

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL112025\
 Data File : VL043274.D
 Acq On : 20 Nov 2025 20:43
 Operator : SY/MD
 Sample : Q3698-03DL 5X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Quant Time: Nov 21 00:43:44 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

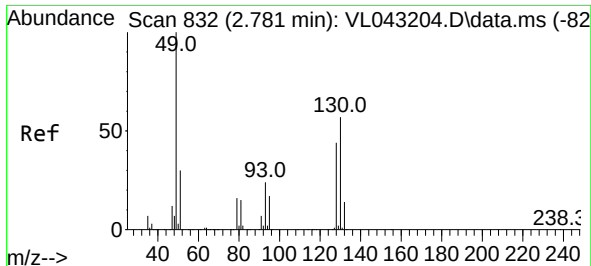
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.781	49	105138	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.949	114	264251	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.869	117	208021	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.364	95	160870	10.550	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.500%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.492	85	1601	0.108	ppbv	92
3) Chlorodifluoromethane	1.557	51	627	0.043	ppbv	99
4) Chloromethane	1.528	50	609	0.110	ppbv	94
8) Dichlorotetrafluoroethane	1.492	85	1601	0.130	ppbv #	17
9) Propene	1.554	41	10434	1.685	ppbv #	1
10) Heptane	4.972	43	694	0.038	ppbv #	26
11) Trichlorofluoromethane	1.874	101	754	0.052	ppbv	99
13) Ethanol	1.719	45	8582	3.941	ppbv #	38
15) Acetone	1.832	43	909419	62.258	ppbv	98
16) 1,3-Butadiene	1.619	39	58763	9.024	ppbv #	14
19) Isopropyl Alcohol	1.884	45	21583	2.615	ppbv #	1
20) Methylene Chloride	2.059	84	2846	Below Cal	#	83
21) Allyl Chloride	1.958	41	5174	0.526	ppbv #	21
23) Vinyl Acetate	2.470	43	5354	0.304	ppbv #	55
25) Ethyl Acetate	2.816	43	4748	0.151	ppbv #	1
26) Hexane	2.816	57	3752	0.272	ppbv #	67
31) cis-1,2-Dichloroethene	2.813	61	5749	0.419	ppbv #	26
34) 2-Butanone	2.557	43	3832	0.205	ppbv	96
36) Benzene	3.645	78	3715	0.147	ppbv #	83
37) 1,2-Dichloroethane	2.813	62	8840	0.597	ppbv #	80
39) 1,2-Dichloropropane	3.949	63	68195	7.363	ppbv #	24
44) 2,2,4-Trimethylpentane	4.625	57	1795	0.041	ppbv #	48
53) Toluene	6.920	91	8252	0.275	ppbv #	48
58) Ethyl Benzene	9.344	91	79579	1.988	ppbv	96
59) m/p-Xylene	9.519	91	340301	10.601	ppbv	99
60) o-Xylene	9.953	91	96189	3.000	ppbv	97
61) Styrene	9.956	104	2076	0.148	ppbv #	1

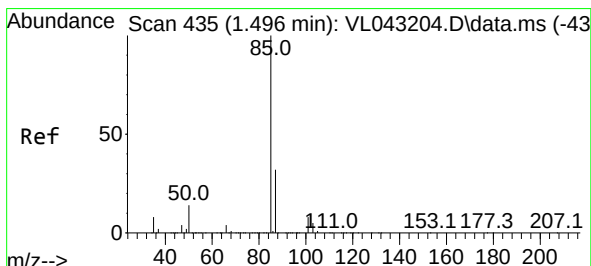
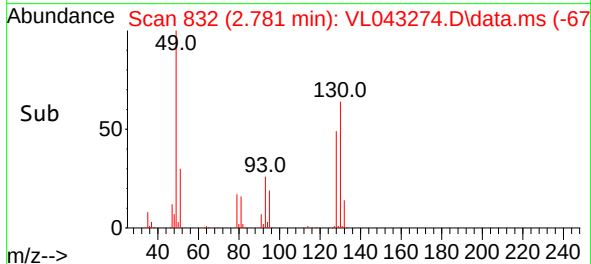
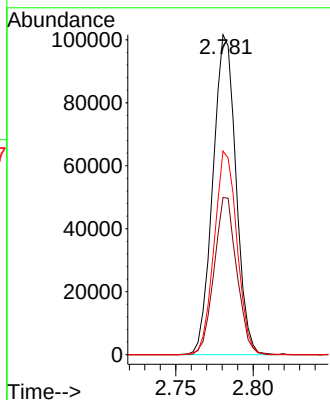
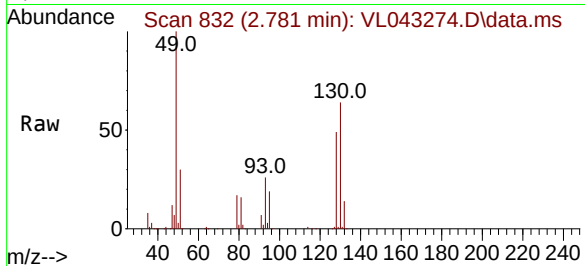
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.781 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

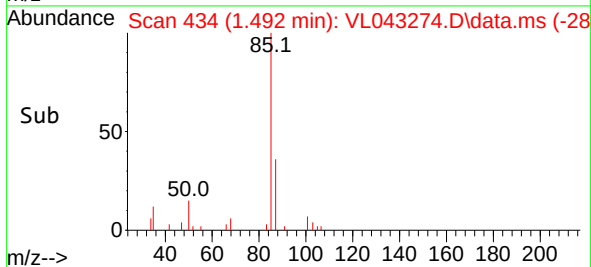
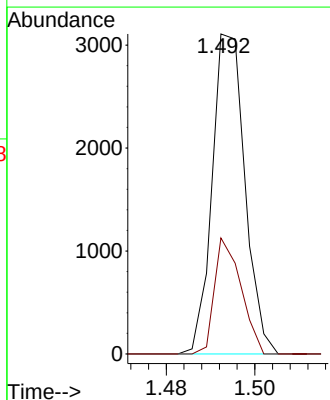
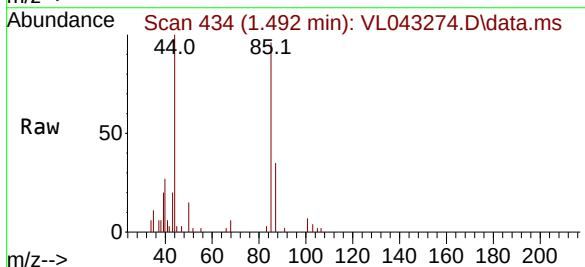
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

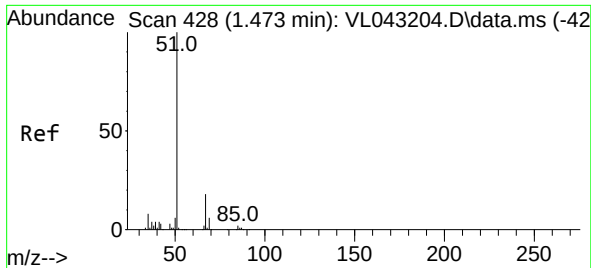
Tgt Ion: 49 Resp: 105138
Ion Ratio Lower Upper
49 100
128 48.2 23.0 69.0
130 63.0 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.108 ppbv
RT: 1.492 min Scan# 434
Delta R.T. -0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 85 Resp: 1601
Ion Ratio Lower Upper
85 100
87 36.3 25.4 38.2

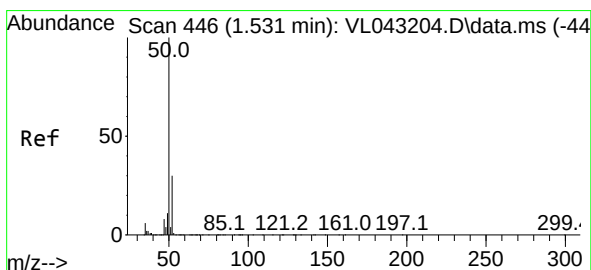
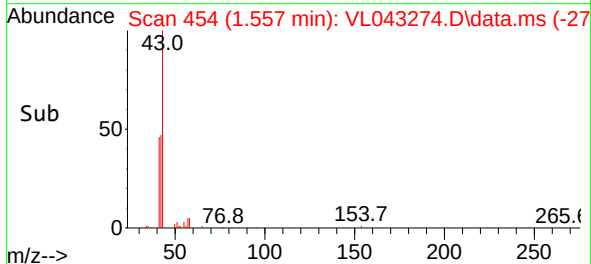
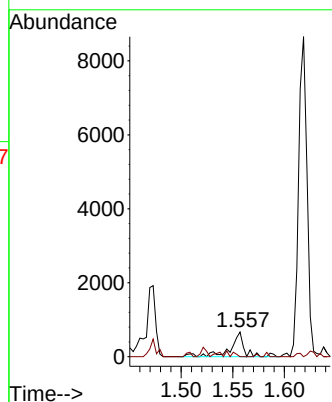
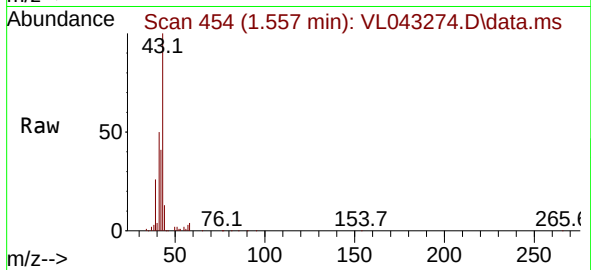




#3
Chlorodifluoromethane
Concen: 0.043 ppbv
RT: 1.557 min Scan# 41
Delta R.T. 0.084 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

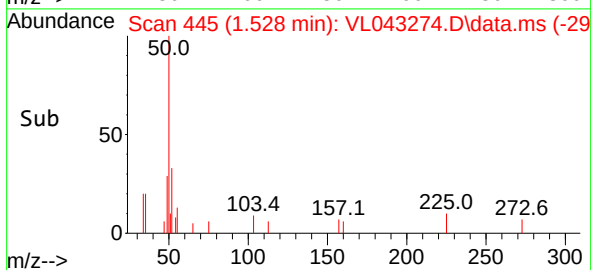
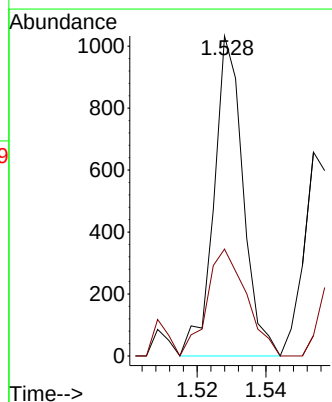
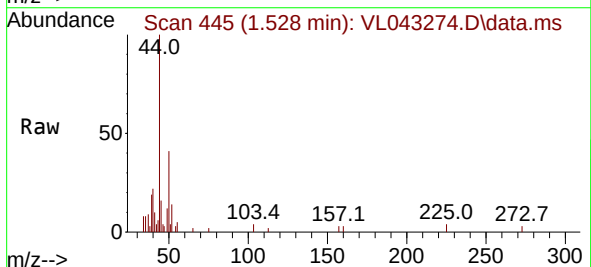
Instrument :
MSVOA_1
ClientSampleId :
IA1DL

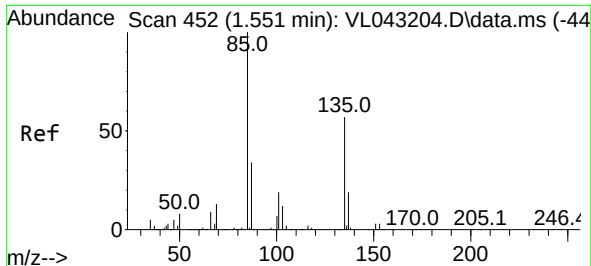
Tgt Ion: 51 Resp: 627
Ion Ratio Lower Upper
51 100
67 19.0 14.9 22.3



#4
Chloromethane
Concen: 0.110 ppbv
RT: 1.528 min Scan# 445
Delta R.T. -0.004 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 50 Resp: 609
Ion Ratio Lower Upper
50 100
52 33.4 24.1 36.1

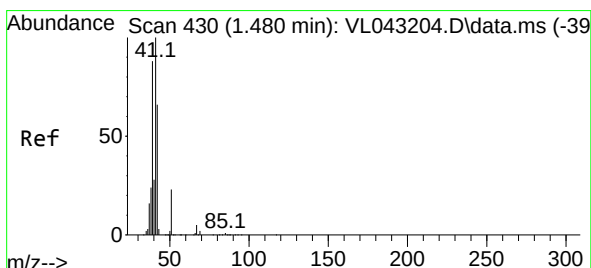
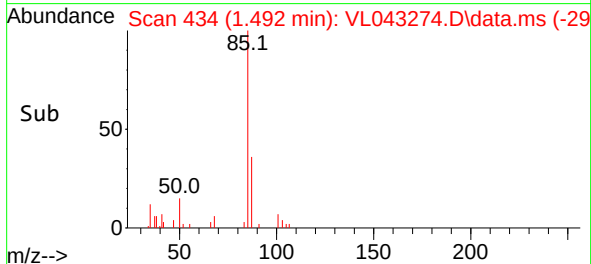
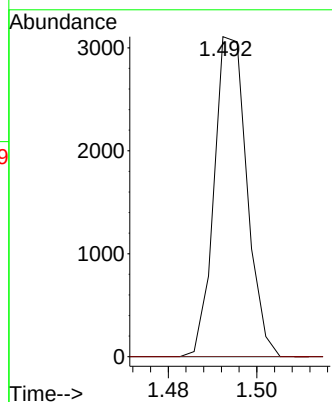
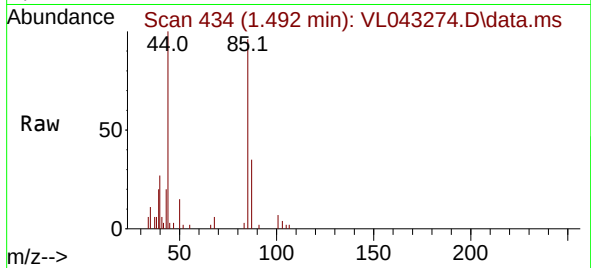




#8
 Dichlorotetrafluoroethane
 Concen: 0.130 ppbv
 RT: 1.492 min Scan# 41
 Delta R.T. -0.059 min
 Lab File: VL043274.D
 Acq: 20 Nov 2025 20:43

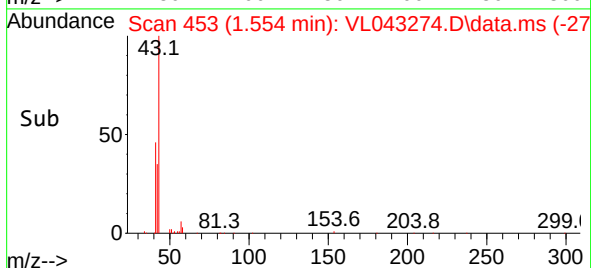
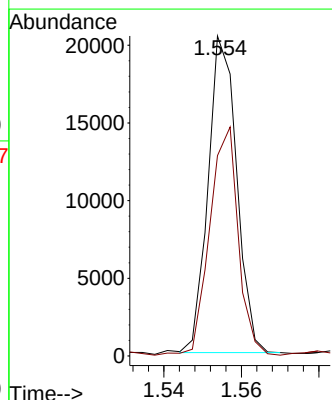
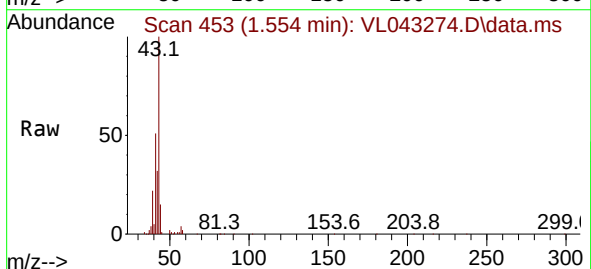
Instrument :
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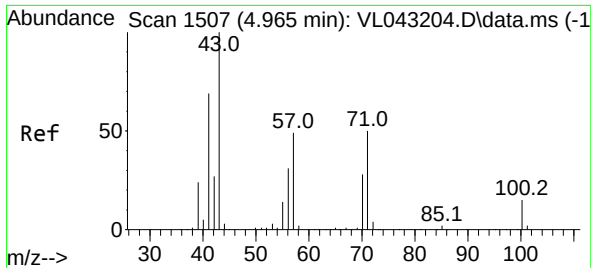
Tgt Ion: 85 Resp: 1601
 Ion Ratio Lower Upper
 85 100
 135 0.0 52.6 79.0#



#9
 Propene
 Concen: 1.685 ppbv
 RT: 1.554 min Scan# 453
 Delta R.T. 0.074 min
 Lab File: VL043274.D
 Acq: 20 Nov 2025 20:43

Tgt Ion: 41 Resp: 10434
 Ion Ratio Lower Upper
 41 100
 42 72.6 3.7 5.5#





#10

Heptane

Concen: 0.038 ppbv

RT: 4.972 min Scan# 1

Delta R.T. 0.006 min

Lab File: VL043274.D

Acq: 20 Nov 2025 20:43

Instrument :

MSVOA_L

ClientSampleId :

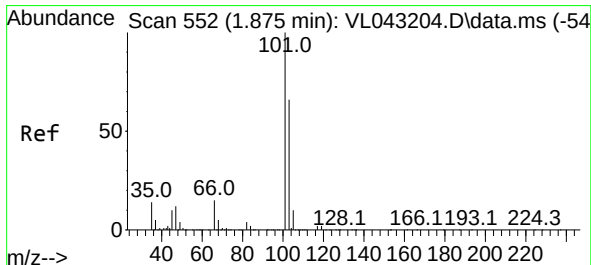
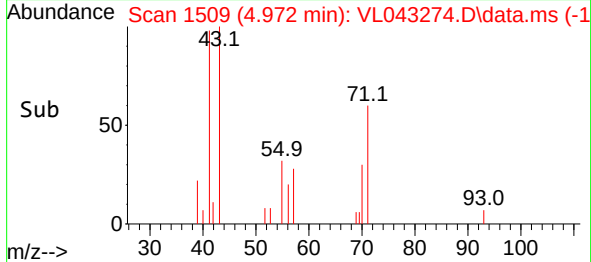
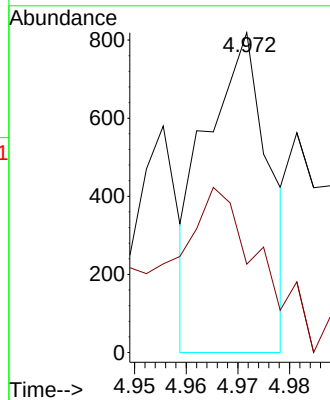
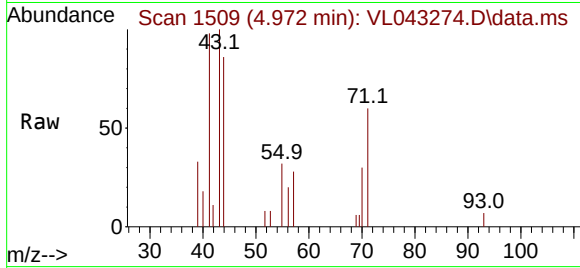
IA1DL

Tgt Ion: 43 Resp: 694

Ion Ratio Lower Upper

43 100

57 100.3 39.7 59.5#



#11

Trichlorofluoromethane

Concen: 0.052 ppbv

RT: 1.874 min Scan# 552

Delta R.T. -0.000 min

Lab File: VL043274.D

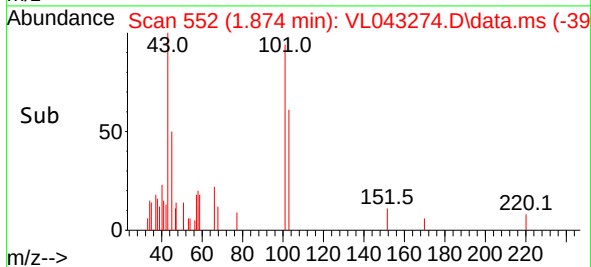
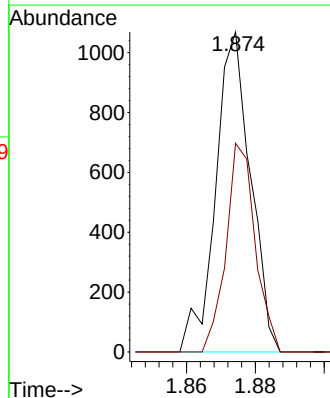
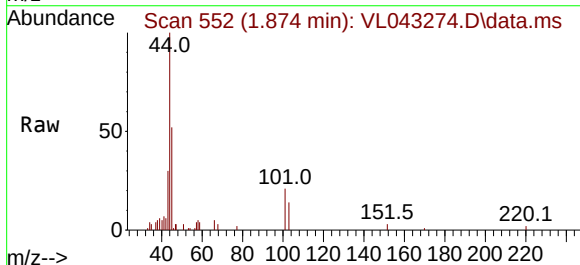
Acq: 20 Nov 2025 20:43

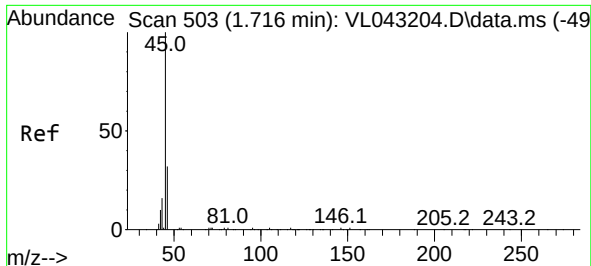
Tgt Ion:101 Resp: 754

Ion Ratio Lower Upper

101 100

103 65.2 52.6 79.0

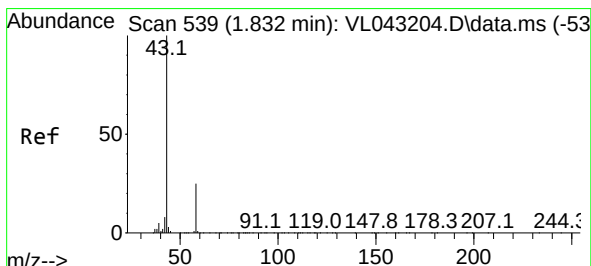
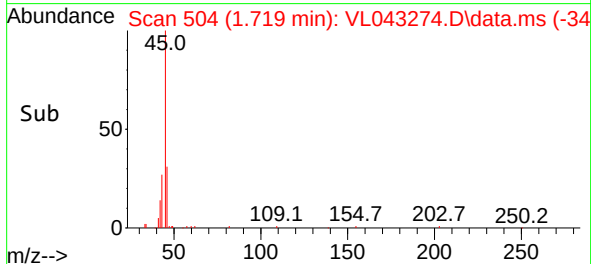
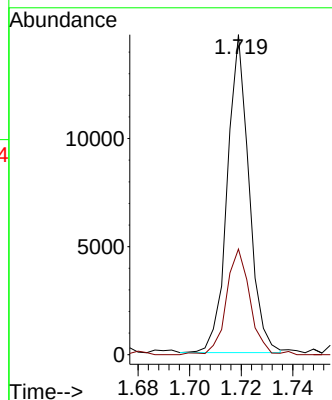
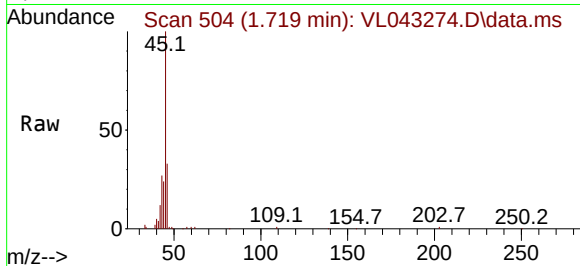




#13
Ethanol
Concen: 3.941 ppbv
RT: 1.719 min Scan# 503
Delta R.T. 0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

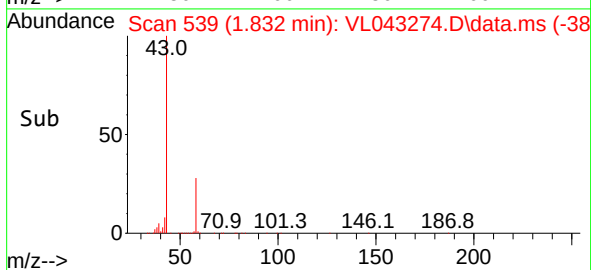
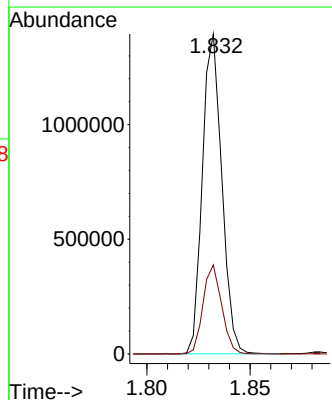
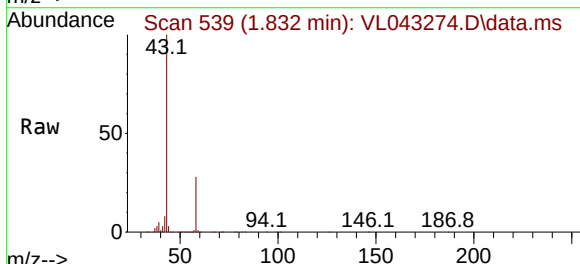
Instrument :
MSVOA_1
ClientSampleId :
IA1DL

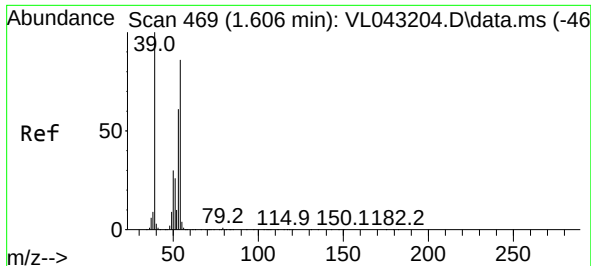
Tgt Ion: 45 Resp: 8582
Ion Ratio Lower Upper
45 100
46 0.0 15.0 59.8#



#15
Acetone
Concen: 62.258 ppbv
RT: 1.832 min Scan# 539
Delta R.T. -0.000 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 43 Resp: 909419
Ion Ratio Lower Upper
43 100
58 26.7 20.7 31.1

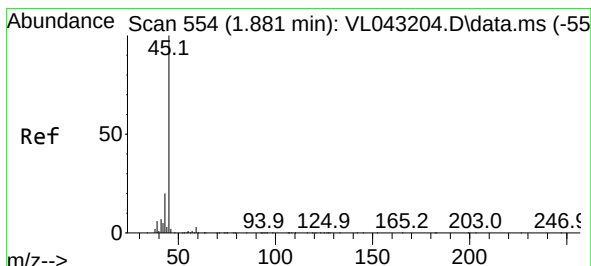
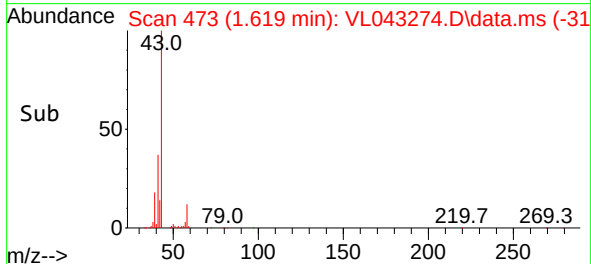
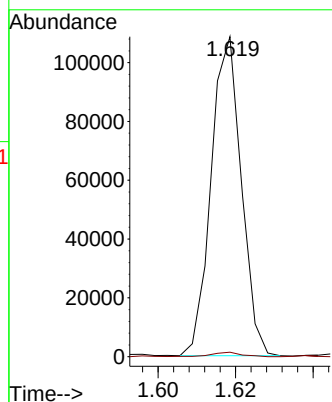
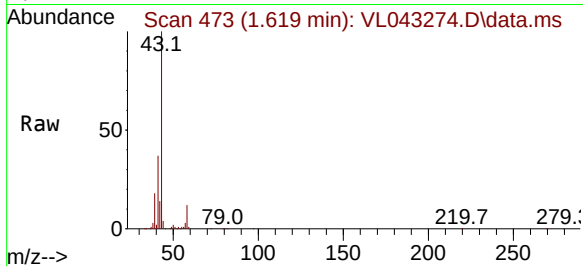




#16
1,3-Butadiene
Concen: 9.024 ppbv
RT: 1.619 min Scan# 41
Delta R.T. 0.013 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

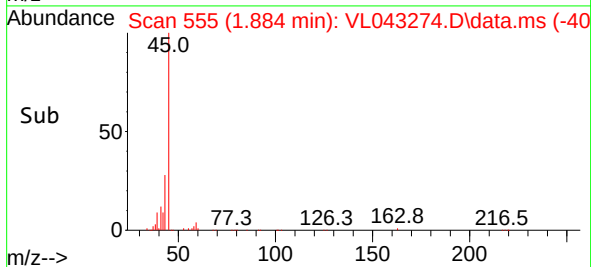
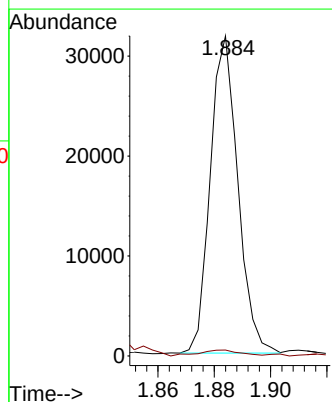
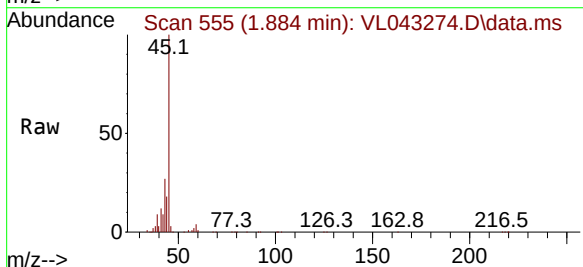
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ClientSampleId :
IA1DL

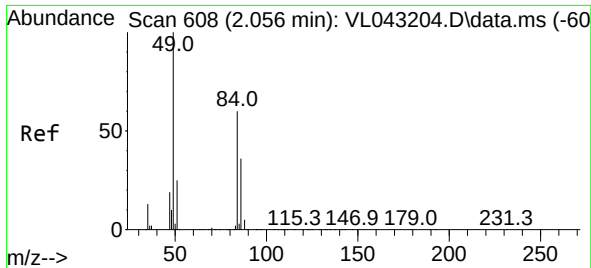
Tgt Ion: 39 Resp: 58763
Ion Ratio Lower Upper
39 100
54 1.7 59.4 89.2#



#19
Isopropyl Alcohol
Concen: 2.615 ppbv
RT: 1.884 min Scan# 555
Delta R.T. 0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 45 Resp: 21583
Ion Ratio Lower Upper
45 100
58 1126.8 31.3 46.9#

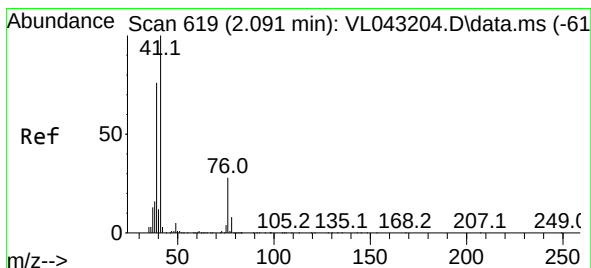
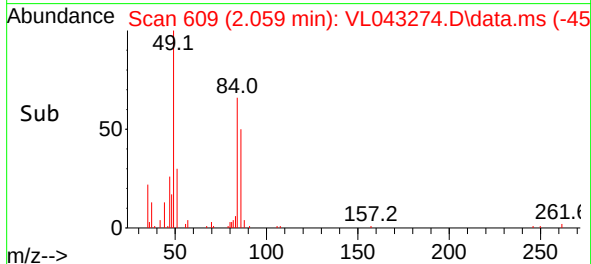
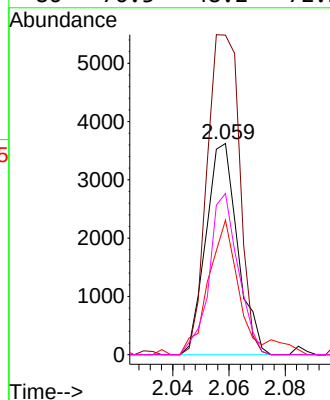
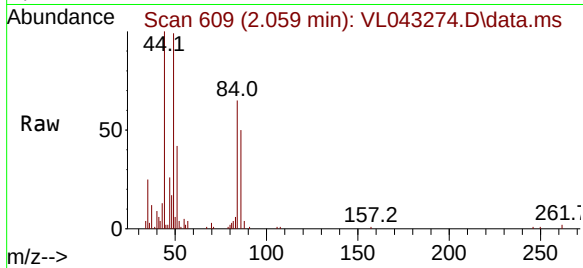




#20
Methylene Chloride
Concen: Below Cal
RT: 2.059 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

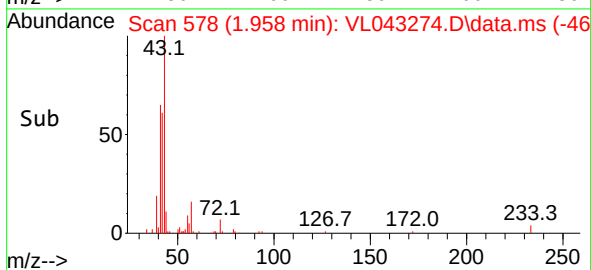
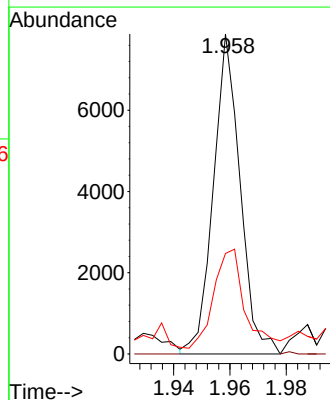
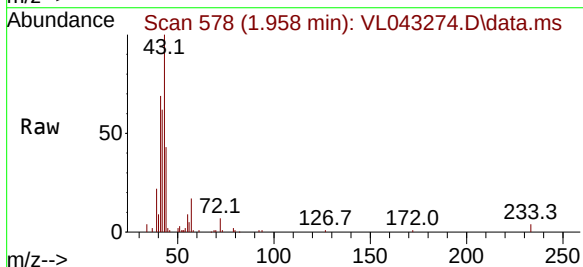
Instrument :
MSVOA_1
ClientSampleId :
IA1DL

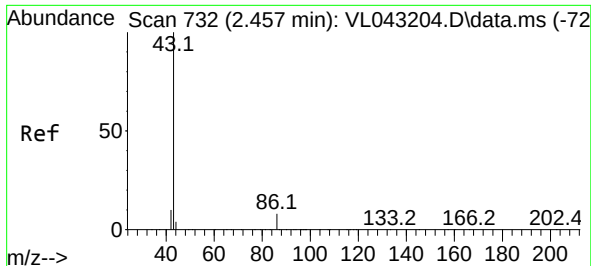
Tgt Ion:	84	Resp:	2846
Ion	Ratio	Lower	Upper
84	100		
49	151.3	132.9	199.3
51	63.7	34.8	52.2#
86	76.3	48.2	72.2#



#21
Allyl Chloride
Concen: 0.526 ppbv
RT: 1.958 min Scan# 578
Delta R.T. -0.133 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion:	41	Resp:	5174
Ion	Ratio	Lower	Upper
41	100		
76	0.2	22.1	33.1#
39	0.0	61.0	91.4#

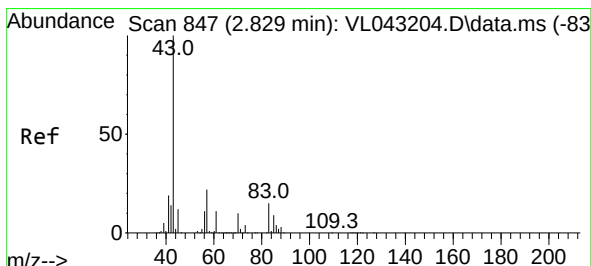
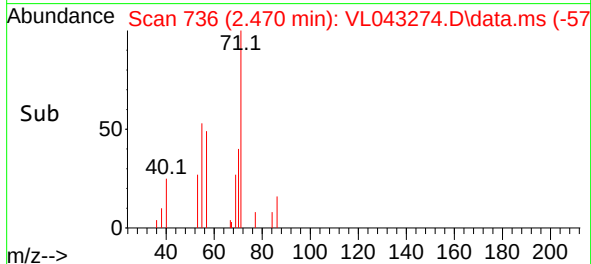
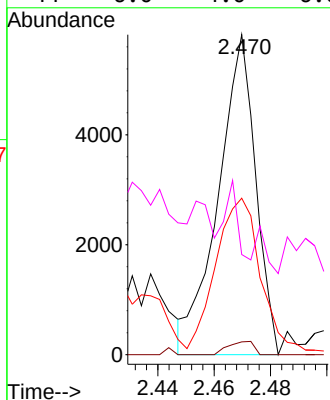
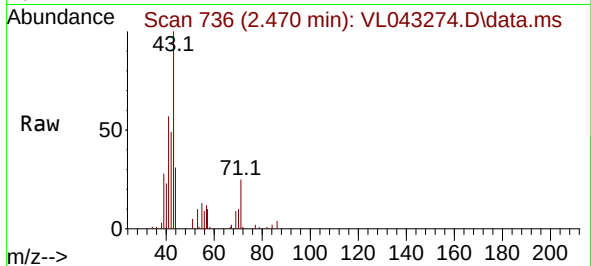




#23
Vinyl Acetate
Concen: 0.304 ppbv
RT: 2.470 min Scan# 71
Delta R.T. 0.013 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

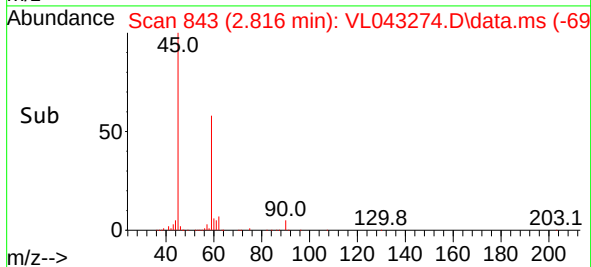
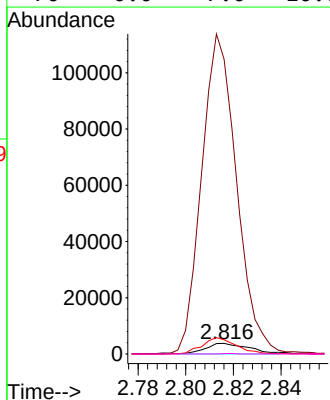
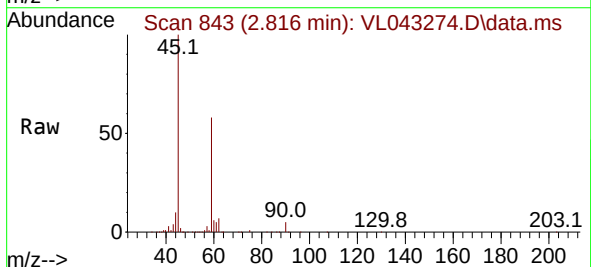
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

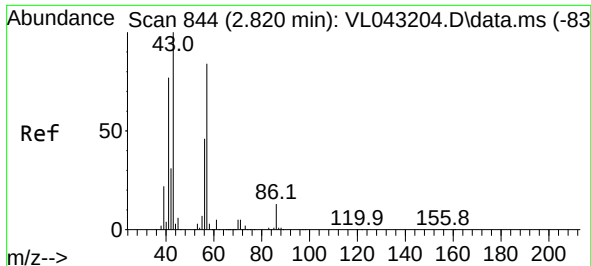
Tgt Ion:	43	Resp:	5354
Ion	Ratio	Lower	Upper
43	100		
86	4.0	6.2	9.2#
42	44.1	8.0	12.0#
44	6.0	4.0	6.0



#25
Ethyl Acetate
Concen: 0.151 ppbv
RT: 2.816 min Scan# 843
Delta R.T. -0.013 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion:	43	Resp:	4748
Ion	Ratio	Lower	Upper
43	100		
45	2456.4	8.1	12.1#
61	121.3	7.0	10.4#
70	0.0	7.0	10.6#

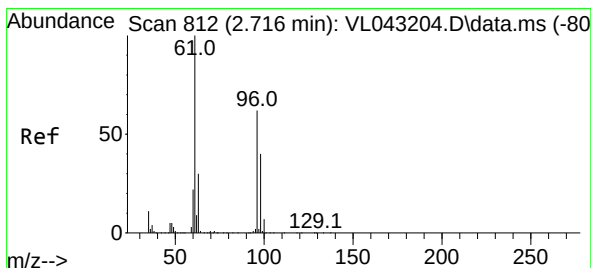
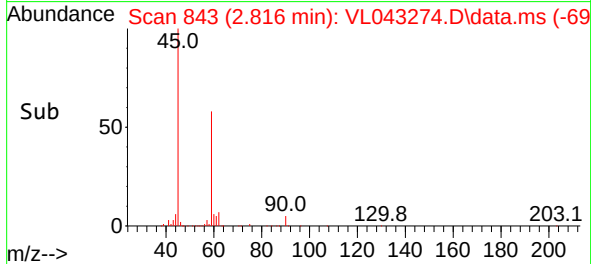
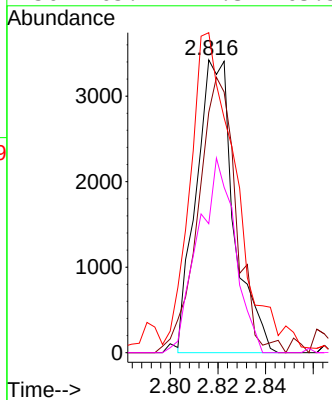
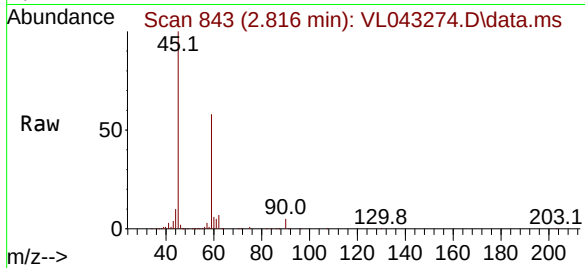




#26
Hexane
Concen: 0.272 ppbv
RT: 2.816 min Scan# 841
Delta R.T. -0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

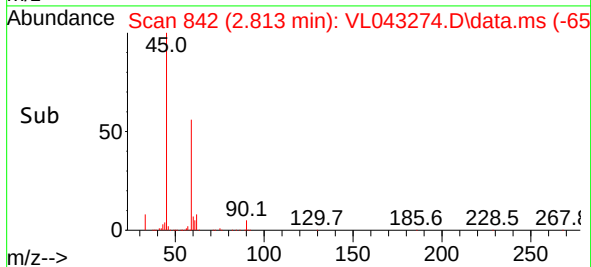
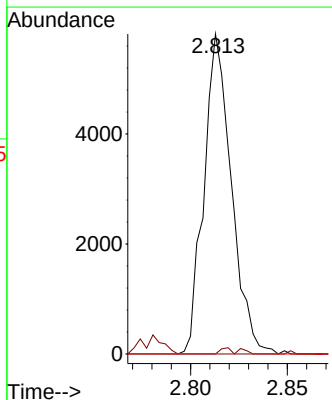
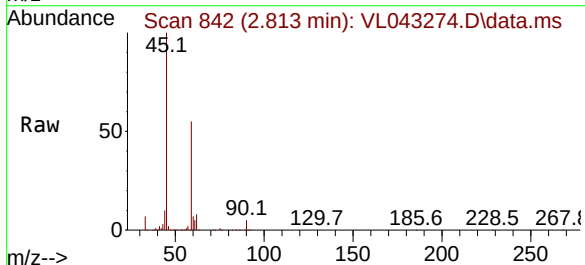
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

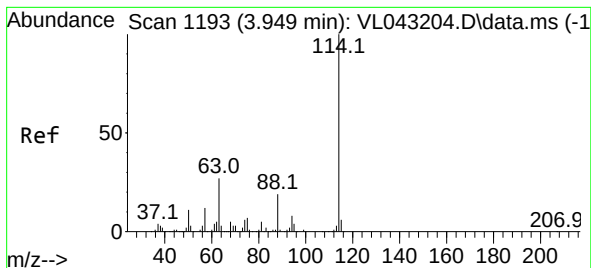
Tgt Ion: 57 Resp: 3752
Ion Ratio Lower Upper
57 100
41 96.2 74.6 111.8
43 143.4 179.0 268.4#
56 65.2 42.3 63.5#



#31
cis-1,2-Dichloroethene
Concen: 0.419 ppbv
RT: 2.813 min Scan# 842
Delta R.T. 0.097 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 61 Resp: 5749
Ion Ratio Lower Upper
61 100
96 0.0 49.3 73.9#
98 0.0 32.1 48.1#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.949 min Scan# 1193

Delta R.T. -0.000 min

Lab File: VL043274.D

Acq: 20 Nov 2025 20:43

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

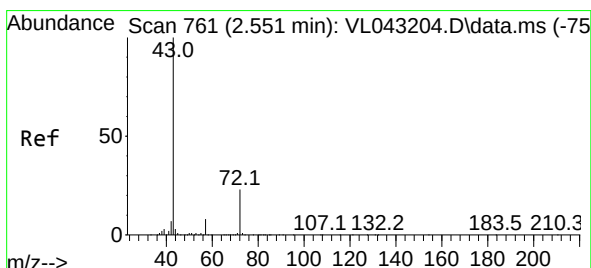
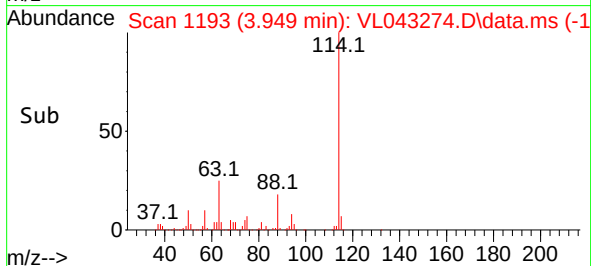
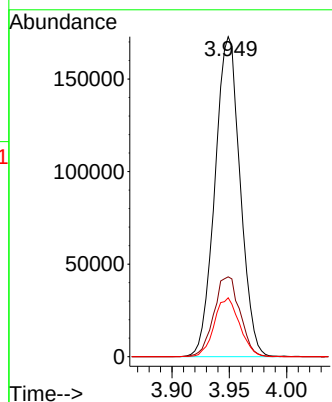
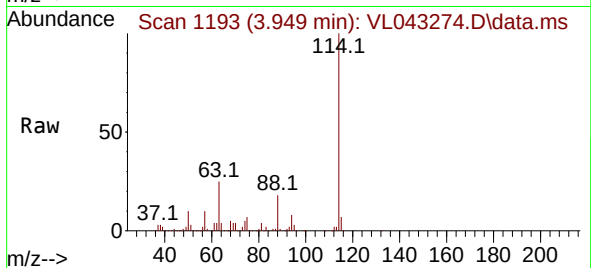
Tgt Ion:114 Resp: 264251

Ion Ratio Lower Upper

114 100

63 25.8 21.0 31.6

88 18.5 14.9 22.3



#34

2-Butanone

Concen: 0.205 ppbv

RT: 2.557 min Scan# 763

Delta R.T. 0.006 min

Lab File: VL043274.D

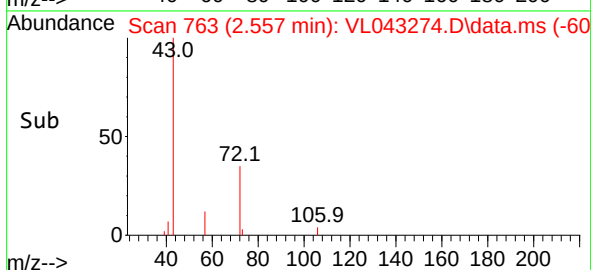
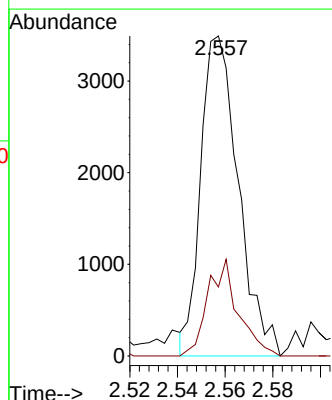
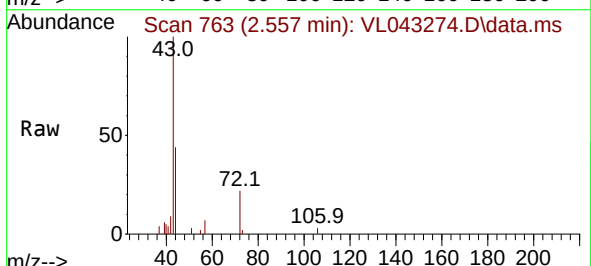
Acq: 20 Nov 2025 20:43

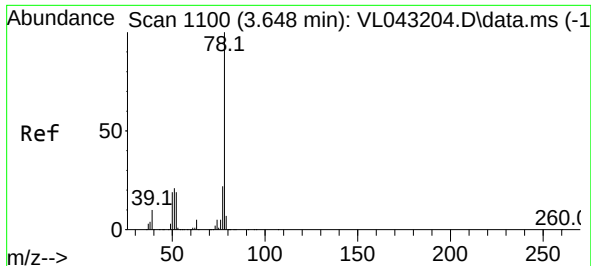
Tgt Ion: 43 Resp: 3832

Ion Ratio Lower Upper

43 100

72 24.5 18.1 27.1

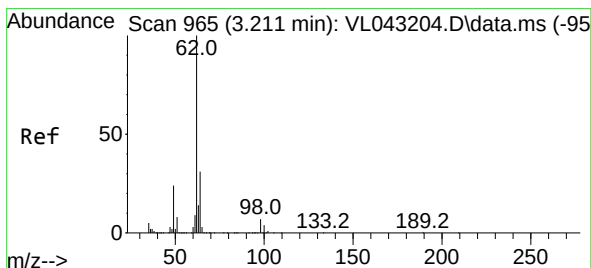
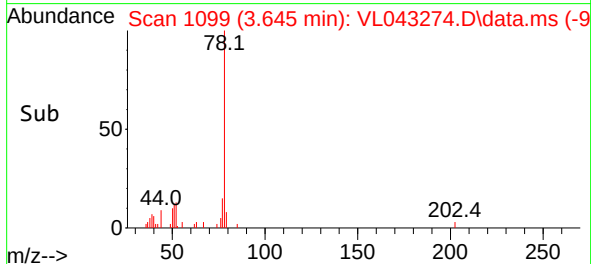
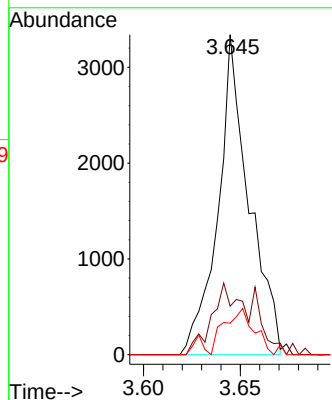
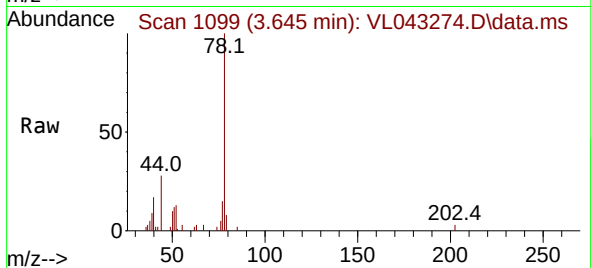




#36
Benzene
Concen: 0.147 ppbv
RT: 3.645 min Scan# 1099
Delta R.T. -0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

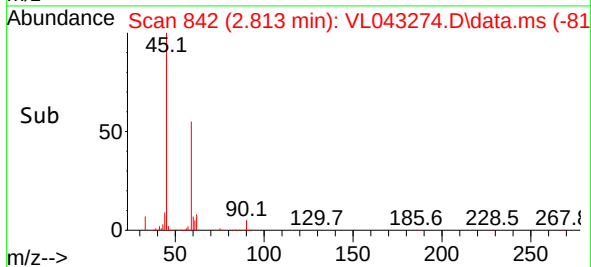
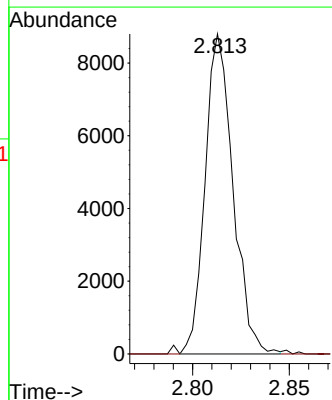
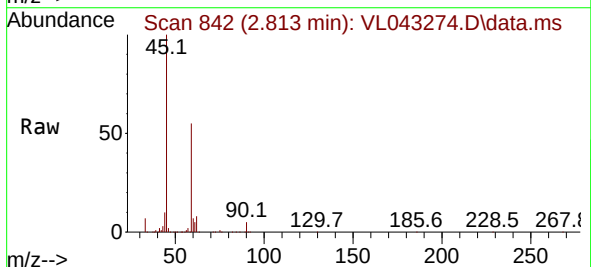
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

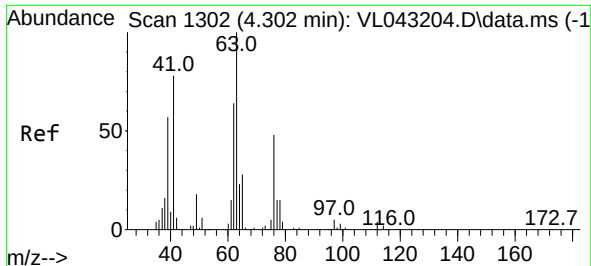
Tgt Ion: 78 Resp: 3715
Ion Ratio Lower Upper
78 100
77 15.1 17.5 26.3#
50 9.8 15.5 23.3#



#37
1,2-Dichloroethane
Concen: 0.597 ppbv
RT: 2.813 min Scan# 842
Delta R.T. -0.398 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 62 Resp: 8840
Ion Ratio Lower Upper
62 100
98 0.0 5.5 8.3#





#39

1,2-Dichloropropane

Concen: 7.363 ppbv

RT: 3.949 min Scan# 1193

Delta R.T. -0.353 min

Lab File: VL043274.D

Acq: 20 Nov 2025 20:43

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

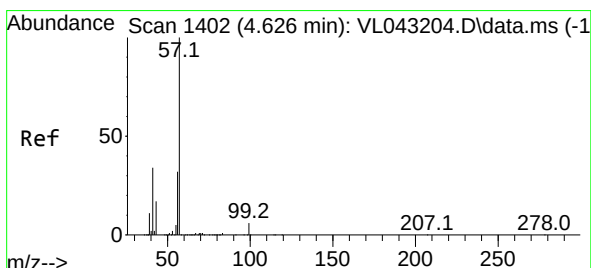
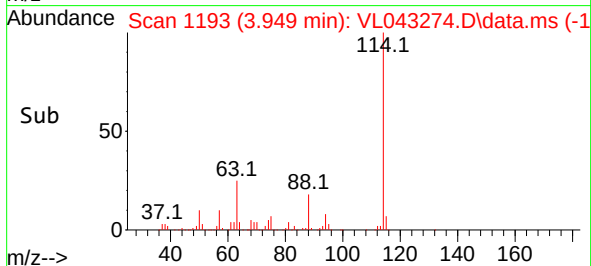
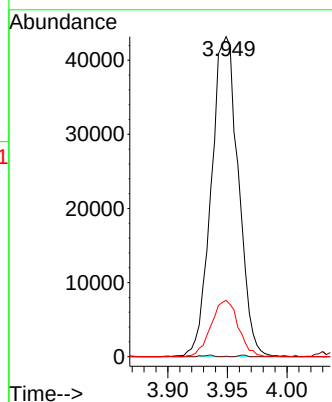
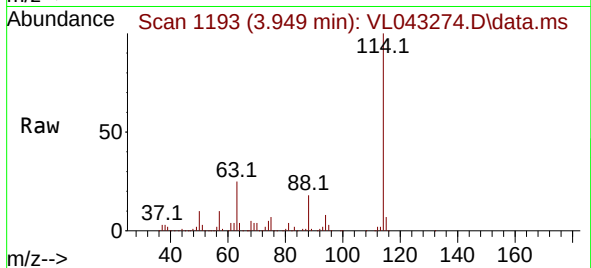
Tgt Ion: 63 Resp: 68195

Ion Ratio Lower Upper

63 100

41 0.2 62.6 93.8#

62 17.6 51.0 76.6#



#44

2,2,4-Trimethylpentane

Concen: 0.041 ppbv

RT: 4.625 min Scan# 1402

Delta R.T. -0.000 min

Lab File: VL043274.D

Acq: 20 Nov 2025 20:43

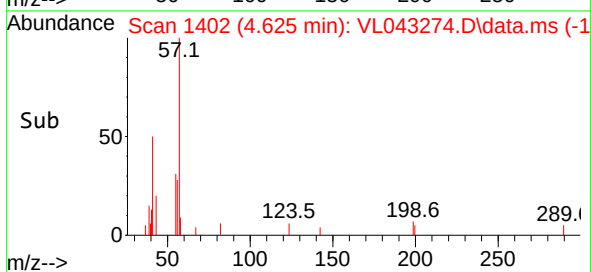
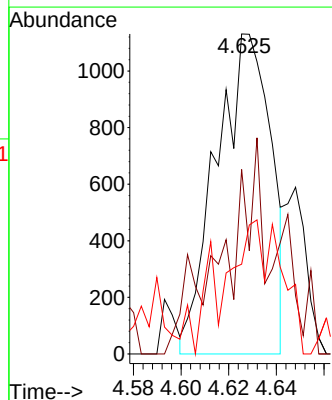
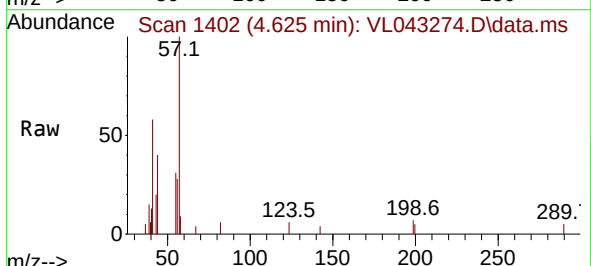
Tgt Ion: 57 Resp: 1795

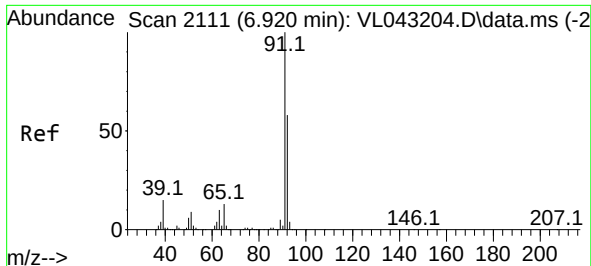
Ion Ratio Lower Upper

57 100

41 65.1 28.0 42.0#

56 61.6 25.6 38.4#

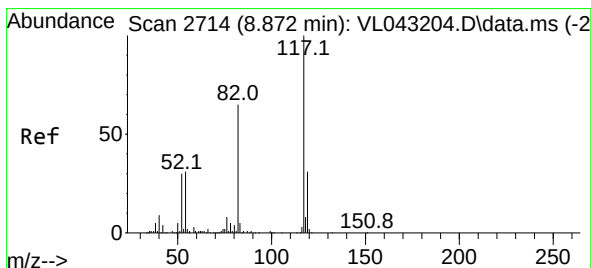
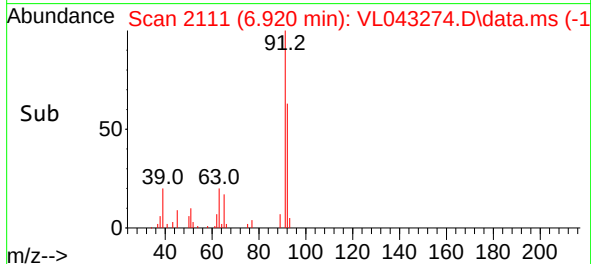
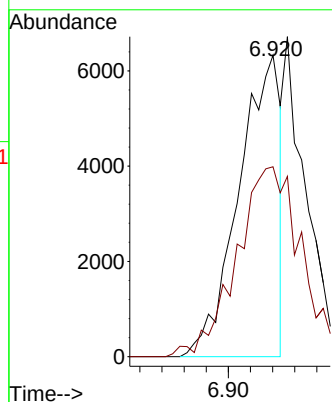
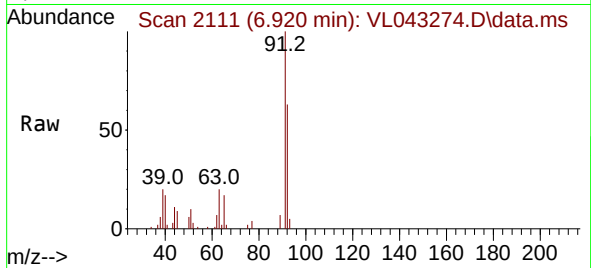




#53
Toluene
Concen: 0.275 ppbv
RT: 6.920 min Scan# 2111
Delta R.T. -0.000 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

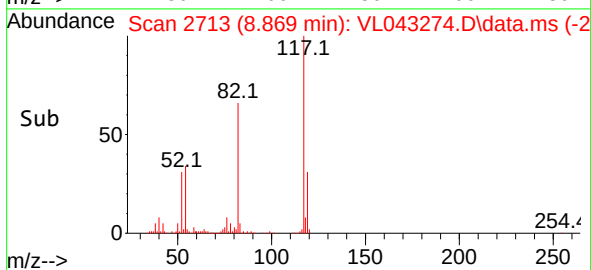
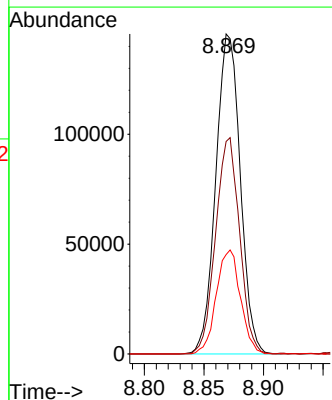
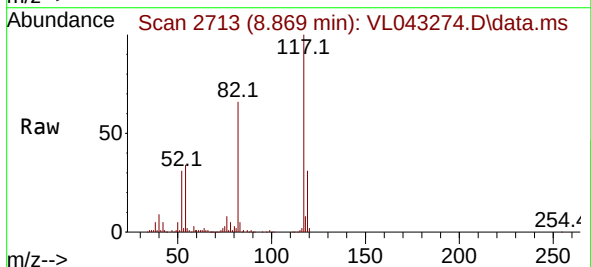
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

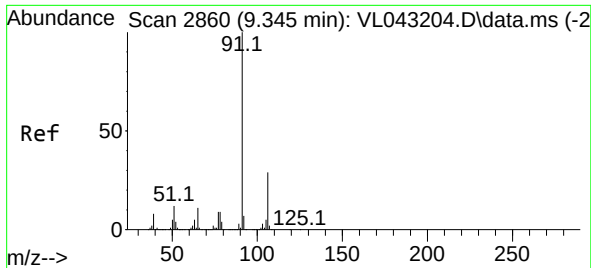
Tgt Ion: 91 Resp: 8252
Ion Ratio Lower Upper
91 100
92 97.9 47.4 71.0#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.869 min Scan# 2713
Delta R.T. -0.003 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 117 Resp: 208021
Ion Ratio Lower Upper
117 100
82 66.4 56.1 84.1
119 32.1 25.0 37.6

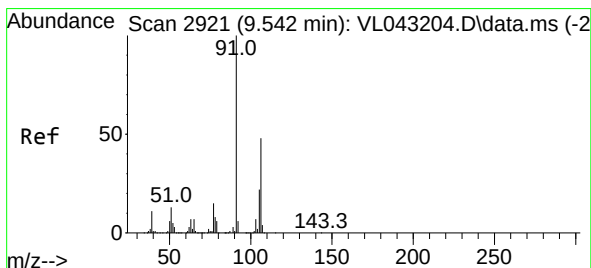
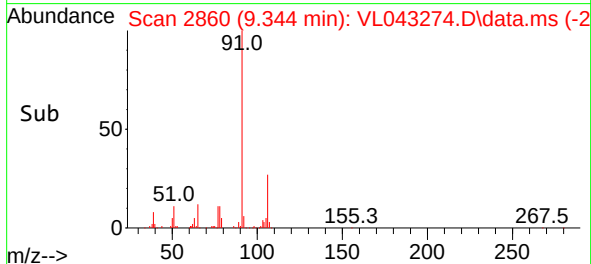
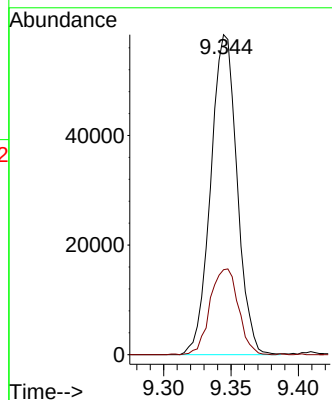
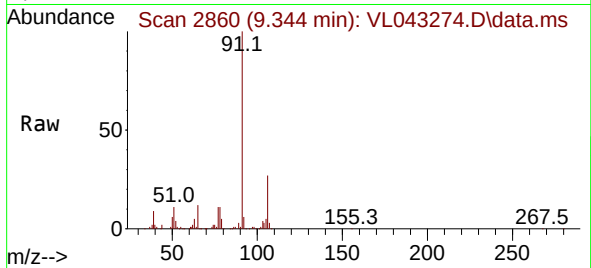




#58
Ethyl Benzene
Concen: 1.988 ppbv
RT: 9.344 min Scan# 21
Delta R.T. -0.000 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

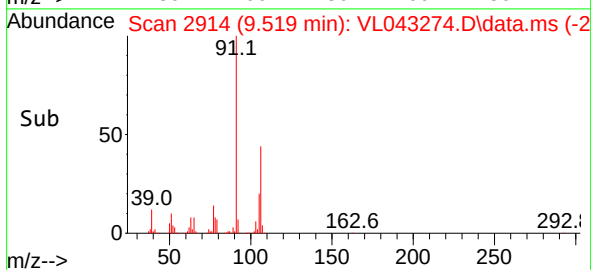
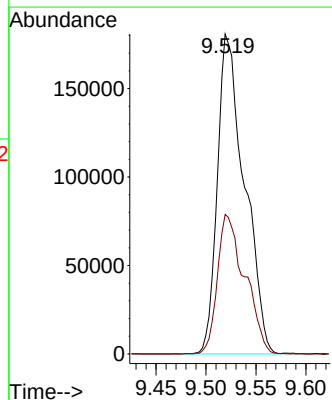
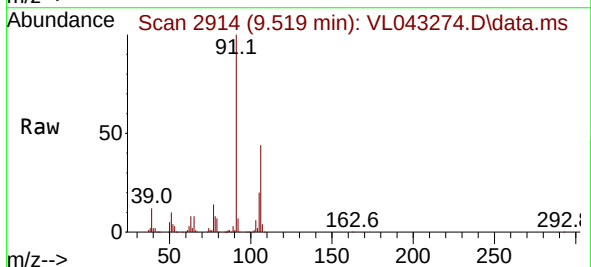
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

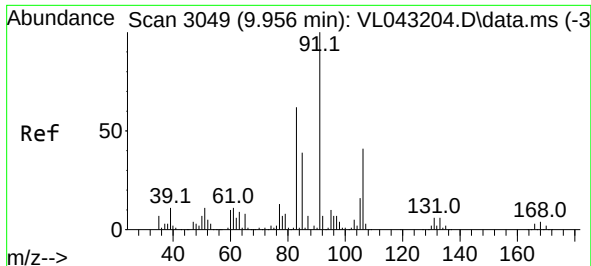
Tgt Ion: 91 Resp: 79579
Ion Ratio Lower Upper
91 100
106 26.6 22.8 34.2



#59
m/p-Xylene
Concen: 10.601 ppbv
RT: 9.519 min Scan# 2914
Delta R.T. -0.023 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 91 Resp: 340301
Ion Ratio Lower Upper
91 100
106 44.2 36.1 54.1

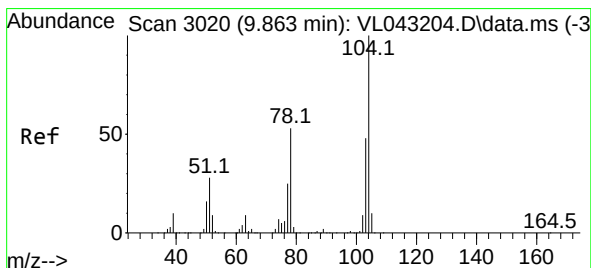
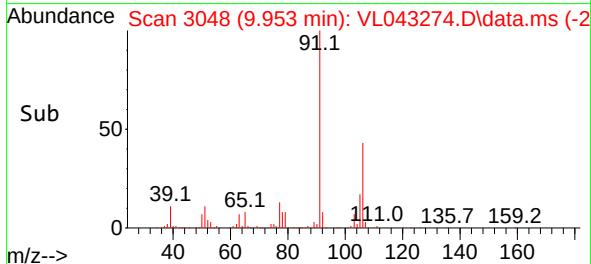
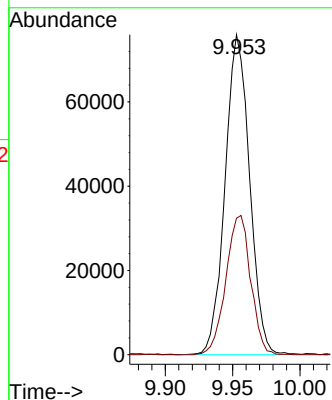
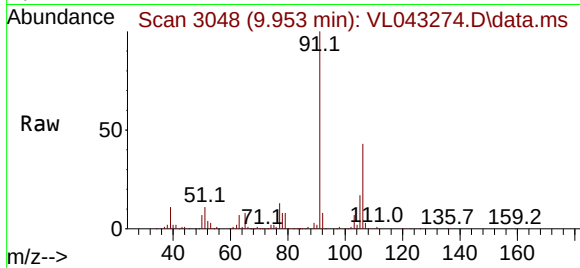




#60
o-Xylene
Concen: 3.000 ppbv
RT: 9.953 min Scan# 3049
Delta R.T. -0.004 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

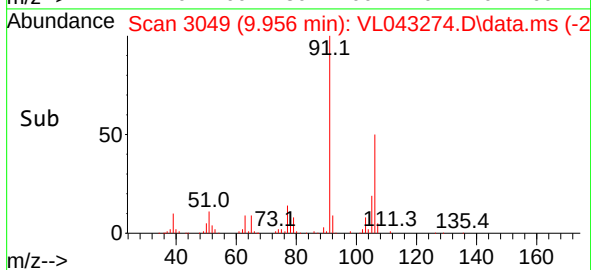
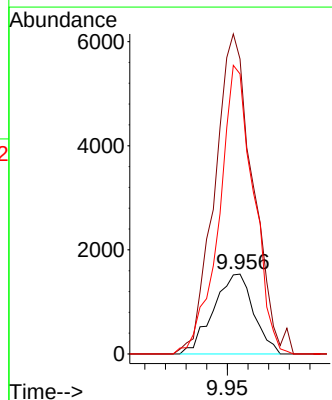
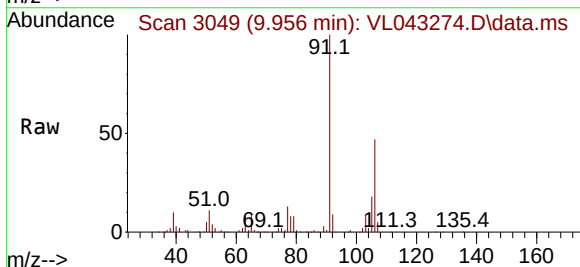
Instrument :
MSVOA_1
ClientSampleId :
IA1DL

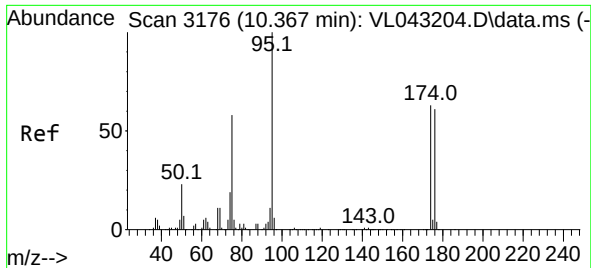
Tgt Ion: 91 Resp: 96189
Ion Ratio Lower Upper
91 100
106 43.9 20.9 62.8



#61
Styrene
Concen: 0.148 ppbv
RT: 9.956 min Scan# 3049
Delta R.T. 0.094 min
Lab File: VL043274.D
Acq: 20 Nov 2025 20:43

Tgt Ion: 104 Resp: 2076
Ion Ratio Lower Upper
104 100
78 382.7 42.1 63.1#
103 310.7 37.2 55.8#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.550 ppbv
 RT: 10.364 min Scan# 3175
 Delta R.T. -0.003 min
 Lab File: VL043274.D
 Acq: 20 Nov 2025 20:43

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

Tgt Ion: 95 Resp: 160870

Ion	Ratio	Lower	Upper
95	100		
174	66.7	50.2	75.2
175	5.2	4.1	6.1

