

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL081325\
 Data File : VL042862.D
 Acq On : 13 Aug 2025 21:26
 Operator : SY/MD
 Sample : Q2834-02 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

Quant Time: Aug 14 02:22:53 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL081325AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Aug 14 02:12:54 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.793	49	126696	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.968	114	384213	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.891	117	328630	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.387	95	250839	10.178	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.800%

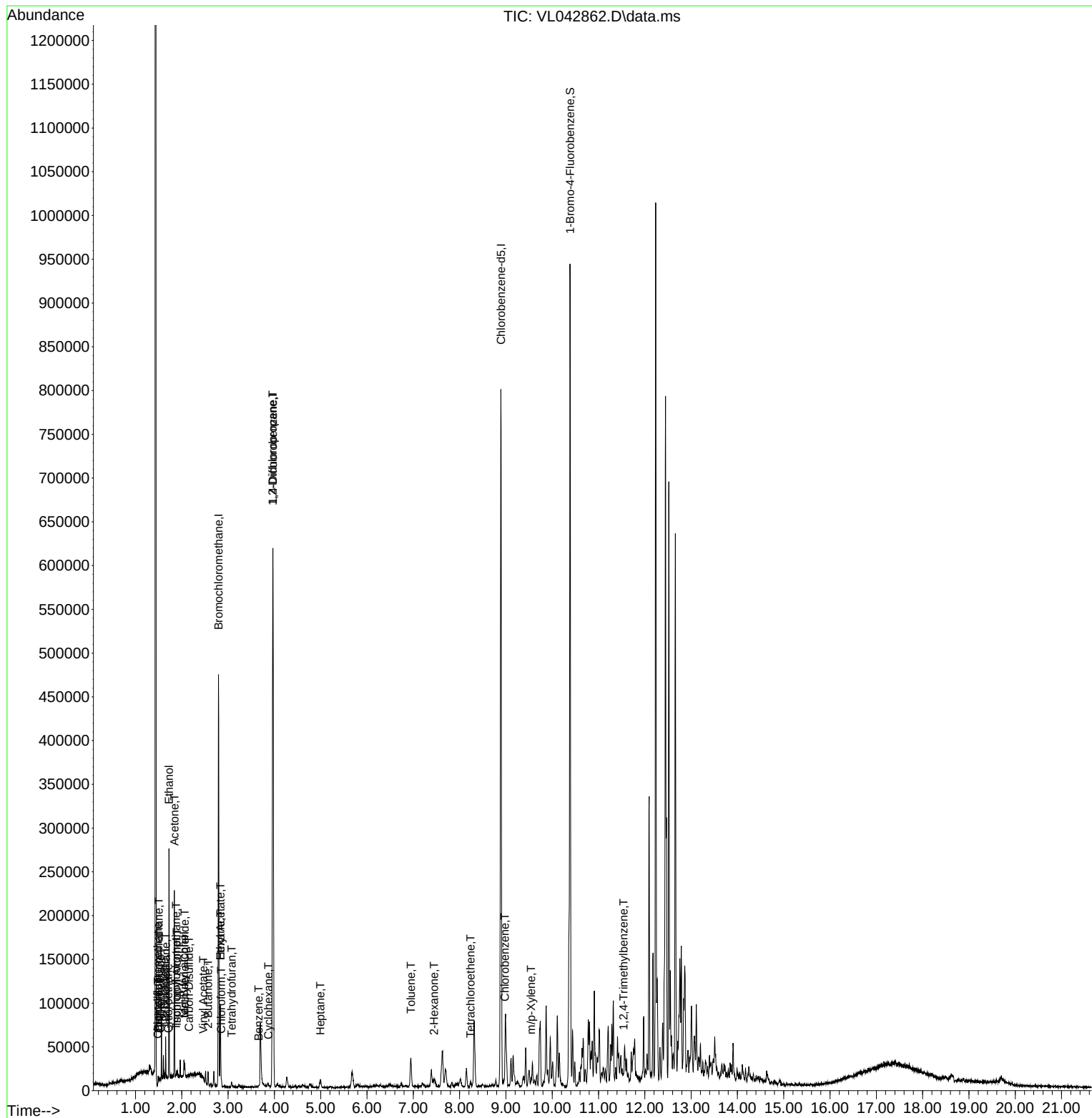
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.502	85	1200	0.065	ppbv	91
3) Chlorodifluoromethane	1.479	51	606	0.030	ppbv #	90
4) Chloromethane	1.534	50	237	0.032	ppbv #	44
6) Bromomethane	1.657	94	68	0.023	ppbv #	73
7) Chloroethane	1.709	64	105	0.036	ppbv #	39
9) Propene	1.489	41	1229	0.139	ppbv #	79
10) Heptane	4.991	43	3107	0.131	ppbv #	74
11) Trichlorofluoromethane	1.877	101	567	0.031	ppbv	89
13) Ethanol	1.722	45	96985	119.666	ppbv	90
15) Acetone	1.839	43	87245	5.206	ppbv	97
16) 1,3-Butadiene	1.625	39	450	0.059	ppbv #	10
17) tert-Butyl alcohol	2.049	59	8016	0.403	ppbv #	87
19) Isopropyl Alcohol	1.890	45	3151	0.315	ppbv #	1
20) Methylene Chloride	2.065	84	2362	0.336	ppbv	94
23) Vinyl Acetate	2.463	43	489	0.021	ppbv #	1
25) Ethyl Acetate	2.832	43	15674	0.386	ppbv #	78
26) Hexane	2.832	57	23928	1.278	ppbv #	43
27) Carbon Disulfide	2.156	76	582	0.032	ppbv #	1
29) Chloroform	2.852	83	2537	0.095	ppbv #	81
30) Cyclohexane	3.871	84	417	0.025	ppbv #	1
34) 2-Butanone	2.567	43	9355	0.361	ppbv	94
36) Benzene	3.658	78	1204	0.033	ppbv	99
39) 1,2-Dichloropropane	3.965	63	95390	7.099	ppbv #	27
41) Tetrahydrofuran	3.075	42	2121	0.147	ppbv #	87
51) 2-Hexanone	7.448	43	828	0.030	ppbv #	27
52) Tetrachloroethene	8.234	164	577	0.043	ppbv #	54
53) Toluene	6.949	91	23951	0.548	ppbv	99
57) Chlorobenzene	8.979	112	949	0.030	ppbv #	41
59) m/p-Xylene	9.545	91	1535	0.034	ppbv #	100
74) 1,2,4-Trimethylbenzene	11.542	105	1758	0.034	ppbv #	61

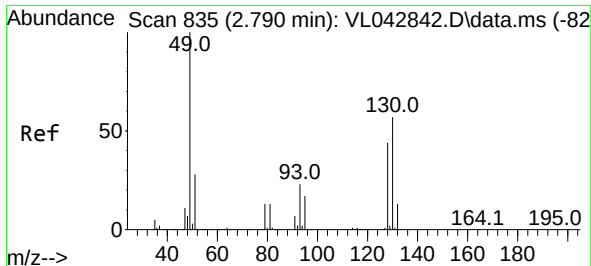
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Aug 14 02:22:53 2025
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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
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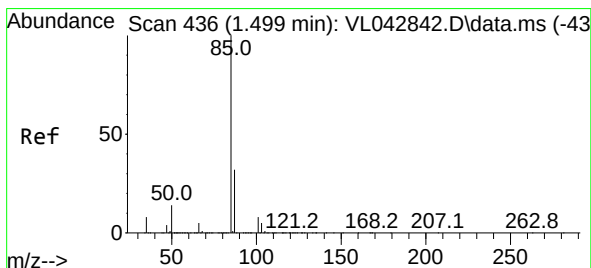
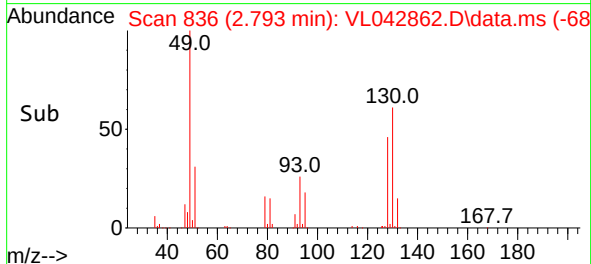
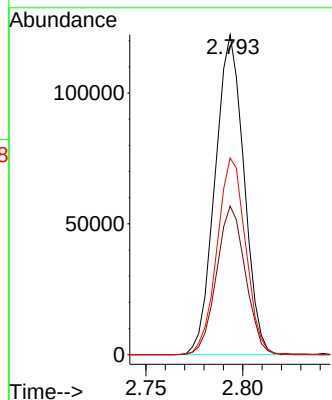
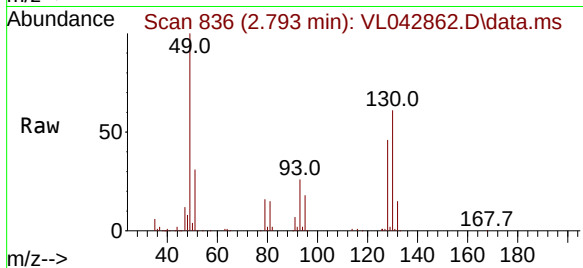




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.793 min Scan# 81
 Delta R.T. 0.003 min
 Lab File: VL042862.D
 Acq: 13 Aug 2025 21:26

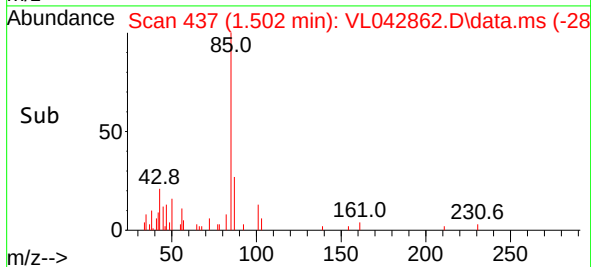
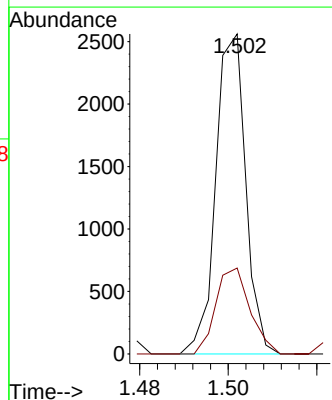
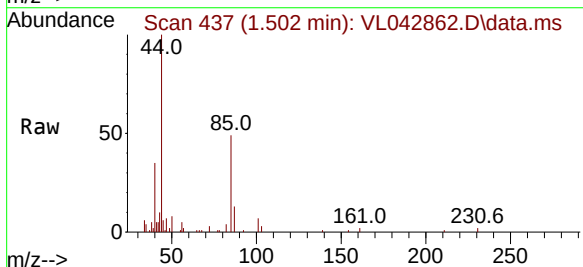
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1

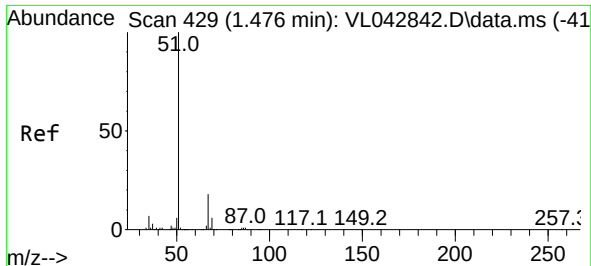
Tgt Ion: 49 Resp: 126696
 Ion Ratio Lower Upper
 49 100
 128 46.4 23.7 71.1
 130 61.2 30.6 91.6



#2
 Dichlorodifluoromethane
 Concen: 0.065 ppbv
 RT: 1.502 min Scan# 437
 Delta R.T. 0.003 min
 Lab File: VL042862.D
 Acq: 13 Aug 2025 21:26

Tgt Ion: 85 Resp: 1200
 Ion Ratio Lower Upper
 85 100
 87 26.9 25.3 37.9

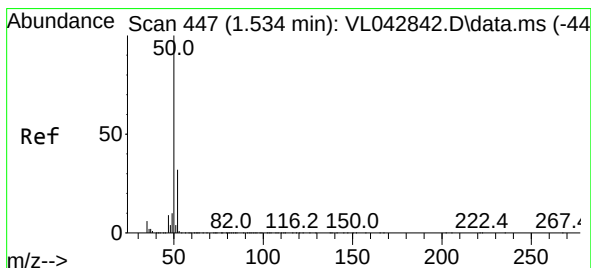
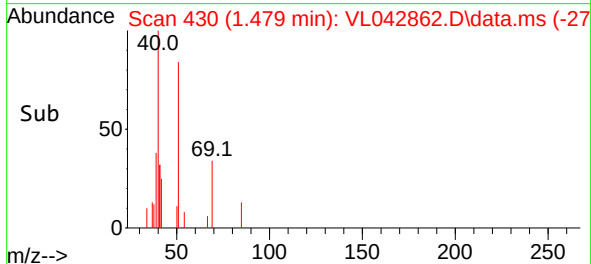
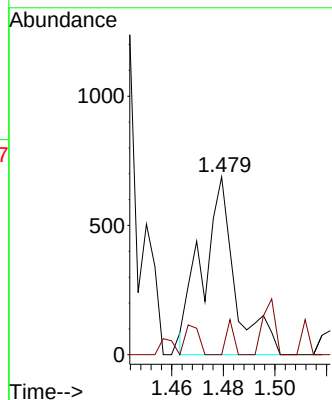
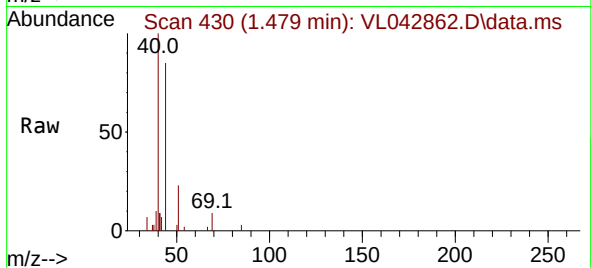




#3
Chlorodifluoromethane
Concen: 0.030 ppbv
RT: 1.479 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

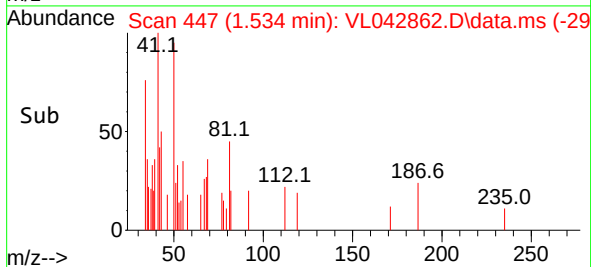
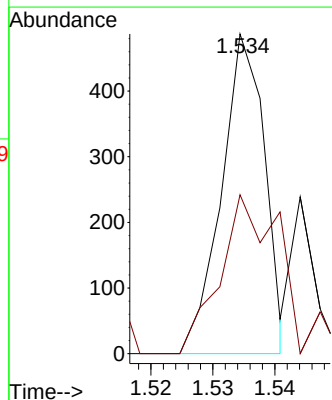
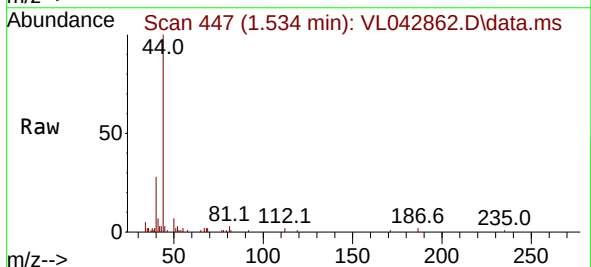
Instrument :
MSVOA_1
ClientSampleId :
SV1

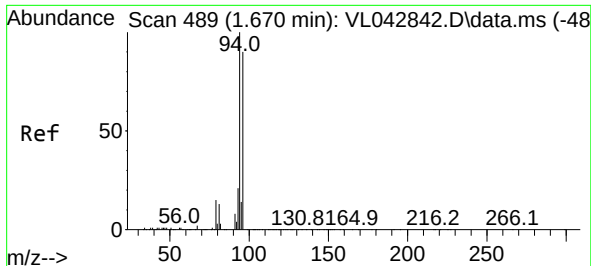
Tgt Ion: 51 Resp: 606
Ion Ratio Lower Upper
51 100
67 23.1 14.9 22.3#



#4
Chloromethane
Concen: 0.032 ppbv
RT: 1.534 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 50 Resp: 237
Ion Ratio Lower Upper
50 100
52 64.1 25.9 38.9#

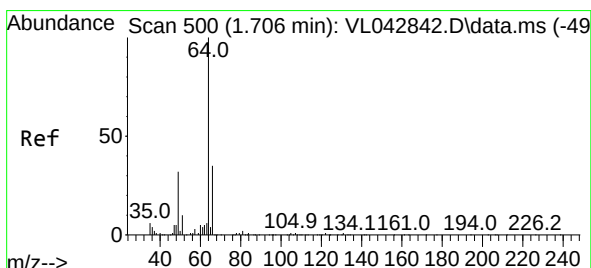
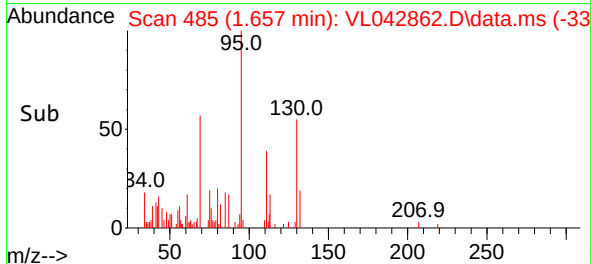
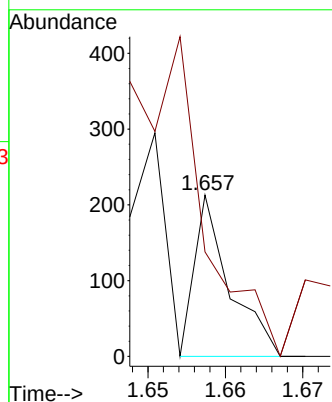
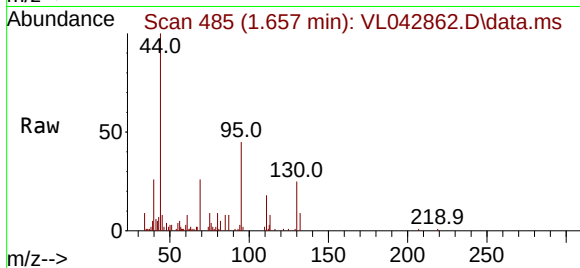




#6
Bromomethane
Concen: 0.023 ppbv
RT: 1.657 min Scan# 41
Delta R.T. -0.013 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

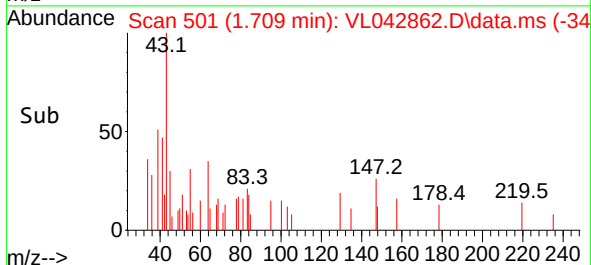
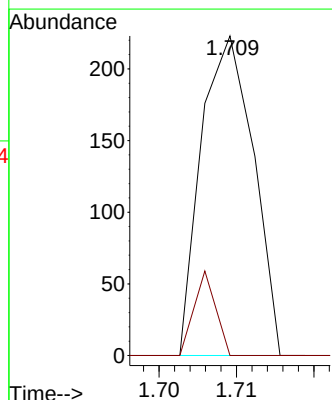
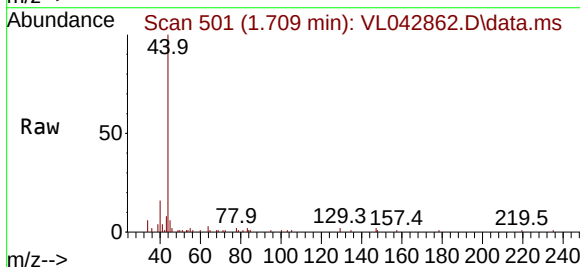
Instrument :
MSVOA_L
ClientSampleId :
SV1

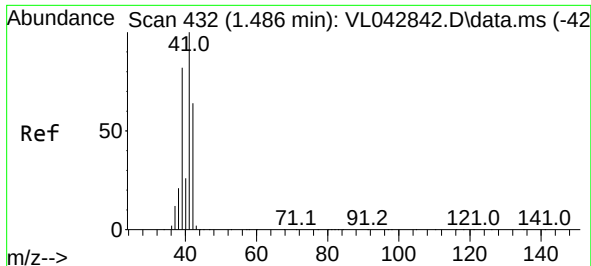
Tgt Ion: 94 Resp: 68
Ion Ratio Lower Upper
94 100
96 64.8 72.1 108.1#



#7
Chloroethane
Concen: 0.036 ppbv
RT: 1.709 min Scan# 501
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 64 Resp: 105
Ion Ratio Lower Upper
64 100
66 0.0 28.6 42.8#





#9

Propene

Concen: 0.139 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

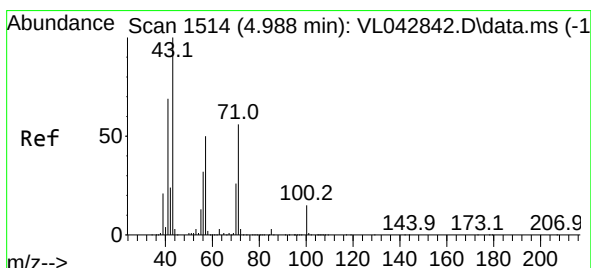
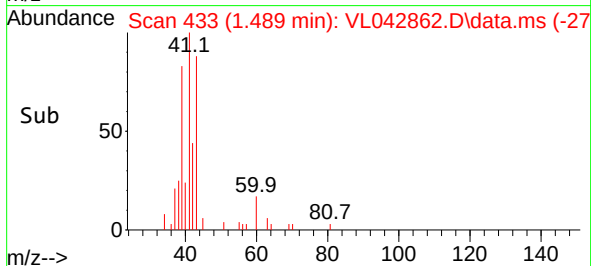
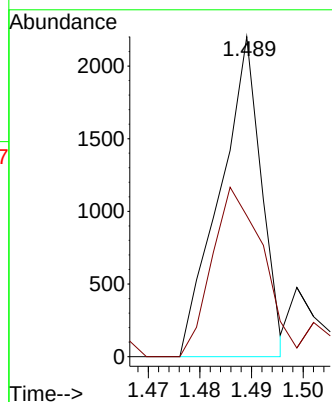
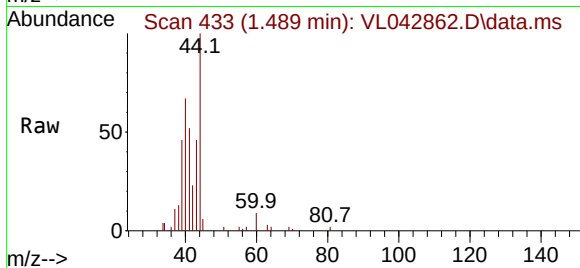
SV1

Tgt Ion: 41 Resp: 1229

Ion Ratio Lower Upper

41 100

42 82.6 53.0 79.4#



#10

Heptane

Concen: 0.131 ppbv

RT: 4.991 min Scan# 1515

Delta R.T. 0.003 min

Lab File: VL042862.D

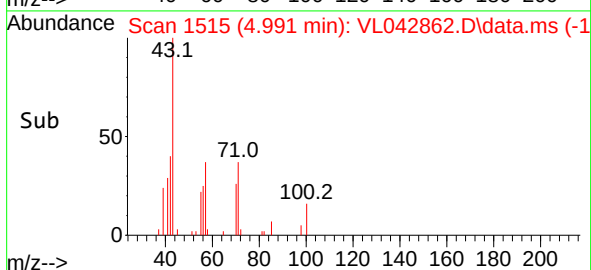
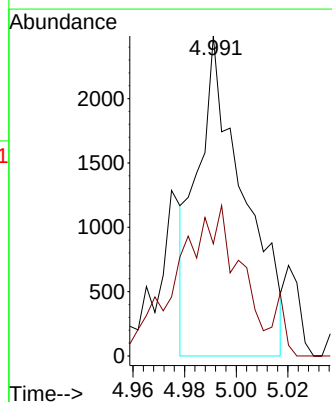
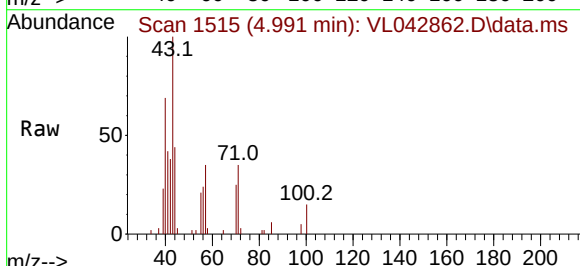
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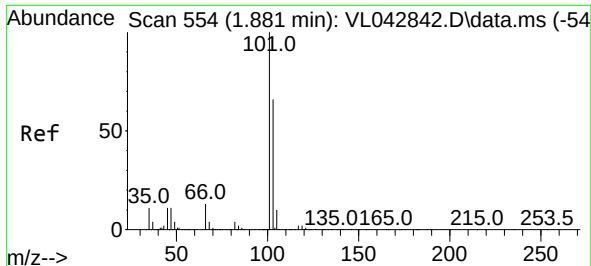
Tgt Ion: 43 Resp: 3107

Ion Ratio Lower Upper

43 100

57 69.7 41.4 62.0#

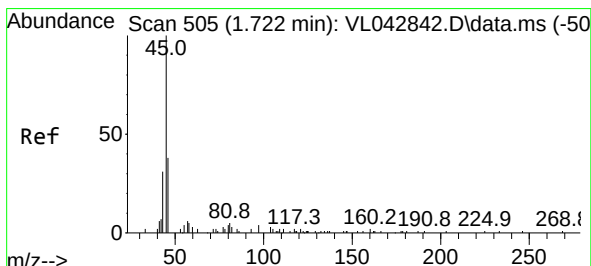
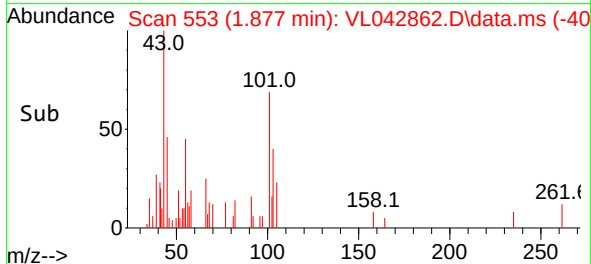
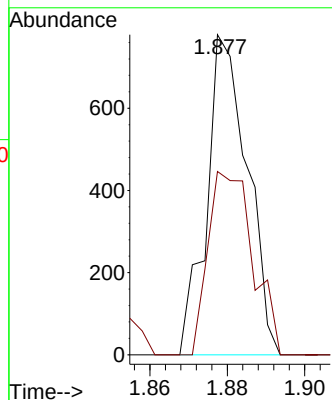
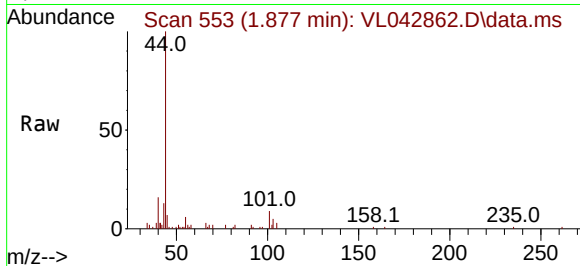




#11
 Trichlorofluoromethane
 Concen: 0.031 ppbv
 RT: 1.877 min Scan# 511
 Delta R.T. -0.003 min
 Lab File: VL042862.D
 Acq: 13 Aug 2025 21:26

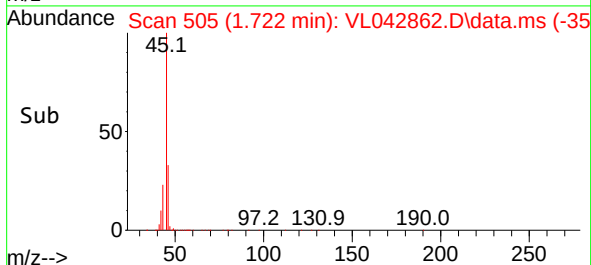
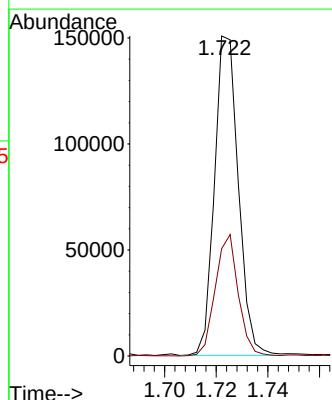
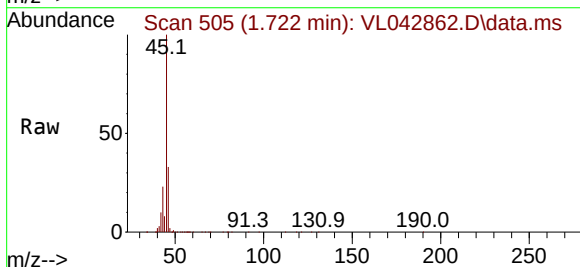
Instrument :
 MSVOA_1
 ClientSampleId :
 SV1

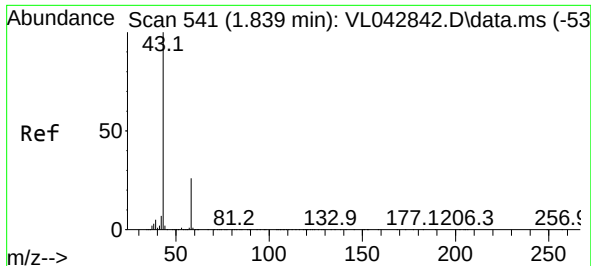
Tgt Ion:101 Resp: 567
 Ion Ratio Lower Upper
 101 100
 103 57.3 52.5 78.7



#13
 Ethanol
 Concen: 119.666 ppbv
 RT: 1.722 min Scan# 505
 Delta R.T. -0.000 min
 Lab File: VL042862.D
 Acq: 13 Aug 2025 21:26

Tgt Ion: 45 Resp: 96985
 Ion Ratio Lower Upper
 45 100
 46 37.1 17.5 69.9

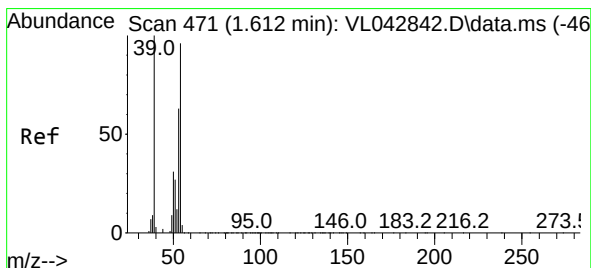
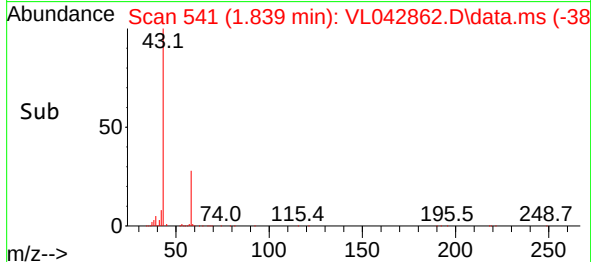
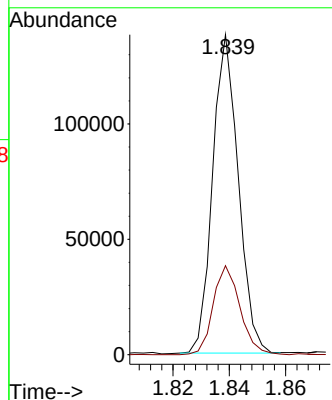
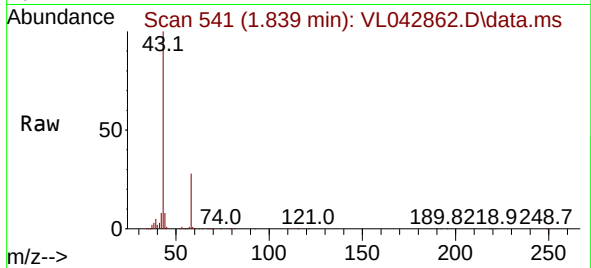




#15
Acetone
Concen: 5.206 ppbv
RT: 1.839 min Scan# 541
Delta R.T. -0.000 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

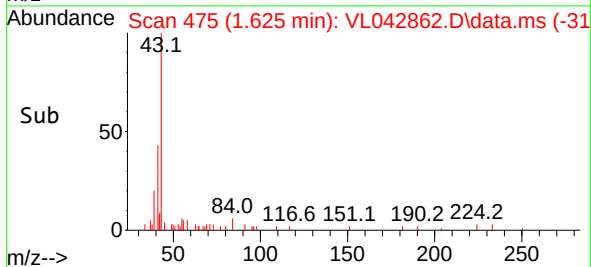
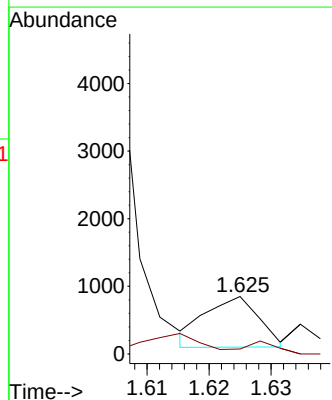
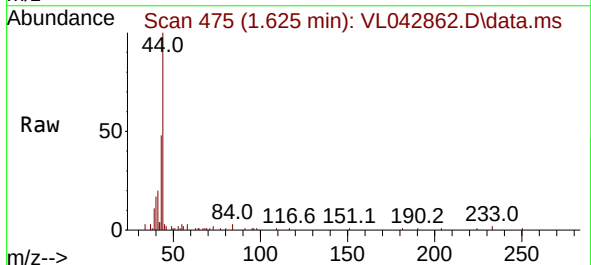
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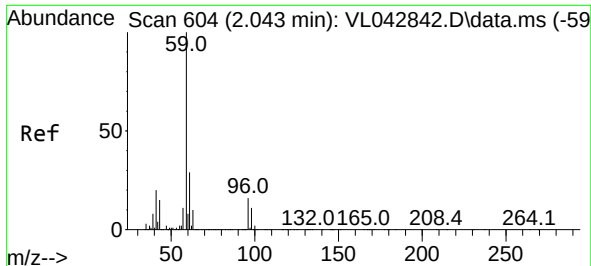
Tgt Ion: 43 Resp: 87245
Ion Ratio Lower Upper
43 100
58 29.5 22.4 33.6



#16
1,3-Butadiene
Concen: 0.059 ppbv
RT: 1.625 min Scan# 475
Delta R.T. 0.013 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 39 Resp: 450
Ion Ratio Lower Upper
39 100
54 0.0 63.6 95.4#





#17

tert-Butyl alcohol

Concen: 0.403 ppbv

RT: 2.049 min Scan# 604

Delta R.T. 0.006 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

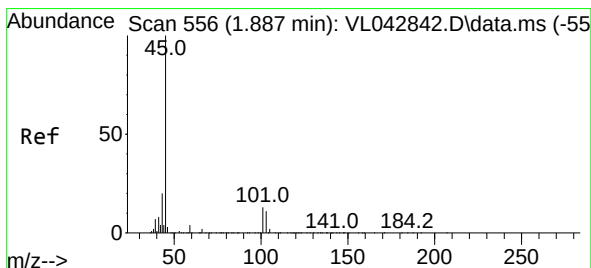
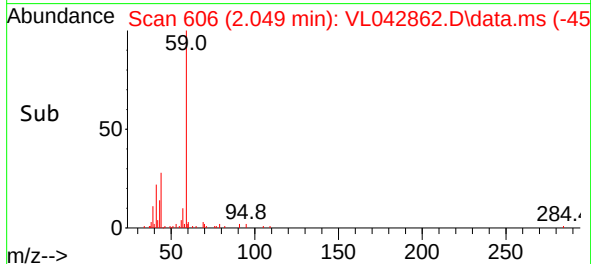
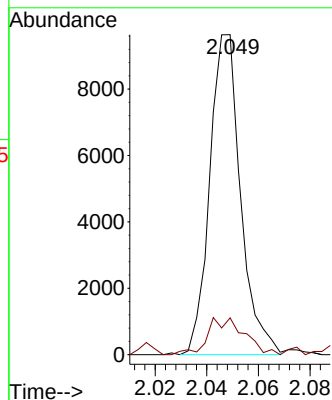
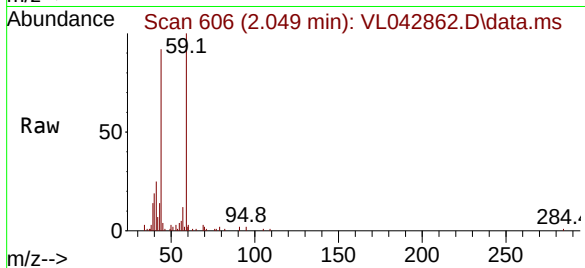
SV1

Tgt Ion: 59 Resp: 8016

Ion Ratio Lower Upper

59 100

57 16.3 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 0.315 ppbv

RT: 1.890 min Scan# 557

Delta R.T. 0.003 min

Lab File: VL042862.D

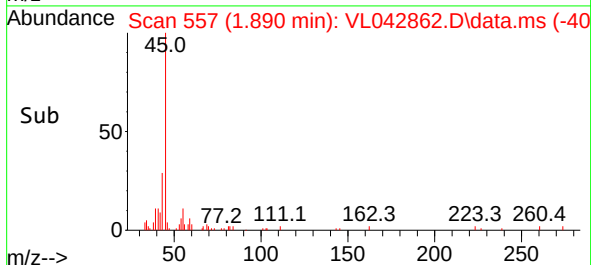
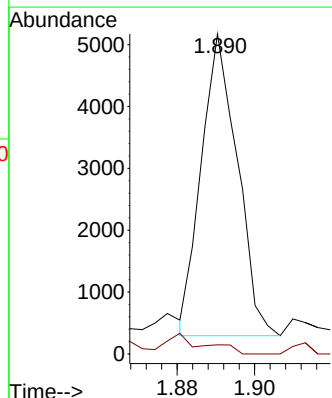
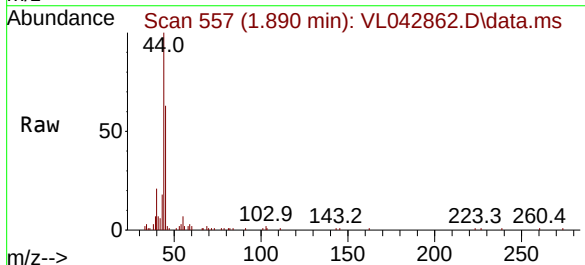
Acq: 13 Aug 2025 21:26

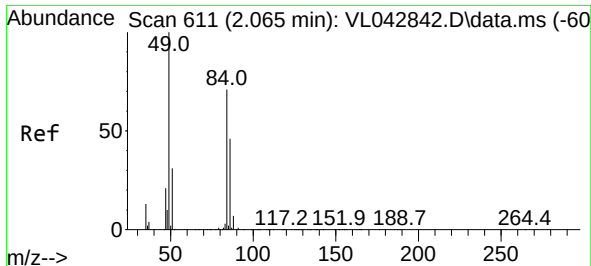
Tgt Ion: 45 Resp: 3151

Ion Ratio Lower Upper

45 100

58 818.1 32.7 49.1#

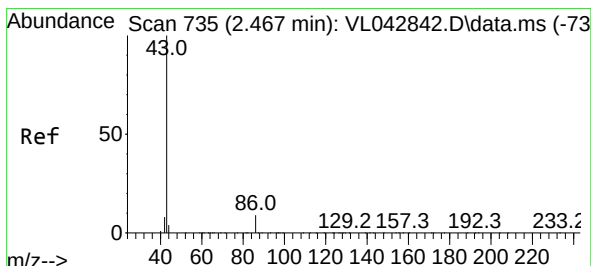
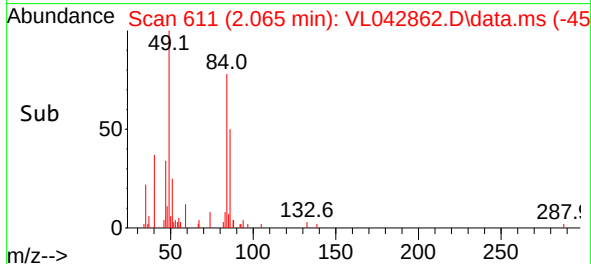
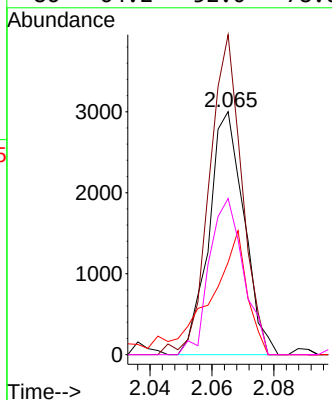
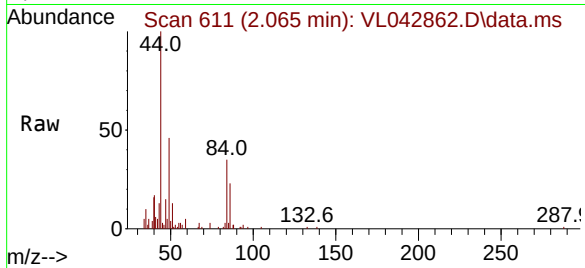




#20
Methylene Chloride
Concen: 0.336 ppbv
RT: 2.065 min Scan# 611
Delta R.T. -0.000 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

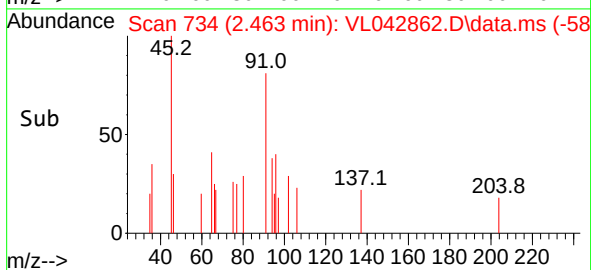
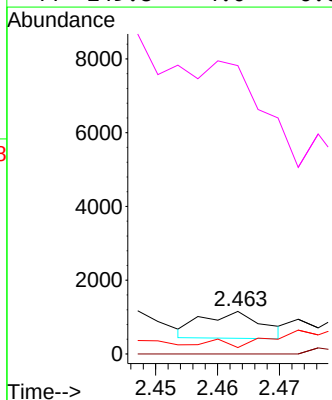
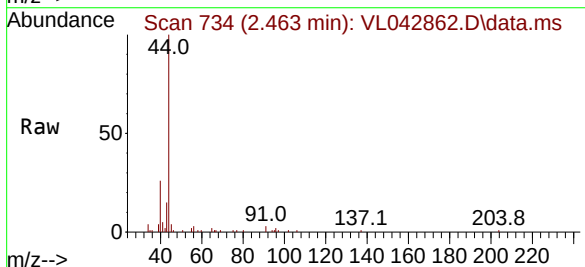
Instrument :
MSVOA_L
ClientSampleId :
SV1

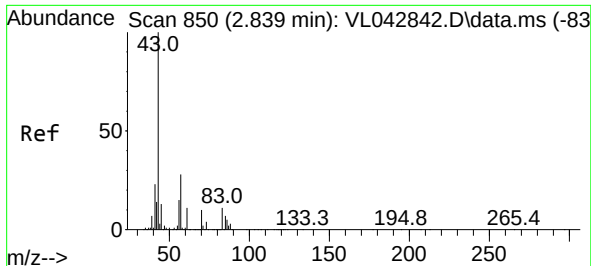
Tgt Ion: 84	Resp:	2362	
Ion	Ratio	Lower	Upper
84	100		
49	131.6	112.3	168.5
51	38.0	36.0	54.0
86	64.2	52.0	78.0



#23
Vinyl Acetate
Concen: 0.021 ppbv
RT: 2.463 min Scan# 734
Delta R.T. -0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 43	Resp: 489
Ion Ratio	Lower Upper
43 100	
86 0.0	6.6 9.8#
42 0.0	7.0 10.6#
44 249.8	4.0 6.0#





#25

Ethyl Acetate

Concen: 0.386 ppbv

RT: 2.832 min Scan# 848

Delta R.T. -0.007 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

SV1

Tgt Ion: 43 Resp: 15674

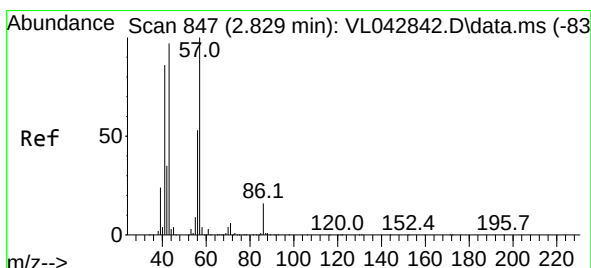
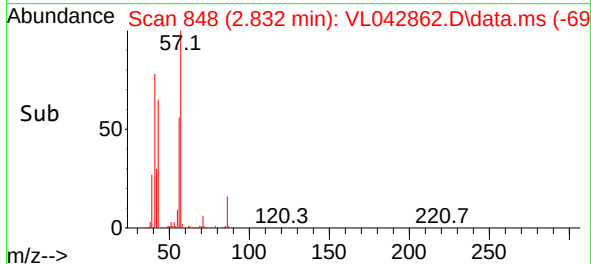
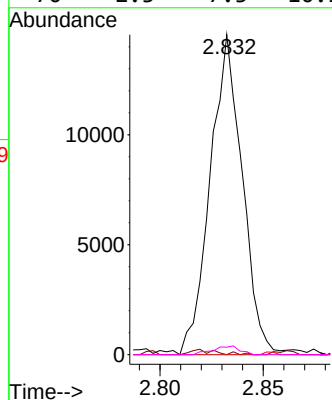
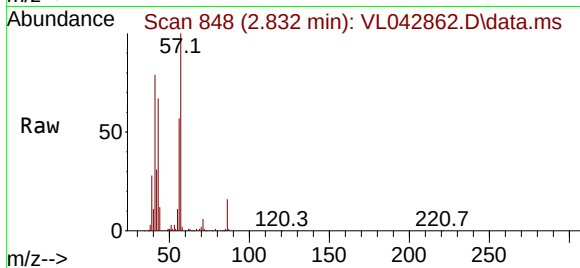
Ion Ratio Lower Upper

43 100

45 1.7 8.1 12.1#

61 0.0 7.4 11.2#

70 2.3 7.3 10.9#



#26

Hexane

Concen: 1.278 ppbv

RT: 2.832 min Scan# 848

Delta R.T. 0.003 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Tgt Ion: 57 Resp: 23928

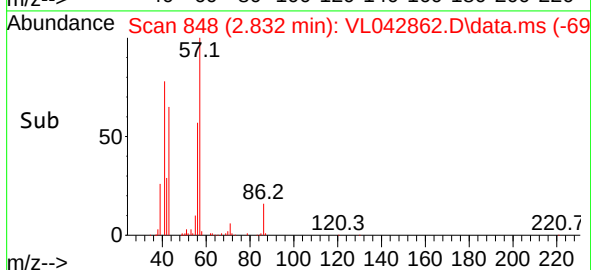
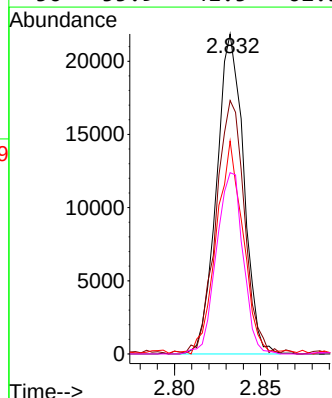
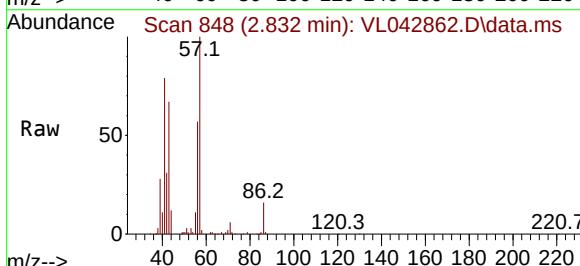
Ion Ratio Lower Upper

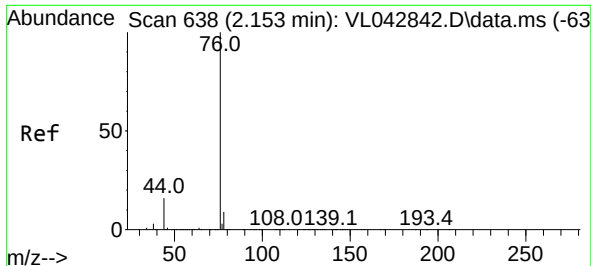
57 100

41 84.1 68.6 103.0

43 66.4 168.5 252.7#

56 55.9 41.5 62.3





#27

Carbon Disulfide

Concen: 0.032 ppbv

RT: 2.156 min Scan# 61

Delta R.T. 0.003 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

SV1

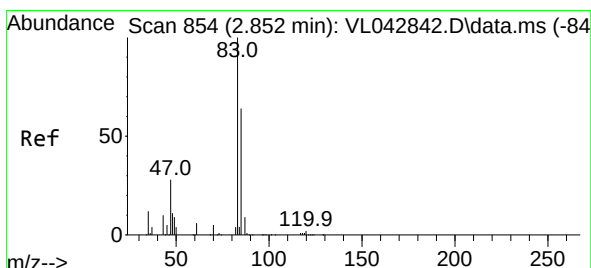
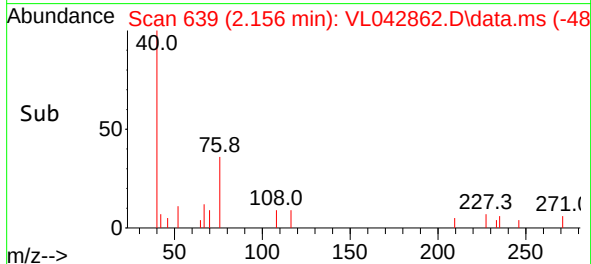
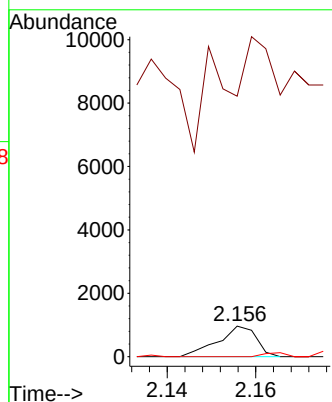
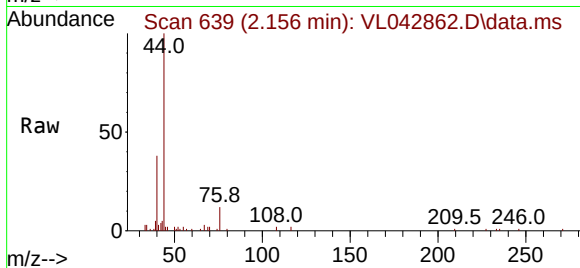
Tgt Ion: 76 Resp: 582

Ion Ratio Lower Upper

76 100

44 2835.9 15.9 23.9#

78 34.5 9.5 14.3#



#29

Chloroform

Concen: 0.095 ppbv

RT: 2.852 min Scan# 854

Delta R.T. -0.000 min

Lab File: VL042862.D

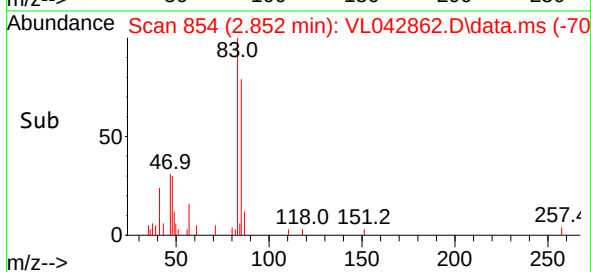
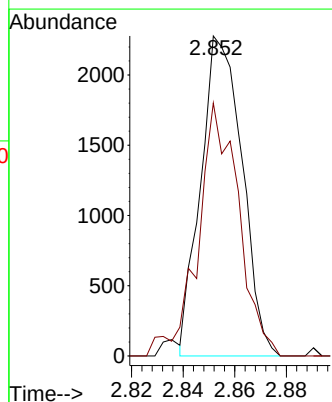
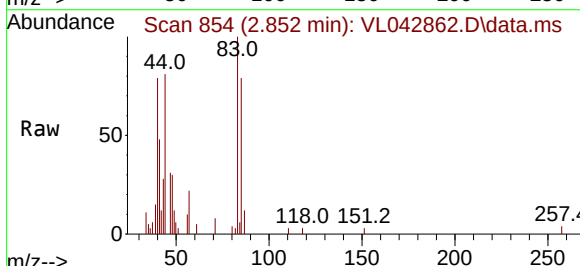
Acq: 13 Aug 2025 21:26

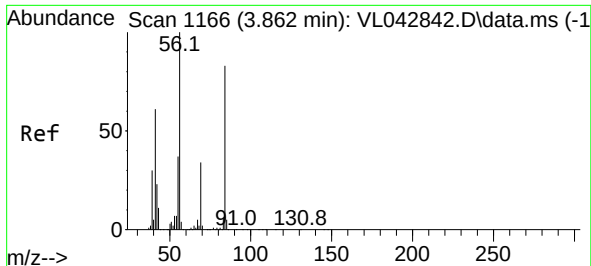
Tgt Ion: 83 Resp: 2537

Ion Ratio Lower Upper

83 100

85 79.1 51.1 76.7#

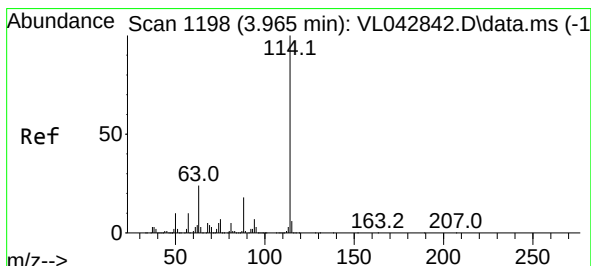
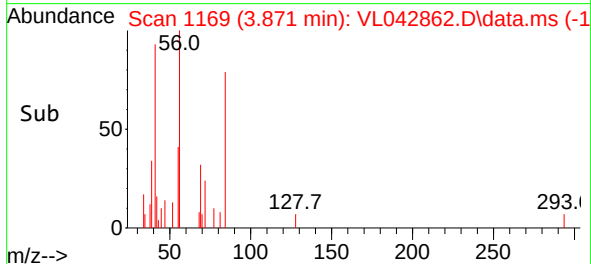
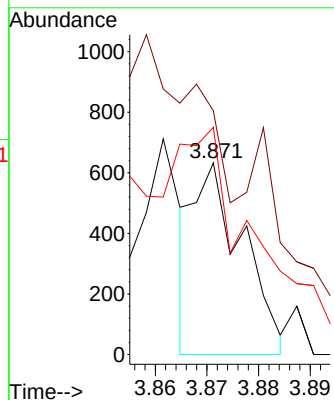
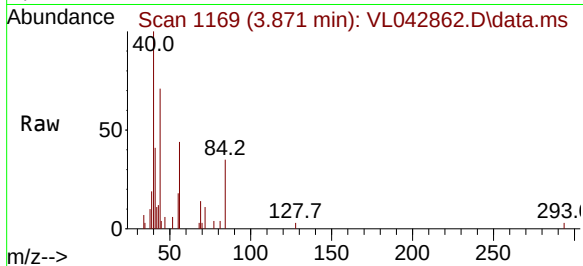




#30
Cyclohexane
Concen: 0.025 ppbv
RT: 3.871 min Scan# 1166
Delta R.T. 0.010 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

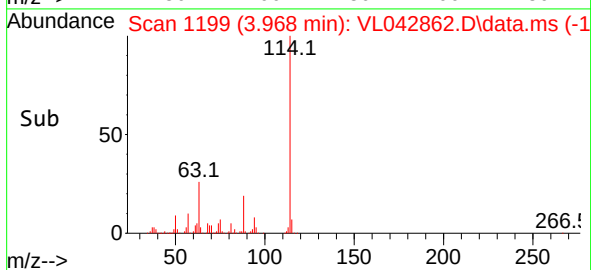
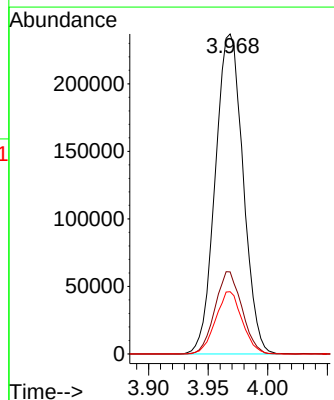
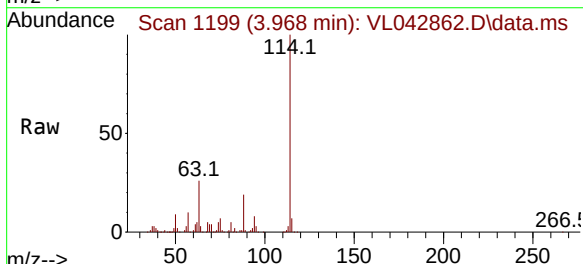
Instrument :
MSVOA_L
ClientSampleId :
SV1

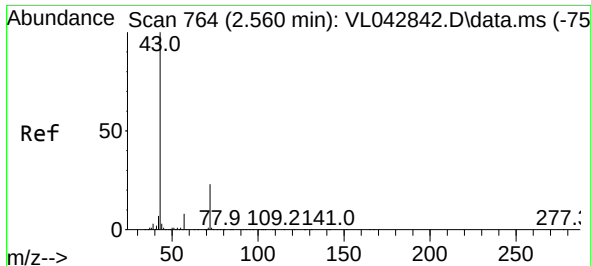
Tgt Ion: 84 Resp: 417
Ion Ratio Lower Upper
84 100
56 0.0 98.8 148.2#
41 0.0 61.3 91.9#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.968 min Scan# 1199
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 114 Resp: 384213
Ion Ratio Lower Upper
114 100
63 24.9 19.7 29.5
88 18.6 14.4 21.6





#34

2-Butanone

Concen: 0.361 ppbv

RT: 2.567 min Scan# 7

Delta R.T. 0.006 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

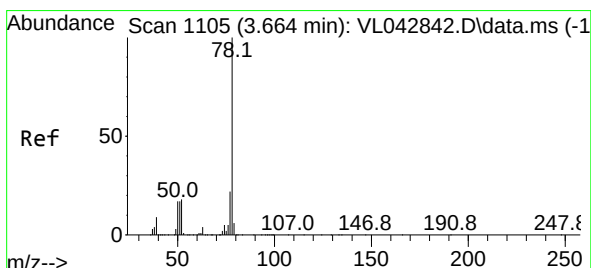
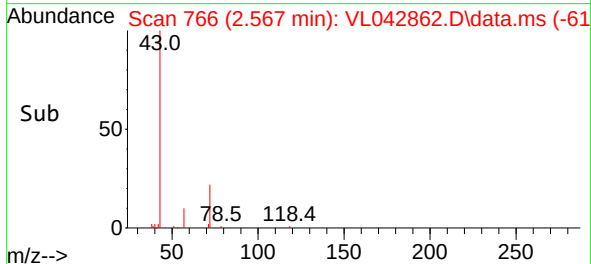
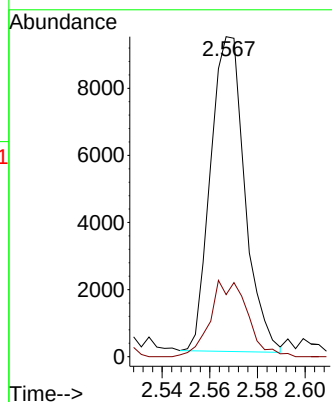
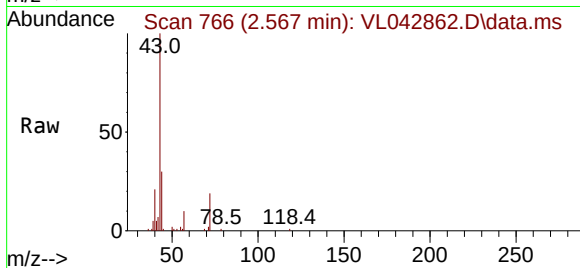
SV1

Tgt Ion: 43 Resp: 9355

Ion Ratio Lower Upper

43 100

72 26.2 18.6 28.0



#36

Benzene

Concen: 0.033 ppbv

RT: 3.658 min Scan# 1103

Delta R.T. -0.007 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

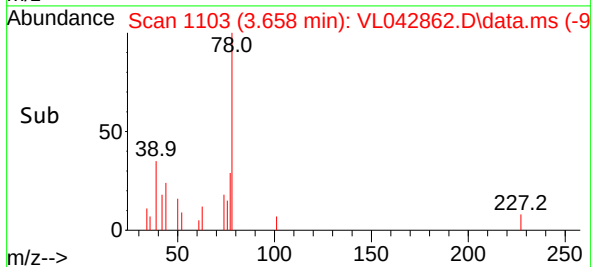
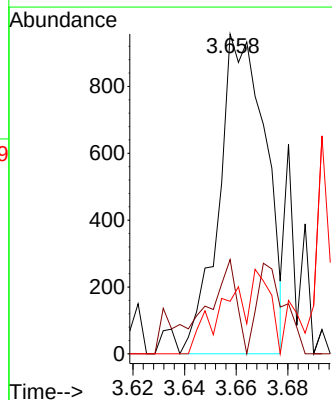
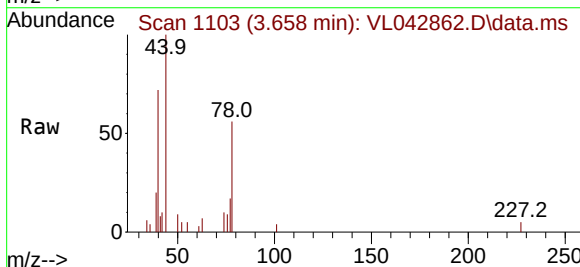
Tgt Ion: 78 Resp: 1204

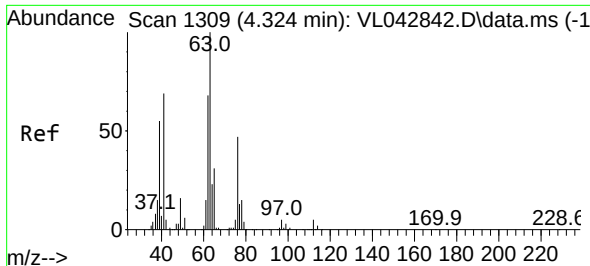
Ion Ratio Lower Upper

78 100

77 22.3 17.7 26.5

50 18.1 13.9 20.9





#39

1,2-Dichloropropane

Concen: 7.099 ppbv

RT: 3.965 min Scan# 1198

Delta R.T. -0.359 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

Instrument :

MSVOA_L

ClientSampleId :

SV1

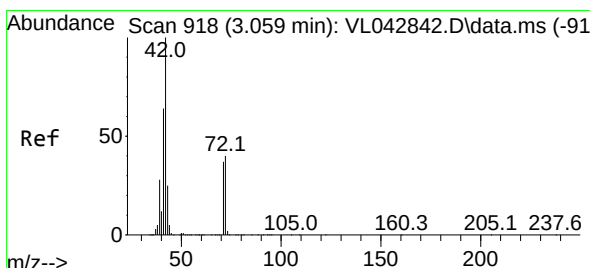
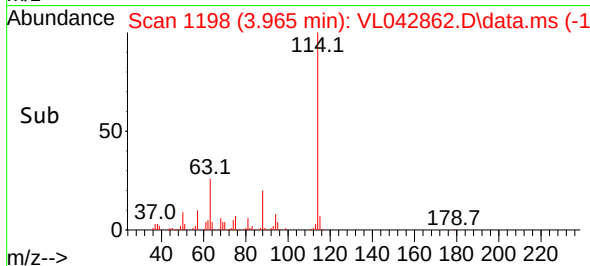
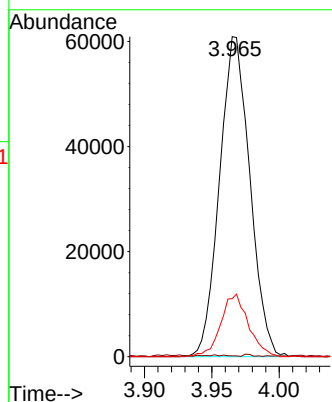
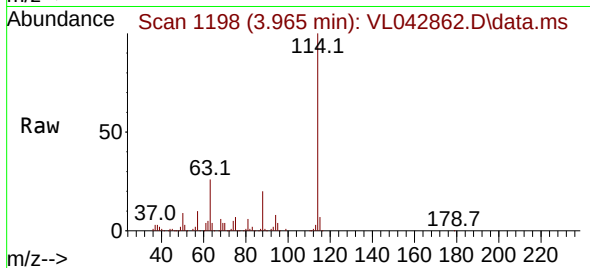
Tgt Ion: 63 Resp: 95390

Ion Ratio Lower Upper

63 100

41 0.0 55.0 82.4#

62 18.2 54.4 81.6#



#41

Tetrahydrofuran

Concen: 0.147 ppbv

RT: 3.075 min Scan# 923

Delta R.T. 0.016 min

Lab File: VL042862.D

Acq: 13 Aug 2025 21:26

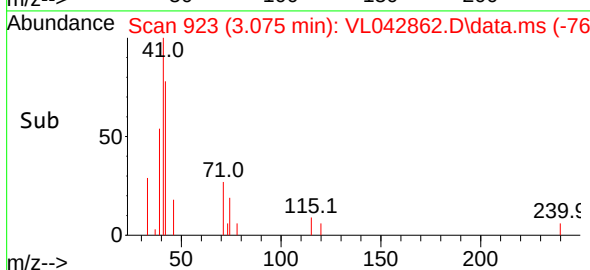
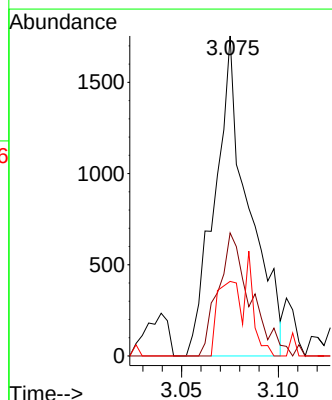
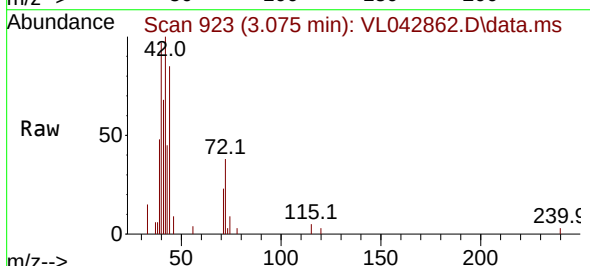
Tgt Ion: 42 Resp: 2121

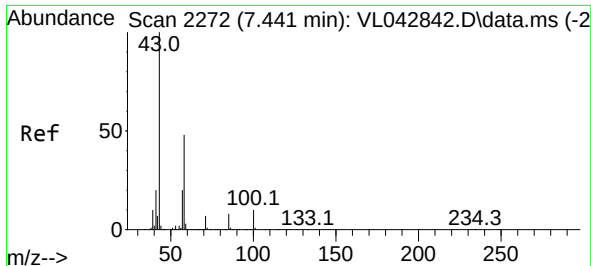
Ion Ratio Lower Upper

42 100

72 37.3 32.6 48.8

71 24.6 30.0 45.0#

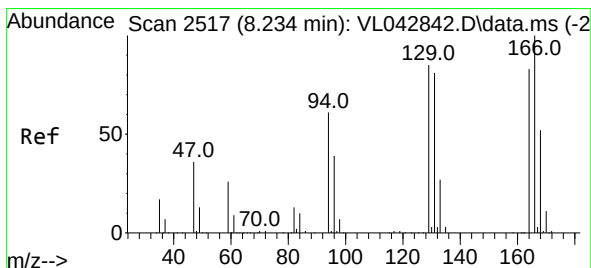
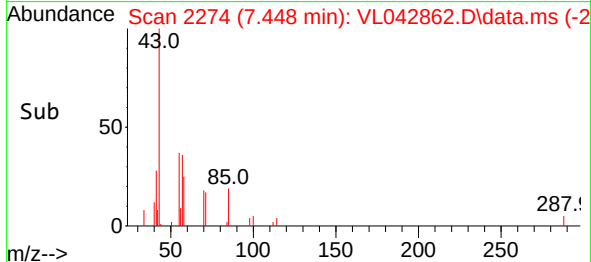
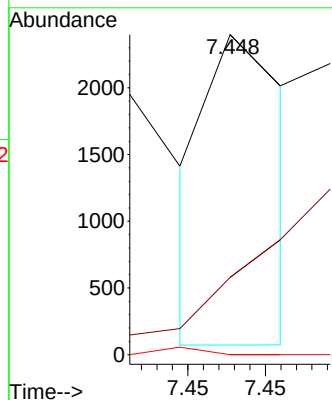
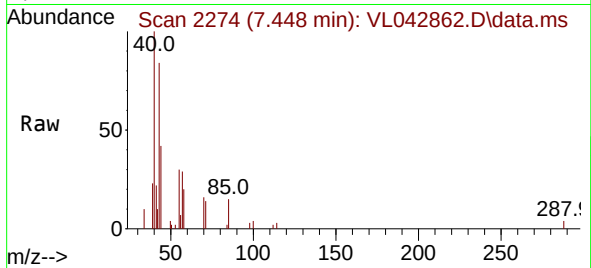




#51
2-Hexanone
Concen: 0.030 ppbv
RT: 7.448 min Scan# 21
Delta R.T. 0.006 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

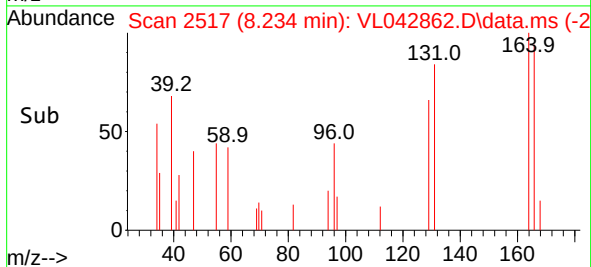
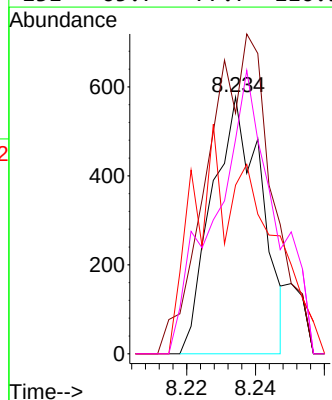
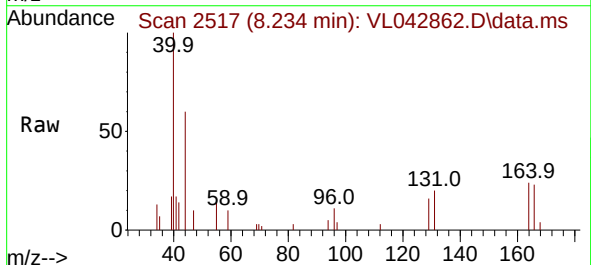
Instrument :
MSVOA_L
ClientSampleId :
SV1

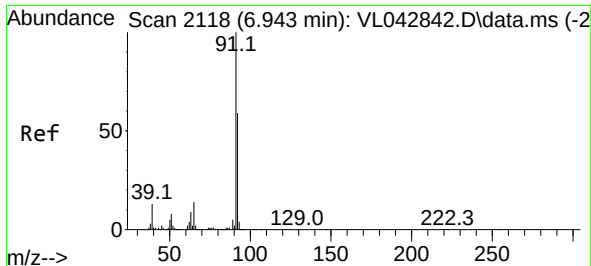
Tgt Ion: 43 Resp: 828
Ion Ratio Lower Upper
43 100
58 0.0 41.0 61.6#
98 0.0 0.1 0.1#



#52
Tetrachloroethene
Concen: 0.043 ppbv
RT: 8.234 min Scan# 2517
Delta R.T. -0.000 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 164 Resp: 577
Ion Ratio Lower Upper
164 100
166 78.2 96.5 144.7#
129 34.0 81.8 122.6#
131 65.7 77.7 116.5#

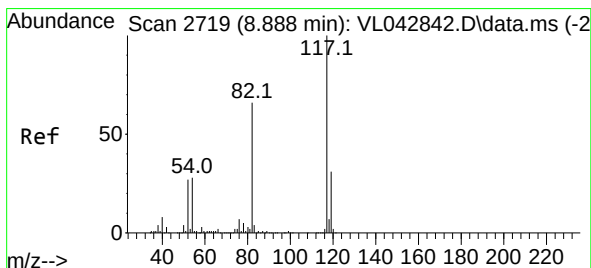
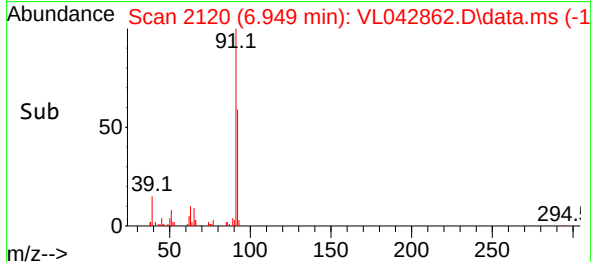
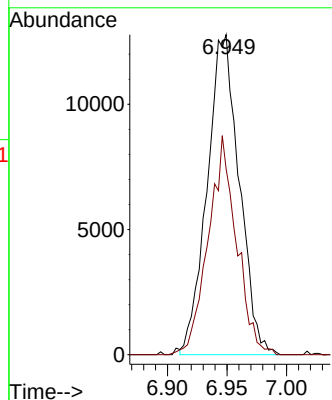
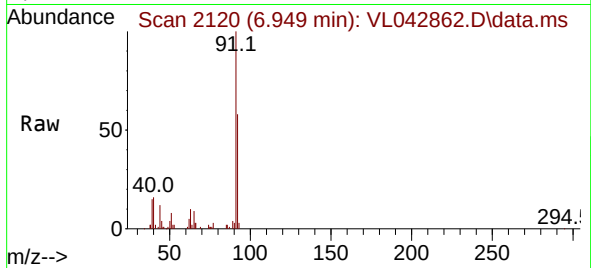




#53
Toluene
Concen: 0.548 ppbv
RT: 6.949 min Scan# 2118
Delta R.T. 0.006 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

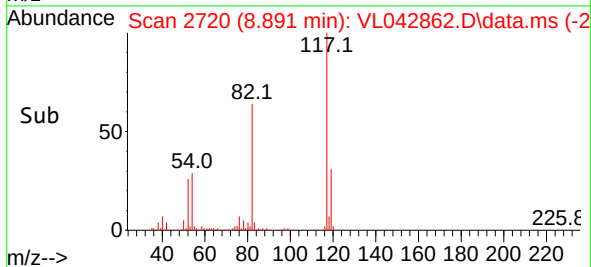
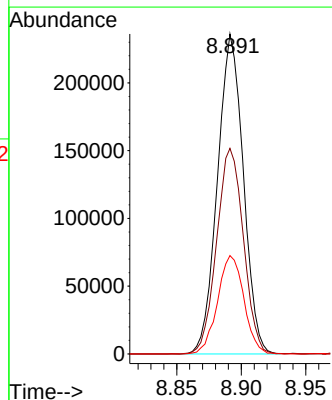
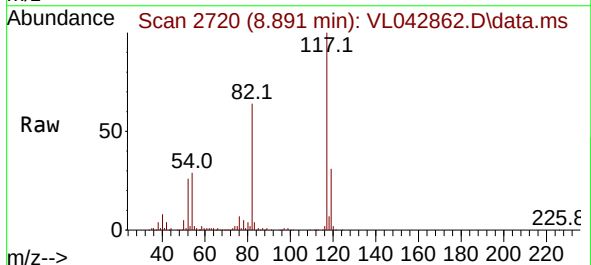
Instrument :
MSVOA_L
ClientSampleId :
SV1

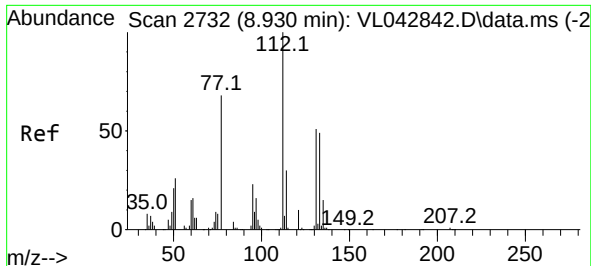
Tgt Ion: 91 Resp: 23951
Ion Ratio Lower Upper
91 100
92 60.2 47.8 71.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.891 min Scan# 2720
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 117 Resp: 328630
Ion Ratio Lower Upper
117 100
82 66.5 54.6 81.8
119 31.3 25.9 38.9

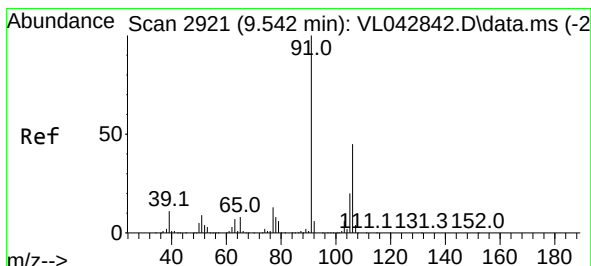
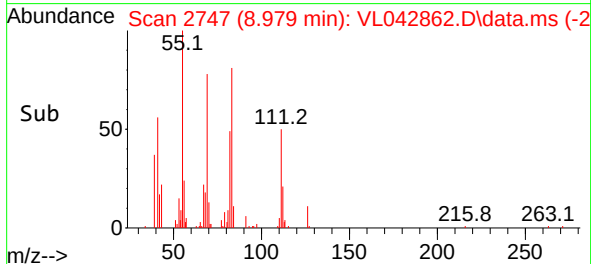
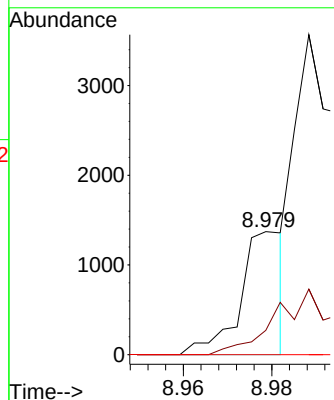
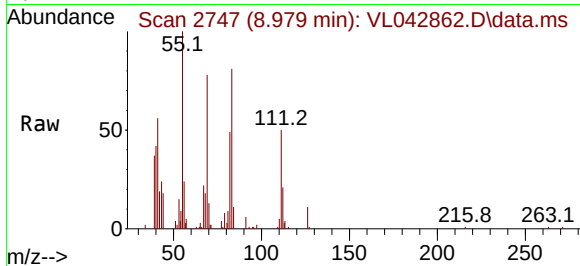




#57
Chlorobenzene
Concen: 0.030 ppbv
RT: 8.979 min Scan# 21
Delta R.T. 0.048 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

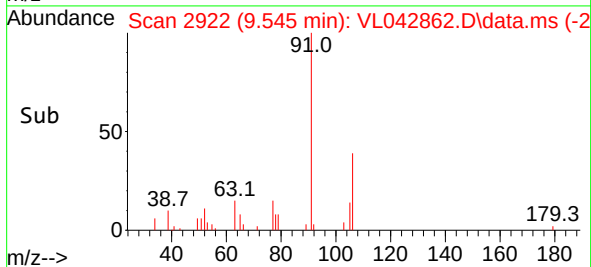
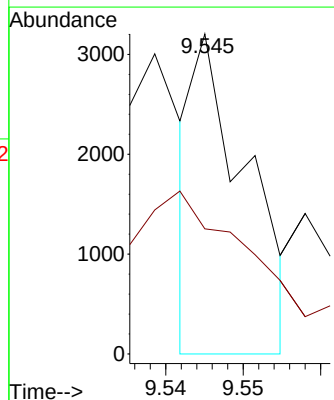
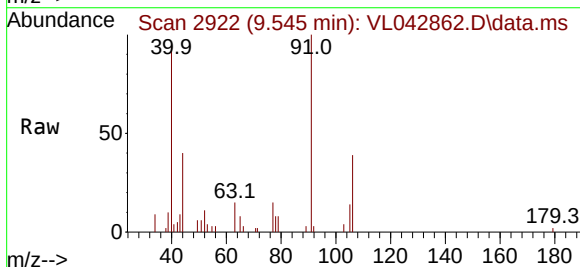
Instrument :
MSVOA_L
ClientSampleId :
SV1

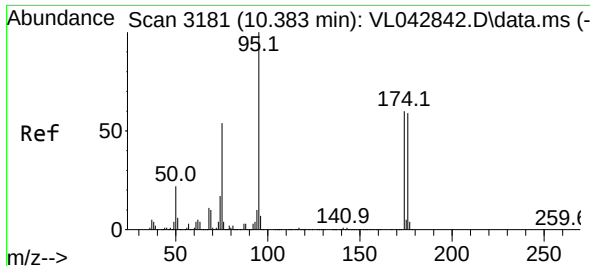
Tgt Ion:112 Resp: 949
Ion Ratio Lower Upper
112 100
77 19.8 55.5 83.3#
114 0.0 27.2 33.2#



#59
m/p-Xylene
Concen: 0.034 ppbv
RT: 9.545 min Scan# 2922
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 91 Resp: 1535
Ion Ratio Lower Upper
91 100
106 172.0 0.0 0.0#

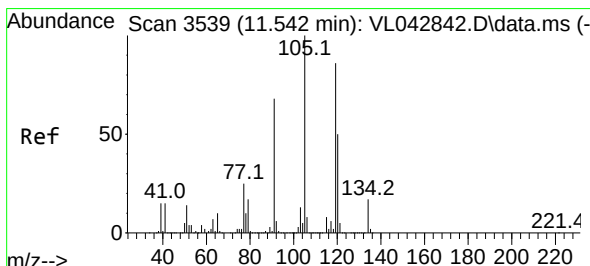
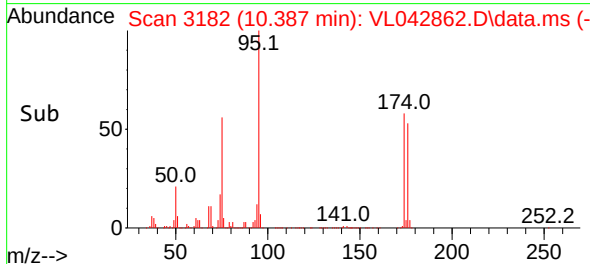
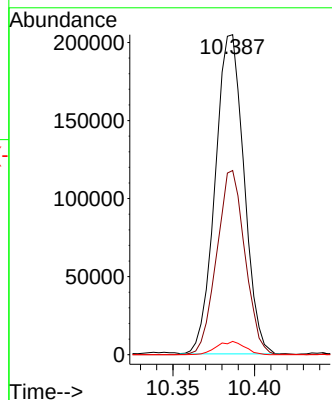
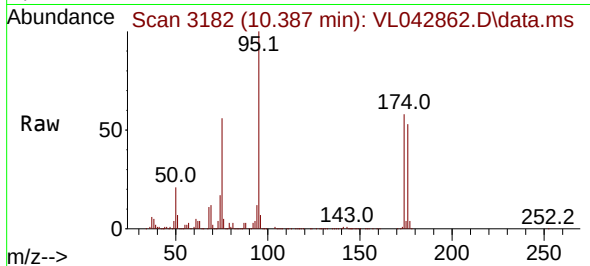




#68
1-Bromo-4-Fluorobenzene
Concen: 10.178 ppbv
RT: 10.387 min Scan# 3181
Delta R.T. 0.003 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Instrument :
MSVOA_L
ClientSampleId :
SV1

Tgt Ion: 95 Resp: 250839
Ion Ratio Lower Upper
95 100
174 56.7 48.4 72.6
175 4.1 3.8 5.8



#74
1,2,4-Trimethylbenzene
Concen: 0.034 ppbv
RT: 11.542 min Scan# 3539
Delta R.T. -0.000 min
Lab File: VL042862.D
Acq: 13 Aug 2025 21:26

Tgt Ion: 105 Resp: 1758
Ion Ratio Lower Upper
105 100
120 32.1 39.8 59.6#
91 18.7 54.2 81.4#
77 27.3 19.8 29.6

