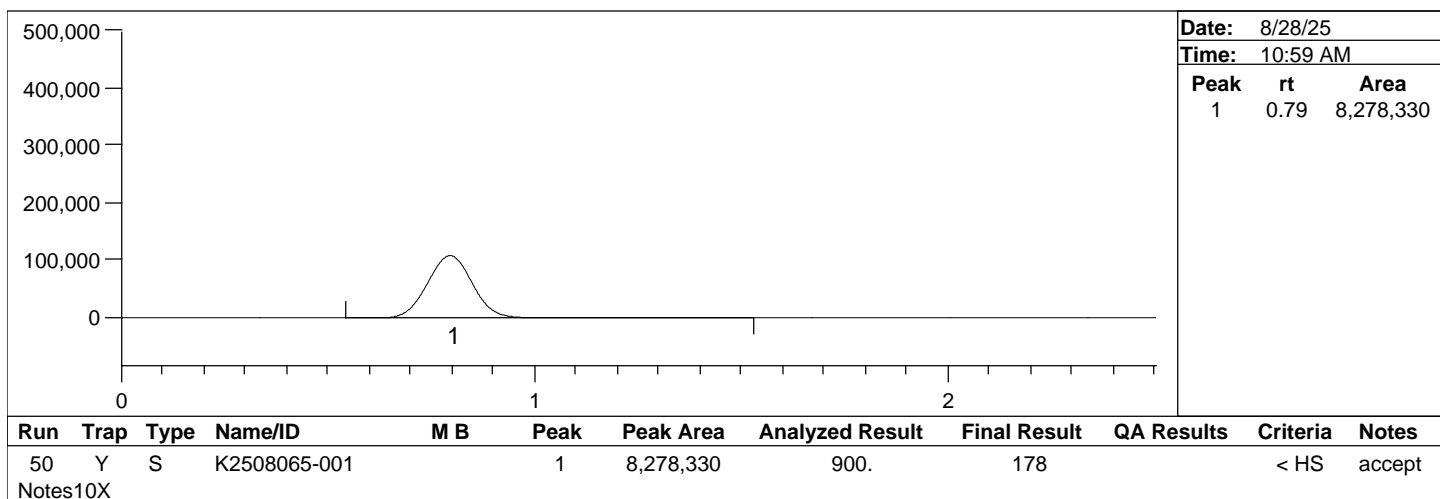
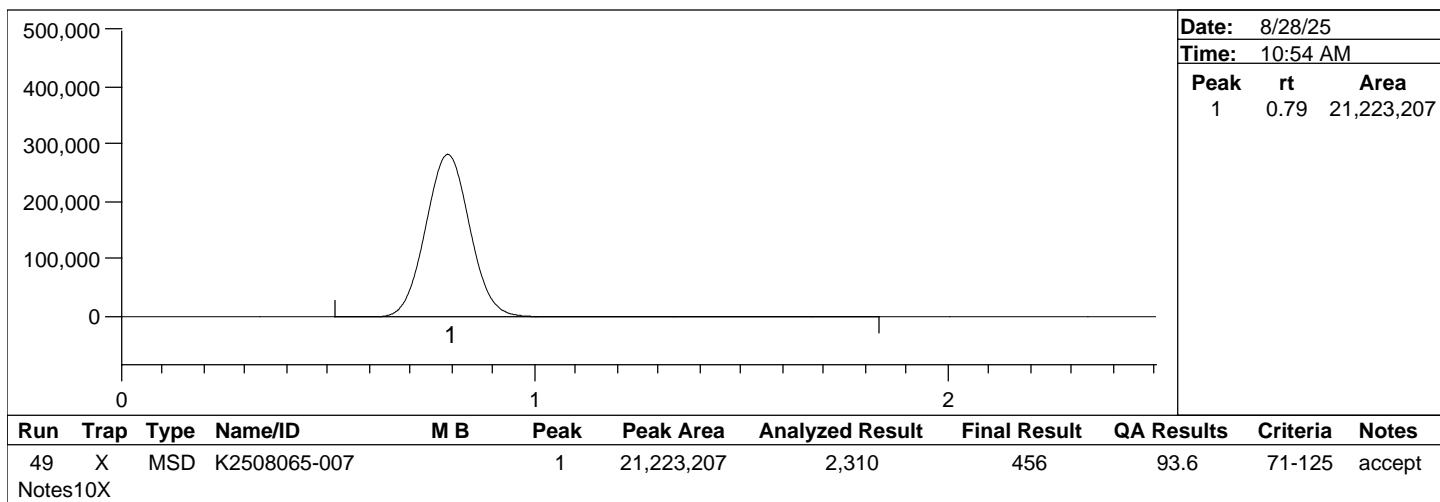
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

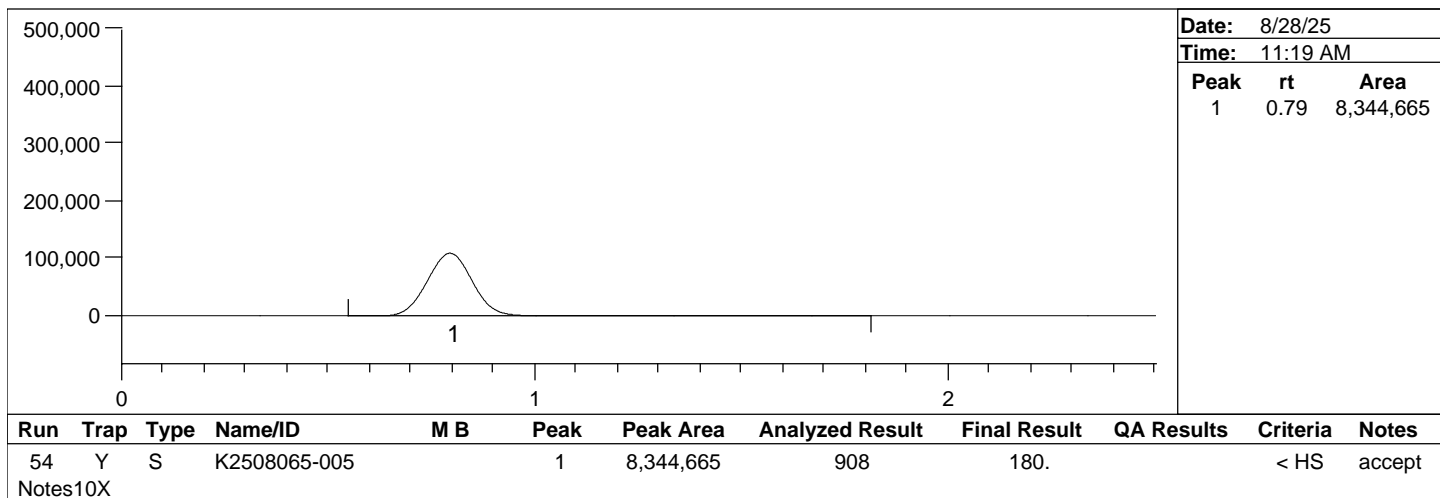
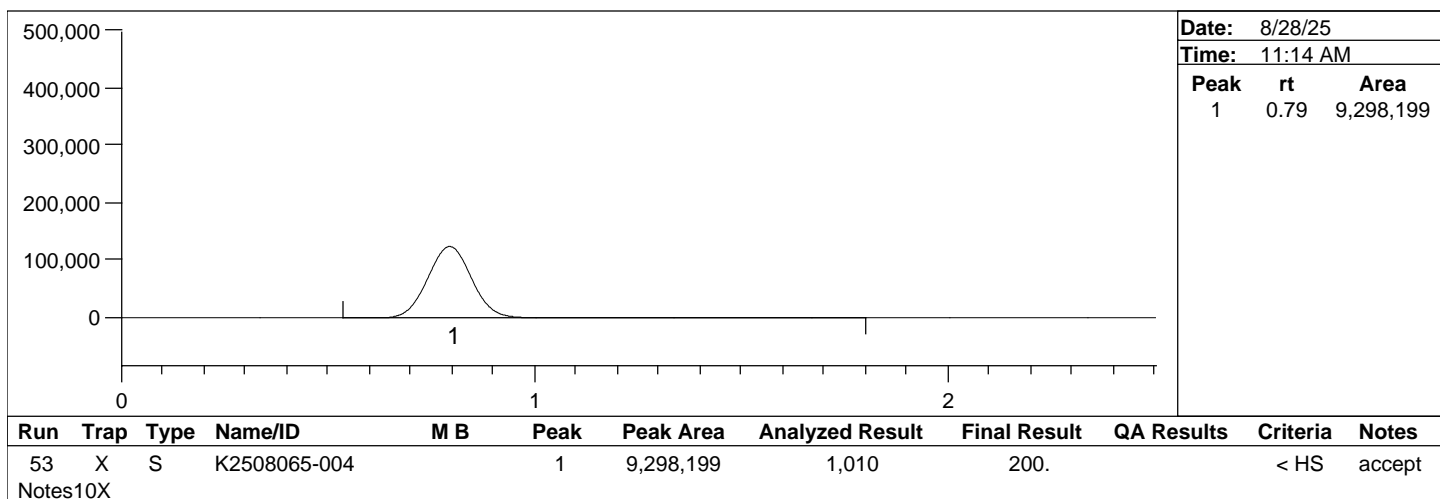
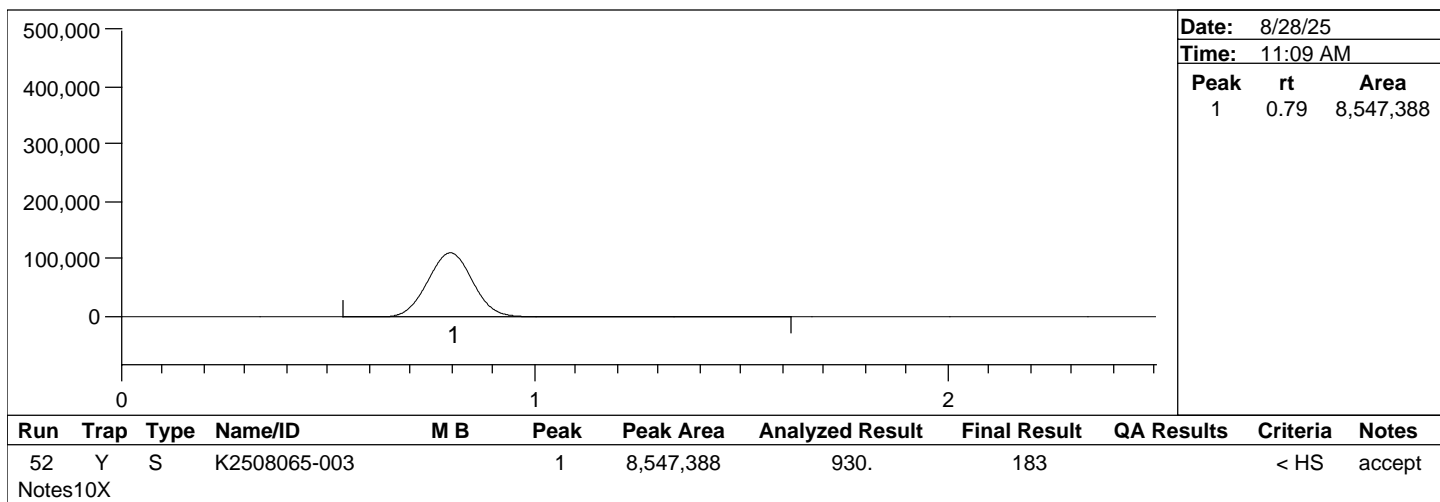


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



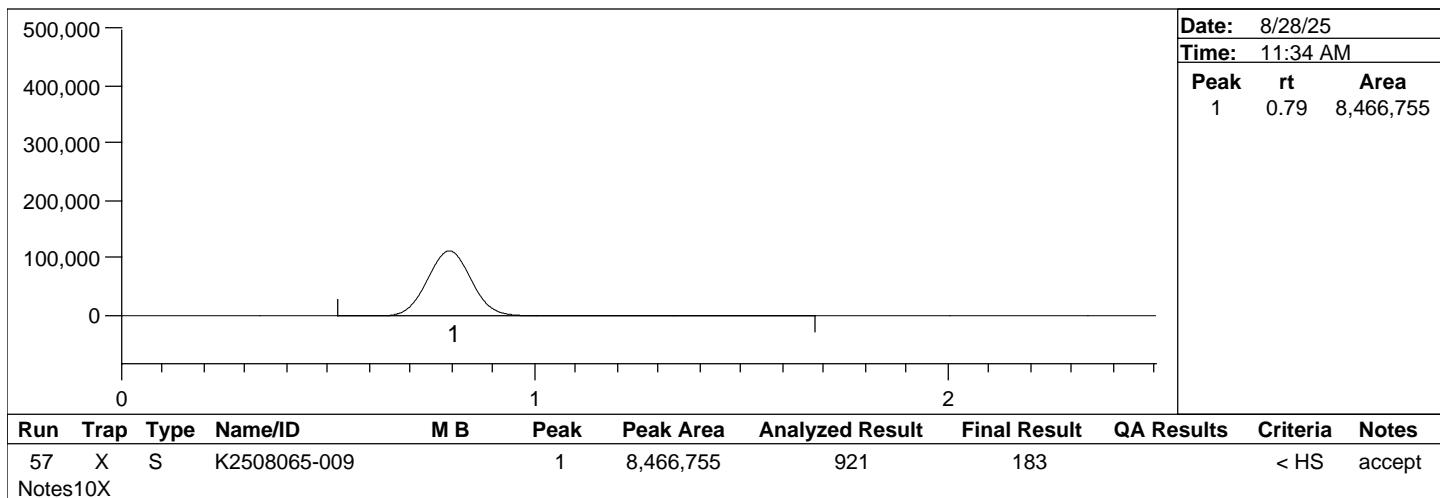
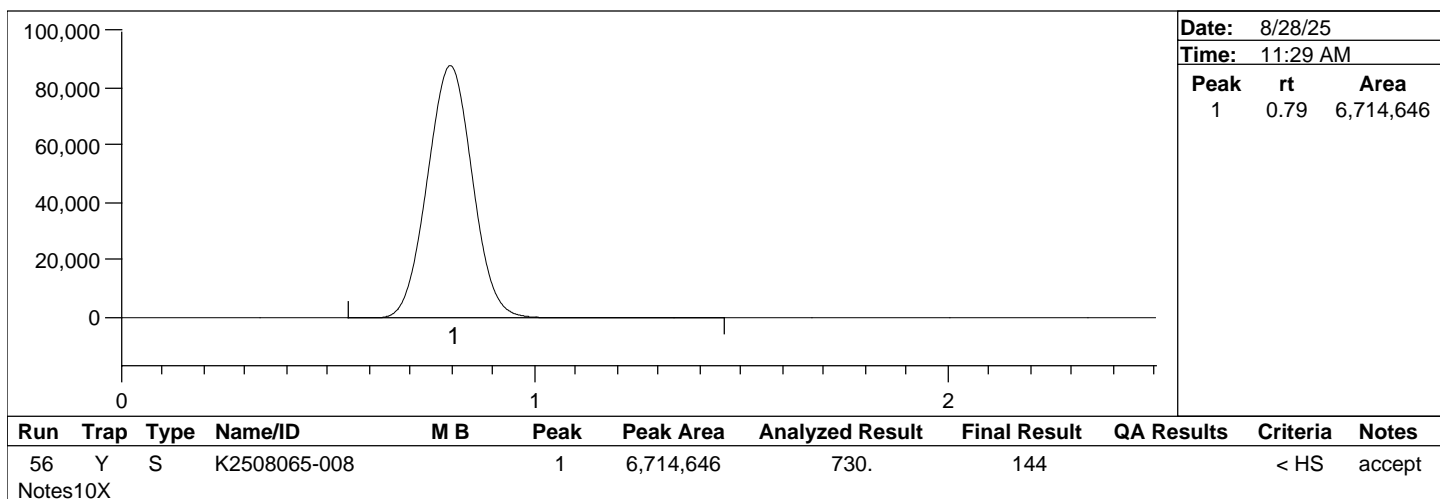
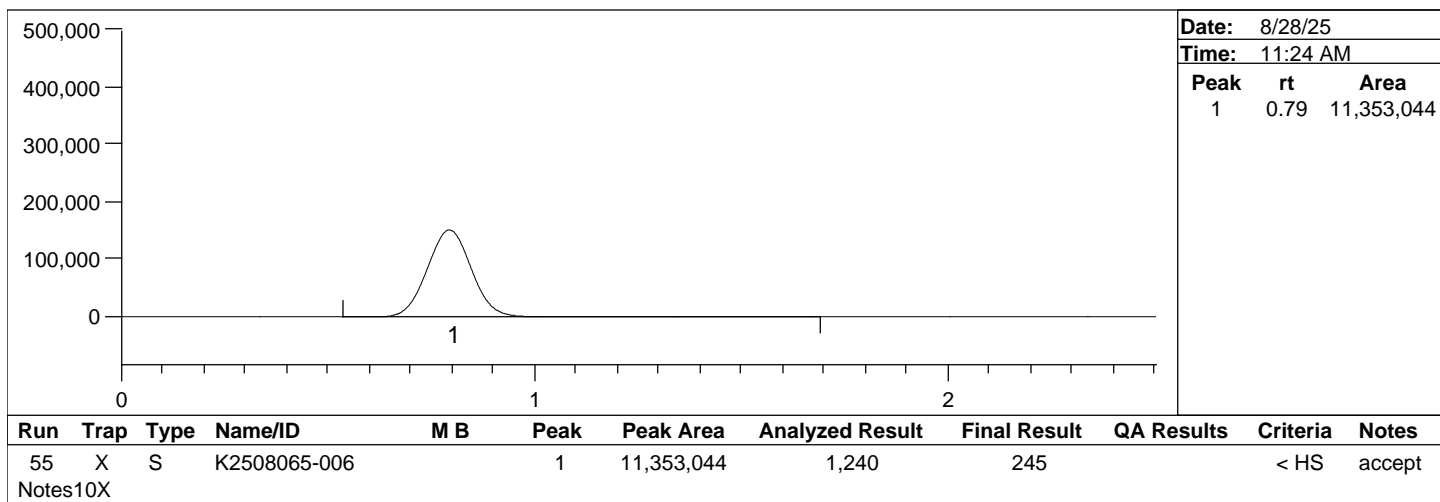
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



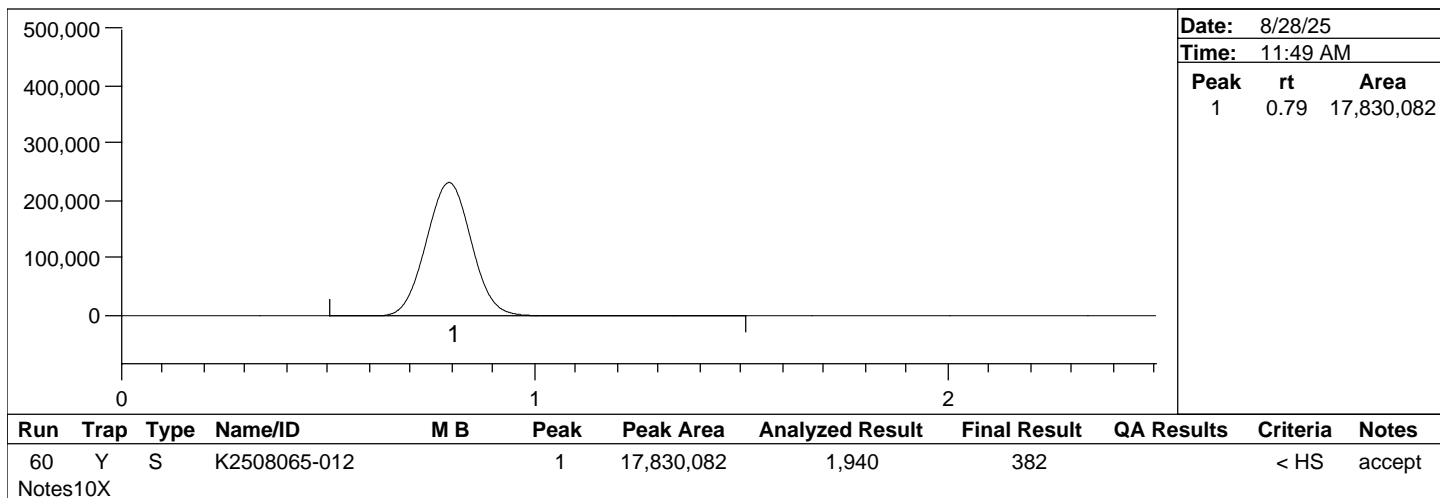
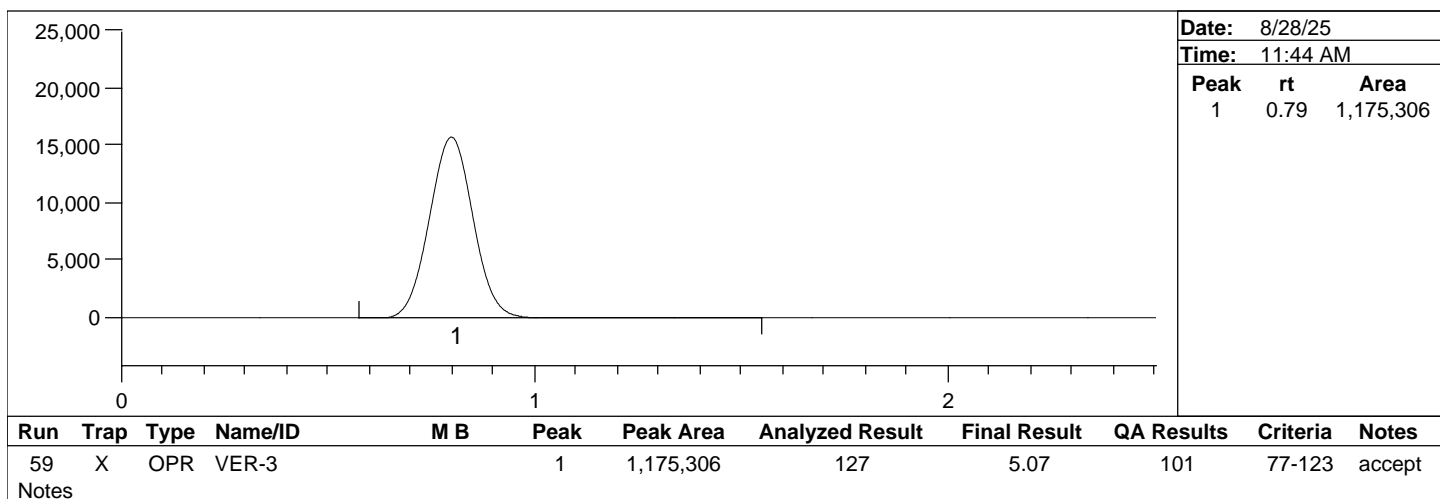
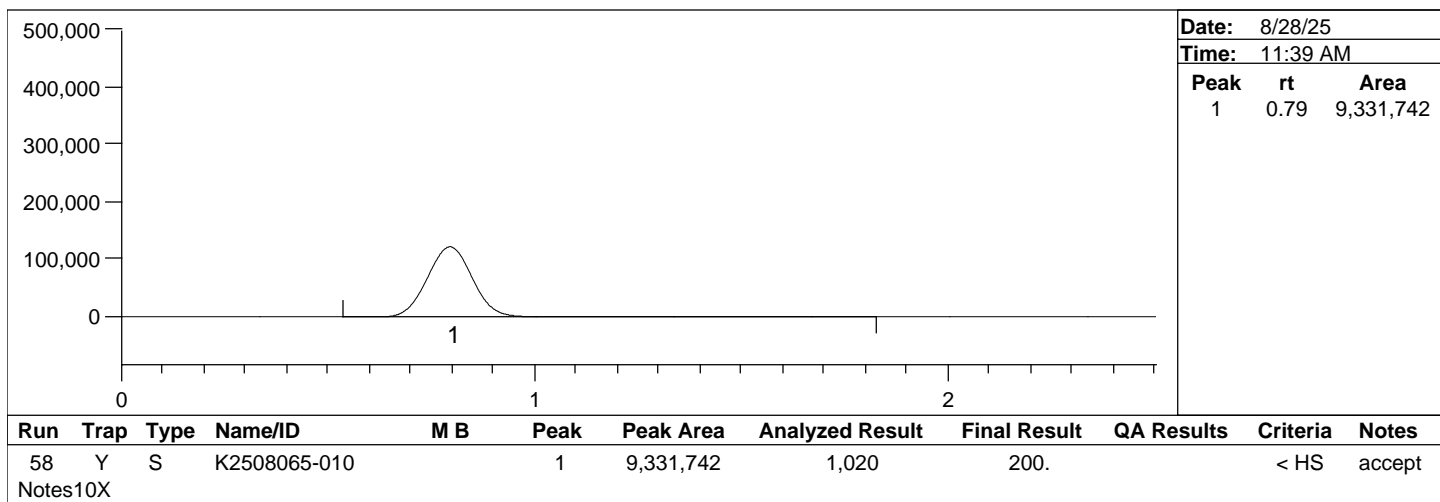
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

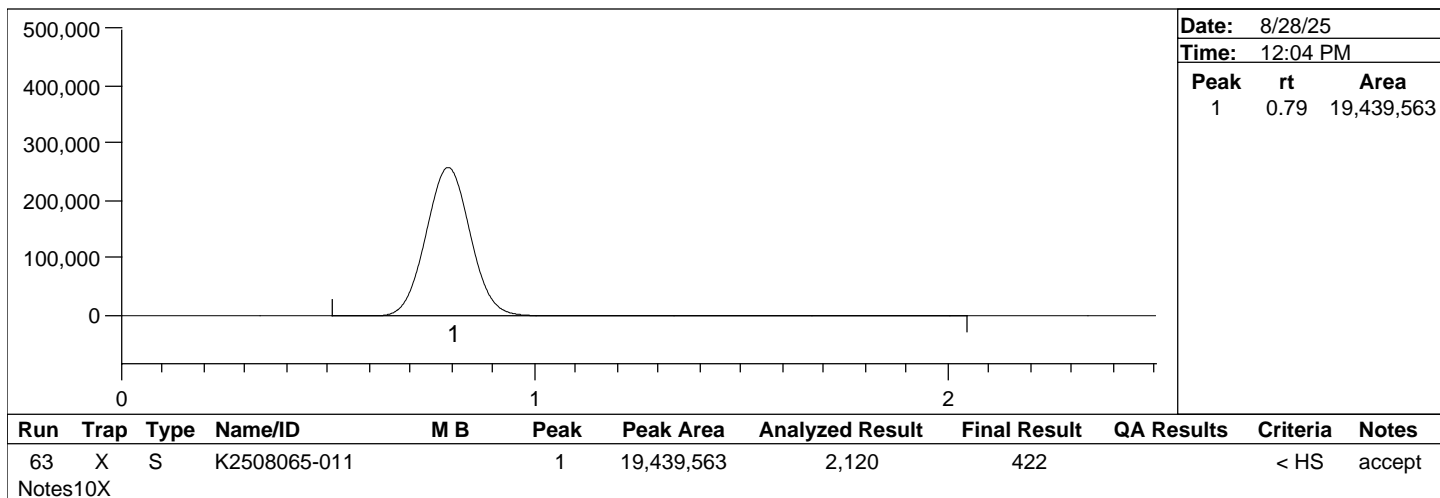
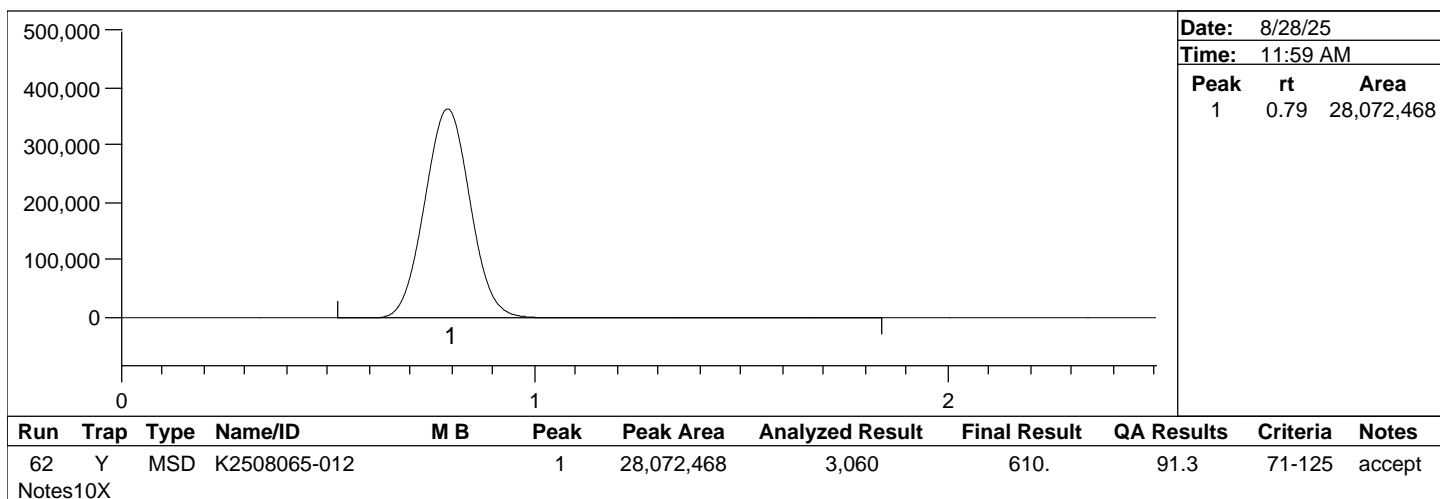
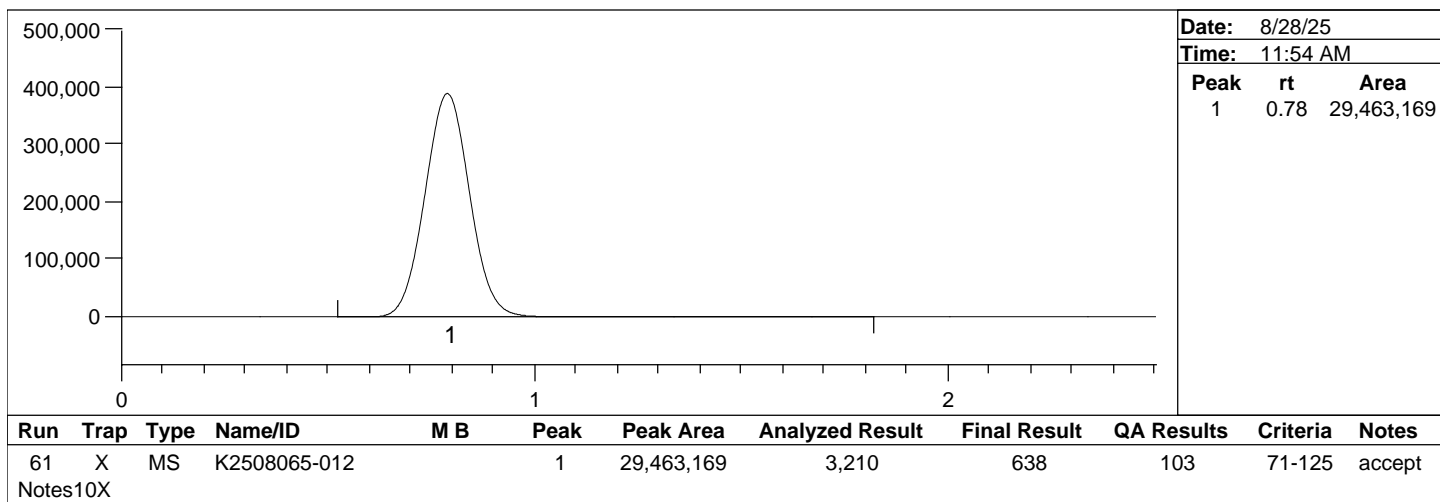


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



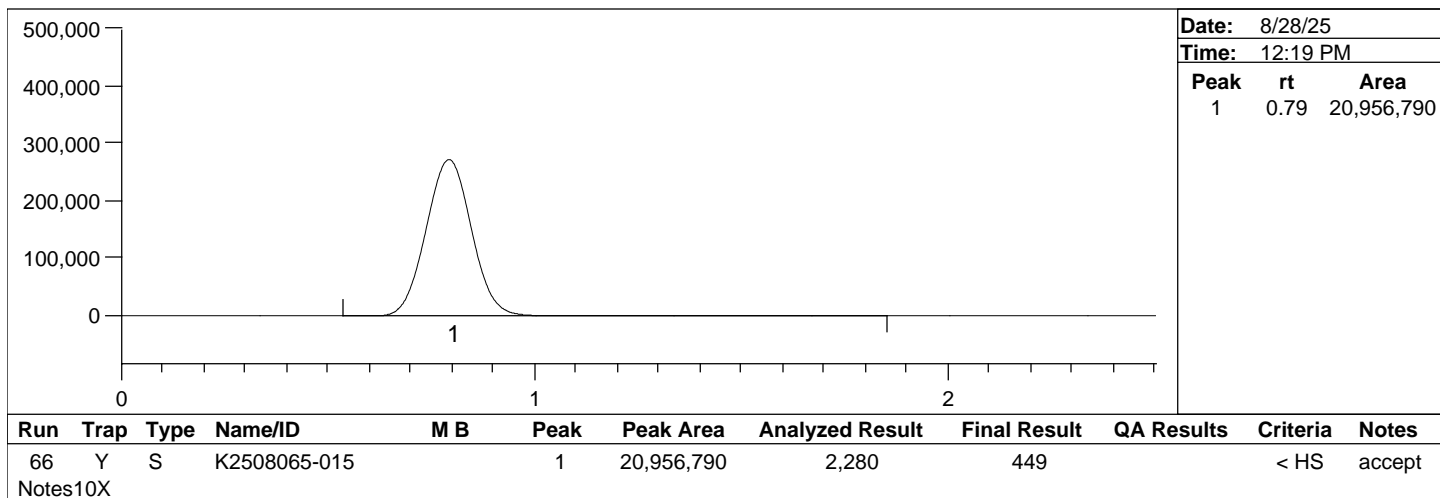
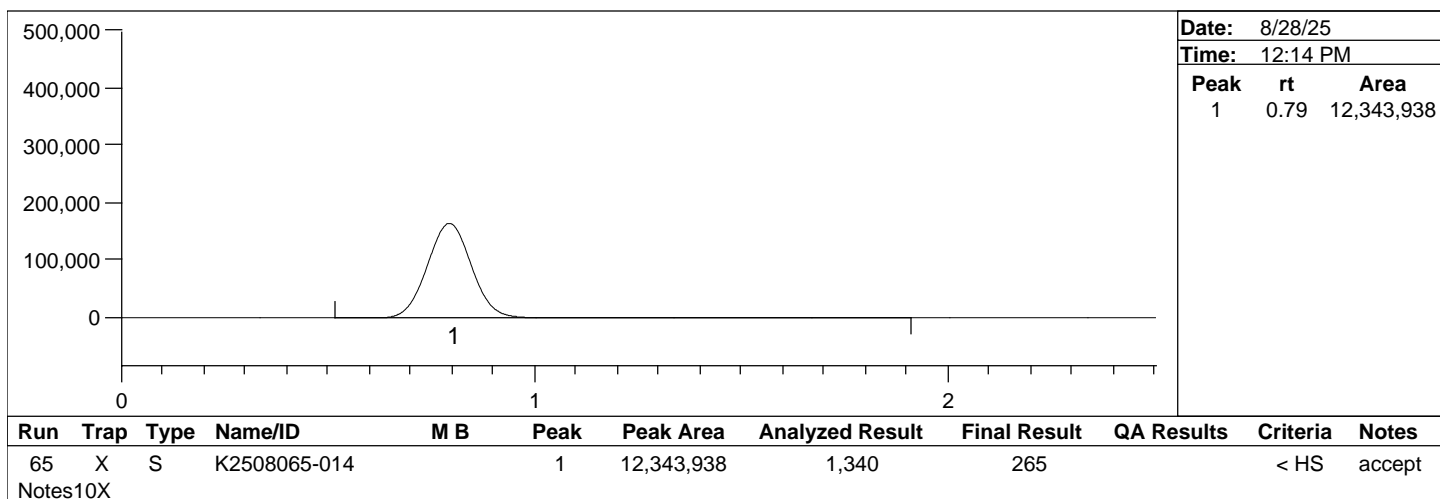
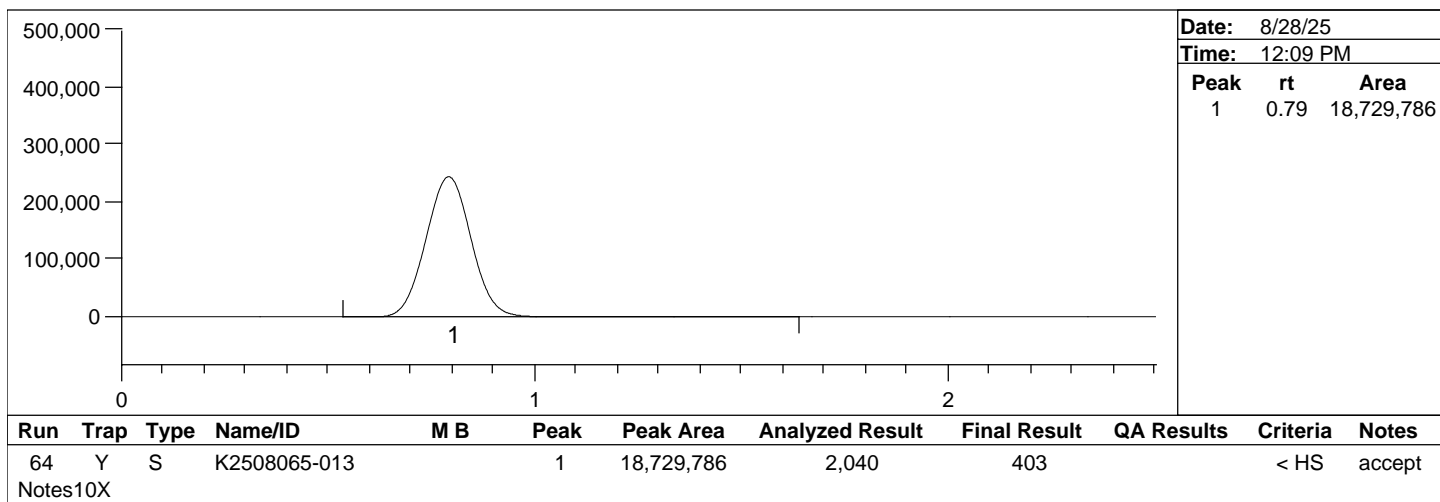
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

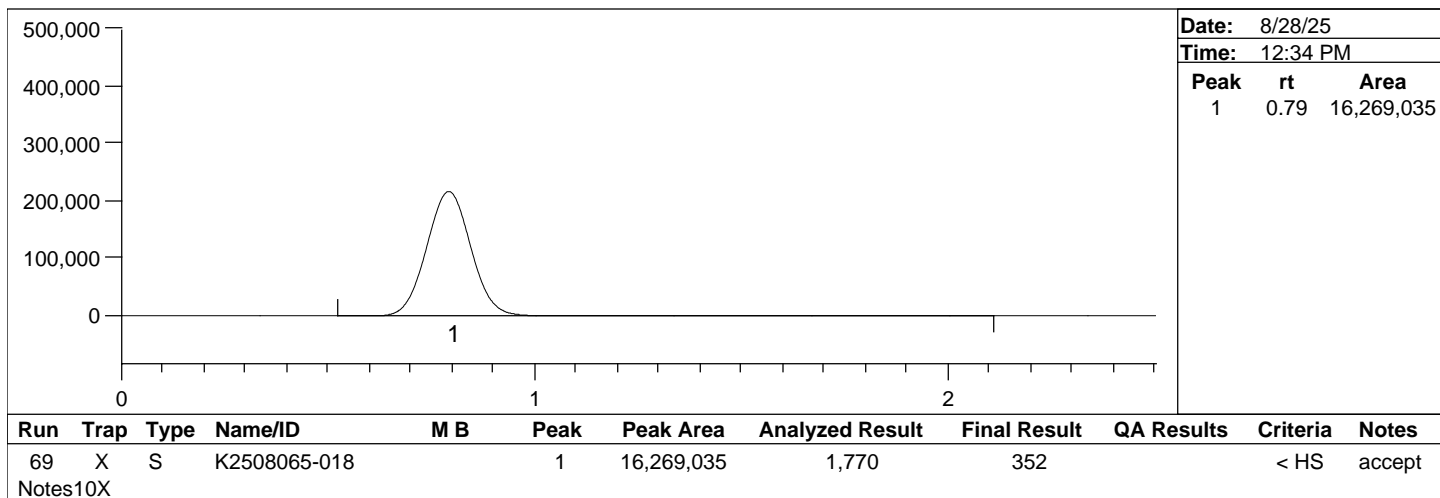
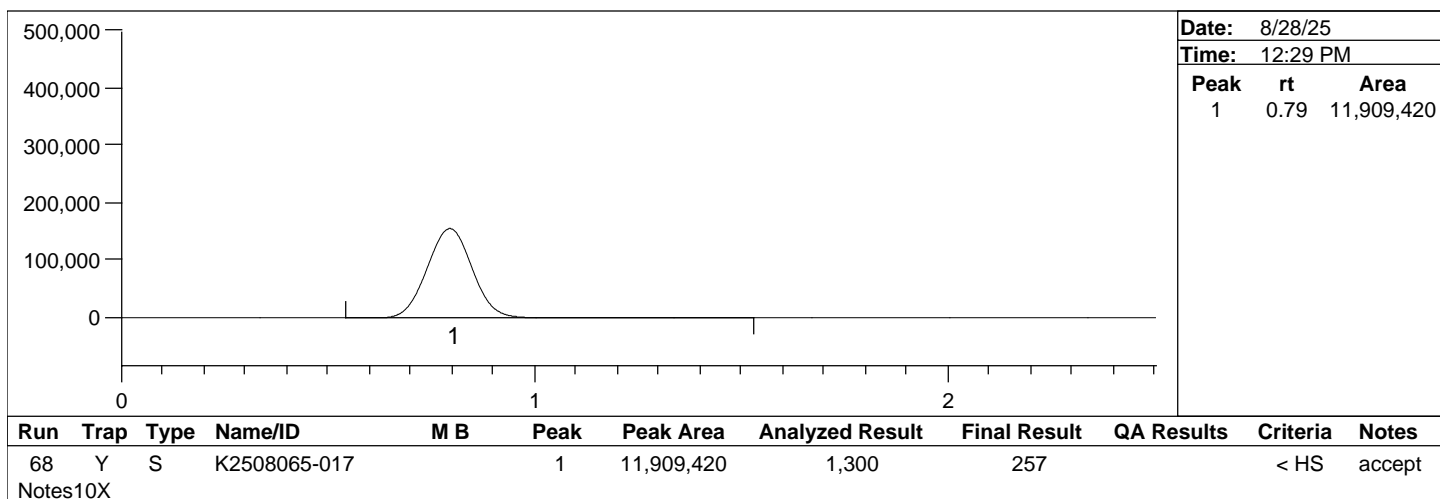
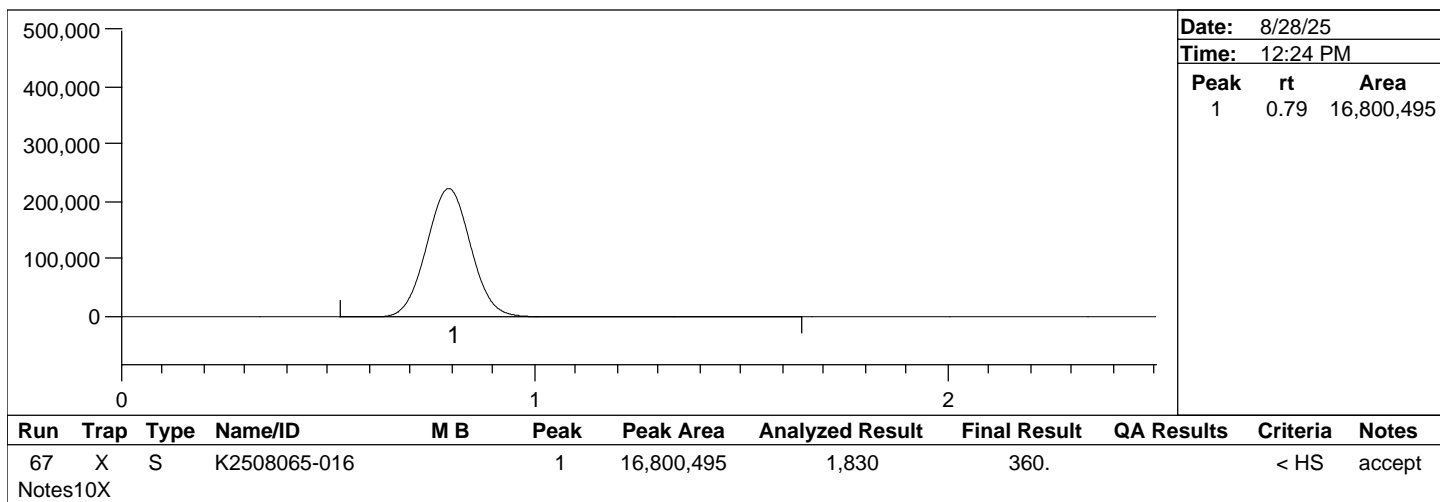


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



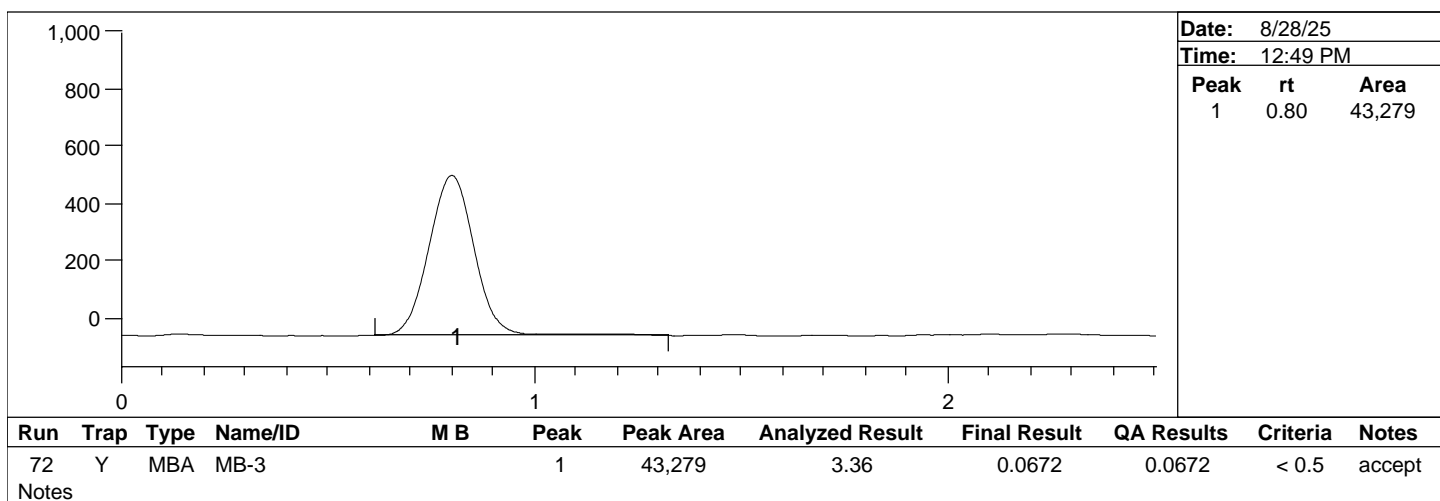
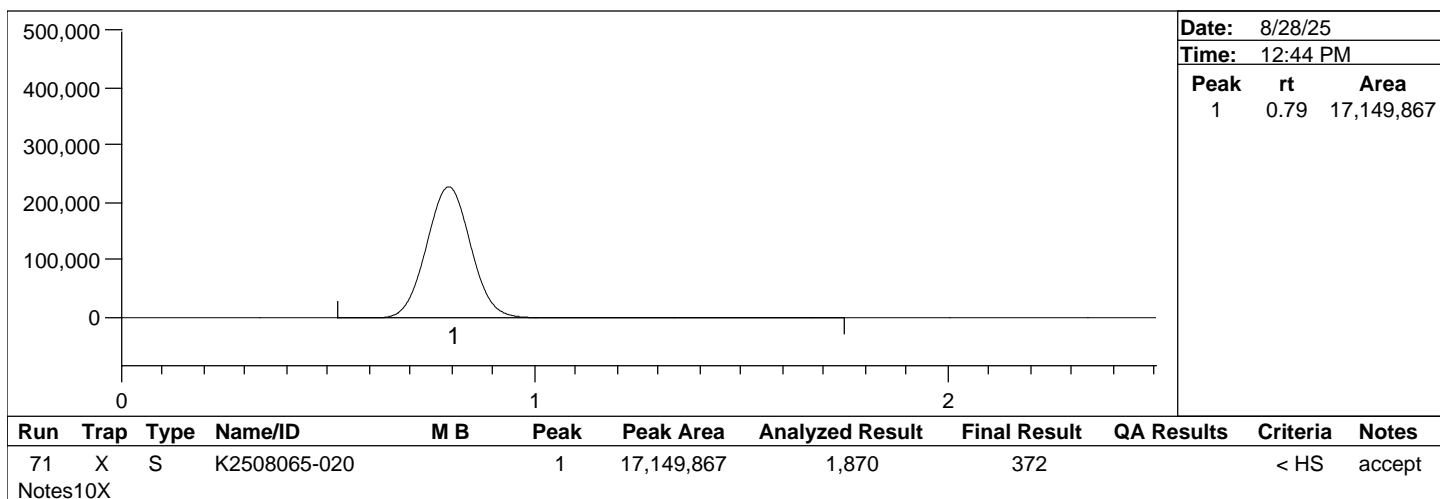
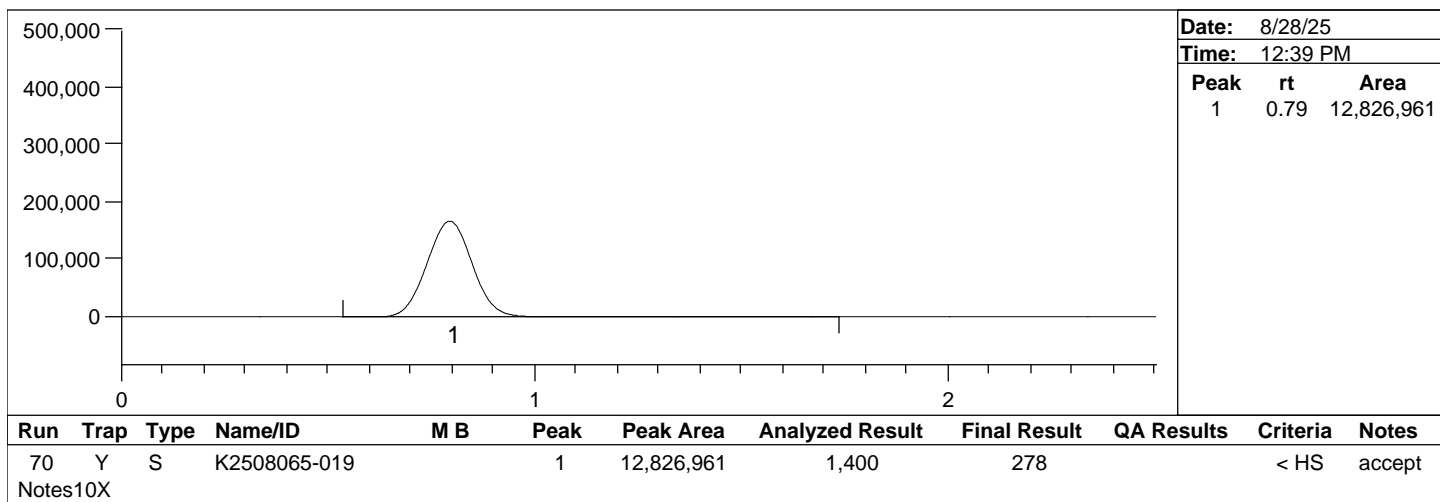
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



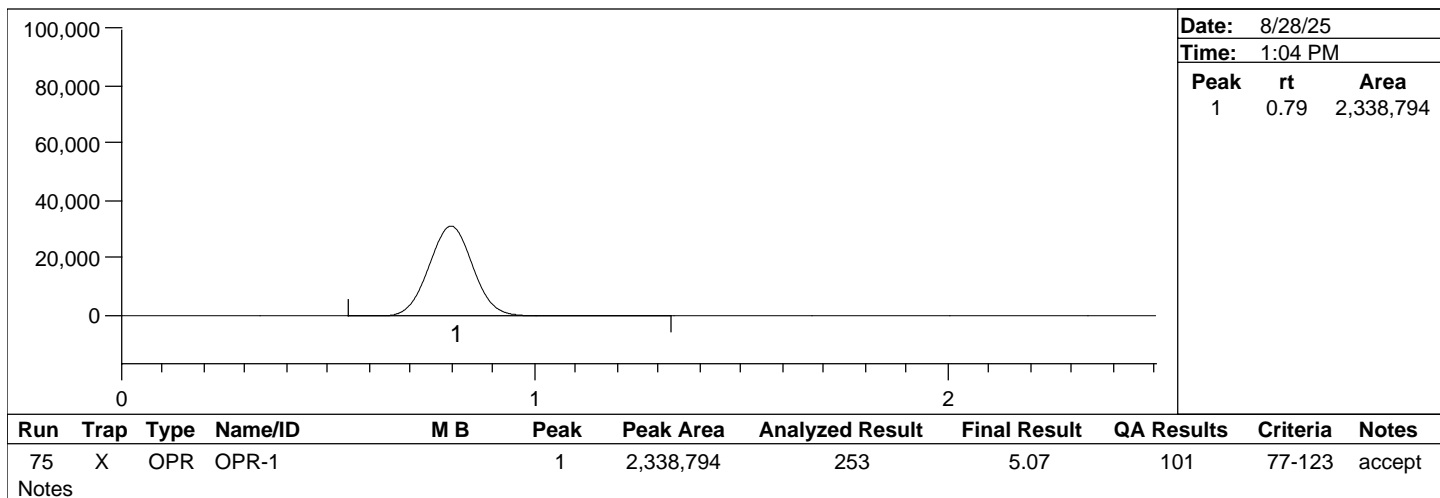
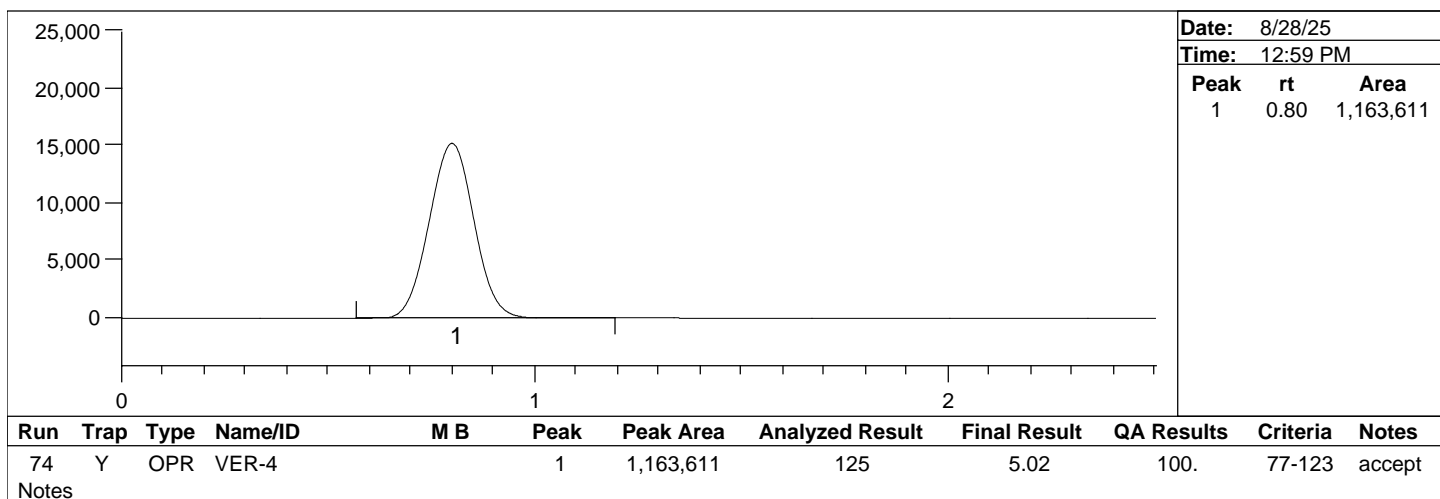
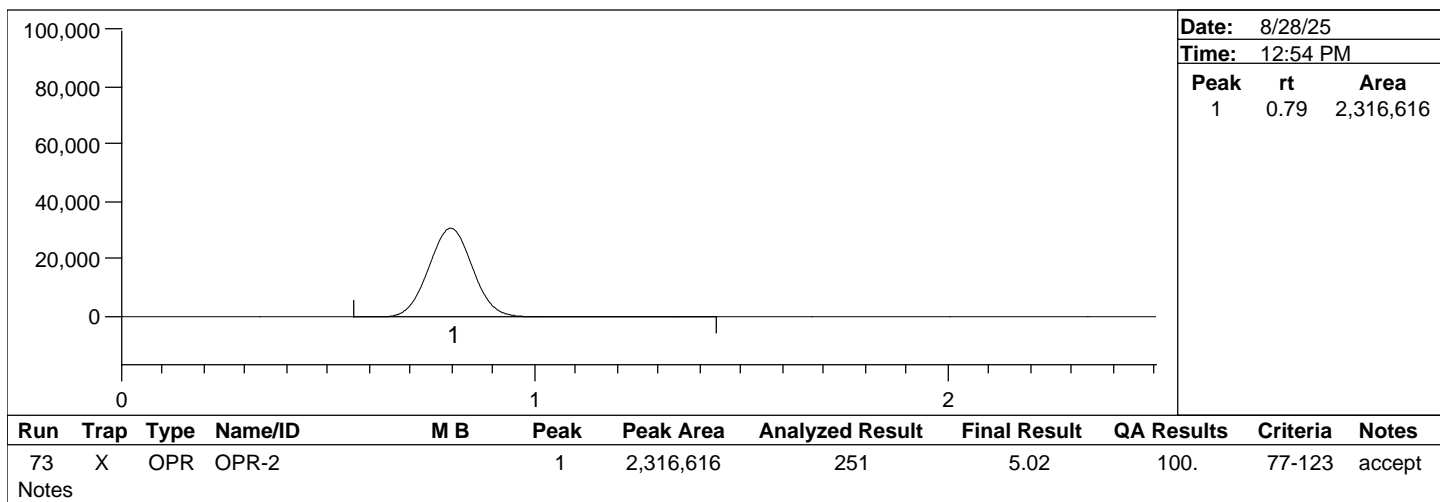
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



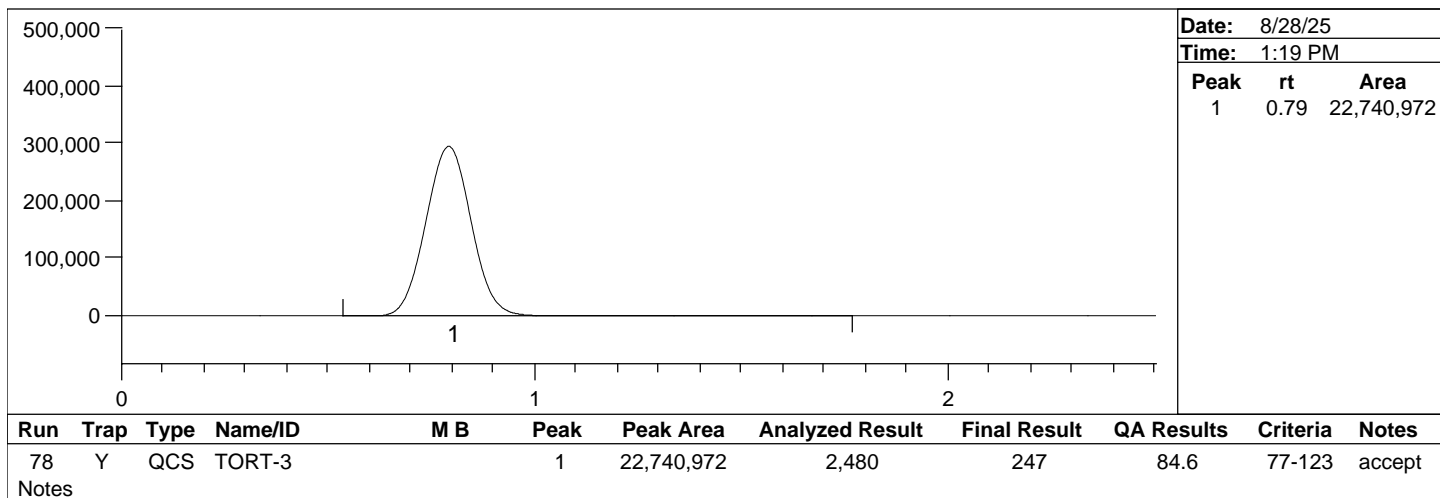
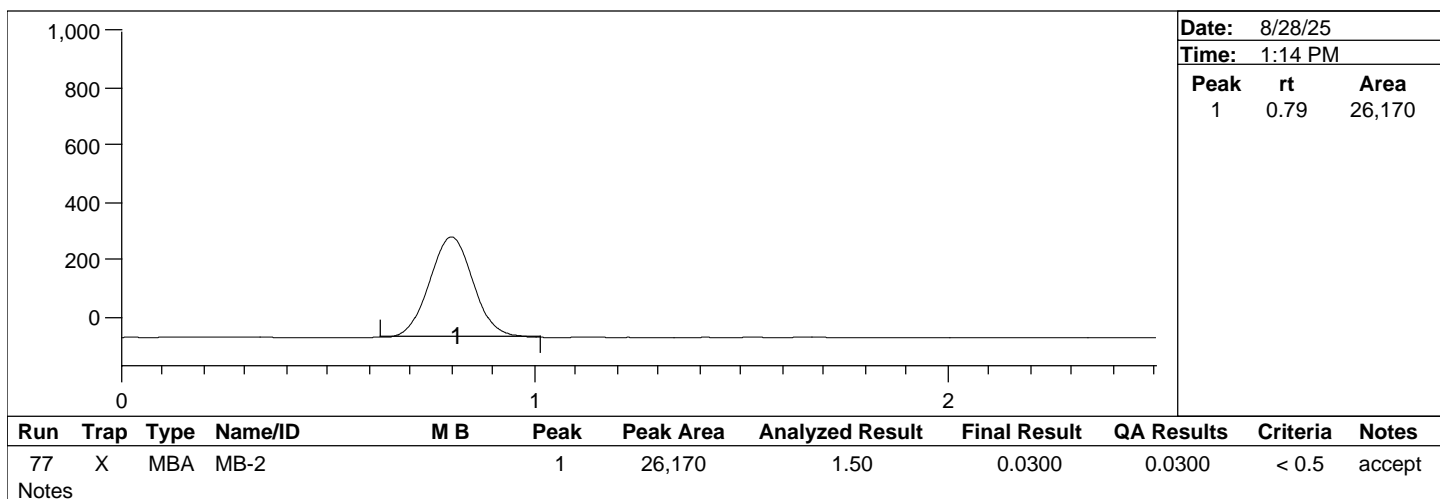
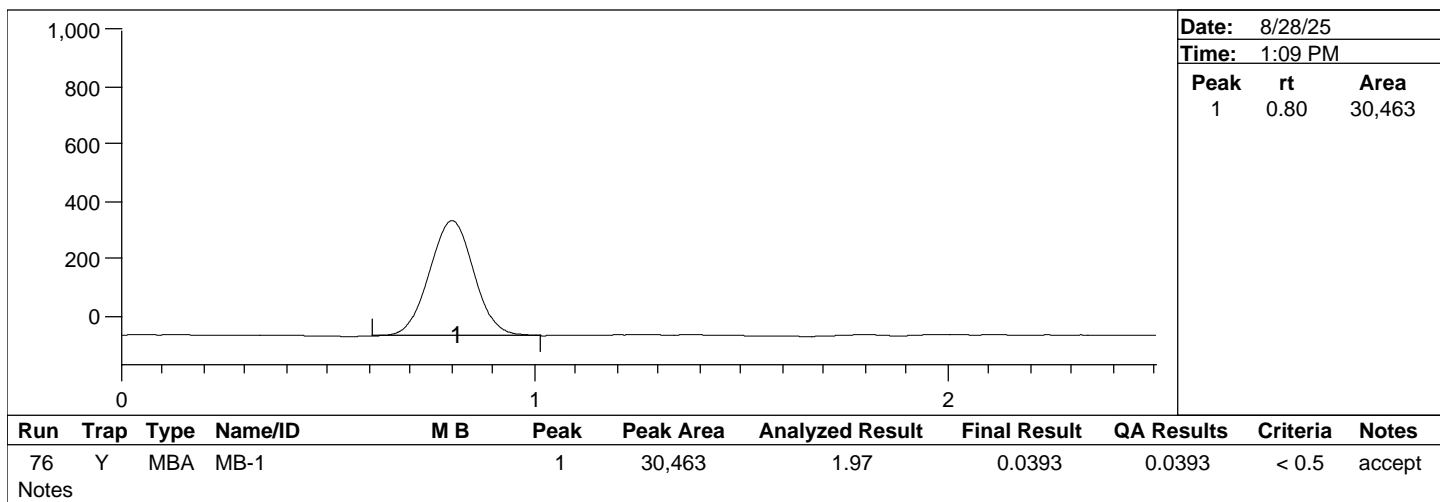
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey

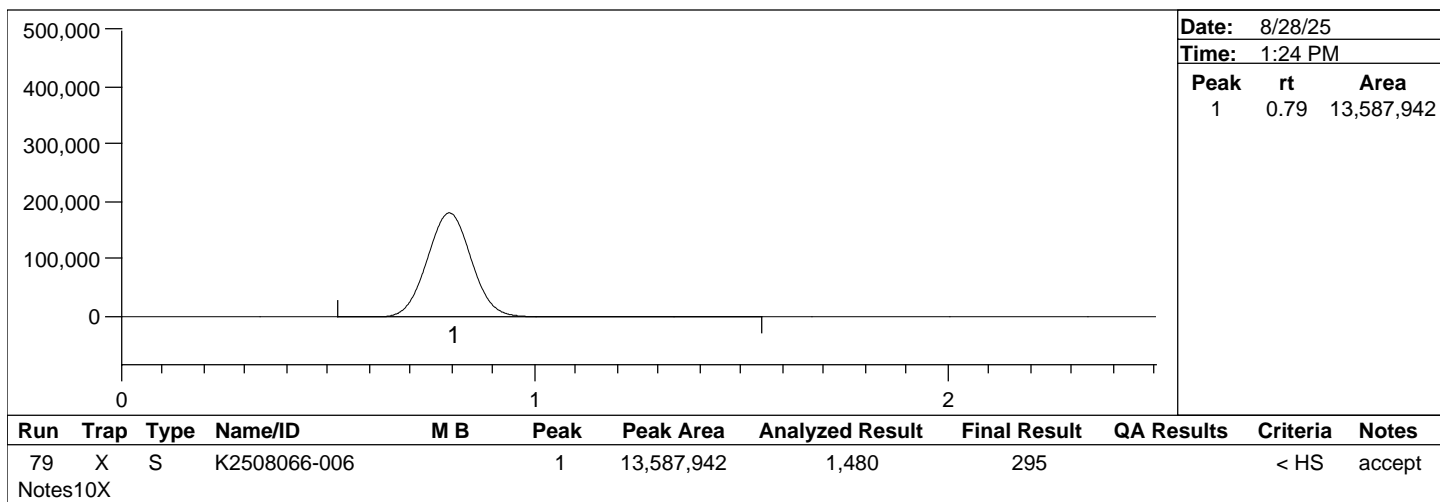


Peak Report

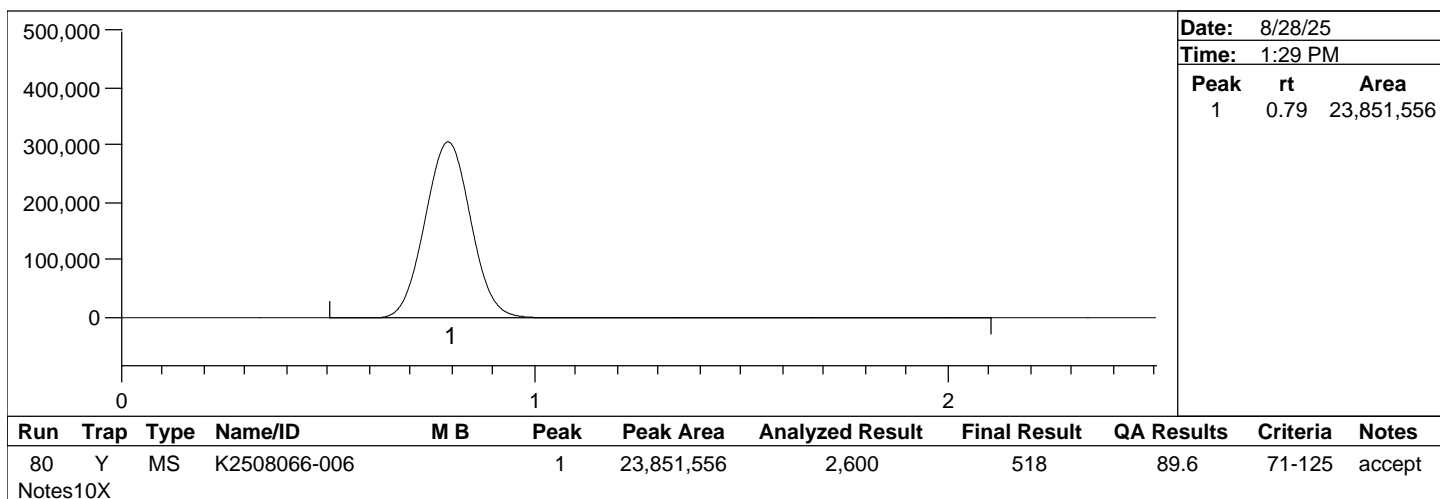
Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

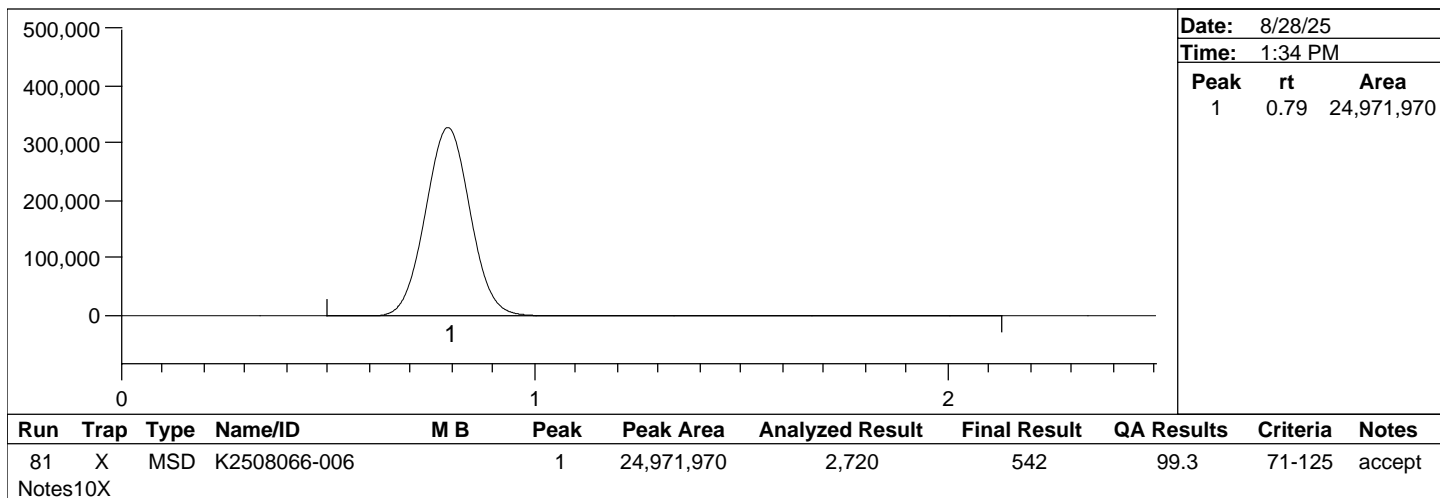
Date Analyzed: 8/28/25
Analyst Name: ssoladey



Date: 8/28/25
Time: 1:24 PM
Peak rt Area
1 0.79 13,587,942



Date: 8/28/25
Time: 1:29 PM
Peak rt Area
1 0.79 23,851,556



Date: 8/28/25
Time: 1:34 PM
Peak rt Area
1 0.79 24,971,970

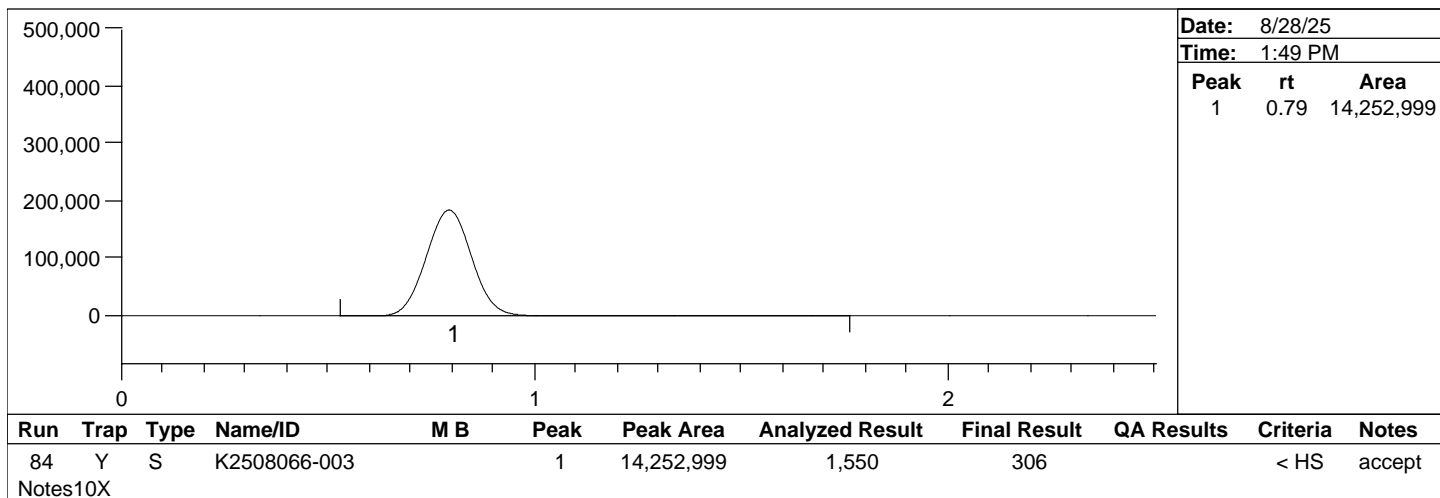
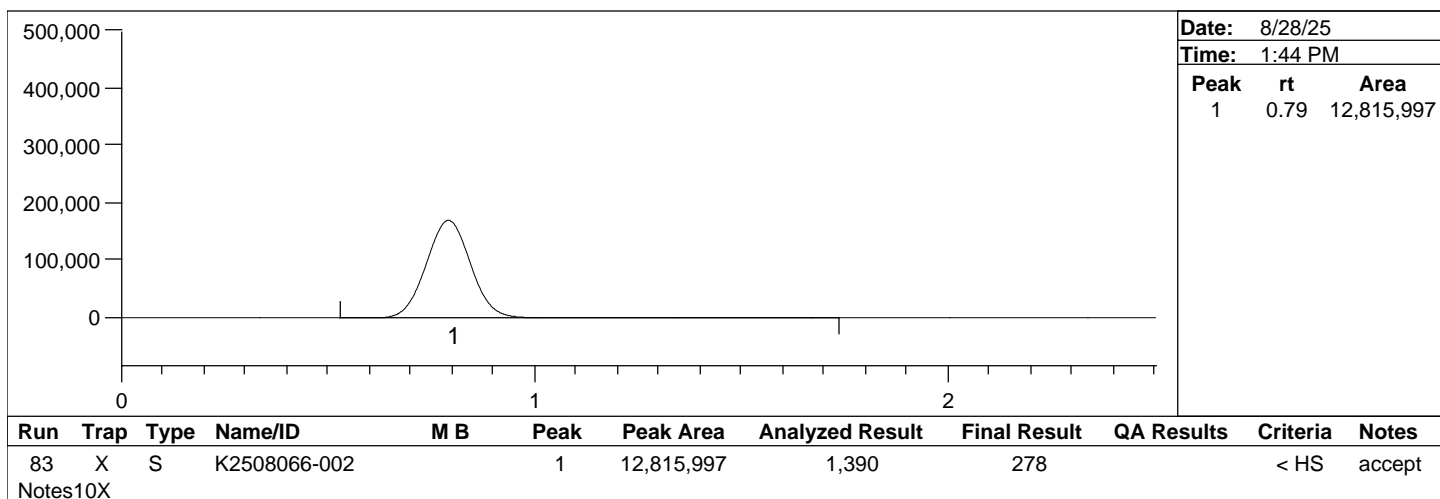
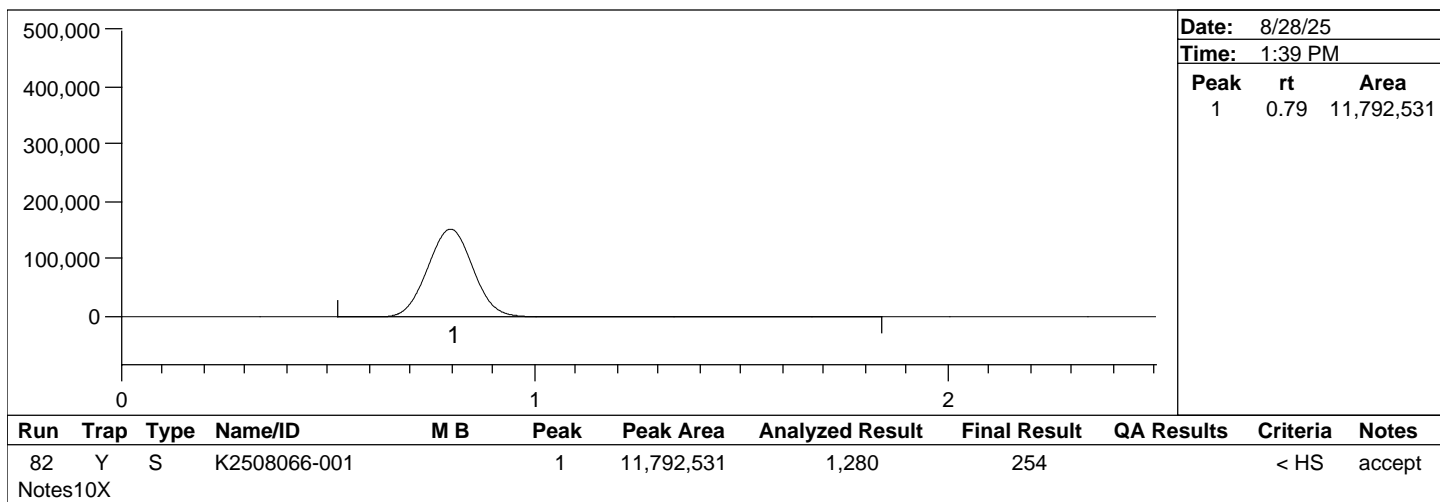
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



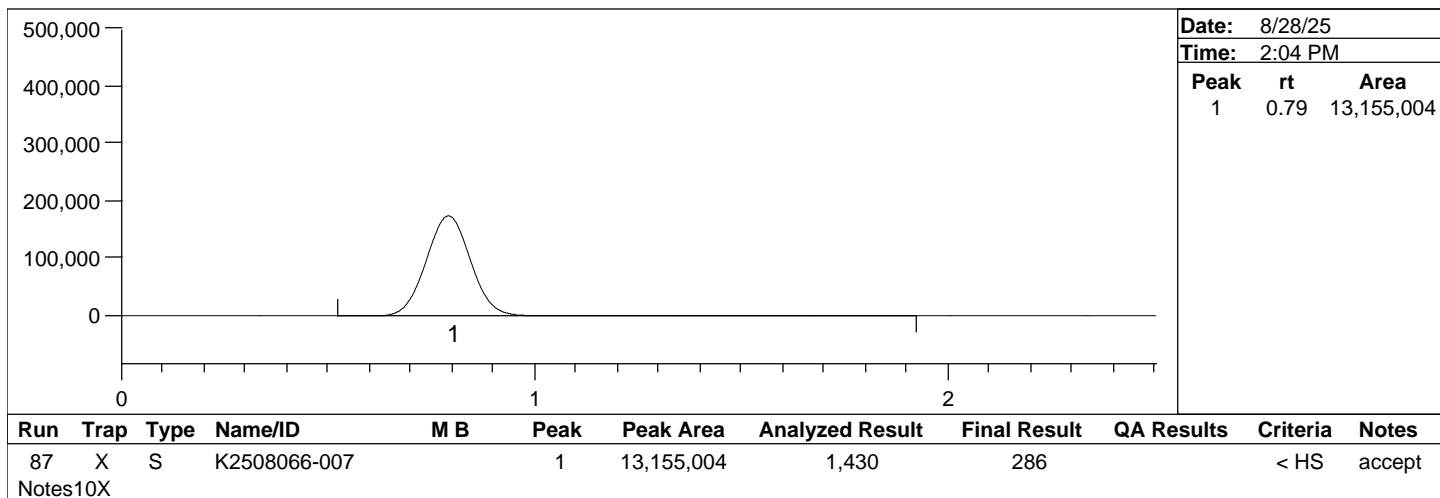
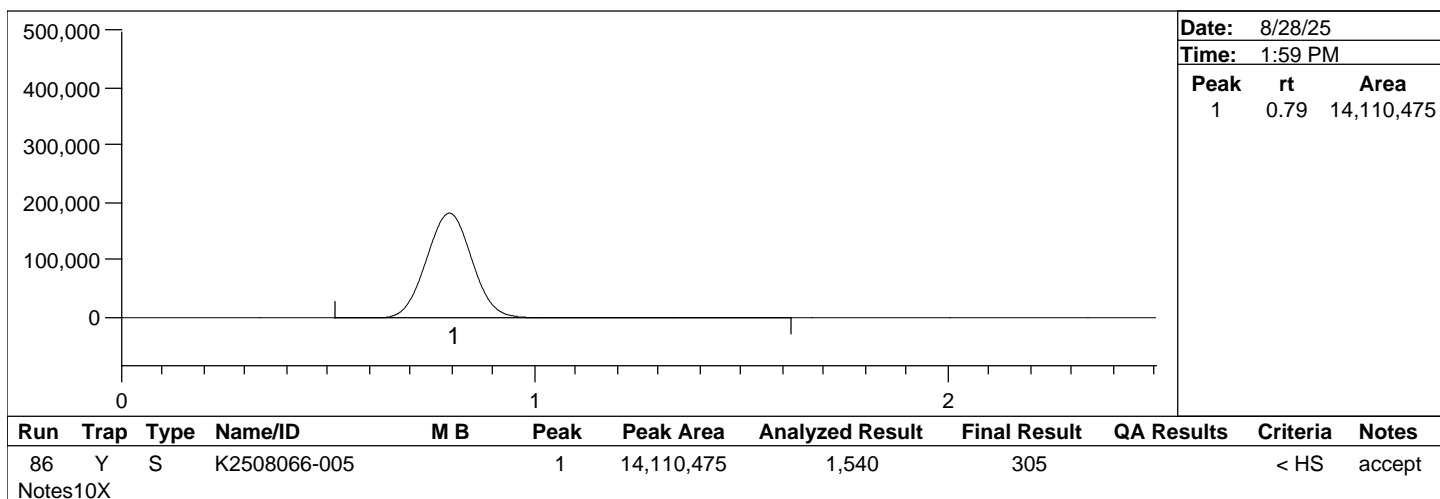
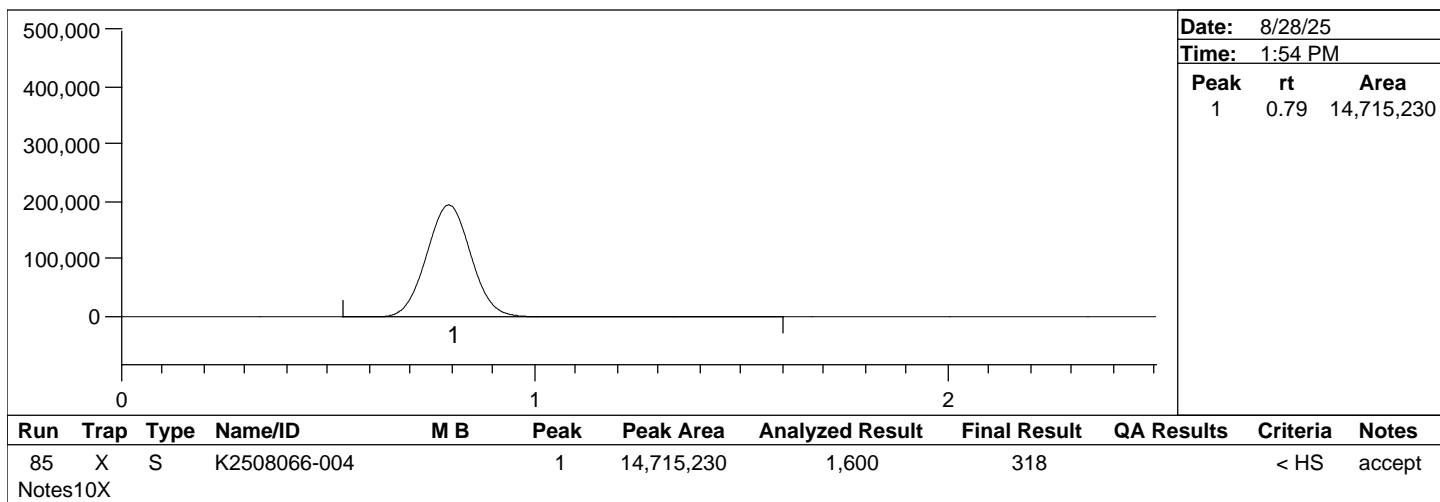
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



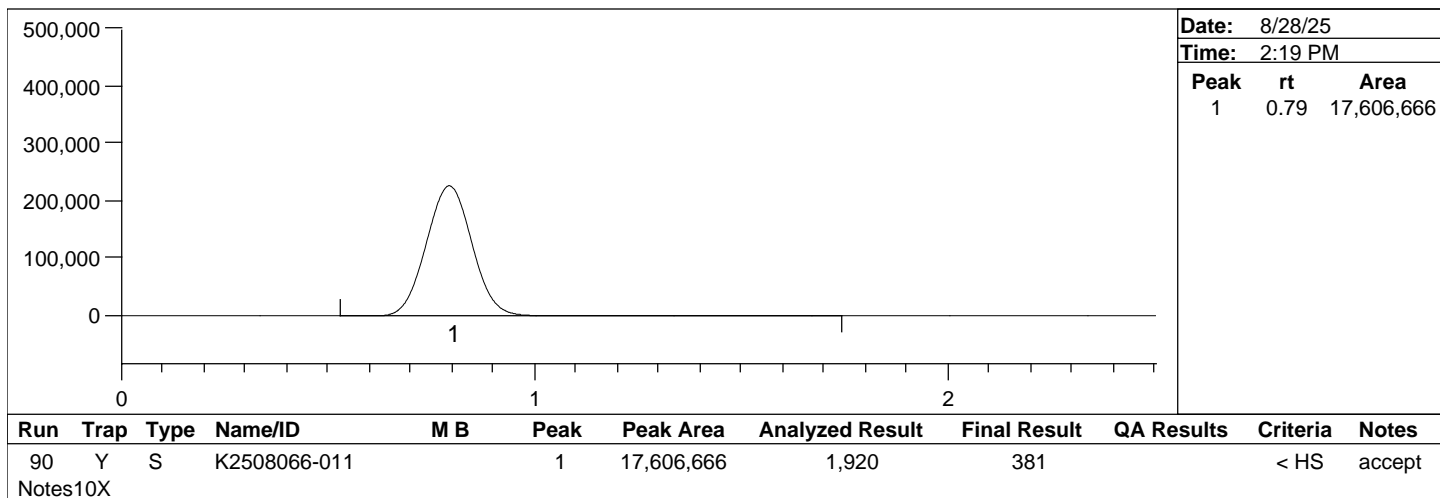
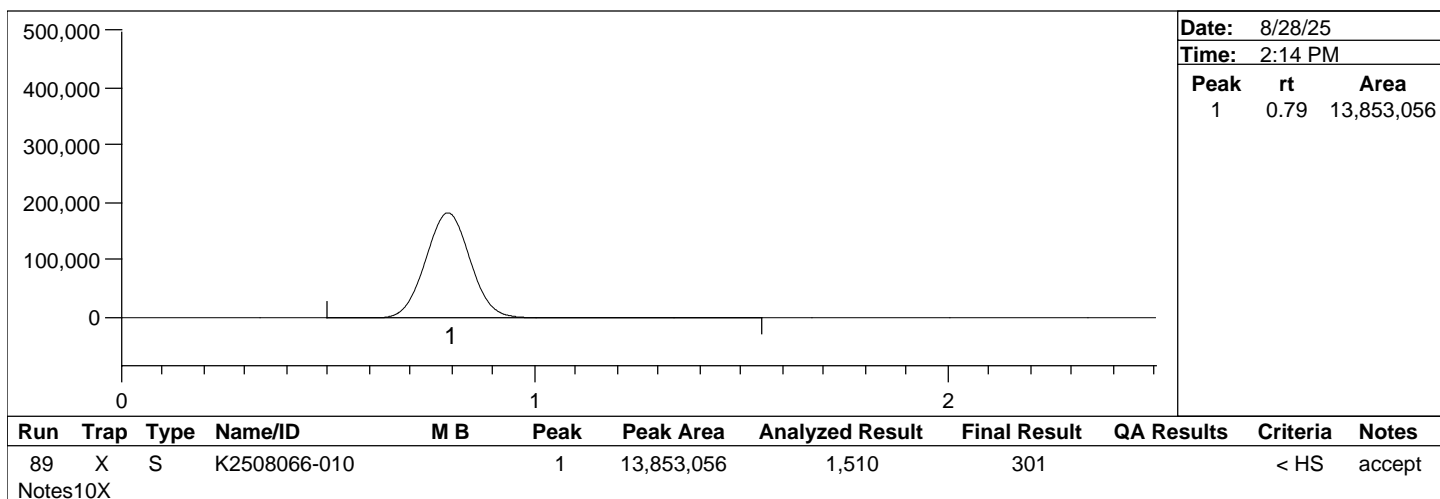
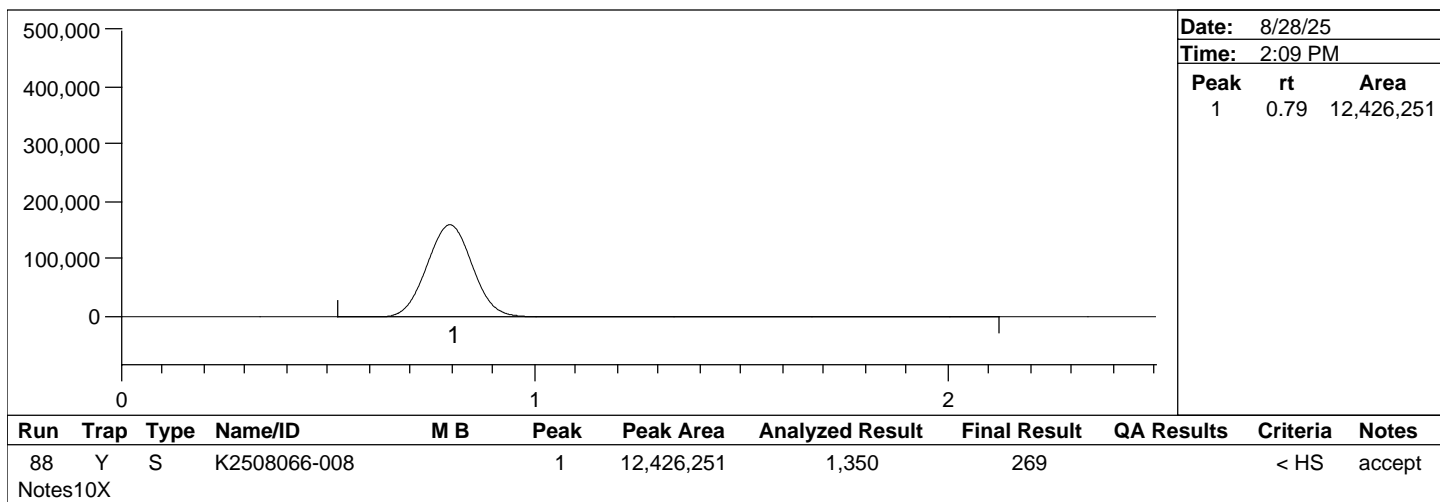
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



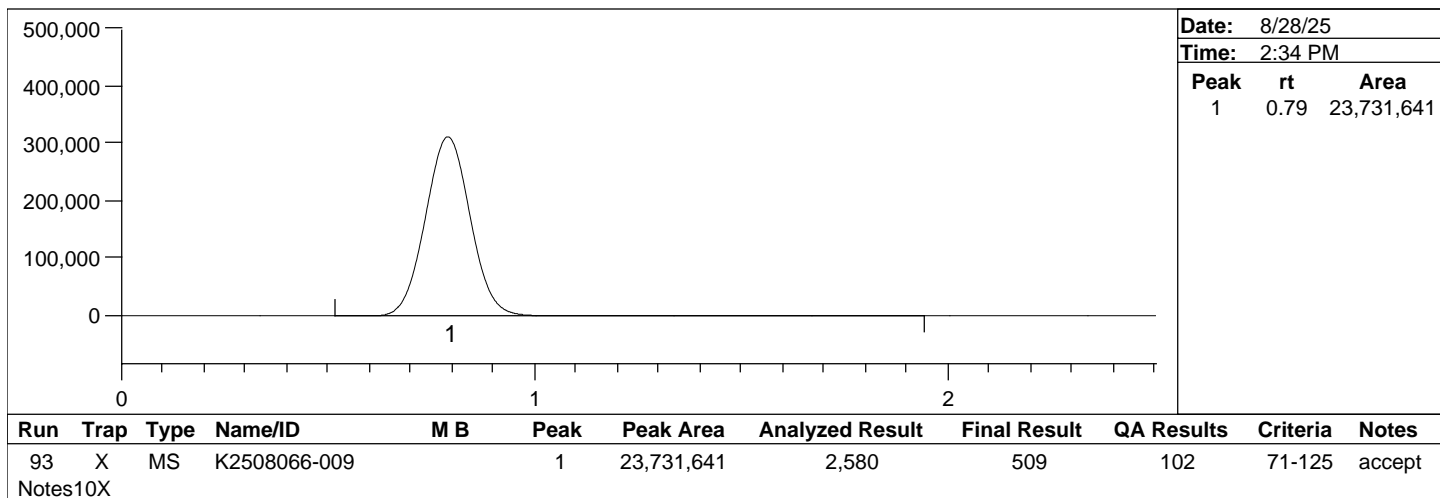
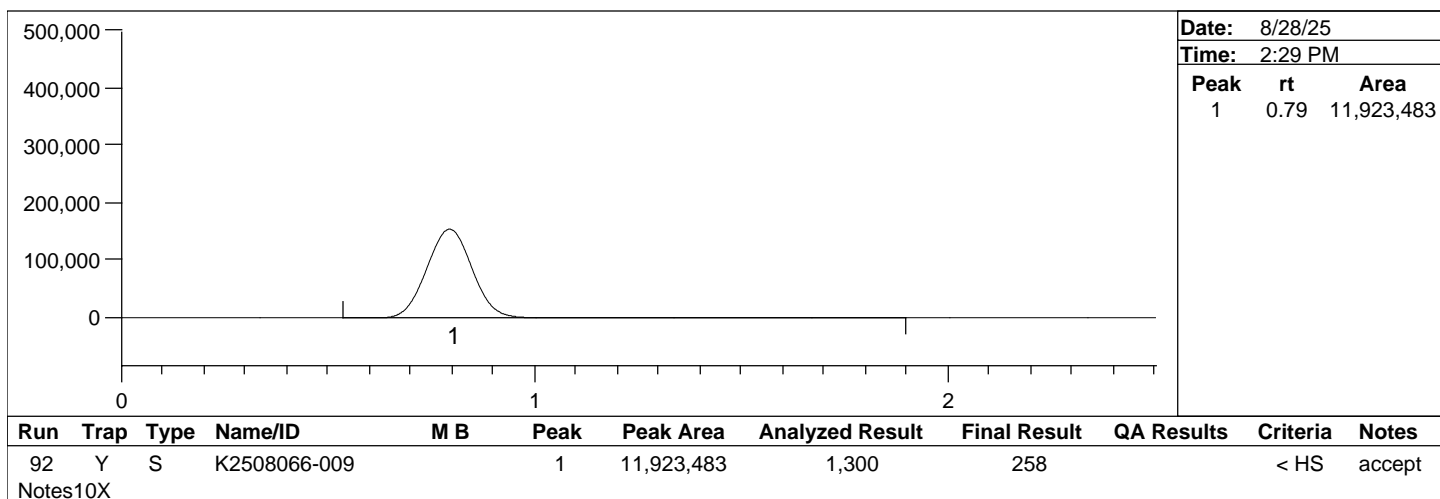
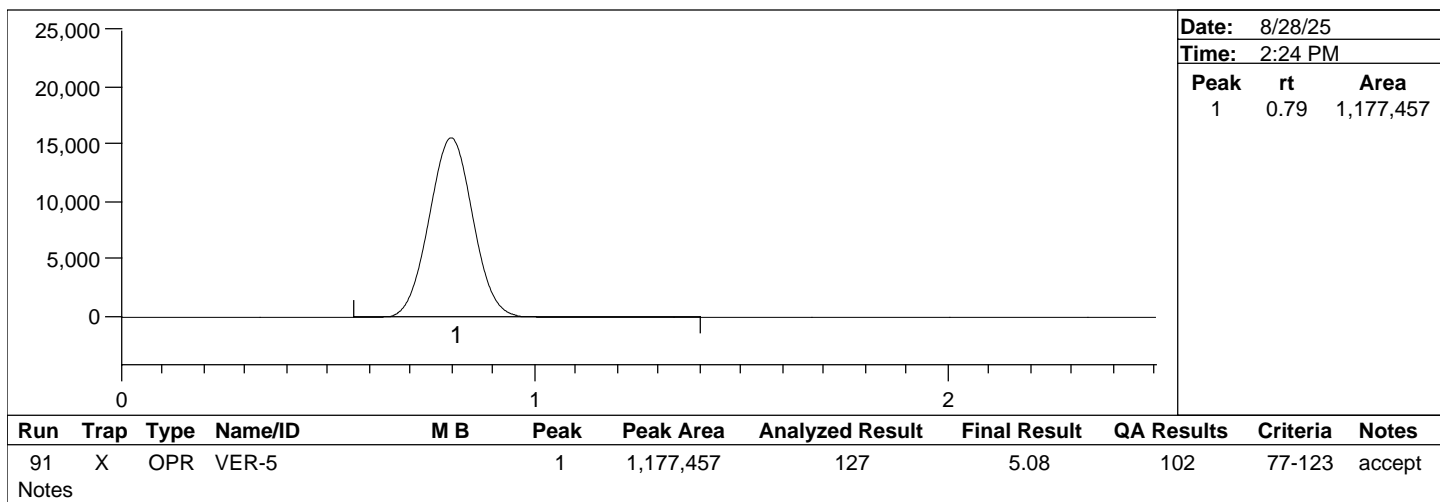
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey

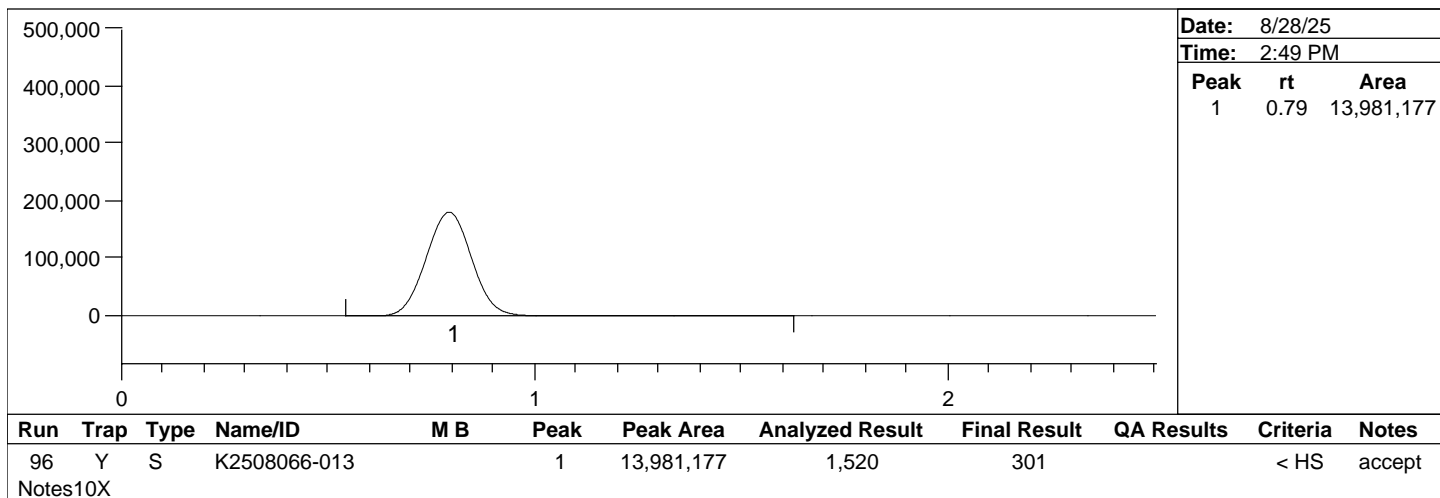
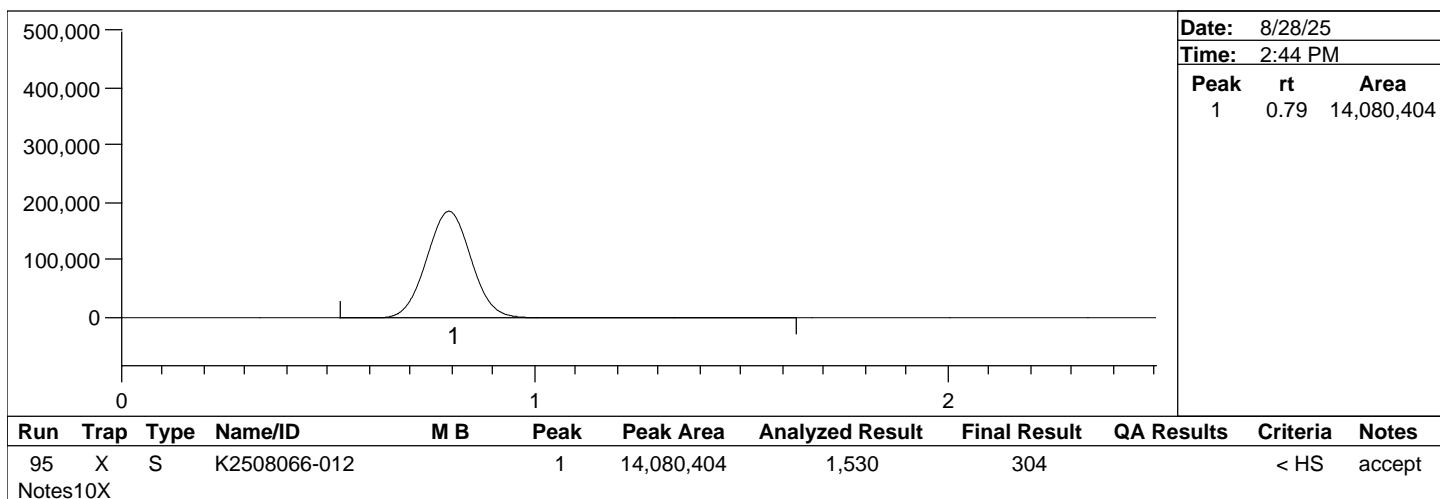
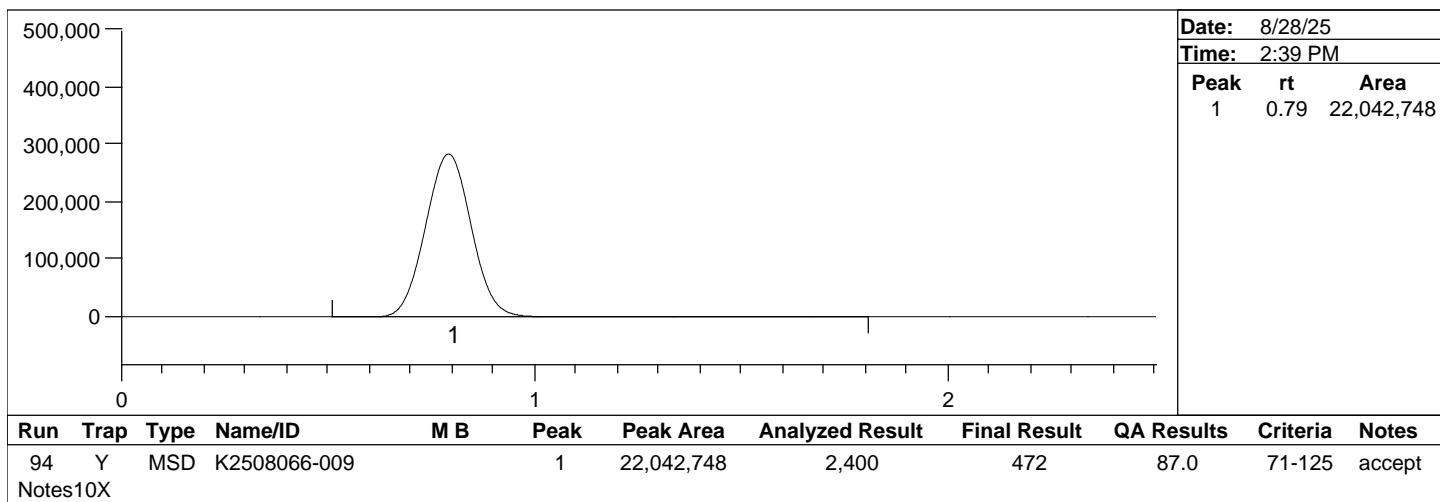


Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssladey



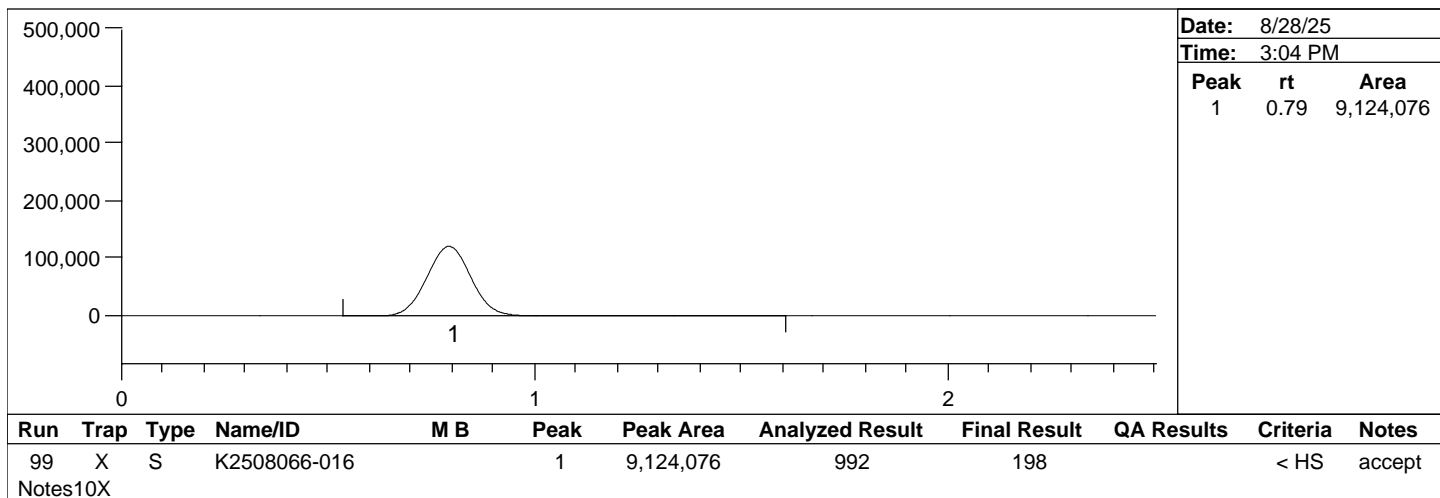
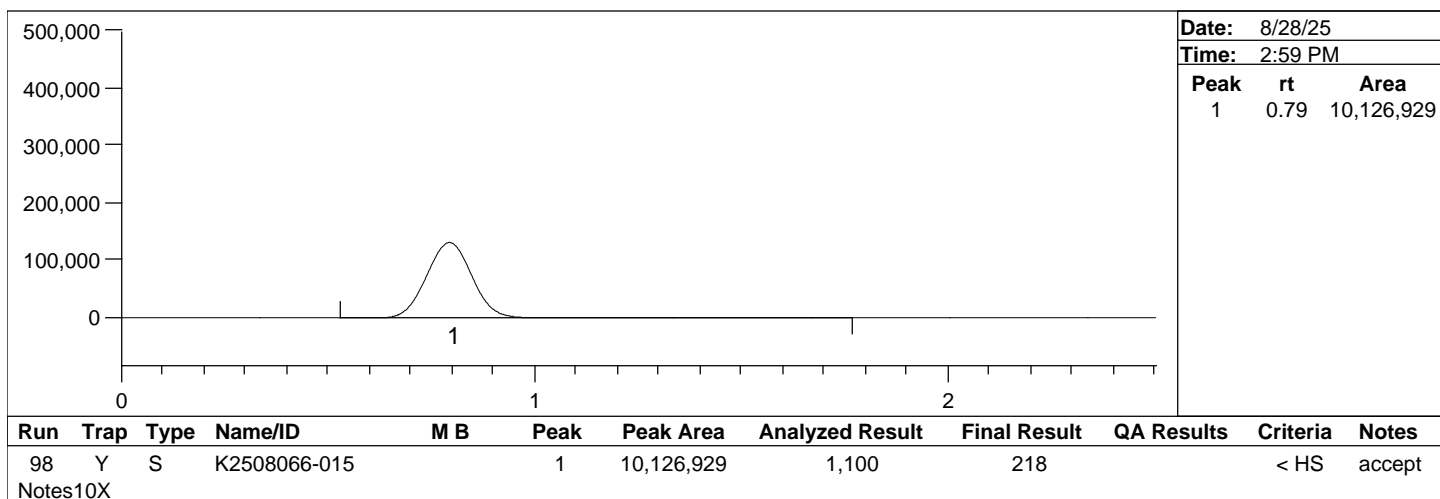
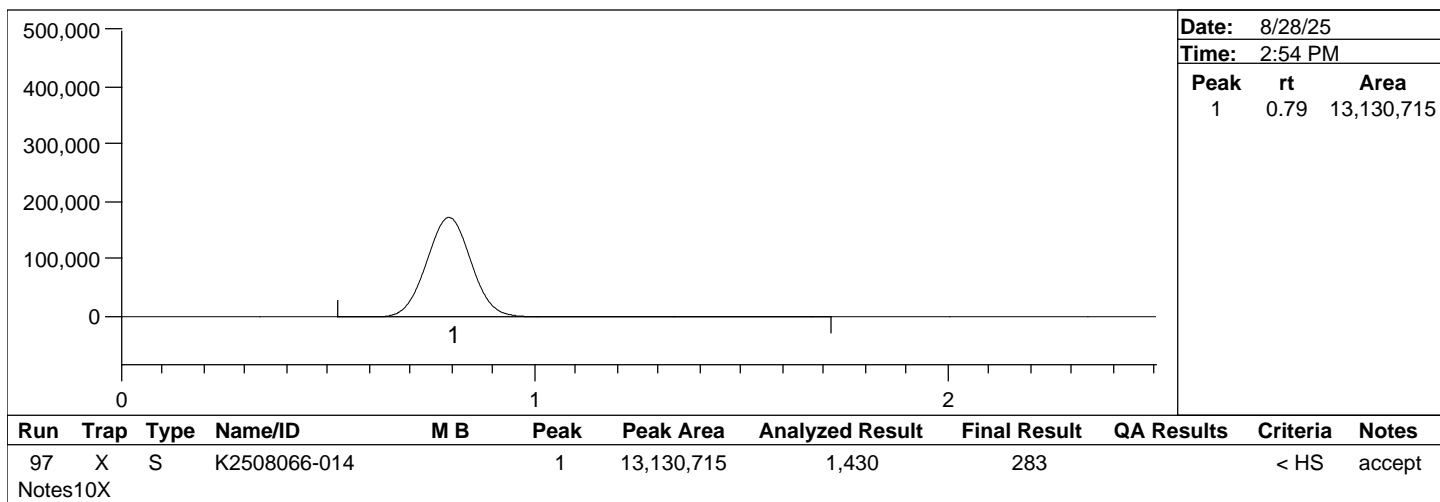
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



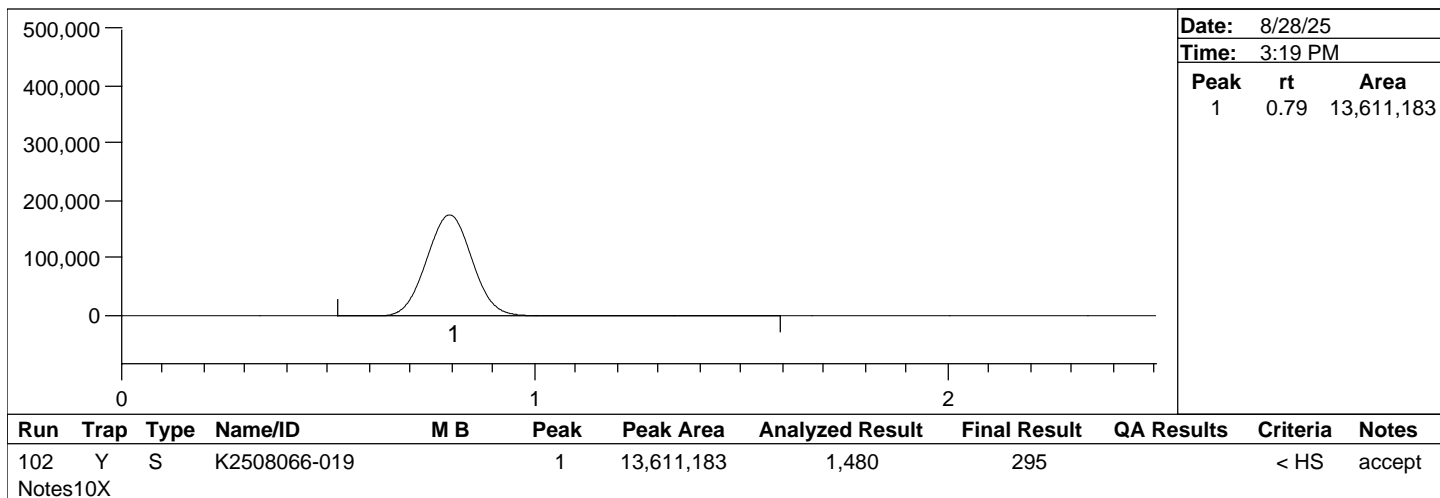
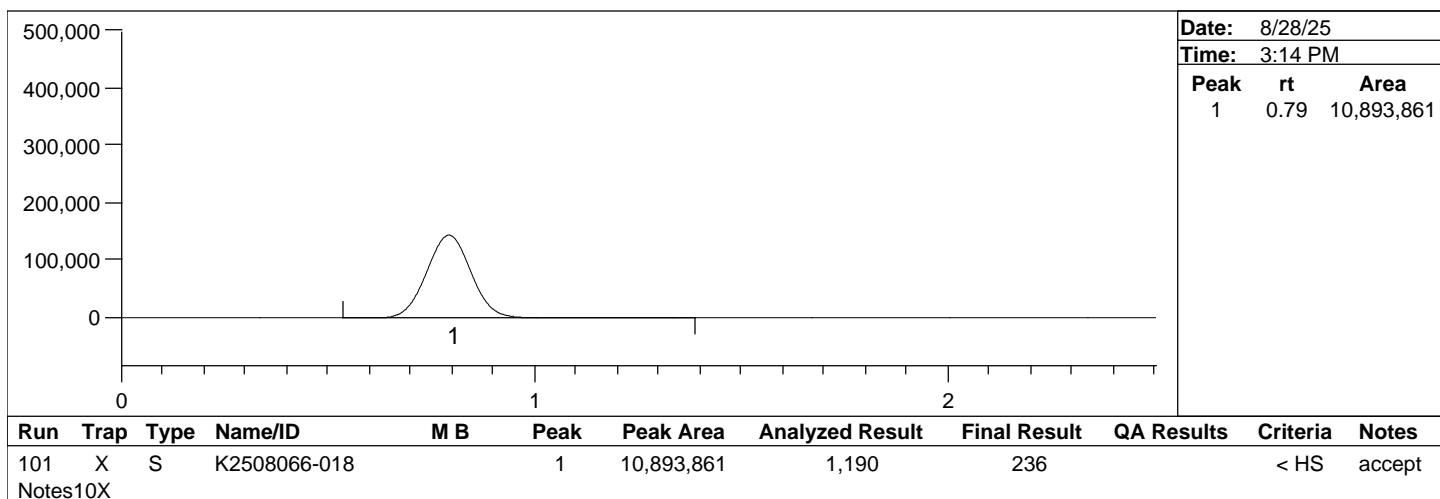
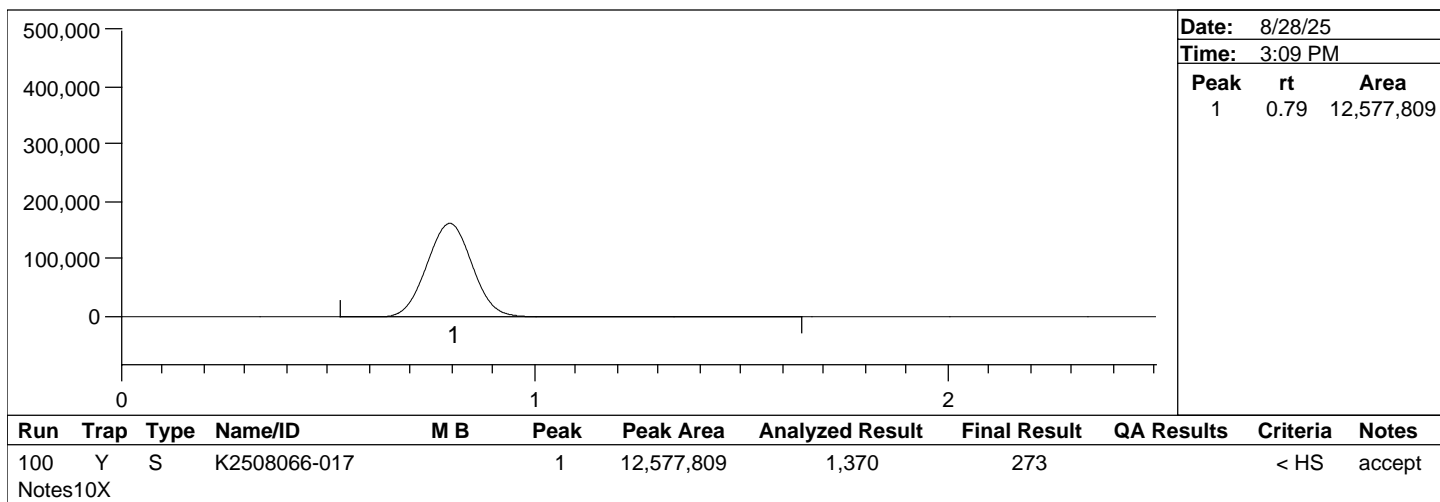
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



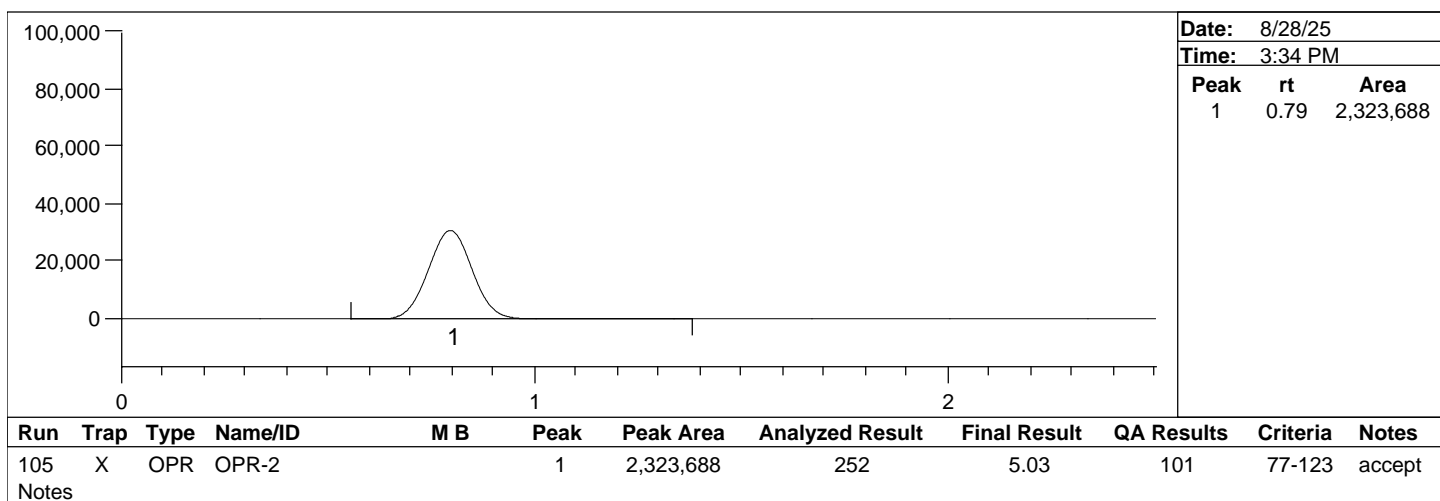
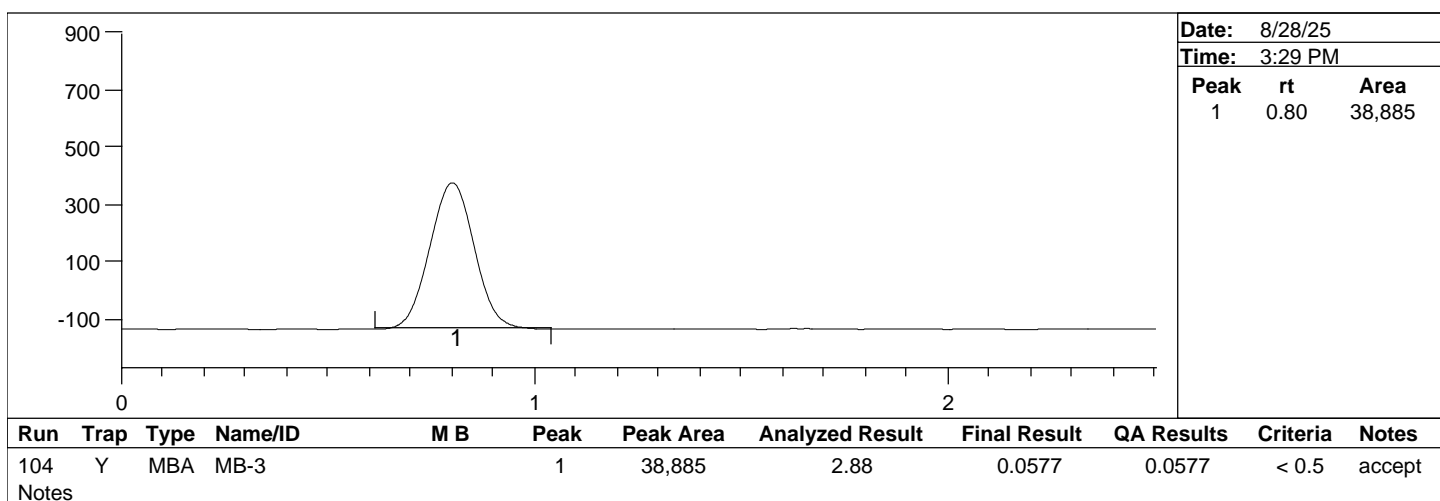
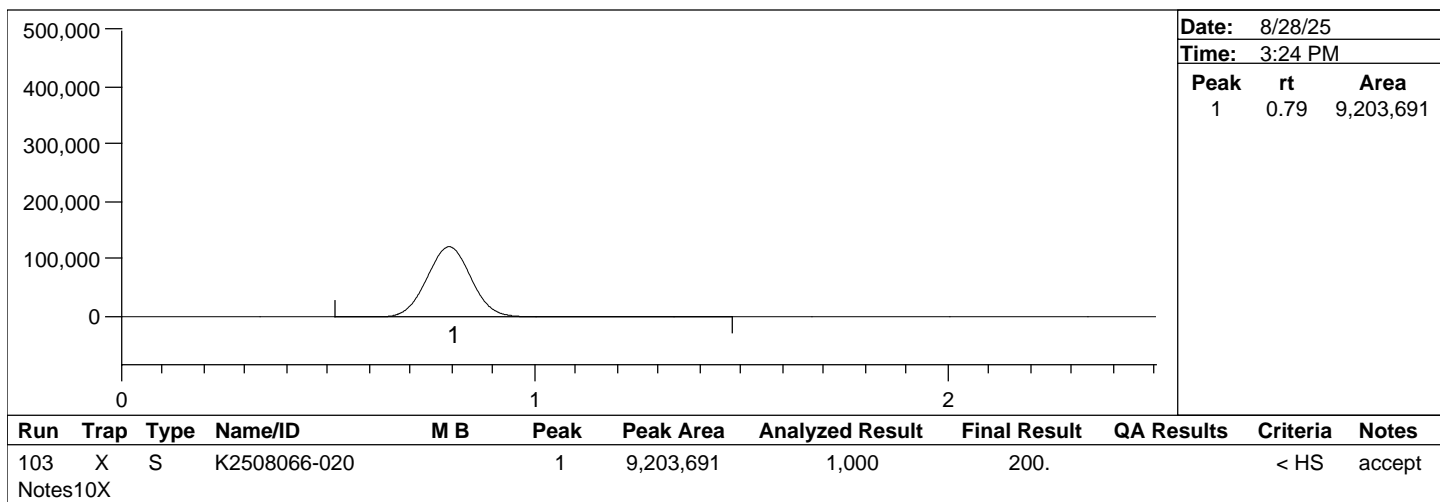
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



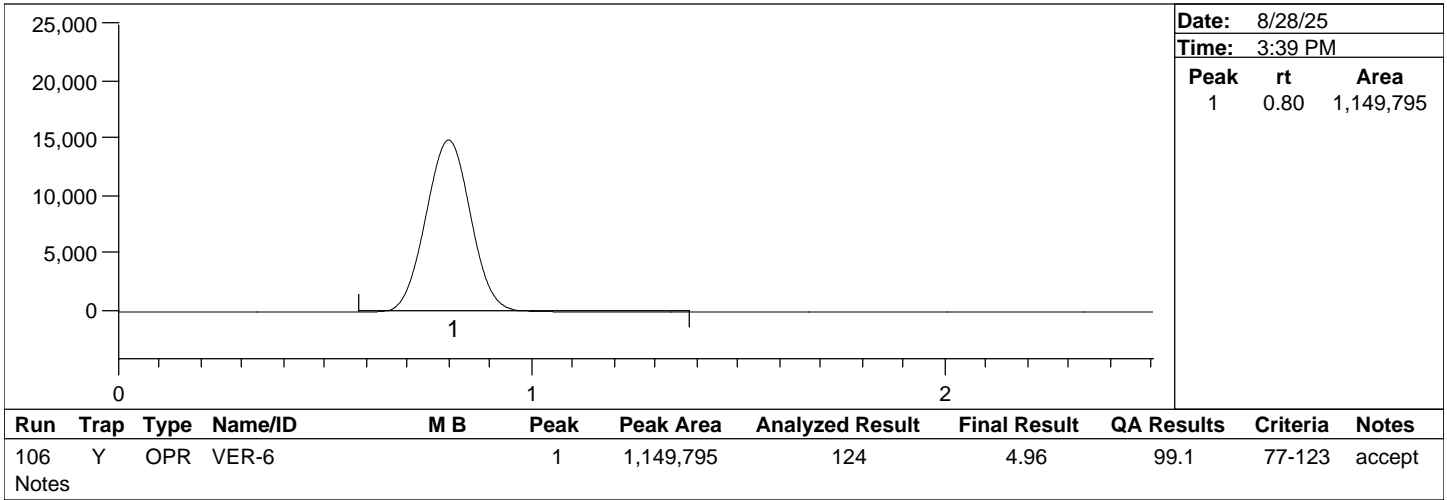
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 8/28/25
Analyst Name: ssoladey



Service Request: K2508064, K2508065, K2508066

Calibration: 082725AICPMS06

ALS LIMS Run# 891163

Pipette IDs: 18010244, 44382052, 43889034

Cal Std: MS37-40-A

CCV: MS37-40-B

ICV Std: MS37-24-A

ICSA: MS37-40-C

LLICV Std: MS37-40-G

ICSAB: MS37-40-D

I.S. Solution: MS36-85-C

Tune Std: MS36-87-C

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	<u> X </u>	<u> </u>	<u> </u>
2. ICV in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
3. CCV's in control (+/- 10%)	<u> X </u>	<u> </u>	<u> </u>
4. ICB/CCB's below MRL	<u> X </u>	<u> </u>	<u> </u>
5. LLICV standard analyzed and in control	<u> X </u>	<u> </u>	<u> </u>
6. ICS standards within 20% of true value	<u> X </u>	<u> </u>	<u> </u>
7. All analytes within instrument linear range	<u> X </u>	<u> </u>	<u> </u>
8. Adequate rinse out time allowed	<u> X </u>	<u> </u>	<u> </u>
9. Internal standards in control	<u> X </u>	<u> </u>	<u> </u>
10. Interferences checked	<u> X </u>	<u> </u>	<u> </u>
11. Was the run terminated? If so, why.	<u> </u>	<u> X </u>	<u> </u>

See Benchsheet exception report for sample batch QC information.

Comments: LRSTD- 1000ppb + 50ppb Ag

Prep Batches: 462959, 462960, 462961

Primary Review by AB Date 8/27/25

Secondary Review by RRM Date 8/27/25

Data Review Form

Instrument ID#: K-ICP-MS-06
DataFile Name: R:\ICP\WIP\DATA\K-ICP-MS-06 (Agilent 7800)\082725A.csv
RUNNO: 891163

K2508064

No exceptions to report.

K2508065

K2508065-012MS - Metals T -

MS Recovery

6020B/Metals T - 66 Zn [He] - Recovery: 126 Limits: 75 - 125 *

K2508066






KQ2515048-04SRM - Metals T -

SRM Recovery

6020B/Metals T - 208 Pb [He] - Recovery: 72 Limits: 80 - 120 *

*okay




Primary Approver: AWB 8/27/25
Secondary Approver: RRM 8/27/25

Sample									
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 1		<input type="checkbox"/>	001SMPL.	2025-08-27 10:20:33	Sample		PRIMER		2
+ 2		<input type="checkbox"/>	002SMPL.	2025-08-27 10:22:38	Sample		RINSE		1
+ 3		<input type="checkbox"/>	003SMPL.	2025-08-27 10:24:42	Sample		PRIMER		2
+ 4		<input type="checkbox"/>	004SMPL.	2025-08-27 10:26:46	Sample		RINSE		1
+ 5		<input type="checkbox"/>	005SMPL.	2025-08-27 10:28:51	Sample		RINSE		1
+ 6		<input type="checkbox"/>	006CALB.	2025-08-27 10:30:55	CalBlk	1	Blank		1
+ 7		<input type="checkbox"/>	007CAL.S.	2025-08-27 10:32:59	CalStd	2	Cal Std		4
+ 8		<input type="checkbox"/>	008_ICV.d	2025-08-27 10:35:04	ICV		ICV		2101
+ 9		<input type="checkbox"/>	009_CCV.	2025-08-27 10:37:09	CCV		CCV		2
+ 10		<input type="checkbox"/>	010_ICB.d	2025-08-27 10:39:13	ICB		ICB		1
+ 11		<input type="checkbox"/>	011_CCB.	2025-08-27 10:41:17	CCB		CCB		1
+ 12		<input type="checkbox"/>	012LICV.d	2025-08-27 10:43:22	LLICV		LLICVT		2102
+ 13		<input type="checkbox"/>	013LICV.d	2025-08-27 10:50:02	LLICV		LLICVT		2102
+ 14		<input type="checkbox"/>	014ICSA.d	2025-08-27 10:52:06	ICSA		ICSA		2103
+ 15		<input type="checkbox"/>	015ICSB.d	2025-08-27 10:54:10	ICSB		ICSAB		2104
+ 16		<input type="checkbox"/>	016SMPL.	2025-08-27 10:56:15	Sample		LRSTD 1000ppb		1101
+ 17		<input type="checkbox"/>	017SMPL.	2025-08-27 10:58:14	Sample		MO STD		2105
+ 18		<input type="checkbox"/>	018_PB.d	2025-08-27 11:06:51	PB		KQ2515045-01	5X	1102
+ 19		<input type="checkbox"/>	019_LCS.d	2025-08-27 11:08:55	LCS		KQ2515045-02	5X	1103
+ 20		<input type="checkbox"/>	020_QC4.	2025-08-27 11:10:59	QC4		KQ2515045-03	5X	1104
+ 21		<input type="checkbox"/>	021_QC5.	2025-08-27 11:13:03	QC5		KQ2515045-04	5X	1105
+ 22		<input type="checkbox"/>	022_ARF.	2025-08-27 11:15:06	AllRef		K2508064-008	5X	1106
+ 23		<input type="checkbox"/>	023_Dup.	2025-08-27 11:17:10	Dup		KQ2515045-05	5X	1107
+ 24		<input type="checkbox"/>	024SMPL.	2025-08-27 11:19:14	Sample		K2508064-008L	25X	1108
+ 25		<input type="checkbox"/>	025_PDS.	2025-08-27 11:21:18	PDS		K2508064-008A	5X	1109
+ 26		<input type="checkbox"/>	026_SPK.	2025-08-27 11:23:22	Spike		KQ2515045-06	5X	1110
+ 27		<input type="checkbox"/>	027SMPL.	2025-08-27 11:25:25	Sample		K2508064-001	5X	1111
+ 28		<input type="checkbox"/>	028_CCV.	2025-08-27 11:27:29	CCV		CCV		2
+ 29		<input type="checkbox"/>	029_CCB.	2025-08-27 11:29:33	CCB		CCB		1
+ 30		<input type="checkbox"/>	030SMPL.	2025-08-27 11:31:38	Sample		K2508064-002	5X	1112
+ 31		<input type="checkbox"/>	031SMPL.	2025-08-27 11:33:42	Sample		K2508064-003	5X	1201
+ 32		<input type="checkbox"/>	032SMPL.	2025-08-27 11:35:44	Sample		K2508064-004	5X	1202

see veron
 AB
 8/27/25

Sample									
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 33		<input type="checkbox"/>	033SMPL.	2025-08-27 11:37:47	Sample		K2508064-005	5X	1203
+ 34		<input type="checkbox"/>	034SMPL.	2025-08-27 11:39:50	Sample		K2508064-006	5X	1204
+ 35		<input type="checkbox"/>	035SMPL.	2025-08-27 11:41:55	Sample		K2508064-007	5X	1205
+ 36		<input type="checkbox"/>	036SMPL.	2025-08-27 11:43:57	Sample		K2508064-009	5X	1206
+ 37		<input type="checkbox"/>	037SMPL.	2025-08-27 11:46:00	Sample		K2508064-010	5X	1207
+ 38		<input type="checkbox"/>	038SMPL.	2025-08-27 11:48:02	Sample		K2508064-011	5X	1208
+ 39		<input type="checkbox"/>	039SMPL.	2025-08-27 11:50:05	Sample		K2508064-012	5X	1209
+ 40		<input type="checkbox"/>	040_CC.V.	2025-08-27 11:52:09	CCV		CCV		2
+ 41		<input type="checkbox"/>	041_CC.V.	2025-08-27 11:57:16	CCV		CCV		2
+ 42		<input type="checkbox"/>	042_CCB.	2025-08-27 11:59:21	CCB		CCB		1
+ 43		<input type="checkbox"/>	043SMPL.	2025-08-27 12:01:25	Sample		K2508064-013	5X	1210
+ 44		<input type="checkbox"/>	044SMPL.	2025-08-27 12:03:27	Sample		K2508064-014	5X	1211
+ 45		<input type="checkbox"/>	045SMPL.	2025-08-27 12:05:30	Sample		K2508064-015	5X	1212
+ 46		<input type="checkbox"/>	046SMPL.	2025-08-27 12:07:33	Sample		K2508064-016	5X	1301
+ 47		<input type="checkbox"/>	047SMPL.	2025-08-27 12:09:35	Sample		K2508064-017	5X	1302
+ 48		<input type="checkbox"/>	048SMPL.	2025-08-27 12:11:39	Sample		K2508064-018	5X	1303
+ 49		<input type="checkbox"/>	049SMPL.	2025-08-27 12:13:43	Sample		K2508064-019	5X	1304
+ 50		<input type="checkbox"/>	050SMPL.	2025-08-27 12:15:46	Sample		K2508064-020	5X	1305
+ 51		<input type="checkbox"/>	051_CC.V.	2025-08-27 12:17:50	CCV		CCV		2
+ 52		<input type="checkbox"/>	052_CCB.	2025-08-27 12:19:54	CCB		CCB		1
+ 53		<input type="checkbox"/>	053_PB.d	2025-08-27 12:21:59	PB		KQ2515046-01	5X	1306
+ 54		<input type="checkbox"/>	054_LCS.d	2025-08-27 12:24:03	LCS		KQ2515046-02	5X	1307
+ 55		<input type="checkbox"/>	055_QC4.	2025-08-27 12:26:05	QC4		KQ2515046-03	5X	1308
+ 56		<input type="checkbox"/>	056_QC5.	2025-08-27 12:28:08	QC5		KQ2515046-04	5X	1309
+ 57		<input type="checkbox"/>	057_ARF.	2025-08-27 12:30:10	AllRef		K2508065-012	5X	1310
+ 58		<input type="checkbox"/>	058_Dup.	2025-08-27 12:32:14	Dup		KQ2515046-05	5X	1311
+ 59		<input type="checkbox"/>	059SMPL.	2025-08-27 12:34:17	Sample		K2508065-012L	25X	1312
+ 60		<input type="checkbox"/>	060_PDS.	2025-08-27 12:36:19	PDS		K2508065-012A	5X	1401
+ 61		<input type="checkbox"/>	061_SPK.	2025-08-27 12:38:23	Spike		KQ2515046-06	5X	1402
+ 62		<input type="checkbox"/>	062SMPL.	2025-08-27 12:40:26	Sample		K2508065-001	5X	1403
+ 63		<input type="checkbox"/>	063_CC.V.	2025-08-27 12:42:29	CCV		CCV		2
+ 64		<input type="checkbox"/>	064_CCB.	2025-08-27 12:44:32	CCB		CCB		1

See
 rerun
 AB
 5/27/25

Sample										
		Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...	
+	65	<input type="checkbox"/>	065SMPL.	2025-08-27 12:46:36	Sample		K2508065-002	5X	1404	
+	66	<input type="checkbox"/>	066SMPL.	2025-08-27 12:48:40	Sample		K2508065-003	5X	1405	
+	67	<input type="checkbox"/>	067SMPL.	2025-08-27 12:50:43	Sample		K2508065-004	5X	1406	
+	68	<input type="checkbox"/>	068SMPL.	2025-08-27 12:52:47	Sample		K2508065-005	5X	1407	
+	69	<input type="checkbox"/>	069SMPL.	2025-08-27 12:54:51	Sample		K2508065-006	5X	1408	
+	70	<input type="checkbox"/>	070SMPL.	2025-08-27 12:56:55	Sample		K2508065-007	5X	1409	
+	71	<input type="checkbox"/>	071SMPL.	2025-08-27 12:58:58	Sample		K2508065-008	5X	1410	
+	72	<input type="checkbox"/>	072SMPL.	2025-08-27 13:01:01	Sample		K2508065-009	5X	1411	
+	73	<input type="checkbox"/>	073SMPL.	2025-08-27 13:03:05	Sample		K2508065-010	5X	1412	
+	74	<input type="checkbox"/>	074SMPL.	2025-08-27 13:05:09	Sample		K2508065-011	5X	1501	
+	75	<input type="checkbox"/>	075_CCV.	2025-08-27 13:07:13	CCV		CCV		2	
+	76	<input type="checkbox"/>	076_CCB.	2025-08-27 13:09:17	CCB		CCB		1	
+	77	<input type="checkbox"/>	077SMPL.	2025-08-27 13:11:22	Sample		K2508065-013	5X	1502	
+	78	<input type="checkbox"/>	078SMPL.	2025-08-27 13:13:25	Sample		K2508065-014	5X	1503	
+	79	<input type="checkbox"/>	079SMPL.	2025-08-27 13:15:29	Sample		K2508065-015	5X	1504	
+	80	<input type="checkbox"/>	080SMPL.	2025-08-27 13:17:32	Sample		K2508065-016	5X	1505	
+	81	<input type="checkbox"/>	081SMPL.	2025-08-27 13:19:35	Sample		K2508065-017	5X	1506	
+	82	<input type="checkbox"/>	082SMPL.	2025-08-27 13:21:39	Sample		K2508065-018	5X	1507	
+	83	<input type="checkbox"/>	083SMPL.	2025-08-27 13:23:43	Sample		K2508065-019	5X	1508	
+	84	<input type="checkbox"/>	084SMPL.	2025-08-27 13:25:47	Sample		K2508065-020	5X	1509	
+	85	<input type="checkbox"/>	085_CCV.	2025-08-27 13:27:52	CCV		CCV		2	
+	86	<input type="checkbox"/>	086_CCB.	2025-08-27 13:29:56	CCB		CCB		1	
+	87	<input type="checkbox"/>	087_PB.d	2025-08-27 13:32:01	PB		KQ2515048-01	5X	1510	
+	88	<input type="checkbox"/>	088_LCS.d	2025-08-27 13:34:04	LCS		KQ2515048-02	5X	1511	
+	89	<input type="checkbox"/>	089_QC4.	2025-08-27 13:36:08	QC4		KQ2515048-03	5X	1512	
+	90		<input type="checkbox"/>	090_QC5.	2025-08-27 13:38:11	QC5		KQ2515048-04	5X	3101
+	91	<input type="checkbox"/>	091_ARF.	2025-08-27 13:40:15	AllRef		K2508066-004	5X	3102	
+	92		<input type="checkbox"/>	092_Dup.	2025-08-27 13:42:19	Dup		KQ2515048-05	5X	3103
+	93	<input type="checkbox"/>	093SMPL.	2025-08-27 13:44:22	Sample		K2508066-004L	25X	3104	
+	94	<input type="checkbox"/>	094_PDS.	2025-08-27 13:46:25	PDS		K2508066-004A	5X	3105	
+	95	<input type="checkbox"/>	095_SPK.	2025-08-27 13:48:28	Spike		KQ2515048-06	5X	3106	
+	96	<input type="checkbox"/>	096SMPL.	2025-08-27 13:50:32	Sample		K2508066-001	5X	3107	

Sample								
	Rj	Data File	Acq. Date-Time	Type	Le	Sample Name	Co...	Vial N...
+ 97	<input type="checkbox"/>	097_CCV.	2025-08-27 13:52:37	CCV		CCV		2
+ 98	<input type="checkbox"/>	098_CCB.	2025-08-27 13:54:41	CCB		CCB		1
+ 99	<input type="checkbox"/>	099SMPL.	2025-08-27 13:56:46	Sample		K2508066-002	5X	3108
+ 100	<input type="checkbox"/>	100SMPL.	2025-08-27 13:58:51	Sample		K2508066-003	5X	3109
+ 101	<input type="checkbox"/>	101SMPL.	2025-08-27 14:00:55	Sample		K2508066-005	5X	3110
+ 102	<input type="checkbox"/>	102SMPL.	2025-08-27 14:02:59	Sample		K2508066-006	5X	3111
+ 103	<input type="checkbox"/>	103SMPL.	2025-08-27 14:05:02	Sample		K2508066-007	5X	3112
+ 104	<input type="checkbox"/>	104SMPL.	2025-08-27 14:07:06	Sample		K2508066-008	5X	3201
+ 105	<input type="checkbox"/>	105SMPL.	2025-08-27 14:09:09	Sample		K2508066-009	5X	3202
+ 106	<input type="checkbox"/>	106SMPL.	2025-08-27 14:11:13	Sample		K2508066-010	5X	3203
+ 107	<input type="checkbox"/>	107SMPL.	2025-08-27 14:13:17	Sample		K2508066-011	5X	3204
+ 108	<input type="checkbox"/>	108SMPL.	2025-08-27 14:15:20	Sample		K2508066-012	5X	3205
+ 109	<input type="checkbox"/>	109_CCV.	2025-08-27 14:17:26	CCV		CCV		2
+ 110	<input type="checkbox"/>	110_CCB.	2025-08-27 14:19:30	CCB		CCB		1
+ 111	<input type="checkbox"/>	111SMPL.	2025-08-27 14:21:35	Sample		K2508066-013	5X	3206
+ 112	<input type="checkbox"/>	112SMPL.	2025-08-27 14:23:37	Sample		K2508066-014	5X	3207
+ 113	<input type="checkbox"/>	113SMPL.	2025-08-27 14:25:41	Sample		K2508066-015	5X	3208
+ 114	<input type="checkbox"/>	114SMPL.	2025-08-27 14:27:45	Sample		K2508066-016	5X	3209
+ 115	<input type="checkbox"/>	115SMPL.	2025-08-27 14:29:48	Sample		K2508066-017	5X	3210
+ 116	<input type="checkbox"/>	116SMPL.	2025-08-27 14:31:53	Sample		K2508066-018	5X	3211
+ 117	<input type="checkbox"/>	117SMPL.	2025-08-27 14:33:57	Sample		K2508066-019	5X	3212
+ 118	<input type="checkbox"/>	118SMPL.	2025-08-27 14:36:01	Sample		K2508066-020	5X	3301
+ 119	<input type="checkbox"/>	119_CCV.	2025-08-27 14:38:05	CCV		CCV		2
- 120	<input type="checkbox"/>	120_CCB.	2025-08-27 14:40:09	CCB		CCB		1

Analyte					
	Name	Mass	ISTD	Tune Mo...	Replica...
+ 1	Cu	63	72	He	3
+ 2	Cu	65	72	He	3
+ 3	Zn	66	72	He	3
+ 4	Se	77	72	H2	3
+ 5	Se	78	72	H2	3
+ 6	Mo	95	115	He	3

Analyte						
	Name	Mass	ISTD	Tune Mo...	Replica...	
+	7	Mo	98	115	He	3
+	8	Ag	107	115	He	3
+	9	Ag	109	115	He	3
+	10	Cd	111	115	He	3
+	11	[Pb]	206	175	He	3
+	12	[Pb]	207	175	He	3
+	13	Pb	208	175	He	3
+	14	Sc	45		He	3
+	15	Ge	72		H2	3
+	16	Ge	72		He	3
+	17	In	115		He	3
+	18	Lu	175		He	3
+	19	Th	232		He	3

US EPA Tune Check Report

Operator Name ALKLS NoUser
 Acq/Data Batch D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725.b
 Acq. Date-Time 2025-08-27 10:16:33
 Report Comment ---
 Instrument Name G8421A JP16310358

[No Gas]

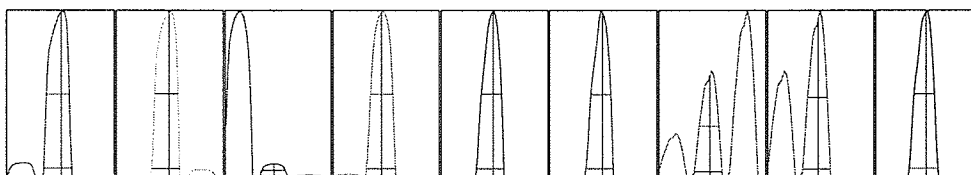
Sensitivity

Mass	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	161341.73	0.338	5.000	
9	40106.81	0.663	5.000	
24	127644.00	0.334	5.000	
59	179444.59	0.218	5.000	
115	268011.81	0.546	5.000	
140	270858.68	0.303	5.000	
208	147026.32	0.701	5.000	
209	230494.40	0.724	5.000	
238	298576.19	0.582	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	16041	16139	16180	16166	16144
9	3991	4013	4043	4028	3978
24	12834	12763	12756	12718	12751
59	17965	17967	17885	17925	17980
115	26811	26964	26893	26580	26759
140	27118	27188	27026	26981	27115
208	14549	14827	14754	14680	14703
209	22797	23252	23047	23025	23126
238	29588	29956	29982	29985	29777

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
7	26761.47	7.05	6.90 - 7.10		0.783		0.900
9	6468.63	9.00	8.90 - 9.10		0.783		0.900
24	20132.63	23.90	23.90 - 24.10		0.790		0.900

US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Flag)	W-5% (Required)
59	29884.04	58.90	58.90 - 59.10		0.823		0.900
115	50018.31	115.00	114.90 - 115.10		0.772		0.900
140	52169.92	140.00	139.90 - 140.10		0.761		0.900
208	27288.85	207.95	207.90 - 208.10		0.784		0.900
209	42741.86	208.95	208.90 - 209.10		0.785		0.900
238	55385.38	237.95	237.90 - 238.10		0.818		0.900

Integration Time [sec] 0.1
 Acquisition Time [sec] 268.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.59 L/min	Dilution Gas	0.42 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.60 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-30 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	127	Axis Gain	1.0002	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	-0.6 mm	Torch V	0.0 mm
---------	---------	---------	--------

EM

Discriminator	4.5 mV	Analog HV	2552 V	Pulse HV	1859 V
---------------	--------	-----------	--------	----------	--------

Calibration Blank Report

Sample Name Blank
File Name 006CALB.d
Data Path Name D:\Agilent\CPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:30:55
Sample Type CalBlk
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	146.67	14.2
Se	78	72	H2	1.67	91.7
Cu	63	72	He	116.67	48.7
Cu	65	72	He	33.33	8.7
Zn	66	72	He	53.33	21.7
Mo	95	115	He	26.67	69.6
Mo	98	115	He	52.22	68.3
Ag	107	115	He	6.67	43.3
Ag	109	115	He	26.67	28.6
Cd	111	115	He	0.00	N/A
[Pb]	206	175	He	36.67	36.4
[Pb]	207	175	He	23.33	0.0
Pb	208	175	He	127.78	29.7

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Ge	72	H2	378486.94	2.7
Sc	45	He	74157.35	2.4
Ge	72	He	64995.55	1.2
In	115	He	567443.14	1.4
Lu	175	He	1431992.06	1.9
Th	232	He	2601025.95	0.9

AG 8/27/25

Calibration Standard Report

Sample Name Cal Std
File Name 007CAL.S.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:32:59
Sample Type CalStd
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
Se	77	72	H2	4947.63	6.8
Se	78	72	H2	14902.84	1.7
Cu	63	72	He	217010.04	0.3
Cu	65	72	He	108003.30	0.9
Zn	66	72	He	25676.84	1.5
Mo	95	115	He	50012.51	1.5
Mo	98	115	He	86139.93	0.9
Ag	107	115	He	183706.19	0.8
Ag	109	115	He	180411.82	1.1
Cd	111	115	He	41439.34	0.9
[Pb]	206	175	He	246645.46	0.9
[Pb]	207	175	He	210657.72	0.8
Pb	208	175	He	981409.41	0.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	356613.67	0.7	378486.94	94.22	
Sc	45	He	71812.01	1.9	74157.35	96.84	
Ge	72	He	61794.71	1.5	64995.55	95.08	
In	115	He	541359.35	0.9	567443.14	95.4	
Lu	175	He	1384665.81	0.7	1431992.06	96.7	
Th	232	He	2551040.90	0.9	2601025.95	98.08	

Initial Calibration Verification (ICV) Report

Sample Name ICV
File Name 008_ICV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:35:04
Sample Type ICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8770	ug/L	11.2	2516.93	95.51	
Se	78	72	H2	25.3763	ug/L	1.6	7824.84	101.51	
Cu	63	72	He	12.4021	ug/L	0.1	54668.45	99.22	
Cu	65	72	He	12.4085	ug/L	1.2	27206.01	99.27	
Zn	66	72	He	25.9989	ug/L	4.4	13563.37	104	
Mo	95	115	He	25.4394	ug/L	1.1	51545.80	101.76	
Mo	98	115	He	25.4037	ug/L	1.6	88656.58	101.61	
Ag	107	115	He	12.9261	ug/L	1.1	96213.44	103.41	
Ag	109	115	He	12.6426	ug/L	1.4	92413.28	101.14	
Cd	111	115	He	12.6979	ug/L	1.5	10658.76	101.58	
Pb	208	175	He	24.7198	ug/L	3.2	503038.43	98.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	368913.38	1.6	378486.94	97.47	
Sc	45	He	72833.77	1.4	74157.35	98.22	
Ge	72	He	62651.94	0.6	64995.55	96.39	
In	115	He	548350.79	1.5	567443.14	96.64	
Lu	175	He	1436443.99	3.7	1431992.06	100.31	
Th	232	He	2554818.56	1.0	2601025.95	98.22	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 009_CCV.d
Data Path Name D:\Agilent\ICPMH1\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:37:09
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.7328	ug/L	10.1	2636.96	102.93	
Se	78	72	H2	25.0726	ug/L	2.1	7543.69	100.29	
Cu	63	72	He	25.6206	ug/L	1.4	110660.34	102.48	
Cu	65	72	He	26.1613	ug/L	1.0	56228.96	104.65	
Zn	66	72	He	26.1974	ug/L	1.0	13409.86	104.79	
Mo	95	115	He	12.3998	ug/L	1.1	25242.81	99.2	
Mo	98	115	He	12.4395	ug/L	0.7	43623.54	99.52	
Ag	107	115	He	12.6771	ug/L	1.0	94750.22	101.42	
Ag	109	115	He	12.5908	ug/L	2.2	92408.27	100.73	
Cd	111	115	He	25.3513	ug/L	0.5	21370.26	101.41	
Pb	208	175	He	25.2360	ug/L	1.7	506397.60	100.94	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359938.31	0.5	378486.94	95.1	
Sc	45	He	72666.16	0.5	74157.35	97.99	
Ge	72	He	61463.58	1.7	64995.55	94.57	
In	115	He	550613.02	1.4	567443.14	97.03	
Lu	175	He	1415713.52	2.4	1431992.06	98.86	
Th	232	He	2549004.23	1.1	2601025.95	98	

Initial Calibration Blank (ICB) Report

Sample Name ICB
File Name 010_ICB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:39:13
Sample Type ICB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.2625	ug/L	N/A	116.67	
Se	78	72	H2	0.0077	ug/L	41.2	4.00	
Cu	63	72	He	-0.0151	ug/L	N/A	46.67	
Cu	65	72	He	0.0044	ug/L	155.8	41.67	
Zn	66	72	He	0.0222	ug/L	174.2	63.33	
Mo	95	115	He	0.0103	ug/L	23.5	47.78	
Mo	98	115	He	0.0039	ug/L	27.4	65.55	
Ag	107	115	He	0.0068	ug/L	27.8	58.33	
Ag	109	115	He	0.0050	ug/L	74.9	63.33	
Cd	111	115	He	0.0018	ug/L	33.6	1.50	
Pb	208	175	He	0.0018	ug/L	47.4	164.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367176.94	0.9	378486.94	97.01	
Sc	45	He	72398.65	0.2	74157.35	97.63	
Ge	72	He	62866.13	1.9	64995.55	96.72	
In	115	He	559682.97	0.4	567443.14	98.63	
Lu	175	He	1434242.53	1.7	1431992.06	100.16	
Th	232	He	2535207.77	2.4	2601025.95	97.47	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 011_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:41:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.5602	ug/L	69.6	200.01	
Se	78	72	H2	0.0001	ug/L	6637.0	1.67	
Cu	63	72	He	-0.0130	ug/L	N/A	56.67	
Cu	65	72	He	0.0024	ug/L	494.5	38.33	
Zn	66	72	He	-0.0113	ug/L	N/A	46.67	
Mo	95	115	He	-0.0033	ug/L	N/A	20.00	
Mo	98	115	He	-0.0026	ug/L	N/A	43.34	
Ag	107	115	He	0.0030	ug/L	64.5	30.00	
Ag	109	115	He	-0.0002	ug/L	N/A	25.00	
Cd	111	115	He	0.0011	ug/L	0.1	1.00	
Pb	208	175	He	0.0000	ug/L	4720.4	128.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	371675.83	1.9	378486.94	98.2	
Sc	45	He	73607.40	1.7	74157.35	99.26	
Ge	72	He	63776.81	1.7	64995.55	98.12	
In	115	He	569177.97	0.1	567443.14	100.31	
Lu	175	He	1446710.03	1.1	1431992.06	101.03	
Th	232	He	2538492.67	2.4	2601025.95	97.6	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 012LICV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:43:22
Sample Type LLICV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.0584	ug/L	11.4	346.68	-205.84	
Se	78	72	H2	2.0362	ug/L	2.4	627.01	101.81	
Cu	63	72	He	0.2386	ug/L	12.5	1190.07	119.3	
Cu	65	72	He	0.2608	ug/L	4.1	618.35	130.4	LLICV Failed
Zn	66	72	He	2.5872	ug/L	7.8	1430.10	258.72	LLICV Failed
Mo	95	115	He	0.1816	ug/L	10.0	407.79	90.8	
Mo	98	115	He	0.1989	ug/L	5.2	771.14	99.45	
Ag	107	115	He	0.0372	ug/L	20.0	293.34	93	
Ag	109	115	He	0.0397	ug/L	15.5	326.68	99.25	
Cd	111	115	He	0.0476	ug/L	5.2	41.33	119	
[Pb]	206	175	He	0.0465	ug/L	21.7	277.78	116.25	
[Pb]	207	175	He	0.0416	ug/L	15.7	207.78	104	
Pb	208	175	He	0.0440	ug/L	10.2	1035.58	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	367587.04	1.1	378486.94	97.12	
Sc	45	He	74354.68	2.7	74157.35	100.27	
Ge	72	He	64225.26	1.9	64995.55	98.81	
In	115	He	567871.91	1.0	567443.14	100.08	
Lu	175	He	1453642.11	2.9	1431992.06	101.51	
Th	232	He	2542116.99	0.2	2601025.95	97.74	

see remake std
 AB
 8/27/25

Low Level Initial Calibration Verification (LLICV) Report

Sample Name LLICVT
File Name 013LICV.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:50:02
Sample Type LLICV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc.RSD	CPS	% Rec	QC Flag
Se	77	72	H2	2.2263	ug/L	17.4	353.34	-222.63	
Se	78	72	H2	2.0686	ug/L	5.4	619.34	103.43	
Cu	63	72	He	0.1781	ug/L	11.4	926.71	89.05	
Cu	65	72	He	0.2284	ug/L	9.6	550.02	114.2	
Zn	66	72	He	1.0368	ug/L	12.8	610.03	103.68	
Mo	95	115	He	0.1963	ug/L	9.3	441.12	98.15	
Mo	98	115	He	0.1884	ug/L	6.7	738.92	94.2	
Ag	107	115	He	0.0408	ug/L	8.0	323.34	102	
Ag	109	115	He	0.0377	ug/L	7.4	315.01	94.25	
Cd	111	115	He	0.0369	ug/L	7.8	32.33	92.25	
[Pb]	206	175	He	0.0352	ug/L	16.3	220.00	88	
[Pb]	207	175	He	0.0405	ug/L	18.6	203.34	101.25	
Pb	208	175	He	0.0378	ug/L	3.1	911.13	94.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357939.06	4.6	378486.94	94.57	
Sc	45	He	73215.66	3.3	74157.35	98.73	
Ge	72	He	64764.60	1.1	64995.55	99.64	
In	115	He	572100.82	3.3	567443.14	100.82	
Lu	175	He	1459085.92	2.0	1431992.06	101.89	
Th	232	He	2526382.36	3.8	2601025.95	97.13	

Interference Check Solution A (ICS-A) Report

Sample Name ICSA
File Name 014ICSA.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:52:06
Sample Type ICSA
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	0.6162	ug/L	113.2	-1	186.67	
Se	78	72	H2	0.0327	ug/L	24.1	-1	10.67	
Cu	63	72	He	0.5163	ug/L	9.3	-1	2230.22	
Cu	65	72	He	0.5537	ug/L	2.6	-1	1165.06	
Zn	66	72	He	0.6547	ug/L	3.8	-1	366.68	
Mo	95	115	He	50.3340	ug/L	1.0	50	95935.68	
Mo	98	115	He	50.3523	ug/L	0.3	50	165300.33	
Ag	107	115	He	0.0106	ug/L	17.5	-1	80.00	
Ag	109	115	He	0.0084	ug/L	20.3	-1	81.67	
Cd	111	115	He	0.4146	ug/L	2.3	-1	327.50	
[Pb]	206	175	He	0.2574	ug/L	7.3	-1	1264.51	
[Pb]	207	175	He	0.2506	ug/L	1.9	-1	1045.60	
Pb	208	175	He	0.2434	ug/L	1.8	-1	4751.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336368.85	1.2	378486.94	88.87	
Sc	45	He	68378.74	1.4	74157.35	92.21	
Ge	72	He	58668.19	1.9	64995.55	90.26	
In	115	He	515887.81	0.4	567443.14	90.91	
Lu	175	He	1342589.88	1.1	1431992.06	93.76	
Th	232	He	2434416.58	3.3	2601025.95	93.59	

Interference Check Solution AB (ICS-AB) Report

Sample Name ICSAB
File Name 015ICSB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:54:10
Sample Type ICSB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	ExpValue	CPS	QC Flag
Se	77	72	H2	24.7881	ug/L	9.5	25	2353.57	
Se	78	72	H2	25.5727	ug/L	1.5	25	7107.79	
Cu	63	72	He	49.2471	ug/L	0.9	50	203092.20	
Cu	65	72	He	48.9887	ug/L	0.8	50	100547.70	
Zn	66	72	He	25.0011	ug/L	3.4	25	12222.10	
Mo	95	115	He	50.1126	ug/L	0.9	50	96790.75	
Mo	98	115	He	49.8623	ug/L	1.3	50	165878.31	
Ag	107	115	He	12.4426	ug/L	1.9	12.5	88302.92	
Ag	109	115	He	12.3310	ug/L	1.3	12.5	85945.17	
Cd	111	115	He	25.2566	ug/L	0.9	25	20215.03	
[Pb]	206	175	He	0.2444	ug/L	5.2	-1	1248.96	
[Pb]	207	175	He	0.2276	ug/L	8.4	-1	986.71	
Pb	208	175	He	0.2313	ug/L	3.2	-1	4691.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332550.78	1.7	378486.94	87.86	
Sc	45	He	68134.19	2.4	74157.35	91.88	
Ge	72	He	58708.15	1.4	64995.55	90.33	
In	115	He	522786.59	0.2	567443.14	92.13	
Lu	175	He	1393616.59	2.1	1431992.06	97.32	
Th	232	He	2413229.08	0.7	2601025.95	92.78	

Sample Report

Sample Name LRSTD 1000ppb + 50ppb Ag
File Name 016SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:56:15
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

1 mL / 10 mL 10ppm Pb
 1 mL / 10 mL 50ppb Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	1010.7952	ug/L	2.6	91592.17	
Se	78	72	H2	1050.5522	ug/L	1.8	294612.24	
Cu	63	72	He	1053.8760	ug/L	1.0	4268491.60	
Cu	65	72	He	1058.8081	ug/L	2.3	2134504.55	
Zn	66	72	He	1055.7809	ug/L	2.0	505261.19	
Mo	95	115	He	1016.3681	ug/L	0.5	1990905.13	
Mo	98	115	He	992.1351	ug/L	1.3	3347121.81	
Ag	107	115	He	53.4393	ug/L	0.8	384699.30	
Ag	109	115	He	53.1186	ug/L	0.8	375479.33	
Cd	111	115	He	1038.6658	ug/L	0.7	843316.96	
Pb	208	175	He	1029.6259	ug/L	2.5	20272495.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	335625.84	1.5	378486.94	88.68	
Sc	45	He	70482.15	0.9	74157.35	95.04	
Ge	72	He	57694.13	2.3	64995.55	88.77	
In	115	He	530338.29	1.0	567443.14	93.46	
Lu	175	He	1389450.34	1.7	1431992.06	97.03	
Th	232	He	2436606.52	2.1	2601025.95	93.68	

Sample Report

Sample Name MO STD
File Name 017SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 10:58:14
Sample Type Sample
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.3535	ug/L	120.1	166.67	
Se	78	72	H2	0.2888	ug/L	7.7	84.67	
Cu	63	72	He	0.0743	ug/L	18.9	413.35	
Cu	65	72	He	0.0760	ug/L	4.2	186.67	
Zn	66	72	He	0.2622	ug/L	45.1	176.67	
Mo	95	115	He	50.2901	ug/L	1.1	99446.82	
Mo	98	115	He	50.3394	ug/L	0.9	171455.19	
Ag	107	115	He	0.0111	ug/L	15.9	86.67	
Ag	109	115	He	0.0042	ug/L	62.0	55.00	
Cd	111	115	He	0.0687	ug/L	6.0	56.33	
Pb	208	175	He	0.0743	ug/L	6.3	1606.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344386.52	1.3	378486.94	90.99	
Sc	45	He	68220.96	0.9	74157.35	91.99	
Ge	72	He	58902.38	0.6	64995.55	90.63	
In	115	He	535281.13	1.5	567443.14	94.33	
Lu	175	He	1406605.86	1.0	1431992.06	98.23	
Th	232	He	2430354.28	1.1	2601025.95	93.44	

Prep Blank (PB) Report

Sample Name KQ2515045-01
File Name 018_PB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:06:51
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3455	ug/L	N/A	103.33	
Se	78	72	H2	0.0061	ug/L	89.1	3.33	
Cu	63	72	He	0.0152	ug/L	41.8	180.00	
Cu	65	72	He	0.0324	ug/L	21.5	103.33	
Zn	66	72	He	0.0416	ug/L	205.7	73.33	
Mo	95	115	He	0.0119	ug/L	41.0	51.11	
Mo	98	115	He	0.0167	ug/L	72.9	111.11	
Ag	107	115	He	0.0000	ug/L	15964.5	6.67	
Ag	109	115	He	-0.0020	ug/L	N/A	11.67	
Cd	111	115	He	0.0076	ug/L	12.9	6.50	
[Pb]	206	175	He	0.0058	ug/L	12.0	65.55	
[Pb]	207	175	He	0.0122	ug/L	58.7	75.56	
Pb	208	175	He	0.0077	ug/L	20.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350370.80	1.8	378486.94	92.57	
Sc	45	He	71493.52	2.3	74157.35	96.41	
Ge	72	He	62845.95	1.1	64995.55	96.69	
In	115	He	559309.05	0.8	567443.14	98.57	
Lu	175	He	1421105.08	1.0	1431992.06	99.24	
Th	232	He	2444479.29	0.1	2601025.95	93.98	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-02
File Name 019_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:08:55
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.4609	ug/L	0.7	3123.73	33.3	94.48	
Se	78	72	H2	33.6858	ug/L	1.9	9913.81	33.3	101.16	
Cu	63	72	He	49.4509	ug/L	0.9	208495.72	50	98.9	
Cu	65	72	He	48.7860	ug/L	0.7	102380.34	50	97.57	
Zn	66	72	He	100.5725	ug/L	1.1	50128.41	100	100.57	
Mo	95	115	He	31.3298	ug/L	0.5	63779.45	33.3	94.08	
Mo	98	115	He	31.3528	ug/L	1.3	109917.48	33.3	94.15	
Ag	107	115	He	9.7659	ug/L	1.3	73039.82	10	97.66	
Ag	109	115	He	9.6976	ug/L	1.5	71222.22	10	96.98	
Cd	111	115	He	9.6549	ug/L	1.4	8142.56	10	96.55	
[Pb]	206	175	He	100.4949	ug/L	0.5	502038.35	100	100.49	
[Pb]	207	175	He	97.0865	ug/L	0.6	414234.70	100	97.09	
Pb	208	175	He	98.1886	ug/L	0.1	1951786.69	100	98.19	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352114.17	0.5	378486.94	93.03	
Sc	45	He	70337.83	1.4	74157.35	94.85	
Ge	72	He	60020.64	0.8	64995.55	92.35	
In	115	He	550896.79	1.5	567443.14	97.08	
Lu	175	He	1402305.45	1.1	1431992.06	97.93	
Th	232	He	2404754.08	0.9	2601025.95	92.45	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-03
File Name 020_QC4.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:10:59
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	5.1344	ug/L	8.5	616.69	4.8	106.97	
Se	78	72	H2	5.0262	ug/L	2.2	1462.08	4.8	104.71	
Cu	63	72	He	6.4436	ug/L	2.5	27610.31	6.6	97.63	
Cu	65	72	He	6.3183	ug/L	0.7	13456.47	6.6	95.73	
Zn	66	72	He	57.0501	ug/L	1.4	28822.81	57.4	99.39	
Mo	95	115	He	0.2734	ug/L	5.5	573.35	-1	-27.34	
Mo	98	115	He	0.2695	ug/L	4.4	980.04	-1	-26.95	
Ag	107	115	He	0.2645	ug/L	4.5	1953.49	0.27	97.96	
Ag	109	115	He	0.2600	ug/L	13.5	1905.15	0.27	96.3	
Cd	111	115	He	0.2940	ug/L	4.2	244.17	0.296	99.32	
Pb	208	175	He	0.1237	ug/L	4.0	2599.00	0.116	106.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347751.14	1.0	378486.94	91.88	
Sc	45	He	70954.44	2.1	74157.35	95.68	
Ge	72	He	60790.53	0.5	64995.55	93.53	
In	115	He	542387.64	0.2	567443.14	95.58	
Lu	175	He	1410960.81	1.8	1431992.06	98.53	
Th	232	He	2371138.77	0.9	2601025.95	91.16	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515045-04
File Name 021_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:13:03
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.9338	ug/L	2.8	2000.17	21.8	96.03	
Se	78	72	H2	21.9730	ug/L	1.1	6086.31	21.8	100.79	
Cu	63	72	He	901.4919	ug/L	3.5	3810718.28	994	90.69	
Cu	65	72	He	915.4979	ug/L	1.5	1927241.59	994	92.1	
Zn	66	72	He	257.1535	ug/L	2.8	128509.54	272	94.54	
Mo	95	115	He	6.2374	ug/L	0.6	12371.07	6.88	90.66	
Mo	98	115	He	6.2802	ug/L	0.7	21458.76	6.88	91.28	
Ag	107	115	He	7.6426	ug/L	0.3	55599.54	-1	-764.26	
Ag	109	115	He	7.4675	ug/L	0.6	53359.33	-1	-746.75	
Cd	111	115	He	78.4210	ug/L	0.4	64338.46	84.6	92.7	
Pb	208	175	He	0.3958	ug/L	2.5	7973.23	0.45	87.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	331424.83	2.2	378486.94	87.57	
Sc	45	He	69162.29	2.4	74157.35	93.26	
Ge	72	He	60244.92	2.9	64995.55	92.69	
In	115	He	535874.02	0.4	567443.14	94.44	
Lu	175	He	1399302.95	1.0	1431992.06	97.72	
Th	232	He	2352841.99	0.7	2601025.95	90.46	

Reference Sample Report

Sample Name K2508064-008
File Name 022_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:15:06
Sample Type AIRef
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fial Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.3520	ug/L	15.0	1213.41	
Se	78	72	H2	11.9409	ug/L	1.7	3515.11	
Cu	63	72	He	11.3317	ug/L	1.9	48342.23	
Cu	65	72	He	11.3454	ug/L	1.4	24072.07	
Zn	66	72	He	498.7541	ug/L	0.1	250928.04	
Mo	95	115	He	0.2386	ug/L	5.7	506.68	
Mo	98	115	He	0.2418	ug/L	9.1	890.03	
Ag	107	115	He	0.0880	ug/L	6.6	658.35	
Ag	109	115	He	0.0870	ug/L	3.7	658.35	
Cd	111	115	He	3.5033	ug/L	0.8	2927.64	
Pb	208	175	He	1.6128	ug/L	1.9	32679.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352129.38	1.1	378486.94	93.04	
Sc	45	He	71058.46	0.8	74157.35	95.82	
Ge	72	He	60629.52	0.9	64995.55	93.28	
In	115	He	545823.14	0.6	567443.14	96.19	
Lu	175	He	1424136.59	1.0	1431992.06	99.45	
Th	232	He	2408246.99	1.3	2601025.95	92.59	

Duplicate Sample Report

Sample Name KQ2515045-05
File Name 023_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:17:10
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 022_
Default Text ARLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	11.9678	ug/L	13.8	1266.75	5.28	
Se	78	72	H2	12.7379	ug/L	2.3	3733.50	6.46	
Cu	63	72	He	12.3746	ug/L	2.0	52801.11	8.8	
Cu	65	72	He	12.3481	ug/L	2.6	26209.20	8.46	
Zn	66	72	He	526.5237	ug/L	0.4	264977.41	5.42	
Mo	95	115	He	0.2862	ug/L	4.7	601.13		<5x MRL
Mo	98	115	He	0.2765	ug/L	6.2	1007.82		<5x MRL
Ag	107	115	He	0.0930	ug/L	1.6	693.35		<5x MRL
Ag	109	115	He	0.0939	ug/L	12.2	706.69		<5x MRL
Cd	111	115	He	3.8799	ug/L	1.4	3233.55	10.2	
[Pb]	206	175	He	1.7091	ug/L	0.5	8744.10	5.04	
[Pb]	207	175	He	1.7261	ug/L	2.4	7534.45	5.42	
Pb	208	175	He	1.7043	ug/L	1.4	34672.71	5.51	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350660.74	1.3	378486.94	92.65	
Sc	45	He	70515.61	1.1	74157.35	95.09	
Ge	72	He	60646.34	1.0	64995.55	93.31	
In	115	He	544348.79	0.5	567443.14	95.93	
Lu	175	He	1430285.39	2.1	1431992.06	99.88	
Th	232	He	2408498.82	0.5	2601025.95	92.6	

Sample Report

Sample Name K2508064-008L
File Name 024SMPL.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:19:14
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	2.8317	ug/L	23.5	406.68	
Se	78	72	H2	2.2414	ug/L	4.3	662.35	
Cu	63	72	He	2.3398	ug/L	2.0	9943.59	
Cu	65	72	He	2.3130	ug/L	2.5	4870.87	
Zn	66	72	He	100.9729	ug/L	1.0	50198.77	
Mo	95	115	He	0.0383	ug/L	23.0	103.33	
Mo	98	115	He	0.0436	ug/L	7.9	202.23	
Ag	107	115	He	0.0209	ug/L	7.4	161.67	
Ag	109	115	He	0.0162	ug/L	17.3	143.33	
Cd	111	115	He	0.6938	ug/L	3.0	580.84	
Pb	208	175	He	0.3264	ug/L	1.5	6610.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352795.48	1.1	378486.94	93.21	
Sc	45	He	70318.10	0.5	74157.35	94.82	
Ge	72	He	59866.27	0.6	64995.55	92.11	
In	115	He	546884.19	0.9	567443.14	96.38	
Lu	175	He	1401817.06	2.3	1431992.06	97.89	
Th	232	He	2396837.52	0.6	2601025.95	92.15	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508064-008A
File Name 025_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:21:18
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_
 ARF.
Default Text ALKLS
 NoUser

+500110ppm PS
 100v1 500ppb Ag
 AB
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	62.9937	ug/L	4.2	6028.07	50	103.28	
Se	78	H2	65.8989	ug/L	0.6	19109.54	50	107.92	
Cu	63	He	63.4863	ug/L	2.0	266097.85	50	104.31	
Cu	65	He	64.0366	ug/L	0.3	133606.21	50	105.38	
Zn	66	He	559.5965	ug/L	1.1	277101.62	50	121.68	PDS Failed
Mo	95	He	49.8474	ug/L	0.8	99858.75	50	99.22	
Mo	98	He	50.2478	ug/L	0.8	173377.82	50	100.01	
Ag	107	He	5.2849	ug/L	1.6	38904.68	5	103.94	
Ag	109	He	5.1941	ug/L	0.6	37562.66	5	102.14	
Cd	111	He	54.4453	ug/L	0.5	45197.87	50	101.88	
[Pb]	206	He	52.2070	ug/L	1.3	261765.26	50	101.16	
[Pb]	207	He	51.8422	ug/L	1.1	222003.62	50	100.41	
Pb	208	He	51.8715	ug/L	1.3	1034849.01	50	100.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346979.63	0.6	378486.94	91.68	
Sc	45	He	69464.10	1.8	74157.35	93.67	
Ge	72	He	59678.92	1.0	64995.55	91.82	
In	115	He	542222.29	0.1	567443.14	95.56	
Lu	175	He	1407451.65	1.4	1431992.06	98.29	
Th	232	He	2410699.76	2.1	2601025.95	92.68	

Matrix Spike Sample (MS) Report

Sample Name KQ2515045-06
File Name 026_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:23:22
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 022_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	43.4002	ug/L	3.5	4277.39	33.3	96.24	
Se	78	H2	46.3660	ug/L	1.5	13709.97	33.3	103.38	
Cu	63	He	61.1645	ug/L	1.0	261239.92	50	99.67	
Cu	65	He	61.6481	ug/L	1.5	131046.08	50	100.61	
Zn	66	He	608.8511	ug/L	2.0	307160.61	100	110.1	
Mo	95	He	32.5427	ug/L	1.8	66021.80	33.3	97.01	
Mo	98	He	32.4722	ug/L	1.1	113474.65	33.3	96.79	
Ag	107	He	9.8453	ug/L	1.0	73385.13	10	97.57	
Ag	109	He	9.8611	ug/L	0.2	72192.39	10	97.74	
Cd	111	He	13.5414	ug/L	0.3	11383.50	10	100.38	
[Pb]	206	He	100.3079	ug/L	1.4	515068.36	100	98.68	
[Pb]	207	He	95.6940	ug/L	0.9	419678.85	100	94.06	
Pb	208	He	97.3871	ug/L	0.6	1989772.66	100	95.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353813.12	0.5	378486.94	93.48	
Sc	45	He	71420.06	2.3	74157.35	96.31	
Ge	72	He	60814.09	2.0	64995.55	93.57	
In	115	He	549081.83	0.6	567443.14	96.76	
Lu	175	He	1441388.10	0.5	1431992.06	100.66	
Th	232	He	2438895.02	1.4	2601025.95	93.77	

Sample Report

Sample Name K2508064-001
File Name 027SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:25:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.5681	ug/L	8.4	1320.09	
Se	78	72	H2	12.3304	ug/L	2.3	3603.46	
Cu	63	72	He	16.2712	ug/L	1.5	70102.34	
Cu	65	72	He	16.2842	ug/L	3.0	34894.48	
Zn	66	72	He	547.9987	ug/L	1.0	278566.90	
Mo	95	115	He	0.3394	ug/L	7.1	706.69	
Mo	98	115	He	0.3482	ug/L	2.9	1253.39	
Ag	107	115	He	0.0952	ug/L	9.4	708.36	
Ag	109	115	He	0.0913	ug/L	10.9	686.69	
Cd	111	115	He	4.0269	ug/L	0.6	3349.07	
Pb	208	175	He	1.0905	ug/L	2.6	22011.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349555.62	0.6	378486.94	92.36	
Sc	45	He	70696.15	1.1	74157.35	95.33	
Ge	72	He	61265.75	1.5	64995.55	94.26	
In	115	He	543202.95	0.5	567443.14	95.73	
Lu	175	He	1416176.07	1.4	1431992.06	98.9	
Th	232	He	2462173.87	0.5	2601025.95	94.66	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 028_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:27:29
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.2302	ug/L	12.2	2446.92	96.92	
Se	78	72	H2	24.9030	ug/L	1.2	7360.59	99.61	
Cu	63	72	He	25.4138	ug/L	1.8	108746.21	101.66	
Cu	65	72	He	25.4966	ug/L	1.3	54291.45	101.99	
Zn	66	72	He	25.9344	ug/L	3.3	13149.60	103.74	
Mo	95	115	He	12.3529	ug/L	1.0	24919.98	98.82	
Mo	98	115	He	12.3136	ug/L	0.6	42790.99	98.51	
Ag	107	115	He	12.6398	ug/L	1.4	93612.48	101.12	
Ag	109	115	He	12.6830	ug/L	1.0	92253.78	101.46	
Cd	111	115	He	25.0873	ug/L	0.9	20955.29	100.35	
Pb	208	175	He	25.1698	ug/L	0.9	499771.59	100.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353657.60	1.4	378486.94	93.44	
Sc	45	He	69721.82	2.5	74157.35	94.02	
Ge	72	He	60894.36	1.6	64995.55	93.69	
In	115	He	545609.87	1.2	567443.14	96.15	
Lu	175	He	1400597.74	1.2	1431992.06	97.81	
Th	232	He	2420488.66	1.5	2601025.95	93.06	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 029_CCB.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:29:33
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1600	ug/L	160.9	153.33	
Se	78	72	H2	0.0181	ug/L	102.4	7.00	
Cu	63	72	He	-0.0002	ug/L	N/A	110.00	
Cu	65	72	He	0.0039	ug/L	212.1	40.00	
Zn	66	72	He	-0.0205	ug/L	N/A	40.00	
Mo	95	115	He	0.0164	ug/L	68.8	60.00	
Mo	98	115	He	0.0109	ug/L	25.2	90.00	
Ag	107	115	He	0.0024	ug/L	53.8	25.00	
Ag	109	115	He	0.0001	ug/L	2078.5	26.67	
Cd	111	115	He	0.0025	ug/L	80.9	2.17	
Pb	208	175	He	0.0045	ug/L	20.7	214.44	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355447.39	1.1	378486.94	93.91	
Sc	45	He	70096.65	0.4	74157.35	94.52	
Ge	72	He	61503.62	0.3	64995.55	94.63	
In	115	He	555508.37	0.4	567443.14	97.9	
Lu	175	He	1404848.05	1.0	1431992.06	98.1	
Th	232	He	2394111.06	0.9	2601025.95	92.04	

Sample Report

Sample Name K2508064-002
File Name 030SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:31:38
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.1669	ug/L	27.1	1156.74	
Se	78	72	H2	11.7425	ug/L	19.0	3640.81	
Cu	63	72	He	9.3339	ug/L	1.3	39759.03	
Cu	65	72	He	9.2605	ug/L	3.2	19605.29	
Zn	66	72	He	383.3557	ug/L	1.9	192418.20	
Mo	95	115	He	0.1985	ug/L	12.2	428.90	
Mo	98	115	He	0.1676	ug/L	6.0	636.69	
Ag	107	115	He	0.0668	ug/L	5.1	505.01	
Ag	109	115	He	0.0647	ug/L	12.8	500.01	
Cd	111	115	He	2.0591	ug/L	3.2	1732.44	
Pb	208	175	He	0.4359	ug/L	2.2	8931.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	379559.96	18.1	378486.94	100.28	
Sc	45	He	69413.57	1.6	74157.35	93.6	
Ge	72	He	60498.94	2.0	64995.55	93.08	
In	115	He	549576.83	0.3	567443.14	96.85	
Lu	175	He	1425524.62	1.8	1431992.06	99.55	
Th	232	He	2430737.51	1.7	2601025.95	93.45	

Sample Report

Sample Name K2508064-003
File Name 031SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:33:42
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9475	ug/L	9.1	1196.74	
Se	78	72	H2	11.0453	ug/L	2.4	3310.39	
Cu	63	72	He	10.1994	ug/L	1.2	43426.36	
Cu	65	72	He	10.3451	ug/L	2.7	21900.28	
Zn	66	72	He	512.6946	ug/L	2.4	257302.23	
Mo	95	115	He	0.1853	ug/L	2.6	402.23	
Mo	98	115	He	0.2024	ug/L	9.7	758.91	
Ag	107	115	He	0.0653	ug/L	7.9	493.35	
Ag	109	115	He	0.0595	ug/L	10.1	461.68	
Cd	111	115	He	2.8821	ug/L	1.9	2425.55	
Pb	208	175	He	0.4414	ug/L	1.0	9089.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358451.88	0.8	378486.94	94.71	
Sc	45	He	70140.48	1.4	74157.35	94.58	
Ge	72	He	60499.10	2.1	64995.55	93.08	
In	115	He	549722.82	0.5	567443.14	96.88	
Lu	175	He	1432457.27	1.7	1431992.06	100.03	
Th	232	He	2427025.59	0.9	2601025.95	93.31	

Sample Report

Sample Name K2508064-004
File Name 032SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:35:44
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.9924	ug/L	11.6	1273.42	
Se	78	72	H2	12.7121	ug/L	0.9	3735.83	
Cu	63	72	He	7.3354	ug/L	1.8	31535.13	
Cu	65	72	He	7.3059	ug/L	2.9	15611.97	
Zn	66	72	He	356.9163	ug/L	0.8	180730.29	
Mo	95	115	He	0.1317	ug/L	12.0	291.11	
Mo	98	115	He	0.1338	ug/L	16.6	514.46	
Ag	107	115	He	0.0457	ug/L	16.7	345.01	
Ag	109	115	He	0.0366	ug/L	4.5	291.67	
Cd	111	115	He	1.7162	ug/L	1.5	1432.91	
Pb	208	175	He	0.5306	ug/L	1.3	10869.62	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351507.56	1.3	378486.94	92.87	
Sc	45	He	70961.17	0.7	74157.35	95.69	
Ge	72	He	61018.25	0.5	64995.55	93.88	
In	115	He	545342.66	0.4	567443.14	96.11	
Lu	175	He	1428357.27	1.0	1431992.06	99.75	
Th	232	He	2484795.75	0.6	2601025.95	95.53	

Sample Report

Sample Name K2508064-005
File Name 033SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:37:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.6793	ug/L	8.8	1270.08	
Se	78	72	H2	11.4533	ug/L	0.7	3438.09	
Cu	63	72	He	7.7359	ug/L	4.0	33616.63	
Cu	65	72	He	7.9269	ug/L	2.1	17127.07	
Zn	66	72	He	434.5133	ug/L	0.8	222520.38	
Mo	95	115	He	0.1851	ug/L	8.7	401.12	
Mo	98	115	He	0.1676	ug/L	1.4	635.57	
Ag	107	115	He	0.0739	ug/L	7.2	556.69	
Ag	109	115	He	0.0683	ug/L	1.9	525.01	
Cd	111	115	He	1.7235	ug/L	1.5	1447.41	
Pb	208	175	He	0.5304	ug/L	1.3	10732.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	359050.19	0.3	378486.94	94.86	
Sc	45	He	70937.28	1.0	74157.35	95.66	
Ge	72	He	61717.68	2.1	64995.55	94.96	
In	115	He	548539.67	0.9	567443.14	96.67	
Lu	175	He	1411038.99	1.3	1431992.06	98.54	
Th	232	He	2480032.67	2.2	2601025.95	95.35	

Sample Report

Sample Name K2508064-006
File Name 034SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:39:50
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.9327	ug/L	9.1	1576.78	
Se	78	72	H2	14.1391	ug/L	1.5	4222.97	
Cu	63	72	He	5.9508	ug/L	2.6	25904.01	
Cu	65	72	He	5.9572	ug/L	2.2	12885.92	
Zn	66	72	He	352.7133	ug/L	1.0	180730.37	
Mo	95	115	He	0.1049	ug/L	3.8	241.11	
Mo	98	115	He	0.0878	ug/L	1.7	361.12	
Ag	107	115	He	0.0290	ug/L	15.3	225.00	
Ag	109	115	He	0.0242	ug/L	15.8	205.00	
Cd	111	115	He	1.6904	ug/L	1.6	1435.91	
Pb	208	175	He	0.3510	ug/L	1.2	7349.75	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	357274.32	1.0	378486.94	94.4	
Sc	45	He	72646.17	1.9	74157.35	97.96	
Ge	72	He	61751.06	2.0	64995.55	95.01	
In	115	He	554825.23	0.3	567443.14	97.78	
Lu	175	He	1451442.27	1.0	1431992.06	101.36	
Th	232	He	2509826.53	1.1	2601025.95	96.49	

Sample Report

Sample Name K2508064-007
File Name 035SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:41:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0528	ug/L	13.8	1196.74	
Se	78	72	H2	11.6664	ug/L	1.8	3465.10	
Cu	63	72	He	9.6665	ug/L	0.5	41918.64	
Cu	65	72	He	9.6360	ug/L	3.2	20770.24	
Zn	66	72	He	488.4756	ug/L	1.5	249640.65	
Mo	95	115	He	0.1845	ug/L	12.5	406.67	
Mo	98	115	He	0.1912	ug/L	8.1	730.02	
Ag	107	115	He	0.0388	ug/L	18.2	300.01	
Ag	109	115	He	0.0279	ug/L	12.5	233.33	
Cd	111	115	He	2.3630	ug/L	1.6	2017.98	
Pb	208	175	He	0.7140	ug/L	2.6	14740.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	355189.71	1.8	378486.94	93.84	
Sc	45	He	72515.49	0.8	74157.35	97.79	
Ge	72	He	61597.08	1.7	64995.55	94.77	
In	115	He	557759.87	0.8	567443.14	98.29	
Lu	175	He	1443998.63	1.5	1431992.06	100.84	
Th	232	He	2493818.24	1.6	2601025.95	95.88	

Sample Report

Sample Name K2508064-009
File Name 036SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:43:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.9595	ug/L	17.0	1206.74	
Se	78	72	H2	12.1687	ug/L	2.6	3672.48	
Cu	63	72	He	12.4759	ug/L	0.4	54320.14	
Cu	65	72	He	12.4399	ug/L	1.6	26938.90	
Zn	66	72	He	473.8635	ug/L	1.4	243338.70	
Mo	95	115	He	0.2428	ug/L	21.4	523.35	
Mo	98	115	He	0.2539	ug/L	11.0	947.81	
Ag	107	115	He	0.0764	ug/L	8.2	581.69	
Ag	109	115	He	0.0660	ug/L	11.0	513.35	
Cd	111	115	He	3.9560	ug/L	1.0	3359.41	
Pb	208	175	He	0.6647	ug/L	4.0	13536.13	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	360982.58	0.2	378486.94	95.38	
Sc	45	He	70401.68	0.8	74157.35	94.94	
Ge	72	He	61885.31	0.4	64995.55	95.21	
In	115	He	554668.36	1.0	567443.14	97.75	
Lu	175	He	1423487.06	0.6	1431992.06	99.41	
Th	232	He	2498723.71	0.7	2601025.95	96.07	

Sample Report

Sample Name K2508064-010
File Name 037SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:46:00
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9636	ug/L	8.5	1006.72	
Se	78	72	H2	9.8248	ug/L	0.6	2947.98	
Cu	63	72	He	7.6358	ug/L	1.7	33753.62	
Cu	65	72	He	7.6799	ug/L	2.3	16875.11	
Zn	66	72	He	333.8798	ug/L	2.4	173836.25	
Mo	95	115	He	0.1315	ug/L	4.5	296.67	
Mo	98	115	He	0.1446	ug/L	13.0	563.34	
Ag	107	115	He	0.0384	ug/L	16.6	296.67	
Ag	109	115	He	0.0486	ug/L	7.7	386.68	
Cd	111	115	He	1.0631	ug/L	1.2	906.20	
Pb	208	175	He	0.5259	ug/L	2.6	10840.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358872.68	0.7	378486.94	94.82	
Sc	45	He	71959.24	0.7	74157.35	97.04	
Ge	72	He	62755.64	1.8	64995.55	96.55	
In	115	He	556729.45	0.9	567443.14	98.11	
Lu	175	He	1437094.04	1.6	1431992.06	100.36	
Th	232	He	2515509.39	1.8	2601025.95	96.71	

Sample Report

Sample Name K2508064-011
File Name 038SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:48:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.6625	ug/L	11.5	1150.07	
Se	78	72	H2	11.0700	ug/L	6.0	3263.38	
Cu	63	72	He	11.1154	ug/L	1.2	48104.79	
Cu	65	72	He	11.1325	ug/L	2.4	23960.23	
Zn	66	72	He	539.3749	ug/L	1.8	275239.04	
Mo	95	115	He	0.2652	ug/L	10.5	564.46	
Mo	98	115	He	0.2801	ug/L	3.9	1030.05	
Ag	107	115	He	0.0463	ug/L	11.0	351.68	
Ag	109	115	He	0.0384	ug/L	8.0	306.68	
Cd	111	115	He	3.3053	ug/L	2.2	2781.45	
Pb	208	175	He	0.2987	ug/L	2.5	6180.60	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352672.25	1.0	378486.94	93.18	
Sc	45	He	70730.02	1.3	74157.35	95.38	
Ge	72	He	61503.35	1.4	64995.55	94.63	
In	115	He	549791.77	1.9	567443.14	96.89	
Lu	175	He	1429861.23	0.7	1431992.06	99.85	
Th	232	He	2496019.13	2.6	2601025.95	95.96	

Sample Report

Sample Name K2508064-012
File Name 039SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:50:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0024	ug/L	3.5	1083.40	
Se	78	72	H2	10.1962	ug/L	2.6	2992.99	
Cu	63	72	He	12.3423	ug/L	1.3	52426.74	
Cu	65	72	He	12.3605	ug/L	1.9	26112.27	
Zn	66	72	He	493.2385	ug/L	1.1	247123.52	
Mo	95	115	He	0.2128	ug/L	9.2	447.79	
Mo	98	115	He	0.2109	ug/L	8.9	771.14	
Ag	107	115	He	0.0715	ug/L	8.4	528.35	
Ag	109	115	He	0.0733	ug/L	4.6	550.02	
Cd	111	115	He	3.0164	ug/L	1.1	2482.89	
Pb	208	175	He	0.3345	ug/L	1.3	6792.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351054.55	1.5	378486.94	92.75	
Sc	45	He	69741.83	1.7	74157.35	94.05	
Ge	72	He	60381.72	1.8	64995.55	92.9	
In	115	He	537599.80	1.1	567443.14	94.74	
Lu	175	He	1406457.12	1.0	1431992.06	98.22	
Th	232	He	2474021.32	0.6	2601025.95	95.12	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 040_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:52:09
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.1270	ug/L	7.0	2413.58	96.51	
Se	78	72	H2	25.1407	ug/L	0.9	7355.25	100.56	
Cu	63	72	He	26.5405	ug/L	1.7	108688.76	106.16	
Cu	65	72	He	26.8169	ug/L	0.8	54651.19	107.27	
Zn	66	72	He	27.7278	ug/L	1.1	13453.23	110.91	CCV Failed
Mo	95	115	He	12.6705	ug/L	0.7	24876.58	101.36	
Mo	98	115	He	12.6412	ug/L	0.4	42752.02	101.13	
Ag	107	115	He	12.8758	ug/L	0.5	92815.83	103.01	
Ag	109	115	He	12.8477	ug/L	0.9	90952.19	102.78	
Cd	111	115	He	25.5373	ug/L	0.1	20761.33	102.15	
Pb	208	175	He	24.4168	ug/L	1.2	486017.59	97.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350054.24	1.9	378486.94	92.49	
Sc	45	He	68459.02	1.2	74157.35	92.32	
Ge	72	He	58276.42	1.0	64995.55	89.66	
In	115	He	531004.94	0.5	567443.14	93.58	
Lu	175	He	1404055.14	1.1	1431992.06	98.05	
Th	232	He	2450074.55	1.0	2601025.95	94.2	

*See rerun
 MS
 8/27/25*

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 041_CC.V.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:57:16
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.5893	ug/L	3.7	2440.24	98.36	
Se	78	72	H2	25.3481	ug/L	1.7	7366.92	101.39	
Cu	63	72	He	26.3479	ug/L	0.1	108403.32	105.39	
Cu	65	72	He	26.3439	ug/L	2.9	53925.11	105.38	
Zn	66	72	He	26.9800	ug/L	3.1	13149.60	107.92	
Mo	95	115	He	12.5514	ug/L	2.1	24622.79	100.41	
Mo	98	115	He	12.4586	ug/L	1.1	42107.82	99.67	
Ag	107	115	He	12.7540	ug/L	0.7	91877.52	102.03	
Ag	109	115	He	12.7917	ug/L	1.5	90489.03	102.33	
Cd	111	115	He	25.4795	ug/L	1.0	20699.91	101.92	
Pb	208	175	He	24.3048	ug/L	0.6	480096.12	97.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347706.01	0.2	378486.94	91.87	
Sc	45	He	68984.68	0.4	74157.35	93.02	
Ge	72	He	58541.02	0.8	64995.55	90.07	
In	115	He	530692.14	1.6	567443.14	93.52	
Lu	175	He	1393266.75	0.7	1431992.06	97.3	
Th	232	He	2453260.90	1.5	2601025.95	94.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 042_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 11:59:21
Sample Type CCB
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0436	ug/L	492.5	140.00	
Se	78	72	H2	0.0096	ug/L	117.6	4.33	
Cu	63	72	He	-0.0091	ug/L	N/A	70.00	
Cu	65	72	He	0.0035	ug/L	330.1	38.33	
Zn	66	72	He	0.0079	ug/L	496.9	53.33	
Mo	95	115	He	0.0000	ug/L	4926.8	25.55	
Mo	98	115	He	0.0023	ug/L	168.9	57.78	
Ag	107	115	He	0.0028	ug/L	16.0	26.67	
Ag	109	115	He	0.0025	ug/L	69.6	43.33	
Cd	111	115	He	0.0018	ug/L	67.7	1.50	
Pb	208	175	He	0.0078	ug/L	31.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350207.37	1.3	378486.94	92.53	
Sc	45	He	68519.59	2.3	74157.35	92.4	
Ge	72	He	59756.13	3.2	64995.55	91.94	
In	115	He	538660.93	1.3	567443.14	94.93	
Lu	175	He	1407453.26	1.3	1431992.06	98.29	
Th	232	He	2485102.36	2.3	2601025.95	95.54	

Sample Report

Sample Name K2508064-013
File Name 043SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:01:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.0428	ug/L	20.4	1166.74	
Se	78	72	H2	11.2244	ug/L	0.9	3259.05	
Cu	63	72	He	10.2008	ug/L	3.0	41159.74	
Cu	65	72	He	9.9694	ug/L	1.5	20009.10	
Zn	66	72	He	621.0704	ug/L	2.0	295472.74	
Mo	95	115	He	0.1548	ug/L	3.9	323.34	
Mo	98	115	He	0.1537	ug/L	9.8	560.01	
Ag	107	115	He	0.0541	ug/L	10.7	390.01	
Ag	109	115	He	0.0570	ug/L	2.6	421.68	
Cd	111	115	He	2.8415	ug/L	0.8	2273.52	
Pb	208	175	He	0.3189	ug/L	1.6	6259.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347258.51	1.5	378486.94	91.75	
Sc	45	He	66684.24	1.7	74157.35	89.92	
Ge	72	He	57349.62	2.3	64995.55	88.24	
In	115	He	522664.29	2.1	567443.14	92.11	
Lu	175	He	1357962.32	0.6	1431992.06	94.83	
Th	232	He	2431668.24	0.6	2601025.95	93.49	

Sample Report

Sample Name K2508064-014
File Name 044SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:03:27
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	12.0388	ug/L	9.3	1243.41	
Se	78	72	H2	11.8147	ug/L	0.9	3379.07	
Cu	63	72	He	13.1971	ug/L	2.0	54437.50	
Cu	65	72	He	13.4063	ug/L	3.5	27486.55	
Zn	66	72	He	543.1706	ug/L	2.6	264148.85	
Mo	95	115	He	0.1971	ug/L	8.8	410.01	
Mo	98	115	He	0.1790	ug/L	8.2	651.13	
Ag	107	115	He	0.0356	ug/L	23.1	261.67	
Ag	109	115	He	0.0346	ug/L	18.0	268.34	
Cd	111	115	He	3.7046	ug/L	1.4	2999.16	
Pb	208	175	He	0.2756	ug/L	4.3	5589.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342111.71	1.1	378486.94	90.39	
Sc	45	He	67705.34	0.7	74157.35	91.3	
Ge	72	He	58634.86	3.1	64995.55	90.21	
In	115	He	528761.76	0.6	567443.14	93.18	
Lu	175	He	1398860.45	0.6	1431992.06	97.69	
Th	232	He	2450972.36	0.6	2601025.95	94.23	

Sample Report

Sample Name K2508064-015
File Name 045SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:05:30
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.0413	ug/L	38.8	1296.75	
Se	78	72	H2	14.0644	ug/L	19.1	3490.10	
Cu	63	72	He	12.3747	ug/L	1.4	50589.89	
Cu	65	72	He	12.5098	ug/L	2.9	25429.43	
Zn	66	72	He	453.3085	ug/L	0.5	218590.89	
Mo	95	115	He	0.2263	ug/L	2.8	462.23	
Mo	98	115	He	0.2084	ug/L	10.0	743.36	
Ag	107	115	He	0.0736	ug/L	15.7	530.01	
Ag	109	115	He	0.0835	ug/L	20.3	608.35	
Cd	111	115	He	3.2959	ug/L	1.6	2641.42	
Pb	208	175	He	0.6518	ug/L	0.7	12744.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	303375.44	16.9	378486.94	80.15	
Sc	45	He	67239.99	1.4	74157.35	90.67	
Ge	72	He	58109.18	1.7	64995.55	89.4	
In	115	He	523544.49	1.7	567443.14	92.26	
Lu	175	He	1366382.64	1.5	1431992.06	95.42	
Th	232	He	2479014.34	1.4	2601025.95	95.31	

Sample Report

Sample Name K2508064-016
File Name 046SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:07:33
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.7804	ug/L	8.8	1140.07	
Se	78	72	H2	11.3033	ug/L	3.7	3264.72	
Cu	63	72	He	12.4655	ug/L	2.7	51774.31	
Cu	65	72	He	12.4989	ug/L	1.0	25825.16	
Zn	66	72	He	485.6824	ug/L	2.5	237914.57	
Mo	95	115	He	0.2151	ug/L	11.4	444.45	
Mo	98	115	He	0.2226	ug/L	10.5	796.70	
Ag	107	115	He	0.0557	ug/L	14.9	405.01	
Ag	109	115	He	0.0615	ug/L	7.5	458.34	
Cd	111	115	He	2.6462	ug/L	2.7	2141.16	
Pb	208	175	He	0.2995	ug/L	4.3	6089.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345633.64	2.3	378486.94	91.32	
Sc	45	He	68245.03	1.2	74157.35	92.03	
Ge	72	He	59049.82	1.9	64995.55	90.85	
In	115	He	528664.13	1.7	567443.14	93.17	
Lu	175	He	1405722.38	2.4	1431992.06	98.17	
Th	232	He	2501242.05	1.6	2601025.95	96.16	

Sample Report

Sample Name K2508064-017
File Name 047SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:09:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	9.3459	ug/L	6.6	1006.72	
Se	78	72	H2	10.9062	ug/L	1.1	3158.69	
Cu	63	72	He	9.8627	ug/L	1.5	40484.58	
Cu	65	72	He	9.5961	ug/L	2.1	19586.87	
Zn	66	72	He	385.1112	ug/L	0.1	186352.27	
Mo	95	115	He	0.1756	ug/L	14.7	370.01	
Mo	98	115	He	0.1628	ug/L	2.8	600.02	
Ag	107	115	He	0.0876	ug/L	10.3	638.36	
Ag	109	115	He	0.0778	ug/L	6.5	576.69	
Cd	111	115	He	1.5972	ug/L	2.4	1301.06	
Pb	208	175	He	0.6280	ug/L	0.1	12600.25	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346427.43	2.1	378486.94	91.53	
Sc	45	He	68228.05	1.5	74157.35	92	
Ge	72	He	58309.88	0.3	64995.55	89.71	
In	115	He	532082.72	1.1	567443.14	93.77	
Lu	175	He	1401469.36	1.8	1431992.06	97.87	
Th	232	He	2521849.23	1.7	2601025.95	96.96	

Sample Report

Sample Name K2508064-018
File Name 048SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:11:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.2155	ug/L	24.5	1180.08	
Se	78	72	H2	11.5345	ug/L	1.7	3330.39	
Cu	63	72	He	9.5663	ug/L	1.9	39277.65	
Cu	65	72	He	9.7787	ug/L	0.8	19965.80	
Zn	66	72	He	433.6171	ug/L	2.4	209847.81	
Mo	95	115	He	0.3091	ug/L	11.2	616.68	
Mo	98	115	He	0.2949	ug/L	1.2	1021.15	
Ag	107	115	He	0.0361	ug/L	16.7	260.00	
Ag	109	115	He	0.0406	ug/L	2.5	305.01	
Cd	111	115	He	1.9246	ug/L	1.4	1528.58	
Pb	208	175	He	0.4924	ug/L	4.1	9710.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345353.59	1.4	378486.94	91.25	
Sc	45	He	67102.74	1.1	74157.35	90.49	
Ge	72	He	58326.66	0.9	64995.55	89.74	
In	115	He	518751.71	0.7	567443.14	91.42	
Lu	175	He	1374075.92	2.0	1431992.06	95.96	
Th	232	He	2488507.67	1.4	2601025.95	95.67	

Sample Report

Sample Name K2508064-019
File Name 049SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:13:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.9852	ug/L	8.2	930.05	
Se	78	72	H2	10.8081	ug/L	6.5	2989.99	
Cu	63	72	He	8.3860	ug/L	2.6	34344.92	
Cu	65	72	He	8.3467	ug/L	0.8	17000.25	
Zn	66	72	He	403.6771	ug/L	1.4	194838.14	
Mo	95	115	He	0.1808	ug/L	7.5	377.78	
Mo	98	115	He	0.1697	ug/L	9.2	620.02	
Ag	107	115	He	0.0495	ug/L	10.6	361.68	
Ag	109	115	He	0.0464	ug/L	1.5	351.68	
Cd	111	115	He	2.2790	ug/L	0.9	1844.79	
Pb	208	175	He	0.4116	ug/L	2.9	8289.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	332215.73	9.7	378486.94	87.77	
Sc	45	He	68385.25	0.9	74157.35	92.22	
Ge	72	He	58173.09	2.1	64995.55	89.5	
In	115	He	528748.03	1.5	567443.14	93.18	
Lu	175	He	1400034.98	2.3	1431992.06	97.77	
Th	232	He	2480010.74	1.0	2601025.95	95.35	

Sample Report

Sample Name K2508064-020
File Name 050SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:15:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.0937	ug/L	15.2	1070.06	
Se	78	72	H2	11.1410	ug/L	2.3	3205.70	
Cu	63	72	He	11.9419	ug/L	0.9	48178.26	
Cu	65	72	He	11.7721	ug/L	2.6	23621.38	
Zn	66	72	He	505.3667	ug/L	1.4	240441.06	
Mo	95	115	He	0.1940	ug/L	7.7	402.23	
Mo	98	115	He	0.1921	ug/L	1.3	692.24	
Ag	107	115	He	0.0649	ug/L	17.3	470.01	
Ag	109	115	He	0.0438	ug/L	21.6	331.67	
Cd	111	115	He	4.0341	ug/L	1.2	3251.72	
Pb	208	175	He	0.3108	ug/L	3.6	6149.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344184.94	0.8	378486.94	90.94	
Sc	45	He	68143.87	0.7	74157.35	91.89	
Ge	72	He	57336.07	0.7	64995.55	88.22	
In	115	He	526503.24	0.9	567443.14	92.79	
Lu	175	He	1368026.75	0.6	1431992.06	95.53	
Th	232	He	2493489.76	1.5	2601025.95	95.87	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 051_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:17:50
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.8684	ug/L	5.5	2333.57	95.47	
Se	78	72	H2	25.9830	ug/L	3.8	7424.29	103.93	
Cu	63	72	He	25.6223	ug/L	0.8	104514.97	102.49	
Cu	65	72	He	25.5729	ug/L	2.1	51897.52	102.29	
Zn	66	72	He	26.0226	ug/L	0.6	12579.08	104.09	
Mo	95	115	He	12.7263	ug/L	0.6	24277.80	101.81	
Mo	98	115	He	12.5861	ug/L	0.6	41360.11	100.69	
Ag	107	115	He	12.9346	ug/L	0.6	90597.85	103.48	
Ag	109	115	He	13.0325	ug/L	2.3	89641.91	104.26	
Cd	111	115	He	25.4874	ug/L	0.6	20134.08	101.95	
Pb	208	175	He	23.9721	ug/L	1.2	461392.31	95.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341869.41	0.9	378486.94	90.33	
Sc	45	He	66027.45	1.4	74157.35	89.04	
Ge	72	He	58042.28	1.7	64995.55	89.3	
In	115	He	515968.06	0.7	567443.14	90.93	
Lu	175	He	1357566.07	0.4	1431992.06	94.8	
Th	232	He	2479288.14	1.5	2601025.95	95.32	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 052_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:19:54
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.4022	ug/L	N/A	96.67	
Se	78	72	H2	0.0120	ug/L	57.5	5.00	
Cu	63	72	He	-0.0073	ug/L	N/A	73.33	
Cu	65	72	He	-0.0012	ug/L	N/A	26.67	
Zn	66	72	He	0.0142	ug/L	310.9	53.33	
Mo	95	115	He	0.0051	ug/L	14.6	34.44	
Mo	98	115	He	-0.0032	ug/L	N/A	37.78	
Ag	107	115	He	0.0034	ug/L	23.1	30.00	
Ag	109	115	He	0.0013	ug/L	170.7	33.33	
Cd	111	115	He	0.0017	ug/L	21.8	1.33	
Pb	208	175	He	0.0118	ug/L	8.1	346.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345436.10	0.6	378486.94	91.27	
Sc	45	He	65093.73	2.3	74157.35	87.78	
Ge	72	He	56797.38	1.3	64995.55	87.39	
In	115	He	520438.55	1.8	567443.14	91.72	
Lu	175	He	1354174.98	2.8	1431992.06	94.57	
Th	232	He	2475291.53	2.9	2601025.95	95.17	

Prep Blank (PB) Report

Sample Name KQ2515046-01
File Name 053_PB.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:21:59
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1788	ug/L	N/A	116.67	
Se	78	72	H2	0.0086	ug/L	145.8	4.00	
Cu	63	72	He	0.0077	ug/L	61.4	136.67	
Cu	65	72	He	0.0155	ug/L	72.9	61.67	
Zn	66	72	He	0.0116	ug/L	376.7	53.33	
Mo	95	115	He	-0.0049	ug/L	N/A	15.56	
Mo	98	115	He	-0.0089	ug/L	N/A	18.89	
Ag	107	115	He	0.0012	ug/L	114.3	15.00	
Ag	109	115	He	0.0012	ug/L	164.8	33.33	
Cd	111	115	He	0.0006	ug/L	101.0	0.50	
[Pb]	206	175	He	0.0141	ug/L	12.9	104.44	
[Pb]	207	175	He	0.0110	ug/L	19.3	68.89	
Pb	208	175	He	0.0119	ug/L	7.6	356.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343272.12	0.3	378486.94	90.7	
Sc	45	He	66824.67	2.4	74157.35	90.11	
Ge	72	He	58306.62	1.2	64995.55	89.71	
In	115	He	529435.73	1.6	567443.14	93.3	
Lu	175	He	1382377.06	1.0	1431992.06	96.54	
Th	232	He	2454027.36	1.6	2601025.95	94.35	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-02
File Name 054_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:24:03
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	31.8263	ug/L	2.3	3117.06	33.3	95.57	
Se	78	72	H2	33.3429	ug/L	0.6	9683.98	33.3	100.13	
Cu	63	72	He	48.6796	ug/L	0.8	197832.78	50	97.36	
Cu	65	72	He	48.6762	ug/L	1.5	98442.88	50	97.35	
Zn	66	72	He	96.3199	ug/L	0.8	46275.38	100	96.32	
Mo	95	115	He	31.7337	ug/L	2.0	61047.22	33.3	95.3	
Mo	98	115	He	31.7779	ug/L	1.1	105301.35	33.3	95.43	
Ag	107	115	He	9.8439	ug/L	0.9	69578.88	10	98.44	
Ag	109	115	He	9.8762	ug/L	0.9	68559.00	10	98.76	
Cd	111	115	He	9.7570	ug/L	0.5	7778.18	10	97.57	
[Pb]	206	175	He	97.5492	ug/L	1.3	467539.23	100	97.55	
[Pb]	207	175	He	89.9667	ug/L	0.8	368295.12	100	89.97	
Pb	208	175	He	92.0377	ug/L	1.4	1755191.06	100	92.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347495.40	0.2	378486.94	91.81	
Sc	45	He	64963.16	1.2	74157.35	87.6	
Ge	72	He	57854.85	2.0	64995.55	89.01	
In	115	He	520678.27	1.1	567443.14	91.76	
Lu	175	He	1345470.55	1.1	1431992.06	93.96	
Th	232	He	2461768.71	0.9	2601025.95	94.65	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-03
File Name 055_QC4.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:26:05
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.2042	ug/L	17.8	533.36	4.8	87.59	
Se	78	72	H2	4.8677	ug/L	6.3	1427.74	4.8	101.41	
Cu	63	72	He	6.4000	ug/L	2.4	26468.20	6.6	96.97	
Cu	65	72	He	6.4075	ug/L	1.7	13171.15	6.6	97.08	
Zn	66	72	He	54.7084	ug/L	2.5	26675.28	57.4	95.31	
Mo	95	115	He	0.2490	ug/L	5.1	513.35	-1	-24.9	
Mo	98	115	He	0.2408	ug/L	5.7	862.26	-1	-24.08	
Ag	107	115	He	0.2735	ug/L	3.2	1976.83	0.27	101.3	
Ag	109	115	He	0.2429	ug/L	0.9	1743.46	0.27	89.96	
Cd	111	115	He	0.3070	ug/L	1.2	249.50	0.296	103.72	
Pb	208	175	He	0.1211	ug/L	4.4	2534.56	0.116	104.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350713.85	1.0	378486.94	92.66	
Sc	45	He	68535.79	1.4	74157.35	92.42	
Ge	72	He	58671.39	1.1	64995.55	90.27	
In	115	He	530822.99	0.4	567443.14	93.55	
Lu	175	He	1403827.69	0.2	1431992.06	98.03	
Th	232	He	2552989.96	0.1	2601025.95	98.15	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515046-04
File Name 056_QC5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:28:08
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	20.2428	ug/L	4.5	1973.50	21.8	92.86	
Se	78	72	H2	21.3173	ug/L	1.4	6015.95	21.8	97.79	
Cu	63	72	He	916.0032	ug/L	1.9	3767887.65	994	92.15	
Cu	65	72	He	929.1873	ug/L	1.4	1902900.23	994	93.48	
Zn	66	72	He	255.6217	ug/L	3.0	124265.92	272	93.98	
Mo	95	115	He	6.4755	ug/L	1.9	12410.00	6.88	94.12	
Mo	98	115	He	6.5037	ug/L	1.3	21472.12	6.88	94.53	
Ag	107	115	He	5.4442	ug/L	0.8	38274.43	-1	-544.42	
Ag	109	115	He	5.3971	ug/L	1.7	37271.86	-1	-539.71	
Cd	111	115	He	80.2726	ug/L	0.3	63642.33	84.6	94.88	
Pb	208	175	He	0.3854	ug/L	3.5	7429.77	0.45	85.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337658.30	1.2	378486.94	89.21	
Sc	45	He	66677.62	2.2	74157.35	89.91	
Ge	72	He	58607.92	3.3	64995.55	90.17	
In	115	He	517852.05	1.0	567443.14	91.26	
Lu	175	He	1338851.13	2.4	1431992.06	93.5	
Th	232	He	2476123.61	2.3	2601025.95	95.2	

Reference Sample Report

Sample Name K2508065-012
File Name 057_ARF.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:30:10
Sample Type AllRef
Comment 5X
ISTD Ref FileName 008CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4967	ug/L	10.7	1833.49	
Se	78	72	H2	19.9746	ug/L	2.2	5693.15	
Cu	63	72	He	13.3438	ug/L	0.4	54484.38	
Cu	65	72	He	13.5613	ug/L	1.3	27541.67	
Zn	66	72	He	398.3975	ug/L	1.1	191898.36	
Mo	95	115	He	0.7039	ug/L	6.7	1395.64	
Mo	98	115	He	0.7427	ug/L	1.4	2540.25	
Ag	107	115	He	0.8445	ug/L	4.5	6051.37	
Ag	109	115	He	0.8333	ug/L	1.8	5881.30	
Cd	111	115	He	8.0973	ug/L	1.7	6536.54	
Pb	208	175	He	6.1425	ug/L	2.3	121793.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340909.63	1.4	378486.94	90.07	
Sc	45	He	68150.85	2.9	74157.35	91.9	
Ge	72	He	58042.34	0.2	64995.55	89.3	
In	115	He	527294.67	1.0	567443.14	92.92	
Lu	175	He	1397875.55	2.3	1431992.06	97.62	
Th	232	He	2544186.42	2.1	2601025.95	97.81	

Duplicate Sample Report

Sample Name KQ2515046-05
File Name 058_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:32:14
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Fail
ISTD Ref FileName Pass
QC Ref File Name 057_
Default Text ~~ACRLS~~
~~NoUser~~

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	20.1405	ug/L	7.2	1996.84	8.51	
Se	78	72	H2	21.1264	ug/L	2.7	6060.64	5.6	
Cu	63	72	He	15.7188	ug/L	1.1	63735.66	16.34	
Cu	65	72	He	15.6568	ug/L	2.3	31578.42	14.34	
Zn	66	72	He	434.9749	ug/L	2.3	208093.97	8.78	
Mo	95	115	He	0.7574	ug/L	4.7	1493.42		<5x MRL
Mo	98	115	He	0.7776	ug/L	1.6	2644.71		<5x MRL
Ag	107	115	He	0.9242	ug/L	1.2	6589.94	9.01	
Ag	109	115	He	0.9165	ug/L	3.3	6434.87	9.51	
Cd	111	115	He	9.0078	ug/L	0.8	7236.89	10.65	
[Pb]	206	175	He	7.8491	ug/L	2.9	38194.67	19.93	
[Pb]	207	175	He	7.3937	ug/L	3.0	30723.97	18.84	
Pb	208	175	He	7.5077	ug/L	2.3	145362.86	20	Dup Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343327.34	2.2	378486.94	90.71	
Sc	45	He	66811.39	0.4	74157.35	90.09	
Ge	72	He	57657.49	0.8	64995.55	88.71	
In	115	He	524782.60	1.1	567443.14	92.48	
Lu	175	He	1365179.46	1.6	1431992.06	95.33	
Th	232	He	2522210.54	2.1	2601025.95	96.97	

Sample Report

Sample Name K2508065-012L
File Name 059SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:34:17
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	4.2088	ug/L	23.9	523.35	
Se	78	72	H2	3.8451	ug/L	1.3	1107.38	
Cu	63	72	He	2.7101	ug/L	2.1	10844.32	
Cu	65	72	He	2.7100	ug/L	3.7	5374.40	
Zn	66	72	He	80.0952	ug/L	1.7	37553.13	
Mo	95	115	He	0.1397	ug/L	2.7	290.00	
Mo	98	115	He	0.1221	ug/L	15.8	446.68	
Ag	107	115	He	0.1802	ug/L	2.0	1265.07	
Ag	109	115	He	0.1754	ug/L	8.3	1226.73	
Cd	111	115	He	1.6252	ug/L	2.2	1280.73	
Pb	208	175	He	1.2473	ug/L	2.0	24057.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344179.76	1.6	378486.94	90.94	
Sc	45	He	65070.05	3.2	74157.35	87.75	
Ge	72	He	56455.99	2.2	64995.55	86.86	
In	115	He	514799.16	1.6	567443.14	90.72	
Lu	175	He	1354249.35	1.4	1431992.06	94.57	
Th	232	He	2468732.67	1.7	2601025.95	94.91	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508065-012A
File Name 060_PDS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:36:19
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 057_
 ARF.
Default Text ALKLS
 NoUser

+5001 10ppm PS
 10001 50ppm Ag
 AS
 8/27/25

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	72.6070	ug/L	3.1	7005.18	50	108.22	
Se	78	H2	71.7653	ug/L	1.5	21045.94	50	103.58	
Cu	63	He	66.2672	ug/L	1.5	265475.55	50	105.85	
Cu	65	He	66.5929	ug/L	2.1	132779.01	50	106.06	
Zn	66	He	448.4399	ug/L	0.9	212255.34	50	100.08	
Mo	95	He	51.5826	ug/L	1.4	98565.13	50	101.76	
Mo	98	He	51.0574	ug/L	1.1	168041.90	50	100.63	
Ag	107	He	6.1523	ug/L	1.7	43199.02	5	106.16	
Ag	109	He	6.1663	ug/L	0.6	42531.92	5	106.66	
Cd	111	He	59.6281	ug/L	0.7	47216.88	50	103.06	
[Pb]	206	He	54.9033	ug/L	0.7	267277.05	50	96.95	
[Pb]	207	He	52.2707	ug/L	1.4	217315.54	50	92.3	
Pb	208	He	52.9430	ug/L	0.4	1025486.48	50	93.6	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350922.97	1.2	378486.94	92.72	
Sc	45	He	66590.48	2.8	74157.35	89.8	
Ge	72	He	57041.66	1.1	64995.55	87.76	
In	115	He	517217.43	0.4	567443.14	91.15	
Lu	175	He	1366392.32	0.7	1431992.06	95.42	
Th	232	He	2493697.83	1.1	2601025.95	95.87	

Matrix Spike Sample (MS) Report

Sample Name KQ2515046-06
File Name 061_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:38:23
Sample Type Spike
Comment 5X
ISTD Ref FileName 008CALB.d
QC Ref File Name 057_
 ARF.
Default Text ALKLS
 NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	53.0657	ug/L	4.0	5027.63	33.3	103.81	
Se	78	H2	55.9867	ug/L	0.4	16008.37	33.3	108.14	
Cu	63	He	66.9119	ug/L	0.6	267781.26	50	107.14	
Cu	65	He	67.3008	ug/L	1.0	134053.93	50	107.48	
Zn	66	He	526.0760	ug/L	0.7	248730.22	100	127.68	Spike Failed
Mo	95	He	33.3268	ug/L	0.8	63970.18	33.3	97.97	
Mo	98	He	33.4983	ug/L	1.1	110749.78	33.3	98.37	
Ag	107	He	10.8544	ug/L	0.5	76545.64	10	100.1	
Ag	109	He	10.8684	ug/L	0.8	75273.67	10	100.35	
Cd	111	He	18.7367	ug/L	0.4	14901.66	10	106.39	
[Pb]	206	He	103.8965	ug/L	2.1	505759.58	100	97.47	
[Pb]	207	He	95.4465	ug/L	2.1	396828.14	100	89.33	
Pb	208	He	98.0670	ug/L	1.9	1899500.21	100	91.92	

4x, N/A
 AB
 8/27/25

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342124.36	0.4	378486.94	90.39	
Sc	45	He	68194.42	1.1	74157.35	91.96	
Ge	72	He	56978.08	0.8	64995.55	87.66	
In	115	He	519469.10	0.1	567443.14	91.55	
Lu	175	He	1366814.98	2.2	1431992.06	95.45	
Th	232	He	2523250.80	1.7	2601025.95	97.01	

Sample Report

Sample Name K2508065-001
File Name 062SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:40:26
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.1244	ug/L	1.8	880.04	
Se	78	72	H2	8.8634	ug/L	2.4	2528.90	
Cu	63	72	He	10.6663	ug/L	0.8	43563.54	
Cu	65	72	He	10.8288	ug/L	1.5	21993.76	
Zn	66	72	He	429.9725	ug/L	1.3	207033.67	
Mo	95	115	He	0.3297	ug/L	12.4	660.02	
Mo	98	115	He	0.2930	ug/L	4.9	1021.15	
Ag	107	115	He	0.2715	ug/L	1.2	1930.15	
Ag	109	115	He	0.2830	ug/L	3.5	1993.49	
Cd	111	115	He	1.8391	ug/L	1.3	1469.75	
Pb	208	175	He	0.8385	ug/L	0.3	16584.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341242.17	0.5	378486.94	90.16	
Sc	45	He	67511.32	2.9	74157.35	91.04	
Ge	72	He	58028.98	1.2	64995.55	89.28	
In	115	He	522001.87	1.0	567443.14	91.99	
Lu	175	He	1385089.04	1.7	1431992.06	96.72	
Th	232	He	2497968.14	1.6	2601025.95	96.04	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 063_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:42:29
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser
QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.2375	ug/L	4.9	2306.90	92.95	
Se	78	72	H2	25.7409	ug/L	1.7	7460.97	102.96	
Cu	63	72	He	26.2497	ug/L	1.9	105565.52	105	
Cu	65	72	He	26.3097	ug/L	1.5	52652.10	105.24	
Zn	66	72	He	26.1415	ug/L	5.2	12465.64	104.57	
Mo	95	115	He	12.6214	ug/L	0.9	24183.19	100.97	
Mo	98	115	He	12.7363	ug/L	1.8	42034.27	101.89	
Ag	107	115	He	13.0177	ug/L	1.3	91575.85	104.14	
Ag	109	115	He	12.9595	ug/L	1.9	89526.37	103.68	
Cd	111	115	He	25.4166	ug/L	1.8	20164.28	101.67	
Pb	208	175	He	23.1244	ug/L	1.0	448004.73	92.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346861.43	2.9	378486.94	91.64	
Sc	45	He	64370.40	0.7	74157.35	86.8	
Ge	72	He	57232.21	1.5	64995.55	88.06	
In	115	He	518246.95	1.3	567443.14	91.33	
Lu	175	He	1366540.03	1.2	1431992.06	95.43	
Th	232	He	2498898.87	1.2	2601025.95	96.07	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 064_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:44:32
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0687	ug/L	750.3	140.00	
Se	78	72	H2	0.0131	ug/L	13.9	5.33	
Cu	63	72	He	-0.0115	ug/L	N/A	56.67	
Cu	65	72	He	0.0021	ug/L	549.7	33.33	
Zn	66	72	He	0.0207	ug/L	293.0	56.67	
Mo	95	115	He	0.0045	ug/L	174.3	33.34	
Mo	98	115	He	0.0049	ug/L	10.8	64.44	
Ag	107	115	He	0.0039	ug/L	20.8	33.33	
Ag	109	115	He	0.0003	ug/L	455.8	26.67	
Cd	111	115	He	0.0025	ug/L	49.7	2.00	
Pb	208	175	He	0.0128	ug/L	15.6	366.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345341.79	1.4	378486.94	91.24	
Sc	45	He	65656.02	0.9	74157.35	88.54	
Ge	72	He	57071.70	0.3	64995.55	87.81	
In	115	He	520303.09	0.6	567443.14	91.69	
Lu	175	He	1357480.91	0.6	1431992.06	94.8	
Th	232	He	2498570.38	1.4	2601025.95	96.06	

Sample Report

Sample Name K2508065-002
File Name 065SMPL.d
Data Path Name D:\Agilent\ICPM\H1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:46:36
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.7281	ug/L	9.7	940.05	
Se	78	72	H2	7.7513	ug/L	2.6	2219.51	
Cu	63	72	He	9.3570	ug/L	1.8	37984.23	
Cu	65	72	He	9.2818	ug/L	1.4	18737.39	
Zn	66	72	He	420.9367	ug/L	1.0	201431.31	
Mo	95	115	He	0.1701	ug/L	12.1	352.23	
Mo	98	115	He	0.1817	ug/L	14.7	650.02	
Ag	107	115	He	0.0588	ug/L	6.9	421.68	
Ag	109	115	He	0.0643	ug/L	10.8	471.68	
Cd	111	115	He	1.3523	ug/L	0.5	1079.54	
Pb	208	175	He	0.2239	ug/L	3.1	4443.65	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342523.40	1.9	378486.94	90.5	
Sc	45	He	66312.65	3.4	74157.35	89.42	
Ge	72	He	57667.55	1.5	64995.55	88.73	
In	115	He	521463.55	2.0	567443.14	91.9	
Lu	175	He	1362050.87	2.1	1431992.06	95.12	
Th	232	He	2465414.91	1.8	2601025.95	94.79	

Sample Report

Sample Name K2508065-003
File Name 066SMPL.d
Data Path Name D:\Agilent\CPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:48:40
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.8445	ug/L	8.7	860.04	
Se	78	72	H2	8.6710	ug/L	3.1	2492.89	
Cu	63	72	He	10.3654	ug/L	5.2	42105.84	
Cu	65	72	He	10.4046	ug/L	3.1	21023.91	
Zn	66	72	He	426.5188	ug/L	4.0	204297.63	
Mo	95	115	He	0.1512	ug/L	17.5	317.78	
Mo	98	115	He	0.1781	ug/L	10.9	642.24	
Ag	107	115	He	0.0856	ug/L	8.5	615.02	
Ag	109	115	He	0.0717	ug/L	18.2	525.02	
Cd	111	115	He	1.4154	ug/L	3.2	1135.88	
Pb	208	175	He	0.1909	ug/L	4.5	3864.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343957.47	2.4	378486.94	90.88	
Sc	45	He	67661.96	0.5	74157.35	91.24	
Ge	72	He	57761.48	2.7	64995.55	88.87	
In	115	He	524238.29	0.7	567443.14	92.39	
Lu	175	He	1383291.86	1.8	1431992.06	96.6	
Th	232	He	2489963.97	2.1	2601025.95	95.73	

Sample Report

Sample Name K2508065-004
File Name 067SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:50:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.4092	ug/L	21.0	726.70	
Se	78	72	H2	7.3397	ug/L	3.3	2110.16	
Cu	63	72	He	9.5579	ug/L	2.8	38662.78	
Cu	65	72	He	9.5725	ug/L	1.8	19263.15	
Zn	66	72	He	441.4141	ug/L	1.3	210514.21	
Mo	95	115	He	0.2020	ug/L	8.8	410.01	
Mo	98	115	He	0.1937	ug/L	7.0	684.47	
Ag	107	115	He	0.1018	ug/L	5.4	720.02	
Ag	109	115	He	0.0957	ug/L	4.4	683.36	
Cd	111	115	He	0.9238	ug/L	5.1	730.85	
Pb	208	175	He	0.2384	ug/L	6.8	4693.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	343784.24	1.4	378486.94	90.83	
Sc	45	He	66509.87	2.6	74157.35	89.69	
Ge	72	He	57480.04	2.1	64995.55	88.44	
In	115	He	516758.41	0.5	567443.14	91.07	
Lu	175	He	1354143.73	1.8	1431992.06	94.56	
Th	232	He	2496829.39	3.1	2601025.95	95.99	

Sample Report

Sample Name K2508065-005
File Name 068SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:52:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.7983	ug/L	12.5	763.37	
Se	78	72	H2	7.8129	ug/L	4.2	2247.52	
Cu	63	72	He	10.3701	ug/L	0.4	42092.64	
Cu	65	72	He	10.6353	ug/L	1.4	21466.33	
Zn	66	72	He	477.8961	ug/L	0.8	228682.84	
Mo	95	115	He	0.1735	ug/L	30.5	357.78	
Mo	98	115	He	0.1821	ug/L	23.7	647.80	
Ag	107	115	He	0.0642	ug/L	4.3	458.34	
Ag	109	115	He	0.0586	ug/L	15.0	430.01	
Cd	111	115	He	1.3321	ug/L	0.2	1057.71	
Pb	208	175	He	0.2600	ug/L	2.0	5217.10	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	344044.35	1.8	378486.94	90.9	
Sc	45	He	66064.64	1.7	74157.35	89.09	
Ge	72	He	57667.44	0.9	64995.55	88.73	
In	115	He	518620.38	1.8	567443.14	91.4	
Lu	175	He	1382320.97	0.8	1431992.06	96.53	
Th	232	He	2498439.02	0.8	2601025.95	96.06	

Sample Report

Sample Name K2508065-006
File Name 069SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:54:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6056	ug/L	9.2	730.03	
Se	78	72	H2	6.9586	ug/L	1.7	1959.47	
Cu	63	72	He	10.3405	ug/L	3.0	41464.02	
Cu	65	72	He	9.9859	ug/L	2.2	19915.69	
Zn	66	72	He	496.7962	ug/L	2.0	234889.30	
Mo	95	115	He	0.2474	ug/L	2.7	496.68	
Mo	98	115	He	0.2389	ug/L	6.0	833.36	
Ag	107	115	He	0.1362	ug/L	1.6	961.71	
Ag	109	115	He	0.1221	ug/L	9.5	865.04	
Cd	111	115	He	1.2907	ug/L	1.0	1021.21	
Pb	208	175	He	0.4515	ug/L	2.9	8814.55	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	336748.93	1.3	378486.94	88.97	
Sc	45	He	65666.10	0.8	74157.35	88.55	
Ge	72	He	56991.50	1.9	64995.55	87.69	
In	115	He	516808.16	0.2	567443.14	91.08	
Lu	175	He	1358520.24	1.0	1431992.06	94.87	
Th	232	He	2515914.55	0.9	2601025.95	96.73	

Sample Report

Sample Name K2508065-007
File Name 070SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:56:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	8.4058	ug/L	19.2	900.05	
Se	78	72	H2	7.7050	ug/L	3.9	2184.17	
Cu	63	72	He	15.7762	ug/L	1.9	63099.81	
Cu	65	72	He	15.8891	ug/L	2.4	31616.88	
Zn	66	72	He	478.1606	ug/L	1.4	225679.28	
Mo	95	115	He	1.4980	ug/L	3.0	2878.08	
Mo	98	115	He	1.5254	ug/L	0.6	5052.05	
Ag	107	115	He	0.2407	ug/L	4.9	1691.79	
Ag	109	115	He	0.2190	ug/L	5.7	1530.10	
Cd	111	115	He	1.9490	ug/L	1.3	1538.92	
Pb	208	175	He	2.5634	ug/L	2.5	49872.82	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338925.24	0.7	378486.94	89.55	
Sc	45	He	65857.04	0.8	74157.35	88.81	
Ge	72	He	56877.68	0.7	64995.55	87.51	
In	115	He	515701.44	0.7	567443.14	90.88	
Lu	175	He	1369492.95	1.4	1431992.06	95.64	
Th	232	He	2471897.15	1.7	2601025.95	95.04	

Sample Report

Sample Name K2508065-008
File Name 071SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 12:58:58
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6268	ug/L	21.2	833.37	
Se	78	72	H2	7.9884	ug/L	1.4	2273.52	
Cu	63	72	He	10.4148	ug/L	1.7	42346.63	
Cu	65	72	He	10.5701	ug/L	1.0	21369.46	
Zn	66	72	He	387.0515	ug/L	1.7	185510.99	
Mo	95	115	He	0.2245	ug/L	1.3	455.57	
Mo	98	115	He	0.2117	ug/L	2.9	747.80	
Ag	107	115	He	0.0811	ug/L	3.7	578.35	
Ag	109	115	He	0.0867	ug/L	11.5	625.02	
Cd	111	115	He	1.3249	ug/L	1.3	1054.04	
Pb	208	175	He	0.3608	ug/L	1.9	7119.70	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340370.88	1.3	378486.94	89.93	
Sc	45	He	66145.07	1.3	74157.35	89.2	
Ge	72	He	57767.88	1.9	64995.55	88.88	
In	115	He	519672.26	0.7	567443.14	91.58	
Lu	175	He	1368199.77	0.6	1431992.06	95.55	
Th	232	He	2495679.70	0.7	2601025.95	95.95	

Sample Report

Sample Name K2508065-009
File Name 072SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:01:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.6425	ug/L	11.2	740.03	
Se	78	72	H2	7.2357	ug/L	1.3	2054.49	
Cu	63	72	He	8.6232	ug/L	5.4	34826.22	
Cu	65	72	He	8.6893	ug/L	1.2	17455.83	
Zn	66	72	He	470.7990	ug/L	1.7	224125.97	
Mo	95	115	He	0.1829	ug/L	1.7	380.01	
Mo	98	115	He	0.1711	ug/L	8.0	621.13	
Ag	107	115	He	0.0913	ug/L	6.5	658.36	
Ag	109	115	He	0.0866	ug/L	10.7	631.69	
Cd	111	115	He	1.1948	ug/L	2.2	961.70	
Pb	208	175	He	0.2819	ug/L	1.7	5674.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339523.74	0.8	378486.94	89.71	
Sc	45	He	66386.19	0.7	74157.35	89.52	
Ge	72	He	57376.18	1.3	64995.55	88.28	
In	115	He	525787.77	1.1	567443.14	92.66	
Lu	175	He	1389386.23	1.1	1431992.06	97.02	
Th	232	He	2524597.62	0.5	2601025.95	97.06	

Sample Report

Sample Name K2508065-010
File Name 073SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:03:05
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	6.5511	ug/L	18.2	733.37	
Se	78	72	H2	7.1586	ug/L	2.6	2036.15	
Cu	63	72	He	9.5621	ug/L	0.8	39358.06	
Cu	65	72	He	9.7431	ug/L	1.6	19939.04	
Zn	66	72	He	423.9270	ug/L	0.6	205664.55	
Mo	95	115	He	0.2301	ug/L	4.3	466.68	
Mo	98	115	He	0.2020	ug/L	7.3	716.69	
Ag	107	115	He	0.1257	ug/L	10.8	893.37	
Ag	109	115	He	0.1217	ug/L	13.5	868.37	
Cd	111	115	He	1.2033	ug/L	3.3	958.37	
Pb	208	175	He	0.4098	ug/L	1.3	8077.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340054.25	1.0	378486.94	89.85	
Sc	45	He	66992.27	1.6	74157.35	90.34	
Ge	72	He	58463.81	0.9	64995.55	89.95	
In	115	He	520206.53	0.1	567443.14	91.68	
Lu	175	He	1369726.86	1.2	1431992.06	95.65	
Th	232	He	2505709.54	0.5	2601025.95	96.34	

Sample Report

Sample Name K2508065-011
File Name 074SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:05:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.5428	ug/L	10.2	1743.47	
Se	78	72	H2	19.4630	ug/L	5.1	5544.09	
Cu	63	72	He	12.1375	ug/L	2.2	48221.77	
Cu	65	72	He	11.9047	ug/L	3.3	23521.23	
Zn	66	72	He	383.6127	ug/L	1.6	179765.40	
Mo	95	115	He	0.5503	ug/L	6.7	1078.94	
Mo	98	115	He	0.5465	ug/L	6.2	1853.47	
Ag	107	115	He	0.6924	ug/L	5.1	4882.57	
Ag	109	115	He	0.6891	ug/L	1.1	4790.87	
Cd	111	115	He	9.5874	ug/L	1.7	7617.26	
Pb	208	175	He	3.2139	ug/L	0.9	63032.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341163.84	3.7	378486.94	90.14	
Sc	45	He	66212.09	2.7	74157.35	89.29	
Ge	72	He	56479.36	1.8	64995.55	86.9	
In	115	He	518995.95	1.4	567443.14	91.46	
Lu	175	He	1380961.02	0.5	1431992.06	96.44	
Th	232	He	2482353.97	0.8	2601025.95	95.44	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 075_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:07:13
Sample Type CCV
Comment —
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.0825	ug/L	3.5	2336.90	96.33	
Se	78	72	H2	25.4203	ug/L	1.8	7212.85	101.68	
Cu	63	72	He	26.1783	ug/L	2.8	104038.39	104.71	
Cu	65	72	He	26.3420	ug/L	2.6	52093.38	105.37	
Zn	66	72	He	26.1558	ug/L	2.5	12318.86	104.62	
Mo	95	115	He	12.5375	ug/L	0.9	23744.67	100.3	
Mo	98	115	He	12.5761	ug/L	2.5	41014.64	100.61	
Ag	107	115	He	12.9617	ug/L	0.8	90116.37	103.69	
Ag	109	115	He	13.1252	ug/L	2.4	89602.01	105	
Cd	111	115	He	25.4860	ug/L	0.7	19983.69	101.94	
Pb	208	175	He	22.9869	ug/L	0.8	435150.35	91.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339522.48	1.3	378486.94	89.71	
Sc	45	He	64283.08	1.4	74157.35	86.68	
Ge	72	He	56559.64	1.6	64995.55	87.02	
In	115	He	512179.28	1.5	567443.14	90.26	
Lu	175	He	1335233.57	0.9	1431992.06	93.24	
Th	232	He	2496369.55	1.2	2601025.95	95.98	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 076_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:09:17
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.3831	ug/L	N/A	96.67	
Se	78	72	H2	0.0122	ug/L	114.1	5.00	
Cu	63	72	He	-0.0032	ug/L	N/A	90.00	
Cu	65	72	He	0.0129	ug/L	85.9	55.00	
Zn	66	72	He	0.0139	ug/L	471.0	53.33	
Mo	95	115	He	0.0006	ug/L	610.7	25.55	
Mo	98	115	He	-0.0017	ug/L	N/A	42.22	
Ag	107	115	He	0.0020	ug/L	62.6	20.00	
Ag	109	115	He	0.0004	ug/L	660.0	26.67	
Cd	111	115	He	0.0032	ug/L	40.5	2.50	
Pb	208	175	He	0.0114	ug/L	23.2	340.00	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339617.46	0.8	378486.94	89.73	
Sc	45	He	63894.94	1.0	74157.35	86.16	
Ge	72	He	57202.34	1.3	64995.55	88.01	
In	115	He	516489.35	0.6	567443.14	91.02	
Lu	175	He	1360925.97	1.7	1431992.06	95.04	
Th	232	He	2435829.08	0.3	2601025.95	93.65	

Sample Report

Sample Name K2508065-013
File Name 077SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:11:22
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser
QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.6700	ug/L	4.4	3053.72	
Se	78	72	H2	31.6143	ug/L	2.3	9042.56	
Cu	63	72	He	17.6052	ug/L	2.6	71097.27	
Cu	65	72	He	17.4504	ug/L	3.1	35056.49	
Zn	66	72	He	528.6438	ug/L	3.4	251909.39	
Mo	95	115	He	0.8128	ug/L	3.3	1600.10	
Mo	98	115	He	0.8564	ug/L	4.1	2906.99	
Ag	107	115	He	2.4540	ug/L	3.1	17487.79	
Ag	109	115	He	2.4260	ug/L	2.1	16993.87	
Cd	111	115	He	32.5179	ug/L	0.7	26129.87	
Pb	208	175	He	5.6002	ug/L	0.4	110145.71	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342192.57	1.5	378486.94	90.41	
Sc	45	He	67371.02	1.6	74157.35	90.85	
Ge	72	He	57449.71	1.9	64995.55	88.39	
In	115	He	524883.70	1.4	567443.14	92.5	
Lu	175	He	1386036.65	0.6	1431992.06	96.79	
Th	232	He	2513779.34	2.0	2601025.95	96.65	

Sample Report

Sample Name K2508065-014
File Name 078SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:13:25
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	17.9195	ug/L	8.0	1816.81	
Se	78	72	H2	19.5978	ug/L	2.1	5703.15	
Cu	63	72	He	17.8973	ug/L	0.8	73650.11	
Cu	65	72	He	17.9703	ug/L	1.3	36787.46	
Zn	66	72	He	442.4505	ug/L	0.6	214874.33	
Mo	95	115	He	0.7514	ug/L	5.9	1473.42	
Mo	98	115	He	0.7691	ug/L	2.7	2602.48	
Ag	107	115	He	1.0834	ug/L	3.4	7682.18	
Ag	109	115	He	1.0440	ug/L	3.0	7288.63	
Cd	111	115	He	13.9221	ug/L	1.1	11126.63	
Pb	208	175	He	4.9785	ug/L	2.0	96094.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348113.99	1.2	378486.94	91.98	
Sc	45	He	66318.96	2.4	74157.35	89.43	
Ge	72	He	58524.44	0.7	64995.55	90.04	
In	115	He	522003.22	0.4	567443.14	91.99	
Lu	175	He	1360331.39	1.5	1431992.06	95	
Th	232	He	2489690.22	2.0	2601025.95	95.72	

Sample Report

Sample Name K2508065-015
File Name 079SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:15:29
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.5706	ug/L	4.8	1823.49	
Se	78	72	H2	18.8037	ug/L	2.6	5312.00	
Cu	63	72	He	10.4246	ug/L	1.8	41918.65	
Cu	65	72	He	10.4846	ug/L	0.4	20968.83	
Zn	66	72	He	332.9498	ug/L	1.7	157861.71	
Mo	95	115	He	0.5054	ug/L	1.5	995.60	
Mo	98	115	He	0.4957	ug/L	7.9	1686.78	
Ag	107	115	He	0.9243	ug/L	2.0	6531.60	
Ag	109	115	He	0.9230	ug/L	2.9	6423.19	
Cd	111	115	He	6.0835	ug/L	1.5	4842.85	
Pb	208	175	He	2.7163	ug/L	1.4	52271.29	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338040.23	1.5	378486.94	89.31	
Sc	45	He	67344.00	2.0	74157.35	90.81	
Ge	72	He	57141.81	1.7	64995.55	87.92	
In	115	He	520060.17	1.9	567443.14	91.65	
Lu	175	He	1354588.94	0.6	1431992.06	94.59	
Th	232	He	2493829.18	2.4	2601025.95	95.88	

Sample Report

Sample Name K2508065-016
File Name 080SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:17:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	33.4120	ug/L	6.8	3047.05	
Se	78	72	H2	35.4121	ug/L	3.1	9594.59	
Cu	63	72	He	17.3453	ug/L	1.3	70269.51	
Cu	65	72	He	17.4636	ug/L	0.9	35198.57	
Zn	66	72	He	493.1345	ug/L	2.4	235743.04	
Mo	95	115	He	0.8811	ug/L	5.3	1727.89	
Mo	98	115	He	0.8179	ug/L	1.5	2771.40	
Ag	107	115	He	2.9821	ug/L	1.9	21189.64	
Ag	109	115	He	2.9485	ug/L	1.6	20590.45	
Cd	111	115	He	31.6393	ug/L	0.8	25349.77	
Pb	208	175	He	8.0292	ug/L	1.8	152699.76	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	324402.50	3.4	378486.94	85.71	
Sc	45	He	66978.90	0.8	74157.35	90.32	
Ge	72	He	57620.75	1.3	64995.55	88.65	
In	115	He	523319.49	0.3	567443.14	92.22	
Lu	175	He	1340950.19	1.8	1431992.06	93.64	
Th	232	He	2512257.36	1.0	2601025.95	96.59	

Sample Report

Sample Name K2508065-017
File Name 081SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:19:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6501	ug/L	9.2	1976.84	
Se	78	72	H2	20.7350	ug/L	2.1	6024.29	
Cu	63	72	He	9.4537	ug/L	2.4	38478.91	
Cu	65	72	He	9.6186	ug/L	2.3	19466.74	
Zn	66	72	He	355.9835	ug/L	2.6	170789.80	
Mo	95	115	He	0.4214	ug/L	5.4	846.70	
Mo	98	115	He	0.4408	ug/L	2.5	1528.98	
Ag	107	115	He	1.7018	ug/L	1.9	12197.08	
Ag	109	115	He	1.7802	ug/L	0.8	12547.43	
Cd	111	115	He	15.6611	ug/L	0.1	12653.77	
Pb	208	175	He	2.6813	ug/L	1.1	52720.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347565.49	0.3	378486.94	91.83	
Sc	45	He	67206.58	0.7	74157.35	90.63	
Ge	72	He	57831.45	2.0	64995.55	88.98	
In	115	He	527740.64	1.3	567443.14	93	
Lu	175	He	1384223.83	2.7	1431992.06	96.66	
Th	232	He	2489175.59	0.9	2601025.95	95.7	

Sample Report

Sample Name K2508065-018
File Name 082SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:21:39
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	31.5860	ug/L	3.3	3030.39	
Se	78	72	H2	30.2975	ug/L	2.0	8615.63	
Cu	63	72	He	17.6176	ug/L	2.4	70809.38	
Cu	65	72	He	17.7202	ug/L	1.7	35434.18	
Zn	66	72	He	504.0221	ug/L	0.8	239091.44	
Mo	95	115	He	0.9933	ug/L	0.7	1931.26	
Mo	98	115	He	0.9753	ug/L	2.3	3271.51	
Ag	107	115	He	2.3360	ug/L	0.9	16483.23	
Ag	109	115	He	2.3320	ug/L	3.5	16171.22	
Cd	111	115	He	23.8820	ug/L	1.1	18998.48	
Pb	208	175	He	7.2231	ug/L	1.5	140257.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	340268.91	1.1	378486.94	89.9	
Sc	45	He	66958.65	1.9	74157.35	90.29	
Ge	72	He	57172.13	2.2	64995.55	87.96	
In	115	He	519648.23	1.6	567443.14	91.58	
Lu	175	He	1368972.22	1.7	1431992.06	95.6	
Th	232	He	2525922.51	1.4	2601025.95	97.11	

Sample Report

Sample Name K2508065-019
File Name 083SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:23:43
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	24.1246	ug/L	0.4	2403.58	
Se	78	72	H2	25.5037	ug/L	1.9	7432.63	
Cu	63	72	He	13.7814	ug/L	1.3	56676.07	
Cu	65	72	He	13.5401	ug/L	1.3	27698.62	
Zn	66	72	He	428.3809	ug/L	0.7	207832.03	
Mo	95	115	He	0.6935	ug/L	9.3	1371.19	
Mo	98	115	He	0.7341	ug/L	3.6	2502.46	
Ag	107	115	He	1.6927	ug/L	0.8	12080.33	
Ag	109	115	He	1.6701	ug/L	0.6	11721.70	
Cd	111	115	He	15.3531	ug/L	0.2	12352.16	
Pb	208	175	He	4.0606	ug/L	2.4	79802.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348690.59	0.5	378486.94	92.13	
Sc	45	He	68171.05	1.3	74157.35	91.93	
Ge	72	He	58463.90	0.1	64995.55	89.95	
In	115	He	525494.65	0.5	567443.14	92.61	
Lu	175	He	1384763.42	1.9	1431992.06	96.7	
Th	232	He	2514228.35	2.0	2601025.95	96.66	

Sample Report

Sample Name K2508065-020
File Name 084SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:25:47
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	25.4063	ug/L	14.2	2540.28	
Se	78	72	H2	24.0478	ug/L	0.5	7059.77	
Cu	63	72	He	15.9610	ug/L	2.8	65279.71	
Cu	65	72	He	15.7045	ug/L	2.7	31954.27	
Zn	66	72	He	572.1350	ug/L	1.4	276161.32	
Mo	95	115	He	0.8213	ug/L	7.3	1620.10	
Mo	98	115	He	0.8512	ug/L	5.3	2894.76	
Ag	107	115	He	3.2809	ug/L	1.9	23419.87	
Ag	109	115	He	3.2915	ug/L	3.2	23084.37	
Cd	111	115	He	18.6819	ug/L	0.3	15035.80	
Pb	208	175	He	6.1662	ug/L	2.4	119229.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351226.97	1.3	378486.94	92.8	
Sc	45	He	68438.87	2.5	74157.35	92.29	
Ge	72	He	58179.68	2.0	64995.55	89.51	
In	115	He	525690.60	0.7	567443.14	92.64	
Lu	175	He	1363355.97	2.8	1431992.06	95.21	
Th	232	He	2551336.53	1.4	2601025.95	98.09	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 085_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:27:52
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	25.2105	ug/L	12.0	2486.94	100.84	
Se	78	72	H2	25.8529	ug/L	0.4	7477.65	103.41	
Cu	63	72	He	26.2862	ug/L	1.2	107207.44	105.14	
Cu	65	72	He	26.1054	ug/L	1.8	52981.70	104.42	
Zn	66	72	He	26.4142	ug/L	2.1	12769.28	105.66	
Mo	95	115	He	12.5603	ug/L	2.6	24405.77	100.48	
Mo	98	115	He	12.5663	ug/L	1.6	42066.64	100.53	
Ag	107	115	He	12.8489	ug/L	2.5	91666.54	102.79	
Ag	109	115	He	12.9723	ug/L	1.6	90896.91	103.78	
Cd	111	115	He	25.2459	ug/L	2.0	20313.85	100.98	
Pb	208	175	He	22.5209	ug/L	1.1	433396.22	90.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346039.41	2.0	378486.94	91.43	
Sc	45	He	65719.84	1.7	74157.35	88.62	
Ge	72	He	58039.20	1.7	64995.55	89.3	
In	115	He	525685.62	2.0	567443.14	92.64	
Lu	175	He	1357477.69	1.8	1431992.06	94.8	
Th	232	He	2467572.05	1.2	2601025.95	94.87	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 086_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:29:56
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	-0.1762	ug/L	N/A	120.00	
Se	78	72	H2	0.0152	ug/L	99.9	6.00	
Cu	63	72	He	-0.0056	ug/L	N/A	83.33	
Cu	65	72	He	0.0030	ug/L	93.0	36.67	
Zn	66	72	He	-0.0038	ug/L	N/A	46.67	
Mo	95	115	He	-0.0043	ug/L	N/A	16.67	
Mo	98	115	He	-0.0046	ug/L	N/A	33.33	
Ag	107	115	He	0.0047	ug/L	14.5	40.00	
Ag	109	115	He	0.0000	ug/L	6814.8	25.00	
Cd	111	115	He	0.0023	ug/L	83.6	1.83	
Pb	208	175	He	0.0069	ug/L	10.0	256.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351904.47	1.2	378486.94	92.98	
Sc	45	He	66714.35	3.0	74157.35	89.96	
Ge	72	He	59274.05	1.3	64995.55	91.2	
In	115	He	528885.23	0.4	567443.14	93.2	
Lu	175	He	1379890.45	1.4	1431992.06	96.36	
Th	232	He	2467966.21	2.2	2601025.95	94.88	

Prep Blank (PB) Report

Sample Name KQ2515048-01
File Name 087_PB.d
Data Path Name D:\Agilent\NCPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:32:01
Sample Type PB
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0857	ug/L	413.8	143.33	
Se	78	72	H2	0.0049	ug/L	2.7	3.00	
Cu	63	72	He	0.0321	ug/L	47.6	240.01	
Cu	65	72	He	0.0489	ug/L	15.7	131.67	
Zn	66	72	He	0.0776	ug/L	42.3	86.67	
Mo	95	115	He	-0.0088	ug/L	N/A	7.78	
Mo	98	115	He	-0.0083	ug/L	N/A	21.11	
Ag	107	115	He	0.0022	ug/L	82.1	21.67	
Ag	109	115	He	-0.0026	ug/L	N/A	6.67	
Cd	111	115	He	0.0006	ug/L	0.7	0.50	
[Pb]	206	175	He	0.0154	ug/L	15.6	107.78	
[Pb]	207	175	He	0.0187	ug/L	27.2	97.78	
Pb	208	175	He	0.0164	ug/L	13.2	428.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	348985.44	1.3	378486.94	92.21	
Sc	45	He	65709.35	1.6	74157.35	88.61	
Ge	72	He	59260.61	1.1	64995.55	91.18	
In	115	He	527791.54	0.7	567443.14	93.01	
Lu	175	He	1338170.81	2.1	1431992.06	93.45	
Th	232	He	2479266.21	0.5	2601025.95	95.32	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-02
File Name 088_LCS.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:34:04
Sample Type LCS
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	32.9978	ug/L	12.2	3277.12	33.3	99.09	
Se	78	72	H2	33.7789	ug/L	3.2	9954.51	33.3	101.44	
Cu	63	72	He	49.7622	ug/L	2.4	204705.31	50	99.52	
Cu	65	72	He	50.1765	ug/L	2.0	102738.13	50	100.35	
Zn	66	72	He	98.5253	ug/L	3.0	47910.90	100	98.53	
Mo	95	115	He	32.0369	ug/L	1.3	62816.00	33.3	96.21	
Mo	98	115	He	32.0926	ug/L	1.4	108382.48	33.3	96.37	
Ag	107	115	He	9.8018	ug/L	1.3	70607.23	10	98.02	
Ag	109	115	He	9.8502	ug/L	2.2	69686.45	10	98.5	
Cd	111	115	He	9.7533	ug/L	1.0	7923.59	10	97.53	
[Pb]	206	175	He	89.7147	ug/L	1.3	436432.51	100	89.71	
[Pb]	207	175	He	85.7688	ug/L	1.1	356357.27	100	85.77	
Pb	208	175	He	87.1454	ug/L	1.3	1686787.10	100	87.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352581.77	1.2	378486.94	93.16	
Sc	45	He	68181.30	1.5	74157.35	91.94	
Ge	72	He	58581.22	2.4	64995.55	90.13	
In	115	He	530660.32	1.0	567443.14	93.52	
Lu	175	He	1365643.63	1.5	1431992.06	95.37	
Th	232	He	2486777.67	0.8	2601025.95	95.61	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-03
File Name 089_QC4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:36:08
Sample Type QC4
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	4.8974	ug/L	24.9	580.02	4.8	102.03	
Se	78	72	H2	5.3210	ug/L	18.7	1502.08	4.8	110.85	
Cu	63	72	He	6.6913	ug/L	2.3	28241.61	6.6	101.38	
Cu	65	72	He	6.7092	ug/L	1.6	14073.73	6.6	101.65	
Zn	66	72	He	58.5136	ug/L	0.8	29120.16	57.4	101.94	
Mo	95	115	He	0.2738	ug/L	7.2	570.02	-1	-27.38	
Mo	98	115	He	0.2725	ug/L	8.0	983.37	-1	-27.25	
Ag	107	115	He	0.2731	ug/L	6.4	2003.49	0.27	101.15	
Ag	109	115	He	0.2740	ug/L	1.4	1991.83	0.27	101.48	
Cd	111	115	He	0.3054	ug/L	4.3	251.83	0.296	103.18	
Pb	208	175	He	0.1170	ug/L	1.3	2444.55	0.116	100.86	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345636.44	18.9	378486.94	91.32	
Sc	45	He	69366.85	2.0	74157.35	93.54	
Ge	72	He	59883.46	0.1	64995.55	92.13	
In	115	He	538584.43	0.3	567443.14	94.91	
Lu	175	He	1398837.79	1.1	1431992.06	97.68	
Th	232	He	2556055.85	0.9	2601025.95	98.27	

Laboratory Control Sample (LCS) Report

Sample Name KQ2515048-04
File Name 090_QC5.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:38:11
Sample Type QC5
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	% Rec	QC Flag
Se	77	72	H2	17.6987	ug/L	2.6	1826.83	21.8	81.19	
Se	78	72	H2	19.2104	ug/L	2.1	5684.81	21.8	88.12	
Cu	63	72	He	862.2349	ug/L	1.5	3538378.91	994	86.74	
Cu	65	72	He	882.8619	ug/L	1.5	1803530.86	994	88.82	
Zn	66	72	He	243.6301	ug/L	1.4	118184.53	272	89.57	
Mo	95	115	He	5.8940	ug/L	1.9	11390.23	6.88	85.67	
Mo	98	115	He	5.9236	ug/L	1.9	19721.78	6.88	86.1	
Ag	107	115	He	6.2675	ug/L	1.5	44424.45	-1	-626.75	
Ag	109	115	He	6.2657	ug/L	0.5	43625.28	-1	-626.57	
Cd	111	115	He	73.7066	ug/L	1.6	58913.57	84.6	87.12	
Pb	208	175	He	0.3274	ug/L	2.3	6441.78	0.45	72.76	QC5 Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	354084.32	1.6	378486.94	93.55	
Sc	45	He	67939.86	1.7	74157.35	91.62	
Ge	72	He	58447.02	0.4	64995.55	89.92	
In	115	He	522092.20	0.4	567443.14	92.01	
Lu	175	He	1362421.23	2.5	1431992.06	95.14	
Th	232	He	2442311.21	0.6	2601025.95	93.9	

Reference Sample Report

Sample Name K2508066-004
File Name 091_ARF.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:40:15
Sample Type AllRef
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6343	ug/L	3.1	2003.51	
Se	78	72	H2	19.0537	ug/L	1.1	5614.45	
Cu	63	72	He	12.9473	ug/L	1.5	54109.50	
Cu	65	72	He	12.7790	ug/L	3.3	26559.86	
Zn	66	72	He	326.9235	ug/L	1.5	161179.66	
Mo	95	115	He	0.6935	ug/L	9.9	1393.41	
Mo	98	115	He	0.6862	ug/L	3.8	2384.66	
Ag	107	115	He	1.1775	ug/L	5.4	8552.71	
Ag	109	115	He	1.1490	ug/L	1.4	8220.83	
Cd	111	115	He	5.4528	ug/L	3.4	4465.55	
Pb	208	175	He	7.8685	ug/L	2.8	155225.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352497.85	1.4	378486.94	93.13	
Sc	45	He	69732.17	3.0	74157.35	94.03	
Ge	72	He	59411.25	1.3	64995.55	91.41	
In	115	He	535339.13	3.6	567443.14	94.34	
Lu	175	He	1391255.60	2.3	1431992.06	97.16	
Th	232	He	2536171.37	3.2	2601025.95	97.51	

Duplicate Sample Report

Sample Name KQ2515048-05
File Name 092_Dup.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:42:19
Sample Type Dup
Total Dilution 1.0000
Comment 5X
ISTD Ref FileName 006CALB.d
Sample QC Pass/Fail Pass
ISTD Ref FileName Pass
QC Ref File Name 091_
Default Text ARRLS
 NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	RPD	Flag
Se	77	72	H2	16.9010	ug/L	24.8	1853.48	14.96	
Se	78	72	H2	18.0124	ug/L	12.3	5678.14	5.62	
Cu	63	72	He	12.6640	ug/L	3.7	53038.75	2.21	
Cu	65	72	He	12.8529	ug/L	2.7	26780.23	0.58	
Zn	66	72	He	330.9154	ug/L	2.7	163511.85	1.21	
Mo	95	115	He	0.6392	ug/L	2.9	1270.07		<5x MRL
Mo	98	115	He	0.6512	ug/L	5.1	2233.52		<5x MRL
Ag	107	115	He	1.1340	ug/L	2.2	8124.13	3.77	
Ag	109	115	He	1.1025	ug/L	0.9	7773.91	4.13	
Cd	111	115	He	5.4331	ug/L	1.0	4386.69	0.36	
[Pb]	206	175	He	8.7724	ug/L	1.3	42825.85	9.03	
[Pb]	207	175	He	8.6619	ug/L	1.1	36108.87	10.24	
Pb	208	175	He	8.6987	ug/L	0.8	168955.03	10.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	380773.05	11.7	378486.94	100.6	
Sc	45	He	68632.96	2.0	74157.35	92.55	
Ge	72	He	59568.59	2.7	64995.55	91.65	
In	115	He	527352.45	0.2	567443.14	92.93	
Lu	175	He	1369357.06	0.7	1431992.06	95.63	
Th	232	He	2522998.97	0.9	2601025.95	97	



Sample Report

Sample Name K2508066-004L
File Name 093SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:44:22
Sample Type Sample
Comment 25X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	3.5034	ug/L	14.5	466.69	
Se	78	72	H2	3.8092	ug/L	3.0	1117.38	
Cu	63	72	He	2.6027	ug/L	2.9	10714.26	
Cu	65	72	He	2.5566	ug/L	2.8	5217.66	
Zn	66	72	He	65.4989	ug/L	1.5	31598.79	
Mo	95	115	He	0.1304	ug/L	12.7	277.78	
Mo	98	115	He	0.1180	ug/L	11.6	443.34	
Ag	107	115	He	0.2265	ug/L	8.4	1623.44	
Ag	109	115	He	0.2232	ug/L	9.2	1588.44	
Cd	111	115	He	1.0784	ug/L	3.4	867.86	
Pb	208	175	He	1.6476	ug/L	1.6	31723.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350482.08	1.5	378486.94	92.6	
Sc	45	He	67980.01	1.9	74157.35	91.67	
Ge	72	He	58069.12	1.4	64995.55	89.34	
In	115	He	525689.19	0.9	567443.14	92.64	
Lu	175	He	1353557.27	2.1	1431992.06	94.52	
Th	232	He	2477974.13	0.1	2601025.95	95.27	

Post Digestion Spike Sample (PDS) Report

Sample Name K2508066-004A
File Name 094_PDS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:46:25
Sample Type PDS
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_
 ARF.
Default Text ALKLS
 NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	67.2868	ug/L	10.6	6971.85	50	95.31	
Se	78	H2	68.4992	ug/L	1.9	21556.37	50	98.89	
Cu	63	He	63.7987	ug/L	1.1	268950.76	50	101.7	
Cu	65	He	64.1506	ug/L	0.5	134598.94	50	102.74	
Zn	66	He	368.5091	ug/L	0.6	183529.78	50	83.17	
Mo	95	He	50.1421	ug/L	0.5	99823.02	50	98.9	
Mo	98	He	50.3365	ug/L	0.7	172597.35	50	99.3	
Ag	107	He	6.2383	ug/L	1.2	45636.79	5	101.22	
Ag	109	He	6.2019	ug/L	1.2	44566.59	5	101.06	
Cd	111	He	55.5142	ug/L	0.4	45797.81	50	100.12	
[Pb]	206	He	51.8913	ug/L	1.0	258985.98	50	87.75	
[Pb]	207	He	52.0259	ug/L	1.6	221749.64	50	88.42	
Pb	208	He	52.0184	ug/L	1.5	1032950.76	50	88.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376613.46	1.7	378486.94	99.51	
Sc	45	He	70528.81	1.0	74157.35	95.11	
Ge	72	He	60014.00	0.7	64995.55	92.34	
In	115	He	538842.91	0.7	567443.14	94.96	
Lu	175	He	1401010.66	1.8	1431992.06	97.84	
Th	232	He	2518695.74	0.5	2601025.95	96.83	

Matrix Spike Sample (MS) Report

Sample Name KQ2515048-06
File Name 095_SPK.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:48:28
Sample Type Spike
Comment 5X
ISTD Ref FileName 006CALB.d
QC Ref File Name 091_ ARF.
Default Text ALKLS
NoUser

QC Analyte Table

Name	Mass	Tune	Conc.	Units	Conc. RSD	CPS	Spk Amt	% Rec	Flag
Se	77	H2	52.5604	ug/L	7.9	5017.65	33.3	98.88	
Se	78	H2	55.8383	ug/L	1.8	16096.81	33.3	110.46	
Cu	63	He	63.3050	ug/L	0.2	263177.33	50	100.72	
Cu	65	He	63.1818	ug/L	1.3	130728.46	50	100.81	
Zn	66	He	433.5926	ug/L	1.5	212945.66	100	106.67	
Mo	95	He	32.8034	ug/L	0.8	64463.61	33.3	96.43	
Mo	98	He	32.9111	ug/L	0.6	111394.98	33.3	96.77	
Ag	107	He	10.7240	ug/L	0.6	77423.51	10	95.47	
Ag	109	He	10.7679	ug/L	1.0	76348.10	10	96.19	
Cd	111	He	15.2050	ug/L	0.6	12380.35	10	97.52	
[Pb]	206	He	96.3623	ug/L	2.0	470687.71	100	88.35	
[Pb]	207	He	93.7112	ug/L	2.8	390905.31	100	85.89	
Pb	208	He	94.7418	ug/L	2.6	1841190.51	100	86.87	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345024.75	2.4	378486.94	91.16	
Sc	45	He	70247.65	1.7	74157.35	94.73	
Ge	72	He	59187.32	0.9	64995.55	91.06	
In	115	He	531825.82	0.7	567443.14	93.72	
Lu	175	He	1371470.08	2.1	1431992.06	95.77	
Th	232	He	2535339.18	1.7	2601025.95	97.47	

Sample Report

Sample Name K2508066-001
File Name 096SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:50:32
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4266	ug/L	4.6	1630.12	
Se	78	72	H2	15.5334	ug/L	2.2	4654.44	
Cu	63	72	He	11.5128	ug/L	1.3	47920.86	
Cu	65	72	He	11.7740	ug/L	1.7	24372.65	
Zn	66	72	He	270.6286	ug/L	2.5	132842.56	
Mo	95	115	He	0.5361	ug/L	3.1	1086.72	
Mo	98	115	He	0.5600	ug/L	2.0	1959.04	
Ag	107	115	He	0.3559	ug/L	8.4	2595.27	
Ag	109	115	He	0.3418	ug/L	2.1	2466.90	
Cd	111	115	He	1.9371	ug/L	1.0	1589.76	
Pb	208	175	He	3.5173	ug/L	1.2	70182.63	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	358389.58	1.4	378486.94	94.69	
Sc	45	He	69138.73	0.9	74157.35	93.23	
Ge	72	He	59156.85	1.3	64995.55	91.02	
In	115	He	536082.78	1.1	567443.14	94.47	
Lu	175	He	1405378.00	1.4	1431992.06	98.14	
Th	232	He	2531572.51	1.3	2601025.95	97.33	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 097_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:52:37
Sample Type CCV
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	23.7278	ug/L	4.6	2350.23	94.91	
Se	78	72	H2	25.6678	ug/L	1.2	7429.62	102.67	
Cu	63	72	He	26.3486	ug/L	2.8	107201.83	105.39	
Cu	65	72	He	26.6912	ug/L	3.6	54028.96	106.76	
Zn	66	72	He	25.2148	ug/L	4.7	12155.35	100.86	
Mo	95	115	He	12.3183	ug/L	0.5	23833.72	98.55	
Mo	98	115	He	12.5870	ug/L	0.3	41950.73	100.7	
Ag	107	115	He	12.9992	ug/L	1.0	92340.85	103.99	
Ag	109	115	He	13.0281	ug/L	0.6	90891.85	104.22	
Cd	111	115	He	25.4090	ug/L	1.7	20355.40	101.64	
Pb	208	175	He	22.7991	ug/L	1.1	436774.66	91.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346291.26	0.4	378486.94	91.49	
Sc	45	He	67139.79	1.7	74157.35	90.54	
Ge	72	He	57901.75	1.5	64995.55	89.09	
In	115	He	523291.99	0.7	567443.14	92.22	
Lu	175	He	1351319.72	1.2	1431992.06	94.37	
Th	232	He	2486514.86	0.4	2601025.95	95.6	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 098_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:54:41
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.0266	ug/L	3220.4	136.67	
Se	78	72	H2	0.0155	ug/L	38.5	6.00	
Cu	63	72	He	0.0083	ug/L	181.4	140.00	
Cu	65	72	He	0.0039	ug/L	142.1	38.33	
Zn	66	72	He	0.0649	ug/L	57.0	80.00	
Mo	95	115	He	0.0059	ug/L	28.1	36.67	
Mo	98	115	He	0.0049	ug/L	142.8	65.56	
Ag	107	115	He	0.0033	ug/L	22.5	30.00	
Ag	109	115	He	-0.0005	ug/L	N/A	21.67	
Cd	111	115	He	0.0018	ug/L	65.9	1.50	
Pb	208	175	He	0.0103	ug/L	19.7	324.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	345051.49	0.7	378486.94	91.17	
Sc	45	He	67038.93	1.4	74157.35	90.4	
Ge	72	He	58972.73	1.2	64995.55	90.73	
In	115	He	531178.63	1.4	567443.14	93.61	
Lu	175	He	1383394.77	2.2	1431992.06	96.61	
Th	232	He	2500497.46	2.6	2601025.95	96.14	

Sample Report

Sample Name K2508066-002
File Name 099SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:56:46
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.7737	ug/L	7.8	1846.82	
Se	78	72	H2	17.4433	ug/L	2.7	5487.07	
Cu	63	72	He	9.6644	ug/L	1.3	40434.31	
Cu	65	72	He	9.7370	ug/L	3.3	20251.17	
Zn	66	72	He	287.9308	ug/L	1.4	142006.85	
Mo	95	115	He	0.4632	ug/L	2.5	927.81	
Mo	98	115	He	0.4592	ug/L	2.8	1590.10	
Ag	107	115	He	0.6022	ug/L	3.5	4319.04	
Ag	109	115	He	0.5976	ug/L	2.4	4227.35	
Cd	111	115	He	3.9703	ug/L	0.4	3207.21	
Pb	208	175	He	3.5071	ug/L	0.8	67952.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	376455.68	2.2	378486.94	99.46	
Sc	45	He	67953.51	2.5	74157.35	91.63	
Ge	72	He	59435.00	1.6	64995.55	91.44	
In	115	He	527634.83	0.5	567443.14	92.98	
Lu	175	He	1364520.81	1.5	1431992.06	95.29	
Th	232	He	2515958.35	2.1	2601025.95	96.73	

Sample Report

Sample Name K2508066-003
File Name 100SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 13:58:51
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	23.0531	ug/L	8.6	2233.55	
Se	78	72	H2	24.9506	ug/L	3.1	7056.77	
Cu	63	72	He	14.0168	ug/L	0.9	57312.01	
Cu	65	72	He	14.0761	ug/L	1.5	28628.80	
Zn	66	72	He	405.9681	ug/L	0.7	195834.39	
Mo	95	115	He	0.7798	ug/L	3.2	1544.54	
Mo	98	115	He	0.7963	ug/L	2.7	2721.40	
Ag	107	115	He	1.0634	ug/L	2.9	7622.15	
Ag	109	115	He	1.0697	ug/L	1.7	7547.11	
Cd	111	115	He	8.7051	ug/L	0.1	7031.62	
Pb	208	175	He	6.4855	ug/L	1.6	128173.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	338387.18	1.0	378486.94	89.41	
Sc	45	He	69460.47	2.4	74157.35	93.67	
Ge	72	He	58129.51	0.2	64995.55	89.44	
In	115	He	527593.92	0.1	567443.14	92.98	
Lu	175	He	1393185.40	1.6	1431992.06	97.29	
Th	232	He	2515903.61	0.3	2601025.95	96.73	

Sample Report

Sample Name K2508066-005
File Name 101SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:00:55
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.6988	ug/L	3.8	1973.51	
Se	78	72	H2	21.8460	ug/L	1.9	6322.75	
Cu	63	72	He	15.9703	ug/L	2.0	65684.72	
Cu	65	72	He	16.0289	ug/L	3.1	32794.46	
Zn	66	72	He	324.4823	ug/L	1.5	157504.52	
Mo	95	115	He	0.6814	ug/L	1.6	1357.85	
Mo	98	115	He	0.7408	ug/L	5.8	2544.69	
Ag	107	115	He	0.6636	ug/L	3.2	4775.86	
Ag	109	115	He	0.6807	ug/L	3.4	4829.22	
Cd	111	115	He	5.1991	ug/L	1.9	4214.97	
Pb	208	175	He	4.1778	ug/L	1.0	80582.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346248.38	0.1	378486.94	91.48	
Sc	45	He	68044.02	2.9	74157.35	91.76	
Ge	72	He	58501.02	2.2	64995.55	90.01	
In	115	He	529547.49	0.4	567443.14	93.32	
Lu	175	He	1358854.93	1.0	1431992.06	94.89	
Th	232	He	2499325.90	1.5	2601025.95	96.09	

Sample Report

Sample Name K2508066-006
File Name 102SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:02:59
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.8353	ug/L	5.0	2103.52	
Se	78	72	H2	20.3526	ug/L	2.2	6230.71	
Cu	63	72	He	12.3031	ug/L	0.3	50362.48	
Cu	65	72	He	12.2701	ug/L	3.3	24980.32	
Zn	66	72	He	315.7283	ug/L	1.5	152437.68	
Mo	95	115	He	0.5514	ug/L	4.1	1091.16	
Mo	98	115	He	0.5664	ug/L	1.4	1935.70	
Ag	107	115	He	0.6805	ug/L	0.4	4844.22	
Ag	109	115	He	0.6937	ug/L	2.0	4867.57	
Cd	111	115	He	8.6576	ug/L	1.2	6942.24	
Pb	208	175	He	6.3528	ug/L	2.6	123740.28	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	366370.19	3.9	378486.94	96.8	
Sc	45	He	68546.10	2.1	74157.35	92.43	
Ge	72	He	58179.49	0.6	64995.55	89.51	
In	115	He	523798.29	1.3	567443.14	92.31	
Lu	175	He	1373449.46	2.6	1431992.06	95.91	
Th	232	He	2490664.76	2.0	2601025.95	95.76	

Sample Report

Sample Name K2508066-007
File Name 103SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:05:02
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.7926	ug/L	6.8	1340.09	
Se	78	72	H2	11.8539	ug/L	4.6	3722.49	
Cu	63	72	He	8.4339	ug/L	5.0	34993.24	
Cu	65	72	He	8.3795	ug/L	3.5	17290.59	
Zn	66	72	He	235.2062	ug/L	2.8	115066.64	
Mo	95	115	He	0.4854	ug/L	3.3	967.82	
Mo	98	115	He	0.4989	ug/L	4.1	1717.89	
Ag	107	115	He	0.1973	ug/L	4.0	1415.09	
Ag	109	115	He	0.2038	ug/L	4.9	1453.42	
Cd	111	115	He	1.9375	ug/L	1.1	1560.59	
Pb	208	175	He	4.9577	ug/L	3.4	95426.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	375877.52	3.5	378486.94	99.31	
Sc	45	He	68683.69	3.3	74157.35	92.62	
Ge	72	He	58972.64	2.9	64995.55	90.73	
In	115	He	526106.32	1.1	567443.14	92.72	
Lu	175	He	1357379.54	3.7	1431992.06	94.79	
Th	232	He	2518071.63	1.3	2601025.95	96.81	

Sample Report

Sample Name K2508066-008
File Name 104SMPL.d
Data Path Name D:\Agilent\NCPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:07:06
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	19.3409	ug/L	9.8	1890.15	
Se	78	72	H2	19.5634	ug/L	0.3	5516.75	
Cu	63	72	He	11.0381	ug/L	1.9	46231.93	
Cu	65	72	He	11.1129	ug/L	1.0	23148.90	
Zn	66	72	He	353.7922	ug/L	1.6	174736.13	
Mo	95	115	He	0.5342	ug/L	0.7	1072.27	
Mo	98	115	He	0.5260	ug/L	4.4	1824.57	
Ag	107	115	He	0.4633	ug/L	2.4	3343.77	
Ag	109	115	He	0.4584	ug/L	2.7	3267.08	
Cd	111	115	He	6.2851	ug/L	0.5	5106.77	
Pb	208	175	He	2.4852	ug/L	1.1	48841.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	337354.48	0.2	378486.94	89.13	
Sc	45	He	68355.41	0.2	74157.35	92.18	
Ge	72	He	59524.89	1.7	64995.55	91.58	
In	115	He	530698.53	1.1	567443.14	93.52	
Lu	175	He	1383093.41	0.9	1431992.06	96.59	
Th	232	He	2477350.02	0.8	2601025.95	95.25	

Sample Report

Sample Name K2508066-009
File Name 105SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:09:09
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.0251	ug/L	8.8	1636.79	
Se	78	72	H2	16.2901	ug/L	2.9	4730.13	
Cu	63	72	He	11.3237	ug/L	2.4	46569.70	
Cu	65	72	He	11.5317	ug/L	2.8	23584.61	
Zn	66	72	He	289.6037	ug/L	0.9	140485.76	
Mo	95	115	He	0.5551	ug/L	5.4	1094.49	
Mo	98	115	He	0.5748	ug/L	8.7	1959.04	
Ag	107	115	He	0.8861	ug/L	1.7	6284.81	
Ag	109	115	He	0.8773	ug/L	2.9	6128.08	
Cd	111	115	He	4.7673	ug/L	1.6	3809.86	
Pb	208	175	He	5.1825	ug/L	1.1	99756.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	347393.12	1.0	378486.94	91.78	
Sc	45	He	66452.83	1.4	74157.35	89.61	
Ge	72	He	58447.50	1.2	64995.55	89.93	
In	115	He	522059.56	1.5	567443.14	92	
Lu	175	He	1356462.12	1.1	1431992.06	94.73	
Th	232	He	2463378.30	2.4	2601025.95	94.71	

Sample Report

Sample Name K2508066-010
File Name 106SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:11:13
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.7159	ug/L	12.8	1493.44	
Se	78	72	H2	14.4110	ug/L	2.9	4407.02	
Cu	63	72	He	11.4824	ug/L	1.4	46897.45	
Cu	65	72	He	11.2992	ug/L	0.5	22953.64	
Zn	66	72	He	301.1476	ug/L	1.6	145053.62	
Mo	95	115	He	0.6204	ug/L	3.4	1246.73	
Mo	98	115	He	0.6431	ug/L	1.0	2230.19	
Ag	107	115	He	0.5532	ug/L	2.0	4008.96	
Ag	109	115	He	0.5591	ug/L	3.5	3997.28	
Cd	111	115	He	4.2697	ug/L	1.0	3484.44	
Pb	208	175	He	5.4628	ug/L	1.0	107535.83	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	365959.39	2.2	378486.94	96.69	
Sc	45	He	69497.40	1.4	74157.35	93.72	
Ge	72	He	58045.89	1.5	64995.55	89.31	
In	115	He	533034.40	0.3	567443.14	93.94	
Lu	175	He	1387237.58	0.4	1431992.06	96.87	
Th	232	He	2525823.97	1.2	2601025.95	97.11	

Sample Report

Sample Name K2508066-011
File Name 107SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:13:17
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.2559	ug/L	11.8	1683.47	
Se	78	72	H2	17.1014	ug/L	2.6	5043.90	
Cu	63	72	He	19.1024	ug/L	2.3	80218.27	
Cu	65	72	He	18.6357	ug/L	1.2	38939.90	
Zn	66	72	He	349.9937	ug/L	1.1	173501.89	
Mo	95	115	He	0.7750	ug/L	3.1	1537.87	
Mo	98	115	He	0.7617	ug/L	2.7	2611.37	
Ag	107	115	He	0.4562	ug/L	1.9	3280.42	
Ag	109	115	He	0.4549	ug/L	8.0	3227.07	
Cd	111	115	He	4.3817	ug/L	2.9	3545.29	
Pb	208	175	He	7.4537	ug/L	1.3	147898.64	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352792.73	0.9	378486.94	93.21	
Sc	45	He	68506.04	0.9	74157.35	92.38	
Ge	72	He	59739.44	1.1	64995.55	91.91	
In	115	He	528665.05	1.8	567443.14	93.17	
Lu	175	He	1398855.55	1.7	1431992.06	97.69	
Th	232	He	2510560.22	0.9	2601025.95	96.52	

Sample Report

Sample Name K2508066-012
File Name 108SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:15:20
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.4771	ug/L	17.4	1606.79	
Se	78	72	H2	16.1050	ug/L	2.2	4743.80	
Cu	63	72	He	13.6702	ug/L	1.8	56873.69	
Cu	65	72	He	14.0843	ug/L	2.6	29143.25	
Zn	66	72	He	412.5663	ug/L	3.0	202432.43	
Mo	95	115	He	0.9220	ug/L	1.2	1815.68	
Mo	98	115	He	0.9043	ug/L	0.4	3073.69	
Ag	107	115	He	1.0311	ug/L	4.1	7363.68	
Ag	109	115	He	1.0411	ug/L	3.2	7320.34	
Cd	111	115	He	7.0455	ug/L	2.2	5671.16	
Pb	208	175	He	9.0107	ug/L	1.1	174993.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	352351.08	1.7	378486.94	93.09	
Sc	45	He	68509.58	1.1	74157.35	92.38	
Ge	72	He	59167.08	3.4	64995.55	91.03	
In	115	He	525844.81	1.2	567443.14	92.67	
Lu	175	He	1369298.31	1.2	1431992.06	95.62	
Th	232	He	2499676.26	1.2	2601025.95	96.1	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 109_CCV.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:17:26
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	24.4766	ug/L	4.7	2423.59	97.91	
Se	78	72	H2	25.9568	ug/L	0.2	7525.67	103.83	
Cu	63	72	He	26.2089	ug/L	1.4	107356.09	104.84	
Cu	65	72	He	26.6722	ug/L	1.3	54365.14	106.69	
Zn	66	72	He	25.9154	ug/L	2.2	12579.14	103.66	
Mo	95	115	He	12.6177	ug/L	0.5	24192.08	100.94	
Mo	98	115	He	12.7861	ug/L	1.3	42227.14	102.29	
Ag	107	115	He	13.0287	ug/L	1.1	91713.32	104.23	
Ag	109	115	He	13.1258	ug/L	0.4	90747.34	105.01	
Cd	111	115	He	25.5954	ug/L	1.6	20320.69	102.38	
Pb	208	175	He	23.0195	ug/L	0.6	439560.07	92.08	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346870.92	0.6	378486.94	91.65	
Sc	45	He	66030.96	1.4	74157.35	89.04	
Ge	72	He	58283.31	0.1	64995.55	89.67	
In	115	He	518576.57	1.1	567443.14	91.39	
Lu	175	He	1346815.97	0.6	1431992.06	94.05	
Th	232	He	2445201.94	1.5	2601025.95	94.01	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 110_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:19:30
Sample Type CCB
Comment ---
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1687	ug/L	191.1	153.34	
Se	78	72	H2	0.0082	ug/L	70.8	4.00	
Cu	63	72	He	-0.0062	ug/L	N/A	80.00	
Cu	65	72	He	0.0081	ug/L	14.5	46.67	
Zn	66	72	He	0.0175	ug/L	64.2	56.67	
Mo	95	115	He	0.0055	ug/L	75.6	35.56	
Mo	98	115	He	0.0031	ug/L	285.3	58.89	
Ag	107	115	He	0.0012	ug/L	113.4	15.00	
Ag	109	115	He	0.0008	ug/L	333.5	30.00	
Cd	111	115	He	0.0025	ug/L	66.4	2.00	
Pb	208	175	He	0.0086	ug/L	8.1	284.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	353192.21	1.2	378486.94	93.32	
Sc	45	He	67226.90	0.7	74157.35	90.65	
Ge	72	He	58678.49	1.0	64995.55	90.28	
In	115	He	524255.13	0.9	567443.14	92.39	
Lu	175	He	1346741.65	0.3	1431992.06	94.05	
Th	232	He	2473594.29	0.4	2601025.95	95.1	

Sample Report

Sample Name K2508066-013
File Name 111SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:21:35
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	10.8661	ug/L	11.3	1316.76	
Se	78	72	H2	12.6008	ug/L	2.1	4169.62	
Cu	63	72	He	10.5899	ug/L	3.3	43994.90	
Cu	65	72	He	10.5715	ug/L	3.5	21843.50	
Zn	66	72	He	279.5361	ug/L	2.0	136978.20	
Mo	95	115	He	0.4536	ug/L	7.9	913.37	
Mo	98	115	He	0.4314	ug/L	7.0	1502.31	
Ag	107	115	He	0.1870	ug/L	5.9	1351.75	
Ag	109	115	He	0.2042	ug/L	1.2	1466.76	
Cd	111	115	He	2.0866	ug/L	2.9	1692.10	
Pb	208	175	He	2.3982	ug/L	0.9	46772.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	395985.53	3.3	378486.94	104.62	
Sc	45	He	70133.69	1.6	74157.35	94.57	
Ge	72	He	59053.27	2.2	64995.55	90.86	
In	115	He	529832.95	1.5	567443.14	93.37	
Lu	175	He	1372426.39	1.8	1431992.06	95.84	
Th	232	He	2499698.19	0.9	2601025.95	96.1	

Sample Report

Sample Name K2508066-014
File Name 112SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:23:37
Sample Type Sample
Comment 5X
ISTD Ref FileName 008CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	15.5294	ug/L	1.5	1583.44	
Se	78	72	H2	17.0603	ug/L	1.7	4935.20	
Cu	63	72	He	8.7640	ug/L	2.4	36834.54	
Cu	65	72	He	8.6830	ug/L	2.3	18148.37	
Zn	66	72	He	310.6974	ug/L	2.2	153906.29	
Mo	95	115	He	0.5438	ug/L	3.4	1096.72	
Mo	98	115	He	0.5317	ug/L	3.7	1853.47	
Ag	107	115	He	1.6153	ug/L	5.4	11698.37	
Ag	109	115	He	1.6070	ug/L	0.9	11449.81	
Cd	111	115	He	6.7351	ug/L	0.5	5500.09	
Pb	208	175	He	4.4842	ug/L	3.1	87716.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346108.15	1.6	378486.94	91.45	
Sc	45	He	68596.40	1.5	74157.35	92.5	
Ge	72	He	59702.56	1.9	64995.55	91.86	
In	115	He	533398.16	0.8	567443.14	94	
Lu	175	He	1378891.64	2.7	1431992.06	96.29	
Th	232	He	2457585.95	1.1	2601025.95	94.49	

Sample Report

Sample Name K2508066-015
File Name 113SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:25:41
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	13.0127	ug/L	8.1	1366.76	
Se	78	72	H2	14.5944	ug/L	3.4	4278.32	
Cu	63	72	He	13.2990	ug/L	2.5	55682.41	
Cu	65	72	He	13.1797	ug/L	2.4	27439.91	
Zn	66	72	He	396.1411	ug/L	0.6	195650.84	
Mo	95	115	He	0.6473	ug/L	6.3	1287.84	
Mo	98	115	He	0.6141	ug/L	4.8	2112.39	
Ag	107	115	He	0.6353	ug/L	4.6	4564.12	
Ag	109	115	He	0.6487	ug/L	3.9	4592.46	
Cd	111	115	He	4.2950	ug/L	2.0	3474.27	
Pb	208	175	He	4.7262	ug/L	1.7	91694.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	350553.37	1.4	378486.94	92.62	
Sc	45	He	68382.41	4.0	74157.35	92.21	
Ge	72	He	59518.59	2.0	64995.55	91.57	
In	115	He	528340.33	1.7	567443.14	93.11	
Lu	175	He	1367079.67	1.2	1431992.06	95.47	
Th	232	He	2468656.01	1.1	2601025.95	94.91	

Sample Report

Sample Name K2508066-016
File Name 114SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:27:45
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	11.8472	ug/L	9.3	1216.74	
Se	78	72	H2	12.1378	ug/L	4.3	3446.76	
Cu	63	72	He	11.2459	ug/L	1.0	47689.91	
Cu	65	72	He	11.1093	ug/L	1.9	23427.64	
Zn	66	72	He	306.0189	ug/L	0.6	153040.78	
Mo	95	115	He	0.5992	ug/L	5.9	1210.06	
Mo	98	115	He	0.5983	ug/L	1.8	2086.83	
Ag	107	115	He	0.2528	ug/L	2.4	1843.48	
Ag	109	115	He	0.2379	ug/L	9.8	1721.79	
Cd	111	115	He	2.0418	ug/L	1.5	1673.27	
Pb	208	175	He	3.7506	ug/L	1.0	74286.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	339745.46	0.9	378486.94	89.76	
Sc	45	He	69630.97	0.6	74157.35	93.9	
Ge	72	He	60261.48	0.9	64995.55	92.72	
In	115	He	535269.48	0.4	567443.14	94.33	
Lu	175	He	1395105.50	1.1	1431992.06	97.42	
Th	232	He	2505994.18	0.9	2601025.95	96.35	

Sample Report

Sample Name K2508066-017
File Name 115SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:29:48
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	18.4195	ug/L	5.7	1856.82	
Se	78	72	H2	19.4598	ug/L	1.0	5641.79	
Cu	63	72	He	11.6518	ug/L	2.8	48044.48	
Cu	65	72	He	11.7420	ug/L	2.4	24080.42	
Zn	66	72	He	423.0977	ug/L	1.7	205763.26	
Mo	95	115	He	0.6278	ug/L	2.3	1242.29	
Mo	98	115	He	0.6363	ug/L	1.0	2173.52	
Ag	107	115	He	1.0281	ug/L	2.8	7332.00	
Ag	109	115	He	0.9944	ug/L	1.2	6981.82	
Cd	111	115	He	10.3235	ug/L	0.3	8297.32	
Pb	208	175	He	5.8135	ug/L	1.4	112054.99	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	346856.26	0.8	378486.94	91.64	
Sc	45	He	68070.69	1.0	74157.35	91.79	
Ge	72	He	58618.10	2.0	64995.55	90.19	
In	115	He	524969.24	0.6	567443.14	92.51	
Lu	175	He	1358439.88	0.6	1431992.06	94.86	
Th	232	He	2442322.20	0.5	2601025.95	93.9	

Sample Report

Sample Name K2508066-018
File Name 116SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:31:53
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
Operator NoUser

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	16.3015	ug/L	4.9	1680.13	
Se	78	72	H2	15.8463	ug/L	0.4	4652.11	
Cu	63	72	He	9.1070	ug/L	2.9	37058.53	
Cu	65	72	He	9.2288	ug/L	2.0	18674.05	
Zn	66	72	He	289.4042	ug/L	2.3	138819.52	
Mo	95	115	He	0.4067	ug/L	2.8	817.81	
Mo	98	115	He	0.3837	ug/L	10.1	1337.85	
Ag	107	115	He	1.5173	ug/L	2.4	10874.34	
Ag	109	115	He	1.4556	ug/L	2.7	10262.23	
Cd	111	115	He	4.1560	ug/L	1.4	3357.74	
Pb	208	175	He	3.5744	ug/L	1.1	69905.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	351186.23	1.8	378486.94	92.79	
Sc	45	He	67987.04	2.6	74157.35	91.68	
Ge	72	He	57814.80	2.2	64995.55	88.95	
In	115	He	527752.17	1.0	567443.14	93.01	
Lu	175	He	1377386.65	0.7	1431992.06	96.19	
Th	232	He	2570892.56	0.5	2601025.95	98.84	

Sample Report

Sample Name K2508066-019
File Name 117SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:33:57
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	14.4360	ug/L	7.7	1496.78	
Se	78	72	H2	14.8898	ug/L	2.9	4352.01	
Cu	63	72	He	10.4698	ug/L	2.4	42911.45	
Cu	65	72	He	10.3996	ug/L	2.6	21197.52	
Zn	66	72	He	442.4837	ug/L	2.2	213829.74	
Mo	95	115	He	0.5215	ug/L	7.8	1040.04	
Mo	98	115	He	0.5504	ug/L	2.7	1893.47	
Ag	107	115	He	0.6666	ug/L	3.9	4772.52	
Ag	109	115	He	0.6678	ug/L	1.4	4714.17	
Cd	111	115	He	3.7484	ug/L	1.7	3023.33	
Pb	208	175	He	8.1874	ug/L	2.0	158378.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	349670.69	1.3	378486.94	92.39	
Sc	45	He	68348.77	2.9	74157.35	92.17	
Ge	72	He	58250.04	2.0	64995.55	89.62	
In	115	He	526844.40	1.3	567443.14	92.85	
Lu	175	He	1363904.10	1.3	1431992.06	95.25	
Th	232	He	2489285.12	1.1	2601025.95	95.7	

Sample Report

Sample Name K2508066-020
File Name 118SMPL.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:36:01
Sample Type Sample
Comment 5X
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	7.6683	ug/L	21.4	840.04	
Se	78	72	H2	7.4116	ug/L	1.0	2121.16	
Cu	63	72	He	6.5486	ug/L	2.1	27209.59	
Cu	65	72	He	6.5762	ug/L	2.8	13579.91	
Zn	66	72	He	287.5116	ug/L	0.5	140687.25	
Mo	95	115	He	0.3744	ug/L	10.9	755.58	
Mo	98	115	He	0.3811	ug/L	9.1	1330.07	
Ag	107	115	He	0.1313	ug/L	4.7	948.37	
Ag	109	115	He	0.1183	ug/L	9.6	858.37	
Cd	111	115	He	2.2501	ug/L	0.5	1820.95	
Pb	208	175	He	1.6305	ug/L	0.5	32051.21	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342236.23	0.4	378486.94	90.42	
Sc	45	He	68016.90	1.2	74157.35	91.72	
Ge	72	He	58962.89	1.9	64995.55	90.72	
In	115	He	528591.85	0.8	567443.14	93.15	
Lu	175	He	1381513.52	0.9	1431992.06	96.47	
Th	232	He	2455144.23	0.7	2601025.95	94.39	

Continuing Calibration Verification (CCV) Report

Sample Name CCV
File Name 119_CC.V.d
Data Path Name D:\Agilent\ICPMH\1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:38:05
Sample Type CCV
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
QC Analyte Table NoUser

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
Se	77	72	H2	26.5057	ug/L	2.6	2573.62	106.02	
Se	78	72	H2	26.1046	ug/L	2.2	7451.30	104.42	
Cu	63	72	He	26.2982	ug/L	1.2	107331.65	105.19	
Cu	65	72	He	26.4083	ug/L	1.7	53632.44	105.63	
Zn	66	72	He	26.1976	ug/L	5.4	12669.17	104.79	
Mo	95	115	He	12.7876	ug/L	1.7	24468.09	102.3	
Mo	98	115	He	12.5889	ug/L	0.6	41498.25	100.71	
Ag	107	115	He	13.0430	ug/L	0.7	91637.94	104.34	
Ag	109	115	He	13.0144	ug/L	1.0	89796.45	104.12	
Cd	111	115	He	25.5061	ug/L	0.8	20210.86	102.02	
Pb	208	175	He	23.1967	ug/L	2.3	439683.29	92.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	341602.03	2.0	378486.94	90.25	
Sc	45	He	66483.73	1.7	74157.35	89.65	
Ge	72	He	58072.53	0.1	64995.55	89.35	
In	115	He	517560.87	0.8	567443.14	91.21	
Lu	175	He	1337335.87	2.2	1431992.06	93.39	
Th	232	He	2436026.21	0.7	2601025.95	93.66	

Continuing Calibration Blank (CCB) Report

Sample Name CCB
File Name 120_CCB.d
Data Path Name D:\Agilent\ICPMH1\DATA\BatchTemplate\Experiments\082725A.b
Acq Time 2025-08-27 14:40:09
Sample Type CCB
Comment --
ISTD Ref FileName 006CALB.d
Operator ALKLS
NoUser NoUser

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
Se	77	72	H2	0.1796	ug/L	225.6	150.00	
Se	78	72	H2	0.0180	ug/L	13.9	6.67	
Cu	63	72	He	-0.0043	ug/L	N/A	86.67	
Cu	65	72	He	0.0027	ug/L	271.8	35.00	
Zn	66	72	He	-0.0149	ug/L	N/A	40.00	
Mo	95	115	He	0.0004	ug/L	1270.9	25.55	
Mo	98	115	He	-0.0045	ug/L	N/A	33.33	
Ag	107	115	He	0.0024	ug/L	16.7	23.33	
Ag	109	115	He	-0.0002	ug/L	N/A	23.33	
Cd	111	115	He	0.0029	ug/L	13.2	2.33	
Pb	208	175	He	0.0110	ug/L	8.9	327.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	H2	342787.12	2.3	378486.94	90.57	
Sc	45	He	66446.57	2.2	74157.35	89.6	
Ge	72	He	57526.95	1.5	64995.55	88.51	
In	115	He	521891.92	1.0	567443.14	91.97	
Lu	175	He	1339070.50	0.5	1431992.06	93.51	
Th	232	He	2397976.27	0.7	2601025.95	92.19	

APPENDIX E: SEDIMENT DATA AND LAB REPORT

Appendix E.1.–Greens Creek Site 63 sediment compositions, 2018, 2021, and 2024–2025.

Sample Date	Particle Size Data			% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand					
7/11/2018	0.9	4.1	96.0	0.31	67.10	2.45	<2.4	0.81
	0.6	1.1	97.4	0.37	70.00	2.90	<2.3	0.49
	1.0	6.1	90.2	0.11	61.00	2.80	<3.0	1.21
7/13/2021	1.64	18.11	80.46	6.11	59.9	4.30	<5.9	2.55
	0.16	0.55	88.77	21.49	65.5	3.30	<4.6	0.63
	0.12	3.49	87.07	7.72	70.3	3.00	<4.9	0.45
	0.00	0.82	83.76	20.95	68	2.70	<4.6	0.73
	0.16	2.01	93.80	4.01	67.6	3.30	<4.7	0.63
7/9/2024	0.18	0.12	35.78	79.66	83.8	2.40	1.1	0.53
	0.16	0.19	15.91	89.73	66.3	3.30	1.5	1.04
	0.11	0.07	8.32	99.79	70.7	7.90	1.4	0.62
7/7/2025	0.63	1.69	86.88	9.63	3.1	3.10	68.4	0.57
	0.97	10.28	89.46	2.72	3.8	3.80	72.6	0.97
	0.92	1.74	92.31	5.00	2.7	2.7	67.2	0.63

Appendix E.2.– Greens Creek Site 54 sediment compositions, 2013, 2018, 2021, and 2025.

Sample Date	Particle Size Data			% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand					
7/2/2013	5.0	94.0	1.0	0.06	NA	NA	NA	NA
7/10/2018	0.40	1.76	97.55	0.20	67.8	3	<2.2	0.528
	0.48	1.35	96.45	0.75	68.9	3.10	<2.4	0.48
	0.36	1.30	94.46	4.36	68.8	3.00	<2.3	0.55
7/13/2021	0.13	4.77	88.40	7.76	66.2	3.00	<5.6	0.58
	4.02	1.27	92.55	0.36	65.4	3.70	<6.0	0.45
	0.44	10.03	87.05	0.15	64.9	3.20	<5.9	0.58
	1.41	22.75	78.50	0.52	62.4	5.60	<5.3	1.01
	0.12	4.62	93.84	1.40	66.8	3.60	<6.0	0.53
7/7/2025	1.24	14.01	76.95	0.15	6.7	6.70	50.3	1.50
	1.43	13.56	86.31	0.31	4.7	4.70	52.9	1.18
	1.32	9.47	87.63	0.06	4.4	4.4	69.6	1.24

Appendix E.3.—Tributary Creek Site 2232 sediment compositions, 2021 and 2024–2025.

Sample Date	Particle Size Data				% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand	% Course Material (> 2 mm)				
7/13/2021	1.60	13.79	70.09	53.59	45.1	2.450	49	2.94
	1.32	4.18	76.32	79.20	44.4	13.20	<6.3	7.12
	0.92	3.92	47.06	52.79	68.3	20.60	<4.6	0.87
	3.13	24.30	52.76	50.20	38.3	17.00	21.1	6.20
	6.60	50.52	25.28	2.27	35.9	3.90	5.7	9.90
7/10/2024	0.46	8.83	96.52	0.52	53.9	6.70	1.90	2.12
	0.39	7.99	84.95	1.00	51.8	1.10	4.7	3.52
	0.17	5.64	77.94	11.19	47.6	10.80	2.1	2.76
	0.58	13.58	94.82	1.06	45.8	10.30	2.1	2.10
	1.28	22.66	87.98	0.20	41.4	12.00	2.3	4.06
7/9/2025	3.08	10.39	57.78	45.89	10.2	10.20	46.6	2.71
	0.68	1.08	87.17	16.11	4.6	4.6	65.9	0.90
	8.54	32.19	58.79	2.49	8.5	8.50	48.5	2.86
	0.99	2.29	97.74	0.91	5.4	5.400	60	1.33
	0.87	3.42	92.37	1.70	4.2	4.200	70.1	1.07

Appendix E.4.–Tributary Creek Site 9 sediment compositions, 2013, 2018, and 2021–2025.

Sample Date	Particle Size Data				% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand						
7/23/2013	3.00	90.00	7.00	0.10	NA	NA	NA	NA	
7/12/2018	2.43	6.12	61.34	31.90	74.8	3.30	<2.6	1.35	
	2.08	21.31	72.82	2.05	34.7	4.75	<5.5	8.57	
	0.60	3.88	83.10	26.38	73.3	3.80	<2.2	4.53	
7/13/2021	2.68	13.18	76.66	14.67	54.3	11.00	<5.7	3.35	
	8.62	34.16	22.55	14.80	31.7	22.50	<5.5	10.40	
	1.86	10.06	72.40	6.32	70.5	3.60	<4.3	0.85	
	13.09	50.50	53.58	0.00	32.2	16.90	<8.4	12.30	
	11.68	69.44	55.62	2.03	19.9	36.20	<8.7	17.30	
7/11/2022	8.85	35.13	55.18	0.41	45.0	NA	NA	NA	
	2.49	11.93	76.19	11.00	59.7	NA	NA	NA	
	2.37	8.12	64.17	25.54	73.2	NA	NA	NA	
	6.88	19.64	48.55	21.19	74.1	NA	NA	NA	
	3.32	11.57	48.01	35.57	69.9	NA	NA	NA	
7/12/2023	5.57	15.64	75.94	0.92	74.6	NA	NA	NA	
	1.07	3.40	62.19	30.55	79.1	NA	NA	NA	
	1.90	9.43	76.67	12.82	66.0	NA	NA	NA	
	0.10	0.02	15.24	86.48	84.2	NA	NA	NA	
	2.92	14.61	77.79	1.42	57.9	NA	NA	NA	
7/10/2024	0.98	15.25	77.93	9.16	65.4	5.70	1.5	1.29	
	0.99	8.92	89.31	5.11	65.2	4.20	1.4	1.87	
	1.42	9.71	83.35	6.95	67.2	5.1	1.4	1.60	
7/10/2025	0.98	15.25	77.93	9.16	5.4	5.40	64.3	1.56	
	0.99	8.92	89.31	5.11	10.6	10.600	50.5	3.84	
	1.42	9.71	83.35	6.95	9.4	9.400	54.8	2.49	

Appendix E.5.–Tributary Creek Site 1847 sediment compositions, 2018 and 2024–2025.

Sample Date	Particle Size Data				% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand						
7/12/2018	0.5	4.3	90.4	4.64	71.10	4.00	<2.7	0.596	
	0.4	3.5	89.8	5.90	70.10	3.90	<2.8	1.39	
	0.3	3.1	93.1	4.00	72.40	3.40	<2.8	1	
7/10/2024	0.06	6.41	58.00	34.29	75	2.900	1.3	1.02	
	0.00	1.16	57.61	45.09	75.2	2.20	1.2	0.73	
	0.06	0.32	38.42	64.20	80.4	3.30	1.2	0.39	
7/9/2025	0.06	6.41	58.00	34.29	5.6	5.60	62.6	1.55	
	0.00	1.16	57.61	45.09	3.4	3.40	68.5	0.81	
	0.06	0.32	38.42	64.20	3.7	3.70	66.30	1.44	

Appendix E.6.–Zinc Creek Site 371 sediment compositions, 2018, 2021, and 2024–2025.

Sample Date	Particle Size Data				% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand	% Course Material (> 2 mm)				
5/16/2018	0.0	1.3	82.6	18.79	72.30	3.90	<2.7	0.915
	0.0	1.7	90.3	6.23	64.60	5.30	<2.8	1.1
	0.1	0.2	79.2	25.01	69.00	3.90	<2.8	0.745
7/12/2021	0.31	2.19	97.16	4.11	64.8	3.650	<5.8	0.97
	0.02	2.94	93.14	0.67	62.4	4.00	<5.1	1.84
	0.15	5.65	96.38	2.05	63.9	3.90	<5.4	0.98
	0.14	8.89	80.94	6.77	60.3	6.70	<6.2	2.21
	1.05	12.68	64.18	0.52	66	6.00	<5.8	1.08
7/8/2024	0.10	0.58	53.67	43.50	72.6	3.30	1.30	0.64
	0.15	1.24	65.34	31.06	70.4	2.60	1.3	0.79
	0.14	0.68	85.48	11.50	68	2.30	1.4	0.65
7/10/2025	0.61	6.74	82.38	4.20	4.3	4.30	65.2	2.09
	0.90	5.44	94.92	2.44	4.3	4.30	64.6	1.11
	0.55	2.02	77.98	19.74	2.8	2.80	68.4	0.70

Appendix E.7.–Zinc Creek Site 10 sediment compositions, 2021 and 2024–2025.

Sample Date	Particle Size Data				% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand	% Course Material (> 2 mm)				
7/12/2021	1.13	1.65	88.07	19.60	59.4	5.000	<5.3	1.42
	2.05	22.64	55.51	0.22	54.8	6.10	<3.6	1.71
	1.72	11.08	71.62	3.18	60.8	3.20	<3.0	1.19
	0.26	1.50	115.81	13.98	51.3	6.90	<5.9	1.91
	1.41	3.77	107.97	4.35	51.9	7.20	<6.0	2.64
7/8/2024	0.09	0.47	72.91	30.94	70.6	2.80	1.40	0.72
	0.08	1.22	77.78	21.75	73.3	2.50	1.3	0.83
	0.11	0.60	83.74	17.09	72.9	2.20	1.3	0.67
7/9/2025	0.64	1.06	91.58	2.73	2.4	2.40	70.1	0.64
	0.55	1.47	88.09	10.49	2.4	2.40	69	0.82
	0.48	0.12	88.46	11.80	1.9	1.90	69.2	0.56

Appendix E.8.–Zinc-Greens Creek Delta Site 2239 sediment compositions, 2024–2025.

Sample Date	Particle Size Data				% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand						
	7/8/2024	0.00	0.99	62.06					
	0.16	1.25	97.50	3.91	66.3	3.30	1.5	1.04	
	0.00	1.08	72.31	32.43	70.7	7.90	1.4	0.62	
7/9/2025	0.49	0.15	97.42	5.77	3.1	3.10	68.4	0.57	
	0.57	1.86	95.36	3.40	3.8	3.80	72.6	0.97	
	0.65	0.17	100.77	1.55	2.7	2.70	67.20	0.63	

Appendix E.9.–Cannery Creek Site 37 sediment compositions, 2018 and 2024–2025.

Sample Date	Particle Size Data				% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand						
	7/12/2018	0.4	1.5	63.6					
	0.5	2.1	76.5	21.50	69.70	4.90	<2.6	2.42	
	0.3	1.3	57.7	40.25	74.70	3.90	<2.6	1.11	
7/10/2024	0.09	1.12	41.70	65.28	71.7	3.550	1.4	0.93	
	0.00	0.61	30.72	69.14	75.8	3.10	1.3	0.61	
	0.13	0.59	34.85	59.05	70.3	4.00	1.4	0.65	
7/7/2025	0.09	1.12	41.70	65.28	8.3	8.30	53.2	4.83	
	0.38	1.13	46.07	58.20	2.7	2.70	75.3	0.99	
	0.16	0.11	5.47	88.67	1	1.00	89.30	0.30	

Appendix E.10.–Fowler Creek Site 2233 sediment compositions, 2024–2025.

Sample Date	Particle Size Data				% Course Material (> 2 mm)	% Total Solids	% Total Volatile Solids	Total Sulfide (mg/kg)	% Total Organic Carbon
	% Clay	% Silt	% Sand						
	7/10/2024	0.08	0.41	75.00					
	0.08	0.31	61.09	40.73	75.2	2.10	1.3	0.47	
	0.10	0.40	88.44	10.16	72.3	2.60	1.4	0.50	
7/9/2025	0.76	0.00	101.33	0.94	3.2	3.20	68.1	0.51	
	0.77	1.04	98.93	1.62	3.1	3.10	73	0.76	
	0.66	0.61	89.64	11.20	4	4.00	70.20	0.56	

Appendix E.11–Greens Creek Site 63 sediment element concentrations, 2018, 2021, and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/11/2018	NA	NA	2.86	NA	46.7	34.7	0.126	NA	3.4	NA	393
	NA	NA	1.82	NA	43.1	21.4	0.091	NA	2.5	NA	302
	NA	NA	3.16	NA	59.4	42.2	0.148	NA	3.5	NA	482
7/12/2021	12,800	22.2	2.33	24.8	54	18.5	0.168	45.4	3.1	0.436	293
	12,200	20.1	2.02	26.7	50.8	14.6	0.216	45.6	3.2	0.41	272
	11,100	17.3	2.02	22.7	43.7	17	0.17	38.6	2.8	1.02	275
	10,800	15.2	1.5	21.4	40.9	10.8	0.173	35.7	2.4	0.305	209
	11,400	18	1.87	23.4	43.3	14.1	0.147	42.3	3.1	0.324	231
7/9/2024	10,300	10.6	1.19	18.2	33	9.22	0.058	28.9	1.8	0.293	177
	3,340	10.2	0.851	7.21	32.6	6.86	0.064	17.6	1.6	0.594	128
	7,320	4.54	0.57	11.4	30.6	7.51	0.024	21.1	<1.2	0.105	134
7/7/2025	10,500	14.8	1.22	21.9	37.8	13.5	0.088	37.3	1.7	0.225	218
	14,300	16.9	1.57	29.2	48	19.4	0.107	44.7	2.3	0.276	268
	13,800	14.6	1.46	26.5	41.8	11.3	0.086	40.8	1.5	0.212	245

Appendix E.12.– Greens Creek Site 54 sediment element concentrations, 2013, 2018, 2021, and 2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/2/2013	NA	NA	3.63	NA	51.7	29.8	0.0784	NA	4.44	0.339	232
7/10/2018	NA	NA	2.01	NA	48.5	20.7	0.098	NA	3	NA	294
	NA	NA	2.09	NA	50.9	22.5	0.108	NA	2.66	NA	326
	NA	NA	1.79	NA	47.1	20.6	0.107	NA	2.59	NA	280
7/12/2021	10,200	22.6	2.11	35.5	54.6	25	0.264	53.9	4.2	0.397	303
	10,700	19.9	2.02	40.3	57.9	18.9	0.178	52.7	3	0.398	288
	11,300	20.1	2.18	41.7	53.7	18.6	0.2	54.4	3	0.406	297
	11,000	24.8	3.03	34.5	65.5	25.8	0.242	55.9	3.8	0.672	372
	10,900	23.3	2.8	34.9	58.2	17	0.209	58	2.7	0.341	287
7/7/2025	14,800	26.3	2.58	39.8	67.8	27.5	0.177	61.5	3.2	0.557	340
	15,000	26.4	2.42	35.5	64.4	24.9	0.157	54.4	3.1	0.442	342
	12,750	22.8	2.11	33.8	54	22.2	0.117	50.7	3.2	0.609	303

Appendix E.13.–Tributary Creek Site 2232 sediment element concentrations, 2021 and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/13/2021	11,900	17.7	0.502	33.8	17.6	6.98	0.063	32.6	<1.9	0.106	6020
	12,000	38	0.497	27.9	19.8	7.02	0.133	28	<1.9	0.15	71.3
	12,900	20	0.174	49.7	11.7	4.96	<0.027	29.9	<1.1	0.037	73.3
	13,900	19.4	1.42	44.9	71.7	94.1	0.185	55.2	<2.1	0.811	227
	22,200	32.1	1.26	58.6	61.5	16	0.052	110	<1.9	0.154	177
7/10/2024	11,000	23.8	0.344	44.7	15.1	24.4	0.039	30.8	<1.7	0.137	104
	10,700	20.2	0.435	39.5	16.9	25.6	0.048	29.2	<1.7	0.201	104
	12,400	28.4	0.544	46.8	19.4	31.3	0.042	35.8	<1.6	0.229	131
	14,300	31.9	0.552	58.4	18.7	32.2	0.07	41.2	<1.9	0.231	137
	11,300	21.3	0.62	41.7	23.3	32.1	0.07	32	<2.2	0.349	115
7/9/2025	10,900	13.4	0.366	63.2	15.9	13	<0.069	37.3	<1.6	0.105	65.2
	10,200	21	0.273	77.9	11.7	18.6	<0.027	39	<1.2	<0.07	90.9
	6,320	8.28	0.135	33.9	5.22	12.1	<0.036	8.29	<1.6	0.065	22.7
	10,600	28.9	0.312	52.2	12.9	21.7	<0.028	33.2	<1.2	0.097	103
	10,400	22.1	0.269	52.6	10	20.6	<0.026	32.8	<1.2	0.071	89.8

Appendix E.14.–Tributary Creek Site 9 sediment element concentrations, 2013, 2018, and 2021–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/23/2013	NA	NA	0.39	NA	15.5	11.8	<0.0357	NA	<0.309	<0.091	68.9
7/12/2018	NA	NA	0.437	NA	51.6	13.2	0.03	NA	<0.84	NA	97.7
	NA	NA	0.701	NA	26	31.7	0.112	NA	<2	NA	113
	NA	NA	0.253	NA	14.7	8.9	0.054	NA	<0.77	NA	59.6
7/13/2021	10,300	9.07	0.307	42.2	14.5	11.6	0.058	23.9	<1.4	0.071	69
	10,100	12.6	0.479	38.4	21.7	18.7	0.108	24.8	<2.8	0.226	75.5
	9,710	14	0.312	84	16.1	10.8	0.046	34.2	<1.1	0.046	72.2
	9,850	11.4	0.513	38.5	21.8	22.4	0.202	23.2	<2.8	0.271	78.2
	10,800	17.2	0.897	39	29	33.1	0.495	31.2	<3.4	0.415	117
7/11/2022	14,000	10.4	0.357	51.3	19.2	14.4	0.052	25.6	<2.1	0.134	76.6
	11,200	13.4	0.555	42.9	19.3	12.9	<0.029	38.8	<1.2	0.082	87
	10,200	8.9	0.355	29.7	15.6	7.47	<0.026	28.6	<1	0.039	65.5
	10,000	5.76	0.187	48.9	10.8	7.58	<0.023	24.2	<1.1	0.057	49.4
	6,810	8.8	0.234	28.4	10.5	8.81	<0.027	17.3	<1	0.062	47.5
7/12/2023	13,000	18.5	0.221	43.6	14.5	6.73	0.035	28.4	<1.2	0.05	75.1
	11,600	8.84	0.329	39.8	14.6	7.6	0.025	30.5	<0.93	0.026	71.3
	13,600	19.6	0.392	43.8	17.3	8.27	0.036	32.8	<1.3	0.048	86.8
	11,000	10.9	0.221	80.1	9.39	5.81	0.026	35.5	<1	0.021	54.4
	12,400	11	0.333	46.3	17.9	8.94	0.064	26.8	<1.5	0.093	78.6
7/10/2024	12,500	8.92	0.759	42.7	21.5	8.41	0.037	53.1	<1.1	0.072	96.1
	15,100	11.1	0.321	54	23.2	7.86	<0.026	37.3	<1.3	0.047	90.5
	14,500	11.1	0.379	63.8	22.7	10.8	0.041	38.2	<1.3	0.094	93.9
7/10/2025	12,600	14.3	0.249	92.2	24.3	7.23	0.033	45.6	<1.3	0.081	80.8
	13,800	13.6	0.43	52.3	29.1	12.8	0.044	36.9	<1.7	0.149	94.2
	11,600	15.3	0.366	50.2	25.8	13	0.057	34.7	<1.4	0.11	78.8

Appendix E.15.–Tributary Creek Site 1847 sediment element concentrations, 2018 and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/12/2018	NA	NA	0.41	NA	14.6	17.3	0.024	NA	<0.84	NA	94.8
	NA	NA	0.343	NA	17.5	14.7	0.023	NA	<0.89	NA	83.1
	NA	NA	0.358	NA	12.7	14.6	<0.02	NA	<0.76	NA	79.7
7/10/2024	9,700	9.41	0.339	35.1	14.1	8.89	0.027	27.8	<0.98	0.075	76.3
	10,400	21.9	0.326	42.7	12.3	7.78	<0.023	29.5	<1.2	0.03	77.5
	9,070	8.66	0.388	40.4	7.66	7.37	<0.023	23.5	<1.1	0.023	57.8
7/9/2025	10,000	17.9	0.44	72.8	22.8	13.4	0.03	57	<1.3	0.132	141
	9,280	11.7	0.251	33.1	15.1	11	<0.025	26.7	<1.1	<0.043	82.1
	8,410	10	0.289	31.2	18.9	8.44	0.029	21.7	<1.1	0.056	73.3

Appendix E.16.–Zinc Creek Site 371 sediment element concentrations, 2018, 2021, and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
5/16/2018	NA	NA	2.13	NA	31.1	11.5	0.03	NA	1.5	NA	325
	NA	NA	6.08	NA	62.3	248	0.054	NA	2.3	NA	663
	NA	NA	1.53	NA	26.2	15.9	0.03	NA	3.8	NA	286
7/12/2021	12,400	42.1	2.01	163	44.7	13.5	0.041	143	1.4	0.16	331
	11,200	40.6	1.55	104	41	13.5	0.088	106	1.6	0.18	273
	11,700	42.4	1.69	145	37.7	17.8	0.058	129	1.5	0.178	286
	10,900	34.2	1.66	116	38.6	13.2	0.092	109	1.6	0.218	265
	11,300	30	1.08	124	43.2	10.3	0.059	100	<1.2	0.132	209
7/8/2024	10,400	38.2	1.79	196	32.2	9.76	<0.026	133	<1.2	0.083	274
	11,300	51.6	2.16	174	86.9	12.7	0.05	162	1.8	0.673	321
	14,100	36.6	2.43	233	37.3	11.9	0.068	169	1.3	0.147	366
7/10/2025	11,200	50.4	1.5	92.3	43.5	16.3	0.062	112	2	0.231	250
	13,150	56.1	2.37	163	51.4	21.9	0.057	183	2.9	0.253	383
	9,380	37	1.86	132	52.2	10.3	0.062	129	1.5	0.367	297

Appendix E.17.–Zinc Creek Site 10 sediment element concentrations, 2021 and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/12/2021	11,200	41.1	1.66	124	31.7	17.2	0.069	119	<1.2	0.179	289
	11,900	38.7	1.66	132	36.1	18.9	0.118	112	1.4	0.236	306
	10,300	35.6	1.6	94	32.9	18	0.082	96.6	<1.3	0.253	285
	11,300	42	1.89	110	40.5	22	0.113	108	1.6	0.295	326
	12,600	39.8	1.72	118	44.9	20.4	0.086	112	<1.6	0.291	315
7/8/2024	11,300	22.4	1.18	90.1	21	9.71	0.028	97	<1.2	0.088	222
	13,200	33.2	1.37	109	31.4	14.2	0.025	124	<1.2	0.085	272
	10,900	24.7	1.26	97.8	24.1	9.64	0.037	91.5	<1.3	0.079	235
7/9/2025	10,500	24	1.12	107	30.6	14.9	<0.026	94	1.5	0.096	287
	10,300	30.3	1.34	1.42	36.1	15	<0.028	103	<1.6	0.109	307
	9,220	20.7	0.983	89.1	32.9	13	0.024	79.9	1.1	0.068	283

Appendix E.18.–Zinc-Greens Creek Delta Site 2239 sediment element concentrations, 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/8/2024	9,780	24.3	1.04	80.3	23.1	9.66	0.021	80.9	<1.0	0.074	200.8
	11,800	31.8	2.59	121	26.4	13.5	<.024	126	<1.2	0.078	314
	8,540	26.9	1.12	51.3	24.1	11.6	<.024	71	<1.2	0.068	225
7/9/2025	10,500	29	1.39	95.6	31.2	12.7	<0.025	109	<1.2	0.121	276
	9,290	23.3	0.923	144	22.2	11	<0.027	107	<1.2	0.11	194
	11,800	30.8	1.15	125	25.5	12	0.03	104	<1.3	0.084	254

Appendix E.19.–Cannery Creek Site 37 sediment element concentrations, 2018 and 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/12/2018	NA	NA	0.758	NA	16.5	19.7	0.026	NA	<1	NA	141
	NA	NA	0.981	NA	16.3	20.5	0.024	NA	<1	NA	140
	NA	NA	0.852	NA	23.3	22.1	<0.021	NA	<1	NA	136
7/10/2024	11,700	38.2	0.753	23.3	25.8	14	<0.024	27.1	<1.3	0.077	126
	10,100	45.3	0.35	16.4	25.1	13.1	<0.023	16.5	<1.1	0.066	102
	9,150	65.1	0.635	9.36	10.8	11.9	<0.026	17.3	<1.3	<0.026	114
7/7/2025	10,000	21.5	0.54	21.1	23.7	14.3	0.04	19	<1.3	0.22	90.4
	6,390	20.5	0.373	11.2	17.8	11.3	<0.023	18.2	<1	0.443	110
	5,420	8.96	0.312	10.7	8.33	5.71	<0.022	11.6	<0.94	<0.038	34.6

Appendix E.20.–Fowler Creek Site 2233 sediment element concentrations, 2024–2025.

Sample Date	Concentration (mg/kg dry weight)										
	Al	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
7/10/2024	10,900	22.7	0.134	28.3	15.8	8.88	<0.023	21.2	<1.2	0.04	62.5
	13,600	11.9	0.136	22.1	13	5.91	<0.024	23.5	<1.2	<0.023	68.4
	10,700	19.6	0.117	24.8	14	7.02	<0.027	18	<1.2	<0.024	60
7/9/2025	11,800	12.9	0.116	30.1	13.3	5.81	<0.026	20.8	<1.2	<0.047	61
	12,100	24.1	0.144	29.5	17.1	8.28	<0.026	22.6	<1.2	<0.047	1.2
	11,800	27.7	0.105	25.6	15.2	6.59	<0.027	22.7	<1.1	<0.044	63.4

Appendix E.21.—Sediment element concentrations laboratory report, 2025.



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

July 31, 2025

Analytical Report for Service Request No: K2507081

Zack Wrzeszcz
AML Receiving-SE AK LCL
Hecla Greens Creek Mining Env.
Dept.
5615 W. Marginal Way SW
Seattle, WA 98106

RE: 2025 Greens Creek Biomonitoring

Dear Zack,

Enclosed are the results of the sample(s) submitted to our laboratory July 16, 2025
For your reference, these analyses have been assigned our service request number **K2507081**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3260. You may also contact me via email at Luke.Rahn@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Luke Rahn
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
General Chemistry
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Received: 07/16/2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirty two soil samples were received for analysis at ALS Environmental on 07/16/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

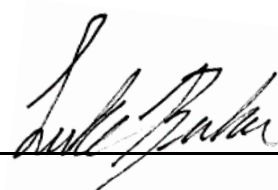
Metals:

Method 200.8, 07/21-23/2025: The Relative Percent Difference (RPD) for the replicate analysis of Silver in sample 2025GCMGC54S3 and Chromium and Nickel in sample 2025GCMTC808S1 was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Method 200.8, 07/18-23/2025: The matrix spike recovery of Chromium for sample 2025GCMZC371S2 and Zinc for samples 2025GCMGC54S3 and 2025GCMZC371S2 was outside the ALS control criteria as a result of the heterogeneous character of the sample. The Relative Percent Difference (RPD) for the replicate analysis supported this. Since the unspiked samples contained high analyte concentrations relative to the amount spiked, the variability between replicates was sufficient to bias the percent recoveries outside normal ALS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control. No further corrective action was appropriate.

General Chemistry:

Method PSEP Sulfide, 07/17,18/2025: Multiple samples in this delivery group were received past or with insufficient holding time remaining. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violations.

Approved by 

Date 07/31/2025



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



144622

CHAIN OF CUSTODY
144622

001

SR# 47507081
COC Set ___ of ___
COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name: <u>2025 Greens Creek Biomonitoring</u>		Project Number: _____	
Project Manager: <u>Greg Albrecht</u>		Company: <u>ADPG</u>	
Address, City, State: <u>802 3rd St. Douglas AK 99824</u>		Phone # <u>907-465-6384</u>	
Sampler Signature: <u>[Signature]</u>		Sampler Printed Name: <u>Greg Albrecht</u>	
email: <u>greg.albrecht@alaska.gov</u>		NUMBER OF CONTAINERS	
		7D	14D
		28D	180D
		160.4 Modified / TVS	PSEP Sulfide / PSEP Sulfide
		PSEP TOC / PSEP TOC T	7471B / Hg
		200.8 / Metals T	PSEP PS / PSEP PartSizeCB
		PSEP TS / PSEP TS	
		1	2
		3	4
		5	6
		Remarks	
CLIENT SAMPLE ID	LABID	SAMPLING Date Time State	Matrix
1. <u>2025GCMTC80851</u>		<u>7/9 1340 AK</u>	<u>SOIL</u>
2. <u>2025GCMTC80892</u>		<u>7/9 1340 AK</u>	<u>SOIL</u>
3. <u>2025GCMTC80853</u>		<u>7/9 1340 AK</u>	<u>SOIL</u>
4. <u>2025GCMTC80854</u>		<u>7/9 1340 AK</u>	<u>SOIL</u>
5. <u>2025GCMTC80895</u>		<u>7/9 1340 AK</u>	<u>SOIL</u>
6. <u>2025GCMGCD51</u>		<u>7/9 1015 AK</u>	<u>SOIL</u>
7. <u>2025GCMGCD52</u>		<u>7/9 1015 AK</u>	<u>SOIL</u>
8. <u>2025GCMGCD53</u>		<u>7/9 1015 AK</u>	<u>SOIL</u>
9. <u>2025GCMTC951</u>		<u>7/10 0900 AK</u>	<u>SOIL</u>
10.			

* PLEASE COMBINE ALL
SEIMENT SAMPLES INTO ONE (1)
REPORT
10 SITES (32 SAMPLES)
with 3 jars
EMAIL BILLING TO
zwizsz2@hela.com
gcap@hela.com

Report Requirements

I. Routine Report: Method Blank, Surrogate, as required

II. Report Dup., MS, MSD as required

III. CLP Like Summary (no raw data)

IV. Data Validation Report

V. EDD

Invoice Information

P.O.# 525055

Bill To: Hela Greens Creek Mining Company

plillesve@hela.com

Turnaround Requirements

24 hr. 48 hr.

5 Day

Standard

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: Please bill Paula Lillesve HJCMC SERVICE ORDER # 525055

Please send lab report to Greg.Albrecht@alaska.gov
zwizsz2@hela.com, gcap@hela.com

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: _____	Signature: _____	Signature: _____	Signature: _____
Printed Name: <u>Zack Weiszsz2</u>	Printed Name: <u>Andresna Caspique</u>	Printed Name: _____	Printed Name: _____	Printed Name: _____	Printed Name: _____
Firm: <u>HJCMC</u>	Firm: <u>MS</u>	Firm: _____	Firm: _____	Firm: _____	Firm: _____
Date/Time: <u>7/15/25 0800</u>	Date/Time: <u>7-16-25 1450</u>	Date/Time: _____	Date/Time: _____	Date/Time: _____	Date/Time: _____



144622

CHAIN OF CUSTODY
144622

001

SR# KL501081
COC Set ___ of ___
COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

* SAMPLES SENT
IN MULTIPLE
COOLERS

Project Name		Project Number:		NUMBER OF CONTAINERS	7D	14D	28D	180D						Remarks		
Project Manager		Company			160.4 Modified / TVS	PSEP Sulfide / PSEP Sulfide	PSEP TOC / PSEP TOC T	7471B / Hg	200.8 / Metals T	PSEP PS / PSEP PartSizeCB	PSEP TS / PSEP TS	1	2		3	4
Address, City, State		Phone #		email		Sampler Signature		Sampler Printed Name								
CLIENT SAMPLE ID	LAB ID	SAMPLING Date Time State	Matrix													
1. 2025GCMGC54S1		7/7 1300 AK	SOIL	3	X	X	X	X	X	X						
2. 2025GCMGC54S2		7/7 1300 AK	SOIL	3	X	X	X	X	X	X						
3. 2025GCMGC54S3		7/7 1300 AK	SOIL	3	X	X	X	X	X	X						
1. 2025GCMGC63S1		7/7 1100 AK	SOIL	3	X	X	X	X	X	X						
2. 2025GCMGC63S2		7/7 1100 AK	SOIL	3	X	X	X	X	X	X						
3. 2025GCMGC63S3		7/7 1100 AK	SOIL	3	X	X	X	X	X	X						
2. 2025GCMTC9S2		7/10 0900 AK	SOIL	3	X	X	X	X	X	X						
3. 2025GCMTC9S3		7/10 0900 AK	SOIL	3	X	X	X	X	X	X						

- Report Requirements**
- I. Routine Report: Method Blank, Surrogate, as required
 - II. Report Dup., MS, MSD as required
 - III. CLP Like Summary (no raw data)
 - IV. Data Validation Report
 - V. EDD

Invoice Information
P.O.# 525055
Bill To: gcap@nectar.com

Turnaround Requirements
 24 hr. 48 hr.
 5 Day
 Standard

Requested Report Date _____

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: _____ *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <u>[Signature]</u>	Signature <u>[Signature]</u>	Signature _____	Signature _____	Signature _____	Signature _____
Printed Name <u>Zack Wazarski</u>	Printed Name <u>Andreana Carpenter</u>	Printed Name _____	Printed Name _____	Printed Name _____	Printed Name _____
Firm <u>HGLMC</u>	Firm <u>MS</u>	Firm _____	Firm _____	Firm _____	Firm _____
Date/Time <u>7/15/25 0800</u>	Date/Time <u>7-16-25 1450</u>	Date/Time _____	Date/Time _____	Date/Time _____	Date/Time _____



144622 CHAIN OF CUSTODY 144622

001

SR# K2501081
 COC Set ___ of ___
 COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
 www.alsglobal.com

Page 3 of 4

Project Name		Project Number:		NUMBER OF CONTAINERS	7D	14D	28D	180D						Remarks			
Project Manager					160.4 Modified / TVS	PSEP Sulfide / PSEP Sulfide	PSEP TOC / PSEP TOC T	74718 / Hg	200.8 / Metals T	PSEP PS / PSEP PartSizeCB	PSEP TS / PSEP TS	1	2		3	4	5
Company																	
Address, City, State																	
Phone #		email															
Sampler Signature		Sampler Printed Name															

* SAMPLES SENT IN MULTIPLE CANS

CLIENT SAMPLE ID	LAB ID	SAMPLING Date Time State	Matrix												
1. 2025GLMFC1S1		7/9 1440 AK	SOIL												
2. 2025GLMFC1S2		7/9 1440 AK	SOIL												
3. 2025GLMFC1S3		7/9 1440 AK	SOIL												
4. 2025GLMZC10 S1		7/9 0900 AK	SOIL												
5. 2025GLMZC10 S2		7/9 0900 AK	SOIL												
6. 2025GLMZC10 S3		7/9 0900 AK	SOIL												
7. 2025GLMZC371S1		7/10 1200 AK	SOIL												

- Report Requirements**
- I. Routine Report: Method Blank, Surrogate, as required
 - II. Report Dup., MS, MSD as required
 - III. CLP Like Summary (no raw data)
 - IV. Data Validation Report
 - V. EDD

Invoice Information
 P.O.# 525055
 Bill To: glap@vecia.com

Turnaround Requirements
 ___ 24 hr. ___ 48 hr.
 ___ 5 Day
 ___ Standard

Requested Report Date _____

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: *Indicate State Hydrocarbon Procedure: AK CA-WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <u>[Signature]</u>	Signature <u>[Signature]</u>	Signature	Signature	Signature	Signature
Printed Name <u>Zane Wezels</u>	Printed Name <u>Andriana Carpinko</u>	Printed Name	Printed Name	Printed Name	Printed Name
Firm <u>HGLMC</u>	Firm <u>MS</u>	Firm	Firm	Firm	Firm
Date/Time <u>7/15/25 0800</u>	Date/Time <u>7-16-25 1450</u>	Date/Time	Date/Time	Date/Time	Date/Time



144622

CHAIN OF CUSTODY
144622

001

SR# K1501081
COC Set ___ of ___
COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Page 4 of 4

* SAMPLES SENT IN MULTIPLE COOLERS

Project Name		Project Number		NUMBER OF CONTAINERS	7D	14D	28D	180D						Remarks		
Project Manager		Company			160.4 Modified / TVS	PSEP Sulfide / PSEP Sulfide	PSEP TOC / PSEP TOC T	7471B / Hg	200.8 / Metals T	PSEP PS / PSEP PartSizeCB	PSEP TS / PSEP TS	1	2		3	4
Address, City, State		Phone #		email		Sampler Signature		Sampler Printed Name								
CLIENT SAMPLE ID	TABID	SAMPLING Date Time State	Matrix													
1. 20256CMCCS1		7/7 1600 AK	SOIL	3	X	X	X	X	X	X						
2. 20256CMCCS2		7/7 1600 AK	SOIL	3	X	X	X	X	X	X						
3. 20256CMCCS3		7/7 1600 AK	SOIL	3	X	X	X	X	X	X						
4. 20256CMT1847S1		7/9 1600 1130	SOIL	3	X	X	X	X	X	X						
5. 20256CMT1847S2		7/9 1130 AK	SOIL	3	X	X	X	X	X	X						
6. 20256CMT1847S3		7/9 1130 AK	SOIL	3	X	X	X	X	X	X						
7. 20256CMZC371S2		7/10 1200 AK	SOIL	3	X	X	X	X	X	X						
8. 20256CMZC371S3		7/10 1200 AK	SOIL	3	X	X	X	X	X	X						
9.																
10.																

- Report Requirements**
- I. Routine Report: Method Blank, Surrogate, as required
 - II. Report Dup., MS, MSD as required
 - III. CLP Like Summary (no raw data)
 - IV. Data Validation Report
 - V. EDD

Invoice Information
P.O.# 525055
Bill To: garc@necla.com

Turnaround Requirements
 24 hr. 48 hr.
 5 Day
 Standard

Requested Report Date _____

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: _____

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <u>[Signature]</u>	Signature <u>[Signature]</u>	Signature	Signature	Signature	Signature
Printed Name <u>Zara W245202</u>	Printed Name <u>Andrew Carpenk</u>	Printed Name	Printed Name	Printed Name	Printed Name
Firm <u>HGC MC</u>	Firm <u>ALS</u>	Firm	Firm	Firm	Firm
Date/Time <u>7/15/25 0800</u>	Date/Time <u>7-16-25 1450</u>	Date/Time	Date/Time	Date/Time	Date/Time

Cooler Receipt and Preservation Form

PM LR

Client ADFG Service Request K25 07081
 Received: 7-16-25 Opened: 7-16-25 By: AR Unloaded: 7-16-25 By: AR

1. Samples were received via? USPS Courier *Fed Ex UPS DHL PDX Hand Delivered*
2. Samples were received in: (circle) Cooler *Box Envelope Other NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/CQC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number <u>NA</u>	Filled
	<u>2.9</u>	<u>IR-01</u>	<u>1 of 3</u>				
	<u>5.0</u>	<u>IR-01</u>	<u>2 of 3</u>				
	<u>6.0</u>	<u>IR-01</u>	<u>3 of 3</u>				

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: *Frozen Partially Thawed Thawed*
6. Packing material: *Inserts Baggies* Bubble Wrap Gel Packs *Wet Ice Dry Ice Sleeves* cardboard
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below NA Y N
14. Was C12/Res negative? NA Y N
15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. NA Y N
16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
<u>2025GCMGC5451</u>	<u>1 of 3</u>		<u>X</u>						
<u>2025GCMGC6351</u>	<u>1 of 3</u>		<u>X</u>						
<u>2025GCMZC37152</u>	<u>1 of 3</u>		<u>X</u>						

Notes, Discrepancies, Resolutions: 3rd page of COC no tests indicated. Received 3 samples that were broken but bagged.



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: 160.4 Modified
Prep Method: None

Service Request: K2507081
Date Collected: 07/07/25 - 07/10/25
Date Received: 07/16/25
Units: Percent
Basis: Dry, per Method

Solids, Total Volatile

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
2025GCMTC808S1	K2507081-001	10.2	0.10	1	07/17/25 12:04	*
2025GCMTC808S2	K2507081-002	4.60	0.10	1	07/17/25 12:04	*
2025GCMTC808S3	K2507081-003	8.50	0.10	1	07/17/25 12:04	*
2025GCMTC808S4	K2507081-004	5.40	0.10	1	07/17/25 12:04	*
2025GCMTC808S5	K2507081-005	4.20	0.10	1	07/17/25 12:04	*
2025GCMGCDS1	K2507081-006	3.10	0.10	1	07/17/25 12:04	*
2025GCMGCDS2	K2507081-007	3.80	0.10	1	07/17/25 12:04	*
2025GCMGCDS3	K2507081-008	2.70	0.10	1	07/17/25 12:04	*
2025GCMTC9S1	K2507081-009	5.40	0.10	1	07/17/25 12:04	
2025GCMGC54S1	K2507081-010	6.70	0.10	1	07/17/25 12:04	*
2025GCMGC54S2	K2507081-011	4.70	0.10	1	07/17/25 12:04	*
2025GCMGC54S3	K2507081-012	4.40	0.10	1	07/17/25 12:04	*
2025GCMGC63S1	K2507081-013	3.10	0.10	1	07/17/25 12:04	*
2025GCMGC63S2	K2507081-014	4.20	0.10	1	07/17/25 12:04	*
2025GCMGC63S3	K2507081-015	3.20	0.10	1	07/17/25 12:04	*
2025GCMTC9S2	K2507081-016	10.6	0.10	1	07/17/25 12:04	
2025GCMTC9S3	K2507081-017	9.40	0.10	1	07/17/25 12:04	
2025GCMFCS1	K2507081-018	3.20	0.10	1	07/17/25 12:04	*
2025GCMFCS2	K2507081-019	3.10	0.10	1	07/17/25 12:04	*
2025GCMFCS3	K2507081-020	4.00	0.10	1	07/17/25 12:04	*
2025GCMZC10S1	K2507081-021	2.40	0.10	1	07/17/25 10:57	*
2025GCMZC10S2	K2507081-022	2.40	0.10	1	07/17/25 10:57	*
2025GCMZC10S3	K2507081-023	1.90	0.10	1	07/17/25 10:57	*
2025GCMZC371S1	K2507081-024	4.30	0.10	1	07/17/25 10:57	
2025GCMCCS1	K2507081-025	8.30	0.10	1	07/17/25 10:57	*
2025GCMCCS2	K2507081-026	2.70	0.10	1	07/17/25 10:57	*
2025GCMCCS3	K2507081-027	1.00	0.10	1	07/17/25 10:57	*
2025GCMTC1847S1	K2507081-028	5.60	0.10	1	07/17/25 10:57	*
2025GCMTC1847S2	K2507081-029	3.40	0.10	1	07/17/25 10:57	*
2025GCMTC1847S3	K2507081-030	3.70	0.10	1	07/17/25 10:57	*
2025GCMZC371S2	K2507081-031	4.30	0.10	1	07/17/25 10:57	
2025GCMZC371S3	K2507081-032	2.80	0.10	1	07/17/25 10:57	
Method Blank	K2507081-MB1	ND U	0.10	1	07/17/25 12:04	
Method Blank	K2507081-MB2	ND U	0.10	1	07/17/25 10:57	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: 160.4 Modified
Prep Method: None

Service Request: K2507081
Date Collected: 07/09/25 - 07/10/25
Date Received: 07/16/25

Units: Percent
Basis: Dry, per Method

Replicate Sample Summary
Solids, Total Volatile

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
2025GCMTC808S1	K2507081-001DUP	0.10	10.2	10.7	10.5	5	20	07/17/25
2025GCMFCS3	K2507081-020DUP	0.10	4.00	4.00	4.00	<1	20	07/17/25
2025GCMZC10S1	K2507081-021DUP	0.10	2.40	2.50	2.45	4	20	07/17/25
2025GCMZC371S2	K2507081-031DUP	0.10	4.30	2.80	3.55	42 *	20	07/17/25

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: PSEP TS
Prep Method: None

Service Request: K2507081
Date Collected: 07/07/25 - 07/10/25
Date Received: 07/16/25
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
2025GCMTC808S1	K2507081-001	46.6	-	1	07/17/25 12:04	
2025GCMTC808S2	K2507081-002	65.9	-	1	07/17/25 12:04	
2025GCMTC808S3	K2507081-003	48.5	-	1	07/17/25 12:04	
2025GCMTC808S4	K2507081-004	60.0	-	1	07/17/25 12:04	
2025GCMTC808S5	K2507081-005	70.1	-	1	07/17/25 12:04	
2025GCMGCDS1	K2507081-006	68.4	-	1	07/17/25 12:04	
2025GCMGCDS2	K2507081-007	72.6	-	1	07/17/25 12:04	
2025GCMGCDS3	K2507081-008	67.2	-	1	07/17/25 12:04	
2025GCMTC9S1	K2507081-009	64.3	-	1	07/17/25 12:04	
2025GCMGC54S1	K2507081-010	50.3	-	1	07/17/25 12:04	
2025GCMGC54S2	K2507081-011	52.9	-	1	07/17/25 12:04	
2025GCMGC54S3	K2507081-012	69.6	-	1	07/17/25 12:04	
2025GCMGC63S1	K2507081-013	71.6	-	1	07/17/25 12:04	
2025GCMGC63S2	K2507081-014	69.2	-	1	07/17/25 12:04	
2025GCMGC63S3	K2507081-015	66.8	-	1	07/17/25 12:04	
2025GCMTC9S2	K2507081-016	50.5	-	1	07/17/25 12:04	
2025GCMTC9S3	K2507081-017	54.8	-	1	07/17/25 12:04	
2025GCMFCS1	K2507081-018	68.1	-	1	07/17/25 12:04	
2025GCMFCS2	K2507081-019	73.0	-	1	07/17/25 12:04	
2025GCMFCS3	K2507081-020	70.2	-	1	07/17/25 12:04	
2025GCMZC10S1	K2507081-021	70.1	-	1	07/17/25 10:57	
2025GCMZC10S2	K2507081-022	69.0	-	1	07/17/25 10:57	
2025GCMZC10S3	K2507081-023	69.2	-	1	07/17/25 10:57	
2025GCMZC371S1	K2507081-024	65.2	-	1	07/17/25 10:57	
2025GCMCCS1	K2507081-025	53.2	-	1	07/17/25 10:57	
2025GCMCCS2	K2507081-026	75.3	-	1	07/17/25 10:57	
2025GCMCCS3	K2507081-027	89.3	-	1	07/17/25 10:57	
2025GCMTC1847S1	K2507081-028	62.6	-	1	07/17/25 10:57	
2025GCMTC1847S2	K2507081-029	68.5	-	1	07/17/25 10:57	
2025GCMTC1847S3	K2507081-030	66.3	-	1	07/17/25 10:57	
2025GCMZC371S2	K2507081-031	64.6	-	1	07/17/25 10:57	
2025GCMZC371S3	K2507081-032	68.4	-	1	07/17/25 10:57	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: PSEP TS
Prep Method: None

Service Request: K2507081
Date Collected: 07/09/25 - 07/10/25
Date Received: 07/16/25

Units: Percent
Basis: As Received

Replicate Sample Summary
Solids, Total

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
2025GCMTC808S1	K2507081-001DUP	-	46.6	44.8	45.7	4	10	07/17/25
2025GCMFCS3	K2507081-020DUP	-	70.2	71.9	71.1	2	10	07/17/25
2025GCMZC10S1	K2507081-021DUP	-	70.1	70.0	70.1	<1	10	07/17/25
2025GCMZC371S2	K2507081-031DUP	-	64.6	66.8	65.7	3	10	07/17/25

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/17/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001
Analysis Method: PSEP TS
Prep Method: None

Units: Percent
Basis: As Received

Analyte Name	MRL	Sample Result	Duplicate K2507081- 001DUP Result	Triplicate K2507081- 001TRP Result	Average	RSD	RSD Limit
Solids, Total	-	46.6	44.8	45.4	45.6	2	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/17/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMFCS3
Lab Code: K2507081-020
Analysis Method: PSEP TS
Prep Method: None

Units: Percent
Basis: As Received

Analyte Name	MRL	Sample Result	Duplicate K2507081- 020DUP Result	Triplicate K2507081- 020TRP Result	Average	RSD	RSD Limit
Solids, Total	-	70.2	71.9	68.1	70.1	3	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/17/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021
Analysis Method: PSEP TS
Prep Method: None

Units: Percent
Basis: As Received

Analyte Name	MRL	Sample Result	Duplicate K2507081- 021DUP Result	Triplicate K2507081- 021TRP Result	Average	RSD	RSD Limit
Solids, Total	-	70.1	70.0	70.8	70.3	<1	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 7/21/2025 10:56:00 AM

SuperSet Reference:25-0000739352 rev 00

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/17/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031
Analysis Method: PSEP TS
Prep Method: None

Units: Percent
Basis: As Received

Analyte Name	MRL	Sample Result	Duplicate K2507081- 031DUP Result	Triplicate K2507081- 031TRP Result	Average	RSD	RSD Limit
Solids, Total	-	64.6	66.8	74.3	68.6	7	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 7/21/2025 10:56:00 AM

SuperSet Reference:25-0000739352 rev 00



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: PSEP Sulfide
Prep Method: Method

Service Request: K2507081
Date Collected: 07/07/25 - 07/10/25
Date Received: 07/16/25
Units: mg/Kg
Basis: Dry

Sulfide, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2025GCMTC808S1	K2507081-001	ND U	2.0	1	07/18/25 18:45	7/18/25	*
2025GCMTC808S2	K2507081-002	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMTC808S3	K2507081-003	ND U	2.0	1	07/18/25 18:45	7/18/25	*
2025GCMTC808S4	K2507081-004	ND U	1.6	1	07/17/25 21:35	7/17/25	*
2025GCMTC808S5	K2507081-005	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMGCDS1	K2507081-006	ND U	1.5	1	07/17/25 21:35	7/17/25	*
2025GCMGCDS2	K2507081-007	ND U	1.3	1	07/17/25 21:35	7/17/25	*
2025GCMGCDS3	K2507081-008	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMTC9S1	K2507081-009	ND U	1.5	1	07/17/25 21:35	7/17/25	*
2025GCMGC54S1	K2507081-010	ND U	1.9	1	07/17/25 21:35	7/17/25	*
2025GCMGC54S2	K2507081-011	ND U	1.9	1	07/17/25 21:35	7/17/25	*
2025GCMGC54S3	K2507081-012	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMGC63S1	K2507081-013	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMGC63S2	K2507081-014	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMGC63S3	K2507081-015	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMTC9S2	K2507081-016	ND U	1.9	1	07/17/25 21:35	7/17/25	*
2025GCMTC9S3	K2507081-017	ND U	1.8	1	07/17/25 21:35	7/17/25	*
2025GCMFCS1	K2507081-018	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMFCS2	K2507081-019	ND U	1.3	1	07/18/25 18:45	7/18/25	*
2025GCMFCS3	K2507081-020	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMZC10S1	K2507081-021	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMZC10S2	K2507081-022	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMZC10S3	K2507081-023	ND U	1.4	1	07/18/25 18:45	7/18/25	*
2025GCMZC371S1	K2507081-024	ND U	1.4	1	07/17/25 21:35	7/17/25	*
2025GCMCCS1	K2507081-025	ND U	1.8	1	07/17/25 21:35	7/17/25	*
2025GCMCCS2	K2507081-026	ND U	1.3	1	07/17/25 21:35	7/17/25	*
2025GCMCCS3	K2507081-027	ND U	1.0	1	07/17/25 21:35	7/17/25	*
2025GCMTC1847S1	K2507081-028	ND U	1.6	1	07/18/25 18:45	7/18/25	*
2025GCMTC1847S2	K2507081-029	ND U	1.3	1	07/18/25 18:45	7/18/25	*
2025GCMTC1847S3	K2507081-030	ND U	1.5	1	07/18/25 18:45	7/18/25	*
2025GCMZC371S2	K2507081-031	ND U	1.5	1	07/17/25 21:35	7/17/25	*
2025GCMZC371S3	K2507081-032	ND U	1.4	1	07/17/25 21:35	7/17/25	*
Method Blank	K2507081-MB1	ND U	1.0	1	07/17/25 21:35	7/17/25	*
Method Blank	K2507081-MB2	ND U	1.0	1	07/18/25 18:45	7/18/25	*

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/18/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMZC10S1 **Units:** mg/Kg
Lab Code: K2507081-021 **Basis:** Dry
Analysis Method: PSEP Sulfide
Prep Method: Method

Analyte Name	MRL	Sample Result	Duplicate K2507081- 021DUP Result	Triplicate K2507081- 021TRP Result	Average	RSD	RSD Limit
Sulfide, Total	1.4	ND	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/17/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMZC371S3 Units: mg/Kg
Lab Code: K2507081-032 Basis: Dry
Analysis Method: PSEP Sulfide
Prep Method: Method

Table with 8 columns: Analyte Name, MRL, Sample Result, Duplicate K2507081-032DUP Result, Triplicate K2507081-032TRP Result, Average, RSD, RSD Limit. Row 1: Sulfide, Total, 1.4, ND, ND, ND, NC, NC, 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/18/25
Date Extracted: 07/18/25

Duplicate Matrix Spike Summary
Sulfide, Total

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021
Analysis Method: PSEP Sulfide
Prep Method: Method

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike K2507081-021MS		Duplicate Matrix Spike K2507081-021DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Sulfide, Total	ND U	420	450	94	410	440	94	28-175	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/17/25
Date Extracted: 07/17/25

**Duplicate Matrix Spike Summary
Sulfide, Total**

Sample Name: 2025GCMZC371S3
Lab Code: K2507081-032
Analysis Method: PSEP Sulfide
Prep Method: Method

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike K2507081-032MS		Duplicate Matrix Spike K2507081-032DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Sulfide, Total	ND U	370	440	83	430	460	93	28-175	16	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/17/25
Date Extracted: 07/17/25

Lab Control Sample Summary
Sulfide, Total

Analysis Method: PSEP Sulfide
Prep Method: Method

Units: mg/Kg
Basis: Dry
Analysis Lot: 886592

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2507081-LCS1	350	320	107	39-166

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/18/25
Date Extracted: 07/18/25

Lab Control Sample Summary
Sulfide, Total

Analysis Method: PSEP Sulfide
Prep Method: Method

Units: mg/Kg
Basis: Dry
Analysis Lot: 886738

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2507081-LCS2	370	330	114	39-166

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Analysis Method: PSEP TOC
Prep Method: ALS SOP

Service Request: K2507081
Date Collected: 07/07/25 - 07/10/25
Date Received: 07/16/25
Units: Percent
Basis: Dry, per Method

Carbon, Total Organic (TOC)

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2025GCMTC808S1	K2507081-001	2.71	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC808S2	K2507081-002	0.90	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC808S3	K2507081-003	2.86	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC808S4	K2507081-004	1.33	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC808S5	K2507081-005	1.07	0.10	1	07/23/25 09:41	7/23/25	
2025GCMGCDS1	K2507081-006	0.57	0.10	1	07/23/25 09:41	7/23/25	
2025GCMGCDS2	K2507081-007	0.97	0.10	1	07/23/25 09:41	7/23/25	
2025GCMGCDS3	K2507081-008	0.63	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC9S1	K2507081-009	1.56	0.10	1	07/23/25 09:41	7/23/25	
2025GCMGC54S1	K2507081-010	1.50	0.10	1	07/18/25 14:16	7/18/25	
2025GCMGC54S2	K2507081-011	1.18	0.10	1	07/18/25 14:16	7/18/25	
2025GCMGC54S3	K2507081-012	1.24	0.10	1	07/18/25 14:16	7/18/25	
2025GCMGC63S1	K2507081-013	0.53	0.10	1	07/18/25 14:16	7/18/25	
2025GCMGC63S2	K2507081-014	0.58	0.10	1	07/18/25 14:16	7/18/25	
2025GCMGC63S3	K2507081-015	0.51	0.10	1	07/18/25 14:16	7/18/25	
2025GCMTC9S2	K2507081-016	3.84	0.10	1	07/23/25 09:41	7/23/25	
2025GCMTC9S3	K2507081-017	2.49	0.10	1	07/23/25 09:41	7/23/25	
2025GCMFCS1	K2507081-018	0.51	0.10	1	07/23/25 09:41	7/23/25	
2025GCMFCS2	K2507081-019	0.76	0.10	1	07/23/25 09:41	7/23/25	
2025GCMFCS3	K2507081-020	0.56	0.10	1	07/23/25 09:41	7/23/25	
2025GCMZC10S1	K2507081-021	0.64	0.10	1	07/23/25 09:41	7/23/25	
2025GCMZC10S2	K2507081-022	0.82	0.10	1	07/23/25 09:41	7/23/25	
2025GCMZC10S3	K2507081-023	0.56	0.10	1	07/23/25 09:41	7/23/25	
2025GCMZC371S1	K2507081-024	2.09	0.10	1	07/23/25 09:41	7/23/25	
2025GCMCCS1	K2507081-025	4.83	0.10	1	07/18/25 14:16	7/18/25	
2025GCMCCS2	K2507081-026	0.99	0.10	1	07/18/25 14:16	7/18/25	
2025GCMCCS3	K2507081-027	0.30	0.10	1	07/18/25 14:16	7/18/25	
2025GCMTC1847S1	K2507081-028	1.55	0.10	1	07/18/25 14:16	7/18/25	
2025GCMTC1847S2	K2507081-029	0.81	0.10	1	07/18/25 14:16	7/18/25	
2025GCMTC1847S3	K2507081-030	1.44	0.10	1	07/18/25 14:16	7/18/25	
2025GCMZC371S2	K2507081-031	1.11	0.10	1	07/18/25 14:16	7/18/25	
2025GCMZC371S3	K2507081-032	0.70	0.10	1	07/18/25 14:16	7/18/25	
Method Blank	K2507081-MB1	ND U	0.10	1	07/18/25 14:16	7/18/25	
Method Blank	K2507081-MB2	ND U	0.10	1	07/23/25 09:41	7/23/25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001
Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method

Analyte Name	MRL	Sample Result	Duplicate K2507081-001DUP Result	Triplicate K2507081-001TRP Result	Average	RSD	RSD Limit
Carbon, Total Organic (TOC)	0.10	2.71	2.73	2.70	2.71	<1	27

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 7/28/2025 11:27:57 AM

SuperSet Reference:25-0000739352 rev 00

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/18/25

Triplicate Sample Summary
General Chemistry Parameters

Sample Name: 2025GCMGC54S1
Lab Code: K2507081-010
Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method

Table with 8 columns: Analyte Name, MRL, Sample Result, Duplicate K2507081-010DUP Result, Triplicate K2507081-010TRP Result, Average, RSD, RSD Limit. Row 1: Carbon, Total Organic (TOC), 0.10, 1.50, 1.51, 1.49, 1.50, <1, 27

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Duplicate Matrix Spike Summary
Carbon, Total Organic (TOC)

Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001
Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method

Analyte Name	Sample Result	Matrix Spike K2507081-001MS			Duplicate Matrix Spike K2507081-001DMS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Carbon, Total Organic (TOC)	2.71	5.04	2.39	97	5.06	2.41	98	69-123	1	27

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/18/25
Date Extracted: 07/18/25

Duplicate Matrix Spike Summary
Carbon, Total Organic (TOC)

Sample Name: 2025GCMGC54S1
Lab Code: K2507081-010
Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method

Analyte Name	Sample Result	Matrix Spike K2507081-010MS			Duplicate Matrix Spike K2507081-010DMS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Carbon, Total Organic (TOC)	1.50	3.81	2.41	96	3.80	2.41	95	69-123	1	27

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/18/25
Date Extracted: 07/18/25

Lab Control Sample Summary
Carbon, Total Organic (TOC)

Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method
Analysis Lot: 886735

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2507081-LCS1	2.98	2.99	100	74-118

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Lab Control Sample Summary
Carbon, Total Organic (TOC)

Analysis Method: PSEP TOC
Prep Method: ALS SOP

Units: Percent
Basis: Dry, per Method
Analysis Lot: 887171

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2507081-LCS2	2.94	2.99	98	74-118

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S1
 Lab Code: K2507081-001

Sand Fraction: Dry Weight (Grams) 15.6659
 Sand Fraction: Weight Recovered (Grams) 15.5979
 Sand Fraction: Percent Recovery 99.57

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	6.8428	45.89
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.6021	10.74
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	2.5315	16.98
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.3498	15.76
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.4168	9.50
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.7153	4.80
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.5500	10.39
Clay (< 0.0039 mm)	> 8 Ø	0.4600	3.08
	Total	17.4683	117.14

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S2
 Lab Code: K2507081-001DUP

Sand Fraction: Dry Weight (Grams) 13.5785
 Sand Fraction: Weight Recovered (Grams) 13.3937
 Sand Fraction: Percent Recovery 98.64

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	4.3325	29.67
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.6801	11.51
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	2.6671	18.27
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.3503	16.10
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.4677	10.05
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.7385	5.06
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.0450	14.01
Clay (< 0.0039 mm)	> 8 Ø	0.5900	4.04
	Total	15.8712	108.71

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S1
 Lab Code: K2507081-001TRP

Sand Fraction: Dry Weight (Grams) 13.3582
 Sand Fraction: Weight Recovered (Grams) 13.3471
 Sand Fraction: Percent Recovery 99.92

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.0009	13.65
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	5.4575	37.24
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	2.0015	13.66
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	1.9990	13.64
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.1003	7.51
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.7074	4.83
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.0050	13.68
Clay (< 0.0039 mm)	> 8 Ø	0.6250	4.26
	Total	15.8966	108.47

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S2
 Lab Code: K2507081-002

Sand Fraction: Dry Weight (Grams) 20.7216
 Sand Fraction: Weight Recovered (Grams) 20.5847
 Sand Fraction: Percent Recovery 99.34

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	3.2034	16.11
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.9995	15.09
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	5.7349	28.84
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	6.7568	33.98
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.5897	8.00
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.2513	1.26
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.2150	1.08
Clay (< 0.0039 mm)	> 8 Ø	0.1350	0.68
	Total	20.8856	105.04

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S3
 Lab Code: K2507081-003

Sand Fraction: Dry Weight (Grams) 10.0683
 Sand Fraction: Weight Recovered (Grams) 9.9288
 Sand Fraction: Percent Recovery 98.61

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.3645	2.49
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.7549	5.15
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.3393	9.14
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	1.8461	12.61
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.6350	17.99
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	2.0356	13.90
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	4.7150	32.19
Clay (< 0.0039 mm)	> 8 Ø	1.2500	8.54
	Total	14.9404	102.01

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S4
 Lab Code: K2507081-004

Sand Fraction: Dry Weight (Grams) 18.0892
 Sand Fraction: Weight Recovered (Grams) 17.9806
 Sand Fraction: Percent Recovery 99.40

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.1658	0.91
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.4290	7.87
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	2.9236	16.10
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	5.2093	28.69
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	7.1098	39.15
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.0763	5.93
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.4150	2.29
Clay (< 0.0039 mm)	> 8 Ø	0.1800	0.99
	Total	18.5088	101.93

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC808S5
 Lab Code: K2507081-005

Sand Fraction: Dry Weight (Grams) 20.1880
 Sand Fraction: Weight Recovered (Grams) 20.0337
 Sand Fraction: Percent Recovery 99.24

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.3612	1.70
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.3139	10.91
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	4.2473	20.02
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.1274	33.59
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	4.7429	22.36
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.1656	5.49
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.7250	3.42
Clay (< 0.0039 mm)	> 8 Ø	0.1850	0.87
	Total	20.8683	98.36

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGCD51
 Lab Code: K2507081-006

Sand Fraction: Dry Weight (Grams) 21.4368
 Sand Fraction: Weight Recovered (Grams) 21.2842
 Sand Fraction: Percent Recovery 99.29

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	1.1897	5.77
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	7.3157	35.49
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	10.4697	50.79
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.1133	10.25
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.1497	0.73
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.0322	0.16
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.0300	0.15
Clay (< 0.0039 mm)	> 8 Ø	0.1000	0.49
	Total	21.4003	103.83

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGCD2
 Lab Code: K2507081-007

Sand Fraction: Dry Weight (Grams) 21.9745
 Sand Fraction: Weight Recovered (Grams) 21.8409
 Sand Fraction: Percent Recovery 99.39

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.7512	3.40
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	5.7831	26.21
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	8.5497	38.75
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	5.7981	26.28
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.6653	3.02
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.2426	1.10
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.4100	1.86
Clay (< 0.0039 mm)	> 8 Ø	0.1250	0.57
	Total	22.3250	101.19

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGCD3
 Lab Code: K2507081-008

Sand Fraction: Dry Weight (Grams) 21.1576
 Sand Fraction: Weight Recovered (Grams) 21.2188
 Sand Fraction: Percent Recovery 100.29

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.3210	1.55
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.9053	9.19
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	8.2642	39.88
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	9.5937	46.29
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.0370	5.00
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.0855	0.41
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.0350	0.17
Clay (< 0.0039 mm)	> 8 Ø	0.1350	0.65
	Total	21.3767	103.14

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC9S1
 Lab Code: K2507081-009

Sand Fraction: Dry Weight (Grams) 17.5890
 Sand Fraction: Weight Recovered (Grams) 17.5082
 Sand Fraction: Percent Recovery 99.54

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.1682	10.25
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	3.4115	16.12
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	4.0701	19.24
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	3.6974	17.47
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.5238	11.93
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.3156	6.22
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	3.2450	15.34
Clay (< 0.0039 mm)	> 8 Ø	1.0450	4.94
	Total	21.4766	101.51

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC54S1
 Lab Code: K2507081-010

Sand Fraction: Dry Weight (Grams) 13.5776
 Sand Fraction: Weight Recovered (Grams) 13.5118
 Sand Fraction: Percent Recovery 99.52

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.0228	0.15
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.0583	0.38
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	0.1245	0.81
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	0.7995	5.22
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	5.3190	34.74
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	5.4819	35.80
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.1450	14.01
Clay (< 0.0039 mm)	> 8 Ø	0.1900	1.24
	Total	14.1410	92.35

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC54S2
 Lab Code: K2507081-011

Sand Fraction: Dry Weight (Grams) 14.8271
 Sand Fraction: Weight Recovered (Grams) 14.6792
 Sand Fraction: Percent Recovery 99.00

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.0493	0.31
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.7024	4.38
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.5998	9.98
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.3317	14.54
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	5.2914	32.99
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	3.9161	24.42
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.1750	13.56
Clay (< 0.0039 mm)	> 8 Ø	0.2300	1.43
	Total	16.2957	101.61

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC54S3
 Lab Code: K2507081-012

Sand Fraction: Dry Weight (Grams) 19.3813
 Sand Fraction: Weight Recovered (Grams) 19.3514
 Sand Fraction: Percent Recovery 99.85

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.0132	0.06
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.1351	0.64
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	0.8389	3.96
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	5.7936	27.37
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	8.2161	38.81
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	3.5673	16.85
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.0050	9.47
Clay (< 0.0039 mm)	> 8 Ø	0.2800	1.32
	Total	20.8492	98.48

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC63S1
 Lab Code: K2507081-013

Sand Fraction: Dry Weight (Grams) 20.9050
 Sand Fraction: Weight Recovered (Grams) 20.7878
 Sand Fraction: Percent Recovery 99.44

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.0210	9.36
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.5426	7.15
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	5.6099	25.99
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	8.0258	37.19
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.8394	13.16
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.7319	3.39
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.3650	1.69
Clay (< 0.0039 mm)	> 8 Ø	0.1350	0.63
	Total	21.2706	98.56

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC63S2
 Lab Code: K2507081-014

Sand Fraction: Dry Weight (Grams) 20.4812
 Sand Fraction: Weight Recovered (Grams) 20.3225
 Sand Fraction: Percent Recovery 99.23

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.5746	2.72
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.3577	11.14
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	5.7870	27.36
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	4.3795	20.70
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	3.3137	15.66
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	3.0879	14.60
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.1750	10.28
Clay (< 0.0039 mm)	> 8 Ø	0.2050	0.97
	Total	21.8804	103.43

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMGC63S3
 Lab Code: K2507081-015

Sand Fraction: Dry Weight (Grams) 19.6959
 Sand Fraction: Weight Recovered (Grams) 19.6443
 Sand Fraction: Percent Recovery 99.74

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	1.0075	5.00
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.9098	14.45
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	6.9732	34.63
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	6.4736	32.15
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.6724	8.30
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.5607	2.78
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.3500	1.74
Clay (< 0.0039 mm)	> 8 Ø	0.1850	0.92
	Total	20.1322	99.97

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC9S2
 Lab Code: K2507081-016

Sand Fraction: Dry Weight (Grams) 12.3812
 Sand Fraction: Weight Recovered (Grams) 12.2602
 Sand Fraction: Percent Recovery 99.02

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.2046	1.34
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.6611	4.34
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.7446	11.46
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.6719	17.56
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	3.5057	23.04
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	2.1533	14.15
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	2.9750	19.55
Clay (< 0.0039 mm)	> 8 Ø	0.9150	6.01
	Total	14.8312	97.45

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC9S3
 Lab Code: K2507081-017

Sand Fraction: Dry Weight (Grams) 15.8677
 Sand Fraction: Weight Recovered (Grams) 15.8294
 Sand Fraction: Percent Recovery 99.76

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	1.3436	6.87
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	3.0389	15.54
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	3.5624	18.21
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.4801	12.68
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.5918	13.25
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	2.2395	11.45
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	3.2900	16.82
Clay (< 0.0039 mm)	> 8 Ø	0.8600	4.40
	Total	19.4063	99.22

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMFCS1
 Lab Code: K2507081-018

Sand Fraction: Dry Weight (Grams) 21.5222
 Sand Fraction: Weight Recovered (Grams) 21.4284
 Sand Fraction: Percent Recovery 99.56

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.1970	0.94
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	3.1431	15.01
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	12.2929	58.72
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	5.5411	26.47
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.1986	0.95
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.0382	0.18
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	-0.0050	0.00
Clay (< 0.0039 mm)	> 8 Ø	0.1600	0.76
	Total	21.5659	103.03

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMFCS2
 Lab Code: K2507081-019

Sand Fraction: Dry Weight (Grams) 22.3831
 Sand Fraction: Weight Recovered (Grams) 22.2409
 Sand Fraction: Percent Recovery 99.36

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.3584	1.62
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.5849	11.71
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	7.4932	33.95
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	9.3036	42.15
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.2240	10.07
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.2318	1.05
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.2300	1.04
Clay (< 0.0039 mm)	> 8 Ø	0.1700	0.77
	Total	22.5959	102.36

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 01/00/00

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMFCS3
 Lab Code: K2507081-020

Sand Fraction: Dry Weight (Grams) 21.5690
 Sand Fraction: Weight Recovered (Grams) 21.4546
 Sand Fraction: Percent Recovery 99.47

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.3814	11.20
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.2663	10.66
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	6.2446	29.37
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.7804	36.59
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.3491	11.05
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.4181	1.97
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.1300	0.61
Clay (< 0.0039 mm)	> 8 Ø	0.1400	0.66
	Total	21.7099	102.11

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC10S1
 Lab Code: K2507081-021

Sand Fraction: Dry Weight (Grams) 20.0242
 Sand Fraction: Weight Recovered (Grams) 19.9702
 Sand Fraction: Percent Recovery 99.73

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.5781	2.73
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.8560	8.78
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	7.5212	35.57
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.5164	35.55
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.0501	9.70
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.4176	1.98
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.2250	1.06
Clay (< 0.0039 mm)	> 8 Ø	0.1350	0.64
	Total	20.2994	96.01

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC10S2
 Lab Code: K2507081-021DUP

Sand Fraction: Dry Weight (Grams) 20.4129
 Sand Fraction: Weight Recovered (Grams) 20.3624
 Sand Fraction: Percent Recovery 99.75

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.7642	3.62
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.2747	10.79
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	7.5908	36.01
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.4345	35.26
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.8889	8.96
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.3882	1.84
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.1750	0.83
Clay (< 0.0039 mm)	> 8 Ø	0.1150	0.55
	Total	20.6313	97.86

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC10S1
 Lab Code: K2507081-021TRP

Sand Fraction: Dry Weight (Grams) 20.5683
 Sand Fraction: Weight Recovered (Grams) 20.5132
 Sand Fraction: Percent Recovery 99.73

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.5423	2.54
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.0545	9.61
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	7.6649	35.85
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.8489	36.71
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	1.9789	9.26
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.3966	1.86
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.2400	1.12
Clay (< 0.0039 mm)	> 8 Ø	0.1250	0.58
	Total	20.8511	97.53

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC10S2
 Lab Code: K2507081-022

Sand Fraction: Dry Weight (Grams) 20.5657
 Sand Fraction: Weight Recovered (Grams) 20.4562
 Sand Fraction: Percent Recovery 99.47

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.1746	10.49
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.1188	10.22
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	5.0024	24.13
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.6759	37.03
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.9365	14.17
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.5274	2.54
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.3050	1.47
Clay (< 0.0039 mm)	> 8 Ø	0.1150	0.55
	Total	20.8556	100.60

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC10S3
 Lab Code: K2507081-023

Sand Fraction: Dry Weight (Grams) 21.3951
 Sand Fraction: Weight Recovered (Grams) 21.0371
 Sand Fraction: Percent Recovery 98.33

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	2.4743	11.80
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.3661	6.51
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	8.5238	40.64
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	8.3306	39.72
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.3051	1.45
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.0288	0.14
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.0250	0.12
Clay (< 0.0039 mm)	> 8 Ø	0.1000	0.48
	Total	21.1537	100.86

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC371S1
 Lab Code: K2507081-024

Sand Fraction: Dry Weight (Grams) 17.5557
 Sand Fraction: Weight Recovered (Grams) 17.4603
 Sand Fraction: Percent Recovery 99.46

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.8289	4.20
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.3389	6.78
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	3.3801	17.13
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	5.4224	27.48
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	4.1727	21.15
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.9413	9.84
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.3300	6.74
Clay (< 0.0039 mm)	> 8 Ø	0.1200	0.61
	Total	18.5343	93.93

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMCCS1
 Lab Code: K2507081-025

Sand Fraction: Dry Weight (Grams) 14.0209
 Sand Fraction: Weight Recovered (Grams) 14.0202
 Sand Fraction: Percent Recovery 100.00

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.4345	2.70
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.4474	2.78
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.0043	6.25
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	2.7499	17.11
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	4.7786	29.73
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	3.5001	21.77
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.8900	11.76
Clay (< 0.0039 mm)	> 8 Ø	0.1900	1.18
	Total	14.9948	93.28

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMCCS2
 Lab Code: K2507081-026

Sand Fraction: Dry Weight (Grams) 27.7188
 Sand Fraction: Weight Recovered (Grams) 27.6883
 Sand Fraction: Percent Recovery 99.89

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	15.4081	58.20
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	5.5855	21.10
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	3.5517	13.41
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	1.8971	7.17
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.8121	3.07
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.3486	1.32
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.3000	1.13
Clay (< 0.0039 mm)	> 8 Ø	0.1000	0.38
	Total	28.0031	105.78

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMCCS3
 Lab Code: K2507081-027

Sand Fraction: Dry Weight (Grams) 67.6045
 Sand Fraction: Weight Recovered (Grams) 67.5500
 Sand Fraction: Percent Recovery 99.92

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	63.5795	88.67
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	3.4697	4.84
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	0.2190	0.31
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	0.0795	0.11
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	0.0685	0.10
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.0756	0.11
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.0800	0.11
Clay (< 0.0039 mm)	> 8 Ø	0.1150	0.16
	Total	67.6868	94.41

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC1847S1
 Lab Code: K2507081-028

Sand Fraction: Dry Weight (Grams) 16.1096
 Sand Fraction: Weight Recovered (Grams) 16.0193
 Sand Fraction: Percent Recovery 99.44

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	1.2860	6.74
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.9946	5.22
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.2105	6.35
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	3.7540	19.69
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	5.1946	27.24
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	2.8201	14.79
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.9200	10.07
Clay (< 0.0039 mm)	> 8 Ø	0.3400	1.78
	Total	17.5198	91.88

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC1847S2
 Lab Code: K2507081-029

Sand Fraction: Dry Weight (Grams) 20.6234
 Sand Fraction: Weight Recovered (Grams) 20.5338
 Sand Fraction: Percent Recovery 99.57

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	1.5608	7.50
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	2.6904	12.93
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	4.4181	21.23
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	6.3859	30.68
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	4.6683	22.43
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.7171	3.45
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.5400	2.59
Clay (< 0.0039 mm)	> 8 Ø	0.1650	0.79
	Total	21.1456	101.60

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMTC1847S3
 Lab Code: K2507081-030

Sand Fraction: Dry Weight (Grams) 18.0984
 Sand Fraction: Weight Recovered (Grams) 18.0218
 Sand Fraction: Percent Recovery 99.58

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.6896	3.46
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	0.7511	3.77
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	1.8023	9.05
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	6.1870	31.07
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	6.5462	32.87
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.8386	9.23
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.0850	5.45
Clay (< 0.0039 mm)	> 8 Ø	0.1600	0.80
	Total	19.0598	95.70

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC371S2
 Lab Code: K2507081-031

Sand Fraction: Dry Weight (Grams) 21.6772
 Sand Fraction: Weight Recovered (Grams) 21.4860
 Sand Fraction: Percent Recovery 99.12

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	0.5307	2.44
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	1.8231	8.37
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	5.4756	25.14
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	7.5752	34.78
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	4.2768	19.64
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	1.5214	6.99
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	1.1850	5.44
Clay (< 0.0039 mm)	> 8 Ø	0.1950	0.90
	Total	22.5828	103.70

ALS Group USA, Corp.
 dba ALS Environmental
Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/28/25

Particle Size Determination
 Puget Sound Estuary Program Protocol

Sample Name: 2025GCMZC371S3
 Lab Code: K2507081-032

Sand Fraction: Dry Weight (Grams) 20.6157
 Sand Fraction: Weight Recovered (Grams) 20.4563
 Sand Fraction: Percent Recovery 99.23

Description	Phi Size	Dry Weight (Grams)	Percent of Total Weight Recovered
Gravel (>2.00 mm)	<-1 Ø	4.1123	19.74
Sand, Very Coarse (1.00 mm to 2.00 mm)	-1 to 0 Ø	4.1447	19.89
Sand, Coarse (0.500 mm to 1.00 mm)	0 to 1 Ø	4.5523	21.85
Sand, Medium (0.250 mm to 0.500 mm)	1 to 2 Ø	4.3946	21.09
Sand, Fine (0.125 mm to 0.250 mm)	2 to 3 Ø	2.3071	11.07
Sand, Very Fine (0.0625 mm to 0.125 mm)	3 to 4 Ø	0.8505	4.08
Silt (0.0039 mm to 0.0625 mm)	4 to 8 Ø	0.4200	2.02
Clay (< 0.0039 mm)	> 8 Ø	0.1150	0.55
	Total	20.8965	100.29



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001

Service Request: K2507081
Date Collected: 07/09/25 13:40
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10900	mg/Kg	6.5	10	07/21/25 13:31	07/18/25	
Arsenic	200.8	13.4	mg/Kg	0.81	10	07/21/25 13:31	07/18/25	
Cadmium	200.8	0.366	mg/Kg	0.065	10	07/21/25 13:31	07/18/25	
Chromium	200.8	47.4	mg/Kg	0.69	10	07/23/25 11:18	07/23/25	
Copper	200.8	15.9	mg/Kg	0.65	10	07/21/25 13:31	07/18/25	
Lead	200.8	13.0	mg/Kg	0.16	10	07/21/25 13:31	07/18/25	
Mercury	7471B	0.069	mg/Kg	0.042	1	07/21/25 11:55	07/18/25	
Nickel	200.8	23.4	mg/Kg	0.69	10	07/23/25 11:18	07/23/25	
Selenium	200.8	1.6	mg/Kg	1.6	10	07/21/25 13:31	07/18/25	
Silver	200.8	0.105	mg/Kg	0.065	10	07/21/25 13:31	07/18/25	
Zinc	200.8	65.2	mg/Kg	1.6	10	07/21/25 13:31	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC808S2
Lab Code: K2507081-002

Service Request: K2507081
Date Collected: 07/09/25 13:40
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10200	mg/Kg	4.9	10	07/21/25 13:16	07/18/25	
Arsenic	200.8	21.0	mg/Kg	0.62	10	07/21/25 13:16	07/18/25	
Cadmium	200.8	0.273	mg/Kg	0.049	10	07/21/25 13:16	07/18/25	
Chromium	200.8	77.9	mg/Kg	0.47	10	07/23/25 11:27	07/23/25	
Copper	200.8	11.7	mg/Kg	0.49	10	07/21/25 13:16	07/18/25	
Lead	200.8	18.6	mg/Kg	0.12	10	07/21/25 13:16	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.027	1	07/21/25 11:57	07/18/25	
Nickel	200.8	39.0	mg/Kg	0.47	10	07/23/25 11:27	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 13:16	07/18/25	
Silver	200.8	0.070	mg/Kg	0.049	10	07/21/25 13:16	07/18/25	
Zinc	200.8	90.9	mg/Kg	1.2	10	07/21/25 13:16	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC808S3
Lab Code: K2507081-003

Service Request: K2507081
Date Collected: 07/09/25 13:40
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	6320	mg/Kg	6.5	10	07/21/25 13:34	07/18/25	
Arsenic	200.8	8.28	mg/Kg	0.81	10	07/21/25 13:34	07/18/25	
Cadmium	200.8	0.135	mg/Kg	0.065	10	07/21/25 13:34	07/18/25	
Chromium	200.8	33.9	mg/Kg	0.65	10	07/23/25 11:29	07/23/25	
Copper	200.8	5.22	mg/Kg	0.65	10	07/21/25 13:34	07/18/25	
Lead	200.8	12.1	mg/Kg	0.16	10	07/21/25 13:34	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.036	1	07/21/25 12:03	07/18/25	
Nickel	200.8	8.29	mg/Kg	0.65	10	07/23/25 11:29	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.6	10	07/21/25 13:34	07/18/25	
Silver	200.8	ND U	mg/Kg	0.065	10	07/21/25 13:34	07/18/25	
Zinc	200.8	22.7	mg/Kg	1.6	10	07/21/25 13:34	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC808S4
Lab Code: K2507081-004

Service Request: K2507081
Date Collected: 07/09/25 13:40
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10600	mg/Kg	4.7	10	07/21/25 13:44	07/18/25	
Arsenic	200.8	28.9	mg/Kg	0.59	10	07/21/25 13:44	07/18/25	
Cadmium	200.8	0.312	mg/Kg	0.047	10	07/21/25 13:44	07/18/25	
Chromium	200.8	52.2	mg/Kg	0.53	10	07/23/25 11:35	07/23/25	
Copper	200.8	12.9	mg/Kg	0.47	10	07/21/25 13:44	07/18/25	
Lead	200.8	21.7	mg/Kg	0.12	10	07/21/25 13:44	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.028	1	07/21/25 12:05	07/18/25	
Nickel	200.8	33.2	mg/Kg	0.53	10	07/23/25 11:35	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 13:44	07/18/25	
Silver	200.8	0.097	mg/Kg	0.047	10	07/21/25 13:44	07/18/25	
Zinc	200.8	103	mg/Kg	1.2	10	07/21/25 13:44	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC808S5
Lab Code: K2507081-005

Service Request: K2507081
Date Collected: 07/09/25 13:40
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10400	mg/Kg	4.7	10	07/21/25 13:47	07/18/25	
Arsenic	200.8	22.1	mg/Kg	0.59	10	07/21/25 13:47	07/18/25	
Cadmium	200.8	0.269	mg/Kg	0.047	10	07/21/25 13:47	07/18/25	
Chromium	200.8	52.6	mg/Kg	0.46	10	07/23/25 11:36	07/23/25	
Copper	200.8	10.0	mg/Kg	0.47	10	07/21/25 13:47	07/18/25	
Lead	200.8	20.6	mg/Kg	0.12	10	07/21/25 13:47	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.026	1	07/21/25 12:07	07/18/25	
Nickel	200.8	32.8	mg/Kg	0.46	10	07/23/25 11:36	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 13:47	07/18/25	
Silver	200.8	0.071	mg/Kg	0.047	10	07/21/25 13:47	07/18/25	
Zinc	200.8	89.8	mg/Kg	1.2	10	07/21/25 13:47	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGCDS1
Lab Code: K2507081-006

Service Request: K2507081
Date Collected: 07/09/25 10:15
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10500	mg/Kg	5.0	10	07/21/25 13:49	07/18/25	
Arsenic	200.8	29.0	mg/Kg	0.62	10	07/21/25 13:49	07/18/25	
Cadmium	200.8	1.39	mg/Kg	0.050	10	07/21/25 13:49	07/18/25	
Chromium	200.8	95.6	mg/Kg	0.46	10	07/23/25 11:38	07/23/25	
Copper	200.8	31.2	mg/Kg	0.50	10	07/21/25 13:49	07/18/25	
Lead	200.8	12.7	mg/Kg	0.12	10	07/21/25 13:49	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.025	1	07/21/25 12:12	07/18/25	
Nickel	200.8	109	mg/Kg	0.46	10	07/23/25 11:38	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 13:49	07/18/25	
Silver	200.8	0.121	mg/Kg	0.050	10	07/21/25 13:49	07/18/25	
Zinc	200.8	276	mg/Kg	1.2	10	07/21/25 13:49	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGCDS2
Lab Code: K2507081-007

Service Request: K2507081
Date Collected: 07/09/25 10:15
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	9290	mg/Kg	4.9	10	07/21/25 13:52	07/18/25	
Arsenic	200.8	23.3	mg/Kg	0.61	10	07/21/25 13:52	07/18/25	
Cadmium	200.8	0.923	mg/Kg	0.049	10	07/21/25 13:52	07/18/25	
Chromium	200.8	114	mg/Kg	0.48	10	07/23/25 11:40	07/23/25	
Copper	200.8	22.2	mg/Kg	0.49	10	07/21/25 13:52	07/18/25	
Lead	200.8	11.0	mg/Kg	0.12	10	07/21/25 13:52	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.027	1	07/21/25 12:13	07/18/25	
Nickel	200.8	107	mg/Kg	0.48	10	07/23/25 11:40	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 13:52	07/18/25	
Silver	200.8	0.110	mg/Kg	0.049	10	07/21/25 13:52	07/18/25	
Zinc	200.8	194	mg/Kg	1.2	10	07/21/25 13:52	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGCDS3
Lab Code: K2507081-008

Service Request: K2507081
Date Collected: 07/09/25 10:15
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11800	mg/Kg	5.1	10	07/21/25 13:54	07/18/25	
Arsenic	200.8	30.8	mg/Kg	0.64	10	07/21/25 13:54	07/18/25	
Cadmium	200.8	1.15	mg/Kg	0.051	10	07/21/25 13:54	07/18/25	
Chromium	200.8	125	mg/Kg	0.44	10	07/23/25 11:41	07/23/25	
Copper	200.8	25.5	mg/Kg	0.51	10	07/21/25 13:54	07/18/25	
Lead	200.8	12.0	mg/Kg	0.13	10	07/21/25 13:54	07/18/25	
Mercury	7471B	0.030	mg/Kg	0.026	1	07/21/25 12:15	07/18/25	
Nickel	200.8	104	mg/Kg	0.44	10	07/23/25 11:41	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.3	10	07/21/25 13:54	07/18/25	
Silver	200.8	0.084	mg/Kg	0.051	10	07/21/25 13:54	07/18/25	
Zinc	200.8	254	mg/Kg	1.3	10	07/21/25 13:54	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC9S1
Lab Code: K2507081-009

Service Request: K2507081
Date Collected: 07/10/25 09:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	12600	mg/Kg	5.0	10	07/21/25 13:57	07/18/25	
Arsenic	200.8	14.3	mg/Kg	0.63	10	07/21/25 13:57	07/18/25	
Cadmium	200.8	0.249	mg/Kg	0.050	10	07/21/25 13:57	07/18/25	
Chromium	200.8	92.2	mg/Kg	0.46	10	07/23/25 11:43	07/23/25	
Copper	200.8	24.3	mg/Kg	0.50	10	07/21/25 13:57	07/18/25	
Lead	200.8	7.23	mg/Kg	0.13	10	07/21/25 13:57	07/18/25	
Mercury	7471B	0.033	mg/Kg	0.027	1	07/21/25 12:16	07/18/25	
Nickel	200.8	45.6	mg/Kg	0.46	10	07/23/25 11:43	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.3	10	07/21/25 13:57	07/18/25	
Silver	200.8	0.081	mg/Kg	0.050	10	07/21/25 13:57	07/18/25	
Zinc	200.8	80.8	mg/Kg	1.3	10	07/21/25 13:57	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC54S1
Lab Code: K2507081-010

Service Request: K2507081
Date Collected: 07/07/25 13:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	14800	mg/Kg	6.6	10	07/21/25 14:00	07/18/25	
Arsenic	200.8	26.3	mg/Kg	0.83	10	07/21/25 14:00	07/18/25	
Cadmium	200.8	2.58	mg/Kg	0.066	10	07/21/25 14:00	07/18/25	
Chromium	200.8	39.8	mg/Kg	0.60	10	07/23/25 11:44	07/23/25	
Copper	200.8	67.8	mg/Kg	0.66	10	07/21/25 14:00	07/18/25	
Lead	200.8	27.5	mg/Kg	0.17	10	07/21/25 14:00	07/18/25	
Mercury	7471B	0.177	mg/Kg	0.034	1	07/21/25 12:18	07/18/25	
Nickel	200.8	61.5	mg/Kg	0.60	10	07/23/25 11:44	07/23/25	
Selenium	200.8	3.2	mg/Kg	1.7	10	07/21/25 14:00	07/18/25	
Silver	200.8	0.557	mg/Kg	0.066	10	07/21/25 14:00	07/18/25	
Zinc	200.8	340	mg/Kg	1.7	10	07/21/25 14:00	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC54S2
Lab Code: K2507081-011

Service Request: K2507081
Date Collected: 07/07/25 13:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	15000	mg/Kg	5.5	10	07/21/25 14:02	07/18/25	
Arsenic	200.8	26.4	mg/Kg	0.69	10	07/21/25 14:02	07/18/25	
Cadmium	200.8	2.42	mg/Kg	0.055	10	07/21/25 14:02	07/18/25	
Chromium	200.8	35.5	mg/Kg	0.55	10	07/23/25 11:46	07/23/25	
Copper	200.8	64.4	mg/Kg	0.55	10	07/21/25 14:02	07/18/25	
Lead	200.8	24.9	mg/Kg	0.14	10	07/21/25 14:02	07/18/25	
Mercury	7471B	0.157	mg/Kg	0.032	1	07/21/25 12:20	07/18/25	
Nickel	200.8	54.4	mg/Kg	0.55	10	07/23/25 11:46	07/23/25	
Selenium	200.8	3.1	mg/Kg	1.4	10	07/21/25 14:02	07/18/25	
Silver	200.8	0.442	mg/Kg	0.055	10	07/21/25 14:02	07/18/25	
Zinc	200.8	342	mg/Kg	1.4	10	07/21/25 14:02	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC54S3
Lab Code: K2507081-012

Service Request: K2507081
Date Collected: 07/07/25 13:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11600	mg/Kg	4.8	10	07/21/25 13:24	07/18/25	
Arsenic	200.8	20.5	mg/Kg	0.59	10	07/21/25 13:24	07/18/25	
Cadmium	200.8	1.87	mg/Kg	0.048	10	07/21/25 13:24	07/18/25	
Chromium	200.8	33.8	mg/Kg	0.49	10	07/23/25 11:50	07/23/25	
Copper	200.8	49.6	mg/Kg	0.48	10	07/21/25 13:24	07/18/25	
Lead	200.8	19.6	mg/Kg	0.12	10	07/21/25 13:24	07/18/25	
Mercury	7471B	0.117	mg/Kg	0.025	1	07/21/25 12:21	07/18/25	
Nickel	200.8	50.7	mg/Kg	0.49	10	07/23/25 11:50	07/23/25	
Selenium	200.8	3.3	mg/Kg	1.2	10	07/21/25 13:24	07/18/25	
Silver	200.8	0.827	mg/Kg	0.048	10	07/21/25 13:24	07/18/25	
Zinc	200.8	261	mg/Kg	1.2	10	07/21/25 13:24	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC63S1
Lab Code: K2507081-013

Service Request: K2507081
Date Collected: 07/07/25 11:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10500	mg/Kg	4.6	10	07/21/25 14:05	07/18/25	
Arsenic	200.8	14.8	mg/Kg	0.57	10	07/21/25 14:05	07/18/25	
Cadmium	200.8	1.22	mg/Kg	0.046	10	07/21/25 14:05	07/18/25	
Chromium	200.8	21.9	mg/Kg	0.44	10	07/23/25 11:52	07/23/25	
Copper	200.8	37.8	mg/Kg	0.46	10	07/21/25 14:05	07/18/25	
Lead	200.8	13.5	mg/Kg	0.11	10	07/21/25 14:05	07/18/25	
Mercury	7471B	0.088	mg/Kg	0.026	1	07/21/25 12:23	07/18/25	
Nickel	200.8	37.3	mg/Kg	0.44	10	07/23/25 11:52	07/23/25	
Selenium	200.8	1.7	mg/Kg	1.1	10	07/21/25 14:05	07/18/25	
Silver	200.8	0.225	mg/Kg	0.046	10	07/21/25 14:05	07/18/25	
Zinc	200.8	218	mg/Kg	1.1	10	07/21/25 14:05	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC63S2
Lab Code: K2507081-014

Service Request: K2507081
Date Collected: 07/07/25 11:00
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	14300	mg/Kg	4.6	10	07/21/25 14:07	07/18/25	
Arsenic	200.8	16.9	mg/Kg	0.57	10	07/21/25 14:07	07/18/25	
Cadmium	200.8	1.57	mg/Kg	0.046	10	07/21/25 14:07	07/18/25	
Chromium	200.8	29.2	mg/Kg	0.47	10	07/23/25 11:54	07/23/25	
Copper	200.8	48.0	mg/Kg	0.46	10	07/21/25 14:07	07/18/25	
Lead	200.8	19.4	mg/Kg	0.11	10	07/21/25 14:07	07/18/25	
Mercury	7471B	0.107	mg/Kg	0.025	1	07/21/25 12:25	07/18/25	
Nickel	200.8	44.7	mg/Kg	0.47	10	07/23/25 11:54	07/23/25	
Selenium	200.8	2.3	mg/Kg	1.1	10	07/21/25 14:07	07/18/25	
Silver	200.8	0.276	mg/Kg	0.046	10	07/21/25 14:07	07/18/25	
Zinc	200.8	268	mg/Kg	1.1	10	07/21/25 14:07	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMGC63S3
Lab Code: K2507081-015

Service Request: K2507081
Date Collected: 07/07/25 11:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	13800	mg/Kg	4.6	10	07/21/25 14:15	07/18/25	
Arsenic	200.8	14.6	mg/Kg	0.57	10	07/21/25 14:15	07/18/25	
Cadmium	200.8	1.46	mg/Kg	0.046	10	07/21/25 14:15	07/18/25	
Chromium	200.8	26.5	mg/Kg	0.45	10	07/23/25 11:55	07/23/25	
Copper	200.8	41.8	mg/Kg	0.46	10	07/21/25 14:15	07/18/25	
Lead	200.8	11.3	mg/Kg	0.11	10	07/21/25 14:15	07/18/25	
Mercury	7471B	0.086	mg/Kg	0.027	1	07/21/25 12:26	07/18/25	
Nickel	200.8	40.8	mg/Kg	0.45	10	07/23/25 11:55	07/23/25	
Selenium	200.8	1.5	mg/Kg	1.1	10	07/21/25 14:15	07/18/25	
Silver	200.8	0.212	mg/Kg	0.046	10	07/21/25 14:15	07/18/25	
Zinc	200.8	245	mg/Kg	1.1	10	07/21/25 14:15	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC9S2
Lab Code: K2507081-016

Service Request: K2507081
Date Collected: 07/10/25 09:00
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	13800	mg/Kg	6.7	10	07/21/25 14:17	07/18/25	
Arsenic	200.8	13.6	mg/Kg	0.83	10	07/21/25 14:17	07/18/25	
Cadmium	200.8	0.430	mg/Kg	0.067	10	07/21/25 14:17	07/18/25	
Chromium	200.8	52.3	mg/Kg	0.65	10	07/23/25 11:57	07/23/25	
Copper	200.8	29.1	mg/Kg	0.67	10	07/21/25 14:17	07/18/25	
Lead	200.8	12.8	mg/Kg	0.17	10	07/21/25 14:17	07/18/25	
Mercury	7471B	0.044	mg/Kg	0.037	1	07/21/25 12:31	07/18/25	
Nickel	200.8	36.9	mg/Kg	0.65	10	07/23/25 11:57	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.7	10	07/21/25 14:17	07/18/25	
Silver	200.8	0.149	mg/Kg	0.067	10	07/21/25 14:17	07/18/25	
Zinc	200.8	94.2	mg/Kg	1.7	10	07/21/25 14:17	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC9S3
Lab Code: K2507081-017

Service Request: K2507081
Date Collected: 07/10/25 09:00
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11600	mg/Kg	5.4	10	07/21/25 14:20	07/18/25	
Arsenic	200.8	15.3	mg/Kg	0.68	10	07/21/25 14:20	07/18/25	
Cadmium	200.8	0.366	mg/Kg	0.054	10	07/21/25 14:20	07/18/25	
Chromium	200.8	50.2	mg/Kg	0.58	10	07/23/25 11:58	07/23/25	
Copper	200.8	25.8	mg/Kg	0.54	10	07/21/25 14:20	07/18/25	
Lead	200.8	13.0	mg/Kg	0.14	10	07/21/25 14:20	07/18/25	
Mercury	7471B	0.057	mg/Kg	0.034	1	07/21/25 12:33	07/18/25	
Nickel	200.8	34.7	mg/Kg	0.58	10	07/23/25 11:58	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.4	10	07/21/25 14:20	07/18/25	
Silver	200.8	0.110	mg/Kg	0.054	10	07/21/25 14:20	07/18/25	
Zinc	200.8	78.8	mg/Kg	1.4	10	07/21/25 14:20	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMFCS1
Lab Code: K2507081-018

Service Request: K2507081
Date Collected: 07/09/25 14:40
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11800	mg/Kg	4.7	10	07/21/25 14:23	07/18/25	
Arsenic	200.8	12.9	mg/Kg	0.58	10	07/21/25 14:23	07/18/25	
Cadmium	200.8	0.116	mg/Kg	0.047	10	07/21/25 14:23	07/18/25	
Chromium	200.8	30.1	mg/Kg	0.48	10	07/23/25 12:00	07/23/25	
Copper	200.8	13.3	mg/Kg	0.47	10	07/21/25 14:23	07/18/25	
Lead	200.8	5.81	mg/Kg	0.12	10	07/21/25 14:23	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.026	1	07/21/25 12:34	07/18/25	
Nickel	200.8	20.8	mg/Kg	0.48	10	07/23/25 12:00	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 14:23	07/18/25	
Silver	200.8	ND U	mg/Kg	0.047	10	07/21/25 14:23	07/18/25	
Zinc	200.8	61.0	mg/Kg	1.2	10	07/21/25 14:23	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMFCS2
Lab Code: K2507081-019

Service Request: K2507081
Date Collected: 07/09/25 14:40
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	12100	mg/Kg	4.7	10	07/21/25 14:25	07/18/25	
Arsenic	200.8	24.1	mg/Kg	0.59	10	07/21/25 14:25	07/18/25	
Cadmium	200.8	0.144	mg/Kg	0.047	10	07/21/25 14:25	07/18/25	
Chromium	200.8	29.5	mg/Kg	0.45	10	07/23/25 12:01	07/23/25	
Copper	200.8	17.1	mg/Kg	0.47	10	07/21/25 14:25	07/18/25	
Lead	200.8	8.28	mg/Kg	0.12	10	07/21/25 14:25	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.026	1	07/21/25 12:36	07/18/25	
Nickel	200.8	22.6	mg/Kg	0.45	10	07/23/25 12:01	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.2	10	07/21/25 14:25	07/18/25	
Silver	200.8	ND U	mg/Kg	0.047	10	07/21/25 14:25	07/18/25	
Zinc	200.8	74.5	mg/Kg	1.2	10	07/21/25 14:25	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMFCS3
Lab Code: K2507081-020

Service Request: K2507081
Date Collected: 07/09/25 14:40
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11800	mg/Kg	4.4	10	07/21/25 14:28	07/18/25	
Arsenic	200.8	27.7	mg/Kg	0.55	10	07/21/25 14:28	07/18/25	
Cadmium	200.8	0.105	mg/Kg	0.044	10	07/21/25 14:28	07/18/25	
Chromium	200.8	26.3	mg/Kg	0.45	10	07/23/25 11:23	07/23/25	
Copper	200.8	15.2	mg/Kg	0.44	10	07/21/25 14:28	07/18/25	
Lead	200.8	6.59	mg/Kg	0.11	10	07/21/25 14:28	07/18/25	
Mercury	7471B	ND U	mg/Kg	0.027	1	07/21/25 12:38	07/18/25	
Nickel	200.8	20.3	mg/Kg	0.45	10	07/23/25 11:23	07/23/25	
Selenium	200.8	ND U	mg/Kg	1.1	10	07/21/25 14:28	07/18/25	
Silver	200.8	ND U	mg/Kg	0.044	10	07/21/25 14:28	07/18/25	
Zinc	200.8	63.4	mg/Kg	1.1	10	07/21/25 14:28	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021

Service Request: K2507081
Date Collected: 07/09/25 09:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10600	mg/Kg	5.5	10	07/18/25 09:48	07/17/25	
Arsenic	200.8	24.4	mg/Kg	0.69	10	07/18/25 09:48	07/17/25	
Cadmium	200.8	1.10	mg/Kg	0.055	10	07/18/25 09:48	07/17/25	
Chromium	200.8	112	mg/Kg	0.55	10	07/18/25 09:48	07/17/25	
Copper	200.8	32.0	mg/Kg	0.41	10	07/23/25 12:09	07/23/25	
Lead	200.8	14.9	mg/Kg	0.10	10	07/23/25 12:09	07/23/25	
Mercury	7471B	ND U	mg/Kg	0.026	1	07/21/25 12:46	07/18/25	
Nickel	200.8	98.5	mg/Kg	0.55	10	07/18/25 09:48	07/17/25	
Selenium	200.8	1.7	mg/Kg	1.4	10	07/18/25 09:48	07/17/25	
Silver	200.8	0.099	mg/Kg	0.055	10	07/18/25 09:48	07/17/25	
Zinc	200.8	296	mg/Kg	1.0	10	07/23/25 12:09	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC10S2
Lab Code: K2507081-022

Service Request: K2507081
Date Collected: 07/09/25 09:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10300	mg/Kg	4.5	10	07/18/25 10:03	07/17/25	
Arsenic	200.8	30.3	mg/Kg	0.57	10	07/18/25 10:03	07/17/25	
Cadmium	200.8	1.34	mg/Kg	0.045	10	07/18/25 10:03	07/17/25	
Chromium	200.8	142	mg/Kg	0.45	10	07/18/25 10:03	07/17/25	
Copper	200.8	36.1	mg/Kg	0.41	10	07/23/25 12:18	07/23/25	
Lead	200.8	15.0	mg/Kg	0.10	10	07/23/25 12:18	07/23/25	
Mercury	7471B	0.028	mg/Kg	0.026	1	07/21/25 12:56	07/18/25	
Nickel	200.8	103	mg/Kg	0.45	10	07/18/25 10:03	07/17/25	
Selenium	200.8	1.6	mg/Kg	1.1	10	07/18/25 10:03	07/17/25	
Silver	200.8	0.109	mg/Kg	0.045	10	07/18/25 10:03	07/17/25	
Zinc	200.8	307	mg/Kg	1.0	10	07/23/25 12:18	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC10S3
Lab Code: K2507081-023

Service Request: K2507081
Date Collected: 07/09/25 09:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	9220	mg/Kg	4.5	10	07/18/25 10:06	07/17/25	
Arsenic	200.8	20.7	mg/Kg	0.57	10	07/18/25 10:06	07/17/25	
Cadmium	200.8	0.983	mg/Kg	0.045	10	07/18/25 10:06	07/17/25	
Chromium	200.8	89.1	mg/Kg	0.45	10	07/18/25 10:06	07/17/25	
Copper	200.8	32.9	mg/Kg	0.52	10	07/23/25 12:20	07/23/25	
Lead	200.8	13.0	mg/Kg	0.13	10	07/23/25 12:20	07/23/25	
Mercury	7471B	ND U	mg/Kg	0.024	1	07/21/25 12:57	07/18/25	
Nickel	200.8	79.9	mg/Kg	0.45	10	07/18/25 10:06	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.1	10	07/18/25 10:06	07/17/25	
Silver	200.8	0.068	mg/Kg	0.045	10	07/18/25 10:06	07/17/25	
Zinc	200.8	283	mg/Kg	1.3	10	07/23/25 12:20	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC371S1
Lab Code: K2507081-024

Service Request: K2507081
Date Collected: 07/10/25 12:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	11200	mg/Kg	4.6	10	07/18/25 10:20	07/17/25	
Arsenic	200.8	50.4	mg/Kg	0.57	10	07/18/25 10:20	07/17/25	
Cadmium	200.8	1.50	mg/Kg	0.046	10	07/18/25 10:20	07/17/25	
Chromium	200.8	92.3	mg/Kg	0.46	10	07/18/25 10:20	07/17/25	
Copper	200.8	43.5	mg/Kg	0.43	10	07/23/25 12:39	07/23/25	
Lead	200.8	16.3	mg/Kg	0.11	10	07/23/25 12:39	07/23/25	
Mercury	7471B	0.062	mg/Kg	0.029	1	07/21/25 12:59	07/18/25	
Nickel	200.8	112	mg/Kg	0.46	10	07/18/25 10:20	07/17/25	
Selenium	200.8	2.0	mg/Kg	1.1	10	07/18/25 10:20	07/17/25	
Silver	200.8	0.231	mg/Kg	0.046	10	07/18/25 10:20	07/17/25	
Zinc	200.8	250	mg/Kg	1.1	10	07/23/25 12:39	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMCCS1
Lab Code: K2507081-025

Service Request: K2507081
Date Collected: 07/07/25 16:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10000	mg/Kg	5.3	10	07/18/25 10:23	07/17/25	
Arsenic	200.8	21.5	mg/Kg	0.66	10	07/18/25 10:23	07/17/25	
Cadmium	200.8	0.540	mg/Kg	0.053	10	07/18/25 10:23	07/17/25	
Chromium	200.8	21.1	mg/Kg	0.53	10	07/18/25 10:23	07/17/25	
Copper	200.8	23.7	mg/Kg	0.69	10	07/23/25 12:26	07/23/25	
Lead	200.8	14.3	mg/Kg	0.17	10	07/23/25 12:26	07/23/25	
Mercury	7471B	0.040	mg/Kg	0.032	1	07/21/25 13:01	07/18/25	
Nickel	200.8	19.0	mg/Kg	0.53	10	07/18/25 10:23	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.3	10	07/18/25 10:23	07/17/25	
Silver	200.8	0.220	mg/Kg	0.053	10	07/18/25 10:23	07/17/25	
Zinc	200.8	90.4	mg/Kg	1.7	10	07/23/25 12:26	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMCCS2
Lab Code: K2507081-026

Service Request: K2507081
Date Collected: 07/07/25 16:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	6390	mg/Kg	4.2	10	07/18/25 10:26	07/17/25	
Arsenic	200.8	20.5	mg/Kg	0.52	10	07/18/25 10:26	07/17/25	
Cadmium	200.8	0.373	mg/Kg	0.042	10	07/18/25 10:26	07/17/25	
Chromium	200.8	11.2	mg/Kg	0.42	10	07/18/25 10:26	07/17/25	
Copper	200.8	17.8	mg/Kg	0.49	10	07/23/25 12:28	07/23/25	
Lead	200.8	11.3	mg/Kg	0.12	10	07/23/25 12:28	07/23/25	
Mercury	7471B	ND U	mg/Kg	0.023	1	07/21/25 13:02	07/18/25	
Nickel	200.8	18.2	mg/Kg	0.42	10	07/18/25 10:26	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.0	10	07/18/25 10:26	07/17/25	
Silver	200.8	0.443	mg/Kg	0.042	10	07/18/25 10:26	07/17/25	
Zinc	200.8	110	mg/Kg	1.2	10	07/23/25 12:28	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMCCS3
Lab Code: K2507081-027

Service Request: K2507081
Date Collected: 07/07/25 16:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	5420	mg/Kg	3.8	10	07/18/25 10:28	07/17/25	
Arsenic	200.8	8.96	mg/Kg	0.47	10	07/18/25 10:28	07/17/25	
Cadmium	200.8	0.312	mg/Kg	0.038	10	07/18/25 10:28	07/17/25	
Chromium	200.8	10.7	mg/Kg	0.38	10	07/18/25 10:28	07/17/25	
Copper	200.8	8.33	mg/Kg	0.32	10	07/23/25 12:29	07/23/25	
Lead	200.8	5.71	mg/Kg	0.080	10	07/23/25 12:29	07/23/25	
Mercury	7471B	ND U	mg/Kg	0.022	1	07/21/25 13:04	07/18/25	
Nickel	200.8	11.6	mg/Kg	0.38	10	07/18/25 10:28	07/17/25	
Selenium	200.8	ND U	mg/Kg	0.94	10	07/18/25 10:28	07/17/25	
Silver	200.8	ND U	mg/Kg	0.038	10	07/18/25 10:28	07/17/25	
Zinc	200.8	34.6	mg/Kg	0.80	10	07/23/25 12:29	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC1847S1
Lab Code: K2507081-028

Service Request: K2507081
Date Collected: 07/09/25 11:30
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	10000	mg/Kg	5.1	10	07/18/25 10:31	07/17/25	
Arsenic	200.8	17.9	mg/Kg	0.64	10	07/18/25 10:31	07/17/25	
Cadmium	200.8	0.440	mg/Kg	0.051	10	07/18/25 10:31	07/17/25	
Chromium	200.8	72.8	mg/Kg	0.51	10	07/18/25 10:31	07/17/25	
Copper	200.8	22.8	mg/Kg	0.62	10	07/23/25 12:31	07/23/25	
Lead	200.8	13.4	mg/Kg	0.16	10	07/23/25 12:31	07/23/25	
Mercury	7471B	0.030	mg/Kg	0.030	1	07/21/25 13:05	07/18/25	
Nickel	200.8	57.0	mg/Kg	0.51	10	07/18/25 10:31	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.3	10	07/18/25 10:31	07/17/25	
Silver	200.8	0.132	mg/Kg	0.051	10	07/18/25 10:31	07/17/25	
Zinc	200.8	141	mg/Kg	1.6	10	07/23/25 12:31	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC1847S2
Lab Code: K2507081-029

Service Request: K2507081
Date Collected: 07/09/25 11:30
Date Received: 07/16/25 14:50
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	9280	mg/Kg	4.3	10	07/18/25 10:33	07/17/25	
Arsenic	200.8	11.7	mg/Kg	0.54	10	07/18/25 10:33	07/17/25	
Cadmium	200.8	0.251	mg/Kg	0.043	10	07/18/25 10:33	07/17/25	
Chromium	200.8	33.1	mg/Kg	0.43	10	07/18/25 10:33	07/17/25	
Copper	200.8	15.1	mg/Kg	0.54	10	07/23/25 12:32	07/23/25	
Lead	200.8	11.0	mg/Kg	0.14	10	07/23/25 12:32	07/23/25	
Mercury	7471B	ND U	mg/Kg	0.025	1	07/21/25 13:07	07/18/25	
Nickel	200.8	26.7	mg/Kg	0.43	10	07/18/25 10:33	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.1	10	07/18/25 10:33	07/17/25	
Silver	200.8	ND U	mg/Kg	0.043	10	07/18/25 10:33	07/17/25	
Zinc	200.8	82.1	mg/Kg	1.4	10	07/23/25 12:32	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMTC1847S3
Lab Code: K2507081-030

Service Request: K2507081
Date Collected: 07/09/25 11:30
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	8410	mg/Kg	4.3	10	07/18/25 10:36	07/17/25	
Arsenic	200.8	10.0	mg/Kg	0.54	10	07/18/25 10:36	07/17/25	
Cadmium	200.8	0.289	mg/Kg	0.043	10	07/18/25 10:36	07/17/25	
Chromium	200.8	31.2	mg/Kg	0.43	10	07/18/25 10:36	07/17/25	
Copper	200.8	18.9	mg/Kg	0.60	10	07/23/25 12:34	07/23/25	
Lead	200.8	8.44	mg/Kg	0.15	10	07/23/25 12:34	07/23/25	
Mercury	7471B	0.029	mg/Kg	0.025	1	07/21/25 13:09	07/18/25	
Nickel	200.8	21.7	mg/Kg	0.43	10	07/18/25 10:36	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.1	10	07/18/25 10:36	07/17/25	
Silver	200.8	0.056	mg/Kg	0.043	10	07/18/25 10:36	07/17/25	
Zinc	200.8	73.3	mg/Kg	1.5	10	07/23/25 12:34	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031

Service Request: K2507081
Date Collected: 07/10/25 12:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	13100	mg/Kg	6.1	10	07/18/25 09:55	07/17/25	
Arsenic	200.8	57.5	mg/Kg	0.76	10	07/18/25 09:55	07/17/25	
Cadmium	200.8	2.13	mg/Kg	0.061	10	07/18/25 09:55	07/17/25	
Chromium	200.8	178	mg/Kg	0.61	10	07/18/25 09:55	07/17/25	
Copper	200.8	51.9	mg/Kg	0.54	10	07/23/25 12:14	07/23/25	
Lead	200.8	24.9	mg/Kg	0.14	10	07/23/25 12:14	07/23/25	
Mercury	7471B	0.057	mg/Kg	0.030	1	07/21/25 13:13	07/18/25	
Nickel	200.8	196	mg/Kg	0.61	10	07/18/25 09:55	07/17/25	
Selenium	200.8	3.3	mg/Kg	1.5	10	07/18/25 09:55	07/17/25	
Silver	200.8	0.244	mg/Kg	0.061	10	07/18/25 09:55	07/17/25	
Zinc	200.8	411	mg/Kg	1.4	10	07/23/25 12:14	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: 2025GCMZC371S3
Lab Code: K2507081-032

Service Request: K2507081
Date Collected: 07/10/25 12:00
Date Received: 07/16/25 14:50

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	9380	mg/Kg	4.2	10	07/18/25 10:38	07/17/25	
Arsenic	200.8	37.0	mg/Kg	0.53	10	07/18/25 10:38	07/17/25	
Cadmium	200.8	1.86	mg/Kg	0.042	10	07/18/25 10:38	07/17/25	
Chromium	200.8	132	mg/Kg	0.42	10	07/18/25 10:38	07/17/25	
Copper	200.8	52.2	mg/Kg	0.53	10	07/23/25 12:35	07/23/25	
Lead	200.8	10.3	mg/Kg	0.13	10	07/23/25 12:35	07/23/25	
Mercury	7471B	0.062	mg/Kg	0.025	1	07/21/25 13:15	07/18/25	
Nickel	200.8	129	mg/Kg	0.42	10	07/18/25 10:38	07/17/25	
Selenium	200.8	1.5	mg/Kg	1.1	10	07/18/25 10:38	07/17/25	
Silver	200.8	0.367	mg/Kg	0.042	10	07/18/25 10:38	07/17/25	
Zinc	200.8	297	mg/Kg	1.3	10	07/23/25 12:35	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512562-05

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	ND U	mg/Kg	4.0	10	07/18/25 09:43	07/17/25	
Arsenic	200.8	ND U	mg/Kg	0.50	10	07/18/25 09:43	07/17/25	
Cadmium	200.8	ND U	mg/Kg	0.040	10	07/18/25 09:43	07/17/25	
Chromium	200.8	ND U	mg/Kg	0.40	10	07/18/25 09:43	07/17/25	
Nickel	200.8	ND U	mg/Kg	0.40	10	07/18/25 09:43	07/17/25	
Selenium	200.8	ND U	mg/Kg	1.0	10	07/18/25 09:43	07/17/25	
Silver	200.8	ND U	mg/Kg	0.040	10	07/18/25 09:43	07/17/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512584-05

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	200.8	ND U	mg/Kg	4.0	10	07/21/25 13:11	07/18/25	
Arsenic	200.8	ND U	mg/Kg	0.50	10	07/21/25 13:11	07/18/25	
Cadmium	200.8	ND U	mg/Kg	0.040	10	07/21/25 13:11	07/18/25	
Copper	200.8	ND U	mg/Kg	0.40	10	07/21/25 13:11	07/18/25	
Lead	200.8	ND U	mg/Kg	0.10	10	07/21/25 13:11	07/18/25	
Selenium	200.8	ND U	mg/Kg	1.0	10	07/21/25 13:11	07/18/25	
Silver	200.8	ND U	mg/Kg	0.040	10	07/21/25 13:11	07/18/25	
Zinc	200.8	ND U	mg/Kg	1.0	10	07/21/25 13:11	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512708-05

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	ND U	mg/Kg	0.40	10	07/23/25 12:06	07/23/25	
Lead	200.8	ND U	mg/Kg	0.10	10	07/23/25 12:06	07/23/25	
Zinc	200.8	ND U	mg/Kg	1.0	10	07/23/25 12:06	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512819-06

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chromium	200.8	ND U	mg/Kg	0.40	10	07/23/25 11:15	07/23/25	
Nickel	200.8	ND U	mg/Kg	0.40	10	07/23/25 11:15	07/23/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512561-03

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	1	07/21/25 12:43	07/18/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2512583-03

Service Request: K2507081
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	1	07/21/25 11:52	07/18/25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/18/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2512562-01			
Aluminum	200.8	5.4	10600	10400	10500	2	30
Arsenic	200.8	0.67	24.4	23.5	24.0	4	30
Cadmium	200.8	0.054	1.10	1.13	1.12	2	30
Chromium	200.8	0.54	112	102	107	9	30
Nickel	200.8	0.54	98.5	89.4	94.0	10	30
Selenium	200.8	1.3	1.7	ND U	NC	NC	30
Silver	200.8	0.054	0.099	0.093	0.096	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/18/25

Replicate Sample Summary
Total Metals

Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2512562-03				
				Result	Result			
Aluminum	200.8	5.9	13100	13200	13200	13200	<1	30
Arsenic	200.8	0.74	57.5	54.6	54.6	56.1	5	30
Cadmium	200.8	0.059	2.13	2.61	2.61	2.37	21	30
Chromium	200.8	0.59	178	148	148	163	18	30
Nickel	200.8	0.59	196	169	169	183	14	30
Selenium	200.8	1.5	3.3	2.4	2.4	2.9	31 #	30
Silver	200.8	0.059	0.244	0.261	0.261	0.253	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMTC808S2
Lab Code: K2507081-002

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2512584-01				
Aluminum	200.8	5.0	10200	9850	10000	3	30	
Arsenic	200.8	0.63	21.0	20.8	20.9	1	30	
Cadmium	200.8	0.050	0.273	0.227	0.250	18	30	
Copper	200.8	0.50	11.7	11.8	11.8	<1	30	
Lead	200.8	0.13	18.6	16.1	17.4	15	30	
Selenium	200.8	1.3	ND U	ND U	ND	-	30	
Silver	200.8	0.050	0.070	0.085	0.078	20	30	
Zinc	200.8	1.3	90.9	79.1	85.0	14	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/21/25

Replicate Sample Summary
Total Metals

Sample Name: 2025GCMGC54S3
Lab Code: K2507081-012

Units: mg/Kg
Basis: Dry

Table with 8 columns: Analyte Name, Analysis Method, MRL, Sample Result, Duplicate Sample Result (KQ2512584-03), Average, RPD, RPD Limit. Rows include Aluminum, Arsenic, Cadmium, Copper, Lead, Selenium, Silver, and Zinc.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2512708-01				
				Result	Result			
Copper	200.8	0.42	32.0	29.2	30.6	9	30	
Lead	200.8	0.11	14.9	14.9	14.9	<1	30	
Zinc	200.8	1.1	296	278	287	6	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/23/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031

Units: mg/Kg
Basis: Dry

Table with 8 columns: Analyte Name, Analysis Method, MRL, Sample Result, Duplicate Sample Result (KQ2512708-03), Average, RPD, RPD Limit. Rows include Copper, Lead, and Zinc.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2512819-01				
				Result	Result			
Chromium	200.8	0.70	47.4	79.0	63.2	50 *	30	
Nickel	200.8	0.70	23.4	51.2	37.3	75 *	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMFCS3
Lab Code: K2507081-020

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample		Average	RPD	RPD Limit
				KQ2512819-04				
				Result	Result			
Chromium	200.8	0.46	26.3	24.8	25.6	6	30	
Nickel	200.8	0.46	20.3	20.6	20.5	1	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2512561-01			
Mercury	7471B	0.025	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25

Replicate Sample Summary

Total Metals

Sample Name: 2025GCMTC808S2
Lab Code: K2507081-002

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				KQ2512583-01			
Mercury	7471B	0.029	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/18/25
Date Extracted: 07/17/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512562-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	10600	10500	525	-26 #	70-130
Arsenic	24.4	162	131	105	70-130
Cadmium	1.10	15.0	13.1	106	70-130
Chromium	112	174	52.5	118	70-130
Nickel	98.5	233	131	103	70-130
Selenium	1.7	139	131	104	70-130
Silver	0.099	13.7	13.1	103	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/18/25
Date Extracted: 07/17/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512562-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	13100	13800	585	124 #	70-130
Arsenic	57.5	205	146	101	70-130
Cadmium	2.13	17.1	14.6	102	70-130
Chromium	178	216	58.5	64 N	70-130
Nickel	196	317	146	83	70-130
Selenium	3.3	157	146	105	70-130
Silver	0.244	15.1	14.6	102	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25
Date Extracted: 07/18/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMTC808S2
Lab Code: K2507081-002
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512584-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	10200	11300	470	238 #	70-130
Arsenic	21.0	142	117	103	70-130
Cadmium	0.273	12.7	11.7	105	70-130
Copper	11.7	70.9	58.7	101	70-130
Lead	18.6	139	117	102	70-130
Selenium	ND U	126	117	107	70-130
Silver	0.070	12.3	11.7	104	70-130
Zinc	90.9	204	117	97	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/07/25
Date Received: 07/16/25
Date Analyzed: 07/21/25
Date Extracted: 07/18/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMGC54S3
Lab Code: K2507081-012
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512584-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	11600	15500	451	857 #	70-130
Arsenic	20.5	143	113	109	70-130
Cadmium	1.87	14.2	11.3	109	70-130
Copper	49.6	123	56.3	130	70-130
Lead	19.6	143	113	110	70-130
Selenium	3.3	123	113	106	70-130
Silver	0.827	12.1	11.3	100	70-130
Zinc	261	454	113	172 N	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512708-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Copper	32.0	84.4	52.4	100	70-130
Lead	14.9	126	105	106	70-130
Zinc	296	388	105	88	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/10/25
Date Received: 07/16/25
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC371S2
Lab Code: K2507081-031
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512708-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Copper	51.9	129	67.6	115	70-130
Lead	24.9	161	135	101	70-130
Zinc	411	505	135	69 N	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMTC808S1
Lab Code: K2507081-001
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512819-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium	47.4	129	69.5	117	70-130
Nickel	23.4	209	174	106	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/23/25
Date Extracted: 07/23/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMFCS3
Lab Code: K2507081-020
Analysis Method: 200.8
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512819-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium	26.3	83.6	46.2	124	70-130
Nickel	20.3	145	116	108	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25
Date Extracted: 07/18/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMZC10S1
Lab Code: K2507081-021
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512561-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	ND U	0.617	0.613	97	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Collected: 07/09/25
Date Received: 07/16/25
Date Analyzed: 07/21/25
Date Extracted: 07/18/25

Matrix Spike Summary
Total Metals

Sample Name: 2025GCMTC808S2
Lab Code: K2507081-002
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2512583-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	ND U	0.639	0.646	96	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/18/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512562-06

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	200.8	391	400	98	85-115
Arsenic	200.8	104	100	104	85-115
Cadmium	200.8	10.4	10.0	104	85-115
Chromium	200.8	42.5	40.0	106	85-115
Nickel	200.8	106	100	106	85-115
Selenium	200.8	107	100	107	85-115
Silver	200.8	10.2	10.0	102	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/21/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512584-06

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	200.8	417	400	104	85-115
Arsenic	200.8	107	100	107	85-115
Cadmium	200.8	10.5	10.0	105	85-115
Copper	200.8	52.7	50.0	105	85-115
Lead	200.8	108	100	108	85-115
Selenium	200.8	106	100	106	85-115
Silver	200.8	10.4	10.0	104	85-115
Zinc	200.8	105	100	105	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/23/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512708-06

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Copper	200.8	53.4	50.0	107	85-115
Lead	200.8	109	100	109	85-115
Zinc	200.8	105	100	105	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/23/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512819-07

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chromium	200.8	43.3	40.0	108	85-115
Nickel	200.8	107	100	107	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/21/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512561-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.487	0.500	97	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Hecla Greens Creek Mining
Project: 2025 Greens Creek Biomonitoring
Sample Matrix: Soil

Service Request: K2507081
Date Analyzed: 07/21/25

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2512583-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.491	0.500	98	80-120