



AECOS, Inc.

45-939 Kamehameha Hwy, Suite 104 • Kaneohe, HI 96744

Telephone: (808) 234-7770 • Fax: (808) 234-7775 • aecos@aecos.com

CLIENT: Stantec GS
737 Bishop Street, Suite 3050
Honolulu HI 96813
ATTENTION: Benjamin Berridge / Jess Hawkins
Benjamin.Berridge@cardno-gs.com
Jessica.Hawkins@cardno-gs.com

FILE No.: 1494
REPORT DATE: 03/27/2025
PAGE: 1 of 1

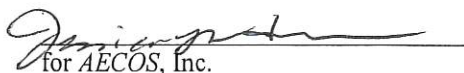
AECOS REPORT OF RESULTS

SAMPLE TYPE: Water
DATE SAMPLED: 03/24/25
DATE/TIME RECEIVED: 03/24/25 @1539
TEMP. CONTROL: 4.5 °C
DATE/TIME ANALYZED: 03/24/25 @1606

AECOS LOG No.: 52483

SAMPLER: J. Hawkins
MATRIX: Water
ANALYST: R. Knapstein

ANALYTE (UNITS)		Enterococcus (MPN/100ml)	Dilution Factor (10 ml / 100 ml)	Number of large positive wells	Number of small positive wells
SAMPLE ID ↴	METHOD →	ASTM D650399	---	---	---
	TIME SAMPLED ↴				
U-3 / WW-4	0830	2300	10	47	20
D-8	0855	1900	10	46	18
E-2	0920	820	10	38	7
D-7	0945	260	10	18	3
D-4	0950	1400	10	41	22
D-6	1025	110	10	10	0
WW-2	1015	120	10	9	2
WW-3	1035	1600	10	44	18
E-1	0945	30	10	2	1
U-2/WW-5	1105	2600	10	48	19
E-1 Dup	0950	31	10	3	0
WW-6	0845	1500	10	45	13


for AECOS, Inc.



AECOS, Inc.

45-939 Kamehameha Highway Suite 104
Kaneohe, Oahu, HI 96744
Tel: (808) 234-7770 Fax: 234-7775

CHAIN OF CUSTODY FORM

PROJECT
FILE No.

LOG NUMBER

[052483]

CLIENT: Stantec GS

ADDRESS: 737 Bishop St Suite 3050

Honolulu, HI 96813

CONTACT: Sydney Gabiter

PHONE No.: 301-922-9142

Purchase Order No.: []

☐ RUSH

☐ SEE REVERSE

SPECIAL INSTRUCTIONS

SAMPLED

	☒	SAMPLE ID	DATE	TIME	SAMPLE TYPE	CONTAINER(S)	REQUESTED ANALYSES	PRESERVATION
1	☒	U-3/WW-4	3/24/25	0830	Water	1	IDEX Enterococci	
2	☒	D-8		0855				
3	☒	E-2		0920				
4	☒	D-7		0945				
5	☒	D-4		0950				
6	☒	D-6		1025				
7	☒	WW-2		1015				
8	☒	WW-3		1035				
9	☒	E-1		0945				
10	☒	U-2/WW-5		1105				

CLIENTS PROVIDING SAMPLES TO THE LABORATORY SHOULD COMPLETE AS MUCH OF THE ABOVE FORM AS POSSIBLE. NOTE: NAME AND DATED SIGNATURE OF PERSON COLLECTING THE SAMPLE MUST BE ENTERED BELOW. INFORMATION REQUESTED IN SHADED BOXES ABOVE TO BE FILLED IN BY THE LABORATORY.

SAMPLED BY:

PRINT NAME: Jessica Hawkins

RELINQUISHED:

SIGNATURE: [Signature]

COMMENTS:

DATE

Mar 24 2025

DATE

Mar 24 2025

TIME 3:37pm

RECEIVED BY:

SIGNATURE

RELINQUISHED:

SIGNATURE OR INITIALS

PRECAUTIONS:

DATE

20

TIME

DATE

20

TIME

RECEIVED FOR LABORATORY:

SIGNATURE

RELINQUISHED:

SIGNATURE OR INITIALS

DISPOSAL:

Temperature at lab: 4.5 °C

Condition of samples on arrival at lab: sealed bottles are fine

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Kaneohe, Oahu, HI 96744

Tel: (808) 234-7770 Fax: 234-7775

CHAIN OF CUSTODY FORM

PROJECT
FILE No.

LOG NUMBER

[52483]

CLIENT: *Hunter G/S* CONTACT: *Sydney Epstein*

ADDRESS: *737 Baking St. Suite 3050* PHONE No.: *301-422-9142*

Purchase Order No.: *910813*

☐ RUSH

☐ SEE REVERSE

SPECIAL INSTRUCTIONS

SAMPLED				REQUESTED ANALYSES		PRESERVATION	
	SAMPLE ID	DATE	TIME	SAMPLE TYPE	CONTAINER(S)		
1	<i>E-1 Dup</i>	<i>3/25/25</i>	<i>0950</i>	<i>Water</i>	<i>1 IDEXX</i>	<i>Enterococci</i>	
2	<i>WW-b</i>	<i>3-25-25</i>	<i>0845</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	
3							
4							
5							
6							
7							
8							
9							
10							

CLIENTS PROVIDING SAMPLES TO THE LABORATORY SHOULD COMPLETE AS MUCH OF THE ABOVE FORM AS POSSIBLE. NOTE: NAME AND DATED SIGNATURE OF PERSON COLLECTING THE SAMPLE MUST BE ENTERED BELOW. INFORMATION REQUESTED IN SHADED BOXES ABOVE TO BE FILLED IN BY THE LABORATORY.

SAMPLED BY:	DATE
<i>Jessica Hawkins</i>	<i>Mar 24 20:05</i>
RELINQUISHED:	DATE
<i>Joe Hoshino</i>	<i>Mar 24 20:25</i>
SIGNATURE	TIME

RECEIVED BY:	DATE
	<i>20</i>
RELINQUISHED:	DATE
	<i>20</i>
SIGNATURE OR INITIALS	TIME

RECEIVED FOR LABORATORY:	DATE
<i>NS</i>	<i>3/24</i>
SIGNATURE	TIME
RELINQUISHED:	DATE
	<i>20</i>
SIGNATURE OR INITIALS	TIME

DISPOSAL:

PRECAUTIONS:

COMMENTS:

RETURN SAMPLE TO CLIENT ☐

USE (BLACK) INK

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Analytical Results Report For:

Stantec-GS

Project:

ADC Water Quality Monitoring

Anatek Work Order:

WFC1094

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Client: Stantec-GS
Address: 737 Bishop St., Ste. 3050
Honolulu, HI 96813
Attn: Benjamin Berridge

Work Order: WFC1094
Project: ADC Water Quality Monitoring
Reported: 4/30/2025 16:43

Analytical Results Report

Sample Location: D-4
Lab/Sample Number: WFC1094-01 **Collect Date:** 03/24/25 09:50
Date Received: 03/27/25 10:30 **Collected By:**
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	6.90	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00190	mg/L	0.00100	4/28/25 13:09	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:06	JLG	EPA 245.1	
Semivolatiles							
Diesel	ND	mg/L	0.0800	4/2/25 8:32	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 8:32	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 8:32	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 8:32	BAM	NWTPH-HCID	
Surrogate: <i>n</i> -Hexacosane	91.9%		50-150	4/2/25 8:32	BAM	NWTPH-HCID	

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Sample Location: D-6
Lab/Sample Number: WFC1094-02 Collect Date: 03/24/25 10:25
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	12.8	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00239	mg/L	0.00100	4/28/25 13:11	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:19	JLG	EPA 245.1	
Semivolatiles							
Diesel	ND	mg/L	0.0800	4/2/25 9:29	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 9:29	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 9:29	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 9:29	BAM	NWTPH-HCID	
Surrogate: <i>n</i> -Hexacosane	86.4%		50-150	4/2/25 9:29	BAM	NWTPH-HCID	

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Sample Location: D-7
Lab/Sample Number: WFC1094-03 Collect Date: 03/24/25 09:45
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	20.8	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.000797	mg/L	0.00100	4/28/25 13:13	JLG	EPA 200.8	J
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:22	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0997	4/21/25 20:12	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0997	4/21/25 20:12	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.499	4/21/25 20:12	MAH	EPA 625.1	
<i>Surrogate: Terphenyl-d14</i>	<i>76.0%</i>		<i>25-135</i>	<i>4/21/25 20:12</i>	<i>MAH</i>	<i>EPA 625.1</i>	
Diesel	ND	mg/L	0.0800	4/2/25 11:22	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 11:22	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 11:22	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 11:22	BAM	NWTPH-HCID	
<i>Surrogate: n-Hexacosane</i>	<i>88.6%</i>		<i>50-150</i>	<i>4/2/25 11:22</i>	<i>BAM</i>	<i>NWTPH-HCID</i>	

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Sample Location: D-8
Lab/Sample Number: WFC1094-04 Collect Date: 03/24/25 08:55
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	2.90	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00487	mg/L	0.00100	4/28/25 13:16	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:24	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.105	4/21/25 20:39	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.105	4/21/25 20:39	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.526	4/21/25 20:39	MAH	EPA 625.1	
<i>Surrogate: Terphenyl-d14</i>	<i>91.4%</i>		<i>25-135</i>	<i>4/21/25 20:39</i>	<i>MAH</i>	<i>EPA 625.1</i>	
Diesel	ND	mg/L	0.0800	4/2/25 12:18	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 12:18	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 12:18	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 12:18	BAM	NWTPH-HCID	
<i>Surrogate: n-Hexacosane</i>	<i>90.9%</i>		<i>50-150</i>	<i>4/2/25 12:18</i>	<i>BAM</i>	<i>NWTPH-HCID</i>	

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Sample Location: E-2
Lab/Sample Number: WFC1094-05 Collect Date: 03/24/25 09:20
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	9.20	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.0181	mg/L	0.00100	4/28/25 13:18	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:27	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0969	4/21/25 21:07	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0969	4/21/25 21:07	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.484	4/21/25 21:07	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	73.5%		25-135	4/21/25 21:07	MAH	EPA 625.1	
Diesel	ND	mg/L	0.0800	4/2/25 13:15	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 13:15	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 13:15	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 13:15	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	32.7%		50-150	4/2/25 13:15	BAM	NWTPH-HCID	S13

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Sample Location: E-1
Lab/Sample Number: WFC1094-06 Collect Date: 03/24/25 09:45
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	18.6	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00154	mg/L	0.00100	4/28/25 13:20	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:29	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0956	4/21/25 21:35	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0956	4/21/25 21:35	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.478	4/21/25 21:35	MAH	EPA 625.1	
<i>Surrogate: Terphenyl-d14</i>	<i>76.4%</i>		<i>25-135</i>	<i>4/21/25 21:35</i>	<i>MAH</i>	<i>EPA 625.1</i>	
Diesel	ND	mg/L	0.0800	4/2/25 14:12	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 14:12	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 14:12	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 14:12	BAM	NWTPH-HCID	
<i>Surrogate: n-Hexacosane</i>	<i>71.4%</i>		<i>50-150</i>	<i>4/2/25 14:12</i>	<i>BAM</i>	<i>NWTPH-HCID</i>	

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Sample Location: E-1 DUP
Lab/Sample Number: WFC1094-07 Collect Date: 03/24/25 09:50
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	11.2	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00166	mg/L	0.00100	4/28/25 13:27	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:42	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0949	4/21/25 22:03	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0949	4/21/25 22:03	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.474	4/21/25 22:03	MAH	EPA 625.1	
<i>Surrogate: Terphenyl-d14</i>	<i>86.7%</i>		<i>25-135</i>	<i>4/21/25 22:03</i>	<i>MAH</i>	<i>EPA 625.1</i>	
Diesel	ND	mg/L	0.0800	4/2/25 15:09	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 15:09	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 15:09	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 15:09	BAM	NWTPH-HCID	
<i>Surrogate: n-Hexacosane</i>	<i>65.0%</i>		<i>50-150</i>	<i>4/2/25 15:09</i>	<i>BAM</i>	<i>NWTPH-HCID</i>	

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Sample Location: WW-2
Lab/Sample Number: WFC1094-08 Collect Date: 03/24/25 10:15
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	18.6	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00343	mg/L	0.00100	4/28/25 13:30	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:44	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0949	4/21/25 22:31	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0949	4/21/25 22:31	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.474	4/21/25 22:31	MAH	EPA 625.1	
<i>Surrogate: Terphenyl-d14</i>	<i>82.8%</i>		<i>25-135</i>	<i>4/21/25 22:31</i>	<i>MAH</i>	<i>EPA 625.1</i>	
Diesel	ND	mg/L	0.0800	4/2/25 16:06	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 16:06	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 16:06	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 16:06	BAM	NWTPH-HCID	
<i>Surrogate: n-Hexacosane</i>	<i>73.6%</i>		<i>50-150</i>	<i>4/2/25 16:06</i>	<i>BAM</i>	<i>NWTPH-HCID</i>	

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Sample Location: WW-3
Lab/Sample Number: WFC1094-09 Collect Date: 03/24/25 10:35
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	10.1	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.00142	mg/L	0.00100	4/28/25 13:32	JLG	EPA 200.8	
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:47	JLG	EPA 245.1	
Semivolatiles							
Atrazine	ND	ug/L	0.0966	4/21/25 22:59	MAH	EPA 625.1	
Metolachlor	ND	ug/L	0.0966	4/21/25 22:59	MAH	EPA 625.1	
Permethrin	ND	ug/L	0.483	4/21/25 22:59	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	91.9%		25-135	4/21/25 22:59	MAH	EPA 625.1	
Diesel	ND	mg/L	0.0800	4/2/25 17:03	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 17:03	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 17:03	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 17:03	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	85.7%		50-150	4/2/25 17:03	BAM	NWTPH-HCID	

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Sample Location: U-2/WW-5
Lab/Sample Number: WFC1094-10 Collect Date: 03/24/25 11:05
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	42.6	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.000837	mg/L	0.00100	4/28/25 13:34	JLG	EPA 200.8	J
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:49	JLG	EPA 245.1	
Semivolatiles							
Diesel	ND	mg/L	0.0800	4/2/25 18:00	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/2/25 18:00	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/2/25 18:00	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/2/25 18:00	BAM	NWTPH-HCID	
Surrogate: <i>n</i> -Hexacosane	60.4%		50-150	4/2/25 18:00	BAM	NWTPH-HCID	

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Sample Location: U-3/WW-4
Lab/Sample Number: WFC1094-11 Collect Date: 03/24/25 08:30
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	7.20	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.000736	mg/L	0.00100	4/28/25 13:46	JLG	EPA 200.8	J
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:52	JLG	EPA 245.1	
Semivolatiles							
Diesel	ND	mg/L	0.0800	4/3/25 1:32	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/3/25 1:32	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/3/25 1:32	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/3/25 1:32	BAM	NWTPH-HCID	
Surrogate: <i>n</i> -Hexacosane	48.0%		50-150	4/3/25 1:32	BAM	NWTPH-HCID	S13

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Sample Location: WW-6
Lab/Sample Number: WFC1094-12 Collect Date: 03/24/25 08:45
Date Received: 03/27/25 10:30 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
TSS	43.6	mg/L		3/28/25 12:29	EMG	EPA 160.2	
Metals by ICP-MS							
Arsenic	0.000693	mg/L	0.00100	4/28/25 13:48	JLG	EPA 200.8	J
Mercury							
Mercury	ND	ug/L	0.100	4/15/25 12:54	JLG	EPA 245.1	
Semivolatiles							
Diesel	ND	mg/L	0.0800	4/3/25 2:29	BAM	NWTPH-HCID	
Gasoline	ND	mg/L	0.400	4/3/25 2:29	BAM	NWTPH-HCID	
Lube Oil	ND	mg/L	0.0800	4/3/25 2:29	BAM	NWTPH-HCID	
Mineral Oil	ND	mg/L	0.400	4/3/25 2:29	BAM	NWTPH-HCID	
Surrogate: <i>n</i> -Hexacosane	90.3%		50-150	4/3/25 2:29	BAM	NWTPH-HCID	

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Sample Location: D-7 Sediment
Lab/Sample Number: WFC1094-13 Collect Date: 03/24/25 09:45
Date Received: 03/27/25 10:30 Collected By:
Matrix: Solid

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
% Solids	52.6	%	0.100	4/24/25 14:48	MAH	SM 2540 G	
Semivolatiles							
AMPA	ND	mg/kg dry	7.69	4/17/25 10:55	BKP	EPA 8321B	
Glyphosate	2.83	mg/kg dry	3.84	4/17/25 10:55	BKP	EPA 8321B	J
Atrazine	ND	mg/kg dry	0.380	4/24/25 12:27	MAH	EPA 8270E	
Metolachlor	ND	mg/kg dry	0.380	4/24/25 12:27	MAH	EPA 8270E	
Permethrin	ND	mg/kg dry	0.380	4/24/25 12:27	MAH	EPA 8270E	
Surrogate: Terphenyl-d14	83.6%		40-134	4/24/25 12:27	MAH	EPA 8270E	

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Sample Location: D-8 Sediment
Lab/Sample Number: WFC1094-14 Collect Date: 03/24/25 08:55
Date Received: 03/27/25 10:30 Collected By:
Matrix: Solid

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
% Solids	58.9	%	0.100	4/24/25 14:48	MAH	SM 2540 G	
Semivolatiles							
AMPA	ND	mg/kg dry	8.75	4/17/25 11:02	BKP	EPA 8321B	
Glyphosate	3.16	mg/kg dry	4.37	4/17/25 11:02	BKP	EPA 8321B	J
Atrazine	ND	mg/kg dry	0.338	4/24/25 12:55	MAH	EPA 8270E	
Metolachlor	ND	mg/kg dry	0.338	4/24/25 12:55	MAH	EPA 8270E	
Permethrin	ND	mg/kg dry	0.338	4/24/25 12:55	MAH	EPA 8270E	
Surrogate: Terphenyl-d14	73.9%		40-134	4/24/25 12:55	MAH	EPA 8270E	

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Sample Location: E-2 Sediment
Lab/Sample Number: WFC1094-15 Collect Date: 03/24/25 09:20
Date Received: 03/27/25 10:30 Collected By:
Matrix: Solid

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
% Solids	80.6	%	0.100	4/24/25 14:48	MAH	SM 2540 G	
Semivolatiles							
AMPA	ND	mg/kg dry	6.57	4/17/25 11:08	BKP	EPA 8321B	
Glyphosate	2.34	mg/kg dry	3.28	4/17/25 11:08	BKP	EPA 8321B	J
Atrazine	ND	mg/kg dry	0.249	4/24/25 13:22	MAH	EPA 8270E	
Metolachlor	ND	mg/kg dry	0.249	4/24/25 13:22	MAH	EPA 8270E	
Permethrin	ND	mg/kg dry	0.249	4/24/25 13:22	MAH	EPA 8270E	
Surrogate: Terphenyl-d14	71.4%		40-134	4/24/25 13:22	MAH	EPA 8270E	

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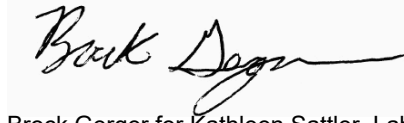
Sample Location: WW-2 Sediment
Lab/Sample Number: WFC1094-16 Collect Date: 03/24/25 10:15
Date Received: 03/27/25 10:30 Collected By:
Matrix: Solid

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
% Solids	71.5	%	0.100	4/24/25 14:48	MAH	SM 2540 G	
Semivolatiles							
AMPA	ND	mg/kg dry	5.83	4/17/25 11:15	BKP	EPA 8321B	
Glyphosate	2.03	mg/kg dry	2.92	4/17/25 11:15	BKP	EPA 8321B	J
Atrazine	ND	mg/kg dry	0.279	4/24/25 13:50	MAH	EPA 8270E	
Metolachlor	ND	mg/kg dry	0.279	4/24/25 13:50	MAH	EPA 8270E	
Permethrin	ND	mg/kg dry	0.279	4/24/25 13:50	MAH	EPA 8270E	
Surrogate: Terphenyl-d14	76.0%		40-134	4/24/25 13:50	MAH	EPA 8270E	

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Authorized Signature,



Brock Gerger for Kathleen Sattler, Lab Manager

J	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable. Potential matrix effect
S13	Surrogate recovery failure due to matrix interference
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

This report shall not be reproduced except in full, without the written approval of the laboratory
The results reported related only to the samples indicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BFC1259 - W Filtration										
Blank (BFC1259-BLK1)					Prepared & Analyzed: 03/28/25 12:29					
TSS	<0.1			mg/L						
Blank (BFC1259-BLK2)					Prepared & Analyzed: 03/28/25 12:29					
TSS	<0.1			mg/L						
LCS (BFC1259-BS1)					Prepared & Analyzed: 03/28/25 12:29					
TSS	96.0			mg/L	100		96.0	90-110		
Duplicate (BFC1259-DUP1)					Prepared & Analyzed: 03/28/25 12:29					
TSS	33.0		Source: WFC1106-01	mg/L		38.0			14.1	20
Matrix Spike (BFC1259-MS1)					Prepared & Analyzed: 03/28/25 12:29					
TSS	114		Source: WFC1094-06	mg/L	100	18.6	95.4	80-120		
Matrix Spike Dup (BFC1259-MSD1)					Prepared & Analyzed: 03/28/25 12:29					
TSS	126		Source: WFC1094-06	mg/L	100	18.6	107	80-120	10.0	20

Quality Control Data

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BFC1313 - W 3010 Digest										
Blank (BFC1313-BLK1)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:02					
Arsenic	ND		0.00100	mg/L						
LCS (BFC1313-BS1)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:06					
Arsenic	0.0437		0.00100	mg/L	0.0500		87.3	85-115		
Matrix Spike (BFC1313-MS1)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:23					
Arsenic	0.0424		0.00100	mg/L	0.0500	0.00154	81.8	70-130		
Matrix Spike (BFC1313-MS2)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:50					
Arsenic	0.0483		0.00100	mg/L	0.0500	0.000693	95.2	70-130		
Matrix Spike Dup (BFC1313-MSD1)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:25					
Arsenic	0.0443		0.00100	mg/L	0.0500	0.00154	85.4	70-130	4.24	20
Matrix Spike Dup (BFC1313-MSD2)					Prepared: 03/31/25 10:37- Analyzed: 04/28/25 13:53					
Arsenic	0.0484		0.00100	mg/L	0.0500	0.000693	95.5	70-130	0.327	20

Quality Control Data

Mercury

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BFD0608 - W 245.1 Digest

Blank (BFD0608-BLK1)

Mercury ND 0.100 ug/L Prepared: 04/14/25 13:21- Analyzed: 04/15/25 11:34

LCS (BFD0608-BS1)

Mercury 2.30 0.100 ug/L 2.00 115 85-115 Prepared: 04/14/25 13:21- Analyzed: 04/15/25 11:39

Matrix Spike (BFD0608-MS1)

Mercury 3.07 0.100 ug/L 2.50 ND 123 70-130 Source: WFC1094-01 Prepared: 04/14/25 13:21- Analyzed: 04/15/25 12:17

Matrix Spike (BFD0608-MS2)

Mercury 2.59 0.100 ug/L 2.50 ND 104 70-130 Source: WFC1094-06 Prepared: 04/14/25 13:21- Analyzed: 04/15/25 12:37

Matrix Spike Dup (BFD0608-MSD1)

Mercury 3.11 0.100 ug/L 2.50 ND 124 70-130 1.29 20 Source: WFC1094-01 Prepared: 04/14/25 13:21- Analyzed: 04/15/25 12:14

Matrix Spike Dup (BFD0608-MSD2)

Mercury 2.75 0.100 ug/L 2.50 ND 110 70-130 5.99 20 Source: WFC1094-06 Prepared: 04/14/25 13:21- Analyzed: 04/15/25 12:34

Quality Control Data (Continued)

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BFC1251 - W TPH-Dx

Blank (BFC1251-BLK1)

Lube Oil ND 0.0800 mg/L Prepared: 03/28/25 10:23- Analyzed: 04/02/25 05:44

Mineral Oil ND 0.400 mg/L

Gasoline ND 0.400 mg/L

Diesel ND 0.0800 mg/L

Surrogate: n-Hexacosane 0.175 mg/L 0.200 87.4 50-150

LCS (BFC1251-BS1)

Diesel 1.88 0.0800 mg/L 2.00 94.0 70-130 Prepared: 03/28/25 10:23- Analyzed: 04/05/25 07:43

Surrogate: n-Hexacosane 0.219 mg/L 0.200 109 50-150

LCS Dup (BFC1251-BSD1)

Diesel 1.69 0.0800 mg/L 2.00 84.4 70-130 10.7 20 Prepared: 03/28/25 10:23- Analyzed: 04/05/25 08:39

Surrogate: n-Hexacosane 0.199 mg/L 0.200 99.1 50-150

Duplicate (BFC1251-DUP1)

Lube Oil ND 0.0800 mg/L ND 200 Source: WFC1094-12 Prepared: 03/28/25 10:23- Analyzed: 04/02/25 18:57

Mineral Oil ND 0.400 mg/L ND 200

Gasoline ND 0.400 mg/L ND 200

Diesel ND 0.0800 mg/L ND 200

Surrogate: n-Hexacosane 0.183 mg/L 0.200 91.4 50-150

Batch: BFD0016 - SVOC Water

Blank (BFD0016-BLK1)

Atrazine ND 0.100 ug/L Prepared: 03/31/25 09:34- Analyzed: 04/21/25 19:44

Metolachlor ND 0.100 ug/L

Permethrin ND 0.500 ug/L

Surrogate: Terphenyl-d14 21.1 ug/L 25.0 84.5 25-135

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Quality Control Data (Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BFD0016 - SVOC Water (Continued)

LCS (BFD0016-BS1)

Prepared: 03/31/25 09:34- Analyzed: 04/21/25 18:22

Atrazine	5.97		0.100	ug/L	5.00		119	60-125		
Metolachlor	5.98		0.100	ug/L	5.00		120	60-125		
Surrogate: Terphenyl-d14			16.8	ug/L	25.0		67.2	25-135		

Matrix Spike (BFD0016-MS1)

Source: WFC1094-06

Prepared: 03/31/25 09:34- Analyzed: 04/21/25 18:50

Atrazine	6.13		0.100	ug/L	5.00	ND	123	40-140		
Metolachlor	6.06		0.100	ug/L	5.00	ND	121	40-140		
Surrogate: Terphenyl-d14			16.8	ug/L	25.0		67.1	60-130		

Matrix Spike Dup (BFD0016-MSD1)

Source: WFC1094-06

Prepared: 03/31/25 09:34- Analyzed: 04/21/25 19:17

Atrazine	5.80		0.100	ug/L	5.00	ND	116	40-140	5.53	40
Metolachlor	5.82		0.100	ug/L	5.00	ND	116	40-140	4.04	40
Surrogate: Terphenyl-d14			16.8	ug/L	25.0		67.4	60-130		

Batch: BFD0739 - Glyphosate

Blank (BFD0739-BLK1)

Prepared: 04/16/25 13:12- Analyzed: 04/17/25 10:08

Glyphosate	ND		0.0600	mg/kg wet						
AMPA	ND		0.120	mg/kg wet						

LCS (BFD0739-BS1)

Prepared: 04/16/25 13:12- Analyzed: 04/17/25 10:15

Glyphosate	0.0886		0.0600	mg/kg wet	0.100		88.6	70-130		
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Matrix Spike (BFD0739-MS1)

Source: WFC1094-13

Prepared: 04/16/25 13:12- Analyzed: 04/17/25 10:41

Glyphosate	4.69		3.84	mg/kg dry	1.60	2.83	116	70-130		
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Matrix Spike Dup (BFD0739-MSD1)

Source: WFC1094-13

Prepared: 04/16/25 13:12- Analyzed: 04/17/25 10:48

Glyphosate	5.10	M1	3.84	mg/kg dry	1.60	2.83	142	70-130	8.38	25
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Quality Control Data (Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BFD1124 - SVOC Water

Blank (BFD1124-BLK1)

Prepared: 04/06/25 09:53- Analyzed: 04/24/25 12:00

Metolachlor	ND		0.200	mg/kg wet						
Atrazine	ND		0.200	mg/kg wet						
Permethrin	ND		0.200	mg/kg wet						
Surrogate: Terphenyl-d14			4.03	mg/kg wet	5.00		80.6	40-134		

LCS (BFD1124-BS1)

Prepared: 04/06/25 09:53- Analyzed: 04/24/25 10:35

Atrazine	0.860		0.200	mg/kg wet	1.00		86.0	60-125		
Metolachlor	0.850		0.200	mg/kg wet	1.00		85.0	60-125		
Permethrin	0.938		0.200	mg/kg wet	1.00		93.8	60-125		
Surrogate: Terphenyl-d14			4.57	mg/kg wet	5.00		91.4	60-125		

Matrix Spike (BFD1124-MS1)

Source: WFC1094-13

Prepared: 04/24/25 09:53- Analyzed: 04/24/25 11:03

Atrazine	1.48		0.380	mg/kg dry	1.90	ND	77.8	0-200		
Metolachlor	1.48		0.380	mg/kg dry	1.90	ND	77.6	0-200		
Permethrin	1.68		0.380	mg/kg dry	1.90	ND	88.2	0-200		
Surrogate: Terphenyl-d14			6.83	mg/kg dry	9.50		71.8	40-134		

Matrix Spike Dup (BFD1124-MSD1)

Source: WFC1094-13

Prepared: 04/24/25 09:53- Analyzed: 04/24/25 11:32

Atrazine	1.57		0.380	mg/kg dry	1.90	ND	82.6	0-200	5.99	200
Metolachlor	1.58		0.380	mg/kg dry	1.90	ND	83.2	0-200	6.97	200
Permethrin	1.88		0.380	mg/kg dry	1.90	ND	99.0	0-200	11.5	200
Surrogate: Terphenyl-d14			6.87	mg/kg dry	9.50		72.2	40-134		



Chain of Custody Record

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Anatek
Log-In #

WFC1094



Due: 04/10/25

Company Name: Stantec GS				Project Manager: Benjamin Berridge											
Address: 737 Bishop St Suite 3050				Project Name & #: ADC Water Quality Monitoring											
City: Honolulu State: HI Zip: 96813				Email Address: benjamin.berridge@stantecgs.com											
Phone: (808) 476-0067				Purchase Order #:											
Fax:				Sampler Name & phone:											
Provide Sample Description				List Analyses Requested				Note Special Instructions/Comments							
Storm water and sediment samples								**Please do not conduct TPH GRO analysis until Stantec confirms it should be run.							
Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	TSS EPA 160.2	TPH HCID - SW 846 MOD 8015	**TPH GRO SW846/M8015	Arsenic EPA 200.8	Mercury EPA 245.1	Pesticides EPA 821.5M Permethrin, atrazine, metolachlor	Paraquat Dichloride EPA 821.5	Pesticides Sed EPA 8270D Azoxystrobin, metolachlor, permethrin	Glyphosate Sed. EPA 547	
2	D-4	3-24-2025 / 9:50 HST	W	5		x	x	x	x	x					MS/MSD volume provided for site E-1
3	D-6	3-24-2025 / 10:25 HST	W	5		x	x	x	x	x					
3	D-7	3-24-2025 / 9:45 HST	W and S	8		x	x	x	x	x	x	x	x	x	
3	D-8	3-24-2025 / 8:55 HST	W and S	8		x	x	x	x	x	x	x	x	x	
2	E-2	3-24-2025 / 9:30 HST	W and S	8		x	x	x	x	x	x	x	x	x	
1	E-1	3-24-2025 / 9:45 HST	W	7		x	x	x	x	x	x	x			
5	E-1 DUP	3-24-2025 / 9:50 HST	W	7		x	x	x	x	x	x	x			
1	WW-2	3-24-2025 / 10:15 HST	W and S	6		x	x	x	x	x			x	x	
1	WW-3	3-24-2025 / 10:35 HST	W	7		x	x	x	x	x	x	x			
5	U-2/WW-5	3-24-2025 / 11:05 HST	W	5		x	x	x	x	x					
2	U-3/WW-4	3-24-2025 / 8:30 HST	W	5		x	x	x	x	x					
2	WW-6	3-24-2025 / 8:45 HST	W	5		x	x	x	x	x					
Printed Name		Signature		Company		Date		Time							
Relinquished by		Jessica Hawkins		Stantec GS		3-25-2025		15:00 HST		Temperature (°C):					
Received by		Kathleen A. Lattle		Anatek Labs		3-27-25		1030		Preservative:					
Relinquished by										Date & Time:					
Received by										Inspected By:					
Relinquished by															
Received by															



Anatek Labs, Inc.

Sample Receipt and Preservation Form

WFC1094



Due: 04/10/25

Client Name: Stantec GS Project: _____TAT: Normal RUSH: _____ daysSamples Received From: FedEx UPS USPS Client Courier Other: _____Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/ANumber of Coolers/Boxes: 5 Type of Ice: Ice/Ice Packs Blue Ice Dry Ice NonePacking Material: Bubble Wrap Bags Foam/Peanuts None Other: _____Cooler Temp As Read (°C): 0.0 Cooler Temp Corrected (°C): 0.6 Thermometer Used: IR #6Cooler #2 1.6/2.2 Cooler #3 1.5/2.1 Cooler #4 0.2/0.8 Cooler #5 1.2/1.8

Comments:

Samples Received Intact? Yes No N/AChain of Custody Present? Yes No N/ASamples Received Within Hold Time? Yes No N/ASamples Properly Preserved? Yes No N/AVOC Vials Free of Headspace (<6mm)? Yes No N/AVOC Trip Blanks Present? Not required Yes No N/ALabels and Chains Agree? Yes No N/ATotal Number of Sample Bottles Received: 76Chain of Custody Fully Completed? Yes No N/ACorrect Containers Received? Yes No N/AAnatek Bottles Used? Yes No Unknown

Record preservatives (and lot numbers, if known) for containers below:

G1000mL HCl 2403362G44 mL HCl 63024

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: Kathleen A. Sattler Date/Time: 3-27-25

PREPARATION BENCH SHEET

Metals

BFC1313

Matrix: Water

Prepared using: Metals - W 3010 Digest

Lab Number	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments
BFC1313-BLK1	03/31/25 10:37 - JLG	50	50				
BFC1313-BS1	03/31/25 10:37 - JLG	50	50	2500939		250	
BFC1313-CCV1	03/31/25 10:37 - JLG	50	50	2500154		250	
BFC1313-MS1	03/31/25 10:37 - JLG	50	50	2500939	WFC1094-06	250	
BFC1313-MS2	03/31/25 10:37 - JLG	50	50	2500939	WFC1094-12	250	
BFC1313-MSD1	03/31/25 10:37 - JLG	50	50	2500939	WFC1094-06	250	
BFC1313-MSD2	03/31/25 10:37 - JLG	50	50	2500939	WFC1094-12	250	
WFC1094-01 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-02 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-03 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-04 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-05 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-06 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-07 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-08 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			
WFC1094-09 Analytes: Arsenic	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			

PREPARATION BENCH SHEET
Metals

BFC1313

(Continued)

Matrix: Water

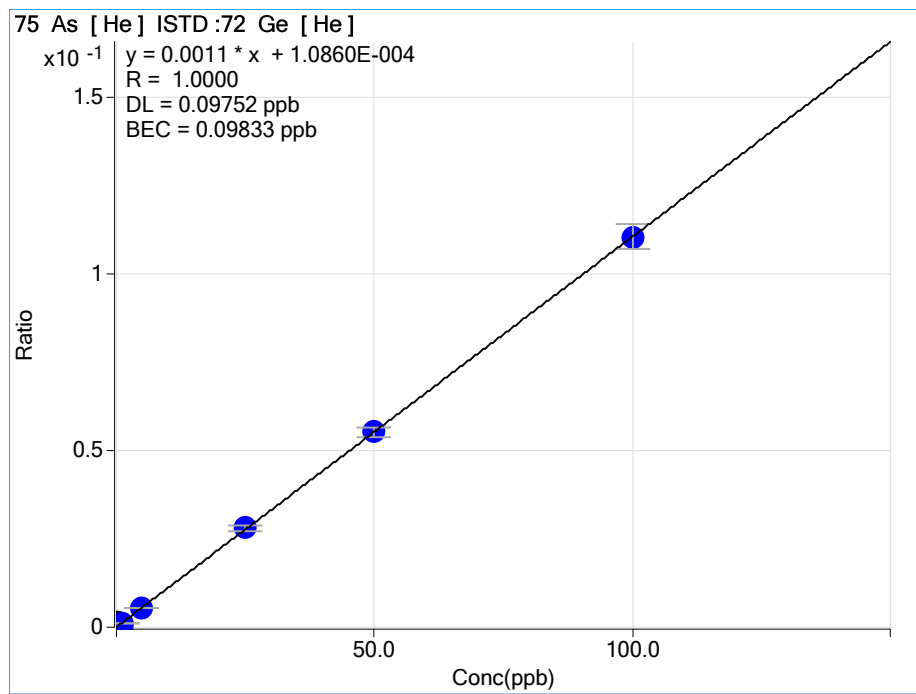
Prepared using: Metals - W 3010 Digest

Lab Number	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments
WFC1094-10	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			Analytes: Arsenic
WFC1094-11	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			Analytes: Arsenic
WFC1094-12	03/31/25 10:37 - JLG	50	50	Client: Stantec-GS			Analytes: Arsenic

Support Equipment: W PT-04 W PT-40 W PT-21, W PT-27, BLK1B

Batch Comments: HW Ocean water

Reagent ID	Description	LotNum
2400754	Metals UHP Helium	155-402885127-1
2401119	Nitric Acid	63117
2402280	P. 1:1 HCl-metals	59072
2404194	P. Metals Digestion Vials	061324
2500879	C. 10 ppb Tune Solution	-
2501057	C. Internal Standard Mix	-



	Sample									
	☐	Rjct	Data File	Acq. Date-Time	Type	Level	Sample Name	Comment	Total Dil.	Vial Number
+	1	☐	001CALB.	2025-04-28 12:10:58	CalBlk	1	Blank		1.0000	1101
+	2	☐	002CALB.	2025-04-28 12:13:16	CalBlk	1	Blank		1.0000	1101
+	3	☐	003CALB.	2025-04-28 12:15:34	CalBlk	1	Blank		1.0000	1101
+	4	☐	004CALS.	2025-04-28 12:17:53	CalStd	2	1 ppb cal		1.0000	1103
+	5	☐	005CALS.	2025-04-28 12:20:11	CalStd	3	5 ppb cal		1.0000	1104
+	6	☐	006CALS.	2025-04-28 12:22:29	CalStd	4	25 ppb cal		1.0000	1105
+	7	☐	007CALS.	2025-04-28 12:24:49	CalStd	5	50 ppb cal		1.0000	1106
+	8	☐	008CALS.	2025-04-28 12:27:07	CalStd	6	100 ppb cal		1.0000	1107
+	9	☐	009_RIN.d	2025-04-28 12:44:12	RINSE		Rinse		1.0000	4
+	10	☒	010_ICV.d	2025-04-28 12:46:02	ICV	MISS	ICV- 40ppb		1.0000	2101
+	11	☐	011_ICV.d	2025-04-28 12:48:22	ICV		ICV- 40ppb		1.0000	3501
+	12	☐	012_ICV.d	2025-04-28 12:50:43	ICV		ICV- 40ppb		1.0000	3502
+	13	☐	013_LDR.d	2025-04-28 12:53:01	LDR		Daily LDR- 500pp		1.0000	3503
+	14	☐	014_RIN.d	2025-04-28 12:55:19	RINSE		Rinse		1.0000	4
+	15	☐	015_RIN.d	2025-04-28 12:57:38	RINSE		Rinse		1.0000	4
+	16	☐	016_RIN.d	2025-04-28 12:59:56	RINSE		Rinse		1.0000	4
+	17	☐	017_Bl.k.d	2025-04-28 13:02:14	Blank		BFC1311-BLK1		1.0000	3101
+	18	☐	018LICV.d	2025-04-28 13:04:35	LLICV		BFC1311-MRL1		1.0000	3102
+	19	☐	019_LCS.d	2025-04-28 13:06:53	LCS		BFC1311-BS1		1.0000	3103
+	20	☐	020SMPL.	2025-04-28 13:09:11	Sample		WFC1094-01		1.0000	3104
+	21	☐	021SMPL.	2025-04-28 13:11:32	Sample		WFC1094-02		1.0000	3105
+	22	☐	022SMPL.	2025-04-28 13:13:50	Sample		WFC1094-03		1.0000	3106
+	23	☐	023SMPL.	2025-04-28 13:16:08	Sample		WFC1094-04		1.0000	3107
+	24	☐	024SMPL.	2025-04-28 13:18:28	Sample		WFC1094-05		1.0000	3108
+	25	☐	025_ARF.d	2025-04-28 13:20:46	AllRef		WFC1094-06		1.0000	3109

	Sample									
	☐	Rjct	Data File	Acq. Date-Time	Type	Level	Sample Name	Comment	Total Dil.	Vial Number
+	26	☐	026_LFM.d	2025-04-28 13:23:04	LFM		BFC1311-MS1		1.0000	3110
+	27	☐	027LFMD.	2025-04-28 13:25:25	LFMDup		BFC1311-MSD1		1.0000	3111
+	28	☐	028SMPL.	2025-04-28 13:27:43	Sample		WFC1094-07		1.0000	3112
+	29	☐	029SMPL.	2025-04-28 13:30:01	Sample		WFC1094-08		1.0000	3201
+	30	☐	030SMPL.	2025-04-28 13:32:21	Sample		WFC1094-09		1.0000	3202
+	31	☐	031SMPL.	2025-04-28 13:34:40	Sample		WFC1094-10		1.0000	3203
+	32	☐	032_RIN.d	2025-04-28 13:36:57	RINSE		Rinse		1.0000	4
+	33	☐	033_CCV.	2025-04-28 13:39:17	CCV		CCV		1.0000	1106
+	34	☐	034_CCB.	2025-04-28 13:41:35	CCB		CCB		1.0000	1101
+	35	☐	035_RIN.d	2025-04-28 13:43:53	RINSE		Rinse		1.0000	5
+	36	☐	036SMPL.	2025-04-28 13:46:14	Sample		WFC1094-11		1.0000	3204
+	37	☐	037_ARF.d	2025-04-28 13:48:32	AllRef		WFC1094-12		1.0000	3205
+	38	☐	038_LFM.d	2025-04-28 13:50:50	LFM		BFC1311-MS2		1.0000	3206
+	39	☐	039LFMD.	2025-04-28 13:53:10	LFMDup		BFC1311-MSD2		1.0000	3207
+	40	☐	040_Bl.k.d	2025-04-28 13:55:29	Blank		BFC1311-BLK1		1.0000	3208
+	41	☐	041_LCS.d	2025-04-28 13:57:47	LCS		BFC1311-BS1		1.0000	3209
+	42	☐	042_RIN.d	2025-04-28 14:00:07	RINSE		Rinse		1.0000	4
+	43	☐	043_CCV.	2025-04-28 14:02:25	CCV		CCV		1.0000	1106
+	44	☐	044_CCB.	2025-04-28 14:09:50	CCB		CCB		1.0000	1101
+	45	☐	045_RIN.d	2025-04-28 14:22:49	RINSE		Rinse		1.0000	5
+	46	☐	046_RIN.d	2025-04-28 14:25:08	RINSE		Rinse		1.0000	5
+	47	☐	047_RIN.d	2025-04-28 14:27:26	RINSE		Rinse		1.0000	4
+	48	☐	048_RIN.d	2025-04-28 14:29:46	RINSE		Rinse		1.0000	5

Sample Report

Sample Name BFC1311-BLK1
File Name 017_Blk.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:02:14
Sample Type Blank
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	59305.72	1.3	107.4	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name BFC1311-MRL1
File Name 018LICV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:04:35
Sample Type LLICV
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	1,184	He	1,184	72	4.4	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	56266.17	0.5	101.9	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name BFC1311-BS1
File Name 019_LCS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:06:53
Sample Type LCS
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	59403.73	0.7	107.6	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-01
File Name 020SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:09:11
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58472.14	2.1	105.9	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name WFC1094-02
File Name 021SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:11:32
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	55395.11	1.0	100.4	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name WFC1094-03
File Name 022SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:13:50
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	57983.35	0.5	105.1	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-04
File Name 023SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:16:08
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	57764.74	0.9	104.7	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-05
File Name 024SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:18:28
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	53444.11	1.7	96.8	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name WFC1094-06
File Name 025_ARF.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:20:46
Sample Type AllRef
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	44754.58	3.7	81.1	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name BFC1311-MS1
File Name 026_LFM.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:23:04
Sample Type LFM
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	42.422	He	42.422	72	7.5	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	45025.39	1.5	81.6	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name BFC1311-MSD1
File Name 027LFMD.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:25:25
Sample Type LFMdup
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	44,260	He	44.26	72	7.8	20	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	50116.20	0.6	90.8	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-07
File Name 028SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:27:43
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	55178.70	2.0	100.0	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-08
File Name 029SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:30:01
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	54176.99	2.3	98.2	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-09
File Name 030SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:32:21
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	65309.14	0.2	118.3	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-10
File Name 031SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:34:40
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	63886.01	0.7	115.7	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name Rinse
File Name 032_RIN.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:36:57
Sample Type RINSE
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	61598.96	0.8	111.6	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name CCV
File Name 033_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:39:17
Sample Type CCV
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	49.551	He	49.551	72	6.6	50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	59498.74	0.6	107.8	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name CCB
File Name 034_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:41:35
Sample Type CCB
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	57666.55	1.0	104.5	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name Rinse
File Name 035_RIN.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:43:53
Sample Type RINSE
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	56971.52	2.3	103.2	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-11
File Name 036SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:46:14
Sample Type Sample
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	59891.59	1.7	108.5	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name WFC1094-12
File Name 037_ARF.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:48:32
Sample Type AllRef
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58751.15	0.6	106.4	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name BFC1311-MS2
File Name 038_LFM.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:50:50
Sample Type LFM
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	48.277	He	48.277	72	7.6	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58655.24	2.1	106.3	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name BFC1311-MSD2
File Name 039LFMD.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:53:10
Sample Type LFMdup
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	48.435	He	48.435	72	7.5	20	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58962.07	1.8	106.8	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name BFC1311-BLK1
File Name 040_Blk.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:55:29
Sample Type Blank
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	60446.31	1.1	109.5	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0



Sample Report

Sample Name BFC1311-BS1
File Name 041_LCS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 13:57:47
Sample Type LCS
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	60623.59	1.9	109.8	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name Rinse
File Name 042_RIN.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 14:00:07
Sample Type RINSE
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
------	------	-------	------	-----------	------	---------	-----	---------

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58352.69	0.8	105.7	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Sample Report

Sample Name CCV
File Name 043_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 HIGH MATRIX MODE ONLY As.b
Acq Time 2025-04-28 14:02:25
Sample Type CCV
Total Dilution 1.0000
Comment ---
ISTD Ref FileName 003CALB.d
Sample QC Pass/Fail Pass
ISTD QC Pass/Fail Pass
Operator JLG

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	48.333	He	48.333	72	6.5	50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	He				0
Sc	45	He				0
Sc	45	2				0
Ge	72	He	58082.70	0.2	105.2	55194.23
Ge	72	2				0
Ge	72	3				0
Rh	103	He				0
Rh	103	2				0
Ho	165	He				0
Ho	165	2				0

Starting sequence Thu Apr 24 09:07:02 2025

Instrument Name: MSD4

Sequence File: T:\DATA1\MSD4\SEQUENCES\2024\0041825.S

Comment: 625 8270

Operator: MAH

Data Path: T:\DATA1\MSD4\2025\APR\24\

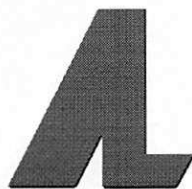
Method Path: C:\MSDCHEM\1\METHODS\

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	1	00101001	SVOCT1	SYS
Sequence Table edit performed Thu Apr 24 09:31:08 2025				
2) Sample	1	00102002	SVOCT1	SYS
3) Sample	2	00201003	CARDSIM	CARDNO 5 PPM
4) Sample	3	00301004	CARDSIM	BFD1124-BS1
5) Sample	4	00401005	CARDSIM	BFD1124-MS1
6) Sample	5	00501006	CARDSIM	BFD1124-MSD1
7) Sample	6	00601007	CARDSIM	BFD1124-BLK1
8) Sample	7	00701008	CARDSIM	WFC1094-13
9) Sample	8	00801009	CARDSIM	WFC1094-14
10) Sample	9	00901010	CARDSIM	WFC1094-15
11) Sample	10	01001011	CARDSIM	WFC1094-16

Sequence completed Thu Apr 24 14:10:58 2025

T:\DATA1\MSD4\2025\APR\24\2025 Apr 24 0907 Quality Log.LOG

T:\DATA1\MSD4\2025\APR\24\2025 Apr 24 0907 Sequence Log .LOG



Anatek Labs, Inc

1282 Alturas Drive
Moscow, ID 83843

1,4-Dioxane Cal. Standard Prep. Form

Method: EPA 625.1/8270D

IS/Surrogate Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
CLP B/N Surrogate	2403403	9/25	1000
CLP Internal Standard	2403410	9/25	2000

Target Compound Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
Metolachlor	2302539	12/27	1000
Atrazine	2302537	10/27	1000
Permethrin	2400875	8/28	1000

Calibration Dilution Template

Desired Concentration (ppm)	Stock Concentration (ppm) **	uL Standard Added	Final Volume (uL)
10	100	100	1000
5	100	50	1000
1.0	100	10	1000
0.5	100	5	1000
0.1	100	1	1000
0.05	100	0.5	1000

Calibration made from target compound standards in the table. 25 uL of surrogate and 10 uL of IS stock added to each standard point. Dilutions were made in MeCl₂ (2403536).

Response Factor Report MSD4

Method Path : T:\Data1\MSD4\METHODS\2025\

Method File : Cardo-042425.M

Title : EPA 8270D - GC MSD4

Last Update : Thu Apr 24 10:54:36 2025

Response Via : Initial Calibration

Calibration Files

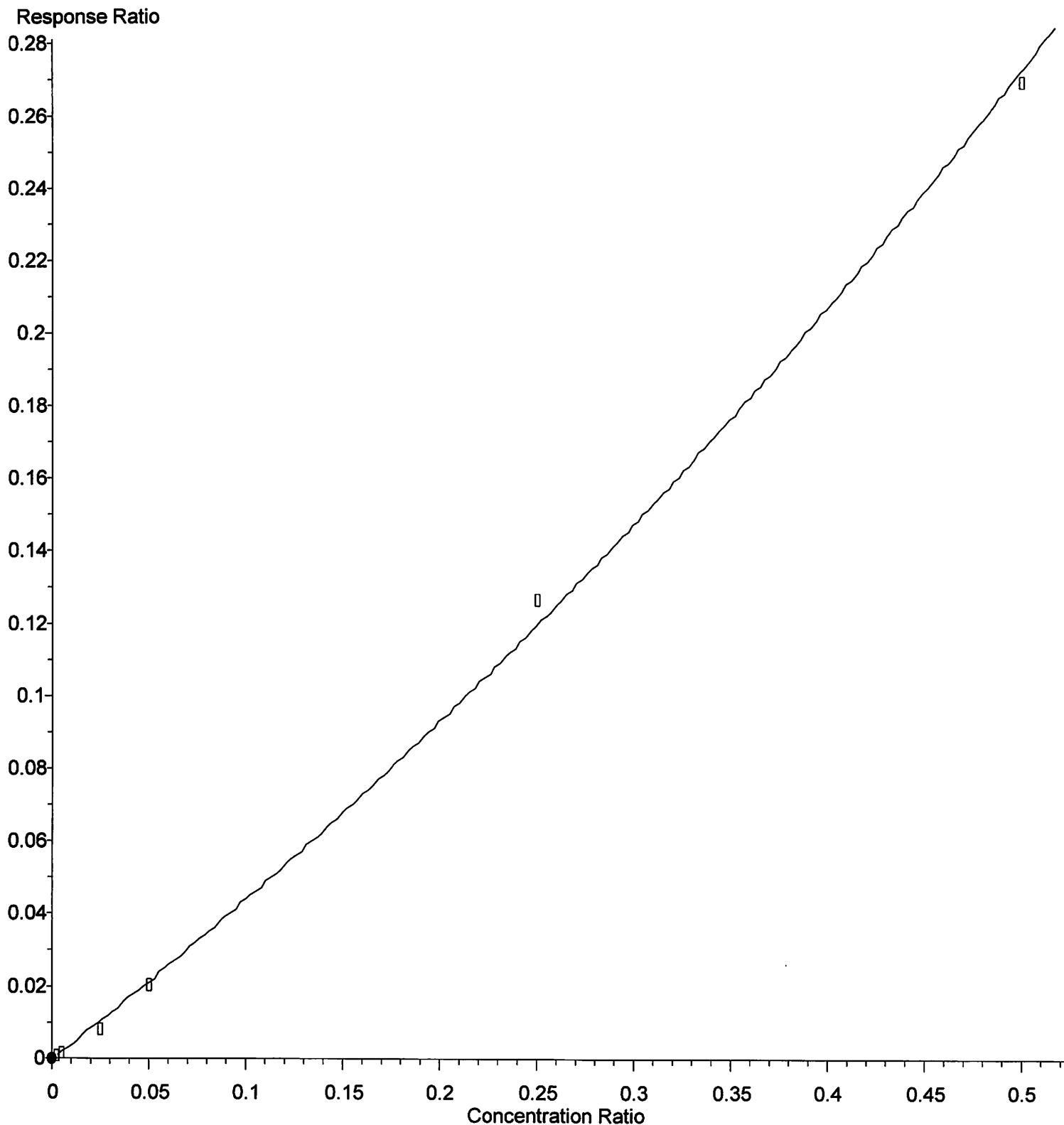
0.05=00701007.D 10 =10201002.D 5 =00201003.D 1 =10401004.D 0.5 =00501005.D 0.1 =00601006.D

Compound	0.05	10	5	1	0.5	0.1	Avg	%RSD

1) I Acenaphthene-d10	-----ISTD-----							
2) Atrazine	0.337	0.536	0.506	0.408	0.331	0.325	0.407	23.02
3) Metolachlor	0.725	1.181	1.115	0.867	0.720	0.706	0.886	23.99
4) I Chrysene-d12	-----ISTD-----							
5) S Terphenyl-d14	1.558	1.172	1.166	1.232	1.547	1.499	1.362	14.03
6) Permerthins	2.081	0.618	0.549	0.382	0.445	0.412	0.748	88.16

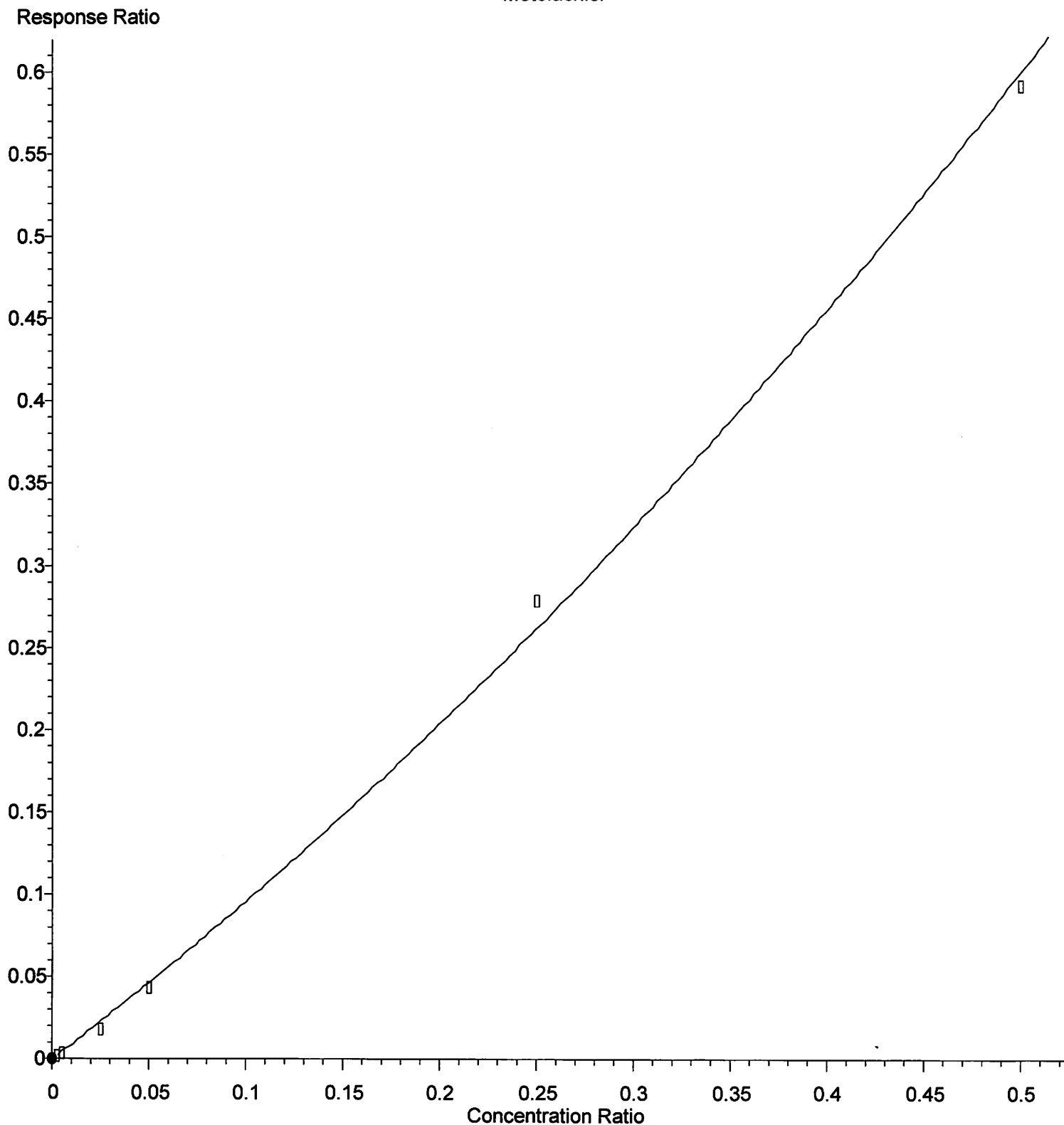
(#) = Out of Range

Atrazine



$R = 2.61e-001 A^2 + 4.12e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.998 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042425.M
 Calibration Table Last Updated: Thu Apr 24 10:54:36 2025

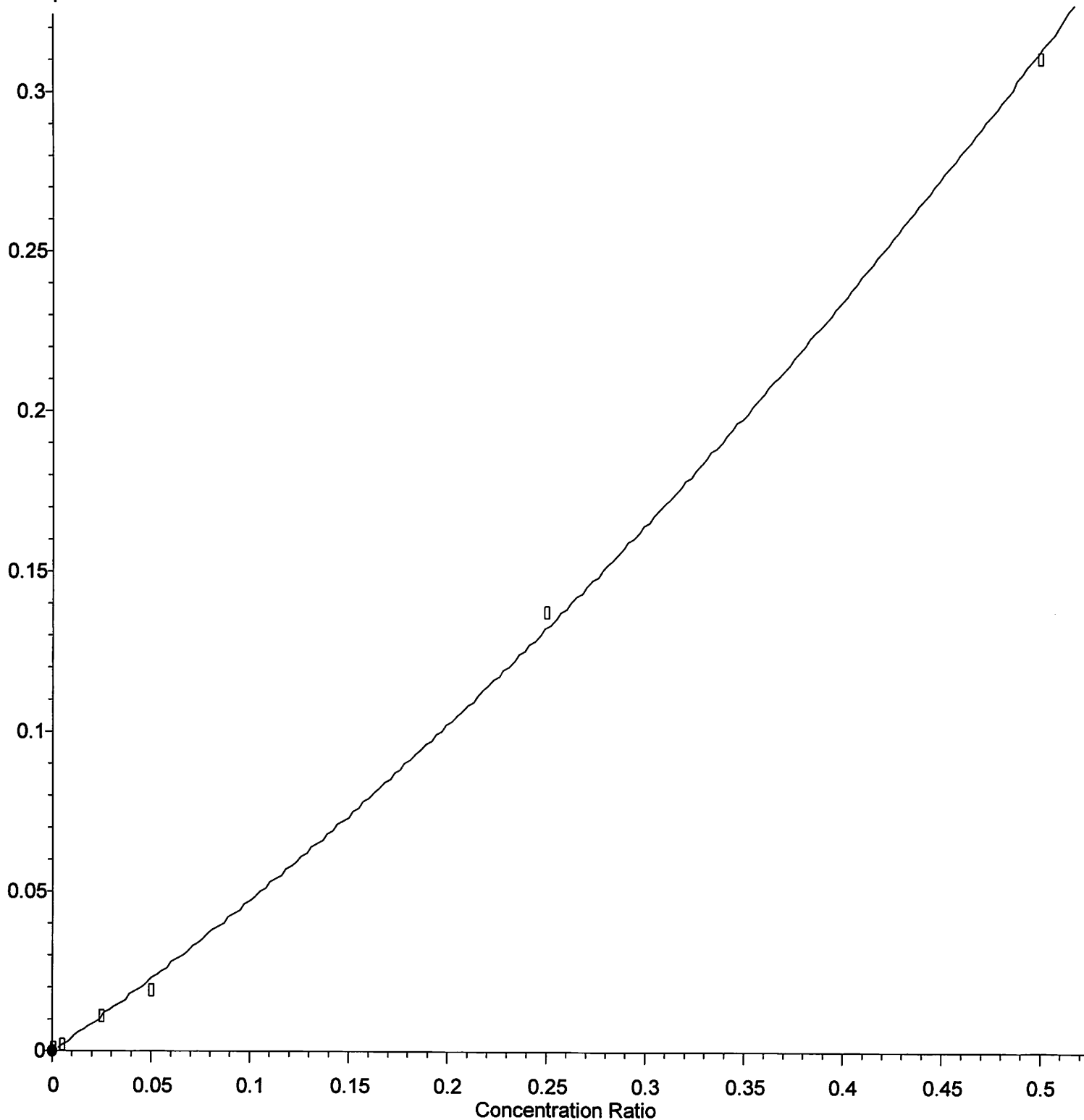
Metolachlor



$R = 6.01e-001 A^*A + 8.96e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.998 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042425.M
 Calibration Table Last Updated: Thu Apr 24 10:54:36 2025

Permerthins

Response Ratio



$R = 3.74e-001 A^2 + 4.35e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.998 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042425.M
 Calibration Table Last Updated: Thu Apr 24 10:54:36 2025

PREPARATION BENCH SHEET

Organics

BFD1124

Matrix: Solid

Prepared using: SVOC - SVOC Water

Analyses

SVOC 8270E MISC

Spiking Solution(s)

2501510 Cardno Spk 100

Surrogate Solution(s)

2403403 CLP B/N 1000
2403404 CLP Acid Surr 2000

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (g)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BFD1124-BLK1	Blank			4/6/25 9:53 MAH	5	1		25	
QC	BFD1124-BS1	LCS			4/6/25 9:53 MAH	5	1	50	25	
QC	BFD1124-MS1	Matrix Spike [WFC1094-13]			4/24/25 9:53 MAH	5	1	50	25	
QC	BFD1124-MSD	Matrix Spike Dup [WFC1094-13]			4/24/25 9:53 MAH	5	1	50	25	
SVOC 8270E MISC	WFC1094-13	D-7 Sediment	04/08/2025	04/07/2025	4/6/25 9:53 MAH	5	1		25	
SVOC 8270E MISC	WFC1094-14	D-8 Sediment	04/08/2025	04/07/2025	4/6/25 9:53 MAH	5.02	1		25	
SVOC 8270E MISC	WFC1094-15	E-2 Sediment	04/08/2025	04/07/2025	4/6/25 9:53 MAH	4.98	1		25	
SVOC 8270E MISC	WFC1094-16	WW-2 Sediment	04/08/2025	04/07/2025	4/6/25 9:53 MAH	5.01	1		25	

Reagents

Standard	Description	LotNum
2000154	Acetone - GC grade	59074
2001342	pH paper	60775
2303363	Sulfuric Acid	80621
2401071	Dichloromethane	64047
2403410	CLP I.S. Spike 2000	061422

Batch Comments:

Acidic start/stop time: 3PM- 8AM
Basic start/stop time: 8AM-3PM
Instrument: 7890/5975 GCMS
Ext. Method: 3520C liq-liq
TurboVap: 01
Balance: 04



Analyst:

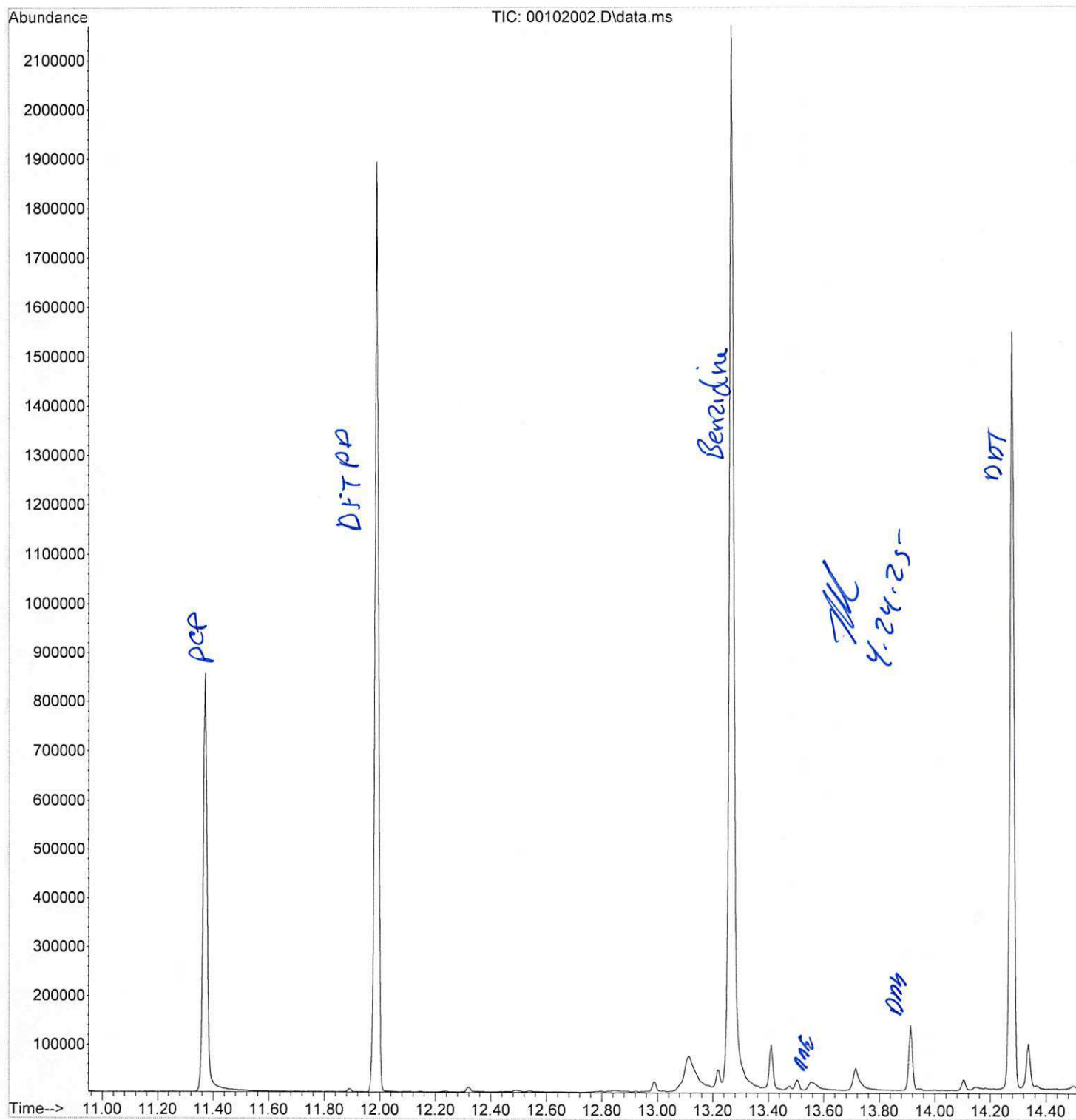
Date

4-24-25

Run Date:

Date

File :T:\Data1\MSD4\2025\APR\24\00102002.D
Operator : MAH
Acquired : 24 Apr 2025 9:38 am using AcqMethod SVOCT1.M
Instrument : MSD4
Sample Name: SYS
Misc Info :
Vial Number: 1



Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00102002.D

Acq On : 24 Apr 2025 9:38 am

Operator : MAH

Sample : SYS

Misc :

ALS Vial : 1 Sample Multiplier: 1

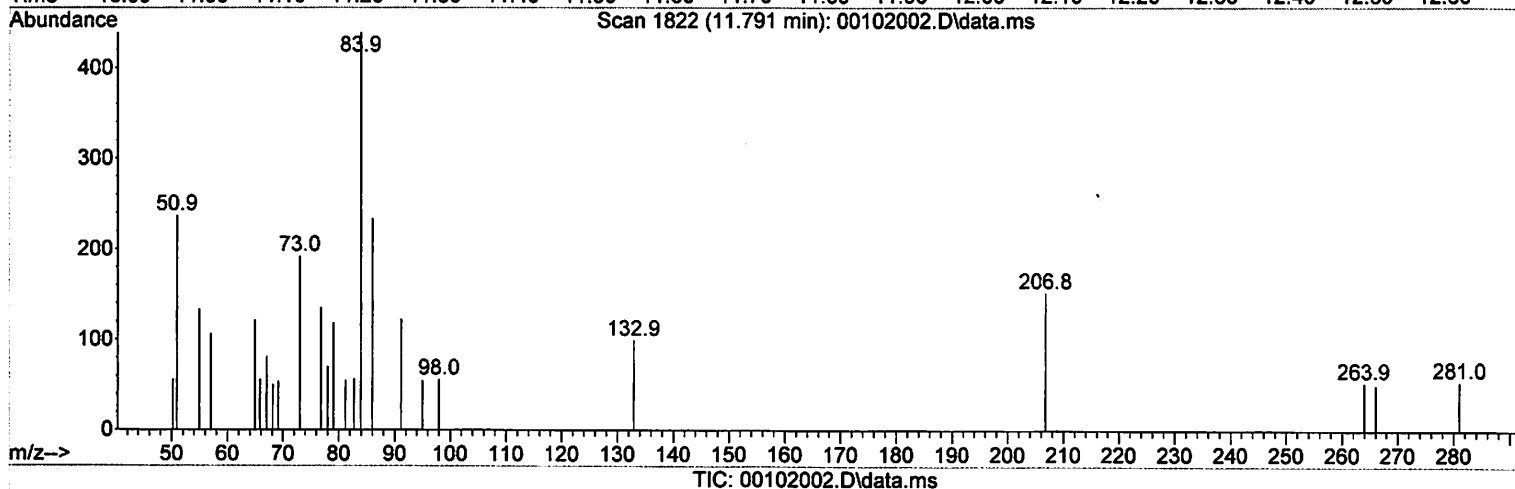
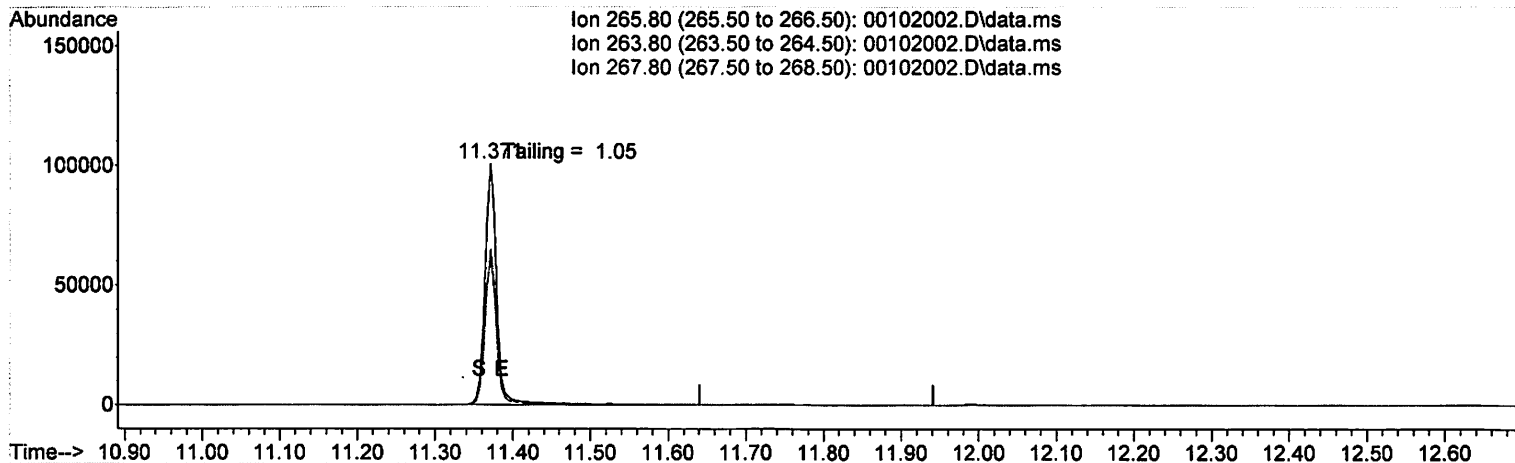
Quant Time: Apr 24 10:56:07 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\BNA-0418.M

Quant Title : EPA 8270D / EPA 625.1 - MSD4

QLast Update : Mon Apr 21 09:59:25 2025

Response via : Initial Calibration



(68) Pentachlorophenol

11.791min (-11.791) 0.00 ug/mL

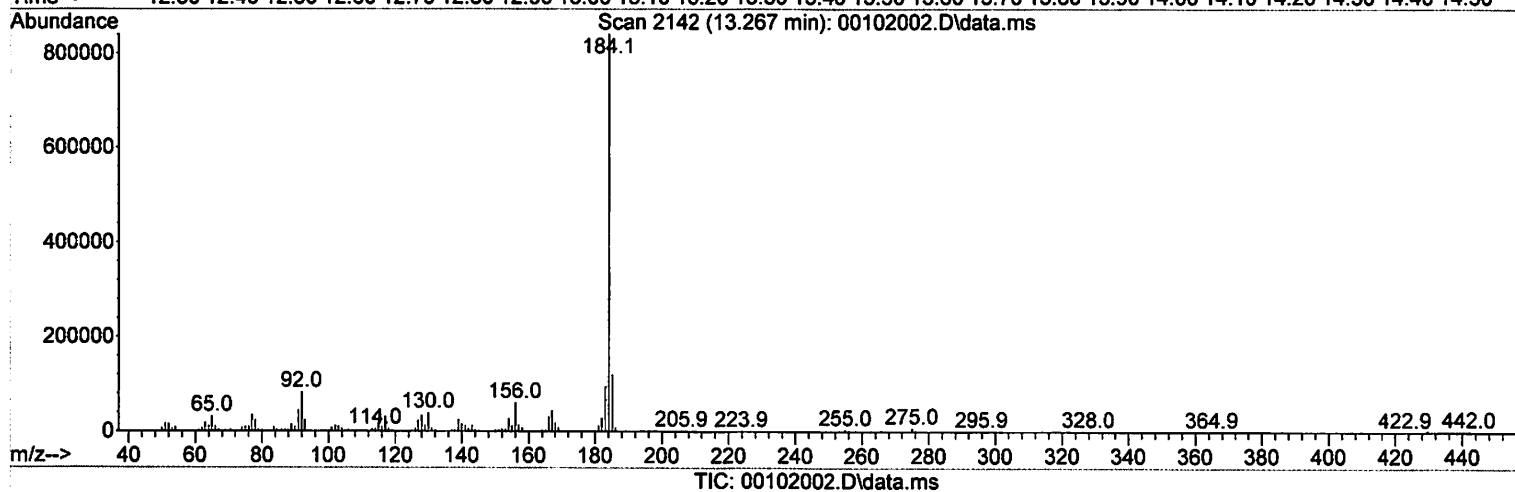
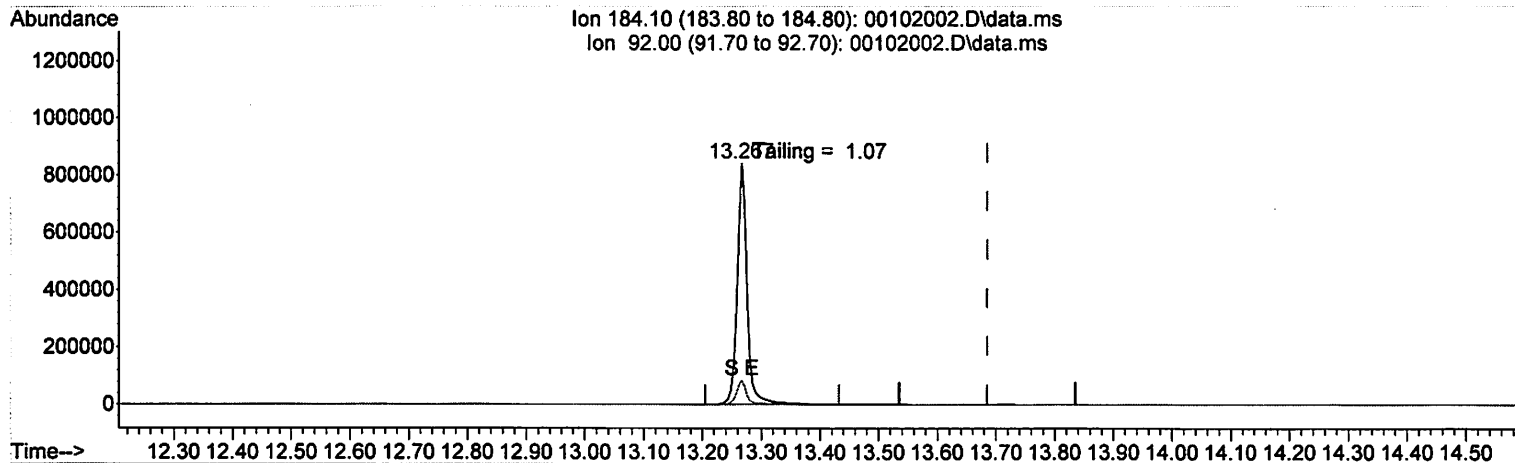
response 0

Ion	Exp%	Act%
265.80	100.00	0.00
263.80	62.60	0.00#
267.80	63.30	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2025\APR\24\
 Data File : 00102002.D
 Acq On : 24 Apr 2025 9:38 am
 Operator : MAH
 Sample : SYS
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 10:56:07 2025
 Quant Method : T:\Data1\MSD4\METHODS\2025\BNA-0418.M
 Quant Title : EPA 8270D / EPA 625.1 - MSD4
 QLast Update : Mon Apr 21 09:59:25 2025
 Response via : Initial Calibration



(74) Benzidine

13.267min (-0.419) 0.00 ug/mL m

response 9723476

Ion	Exp%	Act%
184.10	100.00	100.00
92.00	8.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00301004.D

Acq On : 24 Apr 2025 10:35 am

Operator : MAH

Sample : BFD1124-BS1

Misc :

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 24 12:53:24 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.788	164	28041880	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.836	240	16259121	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.575	244	25292385	22.84	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	91.36%	
Target Compounds						
				Qvalue		
2) Atrazine	11.288	200	2827462	4.30	ug/mL	98
3) Metolachlor	12.472	162	6101431	4.25	ug/mL	100
6) Permethrins	15.644	183	1991157m	4.69	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00401005.D

Acq On : 24 Apr 2025 11:03 am

Operator : MAH

Sample : BFD1124-MS1

Misc :

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 24 12:56:02 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	9.787	164	28333053	20.00 ug/mL	#	0.00
4) Chrysene-d12	14.838	240	20147124	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.575	244	24641736	17.96 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	71.84%	
Target Compounds						
				Qvalue		
2) Atrazine	11.288	200	2553885m	3.89 ug/mL		
3) Metolachlor	12.471	162	5573510m	3.88 ug/mL		
6) Permerthins	15.644	183	2299241m	4.41 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00501006.D

Acq On : 24 Apr 2025 11:32 am

Operator : MAH

Sample : BFD1124-MSD1

Misc :

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 24 12:59:38 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.787	164	26285938	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.837	240	19933397	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.574	244	24514100	18.06	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	72.24%	
Target Compounds						
			Qvalue			
2) Atrazine	11.289	200	2529433	4.13	ug/mL	99
3) Metolachlor	12.473	162	5579972	4.16	ug/mL	100
6) Permerthins	15.639	183	2602319m	4.95	ug/mL	

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00601007.D

Acq On : 24 Apr 2025 12:00 pm

Operator : MAH

Sample : BFD1124-BLK1

Misc :

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 24 13:00:21 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.787	164	29385070	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.836	240	19190213	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.575	244	26320610	20.14	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	80.56%	

Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00701008.D

Acq On : 24 Apr 2025 12:27 pm

Operator : MAH

Sample : WFC1094-13

Misc :

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 24 13:03:43 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.787	164	26161451	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.835	240	17615095	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.575	244	25065048	20.89	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	83.56%	

Target Compounds	Qvalue
------------------	--------

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00801009.D

Acq On : 24 Apr 2025 12:55 pm

Operator : MAH

Sample : WFC1094-14

Misc :

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 24 13:28:35 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.787	164	26528735	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.837	240	21287753	20.00	ug/mL	0.00

System Monitoring Compounds

5) Terphenyl-d14	13.576	244	26785117	18.47	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	73.88%	

Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 00901010.D

Acq On : 24 Apr 2025 1:22 pm

Operator : MAH

Sample : WFC1094-15

Misc :

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 24 13:55:24 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	9.786	164	28312720	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.840	240	23275520	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.581	244	28290925	17.85	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	71.40%	
Target Compounds				Qvalue		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2025\APR\24\

Data File : 01001011.D

Acq On : 24 Apr 2025 1:50 pm

Operator : MAH

Sample : WFC1094-16

Misc :

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 24 14:16:51 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042425.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Thu Apr 24 10:54:36 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.786	164	25048365	20.00	ug/mL	# 0.00
4) Chrysene-d12	14.837	240	18233386	20.00	ug/mL	0.00

System Monitoring Compounds

5) Terphenyl-d14 13.575 244 23589467 18.99 ug/mL 0.00
 Spiked Amount 25.000 Recovery = 75.96%

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Starting sequence Mon Apr 21 15:07:54 2025

Instrument Name: MSD4

Sequence File: T:\Data1\MSD4\SEQUENCES\2024\0041825.s

Comment: 625 8270

Operator: MAH

Data Path: T:\DATA1\MSD4\2025\APR\21\

Method Path: C:\MSDCHEM\1\METHODS\

Line Type	Vial	DataFile	Method	Sample Name
1) Sample	101	10101001	SVOCT1	SYS
2) Sample	102	10201002	CARDSIM	CARDNO 10 PPM
3) Sample	103	10301003	CARDSIM	CARDNO 5 PPM
4) Sample	104	10401004	CARDSIM	CARDNO 1 PPM
5) Sample	105	10501005	CARDSIM	CARDNO 0.5 PPM
6) Sample	106	10601006	CARDSIM	CARDNO 0.1 PPM
7) Sample	107	10701007	CARDSIM	CARDNO 0.05 PPM
8) Sample	111	11101008	CARDSIM	BFD0016-BS1
9) Sample	112	11201009	CARDSIM	BFD0016-MS1
10) Sample	113	11301010	CARDSIM	BFD0016-MSD1
11) Sample	114	11401011	CARDSIM	BFD0016-BLK1
12) Sample	115	11501012	CARDSIM	WFC1094-03
13) Sample	116	11601013	CARDSIM	WFC1094-04
14) Sample	117	11701014	CARDSIM	WFC1094-05
15) Sample	118	11801015	CARDSIM	WFC1094-06
16) Sample	119	11901016	CARDSIM	WFC1094-07
17) Sample	120	12001017	CARDSIM	WFC1094-08
18) Sample	121	12101018	CARDSIM	WFC1094-09

Sequence completed Mon Apr 21 23:19:42 2025

T:\DATA1\MSD4\2025\APR\21\2025 Apr 21 1507 Quality Log.LOG

T:\DATA1\MSD4\2025\APR\21\2025 Apr 21 1507 Sequence Log .LOG



Anatek Labs, Inc

1282 Alturas Drive
Moscow, ID 83843

1,4-Dioxane Cal. Standard Prep. Form

Method: EPA 625.1/8270D

IS/Surrogate Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
CLP B/N Surrogate	2403403	9/25	1000
CLP Internal Standard	2403410	9/25	2000

Target Compound Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
Metolachlor	2302539	12/27	1000
Atrazine	2302537	10/27	1000
Permethrin	2400875	8/28	1000

Calibration Dilution Template

Desired Concentration (ppm)	Stock Concentration (ppm) **	uL Standard Added	Final Volume (uL)
10	100	100	1000
5	100	50	1000
1.0	100	10	1000
0.5	100	5	1000
0.1	100	1	1000
0.05	100	0.5	1000

Calibration made from target compound standards in the table. 25 uL of surrogate and 10 uL of IS stock added to each standard point. Dilutions were made in MeCl₂ (2403536).

Method Path : T:\Data1\MSD4\METHODS\2025\
Method File : Cardo-042125.M
Title : EPA 8270D - GC MSD4
Last Update : Tue Apr 22 08:55:10 2025
Response Via : Initial Calibration

Calibration Files

0.05=10701007.D 10 =10201002.D 5 =10301003.D 1 =10401004.D 0.5 =10501005.D 0.1 =10601006.D

Compound		0.05	10	5	1	0.5	0.1	Avg	%RSD

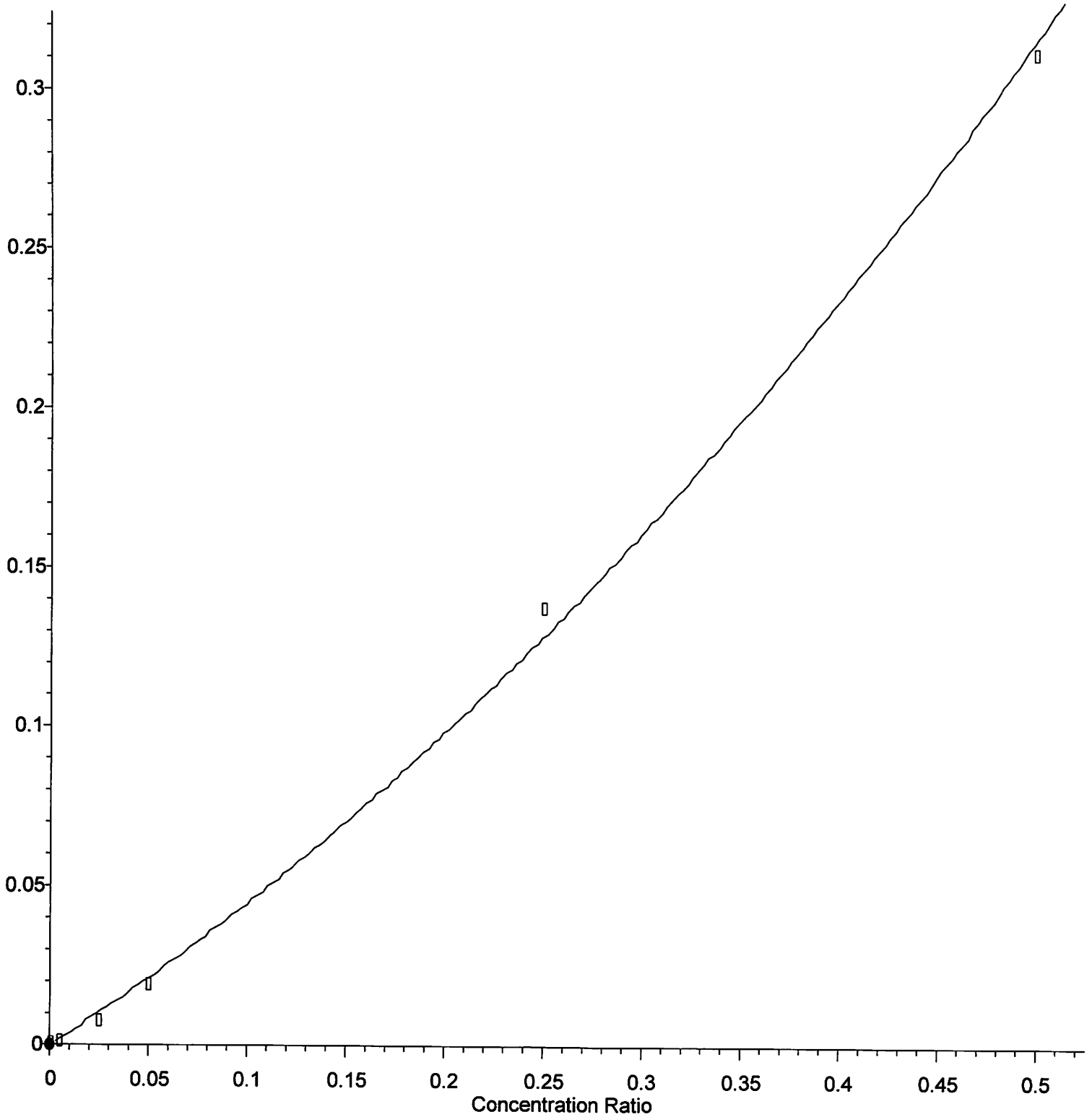
1) I	Acenaphthene-d10	-----ISTD-----							
2)	Atrazine	0.320	0.536	0.506	0.408	0.370	0.319	0.410	22.64
3)	Metolachlor	0.675	1.181	1.115	0.867	0.771	0.662	0.879	25.33
4) I	Chrysene-d12	-----ISTD-----							
5) S	Terphenyl-d14	1.247	1.172	1.166	1.232	1.108	1.241	1.194	4.61
6)	Permerthins	1.372	0.618	0.549	0.382	0.309	0.259	0.581	70.72

(#) = Out of Range

Cardo-042125.M Tue Apr 22 08:55:44 2025

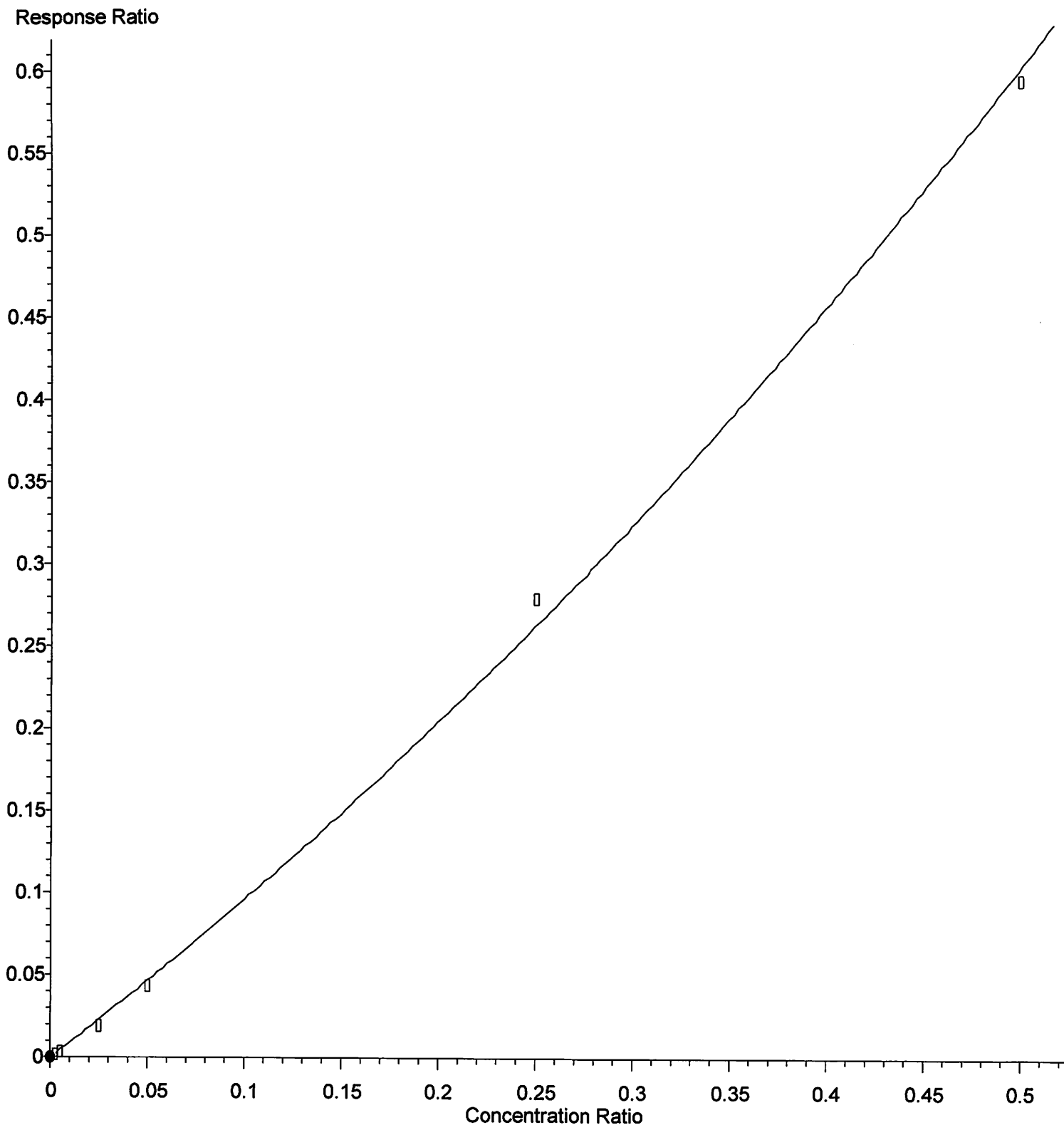
Permerthins

Response Ratio



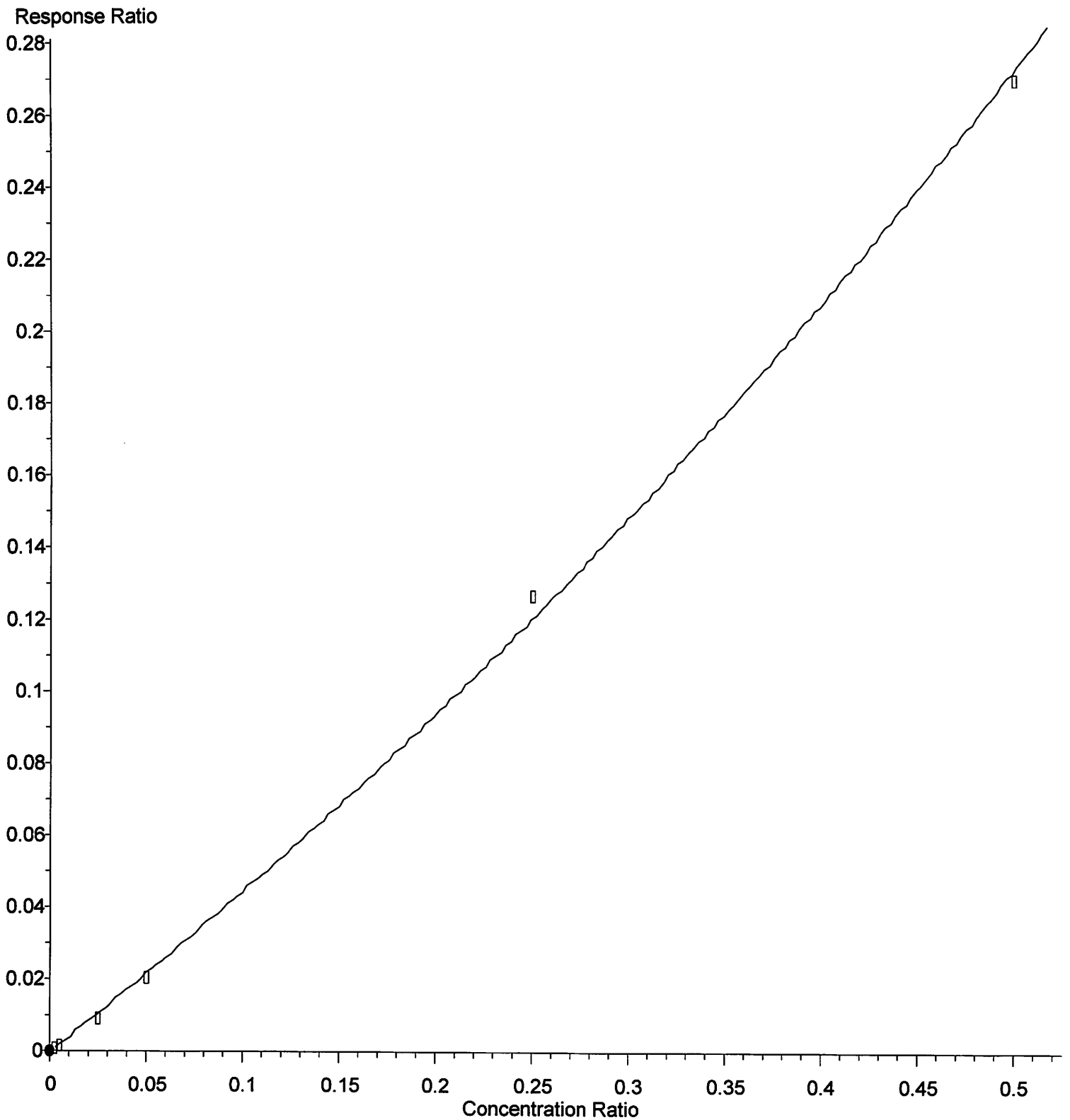
$R = 4.52e-001 A^2 + 4.00e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.996 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
 Calibration Table Last Updated: Tue Apr 22 08:55:10 2025

Metolachlor



$R = 5.86e-001 A^2 + 9.03e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.998 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
 Calibration Table Last Updated: Tue Apr 22 08:55:10 2025

Atrazine



$R = 2.46e-001 A^2 + 4.19e-001 A + 0.00e+000$
 Coef of Det (r^2) = 0.999 Curve Fit: Quad w(1/a)/(0,0)
 Method Name: T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
 Calibration Table Last Updated: Tue Apr 22 08:55:10 2025

PREPARATION BENCH SHEET

Organics

BFD0016

Matrix: Water

Prepared using: SVOC - SVOC Water

Analyses

SVOC 625 MISC

Spiking Solution(s)

2501510 Cardno Spk 100

Surrogate Solution(s)

2400924 CLP Acid Surr 2000
2403403 CLP B/N 1000

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (mL)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BFD0016-BLK1	Blank			3/31/25 9:34 MAH	1000	1		25	
QC	BFD0016-BS1	LCS			3/31/25 9:34 MAH	1000	1	50	25	
QC	BFD0016-MS1	Matrix Spike [WFC1094-06]			3/31/25 9:34 MAH	1000	1	50	25	
QC	BFD0016-MSD	Matrix Spike Dup [WFC1094-06]			3/31/25 9:34 MAH	1000	1	50	25	
SVOC 625 MISC	WFC1094-03	D-7	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1003	1		25	
SVOC 625 MISC	WFC1094-04	D-8	04/08/2025	03/31/2025	3/31/25 9:34 MAH	950	1		25	
SVOC 625 MISC	WFC1094-05	E-2	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1032	1		25	
SVOC 625 MISC	WFC1094-06	E-1	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1046	1		25	
SVOC 625 MISC	WFC1094-07	E-1 DUP	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1054	1		25	
SVOC 625 MISC	WFC1094-08	WW-2	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1054	1		25	
SVOC 625 MISC	WFC1094-09	WW-3	04/08/2025	03/31/2025	3/31/25 9:34 MAH	1035	1		25	

Reagents

Standard	Description	LotNum
2000154	Acetone - GC grade	59074
2001342	pH paper	60775
2303363	Sulfuric Acid	80621
2401071	Dichloromethane	64047
2403410	CLP I.S. Spike 2000	061422

Batch Comments:

MA

Analyst:

Date

4-7-25

Run Date:

Date

PREPARATION BENCH SHEET

Organics

BFD0016

(Continued)

Matrix: Water

Analyses

SVOC 625 MISC

Spiking Solution(s)

2501510 Cardno Spk 100

Prepared using: SVOC - SVOC Water

Surrogate Solution(s)

2400924 CLP Acid Surr 2000
2403403 CLP B/N 1000

Acidic start/stop time: 3PM- 8AM
Basic start/stop time: 8AM-3PM
Instrument: 7890/5975 GCMS
Ext. Method: 3520C liq-liq
TurboVap: 01
Balance: 04

Analyst: _____

Date _____

Run Date: _____

Date _____

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10201002.D

Acq On : 21 Apr 2025 3:38 pm

Operator : MAH

Sample : CARDNO 10 PPM

Misc :

ALS Vial : 102 Sample Multiplier: 1

Quant Time: Apr 22 09:43:40 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	10.099	164	29205653	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	23990282	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.889	244	35132782	24.52 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	98.08%	
Target Compounds						
			Qvalue			
2) Atrazine	11.588	200	7852391	9.93 ug/mL		98
3) Metolachlor	12.779	162	17244651	9.90 ug/mL		99
6) Permerthins	15.950	183	7469509m	9.96 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10301003.D

Acq On : 21 Apr 2025 4:05 pm

Operator : MAH

Sample : CARDNO 5 PPM

Misc :

ALS Vial : 103 Sample Multiplier: 1

Quant Time: Apr 22 09:42:59 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	27701392	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	23599400	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.888	244	34408184	24.42 ug/mL		0.00
Spiked Amount	25.000		Recovery	= 97.68%		
Target Compounds						
				Qvalue		
2) Atrazine	11.585	200	3502638	5.23 ug/mL		98
3) Metolachlor	12.778	162	7723431	5.27 ug/mL		99
6) Permerthins	15.945	183	3209911m	5.25 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10401004.D

Acq On : 21 Apr 2025 4:33 pm

Operator : MAH

Sample : CARDNO 1 PPM

Misc :

ALS Vial : 104 Sample Multiplier: 1

Quant Time: Apr 22 09:42:12 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.098	164	29688688	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	22417834	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.889	244	34524914	25.79 ug/mL		0.00
Spiked Amount	25.000		Recovery	= 103.16%		
Target Compounds						
				Qvalue		
2) Atrazine	11.580	200	605817	0.95 ug/mL		98
3) Metolachlor	12.778	162	1287676	0.93 ug/mL		100
6) Permerthins	15.950	183	430034m	0.91 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10501005.D

Acq On : 21 Apr 2025 5:00 pm

Operator : MAH

Sample : CARDNO 0.5 PPM

Misc :

ALS Vial : 105 Sample Multiplier: 1

Quant Time: Apr 22 09:41:40 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	29329266	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	28242119	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.890	244	39115215	23.19 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	92.76%	
Target Compounds						
2) Atrazine	11.580	200	271254	0.44 ug/mL		98
3) Metolachlor	12.778	162	565679	0.42 ug/mL		100
6) Permerthins	15.950	183	220740m	0.38 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10601006.D

Acq On : 21 Apr 2025 5:28 pm

Operator : MAH

Sample : CARDNO 0.1 PPM

Misc :

ALS Vial : 106 Sample Multiplier: 1

Quant Time: Apr 22 09:41:01 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	28398002	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.163	240	22478801	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.889	244	34860737	25.97 ug/mL		0.00
Spiked Amount	25.000		Recovery	= 103.88%		
Target Compounds						
				Qvalue		
2) Atrazine	11.580	200	45305	0.08 ug/mL		99
3) Metolachlor	12.776	162	93927	0.07 ug/mL		100
6) Permerthins	15.945	183	29424m	0.07 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10701007.D

Acq On : 21 Apr 2025 5:55 pm

Operator : MAH

Sample : CARDNO 0.05 PPM

Misc :

ALS Vial : 107 Sample Multiplier: 1

Quant Time: Apr 22 09:40:15 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	10.099	164	30031706	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	22764518	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.889	244	35493319	26.11 ug/mL		0.00
Spiked Amount	25.000		Recovery	= 104.44%		
Target Compounds						
				Qvalue		
2) Atrazine	11.580	200	24054	0.04 ug/mL#		82
3) Metolachlor	12.777	162	50648	0.04 ug/mL		99
6) Permerthins	15.945	183	15396m	0.03 ug/mL		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\
Data File : 10101001.D
Acq On : 21 Apr 2025 3:10 pm
Operator : MAH
Sample : SYS
Misc :
ALS Vial : 101 Sample Multiplier: 1

Integration Parameters: events.e
Integrator: ChemStation

Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
Title : EPA 8270D - GC MSD4

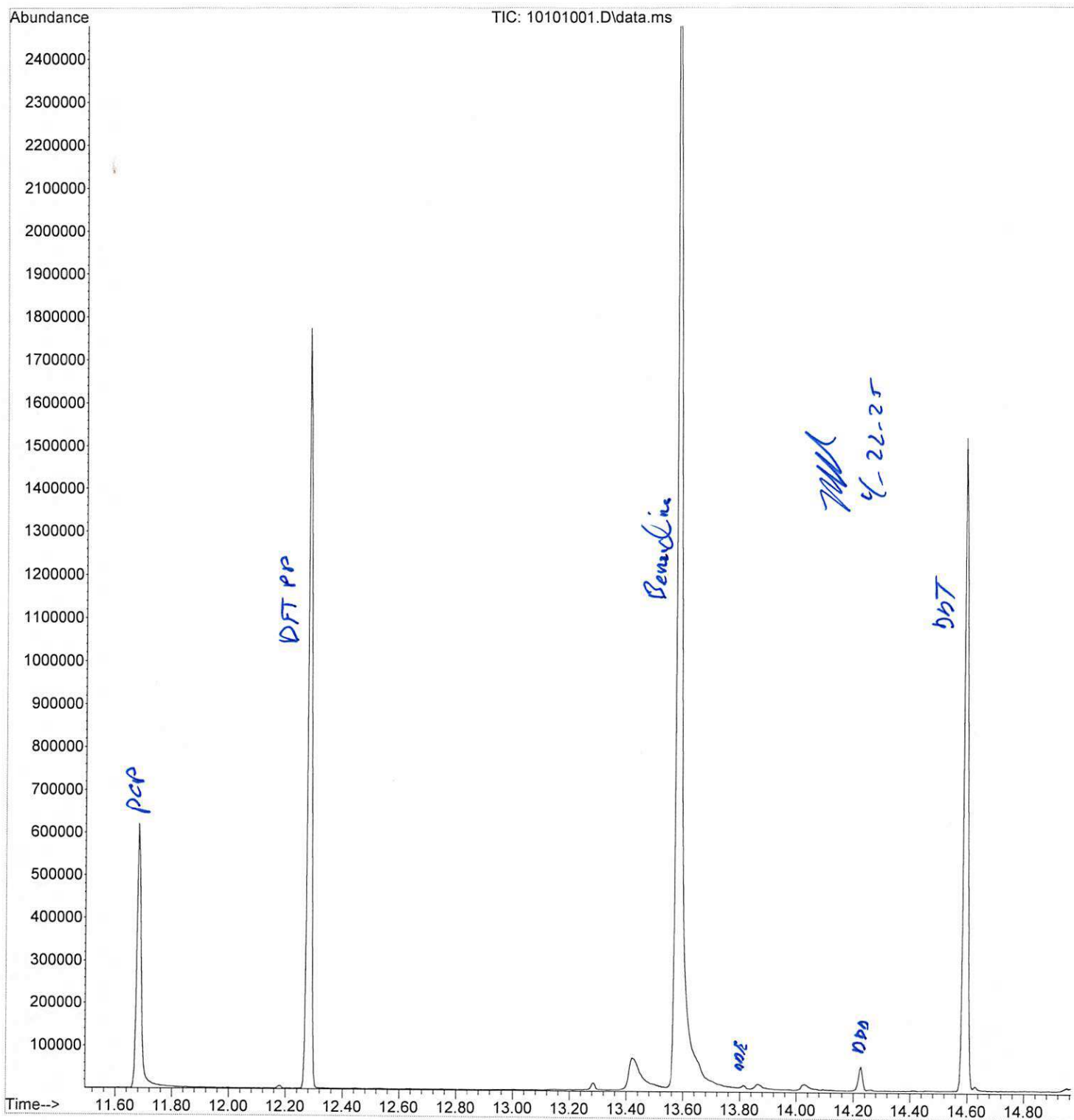
Signal : TIC: 10101001.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total	
1	13.813	2257	2260	2263	M4	6171	52053	0.35%	0.335%	DDE
2	14.225	2343	2350	2354	M	56379	554515	3.72%	3.571%	DDD
3	14.592	2422	2429	2436	M	1530551	14920184	100.00%	96.093%	DDT

Sum of corrected areas: 15526752

Cardo-042125.M Tue Apr 22 09:38:38 2025

File :T:\Data1\MSD4\2025\APR\21\10101001.D
Operator : MAH
Acquired : 21 Apr 2025 3:10 pm using AcqMethod SVOCT1.M
Instrument : MSD4
Sample Name: SYS
Misc Info :
Vial Number: 101



Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 10101001.D

Acq On : 21 Apr 2025 3:10 pm

Operator : MAH

Sample : SYS

Misc :

ALS Vial : 101 Sample Multiplier: 1

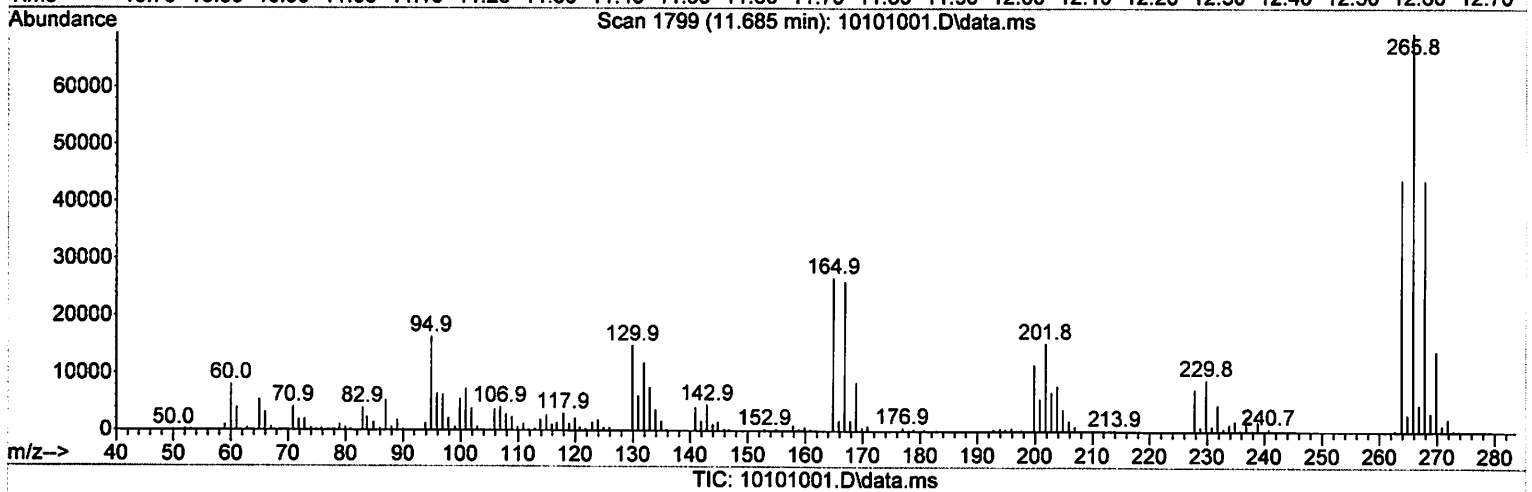
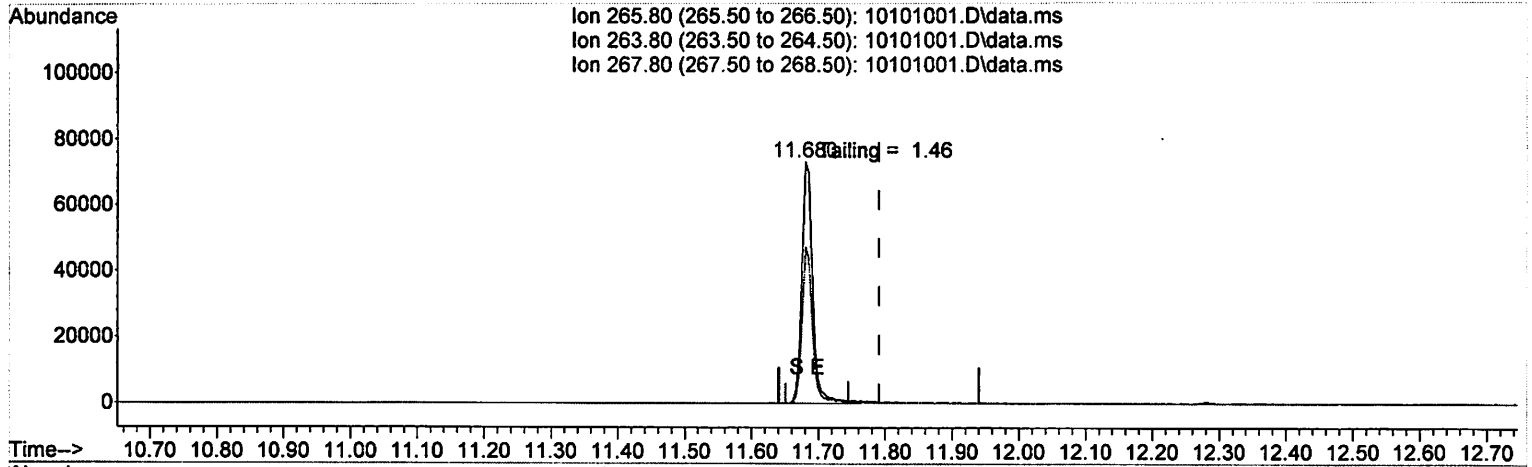
Quant Time: Apr 21 15:46:02 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\BNA-0418.M

Quant Title : EPA 8270D / EPA 625.1 - MSD4

QLast Update : Mon Apr 21 09:59:25 2025

Response via : Initial Calibration



(68) Pentachlorophenol

11.684min (-0.107) 0.00 ug/mL

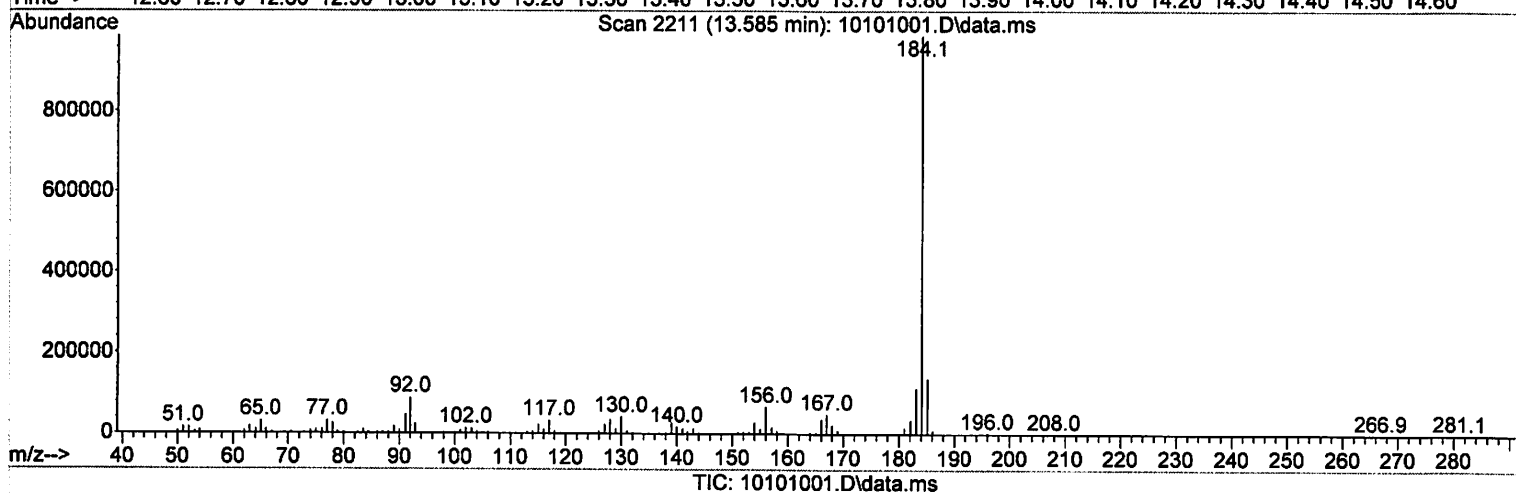
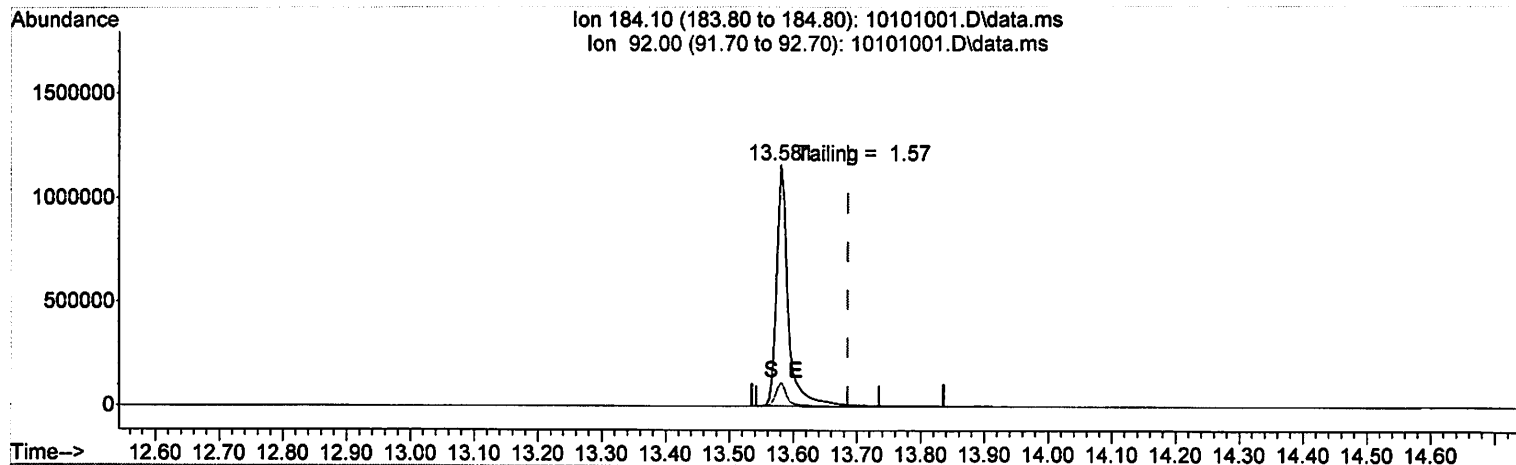
response 788629

Ion	Exp%	Act%
265.80	100.00	100.00
263.80	62.60	63.17
267.80	63.30	62.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\Data1\MSD4\2025\APR\21\
 Data File : 10101001.D
 Acq On : 21 Apr 2025 3:10 pm
 Operator : MAH
 Sample : SYS
 Misc :
 ALS Vial : 101 Sample Multiplier: 1

Quant Time: Apr 21 15:46:02 2025
 Quant Method : T:\Data1\MSD4\METHODS\2025\BNA-0418.M
 Quant Title : EPA 8270D / EPA 625.1 - MSD4
 QLast Update : Mon Apr 21 09:59:25 2025
 Response via : Initial Calibration



(74) Benzidine

13.584min (-0.102) 0.00 ug/mL

response 14551661

Ion	Exp%	Act%
184.10	100.00	100.00
92.00	8.80	9.86
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : T:\Data1\MSD4\2025\APR\21\
Data File : 11101008.D
Acq On : 21 Apr 2025 6:22 pm
Operator : MAH
Sample : BFD0016-BS1
Misc :
ALS Vial : 111 Sample Multiplier: 1

Quant Time: Apr 22 08:56:49 2025
Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Tue Apr 22 08:55:10 2025
Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.096	164	27853481	20.00	ug/mL	# 0.00
4) Chrysene-d12	15.163	240	22881819	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.880	244	22949816m	16.80	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	67.20%	
Target Compounds						
			Qvalue			
2) Atrazine	11.586	200	4100132	5.97	ug/mL	98
3) Metolachlor	12.778	162	8979057	5.98	ug/mL	100
6) Permerthins	15.945	183	4031967m	6.46	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11201009.D

Acq On : 21 Apr 2025 6:50 pm

Operator : MAH

Sample : BFD0016-MS1

Misc :

ALS Vial : 112 Sample Multiplier: 1

Quant Time: Apr 22 08:57:50 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.097	164	28617658	20.00	ug/mL	# 0.00
4) Chrysene-d12	15.164	240	24644599	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.886	244	24684091	16.77	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	67.08%	
Target Compounds						
			Qvalue			
2) Atrazine	11.586	200	4342123	6.13	ug/mL	98
3) Metolachlor	12.777	162	9375058m	6.06	ug/mL	
6) Permethins	15.950	183	4525248m	6.67	ug/mL	

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\
Data File : 11301010.D
Acq On : 21 Apr 2025 7:17 pm
Operator : MAH
Sample : BFD0016-MSD1
Misc :
ALS Vial : 113 Sample Multiplier: 1

Quant Time: Apr 22 09:02:11 2025
Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Tue Apr 22 08:55:10 2025
Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	10.097	164	26480632	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.162	240	20474619	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.885	244	20590093	16.84 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	67.36%	
Target Compounds						
				Qvalue		
2) Atrazine	11.586	200	3767875	5.80 ug/mL		98
3) Metolachlor	12.779	162	8277275	5.82 ug/mL		99
6) Permerthins	15.950	183	3869713m	6.82 ug/mL		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11401011.D

Acq On : 21 Apr 2025 7:44 pm

Operator : MAH

Sample : BFD0016-BLK1

Misc :

ALS Vial : 114 Sample Multiplier: 1

Quant Time: Apr 22 09:03:35 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	26833547	20.00	ug/mL	# 0.00
4) Chrysene-d12	15.164	240	24898312	20.00	ug/mL	0.00

System Monitoring Compounds

5) Terphenyl-d14	13.889	244	31404264	21.12	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	84.48%	

Target Compounds	Qvalue
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(#)= qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11501012.D

Acq On : 21 Apr 2025 8:12 pm

Operator : MAH

Sample : WFC1094-03

Misc :

ALS Vial : 115 Sample Multiplier: 1

Quant Time: Apr 22 09:04:39 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.098	164	23520852	20.00	ug/mL	# 0.00
4) Chrysene-d12	15.164	240	24090461	20.00	ug/mL	0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.888	244	27352093	19.01	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	76.04%	

Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11601013.D

Acq On : 21 Apr 2025 8:39 pm

Operator : MAH

Sample : WFC1094-04

Misc :

ALS Vial : 116 Sample Multiplier: 1

Quant Time: Apr 22 09:05:12 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	10.098	164	27503160	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.162	240	18082714	20.00 ug/mL		0.00

System Monitoring Compounds

5) Terphenyl-d14	13.886	244	24668850	22.85 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	91.40%	

Target Compounds	Qvalue

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\
Data File : 11701014.D
Acq On : 21 Apr 2025 9:07 pm
Operator : MAH
Sample : WFC1094-05
Misc :
ALS Vial : 117 Sample Multiplier: 1

Quant Time: Apr 22 09:09:39 2025
Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Tue Apr 22 08:55:10 2025
Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	26996665	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.166	240	25720972	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.891	244	28225606	18.38 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	73.52%	

Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11801015.D

Acq On : 21 Apr 2025 9:35 pm

Operator : MAH

Sample : WFC1094-06

Misc :

ALS Vial : 118 Sample Multiplier: 1

Quant Time: Apr 22 09:10:29 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Acenaphthene-d10	10.099	164	27294764	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.165	240	27001051	20.00 ug/mL		0.00

System Monitoring Compounds

5) Terphenyl-d14	13.889	244	30777767	19.09 ug/mL	0.00
Spiked Amount	25.000		Recovery	=	76.36%

Target Compounds	Qvalue

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 11901016.D

Acq On : 21 Apr 2025 10:03 pm

Operator : MAH

Sample : WFC1094-07

Misc :

ALS Vial : 119 Sample Multiplier: 1

Quant Time: Apr 22 09:11:21 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.098	164	26350033	20.00	ug/mL	# 0.00
4) Chrysene-d12	15.163	240	18677299	20.00	ug/mL	0.00

System Monitoring Compounds

5) Terphenyl-d14	13.887	244	24165652	21.67	ug/mL	0.00
Spiked Amount	25.000		Recovery	=	86.68%	

Target Compounds	Qvalue
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(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\

Data File : 12001017.D

Acq On : 21 Apr 2025 10:31 pm

Operator : MAH

Sample : WFC1094-08

Misc :

ALS Vial : 120 Sample Multiplier: 1

Quant Time: Apr 22 09:12:46 2025

Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M

Quant Title : EPA 8270D - GC MSD4

QLast Update : Tue Apr 22 08:55:10 2025

Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.099	164	30356613	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.164	240	21514246	20.00 ug/mL		0.00
System Monitoring Compounds						
5) Terphenyl-d14	13.888	244	26588450	20.70 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	82.80%	

Target Compounds	Qvalue
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(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data Path : T:\Data1\MSD4\2025\APR\21\
Data File : 12101018.D
Acq On : 21 Apr 2025 10:59 pm
Operator : MAH
Sample : WFC1094-09
Misc :
ALS Vial : 121 Sample Multiplier: 1

Quant Time: Apr 22 09:13:12 2025
Quant Method : T:\Data1\MSD4\METHODS\2025\Cardo-042125.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Tue Apr 22 08:55:10 2025
Response via : Initial Calibration

Compound	R.T.	Qlon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	10.098	164	26732367	20.00 ug/mL	#	0.00
4) Chrysene-d12	15.163	240	16978967	20.00 ug/mL		0.00

System Monitoring Compounds

5) Terphenyl-d14	13.887	244	23297653	22.98 ug/mL		0.00
Spiked Amount	25.000		Recovery	=	91.92%	

Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Report Generated By Teledyne CETAC QuickTrace

Analyst: Mercury

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\04152025 Hg 245.wszf

Creation Date: 4/15/2025 9:50:18 AM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
Calibration Blank	STD	04/15/25 10:49:00 am	0.000	1260	2.19	15.98		N/A
Replicates			1286.9	1226.1	1248.5	1276.8		
Standard #1 (0.1 ug/L)	STD	04/15/25 10:51:32 am	0.100	2300	1.04	-4.81		N/A
Replicates			2268.1	2294.8	2314.5	2321.4		
Standard #2 (0.2 ug/L)	STD	04/15/25 10:54:04 am	0.200	3573	1.45	-7.82		N/A
Replicates			3524.9	3531.9	3611.1	3624.2		
Standard #3 (0.5 ug/L)	STD	04/15/25 10:56:36 am	0.500	7597	1.42	-1.35		N/A
Replicates			7467.4	7556.1	7650.5	7713.1		
Standard #4 (1.0 ug/L)	STD	04/15/25 10:59:08 am	1.000	14078	1.47	-7.72		N/A
Replicates			13849.6	13981.3	14157.7	14323.1		
Standard #5 (2.0 ug/L)	STD	04/15/25 11:01:41 am	2.000	27806	1.61	37.84		N/A
Replicates			27272.6	27650.3	27986.8	28312.4		
Standard #6 (5.0 ug/L)	STD	04/15/25 11:04:13 am	5.000	66025	1.29	-51.17		N/A
Replicates			65087.9	65665.9	66274.3	67072.7		
Standard #7 (10.0 ug/L)	STD	04/15/25 11:06:46 am	10.000	132594	1.50	19.06		N/A
Replicates			130172.9	131962.3	133436.8	134805.9		

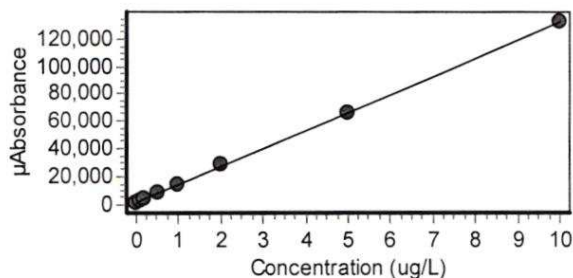
Calibration

Equation: $A = 1049.850 + 13129.435C$

R2: 0.99994

SEE: 371.9246

Flags:



ICV	ICV	04/15/25 11:23:58 am	1.150	16131	1.82	Q	28.72
Replicates			15803.8	16031.6	16255.3	16435.4	
CCV (95-105%)	OPR	04/15/25 11:26:30 am	1.010	14370	1.40	Q	20.29
Replicates			14147.6	14305.3	14444.3	14580.9	
CK	UNK	04/15/25 11:29:03 am	4.970	66294	1.17		N/A
Replicates			65441.0	66003.7	66492.6	67240.6	
CCB	CCB	04/15/25 11:31:34 am	0.004	1107	20.17		N/A
Replicates			1117.8	1095.1	1115.7	1099.0	
BLANK	MB	04/15/25 11:34:05 am	0.010	1175	14.39		N/A
Replicates			1154.8	1185.4	1166.0	1194.4	

Sample Name	Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
-------------	------	-----------	-------------	------	------	----------	-------	------------

LCS	LCS	04/15/25 11:36:36 am	1.170	16450	1.14	L	29.32
Replicates	16214.2	16425.4	16538.8	16620.4			
LCS2	UNK	04/15/25 11:39:08 am	2.300	31205	1.45		N/A
Replicates	30699.3	31046.6	31350.2	31722.9			
LCS 4	UNK	04/15/25 11:41:39 am	4.350	58153	0.99		N/A
Replicates	57437.6	58040.9	58356.6	58775.8			
MDL0.1PPB 1	UNK	04/15/25 11:44:11 am	-0.080	6	2.28		N/A
Replicates	7.8	26.0	17.3	-28.3			
MDL0.1PPB 2	UNK	04/15/25 11:46:43 am	-0.083	-37	2.47		N/A
Replicates	-51.1	-61.7	-35.7	-0.1			
MDL0.1PPB 3	UNK	04/15/25 11:49:14 am	-0.085	-65	1.87		N/A
Replicates	-56.4	-94.6	-64.3	-46.2			
MDL0.1PPB 1	UNK	04/15/25 11:51:46 am	0.067	1930	2.96		N/A
Replicates	1897.2	1922.0	1945.3	1955.7			
MDL0.1PPB 2	UNK	04/15/25 11:54:18 am	0.059	1826	3.50		N/A
Replicates	1803.4	1803.9	1858.3	1838.7			
MDL0.1PPB 3	UNK	04/15/25 11:56:50 am	0.054	1763	2.48		N/A
Replicates	1742.3	1767.3	1758.3	1784.7			
MDL0.2 PPB 1	UNK	04/15/25 11:59:22 am	0.217	3904	1.65		N/A
Replicates	3838.0	3908.0	3922.5	3947.7			
MDL0.2 PPB 2	UNK	04/15/25 12:01:54 pm	0.153	3061	1.97		N/A
Replicates	3019.9	3037.9	3079.4	3107.2			
MDL0.2 PPB 3	UNK	04/15/25 12:04:26 pm	0.160	3147	1.14		N/A
Replicates	3113.5	3148.0	3163.4	3165.1			
WFC1049-01	UNK	04/15/25 12:06:59 pm	0.001	1064	106.79		N/A
Replicates	1043.8	1074.0	1076.2	1061.2			
MS1	UNK	04/15/25 12:09:30 pm	3.480	46708	0.92		N/A
Replicates	46209.5	46593.2	46823.7	47206.6			
MSD1	UNK	04/15/25 12:12:01 pm	3.460	46420	1.14		N/A
Replicates	45781.0	46277.6	46632.1	46987.4			
MSA	UNK	04/15/25 12:14:32 pm	3.110	41893	0.97		N/A
Replicates	41395.4	41781.8	42079.2	42314.1			
MSDA	UNK	04/15/25 12:17:03 pm	3.070	41388	1.40		N/A
Replicates	40801.0	41103.6	41549.6	42099.6			
WFC1049-02	UNK	04/15/25 12:19:35 pm	0.009	1162	13.74		N/A
Replicates	1139.1	1168.6	1171.7	1169.2			
WFC1049-03	UNK	04/15/25 12:22:06 pm	0.006	1127	18.18		N/A
Replicates	1113.8	1128.8	1120.7	1146.5			
WFC1049-04	UNK	04/15/25 12:24:38 pm	0.067	1933	0.66		N/A
Replicates	1930.8	1925.5	1934.8	1939.1			

Sample Name			Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
WFC1049-05			UNK	04/15/25 12:27:10 pm	0.020	1310	4.85			N/A
Replicates	1325.1	1294.3		1312.5 1309.2						
WFC1049-06			UNK	04/15/25 12:29:42 pm	0.017	1269	9.15			N/A
Replicates	1284.1	1288.3		1256.6 1247.7						
MS2			UNK	04/15/25 12:32:14 pm	3.180	42775	1.02			N/A
Replicates	43224.0	43015.6		42584.1 42277.9						
MSD2			UNK	04/15/25 12:34:47 pm	2.750	37104	2.10			N/A
Replicates	38082.3	37301.5		36640.1 36390.6						
MSB			UNK	04/15/25 12:37:19 pm	2.590	35007	2.83			N/A
Replicates	36129.1	35380.9		34609.5 33909.0						
MSDB			UNK	04/15/25 12:39:50 pm	1.810	24814	3.66			N/A
Replicates	25891.4	25063.2		24437.4 23863.1						
WFC1094-07			UNK	04/15/25 12:42:21 pm	-0.108	-368	2.11			N/A
Replicates	-335.1	-352.9		-380.5 -403.0						
WFC1094-08			UNK	04/15/25 12:44:52 pm	-0.025	715	8.52			N/A
Replicates	743.7	731.3		705.7 679.5						
WFC1094-09			UNK	04/15/25 12:47:24 pm	-0.046	448	3.68			N/A
Replicates	478.4	438.6		448.7 426.6						
WFC1094-10			UNK	04/15/25 12:49:55 pm	-0.015	849	6.79			N/A
Replicates	866.0	853.4		839.4 836.3						
WFC1094-11			UNK	04/15/25 12:52:27 pm	-0.046	442	1.27			N/A
Replicates	441.1	449.4		432.0 446.8						
WFC1094-12			UNK	04/15/25 12:54:59 pm	-0.061	250	1.59			N/A
Replicates	257.5	247.7		233.6 262.5						
WFD0038-01			UNK	04/15/25 12:57:30 pm	-0.029	672	7.75			N/A
Replicates	713.1	669.0		644.3 661.7						
WFD0275-02			UNK	04/15/25 01:00:03 pm	-0.031	641	3.70			N/A
Replicates	629.7	631.5		640.9 662.7						
WFD0275-04			UNK	04/15/25 01:02:35 pm	0.073	2004	2.54			N/A
Replicates	1980.4	1986.0		2017.6 2030.3						
WFD0275-05			UNK	04/15/25 01:05:07 pm	-0.034	602	2.15			N/A
Replicates	615.8	602.1		595.4 595.2						
WFD0275-06			UNK	04/15/25 01:07:40 pm	-0.031	644	2.73			N/A
Replicates	641.9	638.1		635.1 659.8						
WFD0275-07			UNK	04/15/25 01:10:11 pm	-0.025	718	4.93			N/A
Replicates	698.4	738.0		714.9 720.7						
WDF0322-01			UNK	04/15/25 01:12:42 pm	-0.021	775	5.53			N/A
Replicates	757.5	792.0		768.1 782.3						
WDF0522-01			UNK	04/15/25 01:15:13 pm	-0.089	-116	0.61			N/A
Replicates	-110.3	-112.9		-126.5 -114.9						

Sample Name	Type	Date/Time	Conc (ug/L)	μAbs	%RSD	Residual	Flags	% Recovery
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PT@100	UNK	04/15/25 01:17:44 pm	0.073	2003	13.45			N/A
Replicates	1848.7	1948.7	2082.8	2130.1				
PT@10	UNK	04/15/25 01:20:16 pm	2.120	28914	1.02			N/A
Replicates	28594.2	28793.8	29015.0	29254.7				
PT	UNK	04/15/25 01:22:47 pm	O/R	215550	1.72		O	N/A
Replicates	219987.4	216840.1	213970.5	211403.9				
BLK	UNK	04/15/25 01:25:19 pm	-0.312	-3044	11.24			N/A
Replicates	-2461.0	-2924.2	-3264.4	-3525.6				
LCS	UNK	04/15/25 01:27:51 pm	0.959	13635	1.86			N/A
Replicates	13388.3	13526.2	13690.2	13933.7				
BLK	UNK	04/15/25 01:59:57 pm	0.003	1088	42.18			N/A
Replicates	1106.7	1096.9	1075.9	1073.5				
CK	UNK	04/15/25 02:02:30 pm	2.050	27990	0.94			N/A
Replicates	27708.3	27885.4	28063.9	28300.6				
CK2	UNK	04/15/25 02:05:03 pm	4.840	64589	0.34			N/A
Replicates	64360.9	64544.2	64571.6	64880.3				

TPHDx/HCID Extractions by EPA8015mod

Anatek Labs, Inc Spokane

Batch: BFC1251

Date: 3/28/25

Time: 10:00

Initial: BAM

Sample Number	Sample ID	Sample Matrix	Sample Amount	µL diesel spike amt	Surrogate spike amt	Internal spike amt	clean up used	Extract 3x with MeCl2	Final volume (mL)
BFC1251-BLK1	Blank	Water	500mL	0	10	10	N	Y	1
BFC1251-BS1	LCS			10	10	10			1
BFC1251-BSD1	LCS Dup			10	10	10			1
WFC1094-01	D-4			8	10	10			1
WFC1094-02	D-6				10	10			1
WFC1094-03	D-7				10	10			1
WFC1094-04	D-8				10	10			1
WFC1094-05	E-2				10	10			1
BFC1251-MS1	Matrix Spike WFC1094-06			10	10	10			1
BFC1251-MSD1	Matrix Spike Dup WFC1094-06			10	10	10			1
WFC1094-06	E-1			8	10	10			1
WFC1094-07	E-1 DUP				10	10			1
WFC1094-08	WW-2				10	10			1
WFC1094-09	WW-3				10	10			1
WFC1094-10	U-2/WW-5				10	10			1
WFC1094-11	U-3/WW-4				10	10			1
BFC1251-DUP2	Duplicate WFC1094-12				10	10			1
WFC1094-12	WW-6				10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1

MeCl ₂	2500513	Balance	BAL-03
Na ₂ SO ₄	2400691	Pipette	PT-11
Gas 20,000 ppm	2204079		
Diesel 20,000 ppm	2404146		
Motor Oil 20,000 ppm	2500384		
Internal Standard	2501023		
Surrogate Standard	2500030		
Diesel ICV	2500159		

- Dark orange emulsion layer sample 3
- 5/6 large white emulsion layer
- 7/8/10 large emulsion layer
- Emulsion layer ms/msd
- Sodium sulfate contamination 6/10/11/ms/msd

MS/MSD method

failed low, not repeating as does not require it

BAM 4/1/25



Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	Sig10001.d	1.	BLK		01 Apr 2025 10:35
2	Sig10002.d	1.	DX 500 PPM		01 Apr 2025 11:31
3	Sig10003.d	1.	DX ICV		01 Apr 2025 12:27
4	Sig10004.d	1.	LO 1000 PPM		01 Apr 2025 13:11
5	Sig10005.d	1.	MO 1000 PPM		01 Apr 2025 13:55
6	Sig10006.d	1.	40 PPM GAS		01 Apr 2025 14:39
7	Sig10007.d	1.	BFC1349-BLK1		01 Apr 2025 15:37
6	Sig10008.d	1.	40 PPM GAS		01 Apr 2025 16:33
7	Sig10009.d	1.	BFC1349-BLK1		01 Apr 2025 17:30
8	Sig10010.d	1.	BFC1349-BS1		01 Apr 2025 18:27
9	Sig10011.d	1.	BFC1349-BSD1		01 Apr 2025 19:24
10	Sig10012.d	1.	WFC0660-02		01 Apr 2025 20:20
11	Sig10013.d	1.	WFC1015-04		01 Apr 2025 21:17
12	Sig10014.d	1.	BFC1349-DUP1		01 Apr 2025 22:13
13	Sig10015.d	1.	WFC1176-01		01 Apr 2025 23:09
1	Sig10016.d	1.	BLK		02 Apr 2025 00:06
2	Sig10017.d	1.	DX 500 PPM		02 Apr 2025 01:02
3	Sig10018.d	1.	DX ICV		02 Apr 2025 01:58
4	Sig10019.d	1.	LO 1000 PPM		02 Apr 2025 02:55
5	Sig10020.d	1.	MO 1000 PPM		02 Apr 2025 03:51
6	Sig10021.d	1.	40 PPM GAS		02 Apr 2025 04:47
14	Sig10022.d	1.	BFC1251-BLK1		02 Apr 2025 05:44
15	Sig10023.d	1.	BFC1251-BS1		02 Apr 2025 06:40
16	Sig10024.d	1.	BFC1251-BSD1	NO internal spike	02 Apr 2025 07:36
17	Sig10025.d	1.	WFC1094-01	ND	02 Apr 2025 08:32
18	Sig10026.d	1.	WFC1094-02	ND	02 Apr 2025 09:29
16	Sig10027.d	1.	BFC1251-BSD2	ND	02 Apr 2025 10:25
19	Sig10028.d	1.	WFC1094-03	ND	02 Apr 2025 11:22
20	Sig10029.d	1.	WFC1094-04	ND	02 Apr 2025 12:18
21	Sig10030.d	1.	WFC1094-05	low, sample had large emulsion layer / sodium sulfate contamination	02 Apr 2025 13:15
22	Sig10031.d	1.	WFC1094-06	ND	02 Apr 2025 14:12
23	Sig10032.d	1.	WFC1094-07	ND	02 Apr 2025 15:09
24	Sig10033.d	1.	WFC1094-08	ND	02 Apr 2025 16:06
25	Sig10034.d	1.	WFC1094-09	ND	02 Apr 2025 17:03
26	Sig10035.d	1.	WFC1094-10	ND	02 Apr 2025 18:00
27	Sig10036.d	1.	BFC1251-DUP1	ND	02 Apr 2025 18:57
1	Sig10037.d	1.	BLK		02 Apr 2025 19:54
2	Sig10038.d	1.	DX 500 PPM		02 Apr 2025 20:50
3	Sig10039.d	1.	DX ICV	HIGH 590	02 Apr 2025 21:47
4	Sig10040.d	1.	LO 1000 PPM		02 Apr 2025 22:43
5	Sig10041.d	1.	MO 1000 PPM		02 Apr 2025 23:40
6	Sig10042.d	1.	40 PPM GAS		03 Apr 2025 00:36
28	Sig10043.d	1.	WFC1094-11	surrogate failed low, sample had emulsion layer	03 Apr 2025 01:32
29	Sig10044.d	1.	WFC1094-12	ND	03 Apr 2025 02:29
30	Sig10045.d	1.	BFC1251-MS1	Failed low	03 Apr 2025 03:25
31	Sig10046.d	1.	BFC1251-MSD1	passed spiked	03 Apr 2025 04:21
32	Sig10047.d	1.	BDM IDOC		03 Apr 2025 05:17
33	Sig10048.d	1.	BDM IDOC		03 Apr 2025 06:14
1	Sig10049.d	1.	BLK		03 Apr 2025 07:10
2	Sig10050.d	1.	DX 500 PPM		03 Apr 2025 08:06
3	Sig10051.d	1.	DX ICV	DX ↑	03 Apr 2025 09:03

MS/MSD failed: MS
(not required per

low, MSD
method).

2x Spiked, not reporting

03 Apr 2025 09:15

BSD1 no internal spikes, reporting from MSD
added internal, reporting from MSD

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	Sig10001.d	1.	BLK		04 Apr 2025 12:08
2	Sig10002.d	1.	GAS 40 PPM		04 Apr 2025 13:04
3	Sig10003.d	1.	DX 40 PPM		04 Apr 2025 14:00
4	Sig10004.d	1.	DX 100 PPM		04 Apr 2025 14:57
5	Sig10005.d	1.	DX 500 PPM	PASS	04 Apr 2025 15:54
6	Sig10006.d	1.	DX 1000 PPM		04 Apr 2025 16:51
1	Sig10007.d	1.	BLK		04 Apr 2025 17:48
7	Sig10008.d	1.	DX 2500 PPM		04 Apr 2025 18:44
8	Sig10009.d	1.	DX 5000 PPM		04 Apr 2025 19:41
9	Sig10010.d	1.	LO 100 PPM		04 Apr 2025 20:37
10	Sig10011.d	1.	LO 500 PPM		04 Apr 2025 21:32
11	Sig10012.d	1.	LO 1000 PPM	PASS NO surrogate spike	04 Apr 2025 22:28
12	Sig10013.d	1.	LO 2000 PPM		04 Apr 2025 23:24
13	Sig10014.d	1.	LO 4000 PPM		05 Apr 2025 00:20
14	Sig10015.d	1.	LO 6000 PPM		05 Apr 2025 01:15
15	Sig10016.d	1.	MO 40 PPM		05 Apr 2025 02:11
16	Sig10017.d	1.	MO 500 PPM		05 Apr 2025 03:06
17	Sig10018.d	1.	MO 1000 PPM	PASS	05 Apr 2025 04:02
18	Sig10019.d	1.	MO 2500 PPM		05 Apr 2025 04:57
19	Sig10020.d	1.	MO 5000 PPM		05 Apr 2025 05:53
20	Sig10021.d	1.	DX 500 ICV	PASS	05 Apr 2025 06:48
21	Sig10022.d	1.	BFC1251-BS1		05 Apr 2025 07:43
22	Sig10023.d	1.	BFC1251-BSD1		05 Apr 2025 08:39
23	Sig10024.d	1.	BFC1251-BSD2		05 Apr 2025 09:34
24	Sig10025.d	1.	BFC1340-BLK1		05 Apr 2025 10:30
25	Sig10026.d	1.	BFC1340-BS1		05 Apr 2025 11:26
26	Sig10027.d	1.	BFC1340-BSD1		05 Apr 2025 12:22
27	Sig10028.d	1.	YFC0567-01		05 Apr 2025 13:18
28	Sig10029.d	1.	YFC0567-02		05 Apr 2025 14:15
29	Sig10030.d	1.	YFC0567-03		05 Apr 2025 15:11
30	Sig10031.d	1.	YFC0567-04		05 Apr 2025 16:08
31	Sig10032.d	1.	YFC0567-05		05 Apr 2025 17:05
32	Sig10033.d	1.	YFC0567-06		05 Apr 2025 18:02
33	Sig10034.d	1.	YFC0567-07		05 Apr 2025 18:59
34	Sig10035.d	1.	YFC0567-08		05 Apr 2025 19:56
35	Sig10036.d	1.	WFC1230-01		05 Apr 2025 20:53
36	Sig10037.d	1.	WFC1230-02		05 Apr 2025 21:49
37	Sig10038.d	1.	BFC1340-DUP1		05 Apr 2025 22:45
38	Sig10039.d	1.	BFC1340-MS1		05 Apr 2025 23:41
39	Sig10040.d	1.	BFC1340-MSD1		06 Apr 2025 00:37
1	Sig10041.d	1.	BLK		06 Apr 2025 01:32
5	Sig10042.d	1.	DX 500 PPM		06 Apr 2025 01:28
20	Sig10043.d	1.	DX 500 ICV		06 Apr 2025 03:24
11	Sig10044.d	1.	LO 1000 PPM	FAIL	06 Apr 2025 04:20
17	Sig10045.d	1.	MO 1000 PPM		06 Apr 2025 05:15
2	Sig10046.d	1.	GAS 40 PPM	FAIL 70K, no HUD being run	06 Apr 2025 06:11

Confirmation run for BFC1251 dx.

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10022.D Vial: 14
Acq On : 02 Apr 2025 5:44 Operator: BAM
Sample : BFC1251-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 08:35:41 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

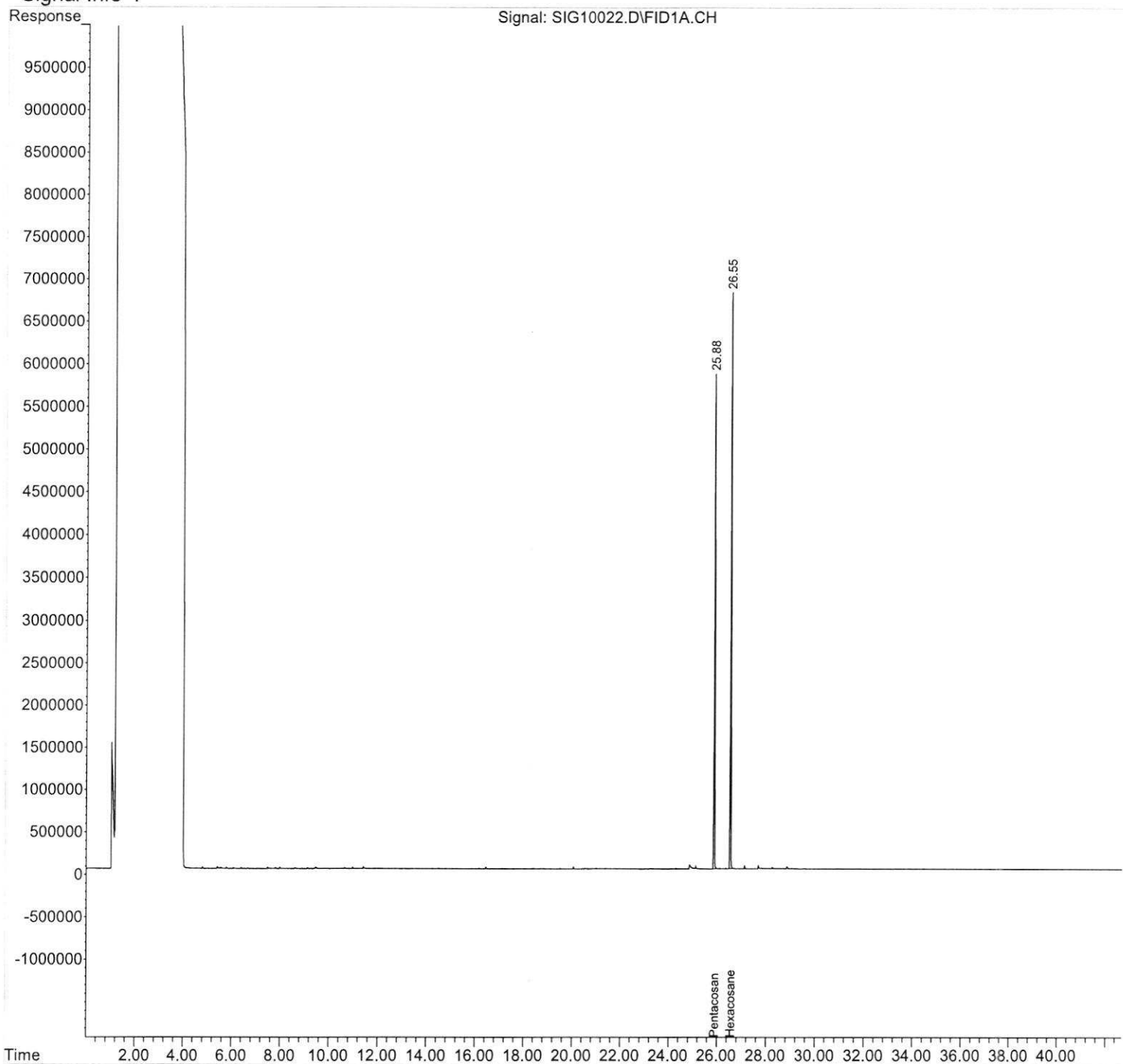
Internal Standards			
I Pentacosane	25.88f	118301641	50.000 ppm
System Monitoring Compounds			
S Hexacosane	26.55	126679701	43.805 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 87.61%
Target Compounds			
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10022.D Vial: 14
Acq On : 02 Apr 2025 5:44 Operator: BAM
Sample : BFC1251-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 2 9:16 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040425C\SIG10022.D Vial: 21
Acq On : 05 Apr 2025 7:43 Operator: BAM
Sample : BFC1251-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 07 08:56:00 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

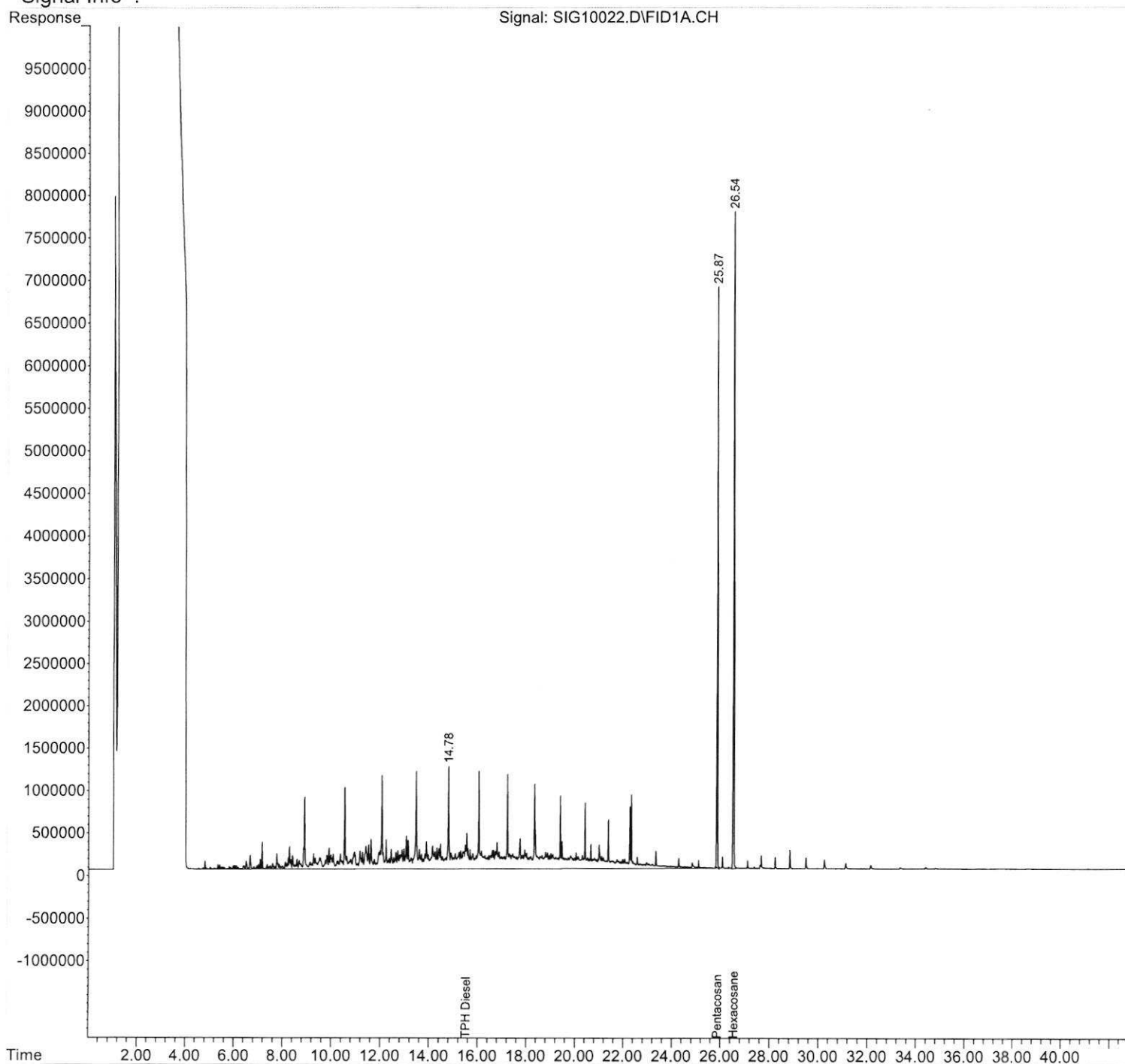
Compound	R.T.	Response	Conc Units
Internal Standards			
I Pentacosane	25.87f	127831759	50.000 ppm m
System Monitoring Compounds			
S Hexacosane	26.54	170920277	54.697 ppm m
iked Amount	50.000	Range 50 - 150	Recovery = 109.39%
Target Compounds			
H TPH Diesel (C12-C14)	15.50	1297821978	470.027 ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040425C\SIG10022.D Vial: 21
Acq On : 05 Apr 2025 7:43 Operator: BAM
Sample : BFC1251-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 7 9:08 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10025.D Vial: 17
Acq On : 02 Apr 2025 8:32 Operator: BAM
Sample : WFC1094-01 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 09:50:53 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	115358037	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.55	129801723	46.030 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 92.06%

Target Compounds

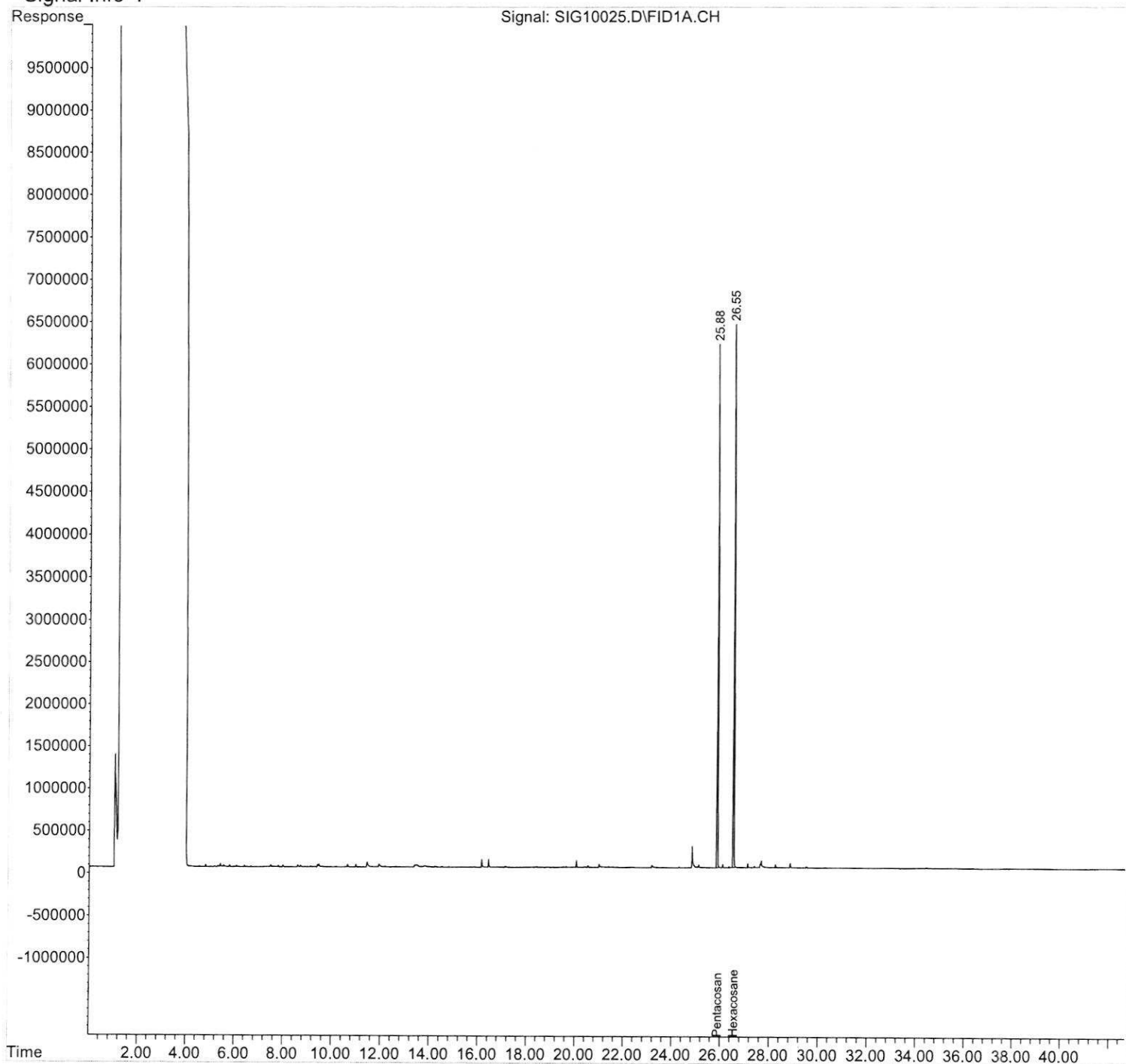
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10025.D Vial: 17
Acq On : 02 Apr 2025 8:32 Operator: BAM
Sample : WFC1094-01 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:07 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10026.D Vial: 18
Acq On : 02 Apr 2025 9:29 Operator: BAM
Sample : WFC1094-02 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 10:25:00 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	111748121	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	118279190	43.299 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 86.60%

Target Compounds

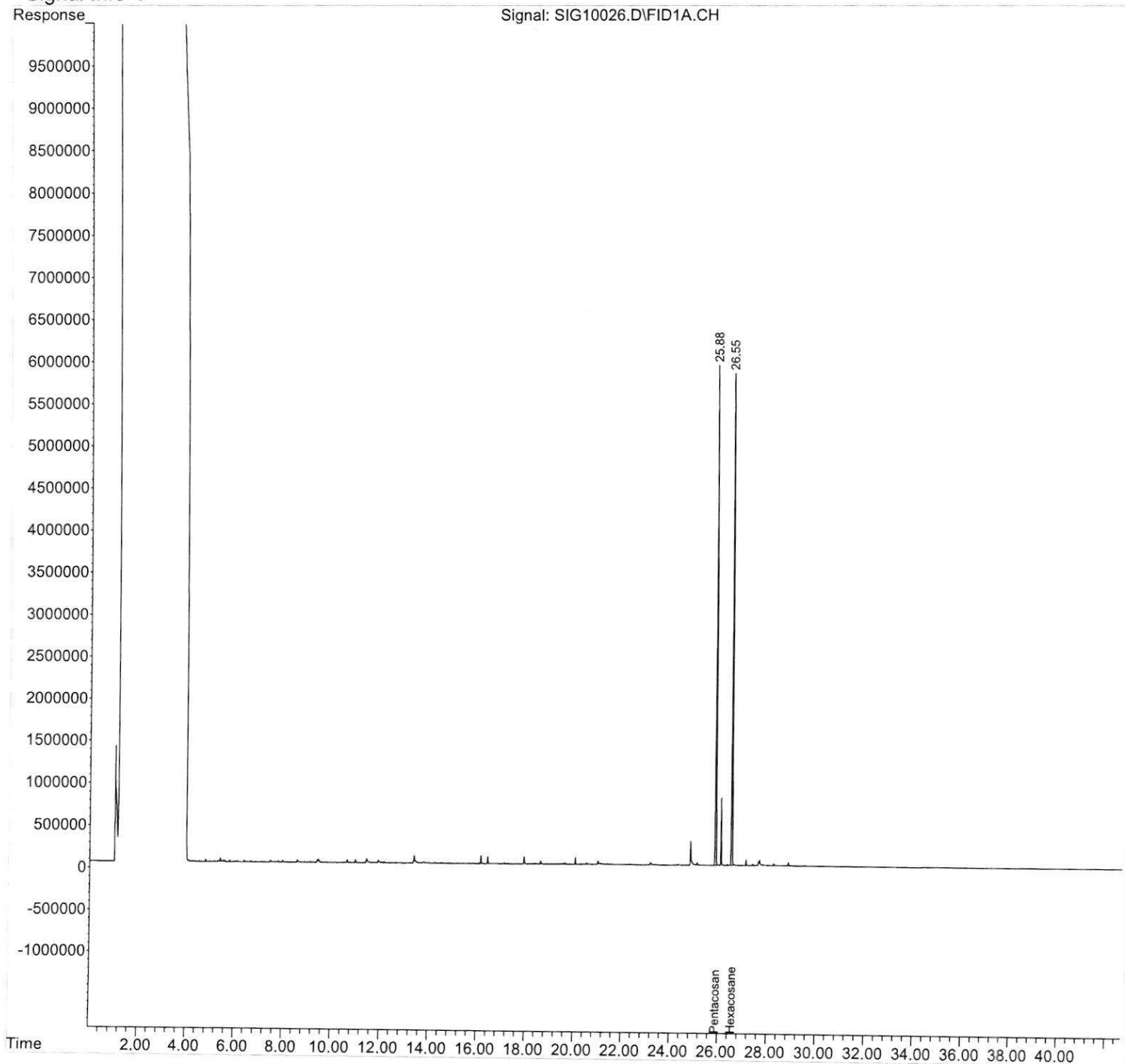
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10026.D Vial: 18
Acq On : 02 Apr 2025 9:29 Operator: BAM
Sample : WFC1094-02 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 2 10:33 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10028.D Vial: 19
Acq On : 02 Apr 2025 11:22 Operator: BAM
Sample : WFC1094-03 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 12:22:37 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.89f	143979106	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.55	156212902	44.384 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 88.77%

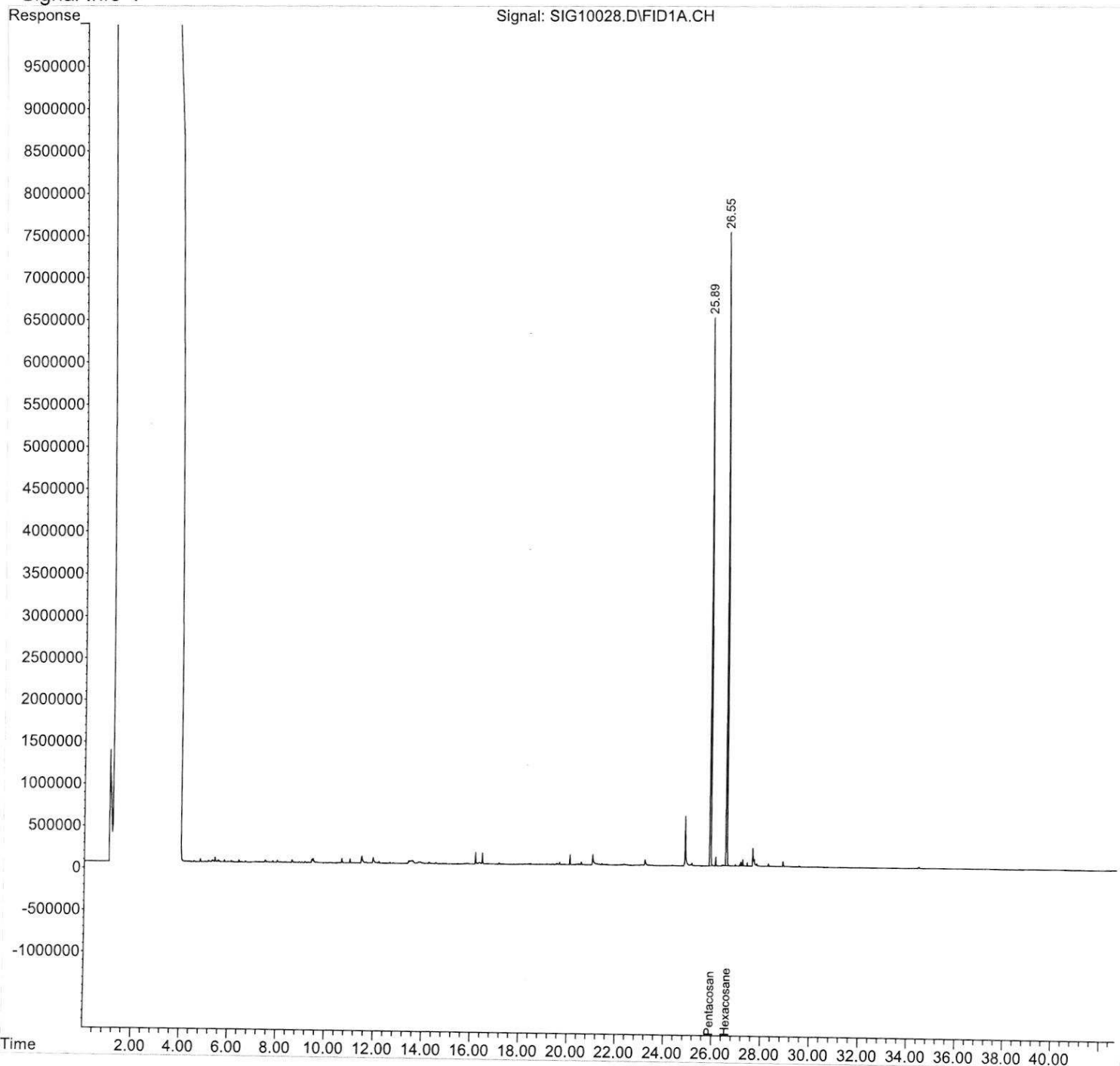
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10028.D Vial: 19
Acq On : 02 Apr 2025 11:22 Operator: BAM
Sample : WFC1094-03 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:07 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10029.D Vial: 20
Acq On : 02 Apr 2025 12:18 Operator: BAM
Sample : WFC1094-04 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 16:53:10 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	112416309	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.55	125206571	45.562 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 91.12%

Target Compounds

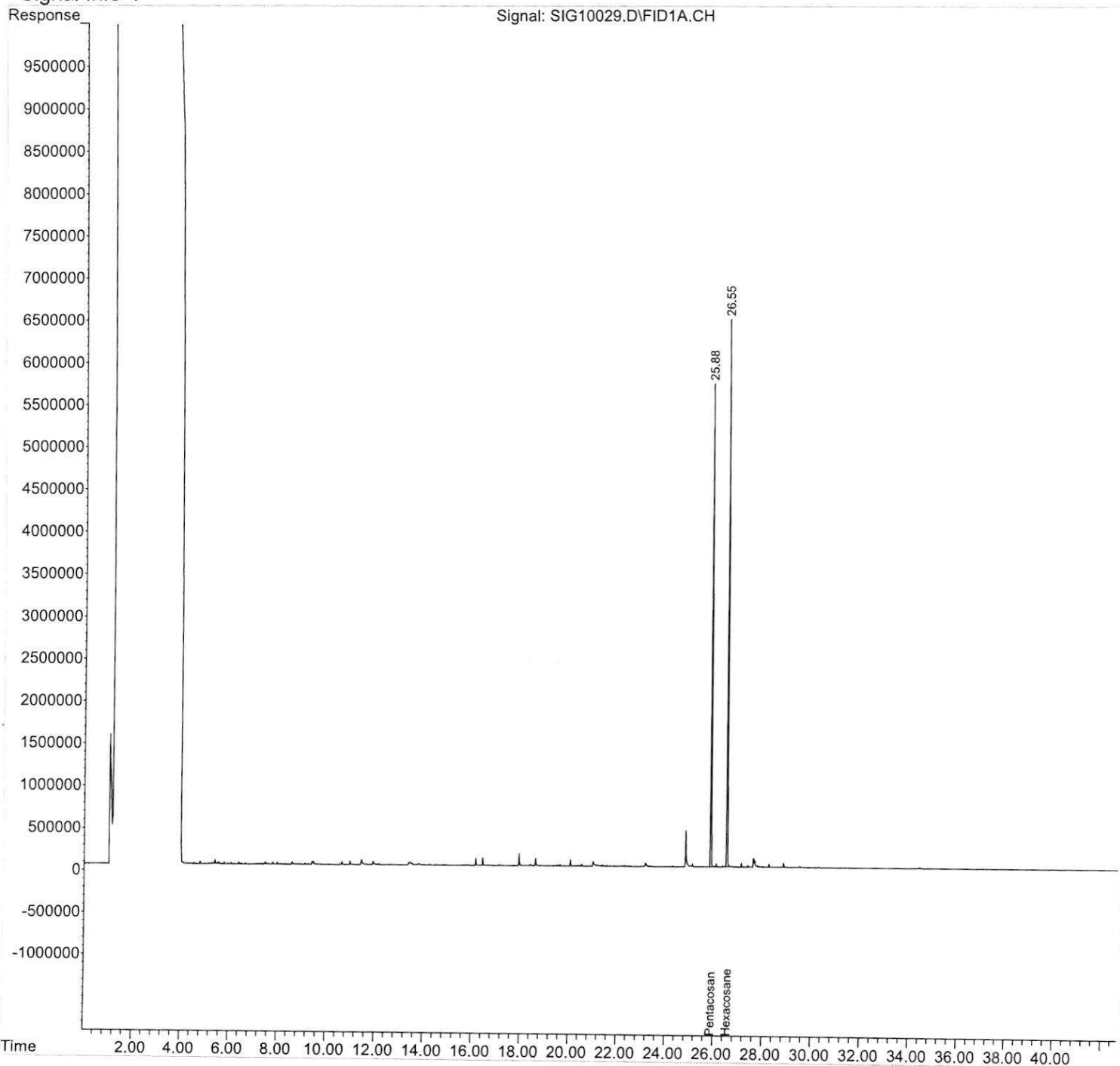
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10029.D Vial: 20
Acq On : 02 Apr 2025 12:18 Operator: BAM
Sample : WFC1094-04 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:08 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10030.D Vial: 21
Acq On : 02 Apr 2025 13:15 Operator: BAM
Sample : WFC1094-05 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 16:53:11 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	103222735	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.53f	41367951	16.394 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 32.79%#

Target Compounds

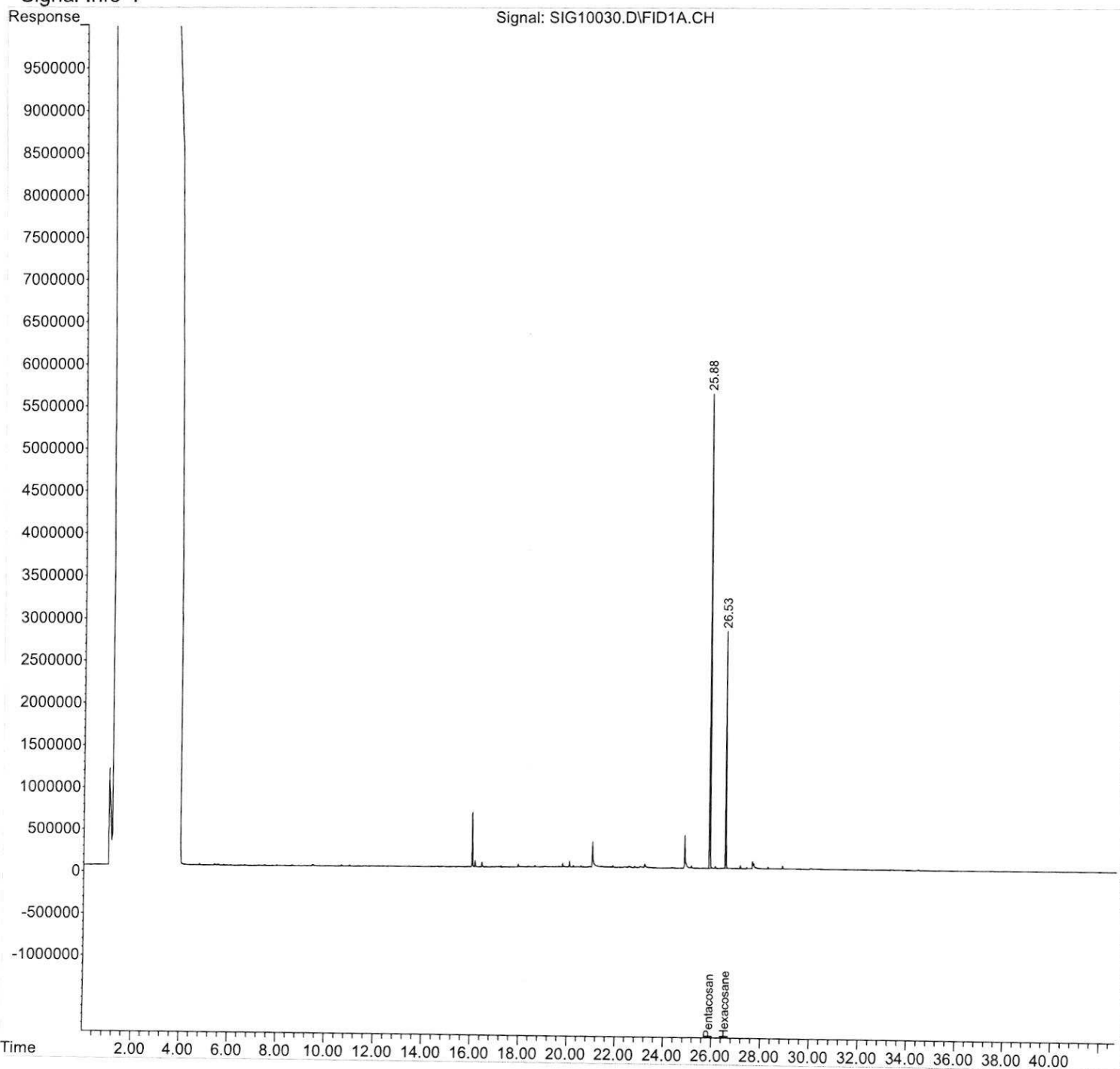
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10030.D Vial: 21
Acq On : 02 Apr 2025 13:15 Operator: BAM
Sample : WFC1094-05 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:09 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10031.D Vial: 22
Acq On : 02 Apr 2025 14:12 Operator: BAM
Sample : WFC1094-06 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 16:53:11 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	107942555	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	94345722	35.755 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 71.51%

Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10031.D Vial: 22

Acq On : 02 Apr 2025 14:12

Operator: BAM

Sample : WFC1094-06

Inst : HP G1530A

Misc :

Multiplr: 1.00

IntFile : EVENTS1.E

Quant Time: Apr 3 10:10 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :

Last Update : Tue Mar 25 09:54:34 2025

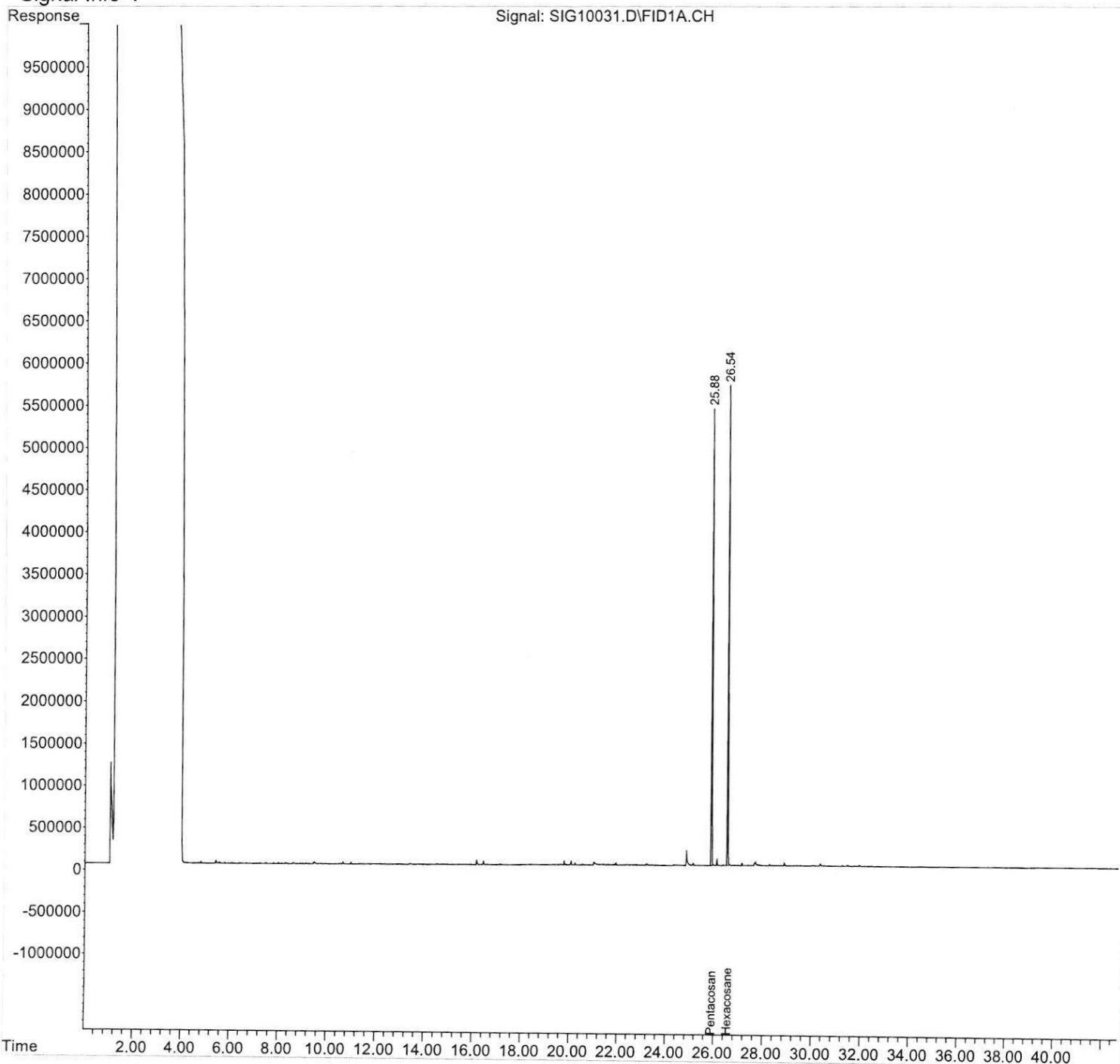
Response via : Multiple Level Calibration

DataAcq Meth : DXHCID7.M

Volume Inj. :

Signal Phase :

Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10032.D Vial: 23
 Acq On : 02 Apr 2025 15:09 Operator: BAM
 Sample : WFC1094-07 Inst : HP G1530A
 Misc : Multiplr: 1.00
 IntFile : EVENTS1.E
 Quant Time: Apr 02 16:53:12 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
 Title :
 Last Update : Tue Mar 25 09:54:34 2025
 Response via : Initial Calibration
 DataAcq Meth : DXHCID7.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	109578074	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	87242604	32.570 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 65.14%

Target Compounds

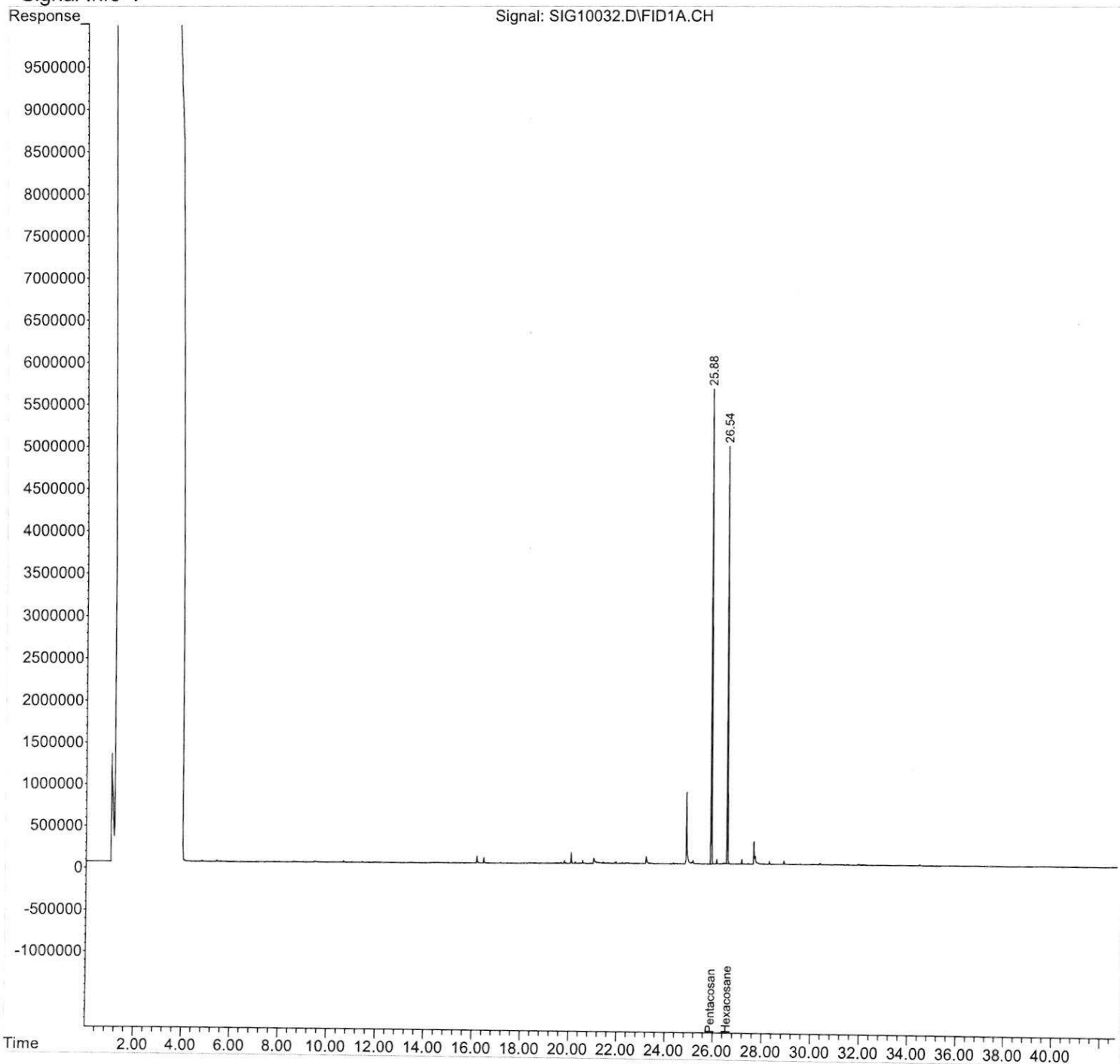
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10032.D Vial: 23
Acq On : 02 Apr 2025 15:09 Operator: BAM
Sample : WFC1094-07 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:10 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10033.D Vial: 24
Acq On : 02 Apr 2025 16:06 Operator: BAM
Sample : WFC1094-08 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 02 16:53:13 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	113808736	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	102548578	36.861 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 73.72%

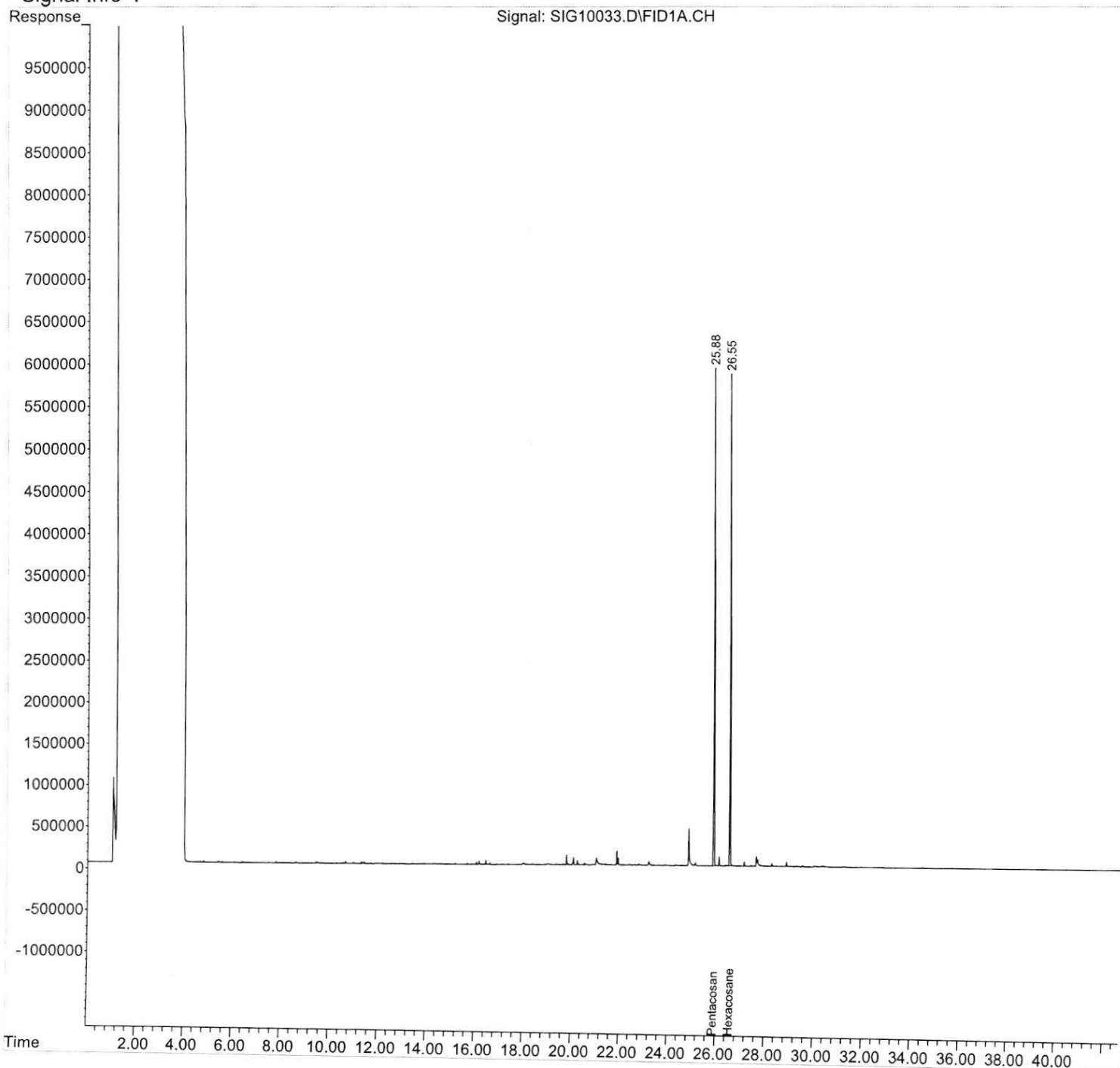
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10033.D Vial: 24
Acq On : 02 Apr 2025 16:06 Operator: BAM
Sample : WFC1094-08 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:11 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10034.D Vial: 25
Acq On : 02 Apr 2025 17:03 Operator: BAM
Sample : WFC1094-09 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 03 09:12:27 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.89f	144262161	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.56	151463822	42.950 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 85.90%

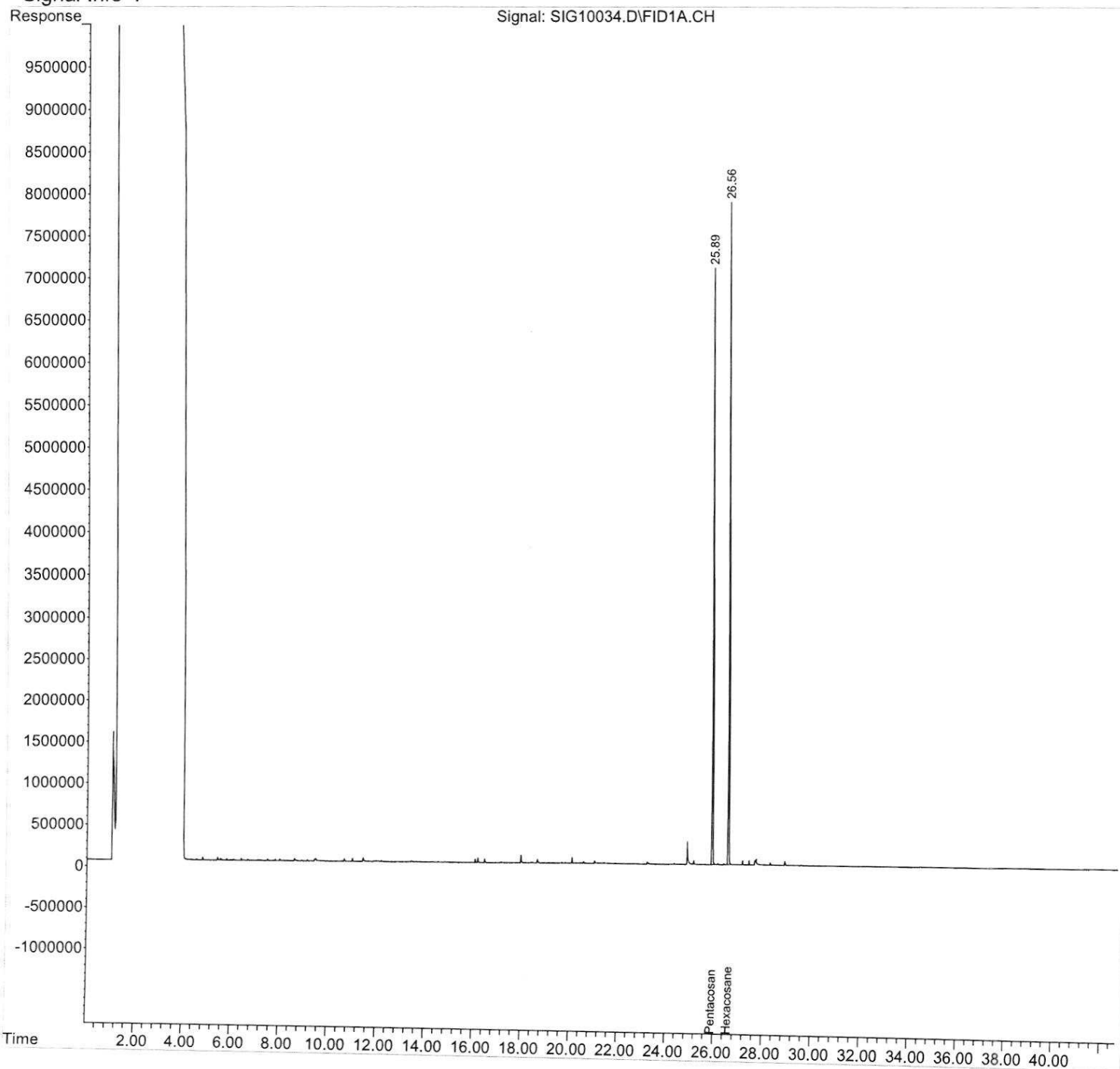
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10034.D Vial: 25
Acq On : 02 Apr 2025 17:03 Operator: BAM
Sample : WFC1094-09 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:11 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10035.D Vial: 26
Acq On : 02 Apr 2025 18:00 Operator: BAM
Sample : WFC1094-10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 03 09:12:28 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	112972229	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	83632386	30.284 ppm
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iked Amount 50.000 Range 50 - 150 Recovery = 60.57%

Target Compounds

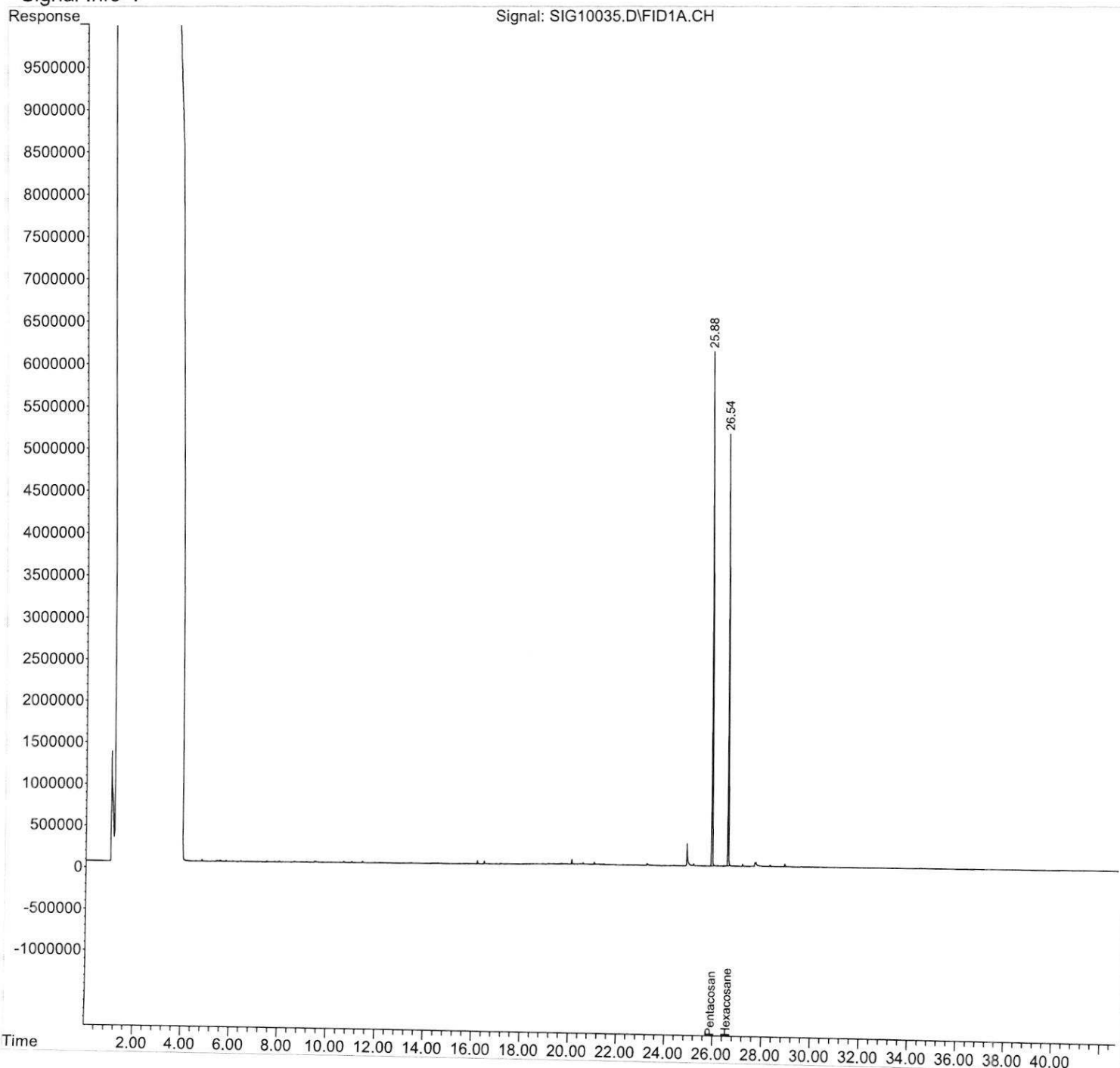
H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10035.D Vial: 26
Acq On : 02 Apr 2025 18:00 Operator: BAM
Sample : WFC1094-10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:12 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)

Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10043.D Vial: 28
Acq On : 03 Apr 2025 1:32 Operator: BAM
Sample : WFC1094-11 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 03 09:12:34 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	125367965	50.000 ppm m
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System Monitoring Compounds

S Hexacosane	26.54f	73774489	24.073 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 48.15%#

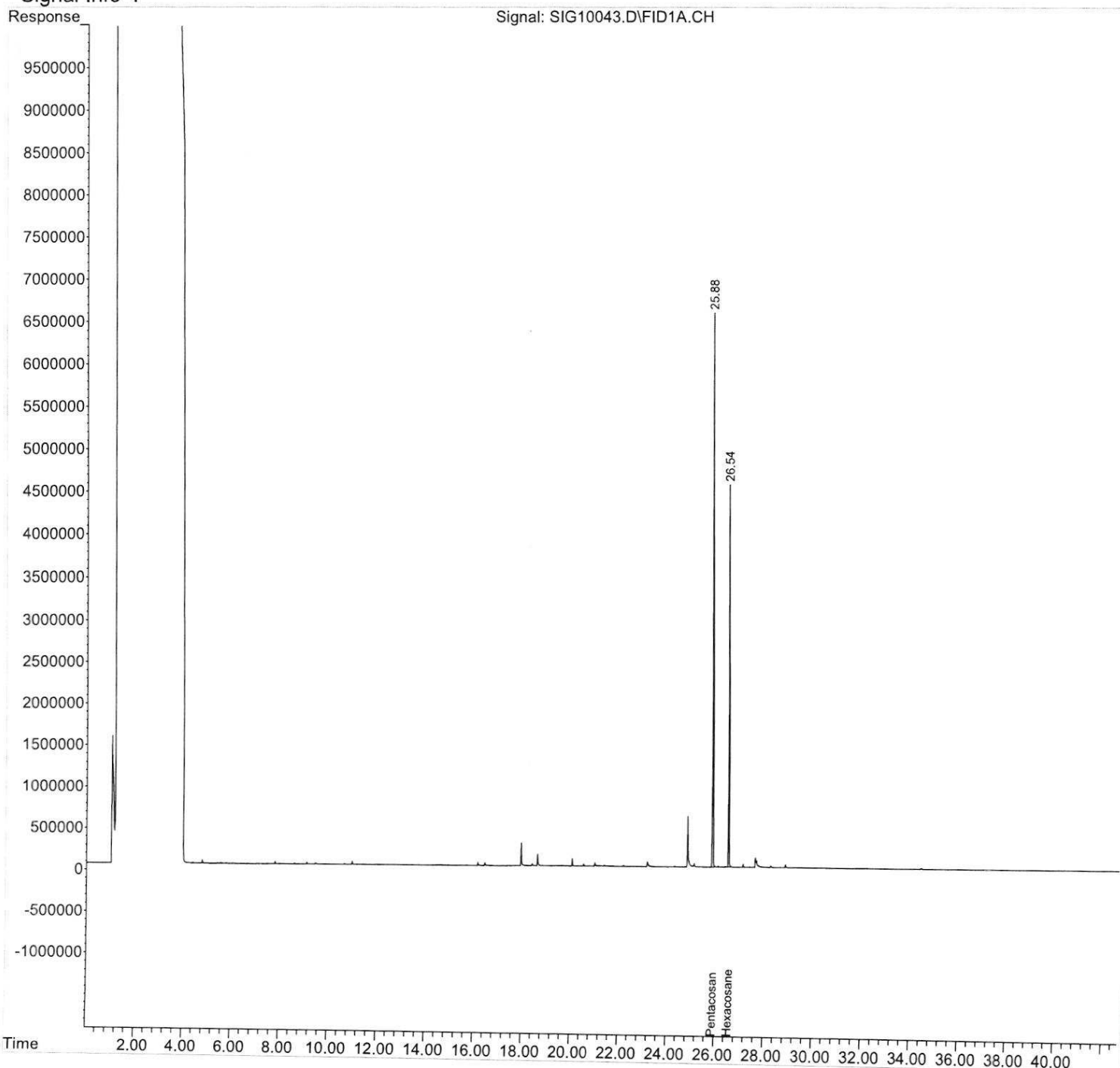
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10043.D Vial: 28
Acq On : 03 Apr 2025 1:32 Operator: BAM
Sample : WFC1094-11 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:14 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10044.D Vial: 29
Acq On : 03 Apr 2025 2:29 Operator: BAM
Sample : WFC1094-12 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 03 09:12:35 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.88f	104360786	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.54	115399497	45.235 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 90.47%

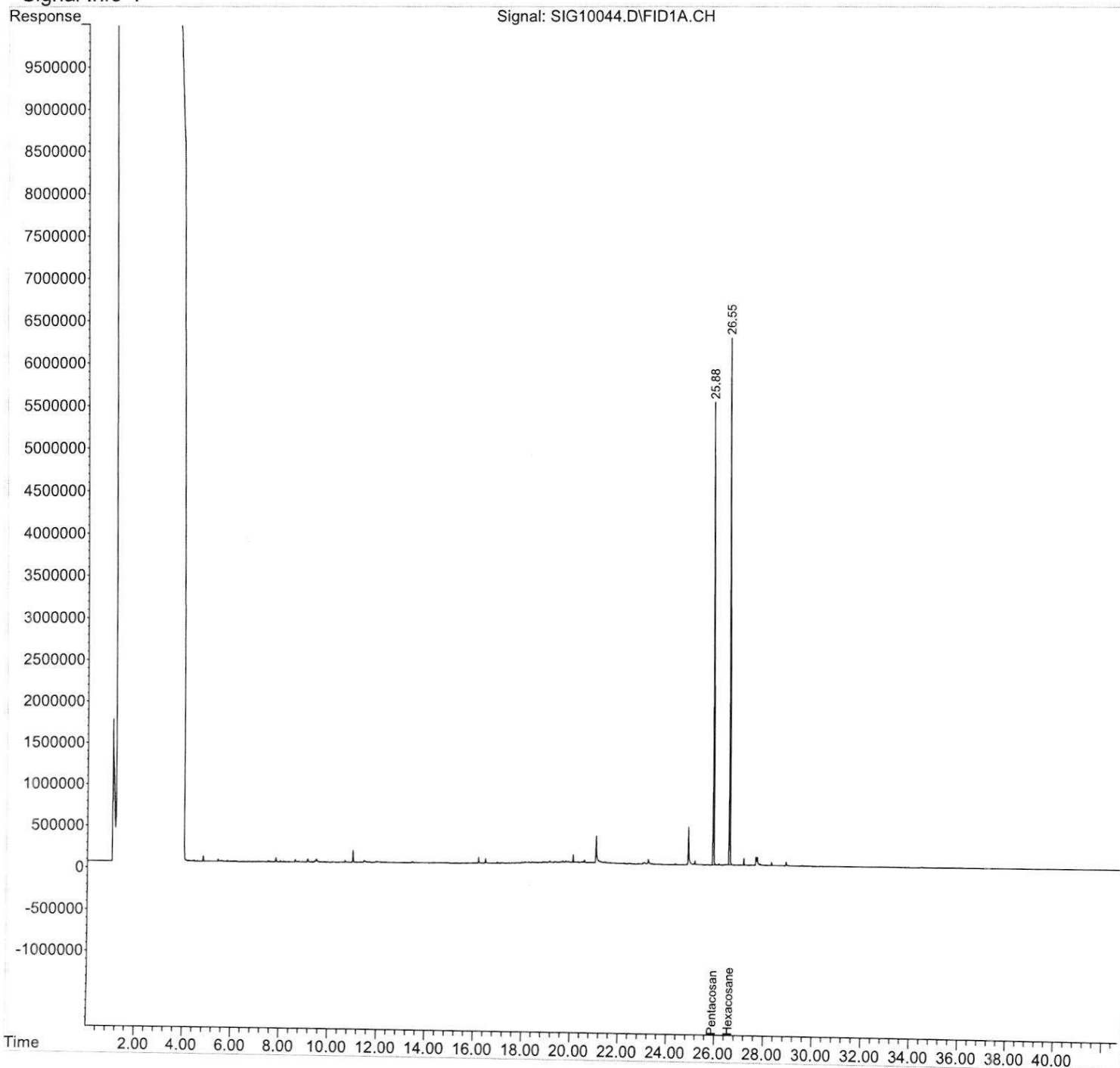
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10044.D Vial: 29
Acq On : 03 Apr 2025 2:29 Operator: BAM
Sample : WFC1094-12 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:14 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : W:\HPCHEM\1\2025DATA\040125\SIG10036.D Vial: 27
Acq On : 02 Apr 2025 18:57 Operator: BAM
Sample : BFC1251-DUP1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 03 09:12:29 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
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Internal Standards

I Pentacosane	25.89f	120415896	50.000 ppm
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System Monitoring Compounds

S Hexacosane	26.55	134838850	45.808 ppm
iked Amount	50.000	Range 50 - 150	Recovery = 91.62%

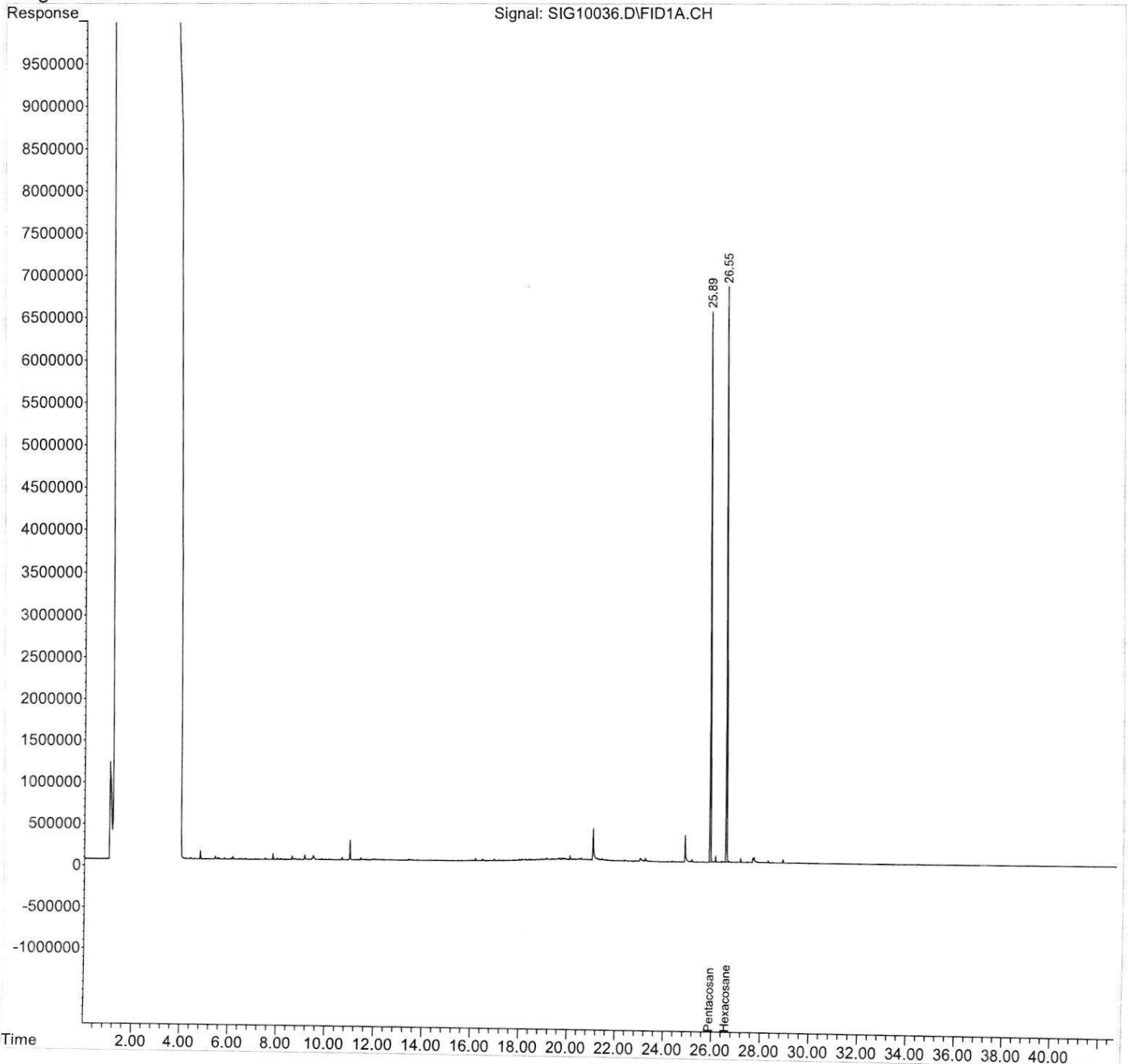
Target Compounds

H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
H Mineral Oil	0.00	0	N.D. ppm
h HCID Gas (C7-C12)	0.00	0	N.D. ppm
h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
h HCID Oil (>C14)	0.00	0	N.D. ppm

Data File : W:\HPCHEM\1\2025DATA\040125\SIG10036.D Vial: 27
Acq On : 02 Apr 2025 18:57 Operator: BAM
Sample : BFC1251-DUP1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Apr 3 10:12 2025 Quant Results File: 250324DHT.RES

Quant Method : W:\HPCHEM\1\METHODS\250324DHT.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 25 09:54:34 2025
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



TSS (SM2540D/EPA 160.2)-TS(SM 2540B)

Anatek Labs. Inc. Spokane

Batch ID: BFC1259 Date: 3.28.25 Time: 12:29 Initials: EMG

QC REQUIREMENTS:	Blank <1ppm, LFB %Rec= 90-110%, MS/MSD %Rec= 80-120% Run a blank and lcs before and after every 20 samples, plus dup and ms/msd after 20 samples.							
TSS Reagents	Std. #	Amount Spiked	Balance ID	Oven	Temp	Filters	Thermometer	Cylinder
100ppm Cellulose TSS Soln.	2500808	100 ppm	BAL-06	5	105	2403480	T-Oven 5	a

Comments:

Date/Time/Initials of Weigh: 3.29.25 16:04 EMG

Sample Number	Sample ID	Dish ID	Filter Wt (g)	mLs used	Dry Weight #1	Dry Weight #2**	Dilution Factor	IResult (mg/L)	FResult (mg/L)	QC Date & Initials
BFC1259-BLK1	Blank	894	0.1107	1000	0.1107	0.1107	0.1			
BFC1259-BLK2	Blank	895	0.1096	1000	0.1095	0.1096	0.1	-1.00	-0.10	
BFC1259-BS1	LCS	896	0.1103	100	0.1199	0.1199	1	96.00	96.00	
BFC1259-MS1	Matrix Spike WFC1094-06	897	0.1092	50	0.1152	0.1149	2	57.00	114.00	
BFC1259-MSD1	Matrix Spike Dup WFC109	932	0.1101	50	0.1166	0.1166	2	65.00	130.00	
WFC1094-06	E-1	933	0.1107	500	0.12	0.1201	0.2	93.00	18.60	
BFC1259-DUP1	Duplicate WFC1106-01	934	0.1081	100	0.1117	0.1114	1	33.00	33.00	
WFC1106-01	Effluent	935	0.1085	100	0.1124	0.1123	1	38.00	38.00	
WFC1110-01	Inf	936	0.1102	75	0.122	0.1218	1.3333333	116.00	154.67	
WFC1110-02	EFF	937	0.1109	1000	0.1132	0.1133	0.1	23.00	2.30	
WFC1115-01	Influent	938	0.11	50	0.1148	0.1149	2	48.00	96.00	
WFC1115-02	Effluent	939	0.11	100	0.116	0.1162	1	60.00	60.00	
WFC1117-01	INF	940	0.1092	150	0.1145	0.1147	0.6666667	53.00	35.33	
WFC1117-02	EFF	941	0.1093	1000	0.1094	0.1096	0.1	1.00	0.10	
WFC1094-01	D-4	942	0.1097	1000	0.1166	0.1167	0.1	69.00	6.90	
WFC1094-02	D-6	943	0.1098	1000	0.1226	0.123	0.1	128.00	12.80	
WFC1094-03	D-7	944	0.1097	750	0.1253	0.1256	0.1333333	156.00	20.80	
WFC1094-04	D-8	945	0.1095	1000	0.1124	0.1124	0.1	29.00	2.90	
WFC1094-05	E-2	946	0.1094	500	0.114	0.1143	0.2	46.00	9.20	
WFC1094-07	E-1 DUP	947	0.1106	500	0.1162	0.1165	0.2	56.00	11.20	
WFC1094-08	WW-2	948	0.11	500	0.1193	0.1194	0.2	93.00	18.60	
WFC1094-09	WW-3	949	0.11	1000	0.1201	0.1201	0.1	101.00	10.10	
WFC1094-10	U-2/WW-5	950	0.1093	500	0.1306	0.1307	0.2	213.00	42.60	
WFC1094-11	U-3/WW-4	951	0.1106	1000	0.1179	0.1178	0.1	72.00	7.20	
WFC1094-12	WW-6	952	0.1093	500	0.1311	0.1314	0.2	218.00	43.60	

Methods: 8270C / EPA 6850 / EPA 8321B

Instrument: LC-MS-MS

Ext. Method: EPA 3535 SPE/ Liq-Solid microextraction and derivatization

BFD0739
BFD0740

B. Retn
4/17/25

Internal Standard (IS)	Solution #	Concentration (ppm)
Glyphosate- ¹³ C ₂	2500457	10
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppm)
Glyphosate / AMPA	2403349	25/50

Standard or Sample # (Glyphosate/AMPA)	Reaction volume	Extract/Water (mL)	FMOc (mL)	Buffer (mL)	IS (μL)	Cal Std or Spike (μL)	Final Mult
250 / 500	2 ml	0.980	0.5	0.5	10	20	
125 / 250	2 ml	0.990	0.5	0.5	10	10	
50 / 100	2 ml	0.996	0.5	0.5	10	4	
25 / 50	2 ml	0.998	0.5	0.5	10	2	
12.5 / 25	2 ml	0.999	0.5	0.5	10	1	
6.25 / 12.5	2 ml	0.999	0.5	0.5	10	0.5	
BFD0739-BLK1	2 ml	1	0.5	0.5	10	0	
BFD0739-BS1	2 ml	0.996	0.5	0.5	10	4	
BFD0739-MS1	2 ml	0.25/0.75	0.5	0.50	10	4	
BFD0739-MSD1	2 ml	0.25/0.75	0.5	0.50	10	4	
WFC1094-13	2 ml	0.25/0.75	0.5	0.50	10	0	8x
WFC1094-14	2 ml	0.25/0.75	0.5	0.50	10	0	I
WFC1094-15	2 ml	0.25/0.75	0.5	0.50	10	0	I
WFC1094-16	2 ml	0.25/0.75	0.5	0.50	10	0	I
MFD0024-01 <u>100000x</u>	2 ml	0.25/0.75	0.5	0.50	10	0	8,000,000
MFD0412-01	2 ml	0.25/0.75	0.5	0.50	10	0	8x

Sample extracts were transferred to centrifuge tubes (stds and samples plus reagents)

Prepped samples were heated overnight at 40°C in a water bath.

Derivatized samples were diluted into well plate for analysis as follows
(100 μL 2% phosphoric acid / 700 μL water / 200 μL derivatized extract)

Reagents

FMOc – 5 mg/mL in ACN; 2% Phosphoric Acid; Buffer – 5 % Sodium Tetraborate

Sample Extraction/Homogenizer information

Sample #	Weight (g)	Buffer amount	MULT
WFC1094-13	11.87	100 mL	
WFC1094-14	9.31	I	
WFC1094-15	9.07	I	
WFC1094-16	11.51	I	
MFD0024-01	11.9515	I	
MFD0412-01	10.2985	I	

MFD0024-01 prepped 50 μL → 50 mL = 1000x $\Rightarrow$ 100 μL → 10 mL = 100000x
Sample DI of 1000x dilution DI

Methods: 8270C / EPA 6850 / EPA 8321B

Instrument: LC-MS-MS

Ext. Method: EPA 3535 SPE/ Liq-Solid microextraction and derivatization

Internal Standard (IS)	Solution #	Concentration (ppm)
Glyphosate- ¹³ C ₂	2500457	10
Matrix Spiking Info (MS/MSD)	Solution #	Concentration (ppm)
Glyphosate / AMPA	2403349	25/50

Standard or Sample # (Glyphosate / AMPA)	Reaction volume	Sample	FMOC (mL)	Buffer (mL)	IS (μL)	Cal Std or Spike (μL)	Final Mult
250 ppb / 500 ppb	2 ml	1.0	0.5	0.5	10	20	
125 ppb / 250 ppb	2 ml	1.0	0.5	0.5	10	10	
50 ppb / 100 ppb	2 ml	1.0	0.5	0.5	10	4	
25 ppb / 50 ppb	2 ml	1.0	0.5	0.5	10	2	
12.5 ppb / 25 ppb	2 ml	1.0	0.5	0.5	10	1	
6.25 ppb/12.5 ppb	2 ml	1.0	0.5	0.5	10	0.5	
BFD0740-BLK1	2 ml	1.0	0.5	0.5	10	0	
BFD0740-BS1	2 ml	1.0	0.5	0.5	10	4	
BFD0740-DUP1@100000	2 ml	1.0	0.5	0.5	10	0	
YFD0075-01@100000	2 ml	1.0	0.5	0.5	10	0	
YFD0075-01@10000	2 ml	1.0	0.5	0.5	10	0	
YFD0075-01@1000	2 ml	1.0	0.5	0.5	10	0	
MRL 1	1	1	1	1	1	6.5	
MRL 2	1	1	1	1	1	0.5	
MRL 3	1	1	1	1	1	0.5	
YFD0075-01 prepped 50μL → 50mL = 1000X							
sample DI							
1mL → 10mL = 10000X							
of DI							
1000x dilution							
100μL → 10mL = 100000X							
of DI							
1000x dilution							

Blp
4/17/25

Prepped samples were heated overnight at 40°C in a water bath.

Derivatized samples were diluted into well plate for analysis as follows

(100 μL 2% phosphoric acid / 700 μL water / 200 μL derivatized extract)

Reagents

FMOC – 5 mg/mL in Acetonitrile

2% Phosphoric Acid

Buffer – 5 % Sodium Tetraborate

PREPARATION BENCH SHEET

Organics

BFD0739

Matrix: Solid

Prepared using: SVOC - Glyphosate

Analyses

Glyphosate Soil

Spiking Solution(s)

2403349 Gly/AMPA 25/50 ppm

Surrogate Solution(s)

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (g)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BFD0739-BLK1	Blank			4/16/25 13:12 BKP	1	2			
QC	BFD0739-BS1	LCS			4/16/25 13:12 BKP	1	2	4		
QC	BFD0739-MS1	Matrix Spike [WFC1094-13]			4/16/25 13:12 BKP	11.87	100	200 400		
QC	BFD0739-MSD1	Matrix Spike Dup [WFC1094-13]			4/16/25 13:12 BKP	11.87	100	200 400		4/16/25
Glyphosate Soil	MFD0024-01	Glyphosate	04/11/2025	04/21/2025	4/16/25 13:12 BKP	11.9515	100			
Glyphosate Soil	MFD0412-01	wheat/glyphosate	04/24/2025	05/09/2025	4/16/25 13:12 BKP	10.2985	100			
Glyphosate Soil	WFC1094-13	D-7 Sediment	04/08/2025	04/21/2025	4/16/25 13:12 BKP	11.87	100			
Glyphosate Soil	WFC1094-14	D-8 Sediment	04/08/2025	04/21/2025	4/16/25 13:12 BKP	9.31	100			
Glyphosate Soil	WFC1094-15	E-2 Sediment	04/08/2025	04/21/2025	4/16/25 13:12 BKP	9.07	100			
Glyphosate Soil	WFC1094-16	WW-2 Sediment	04/08/2025	04/21/2025	4/16/25 13:12 BKP	11.51	100			

Reagents

Standard Description LotNum

Batch Comments:

IS-2500457

B. J. [Signature]
Analyst:

4/17/25
Date

4/16/25
Run Date:

Date

PREPARATION BENCH SHEET

Organics

BFD0740

Matrix: Water

Prepared using: SVOC - Glyphosate

Analyses

Glyphosate

Spiking Solution(s)

2403349 Gly/AMPA 25/50 ppm

Surrogate Solution(s)

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (mL)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BFD0740-BLK1	Blank			4/16/25 13:12 BKP	10	10			
QC	BFD0740-BS1	LCS			4/16/25 13:12 BKP	10	10	20		
QC	BFD0740-DUP1	Duplicate [YFD0075-01RE1]			4/16/25 13:12 BKP	10	10			
QC	BFD0740-MRL1	MRL Check			4/16/25 13:12 BKP	10	10	2.5		
QC	BFD0740-MRL2	MRL Check			4/16/25 13:12 BKP	10	10	2.5		
QC	BFD0740-MRL3	MRL Check			4/16/25 13:12 BKP	10	10	2.5		
Glyphosate	YFD0075-01	Stephen Wallace- Nutrien Ag	04/14/2025	04/16/2025	4/16/25 13:12 BKP	10	10			
Glyphosate	YFD0075-01RE	Stephen Wallace- Nutrien Ag	04/14/2025	04/16/2025	4/16/25 13:12 BKP	10	10			Added 4/17/2025 by BKP

Reagents

Standard	Description	LotNum
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Batch Comments:

IS-2500457

B. Peter

Analyst:

4/17/25

Date

4/16/25

Run Date:

Date

2	250/500 gly/ampa	Standard	4/17/2025 9:27:	041725_gf	1.00	Glyphosate	1.77e+005	250.	5.08e+004	252.	101.
1	250/500 gly/ampa	Standard	4/17/2025 9:27:	041725_gf	1.00	Glyphosate	1.77e+005	250.	5.08e+004	252.	101.
2	250/500 gly/ampa	Standard	4/17/2025 9:27:	041725_gf	1.00	Glyphosate	6.98e+004	250.	5.08e+004	255.	102.
3	250/500 gly/ampa	Standard	4/17/2025 9:27:	041725_gf	1.00	AMPA	1.66e+005	500.	5.08e+004	528.	106.
4	250/500 gly/ampa	Standard	4/17/2025 9:27:	041725_gf	1.00	AMPA	4.75e+004	500.	5.08e+004	549.	110.
5	125/250 gly/ampa	Standard	4/17/2025 9:34:	041725_gf	1.00	Glyphosate	1.25e+005	125.	6.33e+004	123.	98.2
6	125/250 gly/ampa	Standard	4/17/2025 9:34:	041725_gf	1.00	Glyphosate	4.38e+004	125.	6.33e+004	117.	93.3
7	125/250 gly/ampa	Standard	4/17/2025 9:34:	041725_gf	1.00	AMPA	1.12e+005	250.	6.33e+004	220.	87.8
8	125/250 gly/ampa	Standard	4/17/2025 9:34:	041725_gf	1.00	AMPA	3.48e+004	250.	6.33e+004	222.	88.9
9	50/100 gly/ampa	Standard	4/17/2025 9:41:	041725_gf	1.00	Glyphosate	6.17e+004	50.0	7.38e+004	50.7	101.
10	50/100 gly/ampa	Standard	4/17/2025 9:41:	041725_gf	1.00	Glyphosate	2.26e+004	50.0	7.38e+004	51.7	103.
11	50/100 gly/ampa	Standard	4/17/2025 9:41:	041725_gf	1.00	AMPA	6.55e+004	100.	7.38e+004	107.	107.
12	50/100 gly/ampa	Standard	4/17/2025 9:41:	041725_gf	1.00	AMPA	2.01e+004	100.	7.38e+004	104.	104.
13	25/50 gly/ampa	Standard	4/17/2025 9:48:	041725_gf	1.00	Glyphosate	2.74e+004	25.0	7.55e+004	24.3	97.4
14	25/50 gly/ampa	Standard	4/17/2025 9:48:	041725_gf	1.00	Glyphosate	1.13e+004	25.0	7.55e+004	27.3	109.
15	25/50 gly/ampa	Standard	4/17/2025 9:48:	041725_gf	1.00	AMPA	3.55e+004	50.0	7.55e+004	59.5	119.
16	25/50 gly/ampa	Standard	4/17/2025 9:48:	041725_gf	1.00	AMPA	1.15e+004	50.0	7.55e+004	60.3	121.
17	12.5/25 gly/ampa	Standard	4/17/2025 9:54:	041725_gf	1.00	Glyphosate	1.60e+004	12.5	9.30e+004	14.2	113.
18	12.5/25 gly/ampa	Standard	4/17/2025 9:54:	041725_gf	1.00	Glyphosate	5.70e+003	12.5	9.30e+004	13.9	111.
19	12.5/25 gly/ampa	Standard	4/17/2025 9:54:	041725_gf	1.00	AMPA	1.32e+004	25.0	9.30e+004	24.6	98.3
20	12.5/25 gly/ampa	Standard	4/17/2025 9:54:	041725_gf	1.00	AMPA	4.03e+003	25.0	9.30e+004	23.8	95.0
21	6.25/12.5 gly/ampa	Standard	4/17/2025 10:0	041725_gf	1.00	Glyphosate	5.82e+002	6.25	7.48e+004	5.58	89.3
22	6.25/12.5 gly/ampa	Standard	4/17/2025 10:0	041725_gf	1.00	Glyphosate	1.83e+002	6.25	7.48e+004	5.07	81.2
23	6.25/12.5 gly/ampa	Standard	4/17/2025 10:0	041725_gf	1.00	AMPA	4.24e+002	12.5	7.48e+004	10.6	84.5
24	6.25/12.5 gly/ampa	Standard	4/17/2025 10:0	041725_gf	1.00	AMPA	2.79e+002	12.5	7.48e+004	11.0	87.8
25	BFD0739-BLK1	Quality Co	4/17/2025 10:0	041725_gf	1.00	Glyphosate	0.00e+000	0.00	8.97e+004	No Peak	N/A
26	BFD0739-BLK1	Quality Co	4/17/2025 10:0	041725_gf	1.00	Glyphosate	0.00e+000	0.00	8.97e+004	No Peak	N/A
27	BFD0739-BLK1	Quality Co	4/17/2025 10:0	041725_gf	1.00	AMPA	0.00e+000	0.00	8.97e+004	No Peak	N/A
28	BFD0739-BLK1	Quality Co	4/17/2025 10:0	041725_gf	1.00	AMPA	0.00e+000	0.00	8.97e+004	No Peak	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/mL)	IS Peak Area (counts)	Calculated Concentration (ng/mL)	Accuracy (%)
29	BFD0739-BS1	Quality Co	4/17/2025 10:1	041725_gl	1.00	Glyphosate	7.17e+004	50.0	9.91e+004	44.3	88.5
30	BFD0739-BS1	Quality Co	4/17/2025 10:1	041725_gl	1.00	Glyphosate1	2.57e+004	50.0	9.91e+004	44.4	88.8
31	BFD0739-BS1	Quality Co	4/17/2025 10:1	041725_gl	1.00	AMPA	7.96e+004	100.	9.91e+004	96.9	96.9
32	BFD0739-BS1	Quality Co	4/17/2025 10:1	041725_gl	1.00	AMPA1	2.28e+004	100.	9.91e+004	88.0	88.0
33	BFD0740-MRL1	Quality Co	4/17/2025 10:2	041725_gl	1.00	Glyphosate	7.62e+002	6.25	8.13e+004	5.66	90.6
34	BFD0740-MRL1	Quality Co	4/17/2025 10:2	041725_gl	1.00	Glyphosate1	1.83e+002	6.25	8.13e+004	5.05	80.7
35	BFD0740-MRL1	Quality Co	4/17/2025 10:2	041725_gl	1.00	AMPA	7.80e+002	12.5	8.13e+004	11.0	87.7
36	BFD0740-MRL1	Quality Co	4/17/2025 10:2	041725_gl	1.00	AMPA1	2.53e+002	12.5	8.13e+004	10.8	86.2
37	BFD0740-MRL2	Quality Co	4/17/2025 10:2	041725_gl	1.00	Glyphosate	4.92e+002	6.25	9.45e+004	5.45	87.1
38	BFD0740-MRL2	Quality Co	4/17/2025 10:2	041725_gl	1.00	Glyphosate1	1.36e+002	6.25	9.45e+004	4.93	78.8
39	BFD0740-MRL2	Quality Co	4/17/2025 10:2	041725_gl	1.00	AMPA	3.51e+002	12.5	9.45e+004	10.4	82.9
40	BFD0740-MRL2	Quality Co	4/17/2025 10:2	041725_gl	1.00	AMPA1	2.60e+002	12.5	9.45e+004	10.7	85.3
41	BFD0740-MRL3	Quality Co	4/17/2025 10:3	041725_gl	1.00	Glyphosate	3.56e+002	6.25	9.18e+004	5.38	86.0
42	BFD0740-MRL3	Quality Co	4/17/2025 10:3	041725_gl	1.00	Glyphosate1	1.58e+002	6.25	9.18e+004	4.97	79.5
43	BFD0740-MRL3	Quality Co	4/17/2025 10:3	041725_gl	1.00	AMPA	6.04e+002	12.5	9.18e+004	10.7	85.2
44	BFD0740-MRL3	Quality Co	4/17/2025 10:3	041725_gl	1.00	AMPA1	1.52e+002	12.5	9.18e+004	10.3	82.5
45	BFD0739-MS1	Quality Co	4/17/2025 10:4	041725_gl	1.00	Glyphosate	5.23e+004	0.00	8.91e+004	36.6	N/A
46	BFD0739-MS1	Quality Co	4/17/2025 10:4	041725_gl	1.00	Glyphosate1	2.19e+004	0.00	8.91e+004	42.3	N/A
47	BFD0739-MS1	Quality Co	4/17/2025 10:4	041725_gl	1.00	AMPA	5.52e+004	0.00	8.91e+004	76.1	N/A
48	BFD0739-MS1	Quality Co	4/17/2025 10:4	041725_gl	1.00	AMPA1	2.13e+004	0.00	8.91e+004	91.4	N/A
49	BFD0739-MSD1	Quality Co	4/17/2025 10:4	041725_gl	1.00	Glyphosate	5.34e+004	0.00	8.30e+004	39.8	N/A
50	BFD0739-MSD1	Quality Co	4/17/2025 10:4	041725_gl	1.00	Glyphosate1	1.91e+004	0.00	8.30e+004	39.7	N/A
51	BFD0739-MSD1	Quality Co	4/17/2025 10:4	041725_gl	1.00	AMPA	5.99e+004	0.00	8.30e+004	87.6	N/A
52	BFD0739-MSD1	Quality Co	4/17/2025 10:4	041725_gl	1.00	AMPA1	1.76e+004	0.00	8.30e+004	81.8	N/A
53	WFC1094-13	Quality Co	4/17/2025 10:5	041725_gl	1.00	Glyphosate	4.78e+002	0.00	7.13e+004	5.52	N/A
54	WFC1094-13	Quality Co	4/17/2025 10:5	041725_gl	1.00	Glyphosate1	1.08e+002	0.00	7.13e+004	4.94	N/A
55	WFC1094-13	Quality Co	4/17/2025 10:5	041725_gl	1.00	AMPA	4.63e+002	0.00	7.13e+004	10.6	N/A
56	WFC1094-13	Quality Co	4/17/2025 10:5	041725_gl	1.00	AMPA1	3.64e+002	0.00	7.13e+004	11.4	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/mL)	IS Peak Area (counts)	Calculated Concentration (ng/mL)	Accuracy (%)
57	WFC1094-14	Quality Co	4/17/2025 11:0	041725_g1	1.00	Glyphosate	3.12e+002	0.00	6.57e+004	5.42	N/A
58	WFC1094-14	Quality Co	4/17/2025 11:0	041725_g1	1.00	Glyphosate1	1.81e+002	0.00	6.57e+004	5.12	N/A
59	WFC1094-14	Quality Co	4/17/2025 11:0	041725_g1	1.00	AMPA	5.19e+002	0.00	6.57e+004	10.8	N/A
60	WFC1094-14	Quality Co	4/17/2025 11:0	041725_g1	1.00	AMPA1	1.93e+002	0.00	6.57e+004	10.7	N/A
61	WFC1094-15	Quality Co	4/17/2025 11:0	041725_g1	1.00	Glyphosate	2.51e+002	0.00	8.09e+004	5.34	N/A
62	WFC1094-15	Quality Co	4/17/2025 11:0	041725_g1	1.00	Glyphosate1	7.57e+001	0.00	8.09e+004	4.85	N/A
63	WFC1094-15	Quality Co	4/17/2025 11:0	041725_g1	1.00	AMPA	2.02e+002	0.00	8.09e+004	10.2	N/A
64	WFC1094-15	Quality Co	4/17/2025 11:0	041725_g1	1.00	AMPA1	1.12e+002	0.00	8.09e+004	10.2	N/A
65	WFC1094-16	Quality Co	4/17/2025 11:1	041725_g1	1.00	Glyphosate	6.00e+001	0.00	6.93e+004	5.22	N/A
66	WFC1094-16	Quality Co	4/17/2025 11:1	041725_g1	1.00	Glyphosate1	5.22e+000	0.00	6.93e+004	4.72	N/A
67	WFC1094-16	Quality Co	4/17/2025 11:1	041725_g1	1.00	AMPA	8.43e+001	0.00	6.93e+004	10.1	N/A
68	WFC1094-16	Quality Co	4/17/2025 11:1	041725_g1	1.00	AMPA1	8.37e+001	0.00	6.93e+004	10.2	N/A
69	MFD0024-01@100000	Quality Co	4/17/2025 11:2	041725_g1	1.00	Glyphosate	1.35e+005	0.00	1.01e+005	81.2	N/A
70	MFD0024-01@100000	Quality Co	4/17/2025 11:2	041725_g1	1.00	Glyphosate1	4.87e+004	0.00	1.01e+005	81.0	N/A
71	MFD0024-01@100000	Quality Co	4/17/2025 11:2	041725_g1	1.00	AMPA	6.94e+002	0.00	1.01e+005	10.7	N/A
72	MFD0024-01@100000	Quality Co	4/17/2025 11:2	041725_g1	1.00	AMPA1	1.59e+002	0.00	1.01e+005	10.3	N/A
73	MFD0412-01	Quality Co	4/17/2025 11:2	041725_g1	1.00	Glyphosate	7.40e+003	0.00	7.73e+004	10.2	N/A
74	MFD0412-01	Quality Co	4/17/2025 11:2	041725_g1	1.00	Glyphosate1	2.46e+003	0.00	7.73e+004	9.46	N/A
75	MFD0412-01	Quality Co	4/17/2025 11:2	041725_g1	1.00	AMPA	1.60e+003	0.00	7.73e+004	12.1	N/A
76	MFD0412-01	Quality Co	4/17/2025 11:2	041725_g1	1.00	AMPA1	5.93e+002	0.00	7.73e+004	12.2	N/A
77	CCV 25/50	Quality Co	4/17/2025 11:3	041725_g1	1.00	Glyphosate	4.12e+004	25.0	9.43e+004	28.4	113.
78	CCV 25/50	Quality Co	4/17/2025 11:3	041725_g1	1.00	Glyphosate1	1.46e+004	25.0	9.43e+004	28.1	112.
79	CCV 25/50	Quality Co	4/17/2025 11:3	041725_g1	1.00	AMPA	4.37e+004	50.0	9.43e+004	58.8	118.
80	CCV 25/50	Quality Co	4/17/2025 11:3	041725_g1	1.00	AMPA1	1.56e+004	50.0	9.43e+004	64.8	130.
81	BFD0740-BLK1	Quality Co	4/17/2025 11:4	041725_g1	1.00	Glyphosate	0.00e+000	0.00	1.07e+005	No Peak	N/A
82	BFD0740-BLK1	Quality Co	4/17/2025 11:4	041725_g1	1.00	Glyphosate1	0.00e+000	0.00	1.07e+005	No Peak	N/A
83	BFD0740-BLK1	Quality Co	4/17/2025 11:4	041725_g1	1.00	AMPA	0.00e+000	0.00	1.07e+005	No Peak	N/A
84	BFD0740-BLK1	Quality Co	4/17/2025 11:4	041725_g1	1.00	AMPA1	0.00e+000	0.00	1.07e+005	No Peak	N/A

	Sample Name	Sample Type	Acquisition Date	File Name	Dilution Factor	Analyte Peak Name	Analyte Peak Area (counts)	Analyte Concentration (ng/mL)	IS Peak Area (counts)	Calculated Concentration (ng/mL)	Accuracy (%)
85	BFD0740-BS1	Quality Co	4/17/2025 11:4	041725_gl	1.00	Glyphosate	7.73e+004	50.0	1.10e+005	43.1	86.3
86	BFD0740-BS1	Quality Co	4/17/2025 11:4	041725_gl	1.00	Glyphosate1	2.84e+004	50.0	1.10e+005	44.2	88.5
87	BFD0740-BS1	Quality Co	4/17/2025 11:4	041725_gl	1.00	AMPA	8.75e+004	100.	1.10e+005	96.1	96.1
88	BFD0740-BS1	Quality Co	4/17/2025 11:4	041725_gl	1.00	AMPA1	2.25e+004	100.	1.10e+005	79.0	79.0
89	BFD0740-DUP1@100000	Quality Co	4/17/2025 11:5	041725_gl	1.00	Glyphosate	4.32e+002	0.00	1.10e+005	5.38	N/A
90	BFD0740-DUP1@100000	Quality Co	4/17/2025 11:5	041725_gl	1.00	Glyphosate1	1.04e+002	0.00	1.10e+005	4.85	N/A
91	BFD0740-DUP1@100000	Quality Co	4/17/2025 11:5	041725_gl	1.00	AMPA	3.62e+002	0.00	1.10e+005	10.3	N/A
92	BFD0740-DUP1@100000	Quality Co	4/17/2025 11:5	041725_gl	1.00	AMPA1	5.80e+001	0.00	1.10e+005	9.95	N/A
93	YFD0075-01@100000	Quality Co	4/17/2025 12:0	041725_gl	1.00	Glyphosate	2.51e+002	0.00	9.97e+004	5.31	N/A
94	YFD0075-01@100000	Quality Co	4/17/2025 12:0	041725_gl	1.00	Glyphosate1	9.15e+001	0.00	9.97e+004	4.85	N/A
95	YFD0075-01@100000	Quality Co	4/17/2025 12:0	041725_gl	1.00	AMPA	1.66e+002	0.00	9.97e+004	10.2	N/A
96	YFD0075-01@100000	Quality Co	4/17/2025 12:0	041725_gl	1.00	AMPA1	1.15e+002	0.00	9.97e+004	10.2	N/A
97	CCV 25/50	Quality Co	4/17/2025 12:0	041725_gl	1.00	Glyphosate	4.07e+004	25.0	1.06e+005	25.6	102.
98	CCV 25/50	Quality Co	4/17/2025 12:0	041725_gl	1.00	Glyphosate1	1.49e+004	25.0	1.06e+005	26.0	104.
99	CCV 25/50	Quality Co	4/17/2025 12:0	041725_gl	1.00	AMPA	5.06e+004	50.0	1.06e+005	60.5	121.
100	CCV 25/50	Quality Co	4/17/2025 12:0	041725_gl	1.00	AMPA1	1.45e+004	50.0	1.06e+005	55.2	110.
101	YFD0075-01@10000	Quality Co	4/17/2025 12:2	041725_gl	1.00	Glyphosate	1.53e+003	0.00	8.62e+004	6.10	N/A
102	YFD0075-01@10000	Quality Co	4/17/2025 12:2	041725_gl	1.00	Glyphosate1	5.29e+002	0.00	8.62e+004	5.62	N/A
103	YFD0075-01@10000	Quality Co	4/17/2025 12:2	041725_gl	1.00	AMPA	3.59e+002	0.00	8.62e+004	10.4	N/A
104	YFD0075-01@10000	Quality Co	4/17/2025 12:2	041725_gl	1.00	AMPA1	0.00e+000	0.00	8.62e+004	No Peak	N/A
105	YFD0075-01@1000	Quality Co	4/17/2025 12:3	041725_gl	1.00	Glyphosate	5.54e+003	0.00	2.11e+004	19.0	N/A
106	YFD0075-01@1000	Quality Co	4/17/2025 12:3	041725_gl	1.00	Glyphosate1	1.60e+003	0.00	2.11e+004	16.0	N/A
107	YFD0075-01@1000	Quality Co	4/17/2025 12:3	041725_gl	1.00	AMPA	2.34e+002	0.00	2.11e+004	11.1	N/A
108	YFD0075-01@1000	Quality Co	4/17/2025 12:3	041725_gl	1.00	AMPA1	4.41e+001	0.00	2.11e+004	10.5	N/A
109	CCV 25/50 ppb	Quality Co	4/17/2025 12:3	041725_gl	1.00	Glyphosate	4.59e+004	25.0	1.11e+005	27.2	109.
110	CCV 25/50 ppb	Quality Co	4/17/2025 12:3	041725_gl	1.00	Glyphosate1	1.84e+004	25.0	1.11e+005	29.9	120.
111	CCV 25/50 ppb	Quality Co	4/17/2025 12:3	041725_gl	1.00	AMPA	4.45e+004	50.0	1.11e+005	52.1	104.
1	CCV 25/50 ppb	Quality Co	4/17/2025 12:3	041725_gl	1.00	AMPA1	1.53e+004	50.0	1.11e+005	55.6	111.



Anatek Labs Inc
504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P250306
Report Date: April 21, 2025
Client Project ID: [none]

Analytical Report

Client Sample ID: D-7
Matrix: water

PAL Sample ID: P250306-01
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Client Sample ID: D-8
Matrix: water

PAL Sample ID: P250306-02
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Client Sample ID: E-2
Matrix: water

PAL Sample ID: P250306-03
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017
Quality Standard.



Anatek Labs Inc
504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P250306
Report Date: April 21, 2025
Client Project ID: [none]

Analytical Report

Client Sample ID: E-1
Matrix: water

PAL Sample ID: P250306-04
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Client Sample ID: E-1 DUP
Matrix: water

PAL Sample ID: P250306-05
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Client Sample ID: WW-2
Matrix: water

PAL Sample ID: P250306-06
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017
Quality Standard.



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504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P250306
Report Date: April 21, 2025
Client Project ID: [none]

Analytical Report

Client Sample ID: WW-3
Matrix: water

PAL Sample ID: P250306-07
Sample Date: 3/24/25
Received Date: 3/28/25

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
4/10/25	4/14/25	Diquat	ND	10 ug/L	
4/10/25	4/14/25	Paraquat	ND	10 ug/L	

Kara Greer

Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017
Quality Standard.

Anatek Labs Inc
504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P250306
Report Date: April 21, 2025
Client Project ID: [none]

Quality Assurance

Method Blank Data Matrix: water

Extraction Date	Analysis	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
4/10/25	4/14/25	25D1003-BLK1	Diquat	Not Detected	< 10 ug/L	
4/10/25	4/14/25	25D1003-BLK1	Paraquat	Not Detected	< 10 ug/L	

Blank Spike Data Matrix: water

Extraction Date	Analysis	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
4/10/25	4/14/25	25D1003-BS1	Diquat	104	60-140	
4/10/25	4/14/25	25D1003-BSD1	Diquat	100	60-140	
4/10/25	4/14/25	25D1003-BS1	Paraquat	99	60-140	
4/10/25	4/14/25	25D1003-BSD1	Paraquat	99	60-140	

Matrix Spike Data Matrix: water

Extraction Date	Analysis	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
4/10/25	4/14/25	25D1003-MS1	Diquat	103	60-140	
4/10/25	4/14/25	25D1003-MSD1	Diquat	109	60-140	
4/10/25	4/14/25	25D1003-MS1	Paraquat	100	60-140	
4/10/25	4/14/25	25D1003-MSD1	Paraquat	101	60-140	

Duplicate Data Matrix: water

Extraction Date	Analysis	Batch QC Sample #	Analyte	Sample Result	Duplicate Result	RPD	Notes
4/10/25	4/14/25	25D1003-DUP1	Diquat	ND	ND	0	
4/10/25	4/14/25	25D1003-DUP1	Paraquat	ND	ND	0	

Project Notes

Notes	Definition
H3	The sample was analyzed outside of recommended hold time.

*This analytical report complies with the ISO/IEC 17025:2017
Quality Standard.*

US EPA Tune Check Report

Operator Name Metals
Acq/Data Batch D:\Agilent\ICPMH\1\DATA\Method Batches\RXN\Sequences\04282025 TEST.b
Acq. Date-Time 2025-04-28 11:52:53
Report Comment —
Instrument Name 7800 JP17450949

[No Gas]

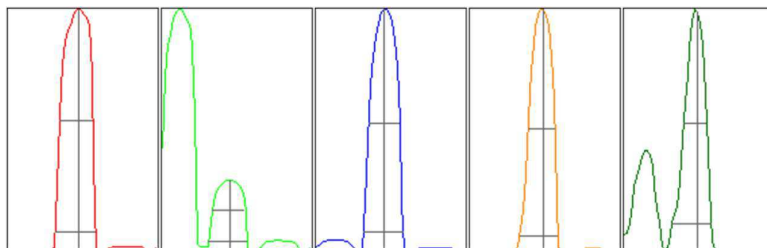
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
9	8807	88065.67	0.695	5.000	
24	20379	203793.13	0.450	5.000	
59	20840	208402.05	0.825	5.000	
115	23240	232403.99	0.461	5.000	
208	11470	114699.96	0.381	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	8827	8805	8888	8718	8796
24	20410	20428	20451	20221	20386
59	21056	20892	20853	20579	20820
115	23207	23217	23111	23262	23405
208	11481	11416	11466	11452	11535

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)	W-5%	W-5% (Required)	W-5% (Flag)
9	13787.68	8.95	8.90 - 9.10		0.813	0.900	
24	32467.27	23.90	23.90 - 24.10		0.770	0.900	
59	35514.54	58.90	58.90 - 59.10		0.792	0.900	
115	44079.20	115.00	114.90 - 115.10		0.764	0.900	
208	24049.36	208.00	207.90 - 208.10		0.785	0.900	

Integration Time [sec] = 0.1 Acquisition Time [sec] = 168.5 Y Axis = Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

US EPA Tune Check Report

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.8 V	Deflect	13.2 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.4 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	140	Axis Gain	0.9997	QP Bias	-3.4 V
Mass Offset	124	Axis Offset	-0.02		

Hardware Settings

Torch

Torch H	0.7 mm	Torch V	-0.6 mm
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EM

Discriminator	3.3 mV	Analog HV	2288 V	Pulse HV	1312 V
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Acute Toxicity Test Results for ADC Kekaha Wet Weather Water Quality Monitoring

Monitoring Period: March 2025

Prepared for: Stantec
737 Bishop St., Suite 3050
Honolulu, HI 96734

Testing Lab: Nautilus Environmental (formerly Enthalpy Analytical)
4340 Vandever Avenue
San Diego, CA 92120

Submitted: June 3, 2025

Data Quality Assurance:

- Nautilus Environmental is accredited in accordance with NELAP by the State of Oregon Environmental Laboratory Accreditation Program (Certificate No. 4053). It is also certified by the State of California Environmental Laboratory Accreditation Program (Certificate No. 1802) and the State of Washington Department of Ecology (Lab ID C552).
- All data have been reviewed and verified.
- All test results have met minimum test acceptability criteria under their respective EPA protocols, unless otherwise noted in this report.
- All results have met internal Quality Assurance Program requirements, unless otherwise noted in this report.

Data Verified by:

Barbara Orelo, Project Manager

Introduction

Two samples were collected during a wet weather event for the ADC Kekaha Water Quality Monitoring. Samples were submitted by Stantec. Testing was conducted at the Nautilus Environmental, Inc. Laboratory in San Diego, California. Pacific topsmelt (*Atherinops affinis*), inland silverside (*Menidia beryllina*), and mysid shrimp (*Americamysis bahia*) 96-hour acute survival tests were used for the WW-2 and WW-3 samples.

Materials and Methods

Sample Information

Client: Stantec
Project Name: ADC Kekaha Water Quality Monitoring
Sample IDs: 1. WW-2
2. WW-3
Sample Collection Dates, Times^a: 1. 3/24/25, 13:15
2. 3/24/25, 13:35
Sample Receipt Dates, Times: 3/25/25, 09:10
Sample Material: Wet weather sample
Sampling Method: Grab

^a Collection times adjusted to Pacific Daylight Time from Hawaii Standard Time.

Table 1. Water Quality Parameters Measured upon Sample Receipt

Sample ID	pH	DO (mg/L)	Temp. (°C)	Cond. (µS/cm)	Salinity (ppt)	Alkalinity (mg/L as CaCO ₃)	Hardness (mg/L as CaCO ₃)	Total Chlorine (mg/L)
WW-2	7.40	8.3	2.1	nm	31.1	148	nm	<0.02
WW-3	7.61	10.1	2.1	3140	1.7	160	420	0.04

nm = not measured

Acute Toxicity Test Methods

Testing was conducted in accordance with methods published in US Environmental Protection Agency (USEPA) guidance (2002). Test specifications for all marine tests are summarized in Table 2.

Table 2. 96-hr Acute Survival Test Specifications - Marine Organisms

Pacific topsmelt test: 3/26/25, 12:55 to 3/30/25, 14:05	Species: <i>Atherinops affinis</i> . Source & Age: Aquatic Biosystems (Ft. Collins, CO), 13 days
Inland silverside test: 3/26/25, 13:40 to 3/30/25, 14:25	Species: <i>Menidia beryllina</i> . Source & Age: Aquatic Biosystems (Ft. Collins, CO), 10 days
Mysid shrimp test: 3/26/25, 14:30 to 3/30/25, 14:30	Species: <i>Americamysis bahia</i> . Source & Age: Aquatic Biosystems (Ft. Collins, CO), 4 days
Protocol Used:	Acute Manual (EPA/821/R-02/012), EPA 2002
Test Acceptability Criteria:	Control mean survival $\geq$ 90%
Test Concentration:	100% sample (WW-2)
Lab Control Water:	20- μ m filtered seawater (Source: Scripps Institution of Oceanography [SIO] Intake); diluted to 30 ppt with deionized water

Statistical Analyses

Statistical analyses were conducted using EPA flowchart specifications as outlined in the test guidance manual (USEPA 2002). Organism performance in the sample was compared to that observed in the concurrent lab control. Results were used to calculate whether a statistically significant effect was observed between the control and sample result. Comprehensive Environmental Toxicity Information System™ (CETIS) software by Tidepool Scientific Software, version 2.1.4.11.

Results

No statistically significant effects were observed to any species that were exposed the WW-2 or WW-3 samples compared to the respective lab controls. A summary of results is presented in Table 3.

Raw datasheets and complete statistical summaries for all tests are provided in Appendix A. Sample receipt information is provided in Appendix B, and a copy of the chain of custody form is presented in Appendix C.

Table 3. Summary of Marine 96-hr Acute Survival Results

Sample ID	Species	Lab Control Result	100% Sample Result	Statistically Significant Effect? (Yes/No)	Percent Effect
WW-2	Pacific topsmelt	95.0	100	No	-5.3
	Inland silverside	100	100	No	0.0
	Mysid shrimp	100	95.0	No	5.0
WW-3	Pacific topsmelt	95.0	100	No	-5.3
	Inland silverside	100	100	No	0.0
	Mysid shrimp	100	95.0	No	5.0

Percent effect from control is calculated as: ((mean response in lab control - mean response in undiluted sample)/mean response in lab control) *100. A negative value results when organism performance in the sample is greater than that in the lab control.

Quality Assurance

The samples were received via overnight delivery service the day after collection and within the range of 0-6 degrees Celsius (°C). The tests were initiated within the maximum allowable holding time of 72 hours.

Mean control responses met minimum acceptability criteria for all tests. Minor QA issues that were unlikely to have any bearing on the final test data, such as slight temperature deviations, are noted on the datasheets, and a list of laboratory qualifier codes can be found in Appendix D.

Reference Toxicant Testing

Results for reference toxicant testing used to monitor laboratory performance and test organism sensitivity are summarized in Table 4. The reference toxicant tests for all species tested met all acceptability criteria. The median effect concentration values (EC₅₀) were within two standard deviations of the historical mean for all species, indicating organisms exhibited typical sensitivity as historically observed in our laboratory. The control charts for the previous 20 reference toxicant tests are presented in Appendix E.

Table 4. Summary of 96-hr Acute Survival Reference Toxicant Test Results

Species	NOEC (µg/L copper)	LC ₅₀ (µg/L copper)	Historical LC ₅₀ ± 2 SD (µg/L copper)	CV (%)
Pacific Topsmelt	200	213	183 ± 100	27.3
Inland Silverside	50	86.4	155 ± 85.7	27.6
Mysid Shrimp	100	183	218 ± 86.3	19.8

NOEC = the highest concentration tested that results in no observed effect

LC₅₀ = the concentration expected to cause a lethal effect to 50 percent of the test organisms

Historical LC₅₀ ± 2 SD = the mean LC₅₀ from the previous 20 tests performed by the lab, plus or minus two standard deviations

CV = Coefficient of Variation

References

Tidepool Scientific Software. 2000-2022. CETIS Comprehensive Environmental Toxicity Information System Software, Version 2.1.4.11.

USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. EPA/821/R-02/012. US EPA Office of Water, Washington, DC.

Appendix A

Raw Data and Statistical Summaries

Pacific Topsmelt

CETIS Summary Report

Report Date: 03 Jun-25 09:53 (p 1 of 1)
Test Code/ID: 2503-S128 / 10-2473-8003

Pacific Topsmelt 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 14-7518-2246	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 12:55	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:05	Species: Atherinops affinis	Brine: Not Applicable
Test Length: 4d 1h	Taxon:	Source: Aquatic Biosystems, CO Age: 13d

Sample ID: 03-5478-9055	Code: 25-0310	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:15 ^{POT}	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 ^{POT}	CAS (PC):	Station: WW-2
Sample Age: 48h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
16-1617-1937	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
16-1617-1937	96h Survival Rate	Control Resp	0.95	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	0.00%
0	SC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-5.26%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-5.26%

96h Survival Rate Detail

MD5: FB6FD0593E516393A3B991070F1BA2B6

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	0.800	1.000
0	SC	1.000	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 09:53 (p 1 of 1)
Test Code/ID: 2503-S128 / 10-2473-8003

Pacific Topsmelt 96-h Acute Survival Test				Nautilus Environmental (CA)			
Analysis ID:	16-1617-1937	Endpoint:	96h Survival Rate	CETIS Version:	CETISv2.1.4		
Analyzed:	03 Jun-25 9:52	Analysis:	Nonparametric-Two Sample	Status Level:	1		
Edit Date:	03 Jun-25 9:51	MD5 Hash:	A53F4C7F6B8D176D17CE23F2C5566508	Editor ID:	007-926-968-0		

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	10.75%

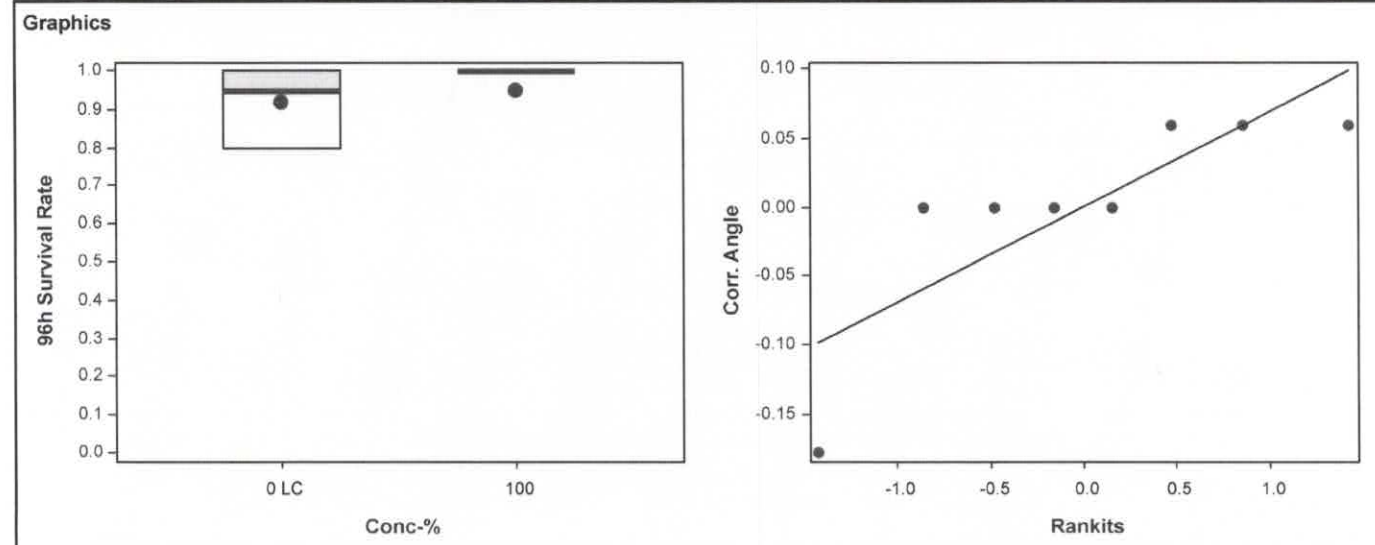
Wilcoxon Rank Sum Two-Sample Test										
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)	
Lab Control		100	6	20	---	1	Exact	1.0000	Non-Significant Effect	

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0070885	0.0070885	1	1	0.3559	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.0496194		7			

ANOVA Assumptions Tests						
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)	
Variance	Variance Ratio F Test				Indeterminate	
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution	

96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	-5.26%

Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	-4.63%



CETIS Summary Report

Report Date: 03 Jun-25 09:54 (p 1 of 1)
 Test Code/ID: 2503-S131 / 13-1410-2366

Pacific Topsmelt 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 04-7825-5096	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 12:55	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:05	Species: Atherinops affinis	Brine: Not Applicable
Test Length: 4d 1h	Taxon:	Source: Aquatic Biosystems, CO Age: 13d

Sample ID: 11-4341-4407	Code: 25-0311	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:35 ^{PDT}	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 ^{PDT}	CAS (PC):	Station: WW-3
Sample Age: 47h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
16-1956-2836	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
16-1956-2836	96h Survival Rate	Control Resp	0.95	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	0.00%
0	SC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-5.26%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-5.26%

96h Survival Rate Detail

MD5: FB6FD0593E516393A3B991070F1BA2B6

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	0.800	1.000
0	SC	1.000	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 09:54 (p 1 of 1)
Test Code/ID: 2503-S131 / 13-1410-2366

Pacific Topsmelt 96-h Acute Survival Test			Nautilus Environmental (CA)		
Analysis ID:	16-1956-2836	Endpoint:	96h Survival Rate	CETIS Version:	CETISv2.1.4
Analyzed:	03 Jun-25 9:54	Analysis:	Nonparametric-Two Sample	Status Level:	1
Edit Date:	03 Jun-25 9:53	MD5 Hash:	A53F4C7F6B8D176D17CE23F2C5566508	Editor ID:	007-926-968-0

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	10.75%

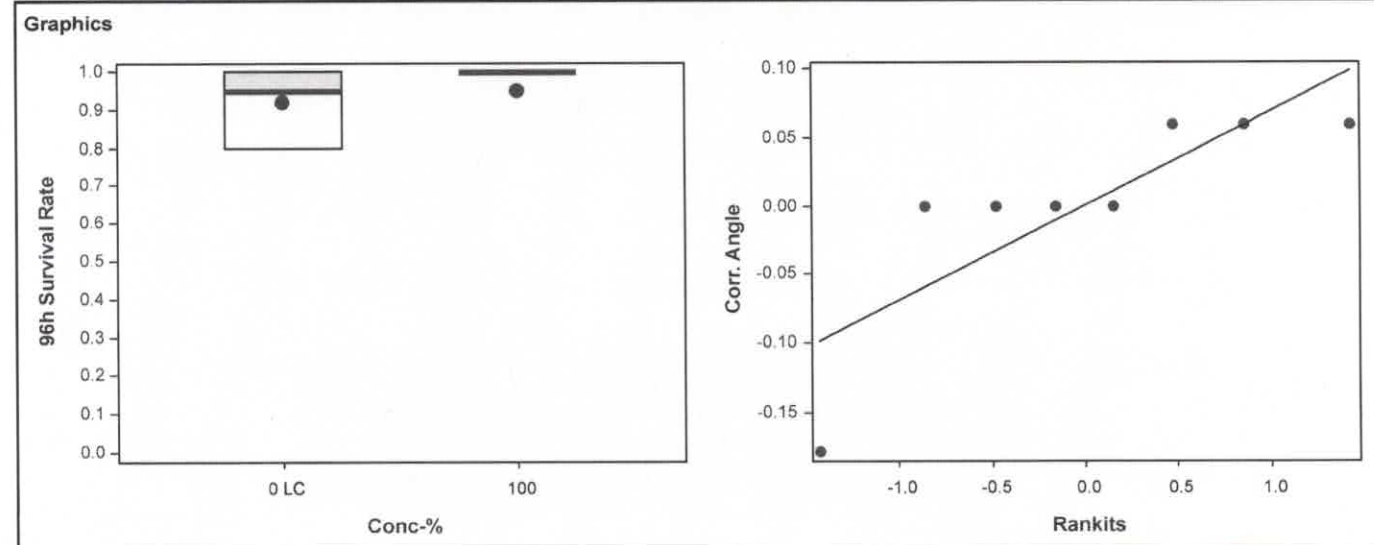
Wilcoxon Rank Sum Two-Sample Test									
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	20	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0070885	0.0070885	1	1	0.3559	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.0496194		7			

ANOVA Assumptions Tests						
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)	
Variance	Variance Ratio F Test				Indeterminate	
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution	

96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	-5.26%

Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	-4.63%



Client: Stantec / ADC Kekaha
Sample ID: WW-2 and WW3
Sample Log-In No.: 25-0310; 25-0311
Test No.: 2503-5128 & 5131

Test Species: A. affinis
Start Date/Time: 3/26/25 1255
End Date/Time: 3/30/25 1405

Tech Initials				
0	24	48	72	96
SM	FM	VC	FM	SM
WF	FM	VC	FM	SM
SM		WF		

Counts:

Readings:

Dilutions made by:

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Salinity (ppt)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	7.87	7.80	7.87	7.74	7.72	7.3	6.9	6.7	6.6	6.2	30.2	30.5	30.7	30.7	30.6	20.5	20.4	20.5	20.6	20.6
	B	5	5	5	5	5			7.76					6.7					30.4					20.5		
	C	5	5	5	5	4																				
	D	5	5	5	5	5																				
Salt Control	A	5	5	5	5	5	8.14	7.97	8.18	7.97	7.92	6.7	6.7	6.7	6.5	6.0	29.9	29.9	30.3	30.4	30.5	22.0	20.5	21.0	20.5	20.6
	B	5	5	5	5	5			7.89					6.5					29.9					20.4		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
100%	A	5	5	5	5	5	7.50	7.7	7.47	7.68	7.77	7.6	6.2	7.4	5.75	5.6	31.2	31.4	31.2	31.6	31.6	21.2	20.4	20.4	20.5	20.7
	B	5	5	5	5	5			7.70					5.7					31.5					20.4		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
WW-2	A	5	5	5	5	5	7.70	8.0	7.85	8.02	8.13	7.5	6.5	7.5	6.35	5.8	29.2	29.2	29.9	29.9	30.0	22.0	20.6	21.0	20.6	20.7
	B	5	5	5	5	5			8.13					6.2					29.2					20.4		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
WW-3	A	5	5	5	5	5																				
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
	A																									
	B																									
	C																									
	D																									
	A																									
	B																									
	C																									
	D																									
	A																									
	B																									
	C																									
	D																									

Initial Counts QC'd by: LM
Initiated by: SM

Environmental Chamber: C

Animal Source/Date Received: ABS 3/25/25 Age at Initiation: 13d

Animal Acclimation Qualifiers (circle all that apply): Q22 Q23 Q24 / none

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal

Organisms fed prior to initiation, circle one (y) / n)

Q18 AD03/26/25 Q18 SM 3/30/25

QC Check: ACS 6/3/25

Nautilus Environmental, Inc. 4340 Vandever Avenue. San Diego, CA 92120.

Feeding Times				
0	24	48	72	96
AM:	0135	0800	0135	0900
PM:	1620			

Final Review:

BO 6/3/25

Inland Silverside

CETIS Summary Report

Report Date: 03 Jun-25 10:14 (p 1 of 1)
 Test Code/ID: 2503-S129 / 05-6969-3539

Inland Silverside 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 20-5232-3499	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 13:40	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:25	Species: Menidia beryllina	Brine: Not Applicable
Test Length: 4d 1h	Taxon:	Source: Aquatic Biosystems, CO Age: 10d
Sample ID: 09-7893-7253	Code: 25-0310	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:15 ^{7DT}	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 ^{7DT}	CAS (PC):	Station: WW-2
Sample Age: 48h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
07-9244-0609	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
07-9244-0609	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0	SC	4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	5.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

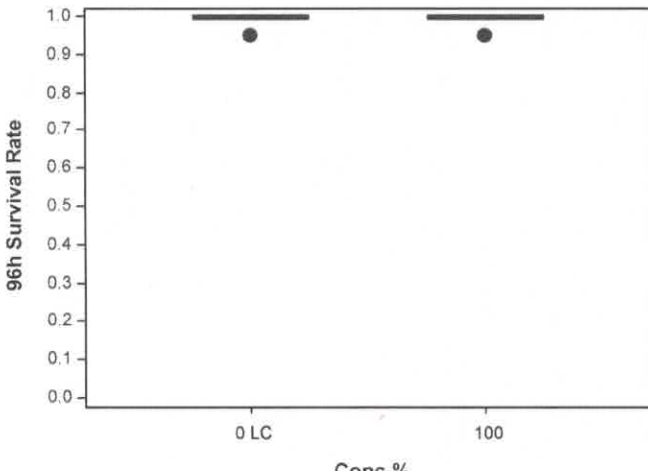
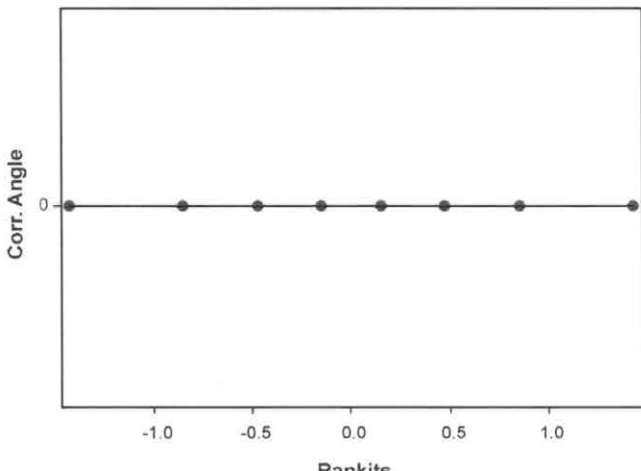
96h Survival Rate Detail

MD5: 4705AB8E28B0999C4101D37C687093B3

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
0	SC	0.800	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 10:14 (p 1 of 1)
Test Code/ID: 2503-S129 / 05-6969-3539

Inland Silverside 96-h Acute Survival Test								Nautilus Environmental (CA)			
Analysis ID: 07-9244-0609		Endpoint: 96h Survival Rate		CETIS Version: CETISv2.1.4							
Analyzed: 03 Jun-25 10:14		Analysis: Nonparametric-Two Sample		Status Level: 1							
Edit Date: 03 Jun-25 10:14		MD5 Hash: 02835A6FE1710696B7C8F79EC2C22377		Editor ID: 007-926-968-0							
Data Transform		Alt Hyp		Comparison Result							
Angular (Corrected)		C > T		100% passed 96h survival rate endpoint							
Wilcoxon Rank Sum Two-Sample Test											
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)		
Lab Control		100	6	18	---	1	Exact	1.0000	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision(α:5%)			
Between	0		0		1			Indeterminate			
Error	0		0		6						
Total	0				7						
ANOVA Assumptions Tests											
Attribute	Test				Test Stat	Critical	P-Value	Decision(α:1%)			
Variance	Variance Ratio F Test							Indeterminate			
Distribution	Shapiro-Wilk W Normality Test							Indeterminate			
96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
Graphics											
											

CETIS Summary Report

Report Date: 03 Jun-25 10:16 (p 1 of 1)
 Test Code/ID: 2503-S132 / 12-1392-9933

Inland Silverside 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 02-3823-6911	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 13:40	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:25	Species: Menidia beryllina	Brine: Not Applicable
Test Length: 4d 1h	Taxon:	Source: Aquatic Biosystems, CO Age: 10d

Sample ID: 18-5429-5917	Code: 25-0311	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:35 ^{POT}	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 ^{POT}	CAS (PC):	Station: WW-3
Sample Age: 48h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
07-5991-8602	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
07-5991-8602	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0	SC	4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	5.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

96h Survival Rate Detail

MD5: 4705AB8E28B0999C4101D37C687093B3

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
0	SC	0.800	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 10:15 (p 1 of 1)
Test Code/ID: 2503-S132 / 12-1392-9933

Inland Silverside 96-h Acute Survival Test						Nautilus Environmental (CA)	
Analysis ID:	07-5991-8602	Endpoint:	96h Survival Rate	CETIS Version:	CETISv2.1.4		
Analyzed:	03 Jun-25 10:15	Analysis:	Nonparametric-Two Sample	Status Level:	1		
Edit Date:	03 Jun-25 10:15	MD5 Hash:	02835A6FE1710696B7C8F79EC2C22377	Editor ID:	007-926-968-0		

Data Transform	Alt Hyp	Comparison Result
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint

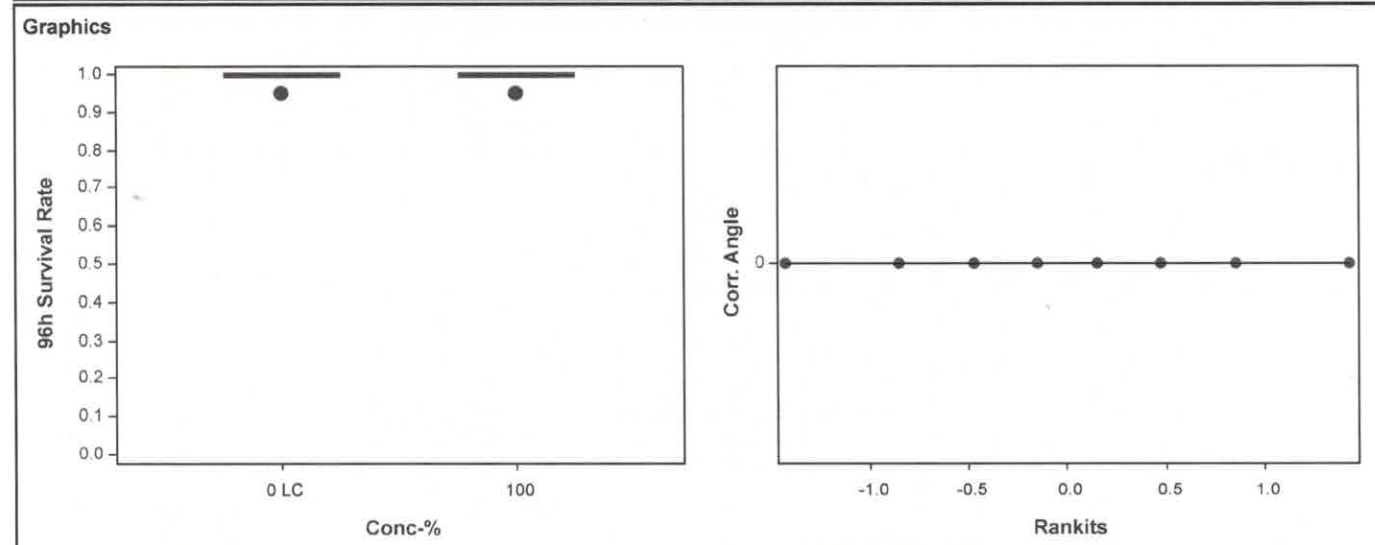
Wilcoxon Rank Sum Two-Sample Test									
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	18	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	6			
Total	0		7			

ANOVA Assumptions Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision(α :1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%



Client: Stantec / ADC Kekaha
Sample ID: WW-2 and WW3
Sample Log-in No.: 25-0310, 25-0311
Test No.: 2503-5129 & 5132

Test Species: M. beryllina
Start Date/Time: 3/26/25 1340
End Date/Time: 3/30/25 1425

Tech Initials				
0	24	48	72	96
SM	FM	WC	PM	SM
WF	FM	WC	FM	SM
SM		WF		

Counts:

Readings:

Dilutions made by:

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Salinity (ppt)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	7.86	7.73	7.97	7.75	7.68	6.6	6.1	6.5	6.1	5.9	29.7	30.2	30.7	30.5	31.0	24.6	25.3	24.7	24.0	25.1
	B	5	5	5	5	5			7.70					6.6					30.7					25.1		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
Salt Control	A	5	5	4	4	4	8.15	7.95	8.18	7.96	7.90	6.5	6.0	6.5	5.9	5.6	29.8	30.1	30.7	30.5	30.7	24.3	25.4	24.5	25.3	25.4
	B	5	5	5	5	5			7.92					6.6					30.1					25.4		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
100%	A	5	5	5	5	5	7.50	7.71	7.89	7.69	7.71	6.5	5.4	6.0	5.0	4.9	31.6	31.7	31.8	31.8	32.0	26.0	25.5	25.9	25.3	25.5
	B	5	5	5	5	5			7.62					6.2					31.7					25.4		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
WW-2	A	5	5	5	5	5	7.74	8.04	7.74	8.04	8.10	6.7	5.9	6.4	5.7	5.2	29.3	29.8	29.9	30.5	31.0	26.0	25.2	25.0	24.9	25.1
	B	5	5	5	5	5			8.18					5.5					29.9					25.2		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
WW-3	A																									
	B																									
	C																									
	D																									
	A																									
	B																									
	C																									
	D																									
	A																									
	B																									
	C																									
	D																									

Initial Counts QC'd by: WF
Initiated by: SM

Environmental Chamber: A

Animal Source/Date Received: ABS 3/25/25 Age at Initiation: 10d

Animal Acclimation Qualifiers (circle all that apply): Q22 Q23 Q24 none

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal

Organisms fed prior to initiation, circle one (y n)

QC Check: ACS 6/3/25

Final Review:

Feeding Times				
0	24	48	72	96
AM:		0135	0800	0135
PM:	1610			

Mysid Shrimp

CETIS Summary Report

Report Date: 03 Jun-25 10:24 (p 1 of 1)
 Test Code/ID: 2503-S130 / 20-5653-4293

Mysid 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 08-4815-0255	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 14:30	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:30	Species: Americamysis bahia	Brine: Not Applicable
Test Length: 96h	Taxon:	Source: Aquatic Biosystems, CO Age: 4d
Sample ID: 19-0036-1916	Code: 25-0310	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:15 ^{PDT}	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 ^{PDT}	CAS (PC):	Station: WW-2
Sample Age: 49h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
06-2486-6516	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
06-2486-6516	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0	SC	4	0.900	0.716	1.080	0.800	1.000	0.058	0.115	12.83%	10.00%
100		4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	5.00%

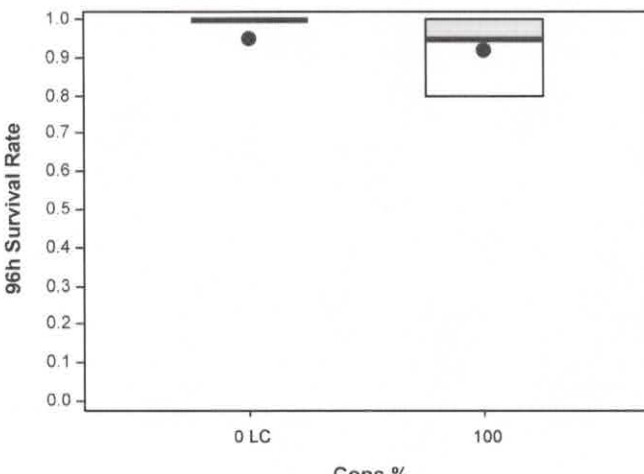
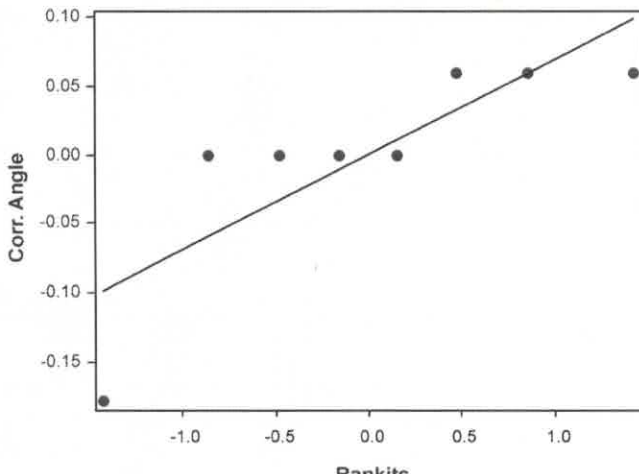
96h Survival Rate Detail

MD5: F15D88D7071596259C928ED20A707FAF

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
0	SC	0.800	0.800	1.000	1.000
100		1.000	0.800	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 10:24 (p 1 of 1)
Test Code/ID: 2503-S130 / 20-5653-4293

Mysid 96-h Acute Survival Test										Nautilus Environmental (CA)	
Analysis ID: 06-2486-6516			Endpoint: 96h Survival Rate				CETIS Version: CETISv2.1.4				
Analyzed: 03 Jun-25 10:24			Analysis: Nonparametric-Two Sample				Status Level: 1				
Edit Date: 03 Jun-25 10:23			MD5 Hash: E123C782296427559F3BCFFA608E98B3				Editor ID: 007-926-968-0				
Data Transform		Alt Hyp		Comparison Result						PMSD	
Angular (Corrected)		C > T		100% passed 96h survival rate endpoint						11.20%	
Wilcoxon Rank Sum Two-Sample Test											
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)		
Lab Control		100	6	16	---	1	Exact	0.5000	Non-Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		DF	F Stat	P-Value	Decision(α:5%)			
Between	0.0070885		0.0070885		1	1	0.3559	Non-Significant Effect			
Error	0.0425309		0.0070885		6						
Total	0.0496194				7						
ANOVA Assumptions Tests											
Attribute	Test				Test Stat	Critical	P-Value	Decision(α:1%)			
Variance	Variance Ratio F Test							Indeterminate			
Distribution	Shapiro-Wilk W Normality Test				0.706	0.645	0.0027	Non-Normal Distribution			
96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	5.00%
Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	4.43%
Graphics											
											

CETIS Summary Report

Report Date: 03 Jun-25 10:26 (p 1 of 1)
Test Code/ID: 2503-S133 / 02-5123-3855

Mysid 96-h Acute Survival Test

Nautilus Environmental (CA)

Batch ID: 16-1173-5856	Test Type: Survival (96h)	Analyst:
Start Date: 26 Mar-25 14:30	Protocol: EPA/821/R-02-012 (2002)	Diluent: Not Applicable
Ending Date: 30 Mar-25 14:30	Species: Americamysis bahia	Brine: Not Applicable
Test Length: 96h	Taxon:	Source: Aquatic Biosystems, CO Age: 4d

Sample ID: 10-0168-9944	Code: 25-0311	Project: ADC Kekaha WQ Monitoring
Sample Date: 24 Mar-25 13:35 PDT	Material: Wet Weather Sample	Source: Stantec
Receipt Date: 25 Mar-25 09:10 PDT	CAS (PC):	Station: WW-3
Sample Age: 49h (2.1 °C)	Client: Stantec	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
02-1468-4243	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	100% passed 96h survival rate	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
02-1468-4243	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0	SC	4	0.900	0.716	1.080	0.800	1.000	0.058	0.115	12.83%	10.00%
100		4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	5.00%

96h Survival Rate Detail

MD5: F15D88D7071596259C928ED20A707FAF

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
0	SC	0.800	0.800	1.000	1.000
100		1.000	0.800	1.000	1.000

CETIS Analytical Report

Report Date: 03 Jun-25 10:26 (p 1 of 1)
Test Code/ID: 2503-S133 / 02-5123-3855

Mysid 96-h Acute Survival Test				Nautilus Environmental (CA)			
Analysis ID:	02-1468-4243	Endpoint:	96h Survival Rate	CETIS Version:	CETISv2.1.4		
Analyzed:	03 Jun-25 10:25	Analysis:	Nonparametric-Two Sample	Status Level:	1		
Edit Date:	03 Jun-25 10:25	MD5 Hash:	E123C782296427559F3BCFFA608E98B3	Editor ID:	007-926-968-0		

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	11.20%

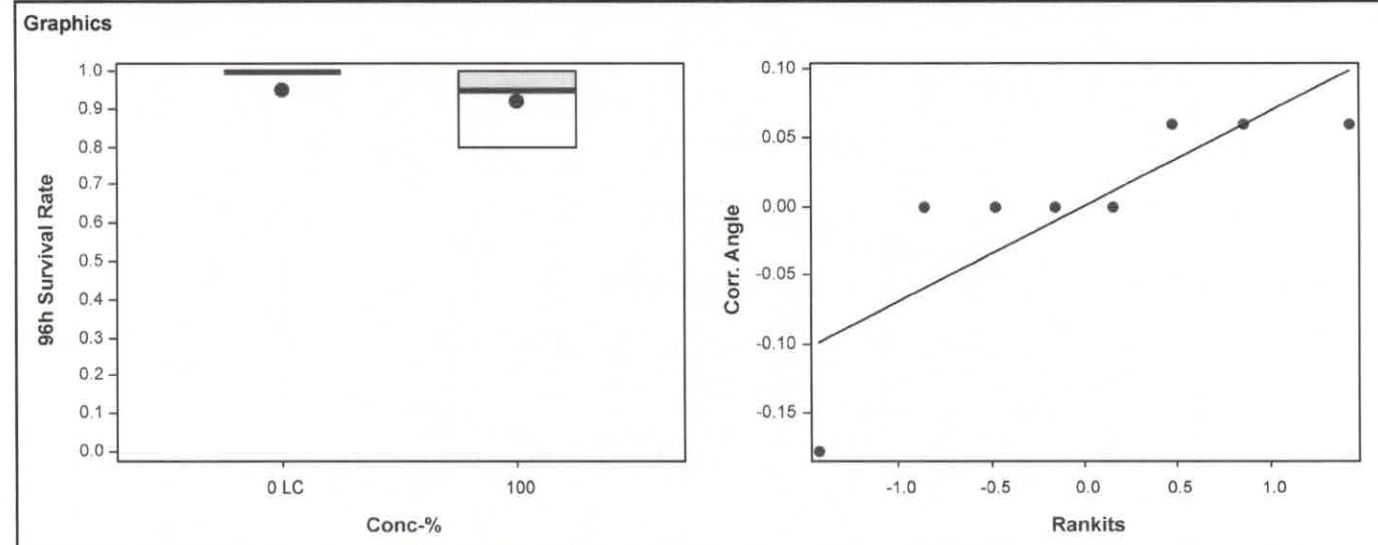
Wilcoxon Rank Sum Two-Sample Test									
Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	16	---	1	Exact	0.5000	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0070885	0.0070885	1	1	0.3559	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.0496194		7			

ANOVA Assumptions Tests						
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)	
Variance	Variance Ratio F Test				Indeterminate	
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution	

96h Survival Rate Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	5.00%

Angular (Corrected) Transformed Summary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	4.43%



DM-001

Water Quality Measurements & Test Organism Survival

Test Species: *A. bahia*

Start Date/Time: 3126125 1430

End Date/Time: 313012S 1430

Counts:	SM	FM	VE	WF	SM
Readings:	WF	FM	VE	FM	SM
Dilutions made by:	SM		WF		

Initial Counts QC'd by: CM
Initiated by: SM

Environmental Chamber: A

ABS 2/26^(A)

Age at Initiation: 4d

Q22 / Q23 / Q24 / none

i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal

Organisms fed prior to initiation, circle one (y) / n) BQ 18 SM 3/26/25 BQ 18 PM 3/26/25

ACS 6/3/25

Final Review:

Nautilus Environmental, Inc. 4340 Vandever Avenue, San Diego, CA 92120.

Feeding Times				
0	24	48	72	96
0.735	0.800	0.733	0.700	
1.420	1.805	1.515	1.530	-

AM:

PM:

Appendix B

Sample Check-In Information

Nautilus Environmental, Inc.
4340 Vandever Avenue
San Diego, CA 92120

Client: Stantec / ADC Kekaha
Sample ID: WW-2 and WW-3
Test ID No(s): 2503-S128 to S133

Sample Check-In Information
DC-005

Sample ID:	1) WW-2	2) WW-3		
Log-in No. (25-xxxx):	0310	0311		
Sample Collection Date & Time:	3/24/25 1315 EDT	3/24/25 1335 EDT		
Sample Receipt Date & Time:	3/25/25 0910	3/25/25 0910		
Number of Containers & Container Type:	1x 10L	1x 10L cubi		
Approx. Total Volume Received (L):	10L	10L		
Check-in Temperature (°C)	2.1	2.1		
Temperature OK? ¹	(Y) N	(Y) N	Y N	Y N
DO (mg/L)	8.3	10.1		
pH (units)	7.40	7.61		
Conductivity (µS/cm)	—	3140		
Salinity (ppt)	31.1	1.7		
Alkalinity (mg/L) ²	148	160		
Hardness (mg/L) ^{2,3}	—	420		
Total Chlorine (mg/L)	≤ 0.02	0.04		
Technician Initials	DT	DT		

Test Performed: Acute topsmelt, silverside, mysid Control/Dilution Water: 8:2 / Lab SW / Lab ART Other: _____

Alkalinity: 155 Salinity: 30 ppt
Additional Control? (Y) N = Lab SW Salinity: 30ppt Alkalinity: 103

Test Performed: _____ Control/Dilution Water: 8:2 / Lab SW / Lab ART Other: _____

Alkalinity: _____ Hardness or Salinity: _____
Additional Control? Y N = _____ Alkalinity: _____ Hardness or Salinity: _____

Test Performed: _____ Control/Dilution Water: 8:2 / Lab SW / Lab ART Other: _____

Alkalinity: _____ Hardness or Salinity: _____
Additional Control? Y N = _____ Alkalinity: _____ Hardness or Salinity: _____

Notes: ¹ Temperature of sample should be 0-6°C, if received more than 24 hours past collection time.

² mg/L as CaCO₃, ³ Measured for freshwater samples only, NA = Not Applicable

Additional Comments: (A) Q18 ACS 3/26/25

QC Check: ACS 6/3/25

Sample Description:

1) dark yellow, opaque, strong odor, light debris
2) light brown, slightly opaque, no odor, light debris

COC Complete (Y/N)?

A Y B Y C _____

1) 2)

Filtration? Y (N)

Initials: A) B) C)

Pore Size: _____

Organisms or Debris

Salinity Adjustment? (Y) N WW-2 only

Test: all Source: instant ocean ppt: 30

Test: Source: Target ppt:

Test: Source: Target ppt:

pH Adjustment? Y (N)

A B C

Initial pH:

Amount of HCl added:

Final pH:

Cl₂ Adjustment? Y (N)

A B C

Initial Free Cl₂:

STS added:

Final Free Cl₂:

Sample Aeration? Y (N)

A B C

Initial D.O.

Duration & Rate

Final D.O.

Measure NH₃ via test strip (circle one)? (Y) N

NH₃ Strip Result* A: 0.5 B: 0.0 C: _____

*(If 6 or more, notify PM) 1) WW-2 2) WW-3

Subsamples for Additional Chemistry Required? Y (N)

NH₃ Other

Tech Initials A B C

Final Review: BO 6/3/25

Appendix C

Chain-of-Custody Form

Nautilus Environmental - Environmental Toxicology

4340 Vandever Avenue
San Diego, CA 92120
Phone 858.587.7333



Chain of Custody

Date 3/24/25 Page 1 of 1

Sample Collection By:								ANALYSES REQUIRED								Receipt Temperature (°C)
Report to:				Invoice To: Same as Report to ☒								Enthalpy Matrix Codes:				
Company <u>Stantec GS</u>				Company _____								G = Grab				
Address <u>737 Bishop St Suite 3050</u>				Address _____								C = Composite				
City/State/Zip <u>Honolulu, HI 96813</u>				City/State/Zip _____								FW = Freshwater				
Contact <u>Benjamin Berridge</u>				Contact _____								SW = Seawater				
Phone <u>808-531-9407</u>				Phone _____								Sed = Sediment				
Email <u>benjamin.berridge@stantecgs.com</u>				Email _____								STRM = Stormwater				
												GW = Groundwater				
												WW = Wastewater				
												O = Other (specify)				
SAMPLE ID	SAMPLE		Type (G or C)	MATRIX CODE (FW, SW, Sed, STRM, GW, WW, O)	Container		COMMENTS	A. affinis 96-hr Acute Survival	M. beryllina 96-hr Acute Survival	A. bahia 96-hr Acute Survival	P. promelas 96-hr Acute Survival	C. dubia 96-hr Acute Survival	H. azteca 96-hr Acute Survival			
	Date	Time			Type	Qty										
1 WW-2	3/24/2025	10:15	G	STRM, SW	2.5 Gal Plastic	1		☒	☒	☒						
2 WW-3	3/24/2025	10:35	G	STRM, SW	2.5 Gal Plastic	1		☒	☒	☒						
3																
4																
5																
6																
7																
8																
9																
10																

PROJECT INFORMATION		SAMPLE RECEIPT		1) RELINQUISHED BY (CLIENT)		2) RECEIVED BY (COURIER)	
Project Name:	ADC Water Quality Monitoring	Total No. of Containers	2	(Signature)	(Time)	(Signature)	(Time)
PO No.:	90942	Received Good Condition?	Y	(Printed Name)	(Date)	(Printed Name)	(Date)
Shipped Via:	FedEx	Matches Test Schedule?	Y	(Company)		(Company)	
SPECIAL INSTRUCTIONS/COMMENTS:				3) RELINQUISHED BY (COURIER)		4) RECEIVED BY (LABORATORY)	
				(Signature)	(Time)	(Signature)	(Time)
				(Printed Name)	(Date)	(Printed Name)	(Date)
				(Company)		(Company)	

Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.
Shaded areas are for lab use only
Report turn-around-time varies depending on length of test; please inquire with your project manager.

Q146m 3/25/25

ww-2 25-0310
ww-3: 25-0311

Appendix D

Qualifier Code Glossary

Glossary of Qualifier Codes:

- Q1 - Temperature out of recommended range; corrective action taken and recorded in Test Temperature Correction Log
- Q2 - Temperature out of recommended range; no action taken, test terminated same day
- Q3 - Sample pH adjusted to within range of 6-9 with reagent grade NaOH or HCl, as needed
- Q4 - Test aerated; D.O. levels dropped below 4.0 mg/L
- Q5 - Test initiated with continuous aeration due to an anticipated drop in D.O.
- Q6 - Airline obstructed or fell out of replicate and replaced; drop in D.O. occurred
- Q7 - Salinity out of recommended range
- Q8 - Spilled test chamber/ Unable to recover test organism(s)
- Q9 - Inadequate sample volume remaining, partial renewal performed
- Q10 - Inadequate sample volume remaining, no renewal performed
- Q11 - Sample out of holding time; refer to QA section of report
- Q12 - Replicate(s) not initiated; excluded from data analysis
- Q13 - Survival counts not recorded due to poor visibility or heavy debris
- Q14 - D.O. percent saturation was checked and was $\leq 110\%$
- Q15 - Did not meet minimum test acceptability criteria. Refer to QA section of report.
- Q16 - Percent minimum significant difference (PMSD) was below the lower bound limit for acceptability. This indicates that statistics may be over-sensitive in detecting a difference from the control due to low variability in the data set. Test results were reviewed and reported in accordance with guidance found in EPA-833-R-00-003, 2000 unless otherwise specified.
- Q17 - Percent minimum significant difference (PMSD) was above the upper bound limit for acceptability. This indicates that statistics may be under-sensitive in detecting a difference from the control due to high variability in the data set. Test results were reviewed and reported in accordance with EPA-833-R-00-003, 2000 guidance unless otherwise specified.
- Q18 - Incorrect or illegible Entry
- Q19 - Miscalculation
- Q20 - PMSD criteria do not apply to test of significant toxicity (TST) analysis
- Q21 - Other (provide reason in comments section)
- Q22 - Greater than 10% batch mortality observed upon receipt and/or in holding prior to test initiation. Organisms acclimated to test conditions at Enthelphy and ultimately deemed fit to use for testing.
- Q23 - Test organisms experienced a temperature shift greater than 3°C in holding or were received at a temperature greater than 3°C outside the recommended test temperature range and had minimal time to acclimate prior to test initiation. However, due to age-specific protocol requirements and/or sample holding time constraints, the organisms were used to initiate test(s). Organisms were ultimately deemed fit to use for testing.
- Q24 - Test organisms experienced a salinity shift greater than 3 ppt in holding or were received at a salinity greater than 3 ppt outside the recommended test salinity range and had minimal time to acclimate prior to test initiation. However, due to age-specific protocol requirements and/or sample holding time constraints, the organisms were used to initiate test(s). Organisms were ultimately deemed fit to use for testing.

Appendix E

Reference Toxicant Test Control Charts

Pacific Topsmelt 96-h Acute Survival Test

Nautilus Environmental (CA)

Test Type: Survival (96h)

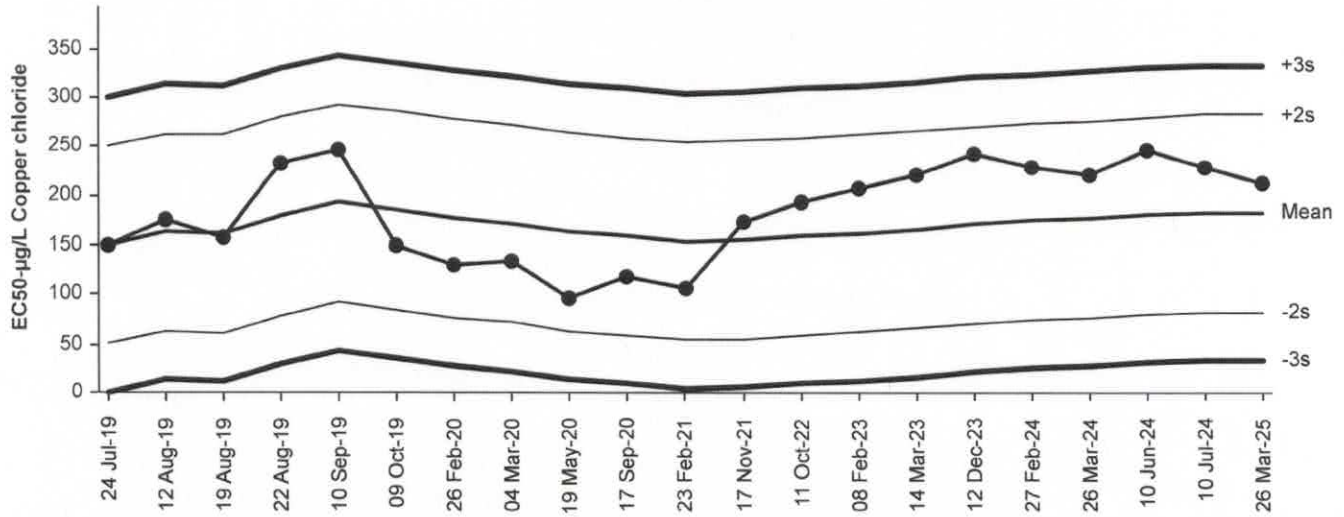
Organism: Atherinops affinis

Material: Copper chloride

Protocol: EPA/821/R-02-012 (2002)

Endpoint: 96h Survival Rate

Source: Reference Toxicant-REF

Pacific Topsmelt 96-h Acute Survival Test
96h Survival Rate Endpoint

Cumulative Mean Plot

Mean: 183.3 Count: 20 -2s Warning Limit: 83.3 -3s Action Limit: 33.4
Sigma: 49.98 CV: 27.30% +2s Warning Limit: 283 +3s Action Limit: 333

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2019	Jul	24	16:25	150.4	-32.89	-0.6581			02-4547-9337	03-4444-2456
2		Aug	12	16:15	176.5	-6.827	-0.1366			05-6999-0080	19-2452-0933
3			19	19:30	158.7	-24.56	-0.4914			00-1616-6988	16-4823-3084
4			22	16:45	232	48.73	0.9749			14-6253-4066	09-6589-6472
5		Sep	10	11:15	246.2	62.93	1.259			01-3190-7470	00-5901-5932
6		Oct	9	15:40	149.6	-33.7	-0.6743			12-2483-9958	16-7314-6828
7	2020	Feb	26	15:20	129.7	-53.62	-1.073			04-4275-3329	19-1366-8841
8		Mar	4	17:15	134.1	-49.22	-0.9848			09-0186-0501	09-2347-5750
9		May	19	17:20	96.59	-86.71	-1.735			09-8977-8612	01-6220-7123
10		Sep	17	14:25	118.9	-64.38	-1.288			07-7701-0607	03-4458-7869
11	2021	Feb	23	16:10	107.2	-76.12	-1.523			15-2183-5128	00-7227-8818
12		Nov	17	17:00	174.1	-9.19	-0.1839			10-0193-2387	14-5680-1838
13	2022	Oct	11	16:07	193.2	9.887	0.1978			02-7625-1264	21-0421-1281
14	2023	Feb	8	14:45	207.1	23.75	0.4753			19-6999-8482	14-7115-7109
15		Mar	14	14:20	221.9	38.61	0.7726			15-6395-0579	17-4627-7258
16		Dec	12	16:10	243.4	60.1	1.202			16-7260-5143	20-7116-3012
17	2024	Feb	27	15:50	229.7	46.44	0.9292			20-5591-0437	03-3170-5555
18		Mar	26	14:05	221.9	38.61	0.7726			17-4330-0896	11-1517-3205
19		Jun	10	13:50	246.2	62.93	1.259			10-1309-3249	11-2796-9191
20		Jul	10	16:25	228.5	45.22	0.9047			21-3298-4124	00-0054-2058
21	2025	Mar	26	13:20	212.8	29.54	0.591			10-6518-4517	07-3426-6451

CETIS QC Plot

Report Date: 03 Jun-25 10:09 (1 of 1)

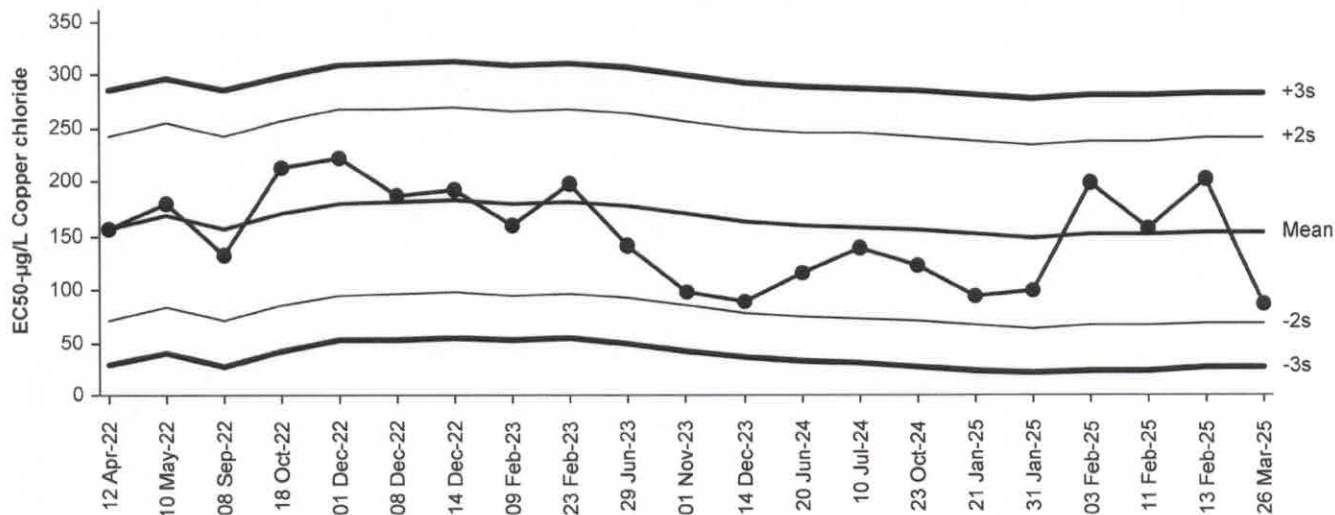
Inland Silverside 96-h Acute Survival Test

Nautilus Environmental (CA)

Test Type: Survival (96h)
Protocol: EPA/821/R-02-012 (2002)

Organism: Menidia beryllina
Endpoint: 96h Survival Rate

Material: Copper chloride
Source: Reference Toxicant-REF

Inland Silverside 96-h Acute Survival Test
96h Survival Rate Endpoint

Cumulative Mean Plot

Mean: 155.4 Count: 20 -2s Warning Limit: 69.7 -3s Action Limit: 26.9
Sigma: 42.84 CV: 27.60% +2s Warning Limit: 241 +3s Action Limit: 284

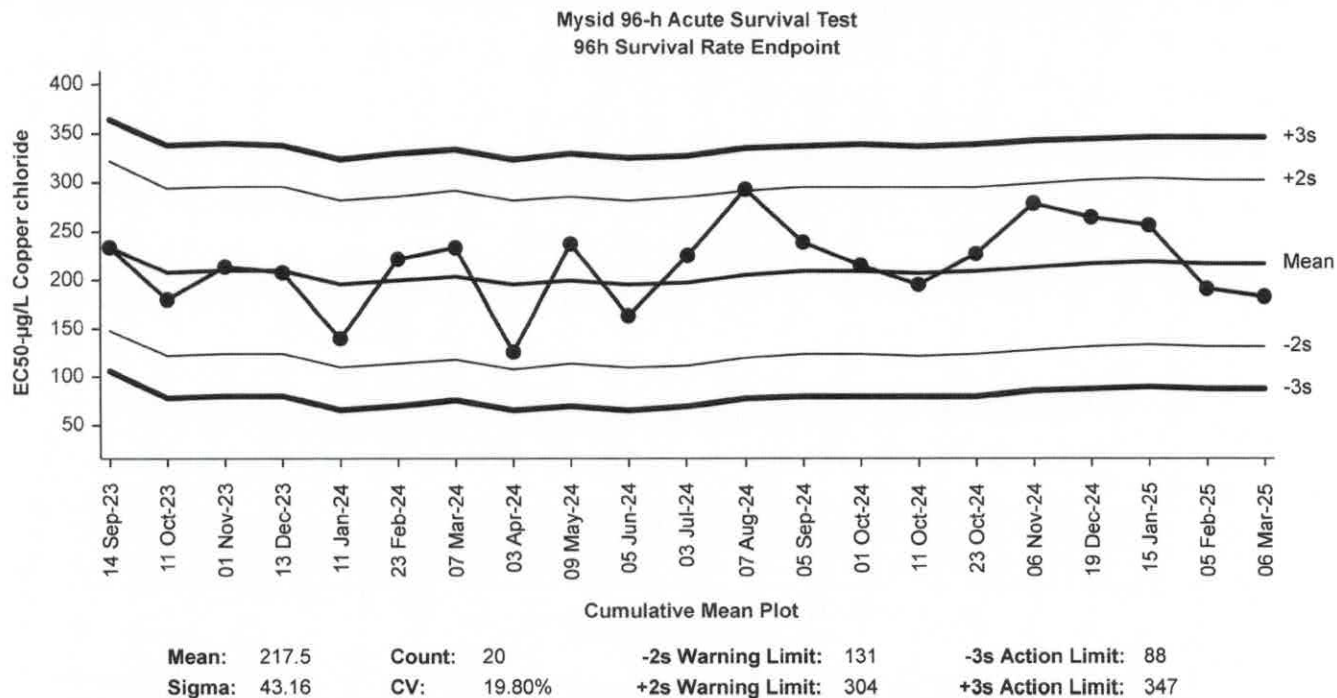
Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Apr	12	17:35	156.9	1.517	0.03541			07-5453-0338	19-2336-1516
2		May	10	17:15	180.3	24.85	0.5801			13-4082-2694	00-0925-3219
3		Sep	8	18:45	132	-23.45	-0.5474			01-2610-4728	13-4659-9428
4		Oct	18	15:45	213.3	57.87	1.351			04-3098-2404	19-6506-1409
5		Dec	1	18:15	221.9	66.51	1.553			10-3325-3262	00-5431-5878
6			8	16:42	186.6	31.21	0.7284			14-7600-8927	07-7357-4624
7			14	17:05	192.4	37.04	0.8647			05-3190-6319	15-9199-6379
8	2023	Feb	9	15:55	160.8	5.45	0.1272			10-2868-1341	17-9597-6471
9			23	16:20	198.2	42.83	0.9998			20-7336-4922	10-8152-4222
10		Jun	29	10:05	141.4	-13.98	-0.3263			18-3139-7315	15-1717-4813
11		Nov	1	15:35	98.92	-56.48	-1.318			04-9858-3754	04-0354-7731
12		Dec	14	15:40	88.54	-66.86	-1.561			03-9728-8300	18-2064-3811
13	2024	Jun	20	18:15	116.5	-38.94	-0.9089			02-4364-8651	04-2415-5001
14		Jul	10	16:40	139.5	-15.89	-0.3709			19-9326-0820	09-9824-5473
15		Oct	23	18:20	123.1	-32.29	-0.7536			19-8212-6474	13-7986-1607
16	2025	Jan	21	19:10	95.45	-59.95	-1.399			09-2487-8602	06-2470-7764
17			31	16:15	99.51	-55.89	-1.305			13-1381-9837	07-3803-9908
18		Feb	3	19:10	200	44.6	1.041			15-8639-7519	04-1900-4454
19			11	19:15	158.7	3.34	0.07797			13-6009-3655	06-6027-1442
20			13	17:30	203.7	48.28	1.127			03-3910-1481	19-9324-4454
21		Mar	26	14:05	86.41	-68.99	-1.61			07-1166-9402	04-1616-4251

CETIS QC Plot

Report Date: 11 Mar-25 14:01 (1 of 1)

Mysid 96-h Acute Survival Test		Nautilus Environmental (CA)	
Test Type: Survival (96h)	Organism: Americamysis bahia	Material: Copper chloride	
Protocol: EPA/821/R-02-012 (2002)	Endpoint: 96h Survival Rate	Source: Reference Toxicant-REF	



Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Sep	14	16:10	234.5	17.02	0.3944			12-4490-6342	05-6140-1388
2		Oct	11	16:05	180.3	-37.25	-0.8631			10-6071-4883	06-9811-9527
3		Nov	1	15:20	214.4	-3.145	-0.07288			08-5051-1943	10-7508-3629
4		Dec	13	15:05	207.1	-10.45	-0.2421			13-6574-4295	15-2299-7241
5	2024	Jan	11	16:15	139.3	-78.24	-1.813			12-2714-7247	15-6117-3790
6		Feb	23	16:15	221.9	4.414	0.1023			04-1438-8638	01-9398-5662
7		Mar	7	16:15	233.6	16.12	0.3734			13-7999-6305	13-1030-9848
8		Apr	3	16:55	125.9	-91.63	-2.123	(-)		09-6518-5757	03-6272-3374
9		May	9	20:00	237.4	19.9	0.461			13-3196-3934	19-6071-3777
10		Jun	5	17:10	162.9	-54.63	-1.266			10-6654-5789	01-1494-0415
11		Jul	3	15:20	225.4	7.888	0.1828			03-4361-4751	13-6922-9955
12		Aug	7	16:35	293.1	75.58	1.751			15-1693-4427	03-2953-2663
13		Sep	5	16:50	240.1	22.55	0.5225			08-9258-7270	15-0424-5902
14		Oct	1	15:40	216	-1.488	-0.03448			17-7656-4472	10-0557-7870
15			11	15:50	195.7	-21.78	-0.5047			16-9807-4054	08-5864-9996
16			23	18:50	228.3	10.84	0.2511			15-2392-6169	12-8776-9848
17		Nov	6	16:30	279.3	61.79	1.432			17-7486-4009	16-8614-8967
18		Dec	19	17:35	265.9	48.37	1.121			20-4604-0920	02-7612-9510
19	2025	Jan	15	15:25	258.4	40.91	0.9478			17-1756-2020	15-6197-5938
20		Feb	5	17:15	190.9	-26.59	-0.6161			01-4600-2205	11-7665-9234
21		Mar	6	17:40	182.6	-34.93	-0.8094			20-5984-4840	03-9287-4591