

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

LAB CHRONICLE

OrderID: P4718	OrderDate: 11/5/2024 1:31:00 PM
Client: Portal Partners Tri-Venture	Project: Amtrak Sawtooth Bridges 2024
Contact: Joseph Krupansky	Location: L21,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4718-01	WB-307-SB01	SOIL	PCB	8082A	11/04/24	11/06/24	11/06/24	11/05/24
			EPH	NJEPH		11/08/24	11/08/24	
P4718-02	WB-307-SB02	SOIL	PCB	8082A	11/04/24	11/06/24	11/06/24	11/05/24
			EPH	NJEPH		11/08/24	11/08/24	
P4718-03	WB-307-SB02	TCLP	TCLP Herbicide	8151A	11/04/24	11/10/24	11/12/24	11/05/24
P4718-04	WB-307-SW	WATER	PCB	8082A	11/04/24	11/06/24	11/06/24	11/05/24
			EPH	NJEPH		11/09/24	11/11/24	



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Fax : 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: P4718

Order ID: P4718

Client: Portal Partners Tri-Venture

Project ID: Amtrak Sawtooth Bridges 2024

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
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Client ID :

Total Concentration: 0.000



QC SUMMARY

Surrogate Summary

SDG No.: P4718

Client: Portal Partners Tri-Venture

Analytical Method: 8151A

Lab Sample ID	Client ID	Parameter	Column	Spike	Result	Rec	Qual	Limits	
								Low	High
I.BLK-PS028355.D	PIBLK-PS028355.D	2,4-DCAA	1	500	501	100		70 (39)	130 (175)
		2,4-DCAA	2	500	503	101		70 (39)	130 (175)
I.BLK-PS028450.D	PIBLK-PS028450.D	2,4-DCAA	1	500	503	101		70 (39)	130 (175)
		2,4-DCAA	2	500	446	89		70 (39)	130 (175)
PB164850BL	PB164850BL	2,4-DCAA	1	500	484	97		70 (39)	130 (175)
		2,4-DCAA	2	500	408	82		70 (39)	130 (175)
PB164850BS	PB164850BS	2,4-DCAA	1	500	534	107		70 (39)	130 (175)
		2,4-DCAA	2	500	468	94		70 (39)	130 (175)
PB164694TB	PB164694TB	2,4-DCAA	1	500	351	70		70 (39)	130 (175)
		2,4-DCAA	2	500	283	57	*	70 (39)	130 (175)
P4718-03	WB-307-SB02	2,4-DCAA	1	500	386	77		70 (39)	130 (175)
		2,4-DCAA	2	500	314	63	*	70 (39)	130 (175)
P4718-03MS	WB-307-SB02MS	2,4-DCAA	1	500	363	73		70 (39)	130 (175)
		2,4-DCAA	2	500	282	56	*	70 (39)	130 (175)
P4718-03MSD	WB-307-SB02MSD	2,4-DCAA	1	500	366	73		70 (39)	130 (175)
		2,4-DCAA	2	500	282	56	*	70 (39)	130 (175)
I.BLK-PS028462.D	PIBLK-PS028462.D	2,4-DCAA	1	500	497	99		70 (39)	130 (175)
		2,4-DCAA	2	500	444	89		70 (39)	130 (175)

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: P4718

Client: Portal Partners Tri-Venture

Analytical Method: 8151A

DataFile : PS028457.D

Lab Sample ID:	Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Client Sample ID:	WB-307-SB02MS											
P4718-03MS	2,4-D	50	0	47.6	ug/L	95				70 (65)	130 (135)	
	2,4,5-TP(Silvex)	50	0	56.9	ug/L	114				70 (62)	130 (139)	

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: P4718

Client: Portal Partners Tri-Venture

Analytical Method: 8151A

DataFile : PS028458.D

Lab Sample ID:	Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Client Sample ID:	WB-307-SB02MSD											
P4718-03MSD	2,4-D	50	0	47.8	ug/L	96		1		70 (65)	130 (135)	20 (20)
	2,4,5-TP(Silvex)	50	0	58.6	ug/L	117		3		70 (62)	130 (139)	20 (20)



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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: P4718

Client: Portal Partners Tri-Venture

Analytical Method: 8151A **Datafile :** PS028453.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD		Limits		RPD
								Qual	Low	High		
PB164850BS	2,4-D	5	5.00	ug/L	100				70 (83)	130 (130)		
	2,4,5-TP(Silvex)	5	5.20	ug/L	104				70 (78)	130 (127)		

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164850BL

Lab Name: CHEMTECH

Contract: PORT06

Lab Code: CHEM Case No.: P4718

SAS No.: P4718 SDG NO.: P4718

Lab Sample ID: PB164850BL

Lab File ID: PS028452.D

Matrix: (soil/water) water

Extraction: (Type) _____

Sulfur Cleanup: (Y/N) N

Date Extracted: 11/10/2024

Date Analyzed (1): 11/12/2024

Date Analyzed (2): 11/12/2024

Time Analyzed (1): 13:53

Time Analyzed (2): 13:53

Instrument ID (1): ECD_S

Instrument ID (2): ECD_S

GC Column (1): RTX-CLP ID: 0.32 (mm)

GC Column (2): RTX-CLP2 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
PB164850BS	PB164850BS	PS028453.D	11/12/2024	11/12/2024
PB164694TB	PB164694TB	PS028454.D	11/12/2024	11/12/2024
WB-307-SB02	P4718-03	PS028456.D	11/12/2024	11/12/2024
WB-307-SB02MS	P4718-03MS	PS028457.D	11/12/2024	11/12/2024
WB-307-SB02MSD	P4718-03MSD	PS028458.D	11/12/2024	11/12/2024

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	11/04/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/05/24
Client Sample ID:	WB-307-SB02	SDG No.:	P4718
Lab Sample ID:	P4718-03	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0
Sample Wt/Vol:	100	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TCLP Herbicide
GPC Factor :	1.0	PH :	
Prep Method :	8151A	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028456.D	1	11/10/24 09:45	11/12/24 15:38	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	4.90	U	4.90	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	4.50	U	4.50	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	386		70 (39) - 130 (175)	77%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028456.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 15:38
 Operator : AR\AJ
 Sample : P4718-03
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 WB-307-SB02

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:52:03 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
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System Monitoring Compounds

4) S	2,4-DCAA	7.244	7.746	1066.4E6	499.6E6	386.260	313.540
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Target Compounds

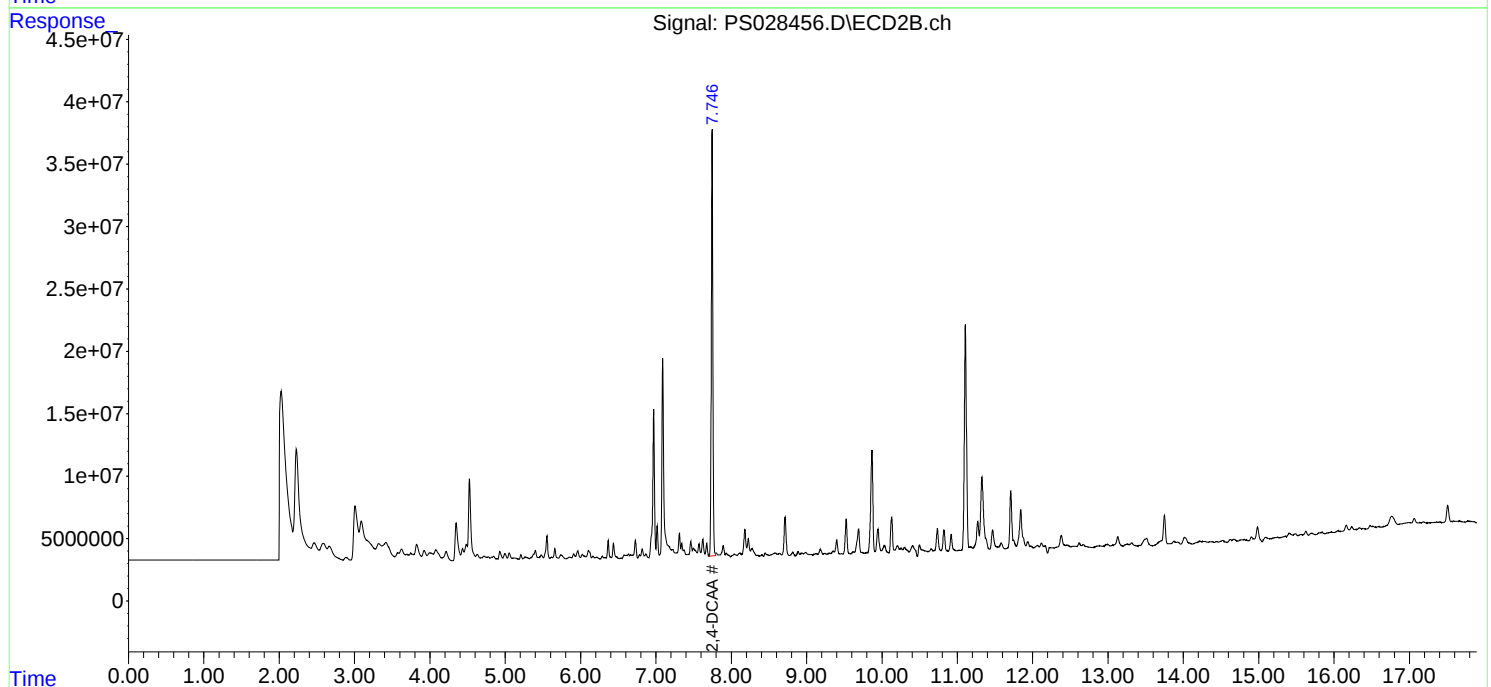
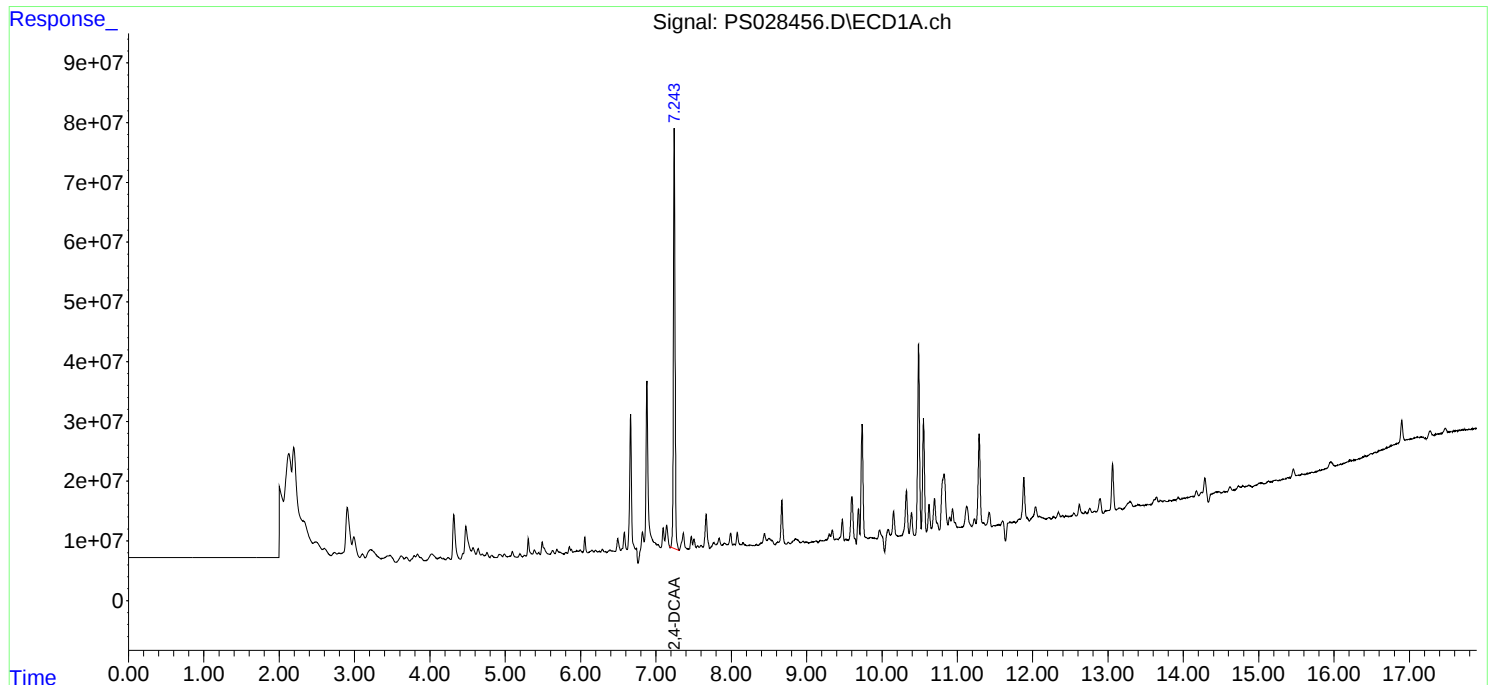
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

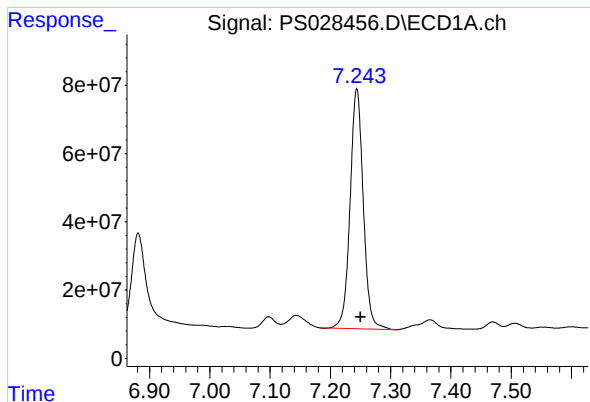
Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028456.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 15:38
Operator : AR\AJ
Sample : P4718-03
Misc :
ALS Vial : 8 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
WB-307-SB02

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:52:03 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

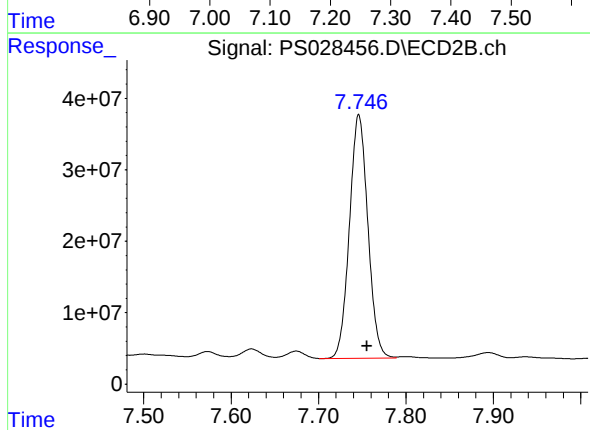




#4 2,4-DCAA

R.T.: 7.244 min
Delta R.T.: -0.006 min
Response: 1066368198
Conc: 386.26 ng/ml

Instrument :
ECD_S
ClientSampleId :
WB-307-SB02



#4 2,4-DCAA

R.T.: 7.746 min
Delta R.T.: -0.009 min
Response: 499601746
Conc: 313.54 ng/ml

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/10/24
Client Sample ID:	PB164694TB	SDG No.:	P4718
Lab Sample ID:	PB164694TB	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	8151A		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028454.D	1	11/10/24 09:45	11/12/24 14:49	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	4.90	U	4.90	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	4.50	U	4.50	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	351		70 (39) - 130 (175)	70%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028454.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 14:49
 Operator : AR\AJ
 Sample : PB164694TB
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 ECD_S
ClientSampleId :
 PB164694TB

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:50:14 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds						
4) S 2,4-DCAA	7.247	7.746	969.4E6	451.4E6	351.121	283.276

Target Compounds

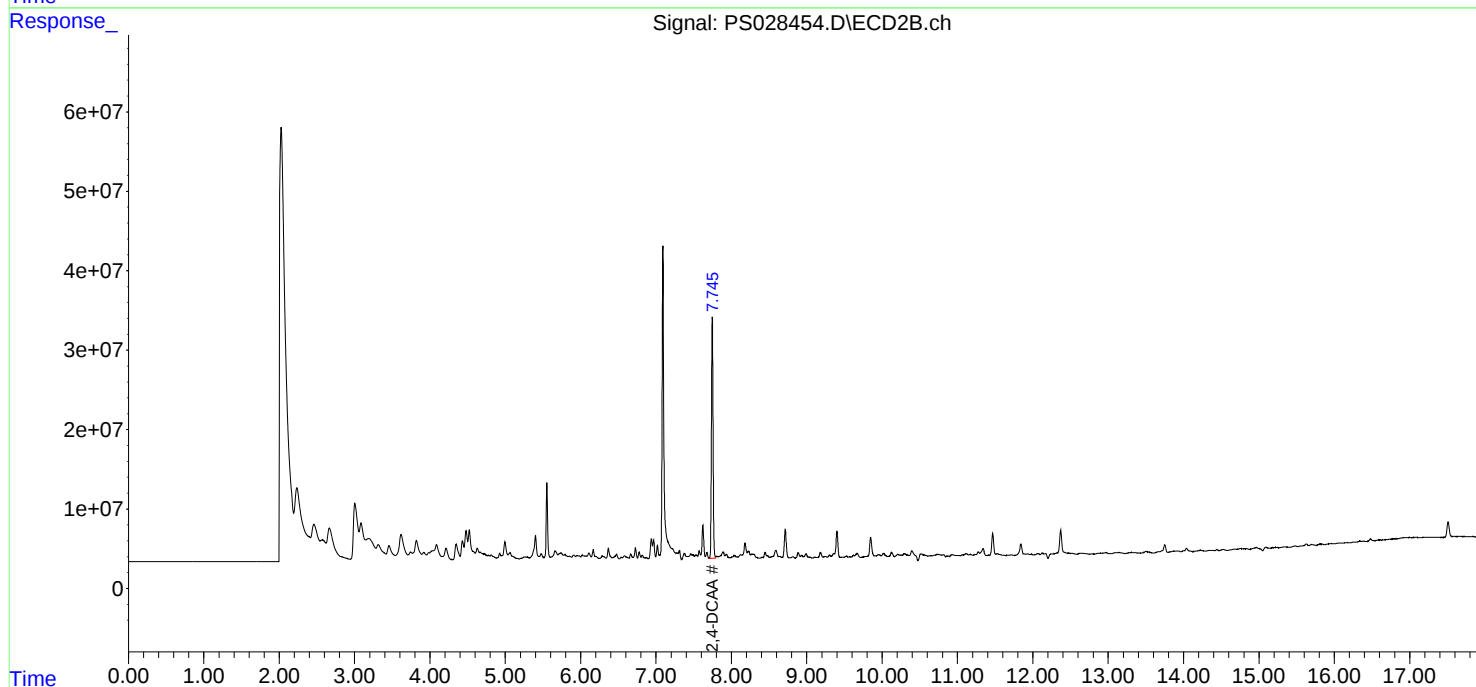
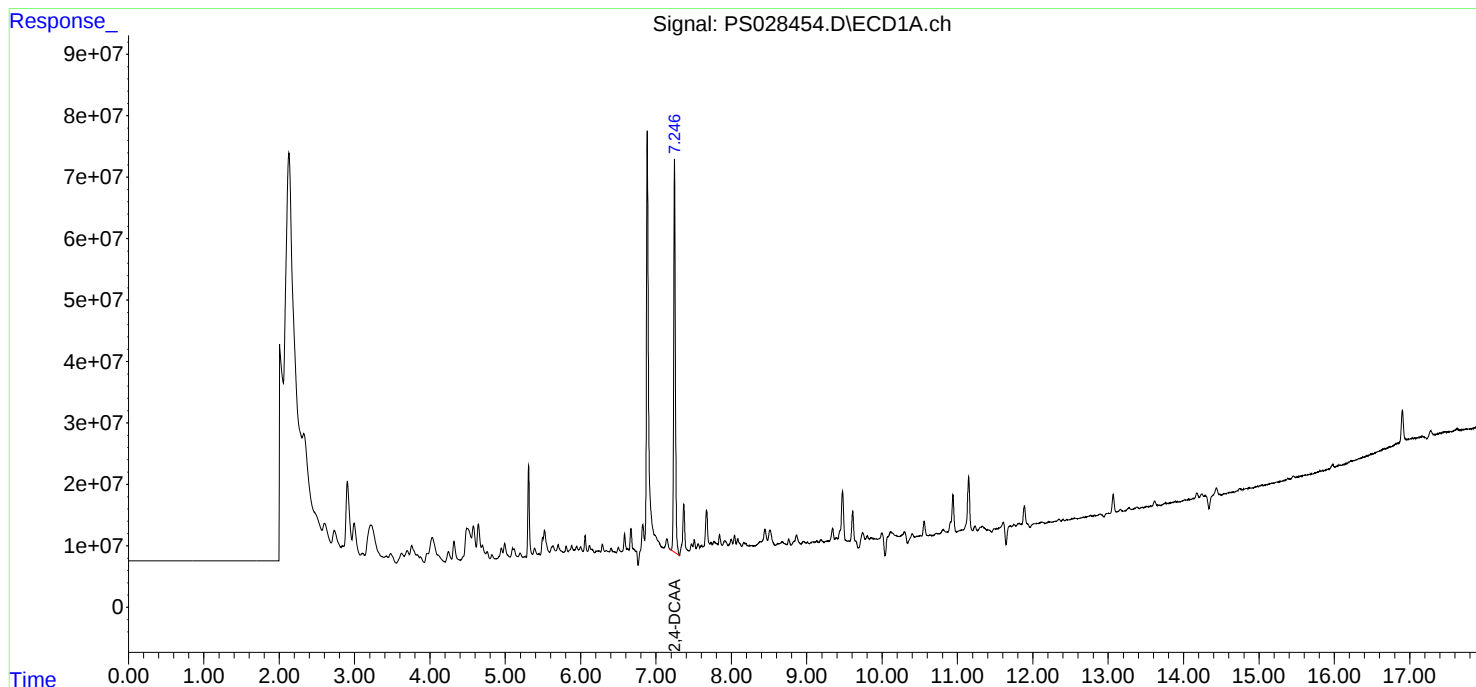
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

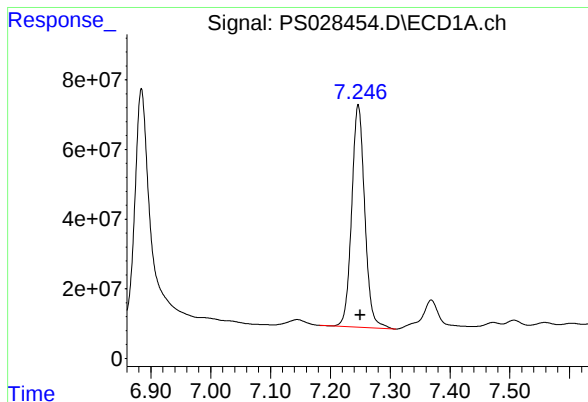
Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028454.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 14:49
Operator : AR\AJ
Sample : PB164694TB
Misc :
ALS Vial : 6 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
PB164694TB

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:50:14 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

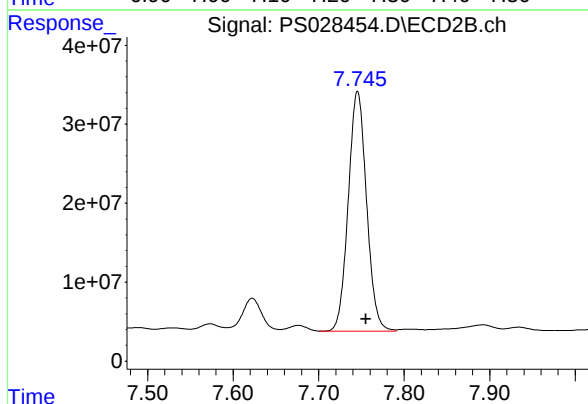




#4 2,4-DCAA

R.T.: 7.247 min
Delta R.T.: -0.003 min
Response: 969358443
Conc: 351.12 ng/ml

Instrument :
ECD_S
ClientSampleId :
PB164694TB



#4 2,4-DCAA

R.T.: 7.746 min
Delta R.T.: -0.010 min
Response: 451378108
Conc: 283.28 ng/ml



CALIBRATION SUMMARY

[illegible]

RETENTION TIMES OF INITIAL CALIBRATION

Contract: PORT06
Lab Code: CHEM **Case No.:** P4718 **SAS No.:** P4718 **SDG NO.:** P4718
Instrument ID: ECD_S **Calibration Date(s):** 11/08/2024 11/08/2024
Calibration Times: 15:13 16:58

GC Column: RTX-CLP2 ID: 0.32 (mm)

LAB FILE ID:	RT 200 = <u>PS028356.D</u>	RT 500 = <u>PS028357.D</u>
	RT 750 = <u>PS028358.D</u>	RT 1000 = <u>PS028359.D</u>
		RT 1500 = <u>PS028360.D</u>

COMPOUND	RT 200	RT 500	RT 750	RT 1000	RT 1500	MEAN RT	RT WINDOW FROM TO	
2,4,5-TP(Silvex)	9.91	9.91	9.91	9.91	9.91	9.91	9.81	10.01
2,4-D	9.01	9.00	9.01	9.01	9.01	9.00	8.90	9.10
2,4-DCAA	7.76	7.75	7.76	7.76	7.76	7.75	7.65	7.85

CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: PORT06
Lab Code: CHEM **Case No.:** P4718 **SAS No.:** P4718 **SDG NO.:** P4718
Instrument ID: ECD_S **Calibration Date(s):** 11/08/2024 11/08/2024
Calibration Times: 15:13 16:58

GC Column: RTX-CLP **ID:** 0.32 (mm)

LAB FILE ID:		CF 200 =	<u>PS028356.D</u>	CF 500 =	<u>PS028357.D</u>		
CF 750 =		<u>PS028358.D</u>	CF 1000 =	<u>PS028359.D</u>	CF 1500 =	<u>PS028360.D</u>	
COMPOUND	CF 200	CF 500	CF 750	CF 1000	CF 1500	CF	% RSD
2,4,5-TP(Silvex)	21008200000	18982300000	19068100000	18267500000	17318700000	18929000000	7
2,4-D	3997770000	3571450000	3468690000	3334460000	3198650000	3514210000	9
2,4-DCAA	3196830000	2740430000	2735520000	2619650000	2511350000	2760750000	9

CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: PORT06
Lab Code: CHEM **Case No.:** P4718 **SAS No.:** P4718 **SDG NO.:** P4718
Instrument ID: ECD_S **Calibration Date(s):** 11/08/2024 11/08/2024
Calibration Times: 15:13 16:58
GC Column: RTX-CLP2 **ID:** 0.32 (mm)

LAB FILE ID:		CF 200 =	<u>PS028356.D</u>	CF 500 =	<u>PS028357.D</u>		
CF 750 =		<u>PS028358.D</u>	CF 1000 =	<u>PS028359.D</u>	CF 1500 =	<u>PS028360.D</u>	
COMPOUND	CF 200	CF 500	CF 750	CF 1000	CF 1500	CF	% RSD
2,4,5-TP(Silvex)	10970300000	10612300000	10768700000	10478800000	10130800000	10592200000	3
2,4-D	2051780000	1901200000	1935300000	1900220000	1880580000	1933820000	4
2,4-DCAA	1694540000	1575990000	1595150000	1561040000	1540400000	1593420000	4

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028356.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 15:13
 Operator : AR\AJ
 Sample : HSTDICC200
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 HSTDICC200

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 16:44:41 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 16:40:02 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.250	7.755	639.4E6	338.9E6	221.163	208.958
Target Compounds							
1) T	Dalapon	2.649	2.709	639.6E6	535.0E6	180.591	187.020
2) T	3,5-DICHL...	6.419	6.707	834.2E6	459.1E6	199.534	190.228
3) T	4-Nitroph...	7.049	7.282	353.5E6	199.1E6	181.638	178.299
5) T	DICAMBA	7.438	7.956	2439.4E6	1322.1E6	197.536	185.109
6) T	MCPD	7.618	8.055	133.1E6	107.5E6	16.834	18.386
7) T	MCPA	7.767	8.299	198.7E6	158.6E6	17.768	19.466
8) T	DICHLORPROP	8.148	8.674	668.8E6	350.5E6	206.983	194.249
9) T	2,4-D	8.379	9.005	751.6E6	385.7E6	204.272	196.527
10) T	Pentachlo...	8.679	9.534	10049.1E6	5003.0E6	203.477	194.171
11) T	2,4,5-TP ...	9.260	9.911	3991.6E6	2084.4E6	202.759	193.286
12) T	2,4,5-T	9.553	10.333	4090.5E6	2048.7E6	202.864	193.761
13) T	2,4-DB	10.130	10.901	636.9E6	256.8E6	201.708	193.839
14) T	DINOSEB	11.345	11.280	3299.9E6	1386.8E6	197.166	190.583
15) T	Picloram	11.150	12.379	6290.0E6	2627.0E6	195.582	183.908
16) T	DCPA	11.638	12.326	5559.4E6	2181.1E6	199.687	191.134

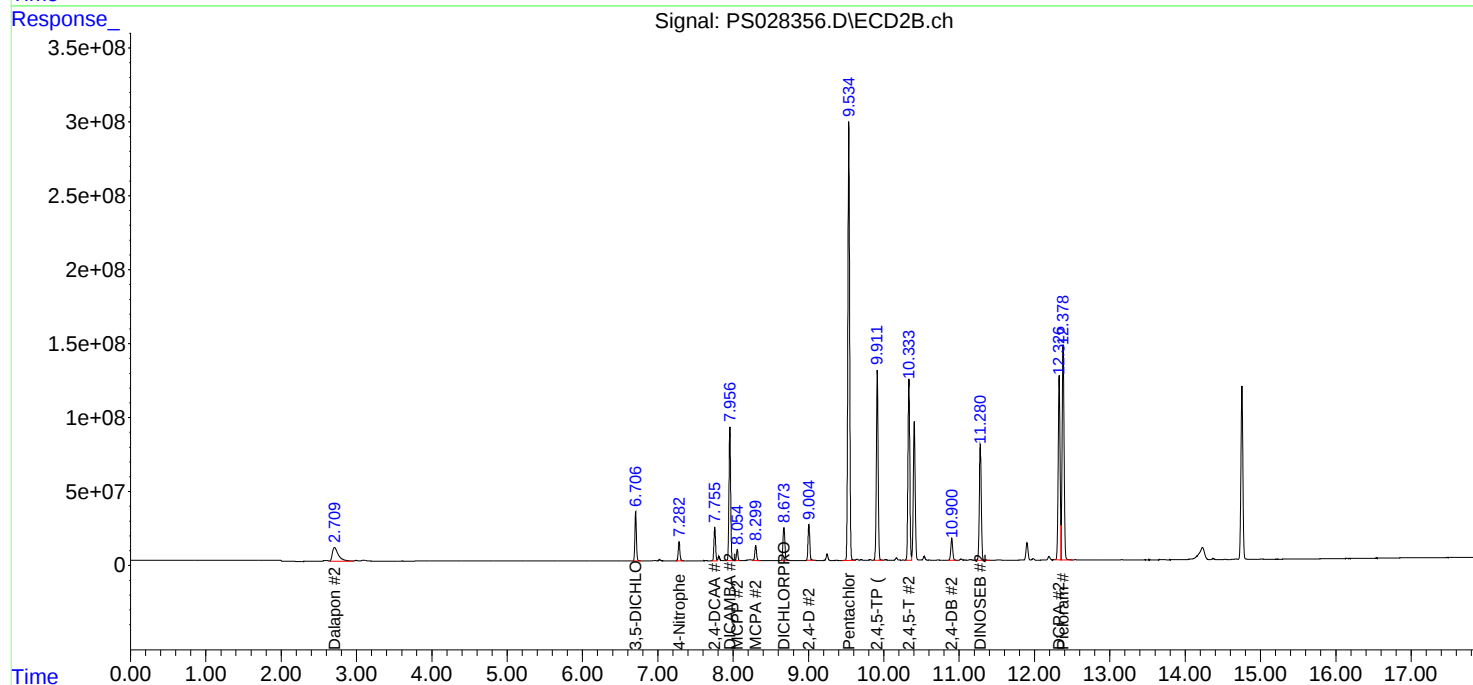
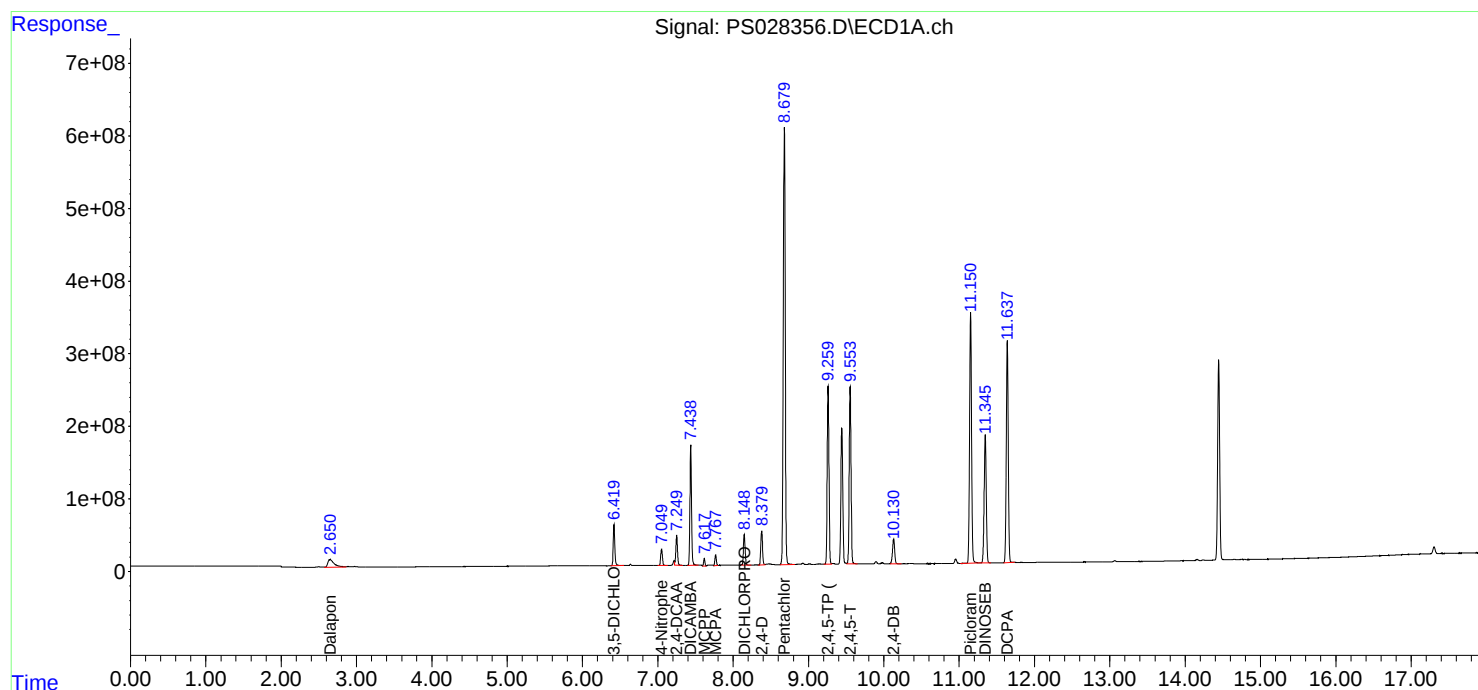
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028356.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 15:13
Operator : AR\AJ
Sample : HSTDICC200
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
HSTDICC200

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 16:44:41 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 16:40:02 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028357.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 15:46
 Operator : AR\AJ
 Sample : HSTDICC500
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

HSTDICC500

Manual Integrations**APPROVED**

Reviewed By :Abdul Mirza 11/11/2024

Supervised By :Ankita Jodhani 11/12/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 16:42:36 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 16:40:02 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.251	7.753	1370.2E6	788.0E6	498.788m	496.979
Target Compounds							
1) T	Dalapon	2.645	2.702	1582.7E6	1275.2E6	445.190	452.045
2) T	3,5-DICHL...	6.421	6.705	1902.5E6	1118.9E6	472.259	468.984
3) T	4-Nitroph...	7.051	7.280	963.6E6	569.3E6	494.651	504.695
5) T	DICAMBA	7.440	7.955	5595.4E6	3310.9E6	464.895	460.013
6) T	MCP	7.622	8.055	384.8E6	276.6E6	46.237	46.777
7) T	MCPA	7.772	8.300	536.1E6	370.5E6	46.896	46.572
8) T	DICHLORPROP	8.151	8.672	1436.8E6	827.1E6	468.310	466.194
9) T	2,4-D	8.382	9.003	1678.6E6	893.6E6	476.860	465.822
10) T	Pentachlo...	8.682	9.533	22692.1E6	12126.5E6	476.373	475.863
11) T	2,4,5-TP ...	9.264	9.910	9016.6E6	5040.9E6	473.928	471.525
12) T	2,4,5-T	9.556	10.331	9232.6E6	4943.4E6	473.922	472.211
13) T	2,4-DB	10.132	10.898	1437.9E6	611.4E6	469.887	466.218
14) T	DINOSEB	11.348	11.278	7684.1E6	3382.0E6	470.583	468.006
15) T	Picloram	11.153	12.378	14946.2E6	6738.5E6	471.666	464.296
16) T	DCPA	11.640	12.325	13258.0E6	5501.2E6	485.938	480.983

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028357.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 15:46
Operator : AR\AJ
Sample : HSTDICC500
Misc :
ALS Vial : 4 Sample Multiplier: 1

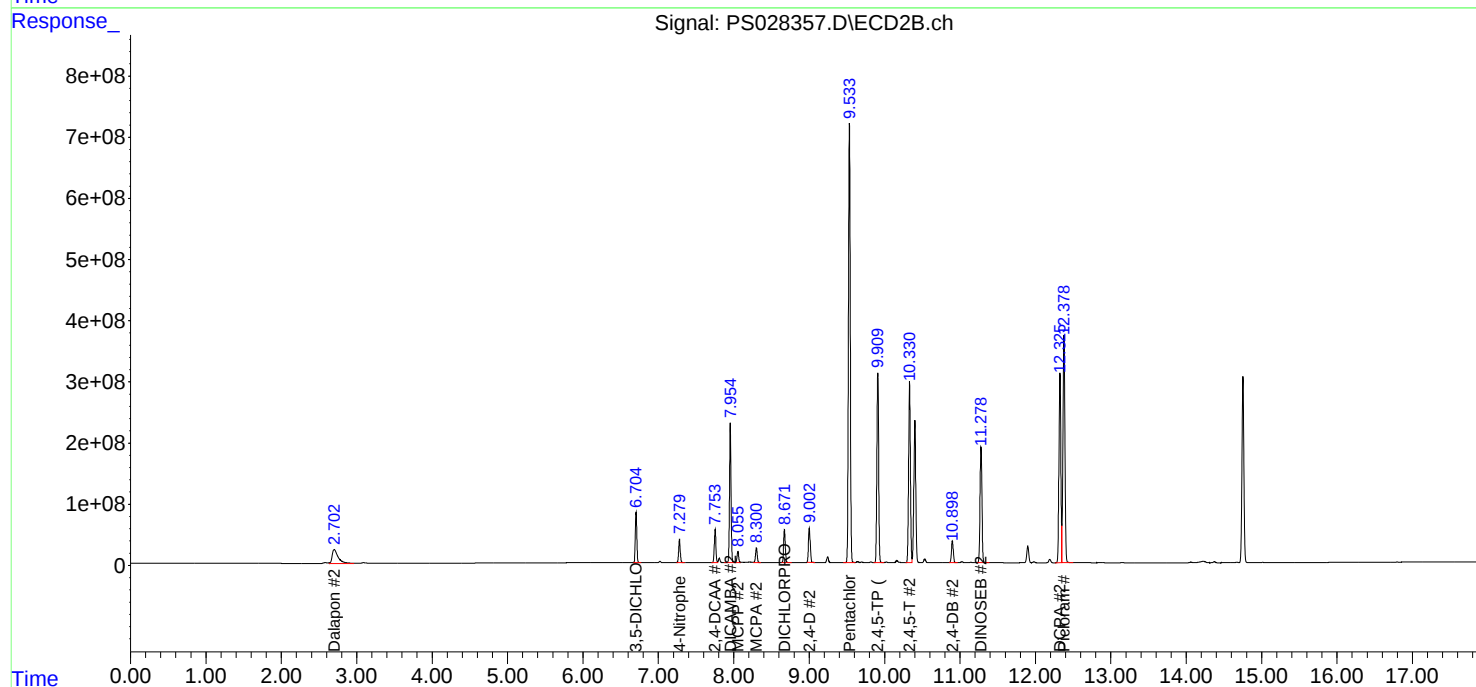
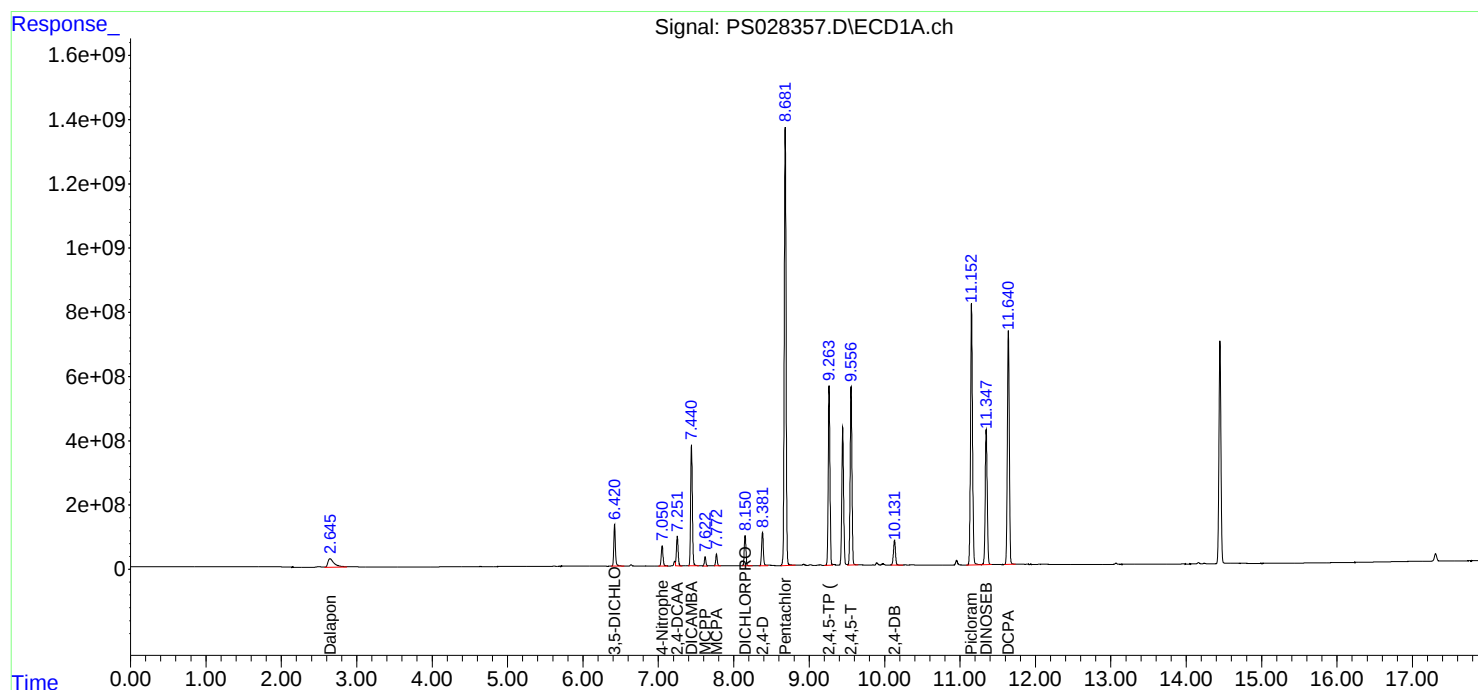
Instrument :
ECD_S
ClientSampleId :
HSTDICC500

Manual Integrations
APPROVED

Reviewed By : Abdul Mirza 11/11/2024
Supervised By : Ankita Jodhani 11/12/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 16:42:36 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 16:40:02 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028358.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 16:10
 Operator : AR\AJ
 Sample : HSTDICC750
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 HSTDICC750

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 16:40:21 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 16:40:02 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.250	7.755	2051.6E6	1196.4E6	750.000	750.000
Target Compounds							
1) T	Dalapon	2.648	2.706	2478.7E6	1937.8E6	682.500	682.500
2) T	3,5-DICHL...	6.419	6.707	2766.0E6	1649.9E6	697.500	697.500
3) T	4-Nitroph...	7.049	7.281	1213.7E6	685.7E6	682.500	682.500
5) T	DICAMBA	7.438	7.956	8577.4E6	5182.0E6	705.000	705.000
6) T	MCPD	7.622	8.059	596.2E6	418.8E6	70.500	70.500
7) T	MCPA	7.772	8.305	790.6E6	554.1E6	69.750	69.750
8) T	DICHLORPROP	8.148	8.673	2170.7E6	1260.9E6	705.000	705.000
9) T	2,4-D	8.379	9.005	2445.4E6	1364.4E6	705.000	705.000
10) T	Pentachlo...	8.679	9.535	33841.9E6	18123.7E6	712.500	712.500
11) T	2,4,5-TP ...	9.260	9.911	13586.0E6	7672.7E6	712.500	712.500
12) T	2,4,5-T	9.552	10.333	13911.9E6	7502.8E6	712.500	712.500
13) T	2,4-DB	10.129	10.900	2203.8E6	951.7E6	712.500	712.500
14) T	DINOSEB	11.345	11.280	11497.6E6	5116.2E6	705.000	705.000
15) T	Picloram	11.150	12.379	22736.2E6	10573.8E6	712.500	712.500
16) T	DCPA	11.637	12.326	19401.0E6	8218.0E6	720.000	720.000

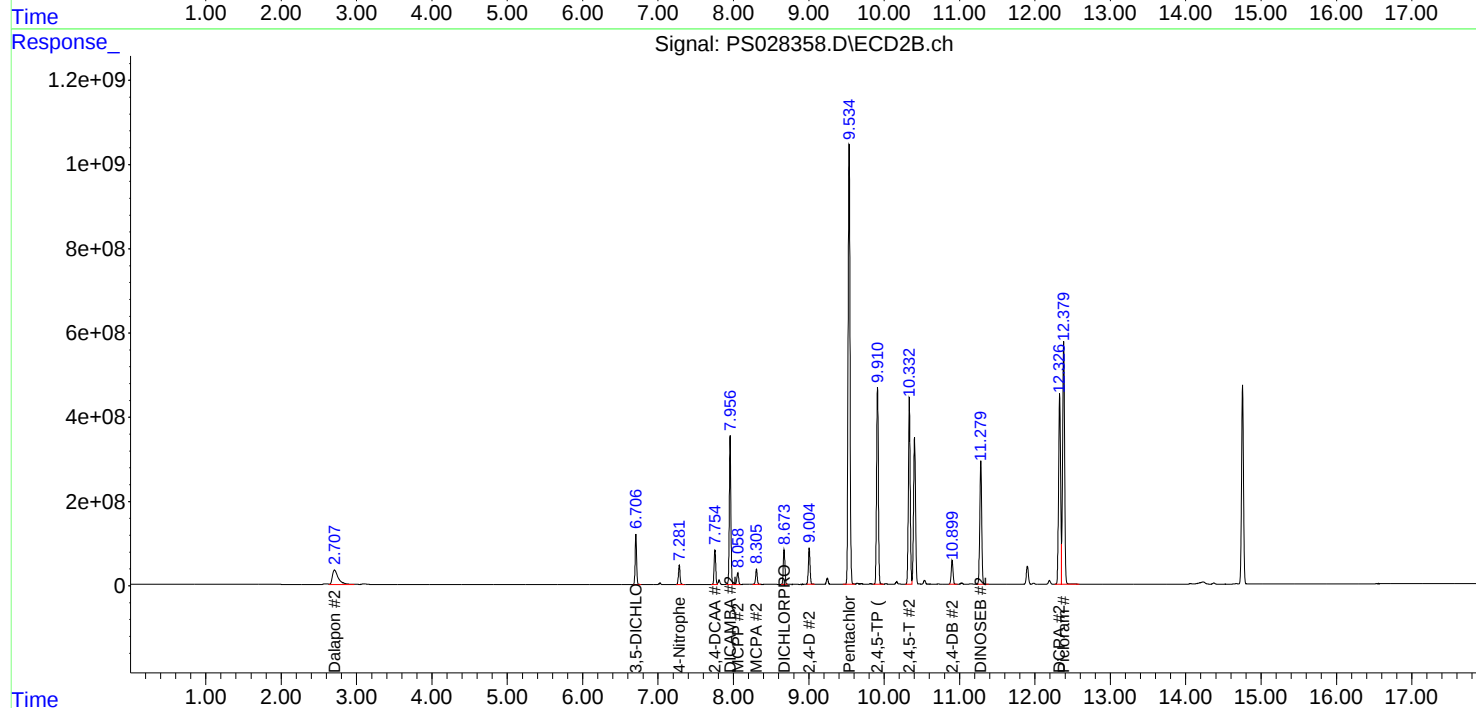
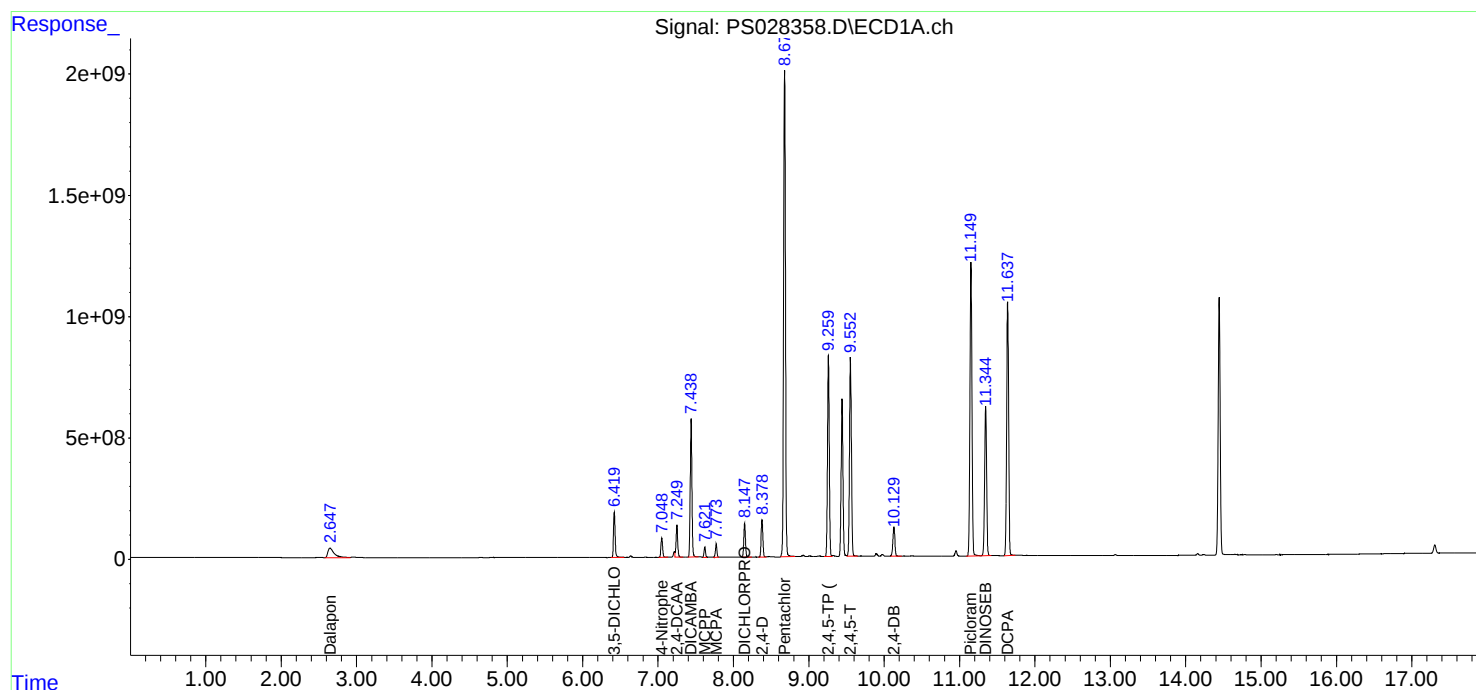
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028358.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 16:10
Operator : AR\AJ
Sample : HSTDICC750
Misc :
ALS Vial : 5 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
HSTDICC750

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 16:40:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 16:40:02 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028359.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 16:34
 Operator : AR\AJ
 Sample : HSTDICC1000
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 HSTDICC1000

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 16:51:21 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 16:51:13 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.250	7.756	2619.7E6	1561.0E6	927.932	971.593
Target Compounds							
1) T	Dalapon	2.648	2.707	3270.7E6	2544.1E6	920.121	894.482
2) T	3,5-DICHL...	6.419	6.707	3538.2E6	2155.4E6	865.823	902.072
3) T	4-Nitroph...	7.049	7.282	1574.2E6	890.6E6	831.961	823.047
5) T	DICAMBA	7.439	7.957	11074.0E6	6814.9E6	907.189	950.556
6) T	MCP	7.624	8.061	799.7E6	554.7E6	99.240	94.640
7) T	MCPA	7.775	8.307	1044.3E6	728.3E6	93.295	90.284
8) T	DICHLORPROP	8.149	8.674	2780.0E6	1649.5E6	879.003	920.573
9) T	2,4-D	8.380	9.005	3134.4E6	1786.2E6	872.338	917.357
10) T	Pentachlo...	8.680	9.535	41014.3E6	23096.9E6	857.444	909.236
11) T	2,4,5-TP ...	9.260	9.912	17354.1E6	9954.9E6	897.710	929.706
12) T	2,4,5-T	9.553	10.333	17770.3E6	9733.3E6	897.521	927.738
13) T	2,4-DB	10.130	10.900	2871.3E6	1257.6E6	919.198	949.434
14) T	DINOSEB	11.345	11.280	14837.6E6	6699.0E6	899.316	925.415
15) T	Picloram	11.151	12.379	29471.0E6	13946.5E6	924.556	969.627
16) T	DCPA	11.638	12.327	24763.6E6	10644.3E6	906.118	939.422

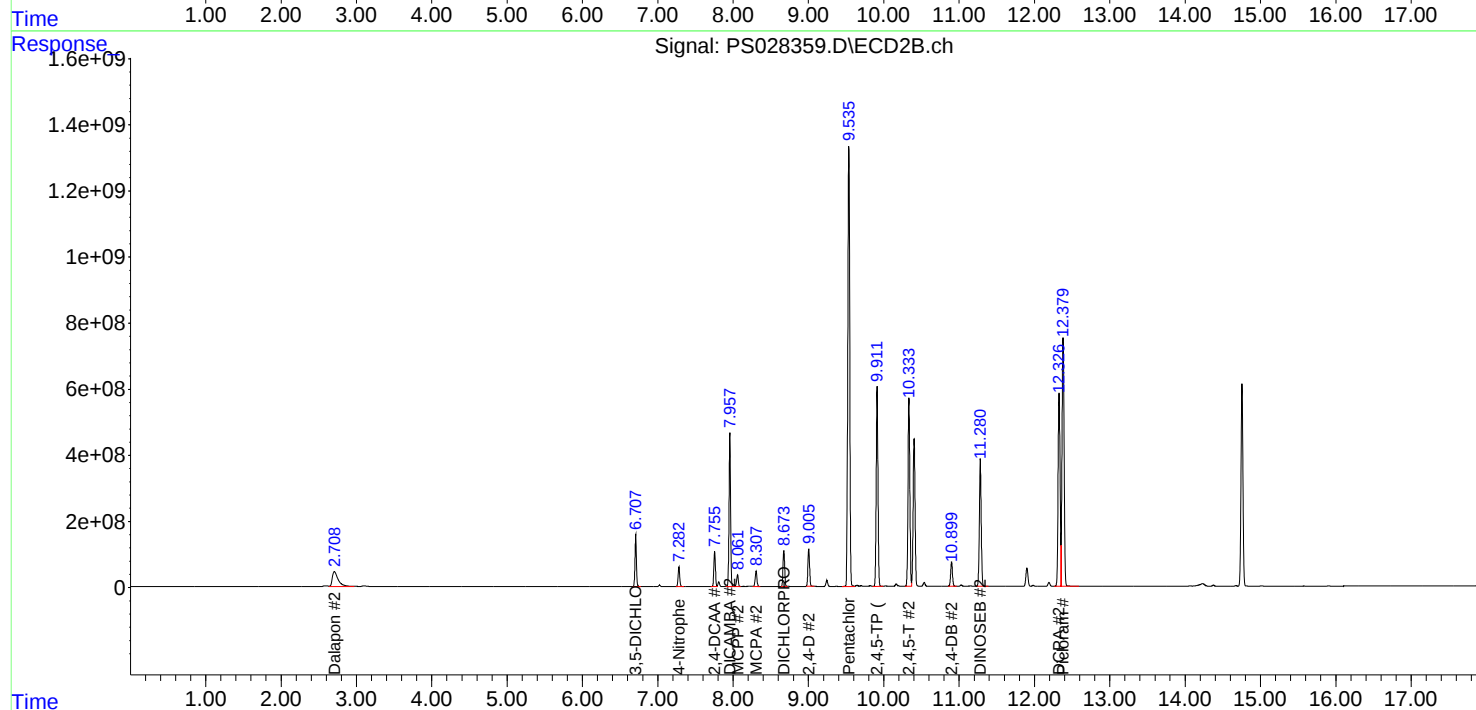
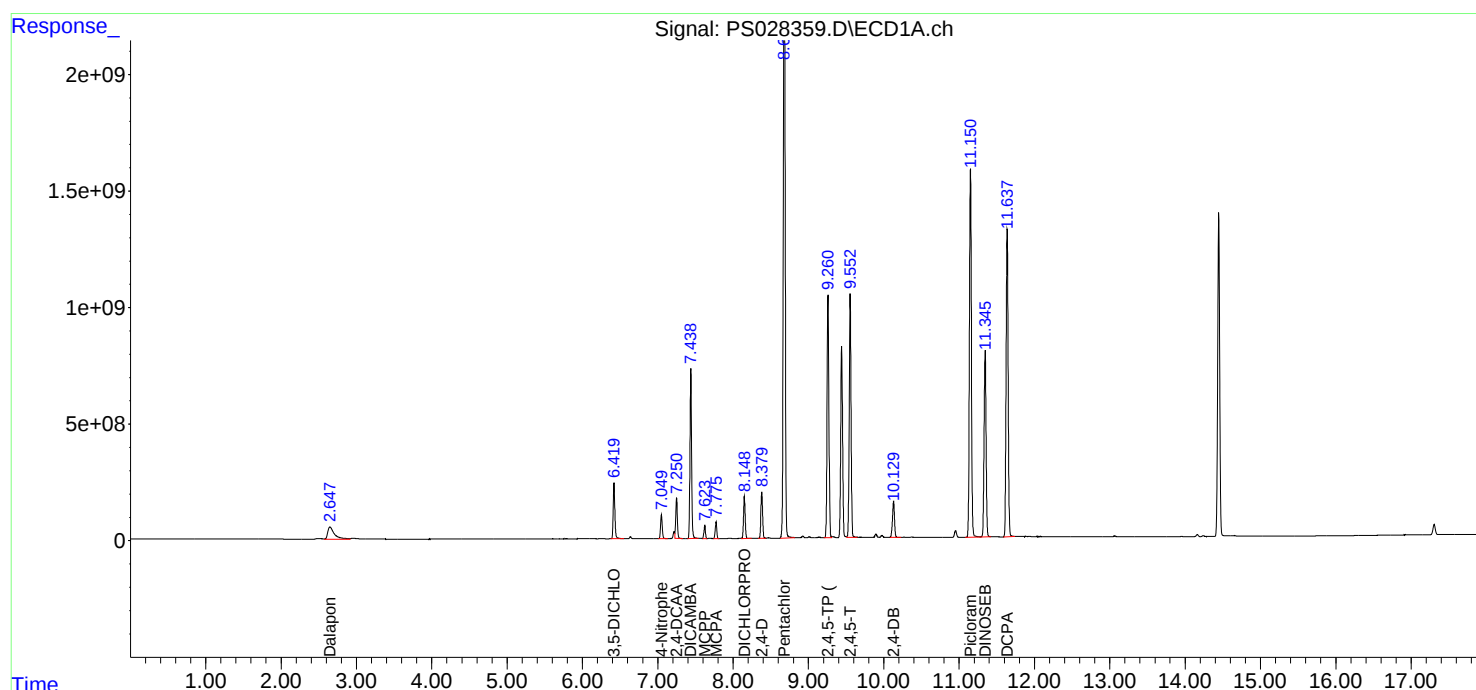
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028359.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 16:34
Operator : AR\AJ
Sample : HSTDICC1000
Misc :
ALS Vial : 6 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
HSTDICC1000

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 16:51:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 16:51:13 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028360.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 16:58
 Operator : AR\AJ
 Sample : HSTDICC1500
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 HSTDICC1500

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 17:45:49 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:45:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.250	7.755	3767.0E6	2310.6E6	1364.492	1450.086
Target Compounds							
1) T	Dalapon	2.650	2.707	4944.0E6	3823.9E6	1385.601	1348.490
2) T	3,5-DICHL...	6.420	6.707	5107.0E6	3191.5E6	1276.301	1347.181
3) T	4-Nitroph...	7.049	7.281	2324.2E6	1319.3E6	1253.460	1245.836
5) T	DICAMBA	7.439	7.957	16040.0E6	10110.0E6	1332.146	1410.143
6) T	MCP	7.628	8.064	1220.9E6	835.8E6	149.279	142.280
7) T	MCPA	7.779	8.312	1574.5E6	1084.0E6	140.433	135.369
8) T	DICHLORPROP	8.149	8.674	4014.9E6	2452.1E6	1295.283	1376.618
9) T	2,4-D	8.380	9.005	4510.1E6	2651.6E6	1283.392	1371.186
10) T	Pentachlo...	8.683	9.536	48275.3E6	32737.8E6	1071.782	1313.882
11) T	2,4,5-TP ...	9.261	9.912	24679.1E6	14436.4E6	1303.775	1362.929
12) T	2,4,5-T	9.553	10.334	25233.9E6	14128.2E6	1301.992	1361.617
13) T	2,4-DB	10.130	10.900	4217.5E6	1892.7E6	1364.499	1428.147
14) T	DINOSEB	11.345	11.280	21251.0E6	9772.8E6	1310.710	1361.620
15) T	Picloram	11.150	12.379	42075.2E6	20561.5E6	1339.720	1428.629
16) T	DCPA	11.638	12.326	35013.3E6	15448.5E6	1310.064	1378.083

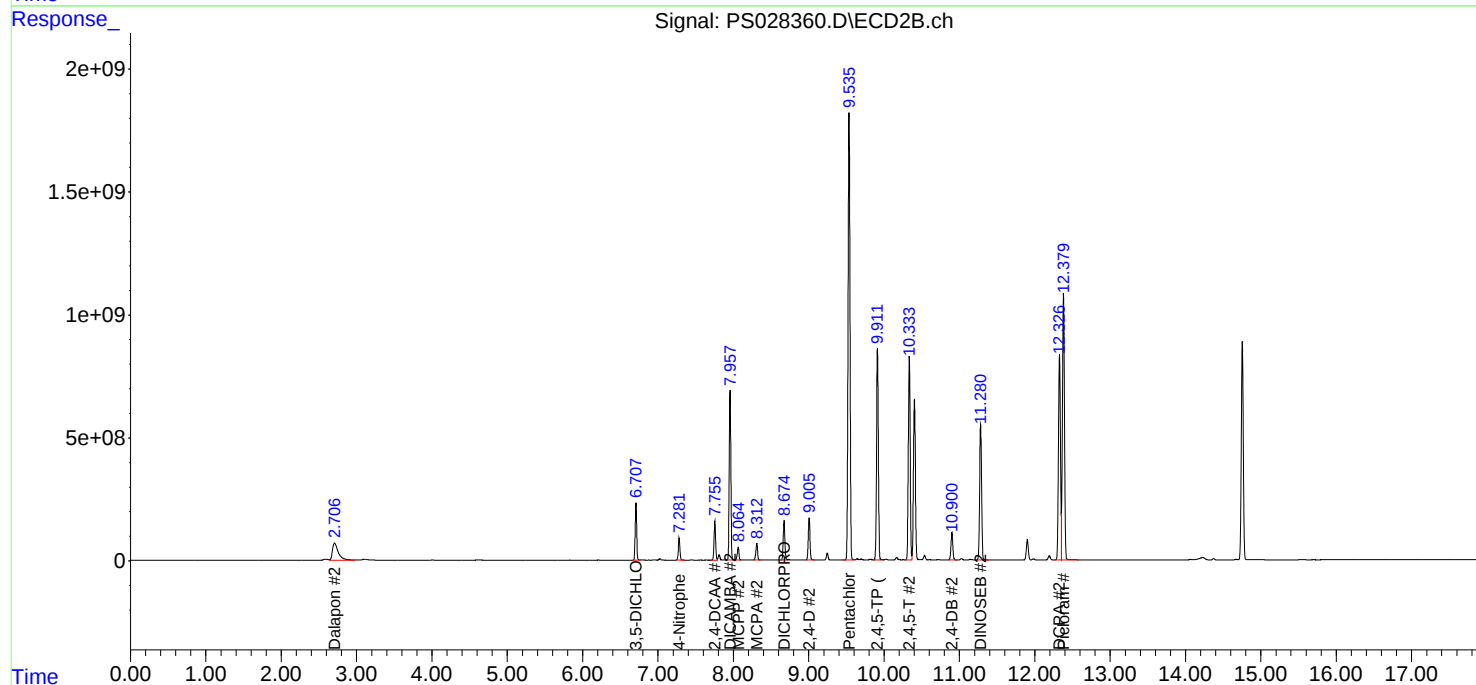
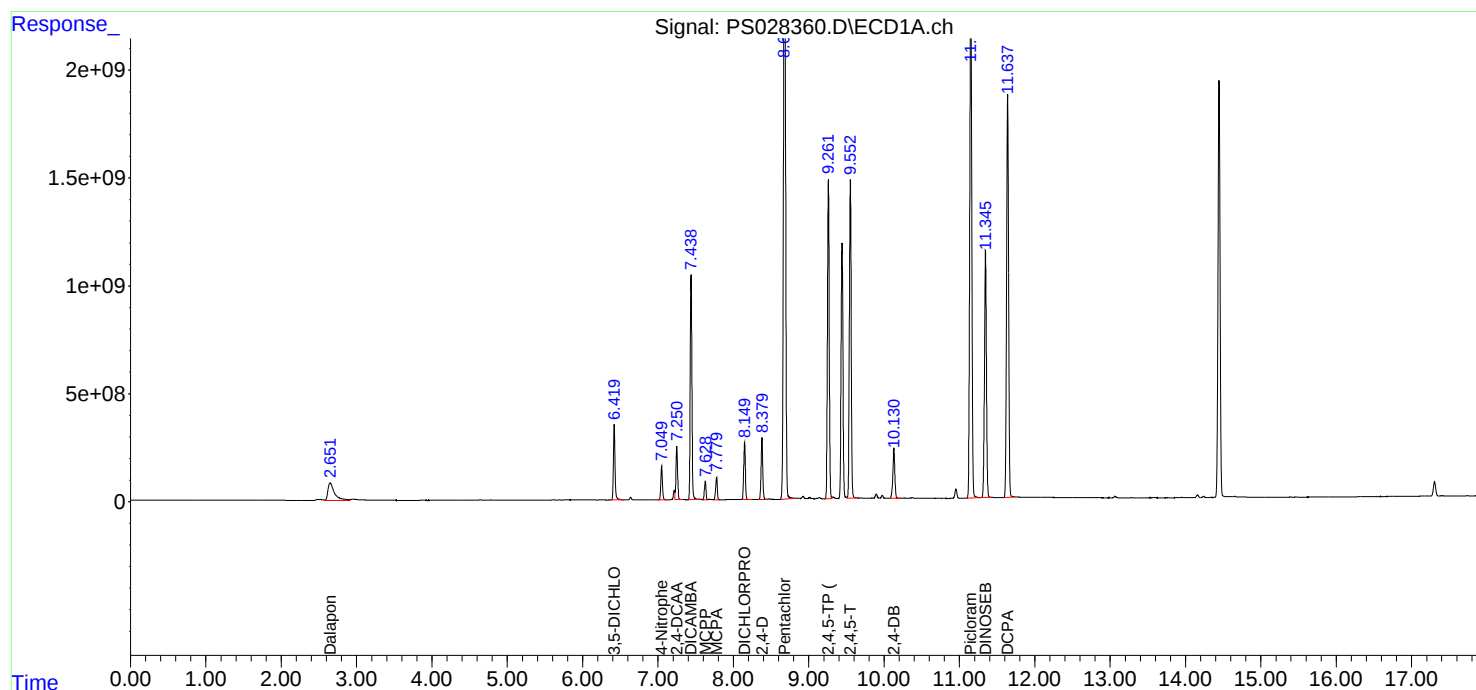
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028360.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 16:58
Operator : AR\AJ
Sample : HSTDICC1500
Misc :
ALS Vial : 7 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
HSTDICC1500

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 17:45:49 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:45:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
 Data File : PS028361.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 08 Nov 2024 17:22
 Operator : AR\AJ
 Sample : HSTDICV750
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 ICVPS110924

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 08 17:51:02 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.250	7.755	2008.0E6	1166.4E6	727.352	732.006
Target Compounds							
1) T	Dalapon	2.648	2.710	2420.5E6	1889.2E6	678.377	666.240
2) T	3,5-DICHL...	6.419	6.707	2702.1E6	1609.9E6	675.295	679.566
3) T	4-Nitroph...	7.049	7.281	1174.4E6	662.7E6	633.348	625.805
5) T	DICAMBA	7.438	7.957	8390.9E6	5041.1E6	696.873	703.125
6) T	MCPD	7.622	8.059	578.6E6	406.9E6	70.744	69.262
7) T	MCPA	7.772	8.304	766.9E6	541.7E6	68.403	67.647
8) T	DICHLORPROP	8.148	8.674	2122.7E6	1230.1E6	684.806	690.570
9) T	2,4-D	8.379	9.004	2394.4E6	1336.5E6	681.345	691.114
10) T	Pentachlo...	8.679	9.535	33172.6E6	17646.2E6	736.479	708.202
11) T	2,4,5-TP ...	9.260	9.911	13283.0E6	7469.4E6	701.729	705.181
12) T	2,4,5-T	9.553	10.332	13622.9E6	7304.6E6	702.901	703.987
13) T	2,4-DB	10.129	10.900	2161.5E6	928.2E6	699.310	700.354
14) T	DINOSEB	11.345	11.280	11126.8E6	4918.7E6	686.276	685.314
15) T	Picloram	11.150	12.378	22320.9E6	10335.0E6	710.722	718.084
16) T	DCPA	11.637	12.325	18930.3E6	7984.4E6	708.298	712.248

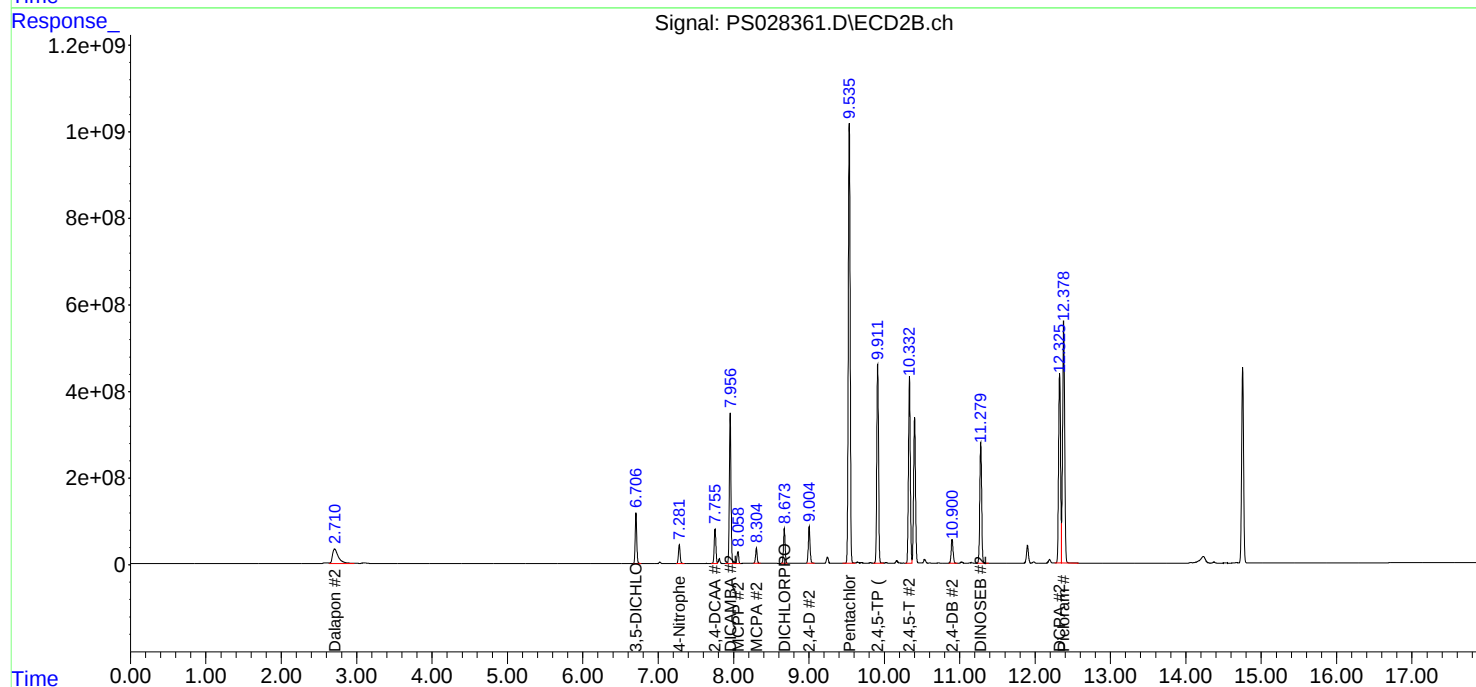
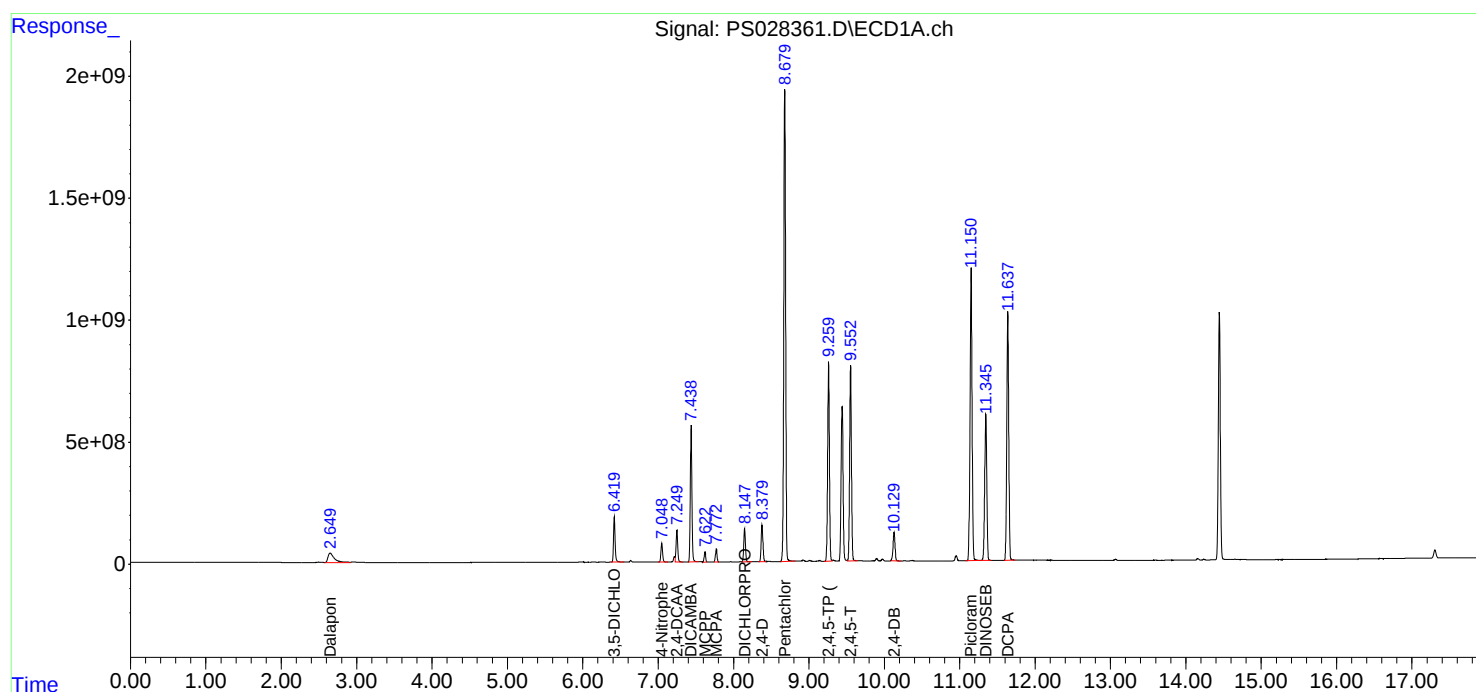
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028361.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 17:22
Operator : AR\AJ
Sample : HSTDICV750
Misc :
ALS Vial : 8 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
ICVPS110924

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 17:51:02 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm





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

CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Continuing Calib Date: 11/12/2024 Initial Calibration Date(s): 11/08/2024 11/08/2024

Continuing Calib Time: 13:25 Initial Calibration Time(s): 15:13 16:58

GC Column: RTX-CLP ID: 0.32 (mm)

COMPOUND	CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
2,4-DCAA	7.24	7.25	7.15	7.35	0.01
2,4-D	8.37	8.38	8.28	8.48	0.01
2,4,5-TP(Silvex)	9.25	9.26	9.16	9.36	0.01



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Fax : 908 789 8922

CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Continuing Calib Date: 11/12/2024 Initial Calibration Date(s): 11/08/2024 11/08/2024

Continuing Calib Time: 13:25 Initial Calibration Time(s): 15:13 16:58

GC Column: RTX-CLP2 ID: 0.32 (mm)

COMPOUND	CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
2,4-DCAA	7.75	7.76	7.66	7.86	0.01
2,4-D	9.00	9.01	8.91	9.11	0.02
2,4,5-TP(Silvex)	9.90	9.91	9.81	10.01	0.01



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CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

GC Column: RTX-CLP ID: 0.32 (mm) Initi. Calib. Date(s): 11/08/2024 11/08/2024

Client Sample No.: CCAL01 Date Analyzed: 11/12/2024

Lab Sample No.: HSTDCCC750 Data File : PS028451.D Time Analyzed: 13:25

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
2,4,5-TP(Silvex)	9.254	9.160	9.360	735.550	712.500	3.2
2,4-D	8.374	8.279	8.479	712.300	705.000	1.0
2,4-DCAA	7.244	7.150	7.350	740.980	750.000	-1.2



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CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

GC Column: RTX-CLP2 ID: 0.32 (mm) Initi. Calib. Date(s): 11/08/2024 11/08/2024

Client Sample No.: CCAL01 Date Analyzed: 11/12/2024

Lab Sample No.: HSTDCCC750 Data File : PS028451.D Time Analyzed: 13:25

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
2,4,5-TP(Silvex)	9.902	9.811	10.011	664.220	712.500	-6.8
2,4-D	8.995	8.905	9.105	639.620	705.000	-9.3
2,4-DCAA	7.747	7.655	7.855	681.430	750.000	-9.1

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028451.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 13:25
 Operator : AR\AJ
 Sample : HSTDCCC750
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

HSTDCCC750

Manual Integrations**APPROVED**

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:30:22 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.244	7.747	2045.7E6	1085.8E6	740.978m	681.434
Target Compounds							
1) T	Dalapon	2.641	2.703	2452.9E6	1746.8E6	687.438	616.015
2) T	3,5-DICHL...	6.414	6.699	2806.9E6	1506.2E6	701.484	635.799
3) T	4-Nitroph...	7.043	7.273	1230.4E6	631.3E6	663.588	596.118
5) T	DICAMBA	7.433	7.948	8770.3E6	4744.7E6	728.384	661.790
6) T	MCP	7.617	8.051	588.8E6	373.4E6	71.994	63.565
7) T	MCPA	7.767	8.297	805.1E6	494.9E6	71.810	61.810
8) T	DICHLORPROP	8.143	8.665	2220.4E6	1137.1E6	716.338	638.341
9) T	2,4-D	8.374	8.995	2503.2E6	1236.9E6	712.297	639.623m
10) T	Pentachlo...	8.673	9.525	34689.2E6	16718.7E6	770.151	670.980
11) T	2,4,5-TP ...	9.254	9.902	13923.1E6	7035.5E6	735.547	664.216
12) T	2,4,5-T	9.547	10.323	14248.9E6	6914.9E6	735.198	666.428
13) T	2,4-DB	10.124	10.891	2196.6E6	849.4E6	710.677	640.908
14) T	DINOSEB	11.339	11.271	11716.6E6	4714.3E6	722.652	656.829
15) T	Picloram	11.145	12.369	22957.9E6	9739.8E6	731.004	676.730
16) T	DCPA	11.632	12.316	19789.1E6	7500.8E6	740.433	669.104

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028451.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 13:25
Operator : AR\AJ
Sample : HSTDCCC750
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

HSTDCCC750

Manual Integrations

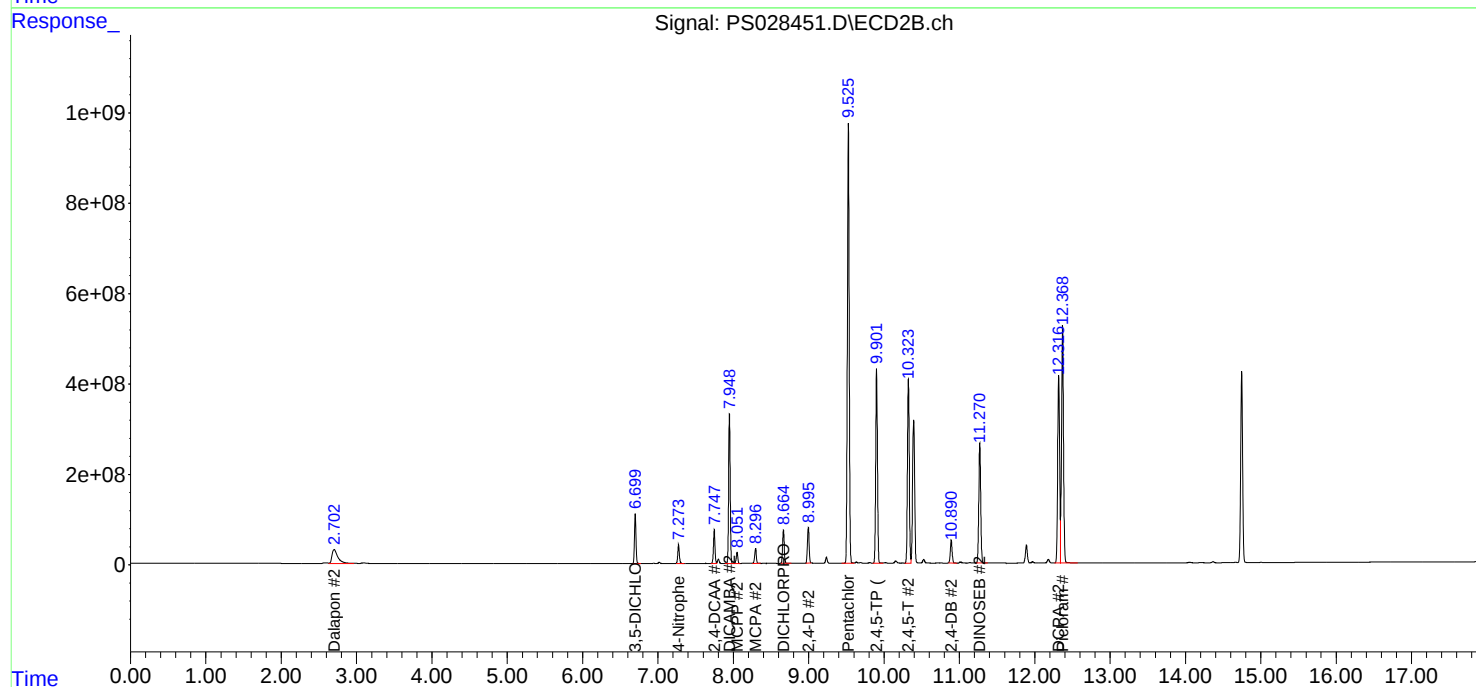
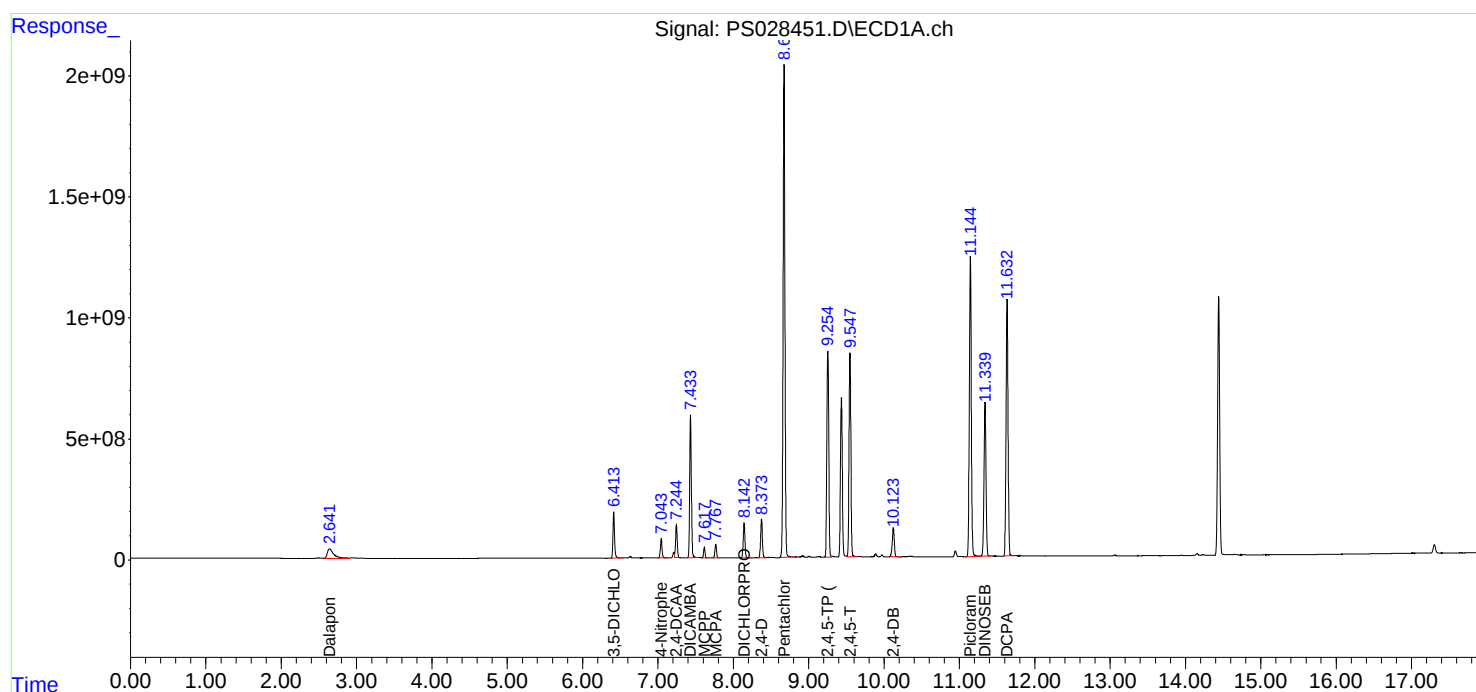
APPROVED

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:30:22 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm





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

CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Continuing Calib Date: 11/12/2024 Initial Calibration Date(s): 11/08/2024 11/08/2024

Continuing Calib Time: 18:29 Initial Calibration Time(s): 15:13 16:58

GC Column: RTX-CLP ID: 0.32 (mm)

COMPOUND	CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
2,4-DCAA	7.24	7.25	7.15	7.35	0.01
2,4-D	8.37	8.38	8.28	8.48	0.01
2,4,5-TP(Silvex)	9.25	9.26	9.16	9.36	0.01



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

CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Continuing Calib Date: 11/12/2024 Initial Calibration Date(s): 11/08/2024 11/08/2024

Continuing Calib Time: 18:29 Initial Calibration Time(s): 15:13 16:58

GC Column: RTX-CLP2 ID: 0.32 (mm)

COMPOUND	CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
2,4-DCAA	7.75	7.76	7.66	7.86	0.01
2,4-D	8.99	9.01	8.91	9.11	0.02
2,4,5-TP(Silvex)	9.90	9.91	9.81	10.01	0.01



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CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

GC Column: RTX-CLP ID: 0.32 (mm) Initi. Calib. Date(s): 11/08/2024 11/08/2024

Client Sample No.: CCAL02 Date Analyzed: 11/12/2024

Lab Sample No.: HSTDCCC750 Data File : PS028463.D Time Analyzed: 18:29

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
2,4,5-TP(Silvex)	9.253	9.160	9.360	730.330	712.500	2.5
2,4-D	8.372	8.279	8.479	706.140	705.000	0.2
2,4-DCAA	7.243	7.150	7.350	746.010	750.000	-0.5



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CALIBRATION VERIFICATION SUMMARY

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

GC Column: RTX-CLP2 ID: 0.32 (mm) Initi. Calib. Date(s): 11/08/2024 11/08/2024

Client Sample No.: CCAL02 Date Analyzed: 11/12/2024

Lab Sample No.: HSTDCCC750 Data File : PS028463.D Time Analyzed: 18:29

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
2,4,5-TP(Silvex)	9.901	9.811	10.011	663.190	712.500	-6.9
2,4-D	8.994	8.905	9.105	643.750	705.000	-8.7
2,4-DCAA	7.746	7.655	7.855	675.910	750.000	-9.9

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028463.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 18:29
 Operator : AR\AJ
 Sample : HSTDCCC750
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

HSTDCCC750

Manual Integrations**APPROVED**

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:31:28 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.243	7.746	2059.5E6	1077.0E6	746.005	675.915
Target Compounds							
1) T	Dalapon	2.642	2.703	2372.0E6	1701.3E6	664.763	599.959
2) T	3,5-DICHL...	6.413	6.698	2798.3E6	1493.8E6	699.338	630.553
3) T	4-Nitroph...	7.042	7.272	1222.8E6	621.1E6	659.460	586.537
5) T	DICAMBA	7.432	7.946	8716.6E6	4720.9E6	723.925	658.475
6) T	MCPD	7.615	8.049	566.5E6	369.2E6	69.267	62.842
7) T	MCPA	7.766	8.295	802.6E6	491.4E6	71.581	61.372
8) T	DICHLORPROP	8.141	8.663	2201.0E6	1116.0E6	710.067	626.516
9) T	2,4-D	8.372	8.994	2481.5E6	1244.9E6	706.141	643.749m
10) T	Pentachlo...	8.672	9.523	34513.2E6	16738.1E6	766.243	671.758
11) T	2,4,5-TP ...	9.253	9.901	13824.4E6	7024.7E6	730.329	663.192
12) T	2,4,5-T	9.546	10.321	14108.3E6	6913.2E6	727.946	666.265
13) T	2,4-DB	10.121	10.888	2131.2E6	821.1E6	689.506	619.566
14) T	DINOSEB	11.336	11.268	11517.8E6	4607.2E6	710.390	641.907
15) T	Picloram	11.142	12.366	21785.1E6	9163.3E6	693.661	636.673
16) T	DCPA	11.629	12.314	19593.1E6	7472.4E6	733.099	666.571

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028463.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 18:29
Operator : AR\AJ
Sample : HSTDCCC750
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

HSTDCCC750

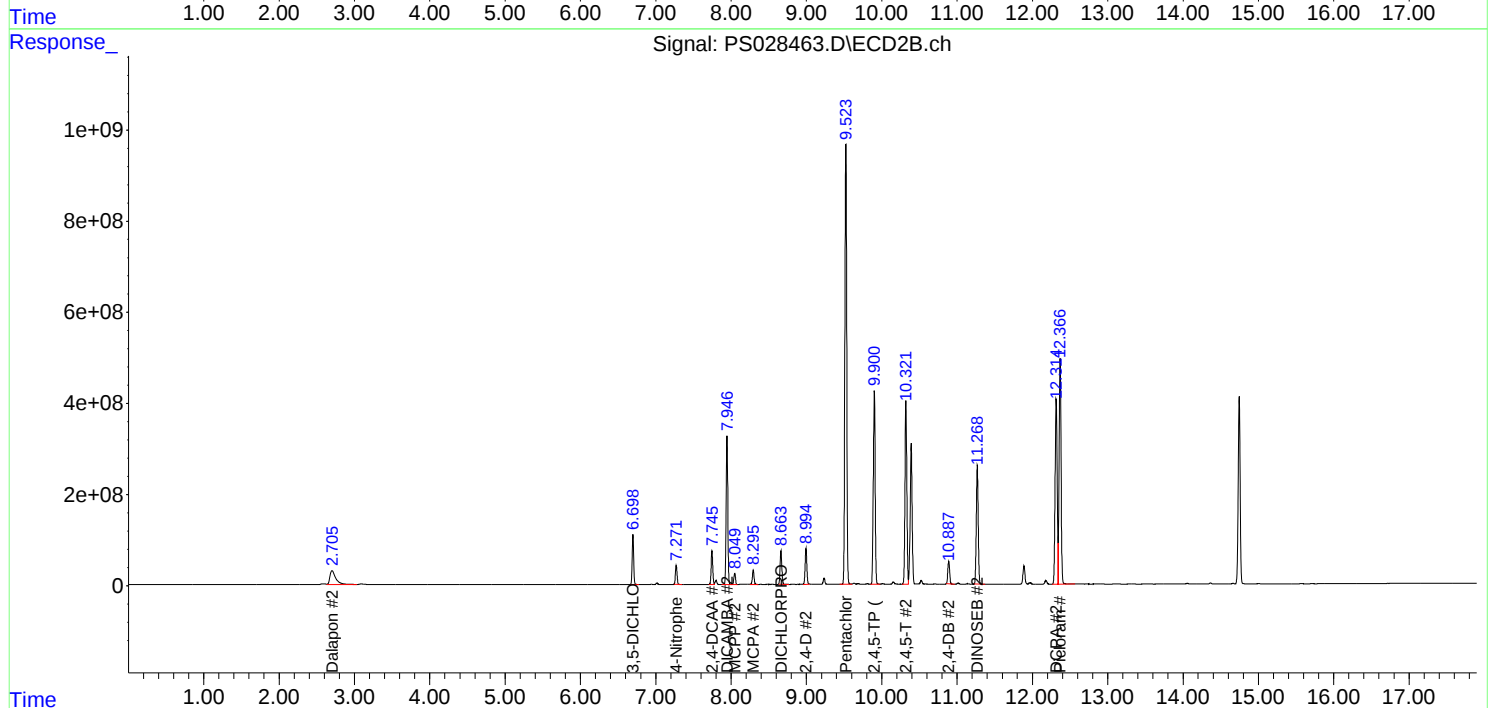
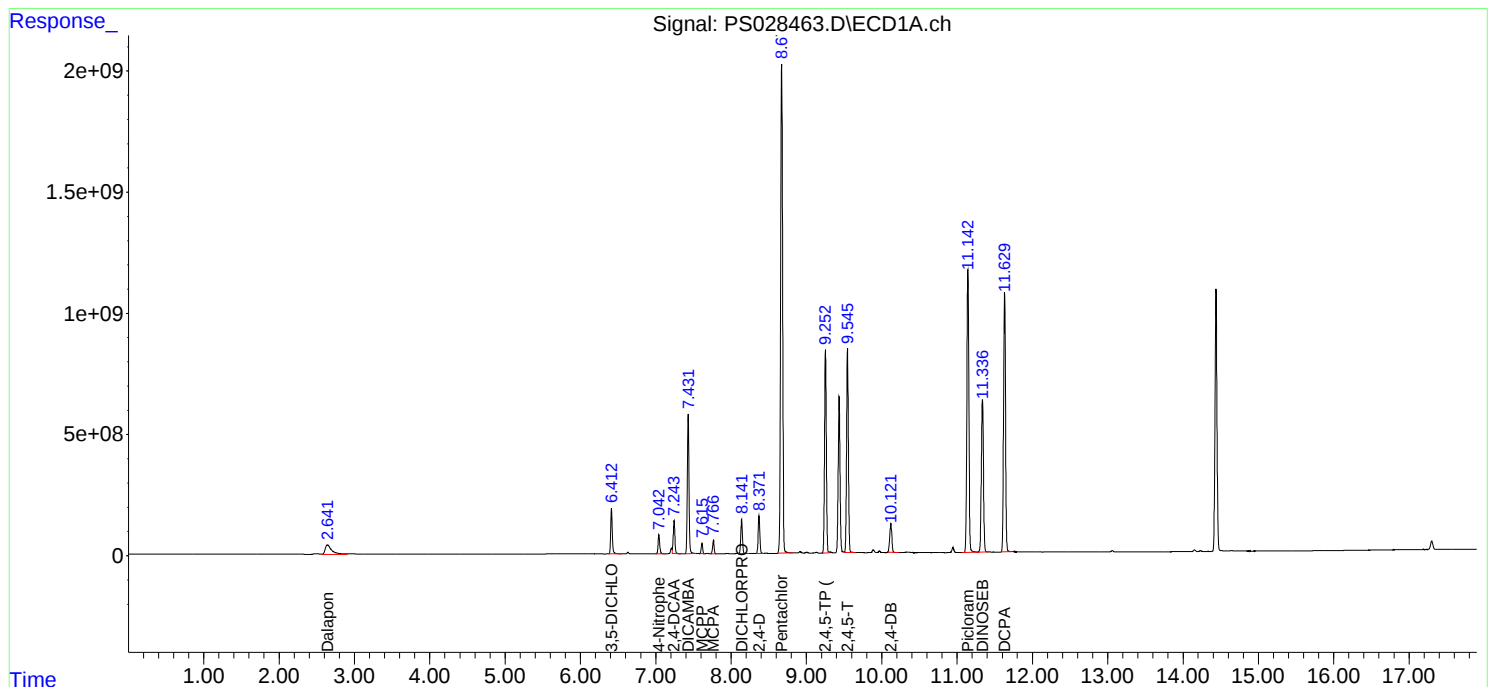
Manual Integrations**APPROVED**

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:31:28 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Analytical Sequence

Client: Portal Partners Tri-Venture	SDG No.: P4718
Project: Amtrak Sawtooth Bridges 2024	Instrument ID: ECD_S
GC Column: RTX-CLP	ID: 0.32 (mm) Inst. Calib. Date(s): 11/08/2024 11/08/2024

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATAFILE	DCAA RT #	RT #
LBLK	LBLK	11/08/2024	14:25	PS028355.D	7.25	0.00
HSTDICC200	HSTDICC200	11/08/2024	15:13	PS028356.D	7.25	0.00
HSTDICC500	HSTDICC500	11/08/2024	15:46	PS028357.D	7.25	0.00
HSTDICC750	HSTDICC750	11/08/2024	16:10	PS028358.D	7.25	0.00
HSTDICC1000	HSTDICC1000	11/08/2024	16:34	PS028359.D	7.25	0.00
HSTDICC1500	HSTDICC1500	11/08/2024	16:58	PS028360.D	7.25	0.00
LBLK	LBLK	11/12/2024	13:00	PS028450.D	7.24	0.00
HSTDCCC750	HSTDCCC750	11/12/2024	13:25	PS028451.D	7.24	0.00
PB164850BL	PB164850BL	11/12/2024	13:53	PS028452.D	7.25	0.00
PB164850BS	PB164850BS	11/12/2024	14:17	PS028453.D	7.24	0.00
PB164694TB	PB164694TB	11/12/2024	14:49	PS028454.D	7.25	0.00
WB-307-SB02	P4718-03	11/12/2024	15:38	PS028456.D	7.24	0.00
WB-307-SB02MS	P4718-03MS	11/12/2024	16:03	PS028457.D	7.24	0.00
WB-307-SB02MSD	P4718-03MSD	11/12/2024	16:27	PS028458.D	7.24	0.00
LBLK	LBLK	11/12/2024	18:04	PS028462.D	7.24	0.00
HSTDCCC750	HSTDCCC750	11/12/2024	18:29	PS028463.D	7.24	0.00

Analytical Sequence

Client: Portal Partners Tri-Venture	SDG No.: P4718
Project: Amtrak Sawtooth Bridges 2024	Instrument ID: ECD_S
GC Column: RTX-CLP2	ID: 0.32 (mm) Inst. Calib. Date(s): 11/08/2024 11/08/2024

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATAFILE	DCAA RT #	RT #
LBLK	LBLK	11/08/2024	14:25	PS028355.D	7.76	0.00
HSTDICC200	HSTDICC200	11/08/2024	15:13	PS028356.D	7.76	0.00
HSTDICC500	HSTDICC500	11/08/2024	15:46	PS028357.D	7.75	0.00
HSTDICC750	HSTDICC750	11/08/2024	16:10	PS028358.D	7.76	0.00
HSTDICC1000	HSTDICC1000	11/08/2024	16:34	PS028359.D	7.76	0.00
HSTDICC1500	HSTDICC1500	11/08/2024	16:58	PS028360.D	7.76	0.00
LBLK	LBLK	11/12/2024	13:00	PS028450.D	7.75	0.00
HSTDCCC750	HSTDCCC750	11/12/2024	13:25	PS028451.D	7.75	0.00
PB164850BL	PB164850BL	11/12/2024	13:53	PS028452.D	7.75	0.00
PB164850BS	PB164850BS	11/12/2024	14:17	PS028453.D	7.75	0.00
PB164694TB	PB164694TB	11/12/2024	14:49	PS028454.D	7.75	0.00
WB-307-SB02	P4718-03	11/12/2024	15:38	PS028456.D	7.75	0.00
WB-307-SB02MS	P4718-03MS	11/12/2024	16:03	PS028457.D	7.75	0.00
WB-307-SB02MSD	P4718-03MSD	11/12/2024	16:27	PS028458.D	7.75	0.00
LBLK	LBLK	11/12/2024	18:04	PS028462.D	7.75	0.00
HSTDCCC750	HSTDCCC750	11/12/2024	18:29	PS028463.D	7.75	0.00

COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

PB164850BS

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Lab Sample ID: PB164850BS Date(s) Analyzed: 11/12/2024 11/12/2024

Instrument ID (1): ECD_S Instrument ID (2): ECD_S

GC Column: (1): RTX-CLP ID: 0.32 (mm) GC Column:(2): RTX-CLP2 ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4-D	1	8.37	8.32	8.42	5.00	12.8
	2	9.00	8.95	9.05	4.40	
2,4,5-TP(Silvex)	1	9.25	9.20	9.30	5.20	12.2
	2	9.90	9.85	9.95	4.60	

COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

WB-307-SB02MS

Contract: PORT06

Lab Code: CHEM Case No.: P4718 SAS No.: P4718 SDG NO.: P4718

Lab Sample ID: P4718-03MS Date(s) Analyzed: 11/12/2024 11/12/2024

Instrument ID (1): ECD_S Instrument ID (2): ECD_S

GC Column: (1): RTX-CLP ID: 0.32 (mm) GC Column:(2): RTX-CLP2 ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-TP(Silvex)	1	9.25	9.20	9.30	46.0	21.2
	2	9.90	9.85	9.95	56.9	
2,4-D	1	8.37	8.32	8.42	47.6	14.4
	2	8.99	8.94	9.04	41.2	

COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

WB-307-SB02MSD

Contract: PORT06

Lab Code: CHEM

Case No.: P4718

SAS No.: P4718

SDG NO.: P4718

Lab Sample ID: P4718-03MSD

Date(s) Analyzed: 11/12/2024

11/12/2024

Instrument ID (1): ECD_S

Instrument ID (2): ECD_S

GC Column: (1): RTX-CLP

ID: 0.32 (mm)

GC Column:(2): RTX-CLP2

ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4-D	1	8.37	8.32	8.42	47.8	11.3
	2	8.99	8.94	9.04	42.7	
2,4,5-TP(Silvex)	1	9.25	9.20	9.30	46.2	23.7
	2	9.91	9.86	9.96	58.6	



QC SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	
Client Sample ID:	PB164850BL	SDG No.:	P4718
Lab Sample ID:	PB164850BL	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028452.D	1	11/10/24 09:45	11/12/24 13:53	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	0.49	U	0.49	2.00	ug/L
93-72-1	2,4,5-TP (Silvex)	0.45	U	0.45	2.00	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	484		70 (39) - 130 (175)	97%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028452.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 13:53
Operator : AR\AJ
Sample : PB164850BL
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
PB164850BL

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:48:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
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System Monitoring Compounds

4) S	2,4-DCAA	7.246	7.746	1336.7E6	649.5E6	484.173	407.586
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Target Compounds

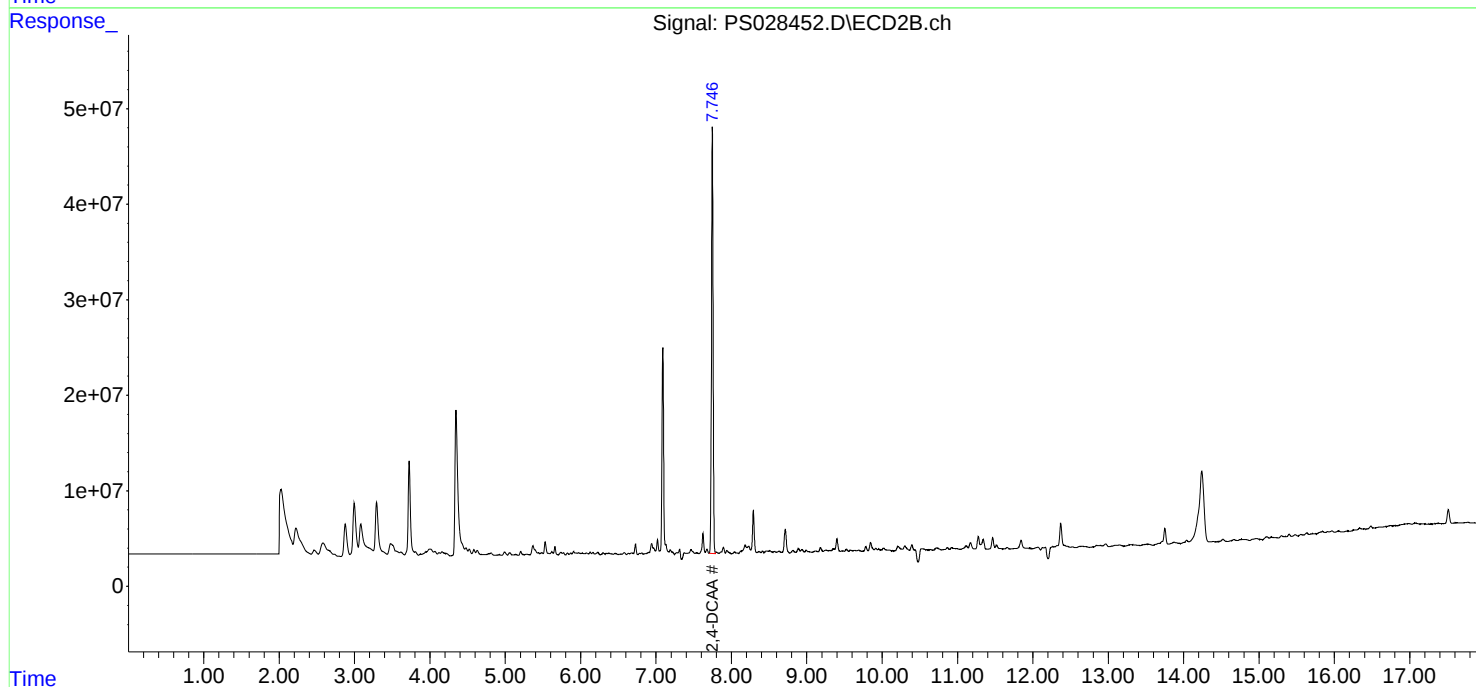
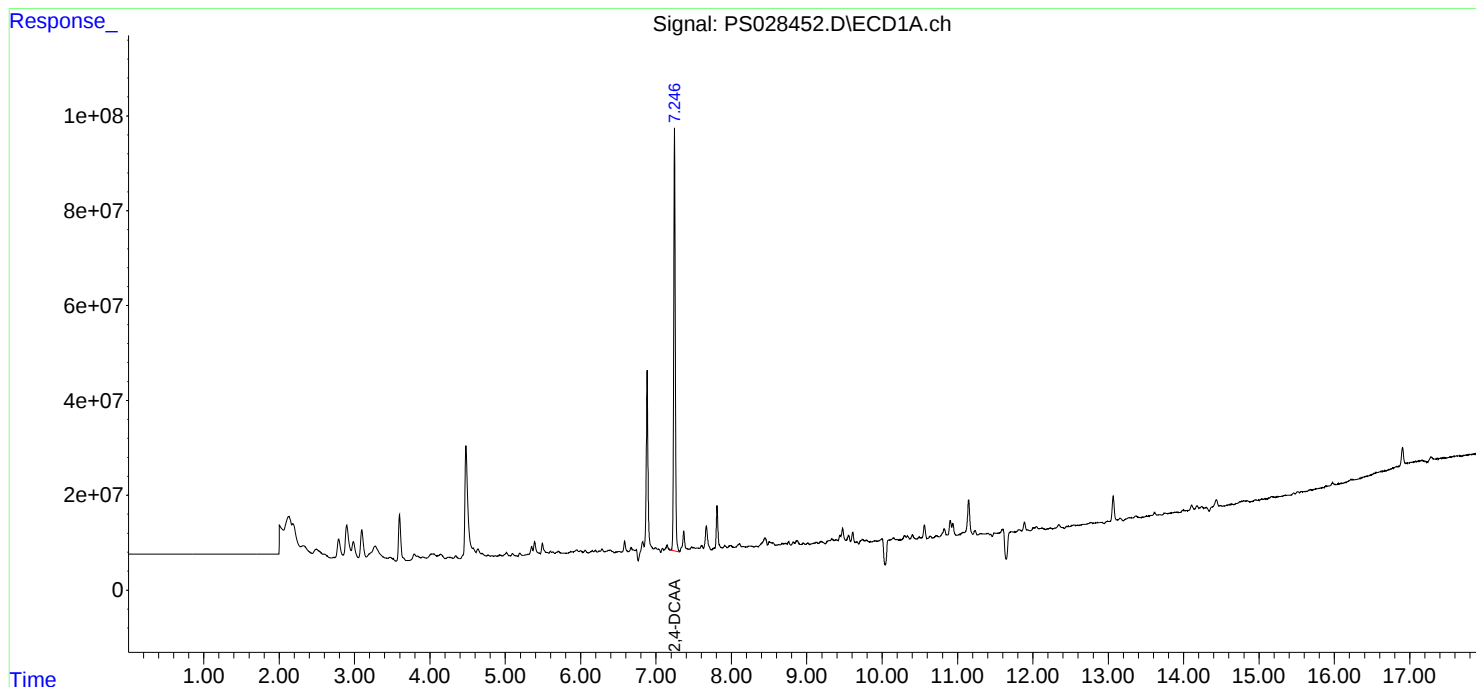
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

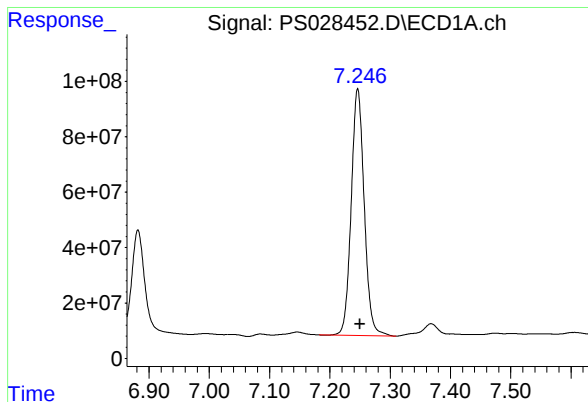
Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028452.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 13:53
Operator : AR\AJ
Sample : PB164850BL
Misc :
ALS Vial : 4 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
PB164850BL

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:48:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

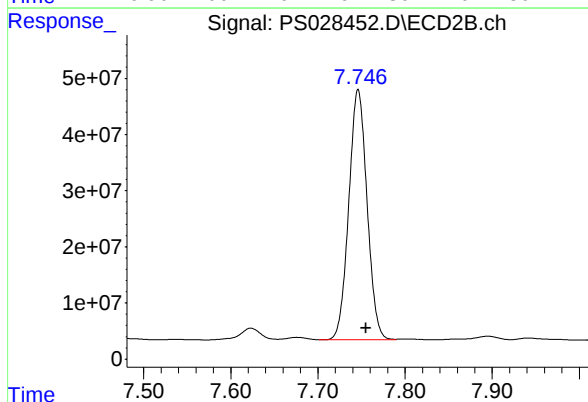




#4 2,4-DCAA

R.T.: 7.246 min
Delta R.T.: -0.004 min
Response: 1336682250
Conc: 484.17 ng/ml

Instrument :
ECD_S
ClientSampleId :
PB164850BL



#4 2,4-DCAA

R.T.: 7.746 min
Delta R.T.: -0.009 min
Response: 649456249
Conc: 407.59 ng/ml

Report of Analysis

Client:	Portal Partners Tri-Venture			Date Collected:	11/08/24		
Project:	Amtrak Sawtooth Bridges 2024			Date Received:	11/08/24		
Client Sample ID:	PIBLK-PS028355.D			SDG No.:	P4718		
Lab Sample ID:	I.BLK-PS028355.D			Matrix:	TCLP		
Analytical Method:	SW8151A			% Solid:	0		Decanted:
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	10000		uL
Soil Aliquot Vol:	uL			Test:	TCLP Herbicide		
Extraction Type:				Injection Volume :			
GPC Factor :	1.0	PH :					
Prep Method :	SW3510C						

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028355.D	1		11/08/24	PS110924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	0.49	U	0.49	2.00	ug/L
93-72-1	2,4,5-TP (Silvex)	0.45	U	0.45	2.00	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	503		70 (39) - 130 (175)	101%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of OC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028355.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 14:25
Operator : AR\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
I.BLK

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 17:51:55 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds						
4) S 2,4-DCAA	7.250	7.756	1382.7E6	801.6E6	500.845	503.062

Target Compounds

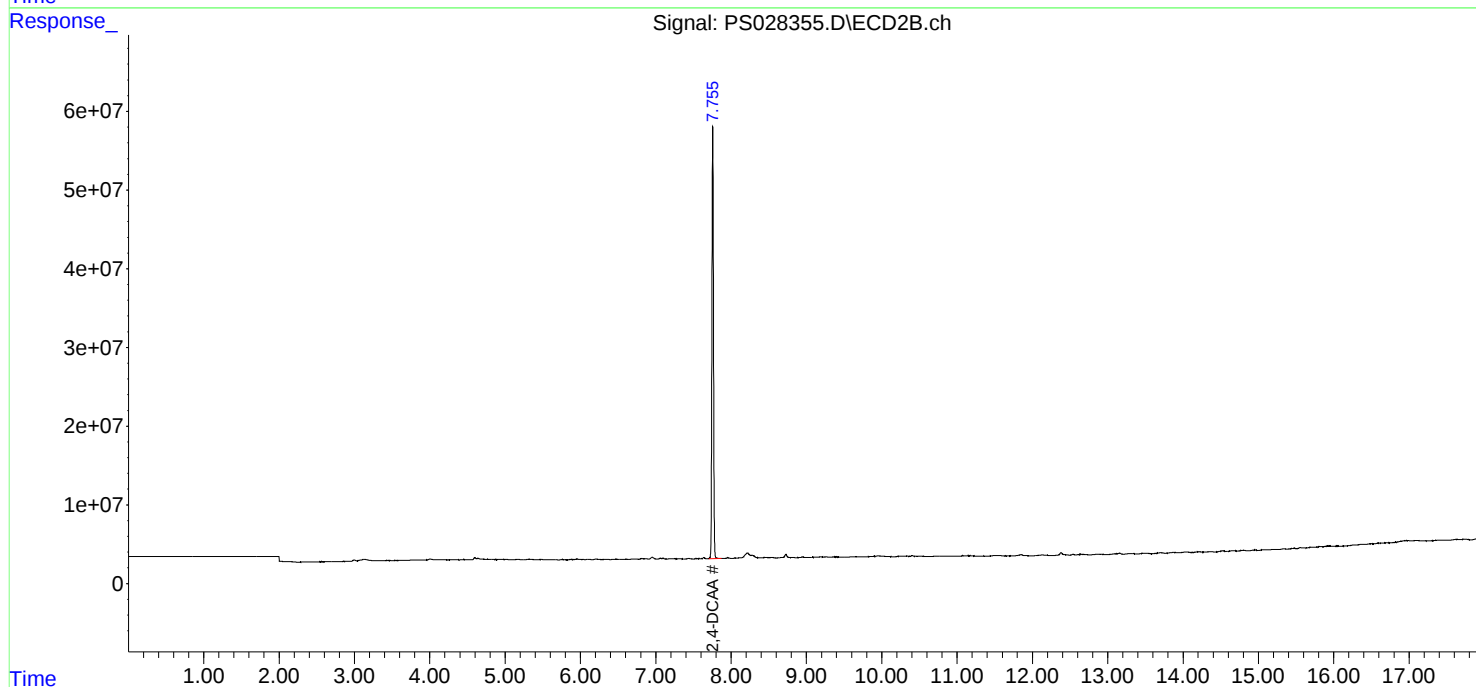
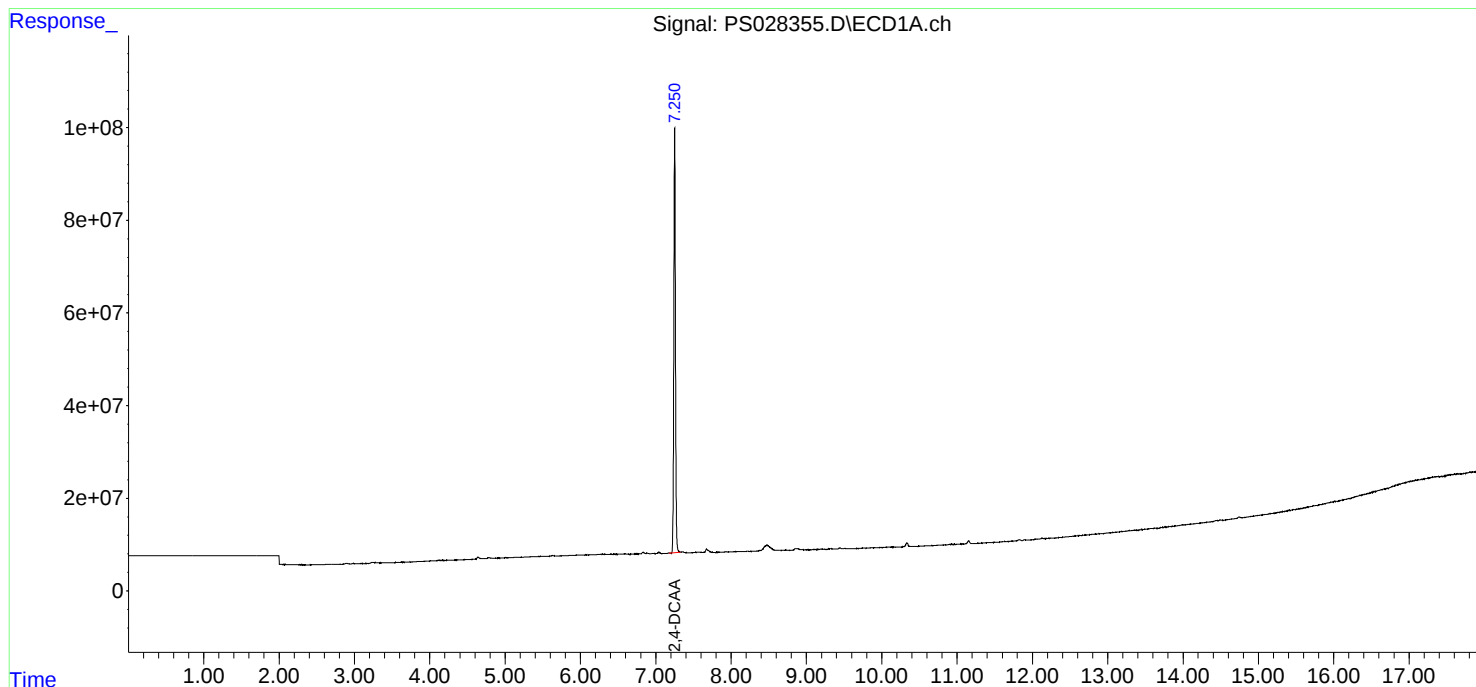
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

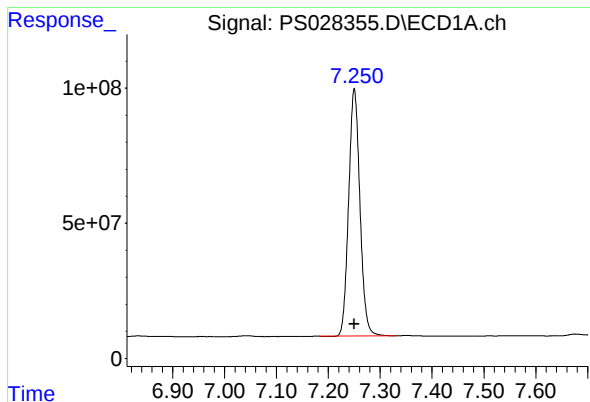
Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS110924\
Data File : PS028355.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08 Nov 2024 14:25
Operator : AR\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
I.BLK

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 08 17:51:55 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm





#4 2,4-DCAA

R.T.: 7.250 min

Delta R.T.: 0.000 min

Response: 1382710493

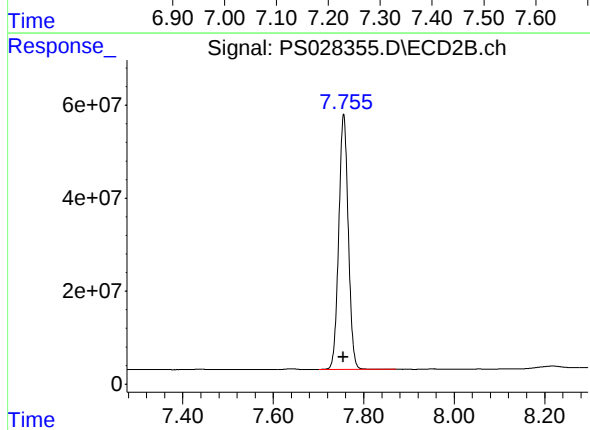
Conc: 500.85 ng/ml

Instrument :

ECD_S

ClientSampleId :

I.BLK



#4 2,4-DCAA

R.T.: 7.756 min

Delta R.T.: 0.000 min

Response: 801589716

Conc: 503.06 ng/ml

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	11/12/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/12/24
Client Sample ID:	PIBLK-PS028450.D	SDG No.:	P4718
Lab Sample ID:	I.BLK-PS028450.D	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TCLP Herbicide
GPC Factor :	1.0	PH :	
Prep Method :	SW3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028450.D	1		11/12/24	PS111224

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	0.49	U	0.49	2.00	ug/L
93-72-1	2,4,5-TP (Silvex)	0.45	U	0.45	2.00	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	503		70 (39) - 130 (175)	101%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028450.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 13:00
 Operator : AR\AJ
 Sample : I.BLK
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 ECD_S
 ClientSampleId :
 I.BLK

Manual Integrations
APPROVED

Reviewed By :Abdul Mirza 11/13/2024
 Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:47:25 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
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 System Monitoring Compounds

4) S	2,4-DCAA	7.244	7.746	1389.0E6	709.9E6	503.123m	445.538
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Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028450.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 13:00
Operator : AR\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

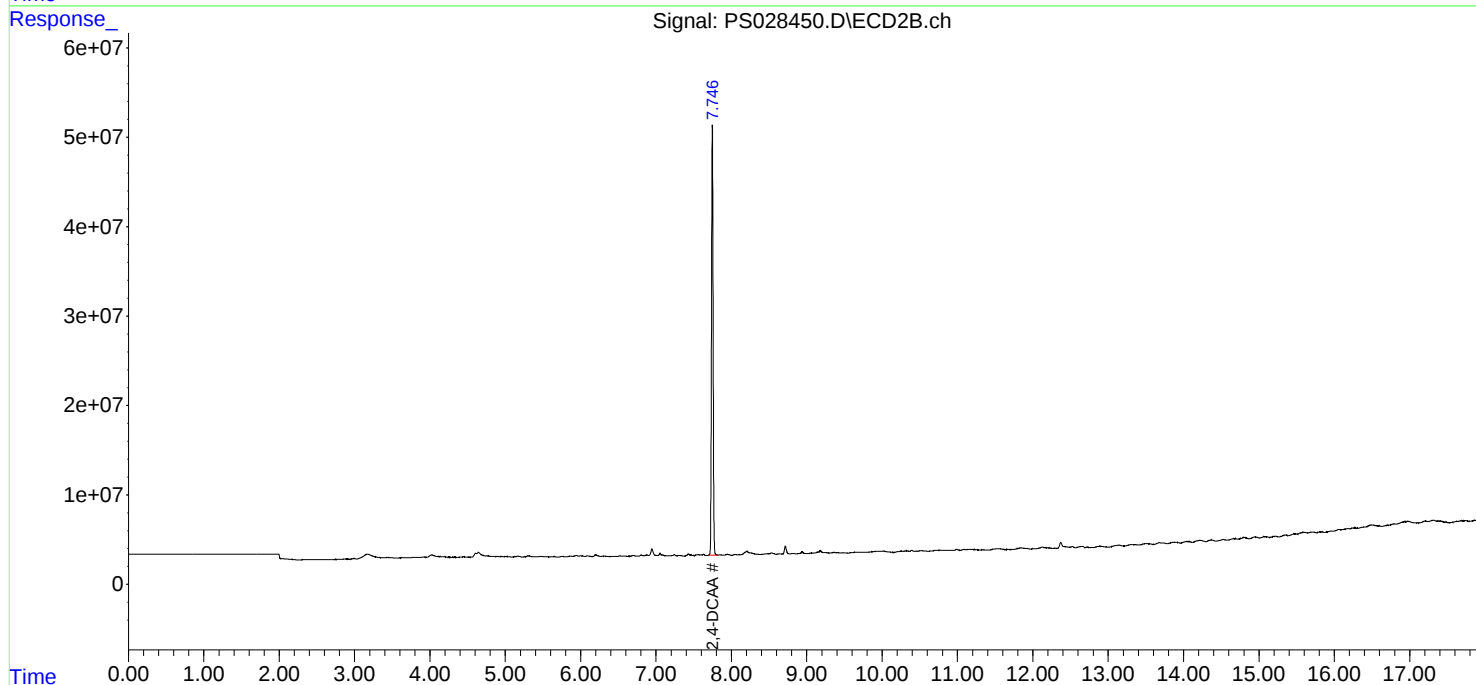
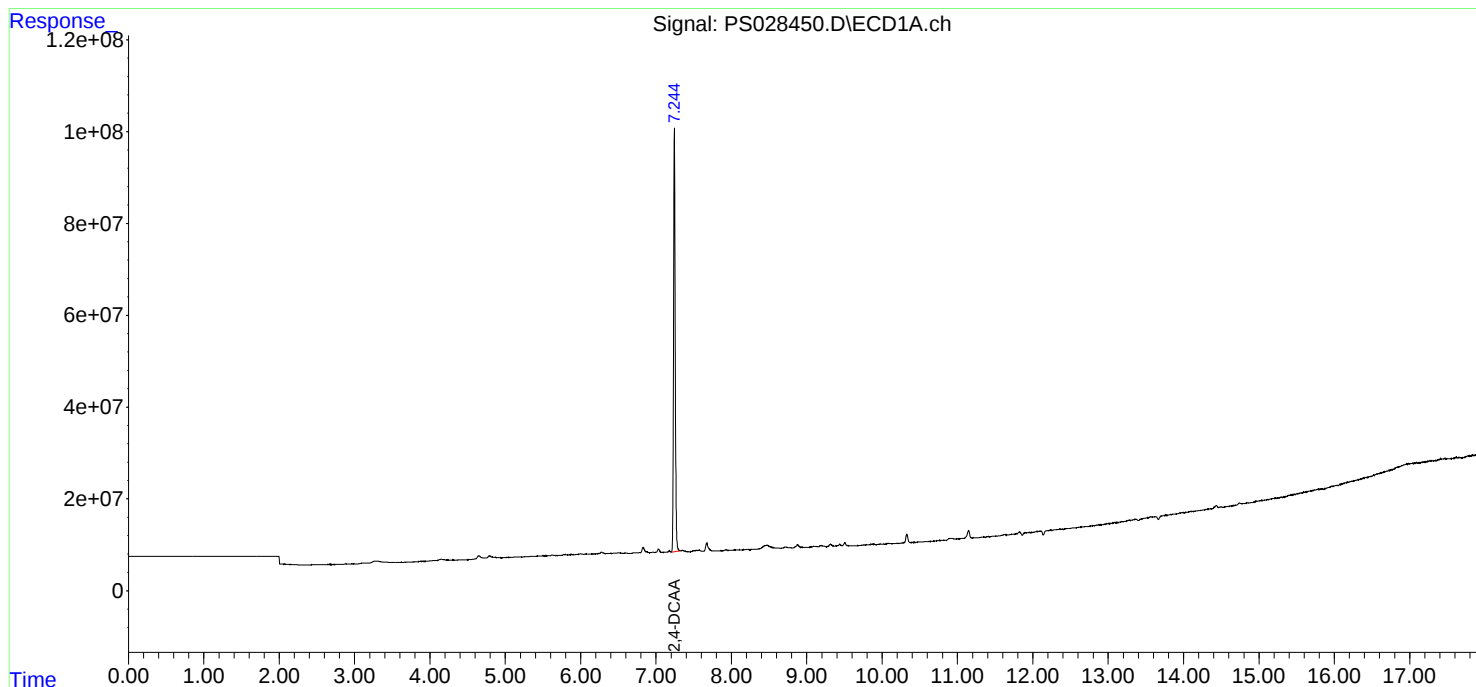
Instrument :
ECD_S
ClientSampleId :
I.BLK

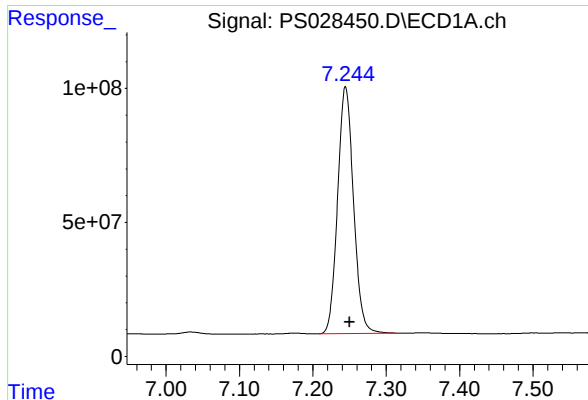
Manual Integrations
APPROVED

Reviewed By : Abdul Mirza 11/13/2024
Supervised By : Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:47:25 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm





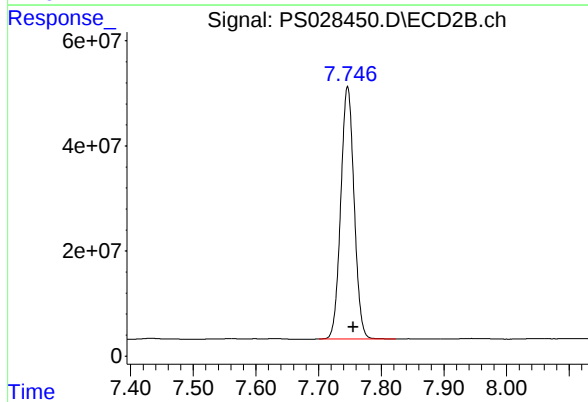
#4 2,4-DCAA

R.T.: 7.244 min
Delta R.T.: -0.006 min
Response: 1388998347
Conc: 503.12 ng/ml

Instrument :
ECD_S
ClientSampleId :
I.BLK

Manual Integrations
APPROVED

Reviewed By :Abdul Mirza 11/13/2024
Supervised By :Ankita Jodhani 11/13/2024



#4 2,4-DCAA

R.T.: 7.746 min
Delta R.T.: -0.009 min
Response: 709930160
Conc: 445.54 ng/ml

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	11/12/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/12/24
Client Sample ID:	PIBLK-PS028462.D	SDG No.:	P4718
Lab Sample ID:	I.BLK-PS028462.D	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	10000 uL
Extraction Type:		Test:	TCLP Herbicide
GPC Factor :	1.0	Injection Volume :	
PH :			
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028462.D	1		11/12/24	PS111224

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	0.49	U	0.49	2.00	ug/L
93-72-1	2,4,5-TP (Silvex)	0.45	U	0.45	2.00	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	497		70 (39) - 130 (175)	99%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028462.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 18:04
Operator : AR\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
I.BLK

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:57:16 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml
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System Monitoring Compounds

4) S	2,4-DCAA	7.242	7.746	1372.7E6	707.3E6	497.222	443.894
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Target Compounds

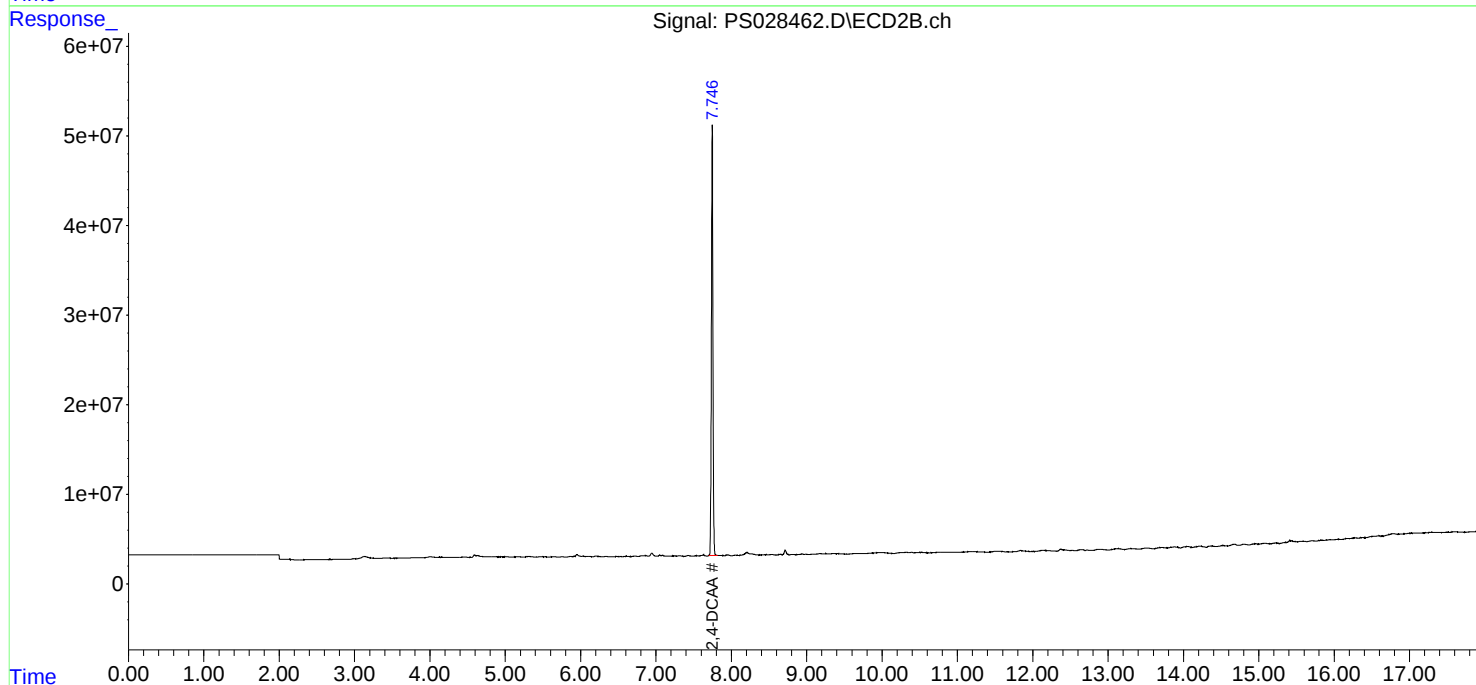
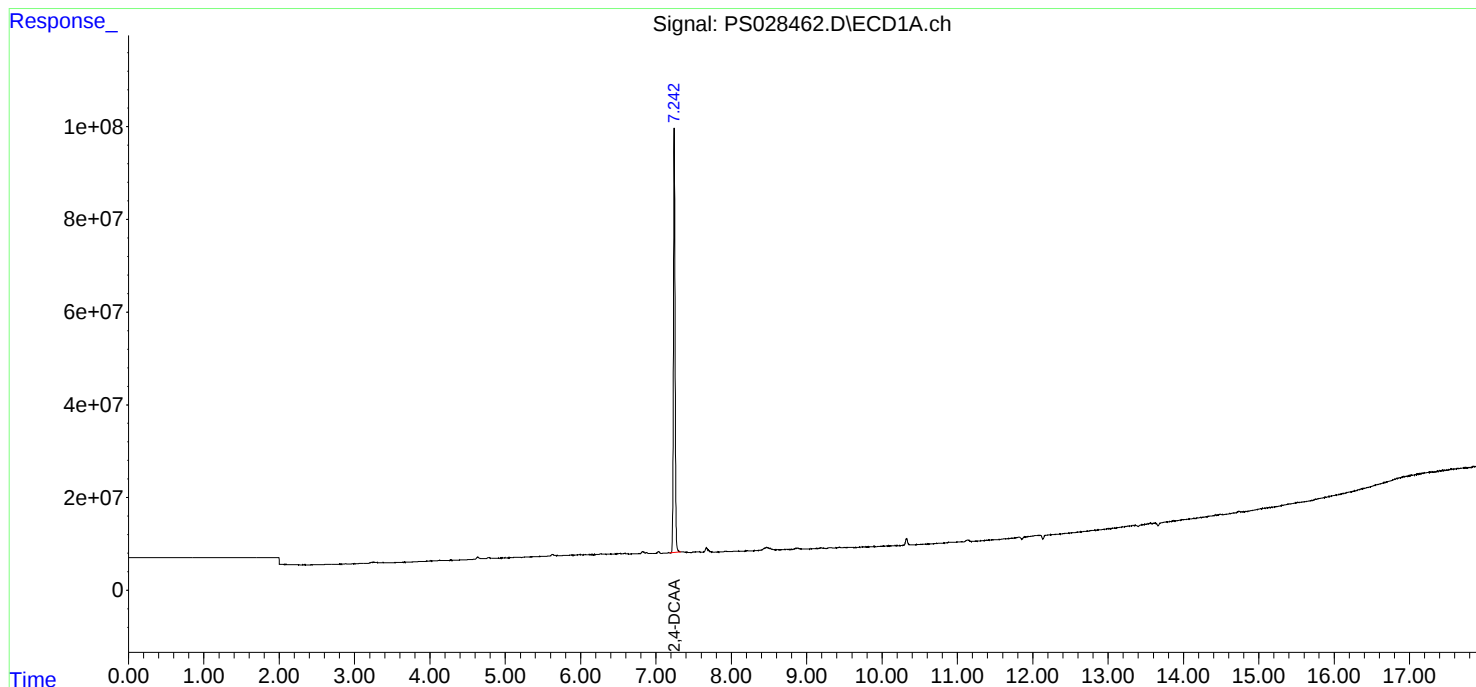
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

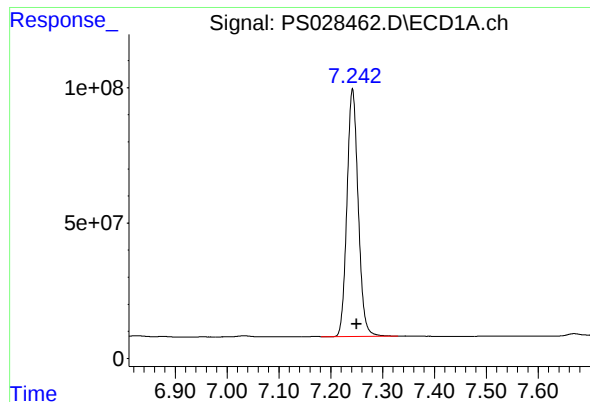
Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028462.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 18:04
Operator : AR\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
ECD_S
ClientSampleId :
I.BLK

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:57:16 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm





#4 2,4-DCAA

R.T.: 7.242 min

Delta R.T.: -0.008 min

Response: 1372708223

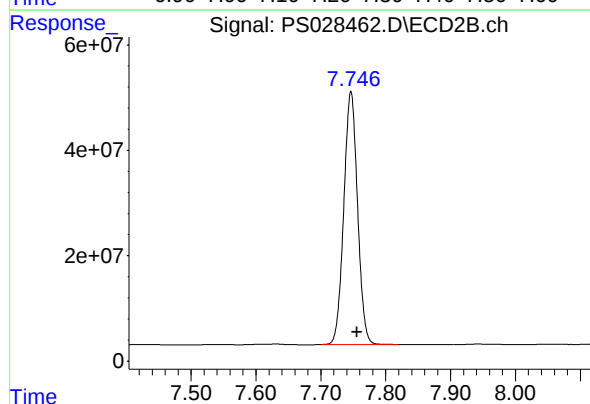
Conc: 497.22 ng/ml

Instrument :

ECD_S

ClientSampleId :

I.BLK



#4 2,4-DCAA

R.T.: 7.746 min

Delta R.T.: -0.009 min

Response: 707309965

Conc: 443.89 ng/ml

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	
Client Sample ID:	PB164850BS	SDG No.:	P4718
Lab Sample ID:	PB164850BS	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028453.D	1	11/10/24 09:45	11/12/24 14:17	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.00		0.49	2.00	ug/L
93-72-1	2,4,5-TP (Silvex)	5.20		0.45	2.00	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	534		70 (39) - 130 (175)	107%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028453.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 14:17
 Operator : AR\AJ
 Sample : PB164850BS
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

PB164850BS

Manual Integrations**APPROVED**

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:49:19 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.244	7.747	1473.7E6	745.8E6	533.813	468.074
Target Compounds							
1) T	Dalapon	2.642	2.702	1603.3E6	1144.6E6	449.334	403.640
2) T	3,5-DICHL...	6.413	6.699	1978.3E6	1034.0E6	494.396	436.449
3) T	4-Nitroph...	7.043	7.273	851.3E6	434.3E6	459.111	410.058
5) T	DICAMBA	7.432	7.948	6083.4E6	3177.8E6	505.234	443.241
6) T	MCPD	7.614	8.048	386.0E6	250.1E6	47.198	42.572
7) T	MCPA	7.764	8.294	541.4E6	337.7E6	48.284	42.171
8) T	DICHLORPROP	8.142	8.665	1568.1E6	772.0E6	505.896	433.386
9) T	2,4-D	8.373	8.995	1768.2E6	858.0E6	503.150	443.669m
10) T	Pentachlo...	8.673	9.525	24641.0E6	11621.2E6	547.067	466.398
11) T	2,4,5-TP ...	9.253	9.902	9787.9E6	4837.3E6	517.087	456.686
12) T	2,4,5-T	9.547	10.323	10003.4E6	4763.8E6	516.142	459.114
13) T	2,4-DB	10.123	10.890	1514.4E6	569.9E6	489.947	429.989
14) T	DINOSEB	11.339	11.270	8131.3E6	3199.9E6	501.519	445.836
15) T	Picloram	11.144	12.368	15318.2E6	6261.2E6	487.747	435.033
16) T	DCPA	11.631	12.316	13760.1E6	5123.5E6	514.851	457.042

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028453.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 14:17
Operator : AR\AJ
Sample : PB164850BS
Misc :
ALS Vial : 5 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

PB164850BS

Manual Integrations

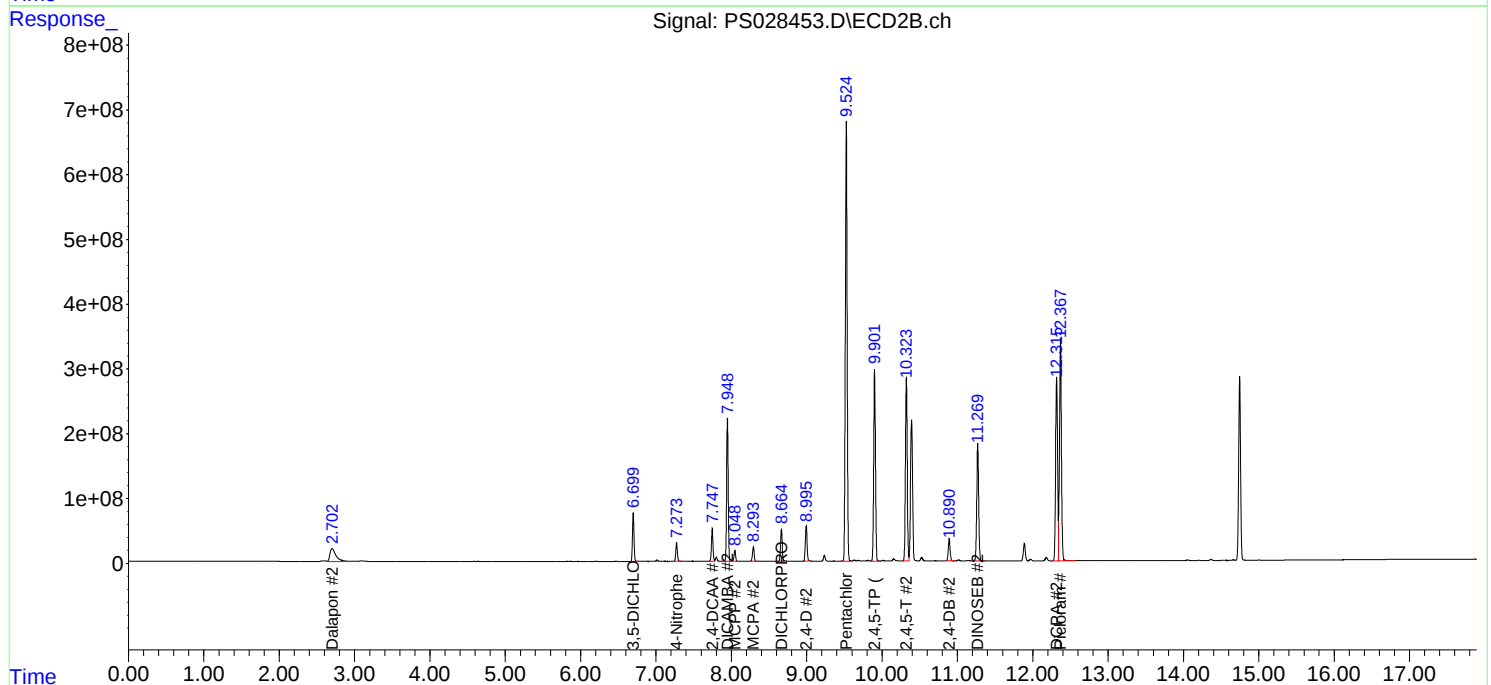
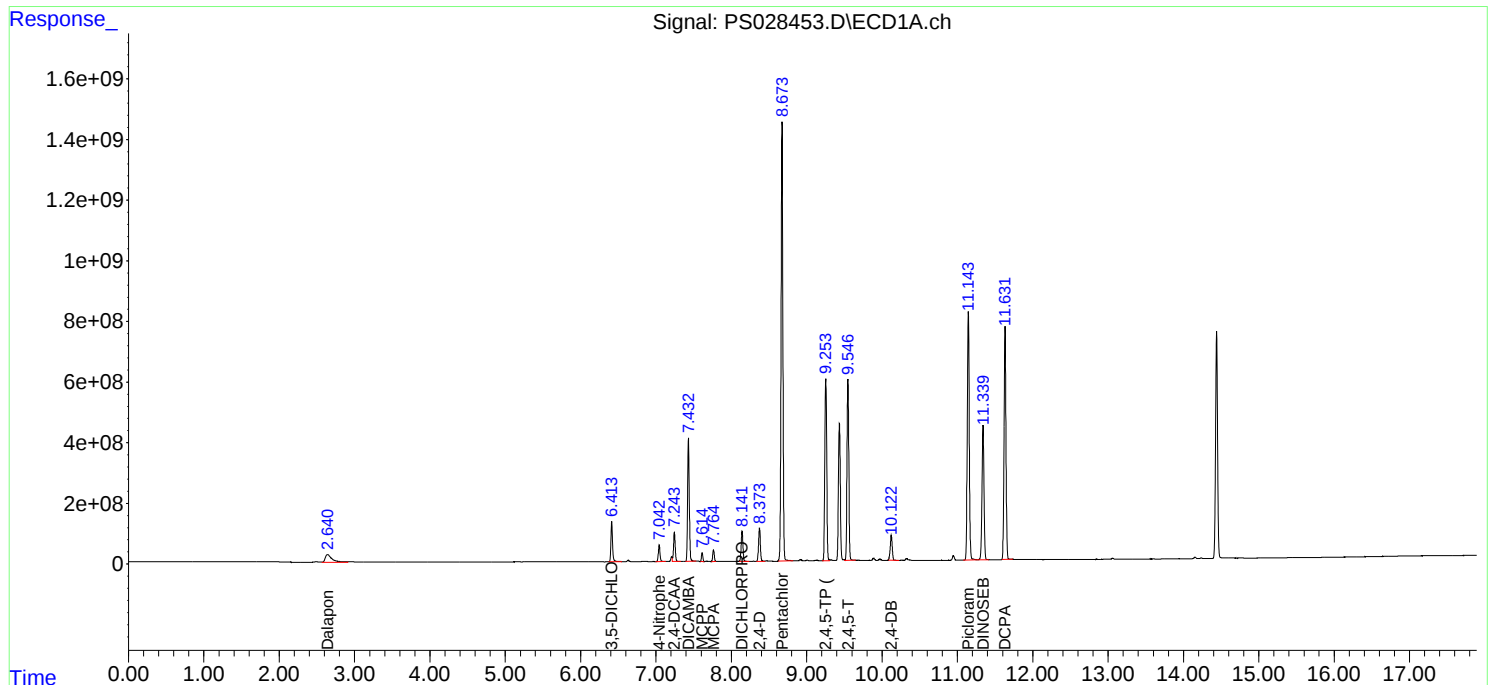
APPROVED

Reviewed By :Abdul Mirza 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:49:19 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	11/04/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/05/24
Client Sample ID:	WB-307-SB02MS	SDG No.:	P4718
Lab Sample ID:	P4718-03MS	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0
Sample Wt/Vol:	100	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TCLP Herbicide
GPC Factor :	1.0	PH :	
Prep Method :	SW3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028457.D	1	11/10/24 09:45	11/12/24 16:03	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	47.6		4.90	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	56.9		4.50	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	363		70 (39) - 130 (175)	73%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028457.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 16:03
 Operator : AR\AJ
 Sample : P4718-03MS
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

WB-307-SB02MS

Manual Integrations

APPROVED

Reviewed By :Yogesh Patel 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:52:50 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.243	7.746	1003.4E6	448.7E6	363.454	281.603
Target Compounds							
1) T	Dalapon	2.648	2.708	1090.1E6	853.3E6	305.511	300.912m
2) T	3,5-DICHL...	6.413	6.700	1633.6E6	896.5E6	408.261	378.435
5) T	DICAMBA	7.431	7.947	4729.6E6	2513.9E6	392.802	350.642
6) T	MCPPE	7.613	8.048	268.6E6	196.6E6	32.837	33.460
7) T	MCPA	7.763	8.292	443.1E6	311.0E6	39.517	38.841
8) T	DICHLORPROP	8.142	8.663	1323.2E6	654.4E6	426.886	367.387
9) T	2,4-D	8.372	8.994	1674.4E6	796.6E6	476.468	411.947m
10) T	Pentachlo...	8.672	9.524	16151.6E6	7477.8E6	358.590	300.109
11) T	2,4,5-TP ...	9.253	9.904	8712.7E6	6026.7E6	460.286	568.973
12) T	2,4,5-T	9.546	10.323	8500.8E6	4004.4E6	438.614	385.924
13) T	2,4-DB	10.123	10.890	1026.4E6	423.2E6	332.078	319.341m
14) T	DINOSEB	11.337	11.270	3981.6E6	1556.1E6	245.578m	216.807
15) T	Picloram	11.143	12.367	11550.6E6	4685.2E6	367.784	325.532
16) T	DCPA	11.629	12.316	11377.0E6	4781.3E6	425.682	426.518

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028457.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 16:03
Operator : AR\AJ
Sample : P4718-03MS
Misc :
ALS Vial : 9 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

WB-307-SB02MS

Manual Integrations

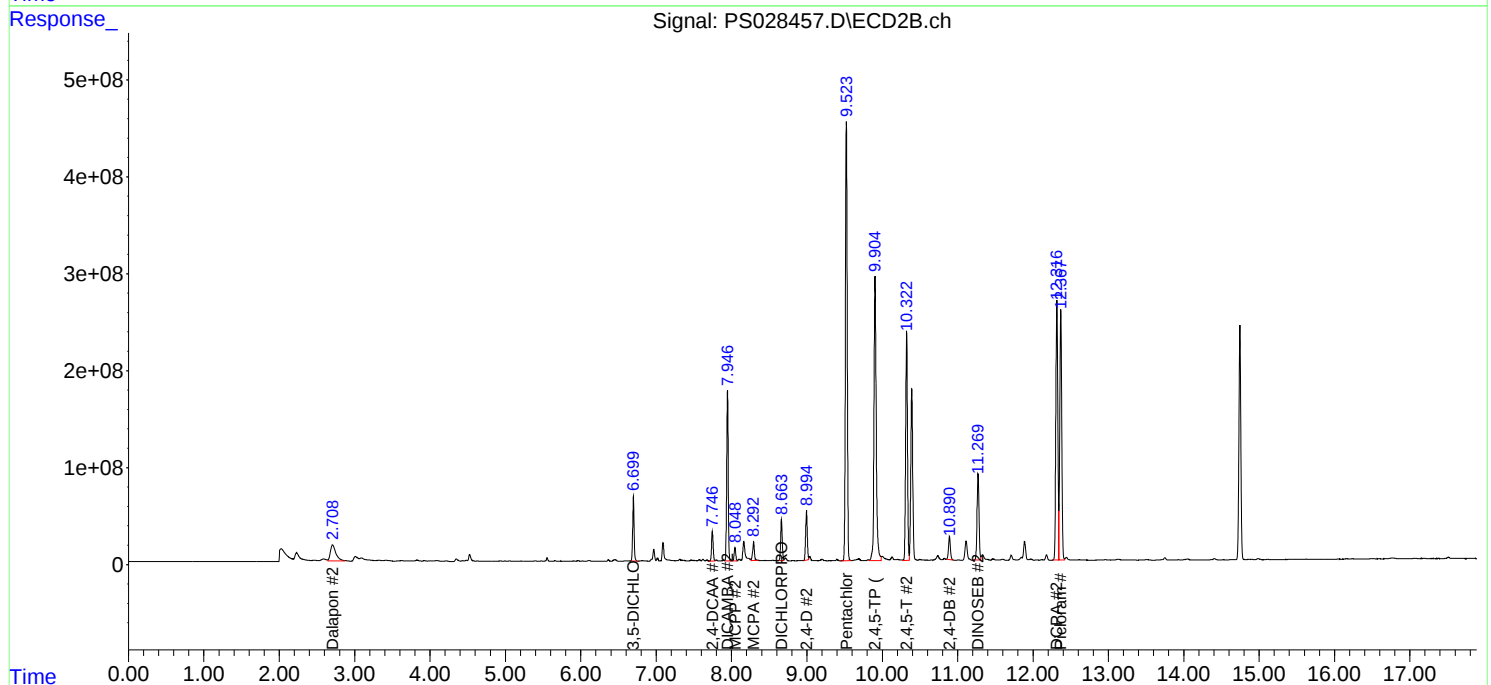
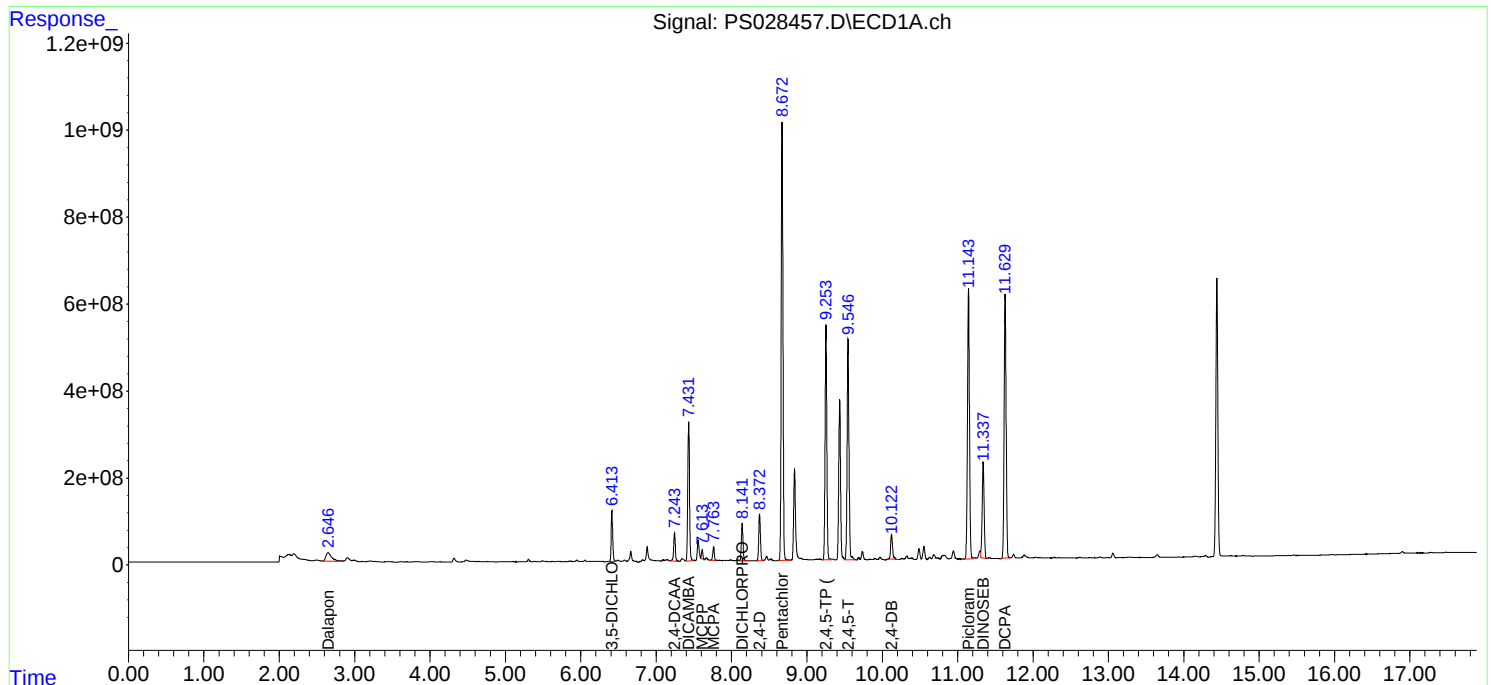
APPROVED

Reviewed By :Yogesh Patel 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:52:50 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	11/04/24
Project:	Amtrak Sawtooth Bridges 2024	Date Received:	11/05/24
Client Sample ID:	WB-307-SB02MSD	SDG No.:	P4718
Lab Sample ID:	P4718-03MSD	Matrix:	TCLP
Analytical Method:	SW8151A	% Solid:	0 Decanted:
Sample Wt/Vol:	100 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	TCLP Herbicide
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS028458.D	1	11/10/24 09:45	11/12/24 16:27	PB164850

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	47.8		4.90	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	58.6		4.50	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	366		70 (39) - 130 (175)	73%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
 Data File : PS028458.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Nov 2024 16:27
 Operator : AR\AJ
 Sample : P4718-03MSD
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

WB-307-SB02MSD

Manual Integrations

APPROVED

Reviewed By :Yogesh Patel 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Nov 12 23:53:43 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
 Quant Title : 8080.M
 QLast Update : Fri Nov 08 17:46:43 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
 Signal #1 Info : 30M x 0.32mm x0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng/ml	ng/ml

System Monitoring Compounds							
4) S	2,4-DCAA	7.242	7.746	1010.9E6	449.7E6	366.165	282.219
Target Compounds							
1) T	Dalapon	2.645	2.707	1085.7E6	883.8E6	304.269	311.686m
2) T	3,5-DICHL...	6.413	6.699	1637.7E6	909.6E6	409.275	383.951m
5) T	DICAMBA	7.431	7.947	4745.0E6	2525.0E6	394.077	352.182
6) T	MCPPE	7.612	8.048	268.8E6	197.0E6	32.870	33.531
7) T	MCPA	7.762	8.292	447.0E6	315.8E6	39.871	39.434
8) T	DICHLORPROP	8.141	8.664	1329.8E6	658.3E6	429.020	369.584
9) T	2,4-D	8.372	8.994	1679.5E6	824.8E6	477.904	426.508m
10) T	Pentachlo...	8.671	9.524	16218.0E6	7515.5E6	360.063	301.622
11) T	2,4,5-TP ...	9.253	9.905	8739.5E6	6210.7E6	461.699	586.342 #
12) T	2,4,5-T	9.546	10.323	8504.4E6	4019.3E6	438.799	387.361
13) T	2,4-DB	10.123	10.890	1029.9E6	419.1E6	333.195	316.242m
14) T	DINOSEB	11.337	11.269	4050.7E6	1558.4E6	249.839	217.126
15) T	Picloram	11.142	12.367	11606.3E6	4702.5E6	369.556	326.732
16) T	DCPA	11.629	12.315	11355.7E6	4797.6E6	424.885	427.974

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\ECD_S\Data\PS111224\
Data File : PS028458.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Nov 2024 16:27
Operator : AR\AJ
Sample : P4718-03MSD
Misc :
ALS Vial : 10 Sample Multiplier: 1

Instrument :

ECD_S

ClientSampleId :

WB-307-SB02MSD

Manual Integrations

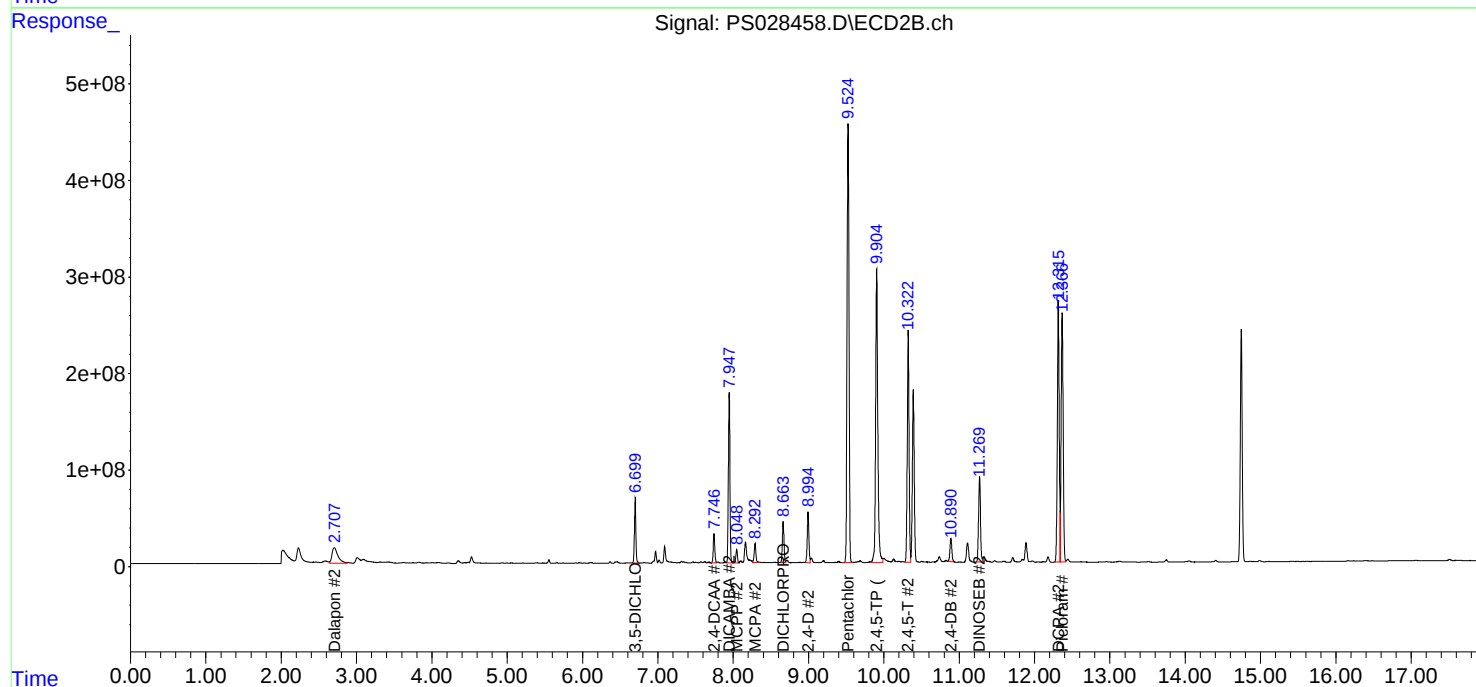
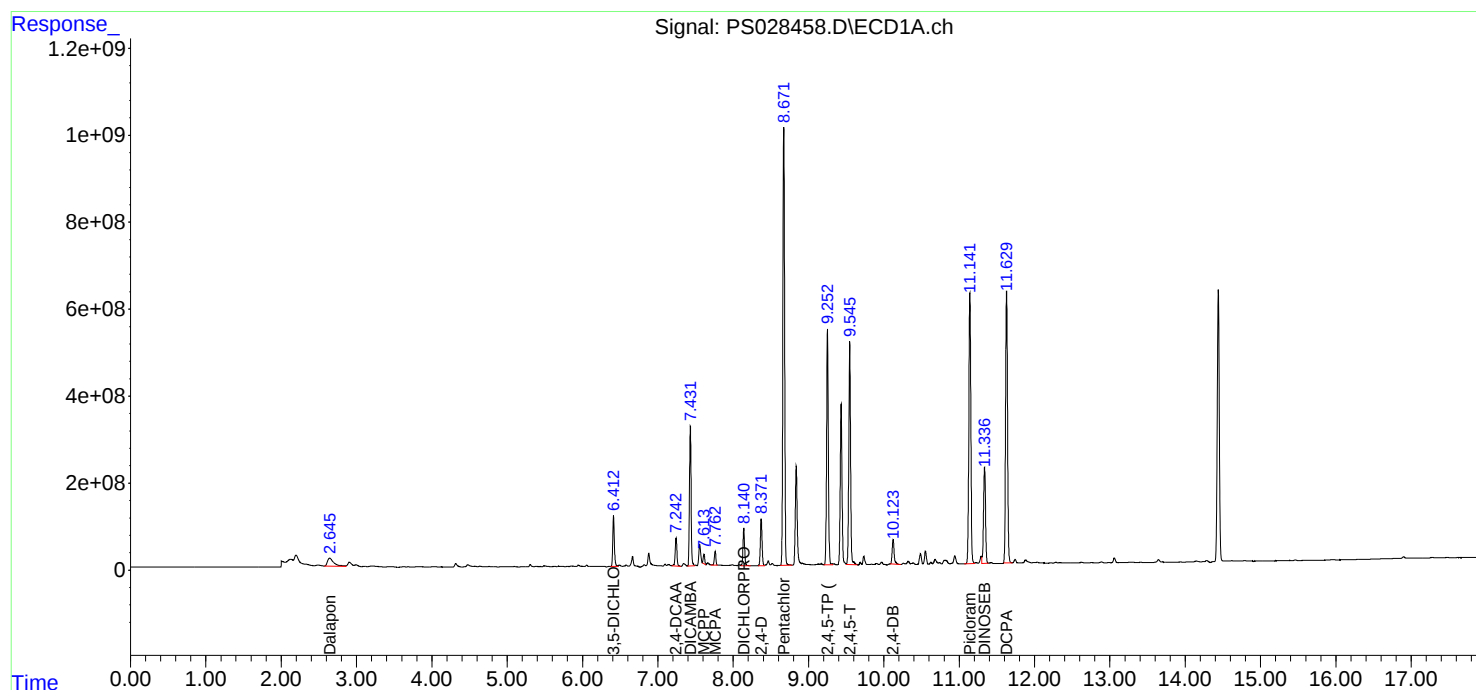
APPROVED

Reviewed By :Yogesh Patel 11/13/2024

Supervised By :Ankita Jodhani 11/13/2024

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 12 23:53:43 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\ECD_S\Method\PS110924.M
Quant Title : 8080.M
QLast Update : Fri Nov 08 17:46:43 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal #1 Phase : ZB-MR1 Signal #2 Phase: ZB-MR2
Signal #1 Info : 30M x 0.32mm x 0.5 Signal #2 Info : 30M x 0.32mm x 0.25µm



Manual Integration Report

Sequence:

PS110924

Instrument

ECD_s

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
HSTDICC500	PS028357.D	2,4-DCAA	Abdul	11/11/2024 5:06:04 PM	Ankita	11/12/2024 8:58:43	Peak Integrated by Software
I.BLK	PS028362.D	2,4-DCAA	Abdul	11/11/2024 5:06:07 PM	Ankita	11/12/2024 8:58:45	Peak Integrated by Software

Manual Integration Report

Sequence:	PS111224	Instrument	ECD_s
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
I.BLK	PS028450.D	2,4-DCAA	Abdul	11/13/2024 9:36:22 AM	Ankita	11/13/2024 10:38:17	Peak Integrated by Software
HSTDCCC750	PS028451.D	2,4-D #2	Abdul	11/13/2024 9:36:28 AM	Ankita	11/13/2024 10:38:19	Peak Integrated by Software
HSTDCCC750	PS028451.D	2,4-DCAA	Abdul	11/13/2024 9:36:28 AM	Ankita	11/13/2024 10:38:19	Peak Integrated by Software
PB164850BS	PS028453.D	2,4-D #2	Abdul	11/13/2024 9:33:59 AM	Ankita	11/13/2024 10:38:21	Peak Integrated by Software
P4718-03MS	PS028457.D	2,4-D #2	yogesh	11/13/2024 2:53:12 PM	Ankita	11/13/2024 2:53:22	Peak Integrated by Software
P4718-03MS	PS028457.D	2,4-DB #2	yogesh	11/13/2024 2:53:12 PM	Ankita	11/13/2024 2:53:22	Peak Integrated by Software
P4718-03MS	PS028457.D	Dalapon #2	yogesh	11/13/2024 2:53:12 PM	Ankita	11/13/2024 2:53:22	Peak Integrated by Software
P4718-03MS	PS028457.D	DINOSEB	yogesh	11/13/2024 2:53:12 PM	Ankita	11/13/2024 2:53:22	Peak Integrated by Software
P4718-03MSD	PS028458.D	2,4-D #2	yogesh	11/13/2024 2:53:14 PM	Ankita	11/13/2024 2:53:24	Peak Integrated by Software
P4718-03MSD	PS028458.D	2,4-DB #2	yogesh	11/13/2024 2:53:14 PM	Ankita	11/13/2024 2:53:24	Peak Integrated by Software
P4718-03MSD	PS028458.D	3,5-DICHLOROBENZOI C ACID #2	yogesh	11/13/2024 2:53:14 PM	Ankita	11/13/2024 2:53:24	Peak Integrated by Software
P4718-03MSD	PS028458.D	Dalapon #2	yogesh	11/13/2024 2:53:14 PM	Ankita	11/13/2024 2:53:24	Peak Integrated by Software
HSTDCCC750	PS028463.D	2,4-D #2	Abdul	11/13/2024 9:34:26 AM	Ankita	11/13/2024 10:38:28	Peak Integrated by Software

Manual Integration Report

Sequence:	PS111224	Instrument	ECD_s
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
I.BLK	PS028472.D	2,4-DCAA	Abdul	11/13/2024 9:34:40 AM	Ankita	11/13/2024 10:38:33	Peak Integrated by Software
HSTDCCC750	PS028473.D	2,4-D #2	Abdul	11/13/2024 9:34:45 AM	Ankita	11/13/2024 10:38:35	Peak Integrated by Software
HSTDCCC750	PS028473.D	4-Nitrophenol #2	Abdul	11/13/2024 9:34:45 AM	Ankita	11/13/2024 10:38:35	Peak Integrated by Software
HSTDCCC750	PS028483.D	2,4-D #2	Abdul	11/13/2024 9:35:13 AM	Ankita	11/13/2024 10:38:47	Peak Integrated by Software
HSTDCCC750	PS028483.D	2,4-DB #2	Abdul	11/13/2024 9:35:13 AM	Ankita	11/13/2024 10:38:47	Peak Integrated by Software
HSTDCCC750	PS028483.D	3,5-DICHLOROBENZOI C ACID #2	Abdul	11/13/2024 9:35:13 AM	Ankita	11/13/2024 10:38:47	Peak Integrated by Software
HSTDCCC750	PS028483.D	DICHLORPROP #2	Abdul	11/13/2024 9:35:13 AM	Ankita	11/13/2024 10:38:47	Peak Integrated by Software

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS110924

Review By	Abdul	Review On	11/11/2024 5:07:36 PM
Supervise By	Ankita	Supervise On	11/12/2024 8:59:40 AM
SubDirectory	PS110924	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC Internal Standard/PEM	PP23462		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23469		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	HEXANE	PS028354.D	08 Nov 2024 14:00	AR\AJ	Ok
2	I.BLK	PS028355.D	08 Nov 2024 14:25	AR\AJ	Ok
3	HSTDICC200	PS028356.D	08 Nov 2024 15:13	AR\AJ	Ok
4	HSTDICC500	PS028357.D	08 Nov 2024 15:46	AR\AJ	Ok,M
5	HSTDICC750	PS028358.D	08 Nov 2024 16:10	AR\AJ	Ok
6	HSTDICC1000	PS028359.D	08 Nov 2024 16:34	AR\AJ	Ok
7	HSTDICC1500	PS028360.D	08 Nov 2024 16:58	AR\AJ	Ok
8	HSTDICV750	PS028361.D	08 Nov 2024 17:22	AR\AJ	Ok
9	I.BLK	PS028362.D	08 Nov 2024 17:46	AR\AJ	Ok,M
10	HSTDCCC750	PS028363.D	08 Nov 2024 18:10	AR\AJ	Ok
11	P4700-01	PS028364.D	08 Nov 2024 18:34	AR\AJ	Ok,M
12	P4701-01	PS028365.D	08 Nov 2024 18:58	AR\AJ	Ok,M
13	P4701-05	PS028366.D	08 Nov 2024 19:22	AR\AJ	Ok
14	PB164754BL	PS028367.D	08 Nov 2024 19:46	AR\AJ	Ok
15	PB164754BS	PS028368.D	08 Nov 2024 20:10	AR\AJ	Ok,M
16	P4722-03	PS028369.D	08 Nov 2024 20:34	AR\AJ	Not Ok
17	P4722-08	PS028370.D	08 Nov 2024 20:58	AR\AJ	Ok,M
18	P4722-13	PS028371.D	08 Nov 2024 21:22	AR\AJ	Not Ok
19	P4739-01	PS028372.D	08 Nov 2024 21:46	AR\AJ	Ok,M
20	P4739-01MS	PS028373.D	08 Nov 2024 22:10	AR\AJ	Ok,M
21	P4739-01MSD	PS028374.D	08 Nov 2024 22:34	AR\AJ	Ok,M

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS110924

Review By	Abdul	Review On	11/11/2024 5:07:36 PM
Supervise By	Ankita	Supervise On	11/12/2024 8:59:40 AM
SubDirectory	PS110924	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC	PP23462		
Internal Standard/PEM			
ICV/I.BLK	PP23469		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

22	P4739-05	PS028375.D	08 Nov 2024 22:58	AR\AJ	Ok
23	P4739-09	PS028376.D	08 Nov 2024 23:22	AR\AJ	Ok,M
24	P4739-13	PS028377.D	08 Nov 2024 23:46	AR\AJ	Ok,M
25	I.BLK	PS028378.D	09 Nov 2024 00:10	AR\AJ	Ok
26	HSTDCCC750	PS028379.D	09 Nov 2024 00:34	AR\AJ	Ok
27	P4601-24RE	PS028380.D	09 Nov 2024 00:58	AR\AJ	Not Ok
28	P4601-25RE	PS028381.D	09 Nov 2024 01:22	AR\AJ	Not Ok
29	P4601-26RE	PS028382.D	09 Nov 2024 01:46	AR\AJ	Not Ok
30	P4602-43	PS028383.D	09 Nov 2024 02:10	AR\AJ	Not Ok
31	P4602-44MS	PS028384.D	09 Nov 2024 02:34	AR\AJ	Not Ok
32	P4602-45MSD	PS028385.D	09 Nov 2024 02:58	AR\AJ	Not Ok
33	P4602-40	PS028386.D	09 Nov 2024 03:22	AR\AJ	Not Ok
34	P4602-41MS	PS028387.D	09 Nov 2024 03:46	AR\AJ	Not Ok
35	P4602-42MSD	PS028388.D	09 Nov 2024 04:10	AR\AJ	Not Ok
36	PB164393TB	PS028389.D	09 Nov 2024 04:34	AR\AJ	Not Ok
37	I.BLK	PS028390.D	09 Nov 2024 04:58	AR\AJ	Not Ok
38	HSTDCCC750	PS028391.D	09 Nov 2024 05:22	AR\AJ	Not Ok

M : Manual Integration

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS111224

Review By	Abdul	Review On	11/13/2024 9:35:41 AM
Supervise By	Ankita	Supervise On	11/13/2024 10:39:11 AM
SubDirectory	PS111224	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC Internal Standard/PEM	PP23462		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23469		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	HEXANE	PS028449.D	12 Nov 2024 12:36	AR\AJ	Ok
2	I.BLK	PS028450.D	12 Nov 2024 13:00	AR\AJ	Ok,M
3	HSTDCCC750	PS028451.D	12 Nov 2024 13:25	AR\AJ	Ok,M
4	PB164850BL	PS028452.D	12 Nov 2024 13:53	AR\AJ	Ok
5	PB164850BS	PS028453.D	12 Nov 2024 14:17	AR\AJ	Ok,M
6	PB164694TB	PS028454.D	12 Nov 2024 14:49	AR\AJ	Ok
7	PB164793TB	PS028455.D	12 Nov 2024 15:14	AR\AJ	Ok
8	P4718-03	PS028456.D	12 Nov 2024 15:38	AR\AJ	Ok
9	P4718-03MS	PS028457.D	12 Nov 2024 16:03	AR\AJ	Ok,M
10	P4718-03MSD	PS028458.D	12 Nov 2024 16:27	AR\AJ	Ok,M
11	P4722-04	PS028459.D	12 Nov 2024 16:51	AR\AJ	Ok,M
12	P4722-09	PS028460.D	12 Nov 2024 17:16	AR\AJ	Ok
13	P4722-14	PS028461.D	12 Nov 2024 17:41	AR\AJ	Ok,M
14	I.BLK	PS028462.D	12 Nov 2024 18:04	AR\AJ	Ok
15	HSTDCCC750	PS028463.D	12 Nov 2024 18:29	AR\AJ	Ok,M
16	P4732-02	PS028464.D	12 Nov 2024 19:18	AR\AJ	Ok
17	P4771-06	PS028465.D	12 Nov 2024 19:43	AR\AJ	Ok
18	P4771-08	PS028466.D	12 Nov 2024 20:08	AR\AJ	Ok,M
19	PB164908BL	PS028467.D	12 Nov 2024 20:32	AR\AJ	Ok
20	PB164908BS	PS028468.D	12 Nov 2024 20:56	AR\AJ	Ok,M
21	PB164904TB	PS028469.D	12 Nov 2024 21:21	AR\AJ	Ok

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QCBatch ID # PS111224

Review By	Abdul	Review On	11/13/2024 9:35:41 AM
Supervise By	Ankita	Supervise On	11/13/2024 10:39:11 AM
SubDirectory	PS111224	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC Internal Standard/PEM	PP23462		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23469		

22	P4722-05	PS028470.D	12 Nov 2024 21:45	AR\AJ	Ok
23	P4722-10	PS028471.D	12 Nov 2024 22:09	AR\AJ	Ok
24	I.BLK	PS028472.D	12 Nov 2024 22:34	AR\AJ	Ok,M
25	HSTDCCC750	PS028473.D	12 Nov 2024 22:57	AR\AJ	Ok,M
26	P4722-15	PS028474.D	12 Nov 2024 23:46	AR\AJ	Ok
27	P4722-10MS	PS028475.D	13 Nov 2024 00:10	AR\AJ	Ok,M
28	P4722-10MSD	PS028476.D	13 Nov 2024 00:34	AR\AJ	Ok,M
29	PB164910BL	PS028477.D	13 Nov 2024 00:59	AR\AJ	Ok
30	PB164910BS	PS028478.D	13 Nov 2024 01:23	AR\AJ	Ok,M
31	PB164910BSD	PS028479.D	13 Nov 2024 01:48	AR\AJ	Ok,M
32	P4791-02	PS028480.D	13 Nov 2024 02:12	AR\AJ	Ok
33	P4792-04	PS028481.D	13 Nov 2024 02:36	AR\AJ	Ok,M
34	I.BLK	PS028482.D	13 Nov 2024 03:01	AR\AJ	Ok
35	HSTDCCC750	PS028483.D	13 Nov 2024 04:14	AR\AJ	Ok,M

M : Manual Integration

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS110924

Review By	Abdul	Review On	11/11/2024 5:07:36 PM
Supervise By	Ankita	Supervise On	11/12/2024 8:59:40 AM
SubDirectory	PS110924	HP Acquire Method	HP Processing Method ps110924 8151

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469
CCC	PP23462
Internal Standard/PEM	
ICV/I.BLK	PP23469
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	HEXANE	HEXANE	PS028354.D	08 Nov 2024 14:00		AR\AJ	Ok
2	I.BLK	I.BLK	PS028355.D	08 Nov 2024 14:25		AR\AJ	Ok
3	HSTDICC200	HSTDICC200	PS028356.D	08 Nov 2024 15:13		AR\AJ	Ok
4	HSTDICC500	HSTDICC500	PS028357.D	08 Nov 2024 15:46		AR\AJ	Ok,M
5	HSTDICC750	HSTDICC750	PS028358.D	08 Nov 2024 16:10		AR\AJ	Ok
6	HSTDICC1000	HSTDICC1000	PS028359.D	08 Nov 2024 16:34		AR\AJ	Ok
7	HSTDICC1500	HSTDICC1500	PS028360.D	08 Nov 2024 16:58		AR\AJ	Ok
8	HSTDICV750	ICVPS110924	PS028361.D	08 Nov 2024 17:22		AR\AJ	Ok
9	I.BLK	I.BLK	PS028362.D	08 Nov 2024 17:46		AR\AJ	Ok,M
10	HSTDCCC750	HSTDCCC750	PS028363.D	08 Nov 2024 18:10		AR\AJ	Ok
11	P4700-01	MH-8	PS028364.D	08 Nov 2024 18:34		AR\AJ	Ok,M
12	P4701-01	BP-F3	PS028365.D	08 Nov 2024 18:58		AR\AJ	Ok,M
13	P4701-05	BP-F4	PS028366.D	08 Nov 2024 19:22		AR\AJ	Ok
14	PB164754BL	PB164754BL	PS028367.D	08 Nov 2024 19:46		AR\AJ	Ok
15	PB164754BS	PB164754BS	PS028368.D	08 Nov 2024 20:10		AR\AJ	Ok,M
16	P4722-03	WC-1(0-6)	PS028369.D	08 Nov 2024 20:34	2,4-DCAA low in both column	AR\AJ	Not Ok
17	P4722-08	WC-2(0-6)	PS028370.D	08 Nov 2024 20:58		AR\AJ	Ok,M
18	P4722-13	WC-3(0-6)	PS028371.D	08 Nov 2024 21:22	2,4-DCAA Low in both column	AR\AJ	Not Ok

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS110924

Review By	Abdul	Review On	11/11/2024 5:07:36 PM
Supervise By	Ankita	Supervise On	11/12/2024 8:59:40 AM
SubDirectory	PS110924	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC	PP23462		
Internal Standard/PEM			
ICV/I.BLK	PP23469		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

19	P4739-01	TP-14	PS028372.D	08 Nov 2024 21:46		AR\AJ	Ok,M
20	P4739-01MS	TP-14MS	PS028373.D	08 Nov 2024 22:10	Some compound recovery fail	AR\AJ	Ok,M
21	P4739-01MSD	TP-14MSD	PS028374.D	08 Nov 2024 22:34	Some compound recovery fail	AR\AJ	Ok,M
22	P4739-05	BP-G2	PS028375.D	08 Nov 2024 22:58		AR\AJ	Ok
23	P4739-09	BP-B2	PS028376.D	08 Nov 2024 23:22		AR\AJ	Ok,M
24	P4739-13	TP-11	PS028377.D	08 Nov 2024 23:46		AR\AJ	Ok,M
25	I.BLK	I.BLK	PS028378.D	09 Nov 2024 00:10		AR\AJ	Ok
26	HSTDCCC750	HSTDCCC750	PS028379.D	09 Nov 2024 00:34		AR\AJ	Ok
27	P4601-24RE	CC0P1RE	PS028380.D	09 Nov 2024 00:58	Closing CCC fail,	AR\AJ	Not Ok
28	P4601-25RE	CC0P3RE	PS028381.D	09 Nov 2024 01:22	Closing CCC fail,	AR\AJ	Not Ok
29	P4601-26RE	CC0P5RE	PS028382.D	09 Nov 2024 01:46	Closing CCC fail,	AR\AJ	Not Ok
30	P4602-43	CC0R8	PS028383.D	09 Nov 2024 02:10	, Closing CCC fail	AR\AJ	Not Ok
31	P4602-44MS	CC0R8MS	PS028384.D	09 Nov 2024 02:34	Some compound recovery fail, Closing CCC fail	AR\AJ	Not Ok
32	P4602-45MSD	CC0R8MSD	PS028385.D	09 Nov 2024 02:58	Some compound recovery fail, Closing CCC fail	AR\AJ	Not Ok
33	P4602-40	CC0R6	PS028386.D	09 Nov 2024 03:22	Closing CCC fail	AR\AJ	Not Ok
34	P4602-41MS	CC0R6MS	PS028387.D	09 Nov 2024 03:46	Some compound recovery fail, Closing CCC fail	AR\AJ	Not Ok
35	P4602-42MSD	CC0R6MSD	PS028388.D	09 Nov 2024 04:10	Some compound recovery fail, RPD fail, Closing CCC fail	AR\AJ	Not Ok
36	PB164393TB	PB164393TB	PS028389.D	09 Nov 2024 04:34	Closing CCC fail	AR\AJ	Not Ok

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS110924

Review By	Abdul	Review On	11/11/2024 5:07:36 PM
Supervise By	Ankita	Supervise On	11/12/2024 8:59:40 AM
SubDirectory	PS110924	HP Acquire Method	HP Processing Method ps110924 8151

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469
CCC Internal Standard/PEM	PP23462
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23469

37	I.BLK	I.BLK	PS028390.D	09 Nov 2024 04:58	Closing CCC fail	AR\AJ	Not Ok
38	HSTDCCC750	HSTDCCC750	PS028391.D	09 Nov 2024 05:22	CCC fail	AR\AJ	Not Ok

M : Manual Integration

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS111224

Review By	Abdul	Review On	11/13/2024 9:35:41 AM
Supervise By	Ankita	Supervise On	11/13/2024 10:39:11 AM
SubDirectory	PS111224	HP Acquire Method	HP Processing Method ps110924 8151

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469
CCC	PP23462
Internal Standard/PEM	
ICV/I.BLK	PP23469
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	HEXANE	HEXANE	PS028449.D	12 Nov 2024 12:36		AR\AJ	Ok
2	I.BLK	I.BLK	PS028450.D	12 Nov 2024 13:00		AR\AJ	Ok,M
3	HSTDCCC750	HSTDCCC750	PS028451.D	12 Nov 2024 13:25		AR\AJ	Ok,M
4	PB164850BL	PB164850BL	PS028452.D	12 Nov 2024 13:53		AR\AJ	Ok
5	PB164850BS	PB164850BS	PS028453.D	12 Nov 2024 14:17		AR\AJ	Ok,M
6	PB164694TB	PB164694TB	PS028454.D	12 Nov 2024 14:49		AR\AJ	Ok
7	PB164793TB	PB164793TB	PS028455.D	12 Nov 2024 15:14		AR\AJ	Ok
8	P4718-03	WB-307-SB02	PS028456.D	12 Nov 2024 15:38		AR\AJ	Ok
9	P4718-03MS	WB-307-SB02MS	PS028457.D	12 Nov 2024 16:03	Some compound recovery fail	AR\AJ	Ok,M
10	P4718-03MSD	WB-307-SB02MSD	PS028458.D	12 Nov 2024 16:27	Some compound recovery fail	AR\AJ	Ok,M
11	P4722-04	WC-1(0-6)	PS028459.D	12 Nov 2024 16:51		AR\AJ	Ok,M
12	P4722-09	WC-2(0-6)	PS028460.D	12 Nov 2024 17:16		AR\AJ	Ok
13	P4722-14	WC-3(0-6)	PS028461.D	12 Nov 2024 17:41		AR\AJ	Ok,M
14	I.BLK	I.BLK	PS028462.D	12 Nov 2024 18:04		AR\AJ	Ok
15	HSTDCCC750	HSTDCCC750	PS028463.D	12 Nov 2024 18:29		AR\AJ	Ok,M
16	P4732-02	PPE-COMP	PS028464.D	12 Nov 2024 19:18		AR\AJ	Ok
17	P4771-06	P-1	PS028465.D	12 Nov 2024 19:43		AR\AJ	Ok
18	P4771-08	P-2	PS028466.D	12 Nov 2024 20:08		AR\AJ	Ok,M

Instrument ID: ECD_S

Daily Analysis Runlog For Sequence/QC Batch ID # PS111224

Review By	Abdul	Review On	11/13/2024 9:35:41 AM
Supervise By	Ankita	Supervise On	11/13/2024 10:39:11 AM
SubDirectory	PS111224	HP Acquire Method	HP Processing Method ps110924 8151
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	P23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469		
CCC	PP23462		
Internal Standard/PEM			
ICV/I.BLK	PP23469		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

19	PB164908BL	PB164908BL	PS028467.D	12 Nov 2024 20:32		AR\AJ	Ok
20	PB164908BS	PB164908BS	PS028468.D	12 Nov 2024 20:56		AR\AJ	Ok,M
21	PB164904TB	PB164904TB	PS028469.D	12 Nov 2024 21:21		AR\AJ	Ok
22	P4722-05	WC-1(0-6)	PS028470.D	12 Nov 2024 21:45		AR\AJ	Ok
23	P4722-10	WC-2(0-6)	PS028471.D	12 Nov 2024 22:09		AR\AJ	Ok
24	I.BLK	I.BLK	PS028472.D	12 Nov 2024 22:34		AR\AJ	Ok,M
25	HSTDCCC750	HSTDCCC750	PS028473.D	12 Nov 2024 22:57		AR\AJ	Ok,M
26	P4722-15	WC-3(0-6)	PS028474.D	12 Nov 2024 23:46		AR\AJ	Ok
27	P4722-10MS	WC-2(0-6)MS	PS028475.D	13 Nov 2024 00:10		AR\AJ	Ok,M
28	P4722-10MSD	WC-2(0-6)MSD	PS028476.D	13 Nov 2024 00:34		AR\AJ	Ok,M
29	PB164910BL	PB164910BL	PS028477.D	13 Nov 2024 00:59		AR\AJ	Ok
30	PB164910BS	PB164910BS	PS028478.D	13 Nov 2024 01:23		AR\AJ	Ok,M
31	PB164910BSD	PB164910BSD	PS028479.D	13 Nov 2024 01:48		AR\AJ	Ok,M
32	P4791-02	HINCHMAN-OILY-WAT	PS028480.D	13 Nov 2024 02:12		AR\AJ	Ok
33	P4792-04	MANHOLE-WASTE-DR	PS028481.D	13 Nov 2024 02:36		AR\AJ	Ok,M
34	I.BLK	I.BLK	PS028482.D	13 Nov 2024 03:01		AR\AJ	Ok
35	HSTDCCC750	HSTDCCC750	PS028483.D	13 Nov 2024 04:14		AR\AJ	Ok,M

M : Manual Integration

SOP ID :	M1311-TCLP-15	Start Prep Date :	11/06/2024	Time :	16:45
SDG No :	N/A	End Prep Date :	11/07/2024	Time :	09:35
Welgh By :	JP	Combination Ratio :	20		
Balance ID :	WC SC-4	ZHE Cleaning Batch :	N/A		
pH Meter ID :	WC PH METER-1	Initial Room Temperature:	24 °C		
Extraction By :	JP	Final Room Temperature:	23 °C		
Filter By :	JP	TCLP Technician Signature :	<i>[Signature]</i>		
Pippete ID :	WC	Supervisor By :	<i>[Signature]</i>		
Tumbler ID :	T-1 / T-2				
TCLP Filter ID :	114771				

Standard Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP108622
HCL-TCLP,1N	N/A	WP108584
HNO3-TCLP,1N	N/A	WP108585
pH Strips	N/A	W1931,W1934,W2350,W2755
pH Strips	N/A	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	23091
120ml Plastic bottle	N/A	21029
1:1 HNO3	MP81119	N/A

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftation and before preservation. TUMBLER T-1 / T-2 checked,30 rpm. p4718-03 is used for MS-MSD. Particle size reduction is not required.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/07/24 11:00	<i>[Signature]</i> Prep Group	<i>[Signature]</i> Analysis Group

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
P4718-03	WB-307-SB02	01	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-1
P4719-03	BAYAVE-STOCKPILE	02	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1
P4720-05	JC-701-COMP-01	03	100.04	2000	N/A	N/A	N/A	3.5	1.0	T-1
P4722-04	WC-1(0-6)	04	100.03	2000	N/A	N/A	N/A	7.2	1.5	T-1
P4722-09	WC-2(0-6)	05	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
P4722-14	WC-3(0-6)	06	100.03	2000	N/A	N/A	N/A	6.2	1.5	T-1
P4732-02	PPE-COMP	07	100.00	2000	N/A	N/A	N/A	6.0	1.0	T-1
P4738-02	72-12018	08	100.02	2000	N/A	N/A	N/A	4.5	1.5	T-1
P4739-04	TP-14	09	100.03	2000	N/A	N/A	N/A	5.8	1.0	T-1
P4739-08	BP-G2	10	100.02	2000	N/A	N/A	N/A	5.6	1.5	T-1
P4739-12	BP-B2	11	100.03	2000	N/A	N/A	N/A	5.8	1.0	T-2
P4739-16	TP-11	12	100.04	2000	N/A	N/A	N/A	8.2	1.5	T-2
PB164694TB	LEB694	13	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-2

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
P4718-03	WB-307-SB02	N/A	N/A	N/A	N/A	100	N/A
P4719-03	BAYAVE-STOCKPILE	N/A	N/A	N/A	N/A	100	N/A
P4720-05	JC-701-COMP-01	N/A	N/A	N/A	N/A	100	N/A
P4722-04	WC-1(0-6)	N/A	N/A	N/A	N/A	100	N/A
P4722-09	WC-2(0-6)	N/A	N/A	N/A	N/A	100	N/A
P4722-14	WC-3(0-6)	N/A	N/A	N/A	N/A	100	N/A
P4732-02	PPE-COMP	N/A	N/A	N/A	N/A	100	N/A
P4738-02	72-12018	N/A	N/A	N/A	N/A	100	N/A
P4739-04	TP-14	N/A	N/A	N/A	N/A	100	N/A
P4739-08	BP-G2	N/A	N/A	N/A	N/A	100	N/A
P4739-12	BP-B2	N/A	N/A	N/A	N/A	100	N/A
P4739-16	TP-11	N/A	N/A	N/A	N/A	100	N/A
PB164694TB	LEB694	N/A	N/A	N/A	N/A	N/A	N/A

Hot Block ID : WC S-1 /WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
P4718-03	WB-307-SB02	5.02	96.5	8.4	3.0	#1	4.94
P4719-03	BAYAVE-STOCKPILE	5.01	96.5	8.4	3.0	#1	4.94
P4720-05	JC-701-COMP-01	5.02	96.5	6.0	2.0	#1	4.94
P4722-04	WC-1(0-6)	5.03	96.5	9.4	4.0	#1	4.94
P4722-09	WC-2(0-6)	5.02	96.5	9.0	3.5	#1	4.94
P4722-14	WC-3(0-6)	5.01	96.5	8.6	3.5	#1	4.94
P4732-02	PPE-COMP	5.00	96.5	8.4	3.0	#1	4.94
P4738-02	72-12018	5.02	96.5	7.0	2.5	#1	4.94
P4739-04	TP-14	5.03	96.5	7.2	2.5	#1	4.94
P4739-08	BP-G2	5.04	96.5	8.0	3.0	#1	4.94
P4739-12	BP-B2	5.02	96.5	7.6	2.5	#1	4.94
P4739-16	TP-11	5.01	96.5	10.0	4.0	#1	4.94
PB164694TB	LEB694	N/A	N/A	N/A	N/A	#1	4.94

WORKLIST(Hardcopy Internal Chain)

WorkList Name : tclp p4719 WorkList ID : 185149 Department : TCLP Extraction Date : 11-06-2024 07:55:14

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4718-03	WB-307-SB02	Solid	TCLP Extraction	Cool 4 deg C	PORT06	L21	11/04/2024	1311
P4719-03	BAYAVE-STOCKPILE	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	K21	11/05/2024	1311
P4720-05	JC-701-COMP-01	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	K31	11/05/2024	1311
P4722-04	WC-1(0-6)	Solid	TCLP Extraction	Cool 4 deg C	WALS01	L23	11/05/2024	1311
P4722-09	WC-2(0-6)	Solid	TCLP Extraction	Cool 4 deg C	WALS01	L23	11/05/2024	1311
P4722-14	WC-3(0-6)	Solid	TCLP Extraction	Cool 4 deg C	WALS01	L23	11/05/2024	1311
P4732-02	PPE-COMP	Solid	TCLP Extraction	Cool 4 deg C	FUR101	L11	11/06/2024	1311
P4738-02	72-12018	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	L23	11/06/2024	1311
P4739-04	TP-14	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	L21	11/06/2024	1311
P4739-08	BP-G2	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	L21	11/06/2024	1311
P4739-12	BP-B2	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	L21	11/06/2024	1311
P4739-16	TP-11	Solid	TCLP Extraction	Cool 4 deg C	PSEG03	L21	11/06/2024	1311

Date/Time 11/06/24 16:10
 Raw Sample Received by: SA SM
 Raw Sample Relinquished by: SA SM

Date/Time 11/06/24 18:00
 Raw Sample Received by: SA SM
 Raw Sample Relinquished by: SA SM

SOP ID: M8151A-Herbicide-22

Clean Up SOP #: N/A

Matrix : Water

Weigh By: RJ

Balance check: N/A

Balance ID: N/A

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 4,7

Extraction Start Date : 11/10/2024

Extraction Start Time : 09:45

Extraction End Date : 11/10/2024

Extraction End Time : 16:45

Concentration By: RS

Supervisor By : rajesh

Extraction Method: ☒ Separatory Funnel ☐ Continous Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☐ Soxhlet

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	5/500 PPM	PP23930
Surrogate	1.0ML	5000 PPB	PP23907
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Ether	N/A	E3370
Acidified Na2SO4	N/A	EP2503
NAOH 6N	N/A	EP2553
1:3 SULPHURIC ACID	N/A	EP2528
NACL	N/A	M4459
METHANOL	N/A	V14150
ISO OCTANE	N/A	E3554
Diazomethane	N/A	EP3529
Hexane	N/A	E3826
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

pH adjusted with HCL <2 for soil Extraction, PH adjusted with 1:3 H2SO4 <2 after Hydrolysis, Derivatization procedure is completed and samples are ready to Analyze, 40ML Vial Lot # 03-40 BTS721.

KD Bath ID: N/A

KD Bath Temperature: N/A

Envap ID: NEVAP-02

Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/11/24	RP (Ext. Lab)	RP (Ext. Lab)
3:05	Preparation Group	Analysis Group

Analytical Method: M8151A-Herbicide-22

Concentration Date: 11/10/2024

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB164694TB	PB164694TB	TCLP Herbicide	100	6	RUPEsh	ritesh	10			SEP-01
PB164793TB	PB164793TB	TCLP Herbicide	100	6	RUPEsh	ritesh	10			2
PB164850BL	HBLK850	TCLP Herbicide	1000	6	RUPEsh	ritesh	10			3
PB164850BS	HLCS850	TCLP Herbicide	1000	6	RUPEsh	ritesh	10			4
P4718-03	WB-307-SB02	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		5
P4718-03MS	WB-307-SB02MS	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		6
P4718-03MS D	WB-307-SB02MSD	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		7
P4722-04	WC-1(0-6)	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		8
P4722-09	WC-2(0-6)	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		9
P4722-14	WC-3(0-6)	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		10
P4732-02	PPE-COMP	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		11
P4738-02	72-12018	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		12
P4771-06	P-1	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		13
P4771-08	P-2	TCLP Herbicide	100	6	RUPEsh	ritesh	10	A		14

* Extracts relinquished on the same date as received.

11/10/24

TCLP EXTRACTION LOGPAGE

PB164793

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
P4756-04	BP-B4	01	100.03	2000	N/A	N/A	N/A	5.5	1.5	T-1
P4771-06	P-1	02	100.02	2000	N/A	N/A	N/A	5.6	1.0	T-1
P4771-08	P-2	03	100.01	2000	N/A	N/A	N/A	5.8	1.5	T-1
P4788-04	BP-G3	04	100.02	2000	N/A	N/A	N/A	5.8	1.0	T-1
P4789-04	BP-F21	05	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
P4792-01	DIESLE-DRUM	06	100.04	2000	N/A	N/A	N/A	7.0	1.0	T-1
P4792-06	OILY-STONE-DRUM	07	100.02	2000	N/A	N/A	N/A	4.5	1.5	T-1
P4793-02	M00-24-00345	08	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
P4795-02	LAW-23-00189	09	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
P4798-04	MH-6	10	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1
PB164793TB	LEB793	11	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-1

11/09/2024
11:30

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
P4722-05	WC-1(0-6)	11	100.03	2000	N/A	N/A	N/A	7.2	1.5	T-2
P4722-10	WC-2(0-6)	12	100.04	2000	N/A	N/A	N/A	7.0	1.0	T-2
P4722-15	WC-3(0-6)	13	100.02	2000	N/A	N/A	N/A	7.2	1.5	T-2
PB164792TB	LEB792	14	N/A	2000	N/A	N/A	N/A	4.24	1.0	T-2

11/09/2023
11:30

Prep Standard - Chemical Standard Summary

Order ID : P4718

Test : TCLP Herbicide

Prepbatch ID : PB164850,

Sequence ID/Qc Batch ID: PS111224,

Standard ID :

EP2503,EP2528,EP2553,PP23457,PP23458,PP23459,PP23460,PP23461,PP23462,PP23467,PP23468,PP23469,PP23907,PP23930,

Chemical ID :

E3370,E3551,E3657,E3754,E3815,E3818,M4459,M5037,P11179,P12618,P12661,P12707,P12784,P12785,P13498,P13499,P13500,P13501,P13517,P23457,P8828,P8901,P9004,W3112,

[illegible]

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1762	1:3 H2SO4 Soln	EP2528	08/14/2024	12/15/2024	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 08/14/2024
<u>FROM</u> 250.00000ml of M5037 + 750.00000ml of W3112 = Final Quantity: 1000.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3884	6 N NAOH	EP2553	10/21/2024	04/21/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 10/21/2024
<u>FROM</u>	1000.00000ml of W3112 + 240.00000gram of E3657 = Final Quantity: 1000.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1321	2/200 PPM Herb Mega Mix	PP23457	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani 06/18/2024
<u>FROM</u> 0.20000ml of P8828 + 1.00000ml of P11179 + 1.00000ml of P12618 + 1.00000ml of P12661 + 1.00000ml of P8901 + 95.80000ml of E3754 = Final Quantity: 100.000 ml								

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1452	1500 PPB HERB MIX STD	PP23458	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
06/18/2024								

FROM 0.25000ml of E3754 + 75.00000ml of PP23457 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1453	1000 PPB Herb MIX STD	PP23459	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
06/18/2024								

FROM 0.50000ml of E3754 + 0.50000ml of PP23457 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1455	500 PPB Herb MIX STD	PP23460	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.50000ml of E3754 + 0.50000ml of PP23459 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1456	200 PPB Herb MIX STD	PP23461	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.80000ml of E3754 + 0.20000ml of PP23459 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1454	750 PPB Herb MIX STD	PP23462	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.25000ml of E3754 + 0.75000ml of PP23459 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1851	2/200 PPM Herb Mega Mix 2nd Source	PP23467	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.50000ml of P9004 + 1.00000ml of P12707 + 48.50000ml of E3754 = Final Quantity: 50.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1854	1000 PPB HERB MIX ICV STD	PP23468	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.50000ml of E3754 + 0.50000ml of PP23467 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1691	750 PPB ICV HERB STD	PP23469	06/17/2024	12/04/2024	Abdul Mirza	None	None	Ankita Jodhani
								06/18/2024

FROM 0.25000ml of E3754 + 0.75000ml of PP23468 = Final Quantity: 1.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
60	5000 PPB Herbicide Surg Spike (Free Acid)	PP23907	10/21/2024	04/04/2025	Abdul Mirza	None	None	Ankita Jodhani 10/22/2024
<u>FROM</u> 1.25000ml of P13498 + 1.25000ml of P13499 + 1.25000ml of P13500 + 1.25000ml of P13501 + 195.00000ml of E3815 = Final Quantity: 200.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1848	5000/500000 PPB Herbicide Spike (Free Acid)	PP23930	10/30/2024	04/23/2025	Abdul Mirza	None	None	Ankita Jodhani 10/30/2024
<u>FROM</u> 0.50000ml of P13517 + 1.00000ml of P12784 + 1.00000ml of P12785 + 47.50000ml of E3818 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9244-03 / Ether, Anhydrous, Purified (cs/4x4L)	0000288039	01/17/2025	08/01/2022 / Rajesh	07/13/2022 / Rajesh	E3370

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	01/03/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4	23B1556310	12/31/2025	12/04/2023 / Rajesh	12/01/2023 / Rajesh	E3657

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24C1862008	12/04/2024	06/04/2024 / Rajesh	05/31/2024 / Rajesh	E3754

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	04/04/2025	10/04/2024 / Rajesh	10/04/2024 / Rajesh	E3815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	04/23/2025	10/23/2024 / Rajesh	10/09/2024 / Rajesh	E3818

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000237721	04/13/2026	10/03/2022 / Ankita	10/30/2019 / AMANDEEP	M4459

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000250349	12/15/2024	01/06/2022 / mohan	09/18/2021 / mohan	M5037

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32050 / Herbicide, 8000 series, 515 Surrogate [ester] 2,4-dichlorophenyl acetic acid methyl ester, 1mL, 200ug/mL, Hexane	A0172864	12/17/2024	06/17/2024 / Abdul	11/01/2021 / Abdul	P11179

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32062 / Herbicide Mix, 500/8000, Standard #4 [methyl ester] 200ug/mL, hexane, 1mL/ampul	A0155055	12/17/2024	06/17/2024 / Abdul	07/03/2023 / Abdul	P12618

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32055 / Herbicide Mix, 500/8000, Standard #1 [methyl ester] 200ug/mL, hexane, 1mL/ampul	A0199693	12/17/2024	06/17/2024 / Abdul	07/14/2023 / Ankita	P12661

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151M / Chlorinated Herbicide Mixtures, Methyl Esters	0006752480	12/17/2024	06/17/2024 / Abdul	08/09/2023 / Abdul	P12707

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151M / Chlorinated Herbicide Mixtures, Methyl Esters	0006752480	12/17/2024	06/17/2024 / Abdul	08/09/2023 / Abdul	P12707

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/11/2023 / Abdul	P12784

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/11/2023 / Abdul	P12784

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/11/2023 / Abdul	P12785

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/11/2023 / Abdul	P12785

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32049 / Herbicide, 8000 series, 515 Surrogate [free acid] 2,4-dichlorophenyl acetic acid, 1mL, 200ug/mL, MeOH	A0212676	04/21/2025	10/21/2024 / Abdul	08/16/2024 / yogesh	P13498

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32049 / Herbicide, 8000 series, 515 Surrogate [free acid] 2,4-dichlorophenyl acetic acid, 1mL, 200ug/mL, MeOH	A0212676	04/21/2025	10/21/2024 / Abdul	08/16/2024 / yogesh	P13499

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32049 / Herbicide, 8000 series, 515 Surrogate [free acid] 2,4-dichlorophenyl acetic acid, 1mL, 200ug/mL, MeOH	A0212676	04/21/2025	10/21/2024 / Abdul	08/16/2024 / yogesh	P13500

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32049 / Herbicide, 8000 series, 515 Surrogate [free acid] 2,4-dichlorophenyl acetic acid, 1mL, 200ug/mL, MeOH	A0212676	04/21/2025	10/21/2024 / Abdul	08/16/2024 / yogesh	P13501

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/03/2024 / Abdul	P13517

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	HBM-8151A / Chlorinated Herbicide Mixtures, Free Acids	0006750243	04/30/2025	10/30/2024 / Abdul	09/03/2024 / Abdul	P13517

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32254 / Dalapon Methyl Ester, 1000 ug/ml	A0148063	12/17/2024	06/17/2024 / Abdul	08/16/2019 / Stephen	P8828

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32059 / Herbicide Mix#3 (Methyl Ester), 20000 ug/ml	A0152499	12/17/2024	06/17/2024 / Abdul	08/16/2019 / Stephen	P8901

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32050 / Herbicide, 8000 series, 515 Surrogate [ester] 2,4-dichlorophenyl acetic acid methyl ester, 1mL, 200ug/mL, Hexane	A0152705	12/17/2024	06/17/2024 / Abdul	10/11/2019 / Stephen	P9004

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

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



From M4452 to M4459

Received on : 10/30/2019

Received by : AK

Material No.: 3624-05

Batch No.: 0000237721

Manufactured Date: 2019/04/15

Retest Date: 2026/04/13

Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

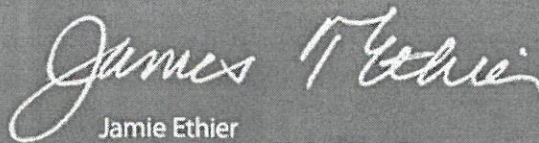
Test	Specification	Result
Assay (NaCl) (by Ag titrn)	$\geq 99.0 \%$	100.3
pH of 5% Solution at 25°C	5.0 - 9.0	6.0
ACS - Insoluble Matter	$\leq 0.005 \%$	< 0.001
Iodide (I)	$\leq 0.002 \%$	< 0.002
Bromide (Br)	$\leq 0.01 \%$	< 0.01
Chlorate and Nitrate (as NO_3)	$\leq 0.003 \%$	< 0.001
ACS - Phosphate (PO_4)	$\leq 5 \text{ ppm}$	< 5
Sulfate (SO_4)	$\leq 0.004 \%$	< 0.004
Barium (Ba)	Passes Test	PT
ACS - Heavy Metals (as Pb)	$\leq 5 \text{ ppm}$	< 5
Iron (Fe)	$\leq 2 \text{ ppm}$	< 2
Calcium (Ca)	$\leq 0.002 \%$	< 0.001
Magnesium (Mg)	$\leq 0.001 \%$	< 0.001
Potassium (K)	$\leq 0.005 \%$	0.002

For Laboratory, Research or Manufacturing Use

Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US

Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Ether, Anhydrous
BAKER ANALYZED® A.C.S. Reagent
Contains BHT as a Preservative
Suitable for Fat Extraction



Material No.: 9244-03
Batch No.: 0000288039
Manufactured Date: 2021/07/22
Expiration Date: 2023/07/22
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

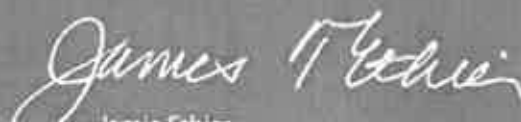
Test	Specification	Result
Assay ((C ₂ H ₅) ₂ O) (by GC, corrected for water)	>= 99.0 %	100.0
Alcohol (C ₂ H ₅ OH)	Passes Test	PT
Carbonyl Compounds (as HCHO) (by polarography)	<= 0.001 %	< 0.001
Color (APHA)	<= 10	< 5
Peroxide (as H ₂ O ₂)	<= 1 ppm	< 1
Preservative (BHT)	>= 7 ppm	9
Residue after Evaporation	<= 0.0010 %	< 0.0010
Titration Acid (μeq/g)	<= 0.2	< 0.2
Water (by KF, coulometric)	<= 0.01 %	0.01

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US

Recd. by RP on 7/13/22

E 3370


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



**PRODUCTOS
QUÍMICOS
MONTERREY, S.A. DE C.V.**

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreign matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by R3 on 7/24/23 **E 3551**

RC-02-01, Ed. 3



Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	$\leq 0.005 \%$	$< 0.005 \%$	PASS
Chloride	$\leq 0.005 \%$	0.002 %	PASS
Heavy Metals	$\leq 0.002 \%$	$< 0.002 \%$	PASS
Iron	$\leq 0.001 \%$	$< 0.001 \%$	PASS
Magnesium	$\leq 0.002 \%$	$< 0.002 \%$	PASS
Mercury	$\leq 0.1 \text{ ppm}$	$< 0.1 \text{ ppm}$	PASS
Nickel	$\leq 0.001 \%$	$< 0.001 \%$	PASS
Nitrogen Compounds	$\leq 0.001 \%$	$< 0.001 \%$	PASS
Phosphate	$\leq 0.001 \%$	$< 0.001 \%$	PASS
Potassium	$\leq 0.02 \%$	$< 0.02 \%$	PASS
Purity	$\geq 97.0 \%$	99.2 %	PASS
Sodium Carbonate	$\leq 1.0 \%$	0.5 %	PASS
Sulfate	$\leq 0.003 \%$	$< 0.003 \%$	PASS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

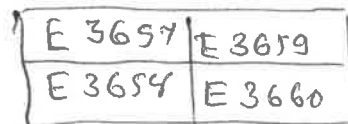
This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9262-03
Batch No.: 24C1862008
Manufactured Date: 2024-01-30
Expiration Date: 2025-04-30
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.4 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by R1 on 5/31/24

E3754

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9254-03
Batch No.: 24H1462005
Manufactured Date: 2024-05-24
Expiration Date: 2027-05-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3815

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087 U.S.A. Phone 610.386.1700

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor



Material No.: 9254-03
Batch No.: 24H1462005
Manufactured Date: 2024-05-24
Expiration Date: 2027-05-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected forwater)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 10/9/24

E 3818

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087, U.S.A. Phone 610.386.1700

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

avantor™



Material No.: 9673-33

Batch No.: 0000250349

Manufactured Date: 2019/12/17

Retest Date: 2024/12/15

Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H ₂ SO ₄)	95.0 - 98.0 %	96.5
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Substances Reducing Permanganate (as SO ₂)	<= 2 ppm	< 2
Ammonium (NH ₄)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO ₃)	<= 0.2 ppm	< 0.1
Phosphate (PO ₄)	<= 0.5 ppm	< 0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.2
Arsenic and Antimony (as As)	<= 4 ppb	< 2
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 1.0
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	2.9
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 1.0
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 10.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 100

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

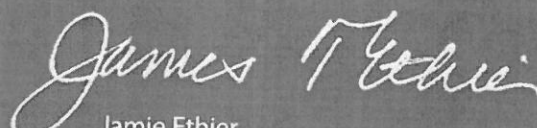
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9673-33
Batch No.: 0000250349

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	4.1
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 1.0
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	22.9
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	2.7
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

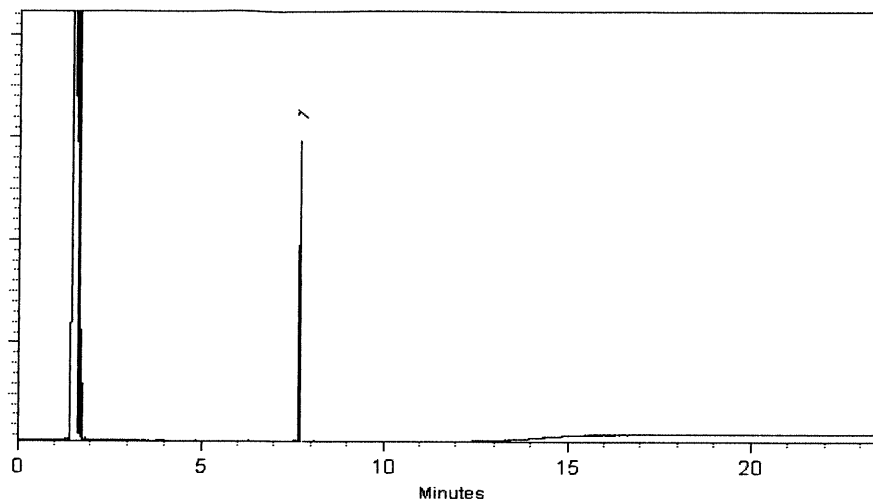
250°C

Det. Temp:

330°C

Det. Type:

FID

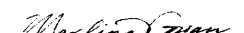


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Katelyn McGinnis - Operations Tech I

Date Mixed: 28-May-2021

Balance: B345965662


Marlene Cowan - Operations Tech I

Date Passed: 02-Jun-2021

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

1911177
70
P 111 86
AR
11/02/21



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32050 **Lot No.:** A0172864
Description : 2,4-Dichlorophenylacetic Acid Methyl Ester Standard
515 Surrogate (ester) 2, 4-dichlorophenyl Acetic Acid Methyl Ester
200µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : February 29, 2028 **Storage:** 10°C or colder
Handling: This product is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2,4-Dichlorophenyl acetic acid methyl ester	202.0 µg/mL	+/- 1.4323 µg/mL Gravimetric
	CAS # 55954-23-9 (Lot CSC42194-01)		+/- 6.8182 µg/mL Unstressed
	Purity 99%		+/- 6.8182 µg/mL Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

P11177
↓
P11186
AR
01/02/21



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32062 **Lot No.:** A0155055

Description : Herbicide Mix #4/ME (Methyl Ester)

Herbicide Mix #4/ME (Methyl Ester) 200µg/mL,
Hexane/Methyl-tert-butyl-ether, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2026 **Storage:** 10°C or colder

P12616 / (5)
↓
P12620
✓ *Paul* = 7/5/2023

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	3,5-Dichlorobenzoic acid methyl ester CAS # 2905-67-1 (Lot 3903900) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed
2	4-Nitroanisole CAS # 100-17-4 (Lot 24765/7) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed
3	Pentachloroanisole CAS # 1825-21-4 (Lot 7921100) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed
4	Chloramben methyl ester CAS # 7286-84-2 (Lot 6487100) Purity 98%	199.9 µg/mL	+/- 1.4176 µg/mL Gravimetric +/- 6.7480 µg/mL Unstressed +/- 6.7480 µg/mL Stressed
5	Bentazon methyl ester CAS # 61592-45-8 (Lot 817100) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed
6	Picloram methyl ester CAS # 14143-55-6 (Lot 386-21B) Purity 98%	201.9 µg/mL	+/- 1.4315 µg/mL Gravimetric +/- 6.8141 µg/mL Unstressed +/- 6.8141 µg/mL Stressed
7	DCPA methyl ester (Chlorthal-dimethyl) CAS # 1861-32-1 (Lot 8008700) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed

8	Acifluorfen methyl ester	200.0 µg/mL	+/- 1.4182	µg/mL	Gravimetric
	CAS # 50594-67-7 (Lot 6282300)		+/- 6.7507	µg/mL	Unstressed
	Purity 99%		+/- 6.7507	µg/mL	Stressed

Solvent: Hexane/Methyl-tert-butyl-ether
CAS # 110-54-3/1634-04-4
Purity 99%

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

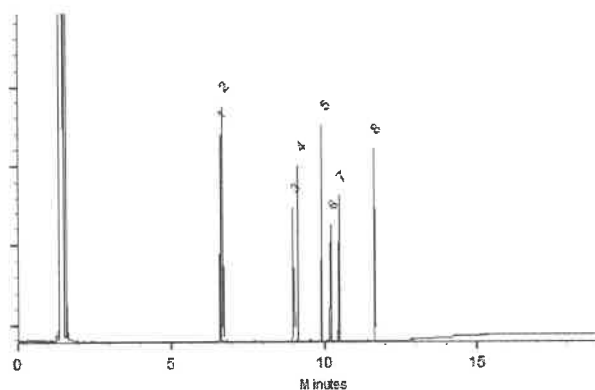
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maje

Date Mixed: 14-Nov-2019 **Balance:** 1128353505

Justine Albertson
Justine Albertson - Operations Tech-ARM QC

Date Passed: 18-Nov-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32055 **Lot No.:** A0199693

Description : Herbicide Mix #1/ME (Methyl Ester)
Herbicide Mix #1/ME (Methyl Ester) 200 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2030 **Storage:** 10°C or colder

Handling: This product is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty* (95% C.L.; K=2)
1	Dicamba methyl ester	6597-78-0	1813500	99%	202.0 µg/mL	+/- 3.4272
2	Dichlorprop methyl ester	57153-17-0	8578700	98%	201.9 µg/mL	+/- 3.4251
3	2,4-D methyl ester	1928-38-7	10048000	99%	202.0 µg/mL	+/- 3.4272
4	2,4,5-TP (silvex) methyl ester	4841-20-7	504400	99%	202.0 µg/mL	+/- 3.4272
5	2,4,5-T methyl ester	1928-37-6	6875800	98%	201.9 µg/mL	+/- 3.4251
6	Dinoseb methyl ether	6099-79-2	9239100	99%	202.0 µg/mL	+/- 3.4272
7	2,4-DB methyl ester	18625-12-2	6847200	99%	202.0 µg/mL	+/- 3.4272

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Hexane
CAS # 110-54-3
Purity 99%

P12660
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P12664

AJ
07/11/23

Quality Confirmation Test

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

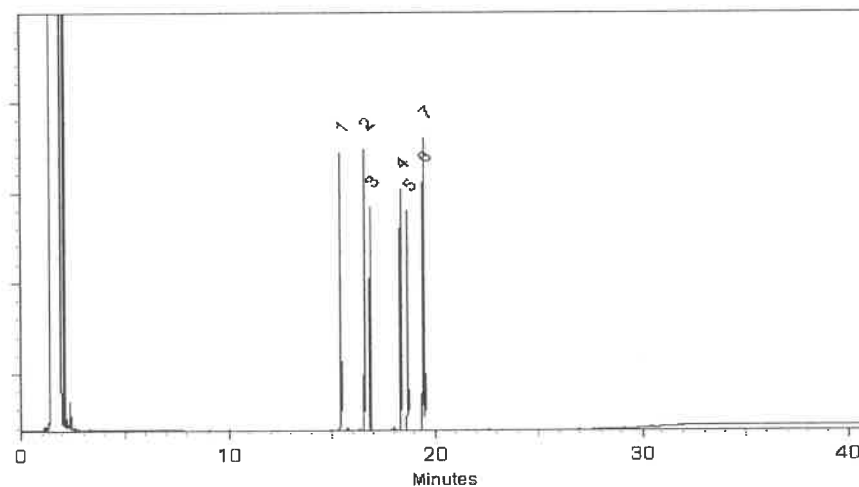
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw

Nick Yaw - Operations Tech I

Date Mixed: 07-Jul-2023

Balance Serial # 1128360905

Christie Mills

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 11-Jul-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

P12706
↓
P12715
/ (10)
/ 1
/ 8/15/23

ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Chlorinated Methylated Herbicides Standard

Lot Number: 0006752480

Product Number: HBM-8151M-1

Lot Issue Date: 18-Jul-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 31-Aug-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
acifluorfen methyl ester	100.3 ±	0.5 µg/mL	050594-67-7	RM03058
bentazon methyl derivative	100.2 ±	0.5 µg/mL	061592-45-8	RM13829
chloramben methyl ester	100.4 ±	0.5 µg/mL	007286-84-2	RM03055
2,4-D methyl ester	100.2 ±	0.5 µg/mL	001928-38-7	RM03040
dalapon methyl ester	100.4 ±	0.5 µg/mL	017640-02-7	RM14219
2,4-DB methyl ester	100.2 ±	0.5 µg/mL	018625-12-2	RM03029
DCPA	100.2 ±	0.5 µg/mL	001861-32-1	RM13426
dicamba methyl ester	100.4 ±	0.5 µg/mL	006597-78-0	RM03039
methyl-3,5-dichlorobenzoate	100.1 ±	0.5 µg/mL	002905-67-1	RM03048
dichlorprop methyl ester	100.4 ±	0.5 µg/mL	057153-17-0	NT02086
dinoseb methyl ether	100.5 ±	0.5 µg/mL	006099-79-2	RM03051
MCPA methyl ester	10031 ±	50 µg/mL	002436-73-9	RM12863
MCPP methyl ester	10031 ±	50 µg/mL	023844-56-6	RM20060
4-nitroanisole	100.3 ±	0.5 µg/mL	000100-17-4	RM02806
pentachloroanisole	100.4 ±	0.5 µg/mL	001825-21-4	RM02457
picloram methyl ester	100.2 ±	0.5 µg/mL	014143-55-6	RM03044
silvex methyl ester	100.2 ±	0.5 µg/mL	004841-20-7	RM03799
2,4,5-T methyl ester	100.4 ±	0.5 µg/mL	001928-37-6	RM03033

Matrix: methanol (methyl alcohol)

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:

This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

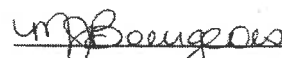
Expiration of Certification:

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:


Monica Bourgeois
QMS Representative

P12706 / (10)
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P12715
✓ RAUF
8.15.23



ISO 17034
Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

www.agilent.com/quality/
CSD-QA-015.2

ISO 17025
Cert No. AT-1937

P12766
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P12785
✓
9.11.23
20

ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Chlorinated Herbicides Standard

Lot Number: 0006750243

Product Number: HBM-8151A-1

Lot Issue Date: 07-Jul-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 31-Aug-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
acifluorfen	100.1	± 0.5 µg/mL	050594-66-6	NT02057
bentazon	100.1	± 0.5 µg/mL	025057-89-0	RM20289
chloramben	100.4	± 0.5 µg/mL	000133-90-4	RM02698
2,4-D	100.1	± 0.5 µg/mL	000094-75-7	RM17172
dalapon	100.4	± 0.5 µg/mL	000075-99-0	RM21030
2,4-DB	100.1	± 0.5 µg/mL	000094-82-6	RM02866
tetrachloroterephthalic acid	100.3	± 0.5 µg/mL	002136-79-0	RM13887
dicamba	100.2	± 0.5 µg/mL	001918-00-9	RM20089
3,5-dichlorobenzoic acid	100.0	± 0.5 µg/mL	000051-36-5	RM02768
dichlorprop	100.0	± 0.5 µg/mL	000120-36-5	RM20896
dinoseb	100.0	± 0.5 µg/mL	000088-85-7	RM20667
MCPA	10004	± 50 µg/mL	000094-74-6	RM12220
MCPP (mecoprop)	10037	± 50 µg/mL	000093-65-2	RM09273
4-nitrophenol	100.1	± 0.5 µg/mL	000100-02-7	RM03752
pentachlorophenol	100.1	± 0.5 µg/mL	000087-86-5	RM02474
picloram	100.4	± 0.5 µg/mL	001918-02-1	RM20442
silvex	100.1	± 0.5 µg/mL	000093-72-1	RM20208
2,4,5-T	100.4	± 0.5 µg/mL	000093-76-5	NT01808

Matrix: methanol (methyl alcohol)

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:

This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:


Monica Bourgeois
QMS Representative

P12766 / (20)
↓
P12785 / 1

9/11/2023



ISO 17034
Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

www.agilent.com/quality/
CSD-QA-015.2

ISO 17025
Cert No. AT-1937

P12766
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P12785
✓
9.11.23

ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Chlorinated Herbicides Standard

Lot Number: 0006750243

Product Number: HBM-8151A-1

Lot Issue Date: 07-Jul-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 31-Aug-2025

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2,4-D	100.1	± 0.5 µg/mL	000094-75-7	RM17172
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dinoseb	100.0	± 0.5 µg/mL	000088-85-7	RM20667
MCPA	10004	± 50 µg/mL	000094-74-6	RM12220
MCPP (mecoprop)	10037	± 50 µg/mL	000093-65-2	RM09273
4-nitrophenol	100.1	± 0.5 µg/mL	000100-02-7	RM03752
pentachlorophenol	100.1	± 0.5 µg/mL	000087-86-5	RM02474
picloram	100.4	± 0.5 µg/mL	001918-02-1	RM20442
silvex	100.1	± 0.5 µg/mL	000093-72-1	RM20208
2,4,5-T	100.4	± 0.5 µg/mL	000093-76-5	NT01808

Matrix: methanol (methyl alcohol)

Description:

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Sample lot approver:


Monica Bourgeois
QMS Representative

P12766 / (20)
↓
P12785 /
✓
9/11/2023



ISO 17034
Cert No. AR-1936

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Page: 2 of 2

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CSD-QA-015.2

ISO 17025
Cert No. AT-1937



110 Benner Circle
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Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32049 **Lot No.:** A0212676
Description : 2,4-Dichlorophenylacetic Acid Standard
2, 4-Dichlorophenyl Acetic Acid 200µg/mL, Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2027 **Storage:** 10°C or colder
Handling: This product is photosensitive. **Ship:** Ambient

P13697 } Y.P.
↓
P13515 } 08/15/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2,4-dichlorophenylacetic acid	19719-28-9	STBK3827	99%	200.0 µg/mL	+/- 2.7154

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:

Failure to derivatize this standard will lead to incorrect quantitative results.

Quality Confirmation Test

Column:

150mm x 4.6mm
Allure C18 Cat. (#9164565)

Flow Rate:

1.0 ml/min.

Mobile Phase A:

0.14% H₃PO₄ in water

Mobile Phase B:

acetonitrile

Mobile Phase Composition:

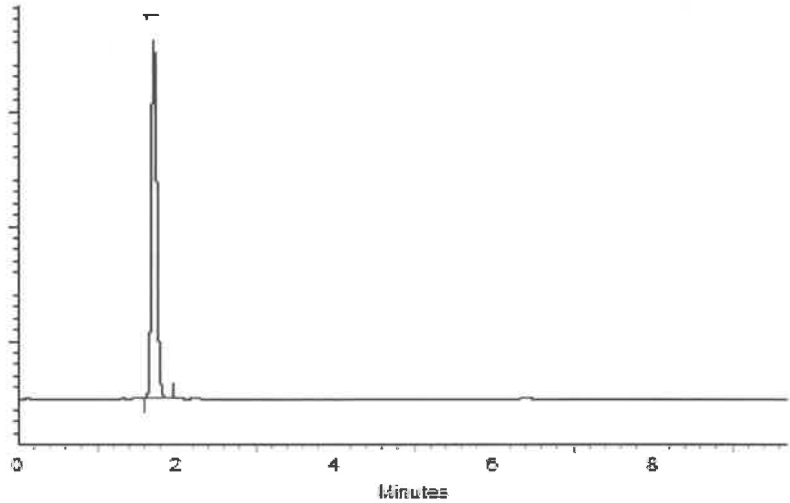
90%B Isocratic

Det. Type:

Wavelength: 220 & 254 nm

Inj. Vol

5µl

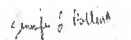


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ethan Winiarski - Operations Tech I

Date Mixed: 11-Jun-2024

Balance Serial # B345965662


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-Jun-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32049 **Lot No.:** A0212676
Description : 2,4-Dichlorophenylacetic Acid Standard
2, 4-Dichlorophenyl Acetic Acid 200µg/mL, Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2027 **Storage:** 10°C or colder
Handling: This product is photosensitive. **Ship:** Ambient

P13697 } Y.P.
↓
P13515 } 08/15/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2,4-dichlorophenylacetic acid	19719-28-9	STBK3827	99%	200.0 µg/mL	+/- 2.7154

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:

Failure to derivatize this standard will lead to incorrect quantitative results.

Quality Confirmation Test

Column:

150mm x 4.6mm
Allure C18 Cat. (#9164565)

Flow Rate:

1.0 ml/min.

Mobile Phase A:

0.14% H₃PO₄ in water

Mobile Phase B:

acetonitrile

Mobile Phase Composition:

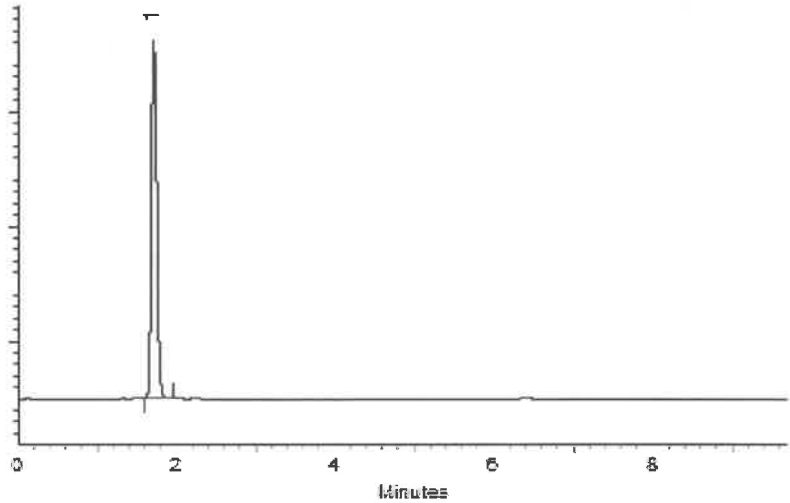
90%B Isocratic

Det. Type:

Wavelength: 220 & 254 nm

Inj. Vol

5µl

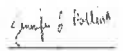


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ethan Winiarski - Operations Tech I

Date Mixed: 11-Jun-2024

Balance Serial # B345965662


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-Jun-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32049 **Lot No.:** A0212676
Description : 2,4-Dichlorophenylacetic Acid Standard
2, 4-Dichlorophenyl Acetic Acid 200µg/mL, Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2027 **Storage:** 10°C or colder
Handling: This product is photosensitive. **Ship:** Ambient

P13697 } Y.P.
↓
P13515 } 08/15/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2,4-dichlorophenylacetic acid	19719-28-9	STBK3827	99%	200.0 µg/mL	+/- 2.7154

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:

Failure to derivatize this standard will lead to incorrect quantitative results.

Quality Confirmation Test

Column:

150mm x 4.6mm
Allure C18 Cat. (#9164565)

Flow Rate:

1.0 ml/min.

Mobile Phase A:

0.14% H₃PO₄ in water

Mobile Phase B:

acetonitrile

Mobile Phase Composition:

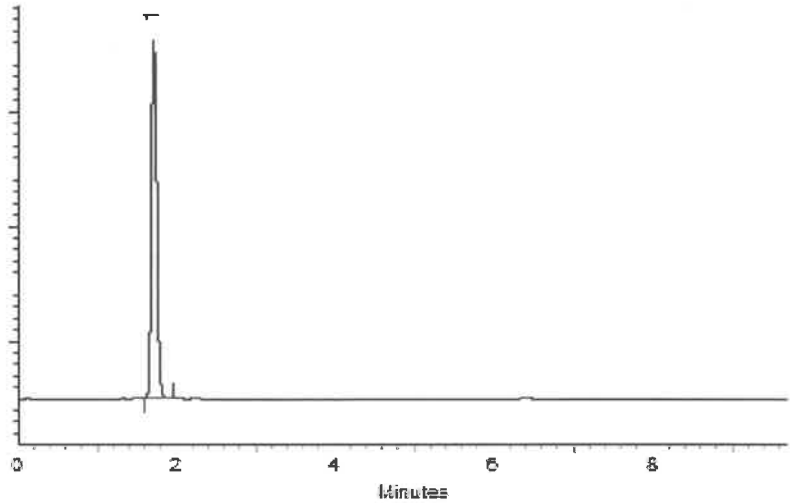
90%B Isocratic

Det. Type:

Wavelength: 220 & 254 nm

Inj. Vol

5µl

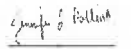


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ethan Winiarski - Operations Tech I

Date Mixed: 11-Jun-2024

Balance Serial # B345965662


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-Jun-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32049 **Lot No.:** A0212676
Description : 2,4-Dichlorophenylacetic Acid Standard
2, 4-Dichlorophenyl Acetic Acid 200µg/mL, Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2027 **Storage:** 10°C or colder
Handling: This product is photosensitive. **Ship:** Ambient

P13697 } Y.P.
↓
P13515 } 08/15/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2,4-dichlorophenylacetic acid	19719-28-9	STBK3827	99%	200.0 µg/mL	+/- 2.7154

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:

Failure to derivatize this standard will lead to incorrect quantitative results.

Quality Confirmation Test

Column:

150mm x 4.6mm
Allure C18 Cat. (#9164565)

Flow Rate:

1.0 ml/min.

Mobile Phase A:

0.14% H₃PO₄ in water

Mobile Phase B:

acetonitrile

Mobile Phase Composition:

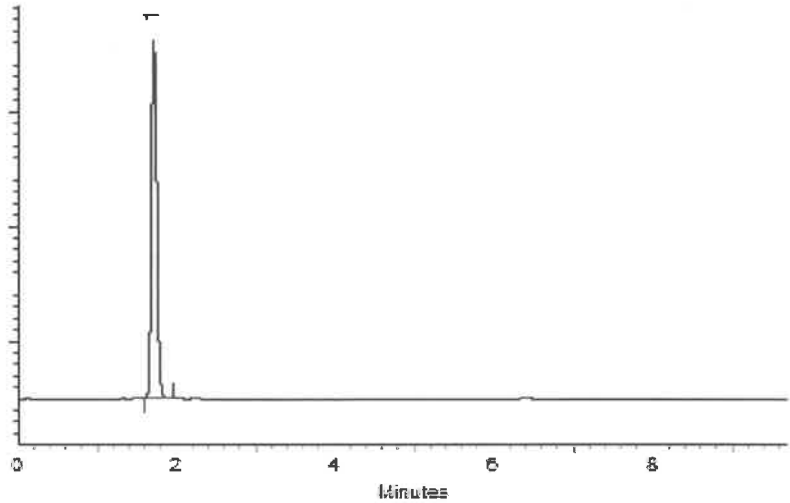
90%B Isocratic

Det. Type:

Wavelength: 220 & 254 nm

Inj. Vol

5µl

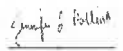


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ethan Winiarski - Operations Tech I

Date Mixed: 11-Jun-2024

Balance Serial # B345965662


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-Jun-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reference Material Certificate
Product Information Sheet

Product Name: Chlorinated Herbicides Standard

Lot Number: 0006750243

Product Number: HBM-8151A-1

Lot Issue Date: 07-Jul-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 31-Aug-2025

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
acifluorfen	100.1	±	0.5 µg/mL	050594-66-6	NT02057
bentazon	100.1	±	0.5 µg/mL	025057-89-0	RM20289
chloramben	100.4	±	0.5 µg/mL	000133-90-4	RM02698
2,4-D	100.1	±	0.5 µg/mL	000094-75-7	RM17172
dalapon	100.4	±	0.5 µg/mL	000075-99-0	RM21030
2,4-DB	100.1	±	0.5 µg/mL	000094-82-6	RM02866
tetrachloroterephthalic acid	100.3	±	0.5 µg/mL	002136-79-0	RM13887
dicamba	100.2	±	0.5 µg/mL	001918-00-9	RM20089
3,5-dichlorobenzoic acid	100.0	±	0.5 µg/mL	000051-36-5	RM02768
dichlorprop	100.0	±	0.5 µg/mL	000120-36-5	RM20896
dinoseb	100.0	±	0.5 µg/mL	000088-85-7	RM20667
MCPA	10004	±	50 µg/mL	000094-74-6	RM12220
MCPP (mecoprop)	10037	±	50 µg/mL	000093-65-2	RM09273
4-nitrophenol	100.1	±	0.5 µg/mL	000100-02-7	RM03752
pentachlorophenol	100.1	±	0.5 µg/mL	000087-86-5	RM02474
picloram	100.4	±	0.5 µg/mL	001918-02-1	RM20442
silvex	100.1	±	0.5 µg/mL	000093-72-1	RM20208
2,4,5-T	100.4	±	0.5 µg/mL	000093-76-5	NT01808

Matrix: methanol (methyl alcohol)

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

P13517
P13518 } ②
✓ *RAUF*
9/4/2024



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis



ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01



ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32254 **Lot No.:** A0148063
Description : Dalapon methyl ester Standard
Dalapon methyl ester 1000µg/mL, Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2026 **Storage:** 10°C or colder
Handling: This product is photosensitive.

Received by
SG on 8/16/19
P8828
P8826

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dalapon methyl ester CAS # 17640-02-7 Purity 98% (Lot 1764600)	999.6 µg/mL	+/- 10.0697 µg/mL Gravimetric +/- 34.4896 µg/mL Unstressed +/- 34.4896 µg/mL Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

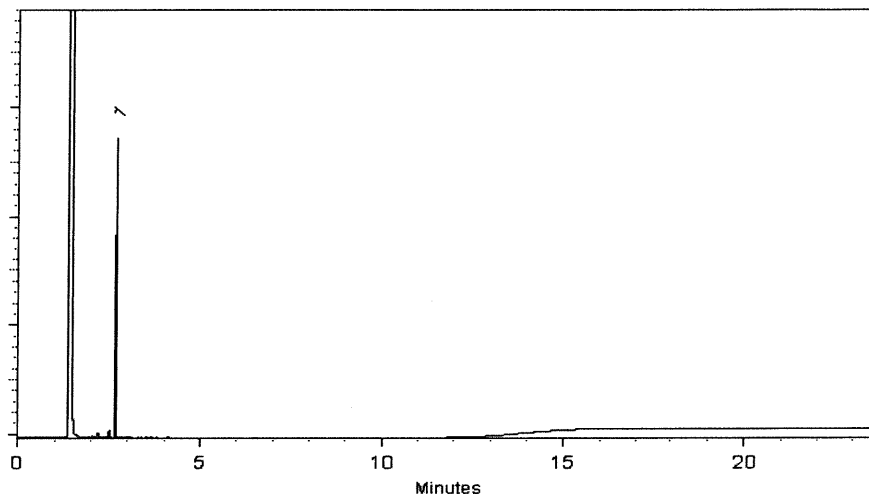
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I

Date Mixed: 11-Apr-2019

Balance: 1127510105

Feng-Yin Lo - QC Analyst

Date Passed: 15-Apr-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Received by
SG on 9/10/19
P8892
P8896

Catalog No. : 32059 **Lot No.:** A0152499
Description : Herbicide Mix #3/ME (Methyl Ester)
Herbicide Mix #3/ME (Methyl Ester) 20,000 µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2026 **Storage:** 10°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)							
1	MCPP (Mecoprop) methyl ester		20,004.0 μg/mL	+/-	185.1208	μg/mL	Gravimetric				
	CAS #	23844-56-6 (Lot 8685200)						+/-	685.5986	μg/mL	Unstressed
	Purity	99%						+/-	685.5986	μg/mL	Stressed
2	MCPA methyl ester		20,012.0 μg/mL	+/-	185.1948	μg/mL	Gravimetric				
	CAS #	2436-73-9 (Lot 7964600)						+/-	685.8728	μg/mL	Unstressed
	Purity	99%						+/-	685.8728	μg/mL	Stressed
Solvent:	Hexane										
	CAS #	110-54-3									
	Purity	99%									

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

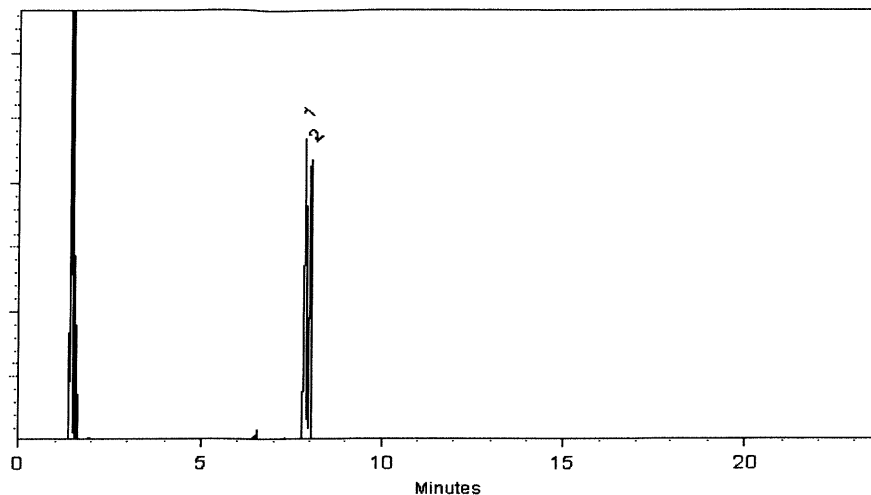
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Russ Bookhamer - Operations Technician I

Date Mixed: 03-Sep-2019

Balance: 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Sep-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32050 Lot No.: A0152705
Description : 2,4-Dichlorophenylacetic Acid Methyl Ester Standard
515 Surrogate (ester) 2, 4-dichlorophenyl Acetic Acid Methyl Ester
200µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : June 30, 2026 Storage: 10°C or colder
Handling: This product is photosensitive.

Received by
SG on 10/11/19
P8999
-
P9008

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2,4-Dichlorophenyl acetic acid methyl ester CAS # 55954-23-9 (Lot CSC42194-01) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 6.7507 µg/mL Unstressed +/- 6.7507 µg/mL Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

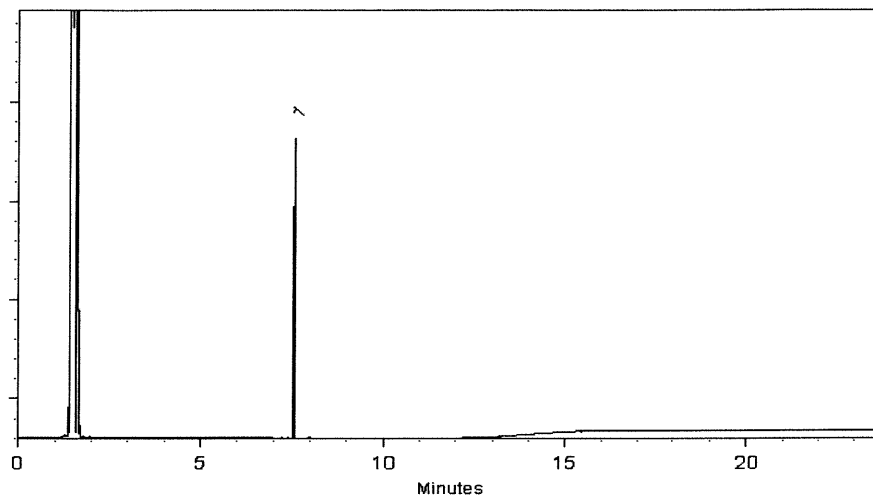
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 09-Sep-2019

Balance: B707717271

Fang-Yun Lo
Fang-Yun Lo - GC Analyst

Date Passed: 11-Sep-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. **P4718**
QUOTE NO.
COC Number **2042034**

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Glannett Fleming
ADDRESS: 1010 Adams Avenue
CITY: Audobon STATE: PA ZIP: 19403
ATTENTION: Joe Krupansky
PHONE: 610-801-8421 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Amtrak's sep. of SB
PROJECT NO.: 9500000218 LOCATION: Keating NJ
PROJECT MANAGER: Joe Krupansky
e-mail: QAQC@bamays.com
PHONE: 610-801-8362 FAX:

CLIENT BILLING INFORMATION

BILL TO: Chemtech PO#:
ADDRESS: 984 Sheffield St.
CITY: Mountainside STATE: NJ ZIP: 07092
ATTENTION: Samuel PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT BEM EDD.

1. TA VOC+10
2. TA PAH
3. TAH NPAHs
4. PCB's
5. CAHs, G/LV
6. EPH
7. TOX
8. EDLs
9. RCRA Parameters

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		A		B		F					
1.	<u>WB-307-SW</u>	<u>GW</u>		<u>X</u>	<u>11/04</u>	<u>8:20</u>	<u>7</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				
2.	<u>WB-307-SB01</u>	<u>S</u>	<u>X</u>		<u>11/04</u>	<u>9:45</u>	<u>10</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				
3.	<u>WB-307-SB02</u>	<u>S</u>	<u>X</u>		<u>11/04</u>	<u>10:45</u>	<u>10</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
4.	<u>TB-11042024</u>																
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt:	☐ COMPLIANT ☐ NON COMPLIANT ☒ COOLER TEMP	<u>4.0</u> °C
1. <u>Yanda</u>	<u>11/6/24 11:19</u>	1. <u>[Signature]</u>	Comments:	<u>No Ice.</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:			
2. <u>[Signature]</u>		2. <u>[Signature]</u>			
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:			
3. <u>[Signature]</u>	<u>11-3-2024</u>	3. <u>[Signature]</u>			

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____

CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P4718	PORT06	Order Date : 11/5/2024 1:31:00 PM	Project Mgr :
Client Name : Portal Partners Tri-Venture		Project Name : Amtrak Sawtooth Bridges 2	Report Type : NJ Reduced
Client Contact : Joseph Krupansky		Receive DateTime : 11/5/2024 12:15:00 PM	EDD Type : EXCEL NJCLEANUP
Invoice Name : Portal Partners Tri-Venture		Purchase Order :	Hard Copy Date :
Invoice Contact : Joseph Krupansky			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P4718-01	WB-307-SB01	Solid	11/04/2024	09:45					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
P4718-02	WB-307-SB02	Solid	11/04/2024	09:45					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
P4718-04	WB-307-SW	Water	11/04/2024	08:20					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	
P4718-05	TB-11042024	Water	11/04/2024	00:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	

Relinquished By :



Date / Time :

11.5.2024 14:27

Received By :



Date / Time :

11.5.2024 14:27

Storage Area : VOA Refridgerator Room